2018 INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT

Water Quality in Alabama
2016-2018

2018 Alabama Integrated Water Quality Monitoring and Assessment Report

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This report was prepared by the Alabama Department of Environmental Management as required by Section 305(b) (the Clean Water Act). Comments or questions related to the content of the report should be addressed to:

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Executive Summary

Alabama's 2018 Integrated Water Quality Assessment and Monitoring Report combines information about Alabama's surface and ground water resource management programs with a comprehensive listing of State waters consistent with EPA's 2006 Integrated Reporting Guidance (which is supplemented by EPA's 2008, 2010 2012, 2014, 2016, and 2018 IR memos). The guidance requests that states report on the condition of all surface waters by categorizing rivers, streams, lakes, estuaries, and coastal waters according to their designated uses and the degree to which water quality is supporting those uses. State waters have been segmented using the high resolution National Hydrography Dataset (NHD) and assigned a unique identification number called an assessment unit ID (AU-ID). The AU-IDs are based on the twelve-digit Watershed Boundary Dataset (WBD). Waterbody data and information are evaluated using the use support assessment methodology and the waterbody is assigned to one of the following categories.

Category1

Waters that are attaining all applicable water quality standards.

Category 2

Waters for which readily available data, which meets the State's requirements as described in Section 4.9, supports a determination that some water quality standards are met and there is insufficient data to determine if remaining water quality standards are met. Attainment status of the remaining standards is unknown because data is insufficient. Waters for which the minimum data requirements (as described later) have not been met will be placed in Category 2.

Category 2A

For these waters available data does not satisfy minimum data requirements but there is a high potential for use impairment based on the limited data. These waters will be given a higher priority for additional data collection.

Category 2B

For these waters available data does not satisfy minimum data requirements but there is a low potential for use impairment based on the limited data. These waters will be included in future basin monitoring rotations as resources allow.

Category 3

Waters for which there is no data or information to determine if any applicable water quality standard is attained or impaired. These waters will be considered unassessed.

Category 4

Waters in which one or more applicable water quality standards are not met but establishment of a TMDL is not required.

Category 4A

Waters for which all TMDLs needed to result in attainment of all applicable WQSs have been approved or established by EPA.

Category 4B

Waters for which other required control measures are expected to attain applicable water quality standards in a reasonable period of time. Adequate documentation is required to indicate that the proposed control mechanisms will address all major pollutant sources and should result in the issuance of more stringent effluent limitations required by either Federal, State, or local authority or the implementation of "other pollution control requirements (e.g., best management practices) required by local, state, or federal authority" that are stringent enough to implement applicable water quality standards. Waters will be evaluated on a case by case basis to determine if the proposed control measures or activities under another program can be expected to address the cause of use impairment within a reasonable time period. A reasonable time period may vary depending on the degree of technical difficulty or extent of the modifications to existing measures needed to achieve water quality standards. EPA's 2006 assessment and listing guidance offers additional clarification of what might be expected of waters placed in Category 4b.

Category 4C

Waters in which the impairment is not caused by a pollutant. This would include waters which are impaired due to natural causes or pollution. A pollutant is defined in Section 502(6) of the Clean Water Act (CWA) as "spoil, solid waste, incinerator residue, sewerage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water." Pollution is defined as "the man-made or man-induced alteration of the chemical, physical, or radiological integrity of a waterbody." Invasive plants and animal species are considered pollution.

Category 5

Waters in which a pollutant has caused or is suspected of causing impairment. If the impairment is caused by an identified pollutant the water should be placed in Category 5. All "readily available data and information" will be used to determine when a water should be placed in Category 5. Waters in this category comprise the State's list of impaired waters or §303(d) list. When the information used to assess the waterbody consist primarily of observed conditions, (limited water quality data, water quality data older than six years, or estimated impacts from observed or suspected activities), the assessment is generally referred to as an evaluated assessment (Category 2). Evaluated assessments usually require the use of some degree of professional judgment by the person making the assessment and these assessments are not considered sufficient to place waters in or to remove waters from the impaired category (Category 5) or the fully supporting category (Category 1).

Monitored assessments (Categories 1 and 5) are based on readily available chemical, physical, and/or biological data collected during the previous six years, using commonly accepted and well-documented methods. Readily available data are data that have been collected or assembled by the Department or other groups or agencies and are available to the public. Data older than six years old may be used on a case-by-case basis when assessing waters that are not currently included in Category 1 or Category 5. (For example, older data could be used if conditions, such as land use, have not changed.) The 2018 §303(d) list was developed using data collected by the Department and various other sources. The data assessed to categorize Alabama's waters was collected between 2011 and 2016. For example, the Department collected over 530,000 samples at 1,074 stations during an estimated 15,000 site visits.

Categorizing Alabama's surface waters represents a significant effort. With approximately 59,000 miles of perennial rivers and streams and approximately 70,000 miles of intermittent and empheral streams, this process will be ongoing and will require substantial resources and time. The five part list included in the appendix of this report represents the categorization based on information currently available. As new information becomes available the list will be updated and placed on the Department's web site to give the public the most complete and accurate picture of the water quality status of Alabama's surface water resources.

Table ES-1 River Basins

Alabama
Black Warrior
Blackwater
Cahaba
Chattahoochee
Chipola
Choctawhatchee
Coosa
Escambia
Escatawpa
Mobile
Perdido
Tallapoosa
Tennessee
Tombigbee
Yellow

A summary of Alabama's Active Trend Stations (Ambient Monitoring) can be found in the Appendix of this report. This information is an ongoing effort to demonstrate trends in water quality. Ambient Trend sites are sampled to identify long-term trends in water quality statewide and to provide data for the development of Total Maximum Daily Loads (TMDLs) and water quality criteria. Sampling frequency presently occurs 3 times a year during the months of June, August, and October at most trend stations and are sampled statewide annually. Selected sites are sampled more frequently. Sampling frequency and parameters collected at these sites vary from other station types. Currently, 91 trend stations are sampled statewide annually.

The U.S. Census estimates the population of Alabama in 2016 to be 4,863,300. The 2010 Census population was 4,779,736. This is a percent change of 1.7%. The cities of Birmingham, Huntsville, Montgomery, Mobile, and their surrounding suburbs contain approximately half of Alabama's population. The state is comprised of sixty-seven (67) counties. A large percentage of Alabama's industries are related to forestry, agriculture, and mining. The State is divided into sixteen (16) river basins (Table ES-1) containing 129,700 miles of rivers and streams (Table ES-2). Table ES-4 shows Size of Surface Waters Assigned to Reporting Categories and Table ES-5 shows the size of Rivers/Streams, Lakes/Reservoirs, and Estuary/Ocean impaired by Causes.

Figure ES-1 River Basins

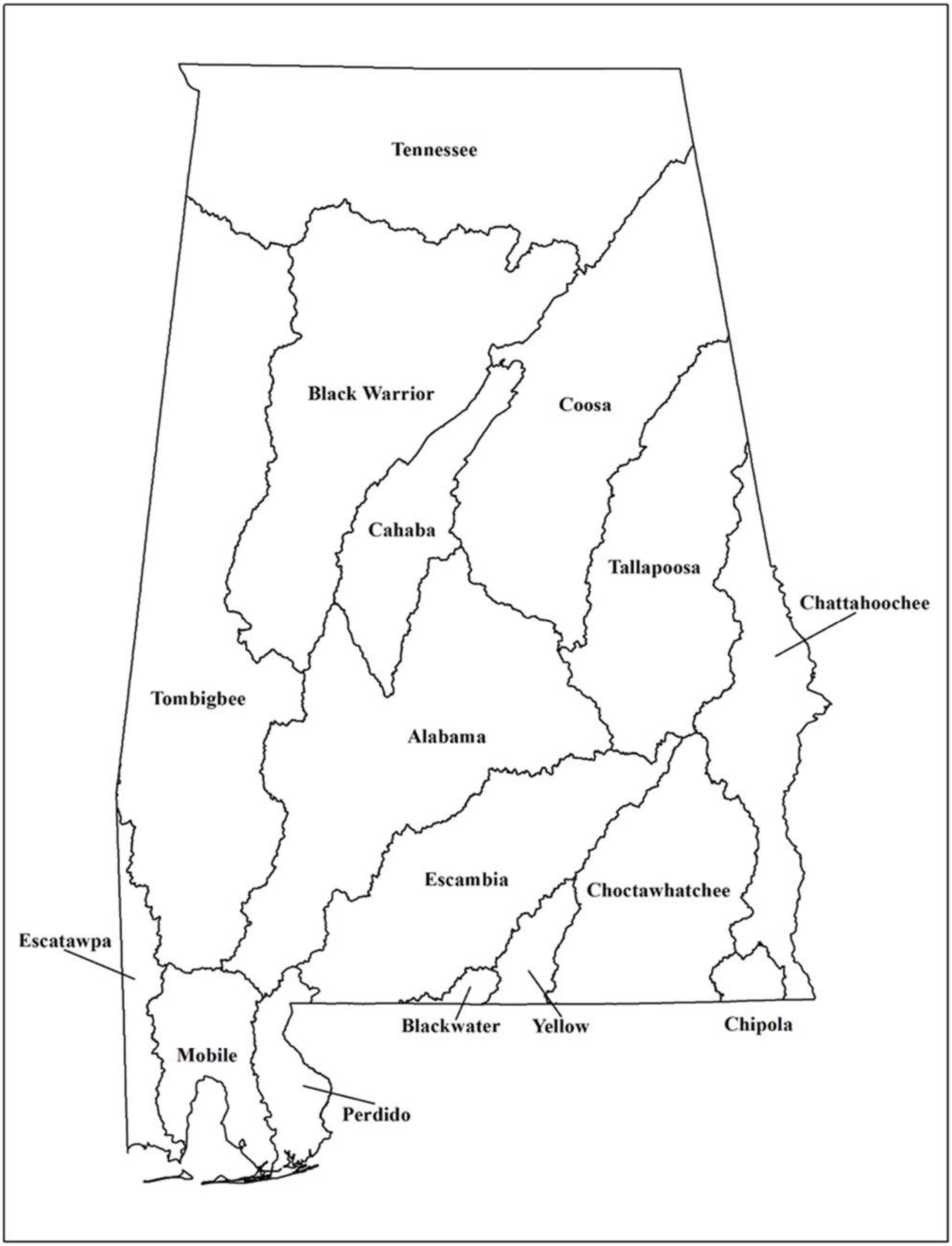


Table ES-2 Atlas

Topics	Value
State population	4,779,736
State surface area	51,609
Number of river basins	16
Total miles of rivers and streams	129,700
Miles of perennial rivers/streams	59,000
Miles of intermittent (nonperennial) streams	70,700
Border miles of shared rivers/streams	210
Number of lakes/Lakes/ponds	7,694
Number of significant publicly-owned lakes/Lakes/ponds	43
Acres of lakes/Lakes/ponds	490,472
Acres of significant publicly-owned lakes/Lakes/ponds	425,748
Square miles of estuaries/harbors/ponds	610
Miles of ocean coast (includes bays and inlets)	337
Acres of freshwater wetlands*	3,600,000
Acres of tidal wetlands*	27,600

*Historic National Wetland Inventory estimates

Alabama has ponds, lakes, and reservoirs in excess of 490,472 acres. Freshwater wetlands occupy an estimated 3,600,000 acres. Alabama's coastal wetlands are estimated at 27,600 acres (National Wetland Inventory estimates). Coastal Alabama also contains an estimated 610 square miles of estuaries and a coastal shoreline that is 337 miles long (includes Mobile Bay and island shorelines).

Assessing the State's abundant surface water resources requires a major effort and sizeable resources. These watersheds, ranging in size from approximately 10 square miles up to more than 100 square miles, were randomly selected to incorporate a range of human disturbances. In addition to the probabilistic watershed monitoring, the Department continued its more traditional monitoring of §303(d) listed streams, ambient trend monitoring, and the rivers and reservoirs monitoring programs. This monitoring strategy continues to be used to gather the data necessary to assess the state's surface waters.

Alabama's surface water is of generally high quality. An indication of full support of rivers and streams can be determined by analyzing Alabama's Category 4 and 5 waters. The total mileage for rivers and streams not supporting designated uses is 2,980.86 miles. This total is 20% of the almost 14,500 river and stream miles which have been assessed. Approximately 54% of Alabama's publicly accessible lakes and reservoirs are fully supporting their designated uses. Much of the non-support acreage is related to historic as well as recent PCB contamination and eutrophic conditions in the Coosa River Basin reservoirs. Naturally higher nutrients in the soils of the Coosa River Basin, to a large extent, dictate its reservoirs' eutrophic conditions. In an effort to manage eutrophic conditions more directly, the Department has developed nutrient criteria for 40 reservoirs.

ADEM continues to work with ADCNR-State Lands-Coastal Section, NOAA-OCM, USEPA and other State and federal agencies to coordinate the Alabama Coastal Nonpoint Pollution Control Program (ACNPCP) as a water quality-based approach to reduce land use impacts to coastal resources and enhance coastal waters. ADEM and ADCNR jointly submitted the *ACNPCP*. New submissions are being developed as the federal recommended actions are being implemented by Alabama to help the State gain full federal approval and allow full program implementation.

Alabama's ground water continues to be managed effectively through efforts under the Underground Storage Tank (UST) Program, the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Underground Injection Control (UIC) Program, as well as the Wellhead Protection Program (WHPP). The lack of chronic detections of pollutants in public water supply groundwater sources is a good indication of Alabama's high ground water quality and effective management of the resource.

Alabama's estuaries enjoy overall good health, but pathogens and mercury are pollutants of concern in many coastal watersheds. The Department's coastal water quality monitoring program has continued to provide technical advice and regulatory coordination with ADCNR and the Mobile Bay National Estuary Program, NRCS, USFWS, USACOE-Mobile District, MS -AL Sea Grant, Week's Bay NERR, The Nature Conservancy, and other NGO's, including cooperation with local County and Municipal entities to develop ACNPCP applicable projects and programs.

Approximately 850,000,000 gallons of water are taken from ground and surface sources each day, provided with treatment, and made available to approximately four million citizens in Alabama. Five hundred and sixteen (516) community systems, forty-eight (48) transient non-community systems and twenty-two (22) non-transient non-community systems are permitted by the ADEM.

Approximately sixty-five (65) percent of the water used is obtained from surface sources such as lakes, rivers, and streams and provided with full treatment to include coagulation, sedimentation, filtration, and disinfection. One hundred (100) percent of these systems meet turbidity requirements, one hundred (100) percent meet trihalomethane standards, ninety-seven (99) percent meet haloacetic acid standards and one hundred (100) percent meet inorganic and radiological drinking water standards.

Despite significant progress, much work remains to be done regarding water quality management with the 303(d) process and implementation of Total Maximum Daily Loads (TMDLs) in Alabama and the recent management efforts of the Source Water Protection Program and the Wellhead Protection Program. Management efforts continue in the UST, RCRA, CERCLA, and UIC Programs and through National Pollutant Discharge Elimination System (NPDES) permitting. Continuing watershed coordination efforts in Alabama are vital to the effective use of limited resources for surface and ground water management. Implementation of controls for nonpoint source runoff is an integral component of watershed management in Alabama. Water quality monitoring will be crucial in demonstrating the effectiveness of these implementation activities.

Table ES-3 Size of Surface Waters Assigned to Reporting Categories

Waterbody Type	Category								Total Assessed
	1	2A	2B	3	4A	4B	4C	5	
River/Stream (miles)	5,574.85	1,563.33	3,185.53	2,667.37	1,246.92	48.52	33.47	2,898.87	14,551.49
Reservoir/Lake (acres)	187,461.19	2,133.42	4,885.33	1,945.26	38,752.06	0	0	200,518.30	433,750.30
Estuary/Ocean (square	130.35	0	18.83	0	5.59	0	0	628.86	783.63

*category 3 not included in total assessed waters

Table ES-5 Size of Rivers/Streams, Lakes/Reservoirs, and Estuary/Ocean impaired by Causes

Cause	Category 5			Category 4			Totals		
	River Stream (miles)	Reservoir Lake (acres)	Ocean Estuary (square miles)	River Stream (miles)	Reservoir Lake (acres)	Ocean Estuary (square miles)	River Stream (miles)	Reservoir Lake (acres)	Ocean Estuary (square miles)
FLOW ALTERATIONS							**4.41**		
Habitat alteration	4.41						4.41		
METALS							**948.58**	**63,903.93**	**305.83**
Aluminum				50.10			50.10		
Arsenic	19.56						19.56		
Chromium	4.23						4.23		
Copper				7.96			7.96		
Cyanide	12.43			44.55			56.98		
Iron	3.62			45.99			49.61		
Lead	9.02			3.30			12.32		
Mercury	690.67	63,903.93	211.21				690.67	63,903.93	211.21
Thallium			94.62				0.00		94.62
Zinc				57.15			57.15		
MINERALIZATION							**127.59**		
Total dissolved solids	64.07						64.07		
Turbidity	32.02			31.50			63.52		
NUTRIENTS							**898.66**	**177,782.98**	
Ammonia				213.24			213.24	0.00	
Nitrogen				171.48	3,021.35		171.48	3,021.35	
Phosphorus	92.96	100,133.29		420.98	74,628.34		513.94	174,761.63	
OXYGEN DEPLETION							**1,296.16**	**8,363.49**	
BOD, carbonaceous	96.14	2,041.93		644.01	3,752.38		740.15	5,794.31	
BOD, nitrogenous	96.14	2,041.93		426.40	527.25		522.54	2,569.18	
Dissolved oxygen (low)				33.47			33.47		
PATHOGENS							**2,525.17**	**7,300.52**	**427.95**
Enterococcus bacteria			418.15	50.72		9.80	50.72		427.95
Escherichia coli	1,602.74	6,567.86		292.82			1,895.56	6,567.86	
Fecal coliform (legacy)				578.89	732.66		578.89	732.66	
PESTICIDES							**180.51**	**85.73**	
Atrazine				23.42			23.42		
Chlorpyrifos				23.42			23.42		
DDT				13.04	85.73		13.04	85.73	
Dieldrin	24.29						24.29		
Endosulfan				48.17			48.17		
Methyl Parathion				48.17			48.17		
pH							**28.00**	**1,569.21**	
pH	6.36	1,569.21		21.64			28.00	1,569.21	
SEDIMENTATION							**1,017.74**	**4,442.18**	
Sedimentation/Siltation	576.64	869.04		334.63	3,573.14		911.27	4,442.18	
Total suspended solids				106.47			106.47		
TOXIC ORGANICS							**79.95**	**74,045.15**	
Benzo(a)pyrene (PAHs)				44.55			44.55		
Polychlorinated biphenyls (PCBs)	35.40	30,044.38			24,622.46		35.40	54,666.84	
Perfluorooctane Sulfonate (PFOS)		19,378.31						19,378.31	
UNKNOWN							**11.08**		
Unknown toxicity	11.08						11.08		

* Category 4 includes all TMDLs

List of Acronyms

A&I	Agriculture and Industry water supply use classification
ACES	Alabama Cooperative Extension Service
ACNPCP	Alabama Coastal Nonpoint Pollution Control Program
ADAI	Alabama Department of Agriculture and Industries
ADCNR	Alabama Department of Conservation and Natural Resources
ADCNR-MRD	Alabama Department of Conservation and Natural Resources-Marine Resources Division
ADEM	Alabama Department of Environmental Management
ADPH	Alabama Department of Public Health
AEMC	Alabama Environmental Management Commission
AFC	Alabama Forestry Commission
AGPT	Algal Growth Potential Test
ASWCC	Alabama Soil and Water Conservation Committee
AU	Assessment Unit
AWPCA	Alabama Water Pollution Control Act
BMP	Best Management Practices
CSO	Combined Sewer Overflow
CWA	Clean Water Act
EMAP	Environmental Monitoring Assessment Program
EPA	U.S. Environmental Protection Agency
F&W	Fish and Wildlife use classification
GIS	Geographical Information System
GPS	Global Positioning System
GSA	Geological Survey of Alabama
HUC	Hydrologic Unit Code
LDI	Landscape Development Index
MCL	Maximum Contaminant Level
MOU	Memorandum of Understanding
MRD	Marine Resources Division of the ADCNR
MU	Monitoring Unit
NEP	National Estuary Program
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPL	Superfund National Priority Listed Sites
NRCS	Natural Resource Conservation Service of the USDA
OAW	Outstanding Alabama Water use classification
OEO	Office of Education and Outreach
ONRW	Outstanding National Resource Water designation

List of Acronyms

PCB	Polychlorinated Biphenyls
PFOA	Perfluorooctanoic Acid
PWS	Public Water Supply use classification
RSMP	Rivers and Streams Monitoring Program
S	Swimming and Other Whole Body Water contact Sports use classification
SH	Shellfish Harvesting use classification
SOC	Synthetic Organic Compound
SOP	Standard Operating Procedures
SSO	Sanitary Sewer Overflow
SWCD	Soil and Water Conservation District
TAL	Treasured Alabama Lake
TMDL	Total Maximum Daily Loads
TSI	Trophic State Index
USCG	U.S. Coast Guard
USCG	United States Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service of the Department of the Interior
USGS	U.S. Geological Survey
VOC	Volatile Organic Compound
WLA	Wasteload Allocation
WWTP	Wastewater Treatment Plant

Chapter 1 Water Quality Standards

1.1 Water Quality Standards Program

For information pertaining to Water Quality Standards, contact Jennifer Haslbauer in ADEM's Montgomery Office at (334) 274-4250 or jhaslbauer@adem.alabama.gov.

1.2 Water Quality Rule Changes

Changes made to previous **Chapter 335-6-10 Water Quality Criteria**:

- Corrected grammatical errors and clarified existing language. (Date: February 3, 2017, Section 335-6-10)
- Added the definition for "Coastal Waters". (Date: February 3, 2017, Section 335-6-10-.02)
- Extended the recreational use season from June through September to May through October. (Date: February 3, 2017, Section 335-6-10-.05)
- Removed E. coli bacteria criteria from the Shellfish Harvesting use classification, as it does not apply to shellfish harvesting areas strictly found in coastal waters. (Date: February 3, 2017, Section 335-6-10-.09)
- Revised E. coli criteria for Public Water Supply and Fish & Wildlife use classifications to be more protective of waters between the months of May and October. (Date: February 3, 2017, Section 335-6-10-.09)
- Updated river basin names. (Date: February 3, 2017, Section 335-6-10-.11)
- Updated West Point Lake chlorophyll *a* criteria to correspond with Georgia's updated criteria. (Date: February 3, 2017, Section 335-6-10-.11)

Changes made to previous **Chapter 335-6-11 Water Use Classifications for Interstate and Intrastate Waters:**

- Corrected grammatical errors and clarified existing language. (Date: February 3, 2017, Section 335-6-11)
- Updated river basin names, removed interstate/intrastate headings, added coastal/non-coastal headings to river basins in coastal regions, updated waterbody names to correspond with the Geographical Names Information System (GNIS), updated reservoir/reservoir embayment names to a new format, and added "10 feet above MSL" to redefine coastal waters. (Date: February 3, 2017, Section: 335-6-11-.02)
- Upgraded Swan Creek from Agricultural and Industrial (A&I) use classification to Fish and Wildlife (F&W) use classification. (Date: February 3, 2017, Section 335-6-11-.02(14))

1.3 Conceptual Approach to Nutrient Criteria Development

In developing nutrient criteria, the Department's objective is to determine nutrient levels that are protective of the beneficial uses designated for each reservoir. Keeping in mind that these reservoirs serve a variety of uses, including swimming and recreation, sport-fishing, and public water supply, while also supporting a wide diversity of aquatic life, nutrient criteria are targeted that support the designated uses and are protective of aquatic communities. Thus, the Department's rationale is to establish nutrient criteria consistent with the "fishable/swimmable" goal of the Clean Water Act.

Located within 16 major river basins and 25 different sub-ecoregions, Alabama's surface waters represent some of the most biologically diverse aquatic ecosystems in the United States. Because of the large diversity in geographic and climatic conditions from one region to another, as well as the significant variability in dam operations between reservoirs, the Department used best professional judgment to develop nutrient criteria on a lake-specific basis rather than on a more aggregate basis such as an ecoregional approach. The lake-specific approach captures the large variability inherent in man-made reservoirs, where chlorophyll a concentrations are typically affected by such factors as reservoir depth, reservoir retention time, and scheduling of power generation. Figure 1-1 and Figure 1-2 depicts Alabama's General Soils and Ecoregions respectively.

During the criteria development process, historical data are studied to provide an overall perspective of the condition of each reservoir. This information is analyzed to determine trends in trophic conditions, the degree to which reservoir conditions remained stable over time, and whether any impairment has occurred due to nutrient over-enrichment. From this data, nutrient levels (expressed as seasonal means of chlorophyll a concentrations) are targeted that correlate with reservoir conditions that support the designated beneficial uses. The historical data depicts the diversity of reservoir conditions in Alabama, from lakes in the Tallapoosa River Basin that are naturally oligotrophic-mesotrophic, such as lakes Martin, Yates and Thurlow, to lakes that tend to be more eutrophic in nature, such as the mainstem reservoirs on the Tennessee and Coosa Rivers.

The Department recognizes that using reference condition analysis to establish nutrient criteria in reservoirs can be limited due to the fact that there is uncertainty regarding what constitutes "natural" conditions in a man-made water body. Therefore, in developing nutrient criteria, the Department has selected to analyze historical ambient data on an individual reservoir basis to determine if each reservoir continues to support its designated uses. If so, the nutrient concentrations that have historically corresponded to that reservoir's use support are evaluated to determine a chlorophyll a target specific to that reservoir. This same approach is used regardless of the reservoir's trophic state (i.e. eutrophic, oligotrophic, or mesotrophic). Thus, the intent is that the selected chlorophyll a criteria values are specifically associated with a condition of full use support in each respective reservoir, taking into account the factors unique to various trophic conditions. Table 1-1 shows the Nutrient Criteria Implementation Schedule for Alabama Reservoirs.

Nutrient criteria are developed to support the existing uses that define each reservoir system and protect the aquatic communities that inhabit them. Data are analyzed to determine the ranges of chlorophyll a and total phosphorus concentrations historically occurring in each reservoir. To maintain nutrient levels within the ranges associated with full use-support conditions, best professional judgment is used to derive criteria values that "cap" each reservoir system with a protective chlorophyll a concentration. In establishing chlorophyll a targets, the variability occurring within the growing season was taken into account. The cooler months are generally less productive and lower chlorophyll a values are usually recorded while the warmer months are generally more productive with higher chlorophyll a values typically recorded.

To determine what constitutes healthy conditions in various types of reservoirs and how trophic gradients relate to use attainment, the Department utilizes research conducted by Dr. David Bayne at Auburn University. This research examines how the quality of fisheries correlates to varying trophic conditions in Alabama reservoirs. The study assesses the potential impacts of

Figure 1-1 Alabama's General Soils

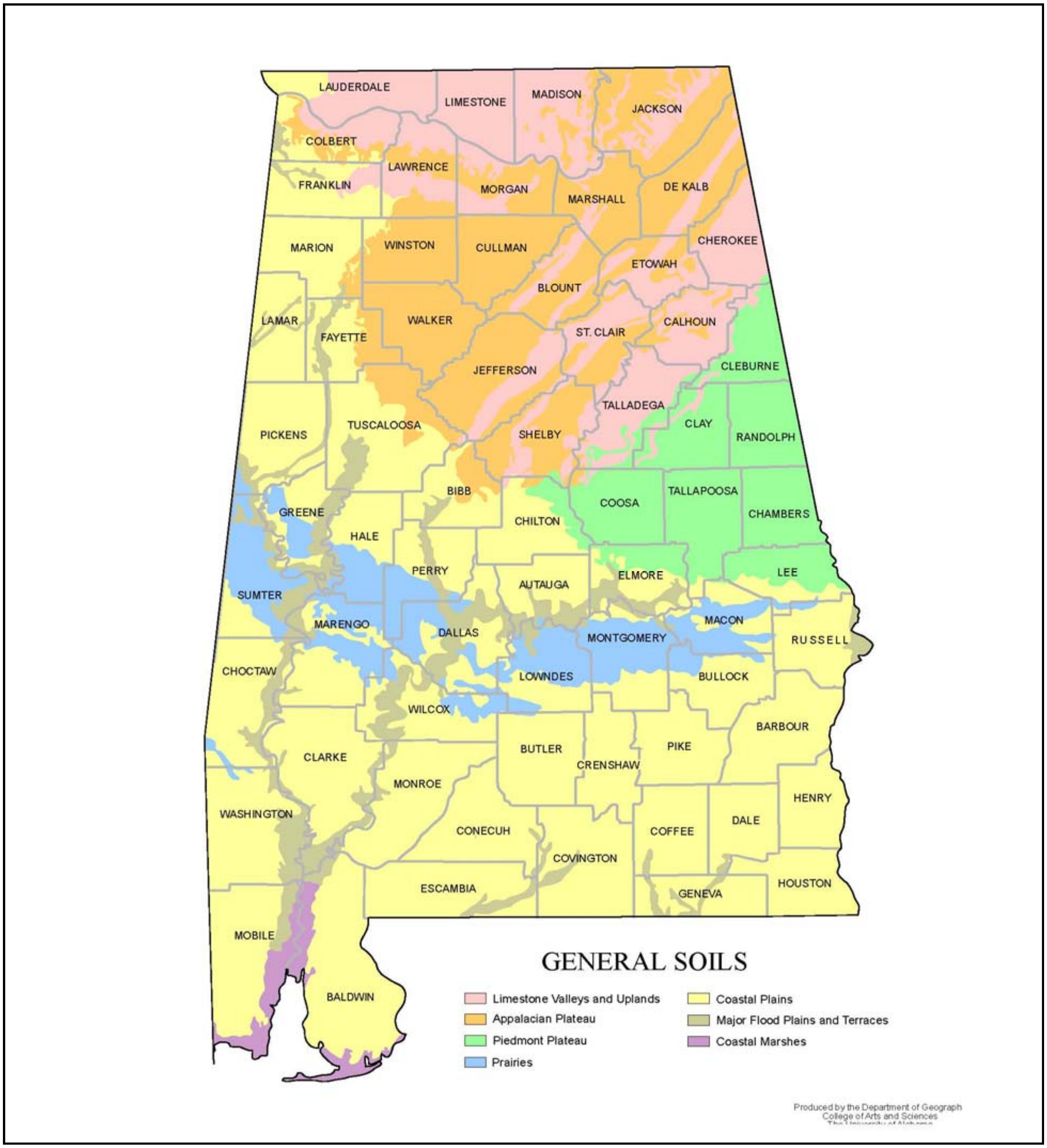


Figure 1-2 Alabama's Level III and IV Ecoregions

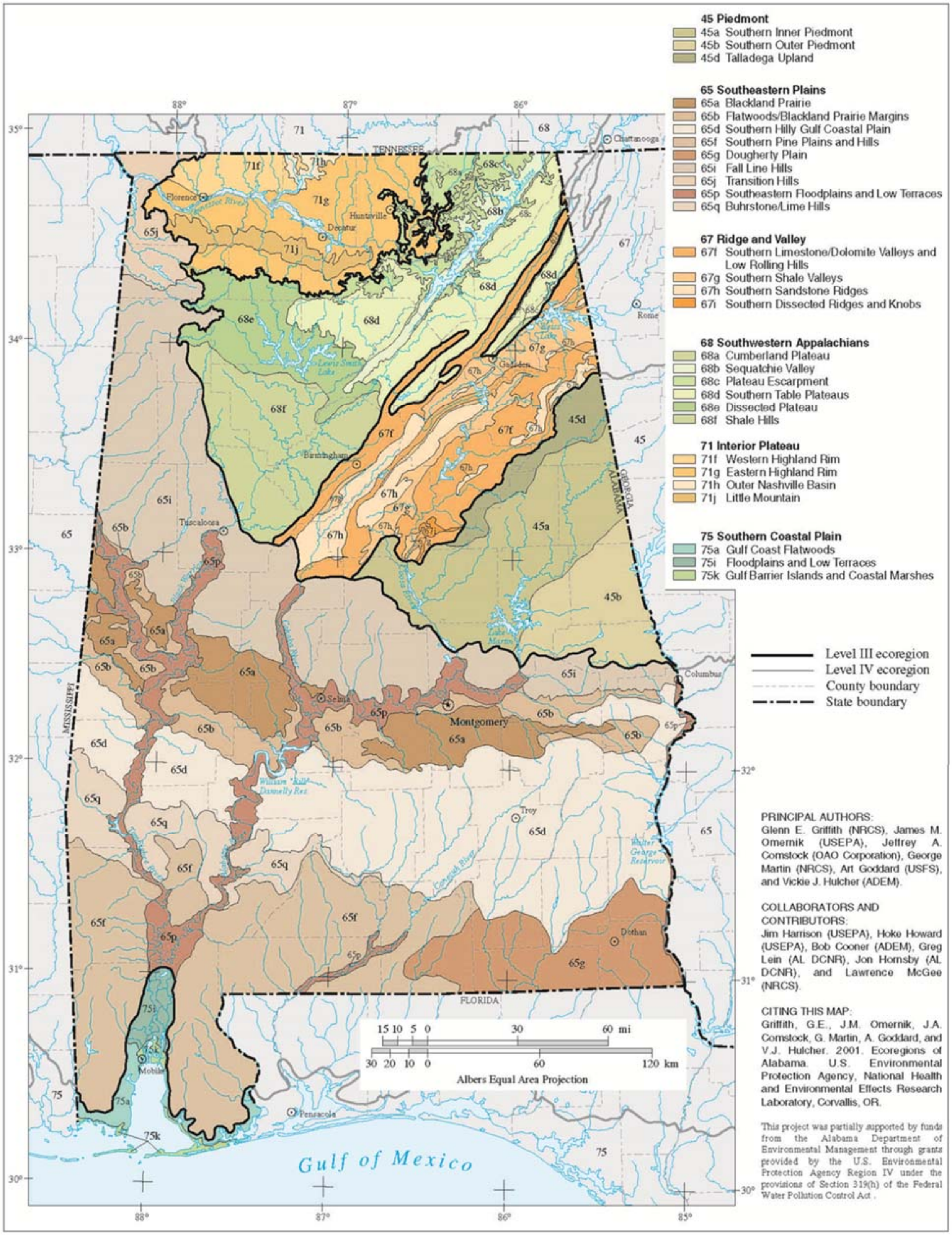


Table 1-1 Nutrient Criteria Implementation Schedule for Alabama Reservoirs

Year	Number of Reservoirs	Major Basin(s)	Name of Reservoirs
2001	4	Chattahoochee, Coosa, Tallapoosa	West Point, W.F. George, Weiss, R.L. Harris
2002	9	Tallapoosa, Tennessee	Martin, Yates, Thurlow, Guntersville, Wheeler, Wilson, Pickwick, Little Bear, Cedar
2004	11	Alabama	Claiborne, Dannelly
		Black Warrior	Bankhead, Holt, Lewis Smith, Oliver, Tuscaloosa, Warrior
		Chattahoochee	Harding
		Escambia	Gantt, Point A
2005	5	Black Warrior	Inland
		Yellow	Jackson
		Tombigbee	Coffeeville, Demopolis, Gainsville
2010	8	Cahaba	Purdy
		Coosa	Jordan, Lay, Logan Martin, Mitchell, Neely Henry
		Escatawpa	Big Creek
		Tombigbee	Aliceville
2014	3	Yellow	Frank Jackson
		Tennessee	Bear Creek, Upper Bear Creek
TBD	1	Alabama	Woodruff

reverse eutrophication and nutrient reduction on reservoir fisheries and calculates target levels of primary production that provide both quality fishing and satisfactory water clarity for other recreational users, while protecting all aquatic communities. This research (“Compatibility between Water Clarity and Quality Black Bass and Crappie Fisheries in Alabama”; American Fisheries Society Symposium 16:296-305. 1996) provides substantial evidence that fish biomass and sport-fish harvesting are positively correlated to algal production in reservoirs.

The research by Dr. Bayne demonstrates that the size, growth rates, and condition of certain species of sports fish are generally higher in eutrophic than in oligo-mesotrophic reservoirs. This study, along with case studies of reservoirs in other regions, raises the concern that the reversal of eutrophication and improvement in water clarity in some reservoirs can be deleterious to its warm-water sports fisheries by reducing fish production and biomass. The Department, therefore, believes that when establishing nutrient criteria it is vital to set water quality standards that adequately consider all the beneficial uses of the reservoir, fishing and swimming alike. Thus, caution is warranted when regulatory actions can potentially result in an undesirable shift in fish species. If, historically, a reservoir has supported all of its uses, including high-quality fisheries and other aquatic communities, nutrient criteria were targeted to preserve these reservoir conditions.

The typical hydraulic regime and flow characteristics of each reservoir are other key factors considered during criteria development. The relationship between water quality, biomass accumulation, and hydraulic residence time (or retention time), which is the average amount of time required to completely renew a reservoir's water volume, was taken into account when establishing the chlorophyll a criteria. For example, reservoirs associated with "run-of-the-river" dams typically have small hydraulic head, limited storage area and short retention times and are less likely to be susceptible to conditions that can lead to eutrophication or promote excessive algal growth. In contrast, reservoirs associated with larger dams, such as storage or hydroelectric dams, are more likely to have longer retention times, providing a greater potential for incoming nutrients to stimulate increased algal production. Increased algal biomass can potentially deplete dissolved oxygen levels within the reservoir through bacterial decomposition and photosynthetic respiration.

A study by Dr. Bayne examined the relationship between reservoir water retention times and phytoplankton algae production on Weiss Lake during the summer of 2001. Dr. Bayne, along with Auburn University professor Dr. Mike Maceina, assessed the potential water quality effects on Weiss Lake of the draft Coosa River water-sharing agreement between Alabama and Georgia. Their study showed that reservoirs with typically short retention times, such as reservoirs on the Coosa River, are more susceptible to hypereutrohic effects and higher chlorophyll a concentrations when retention times are increased even moderately. Historical data shows that higher chlorophyll a concentrations in Weiss Lake have consistently corresponded to longer retention times. Hydrologic models in their study indicated that longer retention times in the reservoir would likely increase phytoplankton algae production and algal biomass accumulation, assuming that other factors remain unchanged. This result is particularly evident during drought periods, such as occurred in 2000, 2006, and 2007.

In addition, the nutrient criteria were developed to reflect downstream transport of nutrients and the processes by which nutrient uptake occurs in streams. Nutrient concentrations generally tend to decrease as they move downstream. This attenuation occurs as nutrients are absorbed by microorganisms and plants (biotic uptake) or as they adsorb onto sediment particles (abiotic uptake) and settle out of the water column. Thus, in developing nutrient criteria, the chlorophyll a targets were set so that along certain stretches of river, each successive reservoir has a lower criteria value as you move downstream. This approach takes into account natural processes that determine nutrient concentrations and is protective of downstream water quality.

1.4 Implementation of Alabama's Antidegradation Policy

On June 25, 2002, the Alabama Environmental Management Commission adopted Rule 335-6-10-.12, Implementation of the Antidegradation Policy. This rule codifies procedures for implementing the Department's antidegradation policy (contained in Rule 335-6-10-.04) which was last amended in 1991 and approved that same year by the U.S. Environmental Protection Agency (EPA), Region 4. In response to a petition from the Legal Environmental Assistance Foundation (LEAF), in 1997 EPA requested that ADEM develop written procedures for implementing the state's antidegradation policy. Final written implementation procedures were submitted to EPA in December 1998 and approved by EPA in August 1999. In November 1999, LEAF sued ADEM alleging that the Department's use of the EPA-approved implementation procedures in the NPDES permitting process was improper because these procedures were, in fact, "rules" that had not been adopted through the formal rulemaking process. The Montgomery Circuit Court found in favor of ADEM; a decision later affirmed by the Court of Civil Appeals.

LEAF then applied for a writ of certiorari to the Alabama Supreme Court, which was granted, and thereafter the Alabama Supreme Court concluded in a decision dated March 1, 2002, that the implementation procedures are “rules” within the context of the Alabama Administrative Procedure Act, reversed the judgment of the Court of Civil Appeals and remanded the case to the lower courts.

As a result of the Supreme Court decision, the Department ceased the review of permit applications for new or expanded discharges of treated wastewater to those waters affected by the Supreme Court decision until April 10, 2002, following adoption by the Alabama Environmental Management Commission of emergency rule (335-6-10-.12-.01ER) establishing implementation procedures. As adopted, the emergency rule procedures incorporate suggestions made by EPA and are essentially equivalent to the written procedures utilized by the Department prior to the Supreme Court decision. The provisions of the permanent rule adopted on June 25, 2002, are the same as those of the emergency rule and, as such, have been determined by EPA to be consistent with the federal requirement for implementation procedures included in EPA’s water quality standards regulation. The final implementation procedures rule became effective on August 1, 2002.

The Department’s antidegradation policy serves to conserve and protect the waters of Alabama and their beneficial uses and to prevent the deterioration of a water body even when its water quality surpasses the level necessary to meet the fishable and swimmable goals of the Clean Water Act. The antidegradation implementation policy addresses three categories of waters and beneficial uses:

- High-quality waters that constitute an outstanding national resource (Tier 3 waters);
- Waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife as well as recreation in and on the water (Tier 2 waters); and
- Existing instream water uses and the level of water quality necessary to protect the existing uses (Tier 1 waters).

The implementation policy codifies procedures for reviewing applications for new or expanded discharges to waters designated as Tier 2 waters. The two basic components of the implementation policy involve:

- The Departments determination, based on the applicant’s demonstration, that the proposed discharge is necessary for important economic or social development in the area in which the waters are located; and
- An evaluation, by the applicant, of alternatives other than the proposed discharge to Tier 2 water.
- The antidegradation implementation procedures comply with federal law and provides ADEM with adequate guidelines for making environmentally and economically sound decisions, industries with the predictability needed to operate and the public with the assurances needed to guarantee clean water.

1.5 Surface Water Use Classification Maps

The following maps depict Outstanding Alabama Waters, Outstanding National Resource Waters, and a Treasured Alabama Lake. Alabama's classified surface waters are listed in *ADEM Water Division, Water Quality Program, Chapter 335-6-11, Water Use Classifications for Interstate and Intrastate Waters (effective November 27, 2012)*. Table 1-2 shows Surface Water Classifications and Designations. Figures and Tables 1-3 through 1-12 show waters classified as Outstanding Alabama Water (OAW) and waters with the special designation of Outstanding National Resource Water (ONRW) and Treasured Alabama Lake (TAL).

Table 1-2 Surface Water Classifications and Special Designations

Use Classifications	
Outstanding Alabama Water	OAW
Public Water Supply	PWS
Swimming and Other Whole Body and Water Contact Sports	S
Shellfish Harvesting	SH
Fish and Wildlife	F&W
Limited Warmwater Fishery	LWF
Agricultural and Industrial Water Supply	A&I
Special Designations	
Outstanding National Resource Water	ONRW
Treasured Alabama Lake	TAL

Figure 1-3 Wolf Bay - Outstanding Alabama Water

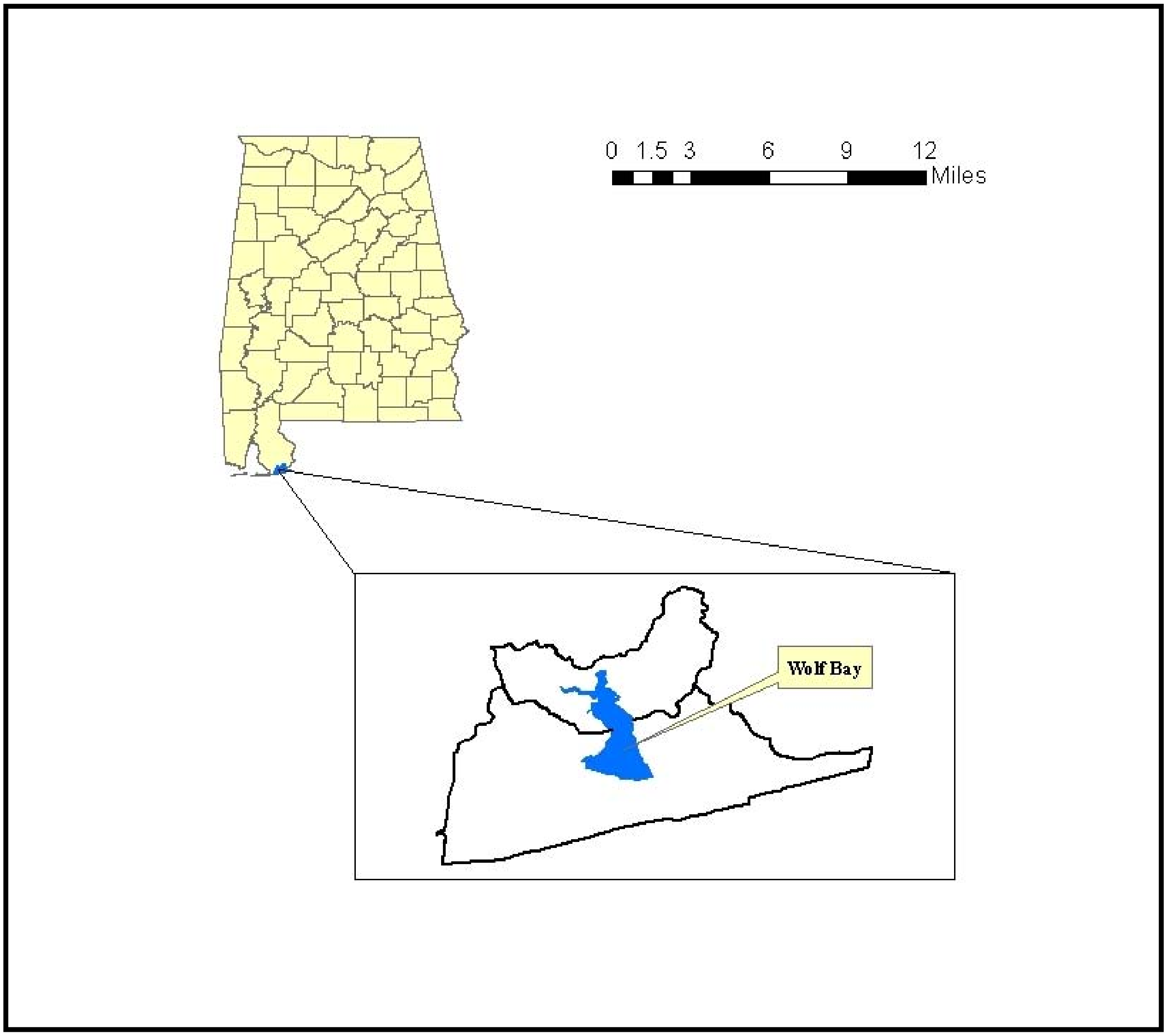


Table 1-3 Wolf Bay - Outstanding Alabama Water

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Square Miles
1	AL03140107-0204-600	Wolf Bay	Bay la Launch	Moccasin Bayou	OAW/SH/S/F&W	4.65
					Total Square Miles:	4.65

Figure 1-4 Cahaba River and Tributaries - Outstanding Alabama

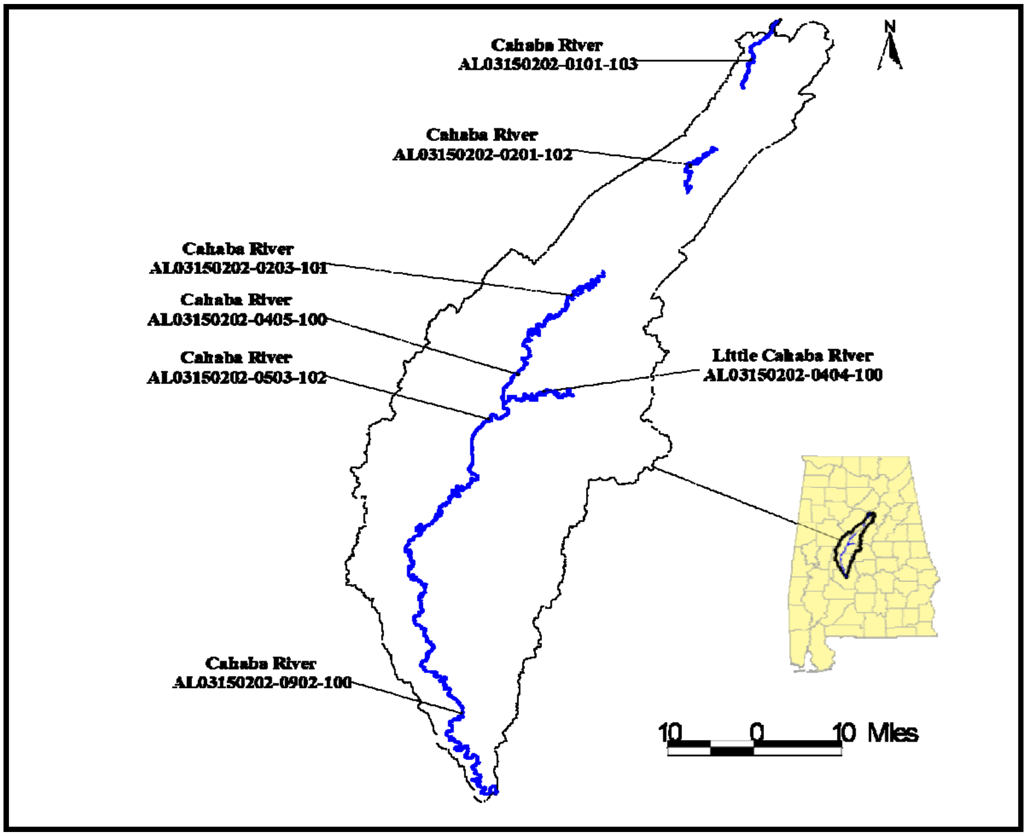


Figure 1-5 Hatchet Creek and Tributaries - Outstanding Alabama

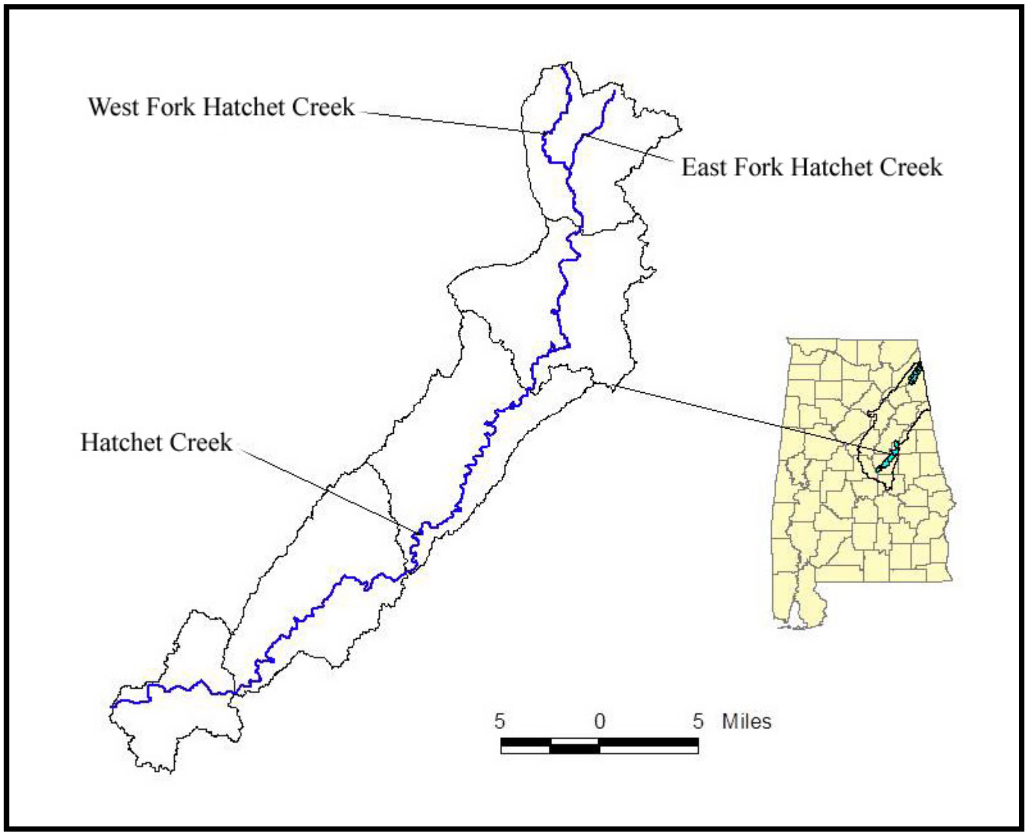


Table 1-4 Cahaba River and Tributaries - Outstanding Alabama Water

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
1	**AL03150202-0902-100**	Cahaba River	Alabama River	Alabama Highway 82	OAW/S	89.50
2	**AL03150202-0503-102**	Cahaba River	Alabama Highway 82	lower Little Cahaba River	OAW/S	10.58
3	**AL03150202-0407-100**	Cahaba River	lower Little Cahaba River	Shades Creek	OAW/F&W	13.51
4	**AL03150202-0206-101**	Cahaba River	Shades Creek	Shelby County Road 52	OAW/F&W	23.61
5	**AL03150202-0204-102**	Cahaba River	dam near U.S. Highway 280	Grant's Mill Road	OAW/PWS	13.45
6	**AL03150202-0101-102**	Cahaba River	US Highway 11	I-59	OAW/F&W	3.13
7	**AL03150202-0101-103**	Cahaba River	I-59	its source	OAW/F&W	2.22
8	**AL03150202-0405-100**	Little Cahaba River	Cahaba River	its source	OAW/F&W	16.54
					Total Miles:	172.54

Table 1-5 Hatchet Creek and Tributaries - Outstanding Alabama Water

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
1	AL03150107-0709-100	Hatchet Creek	Coosa River	Wildcat Creek	OAW/S/F&W	43.20
2	AL03150107-0706-102	Hatchet Creek	Wildcat Creek	its source	OAW/PWS/S/F&W	18.87
3	AL03150107-0701-300	East Fork Hatchet Creek	Hatchet Creek	its source	OAW/F&W	5.30
4	AL03150107-0701-400	West Fork Hatchet Creek	Hatchet Creek	its source	OAW/F&W	7.71
					Total Miles:	75.08

Figure 1-6 Lake Martin – Treasured Alabama Lake

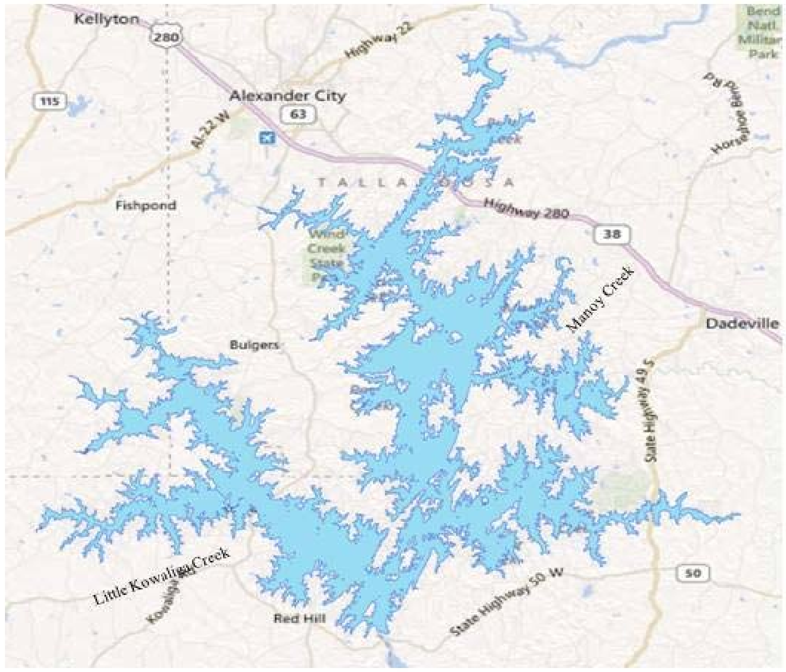


Figure 1-7 Little River and Tributaries (ONRW)

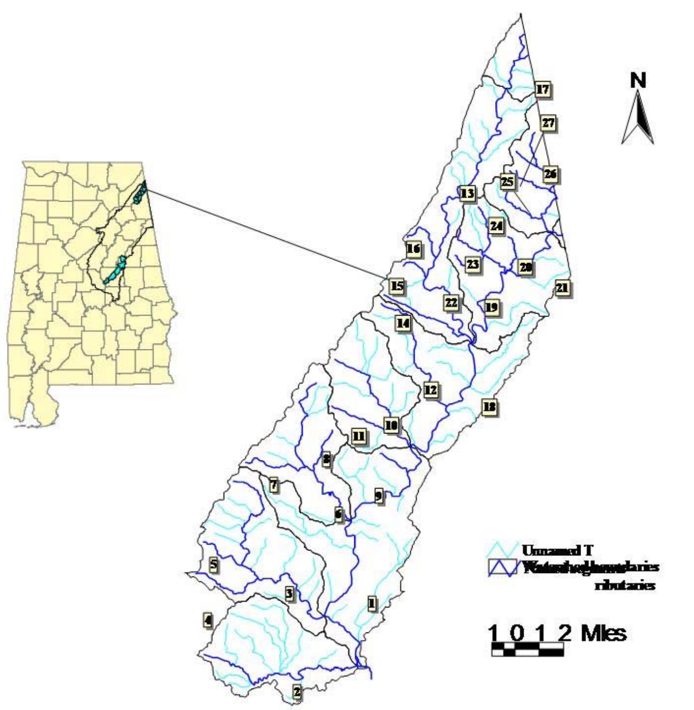


Table 1-6 Lake Martin – Treasured Alabama Lake

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Acres
1	Assessment Unit ID	Name	Downstream	Upstream	Classification	Size
2	AL03150109-0805-100	Tallapoosa River (Lake Martin)	Martin Dam	US Highway 280	S/F&W	15,867.11
3	AL03150109-0802-102	Tallapoosa River (Lake Martin)	US Highway 280	Hillabee Creek	PWS/S/F&W	1,973.85
4	AL03150109-0802-104	Tallapoosa River (Lake Martin)	Hillabee Creek	Irwin Shoals	S/F&W	343.41
5	AL03150109-0504-111	Sandy Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	2,390.93
6	AL03150109-0802-311	Coley Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	54.29
7	AL03150109-0602-111	Blue Creek (Lake Martin)	Tallapoosa River	its source	S/F&W	5,495.14
8	AL03150109-0702-111	Oakachoy Creek (Lake Martin)	Kowaliga Creek	end of embayment	S/F&W	4,455.93
9	AL03150109-0703-201	Little Kowaliga Creek (Lake Martin)	Kowaliga Creek	end of embayment	PWS/S/F&W	2,634.38
10	AL03150109-0704-111	Kowaliga Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	5,602.95
11	AL03150109-0804-201	Manoy Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	618.88
12	AL03150109-0406-111	Hillabee Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	57.75
13	AL03150109-0803-111	Elkahatchee Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	511.41
	AL03150109-0803-301	Sugar Creek (Lake Martin)	Elkahatchee Creek	end of embayment	S/F&W	58.93
					Total Acres	40,064.96

Table 1-7 Little River and Tributaries (ONRW)

#	Assessment Unit #	Name	Downstream	Upstream	Use classification	Miles
1	AL03150105-0806-100	Little River	Coosa River	its source	PWS/S/F&W (ONRW)	22.19
2	AL03150105-0805-100	Wolf Creek	Little River	its source	PWS/S/F&W (ONRW)	9.51
3	AL03150105-0804-100	Johnnies Creek	Little River	its source	PWS/S/F&W (ONRW)	11.63
4	AL03150105-0804-200	Camprock Creek	Johnnies Creek	its source	PWS/S/F&W (ONRW)	3.40
5	AL03150105-0804-300	Dry Creek	Johnnies Creek	its source	PWS/S/F&W (ONRW)	2.37
6	AL03150105-0803-100	Bear Creek	Little River	its source	PWS/S/F&W (ONRW)	8.67
7	AL03150105-0803-300	Hicks Creek	Bear Creek	its source	PWS/S/F&W (ONRW)	3.42
8	AL03150105-0803-200	Falls Branch	Bear Creek	its source	PWS/S/F&W (ONRW)	2.47
9	AL03150105-0806-200	Brooks Branch	Little River	its source	PWS/S/F&W (ONRW)	1.68
10	AL03150105-0801-100	Yellow Creek	Little River	its source	PWS/S/F&W (ONRW)	7.06
11	AL03150105-0801-200	Straight Creek	Yellow Creek	its source	PWS/S/F&W (ONRW)	3.03
12	AL03150105-0802-200	Hurricane Creek	Little River	its source	PWS/S/F&W (ONRW)	6.67
13	AL03150105-0705-100	West Fork Little River	Little River	AL-GA state line	PWS/S/F&W (ONRW)	18.87
14	AL03150105-0705-200	Straight Creek	West Fork of Little River	its source	PWS/S/F&W (ONRW)	4.45
15	AL03150105-0705-300	Sharp Branch	West Fork of Little River	its source	PWS/S/F&W (ONRW)	1.39
16	AL03150105-0705-400	Seymour Branch	West Fork of Little River	its source	PWS/S/F&W (ONRW)	2.48
17	AL03150105-0703-201	East Fork West Fork Little River	West Fork of Little River	AL-GA state line	PWS/S/F&W (ONRW)	0.47
18	AL03150105-0704-100	East Fork Little River	Little River	AL-GA state line	PWS/S/F&W (ONRW)	9.55
19	AL03150105-0704-200	Laurel Creek	East Fork of Little River	its source	PWS/S/F&W (ONRW)	3.97
20	AL03150105-0704-300	Gilbert Branch	East Fork of Little River	its source	PWS/S/F&W (ONRW)	1.83
21	AL03150105-0702-101	Middle Fork Little River	East Fork of Little River	AL-GA state line	PWS/S/F&W (ONRW)	2.44
22	AL03150105-0704-400	Shrader Branch	Laurel Creek	its source	PWS/S/F&W (ONRW)	1.95
23	AL03150105-0705-500	Armstrong Branch	Laurel Creek	its source	PWS/S/F&W (ONRW)	1.75
24	AL03150105-0702-200	Brush Creek	Middle Fork of Little River	its source	PWS/S/F&W (ONRW)	3.04
25	AL03150105-0702-300	Anna Branch	Middle Fork of Little River	its source	PWS/S/F&W (ONRW)	2.18
26	AL03150105-0702-400	Blalock Branch	Anna Branch	its source	PWS/S/F&W (ONRW)	3.46
27	AL03150105-0702-500	Stillhouse Branch	Blalock Branch	its source	PWS/S/F&W (ONRW)	1.09
		Unnamed Tributaries				277.20
					Total Miles:	418.22

Figure 1-8 Magnolia River - Outstanding Alabama Water

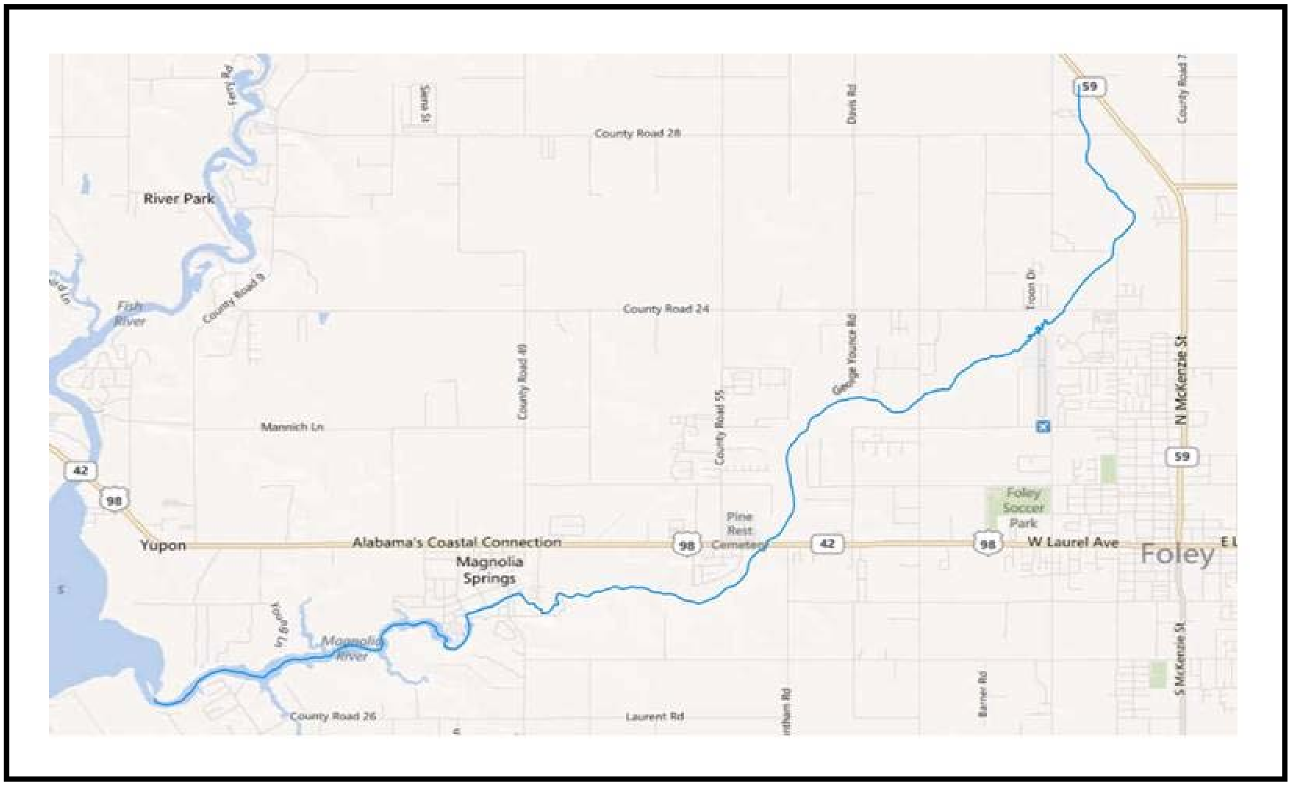


Table 1-8 Magnolia River - Outstanding Alabama Water

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
1	AL03160205-0203-110	Magnolia River	Weeks Bay	its source	OAW/S/F&W	12.41
					Total Square Miles:	12.41

Figure 1-9 Tensaw River - Outstanding Alabama Water and Weeks Bay (ONRW)

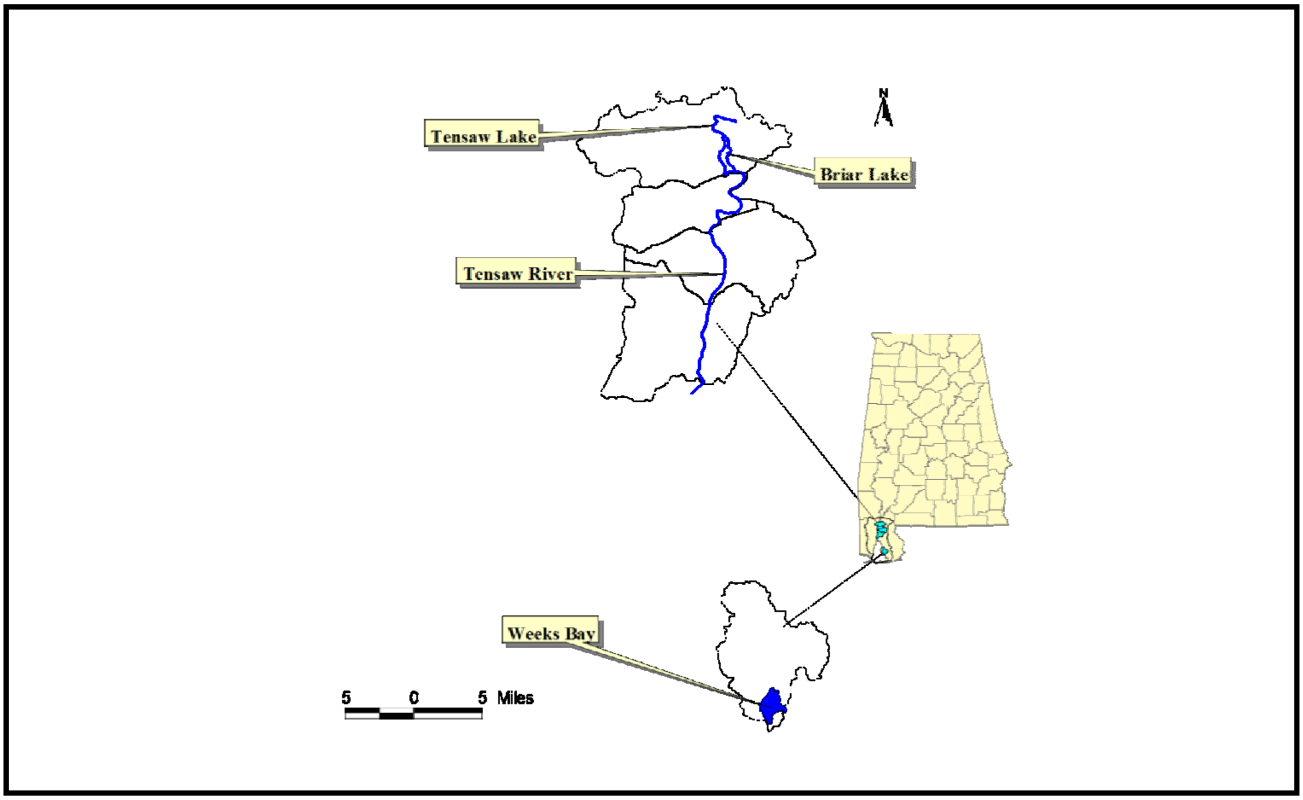


Table 1-9 Tensaw River - Outstanding Alabama Water and Weeks Bay (ONRW)

Tensaw River and Tributaries						
#	**Assessment Unit #**	**Name**	**Downstream**	**Upstream**	**Use Classification**	**Miles**
1	AL03160204-0505-202	Tensaw River	Junction of Tensaw and Apalachee Rivers	Junction of Briar Lake	OAW/S/F&W	21.73
2	AL03160204-0106-302	Tensaw River	Junction of Briar Lake	Junction of Tensaw Lake	OAW/F&W	2.93
					Total Miles	24.66
#	**Assessment Unit #**	**Name**	**From**	**To**	**Use Classification**	**Acres**
3	AL03160204-0106-400	Briar Lake	Junction of Tensaw River	Junction of Tensaw Lake	OAW/F&W	169.36
4	AL03160204-0106-500	Tensaw Lake	Junction of Tensaw River	Bryant Landing	OAW/F&W	436.74
					Total Acres	655.42
Weeks Bay						
#	**Assessment Unit #**	**Name**	**From**	**To**	**Use Classification**	**Square Miles**
1	AL03160205-0204-101	Weeks Bay	Bon Secour Bay	Fish River	S/F&W (ONRW)	3.04
					Total Square Miles:	2.70

Figure 1-10 Sipsey Fork and Tributaries (ONRW)

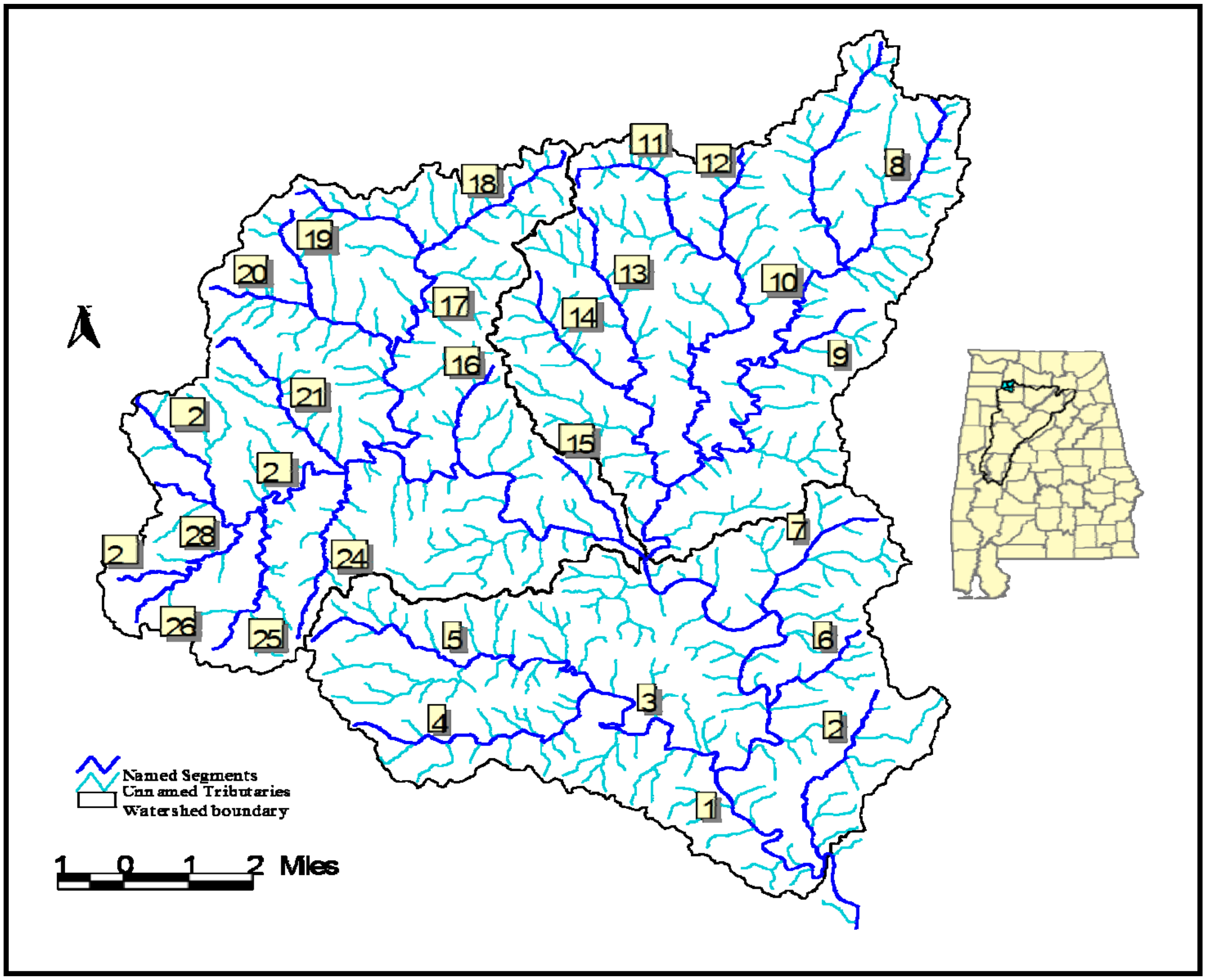


Table 1-10 Sipsey Fork and Tributaries (ONRW)

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
1	AL03160110-0104-103	Sipsey Fork	Sandy Creek	its source	F&W (ONRW)	21.23
2	AL03160110-0101-100	Borden Creek	Sipsey Fork	its source	F&W (ONRW)	16.61
3	AL03160110-0101-200	Braziel Creek	Borden Creek	its source	F&W (ONRW)	5.69
4	AL03160110-0101-300	Flannagin Creek	Borden Creek	its source	F&W (ONRW)	9.99
5	AL03160110-0101-400	Horse Creek	Borden Creek	its source	F&W (ONRW)	1.76
6	AL03160110-0101-500	Montgomery Creek	Borden Creek	its source	F&W (ONRW)	3.99
7	AL03160110-0101-600	Hagood Creek	Braziel Creek	its source	F&W (ONRW)	4.23
8	AL03160110-0101-700	Dry Creek	Flannagin Creek	its source	F&W (ONRW)	2.17
9	AL03160110-0102-110	Parker Branch	Hubbard Creek	its source	F&W (ONRW)	3.82
10	AL03160110-0102-120	Whitman Creek	Hubbard Creek	its source	F&W (ONRW)	3.73
11	AL03160110-0102-130	Maxwell Creek	Hubbard Creek	its source	F&W (ONRW)	2.02
12	AL03160110-0102-140	Basin Creek	Hubbard Creek	its source	F&W (ONRW)	2.81
13	AL03160110-0102-150	Dunn Branch	Maxwell Creek	its source	F&W (ONRW)	1.33
14	AL03160110-0102-160	Natural Well Branch	Maxwell Creek	its source	F&W (ONRW)	1.45
15	AL03160110-0102-170	White Oak Branch	Thompson Creek	its source	F&W (ONRW)	1.69
16	AL03160110-0102-180	Wolf Pen Branch	Sipsey Fork	its source	F&W (ONRW)	1.00
17	AL03160110-0102-190	Ugly Creek	Sipsey Fork	its source	F&W (ONRW)	3.05
18	AL03160110-0102-200	Fall Creek	Sipsey Fork	its source	F&W (ONRW)	2.06
19	AL03160110-0102-300	Bee Branch	Sipsey Fork	its source	F&W (ONRW)	2.09
20	AL03160110-0102-400	Thompson Creek	Sipsey Fork	its source	F&W (ONRW)	8.59
21	AL03160110-0102-500	Hubbard Creek	Sipsey Fork	its source	F&W (ONRW)	6.59
22	AL03160110-0102-600	Tedford Creek	Thompson Creek	its source	F&W (ONRW)	3.68
23	AL03160110-0102-700	Mattox Creek	Thompson Creek	its source	F&W (ONRW)	3.26
24	AL03160110-0102-800	Ross Branch	Tedford Creek	its source	F&W (ONRW)	2.06
25	AL03160110-0102-900	Quillan Creek	Hubbard Creek	its source	F&W (ONRW)	3.77
26	AL03160110-0103-200	Payne Creek	Sipsey Fork	its source	F&W (ONRW)	3.89
27	AL03160110-0103-300	Caney Creek	Sipsey Fork	its source	F&W (ONRW)	4.66
28	AL03160110-0103-400	Hurricane Creek	Sipsey Fork	its source	F&W (ONRW)	2.29
29	AL03160110-0103-500	Davis Creek	Sipsey Fork	its source	F&W (ONRW)	2.83
30	AL03160110-0103-600	North Fork Caney Creek	Caney Creek	its source	F&W (ONRW)	6.38
31	AL03160110-0103-700	South Fork Caney Creek	Caney Creek	its source	F&W (ONRW)	5.04
32	AL03160110-0103-800	Lloyds Creek	Sipsey Fork	its source	F&W (ONRW)	1.11
33	AL03160110-0103-900	Sweetwater Creek	Caney Creek	its source	F&W (ONRW)	1.23
		Unnamed Tributaries				240.37
					Total Miles:	386.47

Figure 1-11 Estil Fork and Hurricane Creek - Outstanding Alabama Water

Table 1-11 Estil Fork and Hurricance Creek - Outstanding Alabama Water

Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
AL06030002-0101-100	Hurricane Creek	AL-TN state line	Paint Rock River	OAW/F&W	10.89
AL06030002-0103-200	Estil Fork	AL-TN state line	Paint Rock River	OAW/F&W	8.00
				Total Square Miles:	18.89

Figure 1-12 Shoal Creek - Outstanding Alabama Water

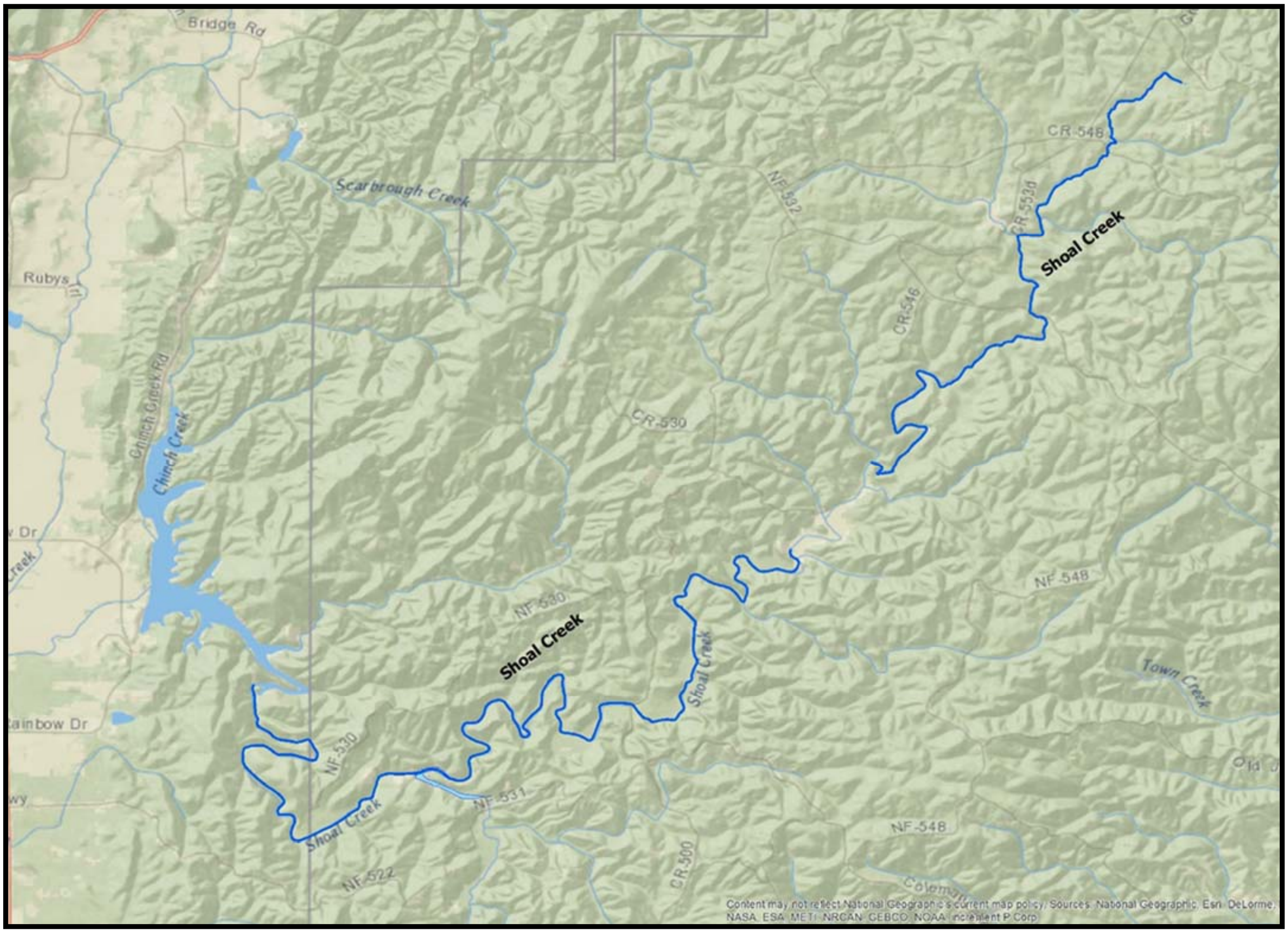


Table 1-12 Shoal Creek - Outstanding Alabama Water

Assessment Unit #	Name	Downstream	Upstream	Use Classification	Size	Type
AL03150106-0501-103	Shoal Creek	Whitesides Mill Lake	Highrock Lake	OAW/S/F&W	3.45	miles
AL03150106-0501-104	Shoal Creek (Highrock Lake)	Highrock Lake		OAW/S/F&W	13.95	acres
AL03150106-0501-105	Shoal Creek	Highrock Lake	Sweetwater Lake	OAW/S/F&W	6.31	miles
AL03150106-0501-107	Shoal Creek	Sweetwater Lake	its source	OAW/S/F&W	5.71	miles
				Total Miles:	15.47	miles
				Total Acres:	13.95	acres

Chapter 2 Rivers and Streams

2.1 Wadeable Rivers and Streams Monitoring Program (RSMP)

ADEM's monitoring strategy is designed to characterize water quality, to identify impacts from a variety of sources, and to provide a systematic and integrated framework for gathering necessary information to support the decision-making process. It is implemented on a 5-year cycle and incorporates specific protocols and methodologies to ensure that monitoring activities provide the highest quality information and make the most efficient use of available resources. See Alabama's 2015 Monitoring Strategy document for a more detailed description of the program.

2.1.2 Objectives

The objectives of ADEM's Wadeable Rivers and Streams Program are to provide data:

- Develop, adopt, or revise water quality standards;
- Determine water quality standards attainment;
- Identify the causes and sources of impairment;
- Identify high quality waters;
- Estimate water quality trends;
- Evaluate program effectiveness;
- Support management decisions; and,
- Estimate overall water quality.

2.1.3 Monitoring Strategy

The RSMP assesses the chemical, physical, and biological conditions of non-navigable, flowing waters throughout the state. It is a watershed-based monitoring program designed to provide data that links watershed condition and assessment results. A Watershed Disturbance Gradient (WDG), based on landuse and other factors, is used to classify each potential monitoring location by the level of disturbance within its watershed. The RSMP uses this information to plan biological monitoring activities along a full disturbance gradient to produce a dataset representing both the full stressor gradient and the full biological condition gradient. A primary goal of this monitoring design was to provide stressor-response data that can be used to develop criteria and indicators.

2.1.4 Monitoring Design

Site Selection

The RSMP incorporates a combination of long-term, fixed network sites, targeted sites, and monitoring units to meet state monitoring goals and objectives:

- The ADEM maintains a network of long-term, fixed ambient trend monitoring stations as part of the RSMP, RRMP, and CWMP. They are permanent monitoring locations established to identify long-term trends in water quality and develop TMDLS and water quality standards. The details of this network are fully described in Section 2.3. In addition, the ADEM has also established a network of fixed monitoring locations at Ecoregional "reference" reaches for comparison with other similar waterbodies statewide. See Section 2.2 for further details.

- The ADEM maintains a network of monitoring units (MUs) to estimate overall water quality within its coastal area and wadeable rivers and streams. The ADEM defines a WFMU as the watershed directly upstream of the downstream-most, accessible, and completely wadeable 300-ft reach. All stream reaches meeting these requirements are delineated using the 2010 12-digit hydrologic unit codes (HUCs), National Hydrography Dataset (NHD), and the National Elevation Dataset (NEDs). Statewide, approximately 1,070 WFMUs have been delineated. They are classified by Watershed Disturbance Gradient (WDG), and ecoregion. A subset of each of these networks is sampled to reflect overall water quality conditions.

- Targeted sites are also incorporated into the RSMP. They support the ADEM 2015-2019 monitoring strategy priorities, and are selected by ADEM's Water Quality Branch, Nonpoint Source Program, Field Operations Division, and other local, state, and federal agencies and stakeholders. This monitoring provides data for use support and assessment, TMDL development, program evaluations, use attainability analyses, or education and outreach. These sites are monitored on a short-term basis, generally one to five years.

The RSMP uses the WDG to classify each site by its potential level of disturbance within its watershed. With this information, the RSMP provides an estimate of overall water quality throughout the basin. Additionally, by ensuring that the entire gradient of watershed conditions within the basin group is sampled, the monitoring strategy increases ADEM's monitoring capacity by providing data to develop indicators and criteria appropriate for wadeable rivers and streams statewide. Because the WDG provides disturbance and landuse information for all stations assessed within the basin group, it enables ADEM to document the "least-impaired" landuse characteristics to set criteria for reference reach status in each Ecoregion or Bioregion. It also assists ADEM in stressor identification and causal analysis for §303(d) listing and TMDL development.

Sampling Protocols

One of the key aspects of ADEM's Monitoring Strategy is to define a given monitoring location as either wadeable or nonwadeable. This is important because the minimum data requirements for Alabama's Assessment and Listing Methodology vary based on waterbody type and availability. The RSMP incorporates four specific protocols to ensure that monitoring activities provide the highest quality information and make the most efficient use of available resources. The four protocols are used in waters ≤10 feet in depth.

Indicator selection and sampling frequency: Core indicators and sampling frequency are selected to meet minimum data requirements as outlined in Alabama's Listing and Assessment

Methodology so that the majority of waterbodies monitored can be categorized in Alabama's Integrated Report and listing/delisting decisions can be made to prioritize sites for §319 funding and BMP implementation.

Monitoring Units: As recommended in the Integrated Water Quality Monitoring and Assessment Guidance, ADEM delineated the wadeable, flowing portions of the 2004 12-digit hydrologic unit codes (HUCs) into smaller monitoring units (MUs) that represent true watersheds. This system limits the variability in drainage area and waterbody type associated with the 12-digit HUCs. Since 2005, a total of 978 wadeable, flowing MUs have been delineated in the ACT (342), the EMT (128), the BWC (179), the TN (121), and the SEAL (208) basin groups.

Watershed Disturbance Gradient: Monitoring watersheds in proportion to an environmental index or Watershed Disturbance Gradient (WDG) can limit error or bias associated with targeted sampling, a weakness of *ASSESS* identified during the review of the first monitoring cycle. The use of an WDG has also been recommended by the EPA to develop Tiered Aquatic Life Uses, to correlate suspected stressors to known levels of impairment, and consequently improve the overall assessment of water quality. Sampling MUs with relatively low and high potentials of impairment also provides a method of identifying the least- and most-impaired sites in support of the Ecoregional Reference Reach and §303(d) Monitoring Programs.

The Landscape Development Intensity Index (LDI) or disturbance gradient, used by the Florida Department of Environmental Protection, relates water quality conditions (physical, chemical, and biological) to human activity within a watershed (Fore 2004), using landuse data and a development-intensity measure derived from energy use per unit area (Brown and Vivas 2004). The Florida LDI was applied to the ACT flowing, wadeable MUs using the 2011 USEPA National Landcover dataset (NLCD), Departmental permit databases, population estimates, and the number of road crossings to place each MU into one of 8 Watershed Disturbance Gradient (WDG) categories (1=least potential for disturbance and 8=greatest potential for disturbance).

Watershed and Reach Selection: Monitoring sites are selected by ADEM's five basin teams to meet ADEM's monitoring objectives, and focus on the 2015-2019 program priorities. Priorities identified by the Department include monitoring impaired, unimpaired, and un-assessed waters, evaluating the effectiveness of restoration efforts, and collaborating with partner agencies and stakeholders when possible.

2.1.5 Core and Supplemental Indicators

Core indicators and sampling frequency were selected to meet data requirements as outlined in Alabama's Consolidated Assessment and Listing Methodology (CALM) so that the majority of waterbodies monitored each year can be categorized in Alabama's Integrated Report. The Ambient Monitoring Program was designed to provide the required data over the five year monitoring cycle. Sampling frequency and indicators collected at these sites differ from the other wadeable rivers and streams programs.

2.1.6 Data Analysis and Assessment

All Alabama waters are assigned to one or more designated uses. Attainment of water quality standards is determined by comparing collected data to both the numeric and narrative criteria established for its highest use classification. These data include physical, chemical, and biological data. The data are used to place each monitored location into one of five categories, with category 1 "Fully Supporting" all use classification criteria and category 5 "Not Supporting" one or more use classification criteria. In addition, this same process is used during Use Attainability Analyses to help determine the highest use classification that a waterbody can be reasonably expected to achieve.

Monitoring is conducted to assess attainment of water quality standards within specific waterbodies or waterbody segments. The RSMP is designed to complement Alabama's CALM, so that the sampling routinely conducted at each site meets or exceeds the minimum data required to fully assess each monitoring location, generally within one year of sampling.

In addition, the development of indicators and assessment criteria was a primary objective of ADEM's 2005 and 2012 Monitoring Strategies. Therefore, a very significant part of Monitoring Strategy is to link results from chemical, physical, and biological indicator sampling to conditions throughout each stream's watershed. These analyses include but are not limited to:

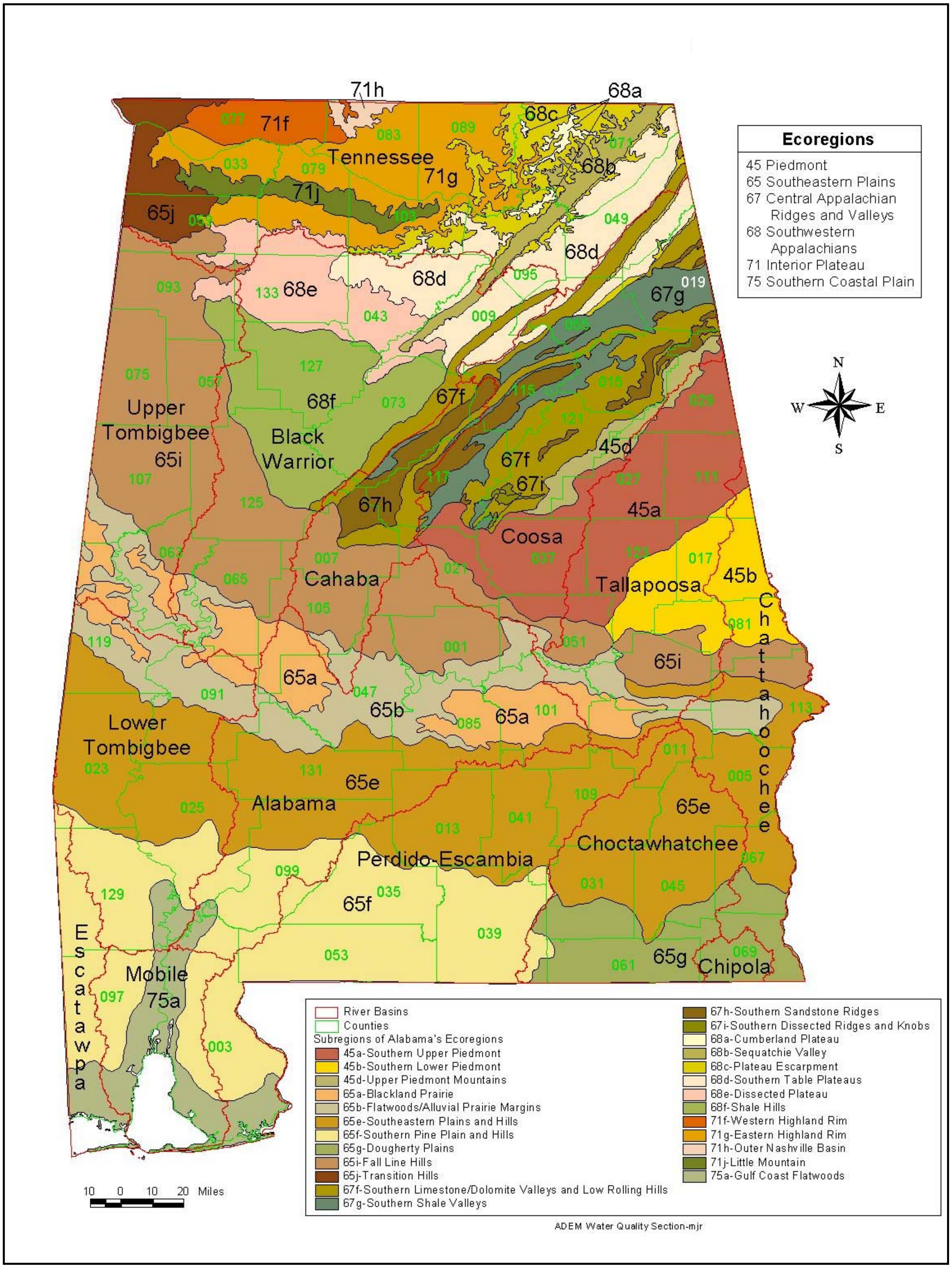
- Development of stream classification (bioregions) based on biological community data;
- Development of indicators, criteria, and assessment indices based on correlations among chemical, physical, and biological indicators, and watershed conditions;
- Methods analysis, including optimal sampling frequencies, timing and number of samples collected, and redundancy among parameters; and,
- Calculation of method performance characteristics based on duplicate samples, samples collected at reference sites, and known levels of watershed disturbance.

2.1.7 Reporting

Results of data analysis will be compiled and documented in a Methods Development Document. All necessary changes to sampling methods, protocols, and assessment indices and criteria will be incorporated into the next revision of the appropriate standard operating procedures manual and the Alabama Listing and Assessment Methodology document.

RSMP data is used to categorize and report water quality status in Alabama's Integrated Assessment Report. Biological assessment results are also documented in ADEM's RSMP Monitoring Summary Reports. These documents are generally completed within two years of data collection, and summarize data and assessment results on the basis of watershed or monitoring unit. They are available by year at: http://www.adem.alabama.gov/programs/water/wqsurvey.cnt.

Figure 2-1 Subregions of Alabama's Ecoregions



2.1.8 Programmatic Evaluation

An important component of ADEM's Monitoring Strategy is a thorough review of data and assessment results from ADEM's five year monitoring cycle to address program weaknesses and changing data needs. Extensive program evaluations were conducted in 2014, in preparation for the 2015-2019 monitoring cycle. Annual status reports on methods development are completed and provided to USEPA Region 4 to document interim progress during the monitoring cycle.

For more information on the Wadeable Rivers and Streams Monitoring Program contact Ms. Lisa Huff in ADEM's Montgomery Office at (334) 260-2752 or esh@adem.alabama.gov.

2.2 Ecoregions

Innate regional differences exist in climate, landform, soil, natural vegetation, and hydrology. These factors, in turn, affect nutrient regime, substrate characteristics, and the composition of biological communities within aquatic ecosystems. By defining relatively homogeneous ecological areas, ecoregions provide a geographic framework for more efficient management of aquatic ecosystems and their components (Hughes 1985, Hughes et al. 1986, and Hughes and Larsen 1988). The USEPA has recommended the development of ecoregional reference conditions as a scientifically defensible method of defining expected habitat, biotic, and chemical conditions within streams, rivers, reservoirs, and wetlands. Level IV ecoregions have been developed or are under development in 37 states nationwide. Griffith et al. (2001) delineated six Level III ecoregions in Alabama: Piedmont, Southeastern Plains, Ridge and Valley, Southwestern Appalachians, Interior Plateau, and the Southern Coastal Plain. Within these, they delineated 29 Level IV ecoregions. Figure 2-1 shows Subregions of Alabama's Ecoregions.

ADEM uses ecoregions as an a priori classification of streams to assist in the development of a dataset representative of wadeable, flowing streams statewide. Since 1991, ADEM has selected and monitored least-impaired reference sites within each sub-ecoregion to be representative of "best attainable" conditions within that subecoregion, both for comparison with other streams and for the development of biological, physical, and chemical reference conditions (ADEM 2000b).

2.2.1 ADEM's Ecoregional Reference Reach Project: 1991-2004

Specific selection criteria were used to ensure that reference reaches were typical of the subecoregion and relatively unimpaired. Watersheds containing the highest percentage of natural vegetation were first located using topographic maps and land use information compiled by USEPA and local Soil and Water Conservation Districts. Departmental databases were used to ensure that potential reference watersheds did not contain any point source discharges, mining, or urban runoff, and minimal agricultural sources. Field reconnaissance was then conducted to ground truth land use estimates. In situ field parameters were collected and visual macroinvertebrate surveys were conducted to screen for obvious impacts to chemical and biological conditions. Substrate composition, gradient, canopy cover, sinuosity, and habitat quality and availability were estimated to assess stream condition and comparability to other streams in the subecoregion. Intensive site assessments were then conducted to verify that the reaches were in relatively good condition.

From 1991-1995, the Ecoregional Reference Reach Project was conducted annually, statewide by ecoregion. In 1996, the ADEM went to a 5-year basin rotation. Reference reaches and candidate reference reaches were sampled within the target basin, or as needed to support specific projects. Through this process, a total of 594 locations were investigated as potential reference reaches statewide. Sixty-five ecoregional reference reaches were established statewide. Data from these sites were used to develop assessment guidelines for ADEM's habitat assessments, screening-level macroinvertebrate assessments, and chemical parameters, including nutrient concentrations for 10 of the 29 subecoregions.

2.2.2 ADEM's Ecoregional Reference Reach Project: 2005-2014

In 2005, ADEM used its WDG and Departmental databases to identify candidate reference reaches in least-disturbed watersheds. Habitat and biological assessments (macroinvertebrates, fish, and periphyton), and monthly water quality data are used to verify that the sites are representative of least-impaired conditions within a subecoregion. Between 2005 and 2014, two hundred and sixty-nine locations were identified as candidate reference reaches. Although the project concentrated on wadeable streams and rivers, for which the USEPA and ADEM have developed rapid bioassessment protocols (Plafkin et al. 1989, Barbour et al. 1999, ADEM 1996, ADEM 1999, ADEM in press), large river ecoregional reference reaches have been established on Sipsey Fork and Hatchet Creek to assess specific impacts to Locust Fork, Mulberry Fork, and the Cahaba River.

In 2008, data from established ecoregional reference reaches were used to define macroinvertebrate site classes, and update reference guidelines for ADEM's habitat assessments and macroinvertebrate assessments, and chemical parameters. In 2010, guidelines for chemical parameters were revised using additional data.

In 2012, watershed information from 1,292 sites were used to identify candidate ecoregional reference reaches statewide. Sites were classified by level 4 ecoregion and stream size (<5 square miles, 5-75 square miles, >75<1,000 square miles). For each site class, sites in the top 25th percentile of watershed condition based on ADEM's WDG scores were selected as candidate reference reaches.

Data collected at each candidate reference reach, including habitat assessment information, reach and watershed characteristics and observations, and the absence of permitted discharges within the watershed were used to validate reference reach status. Water quality data were used as a tertiary filter to exclude sites that may be impacted by unknown sources. Google Earth was also used to evaluate disturbances not reflected in the WDG score (silviculture, poultry, etc.). For sites >5 square miles, all watersheds within the lowest WDG category were selected as candidate reference reaches if at least five sites meeting this criterion could not be identified.

For more information on Alabama's Ecoregions, contact Ms. Lisa Huff in ADEM's Montgomery Office at (334) 260-2752 or esh@adem.state.al.us

2.3 Trend Stations

The purpose of Alabama's trend station network is to gather surface water data at specific locations so that long-term trends in water quality can be identified. In addition, data gathered at these locations are helpful in water quality management decisions related to NPDES permitting and the development of TMDLs, water quality standards, and water quality assessment for the Department's Integrated Water Quality Assessment Report. These data will also be useful in development of nutrient and sediment water quality criteria in mid- and large-river systems for which ecoregional reference reaches are difficult to establish.

One hundred and nine ambient monitoring stations were established statewide (Appendix E), but due to recent monitoring changes, there are now ninety-nine established ambient monitoring stations. To provide overall coverage throughout the state, the selected stations are distributed relatively evenly throughout each of Alabama's 14 major drainage basins. The stations also represent a range in watershed size and water quality. Over half (57) of these reaches were established at USGS gauging stations to provide continuous flow data that can be used to develop pollutant loading models. Sampling is conducted to meet the requirements of ADEM's Listing and Assessment Methodology over a five year monitoring cycle..

An important aspect of ADEM's Listing and Assessment Methodology is that the monitoring, assessment, and listing methodologies differ between wadeable and nonwadeable waterbodies, as well as between freshwater and estuarine waterbodies. Fifty-one wadeable and fifty-eight nonwadeable sampling reaches are monitored statewide; 23 of these monitoring locations are estuarine.

Monthly (January-December) sampling is conducted at twenty-four stations where data are limited, where additional data are needed for TMDL development, or to monitor water quality conditions as they come into or leave the State. Sampling three times during the growing season was selected as the minimum sampling frequency that would provide data representative of a water body under critical conditions and provide the minimum data needed for categorizing waterbodies in Alabama's Integrated Assessment Report. To increase the number of stations that can be monitored and to level out field and laboratory resource needs, forty-four locations are sampled June/August/October, and thirty-seven stations are sampled May/July/September. In 2016, March through October sampling was implemented in estuarine waters to support the development of nutrient criteria. A list of water quality survey reports can be found at: http://adem.alabama.gov/programs/water/wqsurvey.cnt

For more information on Alabama's Trend Monitoring Sites, contact Chris Johnson ((334)-271-7827 or CLJohnson@adem.state.al.us) or David Thompson ((334) 271-7958 or dwt@adem.state.al.us) in ADEM's Montgomery Office.

2.4 Summaries of Designated Use Support for Rivers /Streams

Table 2-1 and Table 2-2 show the Size of Rivers and Streams Impaired by causes and sources respectively. For more information about Designated Use Support contact Mr. John Pate in ADEM's Montgomery Office at (334) 270-5662 or jtp@adem.state.al.us

Table 2-1 Size of Rivers and Streams Impaired by Causes

	Category 5	Category 4
Cause	River/Stream (miles)	River/Stream (miles)
Flow Alterations		
Habitat alteration	4.41	
Metals		
Aluminum		50.10
Arsenic	19.56	
Chromium	4.23	
Copper		7.96
Cyanide	12.43	44.55
Iron	3.62	45.99
Lead	9.02	3.30
Mercury	690.67	
Zinc		57.15
Mineralization		
Total dissolved solids	64.07	
Turbidity	32.02	31.50
Nutrients		
Ammonia		213.24
Nitrogen		171.48
Phosphorus	92.96	420.98
Oxygen depletion		
BOD, carbonaceous	96.14	644.01
BOD, nitrogenous	96.14	426.40
Dissolved oxygen (low)		33.47
Pathogens		
Escherichia coli	1602.74	292.82
Fecal coliform (legacy pollutant)		578.89
Enterococcus bacteria		50.72
Pesticides		
Atrazine		23.42
Chloripyrifos		23.42
DDT		13.04
Dieldrin	24.29	
Endosulfan		48.17
Methyl Parathion		48.17
pH		
pH	6.36	21.64
Sedimentation		
Siltation	576.64	334.63
Total suspended solids		106.47
Toxic Organics		
Benzo(a)pyrene (PAHs)		44.55
Polychlorinated biphenyls (PCBs)	35.40	
Unknown		
Unknown toxicity	11.08	

Table 2-2 Size of Rivers and Streams Impaired by Sources

	Category 5	Category 4
Sources outside state	River/Stream (miles)	River/Stream (miles)
Agriculture	314.61	320.18
Animal feeding operations	785.99	246.66
Aquaculture	69.91	
Atmospheric deposition	672.44	
Channelization	4.41	
Collection system failure	412.23	117.60
Contaminated sediments	43.36	13.04
Dam construction		33.47
Flow regulation/modification		50.10
Highway/Road/Bridge construction		56.38
Industrial	57.03	175.52
Land development	142.12	242.96
Landfills		42.28
Mill tailings		17.53
Mine tailings		17.53
Mining	11.86	
Municipal	215.68	340.70
Natural	16.05	
Non-irrigated crop production	82.07	189.17
On-site wastewater systems	50.19	44.58
Pasture grazing	1728.25	654.75
Riparian habitat loss		56.38
Sources outside state	31.60	30.78
Streambank modification	4.41	56.38
Surface mining	87.20	
Surface mining-abandoned	65.95	114.89
Unknown source	61.63	49.60
Urban development	46.54	
Urban runoff/storm sewers	135.48	603.69
Wet weather discharge	3.62	

2.5 Industrial River Monitoring

The Industrial River Monitoring Program is a water quality monitoring program with the participation of fifteen (15) facilities located within various river basins. The purpose of the river monitoring program is to inform ADEM of operational decisions at the facilities; and to assess the impact of a facility's discharge on the receiving streams water quality. Each facility's NPDES permit contains specific monitoring requirements which may include parameters such as pH, DO, Water Temperature, BOD_5, etc. Most of the facilities that collect this information are pulp and paper mills, although, other types of industries are included. Much of the sampling takes place during the months May through September when critical water quality conditions are anticipated. Table 2-3 and Figure 2-2 show industrial facilities that conduct river monitoring. Table 2-4 shows Industrial River Monitoring Ambient Dissolved Oxygen Summaries for 2015-2016.

For more information about Industrial River Monitoring, contact Ms. Carla Crews in ADEM's Water Division at (334) 271-7804 or crp@adem.alabama.gov

Figure 2-2 Industrial River Monitoring

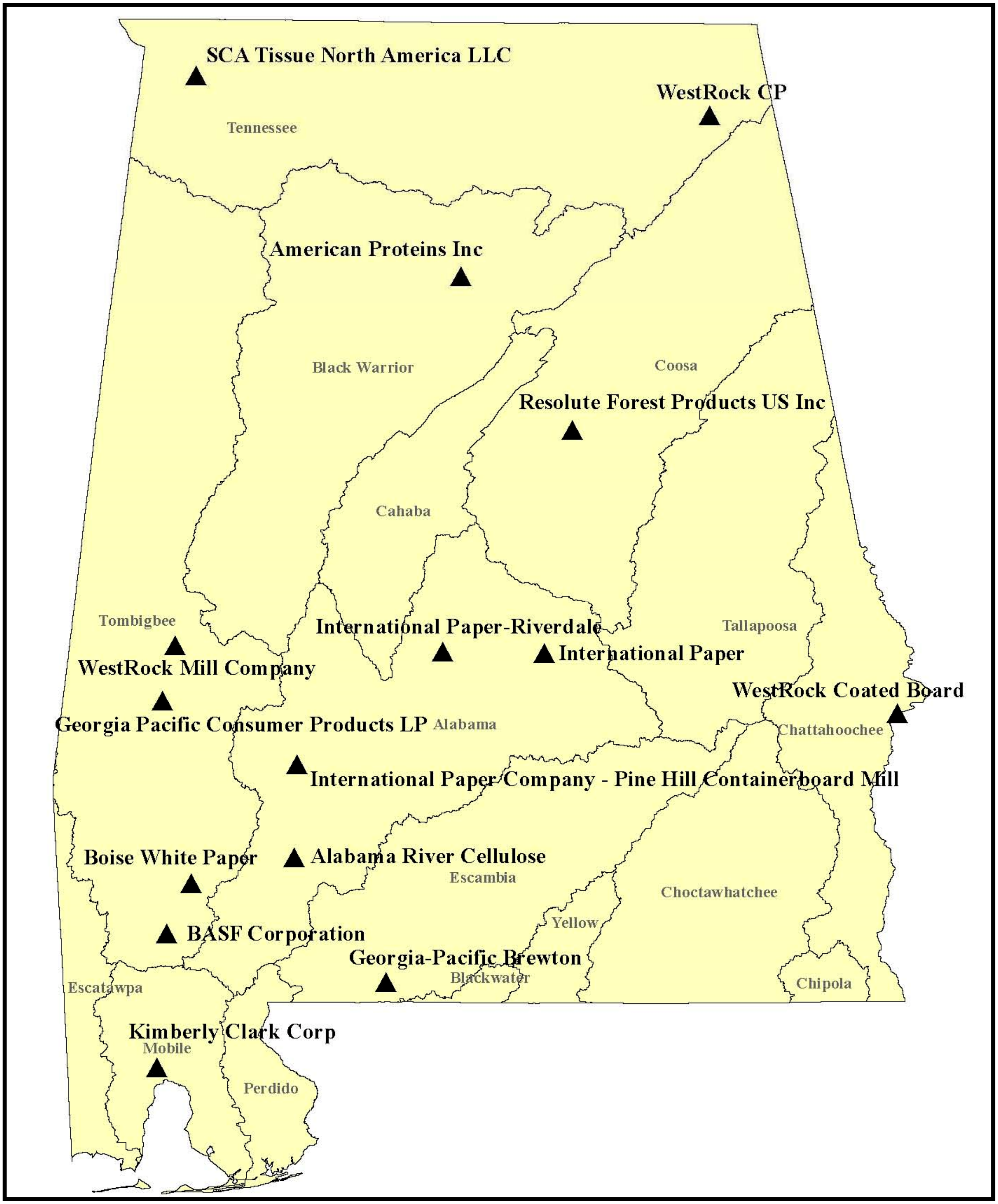


Table 2-3 Industrial River Monitoring

Facility Name	NPDES #	Facility Type	Parameters Sampled	Receiving Stream Name	Number of Stations	River Basin	City	County
Alabama River Cellulose Co., Inc.	AL0025968	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature and pH	Alabama River	5	Alabama	Claiborne	Monroe
American Protiens, Inc.	AL0040843	Rendering Plant	D.O. ,Stream Temperature, pH, Turbidity, Conductivity, TDS, TSS, Nitrate+Nitrite, TKN and Total Phosphorus	Mulberry Fork	3	Black Warrior	Hanceville	Cullman
BASF-The Chemical Company (Ciba Specialty Chemical)	AL0003093	Chemical Plant	Stream Temperature, pH, DO, Chloride,	Tombigbee River	6	Lower Tombigbee	McIntosh	Washington
Boise White Paper LLC	AL0002755	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature and pH	Tombigbee River	6	Lower Tombigbee	Jackson	Clarke
Georgia Pacific Corporation-Brewton Mill, Inc.	AL0002682	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature, Color and pH	Conecuh River	3	Perdido-Escambia	Brewton	Escambia
Georgia Pacific Corporation-Naheola Mill	AL0003301	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature and pH	Tombigbee River	2	Lower Tombigbee	Pennington	Choctaw
International Paper-Pine Hill Mill	AL0002674	Paper Mill	D.O. (at 5 foot depth), Stream Temperature and pH	Alabama River	8	Alabama	Pine Hill	Wilcox
International Paper- Prattville Mill	AL0003115	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature and pH	Alabama River	10	Alabama	Prattville	Autauga
International Paper-Riverdale Mill	AL0003018	Paper Mill	D.O. (at 5 foot depth)	Alabama River	8	Alabama	Selma	Dallas
Kimberly-Clark Corporation-Mobile Mill	AL0002801	Paper Mill	D.O. (at 5 foot depth), Conductivity, pH and Temperature (both ambient & stream)	Mobile River	5	Mobile	Mobile	Mobile
Resolute Forrest Products US, Inc. (Bowater Alabama, Inc.)	AL0003158	Paper Mill	D.O. (at 5 foot depth),Sample Time, Stream Temperature and pH	Coosa River	17	Coosa	Coosa Pines	Talladega
SCA Tissue NA LLC (Barton Operations)	AL0074667	Paper Mill	D.O. (at 5 foot depth), Stream Temperature and pH	Tennessee River	3	Tennessee	Cherokee	Colbert
WestRock Coated Board LLC-Mahrt Mill (non-continuous)	AL0000817	Paper Mill	D.O. (at 5 foot depth), Stream Temperature and pH	Chattahoochee River	12	Chattahoochee	Cottonton	Russell
WestRock Coated Board LLC-Mahrt Mill (continuous)	AL0000817	Paper Mill	D.O. (at 5 foot depth), Stream Temperature and pH	Chattahoochee River	4	Chattahoochee	Cottonton	Russell
WestRock Mill Company-Demopolis	AL0002828	Paper Mill	D.O. (at 5 foot depth), BOD5, Stream Temperature and pH	Tombigbee River	2	Lower Tombigbee	Demopolis	Marengo
WestRock Mill Company-Stevenson	AL0022314	Paper Mill	D.O. (at 5 foot depth), Stream Temperature and pH	Tennessee River	6	Tennessee	Stevenson	Jackson

Table 2-4 Industrial River Monitoring Ambient Dissolved Oxygen Summary 2015-2016

		2015					2016				
Facility Name	NPDES #	Total Samples	# of Samples < 5.0 mg/l	%DO < 5	# of Samples < 4.0 mg/l	%DO <4	Total-Samples	# of Samples < 5.0 mg/l	%DO < 5	# of Samples < 4.0 mg/l	%DO <4
Alabama River Cellulose LLC	AL0025968	477	0	0.00	0	0.00	155	0	0.00	0	0.00
American Proteins, Inc.	AL0040843	21	0	0.00	0	0.00	21	0	0.00	0	0.00
BASF-The Chemical Company	AL0003093	**	**	**	**	**	**	**	**	**	**
Boise White Paper LLC	AL0002755	136	0	0.00	0	0.00	124	0	0.00	0	0.00
Georgia Pacific Corporation-Brewton Mill, Inc.	AL0002682	156	0	0.00	0	0.00	156	0	0.00	0	0.00
Georgia Pacific Corporation-Naheola Mill	AL0003301	274	0	0.00	0	0.00	525	0	0.00	0	0.00
International Paper-Pine Hill Mill	AL0002674	257	0	0.00	0	0.00	366	3	0.82	0	0.00
International Paper- Prattville Mill	AL0003115	222	0	0.00	0	0.00	213	0	0.00	0	0.00
International Paper-Riverdale Mill	AL0003018	299	0	0.00	0	0.00	488	0	0.00	0	0.00
Kimberly-Clark Corporation-Mobile Mill	AL0002801	**	**	**	**	**	**	**	**	**	**
Resolute Forrest Products US, Inc. (Bowater)	AL0003158	238	45	18.91	18	7.56	255	48	18.82	11	4.31
SCA Tissue NA LLC (Barton Operations)	AL0074667	22	0	0.00	0	0.00	27	6	22.22	0	0.00
WestRock Coated Board LLC-Mahrt Mill (Continuous)	AL0000817	**	**	**	**	**	132	30	22.73	8	6.06
WestRock Mill Company-Demopolis	AL0002828	128	0	0.00	0	0.00	176	0	0.00	0	0.00
WestRock Mill Company-Stevenson	AL0022314	54	5	9.26	0	0.00	32	0	0.00	0	0.00

Table prepared with incomplete data received

**Data not reported

Chapter 3 Lakes and Reservoirs

3.1 Lake Water Quality Assessment

3.1.1 Background

Section 314 (a) (2) of the Clean Water Act, as amended by the Water Quality Act of 1987, requires states to conduct assessments of publicly-owned lake water quality and report the findings as part of the biennial §305(b) Water Quality Report to Congress. The assessment process is conducted through the use of federal and matching funding, including that available pursuant to Sections 106 and 319 of the Act.

The Department has defined publicly-owned lakes/reservoirs as those that are of a multiple-use nature, publicly accessible, and exhibit physical/chemical characteristics typical of impounded waters. Lakes designated strictly for public water supply, privately owned lakes, or lakes managed by the Alabama Department of Conservation and Natural Resources (ADCNR) strictly for fish production are not included in this definition. Lakes currently meeting the above definition are included in the tables that follow.

In 1985, the need for information on the trophic state of Alabama's publicly-owned lakes led to the initial survey, conducted by the ADEM with the assistance of the U.S. Environmental Protection Agency Region IV. During the survey, limited baseline data was collected and used to rank the lakes according to trophic condition.

In 1989, Clean Lakes Program funds enabled the ADEM to conduct required water quality assessments of thirty-four (34) publicly-owned lakes in the State and submit collected information as part of the 1990 Water Quality Report to Congress. Trophic state index (TSI) values calculated from data gathered for the water quality assessments indicated potentially significant increases when compared to the TSI values derived from the study conducted in 1985.

Initiated in 1990 as the Reservoir Water Quality Monitoring Program, the program was given the name Rivers and Reservoirs Monitoring Program (RRMP) in 2004 with the addition of free-flowing river reaches:
Objectives of the program are:

a. to develop an adequate water quality database for all rivers and publicly-accessible lakes in the state;
b. to establish trends in river and lake trophic status that are only established through long-term monitoring efforts; and,
c. to satisfy Section 314 (a) (2) of the Clean Water Act.

Acquiring this information enables the ADEM to determine lake water quality and identify lakes in which water quality may be deteriorating. Should deterioration in water quality be indicated by collected data, more intensive study of the lake can be instituted to establish the causes and extent of the deterioration.

From 1990-1992, thirty-one publicly-owned lakes in the State were monitored at least once. Lakes indicated to be use-threatened or impaired from previously collected data were monitored annually. Additional funding received in 1991 through the Clean Lakes Program allowed the expansion of the Program to include all of the thirty-three (33) publicly-owned lakes in the State, with the exception of the eight reservoirs in the Tennessee River system. These reservoirs are monitored through the TVA Reservoir Vital Signs Program. Figure 3-1 shows Publicly Accessible Reservoirs of Alabama.

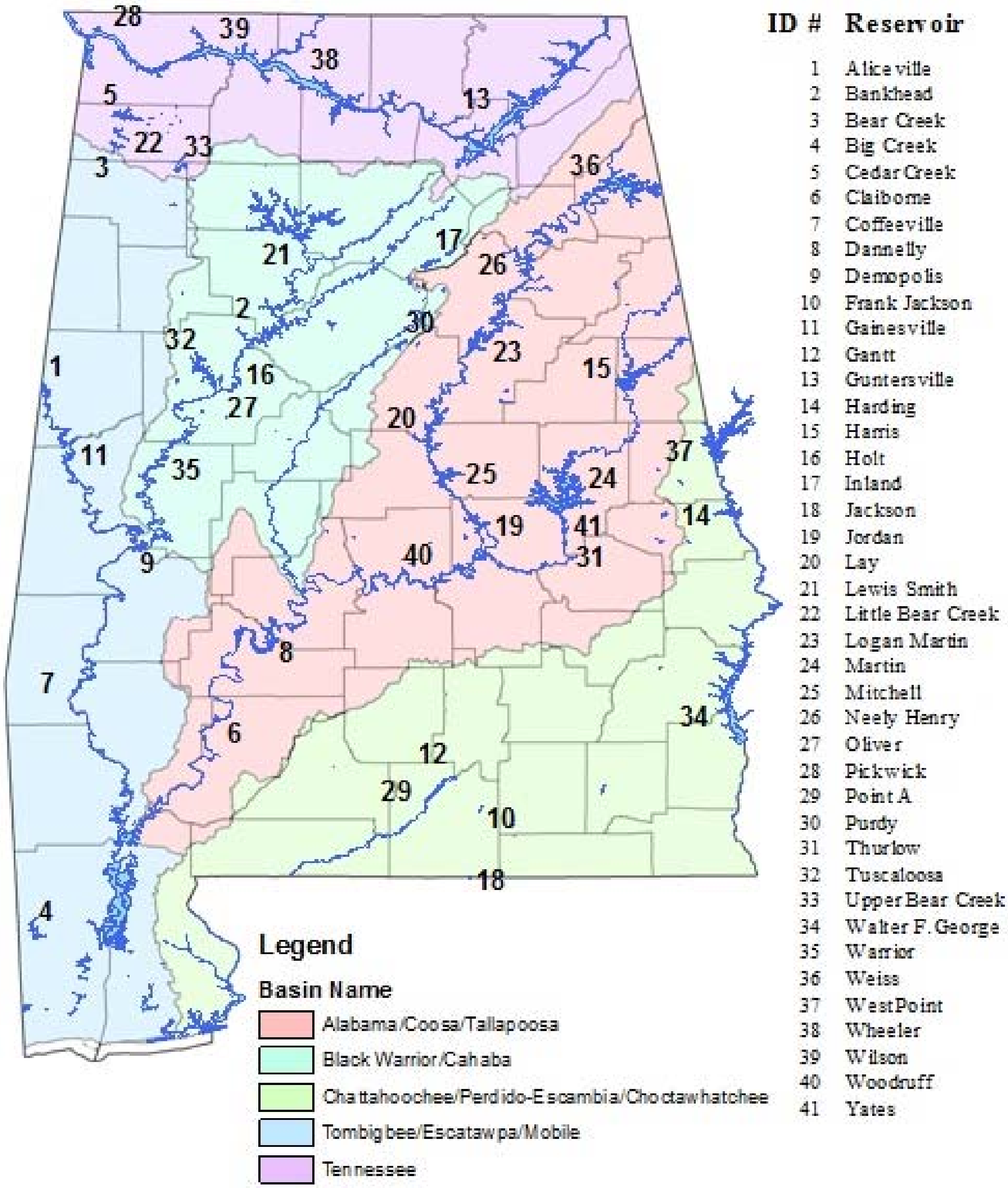
Beginning in 1994, the frequency of reservoir monitoring in the RRMP was increased to a minimum of once every two years (August monitoring) so that the water quality database and trends in trophic status could be more rapidly developed. Lakes indicated to be use-threatened or impaired continued to be monitored annually.

In 1997, intensive monitoring of reservoirs by basin was initiated, with spring season sampling for the RRMP discontinued to allow allocation of resources toward this effort. In 2010, August sampling was also discontinued to focus on full growing season sampling. The mainstem station(s) of each of the publicly-owned lakes were sampled once every three years, as either part of the basin rotation or compliance sampling. After two complete cycles through the state, this approach was discontinued after the 2014 field season. Basins were sampled as follows:

a. Coosa and Tallapoosa River Basin reservoirs, 1997;
b. Black Warrior River Basin reservoirs, 1998;
c. Chattahoochee and Conecuh River Basin reservoirs, 1999;
d. Coosa, Tallapoosa, and Alabama River Basin reservoirs, 2000;
e. Tombigbee and Escatawpa River Basin reservoirs, 2001;
f. Black Warrior and Cahaba River Basin reservoirs, 2002;
g. Tennessee River Basin tributary embayments, 2003;
h. Chattahoochee, Perdido-Escambia, and Choctawhatchee River Basins, 2004;
i. Coosa, Tallapoosa, and Alabama River Basins, 2005;
j. Tombigbee and Escatawpa River Basins, 2006;
k. Black Warrior and Cahaba River Basins, 2007;
l. Chattahoochee, Perdido-Escambia, and Choctawhatchee River Basins, 2008;
m. Tennessee River Basin tributary embayments, 2009;
n. Coosa, Tallapoosa, and Alabama River Basins, 2010;
o. Tombigbee, Mobile and Escatawpa River Basins, 2011;
p. Black Warrior and Cahaba River Basins, 2012;
q. Tennessee River Basin tributary embayments, 2013; and,
r. Chattahoochee, Perdido-Escambia, and Choctawhatchee River Basins, 2014.

In 2015, the RRMP was redesigned to better utilize available resources and to align with the sampling approach of the Rivers and Streams Monitoring Program. The focus moved away

Figure 3-1 Publicly Accessible Reservoirs of Alabama



from the mega-basin concentrated sampling [i.e. Alabama, Coosa, Tallapoosa (ACT) and Black Warrior, Cahaba (BWC)] to smaller, individual river basins, statewide, which would allow more intensive sampling on a smaller scale. The new RRMP design operates on a fixed, three year rotation and consists of monthly sampling of multiple mainstem, tributary embayment and main river stations from April-October. This allows for a more even, statewide distribution of stations and consistent involvement from all field offices throughout the rotation. By focusing on individual river basins, each reservoir will be visited more often, eliminating the need for separate compliance sampling. Beginning with 2015, the three year rotation is as follows:

a. Year One : Alabama, Cahaba, Tallapoosa, and Tennessee (Tributary Embayments) River Basins
b. Year Two: Coosa and Tombigbee River Basins
c. Year Three: Black Warrior, Chattahoochee, Choctawhatchee, Conecuh, Escatawpa and Yellow River Basins

Water quality monitoring of lakes (mainstem) of the Tennessee River system continues through the Tennessee Valley Authority (TVA) Reservoir Vital Signs Monitoring Program. The Program provides results of its monitoring activities to the ADEM on an annual basis through Program reports. Activities of the Program are based on the examination of appropriate physical, chemical, and biological indicators in the forebay, mid-region, and headwater areas of each lake. Objectives of the Program are to provide basic information on the "health" or integrity of the aquatic ecosystem in each TVA lake and to provide screening level information describing how well each reservoir meets the "fishable" and "swimmable" goals of the Clean Water Act. Figure 3-1 shows Publicly Accessible Reservoirs of Alabama.

For more information about Lakes and Reservoirs, contact Ms. Gina Curvin in ADEM's Montgomery Office at (334) 260-2783 or GCurvin@adem.state.al.us

3.2 Trophic Status

In the RRMP, the ADEM uses Carlson's trophic state index (TSI) for determination of the trophic state of Alabama lakes. Carlson suggests the use of corrected chlorophyll a concentrations in calculations of the trophic state of lakes during the summer months. Using corrected chlorophyll a concentrations to determine trophic state is considered to give the best estimate of the biotic response of lakes to nutrient enrichment when phytoplankton is the dominant plant community. In previous reporting due to limited data availability, the ADEM used the yearly August TSI value to characterize the reservoir's trophic state and determine long-term trends. Beginning with the 2012 report, the ADEM evaluated each reservoir using the growing season mean TSI value which is a better indicator for trophic status and trends.

Carlson's TSI provides the limnologist and the public with a single number that serves as an indicator of trophic status of a lake but does not necessarily define it. Lakes with a TSI of 70 or greater are generally considered to be hypereutrophic and in need of regulatory action appropriate for protection and restoration. A TSI of 50 to 70 indicates eutrophic conditions in a lake. Trophic state index values from 40 to 50 indicate mesotrophic conditions. Oligotrophic conditions are indicated by TSI values less than 40.

Table 3-1 Trophic Status of Significant Publicly Owned Lakes

	Number of Lakes	Acreage of Lakes
Total	41	479,470
Assessed	41	479,470
Oligotrophic	4	56,240
Mesotrophic	13	80,435
Eutrophic	24	342,795
Hypereutrophic	0	0
Dystrophic	0	0
Unknown	0	0

The number and surface area of lakes for each trophic classification appear in Table 3-1, which was developed using current monitoring data. A trophic state ranking of Alabama lakes appears in Table 3-2. TSI graphs for Alabama reservoirs are found in Figures 3-2 thru 3-34.

3.3 Control Methods

The ADEM has not defined control methods specifically for lakes. Instead, the pollution controls of ADEM's Point Source Program (NPDES permitting) and the Nonpoint Source Program are applicable for all of the State's surface waters.

3.4. Restoration Efforts

Water quality data collected by the RRMP enabled the ADEM to determine lakes in need of Clean Lakes Program Phase I Diagnostic/Feasibility Studies. All Clean Lakes Program Phase I Diagnostic/Feasibility Studies were conducted through cooperative agreements between ADEM and Auburn University. A list of the Clean Lakes Program Projects of Alabama appears in Table 3-3. Table 3-4 shows State Owned and Operated Public Fishing Lakes.

3.5. Impaired Lakes

The Size of Rivers and Streams Impaired by Causes appears in Table 3-5. Size of Rivers and Streams Impaired by Sources appears in Table 3-6.

Water quality data collected by the ADEM RRMP, Clean Lakes Program Phase I Studies and TVA Reservoir Monitoring Program were used for determination of use support status. Available data from each reservoir was examined for repeated violations of specific water quality criteria established by the ADEM and evaluated with adherence to the Guidelines For Preparation of the State Water Quality Assessments (305(b) Reports). Waters affected by health advisories related to fish consumption were determined to be either partially supporting or not supporting. This determination was dependent upon whether advisories specified limited consumption or no consumption of a particular species as directed in the guidelines mentioned above.

Table 3-2 Reservoir and Lake Trophic Status

Trophic State Designation	Index	Reservoir	River Basin	Growing Season TSI Value	Growing Season TSI Year	*Average TSI Value
Eutrophic (50-69)	1	Neely Henry Lake	Coosa	61	2016	63
	2	Weiss Lake	Coosa	61	2016	61
	3	Pickwick Lake	Tennessee	61	2016	57
	4	Wheeler Lake	Tennessee	61	2015	59
	5	Bear Creek Lake	Tennessee	58	2015	57
	6	Upper Bear Creek Lake	Tennessee	58	2015	57
	7	Holt lake	Black Warrior	58	2017	53
	8	Warrior Lake	Black Warrior	58	2017	53
	9	Logan Martin Lake	Coosa	57	2016	57
	10	Wilson Lake	Tennessee	57	2016	57
	11	Lay Lake	Coosa	56	2016	58
	12	Mitchell Lake	Coosa	56	2016	56
	13	Guntersville Lake	Tennessee	56	2016	55
	14	Aliceville Lake	Tombigbee	56	2016	56
	15	Demopolis Lake	Tombigbee	56	2016	50
	16	Bankhead Lake	Black Warrior	56	2017	54
	17	Walter F. George Lake	Chattahoochee	54	2016	54
	18	Gainesville Lake	Tombigbee	52	2016	53
	19	Lake Purdy	Cahaba	51	2015	56
	20	West Point Lake	Chattahoochee	51	2016	52
	21	Lake Frank Jackson	Yellow	51	2017	51
	22	Gantt Lake	Escambia	51	2017	49
	23	Coffeeville Lake	Tombigbee	51	2016	50
	24	Oliver Lake	Black Warrior	51	2017	50
Mesotrophic (40-49)	25	Jordan Lake	Coosa	49	2016	54
	26	Little Bear Creek Lake	Tennessee	49	2015	49
	27	Dannelly Lake	Alabama	48	2015	54
	28	Lake Harding	Chattahoochee	48	2016	48
	29	Lake Jackson	Yellow	48	2017	40
	30	Point A Lake	Escambia	48	2017	46
	31	Cedar Creek Lake	Tennessee	48	2015	47
	32	Thurlow Lake	Tallapoosa	45	2015	41
	33	Woodruff Lake	Alabama	44	2015	52
	34	Claiborne Lake	Alabama	43	2015	51
	35	Lake Tuscaloosa	Black Warrior	42	2017	40
	36	Inland Lake	Black Warrior	41	2017	42
	37	Smith Lake	Black Warrior	41	2017	40
Oligotrophic (< 40)	38	Harris Lake	Tallapoosa	38	2015	49
	39	Yates Lake	Tallapoosa	36	2015	42
	40	Lake Martin	Tallapoosa	34	2015	39
	41	Big Creek Lake	Escatawpa	30	2017	43

*Average cumulative mean growing season values (1997-present) from dam forebay stations and may not reflect a lake's current trophic state.

Table 3-3 List of Clean Lakes Program Projects

Name of Project	Type of Project	Federal Funding ($)	Problems Addressed	Management Measures Proposed or Undertaken
West Point Lake	Phase I	100,000	Diagnostic/Feasibility	See Report
Walter F. George Lake	Phase I	70,000	Diagnostic/Feasibility	See Report
Neely Henry Lake	Phase I	92,000	Diagnostic/Feasibility	See Report
Weiss Lake	Phase I	142,583	Diagnostic/Feasibility	See Report
Smith Lake	Phase I	93,000	Diagnostic/Feasibility	See Report

Table 3-4 State Owned and Operated Public Fishing Lakes

County	County Fishing Lakes	Acres
Barbour	Barbour County Lake	75
Bibb	Bibb County Lake	100
Chambers	Chambers County Lake	183
Clay	Clay County Lakes	74
Coffee	Coffee County Lake	80
Crenshaw	Crenshaw County Lake	53
Dale	Dale County Lake	92
Dallas	Dallas County Lake	100
DeKalb	DeKalb County Lake	120
Escambia	Escambia County Lake	184
Fayette	Fayette County Lake	60
Geneva	Geneva County Lakes	65
Lamar	Lamar County Lake	68
Lee	Lee County Lake	130
Madison	Madison County Lake	105
Marion	Marion County Lake	37
Monroe	Monroe County Lake	94
Pike	Pike County Lake	45
Walker	Walker County Lake	163
Washington	Washington County Lake	84
Totals	20 State Fishing Lakes	1,061

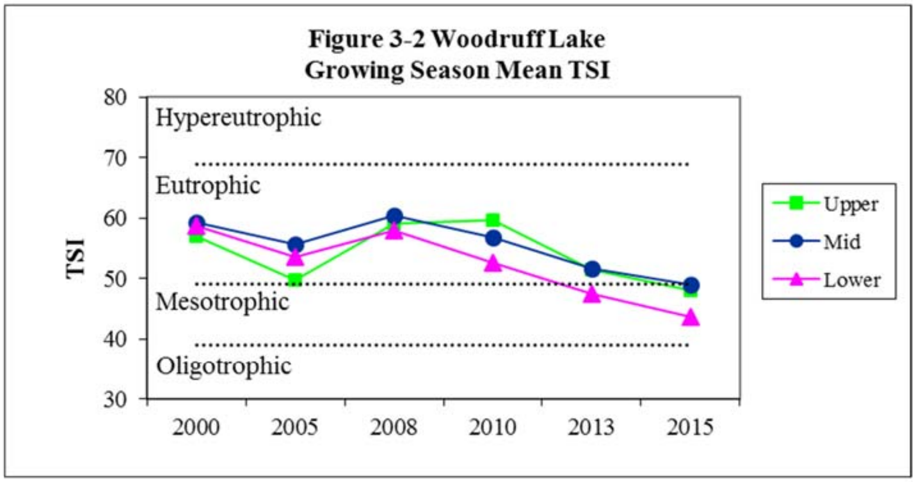
Table 3-5 Size of Lakes/ Reservoirs Impaired by Causes

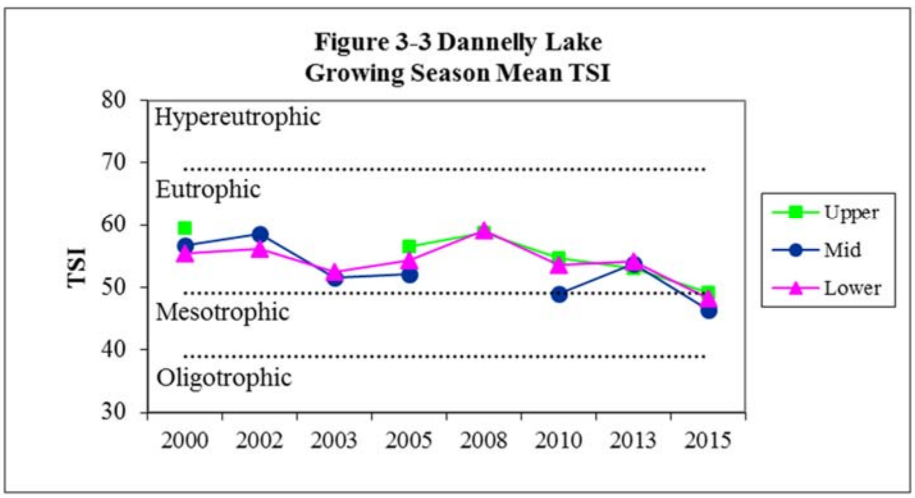
	Category 5	**Category 4**
Cause	Lake/Reservoir (acres)	Lake/Reservoir (acres)
Metals		
Mercury	63,903.93	
Nutrients		
Nitrogen		3,021.35
Phosphorus	100,133.29	74,628.34
Oxygen depletion		
BOD, carbonaceous	2,041.93	3,752.38
BOD, nitrogenous	2,041.93	527.25
Pathogens		
Escherichia coli	6,567.86	
Fecal coliform (legacy pollutant)		732.66
Pesticides		
DDT		85.73
pH		
pH	1,569.21	
Sedimentation		
Siltation	869.04	3,573.14
Toxic Organics		
Perfluorooctane Sulfonate (PFOS)	19,378.31	
Polychlorinated biphenyls (PCBs)	30,044.38	24,622.46

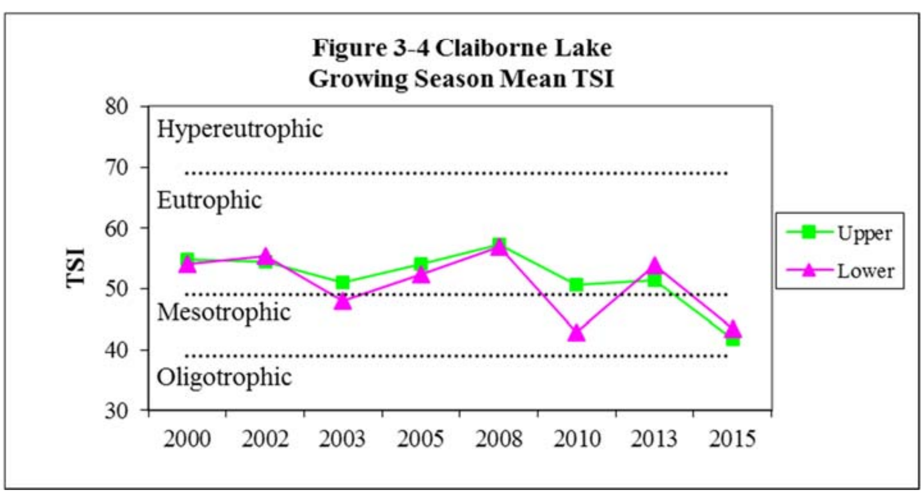
Table 3-6 Size of Lakes/ Reservoirs Impaired by Sources

	Category 5	**Category 4**
Source	Lake/Reservoir (acres)	Lake/Reservoir (acres)
Agriculture	99,562.89	732.66
Animal feeding operations		732.66
Atmospheric deposition	63,818.20	
Collection system failure		527.25
Contaminated sediments	30,130.11	85.73
Dam construction	1,729.86	2,288.69
Flow regulation/modification	1,729.86	72,603.28
Industrial	19,893.16	12,394.79
Municipal	634.52	13,127.45
Non-irrigated crop production	1,569.21	3,364.43
Nonpoint source runoff	62.63	
Pasture grazing	1,569.21	1,463.69
Sources outside state	6,567.86	48,154.36
Spills from trucks or trains		412.49
Surface mining-abandoned		412.49
Urban runoff/storm sewers	348.36	24,394.00

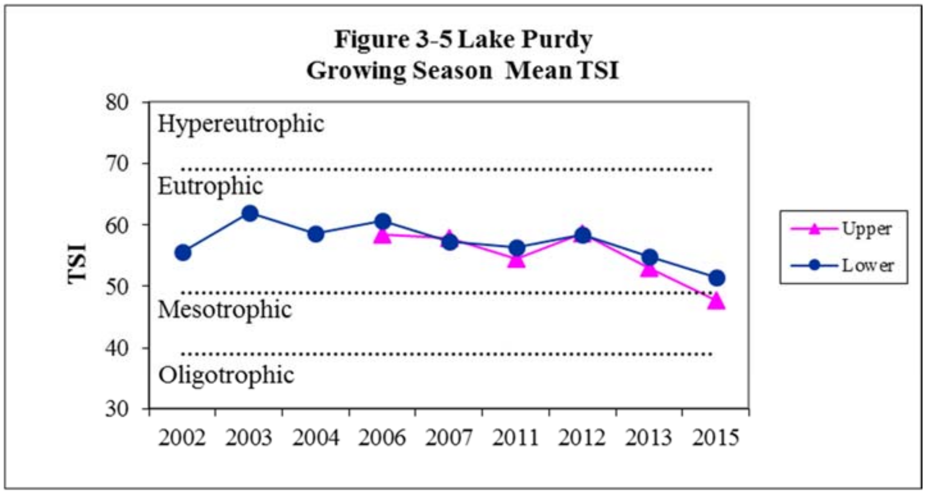
Alabama River Basin



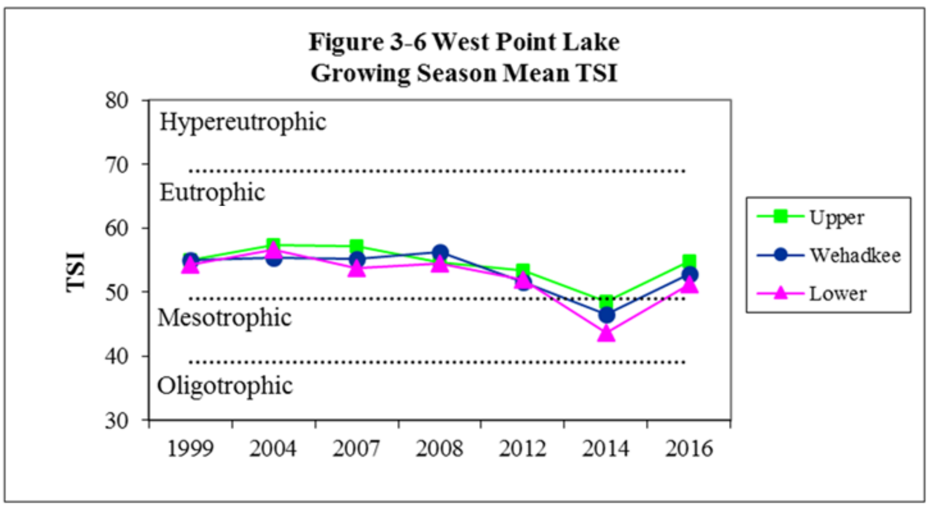


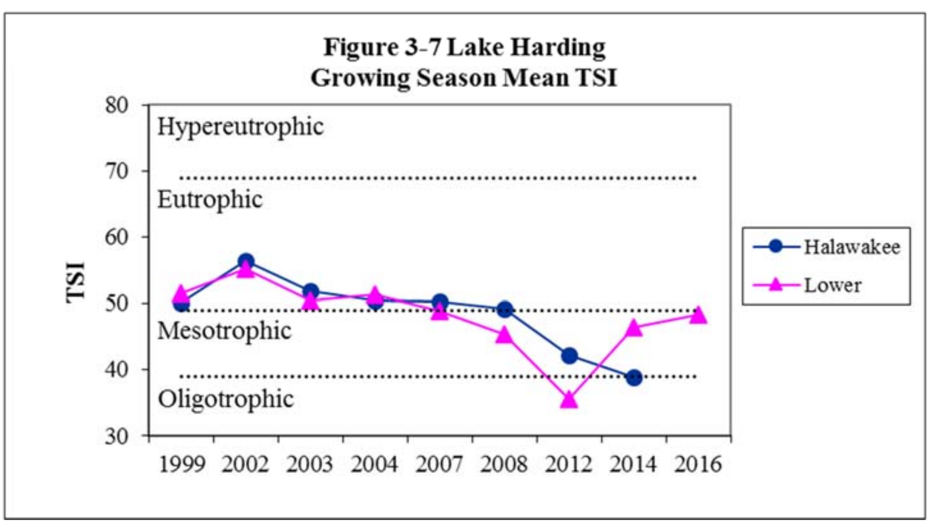


Cahaba River Basin



Chattahoochee River Basin





Chattahoochee River Basin

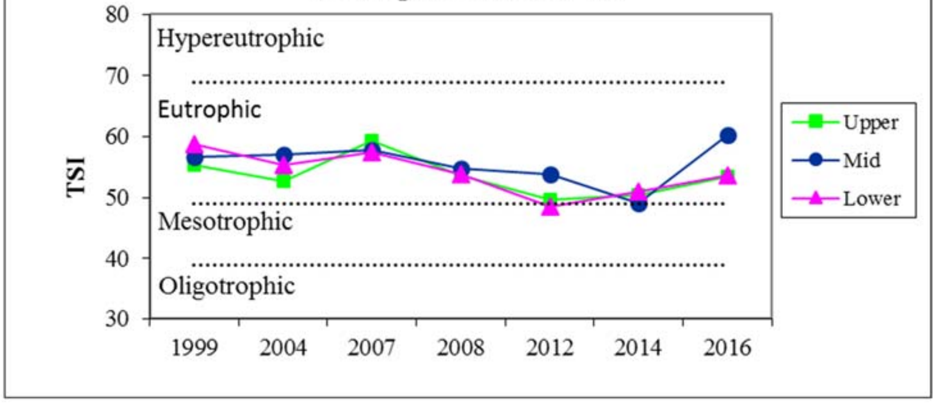


Figure 3-8 Walter F. George Lake
Growing Season Mean TSI

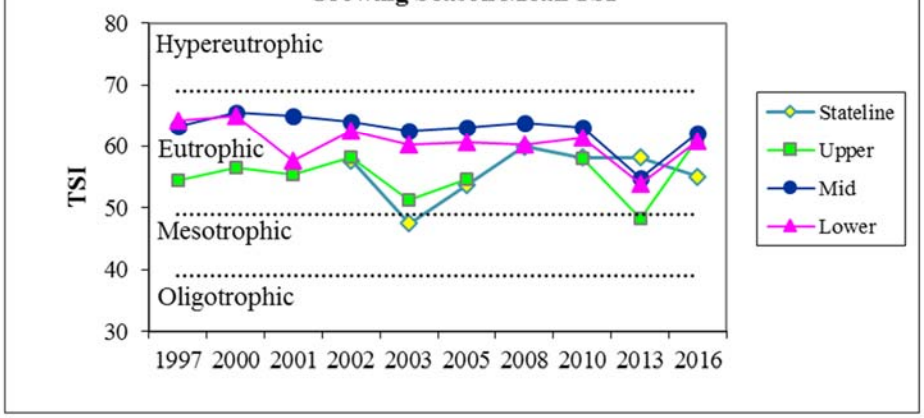


Figure 3-9 Weiss Lake
Growing Season Mean TSI

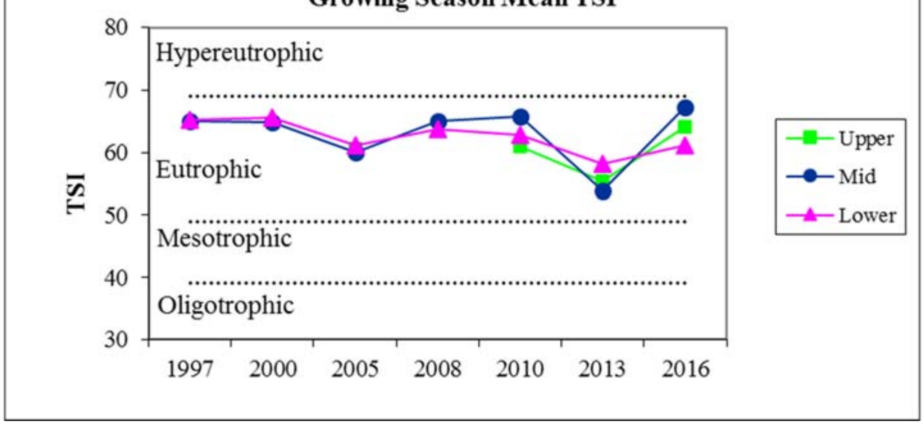
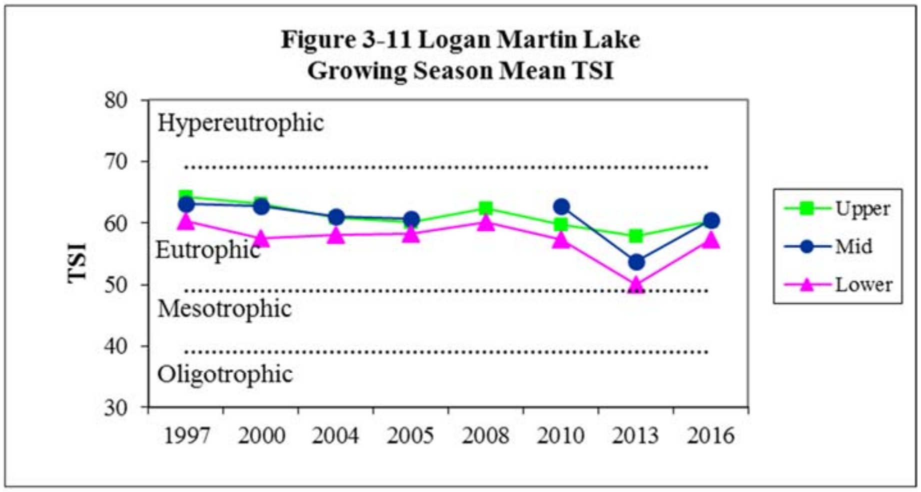
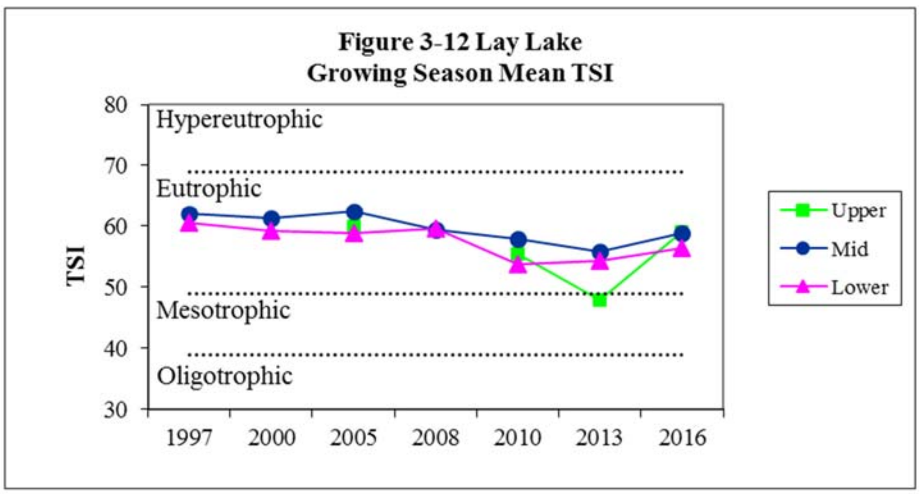
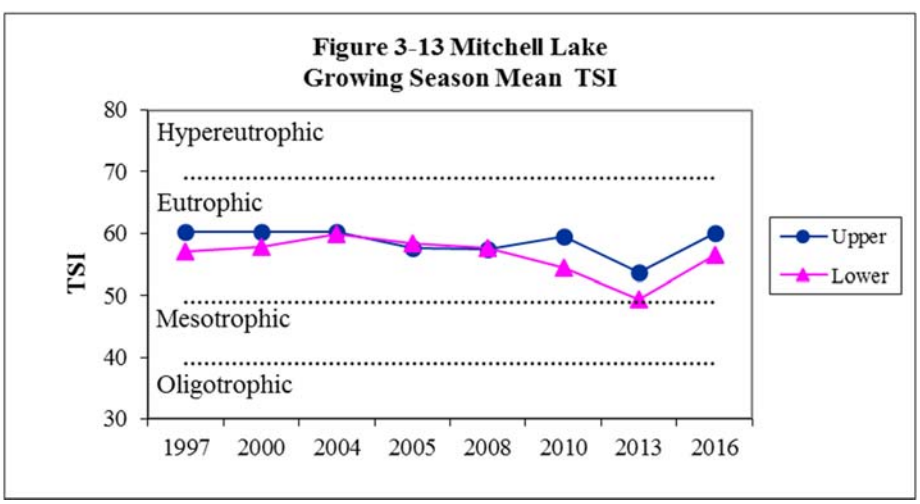


Figure 3-10 Neely Henry Lake
Growing Season Mean TSI

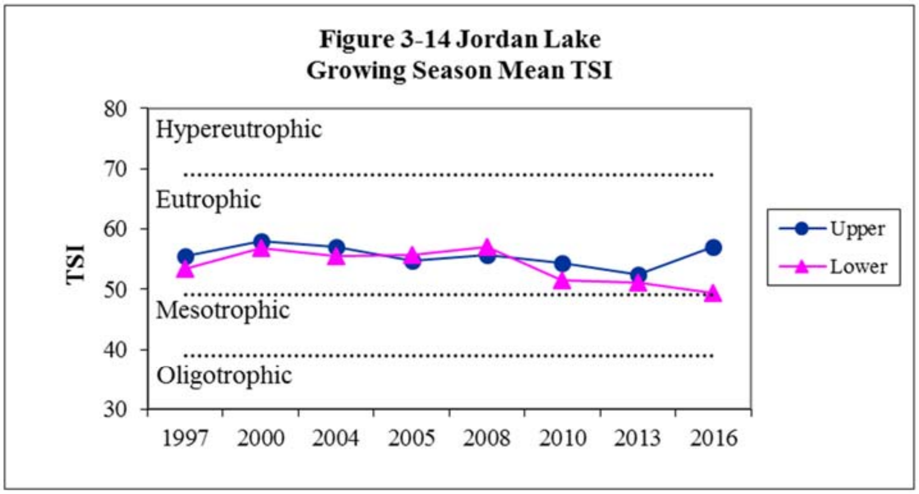
Coosa River Basin

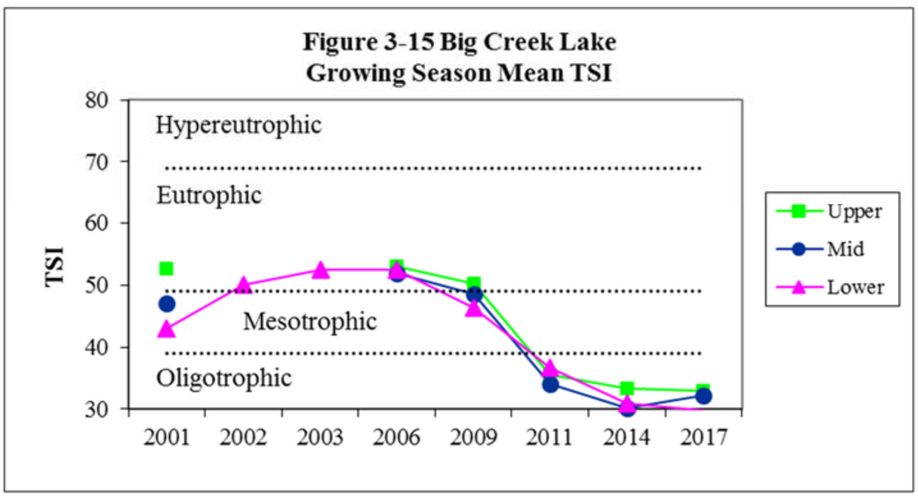


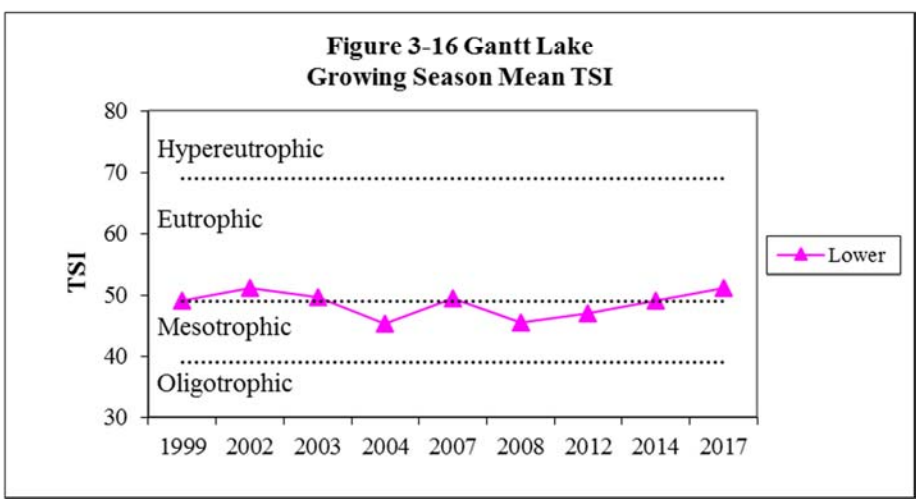




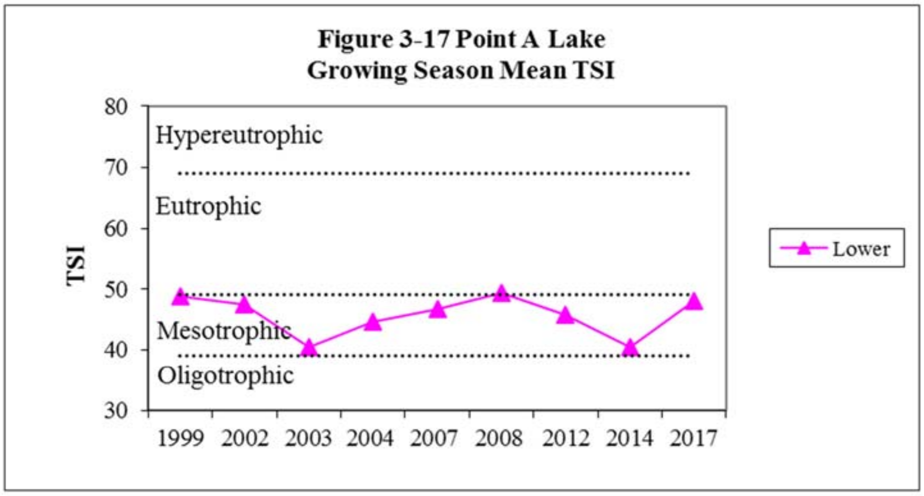
Coosa River Basin



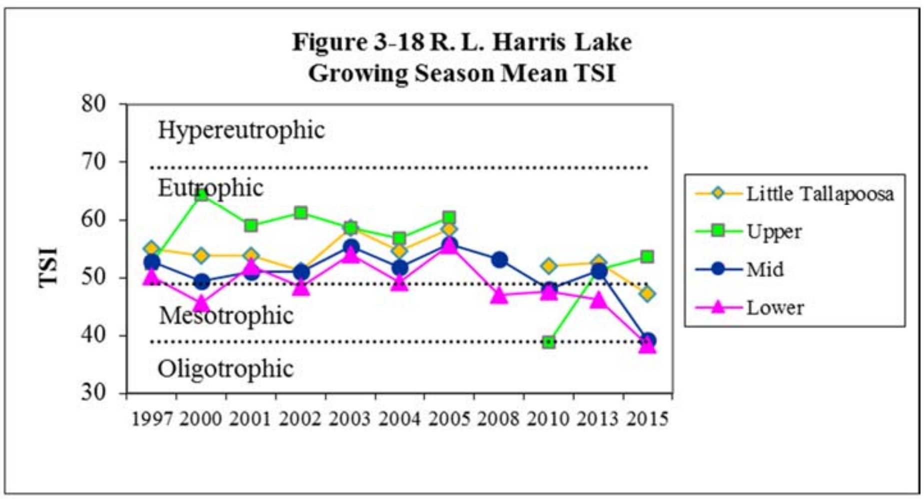


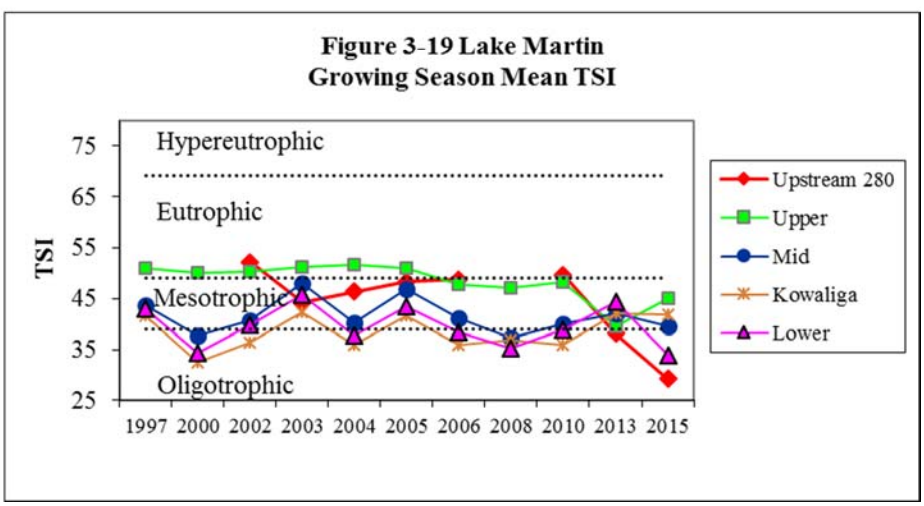


Escambia River Basin

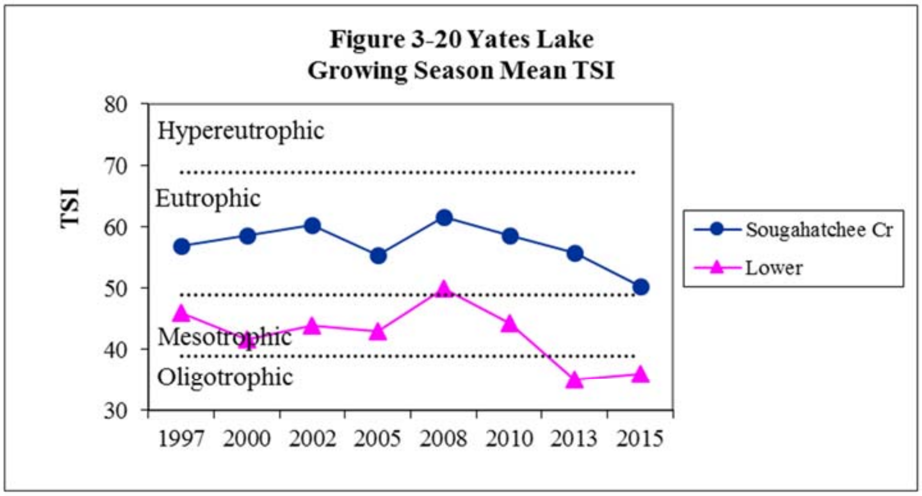


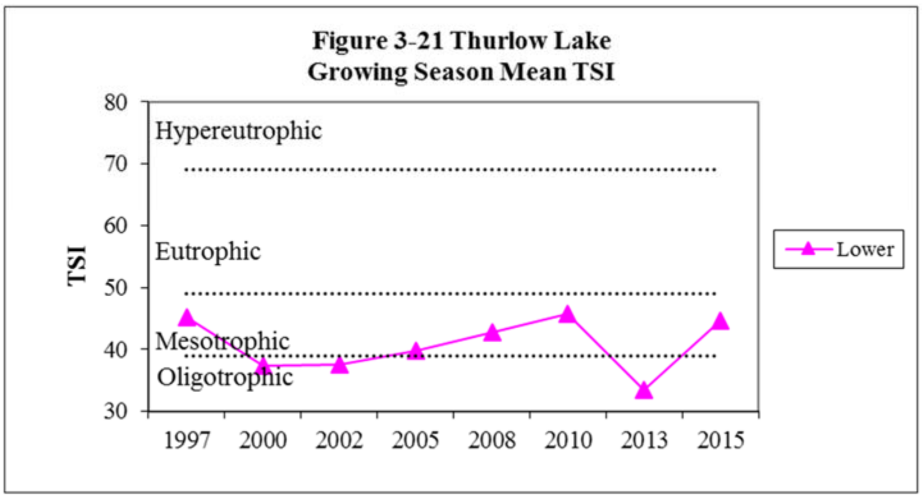
Tallapoosa River Basin



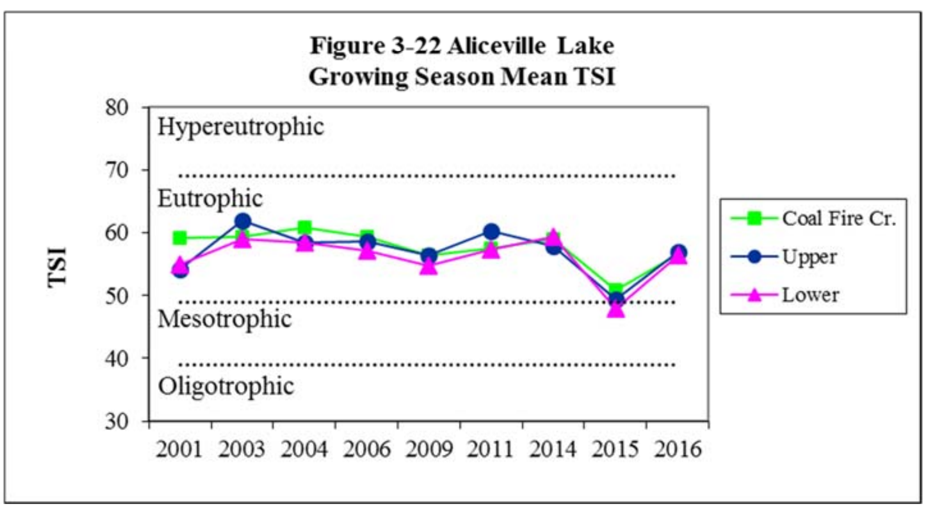


Tallapoosa River Basin

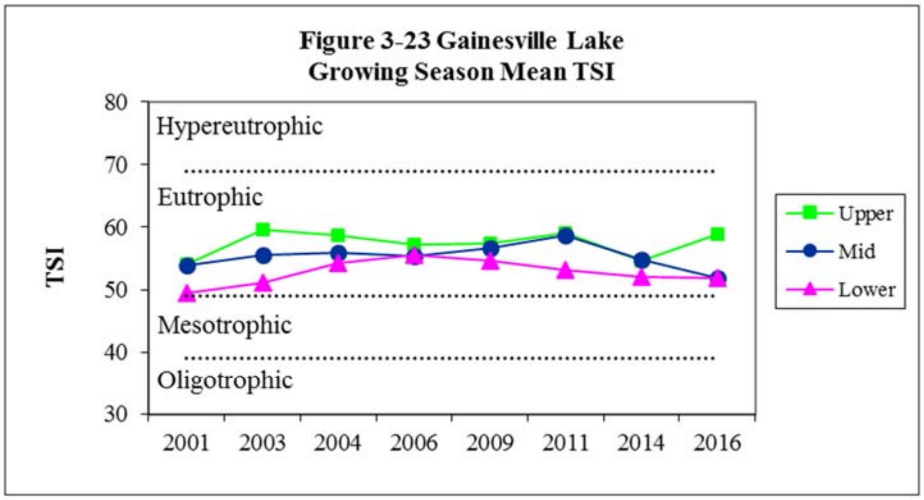


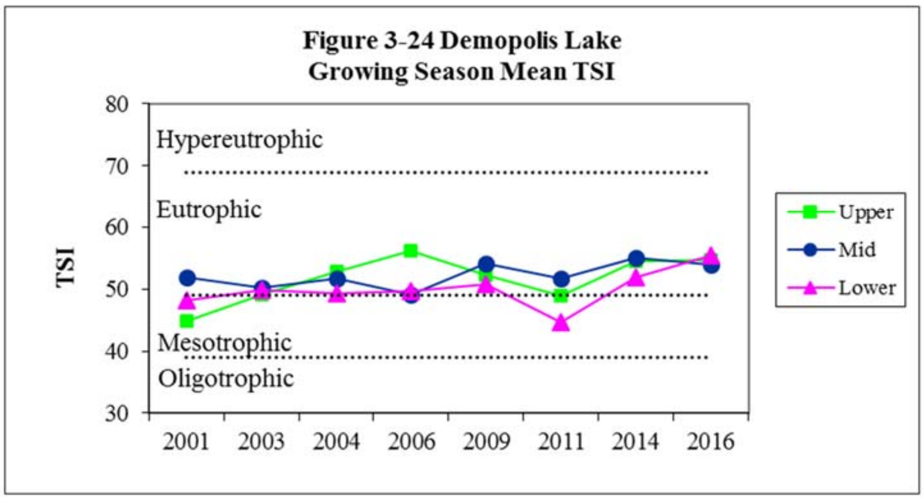


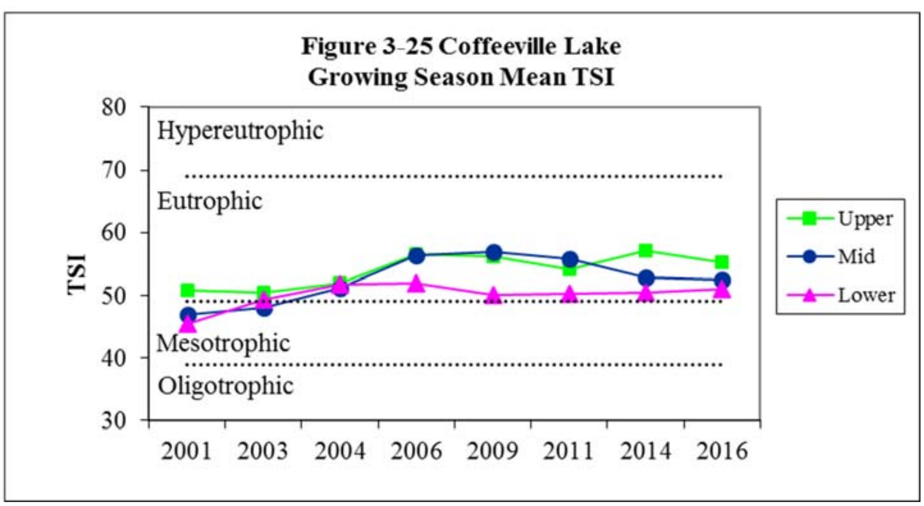
Tombgbee River Bain



Tombgbee River Bain







Warrior River Basin

Figure 3-26 Inland Lake Growing Season Mean TSI

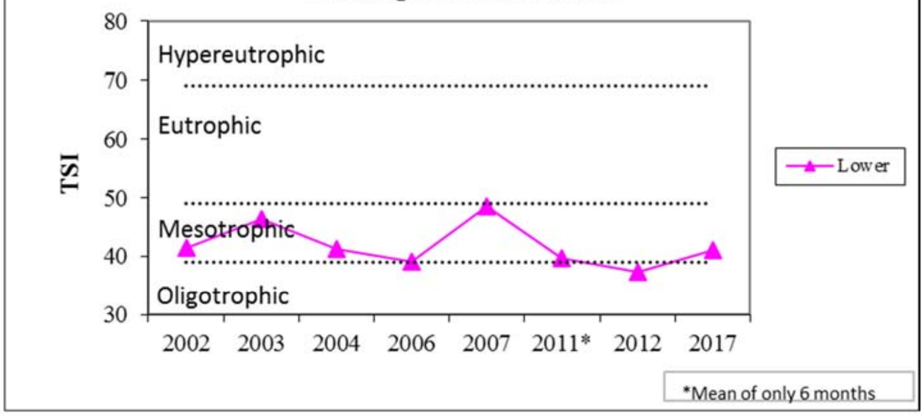


Figure 3-27 Smith Lake Growing Season Mean TSI

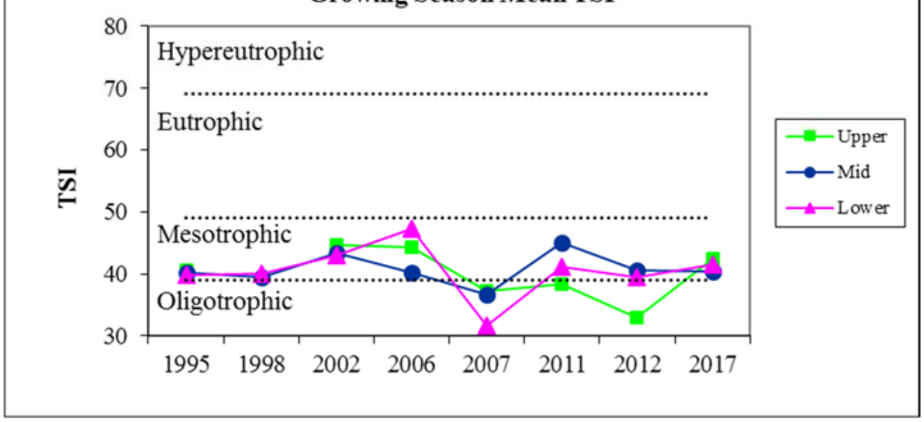
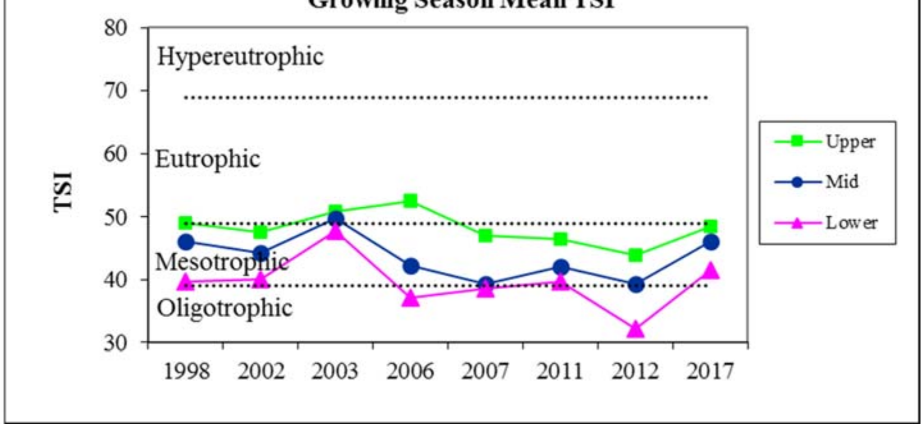
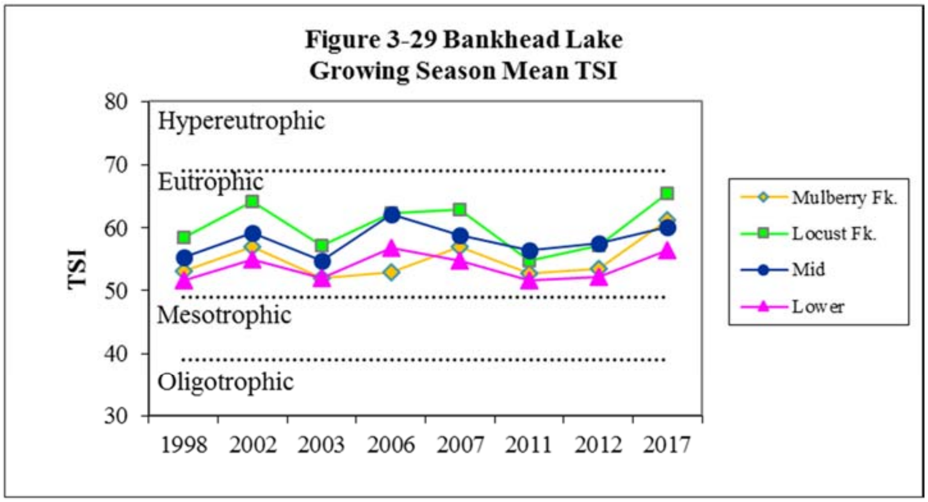
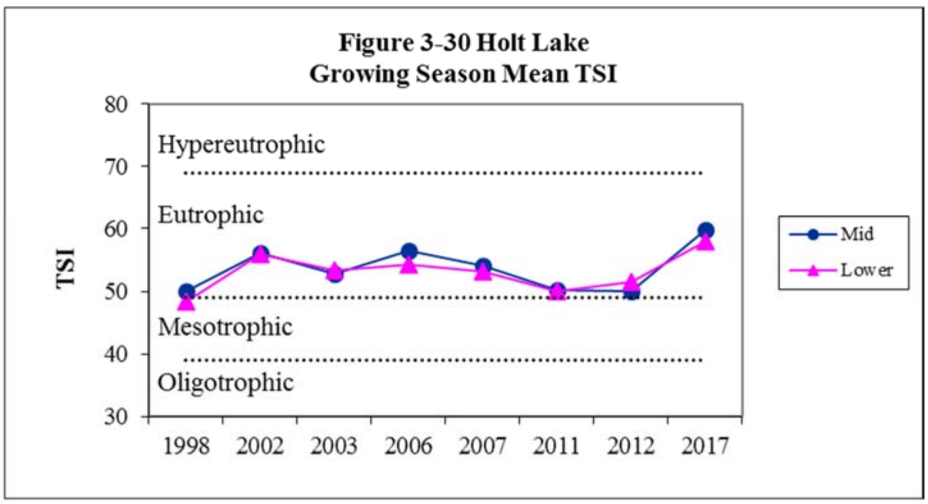


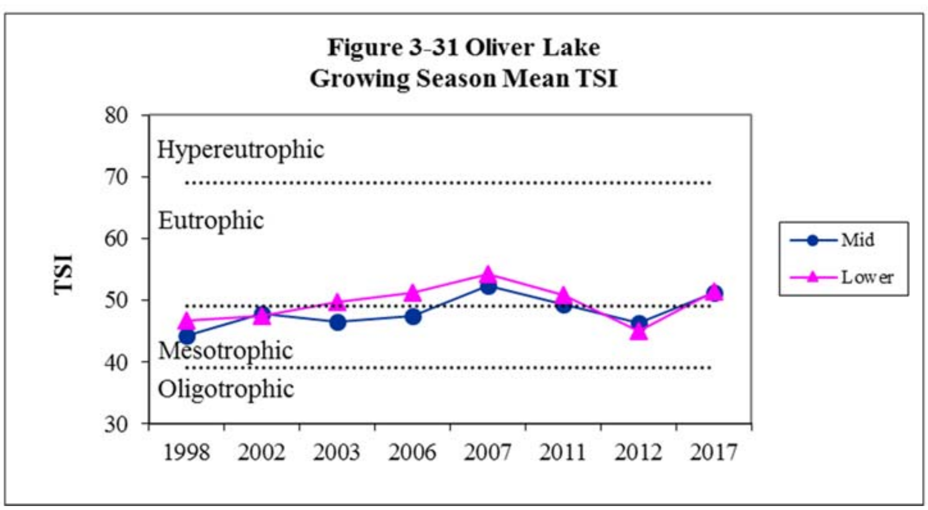
Figure 3-28 Lake Tuscaloosa Growing Season Mean TSI



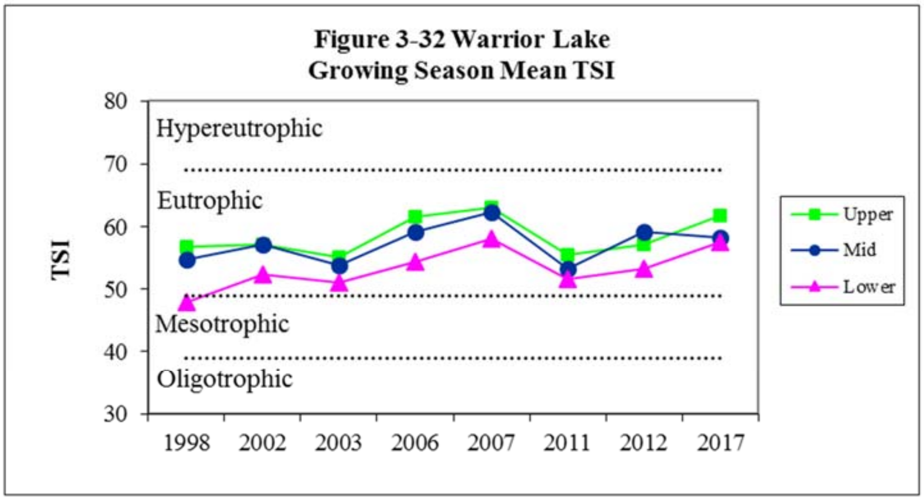
Warrior River Basin



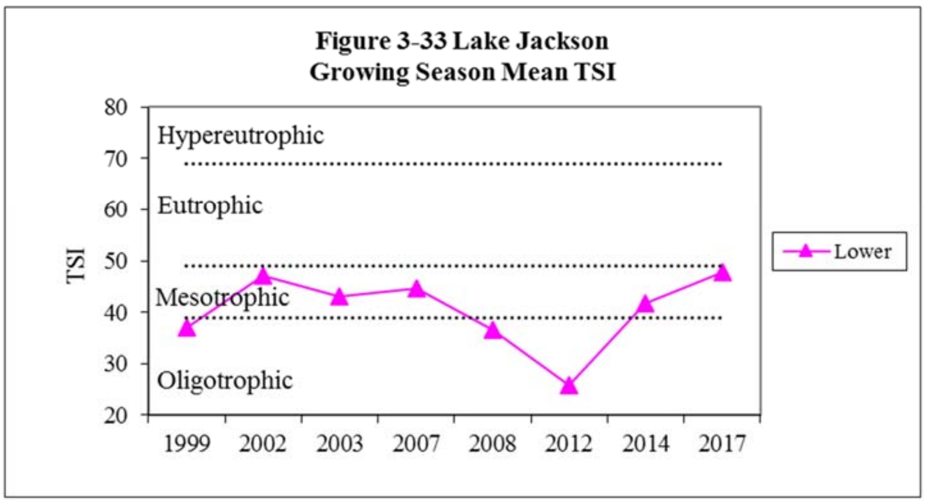


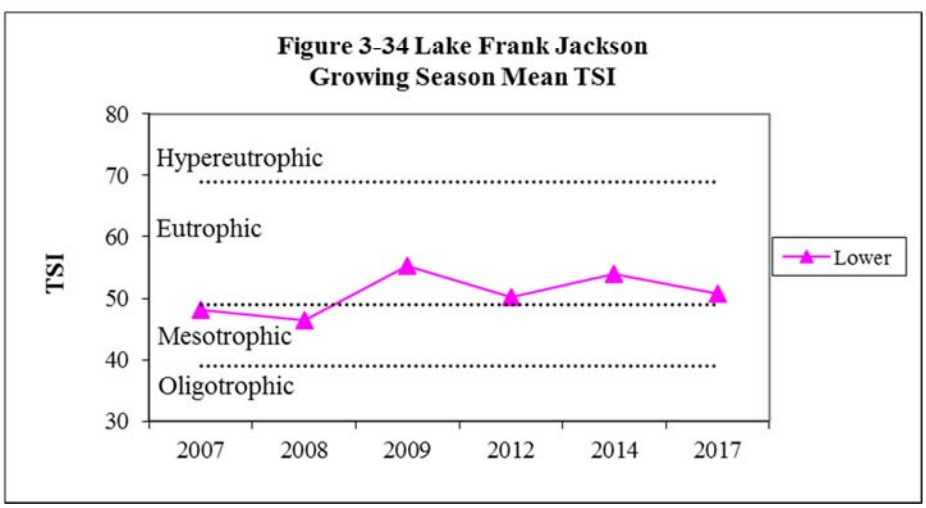


Warrior River Basin



Yellow River Basin





3.6. Toxic Effects on Lakes

Lake-specific monitoring information for toxic pollutants is limited. Point source control efforts are directed at the source of toxic pollutants through NPDES permitting programs. Total lake acres affected by toxicants appear in Table 3-7. Lake acreage monitored for toxicants consists of lakes for which fish have been collected and analyzed through the ADEM Fish Tissue Monitoring Program and the TVA Reservoir Monitoring Program. Lake acreage with elevated levels of toxicants consists of lake areas upon which health advisories have been instituted that relate to consumption of fish contaminated with certain priority pollutants.

Fish will continue to be collected from major lakes, rivers, and certain waterbodies of concern and analyzed for toxic pollutants as part of the ADEM Fish Tissue Monitoring Program. Fish tissue sampling results are contained in the Fish Tissue Monitoring section of Part V Public Health Information.

3.7 Acid Effects on Lakes

The number and acreage of lakes affected by acidity appear in Table 3-8. The number and acreage of lakes affected by sources of high acidity appear in Table 3-9. No reservoirs monitored by the ADEM have been determined to be impacted by high acidity based on data collected through the RRMP. However, the following reservoirs are considered vulnerable to acidity based on low alkalinities and pH values observed in monitoring data that were near limits of specific ADEM water quality criteria: Big Creek Lake; Inland Lake; Lake Jackson; Lake Frank Jackson, Point A Lake; Smith Lake; and Lake Tuscaloosa. Low pH values measured in Big Creek Lake, Lake Jackson, Lake Frank Jackson, and Point A Lake reservoirs are determined to be of natural origin and are considered unlikely to cause adverse impacts. In the case of both Smith and Tuscaloosa Reservoirs, mining activities in the watershed were also considered in determining the vulnerability of the reservoirs to acid effects.

3.8. Trends

Status of Trends for Lakes and Reservoirs appears in Table 3-10. Trends were determined by reviewing three (3) or more years of water quality data from multiple sources, if available, for each reservoir during the period 1997 to 2017.

The reservoirs considered to be degrading were listed based on data collected through the RRMP. Assignment of a particular reservoir to the “Stable” category does not necessarily indicate desirable water quality but only that the water quality appears stable.

Future data collection is critical in further establishing trends in water quality of reservoirs in the State.

For more information about Lakes and Reservoirs, contact Ms. Gina Curvin in ADEM’s Montgomery Office at (334) 260-2783 or GCurvin@adem.state.al.us

Table 3-7 Total Reservoir Size Affected by Toxicants

Waterbody	Size Monitored for Toxicants	Size with Elevated Levels of Toxicants
Rivers (miles)	-	-
Lakes (acres)	339,406	66,832
Estuaries (sq. miles)	-	-
Coastal waters (miles)	-	-
Freshwater wetlands (acres)	-	-
Tidal wetlands (acres)	-	-

Table 3-8 Lakes Affected By Acidity

	Number of Lakes	Acreage of Lakes
Assessed for Acidity	41	479,470
Impacted by High Acidity	0	0
Vulnerable to Acidity	7	34,030

Table 3-9 Sources of High Acidity in Lakes and Reservoirs

Source	Number of Lakes Impacted	Acreage of Lakes Impacted
Acid Deposition	0	0
Acid Mine Drainage	0	0
Natural Sources	0	0
Other (list)	0	0

Table 3-10 Status of Trends for Lakes and Reservoirs

	Number of Lakes	Acreage of Lakes
Assessed for Trends	41	479,470
Improving	4	42,350
Stable	37	437,120
Degrading	0	0
Trend Unknown	0	0

3.9 TVA Lakes

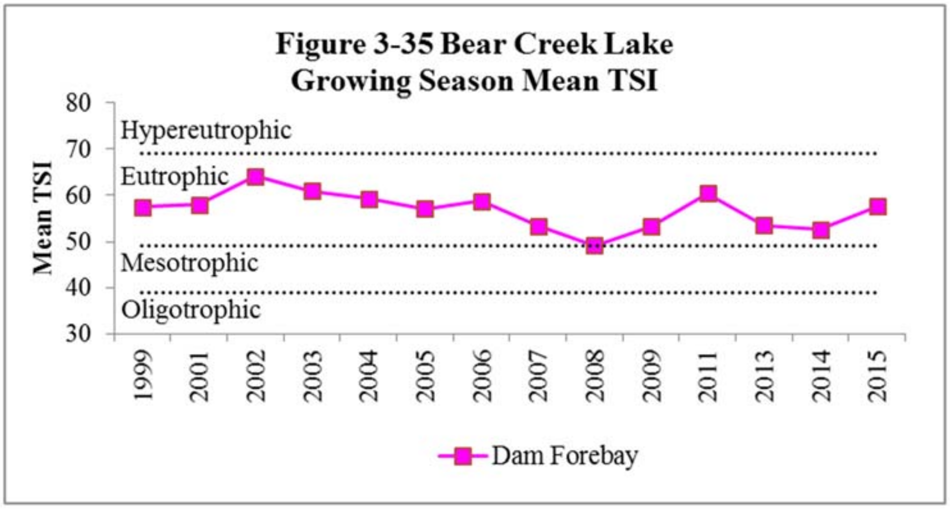
For certain lakes and reservoirs in Alabama there are waterbody-specific nutrient criteria. Nutrients may vary significantly lake-to-lake, and may vary from year to year depending on such factors as rainfall and hydraulic retention time. See Water Quality Criteria Applicable to Specific Lakes, ADEM Administrative code 335-6-10-.11. Tropic Status for TVA Reservoirs in Alabama appear in Figures 3-35 thru 3-41

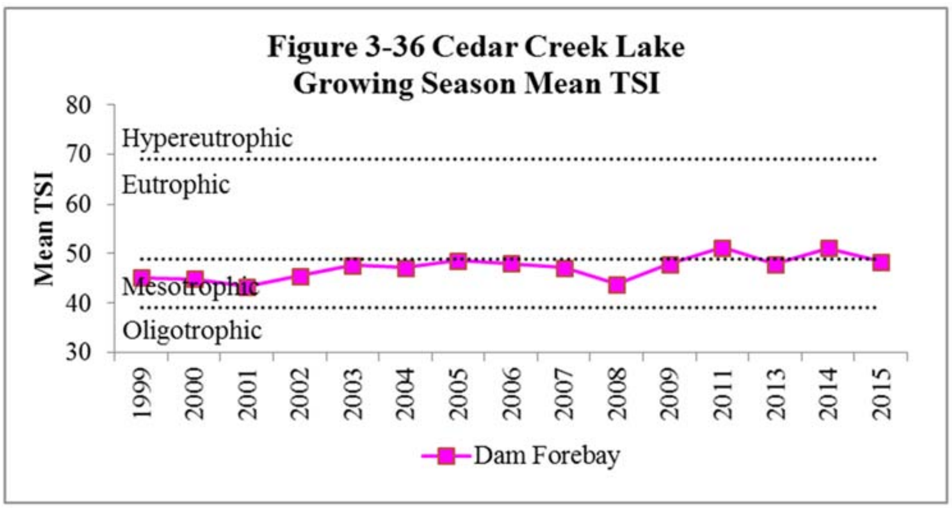
For more information about TVA Lakes, contact Mr. Tyler Baker with Tennessee Valley Authority at (423)-876-6733 or tfbaker@tva.gov.

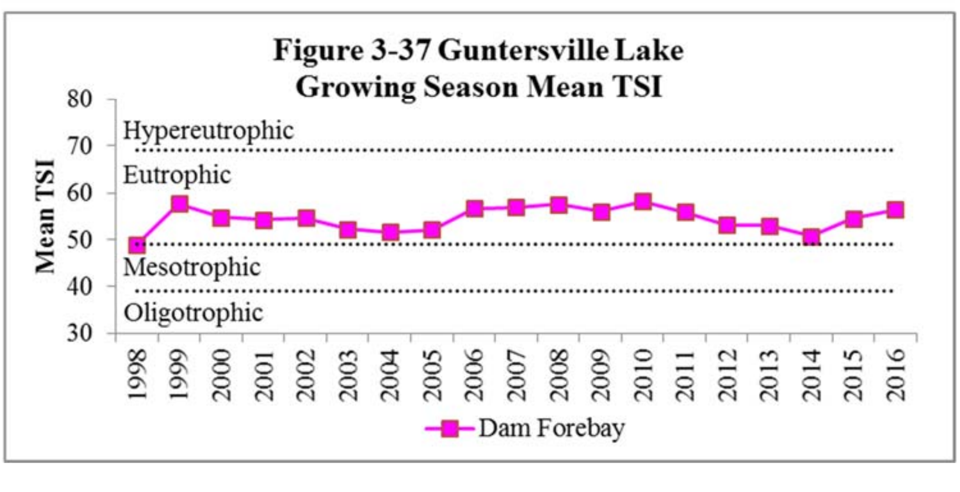
Table 3-11 TVA Lake Sampling Chlorophyll A Sampling Locations

Site Code	**River Mile**	Reservoir	**Area**	Lat	**Long**
UBDFB	BCM 115.4	Upper Bear Creek Lake	Forebay	34º16'37.3"	87º41'06.3"
BCDFB	BCM 75.0	Bear Creek Lake	Forebay	34º23'55.5"	87º58'57.8"
CCDFB	CCM 25.2	Cedar Creek Lake	Forebay	34º32'03.0"	87º57'27.3"
LBDFB	LBCM 12.5	Little Bear Creek Lake	Forebay	34º27'12.7"	87º58'05.1"
PKHFB	TRM 207.3	Pickwick Lake	Forebay	35º04'13.0"	88º14'22.0"
WLHFB	TRM 260.8	Wilson Lake	Forebay	34º48'30.8"	87º36'07.8"
WEHFB	TRM 277.0	Wheeler Lake	Forebay	34º48'06.5"	87º21'15.7"
GUHFB	TRM 350.0	Guntersville Lake	Forebay	34º25'16.1"	86º22'25.5"

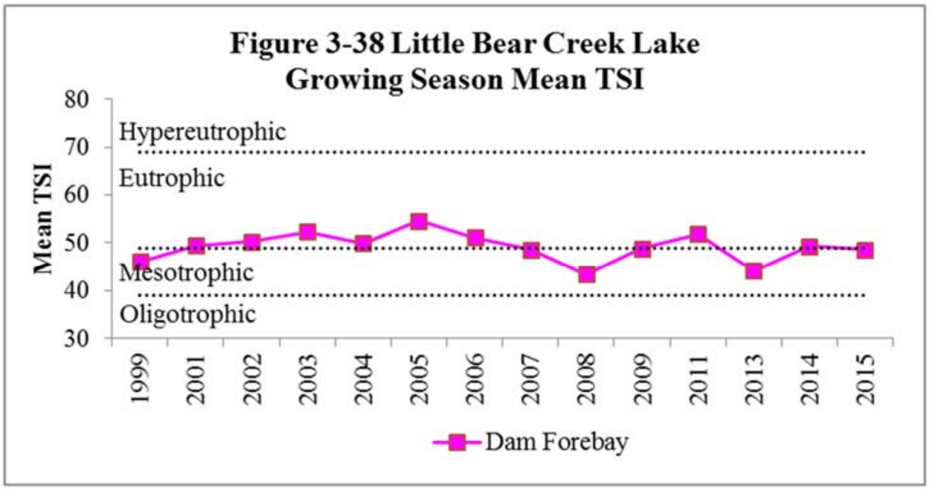
Tennessee River Basin

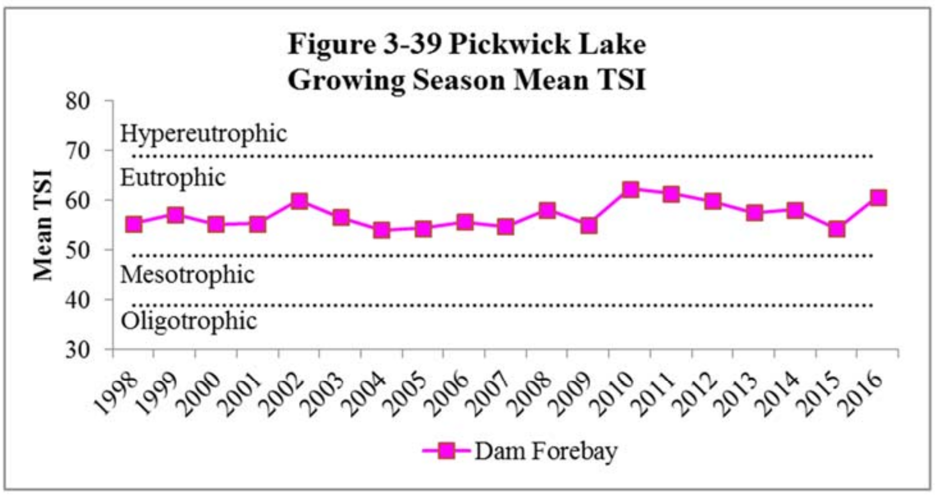


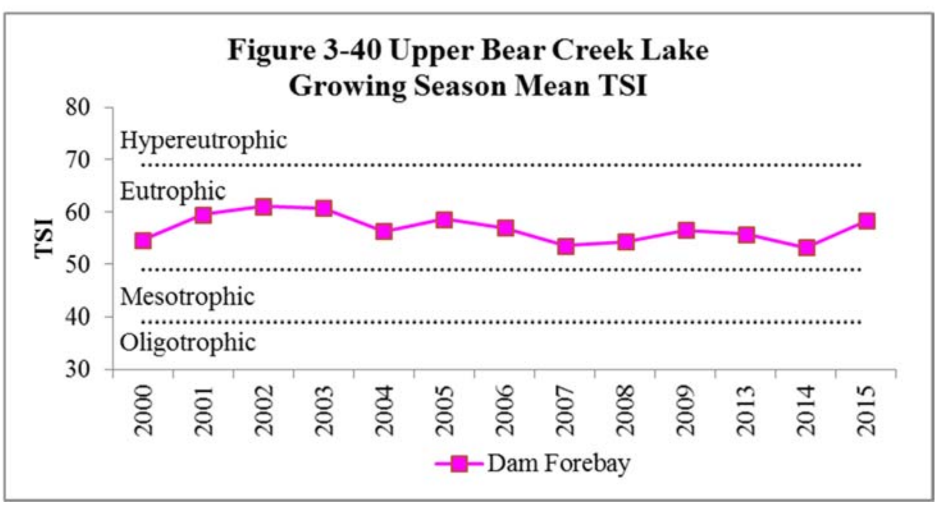




Tennessee River Basin







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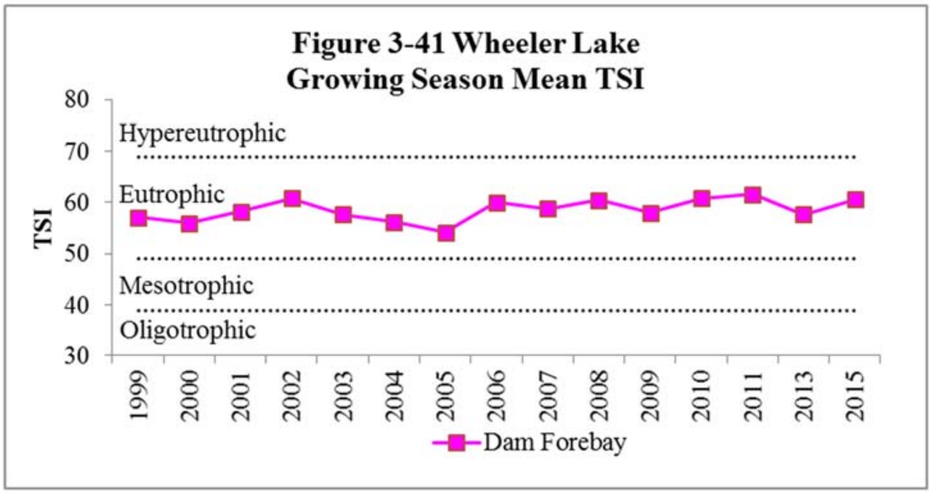

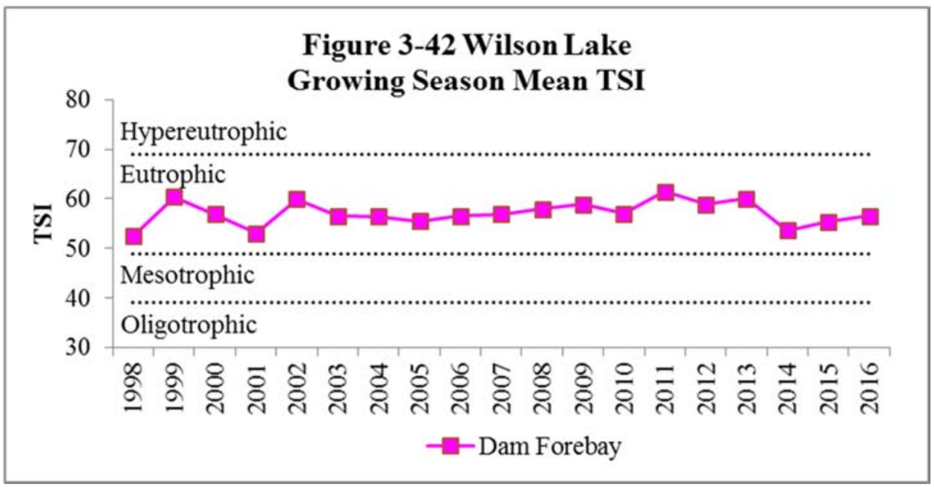

Chapter 4 Wetlands

4.1 Alabama Wetland Management Programs

In 2006, EPA developed the *Elements of a State Water Monitoring and Assessment Program* (EPA-841-B-03) to help States plan and implement a comprehensive water quality monitoring and assessment program to protect and restore water quality of all waters of the State as described in the Clean Water Act [CWA]. The *Elements* document requires that each state develop a wetland monitoring program by 2014, and serves as a guideline to ensure that a State's Wetland Monitoring and Assessment Program not only meets the needs of the State's Monitoring Objective but also those required by the *CWA Section 106(e)(1)*.

In 2011, ADEM began sampling wetland systems statewide as part of EPA's National Wetlands Conditional Assessment Survey (NWCA), and Piedmont and Coastal Plain wetland systems beginning in 2012 as part the Southeast Wetlands Monitoring Intensification Survey, a 2-year multi-state project. ADEM reviewed the protocols assembled and data obtained during these surveys to develop a comprehensive wetland monitoring program that can be incorporated in Alabama's current Water Quality Monitoring Strategy.

This initial effort provided information that assisted the development of the current efforts aimed towards developing a 5-year Wetlands Monitoring Strategy that can be included in Alabama's overall surface water monitoring strategy. Based on prior documents (e.g. EPA's 2008 "Core Elements of an Effective State or Tribal Wetland Program Framework" -Core Elements Framework), the activities currently in process are structured to develop a *Wetlands Monitoring Program (WMP) Project* that will meet ADEM's current and future needs for on-going development and future implementation of the Monitoring Strategy, including capacity for monitoring and assessing Category 2B and 4A wetlands, wetland restoration projects, mitigated wetlands, and protected wetland areas.

In 2014 the *Alabama Wetland Monitoring Workgroup* was established by ADEM-FOD with assistance from the ACNPCP to identify interagency partners and offer participation that would enhance future WMP development. This *Workgroup* has been working through teleconferencing and e-mail to assist the development of goals and objectives, some of which include the following:

1. Further develop the *WMP Workgroup* and identify additional program partners.
2. Identify and document essential objectives for **Alabama's Wetlands Monitoring Program**.
3. Identify the data needed to achieve these goals and objectives for wetland types statewide.
4. Determine the objectives, methods, and indicators for a first 5-yr Wetland Monitoring Strategy.

5. Design the WMP such that it may integrate and be included in Alabama's overall Surface Water Monitoring Strategy and Activities.

Eventually, ADEM's WMP will monitor and assess all wetland types statewide. However in the near term, three goals identified by the Department are scheduled for implementation during the 2015-2019 monitoring cycle:

1. Define the percentage of wetlands within wadeable river and stream watersheds. These will be distinct as a site class discrete from other wadeable river and stream system systems with little or no wetlands, based on expected chemical, physical, and biological conditions;
2. Characterize natural background conditions in the blackwater wadeable river and stream systems (braided, swamps, etc.) common in south Alabama; and
3. Characterize natural background conditions in wetland systems throughout the State.

To further these goals, ADEM convened an *Alabama Wetlands Monitoring Program Workgroup Conference* on August 26-27, 2015 to discuss and identify areas of potential collaboration, including the use of common methods, sharing data, and coordinating future wetland monitoring efforts. The overall goal of the meeting was to determine the best methods and procedures to use for the development of the Alabama Department of Environmental Management (ADEM) WMP. The workgroup consisted of 20 individuals from ten state and federal agencies with existing wetland monitoring programs or an interest in developing a program in the future. The meeting included field activities and took place at the ADEM offices in Montgomery, Alabama, August 25-27, 2015.

The *WMP Workgroup Conference* enabled ADEM to compile an inventory of ongoing monitoring in the State of Alabama and identify the steps needed to further develop a successful WMP. Five specific topics were identified as being essential for wetland program development: 1) wetland classification; 2) the purpose and objectives of each agency's individual program; 3) existing monitoring designs, sampling methods and indicators used to meet program objectives and how to obtain documents; 4) inventory of GIS datasets and tools; 5) existing maps of wetland monitoring locations.

As part of the 2015-2019 monitoring cycle, in 2016 ADEM began monitoring watersheds within the same ecoregion that were characterized by a high percentage of forested wetlands to distinguish natural background conditions in wetland systems and blackwater wadeable river and stream systems. Monitoring included water chemistry, amphibian survey, soil survey, Floristic Quality Index vegetation survey, Wetland Rapid Assessment Procedure (WRAP) assessment and groundwater well monitoring. During 2018, ADEM plans to identify and sample additional forested wetland reference streams.

4.2 Coastal Wetlands

Alabama's coastal counties contain approximately 271,000 acres of wetlands based upon ADEM's 305(b) report for 2002. This acreage represents roughly 12.5% of the total acreage of the designated areas of the Alabama Coastal Nonpoint Pollution Control Program (ACNPCP) *Management Area*, which comprises over 2.3 million acres of southwestern Alabama's coastal region. Alabama recognizes the important functions of coastal wetlands and the vital role they play to reduce Non-Point Source (NPS) impacts and improve coastal water quality.

In addition, approximately 400,000 acres of coastal streams and estuarine waters, comprising more than 18% of this *Management Area* are contained within the geographic area of Mobile and Baldwin counties. These coastal waters possess a large number of wetland, riparian and shoreline vegetative buffers that function to reduce NPS impacts and other ecosystem stressors while serving to protect coastal water quality and habitats. This sub-basin comprises the 6th largest watershed area in the United States that drains into this unique deltaic and estuarine complex contained within this southwestern region of Alabama.

Alabama manages its wetlands, riparian areas, and adjacent buffers as important resources that provide for protection of habitat and water quality. Alabama's Coastal Zone Management Program provides regulatory oversight through ADEM's Coastal Section for the review, avoidance, and minimization of wetland development impacts. Wetlands are permitted and mitigated through the implementation of ADEM's Administrative Code –R.335-8 for the Coastal Program.

Alabama's awareness of these resources has resulted in the development of watershed oriented projects and programs that have proactively incorporated CZARA-§6217 (g) guidance management measures within the ACNPCP *Management Area.* ADEM's Mobile Branch and Coastal Section staff have continued to participate in the development of both wetland and stream mitigation criteria and guide the approval of proposed coastal mitigation banks throughout this area. Currently, eleven (11) USACOE approved and regulated coastal mitigation banks totaling more than 6,323 acres have been accredited or implemented to mitigate potential impacts for Alabama's southwestern coastal waters within our ACNPCP Management Area. Additionally, this Alabama Mitigation Bank Program can provide over 9,576 acres outside the Management Area for in-kind wetland and riparian mitigation, if required, to accommodate additional future impacts.

ADEM Field Operations, Coastal Programs and the ACNPCP have continued coordination with the U.S. Fish and Wildlife Service and the Mississippi Department of Marine Resources through the Mobile Regulatory District Army Corps of Engineers' Mitigation Bank Interagency Review Team (MBIRT). This MBIRT has developed regionalized wetland functional assessment tools as Hydro-Geomorphic (HGM) guidebooks utilized for the standardized assessment of these wetland functions for the Northern Gulf of Mexico, inclusive of Coastal Alabama habitats and functions. ADEM also coordinates with the Alabama Department of Conservation and Natural Resources (ADCNR) with NOAA's Coastal Training Program and the Alabama Coastal Foundation in support of the ACNPCP goals to present best available wetland-related technologies in the form of technical studies, workshops, and conferences that are made available to state and federal regulatory staff, consultants, and the general public. Previous accomplishments have included the presentation of the coastal *Wetland Rapid Assessment Procedure (WRAP) Workshop* and the *Alabama Coastal Wetland Plant Identification Workshop*, the regional *Alabama Stream and Wetlands Restoration Conference, Coastal Wetlands Hydric Soils Workshop* and the *Wetland Regulations and Compliance Workshop*. These workshops are repeated periodically to train new resource management staff and private sector entities. The prior ACNPCP coastal counties technical report titled, *Coastal Alabama Hydromodification and Wetlands Technical Update*, presented an in-depth overview of wetland-related activities and programs that have been implemented for southwest Alabama. More recently the ADEM-ACNPCP completed *Coastal Alabama Headwaters Stream Survey Study*, which provided comparative assessments, including geo-morphological and water quality data to develop a useful Composite Assessment Index for coastal headwater stream habitats and their adjacent wetlands. This *Headwaters Study* also includes new Reference Reach Regional Curve data for coastal stream restoration activities, especially applicable to natural drainages less than 1 sq. mile in area, while providing a recalibration of the earlier *Coastal Alabama Regional Curve* datum. All of these completed projects have been beneficial to the management of these coastal wetland and riparian resources.

The most recent wetlands and riparian areas-oriented projects that have been implemented for Alabama have included continued technical assistance from the ACNPCP to support the development of the *Alabama Wetlands Monitoring Program* (see Section 4.1 above). This *Wetlands Monitoring Program* has been developed through ADEM with coordination from U.S. EPA in order to develop a scheduled monitoring program that will collect long-term wetland data. This new Program will seek to document attributes and conditions that will provide the monitoring and tracking information needed to assess the health and sustainability of these important water resources throughout the state, including our coastal Alabama wetlands

For more information about Alabama's Wetland Resource Programs, contact
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Chapter 5 Groundwater

5.1. Overview of State Groundwater Protection Programs

Many of the elements of Alabama's groundwater programs listed in Table 5-1 are managed by subdivisions within the Alabama Department of Environmental Management (ADEM), including the Land, Field Operations, and Water Divisions. The Groundwater Branch in the Land Division provides the hydrogeological support for these programs. Other programs related to groundwater management and protection are managed by other state and federal agencies. The single family on-site sewage program and less than 15,000 gallon-per-day multi-family residential systems operated by management entities are managed by the Alabama Department of Public Health (ADPH). The Class II Underground Injection Control (UIC) Program is managed by the State of Alabama Oil and Gas Board. Groundwater withdrawal registrations are addressed by the Alabama Department of Economic and Community Affairs (ADECA) Office of Water Resources (Table 5-3). Other groundwater monitoring and regulatory programs are managed by the Geological Survey of Alabama (GSA), and the Alabama Surface Mining Commission. The U.S. Environmental Protection Agency (EPA) provides oversight on all federally funded and delegated groundwater programs.

5.2 Significant State Groundwater Program Developments

Table 5-1 shows a Summary of State Groundwater Protection Programs. The following items summarize some of the recent groundwater developments that are underway in Alabama:

1. Implementation of the Source Water Assessment Program within the ADEM Water Supply Branch regulations.
2. Implementation of revised guidance for Alabama Risk-Based Corrective Action (ARBCA) with respect to releases from structures and/or facilities <u>other than</u> Underground Storage Tanks (USTs). This regulatory guidance was last revised in February, 2017, (Revision 3.0).
3. Implementation of revised guidance for Alabama Risk-Based Corrective Action (ARBCA) with respect to releases of petroleum fuels from USTs. This guidance was last revised November 2001 and is currently under revision.
4. Implementation of FileNet Program for transference of all new documentation from paper files to electronic files allowing these files to be more easily accessible to the public. Older files are being scanned as resources allow.
5.
6. The deadline for UST upgrades with spill, overfill and corrosion protection was December 22, 1998. Tanks should have been upgraded, replaced with a new system or permanently closed by this date. The compliance rate with these regulations is increasing with continuing enforcement of these requirements.

Table 5-1. Summary of State Groundwater Protection Programs

Programs or Activities	**Check**	**Implementation Status**	**Responsible State Agency (1)**
Active Sara Title III Program	X	Fully established	EPA/ADEM/FOD/EMA
Ambient Groundwater Level Monitoring Program	X	Fully established	GSA
Aquifer Vulnerability Assessment	X	Fully established Being updated	ADEM/GWB
Aquifer Mapping	X	Fully established	GSA
Aquifer Characterization	X	Fully established	GSA
Brownfield Redevelopment & Voluntary Cleanup Program Regulations	X	Fully established	ADEM/HWB
Dry Cleaner Trust Fund Program	X	Fully Established	ADEM/HWB
EPA-Endorsed Core Comprehensive State Groundwater Protection Program	X	Fully established	ADEM/GWB
Groundwater discharge permits	X	Established in UIC Regulations	ADEM/UIC
Groundwater Best Management Practices			
Groundwater Legislation			ADECA
Groundwater Classification	X	Established in UIC Reg Definition	ADEM/UIC
Groundwater Quality Standards			
Groundwater Use	X	Fully established	ADECA/WRD
Interagency coordination for ground water protection initiatives	X	Continuing efforts	ADEM/GWB/**ADECA**
Non-point Source Controls	X	Ongoing education	ADEM/FOD
NPDES Permits for Land Application Sites	X	Fully established	ADEM/MUN/IND
Pesticide State Management Plan	X	Under Review	ADAI
Pollution Prevention Program	X	Fully established	ADEM/OEO
Resource Conservation and Recovery Act (RCRA) Primacy	X	Fully established	ADEM/HWB
Source Water Assessment Program	X	Fully established	ADEM/WSB
State Groundwater Program	X	Statute Based program	ADEM/GWB
State Superfund	X	Fully established	ADEM/LD
State RCRA Program incorporating more stringent requirements than RCRA Primacy	X	Fully established	ADEM/HWB
State Septic System Regulations	X	Fully established	ADPH
Subtitle D Solid Waste Program	X	Fully established	ADEM/SWB
Underground Storage Tank Installation Requirements	X	Fully established	ADEM/GWB
Underground Storage Tank Remediation Fund	X	Fully established	ADEM/GWB
Underground Storage Tank Registration Program	X	Fully established	ADEM/GWB
Underground Injection Control Program	X	Fully established	ADEM/GWB/OGB
Vulnerability Assessment for Drinking Water/Wellhead Protection	X	Fully established	ADEM/GWB
Well Abandonment Regulations	X	WSB Regs & Guidelines	ADEM/WSB/GWB
Wellhead Protection Program (EPA-approved)	X	Fully established	ADEM/WSB
Well Installation Regulations	X	Fully established	ADEM/WSB

(1) ADEM = Alabama Department of Environmental Management, FOD = Field Operations Division, GWB = Ground Water Branch, WSB = Water Supply Branch, LD = Land Division, HWB = Hazardous Waste Branch, OEO = Office of Education and Outreach, SWB = Solid Waste Branch, MUN = Municipal Section, IND = Industrial Section, GSA = Geological Survey of Alabama, **ADPH = Alabama Department of Public Health, ADECA = Alabama Department of Economic and Community Affairs, Office of Water Resources, ADAI = Alabama Department of Agriculture and Industries,** EPA = Environmental Protection Agency, EMA = Emergency Management Agency

7. In September 1997, a contract was signed with the Geological Survey of Alabama to revise a series of 13 Aquifer Vulnerability Reports. These reports are being revised by updating geologic names and terms to match the most recent state mapping, revising vulnerability maps from 1:250,000 scale to 1:100,000 scale, revising the vulnerability rating methods, updating information on public water supply wells, and inclusion of text, maps and figures in an electronic CDROM format and GIS Interactive maps. Area 13 (Baldwin and Mobile Counties), Area 10 (Washington, Choctaw and Clarke Counties), Area 5 (Coosa, Cleburne, Clay, Randolph, Tallapoosa, Chambers and Lee Counties), Area 11 (Covington, Escambia, Monroe, Clarke, Butler and Crenshaw Counties), and Area 4 (Jefferson, St. Clair, Calhoun, Talladega and Shelby Counties) have been completed and published as a compact discs., GSA has completed the review process for Area 2 and it is available online. Areas yet to be completed are now linked to the Geological Survey of Alabama Statewide Groundwater Assessment and will be completed as the statewide assessment progresses. The Statewide Assessment will take the place of all the area reports and contain information about aquifers on a more comprehensive, statewide scale. The plan is to have a draft of the assessment posted on GSA's web site by mid 2018 available to the public. It will have over 100 plates of cross sections, potentiometric surface maps, geologic formation maps, and other hydrogeologic information in addition to the report with well-specific hydrographs and discussions. This is envisioned as a living document and as information is updated the plates and figures will be updated as well. Area-specific reports will not be produced in the future as they are replaced by the Statewide Assessment.
8. Regulations have been developed and implemented by ADEM to manage Concentrated Animal Feeding Operations (CAFOs). Hydrogeologic site evaluations and groundwater monitoring requirements have been included in the regulations as part of siting and operation requirements for CAFO lagoons and land application sites.
9. The U.S. Geological Survey has completed the National Water Quality Assessment that includes significant parts of Alabama's Mobile River and Lower Tennessee River Basins.
10. The Alabama Department of Public Health has completed its on-site sewage regulations that went into effect on March 9, 2006.
11.

5.3 Summary of Groundwater Contamination Sources

5.3.1 Reporting Area

There are five Physiographic Sections in Alabama (Figure 5-1). ADEM has selected the Highland Rim Physiographic Section (Figure 5-2) for evaluation during this reporting period. Within this physiographic section there are three (3) districts, the Tennessee Valley (TV), Little Mountain (LIM), and the Moulton Valley (MOV) (Figure 5-2). This reporting area includes all or parts of seven (7) counties in northwest Alabama consisting of Lauderdale, Colbert, Franklin, Limestone, Lawrence, Morgan, and Madison Counties. The Highland Rim is underlain by three (3) major aquifers that outcrop in the area. They are, the Tuscumbia-Fort Payne aquifer, the Bangor aquifer, and the Tuscaloosa aquifer. These aquifers are significant sources of drinking water supplies for private residential use as well as for municipalities and they are all susceptible to contamination. Data contained in Tables 5-2 and 5-3 were queried and retrieved by county. Some overlap of data from physiographic districts not included in the reporting area is shown where the above-mentioned counties do not lie wholly within the report's selected physiographic districts.

5.3.2 Data Review and Compilation

Hydrogeologists from the ADEM Groundwater Branch are assigned to the major groundwater regulatory programs as part of the Comprehensive State Groundwater Protection Program. The information contained in Table 5-2, Groundwater Contamination Summary, was researched from ADEM's electronic databases and prepared by the hydrogeologists assigned to each of the programs listed under the Source type column.

5.3.3 Superfund, CERCLIS, and DOD/DOE Sites

ADEM's Land Division works with EPA and the Department of Defense (DOD)/Department of Energy (DOE) to manage these types of sites. Three (3) facilities identified in Table 5-2 are Superfund sites listed on the National Priority List (NPL) in the reporting area. Redstone Arsenal (US Army) and NASA collectively were listed in May 1994 as one NPL site (ID# AL7210020742). However, Redstone is regulated under a Hazardous Waste Facility Permit through the RCRA process while NASA is regulated under a Federal Facilities Agreement through the CERCLA process. A third facility is the Triana/Tennessee River site (ID# ALD983166299) listed in September 1983 as one (1) of the first NPL sites for Alabama.

There are over 125 sites within Redstone Arsenal and NASA that are under investigation in various phases of assessment through corrective action, all with impacted groundwater where many plumes are comingled. Corrective action for DDT-impacted soil and groundwater was conducted at the Triana/Tennessee River site through the 1990s and is currently under monitoring.

There are two (2) CERCLIS (non-NPL) sites located in the reporting area that were investigated during the reporting period, one (1) had a confirmed release of contaminants into groundwater. These are sites where state and federal funds could be used to conduct preliminary assessments and secondary investigations by ADEM and EPA.

There is one DOD facility located within the reporting area which is also listed as a NPL site: Redstone Arsenal. This active DOD facility with ongoing environmental site assessments is primarily funded through the Defense Environmental Restoration Program. Investigations and corrective action for areas are ongoing or planned. Groundwater has been investigated primarily for VOCs, metals, perchlorate, and explosives.

There are 10 DOD facilities located in this province that are classified as Formerly Used Defense Sites (FUDS). However, only one (1) is identified with potential hazards eligible for funding: Courtland Army Airfield. Therefore, the property is eligible for Defense Environment Restoration Account funding under the FUDS program. Environmental cleanup at FUDS properties is conducted in accordance with CERCLA. Investigations and corrective action for additional areas are currently planned. Groundwater has been investigated for explosives and VOCs.

5.3.4 Underground Storage Tank Program

The largest category of sites listed in Table 5-2 is Underground Storage Tanks (USTs). There are 153 UST sites in the reporting area that have been assessed for impacted groundwater. These sites are managed by the ADEM Groundwater Branch. Assessment and remediation of eligible sites is funded through the State UST Trust Fund. Many of the cleanups listed include free product, source area, and soil removals. Active groundwater remediation systems are also included. Most of these cleanups involve gasoline releases, but also include releases of diesel fuel oils and hazardous substances. The petroleum fuels include compounds such as Benzene, Ethylbenzene, Toluene, and Xylene (BTEX), Polynuclear Aromatic Hydrocarbons (PAHs), Methyl Tertiary Butyl Ether (MTBE), and Lead that affect groundwater quality. Monitoring for MTBE at UST sites has been required since 1996.

5.3.5 Hazardous Waste Management Program (RCRA)

There are eight (8) hazardous waste sites managed under the Resource Conservation and Recovery Act (RCRA) Corrective Action program identified in the reporting area. The ADEM Land Division's Hazardous Waste Branch manages these sites with support from the ADEM Hydrogeology Section. These sites require extensive assessment, permitting, and reporting requirements. Releases associated with these sites are persistent and difficult to assess and remediate. Compounds such as chlorinated VOCs and BTEX associated with hazardous waste generated by the facilities are present in many instances and have properties that make remediation problematic.

5.3.6 Alabama Brownfields & Voluntary Cleanup Program

The ADEM's Land Division administers the Brownfield Redevelopment and Voluntary Cleanup Program pursuant to the Alabama Land Recycling and Redevelopment Act, Code of Alabama 1975, § 22-30E-4 (ADEM Admin. Code Rule 335-15-x-.xx). The program provides a mechanism for the implementation of a cleanup program that encourages applicants to voluntarily assess, remediate and reuse rural and urban areas with actual or perceived contamination. There are two (2) sites managed under the Alabama Brownfields and Voluntary Cleanup Program within the reporting area. Groundwater impacted with constituents such as VOCs and metals are associated with these sites.

5.3.7 Alabama Drycleaning Trust Fund Program

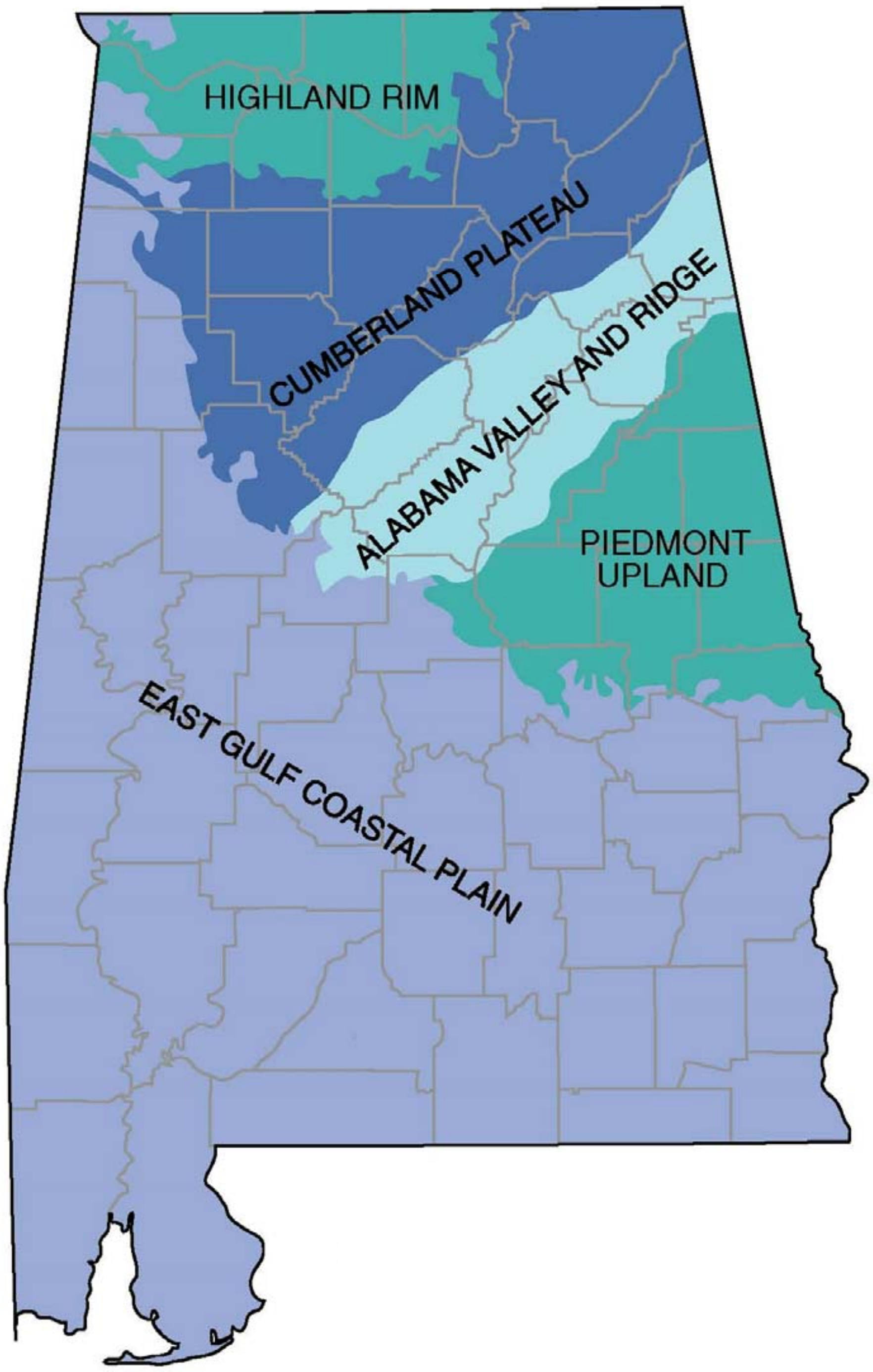
The ADEM's Land Division administers the Alabama Drycleaning Environmental Response Trust Fund (DERTF) Program pursuant to the Alabama Drycleaning Environmental Response Trust Fund Act, Code of Alabama, 1975, § 22-30D-1 et. seq. (ADEM Admin. Code Rule 335-16-x-.xx). The program established: (1) performance standards for facilities brought into use after May 24, 2003; (2) a schedule for the retrofit of facilities that were in existence prior to May 24, 2000; (3) criteria required for reporting a suspected release or site discovery; and (4) requirements for initial investigation, assessment, and remediation of contamination. There are five (5) facilities managed under the Alabama DERTF in the reporting area. VOCs associated with chlorinated solvents have impacted soil and groundwater at these sites.

Table 5-2. Groundwater Contamination Summary (2016-2017)

Source Type	Number of Sites	Number of sites that are listed and/or have confirmed releases	Number with confirmed groundwater contamination	Contaminants	Number of Site Investigations (optional)	Number of sites that have been stabilized or have had the source removed	Number of sites with corrective action plans (optional)	Number of sites with active remediation (optional)	Number of sites with cleanup completed (optional)
NPL	2	2	2	VOCs, SVOCs, metals, explosives, perchlorate, and pesticides	125 investigations within NPL sites	22 Source actions within NPL sites	25 CAPs within NPL sites	15	1
CERCLIS (non-NPL)	2	1	1	Metals and VOCs	2	1		0	
DOD/DOE	2	2	2	VOCs, SVOCs, metals, explosives, perchlorate, and pesticides		NPL sites			
Brownfields & VCP Sites	2	2	2	VOCs and metals	2	0	0	0	0
Drycleaning Trust Fund	5	2	2	Chlorinated VOCs (PCE and daughter products)	2	1	0	2	
Underground Storage Tank (UST) Program #	153	152	132	Petroleum hydrocarbons (BTEX, MTBE, PAHs, et al)	127	153	100	95	28
RCRA Corrective Action	8	8	8	Metals, SVOCs, and VOCs	8	8	7	4	0
Underground Injection Control (UIC) Program *	82			VOCs					
Toxic Substance Control Act	7	0	0	PCBs	0	0	0	0	0
State Sites	17	16	16	Metals, chlorinated VOCs, SVOCs, PCBs, pesticides, cyanide, nitrates, and petroleum VOCs	17	8	8	4	
Solid Waste	6	0	0	Metals and VOCs		0		0	
Totals	286	185	165		283	193	140	120	29

Hydrogeologic Setting: Alabama Highland Rim Physiographic Section Map Available: See Figure 5-1 Date Reporting Period: 2016-2017
The number of UST sites reflects releases that have been reported but are not yet closed/NFA.
* Sites for Underground Injection under investigation in other programs (primarily (UST)

Figure 5-1 Alabama Physiographic Sections



Produced by the Dept. of Geography
College of Arts and Sciences
The University of Alabama

Table 5-3. Groundwater Withdrawals, Overall by Categories, by County - Alabama

	Water withdrawals (Mgal/d)															
	Public Supply		Com-mercial	Domestic	Industrial		Thermoelectric		Mining		Livestock	Aquaculture		Irriga-tion	Total	
County	Fresh	Saline	Fresh	Fresh	Fresh	Saline	Fresh	Saline	Fresh	Saline	Fresh	Fresh	Saline	Fresh	Fresh	Saline
Colbert	0.57			0.27	0.22		0.00		0.00		0.13	0.00		0.61	1.80	0
Franklin	1.08			0.51	0.00		0.00		0.31		0.32	0.00		0.00	2.22	0
Lauder-dale	1.15			1.19	0.00		0.00		0.00		0.19	0.02		1.27	3.82	0
Law-	0			0.38	0.00		0.00		0.01		0.30	0.05		0.19	0.93	0
Lime-stone	2.71			0.68	0.00		0.00		0.00		0.16	0.18		1.28	5.01	0
Madison	28.64			0.78	0.00		0.00		0.31		0.12	0.00		3.71	33.56	0
Morgan	0			0.28	0.00		0.00		0.26		0.30	0.02		0.14	1.00	0
Total:	34.15	0	0	4.09	0.22	0	0	0	0.89	0	1.52	0.27	0	7.2	48.34	0

Source: Tom Littlepage, Office of Water Resources, Alabama Department of Economic & Community Affairs

5.3.8 Underground Injection Control Program

The Underground Injection Control (UIC) program is managed by the ADEM Groundwater Branch. There are 82 sites that have been permitted for underground injection in the reporting area. Sites with impacted groundwater are under investigation through other programs. Each Class V UIC facility in the State is required to operate under an individual performance-based discharge permit issued by the UIC Program. The UIC program reviews permit applications; issues individual performance-based discharge permits for all Class V facilities, and inspects and tracks Class V facilities for compliance. In this reporting area, permits are issued to Class V facilities for the subsurface injection of treated wastewater from various industrial and commercial activities, and for the injection of materials intended to aid remediation at existing contamination sites. Some types of activities that are permitted and regulated by the UIC Program include discharges from clustered on-site sewage Waste Water Treatment Plants (WWTPs), coal washing operations at coal mines, poultry processors, laundromats, truck and car washes, as well as other industrial or commercial activities. State UIC regulations prohibit the discharge from a Class V injection well that would cause an exceedance of federally established maximum contaminant limits (MCLs) in receiving groundwater. Class I and Class IV UIC wells are prohibited in the State of Alabama and Class II UIC wells are managed by the State of Alabama Oil and Gas Board.

5.3.9 State Groundwater Program

There are 17 facilities managed under the State Groundwater Program within this geologic reporting area. State Groundwater Program sites are those that are not regulated by established programs such as CERCLA, RCRA, UIC, UST, DERTF or the Brownfields & Voluntary Cleanup programs. Sites such as releases from bulk petroleum storage facilities, pipelines, and otherwise unregulated chemical spills are assessed and remediated using the authority of the Alabama Water Pollution Control Act (AWPCA). Releases from these sites are in many cases reported by the responsible party through company initiated environmental audits or are discovered as a result of real estate assessments during property transactions. Other groundwater incidents are discovered and reported to the Department by citizens or discovered through inspections. The responsible party is required to perform assessment and cleanup of these sites. Many types of contaminant releases have been addressed by this program including VOCs and emerging contaminants such as PFOAs.

5.3.10 Solid Waste Program

There are six (6) solid waste facilities managed under the Solid Waste Program within the reporting area. The ADEM Land Division’s Solid Waste Branch manages these sites, and includes extensive assessment, permitting, and reporting requirements. Analytical data associated with these sites documents that metals, VOCs, and PFOAs are the primary constituents of concern.

Figure 5-2 Highland Rim and Cross-Section

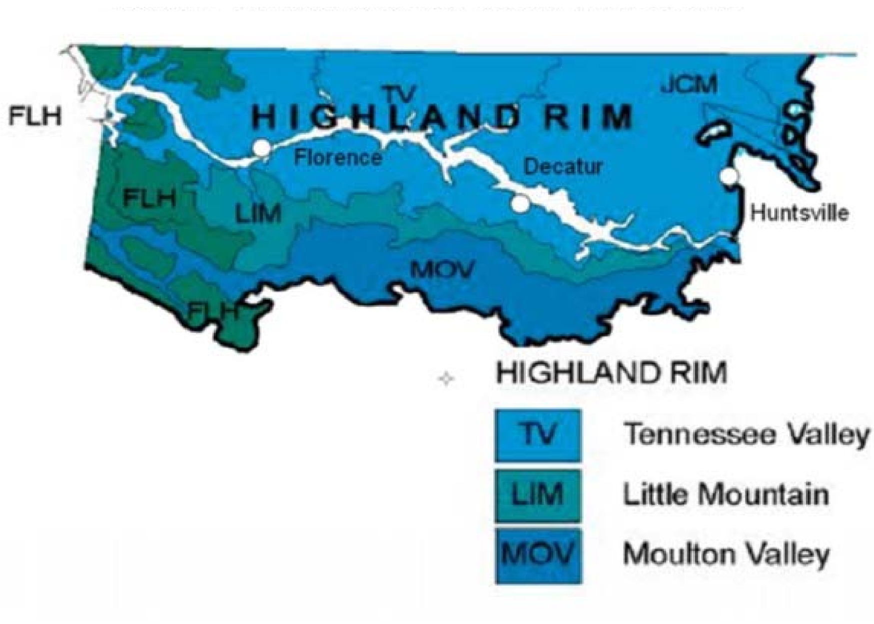


Figure 3. Physiographic districts of the Highland Rim. FLH: Fall Line Hills of the East Gulf Coastal Plain. (Cartographic Research Lab, University of Alabama)

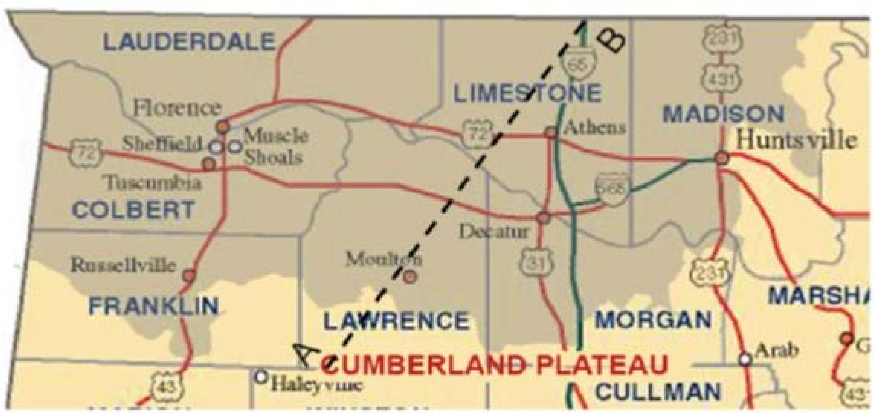


Figure 1. Location Map of the Highland Rim. Note: Small outliers of East Gulf Coast Plain in Lauderdale and Colbert Counties not shown. (Base map from Cartography Research Lab, University of Alabama)

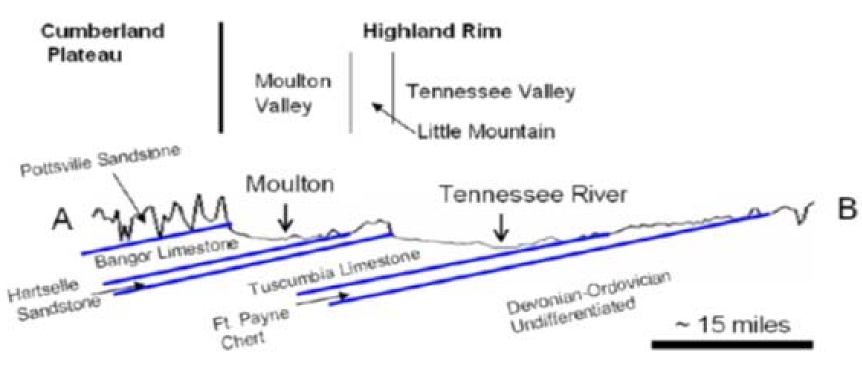


Figure 2. Cross-section AB (see Figure 1 for location) showing the physiographic districts in the Highland Rim and their relationship to the underlying geology. Relief and dip of rocks are exaggerated.

5.4 Summary of Groundwater Quality

5.4.1 Hydrogeology

The Highland Rim Physiographic Section in Alabama (Figure 5-2), contains three (3) aquifers in a seven (7) county area in northwest Alabama. These aquifers are used for public supply by municipalities. The Tuscumbia-Fort Payne aquifer includes the Tuscumbia Limestone, and the Fort Payne Chert, and overlying Monteagle Limestone present only in the southeastern part of the area. The aquifer occurs principally in the northern part of the area and is a major source of groundwater used for public supply. The Bangor aquifer includes the Bangor Limestone and the Hartselle Sandstone. It occurs principally in the southern part of the area and is capable of supplying large quantities of groundwater but currently is not being used extensively. The Tuscumbia-Fort Payne and Bangor aquifers are principally carbonate aquifers. The Tuscaloosa aquifer includes the Tuscaloosa Group. It occurs principally in the southwestern part of the area and supplies water to several small systems. The base of the Tuscaloosa aquifer is the contact with underlying formations (Bangor Limestone or Pottsville Formation). Springs commonly occur at the contact between the Tuscaloosa aquifer and the Pottsville Formation where rocks crop out. Wells in the Tuscaloosa aquifer may yield up to 350 gal/min if properly constructed (Peace, 1964) but most wells, however produce significantly less. The average for public supply wells in the area is 160 gal/min. Many municipalities that formerly used the Tuscaloosa aquifer for water supply currently use surface water. The aquifer is still used by several small communities.

Water in the carbonate aquifers occurs in the secondary features related to fractures that have been enlarged, often to cavernous proportions, due to solution processes. These fractures cause water movement within the aquifer to be markedly preferential, or anisotropic. Large quantities of groundwater may be obtained in the anisotropic aquifers such as these. The occurrence of groundwater in these aquifers is controlled largely by the magnitude of solutional features and the configuration of the surface and bottom of the aquifer. Groundwater in the Tuscaloosa aquifer occurs in relatively uniform primary feathers. Groundwater movement in this aquifer is isotropic and the amounts of water available are principally related to thickness and areal extent of the aquifer.

All of the major aquifers are recharged throughout their outcrop in the subject area, consequently, they are susceptible to contamination throughout their outcrop. Surface contaminants are most likely to enter the groundwater system in poorly drained areas where the land surface is above the potentiometric surface, areas of extensive solution, and sinkholes. Sinkholes provide the most direct path between surface contamination and the groundwater system.

Recharge to most pumping wells, especially those in the Tuscaloosa aquifer, is probably local. Due to the presence of cavernous features, carbonate aquifers have a potential to be recharged by water which comes from outside what is normally conceived as a local area. The area directly affected by pumpage in an isotropic aquifer can be reasaonably well defined through a carefully planned and executed aquifer test. Delineation of the area directly affected by pumping a well in an anisotropic aquifer is normally quite difficult and may require the use of geophysical or remote sensing techniques, or both.

5.4.4 General Statement of Ground Water Quality and Vulnerability

The Highland Rim aquifer system is an important source of water in the Highland Rim area with a wide range of well yields (less than 1 to more than 400 gal/min) and water quality (less than 100 to more than 10,000 mg/L dissolved solids). The complex anisotropic flow system of the aquifer is only partly understood.

The major aquifers in the Highland Rim are recharged throughout their outcrop and any contaminants present in the recharge area of an aquifer can reasonably be expected to enter that aquifer. Consequently, the major aquifers are susceptible to contamination throughout their entire outcrop area. Generalized topographic settings such as closed-contour depressions are identified as areas that are highly susceptible to contamination. Specific features such as sinkholes also are identified as extremely susceptible to contamination..

For more information about Groundwater Programs, contact Whit Slagle /ADEM-Montgomery at (334) 271-7831 or cws@adem.state.al.us.

Chapter 6 Coastal Waters

6.1 Alabama Coastal Nonpoint Pollution Control Program (ACNPCP)

In June 1998, the NOAA-Office of Coastal Management (OCM) and USEPA awarded conditional approval to the Alabama Coastal Nonpoint Pollution Control Program (ACNPCP). Since achieving conditional approval, ADEM has further developed the ACNPCP, seeking full program approval, in order to ensure that program components are implemented to the maximum extent practicable. The approved ACNPCP Management Area is inclusive of the subwatersheds of the Escatawpa River, Mobile-Tensaw Rivers, and Perdido River Sub-Basins, that are contained within the geo-political boundaries of Baldwin and Mobile Counties. Figure 6-1 depicts the *ACNPCP Management Area* and Table 6-1 shows the ACNPCP Watershed HUC Codes.

ADEM continues to work with ADCNR-State Lands-Coastal Section, NOAA-OCM, USEPA and other State and federal agencies to coordinate the Alabama Coastal Nonpoint Pollution Control Program (ACNPCP) as a water quality-based approach to reduce land use impacts to coastal resources and enhance coastal waters. ADEM and ADCNR jointly submitted the *ACNPCP: 2003 Submission Documentation; Response to NOAA/EPA Conditional Approval Items*; July 31, 2003, wherein the State described new and expanded program components that demonstrate an approvable ACNPCP. This submission included a 250 page description of the Program with over 500 supporting documents, which included statewide and coastal projects and programs that have been developed or tailored to address the ACNPCP management measures. This documentation was augmented by the submission of the ACNPCP: Response to "Final Administrative Changes" Guidance; ACNPCP 2003 Submission Support Document; October 31, 2003, that provided the enforcement policy, long term strategy and implementation planning documentation requested by the federal review agencies to complete their approval review process. The State developed a procedure for a new sequential category submission process documenting the State's approach and implementation of numerous supporting coastal and regional projects that address the joint NOAA/EPA Interim Decision Document for Unapproved Conditions of ACNPCP (February 16, 2005). These new submissions are being developed as the federal recommended actions are being implemented by Alabama to help the State gain full federal approval and allow full program implementation.

In August of 2016, NOAA-OCM conducted their formal 312 Review of Alabama's Coastal Zone Management Program. This report cited Alabama with a Necessary Action to complete approval of the ACNPCP by May of 2022, or face state funding sanctions per federal statutes. It also required that Alabama submit a 5-Year ACNPCP Work Plan by November 30, 2017 to satisfy the Necessary Action criteria. Alabama developed an interagency team that submitted this ACNPCP Work Plan as requested. Alabama has engaged this team in quarterly teleconferences with the federal approval representatives, while working toward full approval for this Program.

The ACNPCP utilizes partnerships with Federal, State and Local agencies, businesses, organizations and decision makers to influence the implementation of items necessary to achieve program approval and operation. For the past 18 years, the ACNPCP coordinated to support the former Coastal Alabama Clean Water Partnership, which has now been redeveloped

Figure 6-1 ACNPCP Management Area

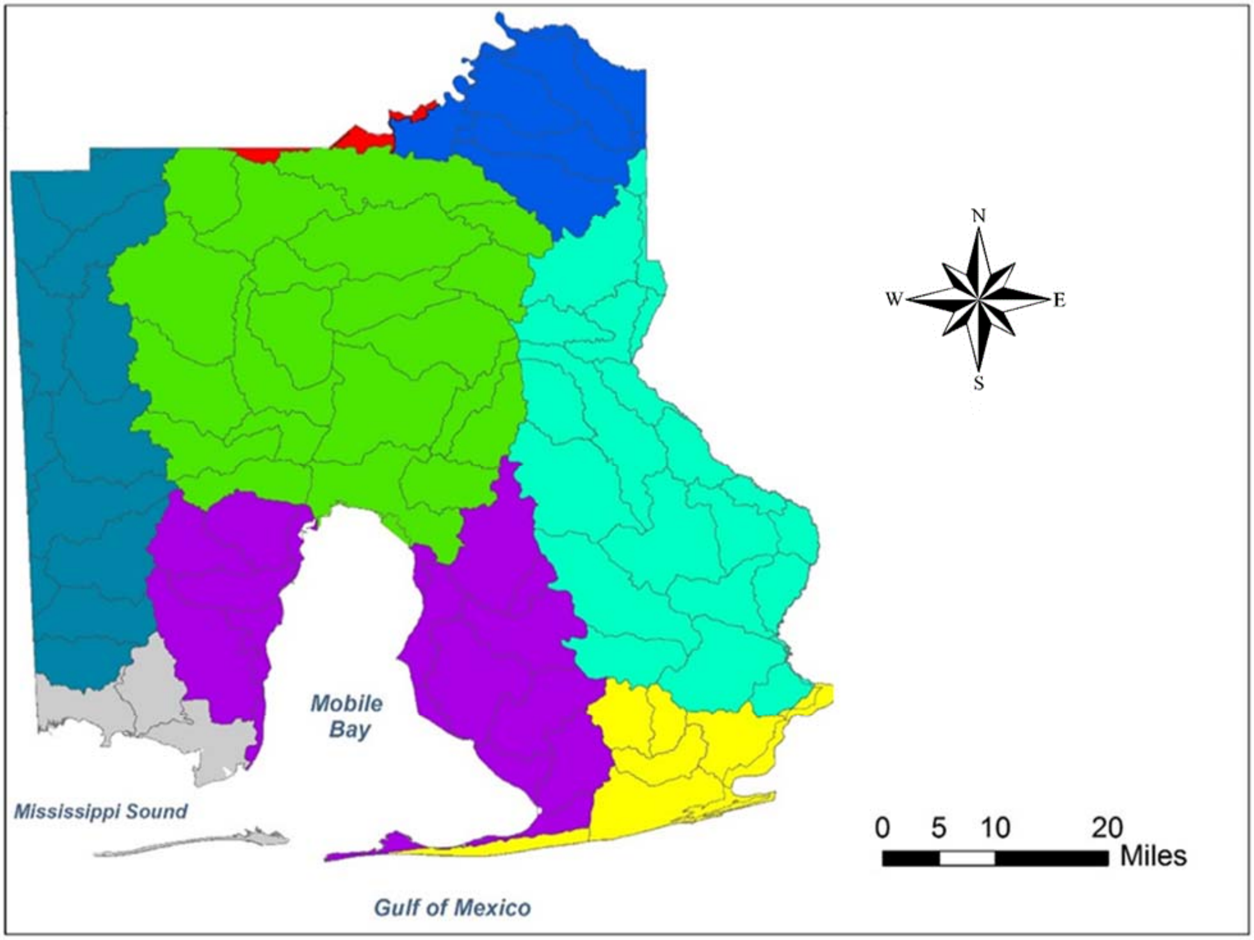


Table 6-1 ACNPCP Watershed HUC Codes

Watershed	USGS Cataloging Unit:	
Lower Alabama	03150204	
Lower Tombigbee	03160203	
Mobile Tensaw	03160204	
Perdido River	03140106	
Mobile Bay	03160205	
Perdido Bay	03140107	
Escatawpa	03170008	
Mississippi Coastal	03170009	

as the Alabama's Coastal Nonpoint Source Resources Matrix (CNPS-Matrix) as a useful forum to tackle challenging coastal NPS issues. The ACNPCP has also redeveloped the regulatory-based ACNPCP Technical Advisory Committee (TAC) to address nonpoint source pollution management program needs and provide guidance for regulatory agency coordination issues. The ACNPCP also works closely with the ADEM-§319 program to assist and support these coastal NPS efforts and issues. These various forums are utilized to enhance coordination and cooperation regarding coastal water quality resources management. NOAA-OCM, USEPA, USDA-NRCS, USFWS, USACOE, ADEM-§319, ADCNR-State Lands, and many other agency environmental partners have helped to advance administrative coordination and interagency cooperation as we further develop and implement the ACNPCP as a coastal program.

ADEM has engaged in many ongoing projects pertinent to ACNPCP that monitor and promote the effectiveness of nonpoint source pollution controls, CZARA-§6217 management measures, and program approval criteria. ADEM's Coastal Programs and CNPCP staff developed and submitted the initial *Coastal Monitoring Plan for the ACNPCP; Mobile and Baldwin Counties, Alabama*. This plan incorporates monitoring activities being conducted through ADEM, within the ACNPCP Management Area. ADEM staff continue extensive field monitoring efforts to conduct specific baseline and Land-Use Category (LUC) BMP Surveys, Targeted Water Quality Studies, inspections of construction, stormwater and mining operations, and targeted Watershed Studies within the ACNPCP Management Area. The ACNPCP has also provided valuable coordination toward the development of the new *Alabama Coastal Waters Quality Monitoring* (CAWQM) *Program* -see Chapter 6.3 below.

ADEM Activities have been expanded considerably to coordinate closely with ADEM-319, Coastal States Organization (CSO), the Gulf of Mexico Alliance (GOMA), CNPS-Matrix, and other Program partners and projects in order to specifically address approval criteria for the Program. ADEM's ACNPCP Coordinator has served as national Chair of the CSO's *Coastal NPS Work Group* since October of 2010. This position serves the national Coastal NPS Work Group (coordinating directly with the federal NOAA and EPA representatives, CSO Director, Counsel and Staff, Sub Committees, as well as other State representatives) to provide bi-monthly national Teleconferences that are directed toward developing the States approach for the promotion, approval and implementation of State CNPCPs. This is an ongoing forum for all states' Coastal Nonpoint Programs, with over 100 Work Group members affiliated through the server for this forum.

The ADEM staff has continued to provide technical advice and regulatory coordination with ADCNR and the Mobile Bay National Estuary Program, NRCS, USFWS, USACOE-Mobile District, MS-AL Sea Grant, Week's Bay NERR, The Nature Conservancy, and other NGO's, including cooperation with local County and Municipal entities to develop the following ACNPCP applicable projects and programs to address approval components for these categories:

A. Agriculture:

1. *Coastal Alabama Regional No-Till Grain Drill (NTGD) Program*: The continued implementation and monitoring of Agriculture-related measures are realized through the newest ACNPCP project being implemented through the local Soil and Water Conservation Districts using ADEM-319 funds. Both Mobile and Baldwin Counties contracted to purchase this erosion stabilization equipment and through a series of collaborative Workshops, they have provided field demonstrations that raise awareness

and educate the local public concerning their use and importance. The No-Till equipment was placed on bid, ordered and was delivered to the SWCDs in August of 2015. This Program provides access and long-term maintenance funding, enabling maximum application for these machines for farmers participating within each coastal county. During this project's initial 18-month period of contracted implementation, the machines' use was reported in 21 of our coastal 12-digit HUCs on least 4,325 acres, with local NRCS-RUSLE-2 estimates of the soil erosion reduction reported for this project at 21,580 tons per year. These participating SWCDs will continue to identify the HUCS and tally projected soil loss reduction as a result of these and other associated practices. The SWCDs will continue implementation of this project with monitoring and tracking of its use projected for the next several years.

2 *Response and Implemented Strategy for Final Category Approval for Agriculture*: ADEM-ACNPCP has engaged directly with ADCNR-State Lands and ADEM-Field Operations Division in order to submit the state's response addressing the IDD "Recommended Actions" for the Agriculture Category. Formal submissions by the State to the Federal entities (NOAA-OCM and USEPA) include the detailed Agriculture Submission information that was submitted in February of 2015. NOAA-OCM and USEPA as the federal review partners deemed this category "conditionally approved" in November, 2015.

B. Urban Areas:

ADEM-ACNPCP staff participates in many coordination meetings, projects development, implementation activities, local, regional, and national events and trainings that support *Urban Areas* measures for these Program categories.

1. *Urban Development: Runoff, New Development, Existing Development, and Watershed Protection*: ACNPCP has worked closely as a member of the Mobile Bay NEP's *Science Advisory Committee* and *Project Implementation Committee* to help prioritize approximately 42 coastal watersheds for the regional development of comprehensive Watershed Management Plans for these targeted coastal 12-digit HUCs [see"Watersheds:http://www.mobilebaynep.com/the_watersheds]. These watershed management plans are essential to provide access for ADEM-319 and many other federal and NGO funding sources, while providing a science-based roadmap for ACNPCP category implementation. These watershed management plans are important for to initiating watershed-scale restoration and enhancement projects for these critical coastal areas. Category efforts during this period that focused on addressing Urban Areas impacts and related issues have included ACNPCP's intensive involvement and support with Mobile Bay NEP activities:
    a. ACNPCP has continued providing technical assistance with developing NFWF funded Watershed Restoration and Management Planning efforts. This has involved Steering Committee participation for Bayou La Batre River, Bon Secour River-Oyster Bay, Dauphin Island, D'Olive Creek, Dog River, Eight Mile Creek, Fowl River, Mon Lois Island and Delchamps Bayou, Three Mile Creek, and Week's Bay HUCs. Future coastal sub-Watershed Management Plans are being developed through the Mobile Bay NEP to address the Sandy Creek-Wolf Bay and West Fowl River, and Tensaw-Apalachee River HUCs in the near future.
    b. ACNPCP continues to provide technical assistance to guide on-the-ground implementation projects being developed for the *D'Olive Comprehensive Watershed Management Plan, Eight Mile Creek Watershed Management Plan, Three Mile Creek Watershed Management Plan, Dog River Watershed Management Plan,* and the newer *Fowl River Watershed Management Plan.*

These efforts have moved forward with intensive coordination with Mobile Bay NEP, ADEM-319, ADEM-Water Divisions programs, NRCS, and The Nature Conservancy. For more specific information see http://www.mobilebaynep.com/the_watersheds

c. Other ACNPCP-related projects have promoted technical assistance and information by providing presentations of Coastal NPS concepts to the public and partner agencies. ADEM's ACNPCP further addressed many Urban Area issues by being involved with the continued support and development of
   1) the *Alabama Low Impact Development (LID) Handbook*. **(**see http://adem.alabama.gov/programs/water/waterforms/LIDHandbook.pdf)We are proud that this product provides water quality-based BMP guidance and technical information that reduce NPS impacts and supports the implementation of ACNPCP's Urban Areas development measures;
   2) he *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (see http://swcc.alabama.gov/pages/erosion_control.aspx?sm=b_b) was released in 2014 and developed through the Alabama Soil & Water Conservation Committee (ASWCC) as a project for ADEM-319 with important additions to the BMP practices that have been coordinated to support the ACNPCP measures. ACNPCP has participated several times on the document review team.

d. ACNPCP has provided technical assistance to the National Estuarine Research Reserve's Coastal Training Program, which has supplemented the *CLEAR WATER ALABAMA Workshop Program* by conducting a series of local *Construction and Stormwater BMP Training Workshops*. In November of 2017 the annual *CLEAR WATER ALABAMA Workshop* was hosted through the Alabama Soil and Water Conservation Committee with support from the City of Mobile and other partners. ADEM-319 and ACNPCP provided funding and moderators to facilitate this important event. These events provide important education and outreach to promote use of best technologies and state-approved BMP practices that support these ACNPCP measures.

2. *Onsite Sewage Distribution Systems* (*OSDS*):
Several prior projects to implement measures for this category have furthered the development of this category for the ACNPCP. Concurrent and sequential projects address those remaining measures and recommended actions requested by NOAA and EPA.One key component of this category is the implementation of the *Coastal Alabama OSDS Inspection & Maintenance (I&M) Program*. Using USEPA set-aside ADEM-319 funds, ACNPCP has secured concurrent Contracts with partner agencies to implement this project with the Baldwin County Soil & Water Conservation District, Mobile County Soil & Water Conservation District, Mobile County Health Department, and the ADPH-Baldwin County Health Department. The *Gulf Coast Resources Conservation and Development Council* has graciously provided annual grants to help fund this OSDS I&M Program.Four (4) Geographic Sewer Units, as "OSDS Sectors", have been selected for each County based upon NRCS and SWCDs hydric mapping and expertise provided by the local Health Departments. The selected group of Contractors have worked well to complement one another and have assisted toward implementing the objectives of this Project. An MOU was facilitated by the SWCDs through the Alabama Onsite Wastewater Board (AOWB) and the local Health Departments with participation from participating State-certified OSDS-Pumpers that have agreed upon a set value and process for the pumpout reimbursements.

The OSDS I&M Project informational Fact Sheets and Workshop Flyer Templates have been designed and are distributed to the public. OSDS I&M Workshop Resident Folders have been designed cooperatively by the Contractors to provide each resident with an OSDS tracking and Pump-Out reminder format.

Alabama Cooperative Extension System (ACES) has greatly supported our efforts and provided PR and social media on behalf of the SWCDs. Also, the Contractors and Partners are reporting project Sector OSDS I&M Workshops in their social media outlets and newsletters. With the gracious participation of our OSDS I&M Workshop hosts, two (2) Sectors have been completed, including participation by over 525 members of the public with the presentation of 22 Workshops at locations that were facilitated by the Contractors for each County Sector. We have seen the successful issuance of 454 Inspection/Pump-out Vouchers to qualifying home owners, administered and dispersed work reimbursements to the AOWB-accredited pumpers that completed vouchered pump-outs and certified inspections for those participating residential OSDS. We are engaged to finish the Sector 3 workshops in Spring of 2018. We have recruited AOWB-certified Pumpers and re-engaged our Project Contractors to continue this Program for implementation of Sector 4 into 2019.

C. Wetlands, Riparian Areas, and Vegetated Treatment Systems:
Alabama manages its wetlands, riparian areas, and adjacent buffers as important resources that provide for protection of habitat and water quality. ADEM's Mobile Branch and Coastal Section staff have continued to participate in the science-based development of both wetland and stream mitigation criteria and guide the approval of proposed coastal mitigation banks and In-Lieu Fee Programs. Alabama's CNPCP has sought to protect these critical resources through the development of watershed oriented projects and programs that have proactively incorporated CZARA-§6217 (g) guidance management measures within the ACNPCP *Management Area*. More information pertinent to this category is presented in Chapter 4 of this document.

1. *Alabama's Wetland Monitoring Program (WMP)*: In 2011, ADEM began sampling wetland systems statewide as part of EPA's National Wetlands Conditional Assessment Survey (NWCA), and Piedmont and Coastal Plain wetland systems beginning in 2012 as part of the Southeast Wetlands Monitoring Intensification Survey, as a 2-year multi-state project. The ACNPCP assisted ADEM's review of the current wetland assessment protocols and review of assembled data obtained to develop a comprehensive wetland monitoring program that can be incorporated in Alabama's current Water Quality Monitoring Strategy. In 2014 the *Alabama Wetland Monitoring Workgroup* was established by ADEM-FOD with assistance from the ACNPCP to identify interagency partners and offer participation that would enhance future WMP development.
2. *Coastal Alabama Head Water Streams Survey Project (HDWTRSS)*, is one such project that was contracted and completed by the ACNPCP through funds from ADEM-319. The Headwater Stream Survey field component located potential stream sites to identify and survey as 'representative' low-order streams within the two coastal counties. Documentation of measurements was made of specific water quality conditions and flow parameters, including basic geomorphic-based survey data for local headwater streams, both urban and rural. Quantification of adjacent Land Use Categories (LUC) was assessed, along with correlating LUC management measures and/or best management practices in close proximity to the targeted stream sites. Utilizing recognized riparian/stream reach elements and tools the HDWTRSS Report developed

the *Coastal Headwater Composite Assessment Index* using a comparative factor measure of 0 to 5. Intensive geomorphic-based *Headwater Stream Field Surveys* were finished to complement the prior *Alabama Reference Reach and Regional Curve* data for the southern Coastal Plain. This project has been completed and the project Report and supporting data were released for distribution to the public to aid current regional stream restoration and watershed enhancement efforts.

D. <u>Other ACNPCP Projects</u>:

1. *<u>Alabama's 5-Year ACNPCP Work Plan (Work Plan)</u>*: In August of 2016 NOAA-OCM conducted a required *312 Review* of Alabama's Coastal Zone Management Program. NOAA's subsequent *312 Review Report* issued a *Necessary Action* against Alabama, citing that Alabama must produce a fully approved CNPCP by May 2022 or face state-level funding sanctions from NOAA and EPA to both §319 and CZMP funding. NOAA also required that Alabama submit an *ACNPCP 5-Year Work Plan* outlining the steps, projects and timeframes to achieve that approval. Alabama developed this state interagency document that was submitted and accepted before the November 30, 2017 deadline. This interagency *Work Plan* identifies 23 specific tasks or projects that will be targeted for implementation in the next four (4) years to seek full approval for the ACNPCP. The remaining category management measures that are targeted in this *Work Plan* include:

   - Urban Areas:
     - ◊ Runoff: (New Development, Site Development)
     - ◊ Watershed Protection & Existing Development
     - ◊ New and Operating Onsite Sewage Distribution Systems (OSDS)
   - Hydromodification (Channelization Impacts and Impoundments)
   - Wetlands; Streams and Riparian Areas; and Vegetated Treatment Systems

   Several of these coastal ACNPCP projects and efforts are referenced in this and other Chapters of Alabama's IWQMAR for 2018. Future efforts by ACNPCP will be to address the completion of the remaining measures for specific categories that are currently being developed for application and implementation using this ACNPCP Work Plan as a guide toward approval. ADEM and ADCNR are actively exploring Program alternatives and expanding agency/partner coordination for future implementation of these ACNPCP Projects to address these issues with a regional approach for coastal Alabama.

2. *<u>NRCS Gulf of Mexico Implementation (GOMI) Projects:</u>* Continuation of ACNPCP Projects under development for the last few years include continued coordination with USDA-NRCS for implementation of the *NRCS Gulf of Mexico Implementation (GOMI) Projects for Mobile County, and Baldwin County, Alabama*. These projects have been developed address key local land use/habitat issues and are being implemented to enhance targeted sub-watersheds (e.g. Grand Bay Swamp and Fish River HUCs) in coastal Alabama through on-the-ground activities of the NRCS, local SWCDs and affected landowners.

3. *<u>Alabama-Mississippi Clean Marina Program</u>*: Continuation of ACNPCP coordination to implement the joint *Alabama-Mississippi Clean Marina Program* is being supported through MS-AL Sea Grant and Mobile Bay NEP programs. ACNPCP continues to provide technical assistance for many of their DWH/ RESTORE-related project

proposals and environmental projects being developed for coastal Alabama.

4. *New Education and Outreach Event-Asian Youth Empowerment Program:* During the development of this Program, ADEM's Coastal Nonpoint Pollution Control Program has been expanding its persistent message of environmental responsibility and personal stewardship for Alabama's coastal waters. The EPA's Gulf of Mexico Program invited ADEM-ACNPCP to conduct an interactive workshop concerning coastal NPS and related watershed issues. As part of this year's national 2017 BP-SOS Asian Youth Empowerment Program, hosted by the local Program Director, Gloria Nguyen, we participated with our demonstration of an interactive NPS and watershed module to their local Summer Youth Camp classes that were held on June 7, 2017 at the BP-SOS office in Bayou La Batre, Alabama. These education and outreach activities were publicized in *ADEM Insider*'s August 2nd, 2018 edition (Volume XI, Number 5).

These are but a few of many tangible examples reflecting the effective coordination that ACNPCP brings forward to support, leverage and bridge the efforts of ADEM-§319 and the state CZMP, while utilizing limited resources and providing good stewardship to reduce the NPS impact potential for Alabama's coastal waters. Alabama's Coastal Nonpoint Pollution Control Program continues as a nexus of science-based information for the public and provides tangible benefits toward assisting the management of coastal resources and enhancing coastal waters. With collaboration and input from interagency partners the Alabama Coastal Nonpoint Pollution Control Program has attained good forward momentum to achieve the primary goal, which is an effective and approvable CNPCP that can continue to enhance coastal waters for Alabama and the northern Gulf of Mexico.

For further information about Alabama's Coastal Nonpoint Pollution Control Program, contact Randy C. Shaneyfelt at ADEM's Mobile Branch Office at (251) 450-3408 or email: rcs@adem.alabama.gov

6.2 Coastal Assessment

6.2.1 Eutrophication

Hypoxic and anoxic conditions are common in Alabama's coastal waters and are generally most prevalent during the summer months. Naturally occurring conditions combine to result in frequently stressed water quality conditions marked by stratification with low dissolved oxygen. These conditions include: relatively shallow water depths found in all of Alabama's open bays and sounds; low average wind and tidal energies; variable fresh water inflow; and constricted tidal passes. This persistent pattern of hypoxia manifests itself in "Jubilees", an infrequently occurring summer condition in Mobile Bay that results when winds blowing from the mainland drive surface waters from shore, causing deeper, poorly oxygenated water to move into the shallows. Fish, shrimp and crabs get caught in the poorly oxygenated water and generally rise to the surface in stress. The Jubilee phenomenon was first recorded in 1821 indicating that its underlying causes are naturally occurring. At this time it has not been determined if anthropogenic sources exacerbate those underlying causes.

6.2.2 Habitat Modification

Alabama's coastal counties are experiencing tremendous population growth. Statistics indicate that the population of Baldwin County increased from 140,415 in 2000 to 208,563 in 2016. Between 2000 and 2016, the Baldwin County population increased by 48.5%. The population of Mobile County increased from 399,843 in 2000 to 414,836 in 2016. Between 2000 and 2016, the Mobile County population increased by 3.7%. Much of that growth is occurring within Alabama's defined coastal area, particularly in Baldwin County where there has been explosive growth in the beach communities of Orange Beach and Gulf Shores and on the Eastern Shore of Mobile Bay. The area of west Mobile, inside and outside of the current city boundary, is undergoing rapid commercial and residential development. Sedimentation from erosion at the numerous construction sites and the increased post development storm water runoff have placed a heavy burden on the receiving streams in the area increasing the incidence of flooding and stream bank erosion. All of Alabama's estuarine waters are being affected by this population growth.

Applications to the Department for coastal permits and certifications are growing, particularly in terms of complexity. Many of these applications propose projects that would have significant adverse impacts to coastal resources if approved as proposed. Projects having direct and significant adverse wetland impacts are routinely reviewed by Department personnel pursuant to the provisions of ADEM Administrative Code R.335-8 (Coastal Program) and Section 404 of the Clean Water Act. Generally, permits are issued for projects having wetland impacts only if all of the following conditions are satisfied: the activity is related to an existing or approved water dependent use, or use of regional benefit or related to an approved beach nourishment, shoreline stabilization or marsh creation, restoration or enhancement project, elimination of dead-end canals or boat slips exhibiting poor water quality or other similar beneficial use, no other feasible alternatives exist; impacts to wetlands on the project site have been minimized by project design, and mitigation is incorporated into the project proposal.

There have been no coastal area wide surveys completed of wetland acreage for submersed aquatics, tidal emergence, or swamp forest during the reporting period. Due to the State's restrictive approval process, including mitigation requirements, it is believed that wetland losses that do occur are minimal for those wetlands regulated by the program and that other losses that may occur are due to natural erosion, unpermitted activities, and minimal losses due to Nationwide permitting by the U.S. Army Corps of Engineers.

ADEM's Coastal/Facility Unit is working with other governmental entities to support wetland and submersed aquatic vegetation status and trend identification. At this time, both Mobile and Baldwin Counties have been flown and color infrared digital ortho-quarter quads have been produced. This imagery will be used to map wetlands and uplands in Mobile and Baldwin Counties.

Alabama's Coastal Program is compiling data on stabilized versus unstabilized shoreline miles. In general, the explosive coastal population growth has resulted in near continuous shoreline development, with certain areas developing more rapidly than others. The Gulf shoreline is unstabilized along its length in Alabama, except at the passes from interior estuarine waters to the Gulf of Mexico at Perdido Pass, Little Lagoon Pass, and on the eastern tip of Dauphin Island at the entrance to Mobile Bay.

6.2.3 Changes in Living Resources

The Alabama Department of Conservation and Natural Resources-Marine Resources Division (ADCNR-MRD) manages Alabama's marine resources. According to ADCNR-MRD personnel, populations are cyclic and vary by species. ADCNR oversees the replanting of oyster reefs and believes that there has been a decrease in reef productivity recently due to changes in environmental conditions. Oyster landings have been below the 519K pound average (1990-2015) since 2008 with annual landing not exceeding 300K. Brown Shrimp landings remain stable at around ten million pounds annually, excluding 2010. Blue crab landings remain below average, but demonstrated an uptick in 2016.

6.2.4 Toxic Contamination

The ADEM has conducted studies to determine metals enrichment in estuarine sediments and has sampled sediments in proximity to shipyards, petroleum storage terminals, and industrial point source discharges. During 2000, ADEM began sampling Alabama's estuarine sediments for toxicity and fishes for whole-body contaminants as part of the NCA program, described above. However, no statement is being made as to the extent of areas having elevated levels of toxicants because no state or EPA criteria for toxins in sediments exist.

6.2.5 Pathogen Contamination

In addition to the recreational beach monitoring discussed above, Alabama's coastal shellfishing waters are monitored for pathogens and are subject to closings, advisories, or warnings. During the reporting period, all of Alabama's oyster harvest areas were closed at one time or another through closing orders issued by the State Health Officer of the Alabama Department of Public Health. Those orders were issued when excess fresh water entered Mobile Bay from the Mobile River. Information on Shellfish Harvesting Area Closures/ Reopenings and Fish Advisories are included in the chapter on Public Health.

6.2.6 Other State Coastal Activities

National Coastal Condition Assessment

The U.S. EPA's National Coastal Condition Assessment (NCCA) is a partnership with EPA's Office of Water (OW), EPA's Regional office, all coastal states, and selected territories.

ADEM participated in NCCA during the summers of 2010 and 2015. Samples were collected for water quality, sediment quality, benthic analysis, and fish tissue chemistry from seventeen sampling locations, with two sites being revisited. ADEM contracted with the ADCNR for collection of fish tissue. All samples were shipped to and analyzed by contract labs.

The NCCA program is based on EPA's EMAP program, and is a continuation of the National Coastal Assessment Program in which ADEM participated from 2000-2004 and again in 2006. These programs use a compatible probabilistic program and a common set of environmental indicators to survey each state's estuaries and assess their condition. These estimates can then be aggregated to assess conditions at the EPA Regional, biogeographical, and national levels. ADEM expects to participate in this program with sampling events occurring once every five years, with the next event occurring in 2020.

For more information about Alabama's National Coastal Condition Assessment, contact Mr. Joie Horn in ADEM's Mobile Office at (251) 450-3400 or mjhorn@adem.alabama.gov

6.3 Alabama Coastal Waters Monitoring Program (CWMP)

This program continues to provide data necessary to develop indicators and assessment criteria that link chemical, physical, and biological conditions for estuaries and coastal rivers within Alabama's Coastal Area. This data will be used in the development of nutrient criteria, and to update or revise protocols and methodologies to more accurately assess related water quality conditions for designated estuaries, coastal rivers, and streams. This program will also incorporate monitoring in priority watersheds identified by ADEM's Field Operations Division, Water Division and the Nonpoint Source Management Program to provide corroborating data concerning the effectiveness of BMPs implemented using Section 319 funds. The CWMP primary study area is delineated as waters within the ten foot contour line and South of Interstate 10. This definition aligns the program with other ADEM and Partner activities in the Coastal region.

For regulatory purposes, Coastal Waters were redefined in 2015 as waters delineated within the 10' contour line. A 3-year rotation of these waters was established for the CWMP, with the coastal area divided into the Western (W), Eastern (E), and Mobile (M) Bay areas. The rotation corresponds well with the six year data assessment period required for the IWQMAR. Additionally, this strategy has identified the need for greater sampling frequency at stations outside the intensive area in order to provide sufficient data to achieve project goals. This may reduce the number of stations over time but will provide better information on which management decisions are made.

In 2016, sampling was performed at 40 stations, of these 17 were in the western rotation of the Coastal Waters Monitoring Program. The stations ranged from the Mississippi State Line to the western shore of the Mobile Bay. Conventional and field parameters as well as Bacteria and Chlorophyll a were sampled at each site visit. Metals were sampled once during the growing season. Figure and Table 6-2 show the 2016 CWMP West Mobile Bay Stations.

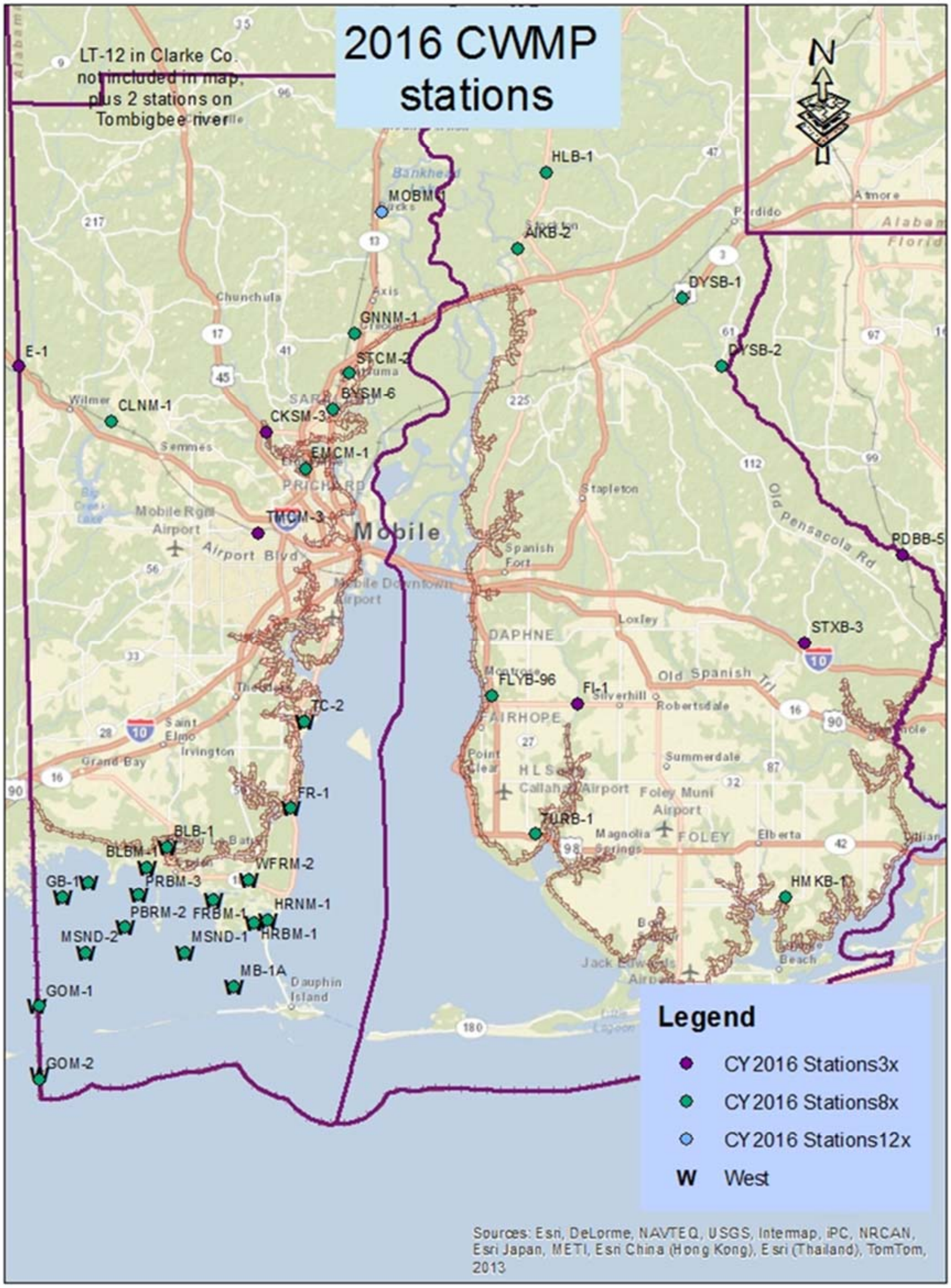
In 2017, sampling was performed in Mobile Bay. A total of 42 stations were sampled, of these 20 were Mobile Bay Coastal Waters Monitoring Program stations. Conventional and field parameters as well as Bacteria and Chlorophyll a were sampled at each site visit. Metals were sampled once during the growing season. Figure and Table 6-3 show the 2017 CWMP Mobile Bay Stations

In 2018, sampling will be performed in the eastern portion of Coastal Alabama, from the Florida State Line to the Eastern Shore of Mobile Bay. A total of 32 stations will be sampled by the Mobile Field Office, 19 of these being part of the Eastern Mobile Bay sampling rotation. Figure and Table 6-4 show the 2017 CWMP East Mobile Bay Stations

All validated data is available on the ADEM web site, www.adem.state.al.us.

For more information about Alabama's Coastal Waters Monitoring Program, contact Mr. Joie Horn in ADEM's Mobile Office at (251) 450-3418 or mjhorn@adem.state.al.us

Figure 6-2 2016 CWMP West Mobile Bay Stations



.**Table 6-2 2016 CWMP West Mobile Bay Stations**

StationID	Comments	Sampling Summary	Sampling Protocol	Latitude	Longitude	Locale_Name
MOBM-1	CY2016_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW Boat	31.01370	-88.01853	Mobile R
FI-1	CY2016_TREND_MONITORING_605	3X Monthly (JunAugOct)	Wadeable	30.54580	-87.79830	Fish R
E-1	CY2016_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW Grab	30.86274	-88.41787	Escatawpa R
CKSM-3	CY2016_TREND_MONITORING_605	3X Monthly (JunAugOct)	Wadeable	30.80297	-88.14334	Chickasaw Ck
TMCM-3	CY2016_TREND_MONITORING_605	3X Monthly (JunAugOct)	Wadeable	30.70630	-88.15111	Threemile Ck
LT-12	CY2016_TREND_MONITORING_605	3X Monthly (JunAugOct)	Wadeable	31.74444	-88.02133	Salitpa Ck
STXB-3	CY2016_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	30.60532	-87.54700	Styx R
PDBB-5	CY2016_TREND_MONITORING_605	3X Monthly (MayJulSep)	NW Grab	30.69047	-87.44026	Perdido R
DYSB-2	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	NW Grab	30.86992	-87.64024	Dyas Ck
AIKB-2	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.98030	-87.86774	Aiken Ck
GDBM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.37090	-88.33500	Grand Bay (Mob)
GB-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.35667	-88.36283	Grand Bay (Mob)
FRBM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.35590	-88.19650	Fowl River Bay
FR-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.44417	-88.11306	Fowl R
FLYB-96	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.55260	-87.89172	Fly Ck
GOM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.25208	-88.38714	Gulf Of Mexico
GOM-2	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.18303	-88.38559	Gulf Of Mexico
DYSB-1	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.93374	-87.68493	Dyas Ck
CLNM-1	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.81120	-88.31580	Collins Ck
BYSM-6	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	NW Grab	30.82530	-88.07000	Bayou Sara
BLBM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.38670	-88.27000	Bayou La Batre
BLB-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.40590	-88.24810	Bayou La Batre
EMCM-1	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.76778	-88.10000	Eightmile Ck
MSND-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.30462	-88.22746	Mississippi Sound
TURB-1	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.42156	-87.84342	Turkey Br
TC-2	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.52650	-88.09824	Deer R
STCM-2	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.85977	-88.05345	Steele Ck
PRBM-3	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.36046	-88.27922	Portersville Bay
GNNM-1	CY2016_REFERENCE_REACH_MONITORING	8X Monthly (Mar-Oct)	Wadeable	30.89785	-88.04787	Gunnison Ck
MSND-2	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.30354	-88.33695	Mississippi Sound
WFRM-2	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.37619	-88.15814	W Fowl R
MB-1A	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.27308	-88.17317	Mississippi Sound
HRNM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.33719	-88.13689	Heron Bay
HRBM-1	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.33445	-88.15178	Heron Bay
HMKB-1	CY2016_EMPT_USA	8X Monthly (Mar-Oct)	NW Boat	30.36300	-87.56772	Hammock Ck
HLB-1	CY2016_REFERENCE_REACH_MONITORING	8X Monthly (Mar-Oct)	Wadeable	31.05264	-87.83701	Halls Ck
PBRM-2	CY2016_CWMP_WEST	8X Monthly (Mar-Oct)	NW Boat	30.32847	-88.29403	Portersville Bay
CLNM-1	CY2016_EMPT_USA	SWQMP Sampling Period	Wadeable	30.81120	-88.31580	Collins Ck
TOMW-1	CY2016_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.16203	-87.95153	Tombigbee R
TOMW-3	CY2016_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.48028	-87.91083	Tombigbee R

Figure 6-3 2017 CWMP Mobile Bay Stations

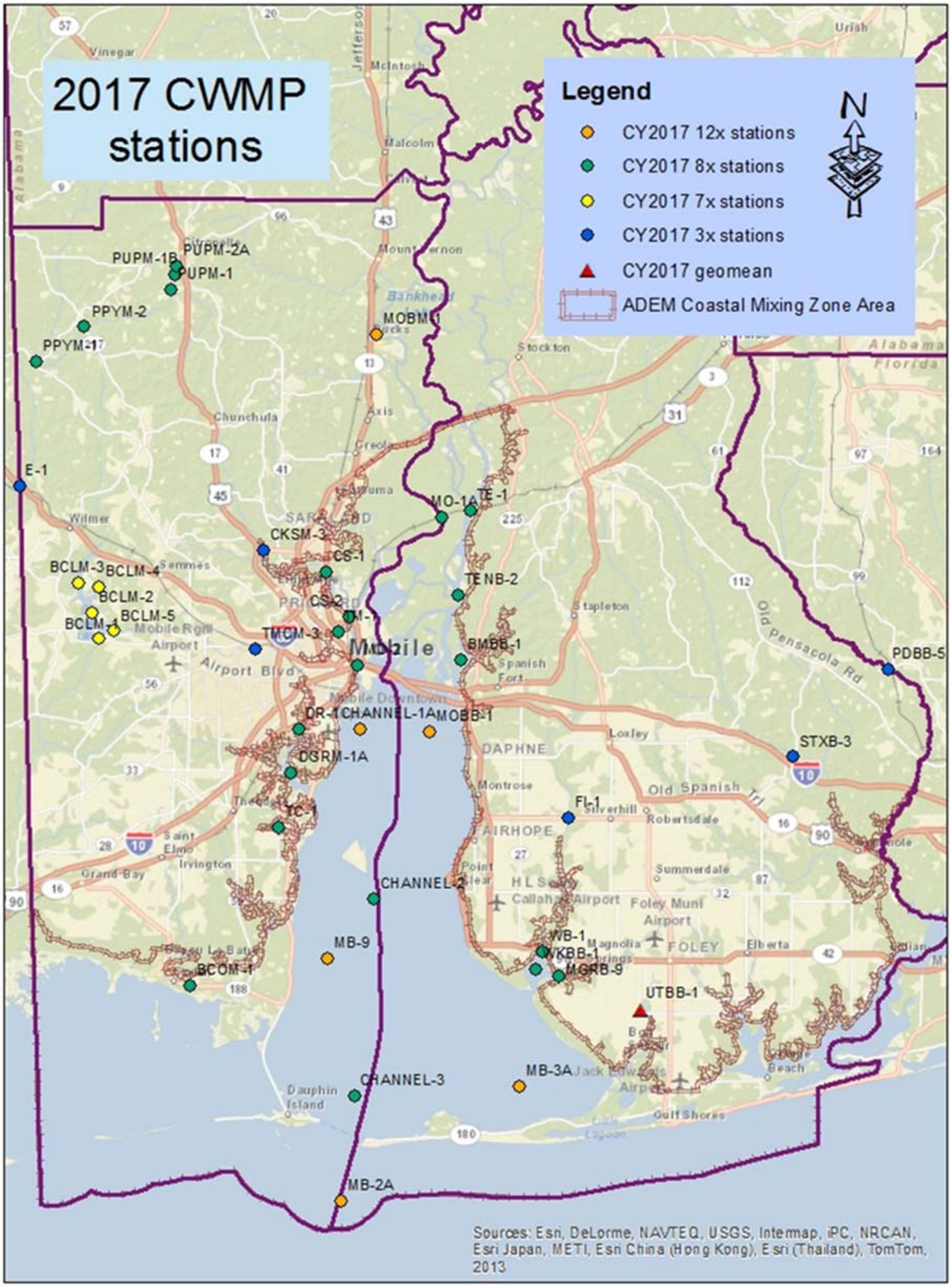


Table 6-3 2017 CWMP Mobile Bay Stations

Station	Comments	Sampling Summary	Protocol	Latitude	Longitude	Locale Name
CHANNEL-1A	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW BOAT	30.62973	-88.03263	Mobile Ship Chn
MB-2A	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW BOAT	30.17180	-88.04895	Gulf Of Mexico
MB-3A	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW BOAT	30.28407	-87.85137	Bon Secour Bay
MB-9	CY2017_CWMP_MOBILE_BAY	12X Monthly (Jan-Dec)	NW BOAT	30.40598	-88.06662	Mobile Bay
MOBB-1	CY2017_CWMP_MOBILE_BAY	12X Monthly (Jan-Dec)	NW BOAT	30.62760	-87.95480	Mobile Bay
MOBM-1	CY2017_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW BOAT	31.01370	-88.01853	Mobile R
E-1	CY2017_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW GRAB	30.86274	-88.41787	Escatawpa R
CKSM-3	CY2017_TREND_MONITORING_106	3X Monthly (JunAugOct)	WADEABLE	30.80297	-88.14334	Chickasaw Ck
FI-1	CY2017_TREND_MONITORING_605	3X Monthly (JunAugOct)	WADEABLE	30.54580	-87.79830	Fish R
LT-12	CY2017_TREND_MONITORING_106	3X Monthly (JunAugOct)	WADEABLE	31.74444	-88.02133	Salitpa Ck
TMCM-3	CY2017_TREND_MONITORING_106	3X Monthly (JunAugOct)	WADEABLE	30.70630	-88.15111	Threemile Ck
STXB-3	CY2017_TREND_MONITORING_605	3X Monthly (MayJulSep)	WADEABLE	30.60532	-87.54700	Styx R
BCLM-1	CY2017_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW BOAT	30.71461	-88.32747	Big Creek Res
BCLM-2	CY2017_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW BOAT	30.74005	-88.33514	Big Creek Res
BCLM-3	CY2017_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW BOAT	30.76917	-88.35045	Big Creek Res
BCLM-4	CY2017_RIVERS_RESERVOIRS_EMBAYMENT	7X Monthly (Apr-Oct)	NW BOAT	30.76505	-88.32861	Crooked Ck (Big Creek)
BCLM-5	CY2017_RIVERS_RESERVOIRS_EMBAYMENT	7X Monthly (Apr-Oct)	NW BOAT	30.72272	-88.31122	Hamilton Ck (Big Creek)
BCOM-1	CY2017_EMPT_USA	8X Monthly (Mar-Oct)	WADEABLE	30.37788	-88.22095	Bayou Como
DGRM-1A	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.58680	-88.10980	Dog R
BMBB-1	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.69780	-87.92060	Bay Minette
CHANNEL-2	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.46437	-88.01577	Mobile Ship Chn
CHANNEL-3	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.27300	-88.03600	Mobile Ship Chn
CS-1	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.78224	-88.07248	Chickasaw Ck
CS-2	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.73925	-88.04571	Chickasaw Ck
DR-1	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.62845	-88.10166	Dog R
MGRB-9	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.39020	-87.80820	Magnolia R
MO-1A	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.83640	-87.94406	Mobile R
MO-2	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.69137	-88.03646	Mobile R
TC-1	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.53333	-88.12389	M Fk Deer R
TE-1	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.84278	-87.91083	Tensaw R
TENB-2	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.76069	-87.92388	Tensaw R
TM-1	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.72398	-88.05912	Threemile Ck
WB-1	CY2017_CWMP_MOBILE_BAY; CY2017_TREND_MONITORING_605	8X Monthly (Mar-Oct)	NW BOAT	30.41469	-87.82583	Fish R
WKBB-1	CY2017_CWMP_MOBILE_BAY	8X Monthly (Mar-Oct)	NW BOAT	30.39750	-87.83361	Weeks Bay
BSTC-2	CY2017_EMT_BASSETT_CK_NPS_INT_PRE	SWQMP Sampling Period	WADEABLE	31.78720	-87.72830	Bassett Ck
BSTC-3	CY2017_EMT_BASSETT_CK_NPS_INT_PRE	SWQMP Sampling Period	WADEABLE	31.86590	-87.74150	Bassett Ck
UTBB-1	CY2017_EMPT_UT_BON_SECOUR_R_NPS_INT_POST	SWQMP Sampling Period	WADEABLE	30.35820	-87.71700	Bon Secour R
PUPM-1	CY2017_EMPT_PUPPY_CK_TMDL_POST	8X Monthly (Mar-Oct)	WADEABLE	31.05583	-88.25000	Puppy Ck
PUPM-1B	CY2017_EMPT_PUPPY_CK_TMDL_POST	8X Monthly (Mar-Oct)	WADEABLE	31.06982	-88.24568	Puppy Ck
PUPM-2A	CY2017_EMPT_PUPPY_CK_TMDL_POST	8X Monthly (Mar-Oct)	WADEABLE	31.07818	-88.24512	Puppy Ck
PPYM-1	CY2017_EMPT_PUPPY_CK_TMDL_POST	8X Monthly (Mar-Oct)	WADEABLE	30.98420	-88.40110	Puppy Ck
PPYM-2	CY2017_EMPT_PUPPY_CK_TMDL_POST	8X Monthly (Mar-Oct)	WADEABLE	31.01800	-88.34760	Puppy Ck

Figure 6-4 2018 Mobile Bay East Stations

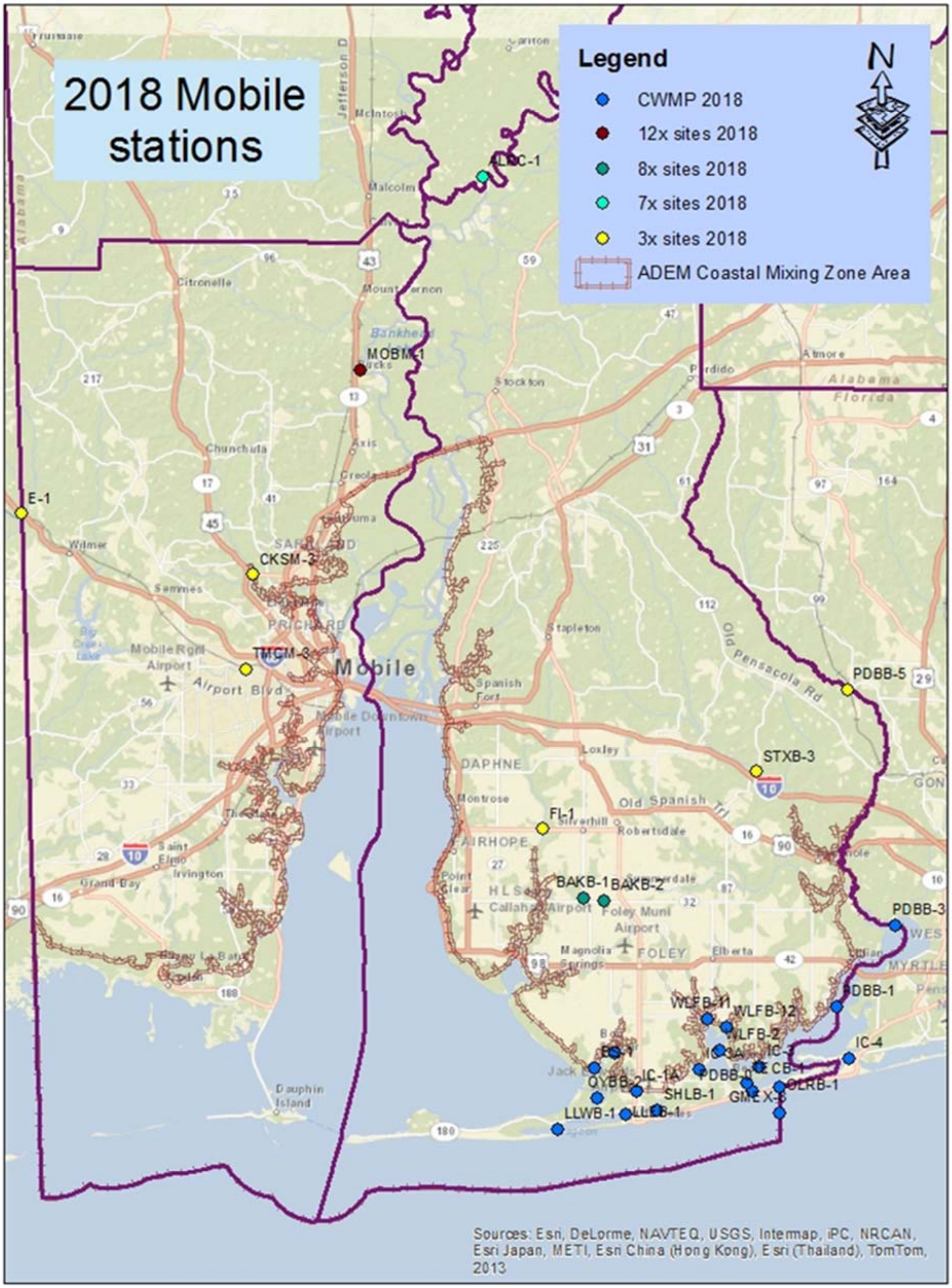


Table 6-4 2018 Mobile Bay East Stations

StationID	Comments	Sampling Summary	Protocol	Latitude	Longitude	Locale Name
MOBM-1	CY2018_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW Boat	31.01370	-88.01853	Mobile R
CKSM-3	CY2018_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	30.80297	-88.14334	Chickasaw Ck
E-1	CY2018_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW Grab	30.86274	-88.41787	Escatawpa R
LT-12	CY2018_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	31.74444	-88.02133	Salitpa Ck
TMCM-3	CY2018_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	30.70630	-88.15111	Threemile Ck
FI-1	CY2018_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	30.54580	-87.79830	Fish R
PDBB-5	CY2018_TREND_MONITORING_605	3X Monthly (MayJulSep)	NW Grab	30.69047	-87.44026	Perdido R
STXB-3	CY2018_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	30.60532	-87.54700	Styx R
ALRA-1	CY2018_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.54127	-87.52605	Alabama R
ALRC-1	CY2018_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.21203	-87.87600	Alabama R
CLAM-1	CY2018_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.61741	-87.55058	Claiborne Res
BAKB-1	CY2018_EMPT	8X Monthly (Mar-Oct)	Wadeable	30.47548	-87.75055	Baker Br
BAKB-2	CY2018_EMPT	8X Monthly (Mar-Oct)	Wadeable	30.47322	-87.72586	Baker Br
BS-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.30221	-87.73575	Bon Secour R
BSBB-5	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.31726	-87.71258	Bon Secour R
GMEX-8	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.25765	-87.51843	Gulf Of Mexico
IC-1A	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.27930	-87.68700	Intracoastal Waterway
IC-3	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.30417	-87.54167	Bay La Launch
IC-3A	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.30136	-87.61257	Intracoastal Waterway
IC-4	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.31353	-87.43640	Intracoastal Waterway
LLEB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.25490	-87.69918	Little Lagoon
LLWB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.23891	-87.77928	Little Lagoon
OLRB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.28396	-87.51833	Old River
OYBB-2	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.27110	-87.73194	Oyster Bay
PDBB-0	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.27968	-87.54948	Perdido Bay
PDBB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.36600	-87.45170	Perdido Bay
PDBB-3	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.45010	-87.38200	Perdido Bay
SHLB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.25933	-87.66223	L Shelby
TECB-1	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.28778	-87.55715	Terry Cove
WLFB-11	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.35308	-87.60319	Wolf Bay
WLFB-12	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.34441	-87.58037	Wolf Bay
WLFB-2	CY2018_CWMP_EAST	8X Monthly (Mar-Oct)	NW Boat	30.32124	-87.58962	Wolf Bay

6.4 Summaries of Designated Use Support for Oceans /Estuaries

Table 6-4 and Table 6-5 show the Size of Oceans and Estuaries Impaired by causes and sources respectively. For more information about Designated Use Support contact Mr. John Pate in ADEM's Montgomery Office at (334) 270-5662 or jtp@adem.state.al.us

Table 6-4 Size of Ocean/Estuary Impaired by Causes

	Category 5	Category 4
Cause	Ocean/Estuary (square miles)	Ocean/Estuary (square miles)
Metals		
Mercury	211.21	
Thallium	94.62	
Pathogens		
Enterococcus	418.15	9.80

Table 6-5 Size of Ocean/Estuary Impaired by Sources

	Category 5	Category 4
Source	Ocean/Estuary (square miles)	Ocean/Estuary (square miles)
Atmospheric deposition	211.21	
Collection system failure	1.29	
Industrial	94.62	
Municipal	18.81	
On-site wastewater systems	134.98	5.09
Unknown source	1.45	
Urban runoff/storm sewers	365.87	9.80

Chapter 7 Nonpoint Source Management

7.1 Overview

The Alabama Nonpoint Source Management Program continues to respond to the nation's leading remaining causes of water quality problems by implementing the revised Alabama Nonpoint Source (NPS) Management Program Plan formally approved by the United States Environmental Protection Agency (EPA) on August 26, 2014. The program enhances public and private sector efforts to plan and implement environmentally-protective NPS pollution management practices, i.e., it provides a framework for all stakeholders to "work off the same page." Goals and objectives include facilitation of a flexible, targeted, iterative, and broad-based management approaches aimed at effectively and efficiently restoring NPS impaired waters and preventing the degradation of unimpaired waters. Management strategies are designed to prevent, reduce, and abate NPS problems using a watershed-based planning and management approach. The statewide program also coordinates applicable coastal NPS water quality management efforts with the Alabama Coastal Nonpoint Source Program (see Chapter 6).

The primary source of funding to implement the state's NPS management program is annual CWA Section 319(h) grant awards from EPA. Efforts to mitigate NPS pollution include facilitation of cooperative public and private sector partnerships, education and outreach, technical assistance, technology transfer, development and implementation of watershed-based management plans, and implementation of best management practices and measures. The management of NPS pollution generally uses a voluntary approach; however, applicable federal and state water quality standards and NPDES pollutant discharge rules and regulations provide adequate regulatory backstops. The development and implementation of watershed-based management plans that incorporate EPA's nine-key watershed plan elements as presented in Section 319 grant guidelines is a statewide NPS management and Section 319 grant program priority. Watershed-based management plans generally target 12-digit hydrologic unit code areal extents to enhance watershed health and restore water quality, mitigate priority NPS pollutant load reductions (i.e., nitrogen, phosphorus, and sediment), and target other NPS causes identified in a draft or final TMDL.

7.2 Nonpoint Source Water Quality

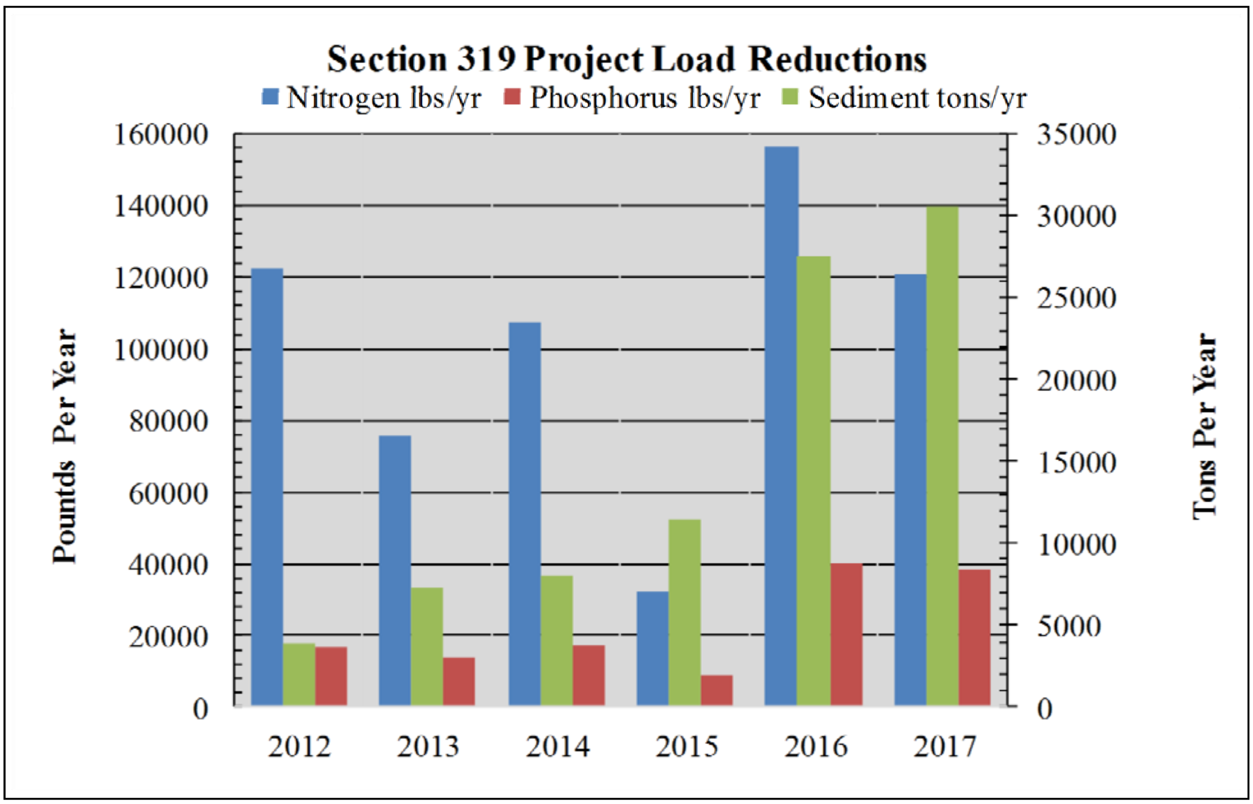
The Alabama Nonpoint Source Management Program and Section 319 grant program is evaluated using NPS water quality data collected as a component of the statewide water quality monitoring and assessment strategy, and/or as needed to assess interim and final NPS project implementation success. This strategy is the most efficient, practical, and cost-effective approach to holistically assess NPS watershed health and water quality on a statewide basis. Assessment reports are available on the ADEM's Water Quality Report website.

Table 7-1 Section 319 Grant Funded Pollutant Load Reduction Estimates

Load Reduction Estimate			
	Nitrogen	Phosphorus	Sedimentation-Siltation
Fiscal Year	**LBS/YR**	**LBS/YR**	**TONS/YR**
2012	122,267	16,618	3,829
2013	75,522	13,871	7,287
2014	107,288	17,016	8,065
2015	32,063	9,065	11,407
2016	156,628	40,263	27,500
2017	120,780	38,277	30,501
Total	**614,547**	**135,110**	**88,589**

**Note:* Section 319 grants have a duration of 5 years, thus load reduction estimates are not calculated immediately but accumulate over time.*

Figure 7-1 Section 319 Grant Funded Pollutant Load Reduction Estimates



Section 319 nonpoint source pollutant load reduction estimates (Table 7-1/Figure 7-1) are used as an indicator of improvements in water quality and as a measure of success for Section 319 grant funded projects. The data is also required to be reported biannually in the EPA Grants Reporting and Tracking (GRTS) database. Data quantity and quality continues to improve as a result of continued enhancements to ADEM water quality assessment and monitoring methodologies, NPS partnerships, and cooperative public/private sector data sharing and reporting.

7.3 Watershed Management Approach

Much progress has been made to protect water quality in Alabama and water quality continues to improve. However, specific targeting of some NPS best management practices can be problematic because it is sometimes difficult to definitively ascertain specific NPS pollutant sources and causes. In addition, human and financial capital is insufficient statewide to implement some best management practices needed to protect water quality using a voluntary approach. Statewide and watershed-specific NPS and water quality protection education and outreach and provisions for citizen input must continue. Dedicated and sustainable sources of funding to be used as stakeholder incentives would likely enhance voluntary NPS management program efforts. Examples of NPS management program activities are presented in the Annual Report on the ADEM website at http://www.adem.state.al.us/programs/water/npsprogram.cnt.

The Alabama NPS Management Program integrates varied water quality programmatic issues such as the development and implementation of TMDLs and watershed management plans, and water quality monitoring and assessments. Facilitation of cooperative partnerships continues to be a NPS management program priority. Education and outreach helps to motivate and sustain NPS partnerships. Examples of ADEM education and outreach initiatives include: 1) Nonpoint Source Education for Municipal Officials (NEMO) http://nemo.uconn.edu/index.htm and 2) Take Action for Clean Water; http://www.adem.state.al.us/programs/water/npsprogram.cnt. Additional NPS education and outreach resources and information is available at http://www.adem.state.al.us/programs/water/npsprogram.cnt or from the USEPA website at http://www.epa.gov/owow_keep/NPS/index.html.

The Alabama Water Watch (AWW) is a statewide education and outreach program coordinated by the Auburn University Department of Fisheries and Allied Aquacultures. This national and internationally recognized group coordinates water quality monitoring data collected by citizen-volunteers. The Alabama Water Watch Association, in cooperation with the AWW, promotes water quality protection efforts. Additional AWW information and data is available at http://www.alabamawaterwatch.org.

Statewide NPS pollution management efforts support applicable CWA Section 6217 program requirements. The Alabama Coastal Nonpoint Pollution Control Program's primary focus is to protect, manage, and improve water quality seaward of the coastal zone management area (10-foot contour elevation) of Mobile and Baldwin counties. See Table 7-2 for a list of Progress to Achieve Full Approval of The Alabama Coastal NPS Pollution Control Program (§6217). Additional Coastal NPS program is discussed in Chapter 6.

The Alabama NPS Management Program / Section 319 grant program partners with many federal, state, and local units of government to efficiently and effectively protect water quality. These entities include, but are not limited to, the USDA-NRCS (technical assistance and cost-share funding), State Soil and Water Conservation Committee and Districts (BMP implementation and watershed health assessments); ACES (stream restoration), OSM and ADIR (resource extraction); ADPH (on-site septage); AFC (silviculture); and GSA and USGS (water quality). In addition, ADEM also collaborates with academic institutions and the private sector.

7.4 Management Program Challenges and Success

The development and implementation of TMDL/watershed-based plans should continue to be a NPS management program priority. Stakeholders should be encouraged to implement plans that are locally developed and have local support.

Statewide and locally-specific NPS education and outreach, training, technical assistance, and technology transfer should be continued. Public awareness and knowledge related to the water quality protection processes, pollutant mitigation needs and available resources, and public/ private sector roles and responsibilities should be enhanced. Opportunities for NPS stakeholders to provide input into water quality protection and watershed management decision-making processes should continue to be facilitated. In addition, dedicated and consistent sources of funding are needed to help plan and implement a myriad of NPS TMDL and watershed-based best management practices and activities, and support water quality monitoring and watershed assessments, citizen volunteers, and public/private sector partnerships.

Environmental, economic, cultural, social, human health, threatened and endangered species, habitat protection, urban growth and development, recreation, and other NPS pollution impact issues should continue to be integrated into holistic watershed-based management plans. The roles, authorities, and views of regulatory and other agencies, elected and appointed officials, environmental groups, commodity groups, industries, municipalities, citizens, and others must be considered when developing the details of how watershed management plans will be implemented. In addition, implementation of innovative, alternative, or creative NPS approaches should be encouraged where feasible and practical and may include, but are not limited to, permitting using a watershed approach; and/or local ordinances, authorities, and incentives. Clearly defined water quality protection goals, objectives, and measurable "success" endpoints should be agreed upon before management plans are implemented and funding is expended.

For more information about Section 319 grant funding and the AL Nonpoint Source Management Program, contact the ADEM – AL NPS Unit at (334) 260-4501 or NPSmail@adem.state.al.us.

7.5 Nonpoint Source Management Program Recommendations

The development and implementation of TMDL/watershed-based plans should continue to be a NPS management program priority. Stakeholders should be encouraged to implement plans that are locally developed and have local support.

Statewide and locally-specific NPS education and outreach, training, technical assistance, and technology transfer should be continued. Public awareness and knowledge related to the water quality protection processes, pollutant mitigation needs and available resources, and public/ private sector roles and responsibilities should be enhanced. Opportunities for NPS stakeholders to provide input into water quality protection and watershed management decision-making processes should continue to be facilitated. In addition, dedicated and consistent sources of funding are needed to help plan and implement a myriad of NPS TMDL and watershed-based

Table 7-2 Progress to Achieve Full Approval of The Alabama Coastal Nonpoint Pollution Control Program (§6217)

Year	Program Approval Activities	Status
1998	***Findings and Conditions for Alabama, "Conditional Approval"*** *with* ***72 Conditions for 14 Categories*** *remaining to be addressed.*	-
2001	**ACNPCP Management Area Designated -Mobile & Baldwin Counties. 1-FTE**	**100%**
2002	**ACNPCP Legal Opinion issued by State AG-submitted to NOAA & EPA. 1-FTE**	**100%**
2003	Through ACNPCP Coordination by ADEM, **69 Conditions for 14 Categories** remaining to be addressed. **1-FTE**.	-
2003	***Comprehensive 2003 ACNPCP Update*** *and* ***15-Year Strategy*** *documents submitted to NOAA and EPA.* ***1-FTE.***	**100%**
2004	ADEM implemented 2 projects to address draft *IDD* /* ***2-FTE.*** *Limited NOAA-OCRM Funding for ADEM Projects*	**100%**
2005	Following ***2003 ACNPCP Update Submission, 9 Conditions for 14 Categories*** *remaining to be addressed; remaining criteria re-addressed as* ***Recommended Actions*** *in* ***Alabama's *Interim Decision Document (IDD)*** *: 24 Recommended Actions in remaining Categories are identified to be addressed by Alabama's CNPCP.*	-
2005	ADEM implemented 6 projects to address *IDD criteria /* ***3-FTE reduced to 2 FTE*** Reduced NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**100%**
2005	**NOAA-OCRM and EPA assess ACNPCP as 87% complete.**	-
2006	ADEM implemented 3 projects to address *IDD criteria /* ***2-FTE****. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.*	**100%**
2007	ADEM implemented 3 projects to address *IDD criteria /****2-FTE****. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.*	**100%**
2008	ADEM implemented 6 projects to address *IDD criteria /* ***2-FTE reduced to 1 FTE****. Limited Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No new NOAA-OCRM Funding for ADEM-ACNPCP Projects.*	**100%**
2009	ADEM implements 2 projects to address *IDD criteria /* ***1-FTE.***Reduced Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**100%**
2010	ADEM to implement 1 project to address *IDD criteria/* ***1-FTE****. Project Report slated for December 2012. Reduced Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.*	**Projects reprogrammed due to DWH activities!**
2010	ADEM will assist and support ACNPCP's new 2010 ACNPCP UPDATE SUBMISSION for Alabama during 2010 through 2012.* ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup.	-
2011	DRAFT 2011 Program Submission submitted to EPA in May 2011/ **1-FTE**. ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. *Staff assignments in alignment with BP MC-252 Oil Spill Recovery Activities. 2010 & 2011 Projects reprogrammed to 2012+. ACNPCP participates in DHS-USCG Investigation of DWH. Completes Duties for Incident Specific Preparedness Report for DHS-USCG.	**Draft EPA Submission 100%**
2012	ADEM implements 1 new project to address IDD criteria / **1-FTE.** DEM-ACNPCP staff Chairs CSO-6217 National Workgroup. Reduced Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**100%**
2012	ADEM will assist and support ACNPCP's new sequential UPDATE SUBMISSION for Alabama during 2012 through 2016. Reinitiate 2010 Project. ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup.	-
2013	ADEM implements 1 project to address IDD criteria / **1-FTE.** Reduced Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**100%**
2013	ADEM will assist and support ACNPCP's new sequential UPDATE SUBMISSION approach for Alabama during 2012. This will proceed until final Approval. ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup.	-
2014	ADEM implements 2 new projects to address IDD criteria / **1-FTE.** ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**Reprogrammed 2010 Project completed 100%**
2014	FY13 Coastal Alabama No-Till Project contracted and being implemented. ADEM utilizes interagency coordination to develop the current ACNPCP's sequential UPDATE SUBMISSION for AGRICULTURE for Alabama during 2014.**	**FY13 Project extended, 50%. 2014 Submission 100%**
2015	ADEM develops 1 new FY14 project to address IDD criteria / **1-FTE.** ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. New Alabama 319 Work Plan Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**FY13 Project completed 100%**
2015	ADEM utilizes interagency coordination to develop the current ACNPCP's Project for Urban-OSDS Inspection & Maintenance [Sector1] for Alabama during 2015. ** AGRICULTURE SUBMISSION conditionally approved by NOAA and EPA in NOV2015.	**FY14 Project being implemented -25%.**
2016	ADEM implements 1 new FY15-A project to address IDD criteria / **1-FTE.** ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. Alabama 319 Work Plan Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	
2016	ADEM utilizes interagency coordination to develop the current ACNPCP's Project for Urban-OSDS Inspection & Maintenance [Sector2] for Alabama during 2016.	**FY14 Project completed 100%. FY15 Project-A being implemented -25%.**
2017	ADEM develops 1 new FY15-B project to address IDD criteria / **1-FTE** . ADEM and ADCNR develop new ACNPCP 5-Yr Work Plan to meet 312 Review request.*** ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. Alabama 319 Work Plan Funding secured from EPA-R4 to ADEM-319 for ACNPCP. No NOAA-OCRM Funding for ADEM-ACNPCP Projects.	**ACNPCP 5-Yr Work Plan Submitted to NOAA & EPA 100%**
2017	ADEM utilizes interagency coordination to develop the current ACNPCP's Project for Urban-OSDS Inspection & Maintenance [Sector 3] for Alabama during 2017. *** ACNPCP 5-YR Work Plan accepted by NOAA and EPA in DEC 2017.	**FY15 Project-A completed 100% FY15 Project-B being implemented- 50%**
2018	ADEM develops 1 new FY16 project to address IDD criteria / **1-FTE.** ADEM-ACNPCP staff Chairs CSO-6217 National Workgroup. Alabama 319 Work Plan Funding secured from EPA-R4 to ADEM-319 for ACNPCP. NOAA-OCRM Funding for ADEM-ACNPCP Projects -TBD.	**FY15 Project-B completed 100% FY16 Project being implemented- 25%**
2018	ADEM utilizes interagency coordination to develop the current ACNPCP's Project for Urban-OSDS Inspection & Maintenance [Sector 4] for Alabama during 2018.	–

best management practices and activities, and support water quality monitoring and watershed assessments, citizen volunteers, and public/private sector partnerships.

Environmental, economic, cultural, social, human health, threatened and endangered species, habitat protection, urban growth and development, recreation, and other NPS pollution impact issues should continue to be integrated into holistic watershed-based management plans. The roles, authorities, and views of regulatory and other agencies, elected and appointed officials, environmental groups, commodity groups, industries, municipalities, citizens, and others must be considered when developing the details of how watershed management plans will be implemented. In addition, implementation of innovative, alternative, or creative NPS approaches should be encouraged where feasible and practical and may include, but are not limited to, permitting using a watershed approach; and/or local ordinances, authorities, and incentives. Clearly defined water quality protection goals, objectives, and measurable "success" endpoints should be agreed upon before management plans are implemented and funding is expended.

For more information about Section 319 grant funding and the AL Nonpoint Source Management Program, contact the ADEM – AL NPS Unit at (334) 260-4501 or NPSmail@adem.state.al.us.

Chapter 8 Public Health

8.1 Fish Consumption Advisories

Concern about protecting the public from possible health exposure to mercury from eating fish has led to the issuance of several new fish consumption advisories for bodies of water in Alabama. The quality of water, based upon the levels of contaminants in fish from the waters in Alabama, generally continues to improve made in recent years. The Alabama Department of Environmental Management (ADEM) collected samples of specific fish species for analysis from various waterbodies throughout the state during the fall of 2013. The Alabama Department of Public Health assessed the results to determine potential human health effects. Fish consumption advisories are issued for specific waterbodies and specific species taken from those areas. The advisories apply to waters as far as a boat can be taken upstream in a tributary, that is, to full pool elevations. The Alabama Department of Public Health, in consultation with ADEM and the Alabama Department of Conservation and Natural Resources, has shifted to a more protective level for mercury. Mercury, which occurs both naturally and from man-made sources, can cause developmental disabilities and behavioral problems in children if it is consumed at high levels. One way to minimize exposure in populations at risk is to reduce mercury derived from eating fish from contaminated water. These populations include women of childbearing age, pregnant women, and children younger than 15 years of age. The fish consumption advisories are based on a stricter action level for mercury developed by the U.S. Environmental Protection Agency. Previously, Food and Drug Administration guidelines were used for mercury advisories. The FDA level was based on eating one fish meal per week.

Beginning with the 2007 advisories, the Department of Public Health adopted a contaminant level for mercury in fish that would protect those who eat more than one fish meal per week. The new EPA standards are four times more protective. This advisory will be represented as the safe number of meals of that fish species that can be eaten in a given period of time, such as meals per week, meals per month or no consumption. A meal portion consists of six (6) ounces of cooked fish or eight (8) ounces of raw fish.

For more information about Fish Consumption Advisories contact the ADPH Epidemiology Division, at 1-800-338-8374 or epidemiology@adph.state.al.us . To view current and historical notices visit http://adph.org/tox/index.asp?ID=1360.

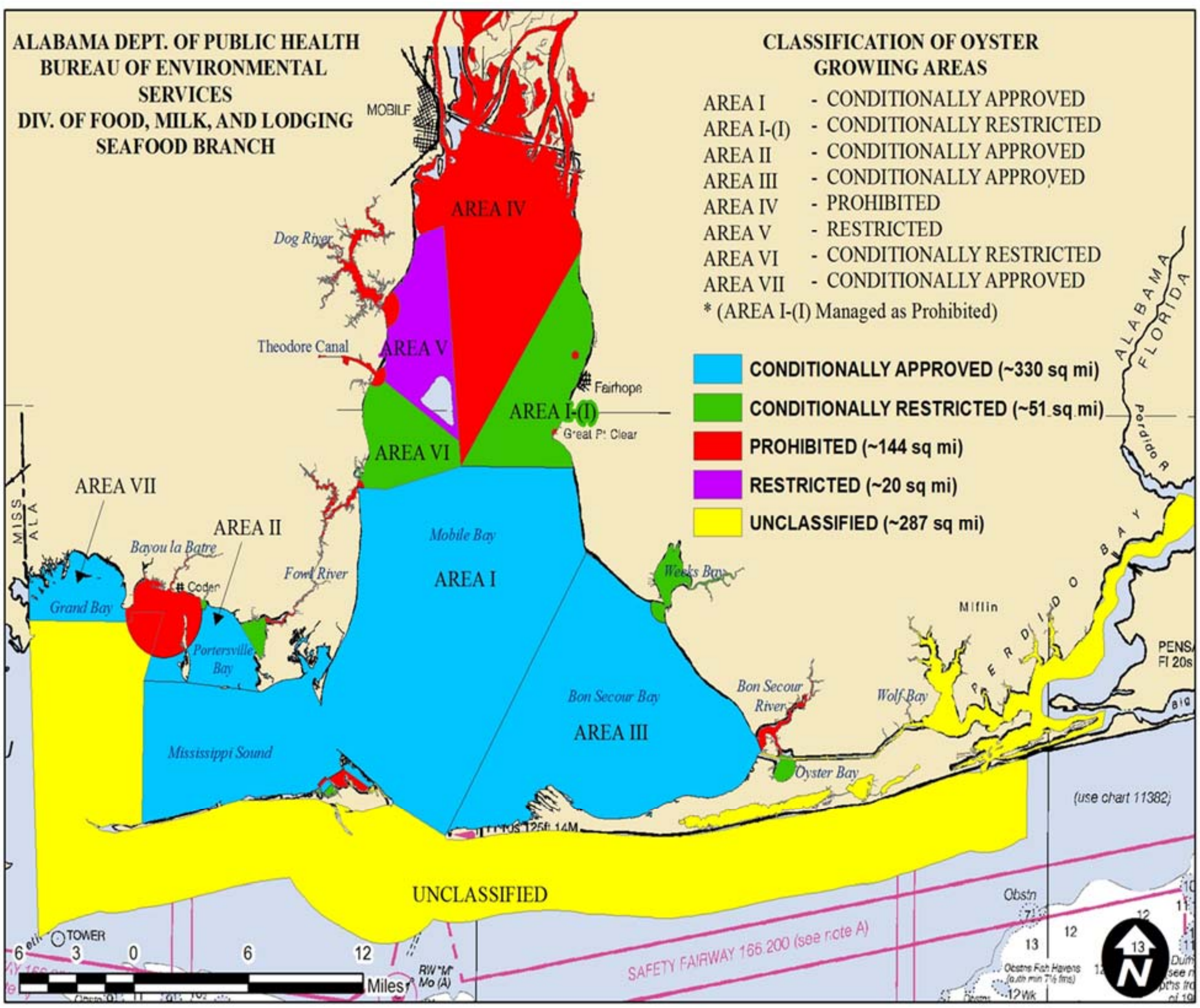
8.2 Shellfish Harvesting Areas

Shellfish harvesting area closures are issued when the Mobile River stage rises above 8 feet at the Barry Steam Plant. For reopening the closed areas, the river stage must be below 8 feet, ambient fecal coliform counts must be below a geometric mean of 14 MPN (most probable number) in 100 milliliters of sample water with not more than 10 percent exceeding 43 MPN in 100 milliliter sample of water, and the E. coli count in oyster meat must be below 230 MPN in

100g of meat. From July 2009 through July 2011 a portion of Area V was sampled to determine its potential as a shellfish harvesting area. Area VI was approved in April 2012 and opened for the first time in October 2012 for shellfish harvesting. Area VII was approved in September 2016, it was previously part of Area II. The revision specifies the westward side of Area II, essentially the Grand Bay Area as the new Area VII. Figure 8-1 depicts Alabama's Oyster/ Shellfish Harvesting Areas in Coastal Waters. For exceptions to these areas such as around outfalls, marinas, or other specific waters refer to the ADEM Administrative Code Water Quality Program Volume I Chapter 335-6-11. Figure 8-1 shows Alabama's Oyster/Shellfish Harvesting Areas in Coastal Waters and Table 8-1 contains the notices pertaining to shellfish harvesting area closures and subsequent reopening.

For more information about shellfish harvesting areas, refer to the 2017 ADPH Seafood Branch Shellfish Growing Water Report, ADPH Seafood Branch Triennial Report and/or the 2007 Comprehensive Sanitary Survey of Alabama's Shellfish Growing Waters at http://alabamapublichealth.gov/foodsafety/seafood-and-shellfish.html. You may also contact Mr. Ron Dawsey with the ADPH Seafood Branch Montgomery at (334) 206-5375 or rdawsey@adph.state.al.us.

Figure 8-1 Alabama's Oyster/Shellfish Harvesting Areas in Coastal Waters



Base Map: NOAA Navigational Chart 11360

Table 8-1 Shellfish Harvesting Area Closures/Reopening

2017																				
NOTICE DATE	EFFECTIVE DATE	TIME EFFECTIVE	AREA I			AREA II			AREA III			AREA IV			AREA VI			AREA VII		
			STATUS	# DAYS OPEN	# DAYS CLOSED	STATUS	# DAYS OPEN	# DAYS CLOSED	STATUS	# DAYS OPEN	# DAYS CLOSED	STATUS	# DAYS OPEN	# DAYS CLOSED	STATUS	# DAYS OPEN	# DAYS CLOSED	STATUS	# DAYS OPEN	# DAYS CLOSED
12 31 17																				
10 13 17	10 13 17	1000	CONDITIONALLY OPEN	80		CONDITIONALLY OPEN	80		CONDITIONALLY OPEN	80		CONDITIONALLY CLOSED		80	CONDITIONALLY CLOSED		80	CONDITIONALLY OPEN	80	
10 06 17	10 07 17	1100	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6
09 21 17	09 21 17	1100	CONDITIONALLY OPEN	16		CONDITIONALLY OPEN	16		CONDITIONALLY OPEN	16		CONDITIONALLY CLOSED		16	CONDITIONALLY CLOSED		16	CONDITIONALLY OPEN	16	
08 30 17	08 30 17	0600	CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22
08 17 17	08 17 17	1100	CONDITIONALLY OPEN	13		CONDITIONALLY OPEN	13		CONDITIONALLY OPEN	13		CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY OPEN	13	
08 07 17	08 04 17	1500	CONDITIONALLY OPEN	13		CONDITIONALLY OPEN	13		CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY OPEN	13	
07 14 17	07 14 17	1500	CONDITIONALLY OPEN	21		CONDITIONALLY OPEN	21		CONDITIONALLY OPEN	21		CONDITIONALLY CLOSED		21	CONDITIONALLY CLOSED		21	CONDITIONALLY OPEN	21	
06 21 17	06 21 17	1500	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23
04 20 17	04 20 17	1000	CONDITIONALLY OPEN	62		CONDITIONALLY OPEN	62		CONDITIONALLY OPEN	62		CONDITIONALLY CLOSED		62	CONDITIONALLY CLOSED		62	CONDITIONALLY OPEN	62	
04 10 17	04 10 17	1800	CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY OPEN	10	
02 03 17	02 03 17	0900	CONDITIONALLY OPEN	66		CONDITIONALLY OPEN	66		CONDITIONALLY OPEN	66		CONDITIONALLY CLOSED		66	CONDITIONALLY CLOSED		66	CONDITIONALLY OPEN	66	
01 30 17	01 29 17	0700	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY OPEN	5	
01 20 17	01 19 17	1200	CONDITIONALLY OPEN	10		CONDITIONALLY OPEN	10		CONDITIONALLY OPEN	10		CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY OPEN	10	
01 03 17	01 02 17	1500	CONDITIONALLY CLOSED		17	CONDITIONALLY CLOSED		17	CONDITIONALLY OPEN	17		CONDITIONALLY CLOSED		17	CONDITIONALLY CLOSED		17	CONDITIONALLY CLOSED		17
01 01 17			CONDITIONALLY OPEN	1		CONDITIONALLY CLOSED		1	CONDITIONALLY OPEN	1		CONDITIONALLY CLOSED		1	CONDITIONALLY CLOSED		1	CONDITIONALLY CLOSED		1
				282	83		281	84		286	79		0	365		0	365		296	69
TOTALS					22.74%			23.01%			21.64%			100.00%			100.00%			18.90%

NOTICE DATE	EFFECTIVE DATE	TIME EFFECTIVE	AREA I			AREA II			AREA III			AREA IV			AREA VI			AREA VII		
				OPEN	CLOSED		OPEN	CLOSED		OPEN	CLOSED		OPEN	CLOSED		OPEN	CLOSED		OPEN	CLOSED
12 31 16																				
12 14 16	12 14 16	0600	CONDITIONALLY OPEN	18		CONDITIONALLY CLOSED		18	CONDITIONALLY OPEN	18		CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18
09 02 16			CONDITIONALLY OPEN	103		CONDITIONALLY OPEN	103		CONDITIONALLY OPEN	103		CONDITIONALLY CLOSED		103	CONDITIONALLY CLOSED		103	CONDITIONALLY OPEN	103	
05 06 16	05 06 16	1030	CONDITIONALLY OPEN	119		CONDITIONALLY OPEN	119		CONDITIONALLY OPEN	119		CONDITIONALLY CLOSED		119	CONDITIONALLY CLOSED		119	New Area Added 9/2/16		
04 19 16	04 17 16	1800	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19			
04 13 16	04 13 16	0600	CONDITIONALLY OPEN	4		CONDITIONALLY OPEN	4		CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4			
04 06 16	04 06 16	1500	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7			
03 28 16	03 28 16	1200	CONDITIONALLY OPEN	9		CONDITIONALLY CLOSED		9	CONDITIONALLY OPEN	9		CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9			
03 01 16	02 27 16	0600	CONDITIONALLY CLOSED		30	CONDITIONALLY CLOSED		30	CONDITIONALLY CLOSED		30	CONDITIONALLY CLOSED		30	CONDITIONALLY CLOSED		30			
02 18 16	02 18 16	1000	CONDITIONALLY OPEN	9		CONDITIONALLY OPEN	9		CONDITIONALLY OPEN	9		CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9			
01 01 16			CONDITIONALLY CLOSED		48	CONDITIONALLY CLOSED		48	CONDITIONALLY CLOSED		48	CONDITIONALLY CLOSED		48	CONDITIONALLY CLOSED		48			
				262	104		235	131		258	108		0	366		0	366		103	18
					28.42%			35.79%			29.51%			100.00%			100.00%			4.92%
TOTALS																				

Conditionally means there are some exceptions to the open status, some parts of the area may still remain closed. See original notice for more detailed

***No Notice Found

Area VI added April 1, 2012

Area VII added September 2,

8.3 Public Water Supply/Drinking Water

Approximately 850,000,000 gallons of water are taken from ground and surface sources each day, provided with treatment, and made available to approximately four million citizens in Alabama. Five hundred and sixteen (516) community systems, forty-eight (48) transient non-community systems and twenty-two (22) non-transient non-community systems are permitted by the ADEM.

Approximately sixty-five (65) percent of the water used is obtained from surface sources such as lakes, rivers, and streams and provided with full treatment to include coagulation, sedimentation, filtration, and disinfection. One hundred (100) percent of these systems meet turbidity requirements, one hundred (100) percent meet trihalomethane standards, ninety-seven (99) percent meet haloacetic acid standards and one hundred (100) percent meet inorganic and radiological drinking water standards. These water treatment facilities are required to employ Grade IV Certified Operators to ensure that proper doses of chemicals are applied and hourly tests are performed to demonstrate a satisfactory water quality.

Thirty-five (35) percent of the water is obtained from ground water sources such as wells and springs. An adequate source of ground water is generally available in this State; however, the ground water is extremely limited in the Piedmont area. Ground water sources are required to provide disinfection and monitor the draw down (water level change) in wells ensuring that a satisfactory available quantity of water remains. More than ninety-six (96) percent of the Community Systems and ninety-four (94) percent of the Non-community Systems met the bacteriological quality standard of the Department. More than ninety-five (95) percent of the community systems and approximately ninety (90) percent of the non-community systems were in full compliance with the bacteriological monitoring requirements. Ninety-six (97) percent meet disinfection byproduct standards and one hundred (100) percent of the groundwater public water systems were able to meet the inorganic and radiological maximum contaminant levels. These figures demonstrate that the majority of the water provided to the citizens in Alabama is excellent. Contaminants, chemicals, and byproducts that water systems monitor for are shown in Tables 8-2 through 8-7.

All water systems continue to monitor for lead and copper. Three systems exceeded a lead or copper action level out of the 449 community and non-transient, non-community systems that were sampled in 2016 and 2017. This system is being required to formulate a corrosion control plan, and continue sampling every six months.

All community and non-transient non-community water system sources continued to be monitored for volatile organic chemicals (VOCs) and synthetic organic chemicals (SOCs). More than ninety-nine (99) percent of the community systems and non-transient non-community systems required to monitor in 2016 and 2017 were in full compliance with the VOC and SOC monitoring requirements. Of the contaminants found, Tetrachloroethylene (TCE) is the most common regulated VOC and Di(2-ethylhexyl)phthalate is the most common regulated SOC. Table 8-3 shows surface source public water systems with compliance violations.

For more information about to Public Water Supply/Drinking Water, contact Mr. Tom Deloach in ADEM's Montgomery Office at (334) 271-7791 or tsd@adem.state.al.us.

Table 8-2 Surface Source Public Water Systems with Compliance Violations

Name of Facility	Municipality Served	Name of Water body	Contaminants with Percent Violations
Lafayette Water Works	Lafayette	Lafayette Resevoir	Total Haloacetic Acids

Table 8-3 Public Water Supply Elemental Contaminants

Elemental Contaminants	MCL in mg/L
Antimony	0.006
Arsenic	0.05
Asbestos	7 million fibers*/L
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4
Lead	0.015
Mercury	0.002
Nickel	0.1
Nitrate (as N)	10
Nitrite (as N)	1
Total Nitrate/Nitrite (as N)	10
Selenium	0.05
Sulfate	500
Thallium	0.002

* Longer than 10 micrometers

Table 8-4 Public Water Supply Radiological Contaminants

Radiological Contaminants	Concentrations
Gross alpha particle	15pCi/L
Combined radium226 and radium228	5 pCi/L
Tritium	20,000 pCi/L
Strontium90	8 pCi/L
Beta particle and photon radioactivity	4 millirem/Yr

Table 8-6 Public Water Supply Disinfection Byproducts

Disinfection Byproduct	MCL in mg/L
Bromate	0.01
Chlorite	1
Haloacetic Acids	0.06
Trihalomethanes	0.08

Table 8-5 Public Water Supply Synthetic Organic Chemicals

Synthetic Organic Chemicals (non-volatile)	MCL in mg/L
Alachlor	0.002
Atrazine	0.003
Carbofuran	0.04
Chlordane	0.002
Dibromochloropropane	0.0002
2,4-D	0.07
Endrin	0.002
Ethylene Dibromide	0.00005
Heptachlor	0.0004
Heptachlor Epoxide	0.0002
Lindane	0.0002
Methoxychlor	0.04
Polychlorinated Biphenyls	0.0005
Pentachlorophenol	0.001
Toxaphene	0.003
2,4,5-TP	0.05
Benso(a)pyrene	0.0002
Dalapon	0.2
Di (2-ethylhexyl) adipate	0.4
Di (2-ethylhexyl) phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Glyphosate	0.7
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Oxamyl (Vydate)	0.2
Picloram	0.5
Simazine	0.004
2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$

Table 8-7 Public Water Supply Volatile Synthetic Organic Chemicals

Volatile Synthetic Organic Chemicals (VOC)	MCL in mg/L
Benzene	0.005
Carbon Tetrachloride	0.005
1,2-Dichloroethane	0.005
Trichloroethylene	0.005
para-Dichlorobenzene	0.075
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.2
Vinyl chloride	0.002
cis-1,2-Dichloroethylene	0.07
1,2-Dichlorpropane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
0-Dichlorobenzene	0.6
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1
Trans-1,2-Dichloroethylene	0.1
Xylene (Total)	10
Dichloromethane	0.005
1,2,4-Trichlorobenzene	0.07
1,1,2-Trichloroethane	0.005

8.4 Source Water Assessment Program

All public water supply systems with ground water sources have completed a SWAP for each of their existing sources. All water systems are required to update their SWAPs when applying for reissuance of their permits-to-furnish water. All new groundwater sources must have a completed SWAP, prior to using the source for potable water. A completed SWAP for a groundwater source must include the following:

- Delineation of the source water assessment area (SWAA),
- An inventory of the possible contaminant sources within the SWAA,
- A susceptibility analysis of each possible contaminant source in the inventory, and
  A public awareness requirement

When the SWAP requirements were initially required in February 2003, Alabama had a total of 414 public water supply systems that utilized one or more groundwater sources. These systems were required to complete a SWAP for their groundwater sources. The public water supply systems were categorized as follows:

- 310 Community Groundwater Systems
- 75 Non-Community Transient Groundwater Systems, and
- 29 Non-Community Non-Transient Groundwater Systems

Alabama received eleven SWAPs for eleven new or expanded groundwater sources in 2016 - 2017. All eleven of these reports were submitted from existing public water systems. SWAPs have been finalized for ten of the new well sources. For the remaining groundwater sources, the SWAP is currently in the process of being reviewed and finalized.

For more information about the Source Water Assessment Program, contact Mr. Loren Crawford in ADEM's Montgomery Office at (334) 271-7788 or llc@adem.state.al.us.

8.5 Wellhead Protection Program

A Ground Water Branch staff member is assigned to the ADEM Public Water Supply Branch to support Source Water Assessment (SWA) and Drinking Water State Revolving Fund (DWSRF) grants and contracts, to manage the Wellhead Protection Program, and to conduct technical reviews of ground water source delineations and contaminant inventories. The Wellhead Protection Program supports the Source Water Assessment Program (SWAP) by providing a mechanism for communities and water systems to develop and implement drinking water protection strategies. The Ground Water Branch provides assistance and guidance to systems in developing a Wellhead Protection Plan, promotes the Ground Water Guardian program, coordinates drinking water protection sign distribution, coordinates with the Alabama Rural Water Association (ARWA) in recognizing water systems that have completed a Wellhead Protection Plan, attends meetings, conferences and workshops, and coordinates inspections and compliance issues in wellhead protection areas with ADEM Branches and other State agencies.
ADEM and the ARWA are working together to integrate the WHPP Tool Kit into implementation of the WHP Program. Nine utilities have developed a protection program utilizing the Tool Kit. In addition, the ADEM and ARWA are working together to install

Drinking Water Protection signs in those communities with completed Wellhead Protection Plans. The sign installations were publicized for several of the communities in both the local media as well as the ARWA journal.

ADEM is working to insure that delineated source water area maps and potential contaminant site location information are available for use within the Department. Source Water Area maps have been digitized for use in developing a GIS layer. The ADEM Information Systems Branch is providing the digitizing and GIS support. The database is currently available to the agency as a draft. The ADEM Groundwater Branch UIC, UST and 106 Programs and the ADEM Industrial and Municipal Branches all consider existing Source Water Assessment areas as part of their permitting process.

The Groundwater Guardian Program was established within the State to provide recognition to communities, municipalities and counties that implement groundwater protection initiatives. The Department was awarded the Ground Water Guardian Affiliate designation for the 21st year by the Ground Water Foundation. One community, New Brockton/Coffee County, was designated Groundwater Guardians during the reporting period.

Twenty eight (28) Groundwater or Water Festivals were hosted. Approximately 22,000 students participated in a festival during the reporting period. The ADEM Groundwater Branch with the assistance of the ADEM Office of Education and Outreach manages the State program and coordinates (on average) three festival committees per year. The ARWA Groundwater and Source Water Technicians provide volunteer hours to several festivals per year and provide teacher training on groundwater in preparation for the festivals. Funding to support the program is provided through an ADEM grant program. Festival committees can apply yearly for a $1000 grant.

The Annual Alabama Groundwater Conference was held in June 14, 2017 at the Gordon Persons Building in Montgomery. The conference provides a forum for discussion of the latest technology and protection programs for groundwater. Approximately one hundred and eleven (111) people were registered for the conference. The audience for the conference is comprised of utility personnel, consultants, watershed managers, geologist, university professors and students, and ADEM personnel.

For more information about the Wellhead Protection Program, contact Mr. Whit Slagle in ADEM's Montgomery Office at (334) 271-7831 or cws@adem.state.al.us. For information about the Water Festival Program contact Scott Hughes, ADEM Office of Education and Outreach, at (334) 271-7955 or ash@adem.state.al.us.

8.6 Coastal Beach Monitoring

Alabama has approximately 50 miles of Gulf beaches and almost 70 miles of bay beaches, both of which are major tourist attractions and represent a significant component of the lifestyle of Alabama residents. In June 1999, ADEM, in cooperation with the ADPH, initiated a program to routinely monitor bacteria levels at five swimming beaches on the Gulf Coast and in August

2000, six additional beaches were added. Congressional passage of the Beaches Environmental Assessment and Coastal Health (BEACH) Act expanded the monitoring and assessment activities at public beaches and in the fall of 2002, ADEM and the Baldwin County Health Department conducted on-site surveys to evaluate additional public beach sites to add to the program. Figure 8-2 shows Alabama's coastal waters covered under the 2000 B.E.A.C.H. Act and Table 8-9 2015-2016 Coastal Beach Monitoring Summary.

During the past summer, a total of 25 public beach areas were monitored. A majority of these sites were sampled weekly from Memorial Day through Labor Day and for the remainder of the year sampling is conducted monthly. All sample collection and analyses are performed by qualified ADEM or ADPH staff, with analytical results made available to the public within 24 hours.

The public beach locations that are sampled have signage with a color-coded bacteriological advisory status to inform the public of the potential health risk associated with swimming or other water contact activities at that site. A GREEN advisory means the most recent water quality test revealed bacterial levels are below recommended thresholds while a YELLOW advisory indicates the most recent water quality test revealed bacterial levels exceed recommended thresholds and an increased risk of illness may be associated with swimming. Once a yellow advisory status has been issued, the site is re-tested. A RED advisory indicates continued elevated bacterial levels at the site and the ADPH issues a swimming advisory. The site is re-tested until bacterial levels return to an acceptable level.

In 2016, more than 800 samples were collected and analyzed for enterococcus bacteria. There were 3 advisories that occurred during the swim season, May through September; resulting in a total of 10 days that beaches were under advisories because of elevated bacteria. Data and monitoring location information from this program are available at www.adem.alabama.gov.

Elevated bacterial levels can be caused by heavy rainfall events that allow stormwater runoff to carry bacterial matter into the coastal waters. ADEM and the ADPH use on-site signs, the ADEM web-page, press releases, and local newspapers to notify the public of the latest monitoring results. Graphs for each beach monitoring station's Enterococcus geomean or Individual count results are on the following pages.

For information pertaining to Coastal Beach Monitoring, contact Ms. Susan Rice in ADEM's Mobile Office at (251) 450-3400 or srice@adem.alabama.gov

Figure 8-2 Coastal Beach Monitoring Locations

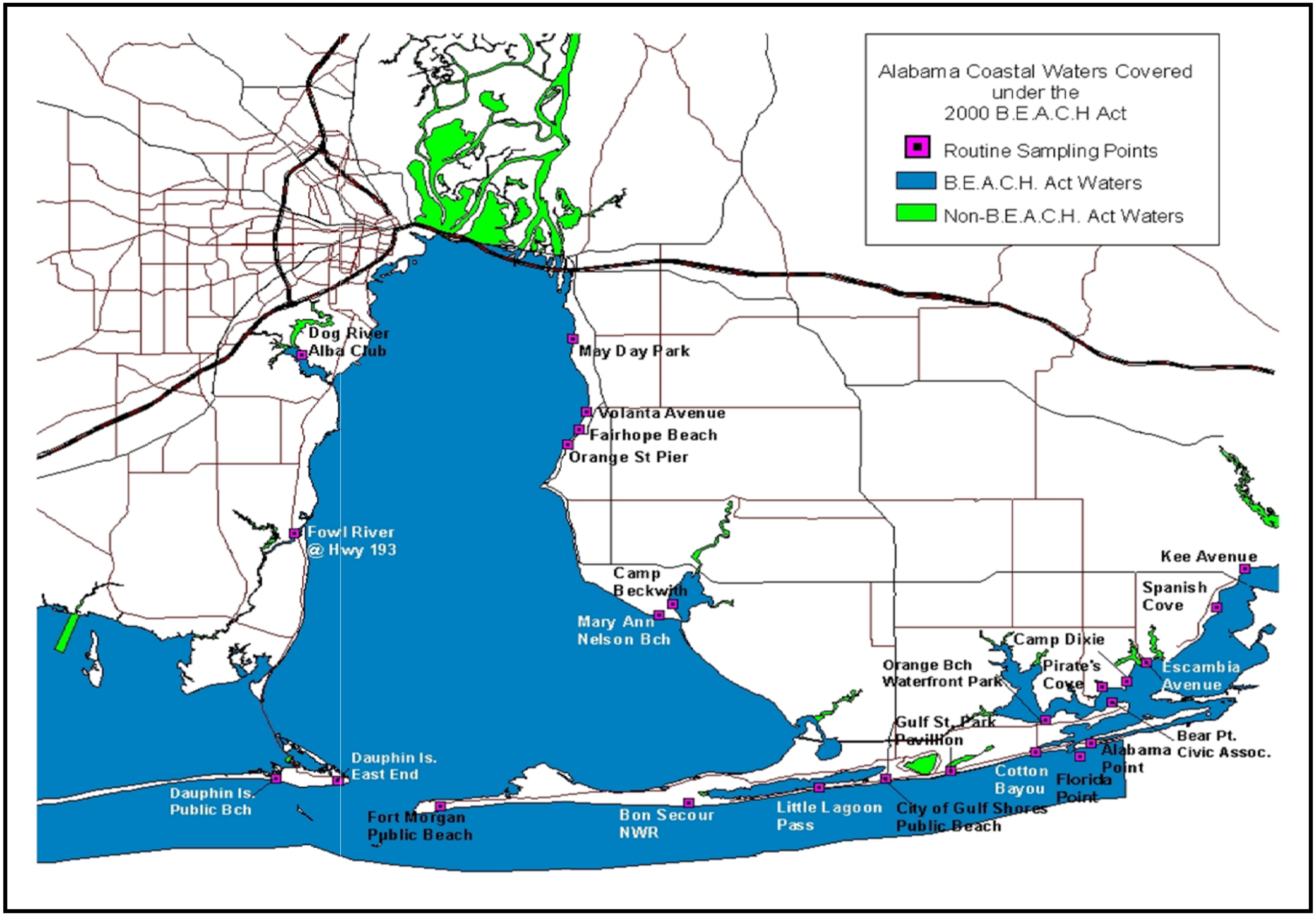


Table 8-9 2015-2016 Coastal Beach Monitoring Summary

Location	Sampling Point	Latitude	Longitude	Individual Samples	Individual Exceedances	Calculated Geomeans	Geomean Exceedances	Individual Samples	Individual Exceedances	Calculated Geomeans	Geomean Exceedances
Alabama Point	AL_PT	30.276940	-87.541670	29	0	2	0	30	0	2	0
Bear Point Civic Association		30.308800	-87.526800	19	1	0	0	19	1	0	0
Bon Secour NWR	BON_SEC	30.228890	-87.831390	17	0	0	0	18	0	0	0
Camp Beckwith	C_BECK	30.388580	-87.842240	53	2	2	0	61	8	6	1
Camp Dixie	C_DIXIE	30.326300	-87.516200	30	0	2	0	31	1	3	0
Cotton Bayou	COT_BYOU	30.269400	-87.582000	29	0	2	0	30	0	2	0
Escambia Avenue	ESC_AVE	30.341130	-87.502270	18	0	0	0	20	2	0	0
Fairhope Public Beach	F_HOPE	30.528070	-87.909560	56	4	6	1	54	1	5	0
Florida Point, Cotton Bayou	FL_PT	30.266200	-87.550100	30	1	3	0	30	0	2	0
Fort Morgan Public Beach	FRT_MGN	30.225800	-88.009400	17	0	0	0	18	0	0	0
Gulf Shores Public Beach	CITY_GS	30.247780	-87.690000	27	0	2	0	30	1	2	0
Gulf State Park Pavillion	GSP_PAV	30.254720	-87.643330	29	0	2	0	30	0	2	0
Kee Avenue	KEE_AVE	30.416430	-87.431870	31	1	2	1	34	5	2	1
Little Lagoon Pass	LL_PASS	30.241390	-87.737780	29	0	2	0	31	1	3	0
Mary Ann Nelson Beach	MAN_BEACH	30.378730	-87.852840	24	4	1	0	23	3	0	0
May Day Park	MAY_DAY	30.599230	-87.914070	31	2	2	0	31	5	2	1
Orange Beach Waterfront Park	OB_WP	30.294800	-87.575100	32	2	3	1	33	3	3	0
Orange Street Pier/Beach	ORANGE_ST	30.515840	-87.917400	30	0	2	0	32	2	3	0
Pirate's Cove	P_COVE	30.321400	-87.533780	31	1	2	0	30	0	2	0
Spanish Cove, Perdido Bay	SPAN_COV	30.385688	-87.451830	33	4	4	0	31	1	2	0
Volanta Avenue	VOL_AVE	30.541540	-87.904110	32	3	3	0	34	4	3	0
Dauphin Island East End	DI_EAST	30.148000	-88.048070	18	0	0	0	21	4	1	1
Dauphin Island Public Beach		30.247800	-88.127200	18	0	0	0	19	1	0	0
Dog River at Alba Club	DOGR_ALBA	30.586400	-88.108300	34	4	4	0	34	4	3	0
Fowl River at HWY. 193	FWL_R	30.444270	-88.113620	37	7	3	0	30	0	2	0

Tab Color Key

Calculated GeoMean

Single Sample Exceedance Only

GeoMean Exceedance

Chart Color Key

Marginal Single Sample Exceedance

Single Sample Exceedance

GeoMean Exceedance

Chapter 9 TMDL Program

9.1 TMDL Program

According to the code of federal regulations (CFR), specifically 40 CFR §130.7(b), each state must determine the total maximum daily load (TMDL) for each pollutant causing impairment as identified on their §303(d) list of impaired waters. A total maximum daily load is defined in 40 CFR §130.2 as the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

Point sources include all sources subject to regulation under the National Pollutant Discharge Elimination System (NPDES) program. Nonpoint sources include all remaining sources of the pollutant as well as anthropogenic and natural background sources. TMDLs must also account for seasonal variations in water quality and include a margin of safety (MOS) to account for uncertainty in predicting how well pollutant reductions will result in meeting water quality standards. The TMDL calculates the maximum amount of a pollutant that a waterbody can receive and still meet applicable water quality standards.

The TMDL calculation is as follows:

$$TMDL = \sum WLA + \sum LA + MOS$$

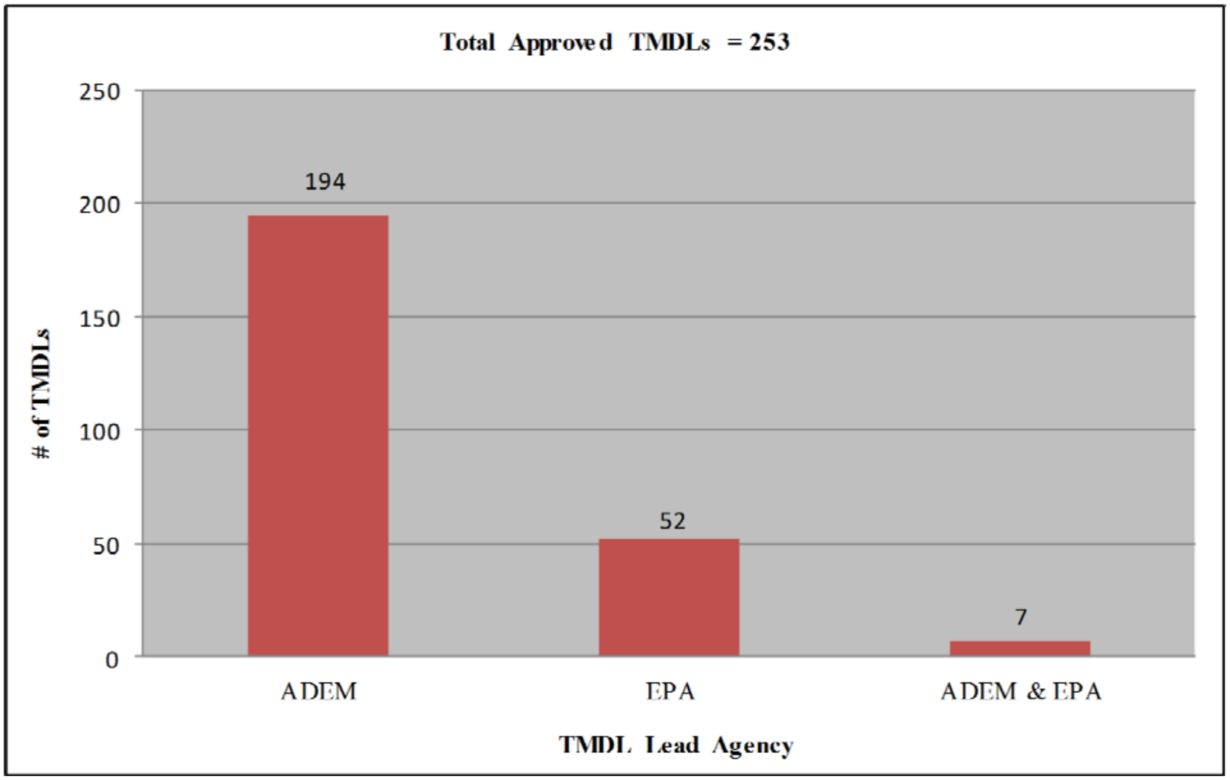
Where WLA = the sum of wasteload allocations (point sources)
LA = the sum of load allocations for nonpoint sources and background
MOS = the margin of safety

Typical modeling methods or approaches used by the Department to develop TMDLs are as follows:

Dynamic and steady-state models for organic enrichment (CBOD and NBOD),
Dynamic and steady-state models for nutrients and siltation,
Mass balance approach for toxic pollutants and pathogens.

Information used in development of the TMDL consists primarily of chemical, physical and biological data from the impaired waterbody to include its watershed characteristics such as land use/cover, soil types, elevation data, point and nonpoint sources, census data,

Figure 9-1 Alabama's Appproved TMDLs in Alabama



meteorological data, water withdrawals, flow data and various other types of information. Most data and information are stored in Departmental databases and can also be managed, analyzed and displayed using ArcView Geographic Information System (GIS), Microsoft Access, Microsoft Excel, Water Resources Database (WRDB) or other software. This information is collected and evaluated by the Water Quality Branch through planned water quality studies with ADEM's Field Operations Division (FOD) or is gathered from other sources (e.g. federal agencies, universities, other State agencies, volunteer monitoring groups) for evaluation by the Water Quality Branch.

Documentation of the TMDL is provided in the form of a written draft report. The draft TMDL report is provided to the EPA Regional Administrator and shall include, at minimum, the elements required under 40 CFR §130.7. In conjunction with or following review by the Regional Administrator, the draft TMDL is made available for public review and comment. The notice of availability of the draft TMDL report and request for comment is published on the Department's website, placed in the State's largest daily newspapers and distributed electronically to any person wishing to receive public notices from the Department.

Following public review and comment, TMDLs are finalized, incorporating any necessary changes as a result of information and comments received during the comment period. The final TMDLs are then submitted to EPA for formal review and approval. Implementation of the final TMDLs is accomplished through ADEM's NPDES programs for regulated point sources, which address WLAs, and through ADEM's 319 nonpoint source program for nonpoint sources, which address the LAs. When the TMDL contains a WLA for point sources, any affected NPDES permits are modified to be consistent with the wasteload allocation contained in the TMDL. The nonpoint source program uses a voluntary approach to address nonpoint source pollution. The program relies on best management practices, education and outreach, technology transfer, monitoring and assessments and resource assistance using a balanced statewide and watershed focused restoration approach. Local partnerships and citizen input are the primary implementation components.

In FY2016 and FY2017, Alabama's TMDL Program had several accomplishments with respect to TMDL development, pollutant delistings, waterbody/watershed investigations and development of dynamic water quality models, all of which address impaired waters throughout Alabama. A total of four TMDLs were developed by ADEM's Water Quality Branch and subsequently approved by EPA Region 4. As of February 1, 2018, a total of 253 TMDLs have been developed for Alabama's waterbodies since the inception of the program, which began in 1997. See Figure 9-1 for details. Figures 9-2 and 9-3 provide the number of TMDLs developed per major river basin and number of TMDLs developed per pollutant, respectively. Table 9-1 provides a list of the approved TMDLs that were completed in FY2016-FY2017. Tables 9-2 and 9-3 provide the TMDL Development Schedules for FY2018 and FY2019, respectively.

For more information about Alabama's TMDL Program, contact Ms. Kimberly Minton in ADEM's Montgomery Office at (334) 271-7826 or kminton@adem.alabama.gov.

Figure 9-2 Alabama's Approved TMDLs by Major River Basin

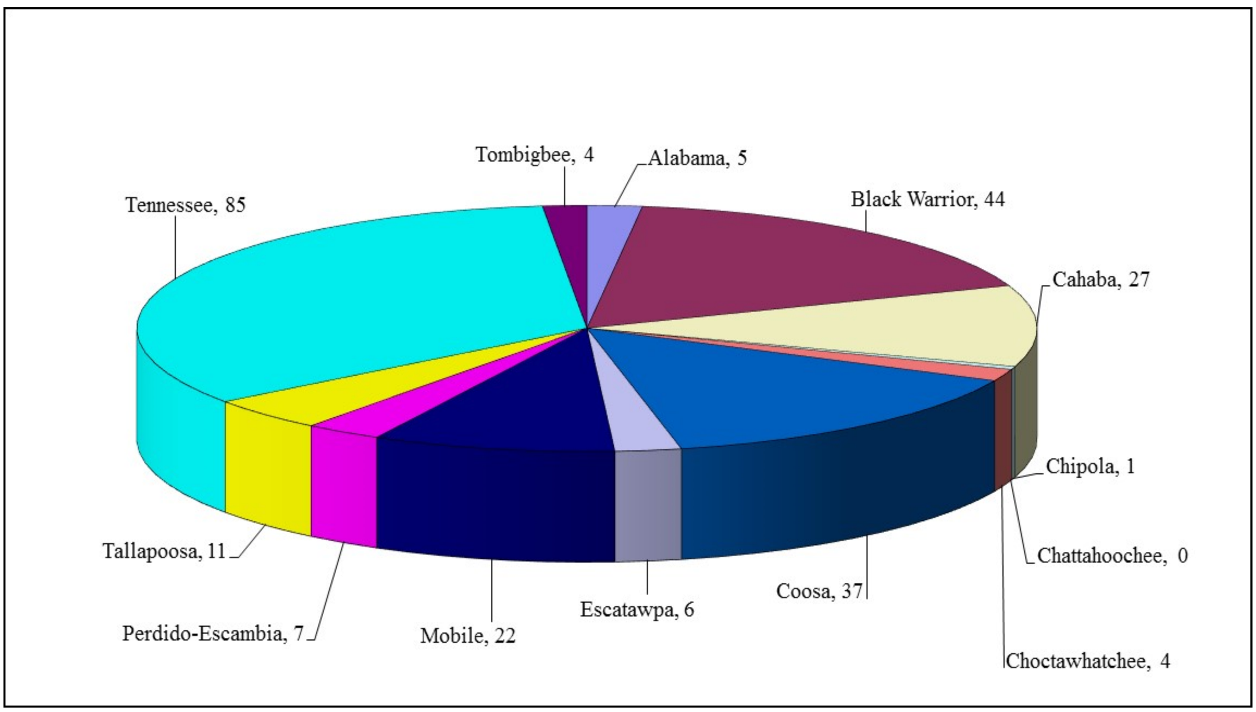


Figure 9-3 Alabama's Approved TMDLs by Pollutant

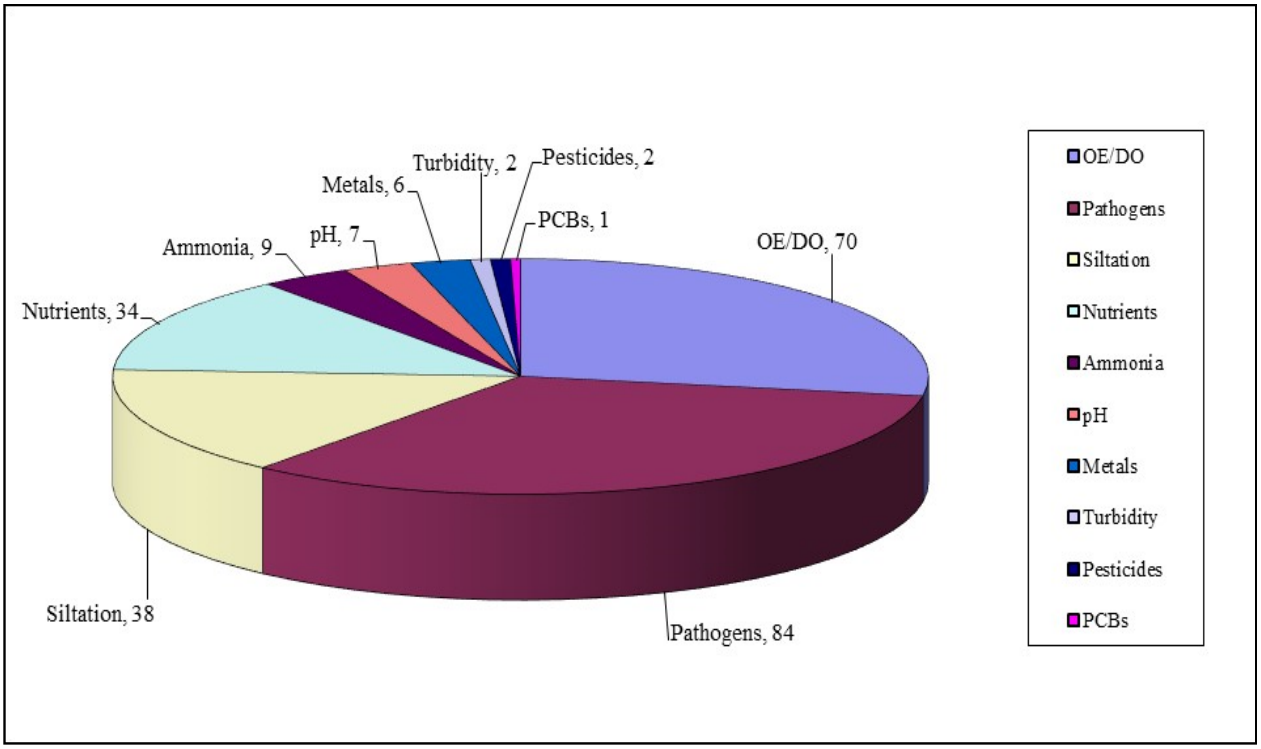


Table 9-1 TMDL Development for Fiscal Years 2016 & 2017

Waterbody Name	Waterbody ID	River Basin	County	Pollutant	Final TMDL Date (approval date)
Rocky Creek	AL03140303-0201-101	Perdido-Escambia	Butler	Pathogens	9/16/2016
Black Branch	AL03160109-0404-500	Black Warrior	Walker	pH	9/16/2016
Black Branch	AL03160109-0404-500	Black Warrior	Walker	Metals (Aluminum)	9/16/2016
Little Tallapoosa River	AL03150108-0905-103	Tallapoosa	Cleburne Randolph	Pathogens	8/25/2017

Table 9-2 Final TMDL Development Schedule for Fiscal Year 2016

Waterbody Name	Waterbody ID (12-Digit HUC)	River Basin	County	Pollutant
Locust Fork	AL03160111-0305-102	Black Warrior	Blount Jefferson	Nutrients
Locust Fork	AL03160111-0308-102	Black Warrior	Blount Jefferson	Nutrients
Locust Fork	AL03160111-0404-102	Black Warrior	Blount Jefferson	Nutrients
Locust Fork	AL03160111-0413-101	Black Warrior	Jefferson	Nutrients
Locust Fork	AL03160111-0413-112	Black Warrior	Jefferson	Nutrients
Village Creek	AL03160111-0409-100	Black Warrior	Jefferson	Nutrients

Table 9-3 Final TMDL Development Schedule for Fiscal Year 2017

Waterbody Name	Waterbody ID (12-Digit HUC)	River Basin	County	Pollutant
AL03160109-0101-150	Riley Maze Creek	Black Warrior	Cullman Marshall	Total Dissolved Solids
AL03160109-0101-600	Tibb Creek	Black Warrior	Cullman Marshall	Total Dissolved Solids
AL03150107-0104-100	Shirtee Creek	Coosa	Talladega	Total Dissolved Solids
AL03150107-0106-100	Tallaseehatchee Creek	Coosa	Talladega	Total Dissolved Solids
AL03160111-0307-400	Black Creek	Black Warrior	Jefferson	pH

Chapter 10 Concerns and Recommendations

A declining trend in national and state funding of water quality programs, including funding of water quality monitoring activities, and ever increasing federal mandates will continue to provide challenges, as well as, opportunities for innovation. Given the considerable task of adequately monitoring the State's surface waters and the fact that EPA's budget continues to decline overall, especially in funding for the Section 319 program, efficiencies must be found to make the most of available resources. The Department is initiating several efforts to increase program efficiency through the effective use of technology to gather, store, assess and report data and information. In addition, EPA has placed a greater emphasis on measuring and reporting water quality changes resulting from implementation of management practices.

Implementation of management measures must be based on sufficiently detailed watershed protection plans with measurable goals. In Alabama, the Clean Water Partnership program promotes efficient and effective implementation of technically sound, environmentally protective, and economically achievable management measures using a grassroots approach. The partnership is composed of a diverse and inclusive coalition of public and private interest groups and individuals who are working in collaboration to improve, protect, and preserve water resources and aquatic ecosystems in Alabama. Public and private funding is needed to institutionalize this successful endeavor and to ensure permanent facilitators in each basin or sub-basin to coordinate projects and programs and to enhance citizen interest and input into decision-making processes. Federal funding reductions for the Section 319 Nonpoint Source Program may jeopardize this very successful effort.

Water quality assessment and resource protection efforts should emphasize shared decision-making processes, integrate diverse and inclusive partnerships, and provide a clear understanding of the many and varied problems impacting a waterbody. In Alabama, voluntary and enforceable mechanisms are in-place, are complementary, and are effective in assuring long-term protection of water quality. However, as competing demands for limited resources endure, additional information becomes available, priorities change, or complex issues emerge, watershed protection plans must be designed to be iterative, particularly as related to TMDL plan implementation. Stakeholders must be involved in the early stages of plan development, encouraged to assume ownership, and voluntarily accept responsibility for providing solutions. Certain elements and structure of the plans can be adapted to the entire watershed, or to specific sources or causes of impairment. However, it is recommended that all plans in Alabama be based on a similar format, especially if the impairments to be addressed are both point and nonpoint source related and/or the plan will serve as a TMDL implementation plan.

In 2015, ADEM's Monitoring Strategy was updated to meet data needs for the next five-year monitoring cycle, namely calendar years 2015-2020. Since 1996, ADEM utilized a rotating basin approach to monitor waters throughout the State. The former approach divided the State into 5 river basin groups which were monitored on a five-year rotating basis. Monitoring was concentrated in one target basin, in accordance with ADEM's 5-year basin rotation. Beginning in 2015, monitoring is conducted in each of the five basin groups every year based on programmatic needs. In addition, the Rivers and Reservoirs Monitoring Program (RRMP) went from a 5-year rotation to a 3-year rotation thus allowing for a more frequent monitoring schedule for our large rivers and reservoirs. The coastal monitoring program was also redesigned to allow for more frequent monitoring in a given year at specific locations within the estuarine and coastal waters. These monitoring changes will enable the Department to collect samples throughout the growing season, and provide more sufficient data nutrient criteria development and use support analysis. These changes to ADEM's Monitoring Strategy provides more flexibility to address the multiple monitoring needs, as well as, meet the growing demands of the various water protection programs.

In 2016, the Department initiated research to collect "real-time" continuous flow, turbidity, and total suspended solids (TSS) at two streams in the Tennessee Basin and two streams in the Tallapoosa Basin. These studies were used to provide a better understanding of sediment loadings and concentrations during various hydrologic conditions including storm events with a goal of developing sediment and turbidity benchmarks for the various ecoregions within Alabama. ADEM has coordinated with the US Geological Survey (USGS) to set up real-time flow and rain gauges at siltation-impacted streams and comparable reference reaches. Long-term turbidity probes and pressure sensors to estimate flow have also been deployed at additional locations.

The Department's ability to efficiently gather, store, analyze, and report on water quality data and information is critical to making sound management decisions. The Department has initiated several projects to address this issue, such as electronic reporting of Discharge Monitoring Reports by industrial and municipal wastewater treatment facilities, the NPDES Management System (NMS), the Alabama Water Quality Assessment & Monitoring Data Repository (ALAWADR), and a database system to replace the Assessment Database (ADB), for tracking assessment units and assessment unit categories.

Although several initiatives and programmatic changes have been established recently, ADEM needs additional resources to enable its monitoring programs to meet a growing list of the programmatic commitments. Development of EPA-mandated nutrient criteria for State waters and evaluation of TMDL implementation activities will require significant additional monitoring resources, including personnel, field equipment and laboratory facilities. Adequate data and information are required to make sound, scientifically based decisions related to development of new water quality criteria, designated uses, and use support status for Alabama's water resources. Careful and thorough planning is needed to insure that any additional resources for monitoring State waters are used efficiently and as effectively as possible. To accomplish this goal, Alabama should establish a Water Quality Monitoring Council (AWQMC) made up of agencies and organizations involved in water quality monitoring activities. The AWQMC would facilitate a long-term, coordinated monitoring strategy for the state's waters and leverage resources to better assess both the quality and quantity of Alabama's water.

Appendix A

Alabama's Water Quality Assessment and Listing Methodology

Alabama's Water Quality Assessment and Listing Methodology

January 1, 2018

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List of Acronyms

A&I	Agricultural and Industrial Water Supply
ADEM	Alabama Department of Environmental Management
ADPH	Alabama Department of Public Health
AEMC	Alabama Environmental Management Commission
AWIC	Alabama Water Improvement Commission
CBOD5	Five-Day Carbonaceous Biochemical Oxygen Demand
Cl^{-1}	Chlorides
CWA	Clean Water Act
DO	Dissolved Oxygen
DRP	Dissolved Reactive Phosphorus
EPA	Environmental Protection Agency
EPT	Ephemeroptera/Plecoptera/Trichoptera
F&W	Fish and Wildlife
GIS	Geographical Information System
GPS	Global Positioning System
IBI	Index of Biotic Integrity
IWQMAR	Integrated Water Quality & Monitoring
LWF	Limited Warmwater Fishery
MDL	Method Detection Limit
NH3-N	Ammonia Nitrogen
NHD	National Hydrography Dataset
NO3+ NO2-N	Nitrate + Nitrite Nitrogen
NPDES	National Pollutant Discharge Elimination System
OAW	Outstanding Alabama Water
ONRW	Outstanding National Resource Water
PWS	Public Water Supply
S	Swimming and Other Whole Body Water-Contact Sports
SH	Shellfish Harvesting
SOP	Standard Operating Procedures
SWQAPP	Surface Water Quality Assurance Project Plan
TAL	Treasured Alabama Lake
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
Total-P	Total Phosphorus
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WMB-EPT	Wadeable Multi-habitat Bioassessment - EPT Families
WMB-I	Intensive Wadeable Multi-habitat Bioassessment

1.0 Introduction

Alabama has long been recognized for its abundant water resources. With over 129,700 miles of perennial and intermittent streams and rivers, 425,748 acres of publicly-owned lakes and reservoirs, 610 square miles of estuaries, and 337 miles of coastal shoreline (includes bays and inlets), the state is faced with a tremendous challenge to monitor and accurately report on the condition of its surface waters (ADEM, 2016).

Sections 305(b) and 303(d) of the federal Clean Water Act (CWA) direct states to monitor and report the condition of their water resources. Guidance published by the Environmental Protection Agency (EPA) provides a basic framework that states may use to fulfill this reporting requirement. *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* provides recommendations on the delineation of assessment units, reporting the status and progress towards comprehensive assessment of state waters, attainment of state water quality standards and the basis for making attainment decisions, schedules for additional monitoring, listing waters which do not fully support their designated uses (i.e. impaired waters), and schedules to address impaired waters (EPA, 2005). This methodology is consistent with this guidance and supplemental guidance issued in 2008, 2010, 2012, 2014, 2016, and 2018.

Alabama's assessment and listing methodology establishes a process, consistent with EPA's guidance, to assess the status of surface waters in Alabama relative to the designated uses assigned to each waterbody. The methodology will also describe the procedure to assign the size or extent of assessed waterbodies. This methodology is not intended to limit the data or information that the State considers as it prepares an Alabama's Integrated Water Quality Monitoring and Assessment Report (IWQMAR). Rather, it is intended to establish a rational and consistent process for reporting the status of Alabama's surface waters relative to their designated uses.

2.0 Alabama's Water Quality Standards

State water quality standards are the yardstick by which the condition of the nation's waters is measured. They are intended to protect, restore, and maintain the condition of the nation's waters. In Alabama, the Alabama Water Improvement Commission (AWIC) first adopted water quality standards in 1967. In 1982, the Alabama Department of Environmental Management (ADEM) was formed by merging AWIC with elements of the Alabama Department of Public Health (ADPH). Since first being adopted in 1967, Alabama's water quality standards have been amended on numerous occasions (ADEM, 2017). The Alabama Environmental Management Commission (AEMC), which is the entity that oversees ADEM, has the authority to adopt revisions to the ADEM Administrative Code. The Use Classifications for Surface Waters (ADEM Administrative Code r. 335-6-11) and the Water Quality Criteria (ADEM Administrative Code r. 335-6-10) are reviewed once every three years pursuant to EPA regulations at 40 CFR Part 131.20. Known as the triennial review, this process affords the public the opportunity to make comments and suggestions regarding Alabama's water quality standards. Any changes that ADEM may propose as a result of the review process are subject to further public comment before consideration by the AEMC.

Water quality standards consist of three components: designated uses, numeric and narrative criteria, and an antidegradation policy. These three components have been compared to the three legs of a stool which work together to provide water quality protection for the nation's surface waters.

Designated uses describe the best uses reasonably expected of waters. These uses should include such activities as recreation in and on the water, public water supply, agricultural and industrial water supply, and habitat for fish and wildlife. While not all waters may support all of these uses, the goal of the Clean Water Act is to provide protection of water quality consistent with "fishable/swimmable" uses, where attainable. In Alabama, waters can be assigned one or more of seven designated uses pursuant to ADEM Administrative Code r. 335-6-11. These uses include:

1. Outstanding Alabama Water (OAW)
2. Public Water Supply (PWS)
3. Shellfish Harvesting (SH)
4. Swimming and Other Whole Body Water-Contact Sports (S)
5. Fish and Wildlife (F&W)
6. Limited Warmwater Fishery (LWF)
7. Agricultural and Industrial Water Supply (A&I)

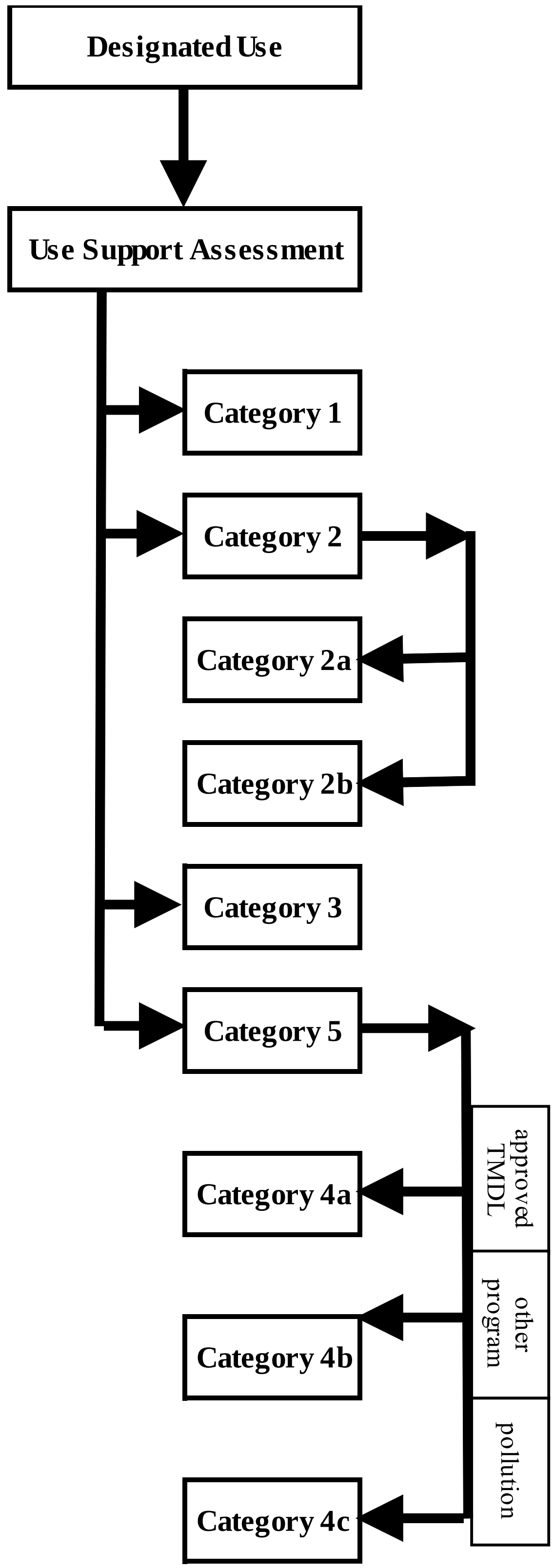
Designated uses 1 through 5 in the list above are considered by EPA to be consistent with the "fishable/swimmable" goal and, therefore, provide for protection of aquatic life and human health.

The State also has two special designations – Outstanding National Resource Water (ONRW) and Treasured Alabama Lake (TAL). These high quality waters are protected or require a thorough evaluation of discharges from new or expanded point sources of pollutants and may be assigned to any one of the first five designated uses in the list above.

Numeric and narrative criteria provide the means to measure the degree to which the quality of waters is consistent with their designated use or uses. The criteria are intended to provide protection of the water quality commensurate with the water's use, to include protection of human health. Narrative criteria generally describe minimum conditions necessary for all uses and may include certain restrictions for specific uses. Numeric criteria include pollutant concentrations or physical characteristics necessary to protect a specific designated use. Alabama's narrative and numeric criteria are defined in ADEM Administrative Code r. 335-6-10.

The state's antidegradation policy provides for the protection of high quality waters that constitute an outstanding national resource (Tier 3), waters whose quality exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (Tier 2), and existing instream water uses and the level of water quality necessary to protect the existing uses (Tier 1). In Tier 3 waters, ADEM Administrative Code r. 335-6-10-.10 prohibits new or expanded point source discharges. In Tier 2 waters, ADEM Administrative Code r. 335-6-10-.04 provides for new or expanded discharge of pollutants only after intergovernmental coordination, public participation, and a demonstration that the new or expanded discharge is necessary for important economic or social development. Alabama's water quality standards regulations (ADEM Administrative Code r. 335-6-10 and 335-6-11) may be found at the Department's web page at: http://www.adem.state.al.us/alEnviroRegLaws/files/Division6Vol1.pdf

Figure 1: Alabama's Waterbody Assessment Process



3.0 Waterbody Categorization

The water quality assessment process begins with the collection, compilation, and evaluation of water quality data and information for the purpose of determining if a waterbody is supporting all of its designated uses. It is imperative that the data and information used in the process be of adequate quality and provide an accurate indication of the water quality conditions in the waterbody since decisions arising from the assessment process may have long-term consequences. Issues of data sufficiency and data quality must be addressed to ensure that use support decisions are based on accurate data and information. However, the minimum data requirements discussed in this methodology are not intended to exclude data and information from the assessment process, but are a guide for use in designing monitoring activities to assess the State's surface waters and to ensure that decisions are made using the best available data. The goal is to accurately describe the status of surface waters where possible and to identify waters where more information is needed to make use support decisions.

The use support assessment process considers all existing and readily available data and information with a goal of placing waterbodies in one of five separate categories. This process is specific to the highest designated use assigned to the waterbody and is described by the flow chart depicted in **Figure 1**.

3.1 Waterbody Categories

Waterbody data and information are evaluated using the use support assessment methodology and the waterbody is assigned to one of the following categories.

Category 1

Waters that are attaining all applicable water quality standards. This category includes waterbodies with exceedances of water quality criteria determined to be the result of Non-anthropogenic Impacts (Natural Conditions). For a description of Non-anthropogenic Impacts (Natural Conditions) see Section 4.8.11.

Category 2

Waters for which existing and readily available data, which meet the State's requirements as described in Section 4.9, supports a determination that some water quality standards are met and there is insufficient data to determine if remaining water quality standards are met. Attainment status of the remaining standards is unknown because data are insufficient. Waters for which the minimum data requirements have not been met will be placed in Category 2.

1. Category 2a
   For these waters, available data does not satisfy minimum data requirements but there is a high potential for use impairment based on the limited data. These waters will be given a higher priority for additional data collection.

2. Category 2b
   For these waters available data does not satisfy minimum data requirements but there is a low potential for use impairment based on the limited data. These waters will be included in future monitoring plans as resources allow.

Category 3
Waters for which there are no data or information to determine if any applicable water quality standard is attained or impaired. These waters will be considered unassessed.

Category 4
Waters in which one or more applicable water quality standards are not met but establishment of a Total Maximum Daily Load (TMDL) is not required.

1. Category 4a
   Waters for which all TMDLs needed to result in attainment of all applicable WQSs have been approved or established by EPA.
2. Category 4b
   Waters for which other required control measures are expected to attain applicable water quality standards in a reasonable time. Adequate documentation is required to indicate that the proposed control mechanisms will address all major pollutant sources and should result in the issuance of more stringent effluent limitations required by either federal, state, or local authority or the implementation of "other pollution control requirements (e.g., best management practices) required by local, state, or federal authority" that are stringent enough to implement applicable water quality standards. Waters will be evaluated on a case-by-case basis to determine if the proposed control measures or activities under another program can be expected to address the cause of use impairment within a reasonable time. A reasonable time may vary depending on the degree of technical difficulty or extent of the modifications to existing measures needed to achieve water quality standards. EPA's 2006 assessment and listing guidance offers additional clarification of what might be expected of waters placed in Category 4b.
3. Category 4c
   Waters in which the impairment is not caused by a pollutant. This would include waters which are impaired due to specific pollution. A pollutant is defined in Section 502(6) of the CWA as "spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water." Pollution is defined as "the man-made or man-induced alteration of the chemical, physical, or radiological integrity of a waterbody." Invasive plants and animal species are considered pollution.

Category 5
Waters in which a pollutant has caused or is suspected of causing impairment. If an identified pollutant causes the impairment, the water should be placed in Category 5. All "existing and readily available data and information" will be used to determine when a water should be placed in Category 5. Waters in this category comprise the State's list of impaired waters or Section 303(d) list.

3.2 Evaluated or Monitored Assessments

When the information used to assess the waterbody consist primarily of observed conditions, (limited water quality data, water quality data older than six years, or estimated impacts from observed or suspected activities), the assessment is generally referred to as an evaluated assessment (Category 2). Evaluated assessments usually require the use of some degree of professional judgment by the person making the assessment and these assessments are not considered sufficient to place waters in or to remove waters from the impaired category (Category 5) or the fully supporting category (Category 1).

Monitored assessments (Categories 1 and 5) are based on existing and readily available chemical, physical, and/or biological data collected during the previous six years, using commonly accepted and well-documented methods. Existing and readily available data are data that have been collected or assembled by the Department or other groups or agencies and are available to the public. Data older than six years old may be used on a case-by-case basis when assessing waters that are not currently included in Category 1 or Category 5. (For example, older data could be used if conditions, such as land use, have not changed.) Much of the remainder of this document will pertain to the use of monitoring data to make use support determinations.

4.0 The Water Quality Assessment Process

The water quality assessment process is different for each of Alabama's seven designated uses, because each use is protected by specific numeric and narrative water quality criteria. As such, the methodology for assigning a given waterbody to one of the five categories may have different data requirements and thresholds for determining the waterbody's use support status. In addition, interpretation of narrative criteria may differ by classified use and waterbody type. Data and information that may be considered when assessing state waters could include water chemistry data such as chemical specific concentration data, land use or land cover data; physical data such as water temperature, and conductivity, and habitat evaluations, biological data such as macroinvertebrate and fish community assessments; and bacteriological data such as *E. Coli* or enterococci counts. Waters classified as "Fish and Wildlife" or higher must provide protection of the aquatic life use. All classifications must provide protection of the human health use.

In order to ensure consistent and accurate assessment of a waterbody's support status and proper categorization of the waterbody, minimum data requirements must be defined that address data quality and data quantity. Data requirements will not only be dictated by the classified use of the waterbody, but also by the waterbody type to account for the different monitoring strategies that may be used for different waterbody types. The minimum data requirements are expected to guide future water quality monitoring activities and provide the basis for making use support decisions. However, in those cases where a data set may not include all of the elements specified by the minimum data requirements, a decision to include the water in Category 5 can still be made, provided the available data indicate a clear impairment and the cause of the impairment is evident. These decisions will be made on a case-by-case basis and the decision will be documented.

In the assessment methodology, the terms "Level IV WMB-I", "Fish IBI", "habitat assessment", "conventional parameter samples", "pesticide/herbicide samples", "inorganic samples", “chlorophyll _a_ samples”, and “fish tissue analysis” are used. For the purposes of this assessment methodology, these terms will have the following meanings.

Level IV WMB-I:

- An intensive wadeable multi-habitat bioassessment (WMB-1) of the macroinvertebrate community in a wadeable stream involving the collection of macroinvertebrates for identification and enumeration in a laboratory

Fish IBI:

- A multihabitat index of biotic integrity (IBI) fish community assessment method developed by the Geological Survey of Alabama (O’Neil et al. 2006) and described in ADEM SOP # 6100 for streams in the Southern Plains (O’Neil and Shepard 2012), Tennessee Valley (O’Neil and Shepard 2010), Ridge and Valley/Piedmont (O’Neil and Shepard 2011a), Hills and Coastal Terraces (O’Neil and Shepard 2011b), and Plateau (O’Neil and Shepard 2011c) ichthyoregions (O’Neil and Shepard 2007)

Habitat assessment:

- An assessment of available aquatic habitat in a stream which evaluates habitat characteristics important to supporting a diverse and healthy aquatic community

Conventional parameter samples will include analyses for the following constituents:

- Air Temperature, °C
- Alkalinity, mg/l
- Ammonia Nitrogen (NH3-N), mg/l
- Chlorides (Cl^{-1})
- Collector Name
- Conductivity, µmhos/cm @ 25°C
- Date (Month, Day, Year)
- Dissolved Oxygen (DO), mg/l
- Dissolved Reactive Phosphorus (DRP), mg/l (field filtered, separate bottle)
- Five-day Carbonaceous Biochemical Oxygen Demand (CBOD5), mg/l
- Hardness, mg/l
- Nitrate + Nitrite Nitrogen (NO3+ NO2-N), mg/l
- pH, s.u.
- Salinity, ppt (coastal waters only)
- Sample Collection Depth, ft. or m
- Stream Flow (where appropriate) cfs
- Sulfate, mg/l
- Time (24 hr)
- Total Dissolved Solids (TDS), mg/l
- Total Kjeldahl Nitrogen (TKN), mg/l
- Total Phosphorus (Total-P), mg/l
- Total Stream Depth at Sampling Point, ft. or m
- Total Suspended Solids (TSS), mg/l
- Turbidity, NTU

- Water Temperature, °C
- Weather Conditions

<u>Pesticide/Herbicide samples</u> will include analyses for the following constituents:
- Atrazine by Immunoassay
- Chlorinated Herbicides by method SW8151
- Glyphosate (EPA547)
- Organochlorine Pesticides by method SW8081A
- Organophosphorus Pesticides by method SW8141

<u>Inorganic (metals) samples</u> will include analyses for the following constituents:
- "Total" Aluminum (Al), µg/l
- "Dissolved" Aluminum (Al), µg/l
- "Dissolved" Antimony (Sb), µg/l
- "Dissolved" Arsenic^{+3} (As^{+3}), µg/l
- "Dissolved" Cadmium (Cd), µg/l
- "Dissolved" Chromium^{+3} (Cr^{+3}), µg/l
- "Dissolved" Copper (Cu), µg/l
- "Total" Iron (Fe), µg/l
- "Dissolved" Iron (Fe), µg/l
- "Dissolved" Lead (Pb), µg/l
- "Total" Manganese (Mn), µg/l
- "Dissolved" Manganese (Mn), µg/l
- "Dissolved" Mercury (Hg), µg/l
- "Dissolved" Nickel (Ni), µg/l
- "Dissolved" Selenium (Se), µg/l
- "Dissolved" Silver (Ag), µg/l
- "Dissolved" Thallium (Tl), µg/l
- "Dissolved" Zinc (Zn), µg/l

<u>Bacteriological Samples</u>
- *E. Coli*, colonies/100 ml in non-coastal waters
- Enterococci, colonies/100 ml in coastal waters
- Fecal coliform, colonies/100 ml in Shellfish Harvesting waters

<u>Chlorophyll *a* samples</u> will include the collection of photic zone composite water samples to be processed in accordance with ADEM Standard Operating Procedures (SOP) # 2063 Chlorophyll *<u>a</u>* Collection and Processing.

<u>Fish tissue analysis</u> will include collection and analyses of fish for the following constituents:
- 2,4-DDD
- 2,4-DDE
- 2,4-DDT
- 4,4-DDD

- 4,4-DDE
- 4,4-DDT
- Arochlor 1016
- Arochlor 1221
- Arochlor 1232
- Arochlor 1242
- Arochlor 1248
- Arochlor 1254
- Arochlor 1260
- Arsenic
- Cadmium
- Chlordane
- Chlorpyrifos
- Dieldrin
- Dioxin
- Endosulfan I
- Endosulfan II
- Endrin
- Heptachlor
- Heptachlor Epoxide
- Hexachlorobenzene
- Lindane
- Mercury
- Mirex
- Percent lipids
- Selenium
- Total PCBs
- Toxaphene

Fish sampling and tissue preparation procedures are described in SOP #2300 Fish Tissue Monitoring Sample Collection and ADEM SOP #2301 Fish Tissue Monitoring Sample, Processing and Data Reporting Procedures.

Chronic aquatic life criteria will be used to assess a waterbody's use support where the designated use specifies such criteria. In those cases where both human health criteria and chronic aquatic life criteria are included, the more stringent of the criteria will determine the waterbody's use support status. The assessment process, including minimum data requirements and the number of chronic criteria exceedances, is described for each designated use in the remainder of the document. The corresponding ADEM SOPs describing each of the methods required are listed in **Table 1**.

Table 1: ADEM Standard Operating Procedures

SOP#	Title
2040	Stream Flow Abbreviated Measurement Method
2041	Temperature Field Measurements
2042	pH Field Measurements
2043	Conductivity Field Measurements
2044	Turbidity Field Measurements
2045	SW Dissolved Oxygen Field Measurements
2046	Photic Zone Measurements and Visibility Determinations
2047	DataSonde Field Measurements
2048	Continuous Monitoring using Datasondes
2049	Time of Travel
2050	ADCP Flow Measurement
2051	SW Rio Grande ADCP Flow Measurement
2061	General Surface Water Sample Collection
2062	Dissolved Reactive Phosphorus (DRP) Collection & Processing
2063	Water Column Chlorophyll *a* Sample Collection
2064	Bacteriological Sample Collection
2065	Sediment Sample Collection
2066	Dissolved Metals Sample Collection and Processing
2067	Organic Sample Collection
2069	Cyanide Sample Collection and Processing
2300	Fish Tissue Monitoring Sample Collection
2301	Fish Tissue Monitoring Sample, Processing and Data Report
5700	Algal Growth Potential Testing (AGPT)
6000	Macroinvertebrate Sample Collection
6001	Macroinvertebrate Sample Processing
6002	Macroinvertebrate Organism Identification
6004	Macroinvertebrate Sample Data Analysis
6101	Fish IBI Metrics/Data Analysis
6300	Physical Characterization
6301	Habitat Assessment
9020	Sample Submittal to Labs
9021	Field Quality Control Measurements and Samples
9025	Field Equipment Cleaning and Storage
9040	Station, Sample ID & Chain of Custody Procedures

4.1 Outstanding Alabama Waters (OAW)

The best usage of waters assigned this classification are those activities consistent with the natural characteristics of the waters. Waterbodies assigned the OAW use are high quality waters that constitute an outstanding Alabama resource, such as waters of state parks and wildlife refuges and waters of exceptional recreational or ecological significance. Beneficial uses encompassed within this classification include: aquatic life support and wildlife propagation, fish and shellfish harvesting and consumption, water contact recreation, agricultural irrigation, livestock watering, and industrial cooling and process water supply.

4.1.1 Minimum Data Requirements for OAW Waters

For waters with the OAW classification, the available data must have been collected consistent with the following standard operating procedures (SOP) manuals listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include wadeable rivers and streams, non-wadeable rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. In addition, the minimum data requirements may change if pollutant sources upstream of the monitoring location are likely. Failure to meet the minimum data requirements for any waterbody type will place the waterbody in Category 2. The following list and **Figure 2** describe the minimum data requirements for assessing waters classified as OAW.

- Wadeable River or Stream
  - 1 habitat assessment
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

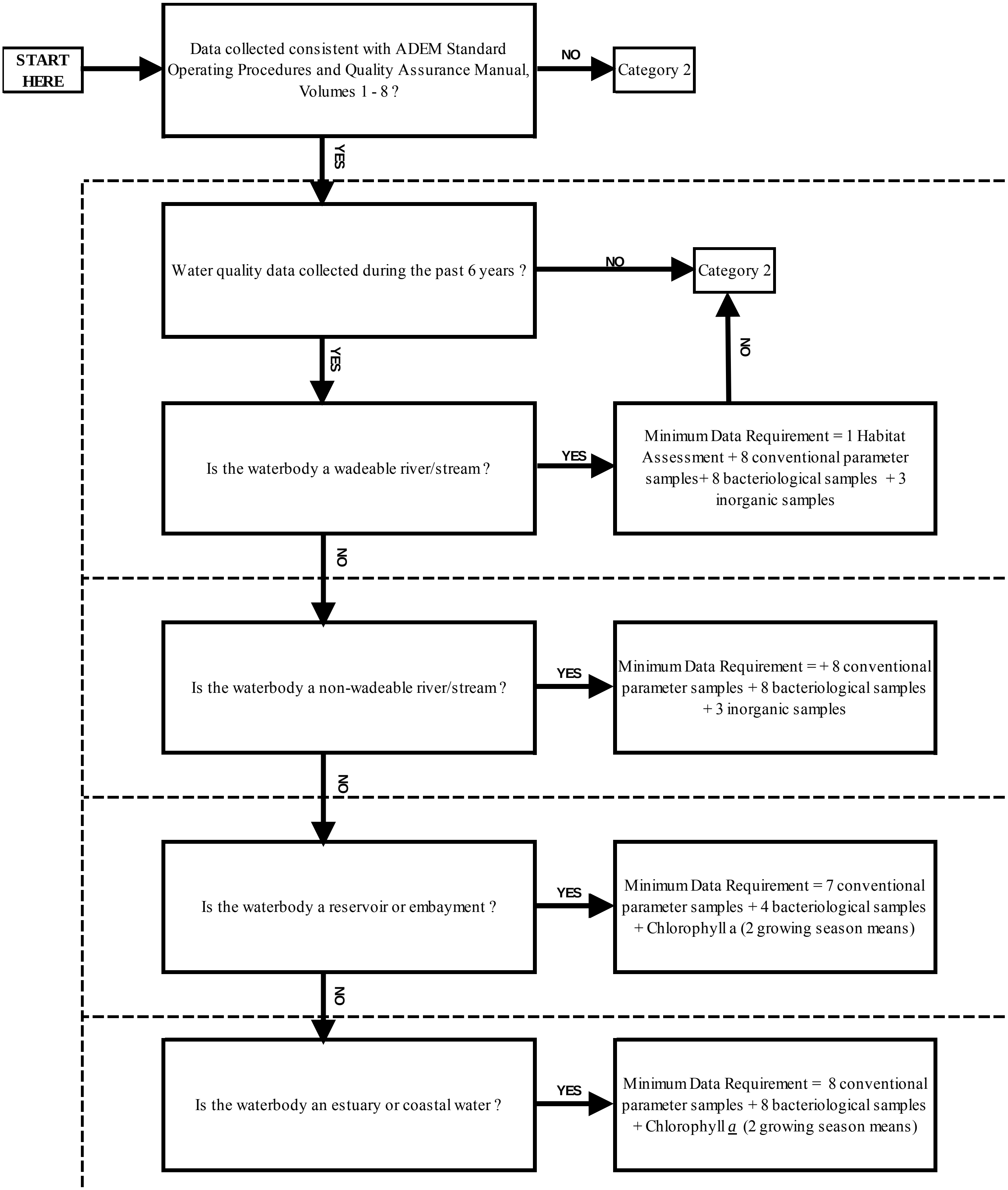
- Non-wadeable River or Stream
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

- Reservoirs and Embayments
  - 7 conventional parameter samples
  - 4 bacteriological samples (embayments only)
  - Chlorophyll _a_ – 2 growing season means

- Wadeable Estuary or Coastal Waters
  - 8 conventional parameter samples
  - 8 bacteriological samples

- Non-Wadeable Estuary or Coastal Waters
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - Chlorophyll _a_ – 2 growing season means

Figure 2: Minimum Data Requirements for the OAW Designated Use



4.1.2 Use Support Assessment for OAW Waters

Once the minimum data requirements have been met, an assessment of the data can be completed resulting in the categorization of the waterbody as either fully supporting the OAW use (Category 1) or not fully supporting the OAW use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, shellfish harvesting closure notices, chemical specific data, bacteriological data, biological community assessments, habitat assessments, periphyton assessments, and toxicity evaluations. **Table 2** shows OAW Category 1 Requirements, and **Table 3** shows OAW Category 5 Requirements. **Figure 3** illustrates the assessment process for OAW waters.

Table 2: OAW Category 1 Requirements

The OAW waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish/shellfish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment "good" or "excellent".[1] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has not been exceeded where such a criterion has been established.[2]
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[3]	No more than a 10% exceedance rate for any given parameter.[4]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 126 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 235 colonies/100 ml.[4]
	Coastal Waters: **A.** The geometric mean enterococci density must be less than or equal to 35 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 104 colonies/100 ml.[4]

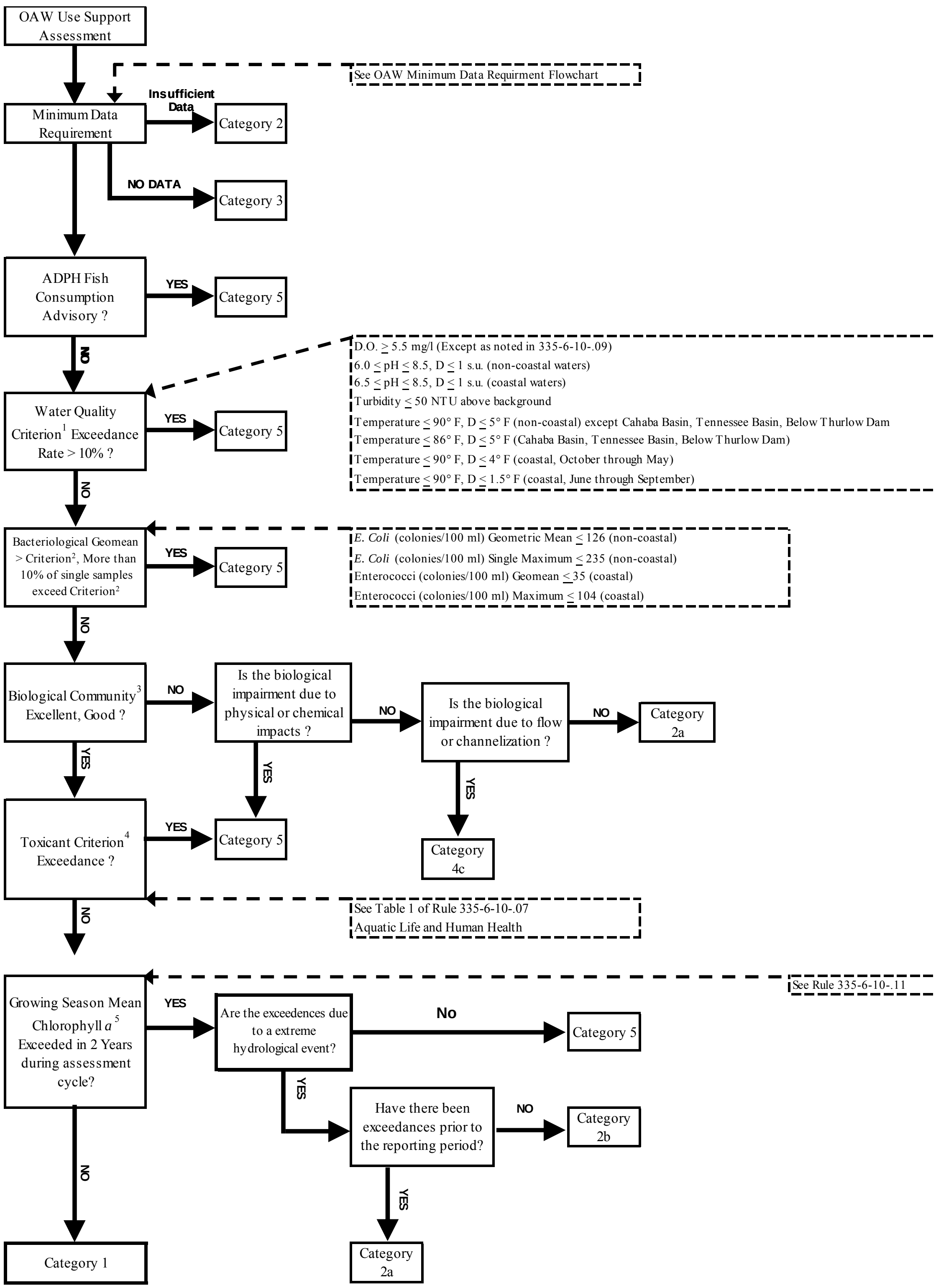
[1] Applicable to wadeable streams only.
[2] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[3] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[4] As determined by the binomial distribution function and Table 17.

Table 3: OAW Category 5 Requirements

The OAW waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	Fish consumption advisory has been issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment less than "good".[5] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has been exceeded where such a criterion has been established.[6]
Toxic Pollutants	More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[7]	More than a 10% exceedance rate for any given parameter.[8]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density is greater than 126 colonies/100 ml, or; **B.** More than 10% of single samples are greater than 235 colonies/100 ml.[8]
	Coastal Waters: **A.** The geometric mean enterococci density is greater than 35 colonies/100 ml, or; **B.** More than 10% of single samples are greater than 104 colonies/100 ml.[8]

[5] Applicable to wadeable streams only. A potential anthropogenic cause for the degraded condition must be identified.
[6] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[7] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[8] As determined by the binomial distribution function and Table 17.

Figure 3: Outstanding Alabama Water (OAW) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.1.2

3 Biological community refers to macroinvertebrates and/or fish in wadeable rivers/streams only (See Minimum Data Requirments)

4 Toxicant Criterion refers to toxics listed in 335-6-10-.07

5 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.2 Public Water Supply (PWS)

The best usage of waters assigned this classification is as a source of water supply for drinking or food-processing purposes after approved treatment. Waterbodies assigned the PWS use are considered safe for drinking or food-processing purposes if subjected to treatment approved by the Department equal to coagulation, sedimentation, filtration and disinfection, with additional treatment if necessary to remove naturally present impurities. Beneficial uses encompassed within this classification include aquatic life support and wildlife propagation; fish and shellfish harvesting and consumption; drinking and food-processing water supply; water contact recreation; agricultural irrigation; livestock watering; and industrial cooling and process water supply.

4.2.1 Minimum Data Requirements for PWS Waters

For waters with the PWS classification, the available data must have been collected consistent with the following standard operating procedures manuals: listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include wadeable rivers and streams, non-wadeable rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. Failure to meet the minimum data requirements will place the waterbody in Category 2. The following list and **Figure 4** describe the minimum data requirements for assessing waters classified as PWS.

- Wadeable River or Stream
    - 1 habitat assessment
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - 3 inorganic samples

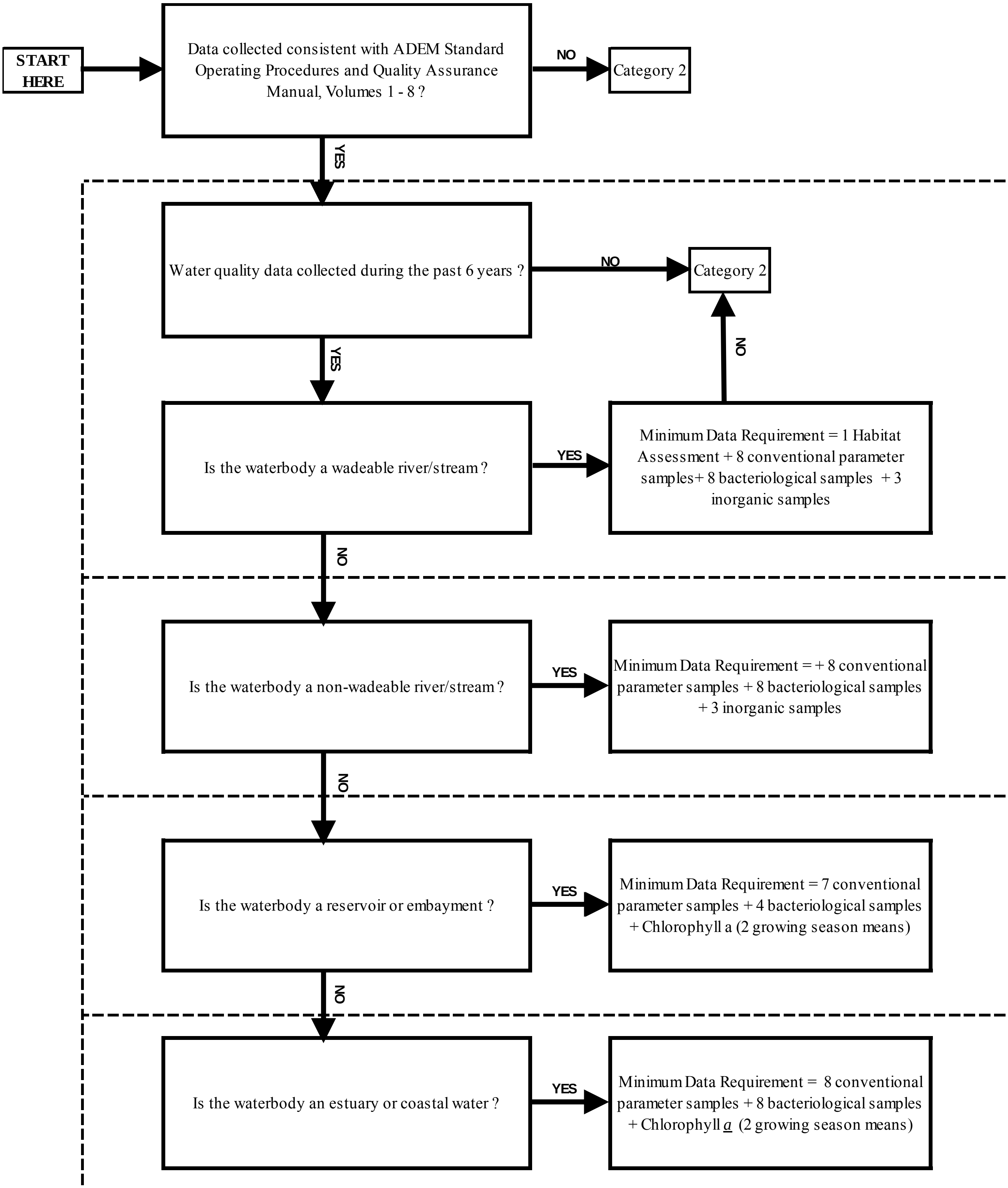
- Non-wadeable River or Stream
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - 3 inorganic samples

- Reservoirs and Embayments
    - 7 conventional parameter samples
    - 4 bacteriological samples (embayments only)
    - Chlorophyll *a* – 2 growing season means

- Wadeable Estuary or Coastal Waters
    - 8 conventional parameter samples
    - 8 bacteriological samples

- Non-Wadeable Estuary or Coastal Waters
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - Chlorophyll *a* – 2 growing season means

Figure 4: Minimum Data Requirements for the PWS Designated Use



4.2.2 Use Support Assessment for PWS Waters

Once the minimum data requirements have been met, an assessment of the data can be completed resulting in the categorization of the waterbody as either fully supporting the PWS use (Category 1) or not fully supporting the PWS use (Category 5). The assessment process considers the available data, and may include any fish consumption advisories, shellfish harvesting closure notices, chemical specific data, bacteriological data, biological community assessments, habitat assessments, periphyton assessments, drinking water system compliance records, and toxicity evaluations. **Table 4** shows PWS Category 1 Requirements, and **Table 5** shows PWS Category 5 Requirements. **Figure 5** illustrates the assessment process for PWS waters.

Table 4: PWS Category 1 Requirements

The PWS waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish/shellfish consumption advisories issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment "fair", "good" or "excellent".[9] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has not been exceeded in two years during the assessment cycle where such a criterion has been established.[10]
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional[11] Parameters	No more than a 10% exceedance rate for any given parameter.[12]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 126 colonies/100 ml (May – October) or less than or equal to 548 colonies/100 ml (November – April), and; **B.** 10% or less of single samples must be less than or equal to 298 colonies/100 ml (May – October) or less than or equal to 2,507 colonies/100 ml (November – April).[12]
	Coastal Waters: **A.** The geometric mean enterococci density must be less than or equal to 35 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 158 colonies/100 ml (May – October) or less than or equal to 275 colonies/100 ml (November – April). [12]

[9] Applicable to wadeable streams only.

[10] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

[11] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.

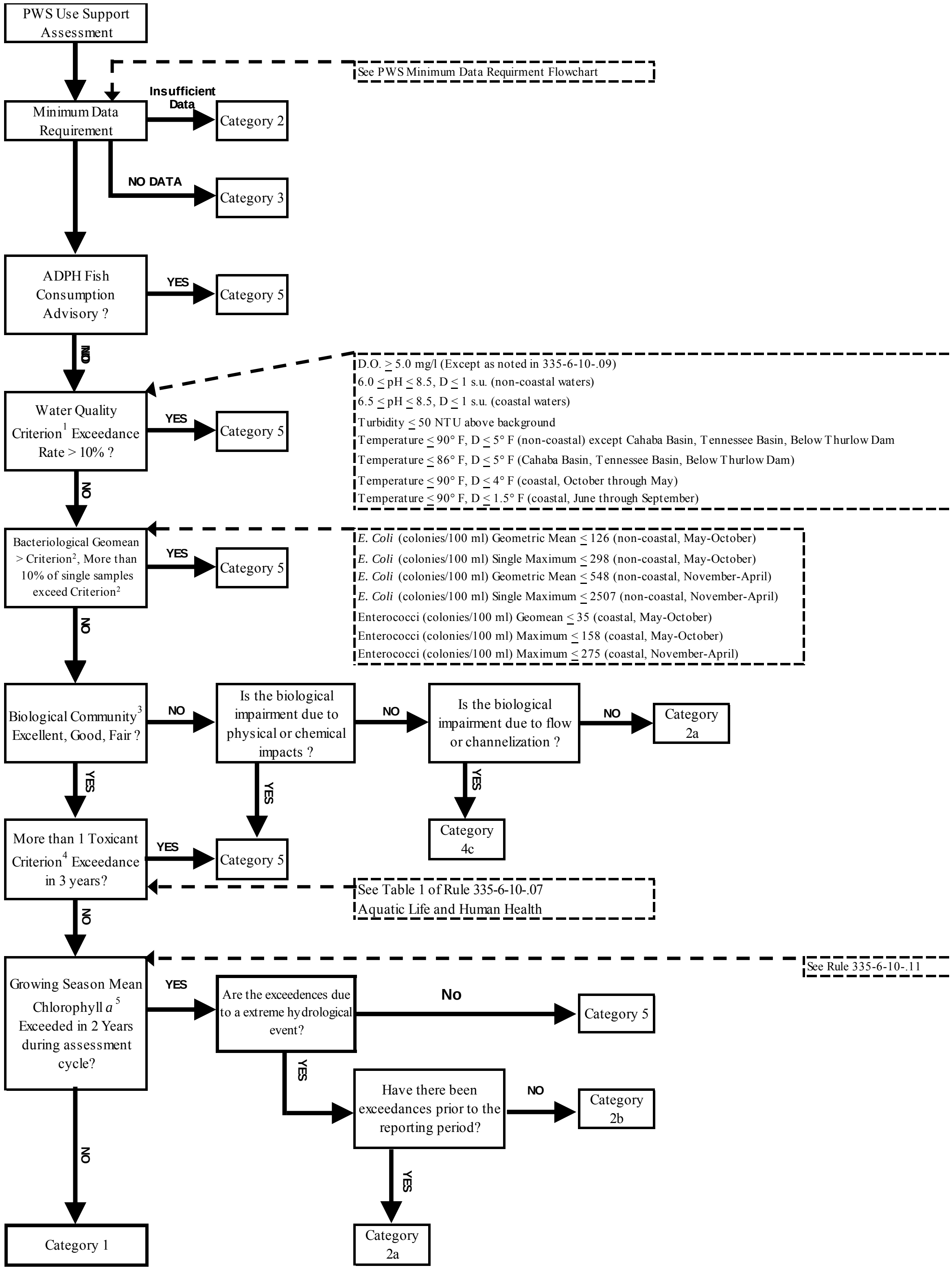
[12] As determined by the binomial distribution function and Table 17.

Table 5: PWS Category 5 Requirements

The PWS waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	Fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment less than "fair".[13] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has been exceeded in two years during the assessment cycle.[14]
Toxic Pollutants	More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[15]	There is more than a 10% exceedance rate for any given parameter.[16]
Bacteriological Data	**Non-Coastal Waters:** ***A.*** The geometric mean *E. Coli* density is greater than 126 colonies/100 ml (May – October) or is greater than 298 colonies/100 ml (November – April), or; ***B.*** More than 10% of single samples are greater than 487 colonies/100 ml (May – October) or greater than 2,507 colonies/100 ml (November – April). [16]
	Coastal Waters: ***A.*** The geometric mean enterococci density is greater than 35 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 158 colonies/100 ml (May – October) or greater than 275 colonies/100 ml (November – April). [16]

[13] Applicable to wadeable streams only. A potential anthropogenic cause for the degraded condition must be identified using observations made during the sampling events or from information contained in the Department's geographic information system.
[14] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[15] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[16] As determined by the binomial distribution function and Table 17.

Figure 5: Public Water Supply (PWS) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.2.2

3 Biological community refers to macroinvertebrates and/or fish in wadeable rivers/streams only (See Minimum Data Requirments)

4 Toxicant Criterion refers to toxics listed in 335-6-10-.07

5 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.3 Swimming and Other Whole Body Water-Contact Sports (S)

The best usage of waters assigned this classification is for swimming and other whole body water-contact sports. Waterbodies assigned the S use, under proper sanitary supervision by the controlling health authorities, will meet accepted standards of water quality for outdoor swimming places and will be considered satisfactory for swimming and other whole body water-contact sports. Beneficial uses encompassed within this classification include aquatic life support and wildlife propagation; fish and shellfish harvesting and consumption; water contact recreation; agricultural irrigation; livestock watering; and industrial cooling and process water supply.

4.3.1 Minimum Data Requirements for S Waters

For waters with the S classification, the available data must have been collected consistent with the following standard operating procedures manuals listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include wadeable rivers and streams, non-wadeable rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. Failure to meet the minimum data requirements will place the waterbody in Category 2. The following list and **Figure 6** describe the minimum data requirements for assessing waters classified as S.

- Wadeable River or Stream
    - 1 habitat assessment
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - 3 inorganic samples

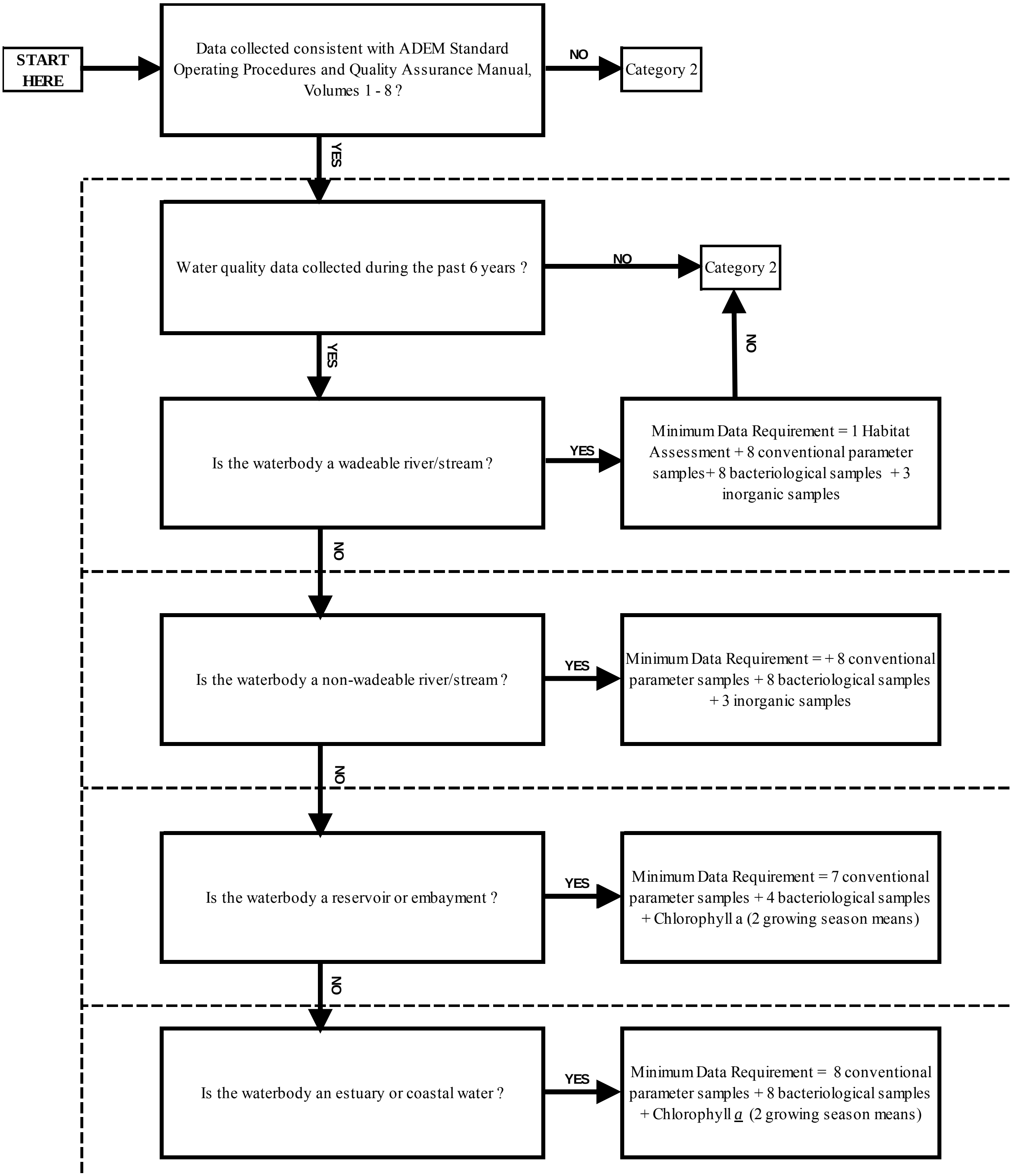
- Non-wadeable River or Stream
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - 3 inorganic samples

- Reservoirs and Embayments
    - 7 conventional parameter samples
    - 4 bacteriological samples (embayments only)
    - Chlorophyll <u>a</u> – 2 growing season means

- Wadeable Estuary or Coastal Waters
    - 8 conventional parameter samples
    - 8 bacteriological samples

- Non-Wadeable Estuary or Coastal Waters
    - 8 conventional parameter samples
    - 8 bacteriological samples
    - Chlorophyll <u>a</u> – 2 growing season means

Figure 6: Minimum Data Requirements for the S Designated Use



4.3.2 Use Support Assessment for S Waters

Once the minimum data requirements have been met, an assessment of the data can be completed resulting in the categorization of the waterbody as either fully supporting the S use (Category 1) or not fully supporting the S use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, shellfish harvesting closure notices, chemical specific data, bacteriological data, biological community assessments, habitat assessments, periphyton assessments, beach closure notices and toxicity evaluations. **Table 6** shows S Category 1 Requirements, and **Table 7** shows S Category 5 Requirements. **Figure 7** illustrates the assessment process for S waters.

Table 6: S Category 1 Requirements

The S waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish/shellfish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment "fair", "good" or "excellent".[17] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has not been exceeded in two years during the assessment cycle where such a criterion has been established.[18]
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[19]	No more than a 10% exceedance rate for any given parameter.[20]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 126 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 235 colonies/100 ml.[20]
	Coastal Waters: **A.** The geometric mean enterococci density must be less than 35 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 104 colonies/100 **ml**.[20]

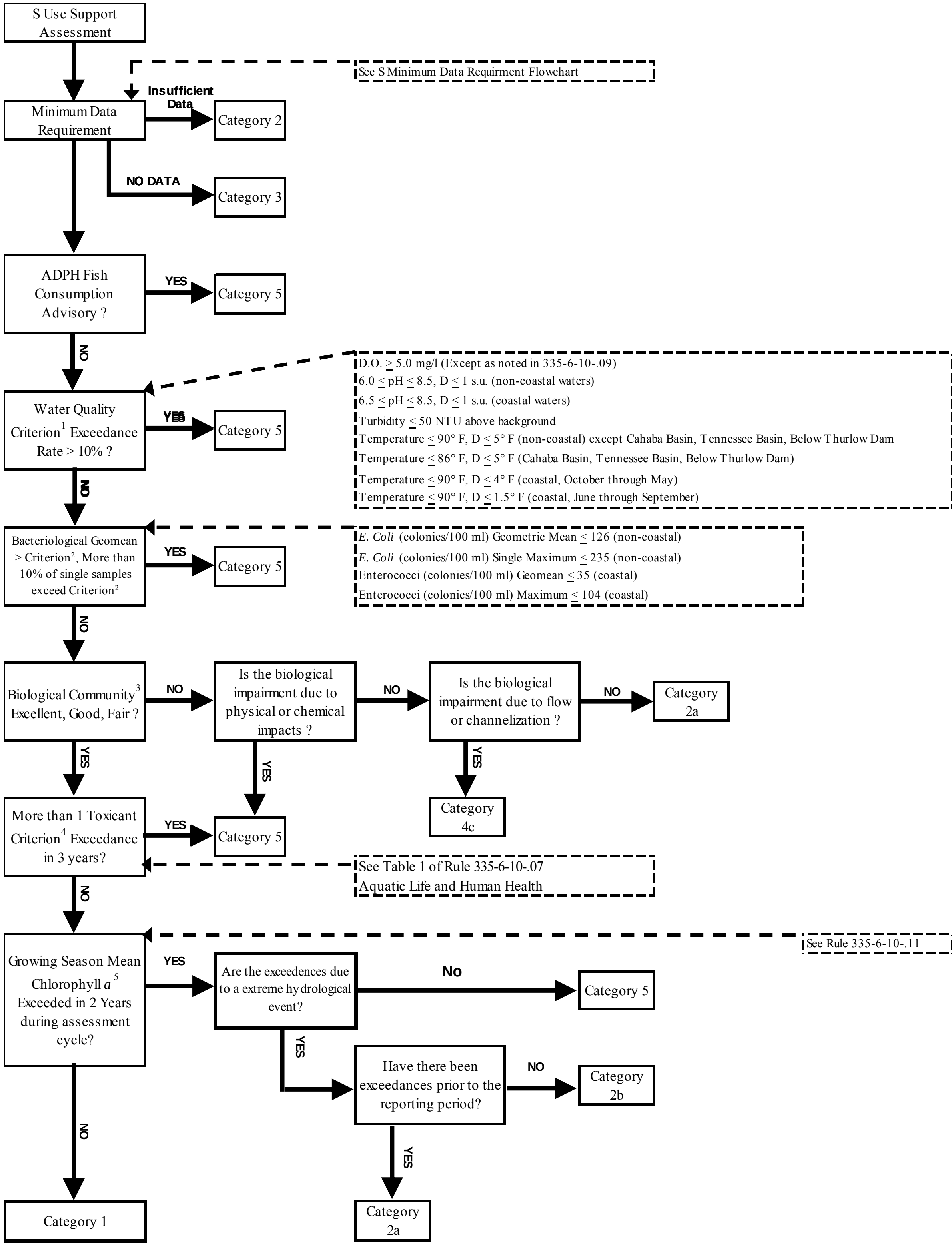
[17] Applicable to wadeable streams only.
[18] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[19] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[20] As determined by the binomial distribution function and Table 17.

Table 7: S Category 5 Requirements

The S waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	There is a fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment less than "fair".[21] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has been exceeded in two years during the assessment cycle.[22]
Toxic Pollutants	More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[23]	There is more than a 10% exceedance rate for any given parameter.[24]
Bacteriological Data	**Non-Coastal Waters:** ***A.*** The geometric mean *E. Coli* density is greater than 126 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 235 colonies/100 ml.[24]
	Coastal Waters: ***A.*** The geometric mean enterococci density is greater than 35 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 104 colonies/100 ml.[24]

[21] Applicable to wadeable streams only. A potential anthropogenic cause for the degraded condition must be identified using observations made during the sampling events or from information contained in the Department's geographic information system.
[22] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[23] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[24] As determined by the binomial distribution function and Table 17.

Figure 7: Swimming and Other Whole Body Water-Contact Sports (S) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.3.2

3 Biological community refers to macroinvertebrates and/or fish in wadeable rivers/streams only (See Minimum Data Requirments)

4 Toxicant Criterion refers to toxics listed in 335-6-10-.07

5 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.4 Shellfish Harvesting (SH)

The best usage of waters assigned this classification is the propagation and harvesting of shellfish (oysters) for sale or for use as a food product. Waterbodies assigned the SH use will meet the sanitary and bacteriological standards included in the *National Shellfish Sanitation Program Model Ordinance, (latest edition, Chapter IV)*, published by the Food and Drug Administration, U.S. Department of Health and Human Services and the requirements of the Alabama Department of Public Health. The waters will also be of a quality suitable for the propagation of fish and other aquatic life, including shrimp and crabs. Beneficial uses encompassed within this classification include aquatic life support and wildlife propagation; fish and shellfish harvesting and consumption; water contact recreation; agricultural irrigation; livestock watering; and industrial cooling and process water supply.

4.4.1 Minimum Data Requirements for SH Waters

For waters with the SH classification, the available data must have been collected consistent with the following standard operating procedures manuals listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. The following list and **Figure 8** describe the minimum data requirements for assessing waters classified as SH.

- 8 conventional parameter samples
- 8 bacteriological samples or 1 geometric mean sample
- 3 inorganic samples
- Summary of ADPH shellfish harvesting closure notices for Areas I, II, and III

4.4.2 Use Support Assessment for SH Waters

Once the minimum data requirements have been met, an assessment of the data can be completed resulting in the categorization of the waterbody as either fully supporting the SH use (Category 1) or not fully supporting the SH use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, shellfish harvesting closure notices, chemical specific data, bacteriological data, and toxicity evaluations. **Table 8** shows SH Category 1 Requirements, and **Table 9** shows SH Category 5 Requirements. **Figure 9** illustrates the assessment process for SH waters.

Figure 8: Minimum Data Requirements for the SH Designated Use

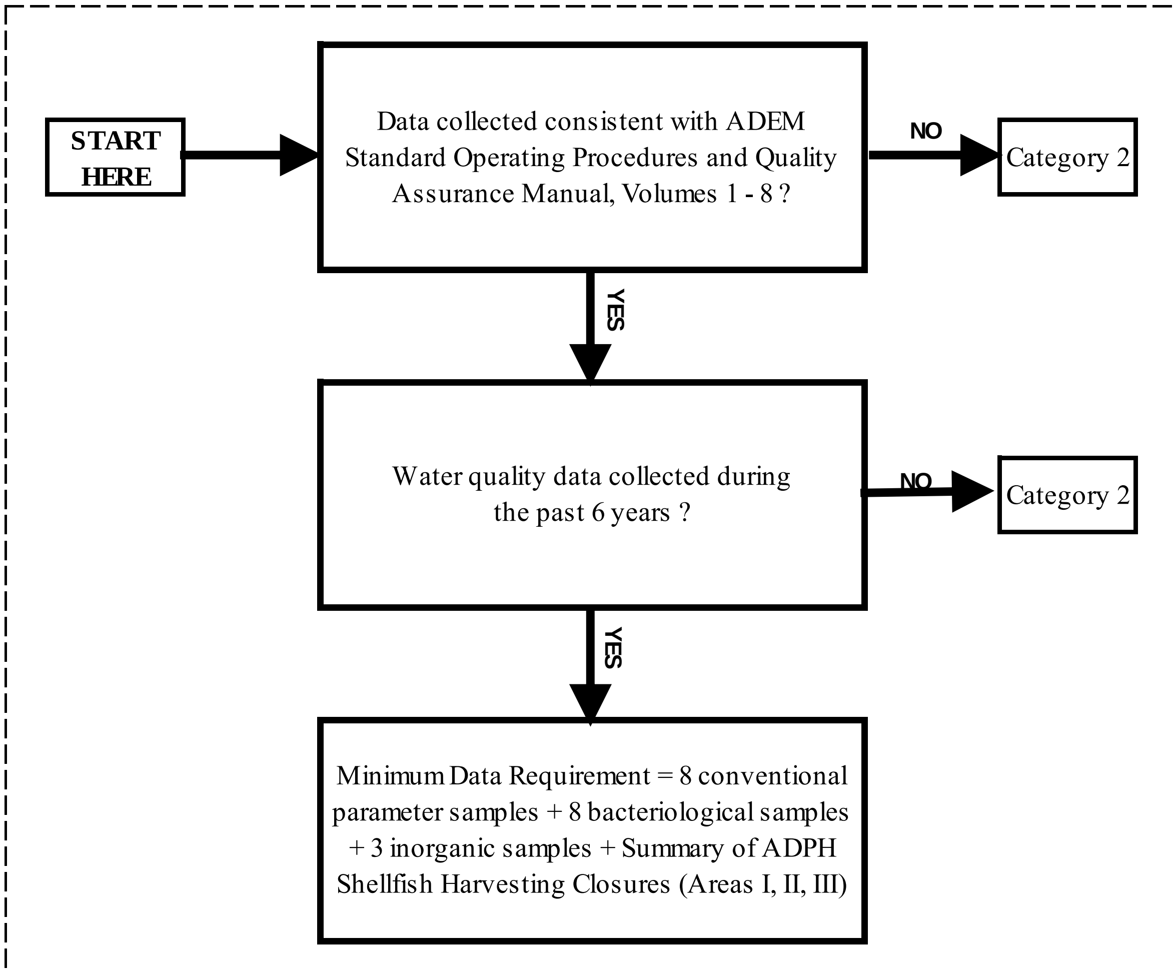


Table 8: SH Category 1 Requirements

The SH waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish/shellfish consumption advisories issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[25]	No more than a 10% exceedance rate for any given parameter.[26]
Bacteriological Data	**Coastal Waters:** **A.** The geometric mean enterococci density must be less than 35 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 104 colonies/100 ml enterococci (May – October) or less than or equal to 275 colonies/100 ml enterococci (November - April).[26]

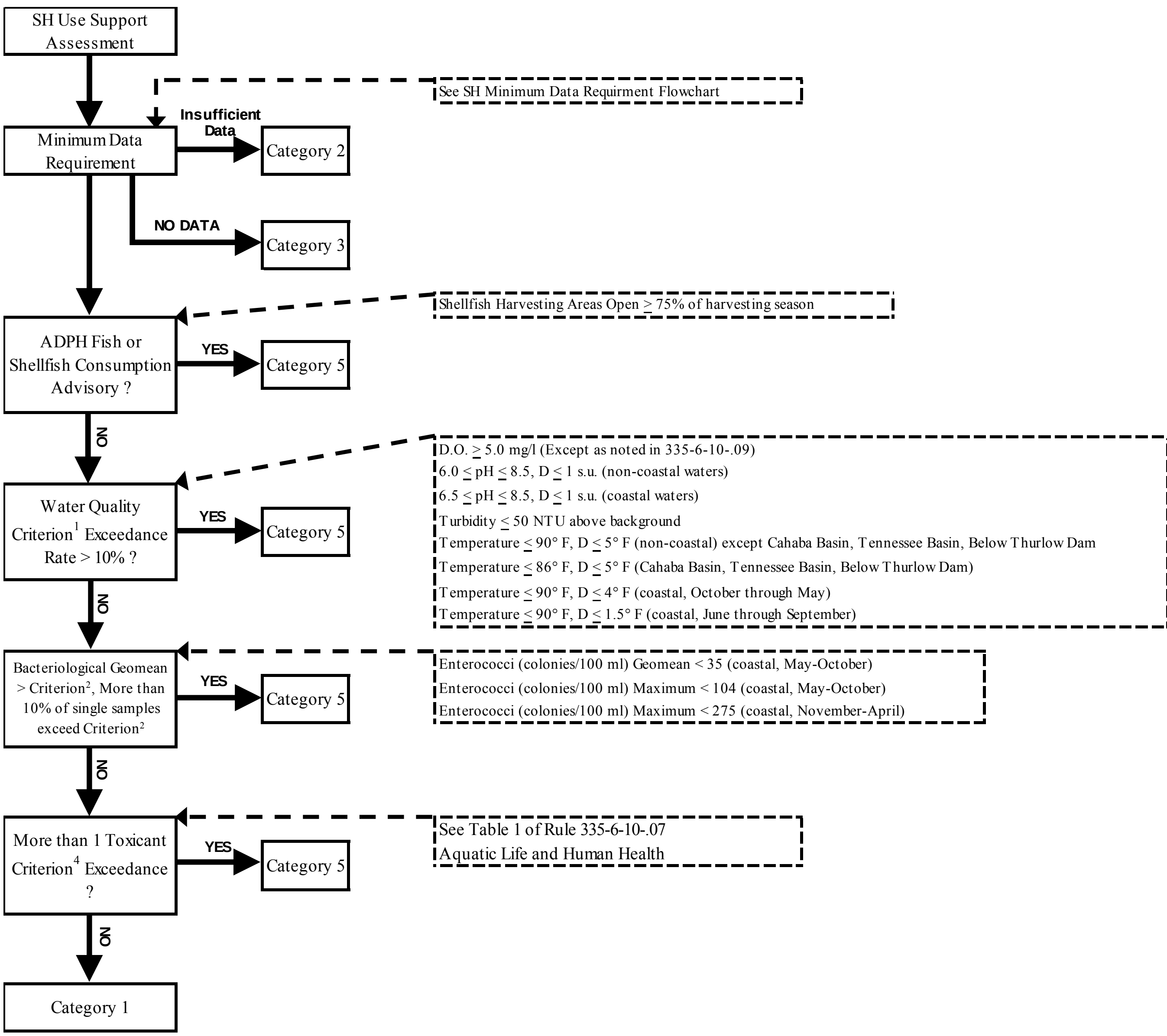
[25] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[26] As determined by the binomial distribution function and Table 17.

Table 9: SH Category 5 Requirements

The SH waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	There is a fish consumption advisory issued by the Alabama Department of Public Health or the shellfish growing areas are "conditionally approved" or "conditionally restricted".
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[27]	There is more than a 10% exceedance rate for any given parameter.[28]
Bacteriological Data	**Coastal Waters:** **A.** The geometric mean enterococci density is greater than 35 colonies/100 ml, or; **B.** More than 10% of single samples exceed 104 colonies/100 ml enterococci (May – October) or less than or equal to 275 colonies/100 ml enterococci (November – April).[28]

[27] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[28] As determined by the binomial distribution function and Table 17.

Figure 9: Shellfish Harvesting (SH) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean

3 Not to exceed the limits specified in the latest edition of the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish: 2007 Revision, published by the Food and Drug Administration, U.S. Department of Health and Human Services.

4 Toxicant Criterion refers to toxics listed in 335-6-10-.07

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.5 Fish and Wildlife (F&W)

The best usage of waters assigned this classification includes fishing, the propagation of fish, aquatic life, wildlife, and any other usage except swimming and water-contact sports or as a source of water supply for drinking or food-processing purposes. Waterbodies assigned the F&W classification are suitable for fish, aquatic life, and wildlife propagation. The quality of salt and estuarine waters to which this classification is assigned will also be suitable for the propagation of shrimp and crabs. In addition, it is recognized that these waters may be used for incidental water contact and recreation during May through October, except in the vicinity of wastewater discharges or other conditions beyond the control of the ADPH. Under proper sanitary supervision by the controlling health authorities, these waters will meet accepted standards of water quality for outdoor swimming places and will be considered satisfactory for swimming and other whole body water-contact sports during the months of May through October.

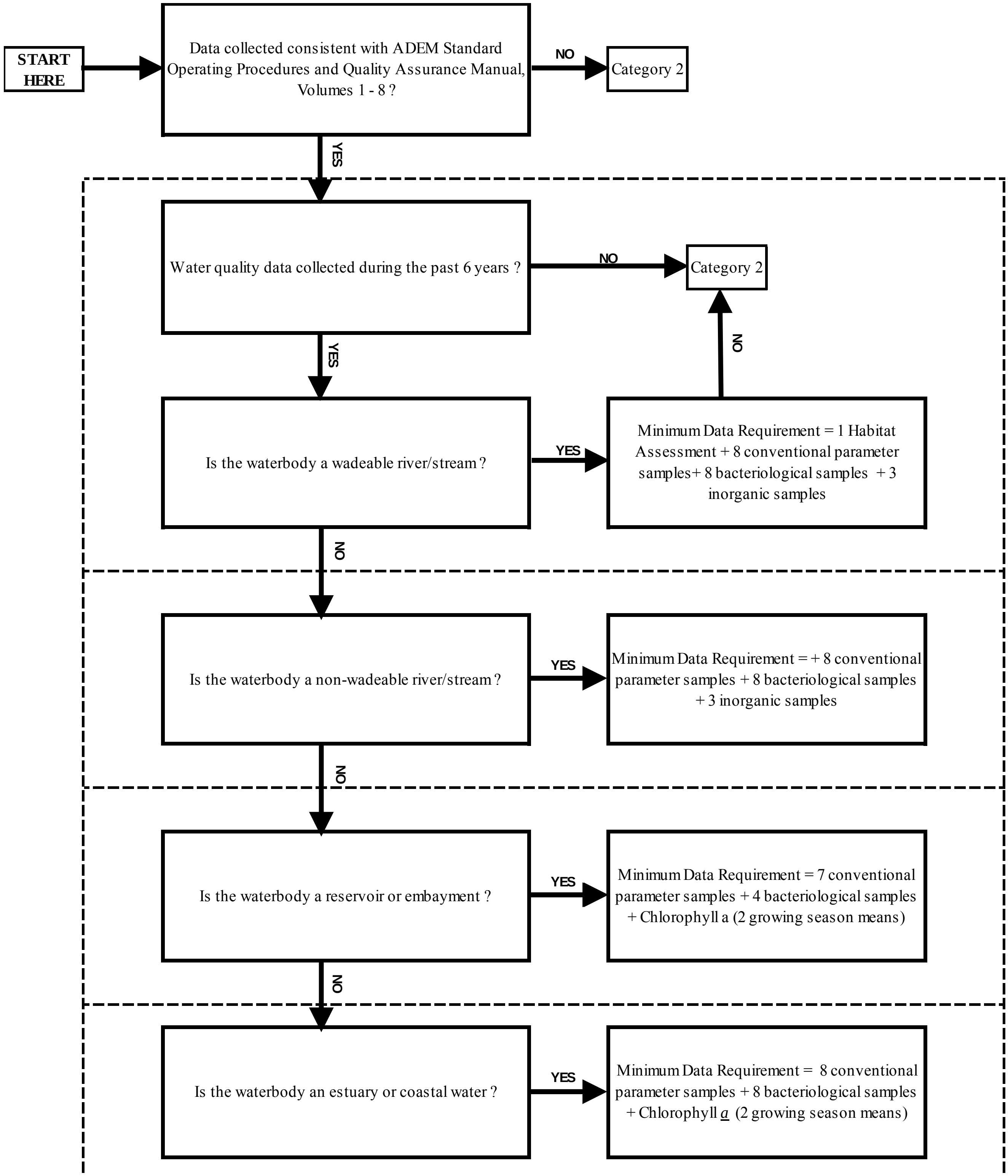
4.5.1 Minimum Data Requirements for F&W Waters

For waters with the F&W classification the available data must have been collected consistent with the following standard operating procedures manuals listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include wadeable rivers and streams, non-wadeable rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. Failure to meet the minimum data requirements will place the waterbody in Category 2. The following list and **Figure 10** describe the minimum data requirements for assessing waters classified as F&W.

- Wadeable River or Stream
  - 1 habitat assessment
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples
- Non-wadeable River or Stream
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples
- Reservoirs and Embayments
  - 7 conventional parameter samples
  - 4 bacteriological samples (embayments only)
  - Chlorophyll *a* – 2 growing season means
- Wadeable Estuary or Coastal Waters
  - 8 conventional parameter samples
  - 8 bacteriological samples
- Non-Wadeable Estuary or Coastal Waters
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - Chlorophyll *a* – 2 growing season means

Figure 10: Minimum Data Requirements for the F&W Designated Use



4.5.2 Use Support Assessment for F&W Waters

Once the minimum data requirements have been met, an assessment of the data can be completed, resulting in the categorization of the waterbody as either fully supporting the F&W use (Category 1) or not fully supporting the F&W use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, chemical specific data, biological community assessments, bacteriological data, beach closure notices and toxicity evaluations. **Figure 11** illustrates the assessment process for F&W waters.

Table 10: F&W Category 1 Requirements

The F&W waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I assessment "fair", "good" or "excellent".[29] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has not been exceeded in two years during the assessment cycle where such a criterion has been established.[30]
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[31]	No more than a 10% exceedance rate for any given parameter.[32]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 126 colonies/100 ml (May – October) or less than or equal to 548 colonies/100 ml (November – April), and; **B.** 10% or less of single samples must be less than or equal to 298 colonies/100 ml May – October) or less than or equal to 2,507 colonies/100 ml (November – April).[32]
	Coastal Waters: **A.** The geometric mean enterococci density must be less than or equal to 35 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 158 colonies/100 ml (May – October) or less than or equal to 275 colonies/100 ml (November – April).[32]

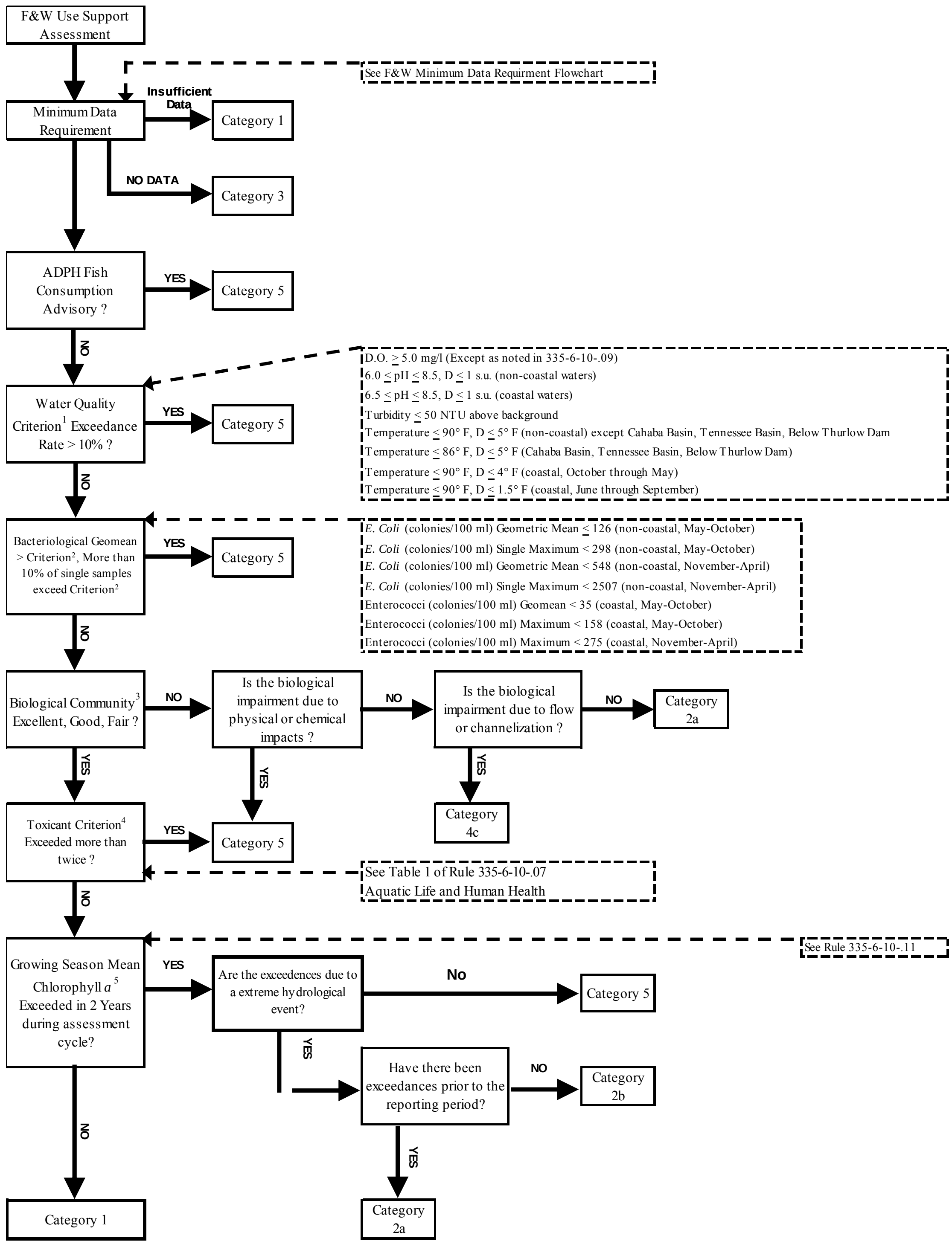
[29] Applicable to wadeable streams only.
[30] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75^{th} percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[31] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[32] As determined by the binomial distribution function in Table 17.

Table 11: F&W Category 5 Requirements

The F&W waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	Fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV assessment less than "fair".[33] Fish IBI results (when available) will be used as supplemental data.
Chlorophyll *a* Data	Growing season mean chlorophyll *a* criterion has been exceeded in two years during the assessment cycle.[34]
Toxic Pollutants	More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[35]	More than a 10% exceedance rate for any given parameter.[36]
Bacteriological Data	**Non-Coastal Waters:** ***A.*** The geometric mean *E. Coli* density is greater than 126 colonies/100 ml (May – October) or greater than 548 colonies/100 ml (November – April), or; ***B.*** More than 10% of single samples are greater than 298 colonies/100 ml (May – October) or greater than 2,507 colonies/100 ml (November – April).[36]
	Coastal Waters: ***A.*** The geometric mean enterococci density is greater than 35 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 158 colonies/100 ml (May – October) or greater than 275 colonies/100 ml (November – April).[36]

[33] Applicable to wadeable streams only.
[34] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile streamflow based on period of record caused by events such as tropical storms, hurricanes, and unusually intense storm activity.
[35] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[36] As determined by the binomial distribution function in Table 17.

Figure 11: Fish and Wildlife (F&W) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.5.2

3 Biological community refers to macroinvertebrates and/or fish in wadeable rivers/streams only (See Minimum Data Requirments)

4 Toxicant Criterion refers to toxics listed in 335-6-10-.07

5 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.6 Limited Warmwater Fishery (LWF)

For the months of December through April, the best usage of waters assigned this classification includes fishing, the propagation of fish, aquatic life, and wildlife, and any other usage except swimming and water-contact sports or as a source of water supply for drinking or food-processing purposes. May through November the quality of waters to which this classification is assigned will be suitable for agricultural irrigation, livestock watering, industrial cooling and process water supplies, and any other usage, except fishing, bathing, recreational activities, including water-contact sports, or as a source of water supply for drinking or food-processing purposes.

4.6.1 Minimum Data Requirements for LWF Waters

For waters with the LWF classification, the available data must have been collected consistent with the standard operating procedures manuals listed in **Table 1**.

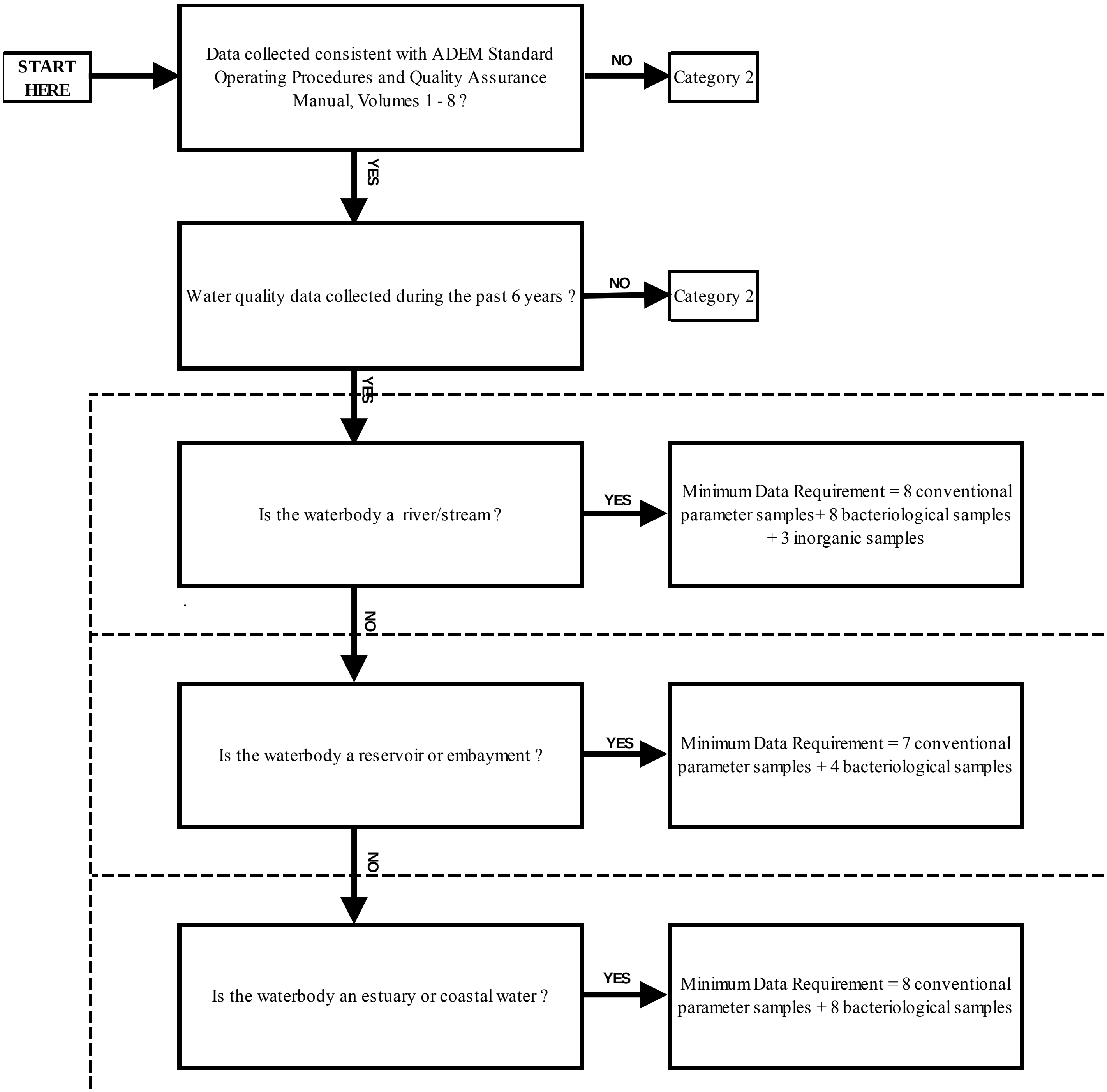
In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. Failure to meet the minimum data requirements will place the waterbody in Category 2. The following list and **Figure 12** describe the minimum data requirements for assessing waters classified as LWF.

- River or Stream (Wadeable and Non-wadeable)
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

- Reservoirs and Embayments
  - 7 conventional parameter samples
  - 4 bacteriological samples (embayments only)

- Estuary or Coastal Waters (Wadeable and Non-wadeable)
  - 8 conventional parameter samples
  - 8 bacteriological samples

Figure 12: Minimum Data Requirements for the LWF Designated Use



4.6.2 Use Support Assessment for LWF Waters

Once the minimum data requirements have been met, an assessment of the data can be completed, resulting in the categorization of the waterbody as either fully supporting the LWF use (Category 1) or not fully supporting the LWF use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, chemical specific data, bacteriological data, and toxicity evaluations. However, currently there is no available protocol for use of biological assessment results to assess use support in LWF-classified waters. The Department's current SOP for conducting biological assessments employs the use of reference sites located in least impacted watersheds and is intended to assess the "fishable" use. **Table 12** shows LWF Category 1 Requirements, and **Table 13** shows LWF Category 5 Requirements. **Figure 13** illustrates the assessment process for LWF waters.

Table 12: LWF Category 1 Requirements

The LWF waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	No more than one exceedance of a particular toxic pollutant acute criterion (May – November) in previous six years. No more than one exceedance of a particular toxic pollutant chronic criterion (December – April).
Conventional Parameters[37]	No more than a 10% exceedance rate for any given parameter.[38]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 548 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 2,507 colonies/100 ml.[38]
	Coastal Waters: **A.** 10% or less of single samples must be less than 275 colonies/100 ml enterococci.[38]

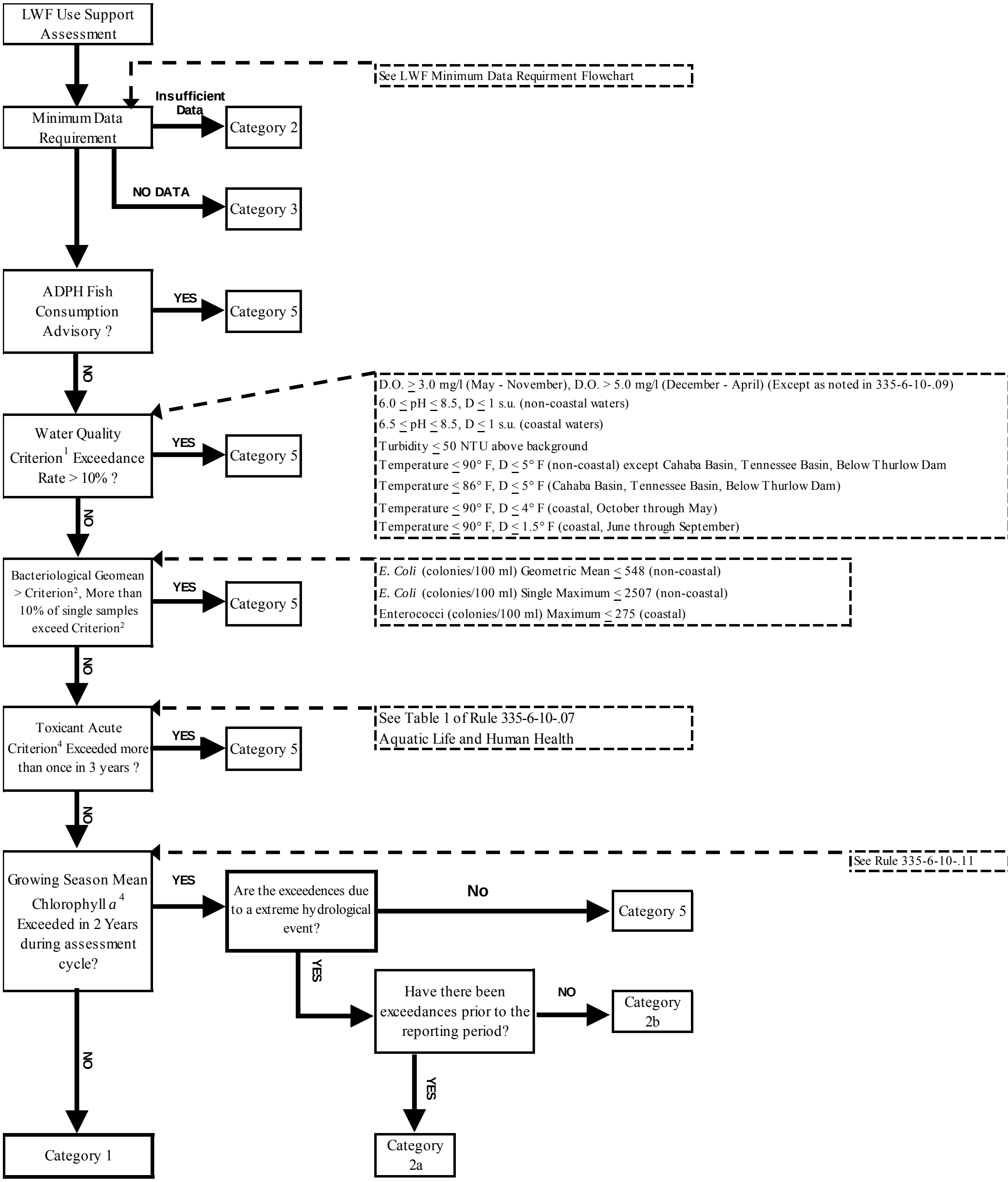
[37] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[38] As determined by the binomial distribution function in Table 17.

Table 13: LWF Category 5 Requirements

The LWF waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	Fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	Two or more exceedances of a particular toxic pollutant acute criterion (May – November) during the previous six years or more than one in a 3 year period. Two or more exceedances of a particular toxic pollutant chronic criterion (December – April) during previous six years or more than one in a 3 year period.
Conventional Parameters[39]	More than a 10% exceedance rate for any given parameter.[40]
Bacteriological Data	**Non-Coastal Waters:** ***A.*** The geometric mean *E. Coli* density is greater than 548 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 2,507 colonies/100 ml.[40]
	Coastal Waters: ***A.*** More than 10% of single samples are greater than 275 colonies/100 ml enterococci.[40]

[39] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[40] As determined by the binomial distribution function in Table 17.

Figure 13: Limited Warmwater Fishery (LWF) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.6.2

3 Toxicant Criterion refers to toxics listed in 335-6-10-.07

4 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.7 Agricultural and Industrial Water Supply (A&I)
Best usage of waters assigned this classification include agricultural irrigation, livestock watering, industrial cooling and process water supplies, and any other usage, except fishing, bathing, recreational activities, including water-contact sports, or as a source of water supply for drinking or food-processing purposes. The waters, except for the natural impurities that may be present, will be suitable for agricultural irrigation, livestock watering, industrial cooling waters, and fish survival. The waters will be usable after special treatment, as may be needed under each particular circumstance, for industrial process water supplies. This classification includes watercourses in which natural flow is intermittent and non-existent during droughts and which may, of necessity, receive treated waste from existing municipalities and industries, both now and in the future.

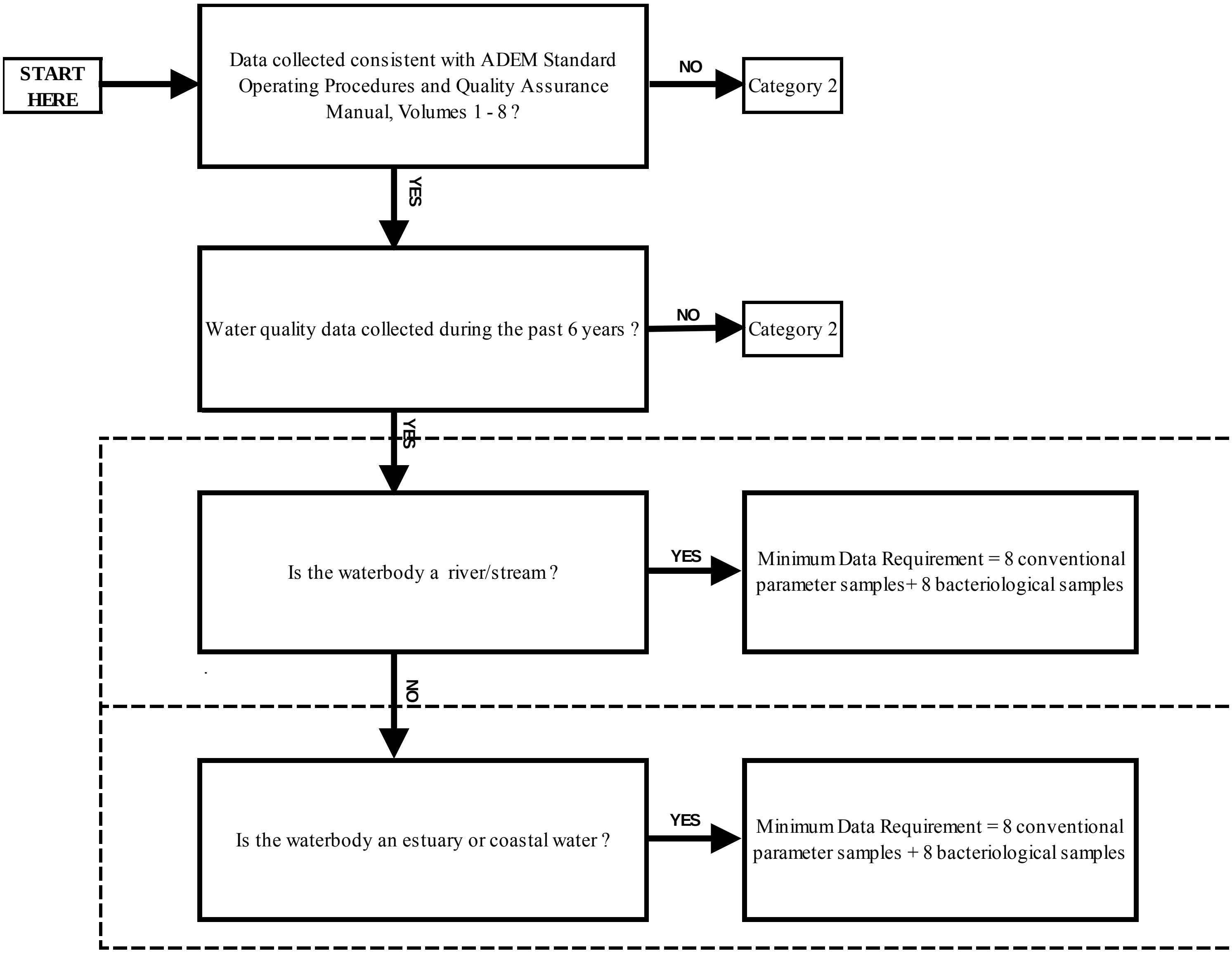
4.7.1 Minimum Data Requirements for A&I Waters
For waters with the A&I classification, the available data must have been collected consistent with the standard operating procedures manual listed in **Table 1**.

In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include wadeable rivers and streams, non-wadeable rivers and streams, reservoirs and reservoir embayments, and estuary and coastal waters. Failure to meet the minimum data requirement will place the waterbody in Category 2. The following list and **Figure 14** describe the minimum data requirements for assessing waters classified as A&I.

- River or Stream
    - 8 conventional parameter samples
    - 8 bacteriological samples

- Estuary or Coastal Waters
    - 8 conventional parameter samples
    - 8 bacteriological samples

Figure 14: Minimum Data Requirements for the A&I Designated Use



4.7.2 Use Support Assessment for A&I Waters

Once the minimum data requirements have been met, an assessment of the data can be completed resulting in the categorization of the waterbody as either fully supporting the A&I use (Category 1) or not fully supporting the A&I use (Category 5). The assessment process considers the available data and may include any fish consumption advisories, chemical specific data, biological community assessments, bacteriological data, beach closure notices, and toxicity evaluations. **Table 14** shows A&I Category 1 Requirements, and **Table 15** shows A&I Category 5 Requirements. **Figure 15** illustrates the assessment process for A&I waters.

Table 14: A&I Category 1 Requirements

The A&I waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	No more than two exceedances of a particular toxic pollutant acute criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[41]	No more than a 10% exceedance rate for any given parameter.[42]
Bacteriological Data	**Non-Coastal Waters:** **A.** The geometric mean *E. Coli* density must be less than or equal to 700 colonies/100 ml, and; **B.** 10% or less of single samples must be less than or equal to 3,200 colonies/100 ml.[42]
	Coastal Waters: **A.** 10% or less of single samples must be less than or equal to 500 colonies/100 ml.[42]

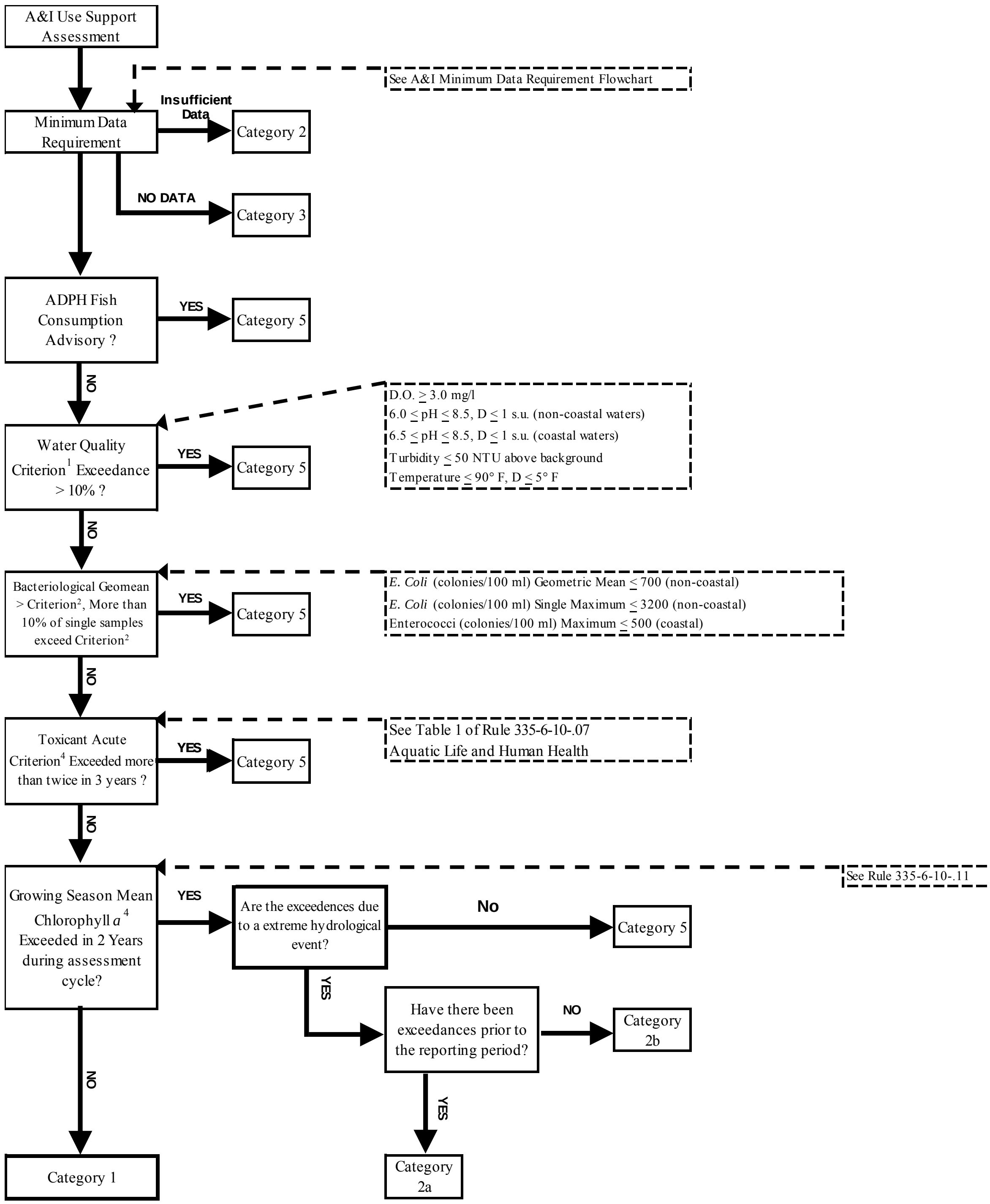
[41] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[42] As determined by the binomial distribution function in Table 17.

Table 15: A&I Category 5 Requirements

The A&I waterbody can be placed in Category 5 if any of the following are true:	
Issue	**Condition**
Consumption Advisories	Fish consumption advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll *a* Data	NA
Toxic Pollutants	More than two exceedances of a particular toxic pollutant acute criterion in previous six years or more than one in a 3-year period.
Conventional Parameters[43]	More than a 10% exceedance rate for any given parameter.[44]
Bacteriological Data	**Non-Coastal Waters:** ***A.*** The geometric mean *E. Coli* density is greater than 700 colonies/100 ml, or; ***B.*** More than 10% of single samples are greater than 3,200 colonies/100 ml.[44]
	Coastal Waters: ***A.*** More than 10% of single samples are greater than 500 colonies/100 ml.[44]

[43] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[44] As determined by the binomial distribution function and Table 17.

Figure 15: Agricultural and Industrial Water Supply (A&I) Categorization Methodology



1 Water Quality Criterion refers to pH, Dissolved Oxygen, turbidity, and temperature resulting from heat sources

2 Bacteriological Criterion refers to both the single sample maximum and geometric mean, see discussion in Section 4.7.2

3 Toxicant Criterion refers to toxics listed in 335-6-10-.07

4 Applies only to reservoirs with established Chlorophyll a criteria and not during extreme hydrologic events. Extreme drought conditions are droughts with a drought intensity category of D2 or greater as listed in the U.S. Drought Monitor (http://droughtmonitor.unl.edu/) that persists for 50% or more of the growing season. Extreme flood conditions are streamflows greater than the 75th percentile caused by events such as tropical storms, hurricanes, and unusually intense storm activity.

Special Note - Natural waters may, on occasion, have characteristics outside of the limits established by these criteria. These criteria relate to condition of waters as affected by the discharge of sewage, industrial wastes, or other wastes, not to conditions resulting from natural forces. See 335-6-10-.05(4)

4.8 Other Data Considerations and Requirements

4.8.1 Use of the 10% Rule

Seasonal variation in water quality conditions, Non-anthropogenic impacts (Natural Conditions), sampling frequency and number of samples collected, and the temporal and spatial sampling coverage of the waterbody must be considered when evaluating water quality data to determine whether a waterbody is fully supporting its designated uses. Most states, including Alabama, determine a waterbody's use support status based on the percent of measured values exceeding a given water quality criterion. Based on EPA guidance, 10% is commonly used as the maximum percent of measurements that may exceed the criterion for waters fully supporting their designated uses. For any given set of samples, the percent exceedance indicated by the number of samples exceeding a given criterion is only an estimate of the true percent exceedance for the waterbody segment. As a result, it is important that a level of confidence be assigned to the estimate of percent exceedance for a given set of samples.

Hypothesis testing can be used to make this estimate. When making a decision about whether a water should be included in Category 5 on the basis of data for conventional pollutants, the null hypothesis is that the water is not impaired and sufficient data must be collected to minimize the probability that this assumption is incorrect (Type I error). For the purpose of this methodology, a 90% confidence level will be used so that we can say, for a given sample size with a given number of criterion exceedances, we are 90% confident that the true exceedance percentage is greater than 0.1 (10%). Using the binomial distribution, it is possible to determine the number of exceedances out of a given number of samples that will result in a greater than 10% exceedance rate at approximately the 90% confidence level. This is the number of exceedances needed to reject the null hypothesis.

When making a decision about whether a water in Category 5 should be removed to Category 1 for a particular conventional pollutant, the null hypothesis is that the water is impaired and sufficient data must be collected to minimize the probability that this assumption is incorrect. Again, a 90% confidence level will be used in the binomial distribution function to estimate the number of samples required to be 90% confident that the water is truly not impaired.

4.8.2 Use of Data Older than Six Years

Data that are more recent shall take precedence over older data if:

- The newer data indicates a change in water quality and the change is related to changes in pollutant loading to the watershed or improved pollution control mechanisms in the watershed contributing to the assessed area, or;

- The Department determines that the older data do not meet the data quality requirements of this methodology or are no longer representative of the water quality of the segment.

Data older than six years will generally not be considered valid, for the purpose of initially placing a waterbody in Category 1 or Category 5, except that data and information older than six years will be considered in the assessment process when such data/information is determined to be reliable. Data older than six years may be used to demonstrate that a waterbody was placed in the wrong category (Category 1 or Category 5) when the original water quality assessment was completed. In addition, data older than six years may be used if the data was not considered during a previous reporting cycle and there is evidence that conditions affecting water quality have not changed since the original data was collected. Waterbodies will not be removed from Category 5 based on the age of data. However, if there is evidence that water quality conditions are likely to have changed since the water was originally placed in Category 1, waterbodies may be removed from Category 1 to Category 2, based on the age of the data.

4.8.3 Use of Accurate Location Data

Accurate location data is required to ensure the appropriate use classification is applied, as well as to confirm that sampling stations are located outside of regulatory mixing zones where water quality criteria do not apply. The monitoring data is acceptable if the locations are correct to within 50 feet. Digital spatial data Geographical Information Systems (GIS) or Global Positioning System (GPS), or latitude/longitude information obtained from United States Geological Survey (USGS) 7.5 minute quadrangle maps are acceptable methods of providing location information.

4.8.4 Use of Temporally Independent Samples

When relying solely on chemical data to determine designated use support, at least eight temporally independent samples of chemical and physical conditions obtained during a time period are optimal. That includes conditions considered critical for the particular pollutant of interest. Independent samples, for the purpose of parameters other than bacteria and in-situ water quality measurements, will have been collected at least four days apart. Samples collected at the same location less than four days apart shall be considered as one sample for the purpose of determining compliance with toxic pollutant criteria, with the mean value used to represent the sampling period.

4.8.5 Data from Continuous Monitoring

For conventional parameters measured using continuous monitoring instruments, such as multi-probe datasondes, compliance with the applicable criteria will be determined at the regulatory depth established for dissolved oxygen measurements. This depth is five feet in water that is ten feet or more in total depth or is at mid-depth in water that is less than ten feet in total depth. Hourly measurements of dissolved oxygen, temperature, and pH data collected using continuous monitoring equipment will be assessed using the same binomial distribution function used for discrete sampling of these parameters. When measurements are made more frequently than hourly, the hourly values will be calculated as the mean of the measured values within each hour.

4.8.6 Use of Fish / Shellfish Consumption Advisories and Shellfish Growing Area Classifications

In October 2000, EPA issued guidance to states regarding the use of fish and shellfish consumption advisories (EPA, 2000). The guidance recommended that states consider certain information when determining if designated uses were impaired, including consumption advisories for fish and shellfish and certain shellfish growing area classifications. The following is an excerpt from the EPA guidance.

> "*Certain shellfish growing area classifications should be used as part of determinations of attainment of water quality standards and listing of impaired waterbodies. Shellfish growing area classifications are developed by the National Shellfish Sanitation Program (NSSP) using water column and tissue data (where available), and information from sanitary surveys of the contributing watershed, to protect public health. The States review these NSSP classifications every three years. There are certain NSSP classifications that are not appropriate to consider, and certain data and information that should not be considered independently of the classification (unless the data and information were not used in the development or review of the classification). These instances are: "Prohibited" classifications set as a precautionary measure due to the proximity of wastewater treatment discharges, or absence of a required sanitary survey; shellfish tissue pathogen data (which can fluctuate based on short-term conditions not representative of general water quality); or short-term actions to place growing areas in the closed status."*

The ADPH Seafood Program regulates shellfish harvesting in coastal waters of Alabama. The ADPH has designated seven areas in Mobile Bay and adjacent coastal waters and classifies shellfish harvesting waters within these areas as "conditionally approved", "conditionally restricted", "restricted", "unclassified", and "prohibited". Area I waters comprise most of Mobile Bay south of East Fowl River and west of Bon Secour Bay and including Mississippi Sound. Area II waters include Portersville Bay with exceptions near wastewater discharges. Area III waters are located in Bon Secour Bay and east of a line drawn from Fort Morgan to Mullet Point. Area IV waters are located in approximately the northern half of Mobile Bay east of the west boundary of the Mobile Ship Channel to Marker 51 and west from Marker 51 to Daphne. Area V waters are located in the northwestern section of Mobile Bay within a line drawn from Theodore Industrial Canal to Mobile Ship Channel Marker 53/1A and from Mobile Ship Channel Mark 53/1A to a point on the beach at the southeast corner of the Brookley Air Field air strip. Area VI waters are located in the western portion of the northern half of Mobile Bay. Area VII waters are located in Grand Bay with exceptions near wastewater discharges.

Most of the waters designated as Shellfish Harvesting are classified as "conditionally approved". These harvesting areas are closed when the river stage on the Mobile River at Barry Steam Plant in Bucks, Alabama reaches a river stage of 8.0 feet above mean sea level and a public notice announcing the closure is published. These procedures are described in detail in the Conditional Area Management Plan developed by ADPH (ADPH, 2001) and the 2007 Comprehensive Sanitary Survey of Alabama's Growing Waters in Mobile and Baldwin Counties Area I, Area II and Area III (ADPH, 2008) which can be found at http://adph.org/foodsafety/index.asp?ID=1141

For purposes of making use support decisions relative to the SH designated use, the Department will consider "conditionally approved" and "conditionally restricted" waters as impaired and will include these water in Category 5. In "prohibited" and "unclassified" waters, the Department will use water column bacteria sampling results to determine use support. When the applicable bacteria criterion is exceeded in more than 10% of the samples as determined using the binomial distribution function and Table 17, these waters will be included in Category 5.

The October 2000 EPA guidance concerning the use of fish and shellfish consumption advisories for protection of human health also recommended that states include waters in Category 5 when there was a consumption advisory which suggested either limited consumption or no consumption of fish due to the presence of toxics in fish tissue. The following is an excerpt from the guidance:

> *"When deciding whether to identify a water as impaired, States, Territories, and authorized Tribes need to determine whether there are impairments of designated uses and narrative criteria, as well as the numeric criteria. Although the CWA does not explicitly direct the use of fish and shellfish consumption advisories or NSSP classifications to determine attainment of water quality standards, States, Territories, and authorized Tribes are required to consider all existing and readily available data and information to identify impaired waterbodies on their section 303(d) lists. For purposes of determining whether a waterbody is impaired and should be included on a section 303(d) list, EPA considers a fish or shellfish consumption advisory, a NSSP classification, and the supporting data, to be existing and readily available data and information that demonstrates non-attainment of a section 101(a) "fishable" use when:*
>
> > *1. the advisory is based on fish and shellfish tissue data,*
> > *2. a lower than "Approved" NSSP classification is based on water column and shellfish tissue data (and this is not a precautionary "Prohibited" classification or the state water quality standard does not identify lower than "Approved" as attainment of the standard)*
> > *3. the data are collected from the specific waterbody in question and*
> > *4. the risk assessment parameters (e.g., toxicity, risk level, exposure duration and consumption rate) of the advisory or classification are cumulatively equal to or less protective than those in the State, Territory, or authorized Tribal water quality standards."*

This listing and assessment methodology will consider fish consumption advisories issued by the ADPH as an indication of impaired use in all State waters. However, there may be circumstances under which these waters could be placed in a category other than Category 5. For example, it may be appropriate to place certain waters in Category 4b when activities are ongoing under another restoration program with the goal of restoring the water to fully supporting its uses. These decisions will be made on a case-by-case basis and the decision will be documented.

4.8.7 Use of Biological Assessments

Biological assessments compare data from biological surveys and other direct measurements of resident biota in surface waters to established biological criteria and assess the waterbody's degree of use support. Alabama has not established numeric biological criteria (except in the case of chlorophyll a in reservoirs) and, as a result, biological data are used as a means of applying narrative criteria contained in Alabama's water quality criteria document (ADEM Administrative Code r. 335-6-10). Since the 1970's, ADEM has been gathering biological assessment data for streams across Alabama. In the early 1990's, the Department began assessing the biological health of wadeable streams using the USEPA Rapid Bioassessment Protocol (Level III Wadeable Multi-habitat Bioassessment – Ephemeroptera/Plecoptera/Trichoptera (EPT) Families (WMB-EPT)) and the Intensive Wadeable Multi-habitat Bioassessment (Level IV Intensive Wadeable Multi-habitat Bioassessment (WMB-I)). The EPA has offered the following technical considerations when using biological data to make use support determinations.

- A waterbody's use support should be based on a comparison of site-specific biological data to a reference condition established for the ecoregion in which the waterbody is located.
- A multimetric approach to bioassessment is recommended.
- The use of a standardized index or sampling period is recommended.
- Standard operation procedures and a quality assurance program should be established.
- A determination of the performance characteristics of the bioassessment methodology is suggested.
- An identification of the appropriate number of sampling sites that are representative of the waterbody is also recommended.

Biological assessment data are used in combination with other surface water quality data or information to arrive at an overall use support determination and to assist with the stressor identification process. Biological assessments should include a habitat assessment conducted at the time of the biological sampling. When available, periphyton assessment data and algal growth potential tests results will be used to refine stressor identification.

In this methodology, several bioassessment methodologies can be used to assess aquatic life use support. One Level IV Intensive Wadeable Multi-habitat Bioassessment is sufficient for assessing aquatic life use support. These methodologies are described in detail in the Department's SOPs referenced earlier. Macroinvertebrate and fish assessment results may vary significantly due to varying sensitivities to stressors between the communities. For these reasons, it may be appropriate to place the waterbody in Category 5 when only 1 assessment indicates impairment. These decisions will be made on a case-by-case basis in consultation with the biologist(s) responsible for conducting the assessment and will be documented.

4.8.8 Use of Data Collected by Others

Data collected by other agencies, industry or industry groups, neighboring states, and watershed groups will be considered and evaluated, provided the data meet the minimum data requirements specified for each designated use and comply with the quality control and quality assurance requirements discussed in Section 4.9. Data collected by others assist the Department in making use support determinations, as well as, help to focus our water quality monitoring priorities from year to year. Examples of other agencies and groups collecting water quality data in Alabama include, but are not limited to, the following agencies and groups:

- USGS
- USEPA
- Tennessee Valley Authority
- National Oceanic and Atmospheric Administration
- United States Fish and Wildlife Service
- Mobile Bay National Estuary Program
- Dauphin Island Sea Lab
- Geological Survey of Alabama
- Natural Resources Conservation Service
- Soil and Water Conservation Districts
- Alabama Department of Conservation and Natural Resources
- Alabama Clean Water Partnership
- Alabama Department of Public Health
- Alabama Department of Transportation
- Citizen and Watershed Groups
- Industries and municipalities conducting river monitoring pursuant to National Pollutant Discharge Elimination System (NPDES) or CWA Section 401 requirements

Data submitted by third parties for consideration should include methods used to collect the data, including study plans, SOPs, and documentation that the data were (or were not) collected consistent with the requirements presented in this methodology.

4.8.9 Use of Bacteria Data

Waterbody segments are sampled for bacteria either as part of a special study, routine ambient monitoring, or as part of the Department's Beach Monitoring Program. Bacteria of the *E. Coli* group are currently used as indicators of the possible presence of pathogens in non-coastal waters. In coastal waters, bacteria of the enterococci group are used as indicators of the possible presence of pathogens. Alabama's bacteria criteria are summarized for each designated use in **Table 16**.

When assessing the geometric means of bacteria sample results, one excursion will generally be sufficient to determine impairment. If the number of individual samples is less than eight and there is enough data to calculate a geomean, both the geometric mean and single sample maximum criteria must be exceeded to determine impairment. If there are

Table 16: Alabama's Bacteria Criteria

	Non-Coastal Waters	Coastal Water
Outstanding Alabama Water (OAW)	*E. Coli (colonies/100 ml)* • Geometric Mean ≤ 126 • Single Sample Max ≤ 235	*Enterococci (colonies/100 ml)* • Geometric Mean ≤ 35 • Single Sample Max ≤ 104
Public Water Supply (PWS)	*E. Coli (colonies/100 ml)* <u>May through October</u> • Geometric Mean ≤ 126 • Single Sample Max ≤ 298 <u>November through April</u> • Geometric Mean ≤ 548 • Single Sample Max ≤ 2507	*Enterococci (colonies/100 ml)* <u>May through October</u> • Geometric Mean ≤ 35 • Single Sample Max ≤ 158 <u>November through April</u> • Single Sample Max ≤ 275
Swimming and Other Whole Body Water-Contact Sports (S)	*E. Coli (colonies/100 ml)* • Geometric Mean ≤ 126 • Single Sample Max ≤ 235	*Enterococci (colonies/100 ml)* • Geometric Mean ≤ 35 • Single Sample Max ≤ 104
Shellfish Harvesting (SH)	Does not apply to non-coastal waters.	*Enterococci (colonies/100 ml)*[45] <u>May through October</u> • Geometric Mean ≤ 35 • Single Sample Max ≤ 104 <u>November through April</u> Single Sample Max ≤ 275
Fish and Wildlife (F&W)	*E. Coli (colonies/100 ml)* <u>May through October</u> • Geometric Mean ≤ 126 • Single Sample Max ≤ 298 <u>November through April</u> • Geometric Mean ≤ 548 • Single Sample Max ≤ 2507	*Enterococci (colonies/100 ml)* <u>May through October</u> • Geometric Mean ≤ 35 • Single Sample Max ≤ 158 <u>November through April</u> • Single Sample Max ≤ 275
Limited Warmwater Fishery (LWF)	*E. Coli (colonies/100 ml)* • Geometric Mean ≤ 548 • Single Sample Max ≤ 2507	*Enterococci (colonies/100 ml)* • Single Sample Max ≤ 275
Agricultural and Industrial Water Supply (A&I)	*E. Coli (colonies/100 ml)* • Geometric Mean ≤ 700 • Single Sample Max ≤ 3200	*Enterococci (colonies/100 ml)* • Single Sample Max ≤ 500

[45] Not to exceed the limits specified in the latest edition of the *National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish: (latest edition, Chapter IV)*, published by the Food and Drug Administration, U.S. Department of Health and Human Services.

eight or more individual samples and a geomean is unable to be calculated with the data, **Table 17** will be used to determine impairment based on exceedances of the single sample criterion. Bacteria data from the Beach Monitoring Program will be assessed by calculating the geometric mean on a monthly basis. More than one geomean exceedance, in this case, will be sufficient to determine impairment. Impairment can also be determined if the single sample maximum criteria is exceeded, independent of geomean exceedances.

4.8.10 Consideration of Stream Flow and Method Detection Limits

During toxicant sampling in rivers or streams, the measured flow must be at or above the 7Q10 value for that location. In cases where the applicable water quality criterion is less than the method detection limit (MDL) for a particular pollutant and the concentration for the pollutant is reported as less than detection (<MDL), the Department will evaluate the data consistent with EPA guidance (Guidance for Data Quality Assessment), and will use the approach that is appropriate for the data set.

These requirements are intended to ensure that existing water quality conditions are accurately portrayed, do not characterize transitional conditions, and do not include data that are obsolete or inaccurate. In addition, the minimum data requirements may change on a case-by-case basis if pollutant sources upstream of the monitoring locations are likely. This determination will be made using information obtained from the Department's geographic information system or other databases. Failure to meet the minimum data requirements for any waterbody type will place the waterbody in Category 2.

4.8.11 Non-anthropogenic Impacts (Natural Conditions)

In the absence of known point and non-point sources or influences, ADEM will investigate if natural conditions [ADEM Administrative Code r. 335-6-10-.05(4)] are responsible for the deviation from water quality criteria. A determination that natural conditions are responsible will be made by examining all readily available sources of supporting data including the following: water quality data from ecoregion reference stations, land use, geology, biology, soils, hydrology, wildlife density, site visits, and any other relevant data. If the deviation from water quality criteria is naturally occurring, then the waterbody(s) will be placed into Category 1. When comparing measured ambient water quality data to data collected at ecoregion stations for the purpose of establishing natural conditions as the sole reason for criterion exceedances, the ambient water quality results will generally be compared to the 90th percentile of the data measured at one or more ecoregion stations, except in the case of bacteria data.

4.8.12 Application of Hardness Based Metals Criteria

For purposes of assessing compliance with the freshwater aquatic life criteria for metals calculated using the equations in ADEM Administrative Code r. 335-6-10-.07(1)(a), ambient in situ hardness measurements will be used to compute the aquatic life criteria. When hardness values are less than 25 mg/l and the measured hardness-dependent metal concentration exceeds the applicable aquatic life criterion, the ambient in situ hardness and metal concentrations will be compared to the ecoregion/unimpacted reference site hardness and metal concentration. If the mean ambient hardness concentration is statistically similar ($p < 0.05$) to the mean ecoregion/unimpacted reference site and the metal concentration is statistically similar ($p < 0.05$) to the mean ecoregion/unimpacted reference site, the exceedance of the aquatic life criterion for the hardness-dependent metal will be considered natural in the absence of potential anthropogenic sources.

4.9 Quality Control / Quality Assurance Requirements

Collection and analyses of all data (including chemical, physical, and biological) should be collected and analyzed consistent with the SOPs presented earlier. Study plans should reference the SOP appropriate for the type of data being collected and should discuss how data quality will be documented. This should include a discussion of the quality control procedures followed during sample collection and analysis. These procedures should describe the number and type of field and laboratory quality control samples for the project, if appropriate for the type of sampling being conducted, field blanks, equipment blanks, split samples, duplicate samples, the name of the laboratory performing the analyses, name of the laboratory contact person, and the number and type of laboratory quality control samples.

While the Department will consider any existing and readily available data and information, the Department reserves the right to reject data or information in making use support decisions that do not comply with the minimum data requirements presented in this document. The decision not to use certain data will be documented. The Department applies best professional judgment when considering datasets smaller than the specified minimum data requirements. In such instances, use support decisions are made on a case-by-case basis in consideration of ancillary data and information such as watershed characteristics, known pollutant sources, water quality trends, or other environmental indicators.

4.10 Minimum Sample Size and Allowable Number of Water Quality Criterion Exceedances

Table 17 shows the allowable number of exceedances for various samples sizes up to 199 samples. The Department's annual sampling plans and available resources generally allow for at least eight samples per sampling location except in reservoirs where fewer samples (i.e. 3 samples) may be collected due to sample holding time and resource constraints. The number of exceedances in each range of sample sizes was calculated using the binomial distribution function. This number is the number of exceedances of a particular water quality criterion needed to say with 90% confidence that the criterion is exceeded in more than 10% of the population represented by the available samples. This table will be used to determine the number of exceedances of Alabama numeric water quality criteria listed in ADEM Administrative Code r. 335-6-10 (for dissolved oxygen, temperature, turbidity, pH, and bacteria), consistent with the assessment methodology for each use discussed earlier, necessary to establish that a waterbody segment is not fully supporting its designated uses. This approach is consistent with ADEM Administrative Code r. 335-6-10, which recognizes that natural conditions may cause sporadic excursions of numeric water quality criteria, and with EPA's 1997 305(b) guidance. For conventional water quality parameters, there must be at least eight temporally independent samples collected during the previous six-year period to be considered adequate for making use support determinations, except where fewer samples are determined to be adequate as discussed earlier. As used in this context, temporally independent means that the samples were collected at an interval appropriate to capture the expected variation in the parameter. For example, dissolved oxygen, temperature, and pH measurements should capture the normal diurnal variation that occurs in the parameters and temporal independence may occur in several hours (i.e. morning versus afternoon). Measurements for turbidity and bacteria should typically be at least 24 hours apart.

It is the intent of the methodology to ensure that an adequate number of samples are available for use in the assessment process and for developing future monitoring plans. Smaller sample sizes may be appropriate in certain circumstances where there is a clear indication that exceedances of the criteria are not due to natural conditions. For example, a data set comprised of fewer than the required minimum number of samples collected monthly may be sufficient to determine that a waterbody is not supporting its use when a significant number (more than two) exceed a particular criterion. Conversely, a data set with fewer than the required minimum number of samples collected monthly may be sufficient to determine that a waterbody is fully supporting its use if none of the samples exceed any of the criteria and there is sufficient supporting information to support this conclusion (i.e. biological assessment indicates full use support). The decision to use smaller data sets for making use support decisions will be made on a case-by-case basis using best professional judgment. These decisions will be made on a case-by-case basis and the decision will be documented.

Table 17: Minimum Number of Samples Exceeding the Numeric Criterion Necessary for Listing *

Sample Size	Number of Exceedances	Sample Size	Number of Exceedances
8 thru 11	2	97 thru 104	14
12 thru 18	3	105 thru 113	15
19 thru 25	4	114 thru 121	16
26 thru 32	5	122 thru 130	17
33 thru 40	6	131 thru 138	18
41 thru 47	7	139 thru 147	19
48 thru 55	8	148 thru 156	20
56 thru 63	9	157 thru 164	21
64 thru 71	10	165 thru 173	22
72 thru 79	11	174 thru 182	23
80 thru 88	12	183 thru 191	24
89 thru 96	13	192 thru 199	25

*For conventional parameters, including bacteria, at the 90% confidence level.

5.0 Removing a Waterbody from Category 5

Waterbodies may be removed from a 303(d) list (Category 5) for various reasons, including:

- Assessment of more recent water quality data demonstrates that the waterbody is meeting all applicable water quality standards. (Move to Category 1)
- A review of the original listing decision demonstrates that the waterbody should not have been included in Category 5. (Move to Category 1 or Category 2)
- TMDL has been completed. (Move to Category 4a)
- Other pollution control requirements are reasonably expected to result in the attainment of the water quality standards in the near future. These requirements must be specifically applicable to the particular water quality problem. (Move to Category 4b)
- Impairment is not caused by a pollutant. (Move to Category 4c)

- Natural causes, when it can be demonstrated the exceedance of a numeric water quality criterion is due to natural conditions and not to human disturbance activities. (Move to Category 1)

Table 18 shows the allowable number of exceedances of criteria for conventional pollutants for various sample sizes and a 90% confidence level. This table will be used to determine the number of allowable exceedances of Alabama numeric water quality criteria for pollutants listed in ADEM Administrative Code r. 335-6-10, with the exception of chlorophyll a criteria and the toxics criteria listed in the appendix to ADEM Administrative Code r. 335-6-10, for the waterbody to be removed from a 303(d) list for a specific pollutant (move to Category 1). In addition, the original basis for listing the waterbody will be considered as a part of the delisting process. Included in this evaluation will be a review of pollutant sources to determine which ones may have been removed or remediated, changes in land practices or uses, installation of new treatment facilities or best management practices, and changes in stream hydrology or morphology.

Table 18: Maximum Number of Samples Exceeding the Numeric Criterion Necessary for Delisting *

Sample Size	Number of Exceedances	Sample Size	Number of Exceedances
8 thru 21	0	104 thru 115	7
22 thru 37	1	116 thru 127	8
38 thru 51	2	128 thru 139	9
52 thru 64	3	140 thru 151	10
65 thru 77	4	152 thru 163	11
78 thru 90	5	164 thru 174	12
91 thru 103	6	175 thru 186	13

*For conventional parameters, including bacteria, at the 90% confidence level.

When a waterbody has been included in Category 5 due to a fish consumption advisory, the waterbody will be moved to Category 1 when subsequent fish tissue results indicate that pollutant concentrations have declined and a fish consumption advisory is no longer needed. The Alabama Department of Public Health makes the determination that a fish consumption advisory is no longer needed.

For waters originally placed in Category 5 due to a specific toxic pollutant or specific toxic pollutants, there should be no violations of the appropriate criteria in a minimum of eight samples collected over a three-year period before the cause of impairment is removed or the water is placed in Category 1.

6.0 Estimating the Size of the Assessed Waterbody

Waterbodies are assessed based on assessment units. Assessment units vary in size, depending on the waterbody type, watershed characteristics, designated use, and the location of monitoring stations. Individual assessments will lie completely within a designated use or a segment with multiple designated uses. For example, an assessment unit will not be partially within one designated use and partially within a different designated use. However, assessment units may be assigned more than one designated use as listed in ADEM Administrative Code r. 335-6-11. For example, an assessment unit may have classified uses of both Fish and Wildlife and Public Water Supply provided both uses are assigned to the entire assessment unit. An assessment unit may be defined as a stream, the mainstem of a river, embayment, portion of a lake or reservoir, or a part of an estuary or coastal water.

A monitoring unit is defined as the watershed draining to a sampling location and is generally made up of many assessment units (individual reaches). A monitoring unit will generally have a drainage area of more than 5 square miles. When it is necessary to better characterize assessment units within the larger monitoring units, new monitoring units can be delineated based on the location of the additional sampling location or locations. Water quality data and information gathered at a sampling location, which defines a monitoring unit, will be the primary means for assigning a use support status to assessment units within the monitoring unit.

The spatial extent of each monitoring unit will be determined using information contained in the Department's GIS. Specifically, stream coverage contained within the National Hydrography Dataset (NHD) will be the basis for determining the size of assessed waters. This database of natural and constructed surface waters is a comprehensive set of digital spatial data that contains information about surface water features, such as lakes, ponds, streams, rivers, springs, and wells. Within the NHD, surface water features are combined to form "reaches", which provide the framework for linking water-related data to the NHD surface drainage network. These linkages enable the analysis and display of these water-related data in upstream and downstream order. Characteristics such as stream length or reservoir area can be aggregated within a monitoring unit to estimate the size of assessed waters.

7.0 <u>Ranking and Prioritizing Impaired Waters</u>

Section 303(d)(1) of the CWA requires each state to establish a priority ranking for waters it identifies on the 303(d) list (i.e., Category 5 waters) taking into account the severity of pollution and the designated uses of such waters.

The State of Alabama is to establish TMDLs in accordance with its priority ranking strategy; however, states are given considerable flexibility in establishing their ranking method based on their particular circumstances and available resources. In accordance with EPA's *Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program*, Alabama has determined priority waters from the 303(d) list for which TMDLs will be developed during FY2016 through FY2022. Factors that were considered in the development of the list of priority waters include:

- Pollutants of concern
- Degree of public interest and support for particular waterbodies
- General watershed management activities (e.g., CWA Section 319 grant activities and watershed management planning)
- Existence of endangered and sensitive aquatic species
- Data availability
- Sources of the pollutants

- Designated uses of waterbodies

All waters placed on the 303(d) list will be given a priority ranking for TMDL development. Those waters identified as priority waters under the *Vision* will be given higher rankings, while those that are not currently identified as priority waters will be given lower rankings. Alabama's IWQMAR will include proposed schedules (both long term and annually) for the development of TMDLs. The Department will communicate with bordering states concerning the status of shared waters, and when requested, the state will provide data concerning shared waters to the adjacent state.

8.0 Public Participation

Alabama's IWQMAR will combine the Water Quality Inventory Report (Section 305(b)) with the Impaired Waterbodies (Section 303(d)) listing. Category 5 in the IWQMAR is considered the Impaired Waterbodies list. The remaining categories are considered the Water Quality Inventory. This methodology lays out the framework for assessing data and determining which of the five categories the waterbody will be assigned. The entire Integrated List will follow the same public process as the Section 303(d) listing but Categories 1 through 4 and the monitoring schedule will be provided for informational purposes only since these schedules are subject to change as resources allow.

The Department will solicit the submittal of data and information for use in developing the IWQMAR. The public notice requesting data will be published in four major newspapers in the state and on the Department's website. The time period for submitting data will be specified in the public notice. Data submitted after the specified period will be considered in the development of subsequent IWQMAR Reports. The Department reviews all existing and readily available data and is committed to using only data with acceptable quality assurance to develop the IWQMAR. Only electronic data or data available in published reports are considered "readily available".

The Department will publish notice of the availability of the Integrated Water Quality Monitoring and Assessment Methodology and Draft Integrated Report in four major newspapers of general circulation throughout the State and on the Department Website. Adjacent states, federal agencies, and interstate agencies shall also be noticed as necessary. The Department will coordinate with neighboring states during the development of the IWQMAR, as needed. The comment period on a proposed Category 5 (Section 303(d)) list will be a minimum of 30 days.

The IWQMAR, which will include the integrated list, expected monitoring schedules, TMDL schedules, as well as any other information usually included in the Section 305(b) Report, will be submitted to the EPA as required by Section 305(b) of the CWA. The Department will post the availability of the IWQMAR on its web page at that time.

9.0 References

ADEM, 2017. ADEM Administrative Code r. 335-6-10, Water Quality Criteria. Alabama Department of Environmental Management, Montgomery, AL.

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O'Neil, PE, and Shepard, TE, 2011, Calibration of the index of biotic integrity for the Ridge and Valley/Piedmont ichthyoregion in Alabama: Alabama Geological Survey, Open-File Report 1109, 140 p.

O'Neil, P and Shepard, TE, 2010, Calibration of the index of biotic integrity for the Tennessee Valley ichthyoregion in Alabama: Alabama Geological Survey, Open-File Report 1004, 126 p.

Appendix B

Categorization of Alabama Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
Category 1 Lakes and Reservoirs								
AL03150201-0107-100	Alabama River (Woodruff Lake)	Alabama	F&W	Autauga Creek	its source	1	5271.33	acres
AL03150201-0311-111	Catoma Creek (Woodruff Lake)	Alabama	F&W	Alabama River	end of embayment	1	368.99	acres
AL03150201-0407-111	Pintlala Creek (Woodruff Lake)	Alabama	S/F&W	Alabama River	end of embayment	1	34.10	acres
AL03150201-0501-100	Alabama River (Woodruff Lake)	Alabama	F&W	Pintlala Creek	Autauga Creek	1	1053.22	acres
AL03150201-0603-111	Swift Creek (Woodruff Lake)	Alabama	S/F&W	Alabama River	end of embayment	1	295.69	acres
AL03150201-0701-111	Cypress Creek (Woodruff Lake)	Alabama	S/F&W	Alabama River	end of embayment	1	87.87	acres
AL03150201-0706-100	Alabama River (Woodruff Lake)	Alabama	S/F&W	Robert F Henry Lock and Dam	Pintlala Creek	1	4786.34	acres
AL03150201-1101-102	Valley Creek (Valley Creek Lake)	Alabama	S/F&W	Valley Creek Lake dam	extent of reservoir	1	54.17	acres
AL03150203-0408-111	Pine Barren Creek (Dannelly Lake)	Alabama	S/F&W	Alabama River	end of embayment	1	763.19	acres
AL03150203-0701-100	Alabama River (Dannelly Lake)	Alabama	S/F&W	Millers Ferry Lock and Dam	Bogue Chitto Creek	1	8620.60	acres
AL03160109-0604-101	Mulberry Fork (Bankhead Lake)	Black Warrior	PWS/S/F&W	Black Warrior River	Baker Creek	1	1357.57	acres
AL03160109-0604-711	Lost Creek (Bankhead Lake)	Black Warrior	S/F&W	Mulberry Fork	end of embayment	1	269.63	acres
AL03160110-0105-100	Sipsey Fork (Smith Lake)	Black Warrior	S/F&W	Brushy Creek	Grindstone Creek	1	2280.57	acres
AL03160110-0203-101	Brushy Creek (Smith Lake)	Black Warrior	S/F&W	Sipsey Fork	end of embayment	1	1280.10	acres
AL03160110-0302-102	Clear Creek (Haleyville City Lake)	Black Warrior	PWS	Haleyville City Lake dam	its source	1	21.30	acres
AL03160110-0404-100	Rock Creek (Smith Lake)	Black Warrior	S/F&W	White Oak Creek	end of embayment	1	843.72	acres
AL03160110-0407-100	Crooked Creek (Smith Lake)	Black Warrior	S/F&W	White Oak Creek	end of embayment	1	698.25	acres
AL03160110-0407-201	White Oak Creek (Smith Lake)	Black Warrior	F&W	Rock Creek	end of embayment	1	377.68	acres
AL03160110-0505-102	Ryan Creek (Smith Lake)	Black Warrior	S/F&W	Doctor Harris Spring Branch	Coon Creek	1	887.65	acres
AL03160110-0507-102	Sipsey Fork (Smith Lake)	Black Warrior	PWS/S/F&W	Lewis Smith Dam	three miles upstream from Lewis Smith Dam	1	1269.96	acres
AL03160110-0507-103	Sipsey Fork (Smith Lake)	Black Warrior	S/F&W	three miles upstream from Lewis Smith Dam	County Road 41	1	2870.56	acres
AL03160111-0204-103	Blackburn Fork (Highland Lake)	Black Warrior	PWS/S	Highland Lake dam	extent of reservoir	1	315.81	acres
AL03160112-0203-100	Black Warrior River (Bankhead Lake)	Black Warrior	PWS/S/F&W	Bankhead Lock and Dam	its source	1	3645.57	acres
AL03160112-0306-100	Black Warrior River (Holt Lake)	Black Warrior	S/F&W	Holt Lock and Dam	Bankhead Lock and Dam	1	3147.23	acres
AL03160112-0505-101	Black Warrior River (Oliver Lake)	Black Warrior	F&W	Oliver Lock and Dam	Hurricane Creek	1	556.93	acres
AL03160112-0505-102	Black Warrior River (Oliver Lake)	Black Warrior	S/F&W	Hurricane Creek	Holt Lock and Dam	1	57.98	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160113-0105-111	Big Sandy Creek (Warrior Lake)	Black Warrior	F&W	Black Warrior River	end of embayment	1	11.29	acres
AL03160113-0401-102	Fivemile Creek (Payne Lake)	Black Warrior	S	Payne Lake dam	extent of reservoir	1	111.54	acres
AL03160113-0402-111	Fivemile Creek (Warrior Lake)	Black Warrior	F&W	Black Warrior River	end of embayment	1	92.06	acres
AL03160113-0507-111	Big Brush Creek (Warrior Lake)	Black Warrior	F&W	Black Warrior River	end of embayment	1	381.95	acres
AL03160113-0607-100	Black Warrior River (Warrior Lake)	Black Warrior	F&W	Warrior Lock and Dam	Oliver Lock and Dam	1	4970.75	acres
AL03160113-0804-102	Black Warrior River (Lake Demopolis)	Black Warrior	PWS/S/F&W	Five miles upstream of Big Prarie Creek	Eight miles upstream of Big Prarie Creek	1	131.02	acres
AL03160113-0804-103	Black Warrior River (Lake Demopolis)	Black Warrior	S/F&W	Eight miles upstream of Big Prarie Creek	Warrior Lock and Dam	1	1451.33	acres
AL03160113-0806-100	Black Warrior River (Lake Demopolis)	Black Warrior	S/F&W	Tombigbee River	Five miles upstream of Big Prarie Creek	1	2074.06	acres
AL03150202-0202-110	Oak Mountain State Park Lakes	Cahaba	PWS	Within Oak Mountain State Park		1	166.73	acres
AL03130002-0808-101	Chattahoochee River (West Point Lake)	Chattahoochee	S/F&W	West Point Dam	West Point Lake Limits in Alabama	1	2201.43	acres
AL03130002-1105-111	Osanippa Creek (Lake Harding)	Chattahoochee	PWS/S/F&W	Chattahoochee River	end of embayment	1	122.60	acres
AL03130002-1108-111	Halawakee Creek (Lake Harding)	Chattahoochee	PWS/S/F&W	Chattahoochee River	end of embayment	1	1525.46	acres
AL03130002-1109-101	Chattahoochee River (Lake Harding)	Chattahoochee	PWS/S/F&W	Bartletts Ferry dam	Osanippa Creek	1	679.12	acres
AL03130002-1109-102	Chattahoochee River (Lake Harding)	Chattahoochee	F&W	Osanippa Creek	Johnson Island	1	200.89	acres
AL03130002-1306-101	Chattahoochee River (Lake Oliver)	Chattahoochee	PWS/S/F&W	Oliver dam	Goat Rock dam	1	334.30	acres
AL03130002-1306-102	Chattahoochee River (Goat Rock Lake)	Chattahoochee	PWS/S/F&W	Goat Rock dam	Bartletts Ferry dam	1	131.20	acres
AL03130003-0804-111	Hatchechubbee Creek (Walter F George Lake)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	1	247.47	acres
AL03130003-0905-100	Chattahoochee River (Walter F George Lake)	Chattahoochee	F&W	Cowikee Creek	Cliatt Branch	1	2021.86	acres
AL03130003-1310-111	Cheneyhatchee Creek (Walter F George Lake)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	1	284.82	acres
AL03150105-0807-111	Little River (Weiss Lake)	Coosa	PWS/S/F&W	Chattooga River	end of embayment	1	761.03	acres
AL03150106-0501-104	Shoal Creek (Highrock Lake)	Coosa	OAW/S/F&W	Highrock Lake dam	extent of reservoir	1	13.95	acres
AL03150106-0501-106	Shoal Creek (Sweetwater Lake)	Coosa	OAW/PWS/S/F&W	Sweetwater Lake dam	extent of reservoir	1	54.97	acres
AL03150106-0501-112	Shoal Creek (Whitesides Mill Lake)	Coosa	PWS/S/F&W	Whitesides Mill Lake dam	extent of reservoir	1	251.75	acres
AL03150106-0501-400	Coleman Lake	Coosa	S/F&W	Coleman Lake dam	extent of reservoir	1	19.46	acres
AL03150106-0503-102	Hillabee Creek (Hillabee Lake)	Coosa	PWS/S/F&W	Hillabee Lake dam	extent of reservoir	1	180.88	acres
AL03150106-0508-400	Salt Creek Lake	Coosa	S/F&W	Salt Creek Lake		1	1.73	acres
AL03150106-0509-102	Cheaha Creek (Lake Chinnabee)	Coosa	S/F&W	Chinnabee dam	extent of reservoir	1	13.94	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150107-0102-102	Tallaseehatchee Creek (Lake Howard)	Coosa	PWS/F&W	Howard dam	extent of reservoir	1	135.97	acres
AL03150107-0102-104	Tallaseehatchee Creek (Lake Virginia)	Coosa	PWS/F&W	Lake Virginia dam	extent of reservoir	1	126.74	acres
AL03150107-0902-111	Shoal Creek (Jordan Lake)	Coosa	S/F&W	Coosa River	end of embayment	1	617.49	acres
AL03150107-0904-111	Weoka Creek (Jordan Lake)	Coosa	S/F&W	Coosa River	end of embayment	1	358.71	acres
AL03150107-0905-111	Sofkahatchee Creek (Jordan Lake)	Coosa	S/F&W	Coosa River	end of embayment	1	291.88	acres
AL03150107-0906-100	Coosa River (Jordan Lake)	Coosa	S/F&W	Jordan Dam	Mitchell Dam	1	4017.31	acres
AL03150201-0101-300	Coosa River (Jordan Lake)	Coosa	PWS/S/F&W	Bouldin Dam	Alabama Highway 111	1	754.31	acres
AL03160204-0106-400	Briar Lake	Mobile	OAW/F&W	Junction of Tensaw River	Junction of Tensaw Lake	1	169.36	acres
AL03160204-0106-500	Tensaw Lake	Mobile	OAW/F&W	Junction of Tensaw River	Bryant Landing	1	436.74	acres
AL03140107-0204-200	Shelby Lakes	Perdido	S/F&W	Within Gulf State Park		1	802.00	acres
AL03150108-0404-103	Cahulga Creek	Tallapoosa	PWS/F&W	Cahulga Reservoir dam	extent of reservoir	1	82.04	acres
AL03150108-0904-111	Wedowee Creek (R L Harris Lake)	Tallapoosa	S/F&W	Little Tallapoosa River	end of embayment	1	294.40	acres
AL03150108-0905-102	Little Tallapoosa River (R L Harris Lake)	Tallapoosa	PWS/S/F&W	US Highway 431	Wolf Creek	1	173.72	acres
AL03150108-0906-100	Little Tallapoosa River (R L Harris Lake)	Tallapoosa	S/F&W	Tallapoosa River	US Highway 431	1	2746.88	acres
AL03150108-1005-111	Mad Indian Creek (R L Harris Lake)	Tallapoosa	S/F&W	R L Harris Lake	its source	1	136.18	acres
AL03150108-1006-110	Tallapoosa River (R L Harris Lake)	Tallapoosa	S/F&W	Little Tallapoosa River	4 miles upstream of Randolph County Road 88	1	2014.75	acres
AL03150109-0406-111	Hillabee Creek (Lake Martin)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	1	57.75	acres
AL03150109-0504-111	Sandy Creek (Lake Martin)	Tallapoosa	S/F&W	Tallapoosa River	end of embayment	1	2390.93	acres
AL03150109-0602-111	Blue Creek (Lake Martin)	Tallapoosa	S/F&W	Tallapoosa River	its source	1	5495.14	acres
AL03150109-0702-111	Oakachoy Creek (Lake Martin)	Tallapoosa	S/F&W	Kowaliga Creek	end of embayment	1	4455.93	acres
AL03150109-0703-201	Little Kowaliga Creek (Lake Martin)	Tallapoosa	PWS/S/F&W	Kowaliga Creek	end of embayment	1	2634.38	acres
AL03150109-0704-111	Kowaliga Creek (Lake Martin)	Tallapoosa	S/F&W	Tallapoosa River	end of embayment	1	5602.95	acres
AL03150109-0802-102	Tallapoosa River (Lake Martin)	Tallapoosa	PWS/S/F&W	US Highway 280	Hillabee Creek	1	1973.85	acres
AL03150109-0802-104	Tallapoosa River (Lake Martin)	Tallapoosa	S/F&W	Hillabee Creek	Irwin Shoals	1	343.41	acres
AL03150109-0802-311	Coley Creek (Lake Martin)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	1	54.29	acres
AL03150109-0803-111	Elkahatchee Creek (Lake Martin)	Tallapoosa	S/F&W	Tallapoosa River	end of embayment	1	511.41	acres
AL03150109-0804-201	Manoy Creek (Lake Martin)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	1	618.88	acres
AL03150109-0805-100	Tallapoosa River (Lake Martin)	Tallapoosa	S/F&W	Martin Dam	US Highway 280	1	15867.11	acres
AL06030001-0203-101	Long Island Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	210.43	acres
AL06030001-0307-111	Crow Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tenneessee River	end of embayment	1	1399.82	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030001-0403-111	Coon Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	844.36	acres
AL06030001-0405-111	Mud Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	2276.16	acres
AL06030001-0505-111	South Sauty Creek (Lake Guntersville)	Tennessee	S/F&W	Tennessee River	end of embayment	1	2627.60	acres
AL06030001-0603-111	Roseberry Creek (Lake Guntersville)	Tennessee	S/F&W	Tennessee River	end of embayment	1	2251.14	acres
AL06030001-0605-100	North Sauty Creek (Lake Guntersville)	Tennessee	PWS	Tennessee River	end of embayment	1	2999.46	acres
AL06030001-0606-103	Tennessee River (Lake Guntersville)	Tennessee	PWS/S/F&W	Roseberry Creek	Pump Spring Branch	1	8633.81	acres
AL06030001-0807-111	Short Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	418.23	acres
AL06030001-0901-102	Tennessee River (Lake Guntersville)	Tennessee	S/F&W	upper end of Buck Island	Roseberry Creek	1	20440.33	acres
AL06030001-0903-111	Big Spring Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	2010.65	acres
AL06030001-0906-100	Tennessee River (Lake Guntersville)	Tennessee	PWS/S/F&W	Guntersville Dam	upper end of Buck Island	1	10176.81	acres
AL06030002-0204-111	Paint Rock River (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	91.34	acres
AL06030002-0405-111	Flint River (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	204.52	acres
AL06030004-0405-102	Elk River (Wheeler Lake)	Tennessee	S/F&W	Anderson Creek	Alabama Highway 99	1	3114.40	acres
AL06030005-0202-111	Bluewater Creek (Wilson Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	140.06	acres
AL06030005-0304-111	Town Creek (Wilson Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	592.99	acres
AL06030005-0509-101	Shoal Creek (Wilson Lake)	Tennessee	S/F&W	Tennessee River	Indiancamp Creek	1	1169.76	acres
AL03160106-0408-111	Lubbub Creek (Gainesville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	26.64	acres
AL03160106-0504-111	Bogue Chitto (Gainesville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	5.42	acres
AL03160106-0606-111	Trussells Creek (Demopolis Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	4.57	acres
AL03160106-0607-111	Brush Creek (Demopolis Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	5.17	acres
AL03160106-0609-102	Tombigbee River (Gainesville Lake)	Tombigbee	S/F&W	Heflin Lock and Dam	Bevill Lock and Dam	1	4761.67	acres
AL03160106-0702-101	Factory Creek (Demopolis Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	12.54	acres
AL03160106-0706-100	Tombigbee River (Demopolis Lake)	Tombigbee	F&W	Cobb Creek	Heflin Lock and Dam	1	1935.13	acres
AL03160106-0709-100	Tombigbee River (Demopolis Lake)	Tombigbee	S/F&W	Black Warrior River	Cobb Creek	1	1859.82	acres
AL03160201-0109-111	Chickasaw Bogue (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	extent of reservoir	1	22.13	acres
AL03160201-0408-102	Tombigbee River (Coffeeville Lake)	Tombigbee	PWS/F&W	1/2 mile downstream from Alabama Highway 114	3 miles upstream from Alabama Highway 114	1	196.10	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160201-0408-104	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	3 miles upstream from Alabama Highway 114	Sucarnoochee River	1	1418.11	acres
AL03160201-0506-111	Tuckabum Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	11.53	acres
AL03160201-0604-111	Horse Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	8.15	acres
AL03160201-0807-111	Okatuppa Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	86.63	acres
AL03160201-0904-111	Wahalak Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	4.92	acres
AL03160201-0906-111	Tallawampa Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	95.78	acres
AL03160201-0907-102	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	Beach Bluff (RM 141)	1/2 mile downstream from Alabama Highway 114	1	2088.71	acres
AL03160201-0908-111	Turkey Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	508.88	acres
AL03160201-0909-100	Tombigbee River (Coffeeville Lake)	Tombigbee	S/F&W	Coffeeville Lock and Dam	Beach Bluff (RM 141)	1	1989.31	acres
Category 1 Rivers and Streams								
AL03150201-0101-100	Bouldin tailrace canal	Alabama	F&W	Coosa River	Bouldin Dam	1	4.74	miles
AL03150201-0104-301	Three Mile Branch	Alabama	F&W	Galbraith Mill Creek	Lower Wetumpka Road	1	0.24	miles
AL03150201-0201-100	Bridge Creek	Alabama	F&W	Autauga Creek	its source	1	11.99	miles
AL03150201-0203-101	Autauga Creek	Alabama	F&W	Alabama River	Matthews Branch	1	7.28	miles
AL03150201-0203-102	Autauga Creek	Alabama	S/F&W	Matthews Branch	its source	1	26.82	miles
AL03150201-0602-100	White Water Creek	Alabama	F&W	Swift Creek	its source	1	9.50	miles
AL03150201-0603-100	Swift Creek	Alabama	S/F&W	Woodruff Lake	its source	1	38.54	miles
AL03150201-0807-100	Big Swamp Creek	Alabama	S/F&W	Alabama River	its source	1	56.41	miles
AL03150201-1001-100	Benson Creek	Alabama	F&W	Mulberry Creek	its source	1	11.38	miles
AL03150201-1005-100	Buck Creek	Alabama	F&W	Mulberry Creek	its source	1	21.33	miles
AL03150201-1006-102	Mulberry Creek	Alabama	F&W	Harris Branch	its source	1	23.91	miles
AL03150201-1101-103	Valley Creek	Alabama	S/F&W	Valley Creek Lake	its source	1	6.07	miles
AL03150201-1102-101	Valley Creek	Alabama	F&W	Alabama River	Selma-Summerfield Road	1	7.27	miles
AL03150201-1102-102	Valley Creek	Alabama	S/F&W	Selma-Summerfield Road	Valley Creek Lake dam	1	15.22	miles
AL03150201-1203-100	Soapstone Creek	Alabama	F&W	Alabama River	its source	1	17.52	miles
AL03150201-1207-101	Alabama River	Alabama	S/F&W	Cahaba River	Six Mile Creek	1	5.36	miles
AL03150201-1207-102	Alabama River	Alabama	F&W	Sixmile Creek	Robert F Henry Lock and Dam	1	42.43	miles
AL03150203-0106-110	Chaney Creek	Alabama	F&W	Bogue Chitto Creek	its source	1	17.12	miles
AL03150203-0203-100	Wolf Creek	Alabama	F&W	Cedar Creek	its source	1	21.98	miles
AL03150203-0209-100	Cedar Creek	Alabama	S/F&W	Alabama River	its source	1	64.46	miles
AL03150203-0404-100	Turkey Creek	Alabama	F&W	Pine Barren Creek	its source	1	18.84	miles
AL03150203-0408-100	Pine Barren Creek	Alabama	S/F&W	Dannelly Lake	its source	1	62.58	miles
AL03150203-0505-102	Alabama River	Alabama	S/F&W	Bogue Chitto Creek	Cahaba River	1	27.73	miles
AL03150203-0605-200	Cub Creek	Alabama	F&W	Beaver Creek	its source	1	12.94	miles
AL03150204-0101-100	Tallatchee Creek	Alabama	F&W	Claiborne Lake	its source	1	22.23	miles
AL03150204-0102-300	Beaver Creek	Alabama	F&W	Alabama River	its source	1	5.68	miles
AL03150204-0104-100	Silver Creek	Alabama	F&W	Alabama River	its source	1	13.42	miles
AL03150204-0205-210	Bear Creek	Alabama	F&W	Big Flat Creek	its source	1	8.75	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150204-0206-100	Big Flat Creek	Alabama	S/F&W	Alabama River	its source	1	63.53	miles
AL03150204-0206-500	Holly Mill Creek	Alabama	F&W	Big Flat Creek	its source	1	9.05	miles
AL03150204-0302-200	Walkers Creek	Alabama	F&W	Limestone Creek	its source	1	8.24	miles
AL03150204-0302-300	Brushy Creek	Alabama	F&W	Limestone Creek	its source	1	8.08	miles
AL03150204-0705-110	Alabama River	Alabama	F&W	Mobile River	Pigeon Creek	1	68.45	miles
AL03160109-0202-110	Marriott Creek	Black Warrior	F&W	Mulberry Fork	its source	1	14.10	miles
AL03160109-0205-500	Rice Creek	Black Warrior	F&W	Mulberry Fork	its source	1	8.60	miles
AL03160109-0309-100	Blackwater Creek	Black Warrior	F&W	Mulberry Fork	its source	1	70.05	miles
AL03160109-0401-100	Mill Creek	Black Warrior	F&W	Lost Creek	its source	1	11.44	miles
AL03160109-0402-103	Lost Creek	Black Warrior	F&W	US Highway 78 at Carbon Hill	Cranford Creek	1	0.66	miles
AL03160109-0403-103	Lost Creek	Black Warrior	F&W	US Highway 78 north of Cedrum	US Highway 78 at Carbon Hill	1	6.53	miles
AL03160109-0404-101	Cane Creek	Black Warrior	F&W	Lost Creek	Dixie Springs Road	1	7.15	miles
AL03160109-0404-102	Cane Creek	Black Warrior	LWF	Dixie Springs Road	Alabama Highway 69	1	3.49	miles
AL03160109-0404-103	Cane Creek	Black Warrior	F&W	Alabama Highway 69	its source	1	7.38	miles
AL03160109-0405-104	Lost Creek	Black Warrior	F&W	Alabama Highway 69 at Oakman	Mill dam at Cedrum	1	17.33	miles
AL03160109-0601-101	Cane Creek	Black Warrior	LWF	Mulberry Fork	Town Creek	1	10.58	miles
AL03160109-0601-901	Town Creek	Black Warrior	LWF	Cane Creek	100 yards upstream of Southern Railway crossing	1	1.10	miles
AL03160110-0101-100	Borden Creek	Black Warrior	F&W	Sipsey Fork	its source	1	16.61	miles
AL03160110-0101-116	unnamed tributaries to Borden Creek	Black Warrior	F&W	Borden Creek	Their source	1	23.35	miles
AL03160110-0101-210	Braziel Creek	Black Warrior	F&W	Borden Creek	its source	1	5.69	miles
AL03160110-0101-215	unnamed tributaries to Braziel Creek	Black Warrior	F&W	Braziel Creek	Their source	1	13.77	miles
AL03160110-0101-310	Flannagin Creek	Black Warrior	F&W	Borden Creek	its source	1	9.99	miles
AL03160110-0101-315	unnamed tributaries to Flannagin Creek	Black Warrior	F&W	Flannagin Creek	Their source	1	15.49	miles
AL03160110-0101-410	Horse Creek	Black Warrior	F&W	Borden Creek	its source	1	1.76	miles
AL03160110-0101-415	unnamed tributaries to Horse Creek	Black Warrior	F&W	Horse Creek	Their source	1	2.30	miles
AL03160110-0101-510	Montgomery Creek	Black Warrior	F&W	Borden Creek	its source	1	3.99	miles
AL03160110-0101-515	unnamed tributaries to Montgomery Creek	Black Warrior	F&W	Montgomery Creek	Their source	1	8.99	miles
AL03160110-0101-610	Hagood Creek	Black Warrior	F&W	Braziel Creek	its source	1	4.23	miles
AL03160110-0101-615	unnamed tributaries to Hagood Creek	Black Warrior	F&W	Hagood Creek	Their source	1	7.57	miles
AL03160110-0101-710	Dry Creek	Black Warrior	F&W	Flannagin Creek	its source	1	2.17	miles
AL03160110-0101-715	unnamed tributaries to Dry Creek	Black Warrior	F&W	Dry Creek	Their source	1	2.80	miles
AL03160110-0102-110	Parker Branch	Black Warrior	F&W	Hubbard Creek	its source	1	3.82	miles
AL03160110-0102-114	unnamed tributaries to Parker Branch	Black Warrior	F&W	Parker Branch	Their source	1	3.35	miles
AL03160110-0102-115	unnamed tributaries to Sipsey Fork	Black Warrior	F&W	Sipsey Fork	Their source	1	9.69	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160110-0102-120	Whitman Creek	Black Warrior	F&W	Hubbard Creek	its source	1	3.73	miles
AL03160110-0102-125	unnamed tributaries to Whitman Creek	Black Warrior	F&W	Whitman Creek	Their source	1	4.53	miles
AL03160110-0102-130	Maxwell Creek	Black Warrior	F&W	Hubbard Creek	its source	1	2.02	miles
AL03160110-0102-135	unnamed tributaries to Maxwell Creek	Black Warrior	F&W	Maxwell Creek	Their source	1	1.55	miles
AL03160110-0102-140	Basin Creek	Black Warrior	F&W	Hubbard Creek	its source	1	2.81	miles
AL03160110-0102-145	unnamed tributaries to Basin Creek	Black Warrior	F&W	Basin Creek	Their source	1	4.39	miles
AL03160110-0102-150	Dunn Branch	Black Warrior	F&W	Maxwell Creek	its source	1	1.33	miles
AL03160110-0102-160	Natural Well Branch	Black Warrior	F&W	Maxwell Creek	its source	1	1.45	miles
AL03160110-0102-165	unnamed tributary to Natural Well Branch	Black Warrior	F&W	Natural Well Branch	its source	1	0.60	miles
AL03160110-0102-170	White Oak Branch	Black Warrior	F&W	Thompson Creek	its source	1	1.69	miles
AL03160110-0102-175	unnamed tributaries to White Oak Branch	Black Warrior	F&W	White Oak Branch	Their source	1	0.61	miles
AL03160110-0102-180	Wolf Pen Branch	Black Warrior	F&W	Sipsey Fork	its source	1	1.00	miles
AL03160110-0102-190	Ugly Creek	Black Warrior	F&W	Sipsey Fork	its source	1	3.05	miles
AL03160110-0102-195	unnamed tributaries to Ugly Creek	Black Warrior	F&W	Ugly Creek	Their source	1	4.46	miles
AL03160110-0102-210	Fall Creek	Black Warrior	F&W	Sipsey Fork	its source	1	2.06	miles
AL03160110-0102-215	unnamed tributaries to Fall Creek	Black Warrior	F&W	Fall Creek	Their source	1	0.70	miles
AL03160110-0102-310	Bee Branch	Black Warrior	F&W	Sipsey Fork	its source	1	2.09	miles
AL03160110-0102-315	unnamed tributaries to Bee Branch	Black Warrior	F&W	Bee Branch	Their source	1	2.95	miles
AL03160110-0102-410	Thompson Creek	Black Warrior	F&W	Sipsey Fork	its source	1	8.59	miles
AL03160110-0102-415	unnamed tributaries to Thompson Creek	Black Warrior	F&W	Thompson Creek	Their source	1	15.29	miles
AL03160110-0102-510	Hubbard Creek	Black Warrior	F&W	Sipsey Fork	its source	1	6.59	miles
AL03160110-0102-515	unnamed tributaries to Hubbard Creek	Black Warrior	F&W	Hubbard Creek	Their source	1	5.30	miles
AL03160110-0102-610	Tedford Creek	Black Warrior	F&W	Thompson Creek	its source	1	3.68	miles
AL03160110-0102-615	unnamed tributaries to Tedford Creek	Black Warrior	F&W	Tedford Creek	Their source	1	10.40	miles
AL03160110-0102-710	Mattox Creek	Black Warrior	F&W	Thompson Creek	its source	1	3.26	miles
AL03160110-0102-715	unnamed tributaries to Mattox Creek	Black Warrior	F&W	Mattox Creek	Their source	1	7.73	miles
AL03160110-0102-800	Ross Branch	Black Warrior	F&W	Tedford Creek	its source	1	2.06	miles
AL03160110-0102-805	unnamed tributaries to Ross Branch	Black Warrior	F&W	Ross Branch	Their source	1	2.07	miles
AL03160110-0102-900	Quillan Creek	Black Warrior	F&W	Hubbard Creek	its source	1	3.77	miles
AL03160110-0102-905	unnamed tributaries to Quillan Creek	Black Warrior	F&W	Quillan Creek	Their source	1	6.68	miles
AL03160110-0103-105	unnamed tributaries to Sipsey Fork	Black Warrior	F&W	Sipsey Fork	Their source	1	28.32	miles
AL03160110-0103-200	Payne Creek	Black Warrior	F&W	Sipsey Fork	its source	1	3.89	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160110-0103-205	unnamed tributaries to Payne Creek	Black Warrior	F&W	Payne Creek	Their source	1	6.11	miles
AL03160110-0103-300	Caney Creek	Black Warrior	F&W	Sipsey Fork	its source	1	4.66	miles
AL03160110-0103-305	unnamed tributaries to Caney Creek	Black Warrior	F&W	Caney Creek	Their source	1	10.21	miles
AL03160110-0103-400	Hurricane Creek	Black Warrior	F&W	Sipsey Fork	its source	1	2.29	miles
AL03160110-0103-405	unnamed tributaries to Hurricane Creek	Black Warrior	F&W	Hurricane Creek	Their source	1	2.56	miles
AL03160110-0103-500	Davis Creek	Black Warrior	F&W	Sipsey Fork	its source	1	2.83	miles
AL03160110-0103-505	unnamed tributaries to Davis Creek	Black Warrior	F&W	Davis Creek	Their source	1	8.94	miles
AL03160110-0103-600	North Fork Caney Creek	Black Warrior	F&W	Caney Creek	its source	1	6.38	miles
AL03160110-0103-605	unnamed tributaries to North Fork Caney Creek	Black Warrior	F&W	North Fork Caney Creek	Their source	1	19.65	miles
AL03160110-0103-700	South Fork Caney Creek	Black Warrior	F&W	Caney Creek	its source	1	5.04	miles
AL03160110-0103-705	unnamed tributaries to South Fork Caney Creek	Black Warrior	F&W	South Fork Caney Creek	Their source	1	8.69	miles
AL03160110-0103-800	Lloyds Creek	Black Warrior	F&W	Sipsey Fork	its source	1	1.11	miles
AL03160110-0103-805	unnamed tributaries to Lloyds Creek	Black Warrior	F&W	Lloyds Creek	Their source	1	0.62	miles
AL03160110-0103-900	Sweetwater Creek	Black Warrior	F&W	Caney Creek	its source	1	1.23	miles
AL03160110-0103-905	unnamed tributaries to Sweetwater Creek	Black Warrior	F&W	Sweetwater Creek	Their source	1	0.70	miles
AL03160110-0104-102	Sipsey Fork	Black Warrior	F&W	Grindstone Creek	Sandy Creek	1	0.89	miles
AL03160110-0104-103	Sipsey Fork	Black Warrior	F&W	Sandy Creek	its source	1	21.23	miles
AL03160110-0104-500	Sandy Creek	Black Warrior	F&W	Sipsey Fork	its source	1	10.83	miles
AL03160110-0201-200	Rush Creek	Black Warrior	F&W	Brushy Creek	its source	1	9.06	miles
AL03160110-0202-200	Capsey Creek	Black Warrior	F&W	Brushy Creek	its source	1	13.47	miles
AL03160110-0203-102	Brushy Creek	Black Warrior	PWS/F&W	Smith Lake	Highway 278	1	1.13	miles
AL03160110-0203-103	Brushy Creek	Black Warrior	F&W	Highway 278	its source	1	29.85	miles
AL03160110-0203-110	Inman Creek	Black Warrior	F&W	Brushy Creek	its source	1	5.79	miles
AL03160110-0402-100	Rock Creek	Black Warrior	F&W	Blevens Creek	its source	1	14.43	miles
AL03160110-0407-202	White Oak Creek	Black Warrior	F&W	Smith Lake	its source	1	7.72	miles
AL03160110-0507-101	Sipsey Fork	Black Warrior	PWS/F&W	Mulberry Fork	Lewis Smith Dam	1	13.92	miles
AL03160111-0202-103	Locust Fork	Black Warrior	F&W	Blount County Road 30	Slab Creek	1	5.90	miles
AL03160111-0202-104	Locust Fork	Black Warrior	S/F&W	Slab Creek	its source	1	35.70	miles
AL03160111-0204-102	Blackburn Fork	Black Warrior	PWS/S	Inland Lake	Highland Lake dam	1	3.33	miles
AL03160111-0204-104	Blackburn Fork	Black Warrior	PWS/S	Highland Lake	its source	1	6.42	miles
AL03160111-0206-101	Calvert Prong	Black Warrior	F&W	Little Warrior River	Calvert Prong dam above US Highway 231	1	13.36	miles
AL03160111-0206-102	Calvert Prong	Black Warrior	PWS	Calvert Prong dam above US Highway 231	its source	1	13.99	miles
AL03160111-0207-100	Little Warrior River	Black Warrior	F&W	Locust Fork	its source	1	6.98	miles
AL03160111-0207-300	Blackburn Fork	Black Warrior	F&W	Little Warrior River	Inland Lake dam	1	11.63	miles
AL03160111-0207-900	Hendrick Mill Branch	Black Warrior	F&W	Blackburn Fork	its source	1	3.91	miles
AL03160111-0208-101	Locust Fork	Black Warrior	F&W	Little Warrior River	Blount County Road 30	1	27.18	miles
AL03160111-0304-100	Gurley Creek	Black Warrior	F&W	Locust Fork	its source	1	23.07	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160111-0405-101	Newfound Creek	Black Warrior	F&W	Fivemile Creek	Newfound Creek Lake dam	1	2.84	miles
AL03160111-0411-100	Short Creek	Black Warrior	F&W	Locust Fork	its source	1	9.34	miles
AL03160112-0105-101	Mud Creek	Black Warrior	F&W	Valley Creek	Big Branch	1	14.12	miles
AL03160112-0201-102	Big Yellow Creek	Black Warrior	S/F&W	Bankhead Lake	its source	1	14.59	miles
AL03160112-0301-100	Blue Creek	Black Warrior	F&W	Black Warrior River	its source	1	18.49	miles
AL03160112-0303-110	Davis Creek	Black Warrior	F&W	Black Warrior River	its source	1	39.00	miles
AL03160112-0401-200	Deadwater Creek	Black Warrior	F&W	Clear Creek	its source	1	8.13	miles
AL03160112-0404-100	Tyro Creek	Black Warrior	F&W	North River	its source	1	12.67	miles
AL03160112-0406-100	Bear Creek	Black Warrior	F&W	North River	its source	1	11.12	miles
AL03160112-0409-100	Barbee Creek	Black Warrior	F&W	Binion Creek	its source	1	10.29	miles
AL03160112-0410-100	Binion Creek	Black Warrior	F&W	Lake Tuscaloosa	its source	1	14.06	miles
AL03160112-0411-102	North River	Black Warrior	F&W	Lake Tuscaloosa	Ellis Creek	1	43.48	miles
AL03160112-0501-103	Yellow Creek	Black Warrior	PWS	Little Yellow Creek	its source	1	10.47	miles
AL03160113-0103-100	South Sandy Creek	Black Warrior	F&W	Big Sandy Creek	its source	1	14.86	miles
AL03160113-0401-103	Fivemile Creek	Black Warrior	F&W	Payne Lake	its source	1	5.04	miles
AL03160113-0604-200	Gabriel Creek	Black Warrior	F&W	Warrior Lake	its source	1	17.00	miles
AL03140104-0103-100	Bear Creek	Blackwater	F&W	Panther Creek	its source	1	10.70	miles
AL03140104-0103-500	Bear Head Creek	Blackwater	F&W	Bear Creek	its source	1	4.63	miles
AL03150202-0103-101	Little Cahaba River	Cahaba	PWS	Cahaba River	Lake Purdy dam	1	4.82	miles
AL03150202-0203-112	Buck Creek	Cahaba	LWF	Cahaba Valley Creek	Shelby County Road 44	1	6.02	miles
AL03150202-0204-800	Little Shades Creek	Cahaba	F&W	Cahaba River	its source	1	7.40	miles
AL03150202-0205-100	Piney Woods Creek	Cahaba	F&W	Cahaba River	its source	1	7.64	miles
AL03150202-0302-101	Mud Creek	Cahaba	F&W	Shades Creek	Tannehill Iron Works	1	3.68	miles
AL03150202-0403-200	Mayberry Creek	Cahaba	F&W	Shoal Creek	its source	1	8.51	miles
AL03150202-0405-110	Little Cahaba River	Cahaba	OAW/F&W	Cahaba River	its source	1	16.54	miles
AL03150202-0405-200	Fourmile Creek	Cahaba	F&W	Little Cahaba River	its source	1	5.64	miles
AL03150202-0406-100	Caffee Creek	Cahaba	F&W	Cahaba River	its source	1	17.88	miles
AL03150202-0603-200	Goose Creek	Cahaba	F&W	Cahaba River	its source	1	7.67	miles
AL03150202-0703-400	Silver Creek	Cahaba	F&W	Cahaba River	its source	1	3.76	miles
AL03150202-0802-700	Holsombech Creek	Cahaba	F&W	Oakmulgee Creek	its source	1	5.55	miles
AL03150202-0804-100	Little Oakmulgee Creek	Cahaba	S	Oakmulgee Creek	its source	1	18.69	miles
AL03150202-0902-100	Cahaba River	Cahaba	OAW/S	Alabama River	Alabama Highway 82	1	89.50	miles
AL03130002-0806-102	Wehadkee Creek	Chattahoochee	F&W	Alabama-Georgia state line	its source	1	24.66	miles
AL03130002-0901-100	Wells Creek	Chattahoochee	F&W	Oseligee Creek	its source	1	12.60	miles
AL03130002-0902-200	Finley Creek	Chattahoochee	F&W	Oseligee Creek	its source	1	4.72	miles
AL03130002-0903-400	Barrow Creek	Chattahoochee	F&W	Oseligee Creek	its source	1	7.54	miles
AL03130002-0908-101	Chattahoochee River	Chattahoochee	F&W	Johnson Island	West Point Manufacturing Company water supply intake at Lanett	1	12.56	miles
AL03130002-0908-102	Chattahoochee River	Chattahoochee	PWS	West Point Manufacturing Company water supply intake at Lanett	West Point Dam	1	4.20	miles
AL03130002-1104-100	Wildcat Creek	Chattahoochee	F&W	Osanippa Creek	its source	1	7.15	miles
AL03130002-1104-200	Snapper Creek	Chattahoochee	F&W	Wildcat Creek	its source	1	13.10	miles
AL03130002-1108-100	Halawakee Creek	Chattahoochee	PWS/F&W	Lake Harding	Three miles upstream of County Road 79	1	2.21	miles
AL03130003-0101-100	Mill Creek	Chattahoochee	F&W	Chattahoochee River	its source	1	9.93	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03130003-0502-110	Adams Branch	Chattahoochee	F&W	Uchee Creek	its source	1	6.62	miles
AL03130003-0803-102	Hatchechubbee Creek	Chattahoochee	F&W	Russell County Highway 4	its source	1	17.12	miles
AL03130003-0804-100	Hatchechubbee Creek	Chattahoochee	S/F&W	Walter F George Lake	Russell County Highway 4	1	7.01	miles
AL03130003-1003-100	Middle Fork Cowikee Creek	Chattahoochee	S/F&W	North Fork Cowikee Creek	its source	1	48.33	miles
AL03130003-1205-200	North Fork Cowikee Creek	Chattahoochee	F&W	Walter F George Lake	its source	1	43.85	miles
AL03130003-1304-100	Leak Creek	Chattahoochee	F&W	Barbour Creek	its source	1	11.02	miles
AL03130004-0104-100	McRae Mill Creek	Chattahoochee	F&W	Chattahoochee River	its source	1	7.62	miles
AL03130004-0602-201	Poplar Spring Branch	Chattahoochee	F&W	Omusee Creek	Ross Clark Circle	1	2.13	miles
AL03130004-0701-100	Cedar Creek	Chattahoochee	F&W	Chattahoochee River	its source	1	11.51	miles
AL03140201-0206-300	Dunham Creek	Choctawhatchee	F&W	Blackwood Creek	its source	1	4.27	miles
AL03140201-0207-110	East Fork Choctawhatchee River	Choctawhatchee	S/F&W	Blackwood Creek	its source	1	47.03	miles
AL03140201-0208-100	East Fork Choctawhatchee River	Choctawhatchee	S/F&W	Choctawhatchee River	Blackwood Creek	1	7.34	miles
AL03140201-0208-300	Seabes Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	1	7.16	miles
AL03140201-0502-110	Bear Creek	Choctawhatchee	F&W	Little Choctawhatchee River	its source	1	11.41	miles
AL03140201-0504-100	Little Choctawhatchee River	Choctawhatchee	F&W	Choctawhatchee River	its source	1	24.02	miles
AL03140202-0205-300	Dry Creek	Choctawhatchee	F&W	Pea River	its source	1	6.29	miles
AL03140202-0401-101	Walnut Creek	Choctawhatchee	F&W	Whitewater Creek	Pike County Road 3304	1	3.58	miles
AL03140202-0401-103	Walnut Creek	Choctawhatchee	F&W	US Highway 231	its source	1	6.14	miles
AL03140202-0407-100	Big Creek	Choctawhatchee	F&W	Whitewater Creek	its source	1	26.05	miles
AL03140202-0409-100	Whitewater Creek	Choctawhatchee	F&W	Pea River	its source	1	41.95	miles
AL03140202-0501-100	Bowden Mill Creek	Choctawhatchee	F&W	Pea River	its source	1	8.78	miles
AL03140202-0503-100	Clearwater Creek	Choctawhatchee	F&W	Pea River	its source	1	10.07	miles
AL03140202-0506-100	Pea River	Choctawhatchee	F&W	Red Oak Creek	Halls Creek	1	8.08	miles
AL03150105-0206-600	UT to Ballplay Creek	Coosa	F&W	Weiss Lake	its source	1	4.61	miles
AL03150105-0502-100	Mills Creek	Coosa	F&W	Chattooga River	Alabama-Georgia state line	1	21.59	miles
AL03150105-0605-102	Chattooga River	Coosa	F&W	Weiss Lake	Alabama-Georgia state line	1	8.57	miles
AL03150105-0702-101	Middle Fork Little River	Coosa	PWS/S/F&W	East Fork Little River	Alabama-Georgia state line	1	2.44	miles
AL03150105-0702-105	unnamed tributaries to Middle Fork Little River	Coosa	PWS/S/F&W	Middle Fork Little River	Their source	1	2.91	miles
AL03150105-0702-200	Brush Creek	Coosa	PWS/S/F&W	Middle Fork Little River	its source	1	3.04	miles
AL03150105-0702-205	unnamed tributaries to Brush Creek	Coosa	PWS/S/F&W	Brush Creek	Their source	1	5.79	miles
AL03150105-0702-300	Anna Branch	Coosa	PWS/S/F&W	Middle Fork Little River	its source	1	2.18	miles
AL03150105-0702-305	unnamed tributaries to Anna Branch	Coosa	PWS/S/F&W	Anna Branch	Their source	1	1.62	miles
AL03150105-0702-400	Blalock Branch	Coosa	PWS/S/F&W	Anna Branch	its source	1	3.46	miles
AL03150105-0702-405	unnamed tributaries to Blalock Branch	Coosa	PWS/S/F&W	Blalock Branch	Their source	1	2.15	miles
AL03150105-0702-500	Stillhouse Branch	Coosa	PWS/S/F&W	Blalock Branch	its source	1	1.09	miles
AL03150105-0702-505	unnamed tributaries to Stillhouse Branch	Coosa	PWS/S/F&W	Stillhouse Branch	Their source	1	0.79	miles
AL03150105-0703-201	East Fork West Fork Little River	Coosa	PWS/S/F&W	West Fork Little River	Alabama-Georgia state line	1	0.47	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150105-0704-100	West Fork Little River	Coosa	PWS/S/F&W	Little River	Alabama-Georgia state line	1	18.87	miles
AL03150105-0704-105	unnamed tributaries to West Fork Little River	Coosa	PWS/S/F&W	West Fork Little River	Their source	1	41.51	miles
AL03150105-0704-200	Straight Creek	Coosa	PWS/S/F&W	West Fork Little River	its source	1	4.45	miles
AL03150105-0704-205	unnamed tributaries to Straight Creek	Coosa	PWS/S/F&W	Straight Creek	Their source	1	3.77	miles
AL03150105-0704-300	Sharp Branch	Coosa	PWS/S/F&W	West Fork Little River	its source	1	1.39	miles
AL03150105-0704-305	unnamed tributaries to Sharp Branch	Coosa	PWS/S/F&W	Sharp Branch	its source	1	0.67	miles
AL03150105-0704-400	Seymour Branch	Coosa	PWS/S/F&W	West Fork Little River	its source	1	2.48	miles
AL03150105-0705-110	East Fork Little River	Coosa	PWS/S/F&W	Little River	its source	1	9.55	miles
AL03150105-0705-115	unnamed tributaries to East Fork Little River	Coosa	PWS/S/F&W	East Fork Little River	Their source	1	19.75	miles
AL03150105-0705-210	Laurel Creek	Coosa	PWS/S/F&W	East Fork Little River	its source	1	3.97	miles
AL03150105-0705-215	unnamed tributaries to Laurel Creek	Coosa	PWS/S/F&W	Laurel Creek	Their source	1	4.43	miles
AL03150105-0705-310	Gilbert Branch	Coosa	PWS/S/F&W	East Fork Little River	its source	1	1.83	miles
AL03150105-0705-315	unnamed tributaries to Gilbert Branch	Coosa	PWS/S/F&W	Gilbert Branch	Their source	1	1.66	miles
AL03150105-0705-405	unnamed tributaries to Shrader Branch	Coosa	PWS/S/F&W	Shrader Branch	Their source	1	1.33	miles
AL03150105-0705-410	Shrader Branch	Coosa	PWS/S/F&W	Laurel Creek	its source	1	1.95	miles
AL03150105-0705-500	Armstrong Branch	Coosa	PWS/S/F&W	Laurel Creek	its source	1	1.75	miles
AL03150105-0705-505	unnamed tributaries to Armstrong Branch	Coosa	PWS/S/F&W	Armstrong Branch	Their source	1	4.13	miles
AL03150105-0801-100	Yellow Creek	Coosa	PWS/S/F&W	Little River	its source	1	7.06	miles
AL03150105-0801-115	unnamed tributaries to Yellow Creek	Coosa	PWS/S/F&W	Yellow Creek	Their source	1	14.96	miles
AL03150105-0801-210	Straight Creek	Coosa	PWS/S/F&W	Yellow Creek	its source	1	3.03	miles
AL03150105-0801-215	unnamed tributaries to Straight Creek	Coosa	PWS/S/F&W	Straight Creek	Their source	1	4.54	miles
AL03150105-0802-115	unnamed tributaries to Little River	Coosa	PWS/S/F&W	Little River	Their source	1	29.23	miles
AL03150105-0802-210	Hurricane Creek	Coosa	PWS/S/F&W	Little River	its source	1	6.67	miles
AL03150105-0802-215	unnamed tributaries to Hurricane Creek	Coosa	PWS/S/F&W	Hurricane Creek	Their source	1	11.69	miles
AL03150105-0803-100	Bear Creek	Coosa	PWS/S/F&W	Little River	its source	1	8.67	miles
AL03150105-0803-105	unnamed tributaries to Bear Creek	Coosa	PWS/S/F&W	Bear Creek	Their source	1	11.94	miles
AL03150105-0803-200	Falls Branch	Coosa	PWS/S/F&W	Bear Creek	its source	1	2.47	miles
AL03150105-0803-205	unnamed tributaries to Falls Branch	Coosa	PWS/S/F&W	Falls Branch	Their source	1	1.67	miles
AL03150105-0803-300	Hicks Creek	Coosa	PWS/S/F&W	Bear Creek	its source	1	3.42	miles
AL03150105-0803-305	unnamed tributaries to Hicks Creek	Coosa	PWS/S/F&W	Hicks Creek	Their source	1	2.00	miles
AL03150105-0804-100	Johnnies Creek	Coosa	PWS/S/F&W	Little River	its source	1	11.63	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150105-0804-105	unnamed tributaries to Johnnies Creek	Coosa	PWS/S/F&W	Johnnies Creek	Their source	1	24.92	miles
AL03150105-0804-200	Camprock Creek	Coosa	PWS/S/F&W	Johnnies Creek	its source	1	3.40	miles
AL03150105-0804-205	unnamed tributaries to Camprock Creek	Coosa	PWS/S/F&W	Camprock Creek	Their source	1	2.65	miles
AL03150105-0804-300	Dry Creek	Coosa	PWS/S/F&W	Johnnies Creek	its source	1	2.37	miles
AL03150105-0804-305	unnamed tributaries to Dry Creek	Coosa	PWS/S/F&W	Dry Creek	Their source	1	3.29	miles
AL03150105-0805-100	Wolf Creek	Coosa	PWS/S/F&W	Little River	its source	1	9.51	miles
AL03150105-0805-105	unnamed tributaries to Wolf Creek	Coosa	PWS/S/F&W	Wolf Creek	Their source	1	36.20	miles
AL03150105-0806-100	Little River	Coosa	PWS/S/F&W	Weiss Lake	its source	1	22.19	miles
AL03150105-0806-105	unnamed tributaries to Little River	Coosa	PWS/S/F&W	Little River	Their source	1	42.86	miles
AL03150105-0806-200	Brooks Branch	Coosa	PWS/S/F&W	Little River	its source	1	1.68	miles
AL03150105-0806-205	unnamed tributary to Brooks Branch	Coosa	PWS/S/F&W	Brooks Branch	its source	1	0.74	miles
AL03150105-0901-100	South Fork Terrapin Creek	Coosa	F&W	Terrapin Creek	its source	1	11.36	miles
AL03150105-0905-100	Nances Creek	Coosa	F&W	Terrapin Creek	its source	1	13.48	miles
AL03150105-0906-102	Terrapin Creek	Coosa	PWS/F&W	US Highway 278	Calhoun County Road 70	1	3.58	miles
AL03150105-0906-103	Terrapin Creek	Coosa	F&W	Calhoun County Road 70	Alabama-Georgia state line	1	21.07	miles
AL03150105-0907-100	Hurricane Creek	Coosa	F&W	Terrapin Creek	its source	1	15.85	miles
AL03150105-0907-300	Wolf Branch	Coosa	F&W	Hurricane Creek	its source	1	2.61	miles
AL03150105-0908-102	Terrapin Creek	Coosa	F&W	Cherokee County Road 8	US Highway 278	1	2.92	miles
AL03150105-0909-101	Terrapin Creek	Coosa	S/F&W	Coosa River	Cherokee County Road 8	1	20.65	miles
AL03150106-0101-102	Big Wills Creek	Coosa	PWS/F&W	100 yards below Allen Branch	its source	1	7.51	miles
AL03150106-0106-100	Little Wills Creek	Coosa	F&W	Big Wills Creek	its source	1	21.65	miles
AL03150106-0304-100	Little Canoe Creek	Coosa	F&W	Big Canoe Creek	its source	1	19.88	miles
AL03150106-0306-100	Big Canoe Creek	Coosa	F&W	Coosa River	its source	1	57.29	miles
AL03150106-0307-100	Beaver Creek	Coosa	F&W	Neely Henry Lake	its source	1	26.58	miles
AL03150106-0501-103	Shoal Creek	Coosa	OAW/S/F&W	Whitesides Mill Lake	Highrock Lake dam	1	3.45	miles
AL03150106-0501-105	Shoal Creek	Coosa	OAW/S/F&W	Highrock Lake	Sweetwater Lake dam	1	6.31	miles
AL03150106-0501-107	Shoal Creek	Coosa	OAW/S/F&W	Sweetwater Lake	its source	1	5.71	miles
AL03150106-0501-111	Shoal Creek	Coosa	S/F&W	Choccolocco Creek	Whitesides Mill Lake dam	1	1.55	miles
AL03150106-0502-700	Dry Creek	Coosa	F&W	Choccolocco Creek	its source	1	4.03	miles
AL03150106-0503-101	Hillabee Creek	Coosa	F&W	Choccolocco Creek	Hillabee Lake dam	1	1.14	miles
AL03150106-0503-103	Hillabee Creek	Coosa	F&W	Hillabee Lake	its source	1	10.85	miles
AL03150106-0504-101	Choccolocco Creek	Coosa	PWS/F&W	Hillabee Creek	Egoniaga Creek	1	8.18	miles
AL03150106-0504-102	Choccolocco Creek	Coosa	F&W	Egoniaga Creek	its source	1	29.96	miles
AL03150106-0506-100	Coldwater Spring Branch	Coosa	F&W	Choccolocco Creek	its source	1	10.39	miles
AL03150106-0506-200	Coldwater Spring	Coosa	PWS/F&W			1	0.10	miles
AL03150106-0508-100	Salt Creek	Coosa	F&W	Choccolocco Creek	its source	1	15.43	miles
AL03150106-0509-103	Cheaha Creek	Coosa	F&W	Lake Chinnabee	its source	1	4.86	miles
AL03150106-0511-100	Cheaha Creek	Coosa	S/F&W	Choccolocco Creek	Chinnabee dam	1	17.67	miles
AL03150106-0601-100	Trout Creek	Coosa	F&W	Coosa River	its source	1	13.69	miles
AL03150106-0701-102	Talladega Creek	Coosa	F&W	Alabama Highway 77	its source	1	23.66	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150106-0702-102	Talladega Creek	Coosa	PWS/F&W	Drivers Branch	Alabama Highway 77	1	6.67	miles
AL03150106-0703-100	Talladega Creek	Coosa	F&W	Lay Lake	Drivers Branch	1	29.51	miles
AL03150107-0102-103	Tallaseehatchee Creek	Coosa	PWS/F&W	Lake Howard	Lake Virginia dam	1	0.60	miles
AL03150107-0102-105	Tallaseehatchee Creek	Coosa	PWS/F&W	Lake Virginia	its source	1	5.83	miles
AL03150107-0205-100	Yellowleaf Creek	Coosa	S/F&W	Lay Lake	its source	1	15.30	miles
AL03150107-0205-200	Fourmile Creek	Coosa	F&W	Yellowleaf Creek	its source	1	10.90	miles
AL03150107-0502-110	Paint Creek	Coosa	F&W	Lay Lake	its source	1	14.26	miles
AL03150107-0603-110	Weogufka Creek	Coosa	S/F&W	Mitchell Lake	its source	1	45.16	miles
AL03150107-0701-300	East Fork Hatchet Creek	Coosa	OAW/F&W	Hatchet Creek	its source	1	5.30	miles
AL03150107-0701-400	West Fork Hatchet Creek	Coosa	OAW/F&W	Hatchet Creek	its source	1	7.71	miles
AL03150107-0704-100	Jacks Creek	Coosa	F&W	Socapatoy Creek	its source	1	10.51	miles
AL03150107-0705-100	Socapatoy Creek	Coosa	F&W	Hatchet Creek	its source	1	16.17	miles
AL03150107-0706-102	Hatchet Creek	Coosa	OAW/PWS/S/F&W	Wildcat Creek	its source	1	18.87	miles
AL03150107-0708-300	Jones Creek	Coosa	F&W	Hatchet Creek	its source	1	5.22	miles
AL03150107-0709-100	Hatchet Creek	Coosa	OAW/S/F&W	Mitchell Lake	Wildcat Creek	1	35.47	miles
AL03150107-0801-800	Turkey Creek	Coosa	F&W	Yellow Leaf Creek	its source	1	5.17	miles
AL03150107-0803-300	Cargle Creek	Coosa	F&W	Mitchell Lake	its source	1	7.80	miles
AL03150107-0901-110	Chestnut Creek	Coosa	F&W	Jordan Lake	its source	1	22.10	miles
AL03150107-0904-100	Weoka Creek	Coosa	S/F&W	Jordan Lake	its source	1	25.16	miles
AL03150107-0905-102	Sofkahatchee Creek	Coosa	F&W	Jordan Lake	its source	1	12.71	miles
AL03150107-0906-800	Pinchoulee Creek	Coosa	F&W	Jordan Lake	its source	1	9.03	miles
AL03150107-0907-100	Coosa River	Coosa	F&W	Tallapoosa River	Jordan Dam	1	12.96	miles
AL03140301-0503-100	Conecuh River	Escambia	F&W	Sepulga River	Point A Dam	1	34.68	miles
AL03140302-0401-100	Pond Creek	Escambia	F&W	Patsaliga Creek	its source	1	7.97	miles
AL03140302-0502-100	Piney Woods Creek	Escambia	F&W	Patsaliga Creek	its source	1	14.15	miles
AL03140302-0505-100	Buck Creek	Escambia	F&W	Patsaliga Creek	its source	1	10.78	miles
AL03140303-0703-102	Sepulga River	Escambia	F&W	Robinson Mill Creek	its source	1	46.99	miles
AL03140303-0704-300	Amos Mill Creek	Escambia	F&W	Sepulga River	its source	1	9.02	miles
AL03140304-0305-102	Burnt Corn Creek	Escambia	S/F&W	Sevenmile Creek	its source	1	38.44	miles
AL03140304-0402-200	Jordan Creek	Escambia	F&W	Murder Creek	its source	1	7.31	miles
AL03140304-0403-100	Murder Creek	Escambia	F&W	Cedar Creek	its source	1	59.39	miles
AL03140304-0505-700	Mayo Mill Creek	Escambia	F&W	Conecuh River	its source	1	5.81	miles
AL03170008-0205-101	Puppy Creek	Escatawpa	F&W	Escatawpa River	Alabama Highway 217	1	5.68	miles
AL03170008-0501-100	Big Creek	Escatawpa	PWS/F&W	Collins Creek	its source	1	13.33	miles
AL03170008-0502-200	Hamilton Creek	Escatawpa	F&W	Big Creek Lake	its source	1	4.78	miles
AL03170008-0601-200	Pasture Creek	Escatawpa	F&W	Big Creek	its source	1	8.47	miles
AL03170008-0602-110	Miller Creek	Escatawpa	F&W	Big Creek	its source	1	14.15	miles
AL03170008-0602-400	Deakle Creek	Escatawpa	F&W	Miller Creek	its source	1	6.37	miles
AL03170008-0603-100	Big Creek	Escatawpa	F&W	Alabama-Mississippi state line	Big Creek Lake dam	1	14.55	miles
AL03170008-0701-100	Jackson Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	1	14.03	miles
AL03170008-0702-100	Franklin Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	1	9.46	miles
AL03160204-0104-100	Halls Creek	Mobile	F&W	Tensaw Lake	its source	1	11.93	miles
AL03160204-0106-302	Tensaw River	Mobile	OAW/F&W	Junction of Briar Lake	Junction of Tensaw Lake	1	2.93	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160204-0106-303	Tensaw River	Mobile	F&W	Junction of Tensaw Lake	Mobile River	1	10.98	miles
AL03160204-0304-104	Eightmile Creek	Mobile	F&W	Highpoint Boulevard	its source	1	2.56	miles
AL03160204-0401-100	Gunnison Creek	Mobile	S/F&W	Bayou Sara	its source	1	7.62	miles
AL03160204-0502-100	Whitehouse Creek	Mobile	F&W	Bay Minette Creek	its source	1	13.10	miles
AL03160204-0505-100	Mobile River	Mobile	LWF	Mobile Bay	Spanish River	1	7.61	miles
AL03160204-0505-201	Tensaw River	Mobile	F&W	Mobile Bay	Junction of Tensaw and Apalachee Rivers	1	6.51	miles
AL03160205-0201-200	Caney Branch	Mobile	F&W	Fish River	its source	1	5.25	miles
AL03160205-0201-400	Perone Branch	Mobile	F&W	Fish River	its source	1	7.06	miles
AL03160205-0203-120	UT to Magnolia River	Mobile	F&W	Magnolia River	its source	1	3.65	miles
AL03160205-0208-200	Intracoastal Waterway	Mobile	F&W	Bon Secour Bay	Alabama Highway 59	1	3.35	miles
AL03140106-0503-100	Hollinger Creek	Perdido	F&W	Styx River	its source	1	23.10	miles
AL03140106-0601-100	Negro Creek	Perdido	F&W	Blackwater River	its source	1	11.77	miles
AL03140107-0204-100	Intracoastal Waterway	Perdido	F&W	Alabama Highway 59	Wolf Bay	1	5.08	miles
AL03150108-0404-101	Cahulga Creek	Tallapoosa	F&W	Tallapoosa River	US Highway 78	1	4.58	miles
AL03150108-0404-102	Cahulga Creek	Tallapoosa	PWS/F&W	US Highway 78	Cahulga Reservoir dam	1	0.47	miles
AL03150108-0404-104	Cahulga Creek	Tallapoosa	PWS/F&W	Cahulga Reservoir	its source	1	2.99	miles
AL03150108-0902-100	Bear Creek	Tallapoosa	F&W	Little Tallapoosa River	its source	1	12.78	miles
AL03150108-1003-100	Ketchepedrakee Creek	Tallapoosa	F&W	R L Harris Lake	its source	1	25.81	miles
AL03150109-0102-102	Crooked Creek	Tallapoosa	PWS/F&W	Alabama Highway 9	its source	1	2.17	miles
AL03150109-0102-400	Horsetrough Creek	Tallapoosa	F&W	Crooked Creek	its source	1	8.40	miles
AL03150109-0103-100	Crooked Creek	Tallapoosa	F&W	Tallapoosa River	Alabama Highway 9	1	21.08	miles
AL03150109-0104-100	Cornhouse Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	19.53	miles
AL03150109-0106-400	Hurricane Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	11.67	miles
AL03150109-0202-100	Little Chatahospee Creek	Tallapoosa	F&W	Chatahospee Creek	its source	1	14.20	miles
AL03150109-0302-100	Caty Creek	Tallapoosa	F&W	High Pine Creek	its source	1	11.93	miles
AL03150109-0304-100	Chikasanoxee Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	21.56	miles
AL03150109-0307-100	Little Emuckfaw Creek	Tallapoosa	F&W	Emuckfaw Creek	its source	1	9.23	miles
AL03150109-0405-102	Hillabee Creek	Tallapoosa	F&W	County Road bridge 3 miles east of Hackneyville	its source	1	1.48	miles
AL03150109-0701-102	Oakachoy Creek	Tallapoosa	F&W	Lake Martin	its source	1	6.14	miles
AL03150109-0801-100	Timbergut Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	14.19	miles
AL03150109-0803-302	Sugar Creek	Tallapoosa	F&W	Lake Martin	its source	1	4.64	miles
AL03150110-0101-300	Little Loblockee Creek	Tallapoosa	F&W	Loblockee Creek	its source	1	9.94	miles
AL03150110-0101-400	UT to Loblockee Creek	Tallapoosa	F&W	Loblockee Creek	its source	1	2.26	miles
AL03150110-0104-103	Sougahatchee Creek	Tallapoosa	F&W	Yates Lake	Sycamore Creek	1	13.30	miles
AL03150110-0202-102	Chewacla Creek	Tallapoosa	PWS/F&W	Moores Mill Creek	its source	1	14.92	miles
AL03150110-0204-100	Chewacla Creek	Tallapoosa	F&W	Uphapee Creek	Moores Mill Creek	1	23.20	miles
AL03150110-0204-300	Long Branch	Tallapoosa	F&W	Chewacla Creek	its source	1	12.26	miles
AL03150110-0304-400	Bulger Creek	Tallapoosa	PWS/F&W	Uphapee Creek	its source	1	7.52	miles
AL03150110-0504-102	Calebee Creek	Tallapoosa	F&W	Macon County Road 9	its source	1	36.95	miles
AL03150110-0802-102	Line Creek	Tallapoosa	F&W	Panther Creek	its source	1	34.78	miles
AL03150110-0902-100	Chubbehatchee Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	23.11	miles
AL03150110-0905-200	Harwell Mill Creek	Tallapoosa	F&W	Tallapoosa River	its source	1	7.70	miles
AL06030001-0203-102	Long Island Creek	Tennessee	PWS/S/F&W	Lake Guntersville	Miller Creek	1	1.85	miles
AL06030001-0203-103	Long Island Creek	Tennessee	S/F&W	Miller Creek	its source	1	2.43	miles
AL06030001-0402-110	Flat Rock Creek	Tennessee	S/F&W	Coon Creek	its source	1	9.22	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030001-0402-300	Hogue Creek	Tennessee	F&W	Flat Rock Creek	its source	1	3.48	miles
AL06030001-0403-100	Coon Creek	Tennessee	S/F&W	Lake Guntersville	its source	1	3.17	miles
AL06030001-0403-140	Rocky Branch	Tennessee	F&W	Warren Smith Creek	its source	1	2.00	miles
AL06030001-0403-600	Dry Creek	Tennessee	F&W	Coon Creek	its source	1	4.21	miles
AL06030001-0405-110	Mud Creek	Tennessee	F&W	Lake Guntersville	its source	1	17.71	miles
AL06030001-0406-100	Bryant Creek	Tennessee	F&W	Jones Creek	its source	1	12.96	miles
AL06030001-0505-100	South Sauty Creek	Tennessee	S/F&W	Lake Guntersville	its source	1	32.34	miles
AL06030001-0604-100	North Sauty Creek	Tennessee	PWS	Lake Guntersville	its source	1	8.91	miles
AL06030001-0805-110	Short Creek	Tennessee	F&W	Scarham Creek	its source	1	24.81	miles
AL06030001-0806-100	Short Creek	Tennessee	PWS/F&W	Lake Guntersville	Scarham Creek	1	0.84	miles
AL06030002-0101-100	Hurricane Creek	Tennessee	OAW/F&W	Paint Rock River	Alabama-Tennessee state line	1	10.89	miles
AL06030002-0103-200	Estil Fork	Tennessee	OAW/F&W	Paint Rock River	Alabama-Tennessee state line	1	8.00	miles
AL06030002-0307-102	Flint River	Tennessee	F&W	Mountain Fork	Alabama-Tennessee state line	1	16.99	miles
AL06030002-0402-102	Hurricane Creek	Tennessee	F&W	Gurley Pike Road	its source	1	18.11	miles
AL06030002-0403-111	Flint River	Tennessee	F&W	Hurricane Creek	Alabama Highway 72	1	7.14	miles
AL06030002-0404-102	Flint River	Tennessee	PWS/F&W	Big Cove Creek	Hurricane Creek	1	8.04	miles
AL06030002-0404-300	Big Cove Creek	Tennessee	F&W	Flint River	its source	1	8.19	miles
AL06030002-0405-100	Flint River	Tennessee	F&W	Wheeler Lake	Big Cove Creek	1	15.56	miles
AL06030002-0602-200	Mud Creek	Tennessee	F&W	West Fork Cotaco Creek	its source	1	3.42	miles
AL06030002-0602-800	Widner Creek	Tennessee	F&W	Mud Creek	its source	1	6.79	miles
AL06030002-0602-900	Fall Creek	Tennessee	F&W	Mud Creek	its source	1	3.62	miles
AL06030002-0702-102	Limestone Creek	Tennessee	F&W	Leslie Branch	Alabama-Tennessee state line	1	19.21	miles
AL06030002-0703-111	Limestone Creek	Tennessee	F&W	Wheeler Lake	US Highway 72	1	15.62	miles
AL06030002-0803-100	Piney Creek	Tennessee	F&W	Wheeler Lake	its source	1	41.94	miles
AL06030002-1003-710	Rock Creek	Tennessee	F&W	Flint Creek	its source	1	5.23	miles
AL06030002-1012-202	McDaniel Creek	Tennessee	F&W	Alabama Highway 36	its source	1	3.83	miles
AL06030002-1101-200	Town Creek	Tennessee	F&W	Swan Creek	its source	1	7.28	miles
AL06030002-1103-201	Round Island Creek	Tennessee	F&W	Wheeler Lake	Browns Ferry Road	1	2.87	miles
AL06030002-1202-100	First Creek	Tennessee	S/F&W	Tennessee River	its source	1	14.48	miles
AL06030002-1204-102	Second Creek	Tennessee	F&W	First bridge upstream from US Highway 72	Lauderdale County Road 76	1	2.34	miles
AL06030004-0403-102	Elk River	Tennessee	PWS/F&W	Alabama Highway 99	Alabama-Tennessee state line	1	12.89	miles
AL06030004-0403-800	Sulphur Creek	Tennessee	F&W	Elk River	its source	1	8.34	miles
AL06030004-0405-900	Big Creek	Tennessee	F&W	Elk River	its source	1	9.15	miles
AL06030005-0304-100	Town Creek	Tennessee	F&W	Wilson Lake	its source	1	46.16	miles
AL06030005-0507-100	Butler Creek	Tennessee	F&W	Shoal Creek	Alabama-Tennessee state line	1	3.88	miles
AL06030005-0507-200	Little Butler Creek	Tennessee	F&W	Butler Creek	Alabama-Tennessee state line	1	4.04	miles
AL06030005-0509-800	Indiancamp Creek	Tennessee	F&W	Shoal Creek	its source	1	5.98	miles
AL06030005-0605-102	Cypress Creek	Tennessee	PWS/F&W	City of Florence Water Treatment Plant	Little Cypress Creek	1	1.94	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030005-0605-103	Cypress Creek	Tennessee	F&W	Little Cypress Creek	Alabama-Tennessee state line	1	17.06	miles
AL06030005-0901-100	Bumpass Creek	Tennessee	F&W	Second Creek	Alabama-Tennessee state line	1	6.78	miles
AL06030006-0103-103	Bear Creek	Tennessee	S/F&W	Mill Creek	Upper Bear Creek Dam	1	3.00	miles
AL06030006-0203-112	Cedar Creek	Tennessee	PWS/S/F&W	Cedar Creek Lake	Alabama Highway 24	1	3.01	miles
AL06030006-0203-140	Tollison Creek	Tennessee	F&W	Cedar Creek Lake	its source	1	7.22	miles
AL03160101-0502-100	Bull Mountain Creek	Tombigbee	F&W	Alabama-Mississippi state line	its source	1	24.98	miles
AL03160101-0503-100	Hurricane Creek	Tombigbee	F&W	Alabama-Mississippi state line	its source	1	10.14	miles
AL03160103-0101-100	West Branch Buttahatchee River	Tombigbee	F&W	Buttahatchee River	its source	1	10.98	miles
AL03160103-0103-100	Barn Creek	Tombigbee	F&W	Buttahatchee River	its source	1	11.80	miles
AL03160103-0104-100	Camp Creek	Tombigbee	F&W	Buttahatchee River	its source	1	10.64	miles
AL03160103-0106-100	Williams Creek	Tombigbee	F&W	Buttahatchee River	its source	1	13.11	miles
AL03160103-0106-200	Stevens Creek	Tombigbee	F&W	Williams Creek	its source	1	4.01	miles
AL03160103-0107-102	Buttahatchee River	Tombigbee	F&W	U.S. Highway 278 one mile east of junction of U.S. Highways 43 and 78 in Hamilton	Lake Buttahatchee dam	1	16.36	miles
AL03160103-0201-201	Purgatory Creek	Tombigbee	F&W	Beaver Creek	Wickett Creek	1	0.50	miles
AL03160103-0201-202	Purgatory Creek	Tombigbee	F&W	Wickett Creek	US Highway 278	1	1.86	miles
AL03160103-0201-203	Purgatory Creek	Tombigbee	PWS/F&W	US Highway 278	its source	1	1.28	miles
AL03160103-0301-100	Woods Creek	Tombigbee	F&W	Buttahatchee River	its source	1	13.95	miles
AL03160103-0302-102	Buttahatchee River	Tombigbee	PWS/F&W	U.S. Hwy. 278 one mile east of junction of U.S Highways 43 and 78 in Hamilton	U.S. Hwy. 278 seven miles east of junction of U.S. Highways 43 and 78 in Hamilton	1	9.05	miles
AL03160103-0303-200	Cantrell Mill Creek	Tombigbee	F&W	Buttahatchee River	its source	1	7.40	miles
AL03160103-0306-101	Buttahatchee River	Tombigbee	F&W	Alabama-Mississippi state line	U.S. Highway 278 one mile east of junction of U.S. Highways 43 and 78 in Hamilton	1	41.85	miles
AL03160103-0401-200	Boardtree Creek	Tombigbee	F&W	Sipsey Creek	its source	1	10.87	miles
AL03160105-0201-102	Luxapallila Creek	Tombigbee	PWS/F&W	Fayette County Road 37	County road crossing approximately 6 miles upstream from Alabama Highway 18	1	8.19	miles
AL03160105-0303-100	Hells Creek	Tombigbee	F&W	Yellow Creek	its source	1	25.20	miles
AL03160106-0405-200	Little Bear Creek	Tombigbee	F&W	Bear Creek	its source	1	7.82	miles
AL03160106-0407-100	Bear Creek	Tombigbee	F&W	Lubbub Creek	its source	1	33.40	miles
AL03160106-0703-100	Jones Creek	Tombigbee	F&W	Tombigbee River	its source	1	15.28	miles
AL03160107-0203-100	Bear Creek	Tombigbee	F&W	Sipsey River	its source	1	10.64	miles
AL03160107-0306-102	Sipsey River	Tombigbee	F&W	Gainesville Reservoir	Tuscaloosa county line	1	40.86	miles
AL03160201-0102-100	Dry Creek	Tombigbee	F&W	Chickasaw Bogue	its source	1	13.84	miles
AL03160201-0103-300	Poplar Creek	Tombigbee	F&W	Chickasaw Bogue	its source	1	8.87	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160201-0109-100	Chickasaw Bogue	Tombigbee	F&W	Coffeeville Lake	its source	1	41.19	miles
AL03160201-0201-100	Little Kinterbish Creek	Tombigbee	F&W	Kinterbish Creek	its source	1	8.54	miles
AL03160201-0506-110	Tuckabum Creek	Tombigbee	F&W	Coffeeville Lake	Alabama-Mississippi state line	1	47.07	miles
AL03160201-0602-100	Sweetwater Creek	Tombigbee	F&W	Horse Creek	its source	1	18.59	miles
AL03160201-0702-100	Tallahatta Creek	Tombigbee	F&W	Bashi Creek	its source	1	20.97	miles
AL03160201-0807-100	Okatuppa Creek	Tombigbee	F&W	Coffeeville Lake	Alabama-Mississippi state line	1	47.09	miles
AL03160201-0908-110	Turkey Creek	Tombigbee	S/F&W	Coffeeville Lake	its source	1	16.24	miles
AL03160203-0201-110	Wells Creek	Tombigbee	F&W	Salitpa Creek	its source	1	14.71	miles
AL03160203-0203-100	Harris Creek	Tombigbee	F&W	Salitpa Creek	its source	1	12.35	miles
AL03160203-0302-200	Ulcanush Creek	Tombigbee	F&W	Tombigbee River	its source	1	9.33	miles
AL03160203-0401-100	Tattilaba Creek	Tombigbee	F&W	Jackson Creek	its source	1	23.68	miles
AL03160203-0902-100	Salt Creek	Tombigbee	F&W	Tombigbee River	its source	1	9.96	miles
AL03140103-0203-200	Pond Creek	Yellow	F&W	Five Runs Creek	its source	1	4.71	miles
AL03140103-0203-400	Bay Branch	Yellow	F&W	Five Runs Creek	its source	1	7.58	miles
AL03140103-0301-100	Indian Creek	Yellow	F&W	Yellow River	its source	1	10.86	miles
Category 1 Estuary and Ocean								
AL03160204-0503-101	Bay Minette	Mobile	F&W	Blakely River	its source	1	1.11	square miles
AL03160205-0204-111	Weeks Bay	Mobile	S/F&W	Bon Secour Bay	Fish River	1	3.04	square miles
AL03160205-0300-300	Mobile Bay	Mobile	F&W	West of a line drawn due south from the western shore of Chacaloochee Bay (30.67981, -087.99561)	North of a line due east from a point at the mouth of Dog River (30.56478, -088.08758)	1	31.56	square miles
AL03160205-0300-400	Mobile Bay	Mobile	S/F&W	South of a line drawn due east from the mouth of Dog River (30.56478, -088.08758)	North of the segment classified for shellfish harvesting	1	54.93	square miles
AL03160205-0300-502	Mobile Bay	Mobile	S/F&W	East of a line drawn due south from the western shore of Chacaloochee Bay (30.67981, -087.99561) except area 1000 feet offshore from Ragged Point to the mouth of Yancey Branch	North of a line due east of a point at the mouth of Dog River (30.56478, -088.08758)	1	35.80	square miles
AL03140107-0204-400	Arnica Bay	Perdido	SH/S/F&W	Perdido Bay	Bay la Launch	1	1.27	square miles
AL03140107-0205-101	Little Lagoon	Perdido	SH/S/F&W	west of Little Lagoon Pass		1	2.64	square miles
Category 2 Lakes and Reservoirs								
AL03150203-0110-111	Bogue Chitto Creek (Dannelly Lake)	Alabama	F&W	Alabama River	end of embayment	2A	546.56	acres
AL03160110-0305-202	Clear Creek (Smith Lake)	Black Warrior	S/F&W	Coon Creek	Caney Creek	2A	782.08	acres
AL03160112-0202-100	Big Yellow Creek (Bankhead Lake)	Black Warrior	S/F&W	Black Warrior River	end of embayment	2A	445.51	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150110-0102-102	Sougahatchee Creek (Sougahatchee Lake)	Tallapoosa	PWS/F&W	Sougahatchee Lake dam	extent of reservoir	2A	346.36	acres
AL03160201-0704-111	Bashi Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	2A	12.91	acres
AL03150203-0505-111	Chilatchee Creek (Dannelly Lake)	Alabama	S/F&W	Alabama River	end of embayment	2B	612.57	acres
AL03150203-0606-111	Beaver Creek (Claiborne Lake)	Alabama	PWS	Alabama River	end of embayment	2B	9.18	acres
AL03150203-0703-102	Alabama River (Claiborne Lake)	Alabama	PWS	Rockwest Creek	Millers Ferry Lock and Dam	2B	386.28	acres
AL03150204-0502-502	Chitterling Creek (Little River Lake)	Alabama	S/F&W	Little River Lake dam	extent of reservoir	2B	32.98	acres
AL03160110-0504-500	Simpson Creek (Smith Lake)	Black Warrior	S/F&W	Ryan Creek	end of embayment	2B	1319.43	acres
AL03160112-0302-300	UT to Rockcastle Creek (Ski Lake)	Black Warrior	F&W	Ski Lake dam	extent of reservoir	2B	106.72	acres
AL03160112-0302-400	UT to Rockcastle Creek (Catfish Lake)	Black Warrior	F&W	Catfish Lake dam	extent of reservoir	2B	10.00	acres
AL03160112-0401-112	Clear Creek (Bugs Lake)	Black Warrior	PWS	Bugs Lake dam	extent of reservoir	2B	63.96	acres
AL03160112-0501-102	Yellow Creek (Lake Harris)	Black Warrior	PWS	Lake Harris dam	Little Yellow Creek	2B	450.31	acres
AL03130003-0903-102	Chattahoochee River (Walter F George Lake)	Chattahoochee	F&W	Cliatt Branch	14th Street Bridge between Columbus and Phenix City	2B	138.30	acres
AL03150105-0605-101	Chattooga River (Weiss Lake)	Coosa	S/F&W	Coosa River	end of embayment	2B	1755.50	acres
Category 2 Rivers and Streams								
AL03150201-0309-300	Whites Slough	Alabama	F&W	Catoma Creek	its source	2A	8.22	miles
AL03150201-0407-100	Pintlala Creek	Alabama	S/F&W	Woodruff Lake	Pinchony Creek	2A	23.65	miles
AL03150201-0801-200	Lake Creek	Alabama	F&W	Fort Deposit Creek	its source	2A	8.79	miles
AL03150203-0105-100	Mud Creek	Alabama	F&W	Bogue Chitto Creek	its source	2A	20.87	miles
AL03150203-0702-100	Dixon Creek	Alabama	F&W	Alabama River	its source	2A	22.47	miles
AL03150203-0801-100	Gravel Creek	Alabama	F&W	Pursley Creek	its source	2A	18.45	miles
AL03150204-0704-100	Majors Creek	Alabama	F&W	Alabama River	its source	2A	19.29	miles
AL03160109-0101-700	Warrior Creek	Black Warrior	F&W	Mulberry Fork	its source	2A	4.28	miles
AL03160109-0108-101	Mud Creek	Black Warrior	F&W	Mulberry Fork	Alabama Highway 31	2A	4.34	miles
AL03160109-0204-100	Dorsey Creek	Black Warrior	F&W	Mulberry Fork	its source	2A	18.04	miles
AL03160109-0206-100	Mulberry Fork	Black Warrior	F&W	Sipsey Fork	Marriott Creek	2A	23.34	miles
AL03160109-0307-300	Charlies Creek	Black Warrior	F&W	Blackwater Creek	its source	2A	6.67	miles
AL03160109-0403-200	Burton Creek	Black Warrior	F&W	Lost Creek	its source	2A	4.16	miles
AL03160109-0405-132	Lost Creek	Black Warrior	F&W	Indian Creek	Alabama Highway 69 at Oakman	2A	11.61	miles
AL03160109-0502-102	Wolf Creek	Black Warrior	S/F&W	Alabama Highway 102	its source	2A	5.28	miles
AL03160109-0601-102	Cane Creek	Black Warrior	F&W	Town Creek	its source	2A	10.34	miles
AL03160109-0604-700	Lost Creek	Black Warrior	S/F&W	Bankhead Lake	Two miles upstream from Wolf Creek	2A	2.64	miles
AL03160110-0301-100	Right Fork Clear Creek	Black Warrior	F&W	Clear Creek	its source	2A	15.61	miles
AL03160110-0303-200	Widows Creek	Black Warrior	F&W	Clear Creek	its source	2A	7.35	miles
AL03160110-0305-203	Clear Creek	Black Warrior	F&W	Caney Creek	Haleyville City Lake dam	2A	35.34	miles
AL03160111-0302-100	Longs Branch	Black Warrior	F&W	Locust Fork	its source	2A	7.87	miles
AL03160111-0413-600	Coal Creek	Black Warrior	F&W	Locust Fork	its source	2A	4.79	miles
AL03160111-0603-200	Little Buck Creek	Black Warrior	F&W	Buck Creek	its source	2A	8.99	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160112-0101-101	Valley Creek	Black Warrior	LWF	19th Street North (Bessemer)	Opossum Creek	2A	0.90	miles
AL03160112-0101-200	Opossum Creek	Black Warrior	A&I	Valley Creek	its source	2A	7.45	miles
AL03160112-0102-100	Valley Creek	Black Warrior	LWF	Blue Creek	19th Street North (Bessemer)	2A	10.80	miles
AL03160112-0104-100	Valley Creek	Black Warrior	F&W	Rock Creek	Blue Creek	2A	11.78	miles
AL03160112-0105-102	Mud Creek	Black Warrior	F&W	Big Branch	its source	2A	7.70	miles
AL03160112-0106-101	Valley Creek	Black Warrior	F&W	Bankhead Lake	Mud Creek	2A	5.23	miles
AL03160112-0106-102	Valley Creek	Black Warrior	S/F&W	Mud Creek	Rock Creek	2A	10.90	miles
AL03160112-0201-500	Little Yellow Creek	Black Warrior	F&W	Big Yellow Creek	its source	2A	10.65	miles
AL03160112-0301-400	Jock Creek	Black Warrior	F&W	Blue Creek	its source	2A	2.21	miles
AL03160113-0503-110	Polecat Creek	Black Warrior	F&W	Big Brush Creek	its source	2A	14.02	miles
AL03150202-0202-200	Dry Brook	Cahaba	F&W	Cahaba Valley Creek	its source	2A	3.49	miles
AL03150202-0407-800	Cane Creek	Cahaba	F&W	Cahaba River	its source	2A	10.38	miles
AL03150202-0502-100	Schultz Creek	Cahaba	S	Cahaba River	its source	2A	16.39	miles
AL03130003-0505-101	Uchee Creek	Chattahoochee	S/F&W	Walter F George Lake	County Road 39	2A	8.96	miles
AL03130003-1101-100	Hurtsboro Creek	Chattahoochee	F&W	North Fork Cowikee Creek	its source	2A	19.41	miles
AL03130003-1301-100	Chewalla Creek	Chattahoochee	S/F&W	Walter F George Lake	its source	2A	13.50	miles
AL03130004-0703-102	Chattahoochee River	Chattahoochee	S/F&W	Woods Branch	Walter F. George Lock and Dam	2A	36.04	miles
AL03130012-0104-200	Big Creek	Chipola	F&W	Marshall Creek	its source	2A	16.45	miles
AL03140201-0302-110	Little Judy Creek	Choctawhatchee	F&W	Judy Creek	its source	2A	14.99	miles
AL03140201-0501-202	Beaver Creek	Choctawhatchee	F&W	Dothan WWTP	its source	2A	4.54	miles
AL03140201-0502-500	UT to Bear Creek	Choctawhatchee	F&W	Bear Creek	its source	2A	3.18	miles
AL03140201-0504-200	Mossy Camp Branch	Choctawhatchee	F&W	Little Choctawhatchee River	its source	2A	4.34	miles
AL03140201-0603-100	Choctawhatchee River	Choctawhatchee	S/F&W	Brooking Mill Creek	its source	2A	10.83	miles
AL03140201-0701-100	Little Claybank Creek	Choctawhatchee	F&W	Claybank Creek	its source	2A	8.54	miles
AL03140201-1102-550	UT to Blanket Creek	Choctawhatchee	F&W	Blanket Creek	its source	2A	2.16	miles
AL03140201-1104-500	Beargrass Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	2A	2.96	miles
AL03140201-1106-100	Double Bridges Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	2A	38.28	miles
AL03140202-0101-100	Stinking Creek	Choctawhatchee	F&W	Pea Creek	its source	2A	9.89	miles
AL03140202-0201-200	Johnson Creek	Choctawhatchee	F&W	Pea River	its source	2A	9.51	miles
AL03140202-0203-110	Little Indian Creek	Choctawhatchee	F&W	Pea River	its source	2A	12.56	miles
AL03140202-0207-102	Pea River	Choctawhatchee	F&W	Connors Creek	its source	2A	31.65	miles
AL03140202-0301-102	Pea River	Choctawhatchee	S/F&W	Buckhorn Creek	Connors Creek	2A	10.44	miles
AL03140202-0303-200	Richland Creek	Choctawhatchee	F&W	Pea River	its source	2A	15.90	miles
AL03140202-0502-102	Pea River	Choctawhatchee	S/F&W	Pike/Barbour County Road 77	Kaiser Branch	2A	5.77	miles
AL03140202-0504-102	Pea River	Choctawhatchee	F&W	US Highway 231	Pike/Barbour County Road 77	2A	6.41	miles
AL03140202-0610-102	Pea River	Choctawhatchee	S/F&W	Snake Branch	Bucks Mill Creek	2A	19.54	miles
AL03140202-0803-400	Eightmile Creek	Choctawhatchee	F&W	Flat Creek	Alabama-Florida state line	2A	8.61	miles
AL03140202-0904-102	Pea River	Choctawhatchee	S/F&W	Alabama-Florida state line	Flat Creek	2A	10.42	miles
AL03140202-0906-102	Pea River	Choctawhatchee	S/F&W	Laddon Creek	Alabama-Florida state line	2A	7.36	miles
AL03150105-0908-200	Mill Creek	Coosa	F&W	Terrapin Creek	its source	2A	8.79	miles
AL03150106-0406-100	Ohatchee Creek	Coosa	S/F&W	Logan Martin Lake	its source	2A	26.64	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150107-0907-500	Fourmile Creek	Coosa	F&W	Taylor Creek	its source	2A	5.67	miles
AL03140301-0102-100	Flat Creek	Escambia	F&W	Conecuh River	its source	2A	11.74	miles
AL03140301-0103-100	Log Creek	Escambia	F&W	Conecuh River	its source	2A	13.31	miles
AL03140302-0102-100	Olustee Creek	Escambia	F&W	Patsaliga Creek	its source	2A	23.90	miles
AL03140302-0202-200	Blue Creek	Escambia	F&W	Patsaliga Creek	its source	2A	18.08	miles
AL03140303-0101-100	Hawkins Creek	Escambia	F&W	Persimmon Creek	its source	2A	4.25	miles
AL03140303-0203-100	Panther Creek	Escambia	F&W	Persimmon Creek	its source	2A	23.10	miles
AL03140303-0204-100	Persimmon Creek	Escambia	F&W	Sepulga River	its source	2A	55.01	miles
AL03140303-0302-100	Long Creek	Escambia	F&W	Duck Creek	its source	2A	21.93	miles
AL03140303-0405-500	Ninemile Branch	Escambia	F&W	Pigeon Creek	its source	2A	2.29	miles
AL03140304-0501-200	Folley Creek	Escambia	F&W	Conecuh River	its source	2A	3.68	miles
AL03140304-0505-800	Maye Creek	Escambia	F&W	Conecuh River	its source	2A	3.81	miles
AL03140304-0602-100	Narrow Gap Creek	Escambia	F&W	Little Escambia Creek	its source	2A	10.25	miles
AL03170009-0102-200	Carls Creek	Escatawpa	F&W	Bayou la Batre	its source	2A	2.93	miles
AL03160204-0402-502	Norton Creek	Mobile	F&W	Saraland WWTP	its source	2A	3.74	miles
AL03160205-0105-200	North Fork Deer River	Mobile	F&W	Deer River	its source	2A	1.81	miles
AL03160205-0203-400	Weeks Creek	Mobile	F&W	Magnolia River	its source	2A	3.58	miles
AL03160205-0203-500	Schoolhouse Branch	Mobile	F&W	Magnolia River	its source	2A	3.83	miles
AL03160205-0204-401	Turkey Branch	Mobile	S/F&W	Fish River	Baldwin County Road 181	2A	1.53	miles
AL03160205-0204-510	Waterhole Branch	Mobile	F&W	Fish River	its source	2A	7.22	miles
AL03140107-0104-500	Peterson Branch	Perdido	F&W	Perdido Bay	its source	2A	3.98	miles
AL03140107-0201-100	Wolf Creek	Perdido	F&W	Wolf Bay	its source	2A	8.91	miles
AL03140107-0201-200	Sandy Creek	Perdido	S/F&W	Wolf Creek	its source	2A	7.57	miles
AL03140107-0202-101	Miflin Creek	Perdido	S/F&W	Wolf Bay	limit of tidal effects	2A	3.39	miles
AL03150109-0301-104	High Pine Creek	Tallapoosa	PWS	High Pine Creek Lake #2	High Pine Creek Lake #1 dam	2A	3.98	miles
AL03150110-0102-103	Sougahatchee Creek	Tallapoosa	PWS/F&W	Sougahatchee Lake	its source	2A	4.95	miles
AL03150110-0704-100	Old Town Creek	Tallapoosa	F&W	Line Creek	its source	2A	40.26	miles
AL03150110-0803-110	Johnsons Creek	Tallapoosa	F&W	Line Creek	its source	2A	16.77	miles
AL03150110-0903-300	Goodwater Creek	Tallapoosa	F&W	Tallapoosa River	its source	2A	7.28	miles
AL06030001-0305-100	Big Coon Creek	Tennessee	F&W	Coon Creek	its source	2A	12.64	miles
AL06030001-0502-100	Kirby Creek	Tennessee	F&W	South Sauty Creek	its source	2A	12.52	miles
AL06030002-0204-100	Paint Rock River	Tennessee	F&W	Wheeler Lake	its source	2A	53.72	miles
AL06030002-0901-100	Shoal Creek	Tennessee	F&W	Wheeler Lake	its source	2A	14.38	miles
AL06030002-1101-103	Swan Creek	Tennessee	F&W	Town Creek	its source	2A	10.83	miles
AL06030005-0102-101	Muddy Fork	Tennessee	A&I	Big Nance Creek	Crow Branch	2A	11.14	miles
AL06030005-0102-700	Crow Branch	Tennessee	A&I	Muddy Fork	its source	2A	4.73	miles
AL06030005-0103-303	Sinking Creek	Tennessee	PWS/F&W	Sinking Creek Lake	its source	2A	2.09	miles
AL06030005-1001-100	Bluff Creek	Tennessee	F&W	Pickwick Lake	its source	2A	9.30	miles
AL06030005-1002-100	Colbert Creek	Tennessee	F&W	Pickwick Lake	its source	2A	5.52	miles
AL06030006-0202-102	Cedar Creek	Tennessee	F&W	Alabama Highway 24	its source	2A	24.60	miles
AL03160103-0303-600	Clark Creek	Tombigbee	F&W	Buttahatchee River	its source	2A	3.96	miles
AL03160106-0203-100	Coal Fire Creek	Tombigbee	S/F&W	Aliceville Lake	its source	2A	43.31	miles
AL03160106-0701-100	Toms Creek	Tombigbee	F&W	Factory Creek	its source	2A	12.17	miles
AL03160107-0102-100	New River	Tombigbee	F&W	Sipsey River	its source	2A	24.41	miles
AL03160107-0306-200	Hughes Creek	Tombigbee	F&W	Sipsey River	its source	2A	11.08	miles
AL03160201-0105-100	Powell Creek	Tombigbee	F&W	Chickasaw Bogue	its source	2A	18.92	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160201-0203-100	Kinterbish Creek	Tombigbee	S/F&W	Tombigbee River	Alabama-Mississippi state line	2A	52.74	miles
AL03160201-0302-100	Beaver Creek	Tombigbee	S/F&W	Tombigbee River	its source	2A	41.86	miles
AL03160201-0504-100	Yantley Creek	Tombigbee	F&W	Tuckabum Creek	Alabama-Mississippi state line	2A	37.28	miles
AL03160201-0704-100	Bashi Creek	Tombigbee	S/F&W	Coffeeville Lake	its source	2A	33.94	miles
AL03160201-0904-102	Wahalak Creek	Tombigbee	F&W	Spear Creek	its source	2A	11.42	miles
AL03160202-0404-101	Sucarnoochee River	Tombigbee	PWS/S/F&W	US Highway 11	Miuka Creek	2A	6.07	miles
AL03140103-0303-110	Clear Creek	Yellow	F&W	Yellow River	its source	2A	13.99	miles
AL03150201-0103-100	Mortar Creek	Alabama	F&W	Alabama River	its source	2B	23.99	miles
AL03150201-0105-500	Pierce Creek	Alabama	F&W	Mill Creek	its source	2B	3.42	miles
AL03150201-0107-200	Pine Creek	Alabama	F&W	Alabama River (Woodruff Lake)	its source	2B	9.58	miles
AL03150201-0304-110	Little Catoma Creek	Alabama	F&W	Catoma Creek	its source	2B	28.99	miles
AL03150201-0306-110	Waller Creek	Alabama	F&W	Ramer Creek	its source	2B	12.16	miles
AL03150201-0308-100	Catoma Creek	Alabama	F&W	Ramer Creek	its source	2B	21.50	miles
AL03150201-0403-100	Pinchony Creek	Alabama	F&W	Pintlala Creek	its source	2B	18.46	miles
AL03150201-0501-200	Noland Creek	Alabama	F&W	Alabama River	its source	2B	9.96	miles
AL03150201-0502-100	Tallawassee Creek	Alabama	F&W	Alabama River	its source	2B	16.91	miles
AL03150201-0601-400	Indian Creek	Alabama	F&W	Swift Creek	its source	2B	4.77	miles
AL03150201-0704-100	Beaver Creek	Alabama	F&W	Alabama River	its source	2B	10.19	miles
AL03150201-0705-100	Ivy Creek	Alabama	F&W	Alabama River	its source	2B	15.51	miles
AL03150201-0801-100	Fort Deposit Creek	Alabama	F&W	Big Swamp Creek	its source	2B	13.52	miles
AL03150201-0802-500	Cherry Creek	Alabama	F&W	Big Swamp Creek	its source	2B	7.71	miles
AL03150201-0903-100	Little Mulberry Creek	Alabama	F&W	Alabama River	its source	2B	38.51	miles
AL03150201-1002-100	Little Mulberry Creek	Alabama	F&W	Mulberry Creek	its source	2B	4.92	miles
AL03150201-1002-200	Byrd Creek	Alabama	F&W	Little Mulberry Creek	its source	2B	6.50	miles
AL03150201-1002-300	Morgan Creek	Alabama	F&W	Little Mulberry Creek	its source	2B	6.66	miles
AL03150203-0104-100	Brush Creek	Alabama	F&W	Mud Creek	its source	2B	15.47	miles
AL03150203-0109-200	Tatum Creek	Alabama	F&W	Bogue Chitto Creek	its source	2B	11.92	miles
AL03150203-0206-100	Dry Cedar Creek	Alabama	F&W	Cedar Creek	its source	2B	28.26	miles
AL03150203-0206-300	Sullivan Branch	Alabama	F&W	Dry Cedar Creek	its source	2B	8.63	miles
AL03150203-0208-100	Mush Creek	Alabama	F&W	Cedar Creek	its source	2B	24.58	miles
AL03150203-0402-100	Sturdivant Creek	Alabama	F&W	Pine Barren Creek	its source	2B	18.77	miles
AL03150203-0405-100	Bear Creek	Alabama	F&W	Pine Barren Creek	its source	2B	27.35	miles
AL03150203-0501-100	Sand Creek	Alabama	F&W	Chilatchee Creek	its source	2B	13.39	miles
AL03150203-0501-200	Glover Creek	Alabama	F&W	Sand Creek	its source	2B	4.70	miles
AL03150203-0502-100	Rogers Creek	Alabama	F&W	Chilatchee Creek	its source	2B	14.00	miles
AL03150203-0504-100	Little Chilatchee Creek	Alabama	F&W	Chilatchee Creek	its source	2B	12.30	miles
AL03150203-0505-200	Chilatchee Creek	Alabama	S/F&W	Dannelly Lake	its source	2B	36.42	miles
AL03150203-0606-100	Beaver Creek	Alabama	F&W	Claiborne Lake	its source	2B	38.22	miles
AL03150203-0606-200	Red Creek	Alabama	F&W	Beaver Creek	its source	2B	21.96	miles
AL03150204-0203-100	Robinson Creek	Alabama	F&W	Big Flat Creek	its source	2B	24.35	miles
AL03150204-0403-110	Randons Creek	Alabama	F&W	Lovetts Creek	its source	2B	16.17	miles
AL03150204-0403-300	Bear Creek	Alabama	F&W	Randons Creek	its source	2B	9.78	miles
AL03150204-0404-110	Lovetts Creek	Alabama	F&W	Alabama River	its source	2B	16.39	miles
AL03150204-0502-300	Butterfork Creek	Alabama	F&W	Little River	its source	2B	7.70	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150204-0502-501	Chitterling Creek	Alabama	F&W	Little River	Little River Lake dam	2B	0.34	miles
AL03150204-0502-503	Chitterling Creek	Alabama	F&W	Little River Lake	its source	2B	4.69	miles
AL03150204-0503-100	Little River	Alabama	S/F&W	Alabama River	its source	2B	33.49	miles
AL03150204-0601-100	Wallers Creek	Alabama	F&W	Alabama River	its source	2B	15.40	miles
AL03150204-0602-400	Baileys Creek	Alabama	F&W	Alabama River	its source	2B	9.25	miles
AL03150204-0603-300	Little Reedy Creek	Alabama	F&W	Sizemore Creek	its source	2B	7.52	miles
AL03150204-0604-400	Shomo Creek	Alabama	F&W	Alabama River	its source	2B	11.04	miles
AL03160109-0103-100	Duck River	Black Warrior	F&W	Mulberry Fork	its source	2B	19.28	miles
AL03160109-0107-110	Blue Springs Creek	Black Warrior	F&W	Mulberry Fork	its source	2B	13.97	miles
AL03160109-0108-102	Mud Creek	Black Warrior	F&W	Alabama Highway 31	its source	2B	4.66	miles
AL03160109-0109-103	Mulberry Fork	Black Warrior	F&W	Blount County Road 6	its source	2B	14.74	miles
AL03160109-0109-900	Pan Creek	Black Warrior	F&W	Mulberry Fork	its source	2B	10.67	miles
AL03160109-0205-200	Sullivan Creek	Black Warrior	F&W	Mulberry Fork	its source	2B	8.20	miles
AL03160109-0206-510	Sloan Creek	Black Warrior	F&W	Mulberry Fork	its source	2B	5.62	miles
AL03160109-0301-110	Splunge Creek	Black Warrior	F&W	Blackwater Creek	its source	2B	20.11	miles
AL03160109-0306-100	Spring Creek	Black Warrior	F&W	Blackwater Creek	its source	2B	7.90	miles
AL03160109-0402-104	Lost Creek	Black Warrior	S/F&W	Cranford Creek	its source	2B	8.33	miles
AL03160109-0403-102	Lost Creek	Black Warrior	F&W	Mill dam at Cedrum	US Highway 78 north of Cedrum	2B	1.23	miles
AL03160109-0403-140	Baker Branch	Black Warrior	F&W	Burton Creek	its source	2B	1.98	miles
AL03160109-0405-131	Lost Creek	Black Warrior	S/F&W	Cane Creek	Indian Creek	2B	2.89	miles
AL03160109-0603-102	Mulberry Fork	Black Warrior	PWS/F&W	Frog Ague Creek	Sipsey Fork	2B	13.54	miles
AL03160110-0201-300	Collier Creek	Black Warrior	F&W	Brushy Creek	its source	2B	5.31	miles
AL03160110-0201-800	West Fork Beech Creek	Black Warrior	F&W	Beech Creek	its source	2B	3.95	miles
AL03160110-0302-200	Little Clear Creek	Black Warrior	F&W	Clear Creek	its source	2B	11.53	miles
AL03160110-0506-100	Mill Creek	Black Warrior	F&W	Sipsey Fork	its source	2B	12.99	miles
AL03160110-0506-200	Little Mill Creek	Black Warrior	F&W	Mill Creek	its source	2B	6.01	miles
AL03160111-0101-100	Bristow Creek	Black Warrior	F&W	Locust Fork	its source	2B	9.51	miles
AL03160111-0103-100	Clear Creek	Black Warrior	F&W	Locust Fork	its source	2B	16.40	miles
AL03160111-0106-110	Little Reedbrake Creek	Black Warrior	F&W	Slab Creek	its source	2B	2.92	miles
AL03160111-0201-100	Wynnville Creek	Black Warrior	F&W	Locust Fork	its source	2B	5.98	miles
AL03160111-0303-200	Sand Valley Creek	Black Warrior	F&W	Gurley Creek	its source	2B	5.55	miles
AL03160111-0304-201	Self Creek	Black Warrior	F&W	Gurley Creek	Alabama Highway 79	2B	8.55	miles
AL03160111-0304-202	Self Creek	Black Warrior	PWS	Alabama Highway 79	its source	2B	4.14	miles
AL03160111-0307-100	Turkey Creek	Black Warrior	F&W	Locust Fork	its source	2B	25.34	miles
AL03160111-0401-100	Crooked Creek	Black Warrior	F&W	Locust Fork	its source	2B	10.03	miles
AL03160111-0404-500	Ward Creek	Black Warrior	F&W	Locust Fork	its source	2B	6.65	miles
AL03160111-0410-100	Locust Fork	Black Warrior	F&W	Village Creek	Jefferson County Road 77	2B	23.26	miles
AL03160112-0101-102	Valley Creek	Black Warrior	LWF	Opossum Creek	its source	2B	13.53	miles
AL03160112-0104-400	Lick Creek	Black Warrior	F&W	Valley Creek	its source	2B	8.13	miles
AL03160112-0202-200	Clifty Creek	Black Warrior	F&W	Big Yellow Creek	its source	2B	4.91	miles
AL03160112-0301-300	Little Bear Creek	Black Warrior	F&W	Blue Creek	its source	2B	3.48	miles
AL03160112-0303-120	Hanna Mill Creek	Black Warrior	F&W	Davis Creek	its source	2B	4.62	miles
AL03160112-0303-400	Prudes Creek	Black Warrior	F&W	Davis Creek	its source	2B	3.78	miles
AL03160112-0401-101	Clear Creek	Black Warrior	F&W	North River	Bugs Lake dam	2B	3.82	miles
AL03160112-0401-103	Clear Creek	Black Warrior	PWS	Bugs Lake	its source	2B	7.66	miles
AL03160112-0402-102	North River	Black Warrior	S/F&W	Ellis Creek	its source	2B	16.39	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160112-0403-200	Cedar Creek	Black Warrior	F&W	North River	its source	2B	13.97	miles
AL03160112-0407-100	Cripple Creek	Black Warrior	F&W	North River	its source	2B	10.45	miles
AL03160112-0412-100	Carroll Creek	Black Warrior	F&W	North River	its source	2B	15.12	miles
AL03160112-0413-101	North River	Black Warrior	F&W	Black Warrior River	Lake Tuscaloosa dam	2B	1.60	miles
AL03160112-0501-101	Yellow Creek	Black Warrior	F&W	Oliver Lake	Lake Harris dam	2B	2.88	miles
AL03160113-0105-100	Big Sandy Creek	Black Warrior	F&W	Black Warrior River	its source	2B	37.36	miles
AL03160113-0202-200	Big Creek	Black Warrior	F&W	Black Warrior River	its source	2B	12.12	miles
AL03160113-0202-350	UT to Tater Hill Creek	Black Warrior	F&W	Tater Hill Creek	its source	2B	2.20	miles
AL03160113-0203-110	Cypress Creek	Black Warrior	F&W	Warrior Lake	its source	2B	14.63	miles
AL03160113-0402-100	Fivemile Creek	Black Warrior	F&W	Warrior Lake	Payne Lake dam	2B	32.16	miles
AL03160113-0501-100	Brush Creek	Black Warrior	F&W	Big Brush Creek	its source	2B	17.35	miles
AL03160113-0502-110	Sparks Creek	Black Warrior	F&W	Big Brush Creek	its source	2B	10.06	miles
AL03160113-0506-100	Big Brush Creek	Black Warrior	F&W	Warrior Lake	its source	2B	27.29	miles
AL03160113-0601-100	Grant Creek	Black Warrior	F&W	Warrior Lake	its source	2B	11.18	miles
AL03160113-0603-100	Buck Creek	Black Warrior	F&W	Warrior Lake	its source	2B	12.97	miles
AL03160113-0604-300	Millians Creek	Black Warrior	F&W	Gabriel Creek	its source	2B	16.91	miles
AL03160113-0606-100	Minter Creek	Black Warrior	F&W	Warrior Lake	its source	2B	16.82	miles
AL03160113-0702-100	Dry Creek	Black Warrior	F&W	Big Prairie Creek	its source	2B	15.28	miles
AL03160113-0707-110	Big German Creek	Black Warrior	F&W	Big Prairie Creek	its source	2B	15.21	miles
AL03160113-0802-110	Hines Creek	Black Warrior	F&W	Lake Demopolis	its source	2B	9.87	miles
AL03150202-0203-103	Buck Creek	Cahaba	F&W	Shelby County Road 44	its source	2B	8.35	miles
AL03150202-0403-600	Spring Creek	Cahaba	F&W	Shoal Creek	its source	2B	9.38	miles
AL03150202-0404-110	Sixmile Creek	Cahaba	S	Little Cahaba River	its source	2B	27.27	miles
AL03150202-0503-200	Sandy Creek	Cahaba	F&W	Cahaba River	its source	2B	16.29	miles
AL03150202-0504-100	Haysop Creek	Cahaba	F&W	Cahaba River	its source	2B	26.81	miles
AL03150202-0506-300	Gully Creek	Cahaba	F&W	Cahaba River	its source	2B	7.72	miles
AL03150202-0507-100	Blue Girth Creek	Cahaba	S	Cahaba River	its source	2B	15.08	miles
AL03150202-0601-200	Wallace Creek	Cahaba	F&W	Cahaba River	its source	2B	8.94	miles
AL03150202-0601-300	Potato Patch Creek	Cahaba	F&W	Cahaba River	its source	2B	7.54	miles
AL03150202-0601-400	Taylor Creek	Cahaba	F&W	Cahaba River	its source	2B	8.77	miles
AL03150202-0602-200	Old Town Creek	Cahaba	S	Cahaba River	its source	2B	12.66	miles
AL03150202-0603-300	Mill Creek	Cahaba	F&W	Cahaba River	its source	2B	11.35	miles
AL03150202-0701-100	Rice Creek	Cahaba	F&W	Cahaba River	its source	2B	14.87	miles
AL03150202-0702-210	Waters Creek	Cahaba	S	Cahaba River	its source	2B	9.93	miles
AL03150202-0702-300	Wells Creek	Cahaba	F&W	Cahaba River	its source	2B	5.36	miles
AL03150202-0703-200	Possum Creek	Cahaba	F&W	Cahaba River	its source	2B	8.97	miles
AL03150202-0801-100	Beaverdam Creek	Cahaba	F&W	Oakmulgee Creek	its source	2B	13.49	miles
AL03150202-0805-100	Oakmulgee Creek	Cahaba	S	Cahaba River	its source	2B	56.67	miles
AL03150202-0902-501	Dry Creek	Cahaba	F&W	Cahaba River	Dallas County Road 201	2B	4.50	miles
AL03130003-0104-102	Chattahoochee River	Chattahoochee	PWS/S/F&W	14th Street Bridge between Columbus and Phenix City	Oliver Dam	2B	3.15	miles
AL03130003-0403-100	Little Uchee Creek	Chattahoochee	F&W	Uchee Creek	its source	2B	36.54	miles
AL03130003-0501-200	Snake Creek	Chattahoochee	F&W	Uchee Creek	its source	2B	11.40	miles
AL03130003-0503-100	Uchee Creek	Chattahoochee	S/F&W	Island Creek	its source	2B	22.59	miles
AL03130004-0602-202	Poplar Spring Branch	Chattahoochee	F&W	Ross Clark Circle	its source	2B	3.46	miles
AL03130004-0604-100	Spivey Mill Creek	Chattahoochee	F&W	Omusee Creek	its source	2B	8.07	miles
AL03130004-0607-100	Omusee Creek	Chattahoochee	F&W	Chattahoochee River	its source	2B	28.05	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03130004-0801-200	Irwin Mill Creek	Chattahoochee	F&W	Alabama-Florida state line	its source	2B	4.17	miles
AL03130012-0106-100	Buck Creek	Chipola	F&W	Alabama-Florida state line	its source	2B	11.11	miles
AL03140201-0201-200	Jack Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	2B	5.83	miles
AL03140201-0204-200	Deal Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	2B	6.57	miles
AL03140201-0303-300	Blacks Creek	Choctawhatchee	F&W	Judy Creek	its source	2B	5.62	miles
AL03140201-0503-200	Camp Creek	Choctawhatchee	F&W	Little Choctawhatchee River	its source	2B	4.29	miles
AL03140201-0504-300	Panther Creek	Choctawhatchee	F&W	Little Choctawhatchee River	its source	2B	7.13	miles
AL03140201-1004-400	Cox Mill Creek	Choctawhatchee	F&W	Hurricane Creek	its source	2B	2.53	miles
AL03140201-1004-800	Sandy Branch	Choctawhatchee	F&W	Hurricane Creek	its source	2B	2.34	miles
AL03140201-1102-200	Little Double Bridges Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	2B	10.25	miles
AL03140201-1103-100	Tight Eye Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	2B	14.69	miles
AL03140201-1202-200	Providence Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	2B	1.70	miles
AL03140201-1203-110	Adams Creek	Choctawhatchee	F&W	Rocky Creek	its source	2B	1.97	miles
AL03140202-0104-100	Pea Creek	Choctawhatchee	F&W	Pea River	its source	2B	22.85	miles
AL03140202-0206-200	Double Creek	Choctawhatchee	F&W	Mill Creek	its source	2B	9.30	miles
AL03140202-0407-400	Cowpen Creek	Choctawhatchee	F&W	Big Creek	its source	2B	4.19	miles
AL03140202-0407-500	Sweetwater Creek	Choctawhatchee	F&W	Big Creek	its source	2B	6.82	miles
AL03140202-0502-103	Pea River	Choctawhatchee	F&W	Kaiser Branch	Buckhorn Creek	2B	8.89	miles
AL03140202-0701-100	Panther Creek	Choctawhatchee	F&W	Flat Creek	its source	2B	10.81	miles
AL03140202-0803-100	Flat Creek	Choctawhatchee	F&W	Pea River	Eightmile Creek	2B	4.72	miles
AL03140202-0905-110	Sandy Creek	Choctawhatchee	F&W	Pea River	its source	2B	10.91	miles
AL03140203-0701-100	Holmes Creek	Choctawhatchee	F&W	Alabama-Florida state line	its source	2B	6.72	miles
AL03150106-0107-100	Black Creek	Coosa	F&W	Neely Henry Lake	its source	2B	26.97	miles
AL03150106-0305-200	Gulf Creek	Coosa	F&W	Big Canoe Creek	its source	2B	9.17	miles
AL03150106-0406-210	Tallasseehatchee Creek	Coosa	F&W	Ohatchee Creek	its source	2B	35.97	miles
AL03150106-0509-200	Fayne Creek	Coosa	F&W	Cheaha Creek	its source	2B	11.10	miles
AL03150106-0510-100	Kelly Creek	Coosa	F&W	Cheaha Creek	its source	2B	12.25	miles
AL03140301-0201-100	Mannings Creek	Escambia	F&W	Conecuh River	its source	2B	18.99	miles
AL03140301-0202-100	Beeman Creek	Escambia	F&W	Conecuh River	its source	2B	14.28	miles
AL03140301-0404-103	Conecuh River	Escambia	F&W	Hornet Creek	Broadhead Creek	2B	35.36	miles
AL03140302-0303-100	Little Patsaliga Creek	Escambia	S/F&W	Patsaliga Creek	its source	2B	32.00	miles
AL03140302-0506-102	Patsaliga Creek	Escambia	F&W	Buck Creek	its source	2B	83.17	miles
AL03140303-0201-102	Rocky Creek	Escambia	F&W	County road north of Chapman	its source	2B	12.64	miles
AL03140303-0702-100	Bottle Creek	Escambia	F&W	Sepulga River	its source	2B	13.90	miles
AL03140304-0104-200	Shack Creek	Escambia	F&W	Murder Creek	its source	2B	7.37	miles
AL03140304-0201-102	Cedar Creek	Escambia	F&W	Alabama-Florida state line	its source	2B	7.28	miles
AL03140304-0201-200	Little Cedar Creek	Escambia	F&W	Cedar Creek	its source	2B	6.40	miles
AL03140304-0502-100	Silas Creek	Escambia	F&W	Conecuh River	its source	2B	1.57	miles
AL03140304-0601-100	Little Escambia Creek	Escambia	F&W	Wild Fork Creek	its source	2B	15.31	miles
AL03140305-0206-102	Big Escambia Creek	Escambia	F&W	Big Spring Creek	its source	2B	27.55	miles
AL03170002-0604-100	Red Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	2B	15.95	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03170008-0201-100	Little Creek	Escatawpa	F&W	Escatawpa River	its source	2B	12.05	miles
AL03170008-0201-600	Long Branch	Escatawpa	F&W	Pond Creek	its source	2B	3.45	miles
AL03170008-0203-100	Bennett Creek	Escatawpa	F&W	Escatawpa River	its source	2B	11.79	miles
AL03170008-0601-400	Pierce Creek	Escatawpa	F&W	Big Creek	its source	2B	10.23	miles
AL03170009-0103-200	West Fowl River	Escatawpa	S/F&W	Fowl River bay	its source	2B	5.84	miles
AL03160204-0102-100	Cedar Creek	Mobile	F&W	Mobile River	its source	2B	24.27	miles
AL03160204-0106-103	Mobile River	Mobile	PWS/F&W	Barry Steam Plant	Tensaw River	2B	10.29	miles
AL03160204-0201-100	Rains Creek	Mobile	F&W	Tensaw River	its source	2B	8.67	miles
AL03160204-0201-200	Aikin Creek	Mobile	F&W	Rains Creek	its source	2B	9.58	miles
AL03160204-0304-101	Eightmile Creek	Mobile	F&W	Chickasaw Creek	City of Prichard's water supply intake	2B	2.19	miles
AL03160204-0304-102	Eightmile Creek	Mobile	PWS/F&W	City of Prichard's water supply intake	US Highway 45	2B	1.73	miles
AL03160204-0401-200	Steele Creek	Mobile	S/F&W	Gunnison Creek	its source	2B	3.45	miles
AL03160204-0402-101	Bayou Sara	Mobile	S/F&W	Mobile River	Gunnison Creek	2B	4.51	miles
AL03160204-0402-104	Bayou Sara	Mobile	F&W	US Highway 43	its source	2B	14.95	miles
AL03160205-0101-102	Dog River	Mobile	F&W	Moore Creek	its source	2B	5.50	miles
AL03160205-0101-300	Robinson Bayou	Mobile	F&W	Dog River	its source	2B	1.97	miles
AL03160205-0103-200	Perch Creek	Mobile	F&W	Dog River	its source	2B	3.64	miles
AL03160205-0103-300	Alligator Bayou	Mobile	F&W	Dog River	its source	2B	4.47	miles
AL03160205-0103-402	Rabbit Creek	Mobile	F&W	Alabama Highway 193	its source	2B	8.20	miles
AL03160205-0104-210	East Fowl River	Mobile	S/F&W	Fowl River	its source	2B	5.38	miles
AL03160205-0206-701	UT to Bon Secour River	Mobile	F&W	Bon Secour River	Baldwin County Road 65	2B	0.61	miles
AL03140106-0302-102	Brushy Creek	Perdido	F&W	Boggy Branch	its source	2B	9.12	miles
AL03140106-0504-100	Styx River	Perdido	S/F&W	Hollinger Creek	its source	2B	22.72	miles
AL03140106-0603-102	Blackwater River	Perdido	F&W	Narrow Gap Creek	its source	2B	27.30	miles
AL03140106-0701-102	Perdido River	Perdido	F&W	Jacks Branch	its source	2B	43.48	miles
AL03150108-1004-112	Tallapoosa River	Tallapoosa	F&W	4 miles upstream of Randolph County Road 88	dam at Cleburne County Road 36	2B	5.77	miles
AL03150108-1004-115	Tallapoosa River	Tallapoosa	F&W	Cleburne County Road 19	Cane Creek	2B	5.85	miles
AL03150108-1005-100	Mad Indian Creek	Tallapoosa	F&W	R L Harris Lake	its source	2B	13.26	miles
AL03150109-0406-100	Hillabee Creek	Tallapoosa	F&W	Lake Martin	Oaktasasi Creek	2B	4.30	miles
AL03150109-0504-102	Sandy Creek	Tallapoosa	F&W	Lake Martin	its source	2B	29.62	miles
AL03150109-0802-105	Tallapoosa River	Tallapoosa	F&W	Irwin Shoals	Alabama Highway 77	2B	36.94	miles
AL03150110-0202-900	UT to Chewacla Creek	Tallapoosa	F&W	Chewacla Creek	its source	2B	5.28	miles
AL03150110-0301-100	Choctafaula Creek	Tallapoosa	F&W	Uphapee Creek	its source	2B	17.48	miles
AL03150110-0501-100	Persimmon Creek	Tallapoosa	F&W	Calebee Creek	its source	2B	13.87	miles
AL03150110-0801-100	Panther Creek	Tallapoosa	F&W	Line Creek	its source	2B	20.57	miles
AL03150110-0904-102	Tallapoosa River	Tallapoosa	PWS/F&W	Jenkins Creek	Thurlow dam	2B	30.00	miles
AL03150110-0905-101	Tallapoosa River	Tallapoosa	F&W	Alabama River	US Highway 231	2B	6.47	miles
AL06030001-0403-801	Warren Smith Creek	Tennessee	F&W	Dry Creek	Ross Branch	2B	3.44	miles
AL06030002-0104-100	Lick Fork	Tennessee	F&W	Paint Rock River	its source	2B	10.54	miles
AL06030002-0203-401	Cole Spring Branch	Tennessee	F&W	Paint Rock River	Bridge at Jones farm	2B	0.99	miles
AL06030002-0302-100	West Fork Flint River	Tennessee	F&W	Flint River	its source	2B	1.76	miles
AL06030002-0602-103	West Fork Cotaco Creek	Tennessee	F&W	Frost Creek	its source	2B	2.93	miles
AL06030002-0606-100	Cotaco Creek	Tennessee	S/F&W	Wheeler Lake	Guyer Branch	2B	11.76	miles
AL06030002-1010-400	Gillespie Creek	Tennessee	F&W	West Flint Creek	its source	2B	3.67	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030002-1012-102	West Flint Creek	Tennessee	F&W	McDaniel Creek	its source	2B	24.32	miles
AL06030004-0303-100	Sugar Creek	Tennessee	F&W	Wheeler Lake	its source	2B	14.06	miles
AL06030004-0404-101	Anderson Creek	Tennessee	F&W	Elk River	Snake Road bridge	2B	4.69	miles
AL06030005-0605-101	Cypress Creek	Tennessee	F&W	Pickwick Lake	City of Florence Water Treatment Plant	2B	7.22	miles
AL06030005-0801-202	McKiernan Creek	Tennessee	F&W	Wilson Lake	its source	2B	3.71	miles
AL06030005-0806-100	Sinking Creek	Tennessee	F&W	Tennessee River	its source	2B	16.38	miles
AL06030006-0101-102	Little Bear Creek	Tennessee	PWS/S/F&W	Upper Bear Creek Lake	its source	2B	9.95	miles
AL06030006-0102-103	Bear Creek	Tennessee	F&W	Alabama Highway 243	its source	2B	10.97	miles
AL06030006-0205-104	Little Bear Creek	Tennessee	S/F&W	Alabama Highway 187	its source	2B	14.01	miles
AL06030006-0206-101	Little Bear Creek	Tennessee	S/F&W	Cedar Creek	Little Bear Creek dam	2B	11.88	miles
AL06030006-0207-100	Cedar Creek	Tennessee	F&W	Alabama-Mississippi state line	Cedar Creek Lake dam	2B	18.75	miles
AL06030006-0305-100	Buzzard Roost Creek	Tennessee	F&W	Pickwick Lake	its source	2B	21.80	miles
AL03160103-0101-600	Moore Creek	Tombigbee	F&W	West Branch Buttahatchee River	its source	2B	3.47	miles
AL03160105-0502-100	Magby Creek	Tombigbee	F&W	Alabama-Mississippi state line	its source	2B	14.57	miles
AL03160106-0606-102	Trussells Creek	Tombigbee	F&W	Demopolis Lake	its source	2B	28.48	miles
AL03160106-0702-102	Factory Creek	Tombigbee	F&W	Demopolis Lake	its source	2B	20.71	miles
AL03160107-0201-102	Sipsey River	Tombigbee	PWS/F&W	US Highway 43	Alabama Highway 102	2B	12.61	miles
AL03160107-0201-103	Sipsey River	Tombigbee	F&W	Alabama Highway 102	its source	2B	20.17	miles
AL03160107-0303-102	Sipsey River	Tombigbee	F&W	Tuscaloosa county line	US Highway 43	2B	74.42	miles
AL03160201-0601-100	Mill Creek	Tombigbee	F&W	Horse Creek	its source	2B	14.15	miles
AL03160201-0902-400	Vaughn Creek	Tombigbee	F&W	Sucarbowa Creek	its source	2B	9.41	miles
AL03160202-0502-102	Toomsuba Creek	Tombigbee	PWS/F&W	AT&N Railroad	Alabama-Mississippi state line	2B	9.90	miles
AL03160203-0403-100	Jackson Creek	Tombigbee	F&W	Tombigbee River	its source	2B	23.33	miles
AL03140103-0302-400	UT to Yellow River	Yellow	F&W	Yellow River	its source	2B	5.44	miles
AL03140103-0305-102	Yellow River	Yellow	F&W	North Creek	its source	2B	35.05	miles
Category 2 Estuary and Ocean								
AL03140107-0203-102	Wolf Bay	Perdido	SH/S/F&W	Moccasin Bayou	its source	2B	0.22	square miles
AL03140107-0203-201	Hammock Creek	Perdido	S/F&W	Wolf Bay	limit of tidal effects	2B	0.63	square miles
AL03140107-0204-301	Perdido Bay	Perdido	SH/S/F&W	Gulf of Mexico	Suarez Point	2B	11.85	square miles
AL03140107-0204-500	Bay la Launch	Perdido	SH/S/F&W	Arnica Bay	Wolf Bay	2B	1.48	square miles
AL03140107-0204-600	Wolf Bay	Perdido	OAW/SH/S/F&W	Bay la Launch	Moccasin Bayou	2B	4.65	square miles
Category 3 Lakes and Reservoirs								
AL03160109-0104-202	Bridge Creek (George Lake)	Black Warrior	PWS	George Lake dam	extent of reservoir	3	159.21	acres
AL03160110-0104-702	Curtis Mill Creek	Black Warrior	PWS	Town of Double Springs water supply reservoir dam	its source	3	2.20	acres
AL03130003-1301-111	Chewalla Creek (Walter F George Lake)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	3	232.32	acres
AL03140201-0703-100	Claybank Creek (Lake Tholocco)	Choctawhatchee	S/F&W	Lake Tholocco dam	extent of reservoir	3	679.39	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150106-0101-402	Allen Branch (Fort Payne City Lake)	Coosa	PWS/F&W	Ft. Payne public water supply dam	its source	3	53.63	acres
AL03150106-0701-202	Mump Creek (Mump Creek Reservoir)	Coosa	PWS/F&W	Mump Creek Reservoir dam	extent of reservoir	3	36.40	acres
AL03150109-0201-202	Finley Creek (Lafayette Reservoir)	Tallapoosa	PWS/F&W	Lafayette Reservoir dam	extent of reservoir	3	96.25	acres
AL03150109-0301-103	High Pine Creek (High Pine Creek Lake #2)	Tallapoosa	PWS	High Pine creek Lake #2 dam	extent of reservoir	3	60.46	acres
AL03150109-0301-105	High Pine Creek (High Pine Creek Lake #1)	Tallapoosa	PWS	High Pine Creek Lake #1 dam	extent of reservoir	3	10.36	acres
AL03150109-0301-202	Jones Creek (Roanoke City Lake)	Tallapoosa	PWS	Roanoke City Lake dam	extent of reservoir	3	39.79	acres
AL03150109-0301-204	Jones Creek (High Pine Creek Lake #4)	Tallapoosa	PWS	High Pine Creek Lake #4 dam	extent of reservoir	3	17.40	acres
AL03150109-0301-502	UT to Jones Creek (Crystal Lake)	Tallapoosa	PWS	Crystal Lake dam	extent of reservoir	3	54.26	acres
AL06030005-0103-302	Sinking Creek (Sinking Creek Lake)	Tennessee	PWS/F&W	Sinking Creek Lake dam	extent of reservoir	3	147.26	acres
AL06030005-0103-402	Turkey Creek (Moulton City Lake)	Tennessee	PWS/F&W	Moulton City Lake dam	extent of reservoir	3	72.73	acres
AL06030005-0703-300	Big Spring (Tuscumbia)	Tennessee	PWS	Spring Creek	its source	3	1.53	acres
AL03160103-0102-102	Buttahatchee River (Lake Buttahatchee)	Tombigbee	S	Lake Buttahatchee dam	extent of reservoir	3	145.82	acres
AL03160202-0502-202	UT to Toomsuba Creek	Tombigbee	PWS	Lake Louise dam	its source	3	47.39	acres
AL03140103-0203-502	Blue Lake	Yellow	S/F&W	Within Conecuh National Forest		3	41.37	acres
AL03140103-0401-180	Open Pond	Yellow	S/F&W	Within Conecuh National Forest		3	34.76	acres
AL03140103-0401-190	Dowdy Pond	Yellow	S/F&W	Within Conecuh National Forest		3	12.73	acres
Category 3 Rivers and Streams								
AL03150201-0802-400	Ballards Creek	Alabama	F&W	Big Swamp Creek	its source	3	9.41	miles
AL03150201-1003-400	Gale Creek	Alabama	F&W	Mulberry Creek	its source	3	7.39	miles
AL03150201-1003-600	Charlotte Creek	Alabama	F&W	Gale Creek	its source	3	4.14	miles
AL03150203-0102-200	Sand Creek	Alabama	F&W	Bogue Chitto Creek	its source	3	7.91	miles
AL03150203-0301-100	Big Swamp Creek	Alabama	F&W	Alabama River	its source	3	18.67	miles
AL03150203-0603-100	Turkey Creek	Alabama	F&W	Beaver Creek	its source	3	29.98	miles
AL03150203-0703-300	Rockwest Creek	Alabama	F&W	Alabama River	its source	3	12.69	miles
AL03150203-0703-900	UT to Rockwest Creek	Alabama	F&W	Rockwest Creek	its source	3	3.80	miles
AL03150204-0302-500	Hudson Branch	Alabama	F&W	Limestone Creek	its source	3	3.54	miles
AL03150204-0303-110	Double Bridges Creek	Alabama	F&W	Limestone Creek	its source	3	7.37	miles
AL03150204-0304-100	Limestone Creek	Alabama	F&W	Alabama River	its source	3	28.16	miles
AL03160109-0102-800	Wolf Creek	Black Warrior	F&W	Duck River	its source	3	4.31	miles
AL03160109-0104-201	Bridge Creek	Black Warrior	F&W	Eightmile Creek	George Lake dam	3	4.41	miles
AL03160109-0104-800	Adams Branch	Black Warrior	PWS	George Lake	its source	3	1.96	miles
AL03160109-0104-900	Pope Creek	Black Warrior	PWS	George Lake	its source	3	2.84	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160109-0405-102	Lost Creek	Black Warrior	PWS/F&W	Two miles upstream from Wolf Creek	Cane Creek	3	4.92	miles
AL03160109-0405-500	Indian Creek	Black Warrior	F&W	Lost Creek	its source	3	7.10	miles
AL03160109-0503-400	Indian Creek	Black Warrior	F&W	Wolf Creek	its source	3	11.50	miles
AL03160109-0601-902	Town Creek	Black Warrior	F&W	100 yards upstream of Southern Railway crossing	its source	3	6.27	miles
AL03160109-0603-101	Mulberry Fork	Black Warrior	PWS/F&W	Burnt Cane Creek	Frog Ague Creek	3	8.60	miles
AL03160109-0603-200	Burnt Cane Creek	Black Warrior	F&W	Mulberry Fork	its source	3	10.31	miles
AL03160109-0603-700	Frog Ague Creek	Black Warrior	F&W	Mulberry Fork	its source	3	4.46	miles
AL03160109-0604-102	Mulberry Fork	Black Warrior	PWS/S/F&W	Baker Creek	Burnt Cane Creek	3	8.60	miles
AL03160110-0104-701	Curtis Mill Creek	Black Warrior	F&W	Sandy Creek	Town of Double Springs water supply reservoir dam	3	3.67	miles
AL03160110-0201-400	Beech Creek	Black Warrior	F&W	Brushy Creek	its source	3	2.08	miles
AL03160110-0503-100	Rock Creek	Black Warrior	F&W	Ryan Creek	its source	3	12.39	miles
AL03160111-0201-600	Whippoorwill Creek	Black Warrior	F&W	Wynnville Creek	its source	3	6.98	miles
AL03160111-0206-500	Chitwood Creek	Black Warrior	F&W	Calvert Prong	its source	3	2.78	miles
AL03160111-0206-700	Whited Creek	Black Warrior	F&W	Calvert Prong	its source	3	4.19	miles
AL03160111-0206-800	Mill Creek	Black Warrior	F&W	Chitwood Creek	its source	3	6.39	miles
AL03160111-0307-200	Cunningham Creek	Black Warrior	F&W	Turkey Creek	its source	3	11.60	miles
AL03160112-0301-200	Lick Creek	Black Warrior	F&W	Blue Creek	its source	3	2.99	miles
AL03160113-0202-300	Tater Hill Creek	Black Warrior	F&W	Warrior Lake	its source	3	4.58	miles
AL03160113-0504-200	Little Brush Creek	Black Warrior	F&W	Big Brush Creek	its source	3	10.76	miles
AL03160113-0505-110	Colwell Creek	Black Warrior	F&W	Big Brush Creek	its source	3	11.79	miles
AL03160113-0604-400	Martin Creek	Black Warrior	F&W	Gabriel Creek	its source	3	1.20	miles
AL03160113-0607-400	Pole Bridge Branch	Black Warrior	F&W	Warrior Lake	its source	3	8.39	miles
AL03160113-0801-100	Dollarhide Creek	Black Warrior	F&W	Lake Demopolis	its source	3	8.59	miles
AL03160113-0803-900	White Creek	Black Warrior	F&W	Lake Demopolis	its source	3	8.38	miles
AL03140104-0104-200	Boggy Hollow Creek	Blackwater	F&W	Alabama-Florida state line	its source	3	7.45	miles
AL03140104-0105-110	Rock Creek	Blackwater	F&W	Alabama-Florida state line	its source	3	1.98	miles
AL03140104-0301-100	Sweetwater Creek	Blackwater	F&W	Alabama-Florida state line	its source	3	4.23	miles
AL03140104-0303-100	Big Jumiper Creek	Blackwater	F&W	Alabama-Florida state line	its source	3	0.49	miles
AL03140104-0402-100	Dixon Creek	Blackwater	F&W	Alabama-Florida state line	its source	3	0.77	miles
AL03150202-0101-103	Cahaba River	Cahaba	OAW/F&W	I-59	its source	3	2.22	miles
AL03150202-0201-100	Peavine Creek	Cahaba	F&W	Buck Creek	its source	3	10.01	miles
AL03150202-0202-300	UT to Cahaba Valley Creek	Cahaba	F&W	Cahaba Valley Creek	its source	3	2.31	miles
AL03150202-0303-800	Little Shades Creek	Cahaba	F&W	Shades Creek	its source	3	8.99	miles
AL03150202-0403-110	Shoal Creek	Cahaba	F&W	Little Cahaba River	its source	3	19.09	miles
AL03130002-0804-100	Guss Creek	Chattahoochee	F&W	Wehadkee Creek	its source	3	6.63	miles
AL03130002-0804-400	Gladney Mill Branch	Chattahoochee	F&W	Guss Creek	its source	3	3.17	miles
AL03130002-0805-102	Veasey Creek	Chattahoochee	F&W	Alabama-Georgia state line	its source	3	10.51	miles
AL03130002-0805-400	Finley Creek	Chattahoochee	F&W	Stroud Creek	its source	3	4.98	miles
AL03130002-0902-300	Allen Creek	Chattahoochee	F&W	Oseligee Creek	its source	3	4.89	miles
AL03130002-0902-400	Kellem Hill Creek	Chattahoochee	F&W	Oseligee Creek	its source	3	4.69	miles
AL03130002-0903-200	Oseligee Creek	Chattahoochee	F&W	Alabama-Georgia state line	its source	3	18.71	miles
AL03130002-0903-300	Hardley Creek	Chattahoochee	F&W	Alabama-Georgia state line	its source	3	10.22	miles
AL03130003-0101-200	Holland Creek	Chattahoochee	F&W	Mill Creek	its source	3	5.18	miles
AL03130003-1310-100	Cheneyhatchee Creek	Chattahoochee	S/F&W	Walter F George Lake	its source	3	8.18	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03130004-0303-100	Skippers Creek	Chattahoochee	F&W	Abbie Creek	its source	3	6.71	miles
AL03130004-0304-200	Vann Mill Creek	Chattahoochee	F&W	Abbie Creek	its source	3	3.04	miles
AL03130012-0101-210	Harkin Branch	Chipola	F&W	Limestone Creek	its source	3	3.31	miles
AL03130012-0101-310	Chipola Creek	Chipola	F&W	Limestone Creek	its source	3	6.41	miles
AL03130012-0102-210	Coopers Bay Creek	Chipola	F&W	Big Creek	its source	3	3.17	miles
AL03130012-0102-310	Chestnut Branch	Chipola	F&W	Big Creek	its source	3	2.36	miles
AL03130012-0102-400	Big Branch	Chipola	F&W	Coopers Bay Creek	its source	3	3.22	miles
AL03130012-0103-110	Double Bridges Creek	Chipola	F&W	Big Creek	its source	3	9.22	miles
AL03130012-0104-100	Marshall Creek	Chipola	F&W	Alabama-Florida state line	its source	3	3.80	miles
AL03130012-0105-100	Spring Creek	Chipola	F&W	Big Creek	its source	3	13.68	miles
AL03130012-0107-100	Freeman Branch	Chipola	F&W	Alabama-Florida state line	its source	3	3.83	miles
AL03130012-0201-210	Mill Creek	Chipola	F&W	Cowarts Creek	its source	3	9.43	miles
AL03130012-0201-310	Webb Creek	Chipola	F&W	Cowarts Creek	its source	3	10.22	miles
AL03130012-0201-410	Cooper Creek	Chipola	F&W	Cowarts Creek	its source	3	3.13	miles
AL03130012-0202-100	Rocky Creek	Chipola	F&W	Cowarts Creek	its source	3	11.70	miles
AL03130012-0202-310	Little Rocky Creek	Chipola	F&W	Rocky Creek	its source	3	5.14	miles
AL03130012-0203-200	Gum Slough	Chipola	F&W	Alabama-Florida state line	its source	3	6.74	miles
AL03130012-0203-300	Guy Branch	Chipola	F&W	Cowarts Creek	its source	3	4.48	miles
AL03130012-0203-400	Bazemores Mill Branch	Chipola	F&W	Cowarts Creek	its source	3	1.38	miles
AL03140201-0102-100	Piney Woods Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	3	9.23	miles
AL03140201-0102-200	Little Piney Woods Creek	Choctawhatchee	F&W	Piney Woods Creek	its source	3	3.64	miles
AL03140201-0202-100	Poor Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	3	10.71	miles
AL03140201-0206-100	Blackwood Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	3	11.33	miles
AL03140201-0403-110	Sikes Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	3	13.07	miles
AL03140201-0405-100	Bear Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	3	11.98	miles
AL03140201-0501-100	Newton Creek	Choctawhatchee	F&W	Little Choctawhatchee River	its source	3	11.05	miles
AL03140201-0904-100	Claybank Creek	Choctawhatchee	F&W	Choctawhatchee River	Lake Tholocco dam	3	20.52	miles
AL03140201-1004-200	Spann Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	3	2.09	miles
AL03140201-1004-900	Caney Creek	Choctawhatchee	F&W	Hurricane Creek	its source	3	2.36	miles
AL03140201-1102-900	UT to Double Bridges Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	3	1.44	miles
AL03140201-1105-120	Beaverdam Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	3	12.37	miles
AL03140201-1105-200	Brushy Branch	Choctawhatchee	F&W	Beaverdam Creek	its source	3	3.07	miles
AL03140202-0103-100	Hurricane Creek	Choctawhatchee	F&W	Pea Creek	its source	3	10.34	miles
AL03140202-0205-200	Bogue Chitta Creek	Choctawhatchee	F&W	Pea River	its source	3	7.19	miles
AL03140202-0206-100	Mill Creek	Choctawhatchee	F&W	Pea River	its source	3	5.01	miles
AL03140202-0207-200	Connors Creek	Choctawhatchee	F&W	Pea River	its source	3	4.35	miles
AL03140202-0302-100	Big Creek	Choctawhatchee	F&W	Pea River	its source	3	8.29	miles
AL03140202-0403-600	Mims Creek	Choctawhatchee	F&W	Whitewater Creek	its source	3	7.82	miles
AL03140202-0406-110	Bluff Creek	Choctawhatchee	F&W	Big Creek	its source	3	10.13	miles
AL03140202-0409-200	Pea Creek	Choctawhatchee	F&W	Whitewater Creek	its source	3	10.84	miles
AL03140202-0601-100	Beaverdam Creek	Choctawhatchee	F&W	Pea River	its source	3	11.33	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140202-0602-100	Bucks Mill Creek	Choctawhatchee	F&W	Pea River	its source	3	10.35	miles
AL03140202-0603-200	Helms Mill Creek	Choctawhatchee	F&W	Pea River	its source	3	4.46	miles
AL03140202-0604-100	Hays Creek	Choctawhatchee	F&W	Pea River	its source	3	8.10	miles
AL03140202-0607-100	Cripple Creek	Choctawhatchee	F&W	Pea River	its source	3	8.75	miles
AL03140202-0608-100	Holley Mill Creek	Choctawhatchee	F&W	Pea River	its source	3	4.66	miles
AL03140202-0610-200	Samson Branch	Choctawhatchee	F&W	Pea River	its source	3	6.06	miles
AL03140202-0802-110	Corner Creek	Choctawhatchee	F&W	Eightmile Creek	its source	3	16.35	miles
AL03140203-0101-100	Justice Mill Creek	Choctawhatchee	F&W	Spring Creek	its source	3	7.51	miles
AL03140203-0103-200	Spring Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	3	13.72	miles
AL03140203-0103-300	Ice Factory Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	3	1.45	miles
AL03140203-0103-400	Wheeler Mill Branch	Choctawhatchee	F&W	Spring Creek	its source	3	2.73	miles
AL03140203-0103-500	Blue Branch	Choctawhatchee	F&W	Spring Creek	its source	3	2.31	miles
AL03140203-0103-600	Negro Church Branch	Choctawhatchee	F&W	Spring Creek	its source	3	3.15	miles
AL03140203-0103-700	Hathaway Branch	Choctawhatchee	F&W	Spring Creek	its source	3	2.79	miles
AL03140203-0104-110	Hand Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	0.55	miles
AL03140203-0105-210	Wide Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	3	3.65	miles
AL03140203-0105-300	Flowers Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	3	2.40	miles
AL03140203-0105-400	Smith Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	3	1.77	miles
AL03140203-0105-500	Whitewater Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	0.70	miles
AL03140203-0105-600	John Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	1.21	miles
AL03140203-0105-700	Boggy Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	1.57	miles
AL03140203-0201-200	Gully Branch	Choctawhatchee	F&W	Wrights Creek	its source	3	3.58	miles
AL03140203-0201-300	Grant Branch	Choctawhatchee	F&W	Wrights Creek	its source	3	3.57	miles
AL03140203-0201-400	Davis Mill Creek	Choctawhatchee	F&W	Wrights Creek	its source	3	3.43	miles
AL03140203-0201-500	Lighter Snag Creek	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	4.50	miles
AL03140203-0201-600	Mill Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	2.27	miles
AL03140203-0201-700	Tindil Branch	Choctawhatchee	F&W	Davis Mill Creek	its source	3	3.55	miles
AL03140203-0203-100	Tenmile Creek	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	3.18	miles
AL03140203-0203-200	Poplar Creek	Choctawhatchee	F&W	Tenmile Creek	its source	3	2.03	miles
AL03140203-0203-300	Cannon Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	2.46	miles
AL03140203-0701-200	Kirkland Branch	Choctawhatchee	F&W	Holmes Creek	its source	3	3.19	miles
AL03140203-0701-300	Boggy Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	2.31	miles
AL03140203-0701-400	Big Branch	Choctawhatchee	F&W	Alabama-Florida state line	its source	3	1.78	miles
AL03150105-0206-200	Ballplay Creek	Coosa	F&W	Weiss Lake	its source	3	5.99	miles
AL03150105-0304-100	Spring Creek	Coosa	F&W	Weiss Lake	Alabama-Georgia state line	3	9.72	miles
AL03150105-0904-200	Little Terrapin Creek	Coosa	F&W	Terrapin Creek	Alabama-Georgia state line	3	6.37	miles
AL03150105-0906-200	Ladiga Creek	Coosa	PWS	Terrapin Creek	Terrapin Creek	3	2.91	miles
AL03150106-0101-401	Allen Branch	Coosa	F&W	Big Wills Creek	Ft. Payne public water supply dam	3	0.31	miles
AL03150106-0201-100	Ballplay Creek	Coosa	F&W	Neely Henry Lake	its source	3	23.27	miles
AL03150106-0204-120	UT to Neely Henry Lake	Coosa	F&W	Neely Henry Lake	its source	3	1.89	miles
AL03150106-0204-900	UT to Neely Henry Lake	Coosa	F&W	Neely Henry Lake	its source	3	2.24	miles
AL03150106-0301-100	Little Canoe Creek	Coosa	F&W	Big Canoe Creek	its source	3	22.12	miles
AL03150106-0402-200	UT to Tallasseehatchee Creek	Coosa	F&W	Tallasseehatchee Creek	its source	3	5.97	miles
AL03150106-0407-200	Cave Creek	Coosa	F&W	Cane Creek	its source	3	6.23	miles
AL03150106-0505-100	UT to Choccolocco Creek	Coosa	F&W	Choccolocco Creek	its source	3	5.59	miles
AL03150106-0507-200	Snows Branch	Coosa	F&W	Choccolocco Creek	its source	3	2.76	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150106-0510-200	Brecon Branch	Coosa	F&W	Kelly Creek	its source	3	3.68	miles
AL03150106-0605-210	Dye Creek	Coosa	F&W	Logan Martin Lake	its source	3	4.02	miles
AL03150106-0611-100	Eastaboga Creek	Coosa	F&W	Choccolocco Creek	its source	3	6.85	miles
AL03150106-0701-201	Mump Creek	Coosa	F&W	Talladega Creek	Mump Creek Reservoir dam	3	0.85	miles
AL03150106-0701-203	Mump Creek	Coosa	PWS/F&W	Mump Creek Reservoir	its source	3	4.31	miles
AL03150106-0804-100	Shoal Creek	Coosa	F&W	Kelly Creek	its source	3	20.33	miles
AL03150106-0810-200	Locust Creek	Coosa	F&W	Lay Lake	its source	3	3.11	miles
AL03150107-0201-300	Little Creek	Coosa	F&W	North Fork Yellowleaf Creek	its source	3	7.78	miles
AL03150107-0205-300	Morgan Creek	Coosa	F&W	Yellowleaf Creek	its source	3	8.14	miles
AL03150107-0403-500	UT to Waxahatchee Creek	Coosa	F&W	Waxahatchee Creek	its source	3	4.02	miles
AL03150107-0406-100	Waxahatchee Creek	Coosa	F&W	Lay Lake	its source	3	14.03	miles
AL03140301-0105-100	Conecuh River	Escambia	F&W	Mannings Creek	its source	3	39.63	miles
AL03140301-0402-500	Double Branch	Escambia	F&W	Conecuh River	its source	3	6.59	miles
AL03140301-0501-300	Prestwood Creek	Escambia	F&W	Conecuh River	its source	3	6.01	miles
AL03140301-0501-500	UT to Conecuh River	Escambia	F&W	Conecuh River	its source	3	2.22	miles
AL03140302-0201-200	Dry Creek	Escambia	F&W	Blue Creek	its source	3	11.22	miles
AL03140303-0402-500	UT to Pigeon Creek	Escambia	F&W	Pigeon Creek	its source	3	3.83	miles
AL03140303-0504-100	Pigeon Creek	Escambia	F&W	Sepulga River	its source	3	79.41	miles
AL03140304-0106-100	Mill Creek	Escambia	F&W	Murder Creek	its source	3	10.88	miles
AL03140304-0505-110	Conecuh River	Escambia	F&W	Mantle Branch	Sepulga River	3	33.57	miles
AL03140305-0101-100	Wet Weather Creek	Escambia	F&W	Sizemore Creek	its source	3	13.46	miles
AL03140305-0401-100	Canoe Creek	Escambia	F&W	Alabama-Florida state line	its source	3	3.85	miles
AL03140305-0401-300	Reedy Creek	Escambia	F&W	Alabama-Florida state line	its source	3	1.83	miles
AL03140305-0501-100	Pine Barren Creek	Escambia	F&W	Alabama-Florida state line	its source	3	2.62	miles
AL03140305-0501-200	Beaverdam Creek	Escambia	F&W	Alabama-Florida state line	its source	3	3.99	miles
AL03170002-0602-100	Turkey Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	3	6.66	miles
AL03170002-0602-200	Sandy Creek	Escatawpa	F&W	Turkey Creek	its source	3	4.72	miles
AL03170002-0604-200	Whiskey Creek	Escatawpa	F&W	Red Creek	its source	3	2.17	miles
AL03170002-0604-300	Buck Creek	Escatawpa	F&W	Red Creek	its source	3	2.05	miles
AL03170002-0605-400	Little Red Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	3	3.53	miles
AL03170002-0605-500	Savannah Branch	Escatawpa	F&W	Alabama-Mississippi state line	its source	3	3.15	miles
AL03170003-0204-100	Byrd Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	3	0.21	miles
AL03170008-0104-100	Pine Barren Creek	Escatawpa	F&W	Escatawpa River	its source	3	5.82	miles
AL03170008-0104-300	West Pine Barren Creek	Escatawpa	F&W	Pine Barren Creek	its source	3	8.27	miles
AL03170008-0104-400	East Pine Barren Creek	Escatawpa	F&W	Pine Barren Creek	its source	3	3.28	miles
AL03170008-0105-100	Brushy Creek	Escatawpa	F&W	Escatawpa River	Alabama-Mississippi state line	3	8.98	miles
AL03170008-0201-200	Pond Creek	Escatawpa	F&W	Little Creek	its source	3	10.84	miles
AL03170008-0404-100	Flat Creek	Escatawpa	F&W	Alabama-Mississippi state line	its source	3	5.86	miles
AL03170009-0101-100	Little River	Escatawpa	F&W	Portersville Bay	its source	3	2.54	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03170009-0103-600	Bayou Coden	Escatawpa	F&W	Portersville Bay	its source	3	2.30	miles
AL03160204-0105-112	Cold Creek	Mobile	PWS/F&W	Dam 1 1/2 miles west of US Highway 43	its source	3	5.05	miles
AL03160204-0203-900	Martin Branch	Mobile	F&W	Red Hill Creek	its source	3	5.52	miles
AL03160204-0305-300	Hog Bayou	Mobile	F&W	Chickasaw Creek	its source	3	0.85	miles
AL03160204-0402-103	Bayou Sara	Mobile	S/F&W	Norton Creek	US Highway 43	3	1.26	miles
AL03160205-0101-110	Eslava Creek	Mobile	F&W	Bolton Branch	its source	3	3.02	miles
AL03160205-0103-500	Rattlesnake Bayou	Mobile	F&W	Rabbit Creek	its source	3	1.49	miles
AL03160205-0201-300	Corn Branch	Mobile	F&W	Fish River	its source	3	5.14	miles
AL03160205-0205-300	Point Clear Creek	Mobile	F&W	Mobile Bay	its source	3	4.45	miles
AL03160205-0205-701	Fly Creek	Mobile	S/F&W	Mobile Bay	10 feet above MSL	3	1.17	miles
AL03160205-0205-800	Rock Creek	Mobile	F&W	Mobile Bay	its source	3	4.01	miles
AL03160205-0206-300	Boggy Branch	Mobile	S/F&W	Bon Secour River	its source	3	3.47	miles
AL03140106-0101-100	Perdido Creek	Perdido	F&W	Perdido River	its source	3	9.61	miles
AL03140106-0602-500	Rock Creek	Perdido	F&W	Blackwater River	its source	3	8.22	miles
AL03140107-0104-200	Palmetto Creek	Perdido	S/F&W	Perdido Bay	its source	3	4.79	miles
AL03140107-0104-300	Soldier Creek	Perdido	S/F&W	Perdido Bay	its source	3	8.77	miles
AL03140107-0104-600	Spring Branch	Perdido	S/F&W	Palmetto Creek	its source	3	3.04	miles
AL03140107-0202-102	Miflin Creek	Perdido	F&W	limit of tidal effects	its source	3	4.98	miles
AL03140107-0203-202	Hammock Creek	Perdido	F&W	limit of tidal effects	its source	3	2.50	miles
AL03150108-0403-100	Cane Creek	Tallapoosa	F&W	Tallapoosa River	its source	3	25.30	miles
AL03150108-0802-100	Shoal Creek	Tallapoosa	F&W	Little Tallapoosa River	its source	3	12.42	miles
AL03150108-0803-200	Knokes Creek	Tallapoosa	F&W	Little Tallapoosa River	its source	3	12.60	miles
AL03150108-0904-100	Wedowee Creek	Tallapoosa	F&W	R L Harris Lake	its source	3	26.46	miles
AL03150109-0107-300	Hutton Creek	Tallapoosa	F&W	Tallapoosa River	its source	3	7.11	miles
AL03150109-0107-500	Beaverdam Creek	Tallapoosa	F&W	Tallapoosa River	its source	3	6.95	miles
AL03150109-0201-100	Mill Creek	Tallapoosa	F&W	Chatahospee Creek	its source	3	6.88	miles
AL03150109-0201-201	Finley Creek	Tallapoosa	PWS/F&W	Mill Creek	Lafayette Reservoir dam	3	1.04	miles
AL03150109-0201-203	Finley Creek	Tallapoosa	PWS/F&W	Lafayette Reservoir	its source	3	4.01	miles
AL03150109-0205-100	Chatahospee Creek	Tallapoosa	F&W	Tallapoosa River	its source	3	21.52	miles
AL03150109-0301-102	High Pine Creek	Tallapoosa	PWS	Highway 431 crossing	High Pine Creek Lake #2 dam	3	0.09	miles
AL03150109-0301-106	High Pine Creek	Tallapoosa	PWS	High Pine Creek Lake #1	its source	3	4.07	miles
AL03150109-0301-201	Jones Creek	Tallapoosa	PWS	High Pine Creek	Roanoke City Lake dam	3	0.20	miles
AL03150109-0301-203	Jones Creek	Tallapoosa	PWS	Roanoke City Lake	High Pine Creek Lake #4 dam	3	5.54	miles
AL03150109-0301-205	Jones Creek	Tallapoosa	PWS	High Pine Creek Lake #4	its source	3	2.15	miles
AL03150109-0301-300	Town Creek	Tallapoosa	F&W	High Pine Creek	its source	3	2.54	miles
AL03150109-0301-400	Graves Creek	Tallapoosa	F&W	High Pine Creek	its source	3	5.53	miles
AL03150109-0301-501	UT to Jones Creek	Tallapoosa	PWS	Jones Creek	Crystal Lake dam	3	1.95	miles
AL03150109-0301-503	UT to Jones Creek	Tallapoosa	PWS	Crystal Lake	its source	3	2.30	miles
AL03150109-0405-101	Hillabee Creek	Tallapoosa	PWS/F&W	Oaktasasi Creek	County Road bridge 3 miles east of Hackneyville	3	5.83	miles
AL03150109-0405-200	Town Creek	Tallapoosa	F&W	Hillabee Creek	its source	3	14.06	miles
AL03150109-0405-500	Hackney Creek	Tallapoosa	PWS/F&W	Town Creek	its source	3	6.92	miles
AL03150109-0406-300	Oaktasasi Creek	Tallapoosa	F&W	Hillabee Creek	its source	3	10.89	miles
AL03150109-0406-400	Whortleberry Creek	Tallapoosa	F&W	Oaktasasi Creek	its source	3	5.51	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150109-0406-800	UT to Oaktasasi Creek	Tallapoosa	F&W	Oaktasasi Creek	its source	3	4.93	miles
AL03150109-0501-101	Little Sandy Creek	Tallapoosa	F&W	Sandy Creek	Central of Georgia RR	3	0.31	miles
AL03150109-0501-102	Little Sandy Creek	Tallapoosa	PWS/F&W	Central of Georgia RR	its source	3	2.09	miles
AL03150109-0502-100	Chattasofka Creek	Tallapoosa	F&W	Sandy Creek	its source	3	17.56	miles
AL03150109-0503-200	North Fork Sandy Creek	Tallapoosa	F&W	Sandy Creek	its source	3	11.14	miles
AL03150109-0602-100	Blue Creek	Tallapoosa	F&W	Lake Martin	its source	3	10.21	miles
AL03150109-0802-300	Coley Creek	Tallapoosa	F&W	Lake Martin	its source	3	4.32	miles
AL03150109-0803-101	Elkahatchee Creek	Tallapoosa	PWS/F&W	Alabama Highway 63	Alabama Highway 22	3	4.42	miles
AL03150109-0803-102	Elkahatchee Creek	Tallapoosa	PWS/F&W	Alabama Highway 22	its source	3	5.61	miles
AL03150109-0803-400	Harold Creek	Tallapoosa	F&W	Elkahatchee Creek	its source	3	6.41	miles
AL03150110-0102-600	Head Creek	Tallapoosa	F&W	Sougahatchee Creek	its source	3	4.00	miles
AL03150110-0401-100	Wind Creek	Tallapoosa	F&W	Tallapoosa River	its source	3	24.24	miles
AL06020001-1101-100	Lookout Creek	Tennessee	S/F&W	Alabama-Georgia state line	its source	3	1.13	miles
AL06030001-0204-102	Widows Creek	Tennessee	S/F&W	Alabama Highway 277	its source	3	5.48	miles
AL06030001-0307-100	Crow Creek	Tennessee	F&W	Lake Guntersville	Alabama-Tennessee state line	3	12.27	miles
AL06030001-0307-200	Bengis Creek	Tennessee	F&W	Lake Guntersville	its source	3	5.93	miles
AL06030001-0402-200	Kash Creek	Tennessee	F&W	Flat Rock Creek	its source	3	3.47	miles
AL06030001-0603-100	Roseberry Creek	Tennessee	F&W	Lake Guntersville	its source	3	6.38	miles
AL06030001-0701-100	Bengis Creek	Tennessee	F&W	Town Creek	its source	3	13.73	miles
AL06030001-0806-500	Turkey Creek	Tennessee	F&W	Short Creek	its source	3	4.80	miles
AL06030001-0806-600	Drum Creek	Tennessee	F&W	Short Creek	its source	3	7.71	miles
AL06030001-0806-900	East Fork Drum Creek	Tennessee	F&W	Drum Creek	its source	3	3.08	miles
AL06030002-0102-100	Larkin Fork	Tennessee	F&W	Paint Rock River	its source	3	10.95	miles
AL06030002-0203-403	Cole Spring Branch	Tennessee	F&W	Jeep trail crossing	its source	3	3.29	miles
AL06030002-0204-301	Little Paint Rock Creek	Tennessee	F&W	Paint Rock River	Merril Road Bridge	3	1.20	miles
AL06030002-0204-303	Little Paint Rock Creek	Tennessee	F&W	Jeep trail crossing	its source	3	1.93	miles
AL06030002-0402-200	Sand Branch	Tennessee	F&W	Hurricane Creek	its source	3	3.41	miles
AL06030002-0403-301	Chase Creek	Tennessee	F&W	Flint River	Acuff Spring	3	0.78	miles
AL06030002-0403-303	Chase Creek	Tennessee	F&W	Alabama Highway 72	its source	3	2.14	miles
AL06030002-0502-100	Huntsville Spring Branch	Tennessee	F&W	Broglan Branch	its source	3	1.85	miles
AL06030002-0504-300	Bradford Creek	Tennessee	F&W	Barren Fork Creek	its source	3	9.43	miles
AL06030002-0602-101	West Fork Cotaco Creek	Tennessee	F&W	Cotaco Creek	Alabama Highway 67	3	1.56	miles
AL06030002-0603-100	Cotaco Creek	Tennessee	S/F&W	West Fork Cotaco Creek	its source	3	14.08	miles
AL06030002-0603-700	Gilliam Creek	Tennessee	F&W	Mill Pond Creek	its source	3	4.93	miles
AL06030002-1008-102	No Business Creek	Tennessee	F&W	Johnson Chapel Creek	its source	3	6.81	miles
AL06030002-1009-111	Elam Creek	Tennessee	F&W	West Flint Creek	Rocky Branch	3	2.01	miles
AL06030002-1014-701	Village Branch	Tennessee	F&W	West Flint Creek	Moss Spring Branch	3	2.94	miles
AL06030004-0403-300	Baptizing Branch	Tennessee	F&W	Wheeler Lake	its source	3	3.51	miles
AL06030005-0103-100	Clear Fork	Tennessee	F&W	Big Nance Creek	its source	3	9.24	miles
AL06030005-0103-301	Sinking Creek	Tennessee	PWS/F&W	Clear Fork	Sinking Creek Lake dam	3	0.61	miles
AL06030005-0103-401	Turkey Creek	Tennessee	PWS/F&W	Clear Fork	Moulton City Lake dam	3	1.57	miles
AL06030005-0103-403	Turkey Creek	Tennessee	PWS/F&W	Moulton City Lake	its source	3	5.28	miles
AL06030005-0202-100	Bluewater Creek	Tennessee	F&W	Wilson Lake	Alabama-Tennessee state line	3	17.75	miles
AL06030005-0509-102	Shoal Creek	Tennessee	F&W	Indiancamp Creek	Alabama-Tennessee state line	3	10.79	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030005-0509-300	Brush Creek	Tennessee	F&W	Wilson Lake	its source	3	4.59	miles
AL06030005-0603-200	Lindsey Creek	Tennessee	F&W	Cypress Creek	its source	3	12.29	miles
AL06030005-0604-100	Little Cypress Creek	Tennessee	F&W	Cypress Creek	its source	3	16.01	miles
AL06030005-0605-200	Cox Creek	Tennessee	F&W	Cypress Creek	its source	3	4.11	miles
AL06030005-0703-102	Spring Creek	Tennessee	F&W	Pickwick Lake	its source	3	30.66	miles
AL06030005-0801-300	Shegog Creek	Tennessee	F&W	McKiernan Creek	its source	3	3.76	miles
AL06030005-0804-500	Stinking Bear Creek	Tennessee	F&W	Little Bear Creek	its source	3	10.06	miles
AL06030005-0805-100	Little Bear Creek	Tennessee	S/F&W	Pickwick Lake	its source	3	11.06	miles
AL06030005-0807-100	Cane Creek	Tennessee	S/F&W	Pickwick Lake	its source	3	15.41	miles
AL06030005-0902-100	Second Creek	Tennessee	F&W	Pickwick Lake	Alabama-Tennessee state line	3	7.64	miles
AL06030005-1202-800	Panther Creek	Tennessee	F&W	Pickwick Lake	its source	3	0.79	miles
AL06030005-1202-900	Cedar Fork	Tennessee	F&W	Pickwick Lake	its source	3	3.32	miles
AL06030006-0103-200	Flat Creek	Tennessee	F&W	Bear Creek	its source	3	5.41	miles
AL06030006-0105-100	Bear Creek	Tennessee	F&W	Alabama-Mississippi state line	Bear Creek Lake dam	3	18.64	miles
AL06030006-0201-200	Mud Creek	Tennessee	F&W	Cedar Creek	its source	3	1.85	miles
AL06030006-0202-200	Duncan Creek	Tennessee	PWS	Cedar Creek	its source	3	6.67	miles
AL06030006-0205-103	Little Bear Creek	Tennessee	PWS/S/F&W	Scott Branch	Alabama Highway 187	3	2.97	miles
AL06030006-0207-101	Cedar Creek	Tennessee	F&W	Bear Creek	Alabama-Mississippi state line	3	1.01	miles
AL06030006-0207-600	Mill Branch	Tennessee	F&W	Cedar Creek	its source	3	3.24	miles
AL03160103-0102-103	Buttahatchee River	Tombigbee	F&W	Lake Buttahatchee	its source	3	9.94	miles
AL03160103-0202-100	Beaver Creek	Tombigbee	F&W	Buttahatchee River	U S Highway 78	3	21.37	miles
AL03160103-0305-100	Bogue Creek	Tombigbee	F&W	Buttahatchee River	its source	3	11.11	miles
AL03160103-0503-100	Sipsey Creek	Tombigbee	F&W	Alabama-Mississippi state line	its source	3	18.91	miles
AL03160105-0101-102	Luxapallila Creek	Tombigbee	PWS/F&W	US Highway 78	its source	3	9.53	miles
AL03160105-0204-101	Luxapallila Creek	Tombigbee	PWS	at Alabama-Mississippi state line		3	0.18	miles
AL03160105-0404-101	Yellow Creek	Tombigbee	PWS	at Alabama-Mississippi state line		3	0.25	miles
AL03160105-0404-102	Yellow Creek	Tombigbee	F&W	Alabama-Mississippi state line	its source	3	36.46	miles
AL03160106-0408-100	Lubbub Creek	Tombigbee	F&W	Gainesville Lake	its source	3	53.62	miles
AL03160106-0505-200	Owl Creek	Tombigbee	F&W	Tombigbee River	Alabama-Mississippi state line	3	4.02	miles
AL03160106-0607-100	Brush Creek	Tombigbee	F&W	Demopolis Lake	its source	3	22.60	miles
AL03160107-0103-100	Little New River	Tombigbee	F&W	Sipsey River	its source	3	19.73	miles
AL03160201-0108-200	Sycamore Creek	Tombigbee	F&W	Chickasaw Bogue	its source	3	8.02	miles
AL03160201-0804-100	Bogueloosa Creek	Tombigbee	F&W	Okatuppa Creek	its source	3	22.73	miles
AL03160201-0904-200	Tishlarka Creek	Tombigbee	F&W	Wahalak Creek	its source	3	11.58	miles
AL03160202-0404-102	Sucarnoochee River	Tombigbee	F&W	Miuka Creek	Alabama-Mississippi state line	3	19.44	miles
AL03160202-0502-101	Toomsuba Creek	Tombigbee	F&W	Alamuchee Creek	AT&N Railroad	3	1.14	miles
AL03160202-0502-201	UT to Toomsuba Creek	Tombigbee	PWS	Toomsuba Creek	Lake Louise dam	3	1.91	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160202-0604-100	Alamuchee Creek	Tombigbee	F&W	Sucarnoochee River	Alabama-Mississippi state line	3	37.58	miles
AL03160202-0703-100	Sucarnoochee River	Tombigbee	F&W	Coffeeville Lake	US Highway 11	3	32.11	miles
AL03160203-0104-100	Santa Bogue Creek	Tombigbee	S/F&W	Tombigbee River	its source	3	26.44	miles
AL03160203-0502-102	Tombigbee River	Tombigbee	F&W	Smiths Creek	Coffeeville Lock and Dam	3	18.45	miles
AL03160203-0603-200	James Creek	Tombigbee	F&W	Bassett Creek	its source	3	6.86	miles
AL03160203-0607-100	Bassett Creek	Tombigbee	F&W	Tombigbee River	Little Bassett Creek	3	39.26	miles
AL03160203-0701-100	Little Bassetts Creek	Tombigbee	F&W	Bassetts Creek	its source	3	13.54	miles
AL03160203-0702-700	Miles Creek	Tombigbee	F&W	Bassetts Creek	its source	3	5.21	miles
AL03160203-0705-100	Bassetts Creek	Tombigbee	S/F&W	Tombigbee River	its source	3	43.22	miles
AL03160203-0802-100	Lewis Creek	Tombigbee	S/F&W	Tombigbee River	its source	3	12.28	miles
AL03160203-0901-112	Tombigbee River	Tombigbee	PWS/S/F&W	1/2 mile downstream of Southern Railway Crossing	Smiths Creek	3	8.83	miles
AL03160203-1001-100	Bates Creek	Tombigbee	S/F&W	Bilbo Creek	its source	3	25.30	miles
AL03160203-1103-103	Tombigbee River	Tombigbee	F&W	Olin Basin canal	Bassetts Creek	3	21.37	miles
AL03140103-0102-103	Lightwood Knot Creek	Yellow	F&W	Lake Frank Jackson	its source	3	14.56	miles
AL03140103-0102-300	Cameron Creek	Yellow	F&W	Lake Frank Jackson	its source	3	2.63	miles
AL03140103-0103-100	Lightwood Knot Creek	Yellow	F&W	Yellow River	Frank Jackson Lake dam	3	6.13	miles
AL03140103-0202-100	Hog Foot Creek	Yellow	F&W	Five Runs Creek	its source	3	10.23	miles
AL03140103-0402-300	Big Creek	Yellow	F&W	Alabama-Florida state line	its source	3	5.26	miles
AL03140103-0601-100	Pond Creek	Yellow	F&W	Alabama-Florida state line	its source	3	2.85	miles
AL03140103-0601-200	Fleming Creek	Yellow	F&W	Alabama-Florida state line	its source	3	3.15	miles
AL03140103-0602-100	Horsehead Creek	Yellow	F&W	Alabama-Florida state line	its source	3	4.59	miles
Category 4A Lakes and Reservoirs								
AL03160109-0104-102	Eightmile Creek (Lake Catoma)	Black Warrior	PWS	Lake Catoma dam	Moody Branch	4A	527.25	acres
AL03160111-0408-101	Village Creek (Bayview Lake)	Black Warrior	LWF	Bayview Lake Dam	Second Creek	4A	412.49	acres
AL03160111-0413-101	Locust Fork (Bankhead Lake)	Black Warrior	PWS/S/F&W	Black Warrior River	Jefferson County Highway 61	4A	625.96	acres
AL03160111-0413-112	Locust Fork (Bankhead Lake)	Black Warrior	F&W	Jefferson County Highway 61	Village Creek	4A	462.66	acres
AL03150105-0206-311	Mud Creek (Weiss Lake)	Coosa	S/F&W	Coosa River	end of embayment	4A	1109.35	acres
AL03150105-0303-111	Cowan Creek (Weiss Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	4A	793.60	acres
AL03150105-0304-201	Spring Creek (Weiss Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	4A	907.15	acres
AL03150105-1002-301	Big Nose Creek (Weiss Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	4A	178.13	acres
AL03150105-1003-102	Coosa River (Weiss Lake)	Coosa	PWS/S/F&W	Weiss dam powerhouse	Spring Creek	4A	15066.37	acres
AL03150106-0201-111	Ballplay Creek (Neely Henry Lake)	Coosa	PWS/F&W	Coosa River	end of embayment	4A	11.47	acres
AL03150106-0203-111	Cove Creek (Neely Henry Lake)	Coosa	PWS/F&W	Coosa River	end of embayment	4A	158.35	acres
AL03150106-0204-101	Coosa River (Neely Henry Lake)	Coosa	F&W	Big Wills Creek	City of Gadsden water supply intake	4A	245.39	acres
AL03150106-0204-102	Coosa River (Neely Henry Lake)	Coosa	PWS/S/F&W	City of Gadsden water supply intake	Weiss dam powerhouse	4A	1724.59	acres
AL03150106-0306-111	Big Canoe Creek (Neely Henry Lake)	Coosa	S/F&W	Coosa River	end of embayment	4A	1231.02	acres
AL03150106-0307-111	Beaver Creek (Neely Henry Lake)	Coosa	S/F&W	Coosa River	end of embayment	4A	397.23	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150106-0309-101	Coosa River (Neely Henry Lake)	Coosa	S/F&W	Neely Henry Dam	McCardney's Ferry	4A	3519.93	acres
AL03150106-0309-102	Coosa River (Neely Henry Lake)	Coosa	F&W	McCardney's Ferry	Big Wills Creek	4A	2637.46	acres
AL03150106-0309-311	Greens Creek (Neely Henry Lake)	Coosa	S/F&W	Coosa River	end of embayment	4A	237.21	acres
AL03150107-0709-111	Hatchet Creek (Mitchell Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	4A	1677.40	acres
AL03150107-0802-111	Walnut Creek (Mitchell Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	4A	88.72	acres
AL03150107-0803-100	Coosa River (Mitchell Lake)	Coosa	PWS/S/F&W	Mitchell Dam	Lay Dam	4A	3718.98	acres
AL06030002-1014-102	Flint Creek (Wheeler Lake)	Tennessee	F&W	Alabama Highway 67	L&N Raiload	4A	732.66	acres
AL03160106-0203-111	Coal Fire Creek (Aliceville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	4A	323.51	acres
AL03160106-0308-101	Tombigbee River (Aliceville Lake)	Tombigbee	S/F&W	Bevill Lock and Dam	Alabama-Mississippi state line	4A	1965.18	acres
Category 4A Rivers and Streams								
AL03150201-0304-200	UT to Little Catoma Creek	Alabama	F&W	Little Catoma Creek	its source	4A	6.27	miles
AL03150201-0307-100	Ramer Creek	Alabama	F&W	Catoma Creek	its source	4A	22.34	miles
AL03150201-0311-100	Catoma Creek	Alabama	F&W	Woodruff Lake	Ramer Creek	4A	20.70	miles
AL03150201-0404-100	Pintlala Creek	Alabama	S/F&W	Pinchony Creek	its source	4A	26.40	miles
AL03150203-0802-100	Pursley Creek	Alabama	F&W	Claiborne Lake	its source	4A	24.75	miles
AL03150203-0802-400	UT to Pursley Creek	Alabama	F&W	Pursley Creek	its source	4A	4.35	miles
AL03160109-0102-150	Long Branch	Black Warrior	F&W	Wolf Creek	its source	4A	2.04	miles
AL03160109-0102-910	Duck Creek	Black Warrior	F&W	Duck River	its source	4A	5.76	miles
AL03160109-0104-103	Eightmile Creek	Black Warrior	PWS	Moody Branch	its source	4A	7.60	miles
AL03160109-0105-101	Brindley Creek	Black Warrior	PWS	Broglen River	State Highway 69	4A	7.17	miles
AL03160109-0105-102	Brindley Creek	Black Warrior	PWS	State Highway 69	its source	4A	9.89	miles
AL03160109-0106-100	Broglen River	Black Warrior	F&W	Mulberry Fork	its source	4A	12.40	miles
AL03160109-0106-500	Eightmile Creek	Black Warrior	F&W	Broglen River	Lake Catoma dam	4A	8.15	miles
AL03160109-0201-100	Thacker Creek	Black Warrior	F&W	Mulberry Fork	its source	4A	9.98	miles
AL03160109-0404-500	Black Branch	Black Warrior	F&W	Cane Creek	its source	4A	4.11	miles
AL03160110-0403-102	Rock Creek	Black Warrior	F&W	Smith Lake	Blevens Creek	4A	8.82	miles
AL03160110-0406-100	Crooked Creek	Black Warrior	F&W	Smith Lake	its source	4A	30.47	miles
AL03160110-0502-102	Ryan Creek	Black Warrior	F&W	Smith Lake	its source	4A	16.12	miles
AL03160111-0202-200	Graves Creek	Black Warrior	F&W	Locust Fork	its source	4A	9.79	miles
AL03160111-0203-100	Dry Creek	Black Warrior	F&W	Locust Fork	its source	4A	12.00	miles
AL03160111-0305-102	Locust Fork	Black Warrior	F&W	Kelly Creek	Little Warrior River	4A	18.15	miles
AL03160111-0308-102	Locust Fork	Black Warrior	PWS/S/F&W	US Highway 31	Kelly Creek	4A	14.86	miles
AL03160111-0404-102	Locust Fork	Black Warrior	S/F&W	Jefferson County Road 77	US Highway 31	4A	14.25	miles
AL03160111-0408-300	Camp Branch	Black Warrior	F&W	Bayview Lake	its source	4A	4.93	miles
AL03160111-0409-100	Village Creek	Black Warrior	S/F&W	Bankhead Lake	Bayview Lake Dam	4A	17.90	miles
AL03160112-0502-200	Little Hurricane Creek	Black Warrior	F&W	Hurricane Creek	its source	4A	7.96	miles
AL03160112-0502-300	North Fork Hurricane Creek	Black Warrior	F&W	Hurricane Creek	its source	4A	6.53	miles
AL03160112-0504-100	Hurricane Creek	Black Warrior	F&W	Oliver Lake	its source	4A	31.50	miles
AL03150202-0101-102	Cahaba River	Cahaba	OAW/F&W	US Highway 11	I-59	4A	3.13	miles
AL03150202-0102-100	Big Black Creek	Cahaba	F&W	Cahaba River	its source	4A	16.45	miles
AL03150202-0103-300	Lee Branch	Cahaba	F&W	Lake Purdy	its source	4A	2.26	miles
AL03150202-0103-700	Jeb Branch	Cahaba	F&W	Lee Branch	its source	4A	1.24	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150202-0104-102	Cahaba River	Cahaba	F&W	Grant's Mill Road	US Highway 11	4A	21.11	miles
AL03150202-0202-100	Cahaba Valley Creek	Cahaba	F&W	Buck Creek	its source	4A	14.98	miles
AL03150202-0203-111	Buck Creek	Cahaba	F&W	Cahaba River	Cahaba Valley Creek	4A	2.92	miles
AL03150202-0204-101	Cahaba River	Cahaba	F&W	Buck Creek	Dam near US Highway 280	4A	17.46	miles
AL03150202-0204-102	Cahaba River	Cahaba	OAW/PWS	Dam near US Highway 280	Grant's Mill Road	4A	13.45	miles
AL03150202-0204-500	Patton Creek	Cahaba	F&W	Cahaba River	its source	4A	8.84	miles
AL03150202-0206-101	Cahaba River	Cahaba	OAW/F&W	Shades Creek	Shelby County Road 52	4A	23.61	miles
AL03150202-0206-102	Cahaba River	Cahaba	F&W	Shelby County Road 52	Buck Creek	4A	3.62	miles
AL03150202-0302-102	Mud Creek	Cahaba	F&W	Tannehill Iron Works	its source	4A	4.08	miles
AL03150202-0302-200	Mill Creek	Cahaba	F&W	Mud Creek	its source	4A	6.65	miles
AL03150202-0302-400	Cooley Creek	Cahaba	F&W	Mill Creek	its source	4A	2.83	miles
AL03150202-0303-100	Shades Creek	Cahaba	F&W	Cahaba River	its source	4A	56.38	miles
AL03150202-0407-100	Cahaba River	Cahaba	OAW/F&W	lower Little Cahaba River	Shades Creek	4A	13.51	miles
AL03150202-0902-502	Dry Creek	Cahaba	F&W	Dallas County Road 201	its source	4A	4.98	miles
AL03130012-0106-201	Boggy Creek	Chipola	F&W	Buck Creek	Cottondale WWTP	4A	3.48	miles
AL03140201-0601-100	Hurricane Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	4A	9.39	miles
AL03140202-0401-102	Walnut Creek	Choctawhatchee	F&W	Pike County Road 3304	US Highway 231	4A	3.30	miles
AL03150105-0807-102	Spring Creek	Coosa	F&W	Weiss Lake	Mud Creek	4A	5.39	miles
AL03150105-0807-103	Spring Creek	Coosa	F&W	Mud Creek	its source	4A	9.88	miles
AL03150105-0807-200	Mud Creek	Coosa	F&W	Spring Creek	its source	4A	5.24	miles
AL03150106-0102-300	Little Wills Creek	Coosa	F&W	Big Wills Creek	its source	4A	6.08	miles
AL03150107-0404-100	Watson Creek	Coosa	F&W	Buxahatchee Creek	its source	4A	12.37	miles
AL03140301-0302-102	Conecuh River	Escambia	F&W	Broadhead Creek	Mannings Creek	4A	24.53	miles
AL03140301-0404-112	Conecuh River	Escambia	F&W	Gantt Lake	Hornet Creek	4A	4.55	miles
AL03140301-0405-102	Conecuh River	Escambia	S/F&W	Point A Lake	Gantt Dam	4A	2.26	miles
AL03140303-0201-101	Rocky Creek	Escambia	F&W	Persimmon Creek	County road north of Chapman	4A	9.23	miles
AL03170008-0205-102	Puppy Creek	Escatawpa	F&W	Alabama Highway 217	its source	4A	11.32	miles
AL03170008-0501-210	Juniper Creek	Escatawpa	F&W	Big Creek	its source	4A	6.67	miles
AL03170009-0102-100	Bayou La Batre	Escatawpa	F&W	Portersville Bay	its source	4A	5.46	miles
AL03160204-0304-103	Eightmile Creek	Mobile	F&W	US Highway 45	Highpoint Boulevard	4A	3.32	miles
AL03160204-0304-200	Gum Tree Branch	Mobile	F&W	Eightmile Creek	its source	4A	2.27	miles
AL03160204-0402-102	Bayou Sara	Mobile	S/F&W	Gunnison Creek	Norton Creek	4A	2.76	miles
AL03160204-0402-501	Norton Creek	Mobile	F&W	Bayou Sara	Saraland WWTP	4A	0.95	miles
AL03160204-0504-101	Threemile Creek	Mobile	A&I	Mobile River	Toulmins Spring Branch	4A	2.04	miles
AL03160204-0504-102	Threemile Creek	Mobile	A&I	Toulmins Spring Branch	Mobile Street	4A	4.34	miles
AL03160204-0504-103	Threemile Creek	Mobile	A&I	Mobile Street	its source	4A	8.85	miles
AL03160204-0504-200	Industrial Canal	Mobile	A&I	Threemile Creek	its source	4A	2.32	miles
AL03160205-0101-101	Dog River	Mobile	F&W	Halls Mill Creek	Moore Creek	4A	1.38	miles
AL03160205-0101-200	Moore Creek	Mobile	F&W	Dog River	its source	4A	3.95	miles
AL03160205-0101-400	Bolton Branch	Mobile	F&W	Dog River	its source	4A	2.44	miles
AL03160205-0101-500	Eslava Creek	Mobile	F&W	Dog River	its source	4A	3.17	miles
AL03160205-0101-600	Bolton Branch	Mobile	F&W	Moore Creek	its source	4A	5.69	miles
AL03160205-0102-101	Dog River	Mobile	S/F&W	Mobile Bay	Halls Mill Creek	4A	2.79	miles
AL03160205-0103-401	Rabbit Creek	Mobile	F&W	Halls Mill Creek	Alabama Highway 193	4A	2.28	miles
AL03160205-0206-702	UT to Bon Secour River	Mobile	F&W	Baldwin County Road 65	its source	4A	1.64	miles
AL03150108-0905-103	Little Tallapoosa River	Tallapoosa	F&W	Wolf Creek	Alabama-Georgia state line	4A	30.78	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150108-0905-400	Wolf Creek	Tallapoosa	F&W	Little Tallapoosa River	its source	4A	5.53	miles
AL03150108-1004-104	Tallapoosa River	Tallapoosa	PWS/F&W	1/2 mile upstream of Cleburne County Road 36	Cleburne County Road 19	4A	3.82	miles
AL03150108-1004-113	Tallapoosa River	Tallapoosa	F&W	dam at Cleburne County Road 36	1/2 mile upstream of Cleburne County Road 36	4A	0.44	miles
AL03150110-0102-700	Pepperell Branch	Tallapoosa	F&W	Sougahatchee Creek	its source	4A	6.67	miles
AL03150110-0202-200	Parkerson Mill Creek	Tallapoosa	F&W	Chewacla Creek	its source	4A	6.85	miles
AL06030001-0705-100	Town Creek	Tennessee	F&W	Lake Guntersville	its source	4A	60.70	miles
AL06030001-0805-200	Scarham Creek	Tennessee	F&W	Short Creek	its source	4A	23.42	miles
AL06030002-0203-402	Cole Spring Branch	Tennessee	F&W	Bridge at Jones farm	Jeep trail crossing	4A	1.80	miles
AL06030002-0204-302	Little Paint Rock Creek	Tennessee	F&W	Merril Road Bridge	Jeep trail crossing	4A	2.17	miles
AL06030002-0303-100	Mountain Fork	Tennessee	F&W	Flint River	its source	4A	14.90	miles
AL06030002-0303-500	Hester Creek	Tennessee	F&W	Mountain Fork	Alabama-Tennessee state line	4A	7.27	miles
AL06030002-0402-101	Hurricane Creek	Tennessee	F&W	Flint River	Gurley Pike Road	4A	7.31	miles
AL06030002-0404-200	Goose Creek	Tennessee	F&W	Flint River	its source	4A	8.89	miles
AL06030002-0405-300	Yellow Bank Creek	Tennessee	F&W	Flint River	its source	4A	5.33	miles
AL06030002-0604-100	Town Creek	Tennessee	F&W	Cotaco Creek	its source	4A	8.66	miles
AL06030002-0605-102	Cotaco Creek	Tennessee	S/F&W	Guyer Branch	West Fork Cotaco Creek	4A	5.38	miles
AL06030002-0703-102	Limestone Creek	Tennessee	F&W	US Highway 72	Leslie Branch	4A	10.79	miles
AL06030002-0802-201	French Mill Creek	Tennessee	F&W	Piney Creek	unnamed tributary in Pine Swamp	4A	5.21	miles
AL06030002-0902-200	Cane Creek	Tennessee	F&W	Tennessee River	its source	4A	7.92	miles
AL06030002-0903-100	Aldridge Creek	Tennessee	F&W	Tennessee River	its source	4A	11.80	miles
AL06030002-1001-100	East Fork Flint Creek	Tennessee	F&W	Flint Creek	its source	4A	15.32	miles
AL06030002-1003-112	Robinson Creek	Tennessee	F&W	Flint Creek	its source	4A	6.69	miles
AL06030002-1003-510	Indian Creek	Tennessee	F&W	Flint Creek	its source	4A	4.22	miles
AL06030002-1004-100	Cedar Creek	Tennessee	F&W	Flint Creek	its source	4A	9.54	miles
AL06030002-1005-100	Shoal Creek	Tennessee	F&W	Flint Creek	its source	4A	12.59	miles
AL06030002-1005-150	UT to Town Branch	Tennessee	F&W	Town Branch	its source	4A	1.25	miles
AL06030002-1005-200	Town Branch	Tennessee	F&W	Shoal Creek	its source	4A	1.90	miles
AL06030002-1006-100	Crowdabout Creek	Tennessee	F&W	Flint Creek	its source	4A	16.11	miles
AL06030002-1006-200	Herrin Creek	Tennessee	F&W	Crowdabout Creek	its source	4A	6.21	miles
AL06030002-1007-102	Flint Creek	Tennessee	F&W	Shoal Creek	its source	4A	13.39	miles
AL06030002-1007-500	Mack Creek	Tennessee	F&W	Flint Creek	its source	4A	5.91	miles
AL06030002-1008-101	No Business Creek	Tennessee	F&W	Flint Creek	Johnson Chapel Creek	4A	7.28	miles
AL06030002-1009-112	Elam Creek	Tennessee	F&W	Rocky Branch	its source	4A	12.08	miles
AL06030002-1011-100	Big Shoal Creek	Tennessee	F&W	West Flint Creek	its source	4A	14.47	miles
AL06030002-1012-201	McDaniel Creek	Tennessee	F&W	West Flint Creek	Alabama Highway 36	4A	4.16	miles
AL06030002-1013-100	West Flint Creek	Tennessee	F&W	Flint Creek	McDaniel Creek	4A	23.12	miles
AL06030002-1013-900	Flat Creek	Tennessee	F&W	West Flint Creek	its source	4A	7.78	miles
AL06030002-1014-104	Flint Creek	Tennessee	LWF	Alabama Highway 36	Shoal Creek	4A	10.00	miles
AL06030002-1014-702	Village Branch	Tennessee	F&W	Moss Spring Branch	its source	4A	6.47	miles
AL06030002-1101-102	Swan Creek	Tennessee	F&W	Huntsville Brownsferry Road	Town Creek	4A	2.80	miles
AL06030002-1103-202	Round Island Creek	Tennessee	F&W	Browns Ferry Road	Beauchamp Branch	4A	3.52	miles
AL06030002-1106-100	Mallard Creek	Tennessee	F&W	Tennessee River	its source	4A	14.05	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030002-1204-103	Second Creek	Tennessee	F&W	Lauderdale County Road 76	Alabama-Tennessee state line	4A	13.00	miles
AL06030004-0401-100	Shoal Creek	Tennessee	F&W	Elk River	Alabama-Tennessee state line	4A	7.47	miles
AL03160105-0101-200	East Branch Luxapallila Creek	Tombigbee	PWS/F&W	Luxapallila Creek	its source	4A	11.18	miles
AL03160201-0904-101	Wahalak Creek	Tombigbee	F&W	Coffeeville Lake	Spear Creek	4A	14.27	miles
AL03160203-0602-100	Bassett Creek	Tombigbee	F&W	Little Bassett Creek	its source	4A	14.47	miles
Category 4A Estuary and Ocean								
AL03160205-0300-101	Mobile Bay	Mobile	SH/F&W	out to 1000 feet offshore from Mullet Point to Ragged Point		4A	2.31	square miles
AL03160205-0300-201	Bon Secour Bay	Mobile	SH/S/F&W	out to 1000 feet offshore from Fish River Point to Mullet Point		4A	0.88	square miles
AL03160205-0300-501	Mobile Bay	Mobile	S/F&W	1000 feet offshore from Ragged Point to the mouth of Yancey Branch		4A	1.08	square miles
AL03140107-0205-102	Little Lagoon	Perdido	SH/S/F&W	east of Little Lagoon Pass		4A	1.32	square miles
Category 4B Rivers and Streams								
AL03160111-0407-101	Fivemile Creek	Black Warrior	S/F&W	Locust Fork	Old Jasper Highway	4B	7.54	miles
AL03160111-0407-102	Fivemile Creek	Black Warrior	F&W	Old Jasper Highway	Alabama Highway 79	4B	27.94	miles
AL06030002-0503-101	Huntsville Spring Branch	Tennessee	F&W	Indian Creek	Johnson Road (Huntsville Field)	4B	11.08	miles
AL06030002-0505-101	Indian Creek	Tennessee	F&W	Wheeler Lake	Martin Road (Redstone Arsenal)	4B	1.96	miles
Category 4C Rivers and Streams								
AL03150105-1003-201	Coosa River	Coosa	S/F&W	Weiss dam powerhouse	Sugar Creek	4C	5.30	miles
AL03150105-1003-202	Coosa River	Coosa	F&W	Sugar Creek	Weiss dam	4C	14.34	miles
AL03150109-0106-102	Tallapoosa River	Tallapoosa	F&W	Cedar Creek	R. L. Harris Dam	4C	10.68	miles
AL03150109-0107-102	Tallapoosa River	Tallapoosa	F&W	Alabama Highway 77	Cedar Creek	4C	3.15	miles
Category 5 Lakes and Reservoirs								
AL03150203-0703-101	Alabama River (Claiborne Lake)	Alabama	PWS	Beaver Creek	Rockwest Creek	5	310.63	acres
AL03150203-0802-111	Pursley Creek (Claiborne Lake)	Alabama	S/F&W	Alabama River	end of embayment	5	6.64	acres
AL03150203-0805-101	Alabama River (Claiborne Lake)	Alabama	S/F&W	McCalls Creek	Bear Creek	5	714.80	acres
AL03150203-0805-102	Alabama River (Claiborne Lake)	Alabama	S/F&W	Bear Creek	Frisco Railroad Crossing	5	304.23	acres
AL03150203-0805-103	Alabama River (Claiborne Lake)	Alabama	F&W	Frisco Railroad Crossing	Pursley Creek	5	474.72	acres
AL03150203-0805-104	Alabama River (Claiborne Lake)	Alabama	F&W	Pursley Creek	River Mile 131	5	524.33	acres
AL03150203-0805-105	Alabama River (Claiborne Lake)	Alabama	PWS	River Mile 131	Beaver Creek	5	109.31	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150204-0101-111	Tallatchee Creek (Claiborne Lake)	Alabama	S/F&W	Alabama River	end of embayment	5	20.58	acres
AL03150204-0105-100	Alabama River (Claiborne Lake)	Alabama	S/F&W	Claiborne Lock and Dam	McCalls Creek	5	2051.55	acres
AL03160110-0305-201	Clear Creek (Smith Lake)	Black Warrior	PWS/S/F&W	Sipsey Fork	Coon Creek	5	346.47	acres
AL03160110-0306-201	Sipsey Fork (Smith Lake)	Black Warrior	S/F&W	County Road 41	Brushy Creek	5	1321.71	acres
AL03160110-0306-901	Butler Branch (Smith Lake)	Black Warrior	S/F&W	Sipsey Fork	end of embayment	5	119.74	acres
AL03160110-0408-110	Rock Creek (Smith Lake)	Black Warrior	S/F&W	Sipsey Fork	White Oak Creek	5	1946.62	acres
AL03160110-0505-103	Ryan Creek (Smith Lake)	Black Warrior	S/F&W	Coon Creek	end of embayment	5	4547.96	acres
AL03160111-0204-111	Blackburn Fork (Inland Lake)	Black Warrior	PWS/S	Inland Lake dam	extent of reservoir	5	1389.78	acres
AL03160112-0106-111	Valley Creek (Bankhead Lake)	Black Warrior	PWS/S/F&W	Black Warrior River	end of embayment	5	119.67	acres
AL03160112-0410-111	Binion Creek (Lake Tuscalooosa)	Black Warrior	F&W	North River	end of embayment	5	305.18	acres
AL03160112-0411-101	North River (Lake Tuscaloosa)	Black Warrior	F&W	Binion Creek	extent of reservoir	5	968.62	acres
AL03160112-0413-102	North River (Lake Tuscaloosa)	Black Warrior	PWS/S	Lake Tuscaloosa dam	Binion Creek	5	3797.84	acres
AL03150202-0103-102	Little Cahaba River (Lake Purdy)	Cahaba	PWS	Lake Purdy dam	extent of reservoir	5	961.95	acres
AL03130003-0505-111	Uchee Creek (Walter F George Lake)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	5	105.15	acres
AL03130003-1205-100	Cowikee Creek (Walter F George Lake)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	5	1739.13	acres
AL03130003-1307-111	Barbour Creek (Walter F George Lake)	Chattahoochee	F&W	Chattahoochee River	end of embayment	5	656.59	acres
AL03130003-1600-100	Chattahoochee River (Walter F George Lake)	Chattahoochee	S/F&W	Walter F. George Lock and Dam	Cowikee Creek	5	9797.21	acres
AL03150105-1002-102	Coosa River (Weiss Lake)	Coosa	S/F&W	Spring Creek	Alabama-Georgia state line	5	6567.86	acres
AL03150106-0107-111	Black Creek (Neely Henry Lake)	Coosa	F&W	US Highway 411	end of embayment	5	348.36	acres
AL03150106-0108-111	Big Wills Creek (Neely Henry Lake)	Coosa	F&W	US Highway 411	end of embayment	5	514.85	acres
AL03150106-0408-111	Cane Creek (Logan Martin Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	35.96	acres
AL03150106-0514-111	Choccolocco Creek (Logan Martin Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	1125.61	acres
AL03150106-0603-111	Coosa River (Logan Martin Lake)	Coosa	PWS/S/F&W	Broken Arrow Creek	Trout Creek	5	1449.31	acres
AL03150106-0603-112	Coosa River (Logan Martin Lake)	Coosa	S/F&W	Trout Creek	Neely Henry Dam	5	783.90	acres
AL03150106-0604-111	Blue Eye Creek (Logan Martin Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	305.45	acres
AL03150106-0605-211	Dye Creek (Logan Martin Lake)	Coosa	F&W	Coosa River	end of embayment	5	144.97	acres
AL03150106-0703-111	Talladega Creek (Lay Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	60.66	acres
AL03150106-0802-111	Clear Creek (Logan Martin Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	624.28	acres
AL03150106-0803-100	Coosa River (Logan Martin Lake)	Coosa	S/F&W	Logan Martin Dam	Broken Arrow Creek	5	10945.46	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150106-0803-311	Easonville Creek (Logan Martin Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	1260.19	acres
AL03150106-0808-111	Kelly Creek (Lay Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	5	6.49	acres
AL03150106-0810-102	Coosa River (Lay Lake)	Coosa	PWS/S/F&W	River Mile 89	Logan Martin Dam	5	698.04	acres
AL03150107-0106-111	Tallaseehatchee Creek (Lay Lake)	Coosa	S/F&W	Coosa River	end of embayment	5	13.46	acres
AL03150107-0205-111	Yellowleaf Creek (Lay Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	5	178.73	acres
AL03150107-0301-102	Coosa River (Lay Lake)	Coosa	S/F&W	Southern RR Bridge	River Mile 89	5	803.88	acres
AL03150107-0304-111	Dry Branch (Lay Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	5	112.04	acres
AL03150107-0406-111	Waxahatchee Creek (Lay Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	5	770.68	acres
AL03150107-0501-111	Peckerwood Creek (Lay Lake)	Coosa	PWS/S/F&W	Coosa River	end of embayment	5	165.92	acres
AL03150107-0503-110	Coosa River (Lay Lake)	Coosa	PWS/S/F&W	Lay Dam	Southern RR Bridge	5	10559.35	acres
AL03140301-0404-111	Conecuh River (Gantt Lake)	Escambia	S/F&W	Gantt Dam	extent of reservoir	5	1,817.43	acres
AL03140301-0405-101	Conecuh River (Point A Lake)	Escambia	S/F&W	Point A Dam	extent of reservoir	5	610.56	acres
AL03140302-0506-101	Patsaliga Creek (Point A Lake)	Escambia	F&W	Conecuh River	Buck Creek	5	154.43	acres
AL03170008-0502-110	Big Creek (Big Creek Lake)	Escatawpa	PWS/F&W	Big Creek Lake dam	Collins Creek	5	2,724.87	acres
AL03170008-0502-211	Hamilton Creek (Big Creek Lake)	Escatawpa	PWS/F&W	Big Creek	end of embayment	5	583.14	acres
AL03150109-0105-102	Tallapoosa River (R L Harris Lake)	Tallapoosa	S/F&W	R L Harris Dam	Little Tallapoosa River	5	5356.95	acres
AL03150109-0803-301	Sugar Creek (Lake Martin)	Tallapoosa	S/F&W	Elkahatchee Creek	end of embayment	5	58.93	acres
AL03150110-0104-101	Sougahatchee Creek (Yates Lake)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	5	203.78	acres
AL03150110-0402-101	Channahatchee Creek (Yates Lake)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	5	62.63	acres
AL03150110-0406-102	Tallapoosa River (Thurlow Lake)	Tallapoosa	PWS/S/F&W	Thurlow dam	Yates dam	5	538.60	acres
AL03150110-0406-103	Tallapoosa River (Yates Lake)	Tallapoosa	PWS/S/F&W	Yates dam	Martin Dam	5	1595.89	acres
AL06030001-0204-111	Widows Creek (Lake Guntersville)	Tennessee	S/F&W	Tennessee River	end of embayment	5	97.65	acres
AL06030001-0205-102	Tennessee River (Lake Guntersville)	Tennessee	PWS/S/F&W	Pump Spring Branch	Alabama-Tennessee state line	5	2400.28	acres
AL06030001-0705-111	Town Creek (Lake Guntersville)	Tennessee	S/F&W	Tennessee River	end of embayment	5	1584.07	acres
AL06030001-0904-101	Browns Creek (Lake Guntersville)	Tennessee	PWS/S/F&W	Tenneessee River	end of embayment	5	5915.66	acres
AL06030002-0505-111	Indian Creek (Wheeler Lake)	Tennessee	PWS/F&W	Tennessee River	end of embayment	5	257.28	acres
AL06030002-0606-111	Cotaco Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	492.48	acres
AL06030002-0902-100	Tennessee River (Wheeler Lake)	Tennessee	S/F&W	Flint River	Guntersville Dam	5	1345.77	acres
AL06030002-0904-100	Tennessee River (Wheeler Lake)	Tennessee	PWS/F&W	Indian Creek	Flint River	5	2779.95	acres
AL06030002-0906-102	Tennessee River (Wheeler Lake)	Tennessee	PWS/S/F&W	Cotaco Creek	Indian Creek	5	334.49	acres
AL06030002-0906-600	Limestone Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	2338.94	acres
AL06030002-1014-101	Flint Creek (Wheeler Lake)	Tennessee	F&W	Tennessee River	Alabama Highway 67	5	851.41	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030002-1101-111	Swan Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	772.38	acres
AL06030002-1102-102	Tennessee River (Wheeler Lake)	Tennessee	PWS/S/F&W	US Highway 31	Flint Creek	5	2587.33	acres
AL06030002-1102-103	Tennessee River (Wheeler Lake)	Tennessee	S/F&W	Flint Creek	Cotaco Creek	5	4271.34	acres
AL06030002-1102-211	Bakers Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	157.02	acres
AL06030002-1102-311	Dry Branch (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	84.15	acres
AL06030002-1103-111	Round Island Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	408.15	acres
AL06030002-1107-102	Tennessee River (Wheeler Lake)	Tennessee	S/F&W	five miles upstream of Elk River (RM 289.3)	US Highway 31	5	19221.29	acres
AL06030002-1201-111	Spring Creek (Wheeler Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	1111.87	acres
AL06030002-1204-101	Second Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	First bridge upstream from US Highway 72	5	610.22	acres
AL06030002-1205-100	Tennessee River (Wheeler Lake)	Tennessee	PWS/S/F&W	Wheeler Dam	five miles upstream of Elk River (RM 289.3)	5	13441.12	acres
AL06030004-0405-101	Elk River (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	Anderson Creek	5	1569.21	acres
AL06030005-0105-111	Big Nance Creek (Wilson Lake)	Tennessee	F&W	Tennessee River	end of embayment	5	44.57	acres
AL06030005-0605-111	Cypress Creek (Pickwick Lake)	Tennessee	PWS/F&W	Tennessee River	end of embayment	5	57.00	acres
AL06030005-0703-111	Spring Creek (Pickwick Lake)	Tennessee	F&W	Tennessee River	end of embayment	5	18.34	acres
AL06030005-0801-100	Tennessee River (Wilson Lake)	Tennessee	PWS/S/F&W	Wilson Dam	Wheeler Dam	5	13363.37	acres
AL06030005-0801-201	McKiernan Creek (Wilson Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	212.45	acres
AL06030005-0807-111	Cane Creek (Pickwick Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	41.43	acres
AL06030005-0808-103	Tennessee River (Pickwick Lake)	Tennessee	F&W	lower end of Seven Mile Island	Sheffield water intake	5	2424.33	acres
AL06030005-0808-104	Tennessee River (Pickwick Lake)	Tennessee	PWS/F&W	Sheffield water intake	Wilson Dam	5	1112.21	acres
AL06030005-0902-111	Second Creek (Pickwick Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	677.22	acres
AL06030005-1203-100	Tennessee River (Pickwick Lake)	Tennessee	PWS/S/F&W	Alabama-Tennessee state line	lower end of Seven Mile Island	5	19370.33	acres
AL06030006-0102-102	Bear Creek (Upper Bear Creek Lake)	Tennessee	PWS/S/F&W	Pretty Branch	Alabama Highway 243	5	249.44	acres
AL06030006-0103-104	Bear Creek (Upper Bear Creek Lake)	Tennessee	PWS/S/F&W	Upper Bear Creek dam	Pretty Branch	5	1462.58	acres
AL06030006-0104-101	Bear Creek (Bear Creek Lake)	Tennessee	PWS/S/F&W	Bear Creek Lake dam	Alabama Highway 187	5	653.54	acres
AL06030006-0203-101	Cedar Creek (Cedar Creek Lake)	Tennessee	PWS/S/F&W	Cedar Creek Lake dam	extent of reservoir	5	4063.07	acres
AL06030006-0205-111	Little Bear Creek (Little Bear Creek Lake)	Tennessee	PWS/S/F&W	Little Bear Creek dam	Scott Branch	5	1435.05	acres
AL06030006-0307-111	Bear Creek (Pickwick Lake)	Tennessee	S/F&W	Tenneessee River	end of embayment	5	5811.82	acres
AL03160107-0306-101	Sipsey River (Gainesville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	5	383.92	acres
AL03160201-0401-102	Tombigbee River (Demopolis Lake)	Tombigbee	S/F&W	Demopolis Lock and Dam	Black Warrior River	5	545.48	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160201-0401-103	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	Sucarnoochee River	Demopolis Lock and Dam	5	668.76	acres
AL03160202-0703-111	Sucarnoochee River (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	5	10.81	acres
AL03160203-1103-800	Olin Basin	Tombigbee	F&W	Olin Basin		5	85.73	acres
AL03140103-0102-102	Lightwood Knot Creek (Lake Frank Jackson)	Yellow	F&W	Lake Frank Jackson dam	extent of reservoir	5	956.26	acres
AL03140103-0601-300	Lake Jackson	Yellow	S/F&W	Within Florala and north of AL-FL state line		5	415.46	acres
Category 5 Rivers and Streams								
AL03150201-0101-200	Callaway Creek	Alabama	F&W	Bouldin tailrace canal	its source	5	11.78	miles
AL03150201-0104-302	Three Mile Branch	Alabama	F&W	Lower Wetumpka Road	its source	5	7.62	miles
AL03150201-0105-300	Mill Creek	Alabama	F&W	Still Creek	its source	5	8.86	miles
AL03150201-1006-101	Mulberry Creek	Alabama	S/F&W	Alabama River	Harris Branch	5	22.20	miles
AL03150201-1207-301	Sixmile Creek	Alabama	F&W	Alabama River	Fourmile Creek	5	1.23	miles
AL03150203-0101-100	Washington Creek	Alabama	F&W	Bogue Chitto Creek	its source	5	17.24	miles
AL03150203-0103-200	Coffee Creek	Alabama	F&W	Tayloe Creek	its source	5	6.88	miles
AL03150203-0108-110	Bear Creek	Alabama	F&W	Bogue Chitto Creek	its source	5	16.79	miles
AL03150203-0110-100	Bogue Chitto Creek	Alabama	F&W	Dannelly Lake	its source	5	53.56	miles
AL03150204-0405-102	Alabama River	Alabama	F&W	Pigeon Creek	Claiborne Lock and Dam	5	12.35	miles
AL03160109-0101-150	Riley Maze Creek	Black Warrior	F&W	Tibb Creek	its source	5	4.13	miles
AL03160109-0101-600	Tibb Creek	Black Warrior	F&W	Mulberry Fork	its source	5	5.13	miles
AL03160109-0109-102	Mulberry Fork	Black Warrior	F&W	Broglen River	Blount County Road 6	5	18.23	miles
AL03160109-0203-101	Mulberry Fork	Black Warrior	F&W	Marriott Creek	Mill Creek	5	2.52	miles
AL03160109-0203-102	Mulberry Fork	Black Warrior	F&W	Mill Creek	Broglen River	5	17.27	miles
AL03160109-0503-100	Wolf Creek	Black Warrior	S/F&W	Lost Creek	Alabama Highway 102	5	38.40	miles
AL03160109-0602-601	Old Town Creek	Black Warrior	F&W	Mulberry Fork	Pinhook Creek	5	2.71	miles
AL03160109-0604-900	Baker Creek	Black Warrior	F&W	Mulberry Fork	its source	5	7.01	miles
AL03160110-0401-100	Blevens Creek	Black Warrior	F&W	Rock Creek	its source	5	19.14	miles
AL03160111-0106-100	Slab Creek	Black Warrior	F&W	Locust Fork	its source	5	24.98	miles
AL03160111-0307-400	Black Creek	Black Warrior	F&W	Cunningham Creek	its source	5	6.36	miles
AL03160111-0407-103	Fivemile Creek	Black Warrior	S/F&W	Alabama Highway 79	its source	5	9.07	miles
AL03160111-0408-102	Village Creek	Black Warrior	LWF	Second Creek	Woodlawn Bridge	5	12.60	miles
AL03160111-0408-103	Village Creek	Black Warrior	LWF	Woodlawn Bridge	its source	5	4.04	miles
AL03160112-0304-110	Pegues Creek	Black Warrior	F&W	Holt Lake	its source	5	4.23	miles
AL03160112-0305-110	Daniel Creek	Black Warrior	F&W	Holt Lake	its source	5	10.42	miles
AL03160112-0503-100	Cottondale Creek	Black Warrior	F&W	Hurricane Creek	its source	5	9.58	miles
AL03160113-0201-100	Mill Creek	Black Warrior	F&W	Warrior Lake	its source	5	10.36	miles
AL03160113-0302-110	Elliotts Creek	Black Warrior	F&W	Warrior Lake	its source	5	24.74	miles
AL03160113-0602-300	Carthage Branch	Black Warrior	F&W	Warrior Lake	its source	5	3.98	miles
AL03160113-0704-100	Cottonwood Creek	Black Warrior	F&W	Big Prairie Creek	its source	5	11.42	miles
AL03160113-0708-100	Big Prairie Creek	Black Warrior	F&W	Lake Demopolis	its source	5	44.16	miles
AL03160113-0801-200	Needham Creek	Black Warrior	F&W	Dollarhide Creek	its source	5	8.96	miles
AL03140104-0104-100	Blackwater River	Blackwater	F&W	Alabama-Florida state line	its source	5	2.78	miles
AL03150202-0103-103	Little Cahaba River	Cahaba	F&W	Lake Purdy	its source	5	13.75	miles
AL03150202-0402-100	Mahan Creek	Cahaba	F&W	Little Cahaba River	its source	5	15.47	miles
AL03150202-0503-102	Cahaba River	Cahaba	OAW/S	Alabama Highway 82	lower Little Cahaba River	5	10.58	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150202-0505-100	Affonee Creek	Cahaba	S	Cahaba River	its source	5	18.51	miles
AL03150202-0506-200	Walton Creek	Cahaba	F&W	Cahaba River	its source	5	5.45	miles
AL03150202-0901-100	Childers Creek	Cahaba	F&W	Cahaba River	its source	5	18.79	miles
AL03130002-0907-100	Moores Creek	Chattahoochee	F&W	Chattahoochee River	its source	5	11.40	miles
AL03130002-1105-100	Osanippa Creek	Chattahoochee	F&W	Lake Harding	its source	5	27.32	miles
AL03130002-1106-100	UT to Halawakee Creek	Chattahoochee	F&W	Halawakee Creek	its source	5	14.19	miles
AL03130002-1107-110	Halawakee Creek	Chattahoochee	F&W	Three miles upstream of County Road 79	its source	5	16.57	miles
AL03130003-0505-102	Uchee Creek	Chattahoochee	PWS/S/F&W	County Road 39	Island Creek	5	11.59	miles
AL03130003-0605-100	Ihagee Creek	Chattahoochee	S/F&W	Chattahoochee River	its source	5	15.73	miles
AL03130003-1204-100	South Fork Cowikee Creek	Chattahoochee	S/F&W	Walter F George Lake	its source	5	30.39	miles
AL03130003-1307-100	Barbour Creek	Chattahoochee	F&W	Walter F George Lake	its source	5	18.77	miles
AL03130004-0206-100	Bennett Mill Creek	Chattahoochee	F&W	Chattahoochee River	its source	5	5.88	miles
AL03130004-0403-110	Peterman Creek	Chattahoochee	F&W	Abbie Creek	its source	5	12.43	miles
AL03130004-0405-100	Abbie Creek	Chattahoochee	F&W	Chattahoochee River	its source	5	42.53	miles
AL03130004-0602-500	Cedar Creek	Chattahoochee	F&W	Omusee Creek	its source	5	4.04	miles
AL03130004-0801-100	Chattahoochee River	Chattahoochee	F&W	Alabama-Florida state line	Woods Branch	5	14.14	miles
AL03130012-0101-100	Limestone Creek	Chipola	F&W	Big Creek	its source	5	10.80	miles
AL03130012-0101-410	Cypress Creek	Chipola	F&W	Limestone Creek	its source	5	8.11	miles
AL03130012-0106-202	Boggy Creek	Chipola	F&W	Cottondale WWTP	its source	5	6.72	miles
AL03130012-0202-210	Bruners Gin Creek	Chipola	F&W	Rocky Creek	its source	5	5.43	miles
AL03130012-0203-110	Cowarts Creek	Chipola	F&W	Alabama-Florida state line	its source	5	21.72	miles
AL03140201-0203-200	Panther Creek	Choctawhatchee	F&W	East Fork Choctawhatchee River	its source	5	7.63	miles
AL03140201-0304-110	Judy Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	5	23.64	miles
AL03140201-0401-100	Lindsey Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	5	12.48	miles
AL03140201-0402-300	Pauls Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	5	7.59	miles
AL03140201-0406-100	West Fork Choctawhatchee River	Choctawhatchee	S/F&W	Judy Creek	its source	5	32.53	miles
AL03140201-0407-101	West Fork Choctawhatchee River	Choctawhatchee	S/F&W	Choctawhatchee River	The falls approximately one-half mile upstream of Alabama Highway 27	5	5.08	miles
AL03140201-0407-102	West Fork Choctawhatchee River	Choctawhatchee	F&W	The falls approximately one-half mile upstream of Alabama Highway 27	Judy Creek	5	1.79	miles
AL03140201-0407-400	Big Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	its source	5	6.53	miles
AL03140201-0501-201	Beaver Creek	Choctawhatchee	F&W	Newton Creek	Dothan WWTP	5	2.09	miles
AL03140201-0602-200	Killebrew Factory Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	5	3.52	miles
AL03140201-0701-300	Bear Creek	Choctawhatchee	F&W	Little Claybank Creek	its source	5	12.37	miles
AL03140201-0702-100	Claybank Creek	Choctawhatchee	F&W	Lake Tholocco	its source	5	11.64	miles
AL03140201-0901-100	Harrand Creek	Choctawhatchee	F&W	Claybank Creek	its source	5	9.71	miles
AL03140201-0901-200	Indian Camp Creek	Choctawhatchee	F&W	Harrand Creek	its source	5	3.98	miles
AL03140201-0904-300	Brackin Mill Creek	Choctawhatchee	F&W	Claybank Creek	its source	5	4.90	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140201-1001-300	Pine Log Branch	Choctawhatchee	F&W	Hurricane Creek	its source	5	4.09	miles
AL03140201-1002-100	Pates Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	5	8.51	miles
AL03140201-1003-102	Choctawhatchee River	Choctawhatchee	F&W	Alabama Highway 12	Brooking Mill Creek	5	6.45	miles
AL03140201-1004-300	Hurricane Creek	Choctawhatchee	F&W	Choctawhatchee River	its source	5	15.66	miles
AL03140201-1004-600	Dowling Branch	Choctawhatchee	F&W	Cox Mill Creek	its source	5	2.10	miles
AL03140201-1102-500	Blanket Creek	Choctawhatchee	F&W	Double Bridges Creek	its source	5	5.71	miles
AL03140201-1203-101	Choctawhatchee River	Choctawhatchee	S/F&W	Pea River	Alabama Highway 12	5	29.07	miles
AL03140202-0202-110	Spring Creek	Choctawhatchee	F&W	Pea River	its source	5	11.13	miles
AL03140202-0204-110	Big Sandy Creek	Choctawhatchee	F&W	Pea River	its source	5	11.32	miles
AL03140202-0301-200	Buckhorn Creek	Choctawhatchee	F&W	Pea River	its source	5	15.97	miles
AL03140202-0504-200	Huckleberrry Creek	Choctawhatchee	F&W	Pea River	its source	5	3.47	miles
AL03140202-0505-100	Pea River	Choctawhatchee	S/F&W	Halls Creek	US Highway 231	5	10.85	miles
AL03140202-0505-200	Halls Creek	Choctawhatchee	F&W	Pea River	its source	5	5.54	miles
AL03140202-0601-200	Patrick Creek	Choctawhatchee	F&W	Beaverdam Creek	its source	5	5.18	miles
AL03140202-0603-101	Pea River	Choctawhatchee	F&W	Bucks Mill Creek	US Highway 84	5	8.09	miles
AL03140202-0603-102	Pea River	Choctawhatchee	S/F&W	US Highway 84	Red Oak Creek	5	11.76	miles
AL03140202-0610-101	Pea River	Choctawhatchee	F&W	Flat Creek	Snake Branch	5	12.11	miles
AL03140202-0702-110	Flat Creek	Choctawhatchee	S/F&W	Eightmile Creek	its source	5	24.26	miles
AL03140202-0906-101	Pea River	Choctawhatchee	F&W	Choctawhatchee River	Laddon Creek	5	3.87	miles
AL03140203-0105-100	Choctawhatchee River	Choctawhatchee	S/F&W	Alabama-Florida state line	Pea River	5	4.45	miles
AL03140203-0201-100	Wrights Creek	Choctawhatchee	F&W	Alabama-Florida state line	its source	5	8.96	miles
AL03150106-0103-100	Big Wills Creek	Coosa	F&W	Little Sand Valley Creek	100 yards below Allen Branch	5	51.63	miles
AL03150106-0108-102	Big Wills Creek	Coosa	S/F&W	Neely Henry Lake	Little Sand Valley Creek	5	24.76	miles
AL03150106-0408-100	Cane Creek	Coosa	F&W	Logan Martin Lake	its source	5	30.68	miles
AL03150106-0507-102	Choccolocco Creek	Coosa	PWS/F&W	UT from Boiling Spring	Hillabee Creek	5	2.37	miles
AL03150106-0514-100	Choccolocco Creek	Coosa	F&W	Logan Martin Lake	UT from Boiling Spring	5	33.03	miles
AL03150106-0602-100	Broken Arrow Creek	Coosa	F&W	Coosa River	its source	5	21.37	miles
AL03150106-0806-100	Wolf Creek	Coosa	F&W	Kelly Creek	its source	5	16.70	miles
AL03150106-0808-100	Kelly Creek	Coosa	S/F&W	Lay Lake	its source	5	33.58	miles
AL03150107-0104-100	Shirtee Creek	Coosa	F&W	Tallaseehatchee Creek	its source	5	4.67	miles
AL03150107-0106-100	Tallaseehatchee Creek	Coosa	F&W	Lay Lake	Howard dam	5	16.74	miles
AL03150107-0203-100	Weewoka Creek	Coosa	F&W	Tallaseehatchee Creek	its source	5	18.32	miles
AL03150107-0304-700	UT to Dry Branch	Coosa	F&W	Dry Branch	its source	5	1.58	miles
AL03150107-0405-100	Buxahatchee Creek	Coosa	F&W	Waxahatchee Creek	its source	5	14.00	miles
AL03150107-0801-100	Yellow Leaf Creek	Coosa	F&W	Mitchell Lake	its source	5	31.27	miles
AL03150107-0802-110	Walnut Creek	Coosa	F&W	Mitchell Lake	its source	5	15.66	miles
AL03140301-0403-100	Feagin Creek	Escambia	F&W	Gantt Lake	its source	5	7.76	miles
AL03140303-0704-100	Sepulga River	Escambia	F&W	Conecuh River	Robinson Mill Creek	5	14.48	miles
AL03140304-0106-200	Sandy Creek	Escambia	F&W	Mill Creek	its source	5	5.76	miles
AL03140304-0305-101	Burnt Corn Creek	Escambia	S/F&W	Murder Creek	Sevenmile Creek	5	5.03	miles
AL03140304-0404-101	Murder Creek	Escambia	F&W	Conecuh River	Cedar Creek	5	8.45	miles
AL03140304-0404-200	Franklin Mill Creek	Escambia	F&W	Murder Creek	its source	5	6.60	miles
AL03140304-0506-100	Conecuh River	Escambia	F&W	Alabama-Florida state line	Mantle Branch	5	12.70	miles
AL03140304-0506-300	Jernigan Mill Creek	Escambia	F&W	Conecuh River	its source	5	7.64	miles
AL03140304-0605-100	Little Escambia Creek	Escambia	F&W	Alabama-Florida state line	Wild Fork Creek	5	12.21	miles
AL03140305-0102-100	Sizemore Creek	Escambia	S/F&W	Big Escambia Creek	its source	5	14.28	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140305-0302-100	Big Escambia Creek	Escambia	F&W	Alabama-Florida state line	Big Spring Creek	5	17.03	miles
AL03170008-0402-110	Escatawpa River	Escatawpa	S/F&W	AL-MS state line	its source	5	70.66	miles
AL03170008-0502-600	Boggy Branch	Escatawpa	F&W	Big Creek Lake	its source	5	3.62	miles
AL03170008-0502-800	Collins Creek	Escatawpa	F&W	Big Creek	its source	5	5.15	miles
AL03160204-0103-100	Mobile River	Mobile	F&W	Tensaw River	its source	5	5.72	miles
AL03160204-0105-111	Cold Creek	Mobile	F&W	Mobile River	Dam 1 1/2 miles west of US Highway 43	5	4.21	miles
AL03160204-0106-112	Mobile River	Mobile	F&W	Cold Creek	Barry Steam Plant	5	2.37	miles
AL03160204-0202-200	Middle River	Mobile	F&W	Tensaw River (RM 20.6)	Tensaw River (RM 37.7)	5	9.72	miles
AL03160204-0303-100	Chickasaw Creek	Mobile	S/F&W	Mobile College	its source	5	26.82	miles
AL03160204-0305-101	Chickasaw Creek	Mobile	LWF	Mobile River	US Highway 43	5	4.43	miles
AL03160204-0305-102	Chickasaw Creek	Mobile	F&W	US Highway 43	Mobile College	5	6.64	miles
AL03160204-0403-112	Mobile River	Mobile	F&W	Spanish River	Cold Creek	5	20.90	miles
AL03160204-0503-102	Bay Minette Creek	Mobile	F&W	Bay Minette	its source	5	18.15	miles
AL03160204-0504-300	Toulmins Spring Branch	Mobile	F&W	Threemile Creek	its source	5	3.22	miles
AL03160204-0504-500	UT to Threemile Creek	Mobile	F&W	Threemile Creek	its source	5	1.04	miles
AL03160204-0505-202	Tensaw River	Mobile	OAW/S/F&W	Junction of Tensaw and Apalachee Rivers	Junction of Briar Lake	5	21.73	miles
AL03160204-0505-501	D'Olive Creek	Mobile	F&W	D'Olive Bay	Lake Forest dam	5	0.51	miles
AL03160204-0505-502	D'Olive Creek	Mobile	F&W	Lake Forest dam	its source	5	4.57	miles
AL03160204-0505-505	UT to D'Olive Creek	Mobile	F&W	D'Olive Creek	its source	5	1.22	miles
AL03160204-0505-800	Joes Branch	Mobile	F&W	D'Olive Creek	its source	5	1.57	miles
AL03160204-0505-900	Tiawasee Creek	Mobile	F&W	D'Olive Creek	its source	5	3.54	miles
AL03160204-0505-905	UT to Tiawasee Creek	Mobile	F&W	Tiawasee Creek	its source	5	1.87	miles
AL03160205-0102-110	Halls Mill Creek	Mobile	F&W	Dog River	its source	5	11.30	miles
AL03160205-0104-110	Fowl River	Mobile	S/F&W	Mobile Bay	its source	5	20.56	miles
AL03160205-0105-100	Deer River	Mobile	F&W	Mobile Bay	its source	5	1.02	miles
AL03160205-0105-300	Middle Fork Deer River	Mobile	F&W	Deer River	its source	5	2.47	miles
AL03160205-0202-210	Polecat Creek	Mobile	S/F&W	Fish River	its source	5	7.89	miles
AL03160205-0202-510	Baker Branch	Mobile	F&W	Polecat Creek	its source	5	6.15	miles
AL03160205-0203-110	Magnolia River	Mobile	OAW/S/F&W	Weeks Bay	its source	5	12.41	miles
AL03160205-0204-112	Fish River	Mobile	S/F&W	Weeks Bay	its source	5	30.01	miles
AL03160205-0204-402	Turkey Branch	Mobile	S/F&W	Baldwin County Road 181	its source	5	5.16	miles
AL03160205-0204-700	Cowpen Creek	Mobile	S/F&W	Fish River	its source	5	7.12	miles
AL03160205-0205-702	Fly Creek	Mobile	S/F&W	10 feet above MSL	its source	5	3.32	miles
AL03160205-0206-101	Bon Secour River	Mobile	S/F&W	Bon Secour Bay	One mile upstream from first bridge above its mouth	5	9.12	miles
AL03160205-0206-102	Bon Secour River	Mobile	S/F&W	One mile upstream from first bridge above its mouth	its source	5	4.38	miles
AL03140106-0203-100	Dyas Creek	Perdido	S/F&W	Perdido River	its source	5	18.34	miles
AL03140106-0302-101	Brushy Creek	Perdido	F&W	Alabama-Florida state line	Boggy Branch	5	0.22	miles
AL03140106-0302-201	Boggy Branch	Perdido	F&W	Brushy Creek	Atmore WWTP	5	1.59	miles
AL03140106-0302-202	Boggy Branch	Perdido	F&W	Atmore WWTP	Masland Carpets WWTP	5	0.14	miles
AL03140106-0302-203	Boggy Branch	Perdido	F&W	Masland Carpets WWTP	its source	5	0.95	miles
AL03140106-0507-100	Styx River	Perdido	F&W	Perdido River	Hollinger Creek	5	18.52	miles
AL03140106-0603-101	Blackwater River	Perdido	F&W	Perdido River	Narrow Gap Creek	5	3.11	miles
AL03140106-0703-100	Perdido River	Perdido	F&W	Perdido Bay	Jacks Branch	5	21.93	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150108-0405-102	Tallapoosa River	Tallapoosa	OAW/F&W	Cane Creek	Alabama-Georgia state line	5	31.60	miles
AL03150109-0303-100	High Pine Creek	Tallapoosa	F&W	Tallapoosa River	Highway 431	5	13.74	miles
AL03150109-0308-100	Emuckfaw Creek	Tallapoosa	F&W	Tallapoosa River	its source	5	23.51	miles
AL03150110-0104-104	Sougahatchee Creek	Tallapoosa	F&W	Sycamore Creek	Sougahatchee Lake dam	5	33.42	miles
AL03150110-0202-300	Moores Mill Creek	Tallapoosa	S/F&W	Chewacla Creek	its source	5	10.51	miles
AL03150110-0304-100	Uphapee Creek	Tallapoosa	F&W	Tallapoosa River	its source	5	21.16	miles
AL03150110-0402-102	Channahatchee Creek	Tallapoosa	F&W	Yates Lake	its source	5	17.31	miles
AL03150110-0406-200	Mill Creek	Tallapoosa	F&W	Tallapoosa River	its source	5	9.16	miles
AL03150110-0504-101	Calebee Creek	Tallapoosa	F&W	Tallapoosa River	Macon County Road 9	5	10.26	miles
AL03150110-0603-102	Cubahatchee Creek	Tallapoosa	S/F&W	Coon Hop Creek	its source	5	22.37	miles
AL03150110-0604-100	Cubahatchee Creek	Tallapoosa	S/F&W	Tallapoosa River	Coon Hop Creek	5	22.07	miles
AL03150110-0702-100	Bughall Creek	Tallapoosa	F&W	Old Town Creek	its source	5	31.44	miles
AL03150110-0804-101	Line Creek	Tallapoosa	F&W	Tallapoosa River	Johnsons Creek	5	10.29	miles
AL03150110-0804-102	Line Creek	Tallapoosa	F&W	Johnsons Creek	Panther Creek	5	5.51	miles
AL03150110-0904-300	Jenkins Creek	Tallapoosa	F&W	Tallapoosa River	its source	5	13.48	miles
AL03150110-0905-112	Tallapoosa River	Tallapoosa	PWS/F&W	US Highway 231	Jenkins Creek	5	10.07	miles
AL06030001-0202-500	Higdon Creek	Tennessee	F&W	Miller Creek	Alabama-Georgia state line	5	4.16	miles
AL06030001-0204-101	Widows Creek	Tennessee	S/F&W	Lake Guntersville	Alabama Highway 277	5	1.29	miles
AL06030001-0306-100	Little Coon Creek	Tennessee	F&W	Coon Creek	Alabama-Tennessee state line	5	16.30	miles
AL06030001-0801-100	Cross Creek	Tennessee	F&W	Short Creek	its source	5	7.53	miles
AL06030001-0904-102	Browns Creek	Tennessee	F&W	Lake Guntersville	its source	5	11.86	miles
AL06030002-0106-101	Guess Creek	Tennessee	F&W	Paint Rock River	Bee Branch	5	11.08	miles
AL06030002-0201-100	Clear Creek	Tennessee	F&W	Paint Rock River	its source	5	6.43	miles
AL06030002-0305-100	Beaverdam Creek	Tennessee	F&W	Brier Fork	its source	5	22.14	miles
AL06030002-0306-110	Brier Fork	Tennessee	F&W	Flint River	Alabama-Tennessee state line	5	21.89	miles
AL06030002-0403-112	Flint River	Tennessee	F&W	Alabama Highway 72	Mountain Fork	5	15.32	miles
AL06030002-0403-302	Chase Creek	Tennessee	F&W	Acuff Spring	Alabama Highway 72	5	2.14	miles
AL06030002-0501-110	Indian Creek	Tennessee	F&W	US Highway 72	its source	5	6.49	miles
AL06030002-0503-102	Huntsville Spring Branch	Tennessee	F&W	Johnson Road (Huntsville Field)	Broglan Branch	5	1.98	miles
AL06030002-0505-102	Indian Creek	Tennessee	F&W	Martin Road (Redstone Arsenal)	US Highway 72	5	10.37	miles
AL06030002-0601-300	Hughes Creek	Tennessee	F&W	Cotaco Creek	its source	5	2.87	miles
AL06030002-0602-102	West Fork Cotaco Creek	Tennessee	F&W	Alabama Highway 67	Frost Creek	5	8.12	miles
AL06030002-0603-600	Mill Pond Creek	Tennessee	F&W	Cotaco Creek	its source	5	1.29	miles
AL06030002-1014-103	Flint Creek	Tennessee	PWS/F&W	L&N Railroad	Alabama Highway 36	5	9.10	miles
AL06030002-1101-101	Swan Creek	Tennessee	F&W	Tennessee River	Huntsville Brownsferry Road	5	5.03	miles
AL06030002-1202-200	Neeley Branch	Tennessee	F&W	First Creek	its source	5	3.61	miles
AL06030004-0404-102	Anderson Creek	Tennessee	F&W	Snake Road bridge	its source	5	9.31	miles
AL06030005-0105-100	Big Nance Creek	Tennessee	F&W	Wilson Lake	its source	5	24.75	miles
AL06030005-0301-200	Chandelower Creek	Tennessee	F&W	Rock Creek	its source	5	5.95	miles
AL06030005-0802-100	Pond Creek	Tennessee	A&I	Pickwick Lake	its source	5	12.43	miles
AL06030005-0803-400	Sweetwater Creek	Tennessee	F&W	Tennessee River (Florence Canal)	its source	5	4.41	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030006-0102-700	Little Dice Branch	Tennessee	F&W	Bear Creek	its source	5	3.83	miles
AL06030006-0104-102	Bear Creek	Tennessee	S/F&W	Alabama Highway 187	Mill Creek	5	22.31	miles
AL06030006-0201-900	Harris Creek	Tennessee	F&W	Mud Creek	its source	5	5.99	miles
AL06030006-0304-102	Bear Creek	Tennessee	F&W	U.S. Highway 72	Alabama-Mississippi state line	5	10.12	miles
AL06030006-0304-500	Rock Creek	Tennessee	F&W	Bear Creek	its source	5	20.74	miles
AL03160103-0201-102	Beaver Creek	Tombigbee	PWS/F&W	US Highway 78	its source	5	6.91	miles
AL03160105-0201-103	Luxapallila Creek	Tombigbee	F&W	County road crossing approximately 6 miles upstream from Alabama Highway 18	U.S. Highway 78	5	10.52	miles
AL03160105-0204-102	Luxapallila Creek	Tombigbee	F&W	Alabama-Mississippi state line	Fayette County Road 37	5	25.25	miles
AL03160106-0504-100	Bogue Chitto	Tombigbee	F&W	Tombigbee River	Alabama-Mississippi state line	5	5.42	miles
AL03160106-0506-110	Blubber Creek	Tombigbee	F&W	Lubbub Creek	its source	5	20.12	miles
AL03160108-1005-100	Bodka Creek	Tombigbee	F&W	Noxubee River	Alabama-Mississippi state line	5	17.45	miles
AL03160108-1102-100	Noxubee River	Tombigbee	F&W	Tombigbee River	Alabama-Mississippi state line	5	23.99	miles
AL03160201-0504-200	Clear Creek	Tombigbee	F&W	Yantley Creek	its source	5	17.25	miles
AL03160201-0604-100	Horse Creek	Tombigbee	S/F&W	Coffeeville Lake	its source	5	44.52	miles
AL03160203-0205-100	Salitpa Creek	Tombigbee	S/F&W	Tombigbee River	its source	5	43.34	miles
AL03160203-0903-102	Tombigbee River	Tombigbee	F&W	Bassetts Creek	1/2 mile downstream of Southern Railway Crossing	5	7.83	miles
AL03160203-1103-101	Tombigbee River	Tombigbee	F&W	Mobile River	Upper end of Bilbo Island	5	11.89	miles
AL03160203-1103-102	Tombigbee River	Tombigbee	F&W	Upper end of Bilbo Island	Olin Basin canal	5	3.75	miles
AL03160203-1103-700	Bilbo Creek	Tombigbee	S/F&W	Tombigbee River	its source	5	30.74	miles
AL03140103-0102-700	UT 3-C to Lightwood Knot Creek (Lake Frank Jackson)	Yellow	F&W	Lake Frank Jackson	its source	5	1.05	miles
AL03140103-0102-800	UT 2-S to Lightwood Knot Creek (Lake Frank Jackson)	Yellow	F&W	Lake Frank Jackson	its source	5	1.77	miles
AL03140103-0203-100	Five Runs Creek	Yellow	F&W	Yellow River	its source	5	30.72	miles
AL03140103-0402-100	Yellow River	Yellow	F&W	Alabama-Florida state line	North Creek	5	14.87	miles
Category 5 Estuary and Ocean								
AL03170009-0201-100	Mississippi Sound	Escatawpa	SH/S/F&W	Mississippi Sound		5	94.62	square miles
AL03170009-0201-200	Portersville Bay	Escatawpa	SH/S/F&W	1000 feet west of outfall	Bayou la Batre Utilities outfall	5	18.81	square miles
AL03170009-0201-300	Grand Bay	Escatawpa	SH/S/F&W	Grand Bay		5	30.73	square miles
AL03160204-0202-300	Mifflin Lake	Mobile	F&W	Tensaw River	its source	5	0.73	square miles
AL03160205-0208-100	Oyster Bay	Mobile	SH/F&W	Oyster Bay		5	0.95	square miles
AL03160205-0300-102	Mobile Bay	Mobile	SH/F&W	All except out to 1000 feet offshore from Mullet Point to Ragged Point		5	168.29	square miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160205-0300-202	Bon Secour Bay	Mobile	SH/S/F&W	Bon Secour Bay except out to 1000 feet offshore from Fish River Point to Mullet Point		5	102.96	square miles
AL-Gulf-of-Mexico-1	Gulf of Mexico	Mobile	SH/S/F&W	Mississippi	Florida	5	205.77	square miles
AL-Gulf-of-Mexico-2	Pelican Bay	Mobile	SH/S/F&W	out to 1000 feet offshore from Dauphin Beach	out to 1000 feet offshore from Pelican Point	5	0.50	square miles
AL03140107-0103-100	Perdido Bay	Perdido	SH/S/F&W	Lillian Bridge	its source	5	4.21	square miles
AL03140107-0204-302	Perdido Bay	Perdido	SH/S/F&W	Suarez Point	Lillian Bridge	5	1.29	square miles

Appendix C

Alabama's 2018 § 303(d) List Fact Sheet

Alabama's 2018 §303(d) List
Fact Sheet

Background

Section 303(d) of the Clean Water Act requires that each state identify those waters that do not currently support designated uses, and to establish a priority ranking of these waters by taking into account the severity of the pollution and the designated uses of such waters. For each waterbody on the list, the state is required to establish a total maximum daily load (TMDL) for the pollutant or pollutants of concern at a level necessary to implement the applicable water quality standards. Current Environmental Protection Agency (EPA) guidance encourages states to establish and focus on priority areas for restoration through TMDL development.

Alabama's 2018 §303(d) List

Alabama's 2018 §303(d) List includes segments of rivers, streams, lakes, reservoirs, and estuaries that do not fully support their currently designated use or uses. Most of the waterbodies on the 2018 §303(d) List also appeared on Alabama's 2016 §303(d) List as submitted to EPA in April 2016. The Department has attempted to obtain and evaluate all existing and readily available water quality-related data and information. The notice soliciting information is included in **Appendix A**. The notice was published in Alabama's four major daily newspapers, appeared on the Department's web page, and was sent to the Department's general mailing list. Data in the Department's multiple databases, information from §319 nonpoint assessments, special watershed studies, other federal and state agencies, industries, and watershed initiatives were evaluated as the draft 2018 §303(d) List was compiled. Any individual or organization may submit additional data or information during the advertised comment period relative to water quality impairment in waterbodies in Alabama. Chemical, physical, and biological data collected primarily during the previous six years have been considered in the preparation of the §303(d) List, consistent with the Department's water quality assessment and listing methodology. Comments on the methodology were solicited in the public notice included in **Appendix A**. Alabama's water quality assessment and listing methodology may be found at the Department's web page at: http://www.adem.alabama.gov/programs/water/wquality/2018WAM.pdf
Data sources include the Alabama Department of Environmental Management, the Alabama Department of Public Health, the Geological Survey of Alabama, the United States Geological Survey, the Tennessee Valley Authority, other public agencies, universities, county and municipal governments, and industries.

The list contains information such as the waterbody name, county(s) in which the listed segments are located, cause(s) for the use impairment, the source(s) of the pollutant(s) known or suspected to be causing the impairment, the size of the impaired segments, and the location of the listed waterbodies.

Changes since the 2016 §303(d) List

A number of differences exist between the 2018 §303(d) List and the 2016 §303(d) List. Some of the changes were to correct errors or omissions in the 2016 List and to provide additional or updated information about waterbodies on the list. Other significant changes since 2016 include the addition and deletion of waterbodies.

Table 1 shows the new waterbody/pollutant combinations that are being added to Alabama's §303(d) List and the justification for the additions.

Table 2 provides the waterbody/pollutant combinations that are being removed from the list and placed in a different category and the corresponding justification for each removal.

Table 3 provides a listing of other changes appearing on the 2018 §303(d) List. Many of these changes result from changes to Assessment Units or corrections to causes and sources. Also, some of the TMDL priorities have been adjusted.

Table 4 provides a list of revisions made between the draft 2018 §303(d) List and the final 2018 §303(d) List submitted to EPA. These revisions were made to the list as a result of comments received during the public notice period or as a result of errors identified by ADEM staff since the draft 2018 §303(d) List was public noticed.

Table 5 provides a list of Assessment Units which have been already been addressed in an existing TMDL.

Table 1
Alabama's 2018 §303(d) List
New Waterbody/Pollutant Combinations Appearing on the 2018 List

The waterbody/pollutant combinations listed in the following table are proposed for addition to Alabama's draft 2018 §303(d) List for the reasons presented in the table.

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150203-0108-110	Bear Creek	Alabama	Dallas Perry	Pathogens (E. coli)	Records at ADEM station BARD-1 from 2016 show that the E. coli criterion was exceeded in 2 out of 9 samples.	ADEM 2016
AL03160111-0106-100	Slab Creek	Black Warrior	Blount Marshall	Pathogens (E. coli)	Records at ADEM station SLAM-22C from 2015 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2015
AL03160111-0204-111	Blackburn Fork (Inland Lake)	Black Warrior	Blount	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2017 based on records from ADEM station INLB-1.	ADEM 2016
AL03160111-0407-103	Fivemile Creek	Black Warrior	Jefferson	Pathogens (E. coli)	Records at ADEM station FMCJ-1B from 2013-2016 show that the E. coli criterion was exceeded in 5 out of 17 samples.	ADEM 2013-2016
AL03160112-0305-110	Daniel Creek	Black Warrior	Tuscaloosa	Pathogens (E. coli)	Records at ADEM station DNCT-2 from 2012 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2012
AL03160113-0201-100	Mill Creek	Black Warrior	Tuscaloosa	Pathogens (E. coli)	Records at ADEM station MLCT-3 from 2012 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2012
AL03160113-0302-110	Elliotts Creek	Black Warrior	Hale	Pathogens (E. coli)	Records at ADEM station ELLH-1 from 2012 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2012
AL03160113-0602-300	Carthage Branch	Black Warrior	Tuscaloosa	Pathogens (E. coli)	Records at ADEM station CRTT-1 from 2012 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2012

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03160113-0708-100	Big Prairie Creek	Black Warrior	Hale Perry	Pathogens (E. coli)	Records from 2016 at ADEM station BPRH-44B show that the E. coli criterion was exceeded in 3 out of 8 samples and at ADEM station BPRH-44C in 2 out of 8 samples.	ADEM 2016
AL03150202-0103-103	Little Cahaba River	Cahaba	Jefferson	Total dissolved solids	A Macroinvertebrate Assessment at ADEM station LC-1 on 7/11/2012 had a Poor WMB-I score. Total dissolved solids values measured at this site were consistently higher than the 90th percentile 67f ecoregional value.	ADEM 2011-2016
AL03150202-0103-102	Little Cahaba River (Lake Purdy)	Cahaba	Jefferson Shelby	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2017 based on records from ADEM station PURS-1.	ADEM 2016
AL03150202-0402-100	Mahan Creek	Cahaba	Bibb Chilton	Pathogens (E. coli)	Records at ADEM station MAHB-1B from 2015 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2015
AL03150202-0505-100	Affonee Creek	Cahaba	Bibb	Pathogens (E. coli)	Records at ADEM station AFFB-3 from 2015 show that the E. coli criterion was exceeded in 7 out of 8 samples.	ADEM 2015
AL03130002-0907-100	Moores Creek	Chattahoochee	Chambers	Pathogens (E. coli)	Records at ADEM station MOOC-3 from 2014 and 2016 show that the E. coli criterion was exceeded in 5 out of 16 samples.	ADEM 2014, 2016
AL03130002-1105-100	Osanippa Creek	Chattahoochee	Chambers Lee	Pathogens (E. coli)	Records at ADEM station OSCC-2 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03130002-1106-100	UT to Halawakee Creek	Chattahoochee	Lee	Pathogens (E. coli)	Records at ADEM station UHAL-4 from 2014 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2014
AL03130003-0505-102	Uchee Creek	Chattahoochee	Russell	Pathogens (E. coli)	Records at ADEM station UCCR-2 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03130012-0101-100	Limestone Creek	Chipola	Houston	Pathogens (E. coli)	Records at ADEM station LMSH-1 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL03130012-0202-210	Bruners Gin Creek	Chipola	Houston	Pathogens (E. coli)	Records at ADEM station BRGH-1 from 2015 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2015

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03140201-0304-110	Judy Creek	Choctawhatchee	Barbour Dale	Pathogens (E. coli)	Records at ADEM station JDYD-4 from 2014 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2014
AL03140201-0203-200	Panther Creek	Choctawhatchee	Dale Henry	Pathogens (E. coli)	Records at ADEM station PRCH-1 from 2014 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2014
AL03140201-0401-100	Lindsey Creek	Choctawhatchee	Barbour	Pathogens (E. coli)	Records at ADEM station LNDB-1 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL03140201-0402-300	Pauls Creek	Choctawhatchee	Barbour	Pathogens (E. coli)	Records at ADEM station PLSB-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140201-0602-200	Killebrew Factory Creek	Choctawhatchee	Dale	Pathogens (E. coli)	Records at ADEM station KBFD-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140201-0701-300	Bear Creek	Choctawhatchee	Dale	Pathogens (E. coli)	Records at ADEM station BERD-1 from 2016 show that the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2016
AL03140201-0702-100	Claybank Creek	Choctawhatchee	Dale	Pathogens (E. coli)	Records at ADEM station CLBD-2 from 2016 show that the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2016
AL03140201-1001-300	Pine Log Branch	Choctawhatchee	Geneva	Pathogens (E. coli)	Records at ADEM station PLBG-1 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03140201-1002-100	Pates Creek	Choctawhatchee	Geneva Houston	Pathogens (E. coli)	Records at ADEM station PTSH-1 from 2015 show that the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2015
AL03140201-1004-300	Hurricane Creek	Choctawhatchee	Geneva	Pathogens (E. coli)	Records from 2015 at ADEM station HURG-1 show that the E. coli criterion was exceeded in 2 out of 8 samples and at ADEM station HURG-3 in 2 out of 8 samples.	ADEM 2015
AL03140201-0904-300	Brackin Mill Creek	Choctawhatchee	Coffee Dale	Pathogens (E. coli)	Records at ADEM station BKMD-1 from 2015 show that the E. coli criterion was exceeded in 7 out of 8 samples.	ADEM 2015

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03140201-1203-101	Choctawhatchee River	Choctawhatchee	Geneva Houston	Pathogens (E. coli)	Records at ADEM station CHO-9 from 2014-2016 show that the E. coli criterion was exceeded in 4 out of 18 samples.	ADEM 2014-2016
AL03140202-0202-110	Spring Creek	Choctawhatchee	Bullock	Pathogens (E. coli)	Records at ADEM station SGCB-1 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL03140202-0204-110	Big Sandy Creek	Choctawhatchee	Bullock	Pathogens (E. coli)	Records at ADEM station BSCB-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140202-0505-200	Halls Creek	Choctawhatchee	Coffee	Pathogens (E. coli)	Records at ADEM station HALC-1 from 2014 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2014
AL03140202-0610-101	Pea River	Choctawhatchee	Geneva	Pathogens (E. coli)	Records at ADEM station PEAG-2 from 2013 and 2015 show that the E. coli criterion was exceeded in 3 out of 18 samples.	ADEM 2013, 2015
AL03150106-0108-111	Big Wills Creek (Neely Henry Lake)	Coosa	Etowah	Nutrients	Records at ADEM station NEES-6 show that the chlorophyll a mean growing season value was 23 μg/L in 2016.	ADEM 2016
AL03150106-0107-111	Black Creek (Neely Henry Lake)	Coosa	Etowah	Nutrients	Records at ADEM station NEES-7 show that the chlorophyll a mean growing season value was 30 μg/L in 2016.	ADEM 2016
AL03150106-0108-102	Big Wills Creek	Coosa	Etowah	Pathogens (E. coli)	Records at ADEM station BWCE-1 from 2013 and 2015-2016 show that the E. coli criterion was exceeded in 7 out of 34 samples.	ADEM 2013, 2015-2016
AL03150106-0103-100	Big Wills Creek	Coosa	Etowah Dekalb	Pathogens (E. coli)	Records at ADEM station BWC-1 from 2015-2016 show that the E. coli criterion was exceeded in 5 out of 22 samples.	ADEM 2015-2016
AL03150106-0408-100	Cane Creek	Coosa	Calhoun	Pathogens (E. coli)	Records at ADEM station CNCC-1 from 2016 show that the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2016
AL03150106-0514-100	Choccolocco Creek	Coosa	Calhoun Talladega	Pathogens (E. coli)	Records at ADEM station CHOT-3 from 2016 show that the E. coli geomean criterion was exceeded.	ADEM 2016

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150106-0808-100	Kelly Creek	Coosa	Shelby St. Clair	Pathogens (E. coli)	Records at ADEM station KYC-1 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03150107-0106-100	Tallaseehatchee Creek	Coosa	Talladega	Pathogens (E. coli)	Records at ADEM station TH-1 from 2012-2015 show that the E. coli criterion was exceeded in 6 out of 17 samples.	ADEM 2012-2015
AL03150107-0104-100	Shirtee Creek	Coosa	Talladega	Pathogens (E. coli)	Records at ADEM station SHRT-1 from 2012-2015 show that the E. coli criterion was exceeded in 6 out of 17 samples.	ADEM 2012-2015
AL03150107-0203-100	Weewoka Creek	Coosa	Talladega	Pathogens (E. coli)	Records from 2015-2016 at ADEM station WWOT-37 show that the E. coli criterion was exceeded in 2 out of 8 samples and at ADEM station WEET-2 in 2 out of 8 samples.	ADEM 2015-2016
AL03150107-0802-110	Walnut Creek	Coosa	Chilton	Pathogens (E. coli)	Records at ADEM station WNTC-4 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL03140301-0403-100	Feagin Creek	Escambia	Covington	Pathogens (E. coli)	Records at ADEM station FEGC-1 from 2014 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2014
AL03140304-0506-300	Jernigan Mill Creek	Escambia	Escambia	Pathogens (E. coli)	Records at ADEM station JGME-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140304-0106-200	Sandy Creek	Escambia	Conecuh	Pathogens (E. coli)	Records at ADEM station SDYC-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140304-0404-200	Franklin Mill Creek	Escambia	Escambia	Pathogens (E. coli)	Records at ADEM station FKME-1 from 2014 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2014
AL03140305-0102-100	Sizemore Creek	Escambia	Escambia	Pathogens (E. coli)	Records at ADEM station SECE-1 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL03160204-0505-502	D'Olive Creek	Mobile	Baldwin	Pathogens (E. coli)	Records at ADEM station DOCB-1 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03160205-0204-402	Turkey Branch	Mobile	Baldwin	Pathogens (E. coli)	Records at ADEM station TURB-1 from 2016 show that the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2016
AL03160205-0205-702	Fly Creek	Mobile	Baldwin	Pathogens (E. coli)	Records at ADEM station FLYB-96 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03160205-0206-102	Bon Secour River	Mobile	Baldwin	Pathogens (E. coli)	Records at ADEM station UTTB-1A from 2015 show that the E. coli criterion was exceeded in 3 out of 16 samples. The E. coli geomean criterion was also exceeded at ADEM station UTTB-1A in 2015.	ADEM 2015
AL-Gulf-of-Mexico-2	Pelican Bay	Mobile	Mobile	Pathogens (Enterococcus)	Records at ADEM station DI_EAST from 2016 show that the enterococcus criterion was exceeded in 4 out of 21 samples. The geomean criterion was also exceeded in 2016.	ADEM 2016
AL03140106-0203-100	Dyas Creek	Perdido	Baldwin	Pathogens (E. coli)	Records at ADEM station DYSB-2 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03150109-0105-102	Tallapoosa River (R L Harris Lake)	Tallapoosa	Randolph	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2016 based on records from ADEM station RLHR-1.	ADEM 2015
AL03150109-0303-100	High Pine Creek	Tallapoosa	Randolph Chambers	Pathogens (E. coli)	Records at ADEM station HIPR-1 from 2016 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2016
AL03150109-0308-100	Emuckfaw Creek	Tallapoosa	Clay Tallapoosa	Pathogens (E. coli)	Records at ADEM station EMKT-14 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03150110-0104-104	Sougahatchee Creek	Tallapoosa	Lee Macon Tallapoosa	Pathogens (E. coli)	Records from 2011-2013 and 2015-2016 at ADEM station SOGL-1 show that the E. coli criterion was exceeded in 9 out of 18 samples and at ADEM station SOGL-11 in 3 out of 8 samples.	ADEM 2011-2013, 2015-2016
AL03150110-0402-102	Channahatchee Creek	Tallapoosa	Elmore	Pathogens (E. coli)	Records at ADEM station CHNE-18 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150110-0304-100	Uphapee Creek	Tallapoosa	Macon	Pathogens (E. coli)	Records at ADEM station UPHM-3 from 2013 and 2015-2016 show that the E. coli criterion was exceeded in 4 out of 18 samples.	ADEM 2013, 2015-2016
AL03150110-0406-103	Tallapoosa River (Yates Lake)	Tallapoosa	Elmore Tallapoosa	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2016 based on records from ADEM station YATE-1.	ADEM 2015
AL03150110-0406-200	Mill Creek	Tallapoosa	Macon Tallapoosa	Pathogens (E. coli)	Records at ADEM station MILT-1 from 2016 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016
AL03150110-0702-100	Bughall Creek	Tallapoosa	Bullock Macon	Pathogens (E. coli)	Records at ADEM station BGHM-1 from 2013 and 2015 show that the E. coli criterion was exceeded in 4 out of 12 samples.	ADEM 2013, 2015
AL06030001-0801-100	Cross Creek	Tennessee	DeKalb	Pathogens (E. coli)	Records at ADEM station CSC-1 from 2015-2016 show that the E. coli criterion was exceeded in 3 out of 11 samples.	ADEM 2015-2016
AL06030001-0904-102	Browns Creek	Tennessee	Marshall	Pathogens (E. coli)	Records at ADEM station BRSB-2 from 2016 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2016
AL06030002-0201-100	Clear Creek	Tennessee	Jackson	Pathogens (E. coli)	Records at ADEM station CLER-1 from 2013 and 2016 show that the E. coli criterion was exceeded in 4 out of 12 samples.	ADEM 2013, 2016
AL06030002-0403-302	Chase Creek	Tennessee	Madison	Pathogens (E. coli)	Records at ADEM station CHSM-190 from 2015 show that the E. coli criterion was exceeded in 9 out of 13 samples. The E. coli geomean criterion was exceeded twice in 2015.	ADEM 2015
AL06030002-0501-110	Indian Creek	Tennessee	Madison	Pathogens (E. coli)	Records at ADEM station INDM-250 from 2015 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2015
AL06030002-0505-102	Indian Creek	Tennessee	Madison	Pathogens (E. coli)	Records at ADEM station INDM-249 from 2013-2016 show that the E. coli criterion was exceeded in 5 out of 28 samples.	ADEM 2013-2016

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL06030002-1202-200	Neeley Branch	Tennessee	Lauderdale	Pathogens (E. coli)	Records at ADEM station NLYW-1A from 2016 show that the E. coli criterion was exceeded in 4 out of 13 samples. The E. coli geomean criterion was exceeded twice in 2016.	ADEM 2016
AL06030005-0301-200	Chandelower Creek	Tennessee	Colbert	Pathogens (E. coli)	Records at ADEM station CHLC-1 from 2013 and 2016 show that the E. coli criterion was exceeded in 4 out of 19 samples. The E. coli geomean criterion was also exceeded in 2016.	ADEM 2013, 2016
AL06030006-0201-900	Harris Creek	Tennessee	Franklin	Pathogens (E. coli)	Records at ADEM station HARF-1 from 2014 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2014
AL06030006-0304-500	Rock Creek	Tennessee	Colbert	Pathogens (E. coli)	Records at ADEM station RCKC-1 from 2016 show that the geomean E. coli criterion was exceeded three times.	ADEM 2016
AL03160103-0201-102	Beaver Creek	Tombigbee	Marion	Pathogens (E. coli)	Records at ADEM station BVRM-79 from 2015 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2015
AL03160105-0201-103	Luxapallila Creek	Tombigbee	Fayette Marion	Pathogens (E. coli)	Records from 2015 at ADEM station LXC-1 show that the E. coli criterion was exceeded in 3 out of 8 samples and at ADEM station LXPM-68 in 3 out of 7 samples.	ADEM 2015
AL03160105-0101-102	Luxapallila Creek	Tombigbee	Marion	Pathogens (E. coli)	Records from 2015 at ADEM station LXC-1 show that the E. coli criterion was exceeded in 3 out of 8 samples and at ADEM station LXPM-68 in 3 out of 7 samples.	ADEM 2015
AL03160106-0504-111	Bogue Chitto (Gainesville Lake)	Tombigbee	Pickens	Nutrients	Records at ADEM station GAIG-6 show that the chlorophyll a mean growing season value was 22 μg/L in 2011 and 28 μg/L in 2016.	ADEM 2011, 2016
AL03160106-0504-100	Bogue Chitto	Tombigbee	Pickens	Pathogens (E. coli)	Records at ADEM station BCTP-1 from 2012-2013 and 2015 show that the E. coli criterion was exceeded in 4 out of 15 samples.	ADEM 2012-2013, 2015

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03160108-1005-100	Bodka Creek	Tombigbee	Sumter	Pathogens (E. coli)	Records at ADEM station BDKS-48 from 2011-2013 and 2015 show that the E. coli criterion was exceeded in 4 out of 16 samples.	ADEM 2011-2013, 2015
AL03160201-0401-102	Tombigbee River (Demopolis Lake)	Tombigbee	Marengo Sumter	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2017 based on records from ADEM station DEMS-1.	ADEM 2016
AL03160201-0504-200	Clear Creek	Tombigbee	Choctaw	Pathogens (E. coli)	Records at ADEM station CLEC-1 from 2015 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2015
AL03160201-0604-100	Horse Creek	Tombigbee	Marengo Clarke	Pathogens (E. coli)	Records from 2016 at ADEM station HORM-1 show that the E. coli criterion was exceeded in 2 out of 8 samples and at ADEM station HORM-2 in 3 out of 8 samples.	ADEM 2016
AL03140103-0203-100	Five Runs Creek	Yellow	Covington	Pathogens (E. coli)	Records from 2014 at ADEM station FRCC-1 show that the E. coli criterion was exceeded in 2 out of 8 samples and at ADEM station FRCC-2 in 2 out of 8 samples.	ADEM 2014

Table 2
Alabama’s 2018 §303(d) List
Waterbody/Pollutants Removed from the 2016 List

The waterbody/pollutant combinations in the following table are currently listed on Alabama’s 2016 §303(d) List and are proposed for removal from Alabama’s 2018 §303(d) List for the reasons presented. Waterbody/pollutant combinations for which EPA has approved a TMDL will be included in Category 4A of the 2018 Integrated Water Quality Report.

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
AL03160109-0403-103	Lost Creek	Black Warrior	Walker	Siltation (habitat alteration)	Available data for Lost Creek indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160109-0405-104	Lost Creek	Black Warrior	Walker	Siltation (habitat alteration)	Available data for Lost Creek indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160109-0404-500	Black Branch	Black Warrior	Walker	Metals (Aluminum)	TMDL Approved by EPA on 09/16/2016.
AL03160109-0404-500	Black Branch	Black Warrior	Walker	pH	TMDL Approved by EPA on 09/16/2016.
AL03160111-0413-101	Locust Fork (Bankhead Lake)	Black Warrior	Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160111-0413-112	Locust Fork (Bankhead Lake)	Black Warrior	Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160111-0404-102	Locust Fork	Black Warrior	Blount Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160111-0404-102	Locust Fork	Black Warrior	Blount Jefferson	Siltation (habitat alteration)	Available data for Locust Fork indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
					according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160111-0308-102	Locust Fork	Black Warrior	Blount Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160111-0308-102	Locust Fork	Black Warrior	Blount Jefferson	Siltation (habitat alteration)	Available data for Locust Fork indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160111-0305-102	Locust Fork	Black Warrior	Blount Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160111-0305-102	Locust Fork	Black Warrior	Blount Jefferson	Siltation (habitat alteration)	Available data for Locust Fork indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160111-0208-101	Locust Fork	Black Warrior	Blount	Siltation (habitat alteration)	Available data for Locust Fork indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160111-0405-101	Newfound Creek	Black Warrior	Jefferson	Siltation (habitat alteration)	Available data for Newfound Creek indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more recent data” which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160111-0409-100	Village Creek	Black Warrior	Jefferson	Nutrients	TMDL Approved by EPA on 01/22/2018.
AL03160112-0201-102	Big Yellow Creek	Black Warrior	Tuscaloosa	Metals (Chromium)	Big Yellow Creek was delisted for Chromium in 2012 and inadvertently left on the list.
AL03160112-0201-102	Big Yellow Creek	Black Warrior	Tuscaloosa	Metals (Lead)	Available data for Big Yellow Creek indicates that impairment for Metals (Lead) does not currently exist. Therefore, ADEM will not develop a TMDL due to “more

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
					recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03130003-0101-100	Mill Creek	Chattahoochee	Lee Russell	Organic enrichment (CBOD, NBOD)	Available data for Mill Creek indicates that impairment for Organic enrichment (CBOD, NBOD) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03140303-0201-101	Rocky Creek	Escambia	Butler	Pathogens (E. coli)	TMDL Approved by EPA on 09/16/2016.
AL03140107-0204-400	Arnica Bay	Perdido	Baldwin	Pathogens (Enterococcus)	Available data for Arnica Bay indicates that impairment for Pathogens (Enterococcus) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03150108-0905-103	Little Tallapoosa River	Tallapoosa	Cleburne Randolph	Pathogens (E. coli)	TMDL Approved by EPA on 08/25/2017.
AL03150108-0905-400	Wolf Creek	Tallapoosa	Randolph	pH	Available data for Wolf Creek indicates that impairment for pH does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030001-0203-101	Long Island Creek (Lake Guntersville)	Tennessee	Jackson	Metals (Mercury)	Based on data from ADEM station GUNM-11, the Alabama Department of Public Health (ADPH) has determined that no restrictions on consumption of fish are necessary. See the ADPH Alabama Fish Consumption Advisory list for 2017.
AL06030001-0403-801	Warren Smith Creek	Tennessee	Jackson	Siltation (habitat alteration)	Available data for Warren Smith Creek indicates that impairment for Siltation (habitat alteration) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030002-0503-102	Huntsville Spring Branch	Tennessee	Madison	Metals (Mercury)	Available data for Huntsville Spring Branch indicates that impairment for Metals (Mercury) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
					recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030005-0801-201	McKiernan Creek (Wilson Lake)	Tennessee	Colbert	Nutrients	Available data for McKiernan Creek (Wilson Lake) indicates that impairment for Nutrients does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030005-0801-201	McKiernan Creek (Wilson Lake)	Tennessee	Colbert	Organic enrichment (CBOD, NBOD)	Available data for McKiernan Creek (Wilson Lake) indicates that impairment for Organic enrichment (CBOD, NBOD) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030006-0103-104	Bear Creek (Upper Bear Creek Lake)	Tennessee	Franklin Marion Winston	Organic enrichment (CBOD, NBOD)	Available data for Bear Creek (Upper Bear Creek Lake) indicates that impairment for Organic enrichment (CBOD, NBOD) does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL06030006-0205-111	Little Bear Creek (Little Bear Creek Lake)	Tennessee	Franklin	Nutrients	Available data for Little Bear Creek (Little Bear Creek Lake) indicates that impairment for Nutrients does not currently exist. Therefore, ADEM will not develop a TMDL due to "more recent data" which is a just cause for delisting waterbodies according to Title 40 of the Code of Federal Regulations (CFR), Part 130.7(b)(6)(iv).
AL03160203-1103-800	Olin Basin	Tombigbee	Washington	Pesticides (DDT)	A TMDL is not needed for this pollutant as it is being addressed by EPA and ADEM under the CERCLA program (ALD008188708). This waterbody/pollutant will be moved to Category 4b.

Table 3
List of Other Changes Appearing on Alabama's 2018 §303(d) List

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03160109-0203-102	Mulberry Fork	Black Warrior	Blount Cullman	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL03160109-0109-102	Mulberry Fork	Black Warrior	Blount Cullman	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL03160109-0604-900	Baker Creek	Black Warrior	Walker	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL03160111-0307-400	Black Creek	Black Warrior	Jefferson	The priority ranking for pH on this Assessment Unit has been changed to High.
AL03150202-0901-100	Childers Creek	Cahaba	Dallas	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL03130003-0605-100	Ihagee Creek	Chattahoochee	Russell	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Low.
AL03130012-0101-410	Cypress Creek	Chipola	Houston	The priority ranking for Nutrients on this Assessment Unit has been changed to Low.
AL03130012-0101-410	Cypress Creek	Chipola	Houston	The priority ranking for Organic enrichment (CBOD, NBOD) on this Assessment Unit has been changed to Low.
AL03150107-0106-100	Tallaseehatchee Creek	Coosa	Talladega	The priority ranking for Total dissolved solids on this Assessment Unit has been changed to High.
AL03150107-0104-100	Shirtee Creek	Coosa	Talladega	The priority ranking for Total dissolved solids on this Assessment Unit has been changed to High.
AL03160204-0505-501	D'Olive Creek	Mobile	Baldwin	Assessment Unit AL03160204-0505-501 was created from a split of Assessment Unit AL03160204-0505-500.
AL03160204-0505-502	D'Olive Creek	Mobile	Baldwin	Assessment Unit AL03160204-0505-502 was created from a split of Assessment Unit AL03160204-0505-500.
AL03160204-0505-501	D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03160204-0505-502	D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03160204-0505-800	Joes Branch	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03160204-0505-900	Tiawasee Creek	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03160204-0505-905	UT to Tiawasee Creek	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03160204-0505-505	UT to D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL-Gulf-of-Mexico-1	Gulf of Mexico	Mobile	Mobile	Assessment Unit AL-Gulf-of-Mexico-1 was created from a split of Assessment Unit AL-Gulf-of-Mexico.
AL-Gulf-of-Mexico-2	Pelican Bay	Mobile	Mobile	Assessment Unit AL-Gulf-of-Mexico-2 was created from a split of Assessment Unit AL-Gulf-of-Mexico.
AL03150110-0406-200	Mill Creek	Tallapoosa	Macon Tallapoosa	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL03150110-0504-101	Calebee Creek	Tallapoosa	Macon	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03150110-0604-100	Cubahatchee Creek	Tallapoosa	Macon	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03150110-0603-102	Cubahatchee Creek	Tallapoosa	Bullock Macon	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03150110-0804-101	Line Creek	Tallapoosa	Macon Montgomery	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03150110-0804-102	Line Creek	Tallapoosa	Macon Montgomery	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL03150110-0904-300	Jenkins Creek	Tallapoosa	Montgomery	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Medium.
AL06030001-0306-100	Little Coon Creek	Tennessee	Jackson	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to High.
AL06030002-0601-300	Hughes Creek	Tennessee	Marshall Morgan	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to High.
AL06030002-0602-102	West Fork Cotaco Creek	Tennessee	Morgan	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to High.
AL06030004-0405-101	Elk River (Wheeler Lake)	Tennessee	Lauderdale Limestone	The priority ranking for pH on this Assessment Unit has been changed to High.
AL06030004-0405-101	Elk River (Wheeler Lake)	Tennessee	Lauderdale Limestone	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030005-0801-201	McKiernan Creek (Wilson Lake)	Tennessee	Colbert	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL06030006-0102-700	Little Dice Branch	Tennessee	Franklin	The priority ranking for Siltation (habitat alteration) on this Assessment Unit has been changed to Low.
AL06030006-0102-102	Bear Creek (Upper Bear Creek Lake)	Tennessee	Franklin Winston	The priority ranking for Organic enrichment (CBOD, NBOD) on this Assessment Unit has been changed to Low.

Table 4
Additional Revisions made between the Draft 2018 §303(d) List and the Final 2018 §303(d) List

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03150202-0103-103	Little Cahaba River	Cahaba	Jefferson	Municipal has been removed as a potential source for Total dissolved solids for this assessment unit.
AL03150106-0514-100	Choccolocco Creek	Coosa	Calhoun Talladega	The delisting of this assessment unit for Priority organics (PCBs) has been withdrawn.

Table 5
Assessment Units listed in Category 4a

Assessment Unit ID	Waterbody Name	River Basin	County	Action
AL03150202-0101-102	Cahaba River	Cahaba	Jefferson	The impairment for Pathogens (E. coli) is already addressed in the Cahaba River pathogens TMDL.

Appendix A
Public Notice

Alabama Department of Environmental Management
Notice of Extension of August 27, 2017 Public Notice Requesting Data and Information for Preparation of Alabama's Draft 2018 Section 303(d) List of Impaired Waters and Comments on Alabama's Draft Water Assessment and Listing Methodology
Fund Code 210

On August 27, 2017, the Alabama Department of Environmental Management (ADEM) published a notice requesting data and information for preparation of Alabama's Draft 2018 Section 303(d) **List of Impaired Waters and comments on Alabama's Draft Water Assessment and Listing Methodology.** Section 303(d) of the Clean Water Act requires that each state identify those waters that do not currently support designated uses and establish a priority ranking of the waters, taking into account the severity of the pollution and the uses to be made of the waters. For each water on the list, the state is required to establish the total maximum daily load (TMDL) at a level necessary to implement the applicable water quality standards.

At the time of the notice, the Department began the development of the 2018 Section 303(d) list and solicited data and information for consideration during preparation of the list and also solicited comments on Alabama's Water Assessment and Listing Methodology which will be used to develop the 2018 Section 303(d) List. The methodology has been prepared to assist the Department in the development of the 303(d) list and establishes minimum data requirements and assessment/listing protocols.

Subsequent to the August 27, 2017, notification, ADEM received a request for an extension of the public comment period. ADEM has given consideration to this request, and has determined that it is appropriate to extend, for a period of fifteen (15) days, the opportunity for the public to provide input to ADEM's aforementioned requests. In order to be fully considered in this process, persons wishing to offer a submittal should do so in an electronic format. While the Department will consider all data submitted, we reserve the right to incorporate only those data that meet minimum quality standards. The Department is not bound by interpretations provided by data submitters. It should also be noted that the Department is unable to pay a fee for the use of data. Data, information, and comments should be submitted to Joseph Roy, Water Division, Alabama Department of Environmental Management, P.O. Box 301463, Montgomery, Alabama 36130-1463 (street address: 1400 Coliseum Boulevard, Montgomery, Alabama 36110-2059). Mr. Roy's phone number is 334-270-5635. His email address is jtr@adem.alabama.gov.

Data, information, and comments must be received by the Department prior to 5:00 p.m. on October 10, 2017.

An electronic copy of the Draft Water Assessment and Listing Methodology is available on ADEM's website under the Public Notice section at the following address: http://adem.alabama.gov/newsEvents/publicNotices.cnt This notice is hereby given this **17th day of September, 2017,** by authorization of the Alabama Department of Environmental Management.

Lance LeFleur
Director

Nondiscrimination Statement: The Department does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in the administration of its programs.

Appendix D

Alabama’s 2018 §303(d) List

2018 Alabama §303(d) List

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03150201-0101-200	Callaway Creek	R	Alabama	Elmore	Fish & Wildlife	Nutrients	Agriculture Municipal	11.78	miles	Bouldin tailrace canal / its source	2010	H
AL03150201-0104-302	Three Mile Branch	R	Alabama	Montgomery	Fish & Wildlife	Pathogens (E. coli)	Urban development	7.65	miles	Lower Wetumpka Road / its source	2010	L
AL03150201-0104-302	Three Mile Branch	R	Alabama	Montgomery	Fish & Wildlife	Pesticides (Dieldrin)	Unknown source	7.65	miles	Lower Wetumpka Road / its source	2002	L
AL03150201-0104-302	Three Mile Branch	R	Alabama	Montgomery	Fish & Wildlife	Siltation	Urban development	7.65	miles	Lower Wetumpka Road / its source	2010	L
AL03150201-0105-300	Mill Creek	R	Alabama	Autauga Elmore	Fish & Wildlife	Siltation	Urban development	8.86	miles	Still Creek / its source	2010	L
AL03150201-1006-101	Mulberry Creek	R	Alabama	Autauga Dallas	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	22.20	miles	Alabama River / Harris Branch	2016	L
AL03150201-1207-301	Sixmile Creek	R	Alabama	Dallas	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1.23	miles	Alabama River / Fourmile Creek	2012	L
AL03150203-0103-200	Coffee Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Nutrients	Pasture grazing	6.88	miles	Tayloe Creek / its source	2010	L
AL03150203-0103-200	Coffee Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.88	miles	Tayloe Creek / its source	2010	L
AL03150203-0103-200	Coffee Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Siltation	Pasture grazing	6.88	miles	Tayloe Creek / its source	2010	L
AL03150203-0108-110	Bear Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Pathogens (E. coli)	Aquaculture Pasture grazing	16.79	miles	Bogue Chitto Creek / its source	2018	L
AL03150203-0805-101	Alabama River (Claiborne Lake)	L	Alabama	Clarke Monroe Wilcox	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	714.80	acres	McCalls Creek / Bear Creek	2008	L
AL03150203-0805-102	Alabama River (Claiborne Lake)	L	Alabama	Wilcox	Swimming Fish & Wildlife	Organic enrichment (BOD)	Dam construction Flow regulation/modification	304.23	acres	Bear Creek / Frisco Railroad Crossing	1996	L
AL03150203-0805-103	Alabama River (Claiborne Lake)	L	Alabama	Wilcox	Fish & Wildlife	Organic enrichment (BOD)	Dam construction Flow regulation/modification	474.72	acres	Frisco Railroad Crossing / Pursley Creek	1996	L
AL03150203-0805-104	Alabama River (Claiborne Lake)	L	Alabama	Wilcox	Fish & Wildlife	Organic enrichment (BOD)	Dam construction Flow regulation/modification	524.33	acres	Pursley Creek / River Mile 131	2000	L
AL03150203-0805-105	Alabama River (Claiborne Lake)	L	Alabama	Wilcox	Public Water Supply	Organic enrichment (BOD)	Dam construction Flow regulation/modification	109.31	acres	River Mile 131 / Beaver Creek	2000	L
AL03150203-0703-101	Alabama River (Claiborne Lake)	L	Alabama	Wilcox	Public Water Supply	Organic enrichment (BOD)	Dam construction Flow regulation/modification	310.63	acres	Beaver Creek / Rockwest Creek	1996	L
AL03150203-0802-111	Pursley Creek (Claiborne Lake)	L	Alabama	Wilcox	Swimming Fish & Wildlife	Organic enrichment (BOD)	Dam construction Flow regulation/modification	6.64	acres	Alabama River / end of embayment	1996	L
AL03150203-0110-100	Bogue Chitto Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Siltation	Agriculture Pasture grazing	60.49	miles	Dannelly Lake / its source	2010	L
AL03150203-0101-100	Washington Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Pathogens (E. coli)	On-site wastewater systems Pasture grazing	17.24	miles	Bogue Chitto Creek / its source	2016	L
AL03150204-0405-102	Alabama River	R	Alabama	Clarke Monroe	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	12.35	miles	Pigeon Creek / Claiborne Lock and Dam	2012	L
AL03150204-0105-100	Alabama River (Claiborne Lake)	L	Alabama	Clarke Monroe	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,051.55	acres	Claiborne Lock and Dam / McCalls Creek	2008	L
AL03150204-0101-111	Tallatchee Creek (Claiborne Lake)	L	Alabama	Monroe	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	20.58	acres	Alabama River / end of embayment	2008	L
AL03160109-0203-101	Mulberry Fork	R	Black Warrior	Blount Cullman	Fish & Wildlife	Nutrients	Agriculture Industrial Municipal	2.52	miles	Marriott Creek / Mill Creek	1998	H
AL03160109-0203-102	Mulberry Fork	R	Black Warrior	Blount Cullman	Fish & Wildlife	Nutrients	Agriculture Industrial Municipal	17.27	miles	Mill Creek / Broglen River	1998	H
AL03160109-0203-102	Mulberry Fork	R	Black Warrior	Blount Cullman	Fish & Wildlife	Siltation	Agriculture Industrial Municipal	17.27	miles	Mill Creek / Broglen River	1998	L
AL03160109-0109-102	Mulberry Fork	R	Black Warrior	Blount Cullman	Fish & Wildlife	Siltation	Agriculture	18.23	miles	Broglen River / Blount County Road 6	1998	L
AL03160109-0101-150	Riley Maze Creek	R	Black Warrior	Cullman Marshall	Fish & Wildlife	Total dissolved solids	Municipal	4.13	miles	Tibb Creek / its source	2006	H
AL03160109-0101-600	Tibb Creek	R	Black Warrior	Cullman Marshall	Fish & Wildlife	Total dissolved solids	Municipal	5.13	miles	Mulberry Fork / its source	2006	H
AL03160109-0503-100	Wolf Creek	R	Black Warrior	Fayette Walker	Swimming Fish & Wildlife	Siltation	Surface mining-abandoned	38.40	miles	Lost Creek / Alabama Highway 102	1998	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160109-0602-601	Old Town Creek	R	Black Warrior	Walker	Fish & Wildlife	Nutrients	Surface mining-abandoned	2.71	miles	Mulberry Fork / Pinhook Creek	2006	L
AL03160109-0602-601	Old Town Creek	R	Black Warrior	Walker	Fish & Wildlife	Siltation	Surface mining-abandoned	2.71	miles	Mulberry Fork / Pinhook Creek	2006	L
AL03160109-0604-900	Baker Creek	R	Black Warrior	Walker	Fish & Wildlife	Siltation	Unknown source	7.01	miles	Mulberry Fork / its source	2006	L
AL03160110-0305-201	Clear Creek (Smith Lake)	L	Black Warrior	Winston	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	346.47	acres	Sipsey Fork / Coon Creek	2010	L
AL03160110-0306-201	Sipsey Fork (Smith Lake)	L	Black Warrior	Winston	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,321.71	acres	County Road 41 / Brushy Creek	2010	L
AL03160110-0306-901	Butler Branch (Smith Lake)	L	Black Warrior	Winston	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	119.74	acres	Sipsey Fork / end of embayment	2010	L
AL03160110-0408-110	Rock Creek (Smith Lake)	L	Black Warrior	Cullman Winston	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,946.62	acres	Sipsey Fork / White Oak Creek	2010	L
AL03160110-0505-103	Ryan Creek (Smith Lake)	L	Black Warrior	Cullman	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4,547.96	acres	Coon Creek / Rock Creek	2010	L
AL03160110-0401-100	Blevens Creek	R	Black Warrior	Cullman Winston	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	19.14	miles	Rock Creek / its source	2016	L
AL03160111-0106-100	Slab Creek	R	Black Warrior	Blount Marshall	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	24.98	miles	Locust Fork / its source	2018	L
AL03160111-0204-111	Blackburn Fork (Inland Lake)	L	Black Warrior	Blount	Public Water Supply Swimming	Metals (Mercury)	Atmospheric deposition	1,389.78	acres	Inland Lake dam / extent of reservoir	2018	L
AL03160111-0307-400	Black Creek	R	Black Warrior	Jefferson	Fish & Wildlife	pH	Surface mining-abandoned	6.36	miles	Cunningham Creek / its source	2014	H
AL03160111-0407-103	Fivemile Creek	R	Black Warrior	Jefferson	Swimming Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewers	9.07	miles	Alabama Highway 79 / its source	2018	L
AL03160111-0408-102	Village Creek	R	Black Warrior	Jefferson	Limited Warmwater Fishery	Pesticides (Dieldrin)	Urban runoff/storm sewers	12.60	miles	Second Creek / Woodlawn Bridge	2006	L
AL03160111-0408-103	Village Creek	R	Black Warrior	Jefferson	Limited Warmwater Fishery	Pesticides (Dieldrin)	Urban runoff/storm sewers	4.04	miles	Woodlawn Bridge / its source	2006	L
AL03160112-0106-111	Valley Creek (Bankhead Lake)	L	Black Warrior	Jefferson	Public Water Supply Swimming Fish & Wildlife	Nutrients	Municipal	119.67	acres	Black Warrior River / end of embayment	2016	L
AL03160112-0304-110	Pegues Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Chromium)	Surface mining-abandoned	2.47	miles	Holt Lake / its source	2006	L
AL03160112-0304-110	Pegues Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Lead)	Surface mining-abandoned	2.47	miles	Holt Lake / its source	2006	L
AL03160112-0304-110	Pegues Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Siltation	Surface mining-abandoned	2.47	miles	Holt Lake / its source	2006	L
AL03160112-0305-110	Daniel Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.42	miles	Holt Lake / its source	2018	L
AL03160112-0305-110	Daniel Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Siltation	Surface mining-abandoned	10.42	miles	Holt Lake / its source	2014	L
AL03160112-0305-110	Daniel Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Total dissolved solids	Surface mining-abandoned	10.42	miles	Holt Lake / its source	2014	L
AL03160112-0413-102	North River (Lake Tuscaloosa)	L	Black Warrior	Tuscaloosa	Public Water Supply Swimming	Metals (Mercury)	Atmospheric deposition	3,797.84	acres	Lake Tuscaloosa dam / Binion Creek	2010	L
AL03160112-0411-101	North River (Lake Tuscaloosa)	L	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	968.62	acres	Binion Creek / extent of reservoir	2010	L
AL03160112-0410-111	Binion Creek (Lake Tuscaloosa)	L	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	305.18	acres	North River / end of embayment	2010	L
AL03160112-0503-100	Cottondale Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Pathogens (E. coli)	On-site wastewater systems Pasture grazing	9.58	miles	Hurricane Creek / its source	2016	L
AL03160113-0201-100	Mill Creek	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	10.36	miles	Warrior Lake / its source	2018	L
AL03160113-0302-110	Elliotts Creek	R	Black Warrior	Hale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	24.74	miles	Warrior Lake / its source	2018	L
AL03160113-0602-300	Carthage Branch	R	Black Warrior	Tuscaloosa	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.98	miles	Warrior Lake / its source	2018	L
AL03160113-0704-100	Cottonwood Creek	R	Black Warrior	Hale Marengo Perry	Fish & Wildlife	Organic enrichment (BOD)	Municipal Pasture grazing	11.42	miles	Big Prairie Creek / its source	2006	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160113-0704-100	Cottonwood Creek	R	Black Warrior	Hale Marengo Perry	Fish & Wildlife	Siltation	Municipal Pasture grazing	11.42	miles	Big Prairie Creek / its source	2006	L
AL03160113-0704-100	Cottonwood Creek	R	Black Warrior	Hale Marengo Perry	Fish & Wildlife	Nutrients	Municipal Pasture grazing	11.42	miles	Big Prairie Creek / its source	2006	L
AL03160113-0708-100	Big Prairie Creek	R	Black Warrior	Hale Perry	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Aquaculture Pasture grazing	44.16	miles	Lake Demopolis / its source	2018	L
AL03160113-0801-200	Needham Creek	R	Black Warrior	Greene	Fish & Wildlife	Total dissolved solids	Aquaculture	8.96	miles	Dollarhide Creek / its source	2014	L
AL03140104-0104-100	Blackwater River	R	Blackwater	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.78	miles	AL-FL state line / its source	2004	L
AL03150202-0503-102	Cahaba River	R	Cahaba	Bibb	Outstanding Alabama Water Swimming	Pathogens (E. coli)	Municipal Pasture grazing Urban runoff/storm sewers	10.58	miles	AL Hwy 82 / lower Little Cahaba River	2016	L
AL03150202-0103-103	Little Cahaba River	R	Cahaba	Jefferson	Fish & Wildlife	Total dissolved solids	Industrial	13.75	miles	Lake Purdy / its source	2018	L
AL03150202-0103-102	Little Cahaba River (Lake Purdy)	L	Cahaba	Jefferson Shelby	Public Water Supply	Metals (Mercury)	Atmospheric deposition	961.95	acres	Lake Purdy dam / extent of reservoir	2018	L
AL03150202-0402-100	Mahan Creek	R	Cahaba	Bibb Chilton	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	15.47	miles	Little Cahaba River / its source	2018	L
AL03150202-0505-100	Affonee Creek	R	Cahaba	Bibb	Swimming	Pathogens (E. coli)	Pasture grazing	18.51	miles	Cahaba River / its source	2018	L
AL03150202-0506-200	Walton Creek	R	Cahaba	Bibb Perry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.45	miles	Cahaba River / its source	2016	L
AL03150202-0901-100	Childers Creek	R	Cahaba	Dallas	Fish & Wildlife	Siltation	Pasture grazing	18.79	miles	Cahaba River / its source	2006	L
AL03130002-0907-100	Moores Creek	R	Chattahoochee	Chambers	Fish & Wildlife	Siltation	Land development	11.40	miles	Chattahoochee River / its source	2012	L
AL03130002-0907-100	Moores Creek	R	Chattahoochee	Chambers	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Urban runoff/storm sewers	11.40	miles	Chattahoochee River / its source	2018	L
AL03130002-1105-100	Osanippa Creek	R	Chattahoochee	Chambers Lee	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	27.32	miles	Lake Harding / its source	2018	L
AL03130002-1106-100	UT to Halawakee Creek	R	Chattahoochee	Lee	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	14.19	miles	Halawakee Creek / its source	2018	L
AL03130002-1107-110	Halawakee Creek	R	Chattahoochee	Chambers Lee	Fish & Wildlife	Siltation	Land development	16.57	miles	Three miles upstream of County Road 79 / its source	2012	L
AL03130003-0505-102	Uchee Creek	R	Chattahoochee	Russell	Public Water Supply Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.59	miles	County Road 39 / Island Creek	2018	L
AL03130003-0505-111	Uchee Creek (Walter F George Lake)	L	Chattahoochee	Russell	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	105.15	acres	Chattahoochee River / end of embayment	2010	L
AL03130003-0605-100	Ihagee Creek	R	Chattahoochee	Russell	Swimming Fish & Wildlife	Siltation	Land development Silviculture activities	15.73	miles	Chattahoochee River / its source	2012	L
AL03130003-0605-100	Ihagee Creek	R	Chattahoochee	Russell	Swimming Fish & Wildlife	Pathogens (E. coli)	Collection system failure On-site wastewater systems Pasture grazing	15.73	miles	Chattahoochee River / its source	2016	L
AL03130003-1205-100	Cowikee Creek (Walter F George Lake)	L	Chattahoochee	Barbour	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,739.13	acres	Chattahoochee River / end of embayment	2010	L
AL03130003-1204-100	South Fork Cowikee Creek	R	Chattahoochee	Barbour Bullock	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	30.39	miles	Walter F George Lake / its source	2016	L
AL03130003-1307-111	Barbour Creek (Walter F George Lake)	L	Chattahoochee	Barbour	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	656.59	acres	Chattahoochee River / end of embayment	2016	L
AL03130003-1307-111	Barbour Creek (Walter F George Lake)	L	Chattahoochee	Barbour	Swimming Fish & Wildlife	Siltation	Agriculture	656.59	acres	Chattahoochee River / end of embayment	1998	L
AL03130003-1307-100	Barbour Creek	R	Chattahoochee	Barbour	Fish & Wildlife	Siltation	Agriculture	18.77	miles	Walter F George Lake / its source	1998	L
AL03130003-1600-100	Chattahoochee River (Walter F George Lake)	L	Chattahoochee	Barbour Henry	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	9,797.21	acres	Walter F George dam / Cowikee Creek	2016	L
AL03130004-0801-100	Chattahoochee River	R	Chattahoochee	Houston	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	14.14	miles	AL-FL state line / Woods Branch	2016	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03130004-0206-100	Bennett Mill Creek	R	Chattahoochee	Henry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.88	miles	Chattahoochee River / its source	2016	L
AL03130004-0405-100	Abbie Creek	R	Chattahoochee	Barbour Henry	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Municipal Pasture grazing	42.53	miles	Chattahoochee River / its source	2016	L
AL03130004-0403-110	Peterman Creek	R	Chattahoochee	Henry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	12.43	miles	Abbie Creek / its source	2016	L
AL03130004-0602-500	Cedar Creek	R	Chattahoochee	Henry Houston	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.04	miles	Omusee Creek / its source	2008	L
AL03130012-0101-100	Limestone Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	10.80	miles	Big Creek / its source	2018	L
AL03130012-0101-410	Cypress Creek	R	Chipola	Houston	Fish & Wildlife	Nutrients	Municipal Urban runoff/storm sewers	8.11	miles	Limestone Creek / its source	1998	L
AL03130012-0101-410	Cypress Creek	R	Chipola	Houston	Fish & Wildlife	Organic enrichment (BOD)	Municipal Urban runoff/storm sewers	8.11	miles	Limestone Creek / its source	1998	L
AL03130012-0202-210	Bruners Gin Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.43	miles	Rocky Creek / its source	2018	L
AL03130012-0203-110	Cowarts Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Municipal Pasture grazing	21.72	miles	AL-FL state line / its source	2016	L
AL03140201-0304-110	Judy Creek	R	Choctawhatchee	Barbour Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	23.64	miles	West Fork Choctawhatchee River / its source	2018	L
AL03140201-0501-201	Beaver Creek	R	Choctawhatchee	Houston	Fish & Wildlife	Nutrients	Municipal Urban runoff/storm sewers	2.09	miles	Newton Creek / Dothan WWTP	1998	L
AL03140201-0501-201	Beaver Creek	R	Choctawhatchee	Houston	Fish & Wildlife	Organic enrichment (BOD)	Municipal Urban runoff/storm sewers	2.09	miles	Newton Creek / Dothan WWTP	1998	L
AL03140201-0203-200	Panther Creek	R	Choctawhatchee	Dale Henry	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.63	miles	East Fork Choctawhatchee River / its source	2018	L
AL03140201-0401-100	Lindsey Creek	R	Choctawhatchee	Barbour	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	12.48	miles	West Fork Choctawhatchee River / its source	2018	L
AL03140201-0402-300	Pauls Creek	R	Choctawhatchee	Barbour	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.59	miles	West Fork Choctawhatchee River / its source	2018	L
AL03140201-0602-200	Killebrew Factory Creek	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.52	miles	Choctawhatchee River / its source	2018	L
AL03140201-0701-300	Bear Creek	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	12.37	miles	Little Claybank Creek / its source	2018	L
AL03140201-0702-100	Claybank Creek	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.64	miles	Lake Tholocco / its source	2018	L
AL03140201-1001-300	Pine Log Branch	R	Choctawhatchee	Geneva	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	4.09	miles	Hurricane Creek / its source	2018	L
AL03140201-1002-100	Pates Creek	R	Choctawhatchee	Geneva Houston	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	8.51	miles	Choctawhatchee River / its source	2018	L
AL03140201-1004-300	Hurricane Creek	R	Choctawhatchee	Geneva	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	15.66	miles	Choctawhatchee River / its source	2018	L
AL03140201-1004-600	Dowling Branch	R	Choctawhatchee	Geneva	Fish & Wildlife	Organic enrichment (BOD)	Agriculture Municipal Urban runoff/storm sewers	2.10	miles	Cox Mill Creek / its source	1998	L
AL03140201-0901-100	Harrand Creek	R	Choctawhatchee	Coffee Dale	Fish & Wildlife	Siltation	Urban runoff/storm sewers	9.71	miles	Claybank Creek / its source	2006	L
AL03140201-0901-200	Indian Camp Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Siltation	Land development Urban runoff/storm sewers	3.98	miles	Harrand Creek / its source	2004	L
AL03140201-0904-300	Brackin Mill Creek	R	Choctawhatchee	Coffee Dale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	4.90	miles	Claybank Creek / its source	2018	L
AL03140201-1203-101	Choctawhatchee River	R	Choctawhatchee	Dale Geneva Houston	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	29.07	miles	Pea River / Alabama Highway 12	2018	L
AL03140201-1203-101	Choctawhatchee River	R	Choctawhatchee	Dale Geneva Houston	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	29.07	miles	Pea River / Alabama Highway 12	2010	L
AL03140201-1003-102	Choctawhatchee River	R	Choctawhatchee	Dale Houston	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	6.45	miles	Alabama Highway 12 / Brooking Mill Creek	2010	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03140201-0407-101	West Fork Choctawhatchee River	R	Choctawhatchee	Dale	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	5.08	miles	Choctawhatchee River / falls 1/2 mile upstream of AL Hwy 27	2016	L
AL03140201-0407-102	West Fork Choctawhatchee River	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	1.79	miles	falls 1/2 mile upstream of AL Hwy 27 / Judy Creek	2016	L
AL03140201-0406-100	West Fork Choctawhatchee River	R	Choctawhatchee	Barbour Dale	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	32.53	miles	Judy Creek / its source	2016	L
AL03140201-0407-400	Big Creek	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	6.53	miles	West Fork Choctawhatchee River / its source	2016	L
AL03140201-1102-500	Blanket Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Organic enrichment (BOD)	Municipal	5.71	miles	Double Bridges Creek / its source	2010	L
AL03140202-0906-101	Pea River	R	Choctawhatchee	Geneva	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	3.87	miles	Choctawhatchee River / Laddon Creek	2010	L
AL03140202-0603-101	Pea River	R	Choctawhatchee	Coffee	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.09	miles	Bucks Mill Creek / US Highway 84	2010	L
AL03140202-0603-102	Pea River	R	Choctawhatchee	Coffee	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	11.76	miles	US Highway 84 / Red Oak Creek	2010	L
AL03140202-0202-110	Spring Creek	R	Choctawhatchee	Bullock	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	11.13	miles	Pea River / its source	2018	L
AL03140202-0204-110	Big Sandy Creek	R	Choctawhatchee	Bullock	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.32	miles	Pea River / its source	2018	L
AL03140202-0505-100	Pea River	R	Choctawhatchee	Coffee Dale	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	10.85	miles	Halls Creek / US Hwy 231	2016	L
AL03140202-0505-200	Halls Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	5.54	miles	Pea River / its source	2018	L
AL03140202-0301-200	Buckhorn Creek	R	Choctawhatchee	Pike	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	15.97	miles	Pea River / its source	2016	L
AL03140202-0504-200	Huckleberry Creek	R	Choctawhatchee	Coffee Dale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.47	miles	Pea River / its source	2016	L
AL03140202-0601-200	Patrick Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.18	miles	Beaverdam Creek / its source	2016	L
AL03140202-0610-101	Pea River	R	Choctawhatchee	Geneva	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	12.11	miles	Flat Creek / Snake Branch	2018	L
AL03140202-0702-110	Flat Creek	R	Choctawhatchee	Coffee Covington Geneva	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	24.26	miles	Eightmile Creek / its source	2016	L
AL03140203-0105-100	Choctawhatchee River	R	Choctawhatchee	Geneva	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.45	miles	AL-FL state line / Pea River	2010	L
AL03140203-0201-100	Wrights Creek	R	Choctawhatchee	Geneva	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	8.96	miles	AL-FL state line / its source	2016	L
AL03150105-1002-102	Coosa River (Weiss Lake)	L	Coosa	Cherokee	Swimming Fish & Wildlife	Pathogens (E. coli)	Sources outside state	6,567.86	acres	Spring Creek / AL-GA state line	2016	L
AL03150106-0803-100	Coosa River (Logan Martin Lake)	L	Coosa	St. Clair Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	10,945.46	acres	Logan Martin Dam / Broken Arrow Creek	1998	*
AL03150106-0603-111	Coosa River (Logan Martin Lake)	L	Coosa	Calhoun St. Clair Talladega	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	1,449.31	acres	Broken Arrow Creek / Trout Creek	1998	*
AL03150106-0603-112	Coosa River (Logan Martin Lake)	L	Coosa	St. Clair Calhoun	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	783.90	acres	Trout Creek / Neely Henry Dam	1998	*
AL03150106-0802-111	Clear Creek (Logan Martin Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	624.28	acres	Coosa River / end of embayment	1998	*
AL03150106-0803-311	Easonville Creek (Logan Martin Lake)	L	Coosa	St. Clair	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	1,260.19	acres	Coosa River / end of embayment	1998	*
AL03150106-0514-111	Choccolocco Creek (Logan Martin Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	1,125.61	acres	Coosa River / end of embayment	2014	*
AL03150106-0605-211	Dye Creek (Logan Martin Lake)	L	Coosa	St. Clair	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	144.97	acres	Coosa River / end of embayment	1998	*
AL03150106-0604-111	Blue Eye Creek (Logan Martin Lake)	L	Coosa	St. Clair	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	305.45	acres	Coosa River / end of embayment	1998	*
AL03150106-0408-111	Cane Creek (Logan Martin Lake)	L	Coosa	Calhoun	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	35.96	acres	Coosa River / end of embayment	1998	*

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AL03150106-0108-111	Big Wills Creek (Neely Henry Lake)	L	Coosa	Etowah	Fish & Wildlife	Nutrients	Agriculture Industrial Municipal	514.85	acres	US Hwy 411 / end of embayment	2018	L
AL03150106-0107-111	Black Creek (Neely Henry Lake)	L	Coosa	Etowah	Fish & Wildlife	Nutrients	Agriculture Urban runoff/storm sewers	348.36	acres	US Highway 411 / end of embayment	2018	L
AL03150106-0108-102	Big Wills Creek	R	Coosa	Etowah	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	24.76	miles	Neely Henry Lake / Little Sand Valley Creek	2018	L
AL03150106-0103-100	Big Wills Creek	R	Coosa	Etowah DeKalb	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	51.63	miles	Little Sand Valley Creek / 100 yards below Allen Branch	2018	L
AL03150106-0408-100	Cane Creek	R	Coosa	Calhoun	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	30.68	miles	Logan Martin Lake / its source	2018	L
AL03150106-0602-100	Broken Arrow Creek	R	Coosa	St. Clair	Fish & Wildlife	Siltation	Agriculture Pasture grazing	21.37	miles	Coosa River / its source	2010	L
AL03150106-0514-100	Choccolocco Creek	R	Coosa	Calhoun Talladega	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	33.03	miles	Logan Martin Lake / UT from Boiling Spring	2018	L
AL03150106-0514-100	Choccolocco Creek	R	Coosa	Calhoun Talladega	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	33.03	miles	Logan Martin Lake / UT from Boiling Spring	2010	L
AL03150106-0514-100	Choccolocco Creek	R	Coosa	Calhoun Talladega	Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	33.03	miles	Logan Martin Lake / UT from Boiling Spring	1996	*
AL03150106-0507-102	Choccolocco Creek	R	Coosa	Calhoun	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.37	miles	UT from Boiling Spring / Hillabee Creek	2010	L
AL03150106-0507-102	Choccolocco Creek	R	Coosa	Calhoun	Public Water Supply Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	2.37	miles	UT from Boiling Spring / Hillabee Creek	1996	*
AL03150106-0806-100	Wolf Creek	R	Coosa	Shelby St. Clair	Fish & Wildlife	Siltation	Surface mining Urban development	16.70	miles	Kelly Creek / its source	2010	L
AL03150106-0806-100	Wolf Creek	R	Coosa	Shelby St. Clair	Fish & Wildlife	Turbidity	Surface mining Urban development	16.70	miles	Kelly Creek / its source	2010	L
AL03150106-0808-100	Kelly Creek	R	Coosa	Shelby St. Clair	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	33.58	miles	Lay Lake / its source	2018	L
AL03150107-0106-100	Tallaseehatchee Creek	R	Coosa	Talladega	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	16.74	miles	Lay Lake / Howard dam	2018	L
AL03150107-0106-100	Tallaseehatchee Creek	R	Coosa	Talladega	Fish & Wildlife	Total dissolved solids	Industrial Municipal	16.74	miles	Lay Lake / Howard dam	2010	H
AL03150107-0104-100	Shirtee Creek	R	Coosa	Talladega	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	4.67	miles	Tallaseehatchee Creek / its source	2018	L
AL03150107-0104-100	Shirtee Creek	R	Coosa	Talladega	Fish & Wildlife	Total dissolved solids	Industrial Municipal	4.67	miles	Tallaseehatchee Creek / its source	2010	H
AL03150107-0203-100	Weewoka Creek	R	Coosa	Talladega	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	18.32	miles	Tallaseehatchee Creek / its source	2018	L
AL03150107-0503-110	Coosa River (Lay Lake)	L	Coosa	Chilton Coosa Shelby Talladega	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	10,559.35	acres	Lay Dam / Southern RR Bridge	1996	*
AL03150107-0301-102	Coosa River (Lay Lake)	L	Coosa	Shelby Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	803.88	acres	Southern RR Bridge / River Mile 89	1996	*
AL03150107-0301-102	Coosa River (Lay Lake)	L	Coosa	Shelby Talladega	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	803.88	acres	Southern RR Bridge / River Mile 89	2010	L
AL03150106-0810-102	Coosa River (Lay Lake)	L	Coosa	Shelby St. Clair Talladega	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	698.04	acres	River Mile 89 / Logan Martin Dam	1996	*
AL03150106-0810-102	Coosa River (Lay Lake)	L	Coosa	Shelby St. Clair Talladega	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	698.04	acres	River Mile 89 / Logan Martin Dam	2010	L
AL03150107-0406-111	Waxahatchee Creek (Lay Lake)	L	Coosa	Chilton Shelby	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	770.68	acres	Coosa River / end of embayment	1996	*
AL03150107-0501-111	Peckerwood Creek (Lay Lake)	L	Coosa	Coosa Talladega	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	165.92	acres	Coosa River / end of embayment	1996	*
AL03150107-0304-111	Dry Branch (Lay Lake)	L	Coosa	Shelby	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	112.04	acres	Coosa River / end of embayment	1996	*

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AL03150107-0205-111	Yellowleaf Creek (Lay Lake)	L	Coosa	Shelby	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	178.73	acres	Coosa River / end of embayment	1996	*
AL03150107-0106-111	Tallaseehatchee Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	13.46	acres	Coosa River / end of embayment	1996	*
AL03150107-0106-111	Tallaseehatchee Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	13.46	acres	Coosa River / end of embayment	2010	L
AL03150106-0703-111	Talladega Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	60.66	acres	Coosa River / end of embayment	1996	*
AL03150106-0703-111	Talladega Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	60.66	acres	Coosa River / end of embayment	2010	L
AL03150106-0808-111	Kelly Creek (Lay Lake)	L	Coosa	St. Clair	Public Water Supply Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	6.49	acres	Coosa River / end of embayment	1996	*
AL03150106-0808-111	Kelly Creek (Lay Lake)	L	Coosa	St. Clair	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	6.49	acres	Coosa River / end of embayment	2010	L
AL03150107-0405-100	Buxahatchee Creek	R	Coosa	Chilton Shelby	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Municipal	14.00	miles	Waxahatchee Creek / its source	2016	L
AL03150107-0801-100	Yellow Leaf Creek	R	Coosa	Chilton	Fish & Wildlife	Siltation	Agriculture	31.27	miles	Mitchell Lake / its source	2010	L
AL03150107-0802-110	Walnut Creek	R	Coosa	Chilton	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	15.66	miles	Mitchell Lake / its source	2018	L
AL03150107-0304-700	UT to Dry Branch	R	Coosa	Shelby	Fish & Wildlife	Nutrients	Municipal Urban runoff/storm sewers	1.58	miles	Dry Branch / its source	1996	L
AL03140301-0403-100	Feagin Creek	R	Escambia	Covington	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.76	miles	Gantt Lake / its source	2018	L
AL03140301-0404-111	Conecuh River (Gantt Lake)	L	Escambia	Covington	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,817.43	acres	Gantt Dam / extent of reservoir	2010	L
AL03140301-0405-101	Conecuh River (Point A Lake)	L	Escambia	Covington	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	610.56	acres	Point A Dam / extent of reservoir	2010	L
AL03140302-0506-101	Patsaliga Creek (Point A Lake)	L	Escambia	Covington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	154.43	acres	Conecuh River / Buck Creek	2010	L
AL03140304-0506-300	Jernigan Mill Creek	R	Escambia	Escambia	Fish & Wildlife	Pathogens (E. coli)	On-site wastewater systems Pasture grazing	7.64	miles	Conecuh River / its source	2018	L
AL03140303-0704-100	Sepulga River	R	Escambia	Conecuh	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	14.48	miles	Conecuh River / Robinson Mill Creek	2010	L
AL03140304-0106-200	Sandy Creek	R	Escambia	Conecuh	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.76	miles	Mill Creek / its source	2018	L
AL03140304-0506-100	Conecuh River	R	Escambia	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	12.70	miles	AL-FL state line / Mantle Branch	2004	L
AL03140304-0404-101	Murder Creek	R	Escambia	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.45	miles	Conecuh River / Cedar Creek	2014	L
AL03140304-0404-200	Franklin Mill Creek	R	Escambia	Escambia	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.60	miles	Murder Creek / its source	2018	L
AL03140304-0305-101	Burnt Corn Creek	R	Escambia	Escambia	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.03	miles	Murder Creek / Sevenmile Creek	2010	L
AL03140304-0605-100	Little Escambia Creek	R	Escambia	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	12.21	miles	AL-FL state line / Wild Fork Creek	2004	L
AL03140305-0102-100	Sizemore Creek	R	Escambia	Escambia	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	14.28	miles	Big Escambia Creek / its source	2018	L
AL03140305-0302-100	Big Escambia Creek	R	Escambia	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	17.03	miles	AL-FL state line / Big Spring Creek	2004	L
AL03170008-0402-110	Escatawpa River	R	Escatawpa	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	70.66	miles	AL-MS state line / its source	2002	L
AL03170008-0502-110	Big Creek (Big Creek Lake)	L	Escatawpa	Mobile	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,724.87	acres	Big Creek Lake dam / Collins Creek	2008	L
AL03170008-0502-211	Hamilton Creek (Big Creek Lake)	L	Escatawpa	Mobile	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	583.14	acres	Big Creek / end of embayment	2008	L
AL03170008-0502-600	Boggy Branch	R	Escatawpa	Mobile	Fish & Wildlife	Metals (Iron)	Natural Wet weather discharge	3.62	miles	Big Creek Lake / its source	1998	L
AL03170008-0502-600	Boggy Branch	R	Escatawpa	Mobile	Fish & Wildlife	Metals (Lead)	Natural Wet weather discharge	3.62	miles	Big Creek Lake / its source	1998	L

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AL03170008-0502-800	Collins Creek	R	Escatawpa	Mobile	Fish & Wildlife	Metals (Arsenic)	Unknown source	5.15	miles	Big Creek / its source	2006	M
AL03170009-0201-100	Mississippi Sound	E	Escatawpa	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Metals (Thallium)	Industrial	94.62	square miles	Segment classified for shellfish harvesting	2010	L
AL03170009-0201-100	Mississippi Sound	E	Escatawpa	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	Urban runoff/storm sewers	94.62	square miles	Segment classified for shellfish harvesting	1998	L
AL03170009-0201-200	Portersville Bay	E	Escatawpa	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	Municipal	18.81	square miles	Portersville Bay	1998	L
AL03170009-0201-300	Grand Bay	E	Escatawpa	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	On-site wastewater systems	30.73	square miles	Grand Bay	2006	L
AL03160204-0403-112	Mobile River	R	Mobile	Baldwin Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	20.90	miles	Spanish River / Cold Creek	2000	L
AL03160204-0106-112	Mobile River	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.37	miles	Cold Creek / Barry Steam Plant	2014	L
AL03160204-0103-100	Mobile River	R	Mobile	Baldwin Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.72	miles	Tensaw River / its source	2014	L
AL03160204-0105-111	Cold Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Contaminated sediments	4.21	miles	Mobile River / Dam 1 1/2 miles west of US Highway 43	1996	L
AL03160204-0305-101	Chickasaw Creek	R	Mobile	Mobile	Limited Warmwater Fishery	Metals (Mercury)	Atmospheric deposition	4.43	miles	Mobile River / US Highway 43	2000	L
AL03160204-0305-102	Chickasaw Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	6.64	miles	US Highway 43 / Mobile College	2000	L
AL03160204-0303-100	Chickasaw Creek	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	26.82	miles	Mobile College / its source	2000	L
AL03160204-0503-102	Bay Minette Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	18.15	miles	Bay Minette / its source	2014	L
AL03160204-0504-300	Toulmins Spring Branch	R	Mobile	Mobile	Fish & Wildlife	Nutrients	Urban runoff/storm sewers	3.22	miles	Threemile Creek / its source	2008	L
AL03160204-0504-500	UT to Threemile Creek	R	Mobile	Mobile	Fish & Wildlife	Nutrients	Urban runoff/storm sewers	1.04	miles	Threemile Creek / its source	2008	L
AL03160204-0505-202	Tensaw River	R	Mobile	Baldwin	Outstanding Alabama Water Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	21.73	miles	Junction of Tensaw and Apalachee Rivers / Junction of Briar Lake	2002	L
AL03160204-0505-501	D'Olive Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	0.51	miles	D'Olive Bay / Lake Forest dam	2008	M
AL03160204-0505-502	D'Olive Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	4.57	miles	Lake Forest dam / its source	2008	M
AL03160204-0505-502	D'Olive Creek	R	Mobile	Baldwin	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewers	4.57	miles	Lake Forest dam / its source	2018	L
AL03160204-0505-800	Joes Branch	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	1.57	miles	D'Olive Creek / its source	2008	M
AL03160204-0505-900	Tiawasee Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	3.54	miles	D'Olive Creek / its source	2008	M
AL03160204-0505-905	UT to Tiawasee Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	1.87	miles	Tiawasee Creek / its source	2008	M
AL03160204-0505-505	UT to D'Olive Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	1.22	miles	D'Olive Creek / its source	2008	M
AL03160204-0202-200	Middle River	R	Mobile	Baldwin Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	9.72	miles	Tensaw River (RM 20.6) / Tensaw River (RM 37.7)	2014	L
AL03160204-0202-300	Mifflin Lake	E	Mobile	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	0.73	square miles	Tensaw River / its source	2014	L
AL03160205-0203-110	Magnolia River	R	Mobile	Baldwin	Outstanding Alabama Water Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	12.41	miles	Weeks Bay / its source	2014	L
AL03160205-0204-402	Turkey Branch	R	Mobile	Baldwin	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.16	miles	Baldwin CR 181 / its source	2018	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160205-0300-102	Mobile Bay	E	Mobile	Mobile	Shellfish Harvesting Fish & Wildlife	Pathogens (Enterococcus)	Urban runoff/storm sewers	168.29	square miles	Mobile Bay south of a line extending east from East Fowl River to lighted beacon FL2 and then to lighted beacon FLG 4 and then northeast to Daphne, except out 1000 feet offshore from Mullet Point to Ragged Point	1998	L
AL03160205-0300-202	Bon Secour Bay	E	Mobile	Baldwin	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	On-site wastewater systems Urban runoff/storm sewers	102.96	square miles	Bon Secour Bay east and south of a line from Mullet Point to Engineers Point, except out 1000 feet offshore from Fish River Point to Mullet Point	1998	L
AL03160205-0102-110	Halls Mill Creek	R	Mobile	Mobile	Fish & Wildlife	Siltation	Land development	11.30	miles	Dog River / its source	2012	L
AL03160205-0105-100	Deer River	R	Mobile	Mobile	Fish & Wildlife	Organic enrichment (BOD)	Collection system failure Urban runoff/storm sewers	1.02	miles	Mobile Bay / its source	2006	L
AL03160205-0105-300	Middle Fork Deer River	R	Mobile	Mobile	Fish & Wildlife	Organic enrichment (BOD)	Collection system failure Urban runoff/storm sewers	2.47	miles	Deer River / its source	2006	L
AL03160205-0104-110	Fowl River	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	20.56	miles	Mobile Bay / its source	2000	L
AL03160205-0202-210	Polecat Creek	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	7.89	miles	Fish River / its source	2006	L
AL03160205-0202-510	Baker Branch	R	Mobile	Baldwin	Fish & Wildlife	Organic enrichment (BOD)	Pasture grazing	6.15	miles	Polecat Creek / its source	2006	L
AL03160205-0204-112	Fish River	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	30.01	miles	Weeks Bay / its source	1998	L
AL03160205-0204-700	Cowpen Creek	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	7.12	miles	Fish River / its source	2008	L
AL03160205-0205-702	Fly Creek	R	Mobile	Baldwin	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.32	miles	10 feet above MSL / its source	2018	L
AL03160205-0206-101	Bon Secour River	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	9.12	miles	Bon Secour Bay / One mile upstream from first bridge above its mouth	2006	L
AL03160205-0206-102	Bon Secour River	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.38	miles	One mile upstream from first bridge above its mouth / its source	2006	L
AL03160205-0206-102	Bon Secour River	R	Mobile	Baldwin	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	4.38	miles	One mile upstream from first bridge above its mouth / its source	2018	L
AL03160205-0208-100	Oyster Bay	E	Mobile	Baldwin	Shellfish Harvesting Fish & Wildlife	Pathogens (Enterococcus)	Unknown source	0.95	square miles	Oyster Bay	2006	L
AL-Gulf-of-Mexico-1	Gulf of Mexico	E	Mobile	Baldwin Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	205.77	square miles	Mississippi / Florida	1998	L
AL-Gulf-of-Mexico-2	Pelican Bay	E	Mobile	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	0.50	square miles	out to 1000 feet offshore from Dauphin Beach / out to 1000 feet offshore of Pelican Point	1998	L
AL-Gulf-of-Mexico-2	Pelican Bay	E	Mobile	Mobile	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	Unknown source	0.50	square miles	out to 1000 feet offshore from Dauphin Beach / out to 1000 feet offshore of Pelican Point	2018	L
AL03140106-0203-100	Dyas Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	18.34	miles	Perdido River / its source	2018	L
AL03140106-0302-101	Brushy Creek	R	Perdido	Escambia	Fish & Wildlife	Metals (Lead)	Industrial Municipal	0.22	miles	AL-FL state line / Boggy Branch	2006	L
AL03140106-0302-201	Boggy Branch	R	Perdido	Escambia	Fish & Wildlife	Metals (Mercury)	Industrial Municipal	1.59	miles	Brushy Creek / Atmore WWTP	2008	L
AL03140106-0302-202	Boggy Branch	R	Perdido	Escambia	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewers	0.14	miles	Atmore WWTP / Masland Carpets WWTP	2016	L
AL03140106-0302-203	Boggy Branch	R	Perdido	Escambia	Fish & Wildlife	Metals (Lead)	Urban runoff/storm sewers	0.95	miles	Masland Carpets WWTP / its source	2016	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03140106-0302-203	Boggy Branch	R	Perdido	Escambia	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewers	0.95	miles	Masland Carpets WWTP / its source	2016	L
AL03140106-0507-100	Styx River	R	Perdido	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	18.52	miles	Perdido River / Hollinger Creek	2002	L
AL03140106-0603-101	Blackwater River	R	Perdido	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	3.11	miles	Perdido River / Narrow Gap Creek	2004	L
AL03140106-0703-100	Perdido River	R	Perdido	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	21.93	miles	Perdido Bay / Jacks Branch	2006	L
AL03140107-0204-302	Perdido Bay	E	Perdido	Baldwin	Shellfish Harvesting Swimming Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure On-site wastewater systems	1.29	square miles	Suarez Point / Lillian Bridge	2012	L
AL03140107-0103-100	Perdido Bay	E	Perdido	Baldwin	Shellfish Harvesting Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.21	square miles	Lillian Bridge / its source	2016	L
AL03150108-0405-102	Tallapoosa River	R	Tallapoosa	Cleburne	Outstanding Alabama Water Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Sources outside state	31.60	miles	Cane Creek / AL-GA state line	2016	L
AL03150109-0105-102	Tallapoosa River (R L Harris Lake)	L	Tallapoosa	Randolph	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5,356.95	acres	R L Harris dam / Little Tallapoosa River	2018	L
AL03150109-0303-100	High Pine Creek	R	Tallapoosa	Randolph Chambers	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	13.74	miles	Tallapoosa River / Highway 431	2018	L
AL03150109-0308-100	Emuckfaw Creek	R	Tallapoosa	Clay Tallapoosa	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	23.51	miles	Tallapoosa River / its source	2018	L
AL03150109-0803-301	Sugar Creek (Lake Martin)	L	Tallapoosa	Tallapoosa	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	58.93	acres	Elkahatchee Creek / end of embayment	2012	L
AL03150110-0104-104	Sougahatchee Creek	R	Tallapoosa	Lee Macon Tallapoosa	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	33.42	miles	Sycamore Creek / Sougahatchee Lake dam	2018	L
AL03150110-0104-101	Sougahatchee Creek (Yates Lake)	L	Tallapoosa	Tallapoosa	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	203.78	acres	Tallapoosa River / end of embayment	2016	L
AL03150110-0402-101	Channahatchee Creek (Yates Lake)	L	Tallapoosa	Elmore	Public Water Supply Swimming Fish & Wildlife	Organic enrichment (BOD)	Nonpoint source runoff	62.63	acres	Tallapoosa River / end of embayment	2012	L
AL03150110-0402-102	Channahatchee Creek	R	Tallapoosa	Elmore	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	17.31	miles	Yates Lake / its source	2018	L
AL03150110-0202-300	Moores Mill Creek	R	Tallapoosa	Lee	Swimming Fish & Wildlife	Siltation	Land development Urban runoff/storm sewers	10.51	miles	Chewacla Creek / its source	2000	L
AL03150110-0304-100	Uphapee Creek	R	Tallapoosa	Macon	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	21.16	miles	Tallapoosa River / its source	2018	L
AL03150110-0406-102	Tallapoosa River (Thurlow Lake)	L	Tallapoosa	Elmore Tallapoosa	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	538.60	acres	Thurlow dam / Yates dam	2012	L
AL03150110-0406-103	Tallapoosa River (Yates Lake)	L	Tallapoosa	Elmore Tallapoosa	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,595.89	acres	Yates dam / Martin dam	2018	L
AL03150110-0406-200	Mill Creek	R	Tallapoosa	Macon Tallapoosa	Fish & Wildlife	Siltation	Agriculture Pasture grazing	9.16	miles	Tallapoosa River / its source	2010	L
AL03150110-0406-200	Mill Creek	R	Tallapoosa	Macon Tallapoosa	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	9.16	miles	Tallapoosa River / its source	2018	L
AL03150110-0504-101	Calebee Creek	R	Tallapoosa	Macon	Fish & Wildlife	Siltation	Agriculture Surface mining	10.26	miles	Tallapoosa River / Macon County Road 9	1998	M
AL03150110-0604-100	Cubahatchee Creek	R	Tallapoosa	Macon	Swimming Fish & Wildlife	Siltation	Agriculture Surface mining	22.07	miles	Tallapoosa River / Coon Hop Creek	1998	M
AL03150110-0603-102	Cubahatchee Creek	R	Tallapoosa	Bullock Macon	Swimming Fish & Wildlife	Siltation	Agriculture Surface mining	22.37	miles	Coon Hop Creek / its source	1998	M
AL03150110-0702-100	Bughall Creek	R	Tallapoosa	Bullock Macon	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	31.44	miles	Old Town Creek / its source	2018	L
AL03150110-0804-101	Line Creek	R	Tallapoosa	Macon Montgomery	Fish & Wildlife	Siltation	Agriculture Surface mining	10.29	miles	Tallapoosa River / Johnsons Creek	1998	M
AL03150110-0804-102	Line Creek	R	Tallapoosa	Macon Montgomery	Fish & Wildlife	Siltation	Agriculture Surface mining	5.51	miles	Johnsons Creek / Panther Creek	1998	M
AL03150110-0905-112	Tallapoosa River	R	Tallapoosa	Elmore Montgomery	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	10.07	miles	US Highway 231 / Jenkins Creek	2012	L

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Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03150110-0904-300	Jenkins Creek	R	Tallapoosa	Montgomery	Fish & Wildlife	Siltation	Urban development	13.48	miles	Tallapoosa River / its source	2010	M
AL06030001-0204-111	Widows Creek (Lake Guntersville)	L	Tennessee	Jackson	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	97.65	acres	Tennessee River / end of embayment	2012	L
AL06030001-0204-101	Widows Creek	R	Tennessee	Jackson	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1.29	miles	Lake Guntersville / Alabama Highway 277	2012	L
AL06030001-0205-102	Tennessee River (Lake Guntersville)	L	Tennessee	Jackson	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,400.28	acres	Pump Spring Branch / AL-TN state line	2012	L
AL06030001-0306-100	Little Coon Creek	R	Tennessee	Jackson	Fish & Wildlife	Siltation	Crop production (non-irrigated) Pasture grazing	16.30	miles	Coon Creek / AL-TN state line	2012	H
AL06030001-0202-500	Higdon Creek	R	Tennessee	DeKalb Jackson	Fish & Wildlife	Siltation	Pasture grazing Silviculture activities	4.16	miles	Miller Creek / AL-GA state line	2012	L
AL06030001-0705-111	Town Creek (Lake Guntersville)	L	Tennessee	Marshall	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,584.07	acres	Tennessee River / end of embayment	2016	L
AL06030001-0801-100	Cross Creek	R	Tennessee	DeKalb	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.53	miles	Short Creek / its source	2018	L
AL06030001-0904-101	Browns Creek (Lake Guntersville)	L	Tennessee	Marshall	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	5,915.66	acres	Tennessee River / end of embayment	2012	L
AL06030001-0904-102	Browns Creek	R	Tennessee	Marshall	Fish & Wildlife	Nutrients	Agriculture Mining	11.86	miles	Lake Guntersville / its source	2012	L
AL06030001-0904-102	Browns Creek	R	Tennessee	Marshall	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.86	miles	Lake Guntersville / its source	2018	L
AL06030002-0106-101	Guess Creek	R	Tennessee	Jackson	Fish & Wildlife	Organic enrichment (BOD)	Pasture grazing Unknown source	11.08	miles	Paint Rock River / Bee Branch	1998	L
AL06030002-0106-101	Guess Creek	R	Tennessee	Jackson	Fish & Wildlife	Unknown toxicity	Pasture grazing Unknown source	11.08	miles	Paint Rock River / Bee Branch	1998	L
AL06030002-0201-100	Clear Creek	R	Tennessee	Jackson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.43	miles	Paint Rock River / its source	2018	L
AL06030002-0305-100	Beaverdam Creek	R	Tennessee	Madison	Fish & Wildlife	Siltation	Crop production (non-irrigated) Land development	22.14	miles	Brier Fork / its source	1998	L
AL06030002-0306-110	Brier Fork	R	Tennessee	Madison	Fish & Wildlife	Siltation	Crop production (non-irrigated) Land development	21.89	miles	Flint River / AL-TN state line	1998	L
AL06030002-0403-112	Flint River	R	Tennessee	Madison	Fish & Wildlife	Turbidity	Agriculture Land development	15.32	miles	Alabama Highway 72 / Mountain Fork	2006	L
AL06030002-0403-302	Chase Creek	R	Tennessee	Madison	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	2.14	miles	Acuff Spring / Alabama Highway 72	2018	L
AL06030002-0503-102	Huntsville Spring Branch	R	Tennessee	Madison	Fish & Wildlife	Metals (Arsenic)	Urban runoff/storm sewers	1.98	miles	Johnson Road (Huntsville Field) / Broglan Branch	2006	L
AL06030002-0601-300	Hughes Creek	R	Tennessee	Marshall Morgan	Fish & Wildlife	Siltation	Agriculture	2.87	miles	Cotaco Creek / its source	1998	H
AL06030002-0603-600	Mill Pond Creek	R	Tennessee	Marshall	Fish & Wildlife	Siltation	Agriculture	1.29	miles	Hog Jaw Creek / its source	1998	L
AL06030002-0602-102	West Fork Cotaco Creek	R	Tennessee	Morgan	Fish & Wildlife	Siltation	Agriculture	8.12	miles	Alabama Highway 67 / Frost Creek	1998	H
AL06030002-0902-100	Tennessee River (Wheeler Lake)	L	Tennessee	Madison Marshall	Swimming Fish & Wildlife	Nutrients	Agriculture	1,345.77	acres	Flint River / Guntersville dam	2014	L
AL06030002-0904-100	Tennessee River (Wheeler Lake)	L	Tennessee	Madison Marshall Morgan	Public Water Supply Fish & Wildlife	Nutrients	Agriculture	2,779.95	acres	Indian Creek / Flint River	2014	L
AL06030002-0906-102	Tennessee River (Wheeler Lake)	L	Tennessee	Madison Marshall	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	334.49	acres	Cotaco Creek / Indian Creek	2014	L
AL06030002-1102-102	Tennessee River (Wheeler Lake)	L	Tennessee	Limestone Morgan	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	2,587.33	acres	US Highway 31 / Flint Creek	2014	L
AL06030002-1102-103	Tennessee River (Wheeler Lake)	L	Tennessee	Limestone Madison Morgan	Swimming Fish & Wildlife	Nutrients	Agriculture	4,271.34	acres	Flint Creek / Cotaco Creek	2014	L
AL06030002-1107-102	Tennessee River (Wheeler Lake)	L	Tennessee	Lawrence Limestone Morgan	Swimming Fish & Wildlife	Nutrients	Agriculture	19,221.29	acres	five miles upstream of Elk River / US Highway 31	2014	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL06030002-1107-102	Tennessee River (Wheeler Lake)	L	Tennessee	Lawrence Limestone Morgan	Swimming Fish & Wildlife	PFOS	Industrial	19,221.29	acres	five miles upstream of Elk River / US Highway 31	2014	L
AL06030002-1205-100	Tennessee River (Wheeler Lake)	L	Tennessee	Lawrence Lauderdale Limestone	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	13,441.12	acres	Wheeler dam / five miles upstream of Elk River	2014	L
AL06030002-0906-600	Limestone Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,338.94	acres	Tennessee River / end of embayment	2012	L
AL06030002-0501-110	Indian Creek	R	Tennessee	Madison	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewers	6.49	miles	US Highway 72 / its source	2018	L
AL06030002-0505-102	Indian Creek	R	Tennessee	Madison	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewers	10.37	miles	Martin Road (Redstone Arsenal) / US Highway 72	2018	L
AL06030002-0505-111	Indian Creek (Wheeler Lake)	L	Tennessee	Madison	Public Water Supply Fish & Wildlife	Nutrients	Agriculture	257.28	acres	Tennessee River / end of embayment	2014	L
AL06030002-1014-101	Flint Creek (Wheeler Lake)	L	Tennessee	Morgan	Fish & Wildlife	Nutrients	Agriculture	851.41	acres	Tennessee River / Alabama Highway 67	2014	L
AL06030002-1014-103	Flint Creek	R	Tennessee	Morgan	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	9.10	miles	L&N Railroad / Alabama Highway 36	2012	L
AL06030002-0606-111	Cotaco Creek Wheeler Lake)	L	Tennessee	Morgan	Swimming Fish & Wildlife	Nutrients	Agriculture	492.48	acres	Tennessee River / end of embayment	2014	L
AL06030002-1101-111	Swan Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Nutrients	Agriculture	772.38	acres	Tennessee River / end of embayment	2014	L
AL06030002-1101-101	Swan Creek	R	Tennessee	Limestone	Fish & Wildlife	Nutrients	Agriculture Municipal Urban runoff/storm sewers	5.03	miles	Wheeler Lake / Huntsville Brownsferry Road	2008	L
AL06030002-1102-211	Bakers Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Nutrients	Agriculture	157.02	acres	Tennessee River / end of embayment	2014	L
AL06030002-1102-211	Bakers Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	PFOS	Industrial	157.02	acres	Tennessee River / end of embayment	2016	L
AL06030002-1102-311	Dry Branch (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Nutrients	Agriculture	84.15	acres	Tennessee River / end of embayment	2014	L
AL06030002-1103-111	Round Island Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Nutrients	Agriculture	408.15	acres	Tennessee River / end of embayment	2014	L
AL06030002-1103-111	Round Island Creek (Wheeler Lake)	L	Tennessee	Limestone	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	408.15	acres	Tennessee River / end of embayment	2016	L
AL06030002-1201-111	Spring Creek (Wheeler Lake)	L	Tennessee	Lawrence	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	1,111.87	acres	Tennessee River / end of embayment	2014	L
AL06030002-1202-200	Neeley Branch	R	Tennessee	Lauderdale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.61	miles	Wheeler Lake / its source	2018	L
AL06030002-1204-101	Second Creek (Wheeler Lake)	L	Tennessee	Lauderdale	Swimming Fish & Wildlife	Nutrients	Agriculture	610.22	acres	Tennessee River / First bridge upstream from US Highway 72	2014	L
AL06030004-0404-102	Anderson Creek	R	Tennessee	Lauderdale	Fish & Wildlife	Siltation	Crop production (non-irrigated) Pasture grazing	9.31	miles	Snake Road bridge / its source	1998	L
AL06030004-0405-101	Elk River (Wheeler Lake)	L	Tennessee	Lauderdale Limestone	Swimming Fish & Wildlife	pH	Crop production (non-irrigated) Pasture grazing	1,569.21	acres	Tennessee River / Anderson Creek	1996	H
AL06030004-0405-101	Elk River (Wheeler Lake)	L	Tennessee	Lauderdale Limestone	Swimming Fish & Wildlife	Nutrients	Crop production (non-irrigated) Pasture grazing	1,569.21	acres	Tennessee River / Anderson Creek	2004	H
AL06030005-0301-200	Chandelower Creek	R	Tennessee	Colbert	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.95	miles	Rock Creek / its source	2018	L
AL06030005-0801-100	Tennessee River (Wilson Lake)	L	Tennessee	Colbert Lauderdale Lawrence	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	13,363.37	acres	Wilson dam / Wheeler dam	2016	L
AL06030005-0105-111	Big Nance Creek (Wilson Lake)	L	Tennessee	Lawrence	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	44.57	acres	Tennessee River / end of embayment	2016	L
AL06030005-0105-100	Big Nance Creek	R	Tennessee	Lawrence	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	24.75	miles	Wilson Lake / its source	2012	L
AL06030005-0801-201	McKiernan Creek (Wilson Lake)	L	Tennessee	Colbert	Public Water Supply Swimming Fish & Wildlife	Siltation	Agriculture	212.45	acres	Tennessee River / end of embayment	1998	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL06030005-0802-100	Pond Creek	R	Tennessee	Colbert	Agricultural & Industrial	Organic enrichment (BOD)	Crop production (non-irrigated) Natural Urban runoff/storm sewers	12.43	miles	Pickwick Lake / its source	1996	L
AL06030005-0802-100	Pond Creek	R	Tennessee	Colbert	Agricultural & Industrial	Metals (Arsenic)	Crop production (non-irrigated) Natural Urban runoff/storm sewers	12.43	miles	Pickwick Lake / its source	2006	L
AL06030005-0802-100	Pond Creek	R	Tennessee	Colbert	Agricultural & Industrial	Metals (Cyanide)	Crop production (non-irrigated) Natural Urban runoff/storm sewers	12.43	miles	Pickwick Lake / its source	2006	L
AL06030005-0802-100	Pond Creek	R	Tennessee	Colbert	Agricultural & Industrial	Metals (Mercury)	Crop production (non-irrigated) Natural Urban runoff/storm sewers	12.43	miles	Pickwick Lake / its source	2006	L
AL06030005-0803-400	Sweetwater Creek	R	Tennessee	Lauderdale	Fish & Wildlife	Habitat alterations	Channelization Streambank modification	4.41	miles	Tennessee River (Florence Canal) / its source	2016	L
AL06030005-0808-103	Tennessee River (Pickwick Lake)	L	Tennessee	Colbert Lauderdale	Fish & Wildlife	Nutrients	Agriculture	2,424.33	acres	lower end of Seven Mile Island / Sheffield Water Intake	2014	L
AL06030005-0808-104	Tennessee River (Pickwick Lake)	L	Tennessee	Colbert Lauderdale	Public Water Supply Fish & Wildlife	Nutrients	Agriculture	1,112.21	acres	Sheffield Water Intake / Wilson Dam	2014	L
AL06030005-1203-100	Tennessee River (Pickwick Lake)	L	Tennessee	Colbert Lauderdale	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	19,370.33	acres	AL-TN state line / lower end of Seven Mile Island	2014	L
AL06030005-0605-111	Cypress Creek (Pickwick Lake)	L	Tennessee	Lauderdale	Public Water Supply Fish & Wildlife	Nutrients	Agriculture	57.00	acres	Tennessee River / end of embayment	2014	L
AL06030005-0605-111	Cypress Creek (Pickwick Lake)	L	Tennessee	Lauderdale	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	57.00	acres	Tennessee River / end of embayment	2016	L
AL06030005-0703-111	Spring Creek (Pickwick Lake)	L	Tennessee	Colbert	Fish & Wildlife	Nutrients	Agriculture	18.34	acres	Tennessee River / end of embayment	2014	L
AL06030005-0807-111	Cane Creek (Pickwick Lake)	L	Tennessee	Colbert	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	41.43	acres	Tennessee River / end of embayment	2014	L
AL06030005-0902-111	Second Creek (Pickwick Lake)	L	Tennessee	Lauderdale	Public Water Supply Swimming Fish & Wildlife	Nutrients	Agriculture	677.22	acres	Tennessee River / end of embayment	2014	L
AL06030006-0102-700	Little Dice Branch	R	Tennessee	Franklin	Fish & Wildlife	Siltation	Surface mining-abandoned	3.83	miles	Bear Creek / its source	1998	L
AL06030006-0307-111	Bear Creek (Pickwick Lake)	L	Tennessee	Colbert	Swimming Fish & Wildlife	Nutrients	Agriculture	5,811.82	acres	Tennessee River / end of embayment	2014	L
AL06030006-0104-101	Bear Creek (Bear Creek Lake)	L	Tennessee	Franklin	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	653.54	acres	Bear Creek Lake dam / Alabama Highway 187	2006	L
AL06030006-0104-102	Bear Creek	R	Tennessee	Franklin Marion	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	22.31	miles	Alabama Highway 187 / Mill Creek	2014	L
AL06030006-0103-104	Bear Creek (Upper Bear Creek Lake)	L	Tennessee	Franklin Marion Winston	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,462.58	acres	Upper Bear Creek Dam / Pretty Branch	2008	L
AL06030006-0102-102	Bear Creek (Upper Bear Creek Lake)	L	Tennessee	Franklin Winston	Public Water Supply Swimming Fish & Wildlife	Organic enrichment (BOD)	Agriculture	249.44	acres	Pretty Branch / Alabama Hwy 243	2016	L
AL06030006-0201-900	Harris Creek	R	Tennessee	Franklin	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.99	miles	Mud Creek / its source	2018	L
AL06030006-0203-101	Cedar Creek (Cedar Creek Lake)	L	Tennessee	Franklin	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4,063.07	acres	Cedar Creek Lake dam / extent of reservoir	2012	L
AL06030006-0205-111	Little Bear Creek (Little Bear Creek Lake)	L	Tennessee	Franklin	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,435.05	acres	Little Bear Creek Dam / Scott Branch	2012	L
AL06030006-0304-102	Bear Creek	R	Tennessee	Colbert	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	10.12	miles	Pickwick Lake / AL-MS state line	2016	L
AL06030006-0304-500	Rock Creek	R	Tennessee	Colbert	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	20.74	miles	Bear Creek / its source	2018	L
AL03160103-0201-102	Beaver Creek	R	Tombigbee	Marion	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.91	miles	US Hwy 78 / its source	2018	L

2018 Alabama §303(d) List

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160105-0204-102	Luxapallila Creek	R	Tombigbee	Fayette Lamar	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Municipal	25.25	miles	AL-MS state line / Fayette County Road 37	2016	L
AL03160105-0201-103	Luxapallila Creek	R	Tombigbee	Fayette Marion	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	10.52	miles	County road crossing approximately 6 miles upstream from Alabama Highway 18 / US Highway 78	2018	L
AL03160105-0101-102	Luxapallila Creek	R	Tombigbee	Marion	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	9.53	miles	US Highway 78 / its source	2018	L
AL03160106-0504-100	Bogue Chitto	R	Tombigbee	Pickens	Fish & Wildlife	Nutrients	Agriculture	5.42	miles	Tombigbee River / AL-MS state line	2014	L
AL03160106-0504-100	Bogue Chitto	R	Tombigbee	Pickens	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.42	miles	Tombigbee River / AL-MS state line	2018	L
AL03160106-0504-111	Bogue Chitto (Gainesville Lake)	L	Tombigbee	Pickens	Swimming Fish & Wildlife	Nutrients	Agriculture	5.42	acres	Tombigbee River / end of embayment	2018	L
AL03160107-0306-101	Sipsey River (Gainesville Lake)	L	Tombigbee	Greene Pickens	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	383.92	acres	Tombigbee River / end of embayment	2010	L
AL03160108-1005-100	Bodka Creek	R	Tombigbee	Sumter	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	17.45	miles	Noxubee River / AL-MS state line	2018	L
AL03160108-1102-100	Noxubee River	R	Tombigbee	Sumter	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	23.99	miles	Tombigbee River / AL-MS state line	2016	L
AL03160201-0401-102	Tombigbee River (Demopolis Lake)	L	Tombigbee	Marengo Sumter	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	545.48	acres	Demopolis Lock and Dam / Black Warrior River	2018	L
AL03160201-0401-103	Tombigbee River (Coffeeville Lake)	L	Tombigbee	Marengo Sumter	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	668.76	acres	Sucarnoochee River / Demopolis Lock and Dam	2012	L
AL03160201-0504-200	Clear Creek	R	Tombigbee	Choctaw	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	17.25	miles	Yantley Creek / its source	2018	L
AL03160201-0604-100	Horse Creek	R	Tombigbee	Marengo Clarke	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	44.52	miles	Coffeeville Lake / its source	2018	L
AL03160202-0703-111	Sucarnoochee River (Coffeeville Lake)	L	Tombigbee	Sumter	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	10.81	acres	Tombigbee River / end of embayment	2012	L
AL03160203-0205-100	Salitpa Creek	R	Tombigbee	Clarke	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	43.34	miles	Tombigbee River / its source	2016	L
AL03160203-0903-102	Tombigbee River	R	Tombigbee	Clarke Washington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	7.83	miles	Bassetts Creek / 1/2 mile downstream of Southern Railway Crossing	2016	L
AL03160203-1103-101	Tombigbee River	R	Tombigbee	Baldwin Clarke Mobile Washington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	11.89	miles	Mobile River / upper end of Bilbo Island	2012	L
AL03160203-1103-102	Tombigbee River	R	Tombigbee	Clarke Washington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition Contaminated sediments	3.75	miles	upper end of Bilbo Island / Olin Basin canal	2004	L
AL03160203-1103-700	Bilbo Creek	R	Tombigbee	Washington	Swimming Fish & Wildlife	Organic enrichment (BOD)	Unknown source	30.74	miles	Tombigbee River / its source	2004	L
AL03160203-1103-700	Bilbo Creek	R	Tombigbee	Washington	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	30.74	miles	Tombigbee River / its source	2008	L
AL03160203-1103-800	Olin Basin	L	Tombigbee	Washington	Fish & Wildlife	Metals (Mercury)	Contaminated sediments	85.73	acres	all of Olin Basin	1996	L
AL03140103-0102-102	Lightwood Knot Creek (Lake Frank Jackson)	L	Yellow	Covington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	956.26	acres	Frank Jackson Lake dam / extent of reservoir	2010	L
AL03140103-0102-700	UT to Lake Frank Jackson 3-C	R	Yellow	Covington	Fish & Wildlife	Organic enrichment (BOD)	Animal feeding operations Pasture grazing	1.05	miles	Lake Frank Jackson / its source	1998	L
AL03140103-0102-800	UT to Lake Frank Jackson 2-S	R	Yellow	Covington	Fish & Wildlife	Organic enrichment (BOD)	Animal feeding operations Pasture grazing	1.77	miles	Lake Frank Jackson / its source	1998	L
AL03140103-0203-100	Five Runs Creek	R	Yellow	Covington	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	30.72	miles	Yellow River / its source	2018	L
AL03140103-0402-100	Yellow River	R	Yellow	Covington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	14.87	miles	AL-FL state line / North Creek	2004	L
AL03140103-0601-300	Lake Jackson	L	Yellow	Covington	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	415.46	acres	Within Florala and north of the Alabama-Florida state line	2010	L

* TMDL development for this pollutant is to be determined based upon ongoing RCRA/CERCLA program activities.

Appendix E

2018 Summary of Alabama's Active Trend Stations (Ambient Monitoring)

Ambient Trend Stations

Currently, there are 91 stations in ADEM's ambient trend station network. Sampling frequency occurs three times a year during the months of June, August, and October or May, July, and September. Selected sites are sampled more frequently.

River Basin Information (2-6)

Details given about each of the 16 river basins include area, major land uses, major tributaries, physiography, and stations located in each river basin.

Ambient Trend Station Charts (Pages 7-13)

The Ambient Trend Station Charts include information about each trend station, including the Station ID, Waterbody, River Basin, County, Latitude and Longitude, Sample Protocol (wadeable or non-wadeable), and Use Classification. Stations are listed based on the river basin in which they are located.

Trend Station Network Map (Page 14)

The Trend Station Network map displays the location of each individual trend station while also showing the assessed waterbodies throughout the state and the boundary of each river basin.

River Basin Maps (Pages 15-29)

Included in this report are individual river basin maps. These maps show the name and location of each trend station. Also, they include the waterbodies contained in each river basin.

Ambient Data Summaries (Pages 30-51) and Trend Graphs (Pages 52-347)

The data summaries are based on nine parameters for each station. Parameters for each station include Temperature (˚C), pH (su), Dissolved Oxygen (mg/L), Specific Conductance (µmhos), Turbidity (NTU), Total Suspended Solids (mg/L), Nitrate + Nitrite Nitrogen (mg/L), Total Nitrogen (mg/L), and Total Phosphorus (mg/L). The time frame varies for each trend station, but each dataset contains the entire life of that station. Older stations include data from 1978, and most stations include data through 2015. The statistics for each trend station include the number of samples (N), the minimum (Min) and maximum (Max) values, the median (Med), the average (Avg), and the standard deviation (SD).

Each of the nine parameters is also represented in the trend graphs. For those nine parameters, each data point represents the yearly median. The initial graph for each station displays temperature, pH, dissolved oxygen, and specific conductance. It is then followed by individual graphs which display the remaining five parameters

River Basin Information

Alabama River Basin

Area	6,067 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Coosa River, Tallapoosa River, Cahaba River
Physiography	East Gulf Coast Plain
Ambient Monitoring Stations	CATM-3, MULD-1, WDFA-2A

Black Warrior River Basin

Area	6,273 mi^2
Major Land Uses	Forest, agriculture, urban, open land
Major Tributaries	Mulberry Fork, Locust Fork, Sipsey Fork
Physiography	Cumberland Plateau, Alabama Valley and Ridge, East Gulf Coastal Plain
Ambient Monitoring Stations	BANT-3, FMCJ-1B, FMCJ-6, H-1, LFKB-1, LFKJ-6, LOSW-7, MBFB-1, NRRT-1, SF-1, SF-6, TRKJ-3, VALJ-8, VC-5, VI-3, VLGJ-5

Blackwater River Basin

Area	146 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Bear Creek
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	BKRE-1

Cahaba River Basin

Area	1,822 mi^2
Major Land Uses	Forest, agriculture, urban
Major Tributaries	Little Cahaba River, Buck Creek, Shades Creek, Shoal Creek
Physiography	Alabama Valley and Ridge, East Gulf Coastal Plain
Ambient Monitoring Stations	B-1, C-1, C-2, C-3, CABB-1, CAHD-1A, CAHS-1, LC-1, SHDJ-6

Chattahoochee River Basin

Area	2,565 mi^2
Major Land Uses	Forest, agriculture
Major Tributaries	Uchee Creek, Cowikee Creek, Abbie Creek, Omussee Creek
Physiography	Southern Piedmont, East Gulf Coastal Plain
Ambient Monitoring Stations	CHTH-1, UCCR-1

Choctawhatchee River Basin

Area	3,122 mi^2
Major Land Uses	Forest, agriculture, urban, open land
Major Tributaries	Pea River
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	CHO-9, PEAG-2

Coosa River Basin

Area	5,393 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Chattooga River, Terapin Creek, Big Wills Creek, Choccolocco Creek
Physiography	Alabama Valley and Ridge, East Gulf Coastal Plain
Ambient Monitoring Stations	BWC-1, BWCE-1, CHAC-1, CHOC-10, CHOT-1, CO-12, CORC-1, COSE-1, HATC-1, SHRT-1, TERC-1, TH-1, WEIC-12

Escambia River Basin

Area	3,835 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Conecuh River, Yellow River
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	BEC-1, CNRC-2, CONC-3, CONE-1, CONE-2, CONE-3, PALC-2, SPLC-3

Escatawpa River Basin

Area	874 mi^2
Major Land Uses	Forest, agriculture
Major Tributaries	Big Creek
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	E-1

Mobile River Basin

Area	1,390 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Chickasaw Creek, Bayou Sara, Cedar Creek
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	CKSM-3, FI-1, MOBM-1, TMCM-3

Perdido River Basin

Area	810 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Blackwater River
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	PDBB-5, STXB-3

Tallapoosa River Basin

Area	4,035 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Little Tallapoosa River, Hillabee Creek, Sougahatchee Creek, Uphapee Creek
Physiography	Southern Piedmont, East Gulf Coastal Plain
Ambient Monitoring Stations	HILT-2, LTRR-1, SOGL-1, TA-2, TARE-1, TART-1, UPHM-3

Tennessee River Basin

Area	6,820 mi^2
Major Land Uses	Agriculture, forest, open land, urban
Major Tributaries	Bear Creek, Town Creek, Elk River, Flint River, Paint Rock River
Physiography	East Gulf Coastal Plain, Highland Rim, Cumberland Plateau
Ambient Monitoring Stations	BERF-6, BGNL-1, FLIM-2A, FTCM-6, INDM-249, LIML-300, PICL-11, PRRJ-1, RCKC-1, SHLL-2, SSYD-4, TENR-215, TENR-417, TN-4A

Tombigbee River Basin

Area	7,691 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Sucarnoochee River, Okatuppa Creek, Bassetts Creek Buttahatchee River, Sipsey River
Physiography	East Gulf Coastal Plain, Cumberland Plateau
Ambient Monitoring Stations	BCTP-1, BDKS-48, BUTL-2A, LT-12, LUXL-1, NXBS-50, SPYG-3, SUCS-1

Yellow River Basin

Area	515 mi^2
Major Land Uses	Forest, agriculture, open land, urban
Major Tributaries	Lightwood Knot Creek, Five Runs Creek
Physiography	East Gulf Coastal Plain
Ambient Monitoring Stations	YERC-3

Ambient Trend Stations

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
CATM-3	Catoma Creek	Alabama R	Montgomery	32.3073	-87.3074	WADEABLE-BIOASSESSMENTS	F&W
MULD-1	Mulberry Creek	Alabama R	Dallas	32.58278	-86.90361	WADEABLE-BIOASSESSMENTS	S/F&W
WDFA-2A	Woodruff Reservoir	Alabama R	Elmore	32.41142	-86.40836	NONWADEABLE BOAT	F&W
BANT-3	Bankhead Reservoir	Black Warrior R	Jefferson	33.544802	-87.174984	NONWADEABLE BOAT	PWS/S/F&W
FMCJ-1B	Five Mile Creek	Black Warrior R	Jefferson	33.60191	-86.75527	WADEABLE-BIOASSESSMENTS	F&W
FMCJ-6	Five Mile Creek	Black Warrior R	Jefferson	33.66341	-86.97465	WADEABLE-WATER QUALITY SAMPLING	F&W
H-1	Hurricane Creek	Black Warrior R	Tuscaloosa	33.229826	-87.46181	WADEABLE-BIOASSESSMENTS	F&W
LFKB-1	Locust Fork	Black Warrior R	Blount	34.023696	-86.573336	WADEABLE-BIOASSESSMENTS	F&W
LFKJ-6	Locust Fork	Black Warrior R	Jefferson	33.587257	-87.109325	NONWADEABLE BOAT	F&W
LOSW-7	Lost Creek	Black Warrior R	Walker	33.742472	-87.326722	WADEABLE-BIOASSESSMENTS	F&W
MBFB-1	Mulberry Fork	Black Warrior R	Blount	33.872403	-86.923778	WADEABLE-BIOASSESSMENTS	F&W
NRRT-1	North River	Black Warrior R	Tuscaloosa	33.4798	-87.596806	WADEABLE-BIOASSESSMENTS	F&W
SF-1	Sipsey Fork	Black Warrior R	Winston	34.285583	-87.399056	WADEABLE-BIOASSESSMENTS	F&W

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
SF-6	Sipsey Fork	Black Warrior R	Cullman	33.908644	-87.082258	NONWADEABLE GRAB-SHALLOW	PWS/F&W
TRKJ-3	Turkey Creek	Black Warrior R	Jefferson	33.702484	-86.69717	WADEABLE-BIOASSESSMENTS	F&W
VALJ-8	Valley Creek	Black Warrior R	Jefferson	33.44722	-87.12222	WADEABLE-BIOASSESSMENTS	F&W
VC-5	Valley Creek	Black Warrior R	Jefferson	33.420027	-86.963056	WADEABLE-BIOASSESSMENTS	LWF
VI-3	Village Creek	Black Warrior R	Jefferson	33.547974	-86.925667	WADEABLE-BIOASSESSMENTS	LWF
VLGJ-5	Village Creek	Black Warrior R	Jefferson	33.627286	-87.053335	WADEABLE-BIOASSESSMENTS	F&W
BKRE-1	Blackwater River	Black Water R	Escambia	31.026555	-86.710005	NONWADEABLE GRAB-SHALLOW	F&W
B-1	Buck Creek	Cahaba R	Shelby	33.296944	-86.842639	WADEABLE-BIOASSESSMENTS	F&W
C-1	Cahaba River	Cahaba R	St Clair	33.60503	-86.54924	WADEABLE-BIOASSESSMENTS	F&W
C-2	Cahaba River	Cahaba R	Shelby	33.41546	-86.74002	WADEABLE-BIOASSESSMENTS	F&W
C-3	Cahaba River	Cahaba R	Shelby	33.284	-86.88193	WADEABLE-BIOASSESSMENTS	OAW/F&W
CABB-1	Cahaba River	Cahaba R	Bibb	32.94456	-87.139827	WADEABLE-BIOASSESSMENTS	OAW/S
CAHD-1A	Cahaba River	Cahaba R	Dallas	32.32676986	-87.10463388	NONWADEABLE BOAT	OAW/S
CAHS-1	Cahaba River	Cahaba R	Shelby	33.3635	-86.8132	WADEABLE-BIOASSESSMENTS	F&W
LC-1	Little Cahaba River	Cahaba R	Jefferson	33.52444	-86.575277	WADEABLE-BIOASSESSMENTS	F&W

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
SHDJ-6	Shades Creek	Cahaba R	Jefferson	33.32586	-86.94863	WADEABLE-BIOASSESSMENTS	F&W
CHTH-1	Chattahoochee River	Chattahoochee R	Houston	31.038392	-85.008617	NONWADEABLE BOAT	F&W
UCCR-1	Uchee Creek	Chattahoochee R	Russell	32.316111	-85.014167	WADEABLE-BIOASSESSMENTS	S/F&W
CHO-9	Choctawhatchee River	Choctawhatchee R	Geneva	31.15917	-85.78472	NONWADEABLE GRAB-SHALLOW	F&W
PEAG-2	Pea River	Choctawhatchee R	Geneva	31.112002	-86.09937	NONWADEABLE GRAB-SHALLOW	F&W
BWC-1	Big Wills Creek	Coosa R	Dekalb	34.43885	-85.76695	WADEABLE-WATER QUALITY SAMPLING	F&W
BWCE-1	Big Wills Creek	Coosa R	Etowah	34.09805	-86.03809	WADEABLE-BIOASSESSMENTS	F&W
CHAC-1	Chattooga River	Coosa R	Cherokee	34.290278	-85.509167	NONWADEABLE GRAB-SHALLOW	F&W
CHOC-10	Choccolocco Creek	Coosa R	Calhoun	33.606111	-85.790111	WADEABLE-BIOASSESSMENTS	PWS/F&W
CHOT-1	Choccolocco Creek	Coosa R	Talladega	33.54818	-86.0966	NONWADEABLE GRAB-SHALLOW	F&W
CO-12	Little River	Coosa R	Cherokee	34.28186	-85.67244	WADEABLE-BIOASSESSMENTS	PWS/S/F&W
CORC-1	Coosa River	Coosa R	Cherokee	34.13947	-85.68692	WADEABLE-BIOASSESSMENTS	F&W
COSE-1	Coosa River	Coosa R	Elmore	32.61396	-86.25498	NONWADEABLE BOAT	F&W
HATC-1	Hatchet Creek	Coosa R	Coosa	32.91821	-86.26938	WADEABLE-BIOASSESSMENTS	OAW/S/F&W
SHRT-1	Shirtee Creek	Coosa R	Talladega	33.21202	-86.27324	WADEABLE-BIOASSESSMENTS	F&W

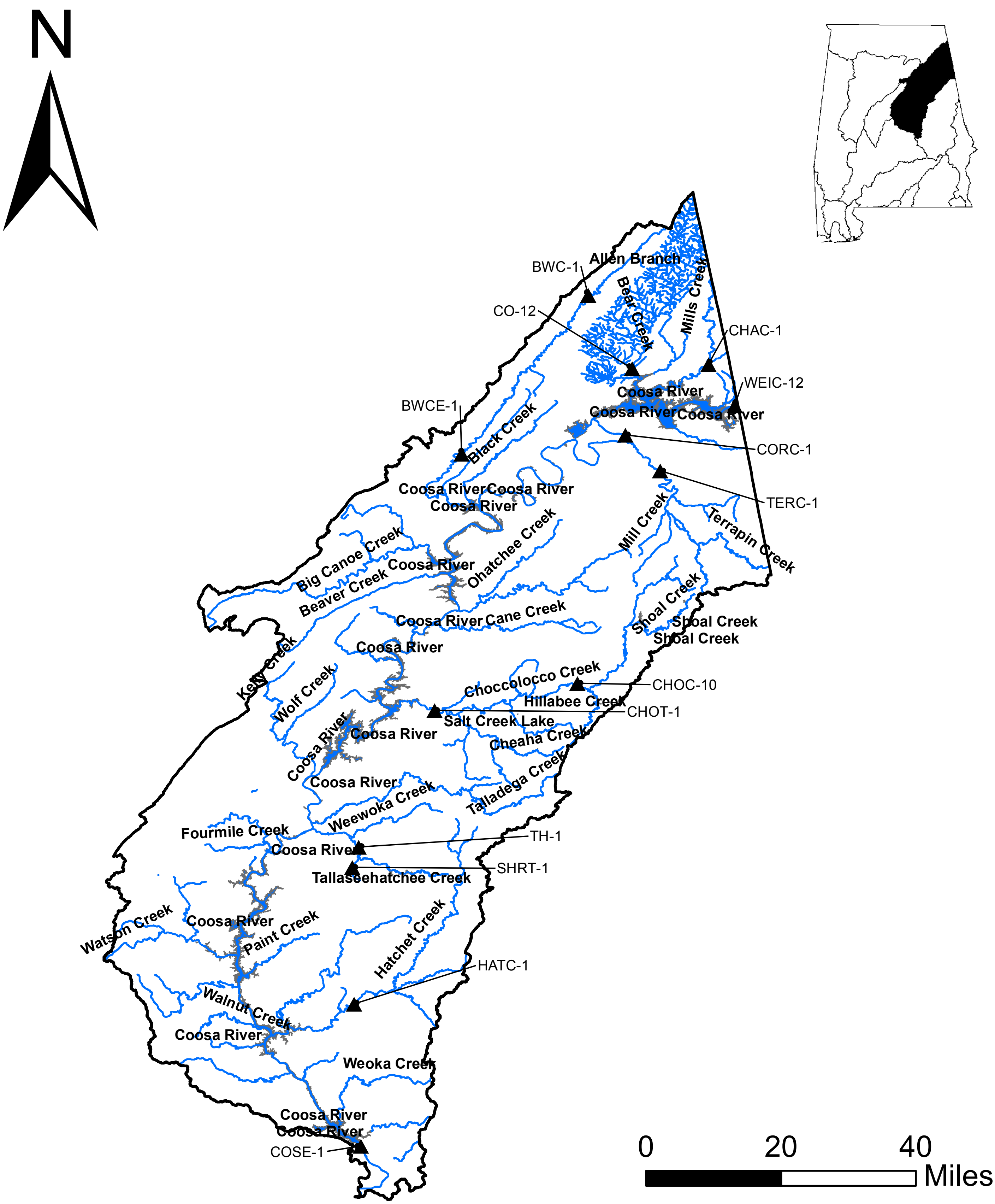
Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
TERC-1	Terrapin Creek	Coosa R	Cherokee	34.06294	-85.61227	NONWADEABLE GRAB-SHALLOW	F&W
TH-1	Tallasseehatchee Creek	Coosa R	Talladega	33.255339	-86.259666	WADEABLE-BIOASSESSMENTS	F&W
WEIC-12	Coosa River	Coosa R	Cherokee	34.202441	-85.452402	NONWADEABLE BOAT	S/F&W
BEC-1	Big Escambia Creek	Escambia R	Escambia	31.0106	-87.2629	WADEABLE-BIOASSESSMENTS	F&W
CNRC-2	Conecuh River	Escambia R	Covington	31.348369	-86.529417	NONWADEABLE BOAT	F&W
CONC-3	Conecuh River	Escambia R	Crenshaw	31.57519705	-86.25226423	NONEWADABLE GRAB-SHALLOW	F&W
CONE-1	Conecuh River	Escambia R	Escambia	30.99865457	-87.163	NONEWADABLE BOAT	F&W
CONE-2	Conecuh River	Escambia R	Escambia	31.068271	-87.058419	NONWADEABLE BOAT	F&W
CONE-3	Escambia River	Escambia R	Escambia	30.966382	-87.234113	NONWADEABLE BOAT	F&W
PALC-2	Patsaliga Creek	Escambia R	Crenshaw	31.5959	-86.40407	NONWADEABLE GRAB-SHALLOW	F&W
SPLC-3	Sepulga River	Escambia R	Conecuh	31.45362	-86.7868	NONWADEABLE GRAB-SHALLOW	F&W
E-1	Escatawpa River	Escatawpa R	Mobile	30.862741	-88.417868	NONWADEABLE GRAB-SHALLOW	S/F&W
CKSM-3	Chickasaw Creek	Mobile R	Mobile	30.80297	-88.14334	WADEABLE-BIOASSESSMENTS	S/F&W
FI-1	Fish River	Mobile R	Baldwin	30.5458	-87.7983	WADEABLE-BIOASSESSMENTS	S/F&W
MOBM-1	Mobile River	Mobile R	Mobile	31.0137	-88.01853	NONWADEABLE BOAT	PWS/F&W

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
TMCM-3	Threemile Creek	Mobile R	Mobile	30.7063	-88.15111	WADEABLE-WATER QUALITY SAMPLING	A&I
PDBB-5	Perdido River	Perdido R	Baldwin	30.69047	-87.44026	NONWADEABLE GRAB-SHALLOW	F&W
STXB-3	Styx River	Perdido R	Baldwin	30.60532	-87.547	WADEABLE-WATER QUALITY SAMPLING	F&W
HILT-2	Hillabee Creek	Tallapoosa R	Tallapoosa	33.06635	-85.87993	WADEABLE-BIOASSESSMENTS	F&W
LTRR-1	Little Tallapoosa River	Tallapoosa R	Randolph	33.49466	-85.33788	NONWADEABLE GRAB-SHALLOW	F&W
SOGL-1	Sougahatchee Creek	Tallapoosa R	Lee	32.6267	-85.588	WADEABLE-BIOASSESSMENTS	F&W
TA-2	Tallapoosa River	Tallapoosa R	Cleburne	33.732723	-85.372167	WADEABLE-BIOASSESSMENTS	F&W
TARE-1	Tallapoosa River	Tallapoosa R	Montgomery	32.43972	-86.19556	NONWADEABLE BOAT	PWS/F&W
TART-1	Tallapoosa River	Tallapoosa R	Tallapoosa	32.97734	-85.73968	NONWADEABLE GRAB-SHALLOW	F&W
UPHM-3	Uphapee Creek	Tallapoosa R	Macon	32.47751	-85.69554	WADEABLE-BIOASSESSMENTS	F&W
BERF-6	Bear Creek	Tennessee R	Colbert	34.655817	-88.1217001	NONWADEABLE GRAB-SHALLOW	F&W
BGNL-1	Big Nance Creek	Tennessee R	Lawrence	34.67	-87.31722	NONWADEABLE GRAB-SHALLOW	F&W
FLIM-2A	Flint River	Tennessee R	Madison	34.74926	-86.44666	NONWADEABLE GRAB-SHALLOW	F&W
FTCM-6	Flint Creek	Tennessee R	Morgan	34.491139	-86.965389	NONWADEABLE BOAT	PWS/F&W

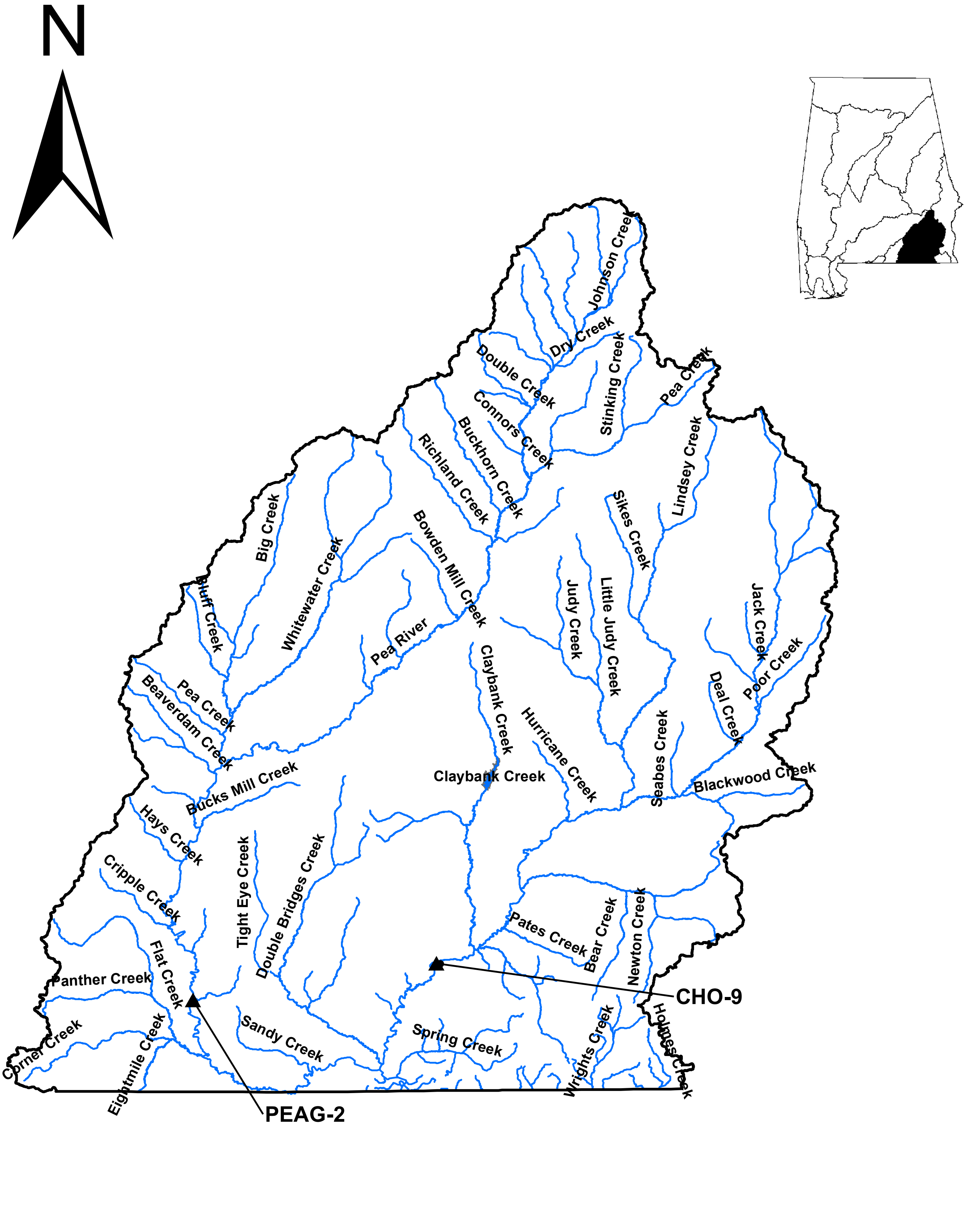
Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
INDM-249	Indian Creek	Tennessee R	Madison	34.69731	-86.7	WADEABLE-BIOASSESSMENTS	F&W
LIML-300	Limestone Creek	Tennessee R	Limestone	34.7521	-86.8232	WADEABLE-BIOASSESSMENTS	F&W
PICL-11	Cypress Creek	Tennessee R	Lauderdale	34.80806	-87.70056	WADEABLE-WATER QUALITY SAMPLING	PWS/F&W
PRRJ-1	Paint Rock River	Tennessee R	Jackson	34.62417	-86.30639	NONWADEABLE GRAB-SHALLOW	F&W
RCKC-1	Rock Creek	Tennessee R	Colbert	34.6579	-88.09412	WADEABLE-BIOASSESSMENTS	F&W
SHLL-2	Shoal Creek	Tennessee R	Lawrence	35.02403	-87.57899	WADEABLE-WATER QUALITY SAMPLING	F&W
SSYD-4	S Sauty Creek	Tennessee R	Dekalb	34.49861	-85.96583	WADEABLE-BIOASSESSMENTS	S/F&W
TENR-215	Tennessee River	Tennessee R	Lauderdale	34.9983	-88.1989	NONWADEABLE BOAT	PWS/S/F&W
TENR-417	Tennessee River	Tennessee R	Jackson	34.994014	-85.698327	NONWADEABLE BOAT	PWS/S/F&W
TN-4A	Elk River	Tennessee R	Giles	35.01415	-86.99465	NONWADEABLE BOAT	PWS/F&W
BCTP-1	Bogue Chitto Creek	Tombigbee R	Pickens	33.09222	-88.300641	WADEABLE-BIOASSESSMENTS	F&W
BDKS-48	Bodka Creek	Tombigbee R	Sumter	32.806787	-88.312129	WADEABLE-BIOASSESSMENTS	F&W
BUTL-2A	Buttahatchee River	Tombigbee R	Marion	34.10597	-87.98869	WADEABLE-WATER QUALITY SAMPLING	F&W
LT-12	Satilpa Creek	Tombigbee R	Clarke	31.74444	-88.02133	WADEABLE-BIOASSESSMENTS	S/F&W

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
LUXL-1	Luxapallila Creek	Tombigbee R	Lamar	33.575	-88.0834	WADEABLE-BIOASSESSMENTS	F&W
NXBS-50	Noxubee Creek	Tombigbee R	Sumter	32.932681	-88.297789	WADEABLE-BIOASSESSMENTS	F&W
SPYG-3	Sipsey River	Tombigbee R	Tuscaloosa	33.256764	-87.781692	NONWADEABLE GRAB-SHALLOW	F&W
SUCS-1	Sucarnoochee River	Tombigbee R	Sumter	32.5739	-88.1942	WADEABLE-BIOASSESSMENTS	PWS/S/F&W
YERC-3	Yellow River	Yellow R	Covington	31.0107	-86.5375	NONWADEABLE GRAB-SHALLOW	F&W

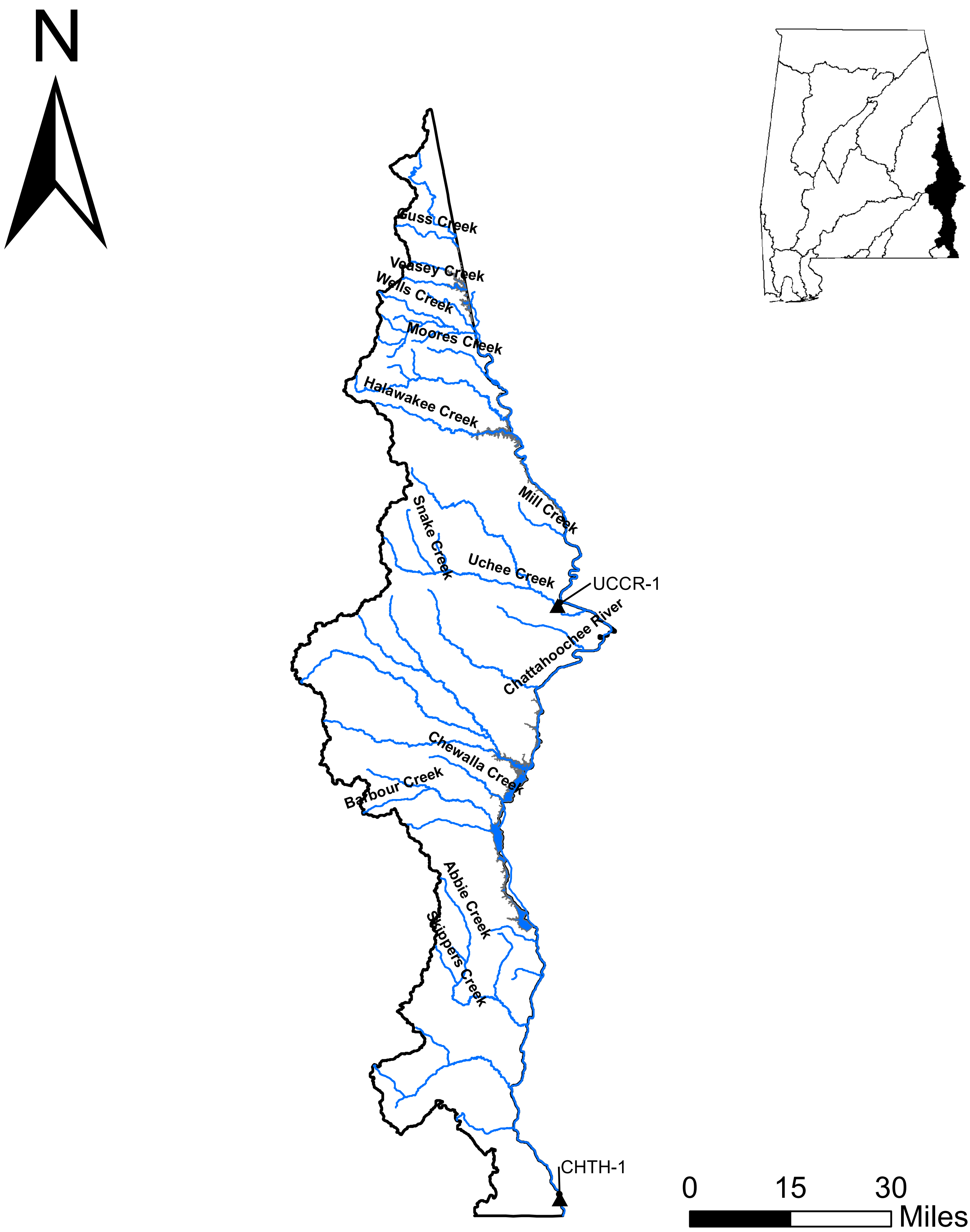
Coosa River Basin



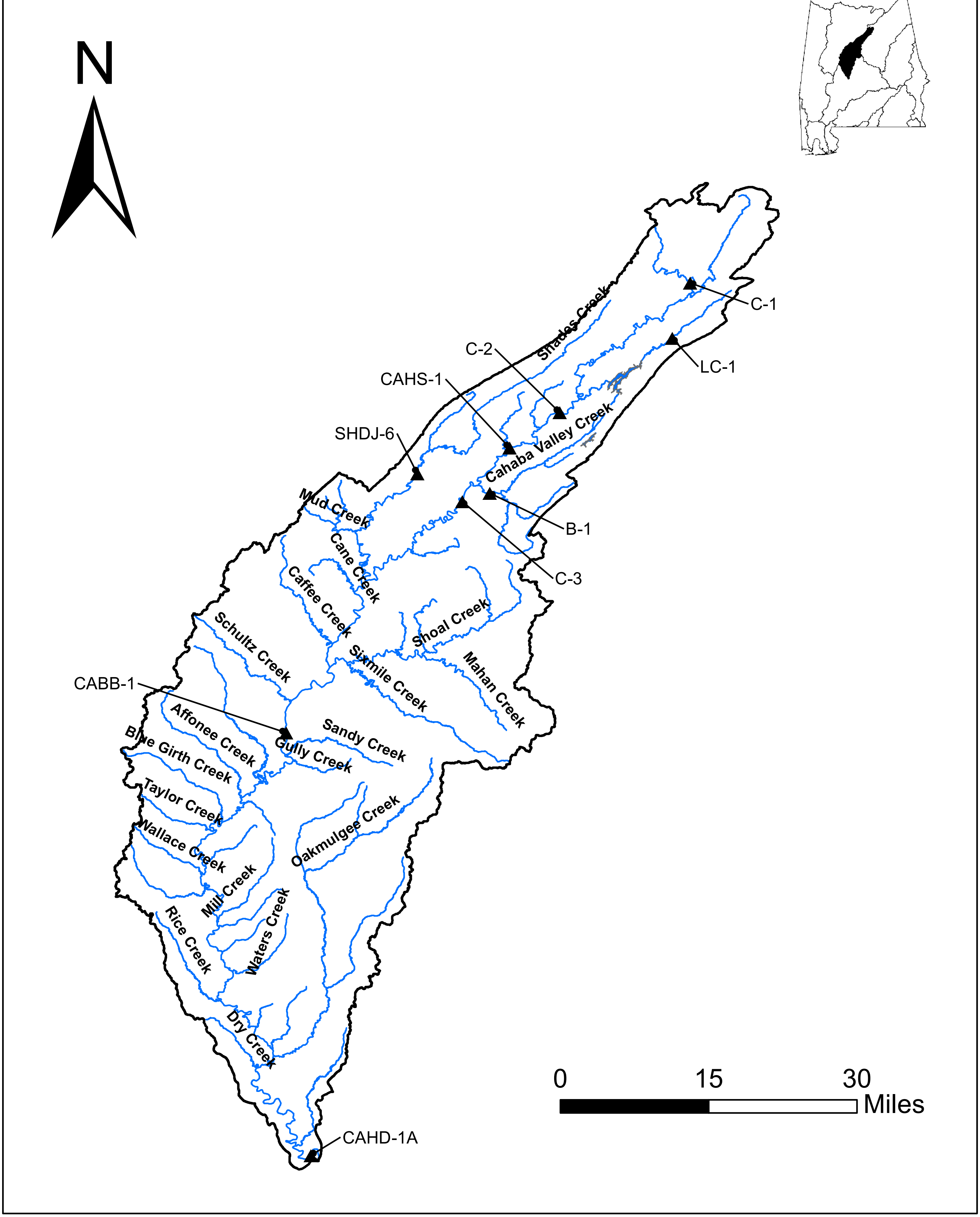
Choctawhatchee River Basin



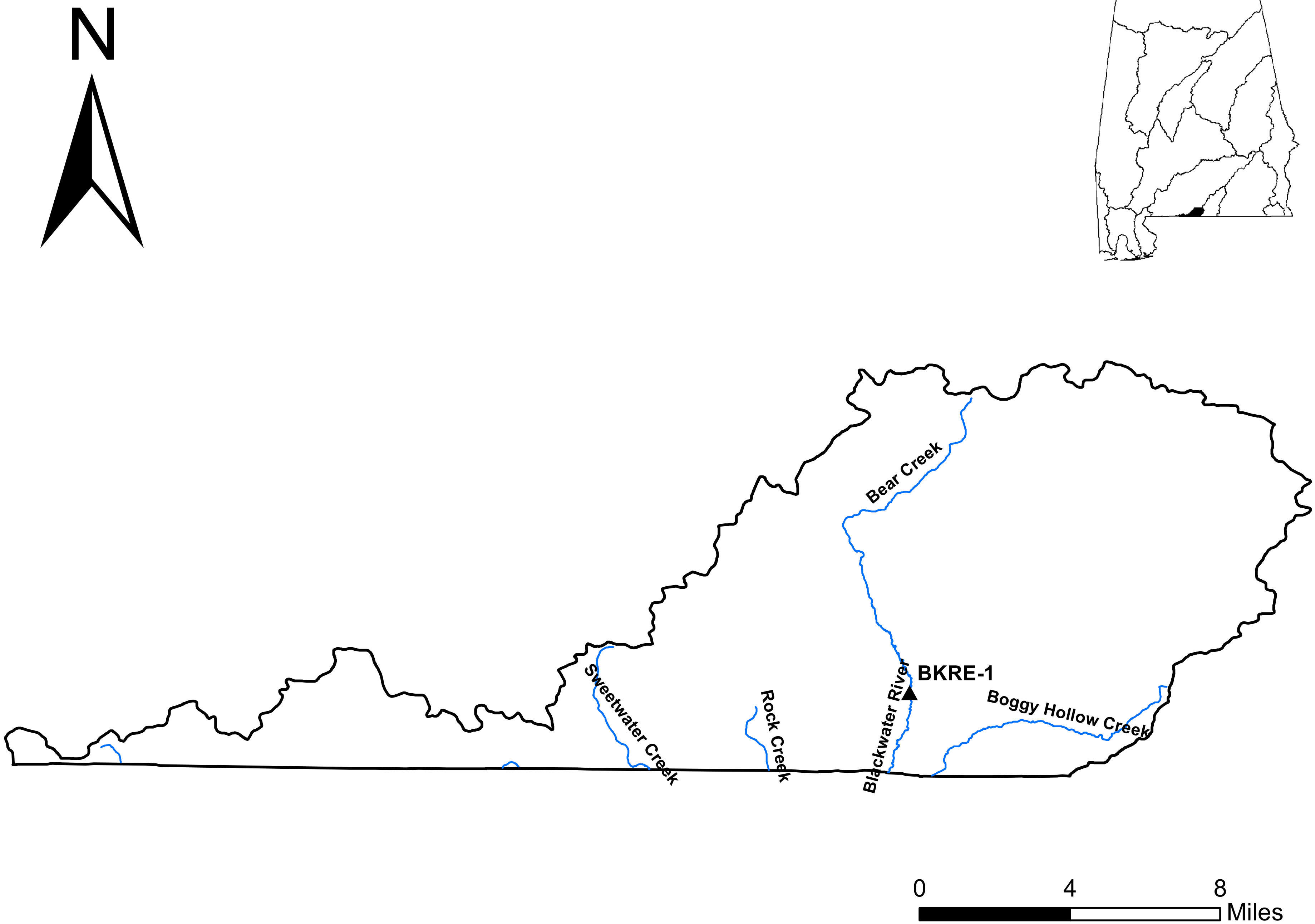
Chattahoochee River Basin



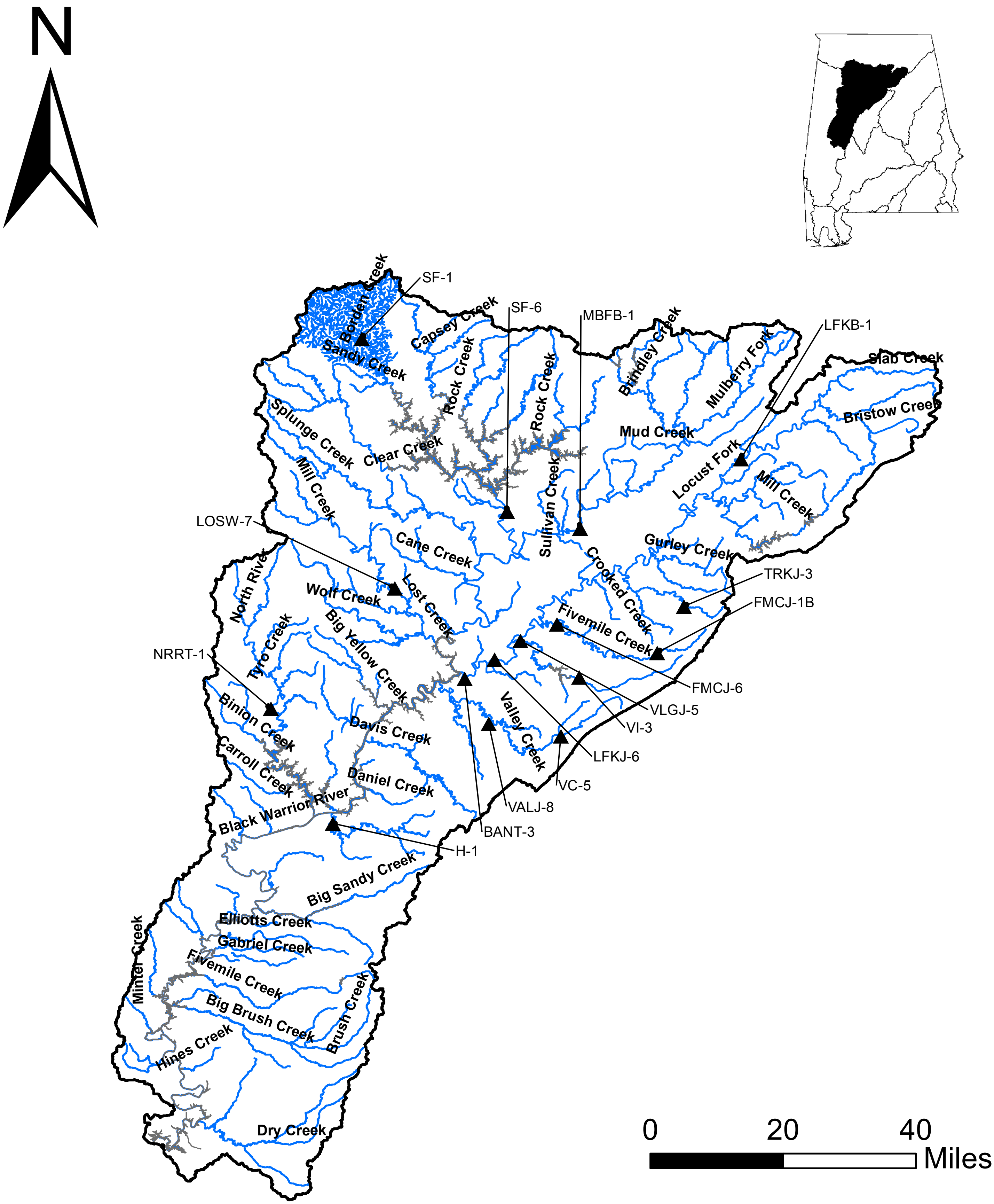
Cahaba River Basin

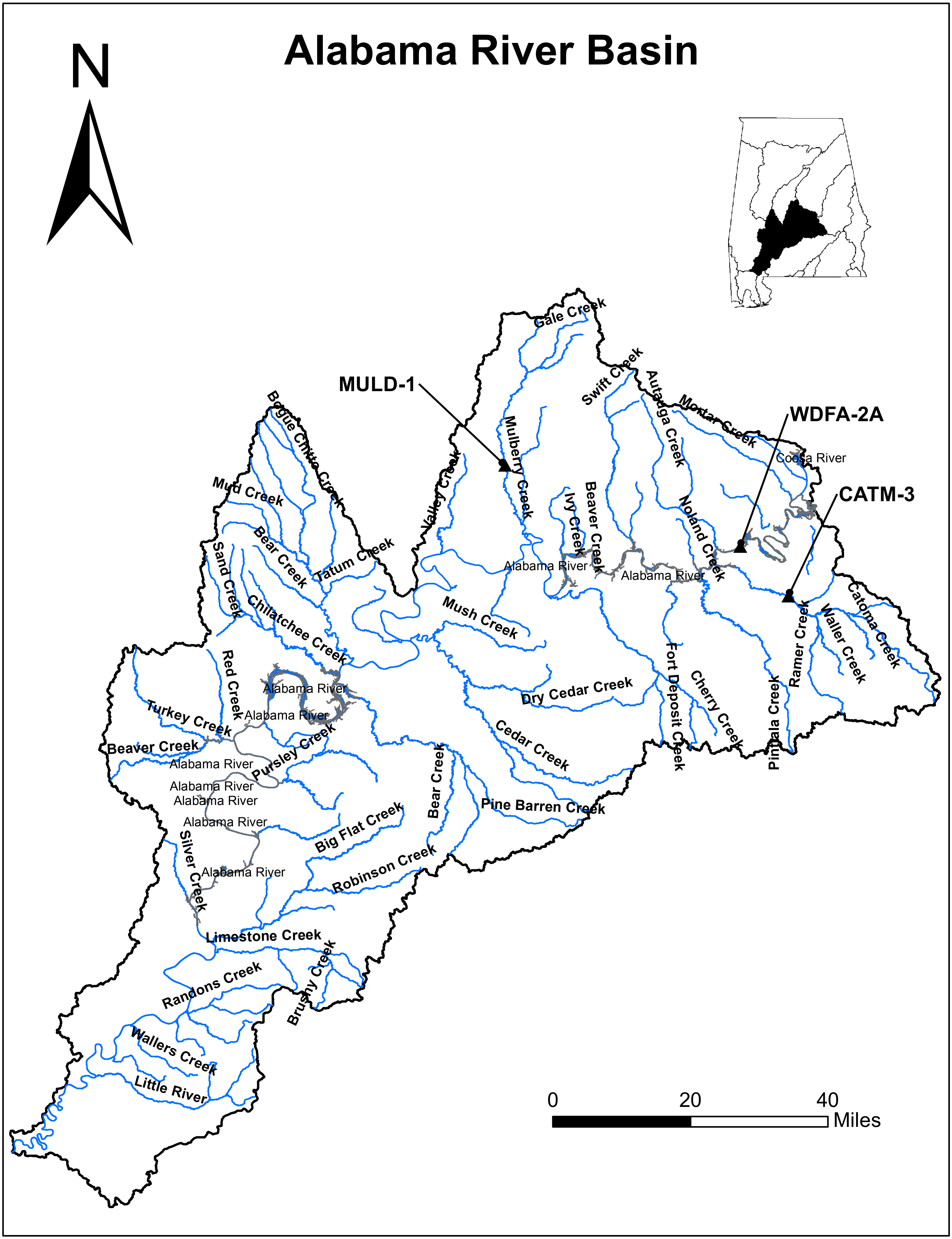


Blackwater River Basin

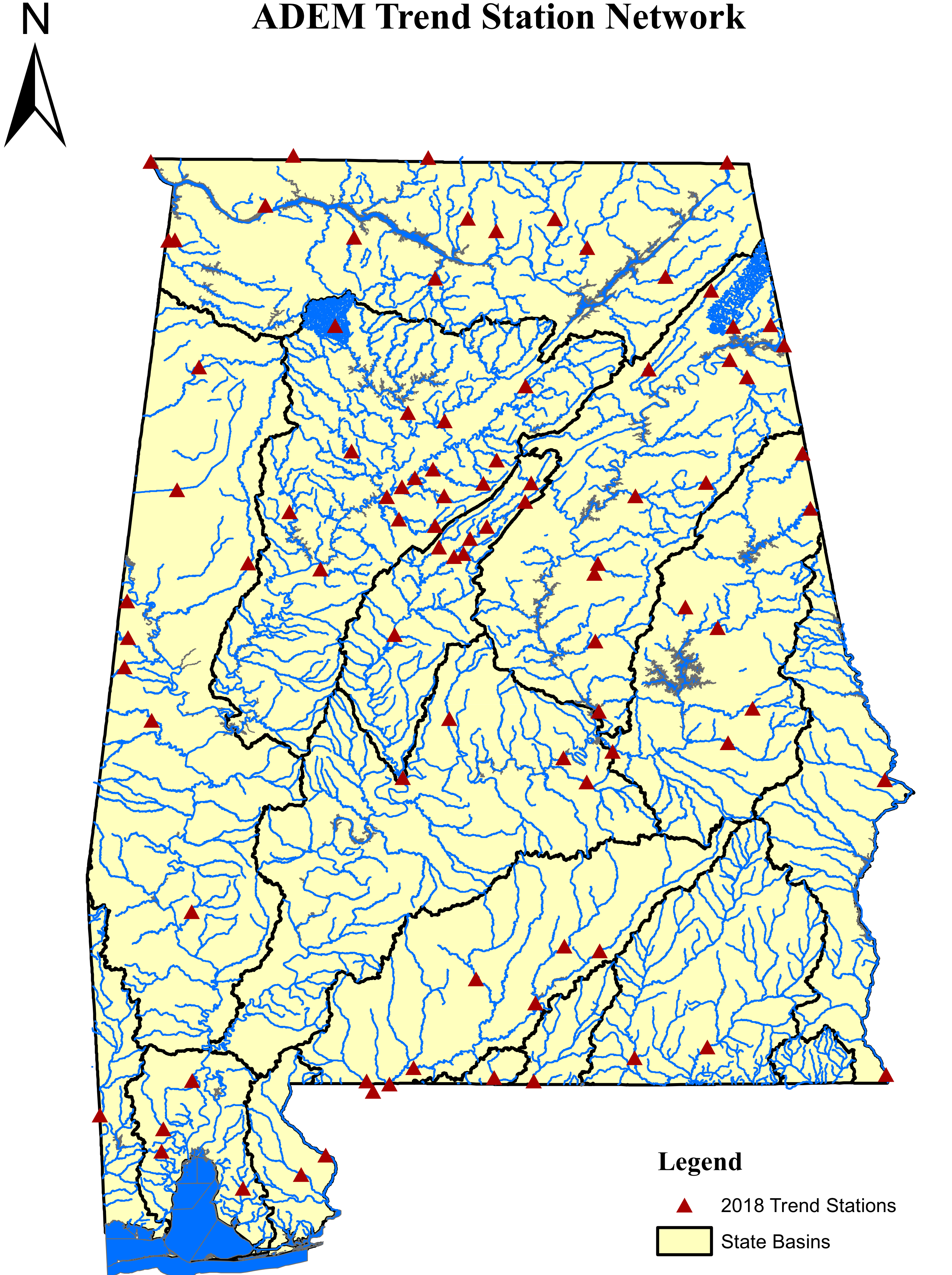


Black Warrior River Basin

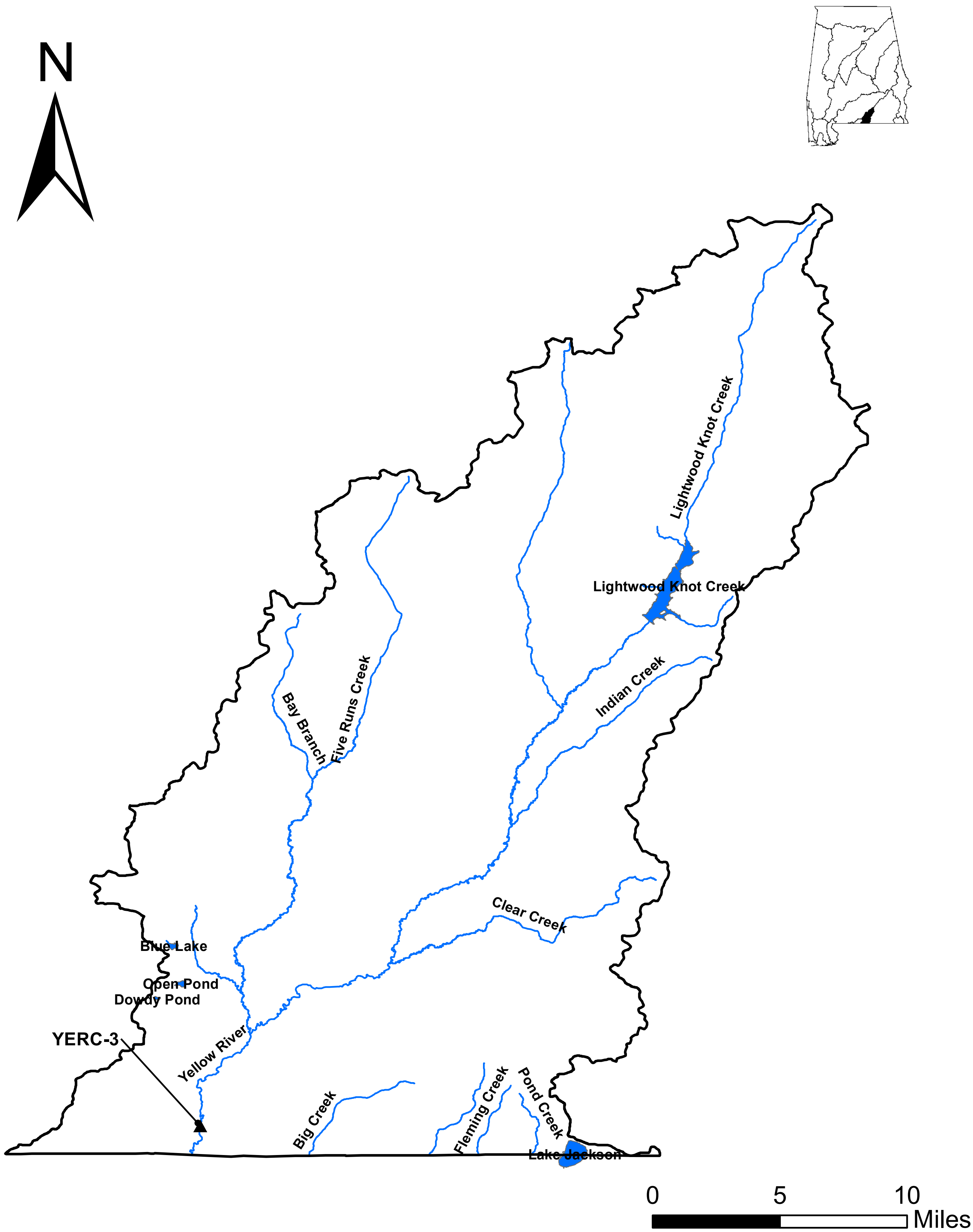



Alabama River Basin
N
MULD-1
WDFA-2A
CATM-3
Gale Creek
Swift Creek
Autauga Creek
Mortar Creek
Coosa River
Mulberry Creek
Ivy Creek
Beaver Creek
Noland Creek
Bogue Chitto Creek
Mud Creek
Valley Creek
Bear Creek
Tatum Creek
Sand Creek
Chilatchee Creek
Mush Creek
Alabama River
Catoma Creek
Waller Creek
Ramer Creek
Red Creek
Turkey Creek
Beaver Creek
Pursley Creek
Dry Cedar Creek
Fort Deposit Creek
Cherry Creek
Pintlala Creek
Cedar Creek
Bear Creek
Pine Barren Creek
Big Flat Creek
Silver Creek
Robinson Creek
Limestone Creek
Brushy Creek
Randons Creek
Wallers Creek
Little River
0
20
40
Miles

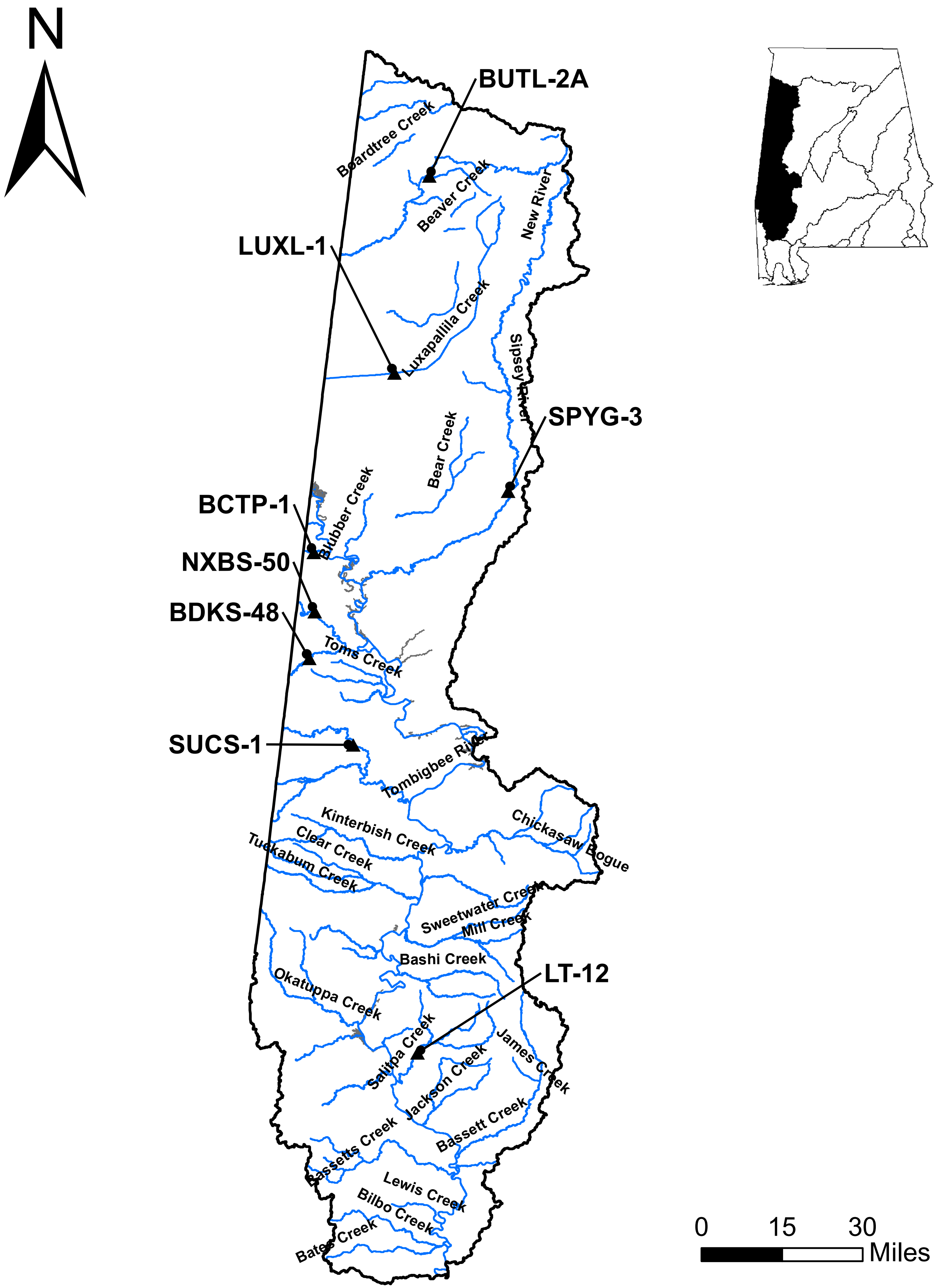
ADEM Trend Station Network



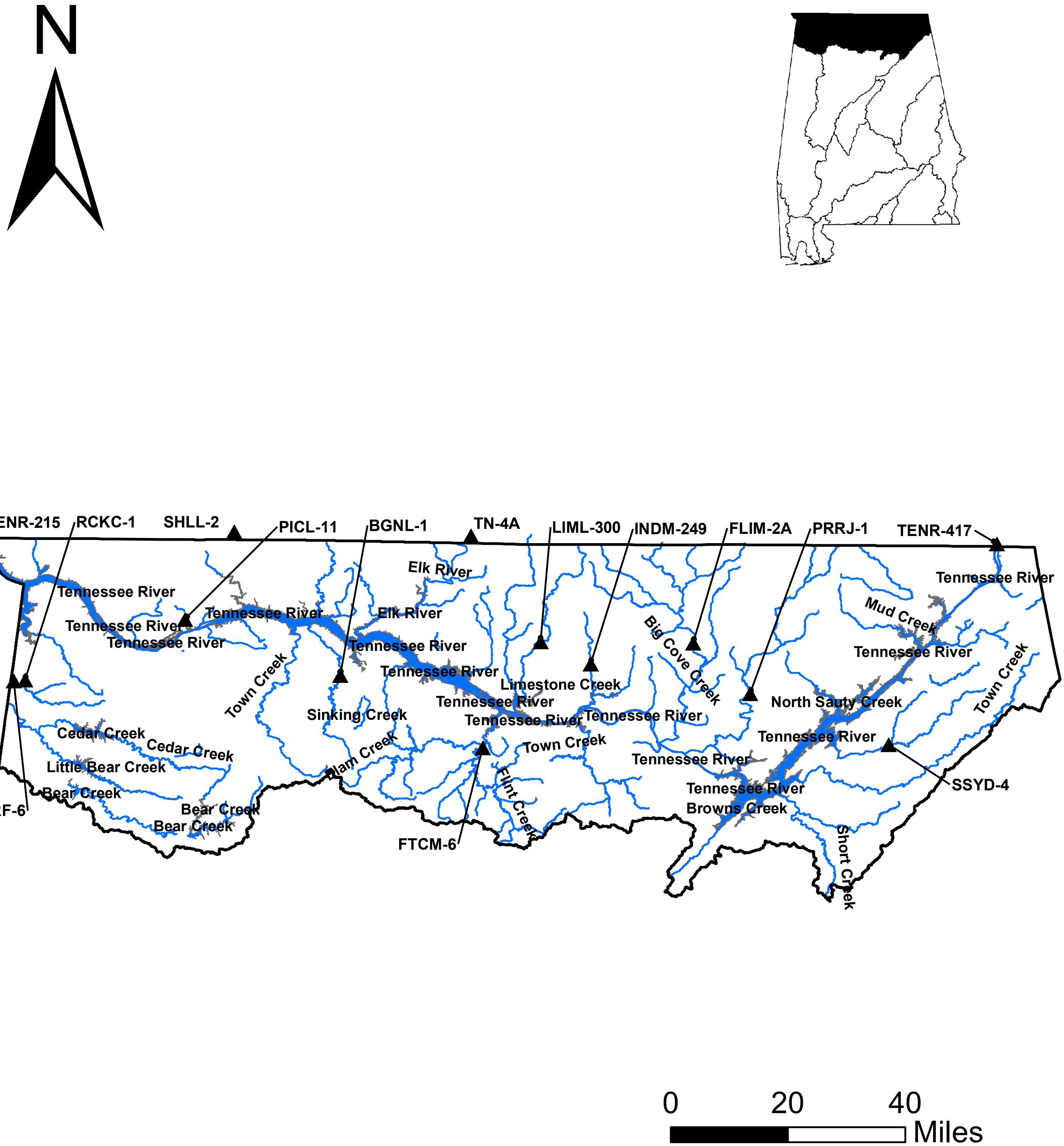
Yellow River Basin



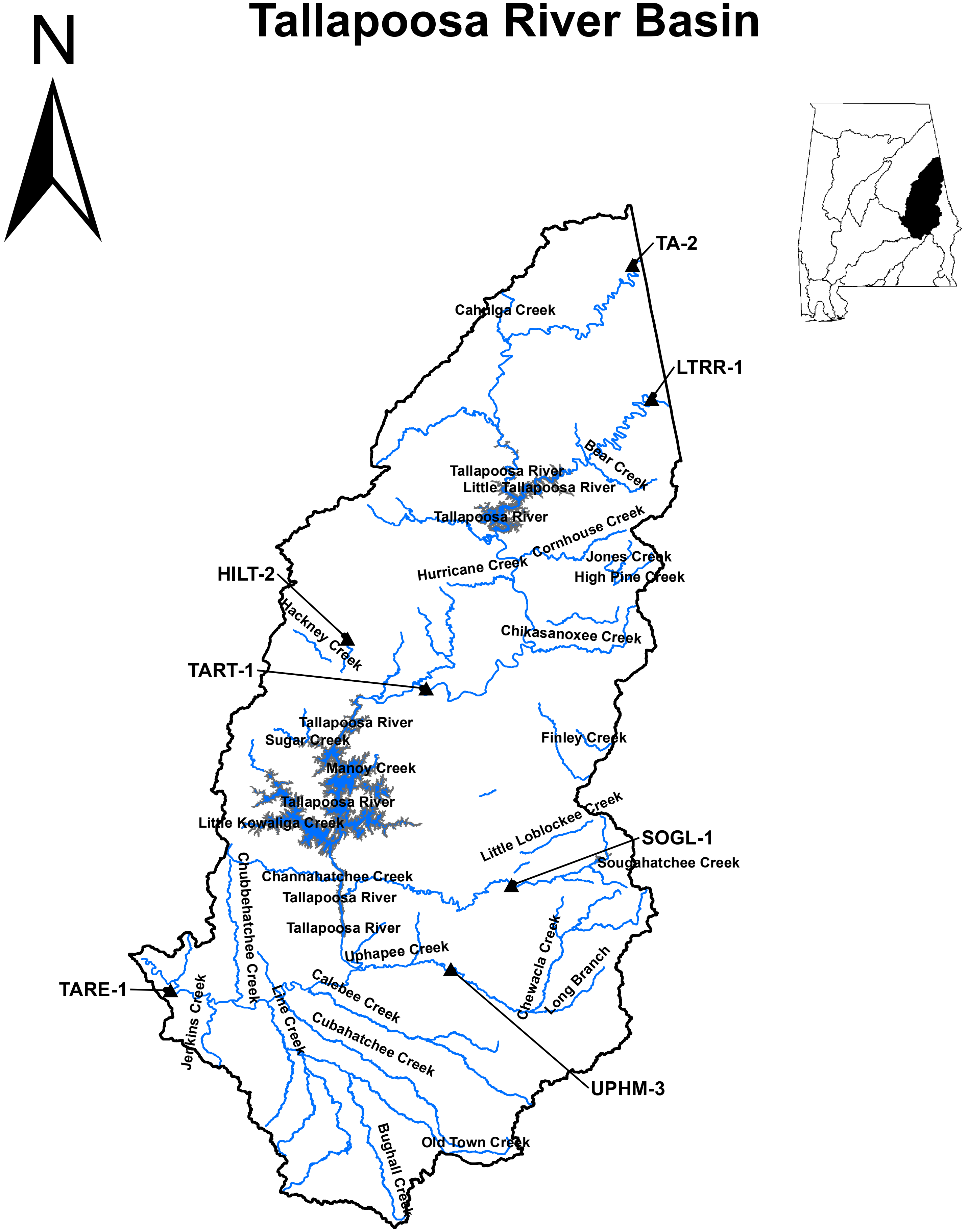
Tombigbee River Basin



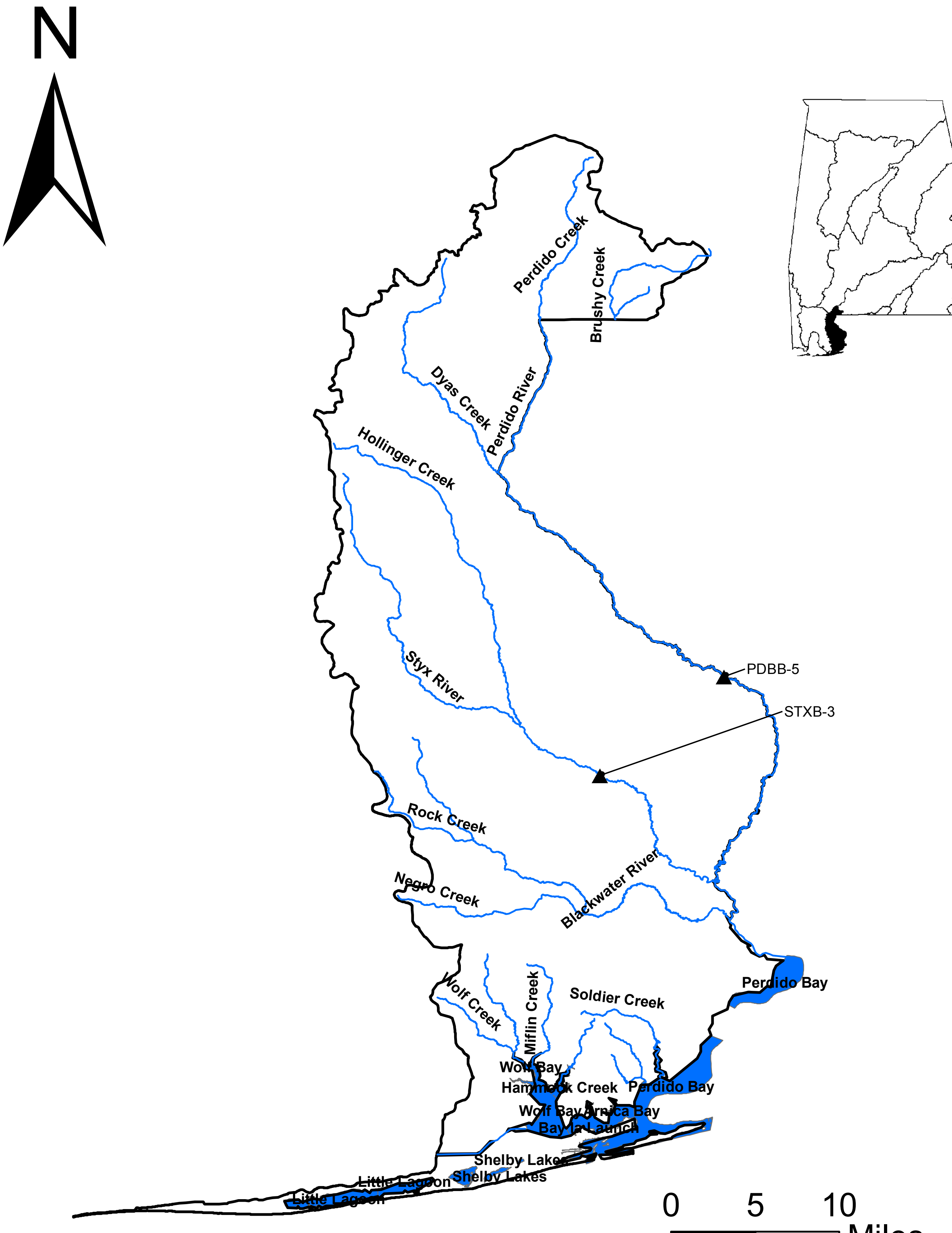
Tennessee River Basin



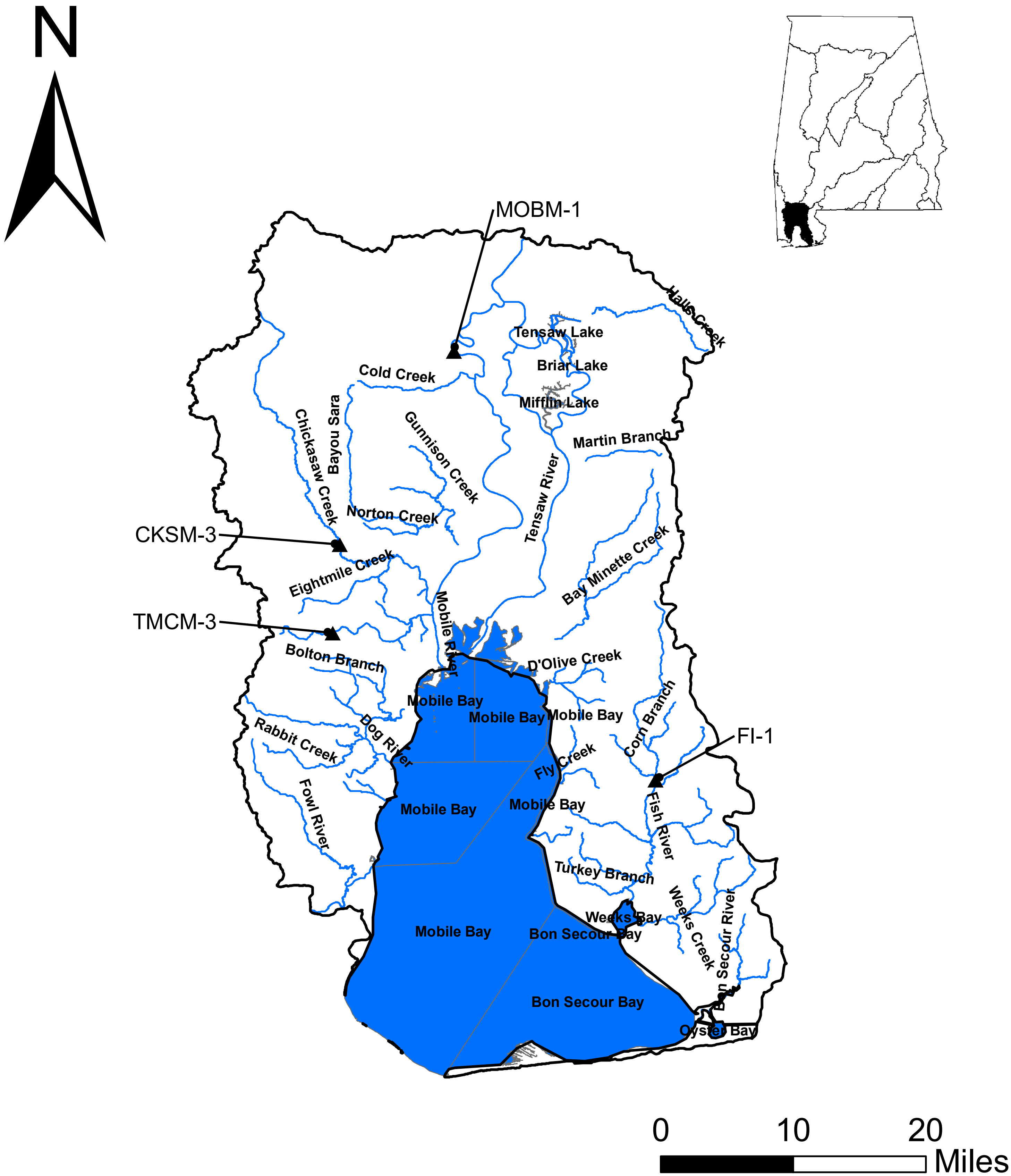
Tallapoosa River Basin



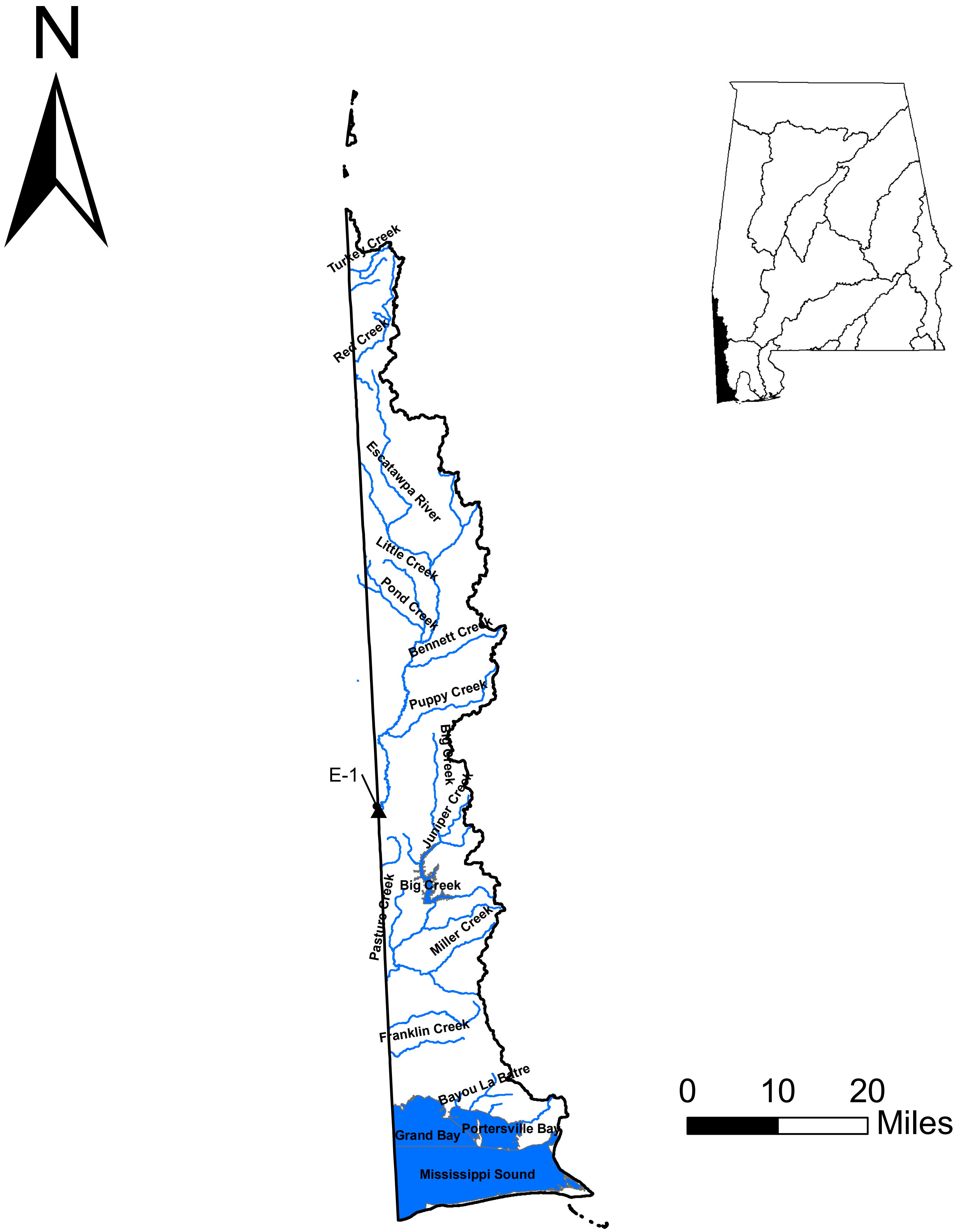
Perdido River Basin



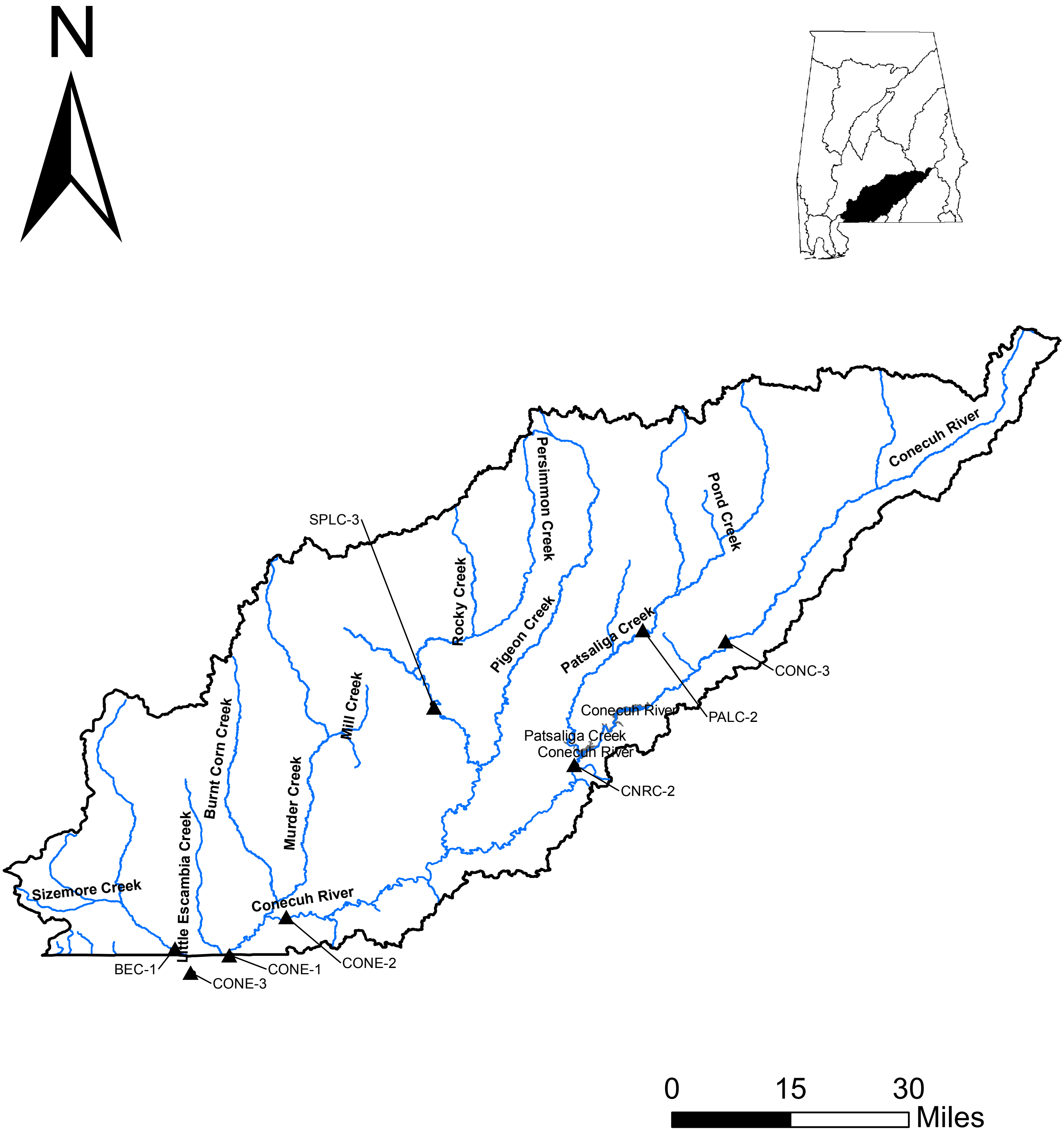
Mobile River Basin



Escatawpa River Basin



Escambia River Basin



Ambient Trend Data Summaries

B-1	N	Min	Max	Med	Avg	SD
Temperature (°C)	268	6.0	30.0	21.0	19.6	5.3
pH (su)	268	6.0	9.1	7.9	7.8	0.4
Dissolved Oxygen (mg/L)	194	7.4	13.6	9.5	9.8	1.4
Specific Conductance (µmhos)	193	5.0	683.0	370.0	363.9	106.6
Turbidity (NTU)	163	0.8	289.0	6.9	17.3	36.0
Total Suspended Solids (mg/L)	238	< 0.3	572.0	7.0	18.6	50.0
Total Nitrogen (mg/L)	189	< 0.038	33.710	1.958	2.652	2.285
Total Phosphorus (mg/L)	206	< 0.017	1.980	0.172	0.322	0.380
BANT-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	61	15.9	33.0	27.0	25.9	4.3
pH (su)	61	6.6	8.9	7.6	7.7	0.6
Dissolved Oxygen (mg/L)	61	5.0	14.4	7.8	8.3	2.2
Specific Conductance (µmhos)	61	0.1	611.8	317.1	258.5	215.3
Turbidity (NTU)	61	1.0	102.0	8.1	11.3	14.2
Total Suspended Solids (mg/L)	61	< 1.0	59.0	9.0	10.1	8.8
Total Nitrogen (mg/L)	61	< 1.132	5.580	1.168	1.198	0.420
Total Phosphorus (mg/L)	61	< 0.020	0.116	0.046	0.048	0.021
BCTP-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	37	13.1	36.5	28.2	27.1	6.0
pH (su)	37	6.9	9.0	8.4	8.3	0.4
Dissolved Oxygen (mg/L)	36	5.6	17.0	11.3	11.3	2.5
Specific Conductance (µmhos)	37	114.8	606.0	401.8	379.9	98.8
Turbidity (NTU)	36	2.5	957.0	12.4	77.3	206.6
Total Suspended Solids (mg/L)	36	1.0	2470.0	9.0	123.8	426.9
Total Nitrogen (mg/L)	33	< 0.006	38.260	1.821	3.162	3.797
Total Phosphorus (mg/L)	33	< 0.006	0.793	0.050	0.131	0.202
BDKS-48	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	12.3	30.1	24.3	23.5	4.5
pH (su)	43	6.9	8.1	7.6	7.6	0.2
Dissolved Oxygen (mg/L)	41	3.6	10.2	6.6	6.8	1.6
Specific Conductance (µmhos)	41	88.3	555.0	273.1	270.8	100.2
Turbidity (NTU)	42	2.2	252.0	8.6	26.4	55.4
Total Suspended Solids (mg/L)	43	< 1.0	235.0	9.0	21.7	42.4
Total Nitrogen (mg/L)	40	< 0.042	5.640	0.744	0.894	0.661
Total Phosphorus (mg/L)	40	< 0.042	0.245	0.070	0.085	0.046
BEC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	100	9.4	29.0	20.4	19.6	5.3
pH (su)	100	5.3	7.3	6.1	6.1	0.4
Dissolved Oxygen (mg/L)	93	7.6	12.6	9.0	9.2	1.1
Specific Conductance (µmhos)	93	23.7	41.0	31.3	31.1	2.6
Turbidity (NTU)	92	1.0	90.5	5.3	10.5	15.0
Total Suspended Solids (mg/L)	98	< 1.0	123.0	5.0	10.2	18.3
Total Nitrogen (mg/L)	101	< 0.051	3.638	0.623	0.667	0.268
Total Phosphorus (mg/L)	100	< 0.004	0.055	0.014	0.016	0.008
BERF-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	15	16.9	26.6	24.2	23.4	3.4
pH (su)	16	7.0	7.5	7.3	7.3	0.1
Dissolved Oxygen (mg/L)	14	5.6	9.2	7.2	7.3	1.1
Specific Conductance (µmhos)	10	92.0	201.0	127.5	132.0	38.6
Turbidity (NTU)	9	5.5	33.9	12.9	14.4	9.5

Total Suspended Solids (mg/L)	9	1.0	36.0	11.0	14.4	10.5
Total Nitrogen (mg/L)	9	0.738	2.056	0.639	0.690	0.221
Total Phosphorus (mg/L)	9	0.015	0.096	0.031	0.041	0.026
BGNL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	45	12.9	37.4	21.7	21.2	3.9
pH (su)	45	6.6	9.3	7.4	7.5	0.4
Dissolved Oxygen (mg/L)	45	3.3	10.5	6.1	6.3	1.4
Specific Conductance (µmhos)	45	129.0	398.0	318.0	302.5	72.7
Turbidity (NTU)	45	0.8	393.0	3.6	17.3	59.4
Total Suspended Solids (mg/L)	44	< 0.3	116.0	3.0	8.8	20.0
Total Nitrogen (mg/L)	32	< 0.003	184.800	2.510	2.392	0.713
Total Phosphorus (mg/L)	32	< 0.006	0.335	0.050	0.067	0.078
BKRE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	97	8.8	25.2	21.1	19.5	4.6
pH (su)	97	3.6	6.0	4.7	4.7	0.5
Dissolved Oxygen (mg/L)	97	6.1	10.6	8.1	8.4	1.0
Specific Conductance (µmhos)	96	0.0	46.5	23.6	24.0	9.2
Turbidity (NTU)	97	1.1	18.5	2.7	3.4	2.5
Total Suspended Solids (mg/L)	97	< 1.0	35.0	2.0	3.4	5.1
Total Nitrogen (mg/L)	97	< 0.191	2.864	0.469	0.488	0.206
Total Phosphorus (mg/L)	97	0.005	0.064	0.009	0.014	0.011
BUTL-2A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	48	9.6	31.2	23.4	22.6	4.6
pH (su)	49	5.9	8.6	7.1	7.2	0.5
Dissolved Oxygen (mg/L)	43	6.7	11.0	8.6	8.7	0.9
Specific Conductance (µmhos)	42	26.6	67.0	37.0	37.3	6.4
Turbidity (NTU)	42	2.8	38.0	6.3	8.7	7.3
Total Suspended Solids (mg/L)	44	< 1.0	53.0	4.5	7.3	9.3
Total Nitrogen (mg/L)	43	< 0.360	4.020	0.489	0.559	0.322
Total Phosphorus (mg/L)	43	< 0.006	0.100	0.018	0.023	0.015
BWC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	34	6.5	27.0	17.1	17.0	5.0
pH (su)	34	7.4	8.5	7.8	7.9	0.2
Dissolved Oxygen (mg/L)	34	6.7	11.9	8.3	8.7	1.5
Specific Conductance (µmhos)	33	232.2	333.4	286.2	289.6	23.2
Turbidity (NTU)	35	2.0	22.8	9.9	9.9	5.6
Total Suspended Solids (mg/L)	34	< 1.0	17.0	5.5	6.9	4.9
Total Nitrogen (mg/L)	34	< 0.755	2.186	0.597	0.660	0.183
Total Phosphorus (mg/L)	34	0.006	0.064	0.020	0.021	0.010
BWCE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	70	6.4	26.8	20.5	18.9	5.1
pH (su)	70	7.2	8.4	7.8	7.8	0.2
Dissolved Oxygen (mg/L)	70	5.7	13.2	7.9	8.3	1.5
Specific Conductance (µmhos)	69	40.0	582.0	312.0	311.0	100.7
Turbidity (NTU)	66	4.3	107.0	21.7	24.2	16.9
Total Suspended Solids (mg/L)	72	3.0	182.0	20.0	24.2	24.2
Total Nitrogen (mg/L)	69	< 1.189	6.462	1.389	1.514	0.576
Total Phosphorus (mg/L)	69	0.097	1.490	0.496	0.592	0.341
C-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	245	2.6	31.1	19.2	18.2	6.8
pH (su)	245	3.8	9.0	7.9	7.9	0.5
Dissolved Oxygen (mg/L)	172	6.1	16.7	10.1	10.4	2.0
Specific Conductance (µmhos)	174	95.0	1852.0	209.0	231.2	146.4
Turbidity (NTU)	158	1.1	440.0	5.2	17.9	50.6
Total Suspended Solids (mg/L)	240	< 0.3	295.0	5.0	10.7	26.3

Total Nitrogen (mg/L)	140	< 0.003	26.300	1.276	1.682	1.241
Total Phosphorus (mg/L)	209	< 0.002	5.950	0.122	0.261	0.485
C-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	231	3.4	31.0	21.5	20.0	7.1
pH (su)	230	6.5	8.7	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	157	6.2	15.9	8.8	9.3	1.9
Specific Conductance (µmhos)	159	75.0	439.7	229.0	240.4	75.9
Turbidity (NTU)	142	1.7	225.0	6.4	12.4	22.0
Total Suspended Solids (mg/L)	209	< 0.3	220.0	6.0	10.0	19.2
Total Nitrogen (mg/L)	161	< 0.003	97.860	0.967	1.920	3.994
Total Phosphorus (mg/L)	179	< 0.005	1.640	0.111	0.273	0.364
C-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	289	4.2	30.6	21.6	20.0	6.5
pH (su)	289	6.0	9.8	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	215	6.0	15.6	8.7	9.3	1.9
Specific Conductance (µmhos)	215	123.0	545.0	268.0	276.4	84.7
Turbidity (NTU)	182	1.4	354.0	7.4	22.2	46.4
Total Suspended Solids (mg/L)	251	< 0.3	1540.0	8.0	28.5	106.7
Total Nitrogen (mg/L)	203	< 0.320	46.194	1.510	1.907	1.168
Total Phosphorus (mg/L)	220	< 0.011	1.160	0.150	0.228	0.235
CABB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	120	4.8	29.2	20.3	19.6	7.0
pH (su)	120	6.5	8.8	8.0	7.9	0.4
Dissolved Oxygen (mg/L)	117	6.2	15.3	9.4	9.6	1.8
Specific Conductance (µmhos)	119	113.0	345.0	236.0	235.3	58.3
Turbidity (NTU)	117	2.3	378.0	7.2	22.7	45.6
Total Suspended Solids (mg/L)	117	< 0.3	262.0	7.0	20.6	39.6
Total Nitrogen (mg/L)	86	< 0.003	5.132	0.568	0.649	0.396
Total Phosphorus (mg/L)	87	< 0.002	0.371	0.033	0.045	0.049
CAHD-1A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	10	24.4	30.9	26.9	27.3	2.2
pH (su)	10	7.7	8.1	7.9	7.9	0.1
Dissolved Oxygen (mg/L)	10	6.9	8.1	7.6	7.7	0.4
Specific Conductance (µmhos)	10	166.3	217.8	207.4	199.7	18.7
Turbidity (NTU)	10	10.8	45.1	16.6	18.0	9.9
Total Suspended Solids (mg/L)	9	11.0	49.3	15.0	18.7	12.0
Total Nitrogen (mg/L)	8	0.224	1.800	0.502	0.531	0.227
Total Phosphorus (mg/L)	9	0.015	0.029	0.020	0.020	0.004
CAHS-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	206	3.6	29.2	21.9	19.9	6.6
pH (su)	205	6.1	8.5	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	203	3.3	14.7	8.4	8.9	2.0
Specific Conductance (µmhos)	202	118.0	528.0	243.5	264.6	91.1
Turbidity (NTU)	175	1.9	400.0	6.9	19.3	41.0
Total Suspended Solids (mg/L)	168	< 0.3	398.0	7.0	20.1	44.7
Total Nitrogen (mg/L)	136	< 0.003	15.850	1.388	1.720	1.304
Total Phosphorus (mg/L)	137	< 0.007	1.900	0.096	0.245	0.350
CATM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	20	6.0	30.0	24.4	23.2	5.8
pH (su)	20	6.9	7.9	7.5	7.4	0.3
Dissolved Oxygen (mg/L)	9	3.5	7.3	6.4	6.1	1.1
Specific Conductance (µmhos)	9	98.0	295.4	187.6	200.6	67.6
Turbidity (NTU)	9	1.8	89.3	22.7	28.7	27.6
Total Suspended Solids (mg/L)	11	< 1.0	92.0	15.0	28.1	30.2
Total Nitrogen (mg/L)	12	< 0.435	1.978	0.520	0.513	0.224

Total Phosphorus (mg/L)	12	0.036	0.180	0.120	0.110	0.050
CHAC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	146	4.8	28.3	17.0	17.0	6.3
pH (su)	146	6.5	8.7	7.8	7.8	0.3
Dissolved Oxygen (mg/L)	146	5.0	14.3	8.6	8.8	1.8
Specific Conductance (µmhos)	145	34.8	881.6	380.0	414.7	176.6
Turbidity (NTU)	148	1.7	297.0	9.0	14.6	33.7
Total Suspended Solids (mg/L)	150	< 0.3	103.0	9.0	11.3	11.0
Total Nitrogen (mg/L)	144	< 0.261	5.400	0.918	0.947	0.351
Total Phosphorus (mg/L)	144	< 0.006	0.797	0.197	0.235	0.152
CHO-9	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	13.4	29.6	25.3	24.5	3.9
pH (su)	43	5.4	8.2	7.1	7.1	0.5
Dissolved Oxygen (mg/L)	38	0.3	9.7	7.5	7.4	1.4
Specific Conductance (µmhos)	38	40.9	127.8	81.9	82.9	19.3
Turbidity (NTU)	39	5.6	79.9	15.6	18.3	12.6
Total Suspended Solids (mg/L)	39	< 1.0	193.0	12.0	21.6	35.8
Total Nitrogen (mg/L)	42	< 0.750	3.472	0.939	0.965	0.279
Total Phosphorus (mg/L)	42	0.017	0.135	0.050	0.056	0.022
CHOC-10	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	40	14.9	28.3	23.6	22.6	3.6
pH (su)	40	7.0	8.1	7.6	7.6	0.2
Dissolved Oxygen (mg/L)	40	6.0	10.0	7.9	7.9	1.0
Specific Conductance (µmhos)	40	50.7	198.4	143.0	134.0	34.5
Turbidity (NTU)	40	4.0	120.0	8.6	13.0	18.2
Total Suspended Solids (mg/L)	39	< 1.0	93.0	8.0	12.5	15.5
Total Nitrogen (mg/L)	36	< 0.172	1.829	0.377	0.385	0.181
Total Phosphorus (mg/L)	36	< 0.004	0.137	0.030	0.039	0.026
CHOT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	47	15.8	27.8	24.2	22.8	3.7
pH (su)	47	6.3	8.4	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	47	6.6	10.2	8.5	8.5	0.8
Specific Conductance (µmhos)	46	102.5	320.0	220.2	208.2	48.1
Turbidity (NTU)	46	4.7	45.6	8.7	11.6	8.7
Total Suspended Solids (mg/L)	46	< 1.0	31.0	7.5	9.4	6.1
Total Nitrogen (mg/L)	43	< 0.970	12.802	0.988	1.148	0.931
Total Phosphorus (mg/L)	43	< 0.043	0.206	0.082	0.093	0.042
CHTH-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	64	9.5	30.5	23.0	22.2	6.3
pH (su)	63	6.3	7.9	7.0	7.0	0.3
Dissolved Oxygen (mg/L)	64	3.3	12.0	8.5	8.5	1.7
Specific Conductance (µmhos)	64	0.1	164.6	102.2	94.0	39.5
Turbidity (NTU)	63	2.0	30.2	6.3	8.4	6.2
Total Suspended Solids (mg/L)	64	< 0.0	26.0	4.5	5.7	4.9
Total Nitrogen (mg/L)	64	< 0.512	4.552	0.804	0.853	0.314
Total Phosphorus (mg/L)	64	0.012	0.071	0.026	0.030	0.014
CKSM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	41	15.0	28.0	23.9	22.8	3.4
pH (su)	41	4.8	7.2	5.8	5.8	0.5
Dissolved Oxygen (mg/L)	41	5.4	10.2	7.8	8.0	0.9
Specific Conductance (µmhos)	41	24.6	67.2	31.0	31.3	6.5
Turbidity (NTU)	40	2.0	29.0	4.9	6.6	5.4
Total Suspended Solids (mg/L)	39	< 1.0	45.0	6.0	8.0	8.2
Total Nitrogen (mg/L)	38	< 0.202	1.808	0.422	0.437	0.198
Total Phosphorus (mg/L)	38	< 0.004	0.038	0.016	0.017	0.008

CNRC-2	N	Min	Max	Med	Avg	SD
Temperature (°C)	47	5.9	30.6	24.1	21.3	6.9
pH (su)	47	6.5	7.8	7.0	7.0	0.3
Dissolved Oxygen (mg/L)	47	4.8	12.3	7.2	7.8	2.0
Specific Conductance (µmhos)	48	41.2	93.1	75.3	74.2	13.5
Turbidity (NTU)	44	2.5	49.6	9.0	12.7	9.9
Total Suspended Solids (mg/L)	43	< 1.0	30.0	3.0	4.5	5.4
Total Nitrogen (mg/L)	44	< 0.327	2.494	0.562	0.587	0.230
Total Phosphorus (mg/L)	44	0.010	0.054	0.021	0.025	0.010
CO-12	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	130	3.8	30.9	17.5	17.3	7.6
pH (su)	130	4.8	8.6	7.1	7.2	0.6
Dissolved Oxygen (mg/L)	125	6.2	12.8	9.5	9.6	1.6
Specific Conductance (µmhos)	125	23.1	82.0	37.2	38.6	9.9
Turbidity (NTU)	124	0.3	37.3	1.4	2.7	5.0
Total Suspended Solids (mg/L)	123	< 0.3	42.0	1.0	2.6	4.8
Total Nitrogen (mg/L)	120	< 0.098	9.580	0.319	0.408	0.472
Total Phosphorus (mg/L)	120	< 0.002	0.232	0.007	0.014	0.026
CONC-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	31	11.3	28.3	24.6	23.5	3.8
pH (su)	31	6.5	7.8	7.2	7.2	0.4
Dissolved Oxygen (mg/L)	31	5.3	10.2	7.4	7.4	0.8
Specific Conductance (µmhos)	31	0.1	191.6	92.2	86.5	61.4
Turbidity (NTU)	31	3.4	63.9	17.1	21.2	15.4
Total Suspended Solids (mg/L)	30	< 1.0	54.0	10.0	13.6	13.4
Total Nitrogen (mg/L)	30	< 0.454	2.690	0.714	0.710	0.235
Total Phosphorus (mg/L)	30	0.012	0.090	0.030	0.034	0.019
CONE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	73	5.7	30.3	22.8	21.8	6.2
pH (su)	76	6.0	7.6	7.0	7.0	0.4
Dissolved Oxygen (mg/L)	76	2.9	11.7	7.4	7.8	1.5
Specific Conductance (µmhos)	76	0.1	281.2	118.4	123.9	68.5
Turbidity (NTU)	71	3.2	73.7	12.8	17.3	13.9
Total Suspended Solids (mg/L)	69	< 1.0	73.0	13.0	15.8	14.2
Total Nitrogen (mg/L)	70	< 0.352	2.732	0.699	0.711	0.252
Total Phosphorus (mg/L)	70	0.027	0.151	0.053	0.058	0.023
CONE-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	108	5.5	31.5	22.5	21.6	6.8
pH (su)	111	5.6	8.9	7.1	7.1	0.4
Dissolved Oxygen (mg/L)	111	4.5	12.2	8.0	8.4	1.4
Specific Conductance (µmhos)	110	0.1	125.7	87.0	80.8	32.4
Turbidity (NTU)	106	2.3	79.5	11.4	15.9	14.0
Total Suspended Solids (mg/L)	104	< 1.0	56.0	8.5	12.8	13.3
Total Nitrogen (mg/L)	105	< 0.151	2.260	0.502	0.518	0.230
Total Phosphorus (mg/L)	105	0.006	0.123	0.022	0.025	0.016
CONE-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	7	20.1	27.8	25.0	24.6	3.0
pH (su)	7	5.7	7.0	6.6	6.5	0.5
Dissolved Oxygen (mg/L)	7	5.2	8.2	7.0	6.9	0.9
Specific Conductance (µmhos)	7	38.0	129.5	75.7	79.6	32.5
Turbidity (NTU)	7	10.3	58.9	25.7	28.5	16.0
Total Suspended Solids (mg/L)	7	8.0	76.0	17.0	24.9	23.6
Total Nitrogen (mg/L)	7	0.880	3.796	0.637	0.781	0.502
Total Phosphorus (mg/L)	7	0.030	0.299	0.035	0.074	0.100
CORC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**

Temperature (°C)	15	9.6	32.7	22.4	23.1	6.6
pH (su)	15	7.2	8.5	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	15	5.3	11.7	8.7	8.6	2.0
Specific Conductance (µmhos)	15	97.8	266.5	166.3	169.3	42.9
Turbidity (NTU)	17	11.2	27.7	15.7	17.0	4.7
Total Suspended Solids (mg/L)	16	4.0	37.0	13.0	17.2	8.6
Total Nitrogen (mg/L)	16	< 0.593	3.642	0.732	0.918	0.486
Total Phosphorus (mg/L)	16	0.028	0.090	0.043	0.046	0.016
COSE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	148	5.6	31.5	21.7	20.5	7.1
pH (su)	148	6.7	8.1	7.3	7.3	0.3
Dissolved Oxygen (mg/L)	148	4.6	12.3	7.9	8.2	2.0
Specific Conductance (µmhos)	148	53.4	260.4	143.6	152.0	40.4
Turbidity (NTU)	148	0.9	21.0	3.9	5.0	3.7
Total Suspended Solids (mg/L)	147	< 1.0	10.0	3.0	3.3	2.4
Total Nitrogen (mg/L)	147	< 0.298	2.200	0.486	0.514	0.192
Total Phosphorus (mg/L)	147	< 0.004	0.104	0.032	0.033	0.013
E-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	318	3.0	30.9	21.0	20.1	5.9
pH (su)	320	3.2	8.3	5.3	5.3	0.8
Dissolved Oxygen (mg/L)	75	5.2	10.7	7.9	8.2	1.1
Specific Conductance (µmhos)	74	0.0	345.0	30.0	35.4	38.0
Turbidity (NTU)	78	1.9	62.0	7.9	10.7	11.0
Total Suspended Solids (mg/L)	316	< 1.0	163.0	9.0	13.5	16.6
Total Nitrogen (mg/L)	84	< 0.005	4.352	0.563	0.660	0.354
Total Phosphorus (mg/L)	324	< 0.001	0.380	0.025	0.034	0.038
FI-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	211	11.7	25.0	20.7	19.7	3.3
pH (su)	211	5.1	7.8	6.0	6.0	0.5
Dissolved Oxygen (mg/L)	123	6.4	12.6	8.1	8.3	0.8
Specific Conductance (µmhos)	124	36.0	125.0	57.0	57.2	13.2
Turbidity (NTU)	116	1.0	159.0	4.4	9.9	19.3
Total Suspended Solids (mg/L)	184	< 1.0	73.0	6.0	9.3	11.6
Total Nitrogen (mg/L)	188	< 0.420	7.600	1.758	1.731	0.524
Total Phosphorus (mg/L)	187	< 0.005	0.317	0.064	0.074	0.054
FLIM-2A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	128	2.7	28.4	18.2	17.7	6.1
pH (su)	129	6.8	8.7	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	128	6.6	13.3	9.1	9.3	1.5
Specific Conductance (µmhos)	126	74.0	231.0	175.5	172.2	27.7
Turbidity (NTU)	125	0.9	421.0	6.4	14.3	40.1
Total Suspended Solids (mg/L)	122	< 0.3	225.0	5.5	11.6	25.2
Total Nitrogen (mg/L)	93	< 0.003	10.712	1.967	2.079	0.705
Total Phosphorus (mg/L)	93	< 0.002	0.384	0.046	0.060	0.064
FMCJ-1B	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	35	16.8	25.2	22.1	21.4	2.2
pH (su)	35	7.6	8.8	8.2	8.2	0.2
Dissolved Oxygen (mg/L)	35	6.9	12.6	10.0	10.0	1.1
Specific Conductance (µmhos)	35	250.0	383.0	357.0	352.2	26.8
Turbidity (NTU)	35	1.0	20.1	1.8	2.9	3.7
Total Suspended Solids (mg/L)	35	< 0.3	12.0	2.0	2.5	2.2
Total Nitrogen (mg/L)	26	< 1.110	8.504	1.088	1.126	0.326
Total Phosphorus (mg/L)	26	< 0.002	0.100	0.010	0.017	0.017
FMCJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	17	14.4	28.6	24.3	21.9	4.9

pH (su)	17	7.6	8.8	8.1	8.2	0.3
Dissolved Oxygen (mg/L)	17	8.0	12.7	9.9	9.9	1.4
Specific Conductance (μmhos)	17	283.0	594.0	459.0	452.7	96.4
Turbidity (NTU)	10	2.3	141.0	5.4	21.4	42.5
Total Suspended Solids (mg/L)	17	< 1.0	148.0	7.0	15.8	34.4
Total Nitrogen (mg/L)	17	< 1.974	12.214	2.227	2.475	1.349
Total Phosphorus (mg/L)	17	0.036	0.640	0.159	0.185	0.150
FTCM-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	92	4.9	28.4	17.9	17.8	6.8
pH (su)	92	6.8	8.0	7.5	7.5	0.2
Dissolved Oxygen (mg/L)	91	2.3	11.7	6.0	6.4	2.4
Specific Conductance (μmhos)	92	120.0	318.0	225.5	224.6	39.2
Turbidity (NTU)	90	5.3	41.1	11.2	13.1	7.4
Total Suspended Solids (mg/L)	90	< 0.3	40.0	10.0	11.6	6.9
Total Nitrogen (mg/L)	70	< 0.004	8.280	0.968	1.105	0.558
Total Phosphorus (mg/L)	71	0.021	0.309	0.050	0.071	0.058
H-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	180	2.0	32.0	20.2	19.5	7.2
pH (su)	180	4.5	8.9	7.4	7.4	0.6
Dissolved Oxygen (mg/L)	110	0.2	24.8	9.7	9.9	2.4
Specific Conductance (μmhos)	108	97.0	1218.0	358.0	387.6	217.6
Turbidity (NTU)	111	0.9	258.0	5.5	18.4	39.4
Total Suspended Solids (mg/L)	177	< 0.3	1133.0	4.0	30.3	107.6
Total Nitrogen (mg/L)	150	< 0.003	5.544	0.379	0.506	0.410
Total Phosphorus (mg/L)	164	< 0.002	0.790	0.017	0.049	0.110
HATC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	167	4.4	31.3	19.3	18.4	6.1
pH (su)	167	6.0	8.6	7.2	7.1	0.4
Dissolved Oxygen (mg/L)	167	6.6	13.5	9.2	9.4	1.5
Specific Conductance (μmhos)	165	23.2	63.8	40.4	40.5	7.0
Turbidity (NTU)	167	1.6	185.0	5.0	12.1	25.5
Total Suspended Solids (mg/L)	160	< 0.5	197.0	2.0	9.2	24.6
Total Nitrogen (mg/L)	160	< 0.045	6.120	0.175	0.257	0.351
Total Phosphorus (mg/L)	160	< 0.004	0.107	0.014	0.023	0.020
HILT-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	45	14.4	29.4	23.2	22.7	3.8
pH (su)	45	5.8	7.6	6.8	6.7	0.4
Dissolved Oxygen (mg/L)	45	5.4	9.5	7.8	7.7	0.9
Specific Conductance (μmhos)	45	19.4	49.5	36.1	35.9	5.1
Turbidity (NTU)	45	4.7	272.0	8.6	22.1	43.1
Total Suspended Solids (mg/L)	41	< 1.0	152.0	4.0	13.4	26.6
Total Nitrogen (mg/L)	41	< 0.144	1.946	0.330	0.370	0.230
Total Phosphorus (mg/L)	41	< 0.011	0.170	0.017	0.027	0.028
INDM-249	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	74	11.5	27.8	22.7	21.0	4.3
pH (su)	74	7.0	8.7	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	74	4.4	12.5	7.5	7.7	1.7
Specific Conductance (μmhos)	74	104.7	300.0	247.6	241.2	37.2
Turbidity (NTU)	78	1.4	76.0	7.1	11.8	14.5
Total Suspended Solids (mg/L)	54	< 0.3	129.0	6.0	10.6	19.4
Total Nitrogen (mg/L)	47	< 0.482	4.136	1.307	1.276	0.404
Total Phosphorus (mg/L)	47	< 0.006	0.175	0.040	0.047	0.034
LC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	240	7.6	30.3	18.4	18.1	4.7
pH (su)	239	6.3	8.7	7.7	7.7	0.3

Dissolved Oxygen (mg/L)	162	5.9	14.8	8.9	9.2	1.6
Specific Conductance (μmhos)	162	40.0	466.0	384.0	368.8	63.0
Turbidity (NTU)	154	1.1	152.0	3.2	7.3	15.6
Total Suspended Solids (mg/L)	230	< 0.3	173.0	4.0	7.4	16.0
Total Nitrogen (mg/L)	131	< 0.003	11.670	2.140	2.398	1.104
Total Phosphorus (mg/L)	203	< 0.004	8.000	0.070	0.138	0.564
LFKB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	42	8.4	29.9	24.9	22.4	5.9
pH (su)	42	6.8	8.8	7.9	7.9	0.5
Dissolved Oxygen (mg/L)	42	6.5	11.8	8.6	8.9	1.4
Specific Conductance (μmhos)	42	91.0	584.0	207.5	253.8	142.9
Turbidity (NTU)	35	1.3	14.1	2.9	3.9	2.8
Total Suspended Solids (mg/L)	32	< 1.0	45.0	3.0	7.7	10.9
Total Nitrogen (mg/L)	32	< 2.896	33.837	2.591	4.045	3.313
Total Phosphorus (mg/L)	32	0.056	5.930	0.439	0.817	1.222
LFKJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	140	5.2	34.0	21.9	21.0	7.5
pH (su)	140	6.4	9.5	7.8	7.9	0.6
Dissolved Oxygen (mg/L)	94	4.6	18.8	10.1	10.1	2.5
Specific Conductance (μmhos)	93	128.0	864.0	357.0	365.9	147.3
Turbidity (NTU)	86	3.9	92.4	7.8	14.8	18.3
Total Suspended Solids (mg/L)	142	< 1.0	64.0	8.0	11.1	10.9
Total Nitrogen (mg/L)	115	< 0.108	32.820	1.415	1.503	0.497
Total Phosphorus (mg/L)	133	< 0.004	0.670	0.052	0.074	0.076
LIML-300	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	52	12.6	29.3	22.1	21.8	4.0
pH (su)	53	6.7	8.1	7.5	7.5	0.3
Dissolved Oxygen (mg/L)	50	6.7	10.2	8.0	8.1	0.8
Specific Conductance (μmhos)	48	92.7	156.0	135.0	129.8	16.9
Turbidity (NTU)	52	1.7	61.5	4.2	7.1	9.0
Total Suspended Solids (mg/L)	47	< 0.3	80.0	3.0	6.4	12.4
Total Nitrogen (mg/L)	40	< 0.888	4.792	1.280	1.292	0.307
Total Phosphorus (mg/L)	40	< 0.005	0.159	0.050	0.060	0.033
LOSW-7	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	72	6.4	28.6	19.0	17.7	6.5
pH (su)	72	6.6	9.1	8.0	8.0	0.4
Dissolved Oxygen (mg/L)	72	5.2	12.7	8.4	8.7	1.7
Specific Conductance (μmhos)	72	285.1	2351.0	932.0	962.9	498.2
Turbidity (NTU)	72	1.7	320.0	5.4	18.8	42.2
Total Suspended Solids (mg/L)	72	< 1.0	507.0	5.5	25.3	72.8
Total Nitrogen (mg/L)	66	< 0.007	8.238	0.400	0.508	0.539
Total Phosphorus (mg/L)	66	< 0.004	0.094	0.013	0.018	0.014
LT-12	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	48	13.3	28.0	24.2	23.2	3.5
pH (su)	48	6.3	7.8	7.2	7.1	0.3
Dissolved Oxygen (mg/L)	43	6.7	10.1	7.5	7.8	0.8
Specific Conductance (μmhos)	43	46.2	175.6	135.6	126.1	31.1
Turbidity (NTU)	43	5.0	113.2	10.5	19.6	24.5
Total Suspended Solids (mg/L)	44	< 1.0	120.0	8.0	15.2	22.5
Total Nitrogen (mg/L)	45	< 0.148	5.380	0.419	0.560	0.502
Total Phosphorus (mg/L)	45	0.010	0.115	0.025	0.035	0.029
LTRR-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	73	11.8	28.6	24.0	23.0	3.6
pH (su)	73	6.2	8.1	6.9	6.9	0.4
Dissolved Oxygen (mg/L)	73	5.1	10.8	7.1	7.1	1.1

Specific Conductance (µmhos)	73	43.2	120.0	68.9	70.1	14.4
Turbidity (NTU)	74	9.3	425.0	17.2	27.6	52.4
Total Suspended Solids (mg/L)	54	< 1.0	231.0	11.0	25.2	46.8
Total Nitrogen (mg/L)	51	< 0.506	2.626	0.712	0.760	0.196
Total Phosphorus (mg/L)	51	< 0.032	0.381	0.050	0.068	0.055
LUXL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	59	6.2	29.6	22.3	21.5	4.8
pH (su)	59	5.7	8.6	6.8	6.8	0.5
Dissolved Oxygen (mg/L)	46	7.1	10.4	8.3	8.4	0.7
Specific Conductance (µmhos)	46	26.7	152.6	41.0	45.3	18.6
Turbidity (NTU)	48	4.0	500.0	11.3	31.3	80.6
Total Suspended Solids (mg/L)	53	< 1.0	236.0	10.0	17.1	33.2
Total Nitrogen (mg/L)	55	< 0.334	6.220	0.515	0.600	0.482
Total Phosphorus (mg/L)	55	< 0.002	0.218	0.022	0.030	0.033
MBFB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	81	5.8	31.6	23.6	21.9	7.1
pH (su)	81	7.0	9.1	7.6	7.7	0.4
Dissolved Oxygen (mg/L)	75	5.0	13.2	8.0	8.6	1.9
Specific Conductance (µmhos)	75	88.0	393.0	175.0	186.1	75.5
Turbidity (NTU)	75	3.8	158.0	10.9	18.7	27.9
Total Suspended Solids (mg/L)	76	< 1.0	199.0	11.5	24.2	40.5
Total Nitrogen (mg/L)	67	< 0.624	9.742	1.928	2.042	0.900
Total Phosphorus (mg/L)	67	0.008	1.050	0.176	0.245	0.193
MOBM-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	152	5.5	34.1	23.0	22.3	7.5
pH (su)	151	5.2	8.2	7.1	7.0	0.6
Dissolved Oxygen (mg/L)	150	4.6	12.8	7.9	8.2	1.8
Specific Conductance (µmhos)	142	56.3	8393.2	188.8	321.4	877.3
Turbidity (NTU)	154	3.0	198.0	21.0	29.7	26.6
Total Suspended Solids (mg/L)	161	4.0	227.0	17.0	26.5	29.3
Total Nitrogen (mg/L)	154	< 0.156	8.924	0.798	0.849	0.443
Total Phosphorus (mg/L)	161	0.026	0.370	0.069	0.077	0.042
MULD-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	41	15.1	31.5	23.9	23.7	3.7
pH (su)	41	5.9	7.5	6.8	6.8	0.4
Dissolved Oxygen (mg/L)	41	7.5	9.7	8.3	8.5	0.6
Specific Conductance (µmhos)	41	0.0	526.0	39.0	50.0	76.6
Turbidity (NTU)	41	3.1	274.0	12.1	33.9	56.2
Total Suspended Solids (mg/L)	39	< 1.0	276.0	15.0	34.4	57.2
Total Nitrogen (mg/L)	38	< 0.138	1.512	0.272	0.317	0.159
Total Phosphorus (mg/L)	39	< 0.006	0.100	0.021	0.027	0.018
NRRT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	87	5.8	31.0	23.0	21.0	7.0
pH (su)	88	6.5	9.3	7.9	7.9	0.6
Dissolved Oxygen (mg/L)	88	5.8	13.4	8.5	9.0	1.8
Specific Conductance (µmhos)	87	69.0	4595.0	180.4	665.4	1039.5
Turbidity (NTU)	86	1.9	254.0	5.7	16.9	40.1
Total Suspended Solids (mg/L)	83	< 1.0	308.0	4.0	15.3	43.8
Total Nitrogen (mg/L)	82	< 0.145	3.602	0.407	0.533	0.402
Total Phosphorus (mg/L)	82	< 0.006	0.210	0.022	0.031	0.029
NXBS-50	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	38	14.1	32.0	26.5	25.5	4.4
pH (su)	38	6.7	8.6	7.9	7.9	0.4
Dissolved Oxygen (mg/L)	37	5.0	8.8	7.1	7.1	0.9
Specific Conductance (µmhos)	38	55.1	205.8	146.6	149.0	27.2

Turbidity (NTU)	40	13.6	548.0	38.0	77.8	114.1
Total Suspended Solids (mg/L)	40	< 1.0	410.0	33.0	70.0	98.0
Total Nitrogen (mg/L)	37	< 0.003	7.086	0.789	1.043	0.736
Total Phosphorus (mg/L)	37	< 0.049	0.441	0.084	0.116	0.091
PALC-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	8.8	30.0	24.9	23.9	3.9
pH (su)	43	6.4	8.2	7.4	7.3	0.4
Dissolved Oxygen (mg/L)	40	5.8	10.7	7.4	7.6	0.9
Specific Conductance (µmhos)	40	41.9	219.8	122.0	124.1	42.4
Turbidity (NTU)	40	2.8	49.6	9.7	14.3	11.4
Total Suspended Solids (mg/L)	39	< 1.0	30.0	3.0	7.5	8.3
Total Nitrogen (mg/L)	42	< 0.173	2.746	0.495	0.530	0.256
Total Phosphorus (mg/L)	42	< 0.004	0.061	0.025	0.026	0.013
PDBB-5	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	49	14.8	27.0	22.9	22.6	2.8
pH (su)	49	3.4	6.9	5.1	5.3	0.6
Dissolved Oxygen (mg/L)	49	6.5	9.2	8.0	8.0	0.6
Specific Conductance (µmhos)	48	20.7	39.0	25.7	25.9	2.9
Turbidity (NTU)	52	1.5	15.6	3.2	4.4	3.0
Total Suspended Solids (mg/L)	49	< 1.0	15.0	4.0	4.6	2.9
Total Nitrogen (mg/L)	49	< 0.658	3.210	0.582	0.670	0.277
Total Phosphorus (mg/L)	49	0.008	0.064	0.019	0.022	0.012
PEAG-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	39	13.2	30.0	25.2	25.1	3.8
pH (su)	39	6.3	9.1	7.3	7.3	0.5
Dissolved Oxygen (mg/L)	39	6.7	9.9	7.8	7.8	0.7
Specific Conductance (µmhos)	39	42.7	165.2	109.2	108.5	31.2
Turbidity (NTU)	39	1.8	157.0	10.9	19.5	25.8
Total Suspended Solids (mg/L)	39	< 1.0	82.0	6.0	17.2	20.2
Total Nitrogen (mg/L)	39	< 0.553	3.480	0.931	0.912	0.307
Total Phosphorus (mg/L)	39	0.007	0.133	0.029	0.038	0.029
PICL-11	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	9	17.9	26.5	24.5	23.2	3.3
pH (su)	9	7.1	9.2	8.5	8.3	0.7
Dissolved Oxygen (mg/L)	9	8.1	13.2	11.3	11.4	1.6
Specific Conductance (µmhos)	9	86.0	180.0	134.0	132.3	26.1
Turbidity (NTU)	9	2.5	12.2	3.3	4.3	3.0
Total Suspended Solids (mg/L)	9	1.0	15.0	4.0	5.1	4.1
Total Nitrogen (mg/L)	9	< 0.960	2.380	0.788	0.782	0.220
Total Phosphorus (mg/L)	9	0.012	0.036	0.024	0.023	0.008
PRRJ-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	12.1	27.3	23.0	21.7	3.7
pH (su)	43	7.0	8.2	7.5	7.6	0.2
Dissolved Oxygen (mg/L)	43	4.5	9.5	6.6	6.5	1.2
Specific Conductance (µmhos)	43	236.0	403.0	309.0	306.5	39.2
Turbidity (NTU)	42	1.3	69.3	6.6	10.2	12.6
Total Suspended Solids (mg/L)	39	1.0	40.0	6.0	8.3	8.0
Total Nitrogen (mg/L)	33	< 0.524	5.080	0.795	0.891	0.460
Total Phosphorus (mg/L)	33	< 0.005	0.100	0.022	0.025	0.016
RCKC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	37	7.0	25.9	23.2	20.8	4.7
pH (su)	37	3.9	8.8	7.0	6.9	0.8
Dissolved Oxygen (mg/L)	38	4.1	11.6	6.2	6.8	2.0
Specific Conductance (µmhos)	31	66.0	166.0	102.0	101.4	20.4
Turbidity (NTU)	31	4.7	82.7	9.4	16.3	17.7

Total Suspended Solids (mg/L)	23	< 1.0	95.0	5.0	11.0	20.1
Total Nitrogen (mg/L)	23	< 0.159	1.628	0.351	0.369	0.191
Total Phosphorus (mg/L)	23	0.011	0.045	0.017	0.020	0.008
SF-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	71	0.2	28.6	19.4	18.4	6.2
pH (su)	71	6.1	8.7	7.6	7.5	0.3
Dissolved Oxygen (mg/L)	71	6.8	14.5	8.8	9.1	1.5
Specific Conductance (µmhos)	70	45.6	168.1	81.0	82.3	21.6
Turbidity (NTU)	74	1.7	21.0	2.9	3.9	3.0
Total Suspended Solids (mg/L)	64	< 1.0	25.0	2.0	2.9	4.3
Total Nitrogen (mg/L)	64	< 0.039	2.640	0.199	0.264	0.243
Total Phosphorus (mg/L)	64	< 0.005	1.000	0.010	0.018	0.062
SF-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	7.4	17.4	13.5	12.9	2.6
pH (su)	43	6.4	9.5	7.8	7.8	0.8
Dissolved Oxygen (mg/L)	43	5.1	11.4	7.6	7.8	1.4
Specific Conductance (µmhos)	43	47.0	320.8	61.0	81.6	60.1
Turbidity (NTU)	43	0.5	47.4	1.7	3.9	7.6
Total Suspended Solids (mg/L)	45	< 1.0	22.0	2.0	3.0	3.7
Total Nitrogen (mg/L)	43	< 0.572	2.812	0.461	0.542	0.232
Total Phosphorus (mg/L)	45	< 0.003	0.043	0.006	0.008	0.007
SHDJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	8	19.6	26.3	23.8	23.4	2.5
pH (su)	8	7.5	8.2	7.8	7.8	0.3
Dissolved Oxygen (mg/L)	8	6.1	8.1	6.8	6.8	0.6
Specific Conductance (µmhos)	8	133.0	378.0	241.0	257.2	83.3
Turbidity (NTU)	8	4.1	109.0	9.2	31.5	38.6
Total Suspended Solids (mg/L)	8	< 1.0	109.0	7.5	29.9	39.5
Total Nitrogen (mg/L)	8	0.540	1.984	0.582	0.641	0.244
Total Phosphorus (mg/L)	8	0.010	0.064	0.022	0.028	0.019
SHLL-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	32	6.2	28.8	17.9	18.4	6.8
pH (su)	32	6.7	8.7	7.8	7.8	0.5
Dissolved Oxygen (mg/L)	32	6.9	14.4	10.3	10.4	1.8
Specific Conductance (µmhos)	32	69.0	210.0	143.0	134.7	32.2
Turbidity (NTU)	32	1.4	26.4	4.4	5.3	4.4
Total Suspended Solids (mg/L)	32	< 1.0	27.0	6.0	7.1	5.4
Total Nitrogen (mg/L)	32	< 0.487	3.336	0.750	0.833	0.308
Total Phosphorus (mg/L)	32	< 0.004	0.078	0.024	0.027	0.016
SHRT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	83	5.0	27.0	22.3	21.5	4.0
pH (su)	85	7.3	8.5	7.9	7.8	0.2
Dissolved Oxygen (mg/L)	59	5.7	11.2	8.1	8.2	1.0
Specific Conductance (µmhos)	60	106.7	1303.0	373.6	458.9	232.1
Turbidity (NTU)	60	1.2	154.0	4.1	9.1	22.2
Total Suspended Solids (mg/L)	78	< 0.3	925.0	6.0	19.6	104.6
Total Nitrogen (mg/L)	60	< 2.036	14.039	3.355	3.512	1.260
Total Phosphorus (mg/L)	75	0.037	15.400	0.687	1.886	2.830
SOGL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	82	5.8	31.0	22.6	21.0	5.2
pH (su)	82	6.6	9.8	7.3	7.3	0.5
Dissolved Oxygen (mg/L)	66	6.0	10.9	7.5	7.7	1.1
Specific Conductance (µmhos)	66	58.5	1376.0	195.6	231.0	194.3
Turbidity (NTU)	67	2.8	340.0	11.6	26.3	49.2
Total Suspended Solids (mg/L)	78	< 1.0	450.0	10.0	24.0	55.0

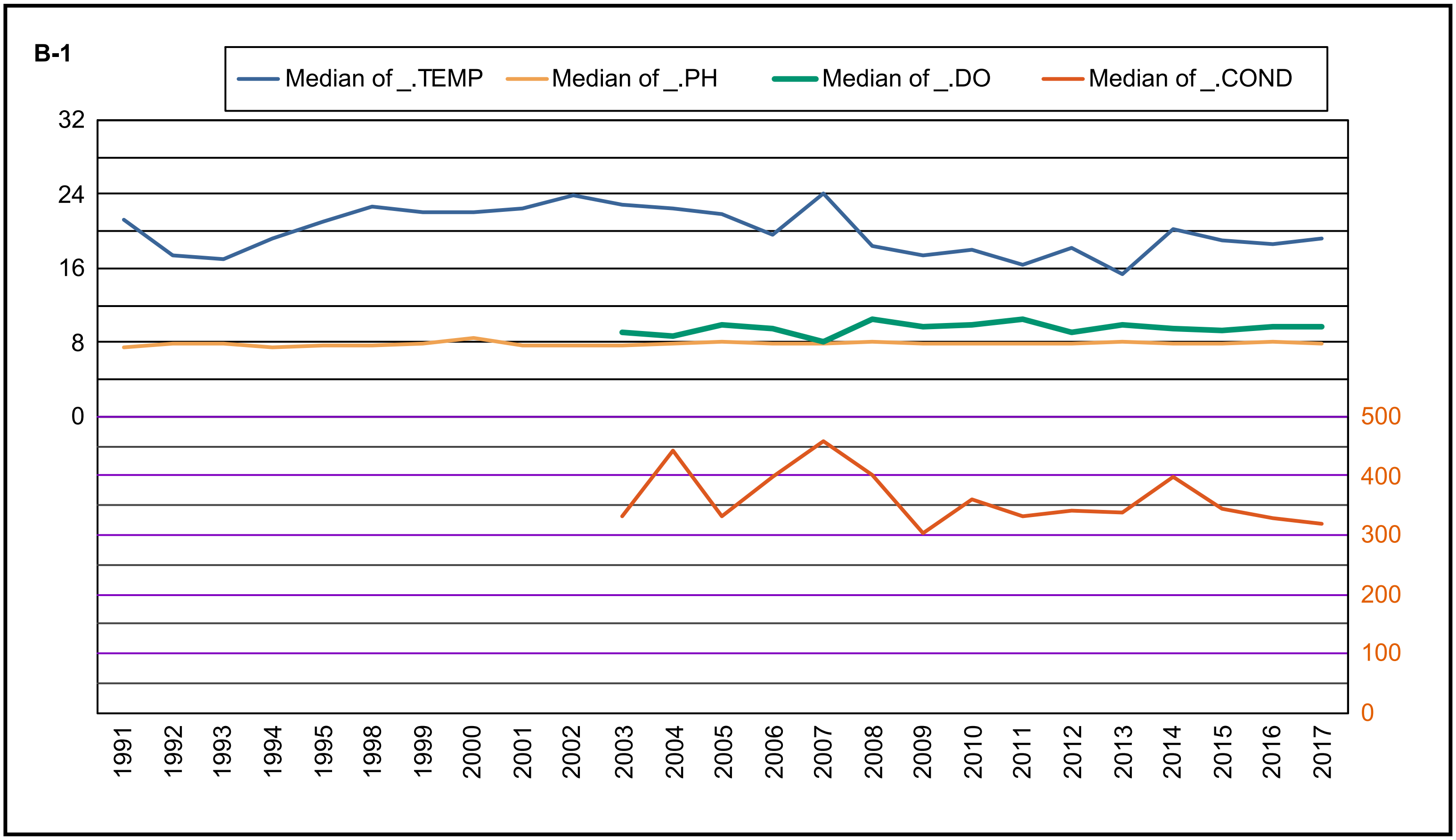
Total Nitrogen (mg/L)	74	< 0.650	19.356	2.116	2.919	2.366
Total Phosphorus (mg/L)	74	0.004	1.870	0.247	0.395	0.431
SPLC-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	40	16.0	32.0	25.0	24.6	3.4
pH (su)	40	6.1	8.3	7.0	7.0	0.4
Dissolved Oxygen (mg/L)	37	5.5	8.3	7.2	7.2	0.7
Specific Conductance (µmhos)	37	29.0	179.7	76.3	79.8	31.6
Turbidity (NTU)	38	1.6	60.9	11.3	16.1	12.4
Total Suspended Solids (mg/L)	38	< 1.0	93.0	3.0	11.1	18.3
Total Nitrogen (mg/L)	41	< 0.152	2.444	0.463	0.496	0.250
Total Phosphorus (mg/L)	41	< 0.004	0.058	0.025	0.026	0.012
SPYG-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	52	4.0	30.3	22.8	22.6	6.1
pH (su)	52	6.0	8.0	7.0	7.0	0.4
Dissolved Oxygen (mg/L)	41	5.5	10.5	7.3	7.4	0.8
Specific Conductance (µmhos)	38	52.0	189.1	120.0	119.9	35.4
Turbidity (NTU)	46	2.3	61.1	19.0	20.6	11.5
Total Suspended Solids (mg/L)	57	1.0	58.0	13.0	16.5	11.4
Total Nitrogen (mg/L)	56	< 0.184	3.714	0.452	0.514	0.282
Total Phosphorus (mg/L)	56	< 0.004	0.100	0.032	0.034	0.018
SSYD-4	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	11	14.8	31.7	24.0	24.0	6.1
pH (su)	11	6.8	9.3	8.2	8.0	0.8
Dissolved Oxygen (mg/L)	11	8.0	10.7	9.0	9.1	0.7
Specific Conductance (µmhos)	11	82.1	352.2	132.0	150.8	72.3
Turbidity (NTU)	11	1.3	10.8	1.8	2.8	2.8
Total Suspended Solids (mg/L)	8	< 1.0	14.0	2.5	3.6	4.3
Total Nitrogen (mg/L)	8	1.368	6.054	1.422	1.561	0.727
Total Phosphorus (mg/L)	8	0.035	0.083	0.049	0.055	0.019
STXB-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	50	16.2	27.0	22.8	22.3	2.4
pH (su)	50	4.6	6.8	5.5	5.5	0.4
Dissolved Oxygen (mg/L)	50	5.9	9.5	8.3	8.3	0.6
Specific Conductance (µmhos)	49	21.6	44.9	33.4	33.3	4.6
Turbidity (NTU)	53	2.1	45.4	5.5	9.6	10.5
Total Suspended Solids (mg/L)	49	< 2.0	53.0	6.0	9.0	10.2
Total Nitrogen (mg/L)	49	< 0.655	3.120	0.858	0.889	0.274
Total Phosphorus (mg/L)	49	0.005	0.071	0.023	0.027	0.014
SUCS-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	55	5.3	30.0	25.1	23.3	5.8
pH (su)	55	5.7	8.2	7.2	7.1	0.5
Dissolved Oxygen (mg/L)	39	6.6	9.6	7.5	7.8	0.7
Specific Conductance (µmhos)	39	46.0	100.7	61.7	64.1	13.7
Turbidity (NTU)	39	10.1	211.0	24.9	43.9	51.4
Total Suspended Solids (mg/L)	55	3.0	259.7	23.0	40.6	55.1
Total Nitrogen (mg/L)	50	< 0.008	3.894	0.349	0.507	0.403
Total Phosphorus (mg/L)	52	< 0.002	0.144	0.048	0.055	0.035
TA-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	162	-1.8	34.0	21.0	19.4	6.5
pH (su)	163	5.7	8.7	7.0	7.0	0.4
Dissolved Oxygen (mg/L)	75	6.0	12.6	8.5	8.6	1.4
Specific Conductance (µmhos)	73	28.4	85.0	45.5	45.8	7.9
Turbidity (NTU)	76	5.2	458.0	12.1	27.1	55.9
Total Suspended Solids (mg/L)	160	< 1.0	292.0	9.0	22.0	37.6
Total Nitrogen (mg/L)	88	< 0.003	18.920	0.381	0.621	1.151

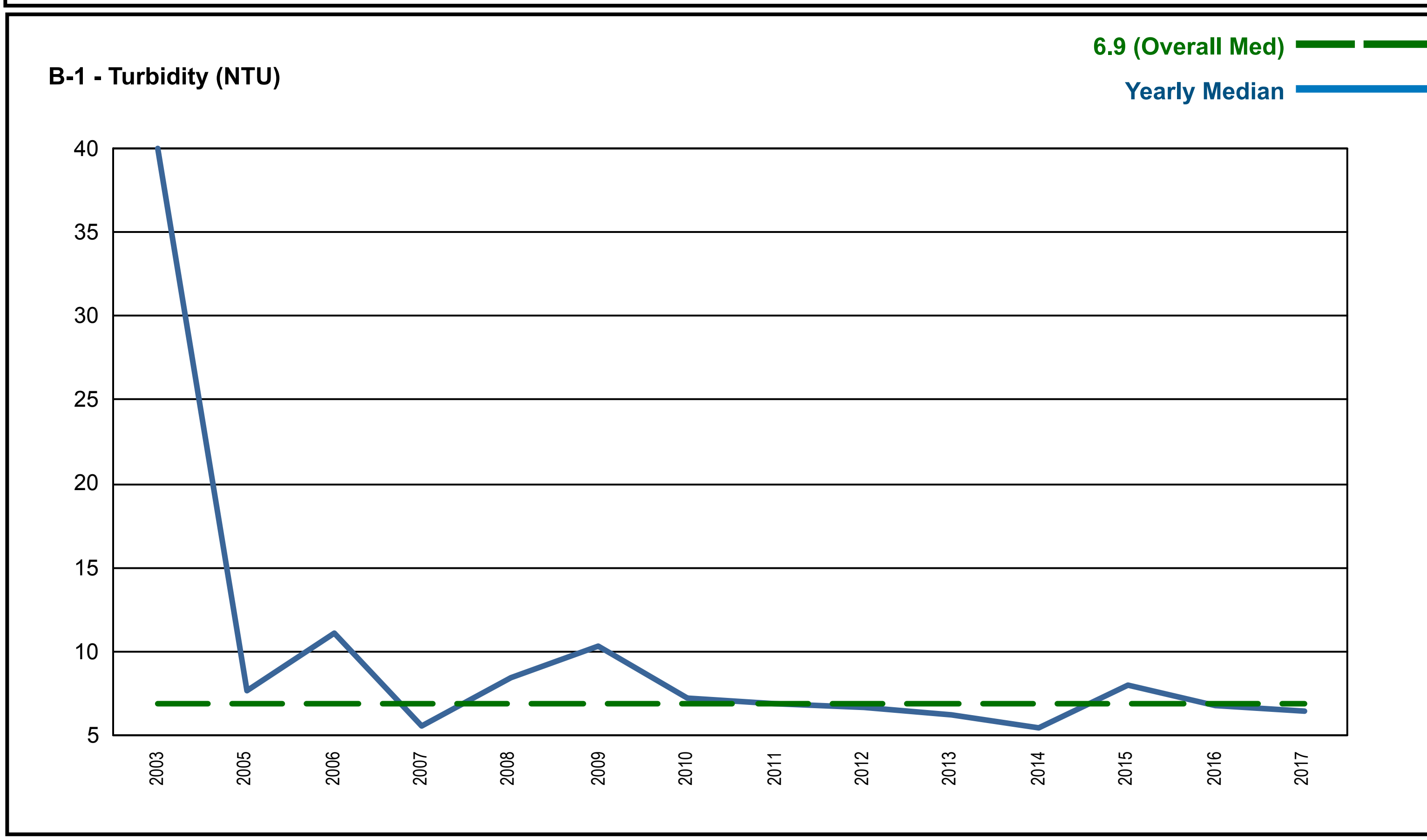
Total Phosphorus (mg/L)	152	< 0.004	2.210	0.040	0.069	0.188
TARE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	143	5.6	30.1	19.0	18.9	5.8
pH (su)	144	5.9	10.0	7.0	6.9	0.4
Dissolved Oxygen (mg/L)	143	6.6	11.8	8.9	9.0	1.1
Specific Conductance (µmhos)	144	36.1	85.3	50.4	51.2	8.0
Turbidity (NTU)	141	2.7	232.0	9.8	17.8	26.1
Total Suspended Solids (mg/L)	143	< 1.0	131.0	9.0	17.1	23.5
Total Nitrogen (mg/L)	143	< 0.257	3.972	0.417	0.459	0.237
Total Phosphorus (mg/L)	143	< 0.004	0.176	0.021	0.030	0.027
TART-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	53	6.7	32.5	21.5	21.0	7.0
pH (su)	53	6.2	8.6	6.9	6.9	0.4
Dissolved Oxygen (mg/L)	53	6.3	12.5	8.1	8.4	1.5
Specific Conductance (µmhos)	53	32.1	48.7	40.9	40.7	3.8
Turbidity (NTU)	52	2.6	54.2	6.2	9.8	9.5
Total Suspended Solids (mg/L)	50	< 1.0	79.0	2.0	7.3	14.4
Total Nitrogen (mg/L)	50	< 0.204	2.416	0.397	0.427	0.218
Total Phosphorus (mg/L)	50	0.009	0.037	0.015	0.018	0.007
TENR-215	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	41	5.8	31.5	20.6	20.1	7.9
pH (su)	41	7.0	8.9	7.8	7.9	0.5
Dissolved Oxygen (mg/L)	41	5.8	12.2	10.0	9.3	1.8
Specific Conductance (µmhos)	41	153.0	218.0	188.0	187.2	17.7
Turbidity (NTU)	41	2.0	13.6	3.8	4.4	2.1
Total Suspended Solids (mg/L)	41	< 1.0	11.0	4.0	4.0	2.2
Total Nitrogen (mg/L)	41	< 0.564	3.976	0.761	0.741	0.309
Total Phosphorus (mg/L)	41	0.015	0.070	0.040	0.041	0.012
TENR-417	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	104	5.7	30.5	19.4	18.9	7.6
pH (su)	104	6.8	8.9	7.6	7.6	0.3
Dissolved Oxygen (mg/L)	104	4.4	13.1	8.1	8.3	2.4
Specific Conductance (µmhos)	104	129.3	233.0	191.0	189.1	22.0
Turbidity (NTU)	104	2.0	44.9	4.7	6.3	5.3
Total Suspended Solids (mg/L)	103	< 0.3	44.0	4.0	4.9	5.0
Total Nitrogen (mg/L)	79	< 0.274	4.590	0.620	0.687	0.328
Total Phosphorus (mg/L)	79	< 0.007	0.270	0.028	0.035	0.034
TERC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	51	13.0	27.8	23.4	21.9	3.9
pH (su)	51	6.7	8.9	7.7	7.8	0.5
Dissolved Oxygen (mg/L)	46	6.2	10.4	8.0	8.1	0.9
Specific Conductance (µmhos)	46	27.0	300.0	189.8	178.5	55.0
Turbidity (NTU)	39	1.3	21.4	4.0	5.5	4.0
Total Suspended Solids (mg/L)	47	< 1.0	165.0	3.0	8.6	24.7
Total Nitrogen (mg/L)	47	< 0.284	2.010	0.430	0.462	0.183
Total Phosphorus (mg/L)	47	< 0.004	0.224	0.021	0.029	0.034
TH-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	129	6.0	29.0	21.0	19.6	5.7
pH (su)	131	6.4	8.6	7.6	7.6	0.4
Dissolved Oxygen (mg/L)	53	6.1	10.0	7.5	7.6	0.8
Specific Conductance (µmhos)	52	40.1	712.0	279.4	291.1	143.3
Turbidity (NTU)	54	2.6	40.7	6.7	8.8	7.2
Total Suspended Solids (mg/L)	126	< 1.0	293.0	7.0	13.3	28.3
Total Nitrogen (mg/L)	107	< 0.360	11.457	1.423	1.800	1.216
Total Phosphorus (mg/L)	123	< 0.004	7.830	0.290	0.768	1.356

TMCM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	89	10.0	33.0	26.0	23.7	6.1
pH (su)	89	5.0	10.1	7.0	6.9	0.9
Dissolved Oxygen (mg/L)	87	6.7	12.0	8.2	8.5	1.2
Specific Conductance (μmhos)	89	0.0	117.0	76.0	72.0	25.7
Turbidity (NTU)	90	1.0	96.0	3.8	8.3	13.5
Total Suspended Solids (mg/L)	85	< 1.0	19.0	2.5	3.6	3.1
Total Nitrogen (mg/L)	85	< 0.226	3.718	0.528	0.578	0.302
Total Phosphorus (mg/L)	85	0.005	0.130	0.022	0.027	0.018
TN-4A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	147	5.0	30.2	17.1	17.4	6.7
pH (su)	148	6.7	9.0	7.9	7.9	0.3
Dissolved Oxygen (mg/L)	151	3.8	13.9	9.2	9.2	1.6
Specific Conductance (μmhos)	140	184.0	345.0	267.5	265.6	30.8
Turbidity (NTU)	152	0.5	271.0	12.4	18.5	25.0
Total Suspended Solids (mg/L)	148	1.0	206.0	14.0	22.3	25.5
Total Nitrogen (mg/L)	114	< 0.294	15.860	1.264	1.335	0.619
Total Phosphorus (mg/L)	114	< 0.002	1.100	0.152	0.178	0.124
TRKJ-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	18	11.3	23.9	19.4	18.6	3.4
pH (su)	18	7.7	8.5	8.2	8.1	0.3
Dissolved Oxygen (mg/L)	18	8.7	11.1	9.5	9.7	0.6
Specific Conductance (μmhos)	18	280.9	318.3	306.8	304.6	10.9
Turbidity (NTU)	19	1.7	3.6	2.5	2.5	0.5
Total Suspended Solids (mg/L)	16	< 1.0	4.0	1.0	1.3	1.2
Total Nitrogen (mg/L)	16	< 1.015	1.882	0.596	0.638	0.135
Total Phosphorus (mg/L)	16	0.008	0.042	0.014	0.014	0.008
UCCR-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	11	18.3	31.9	23.9	23.9	4.3
pH (su)	11	6.6	8.6	7.0	7.2	0.7
Dissolved Oxygen (mg/L)	10	7.9	10.4	8.8	9.0	0.8
Specific Conductance (μmhos)	9	39.2	60.2	45.7	48.9	7.3
Turbidity (NTU)	10	3.5	102.0	10.0	23.3	32.0
Total Suspended Solids (mg/L)	10	1.0	111.0	6.5	23.2	37.2
Total Nitrogen (mg/L)	9	< 0.040	1.718	0.471	0.428	0.252
Total Phosphorus (mg/L)	10	0.018	0.059	0.024	0.032	0.016
UPHM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	45	11.1	31.7	24.6	23.8	4.8
pH (su)	45	6.5	9.0	7.3	7.4	0.4
Dissolved Oxygen (mg/L)	45	6.7	13.0	8.3	8.4	1.3
Specific Conductance (μmhos)	45	38.0	247.7	160.8	149.1	61.6
Turbidity (NTU)	45	0.6	204.0	6.9	23.6	42.5
Total Suspended Solids (mg/L)	44	< 1.0	266.0	4.0	23.7	51.0
Total Nitrogen (mg/L)	44	< 0.732	4.034	0.774	0.958	0.440
Total Phosphorus (mg/L)	44	< 0.004	0.128	0.024	0.039	0.035
VALJ-8	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	38	14.7	29.5	24.8	24.3	3.1
pH (su)	38	7.4	8.5	8.2	8.2	0.2
Dissolved Oxygen (mg/L)	38	6.9	13.0	8.9	9.1	1.4
Specific Conductance (μmhos)	38	453.0	1295.0	805.0	777.7	190.1
Turbidity (NTU)	38	1.2	149.0	2.7	10.6	25.5
Total Suspended Solids (mg/L)	38	< 0.3	185.0	3.5	11.6	31.1
Total Nitrogen (mg/L)	29	< 1.616	17.360	4.896	4.788	1.908
Total Phosphorus (mg/L)	29	< 0.100	1.020	0.487	0.492	0.242
VC-5	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**

Temperature (°C)	61	11.8	28.6	23.4	22.5	3.6
pH (su)	61	6.2	8.4	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	37	5.0	11.3	8.3	8.3	1.4
Specific Conductance (µmhos)	37	131.0	497.2	431.0	387.6	96.6
Turbidity (NTU)	37	0.9	59.1	2.5	5.0	9.5
Total Suspended Solids (mg/L)	56	< 0.3	58.0	3.0	4.3	7.8
Total Nitrogen (mg/L)	34	< 0.108	12.240	1.054	1.026	0.281
Total Phosphorus (mg/L)	49	< 0.004	0.158	0.029	0.036	0.029
VI-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	66	11.7	28.2	24.1	23.2	3.6
pH (su)	66	6.6	8.7	7.6	7.6	0.4
Dissolved Oxygen (mg/L)	47	5.0	10.5	7.4	7.4	1.4
Specific Conductance (µmhos)	47	120.0	491.0	445.0	416.2	81.2
Turbidity (NTU)	47	1.9	225.0	3.8	11.0	32.6
Total Suspended Solids (mg/L)	66	< 1.0	583.0	4.5	16.4	71.5
Total Nitrogen (mg/L)	44	< 1.092	44.822	5.420	5.704	2.486
Total Phosphorus (mg/L)	57	0.203	1.820	0.674	0.694	0.344
VLGJ-5	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	70	5.8	29.5	22.9	21.3	6.6
pH (su)	70	7.3	9.4	8.2	8.3	0.4
Dissolved Oxygen (mg/L)	70	7.4	17.4	9.7	10.2	2.1
Specific Conductance (µmhos)	70	314.0	989.0	568.0	574.3	124.5
Turbidity (NTU)	70	1.1	34.5	4.0	6.8	6.6
Total Suspended Solids (mg/L)	70	< 1.0	49.0	5.0	8.3	9.0
Total Nitrogen (mg/L)	61	< 1.438	28.494	3.113	3.084	1.015
Total Phosphorus (mg/L)	61	0.019	0.517	0.183	0.192	0.116
WDFA-2A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	147	6.8	32.2	21.5	20.8	7.2
pH (su)	147	6.6	8.6	7.5	7.4	0.4
Dissolved Oxygen (mg/L)	147	6.5	12.6	9.1	9.1	1.3
Specific Conductance (µmhos)	147	65.2	222.5	119.6	122.3	30.0
Turbidity (NTU)	147	3.6	42.1	7.2	10.1	6.7
Total Suspended Solids (mg/L)	147	< 1.0	62.0	8.0	9.1	7.9
Total Nitrogen (mg/L)	147	< 0.160	3.980	0.545	0.552	0.226
Total Phosphorus (mg/L)	148	< 0.004	0.114	0.032	0.035	0.015
WEIC-12	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	283	5.6	33.7	21.0	20.6	7.5
pH (su)	283	5.8	9.0	7.6	7.6	0.5
Dissolved Oxygen (mg/L)	165	4.2	11.9	8.6	8.7	1.5
Specific Conductance (µmhos)	165	0.1	263.0	167.2	153.5	63.9
Turbidity (NTU)	162	6.7	237.0	12.6	18.8	22.6
Total Suspended Solids (mg/L)	277	< 1.0	213.0	11.0	16.6	21.2
Total Nitrogen (mg/L)	227	< 0.130	10.618	0.760	0.783	0.260
Total Phosphorus (mg/L)	276	< 0.004	0.990	0.088	0.112	0.103
YERC-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	104	8.8	27.8	21.3	20.1	5.5
pH (su)	105	5.9	7.8	7.1	7.1	0.4
Dissolved Oxygen (mg/L)	106	6.0	11.2	8.3	8.4	1.2
Specific Conductance (µmhos)	105	0.0	167.9	87.7	83.3	37.8
Turbidity (NTU)	103	2.1	60.8	6.9	11.0	10.3
Total Suspended Solids (mg/L)	103	< 1.0	53.0	5.0	8.5	10.7
Total Nitrogen (mg/L)	103	< 0.236	3.662	0.417	0.442	0.259
Total Phosphorus (mg/L)	103	< 0.005	0.092	0.021	0.025	0.015

ADEM Ambient Trend Stations - Sampled 1977 - 2018





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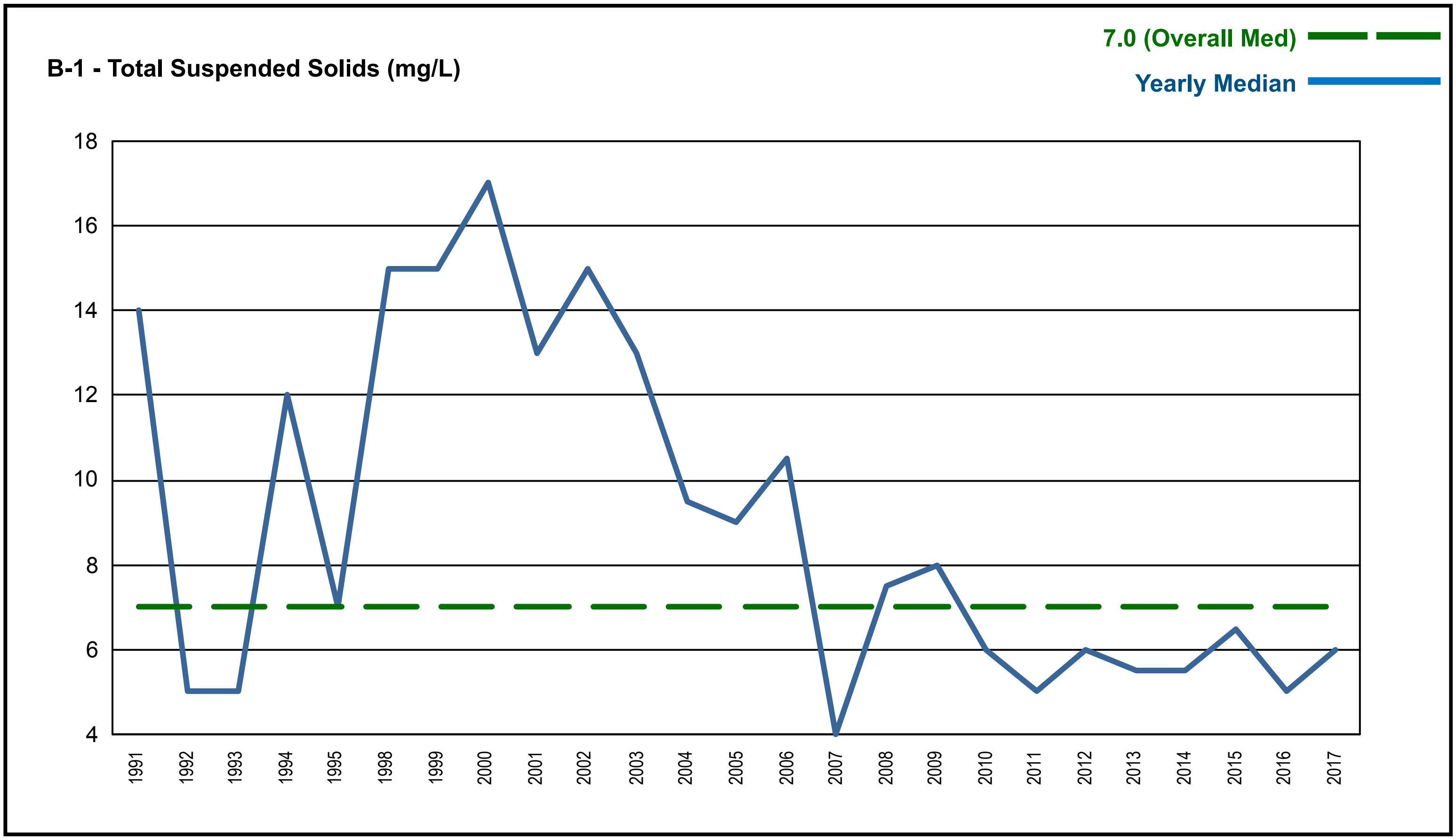

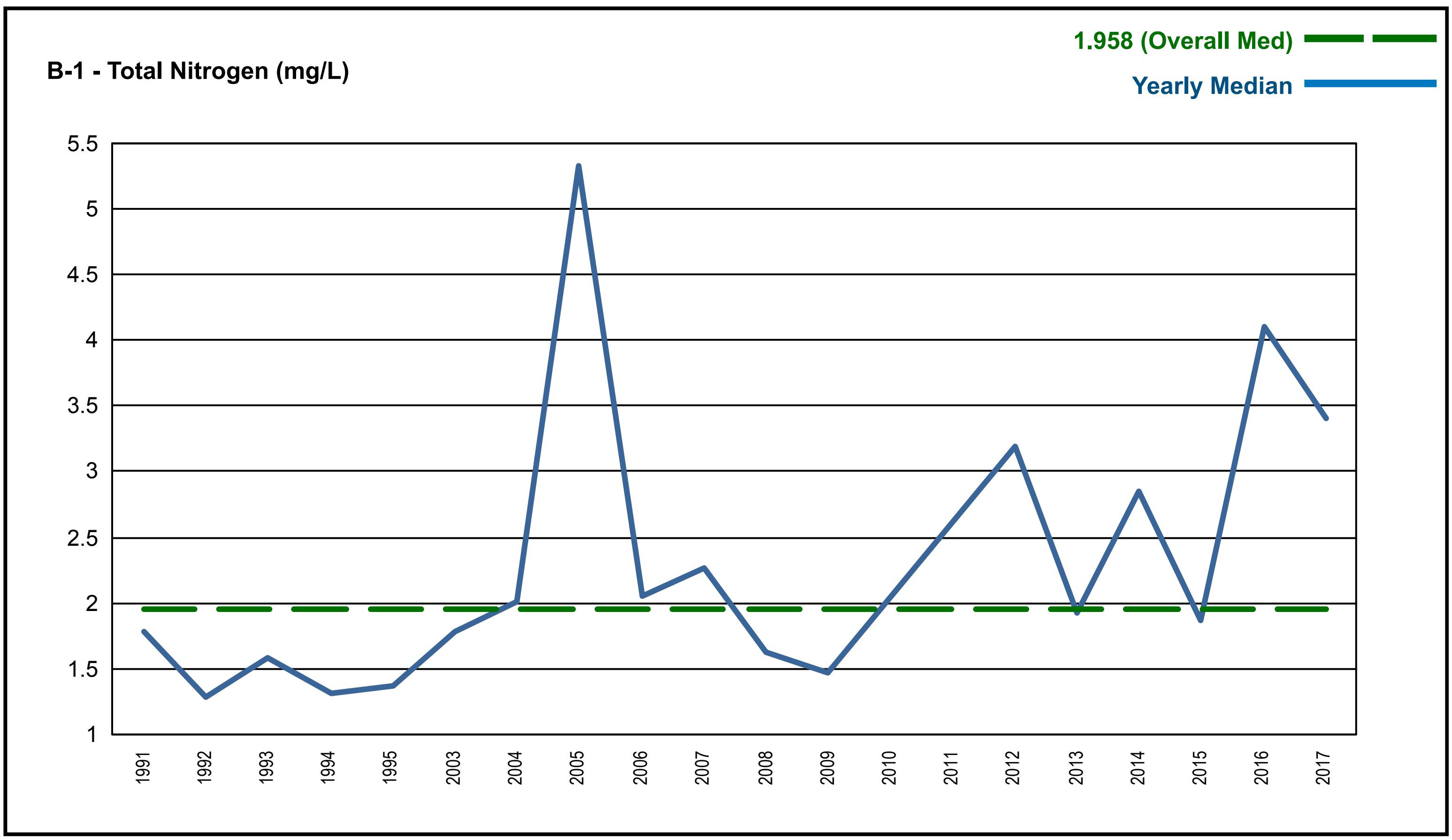

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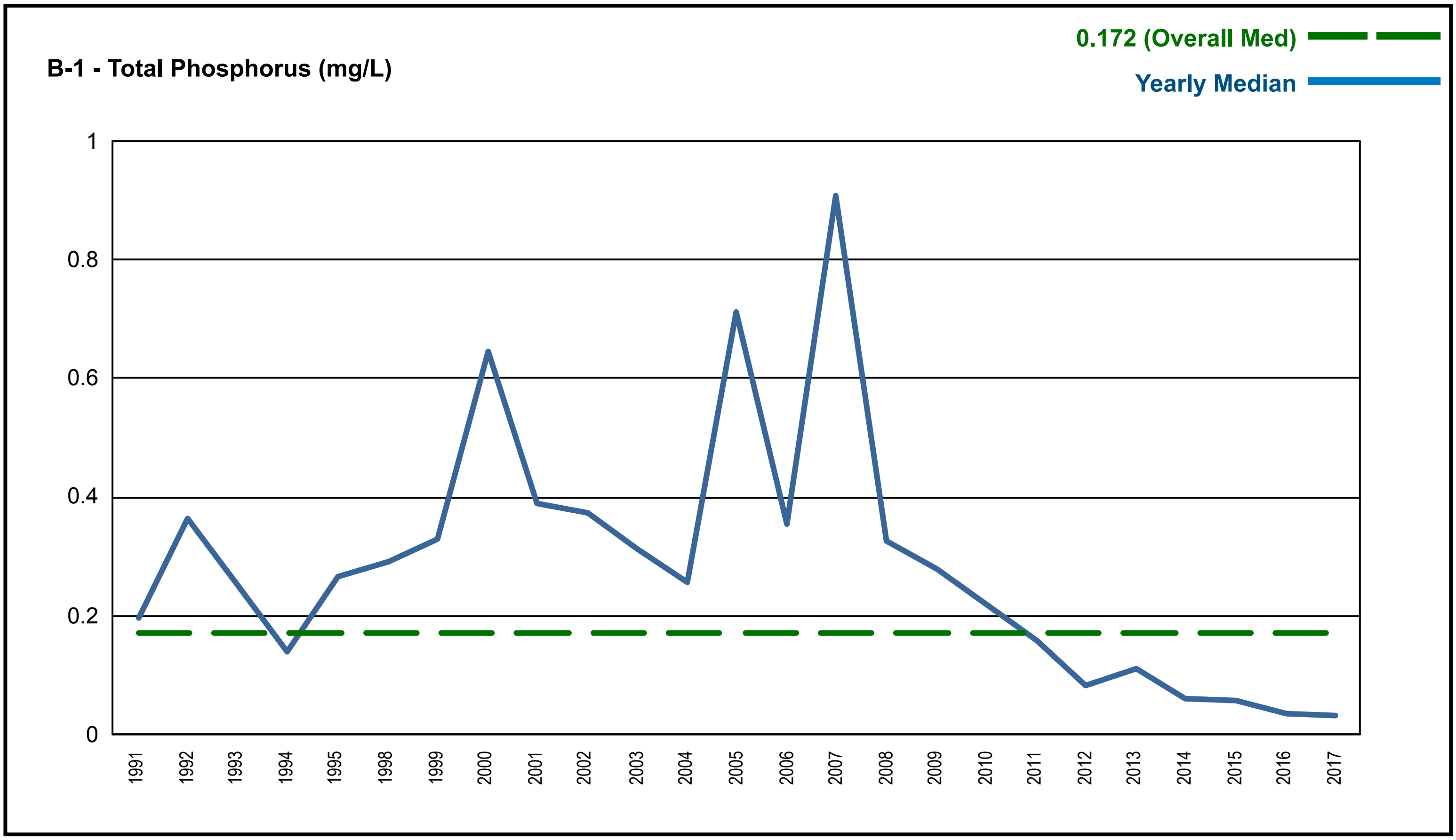

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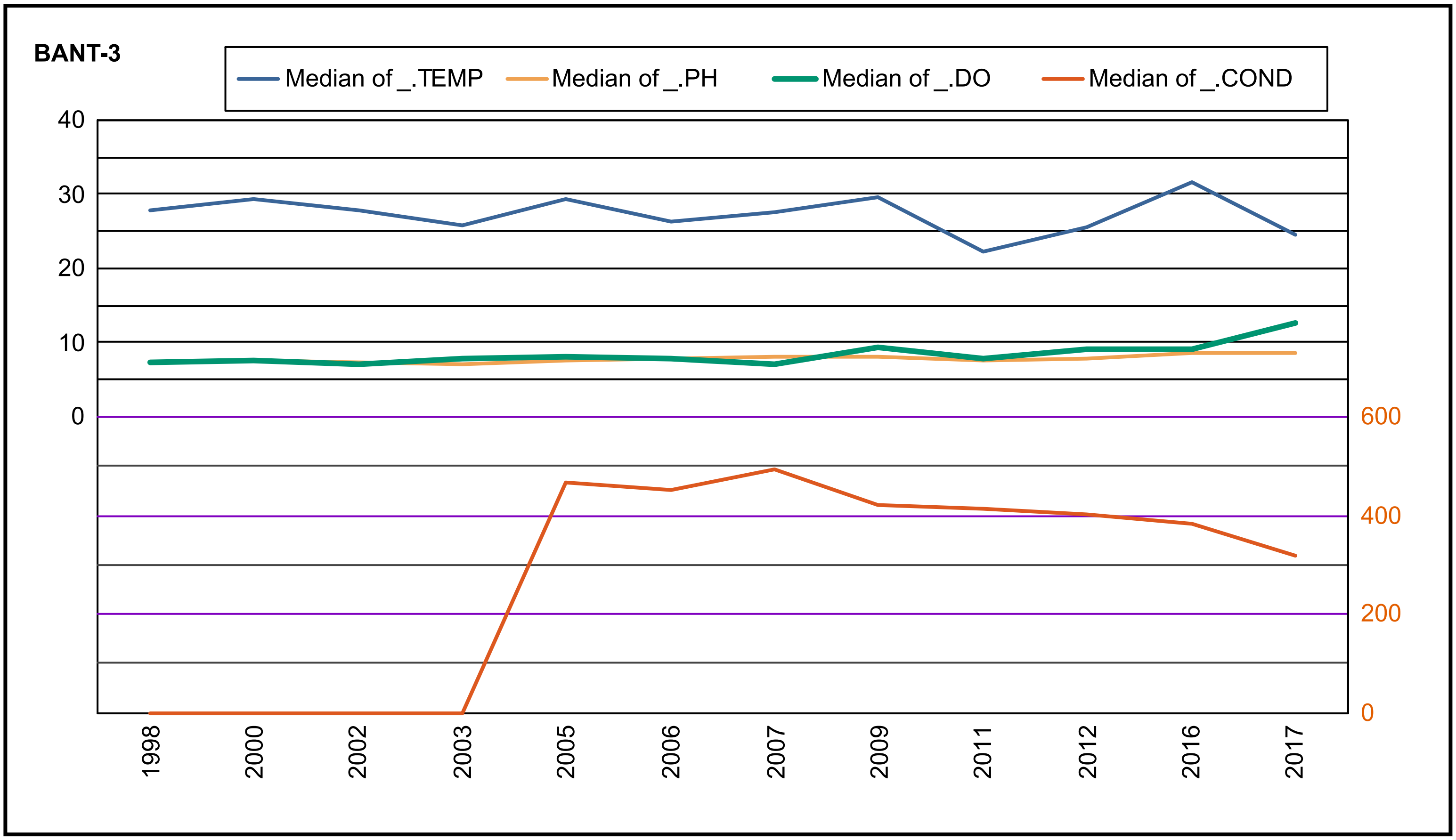

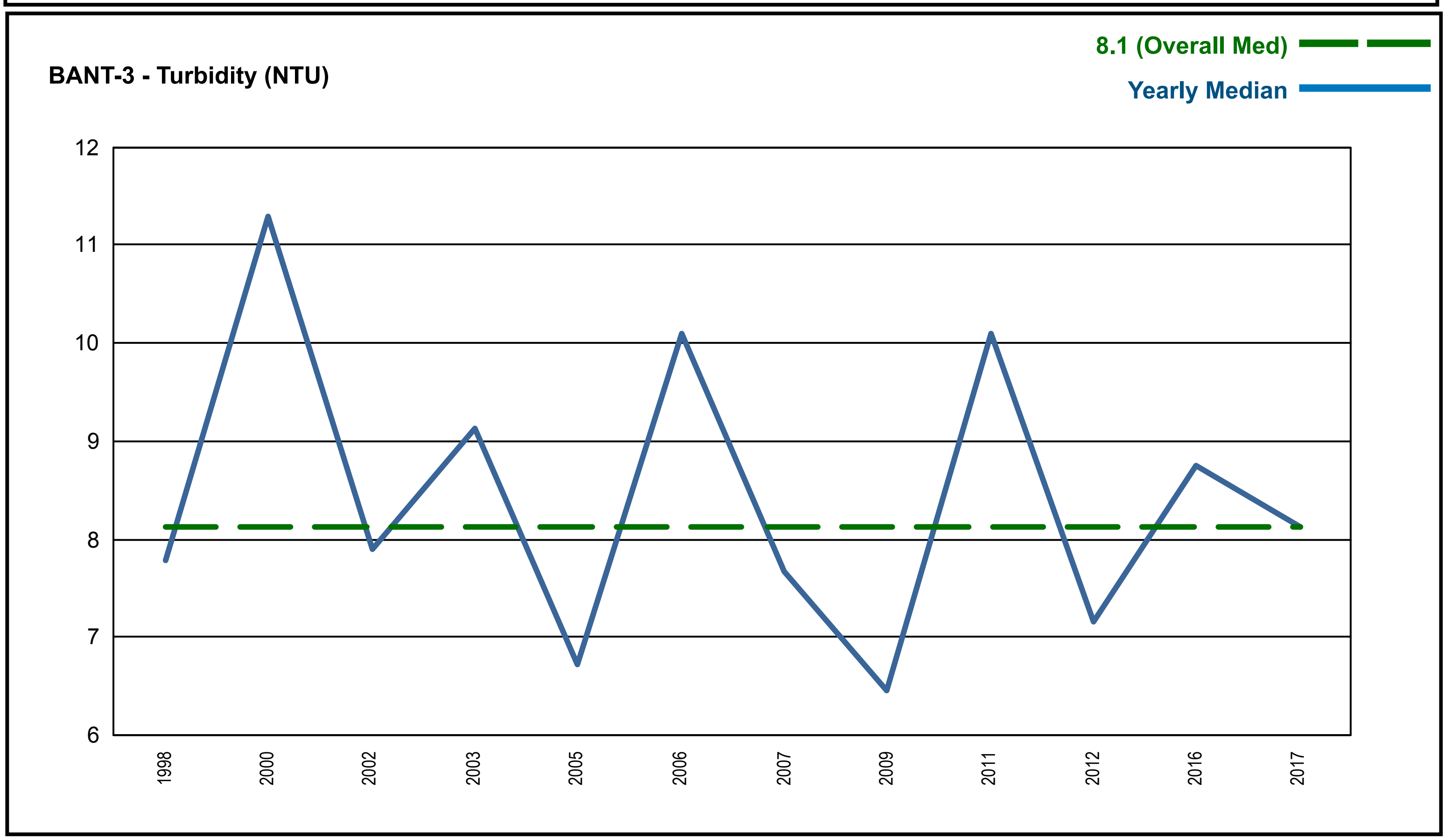

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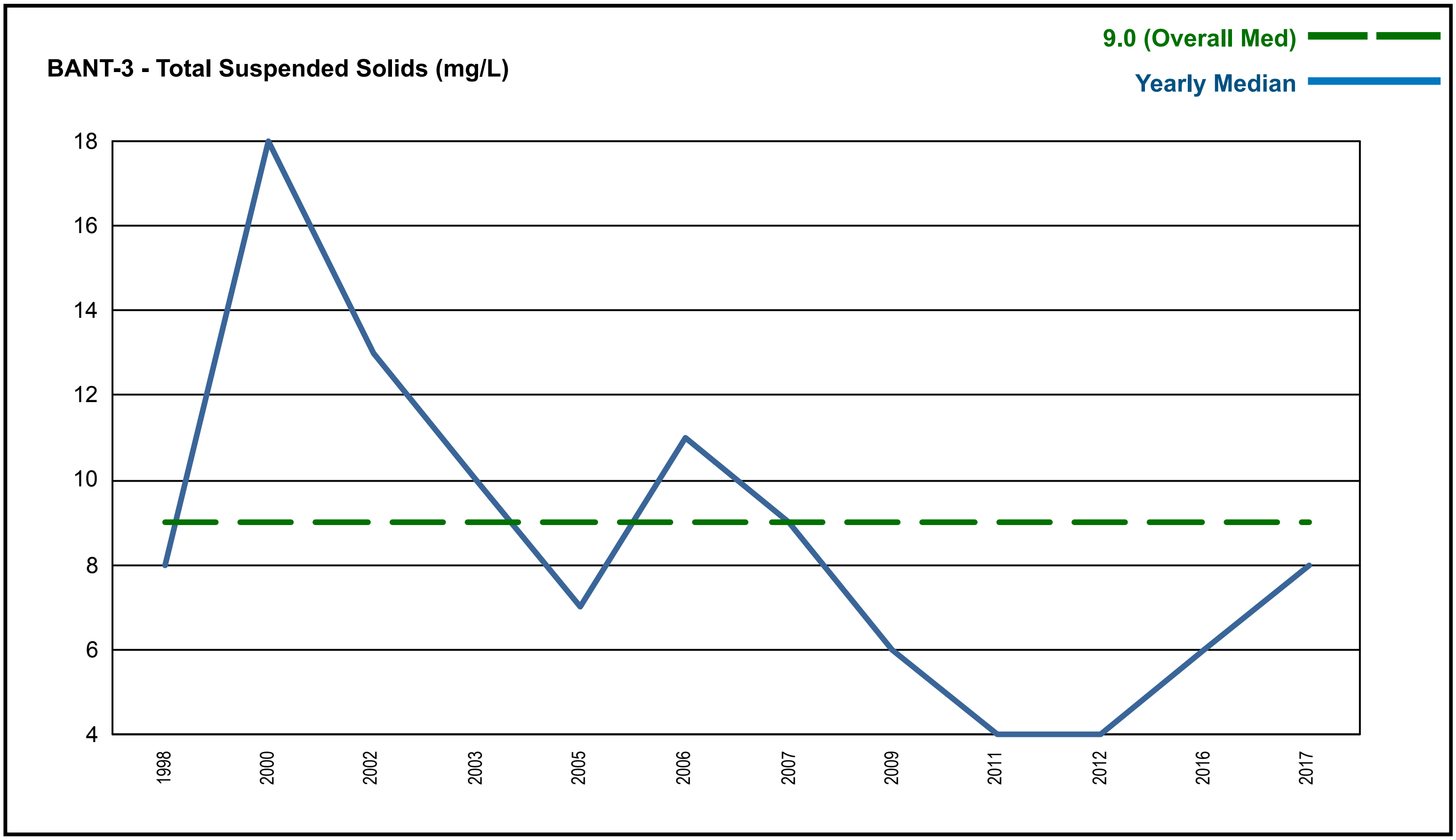

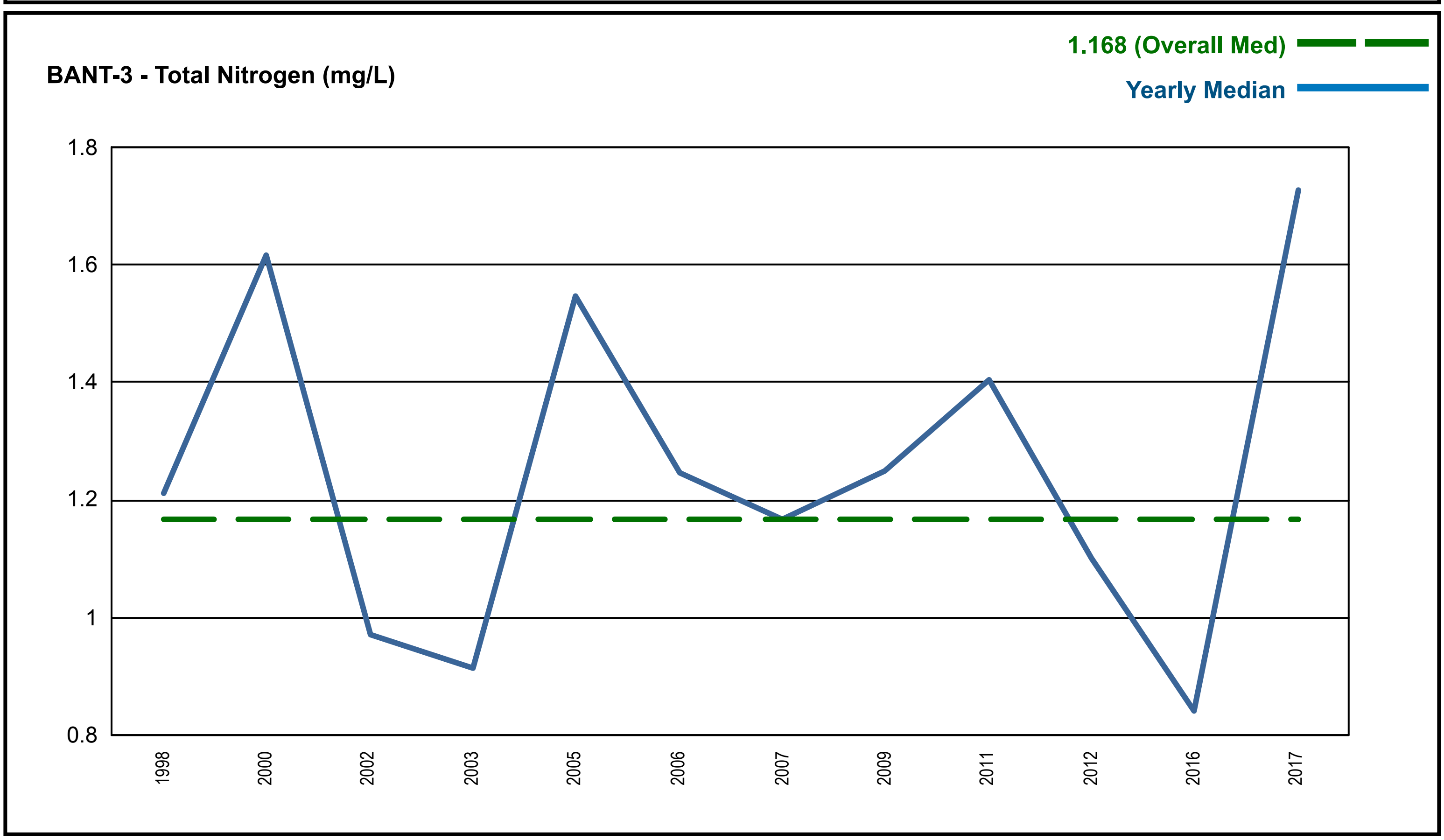

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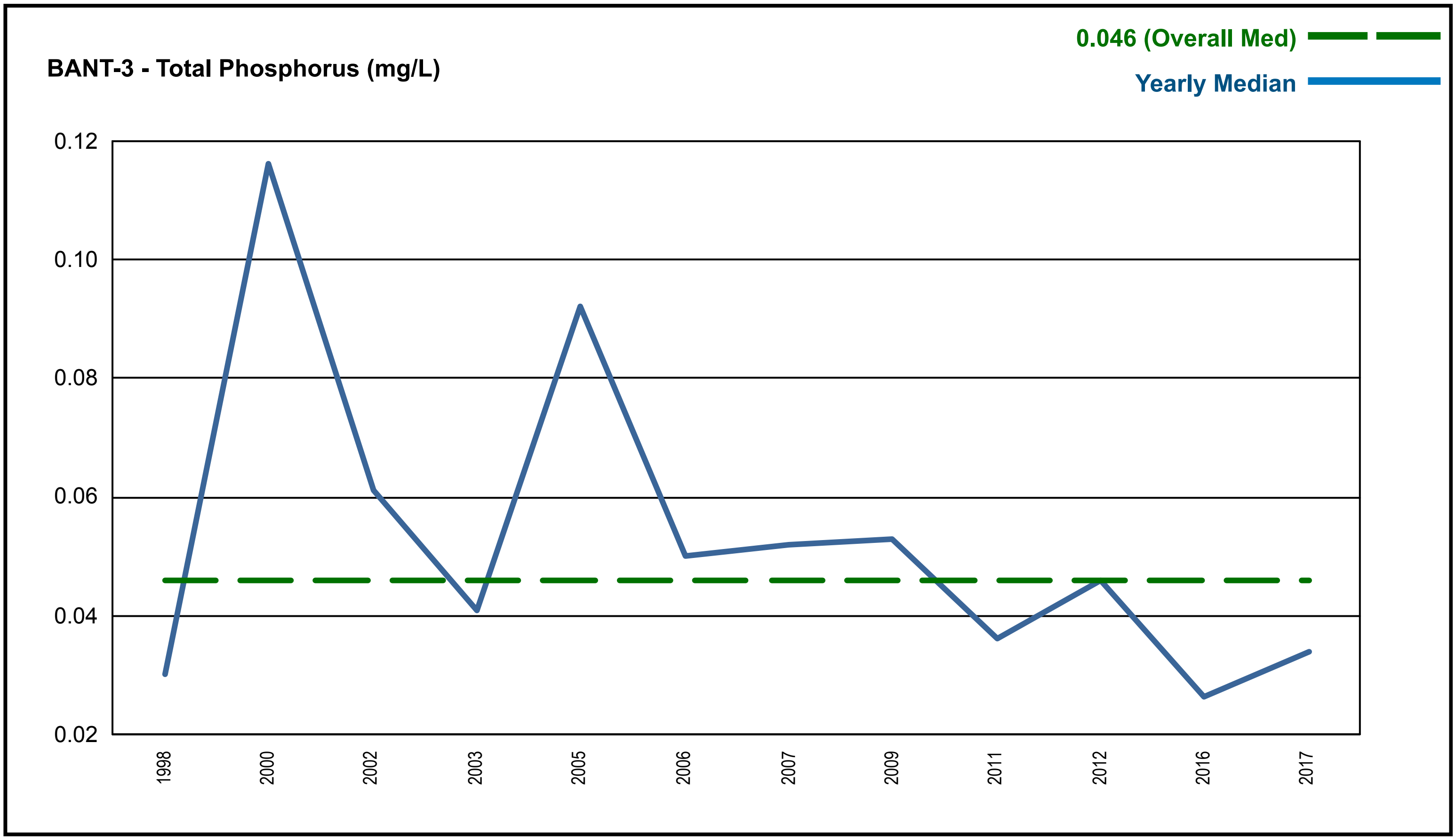

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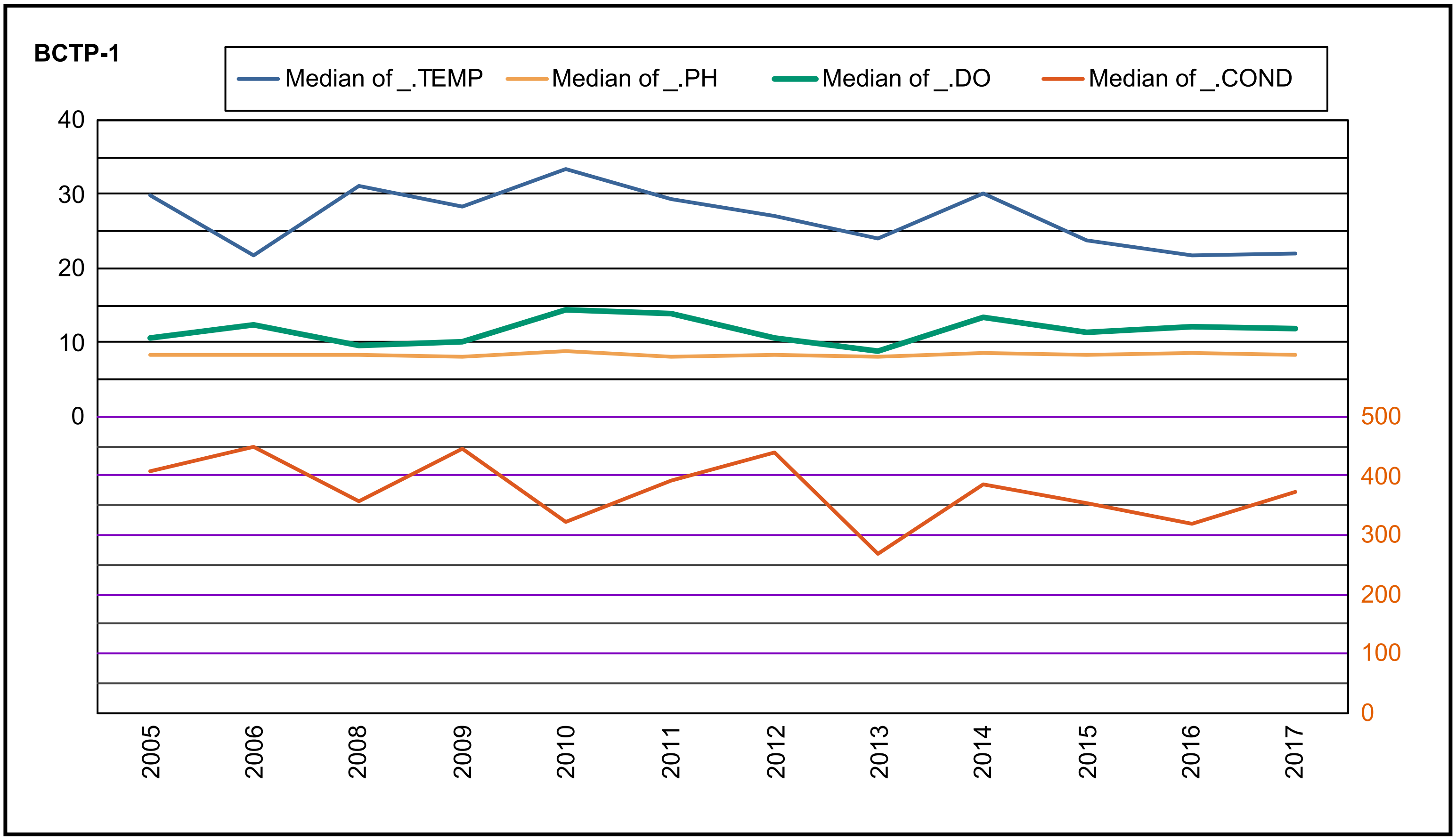

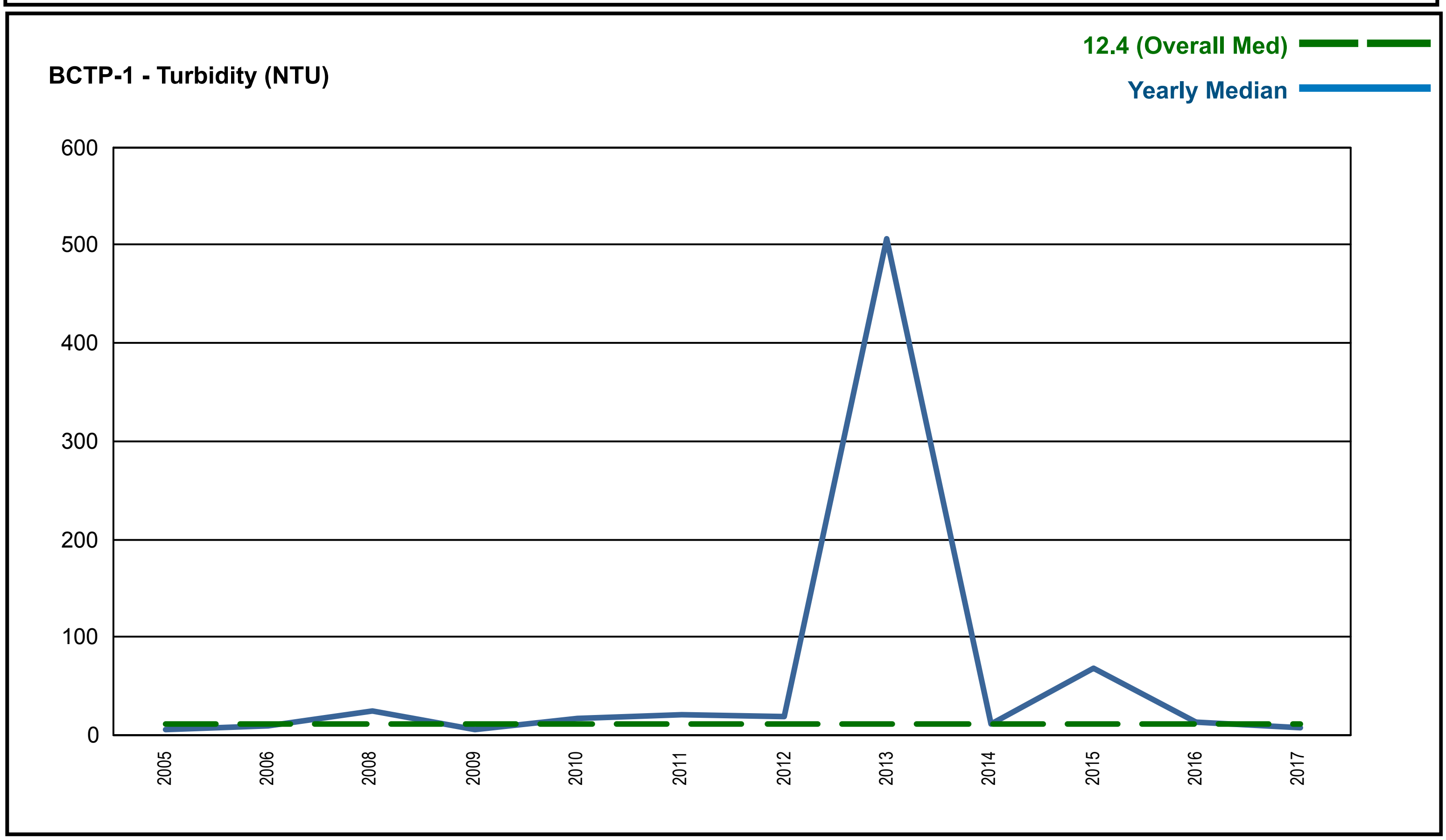

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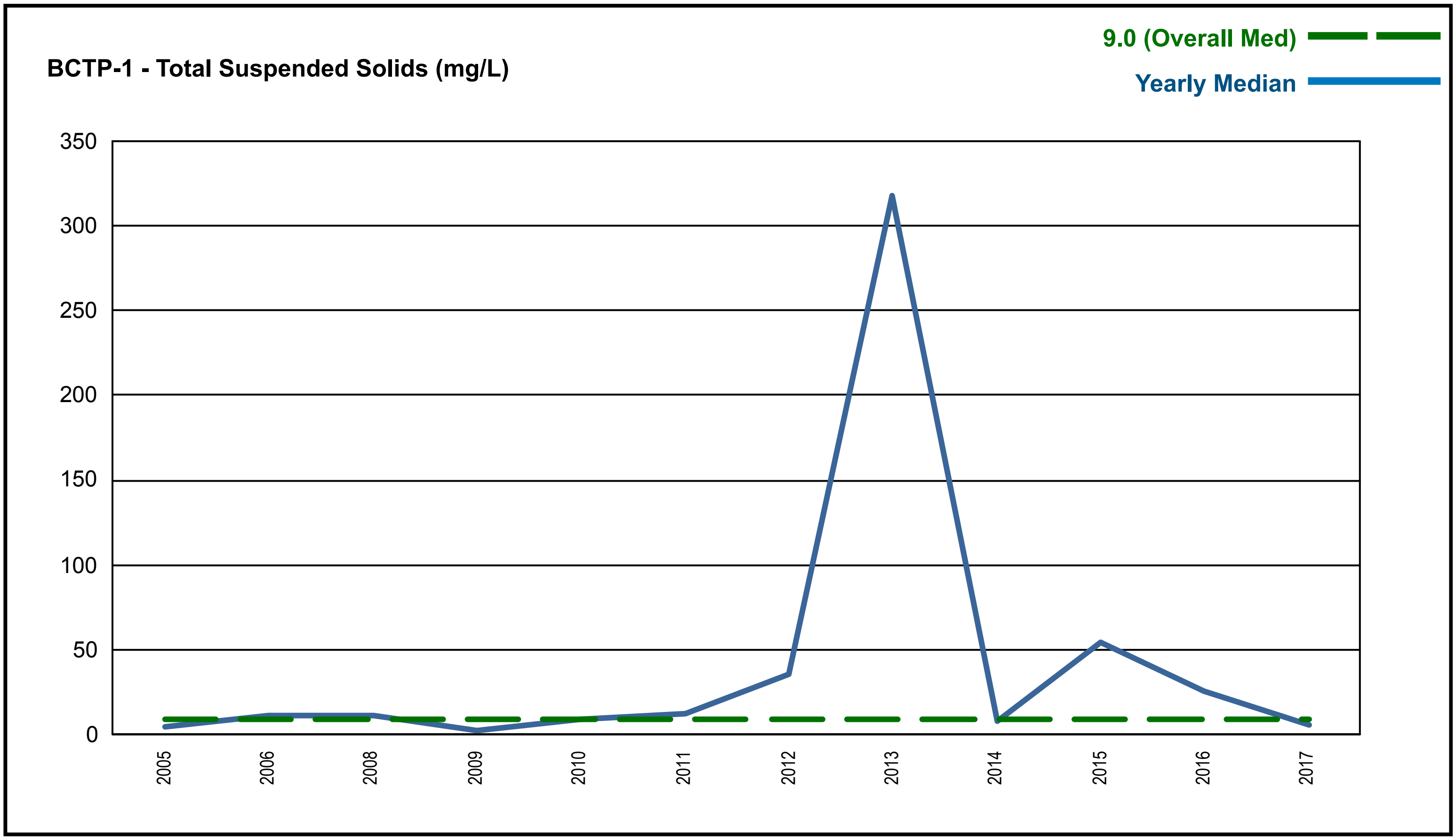

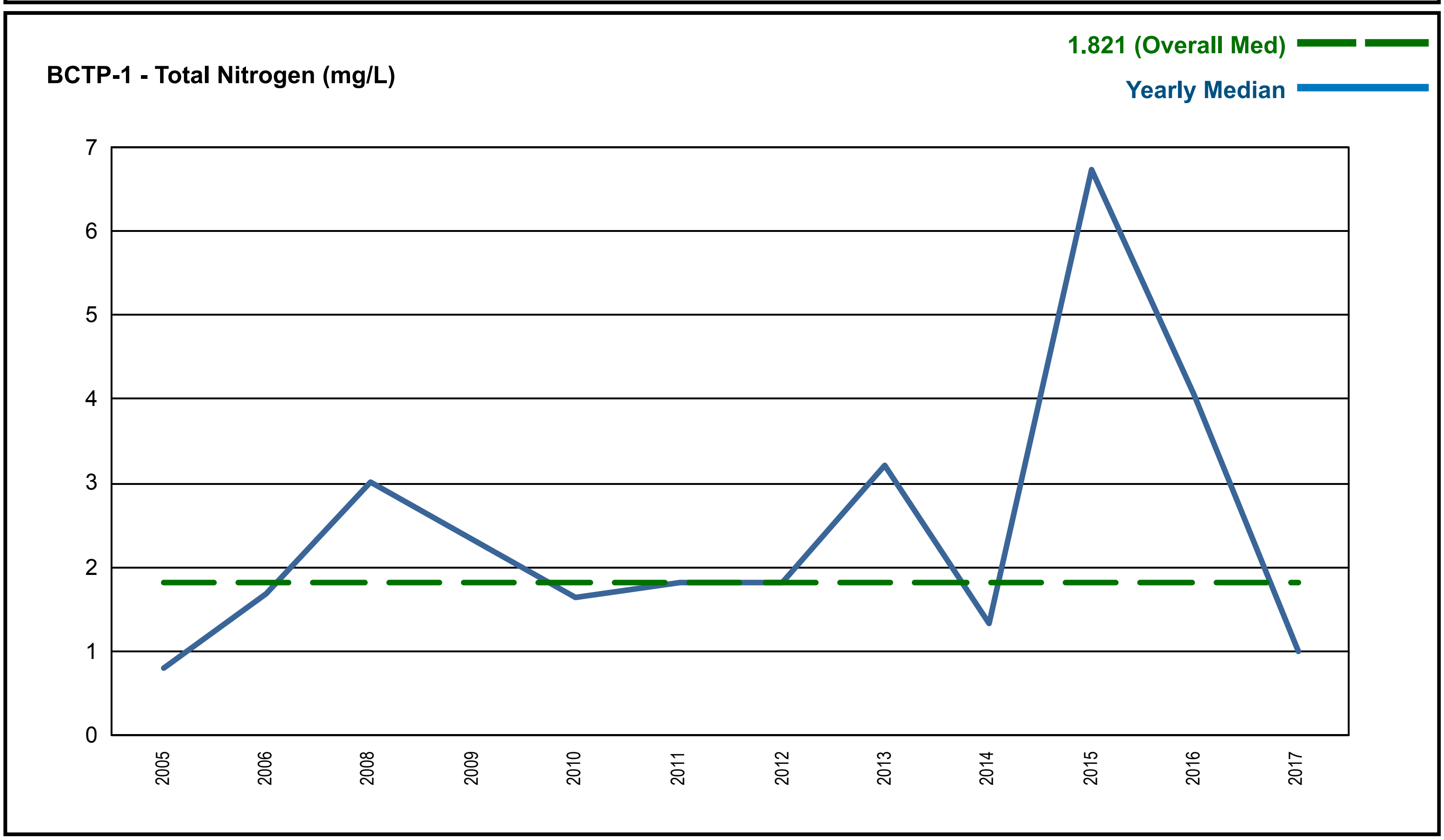

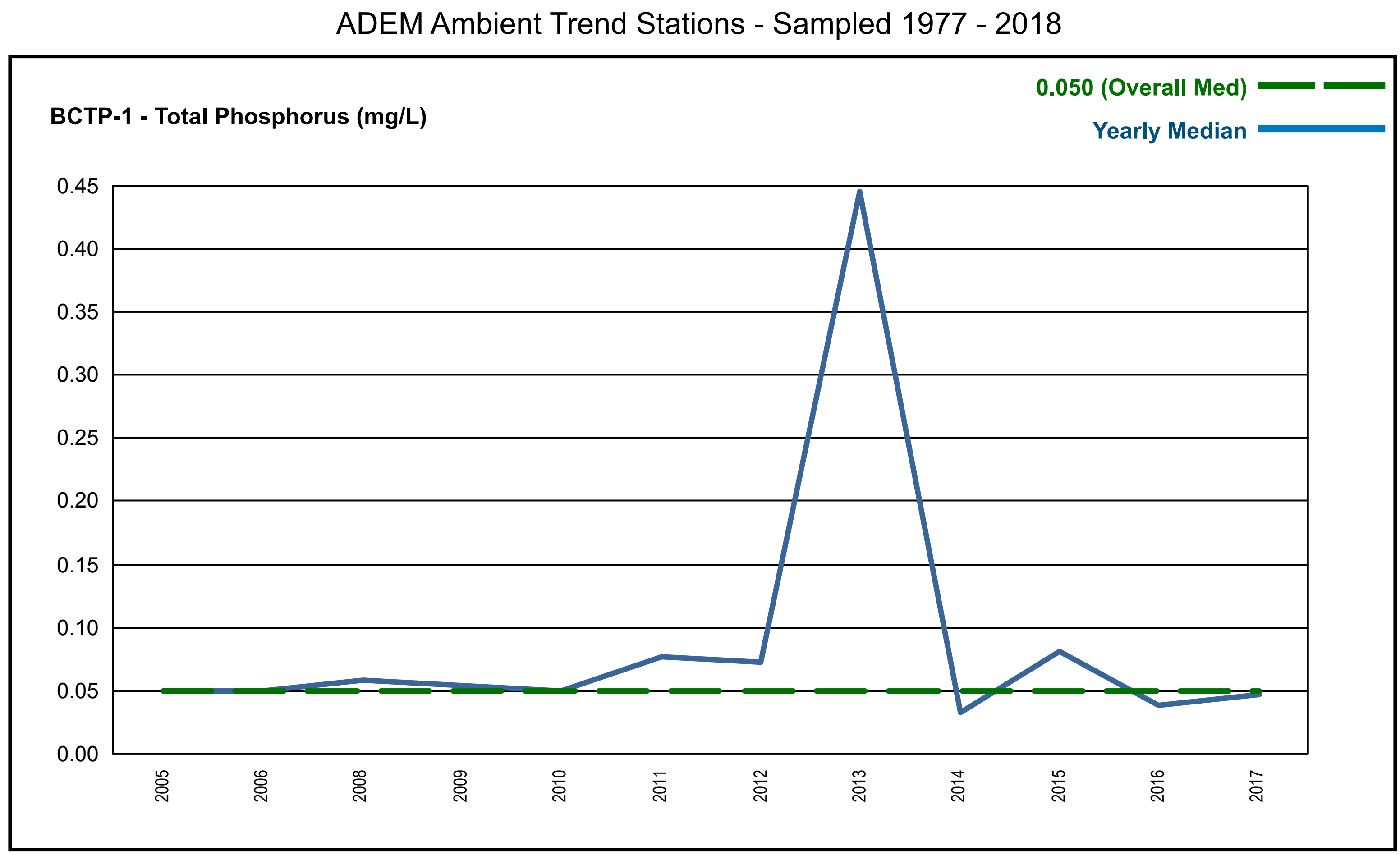
ADEM Ambient Trend Stations - Sampled 1977 - 2018
BCTP-1 - Total Phosphorus (mg/L)
0.050 (Overall Med)
Yearly Median
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
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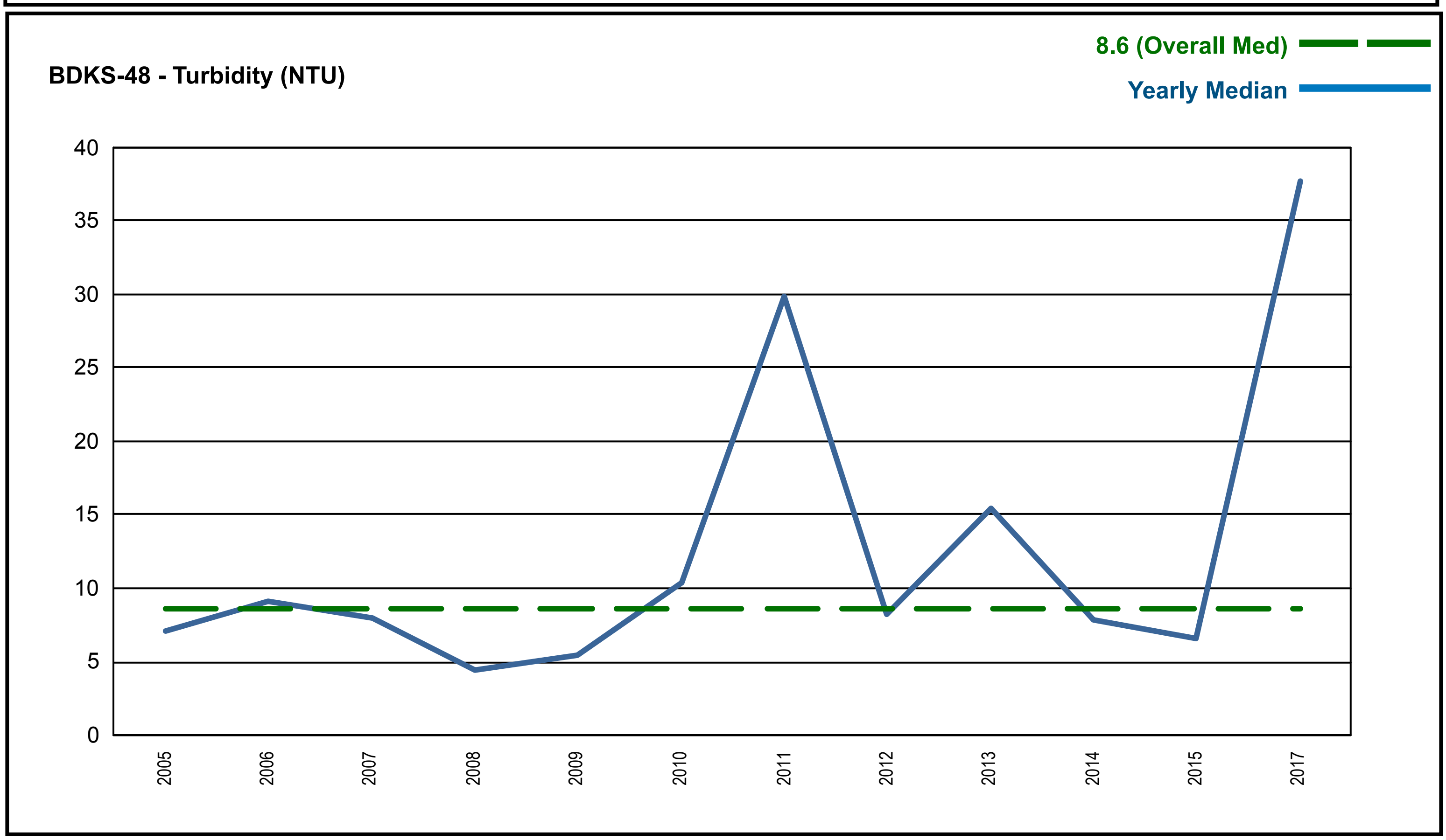
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

ADEM Ambient Trend Stations - Sampled 1977 - 2018



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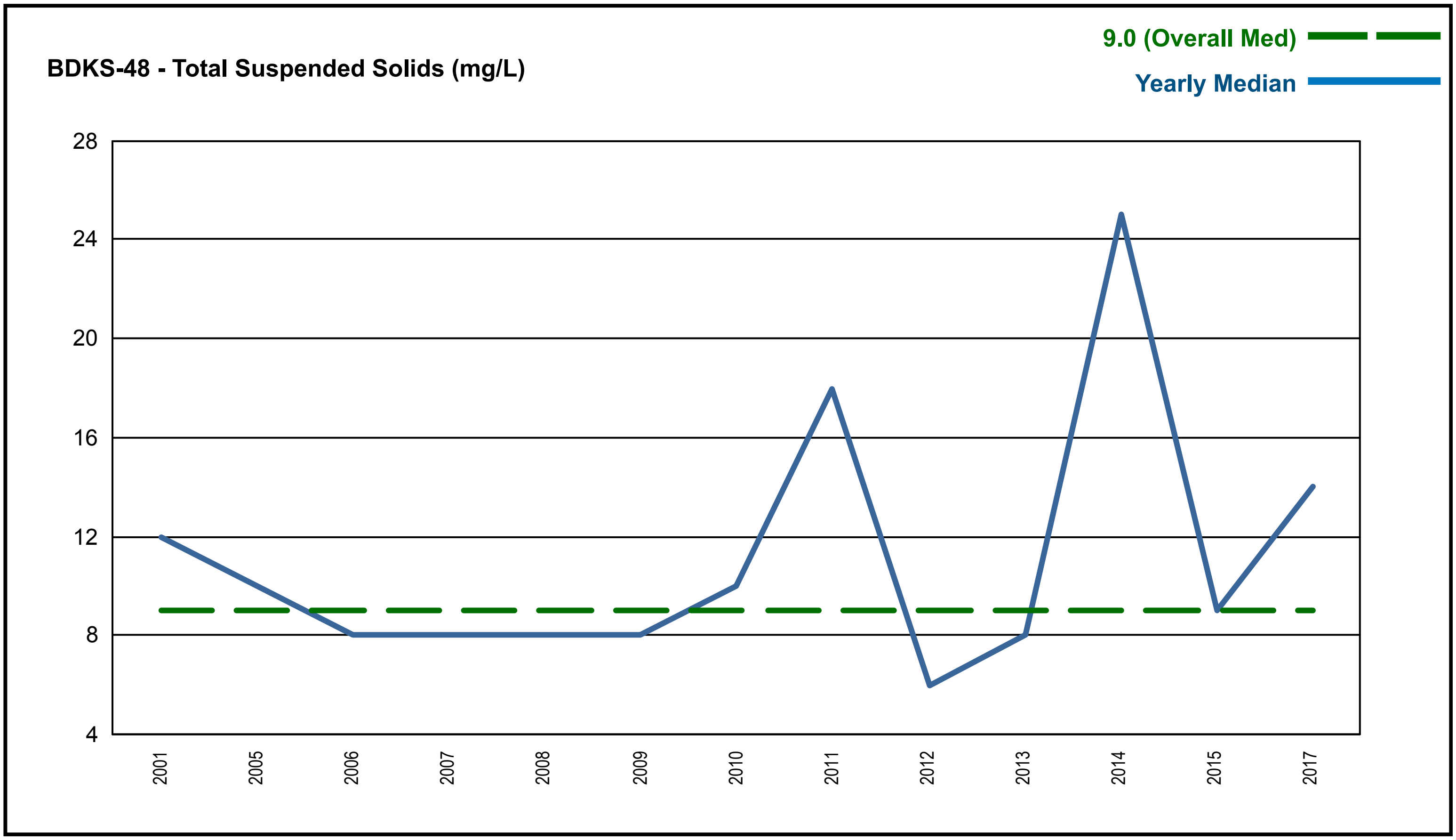

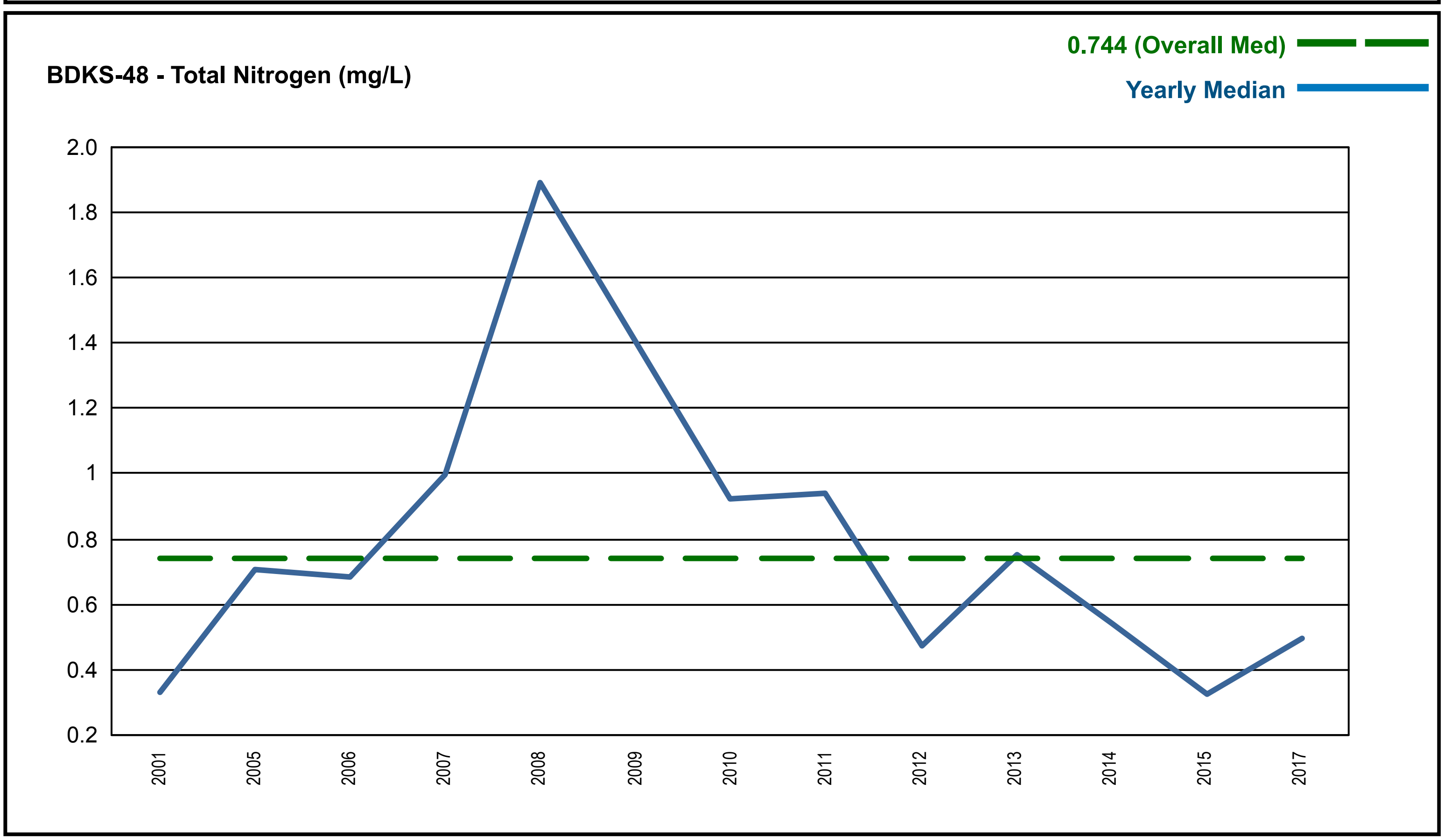

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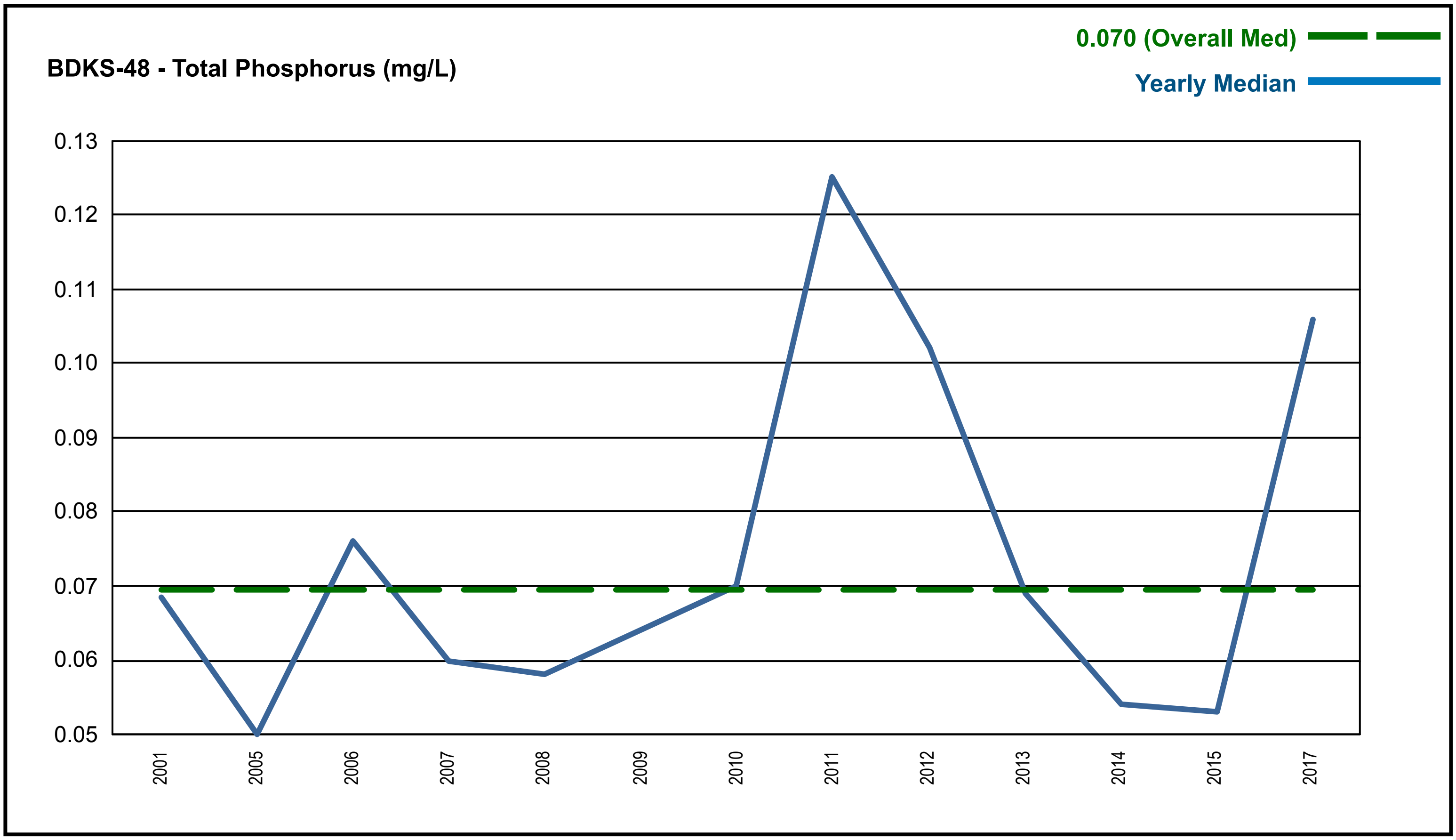

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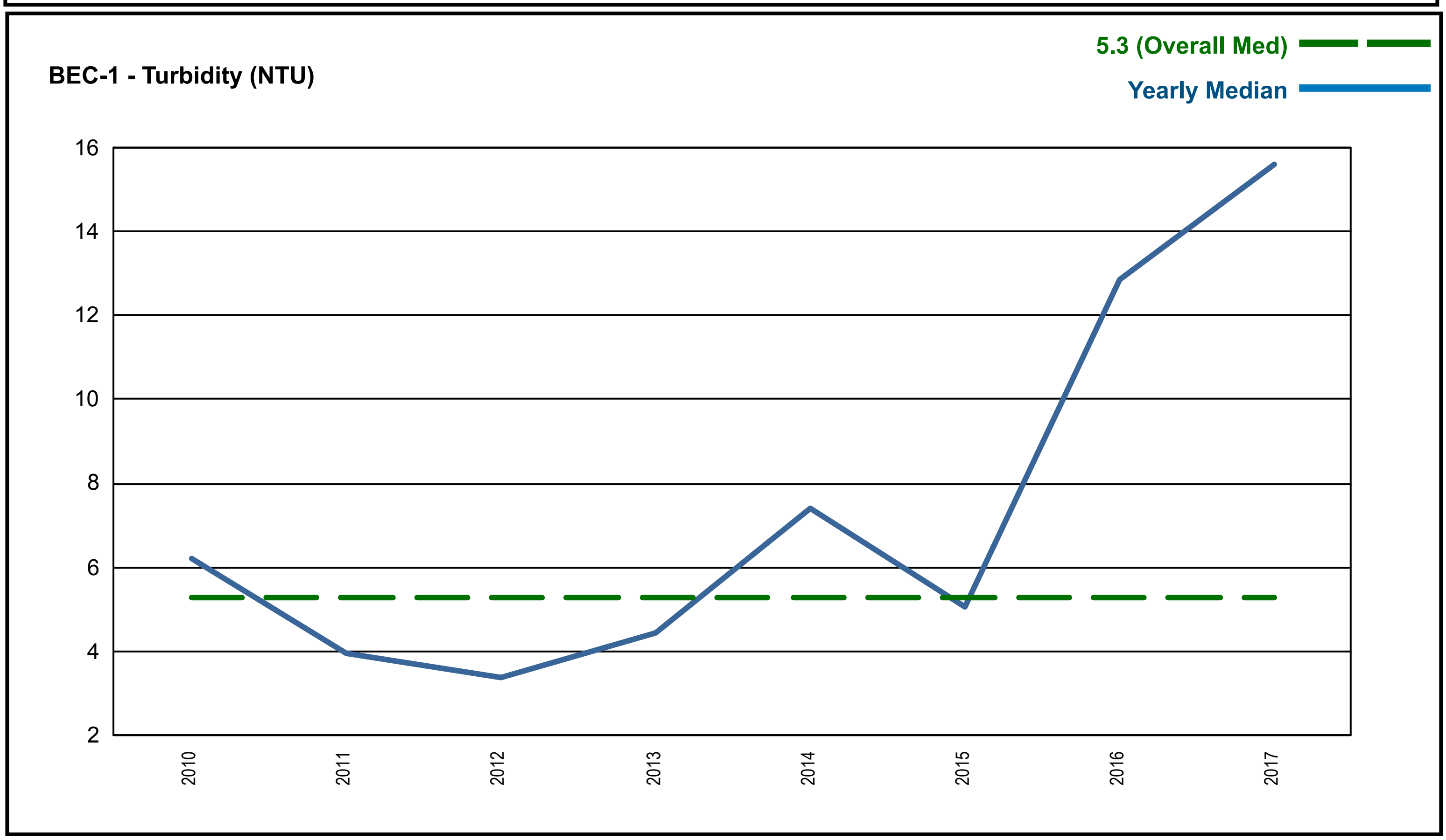

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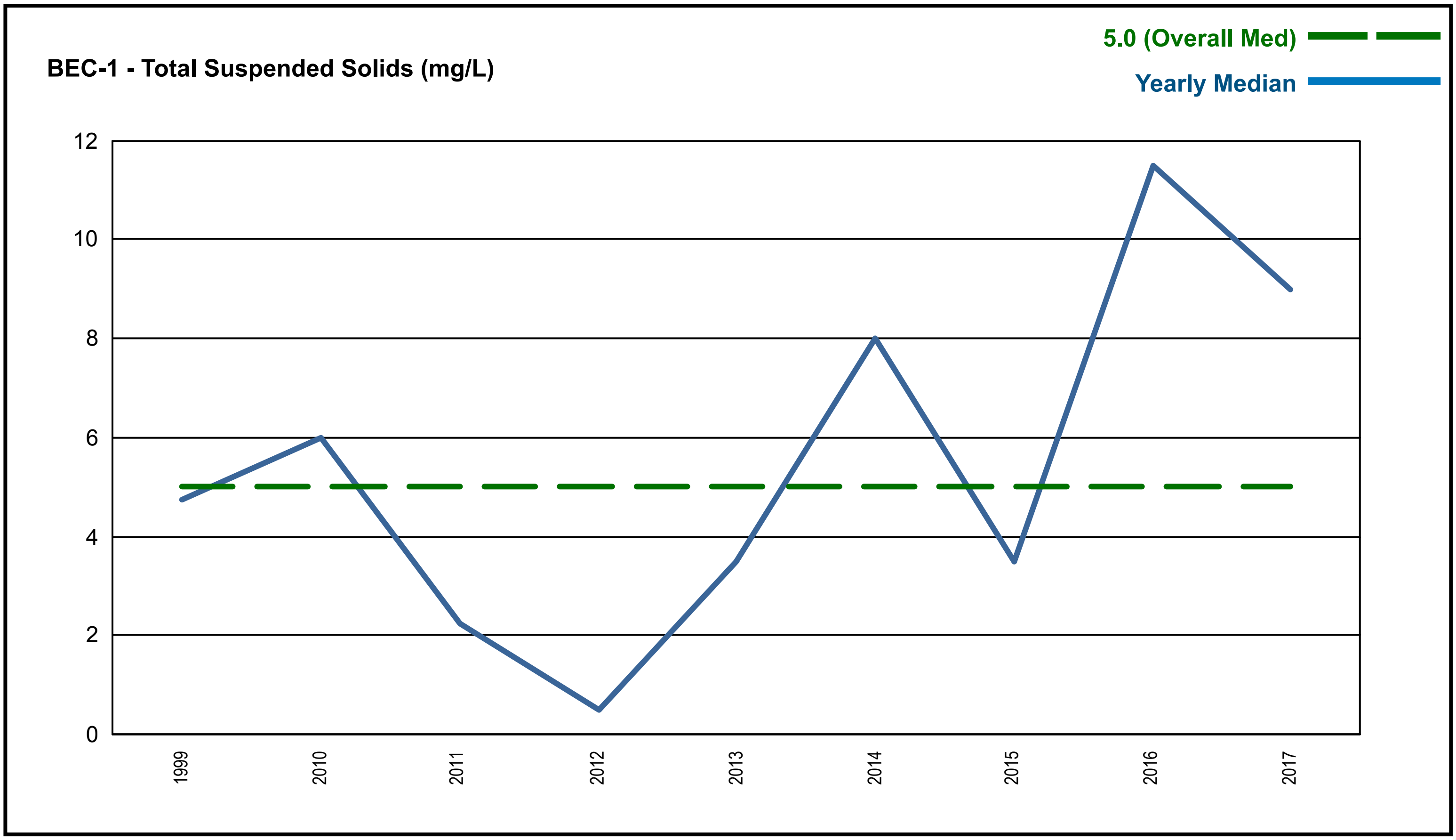

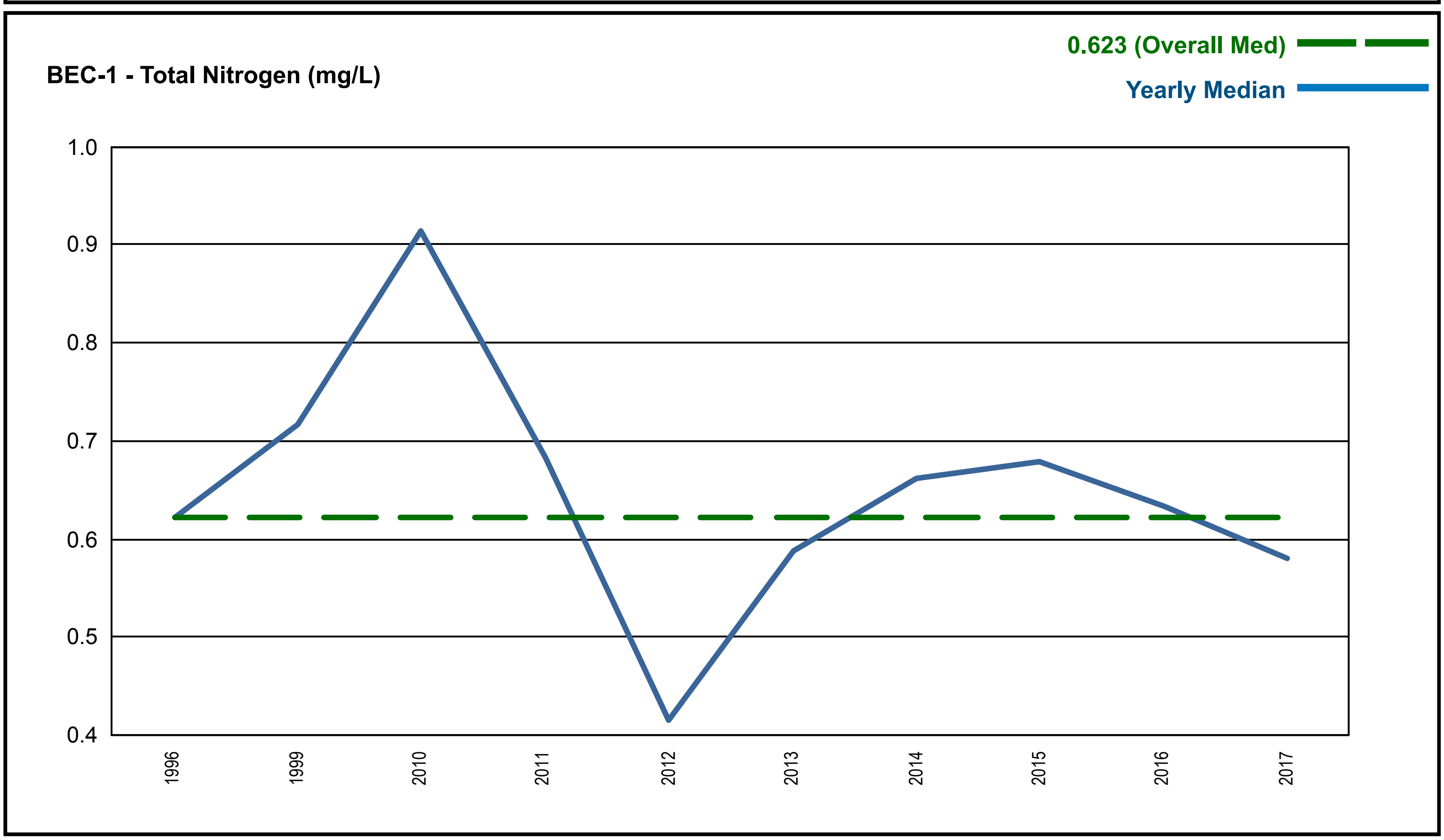

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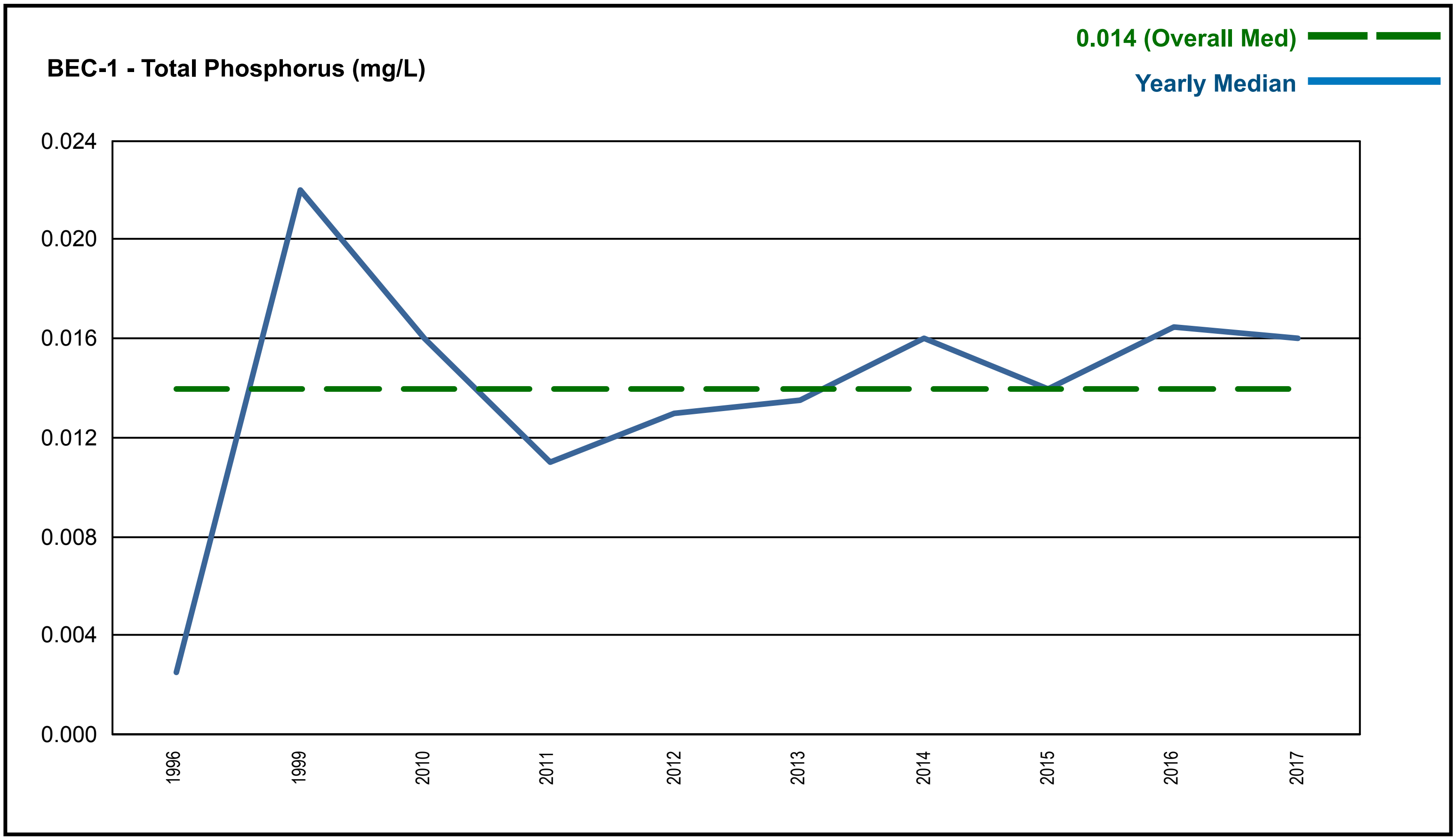

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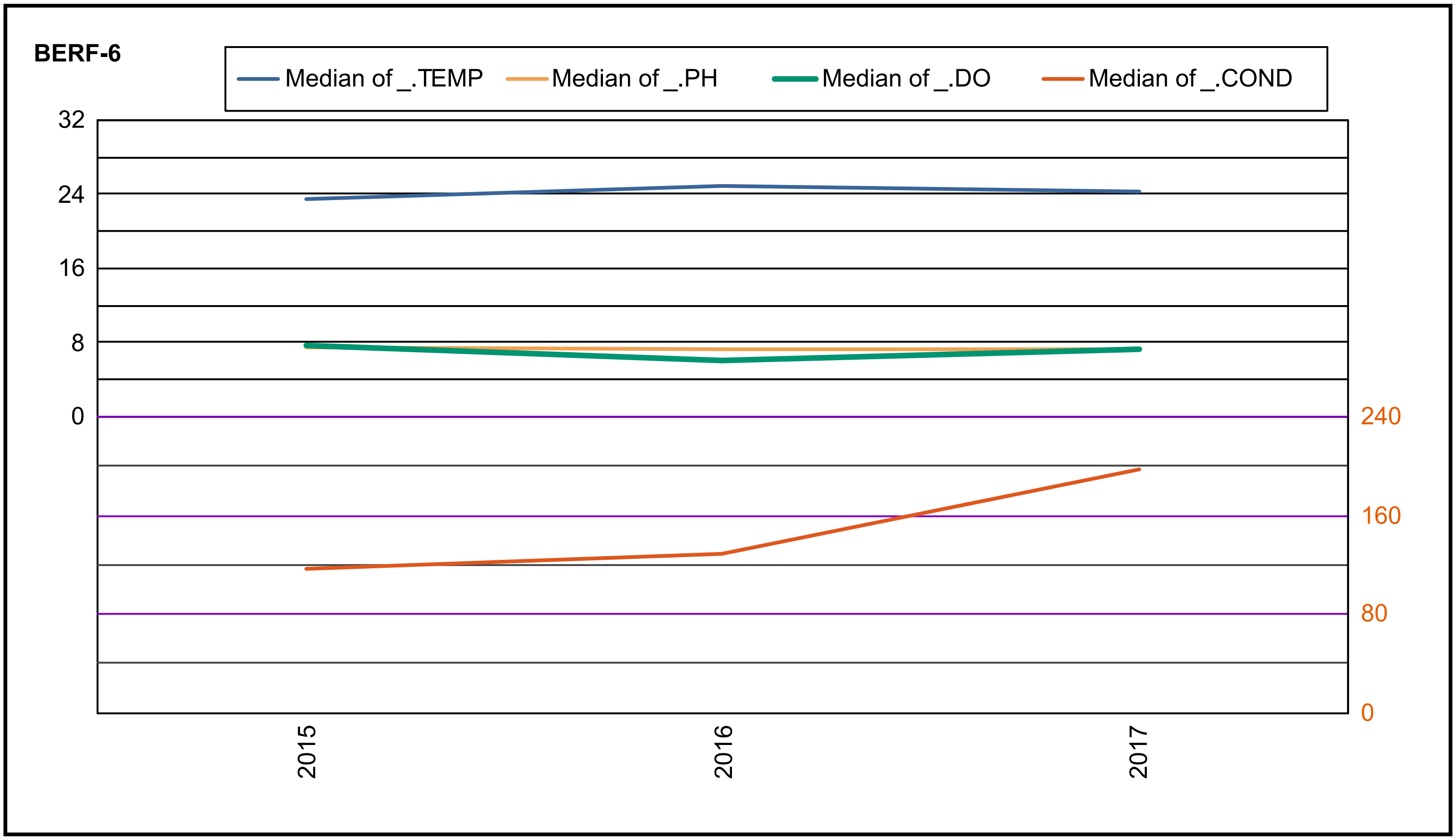
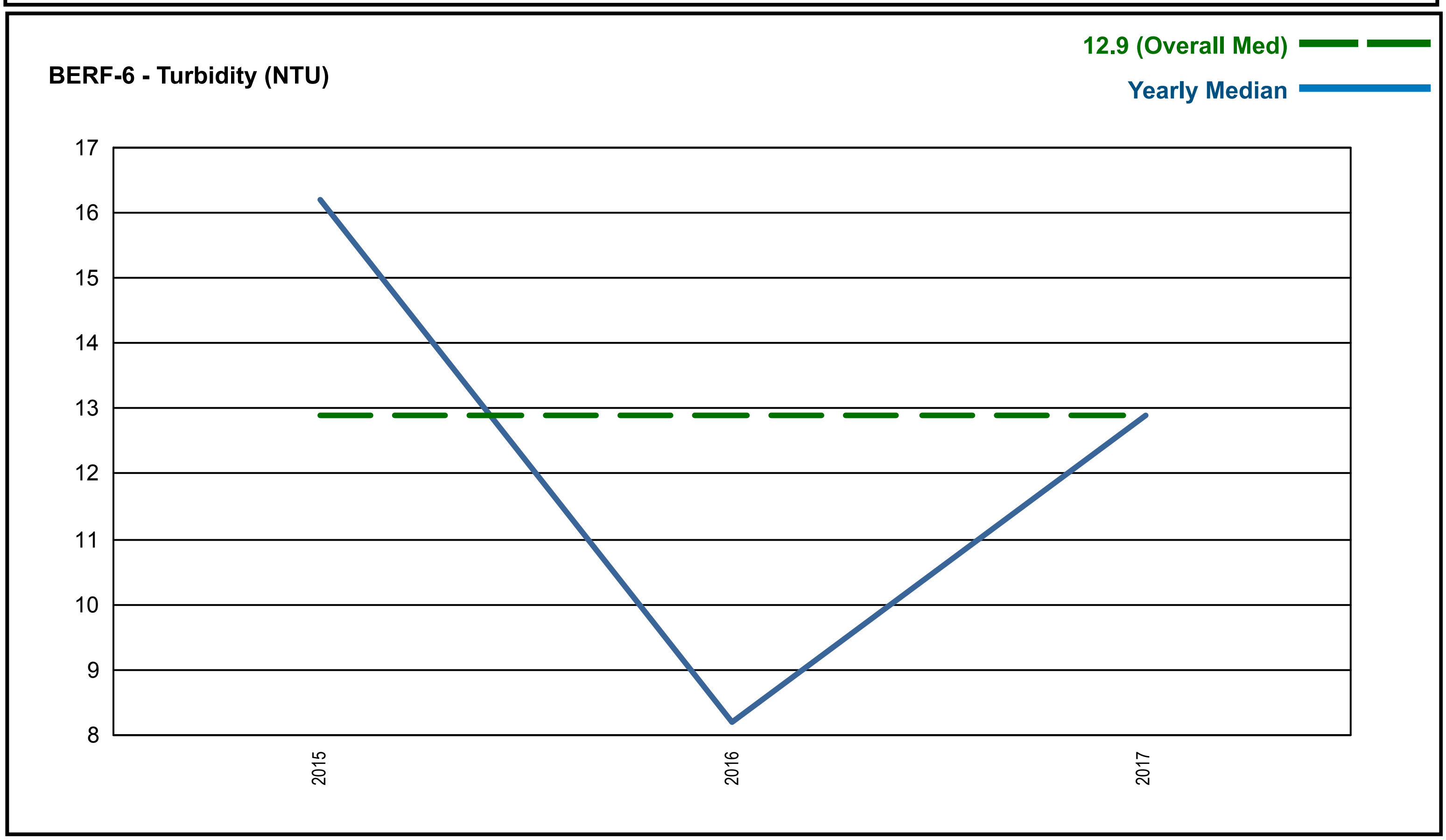
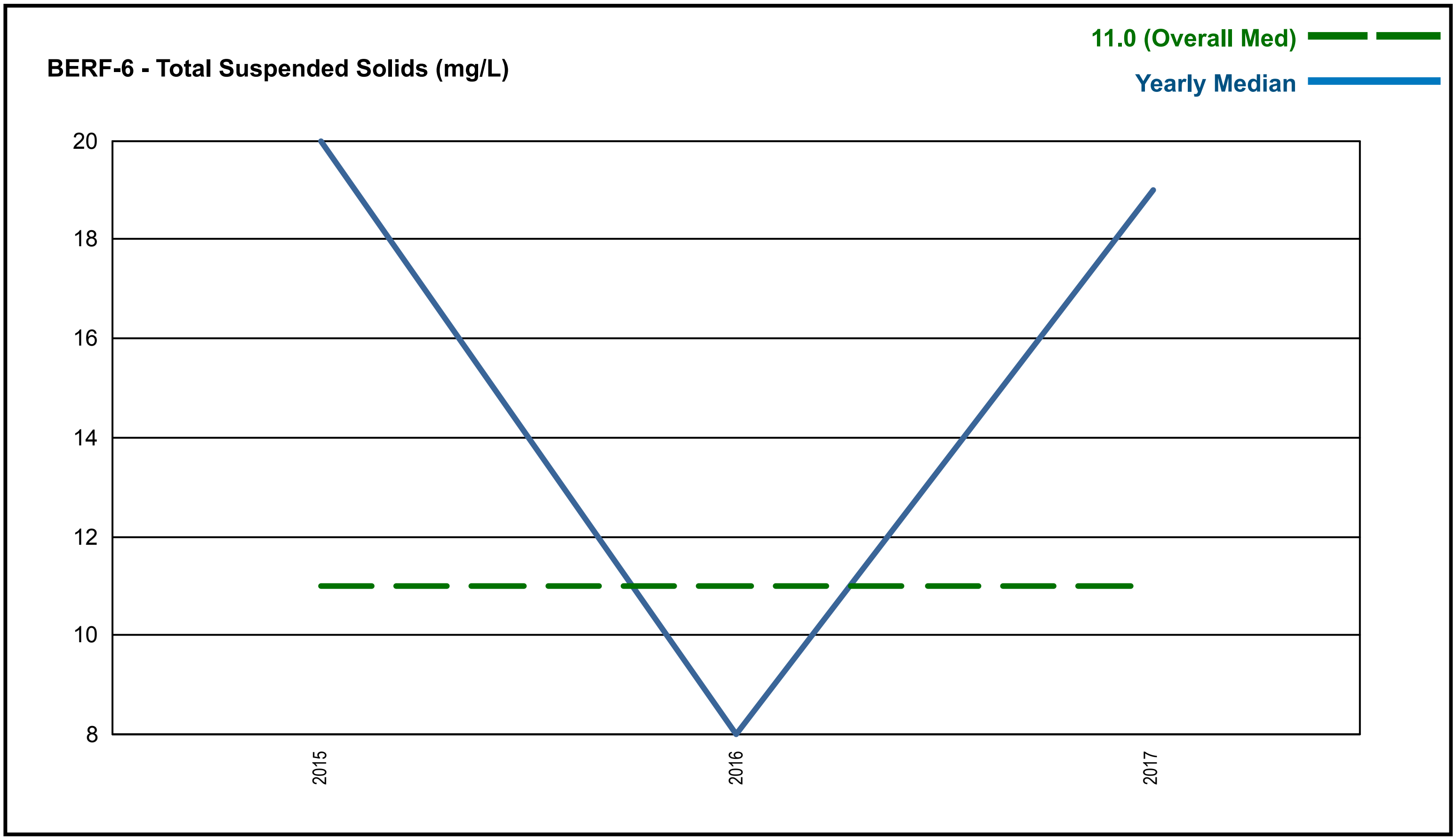
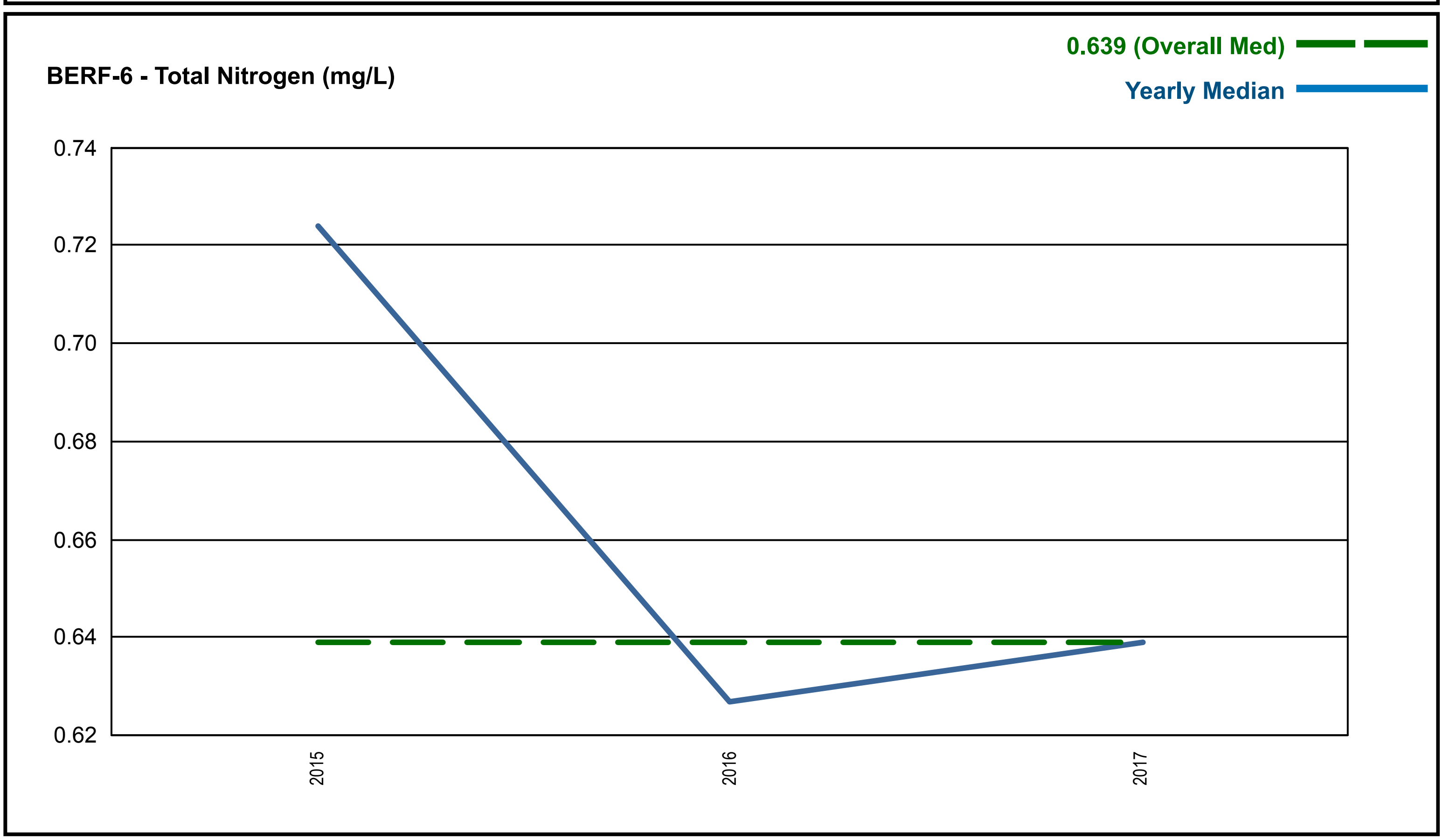


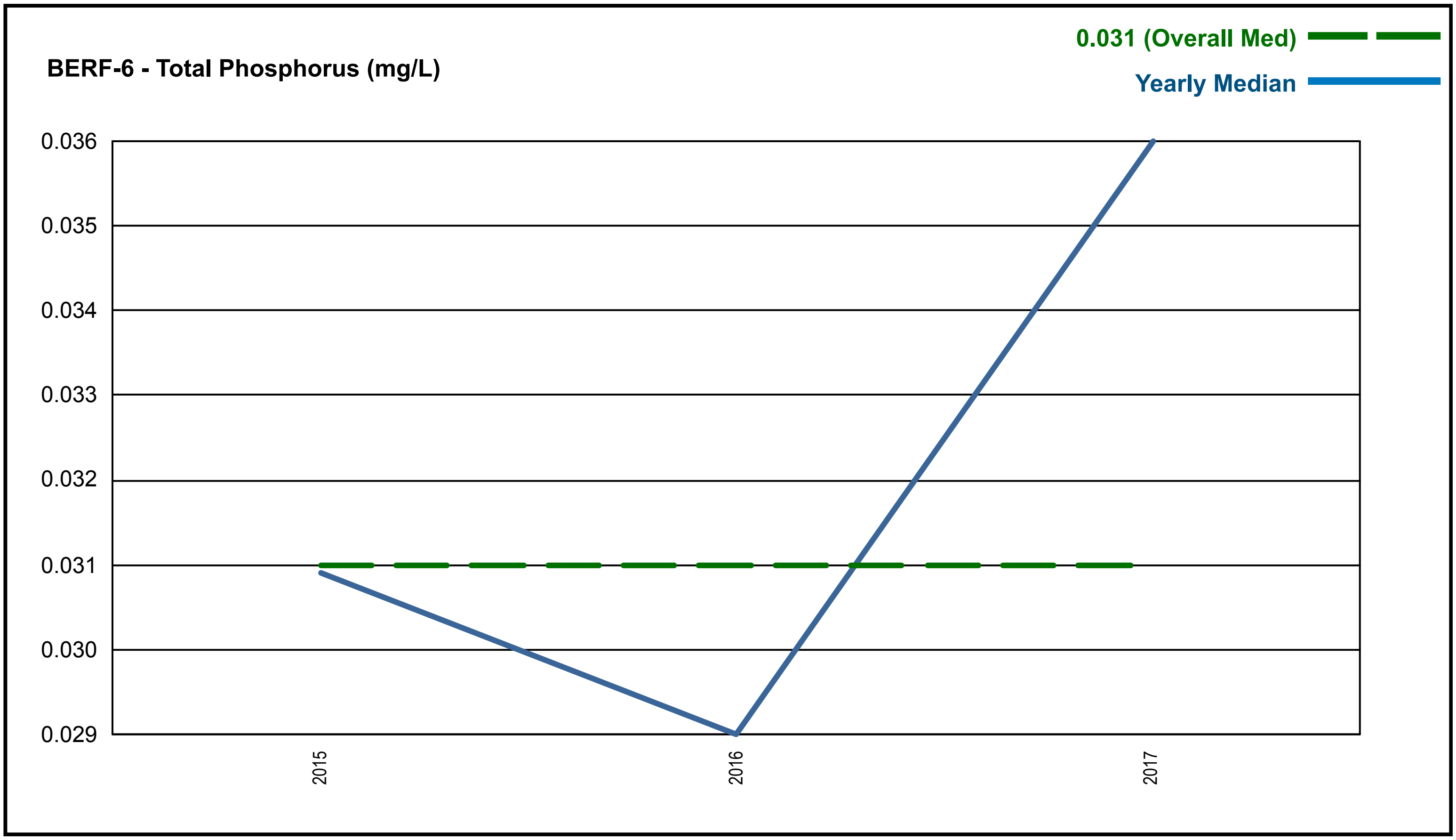


ADEM Ambient Trend Stations - Sampled 1977 - 2018

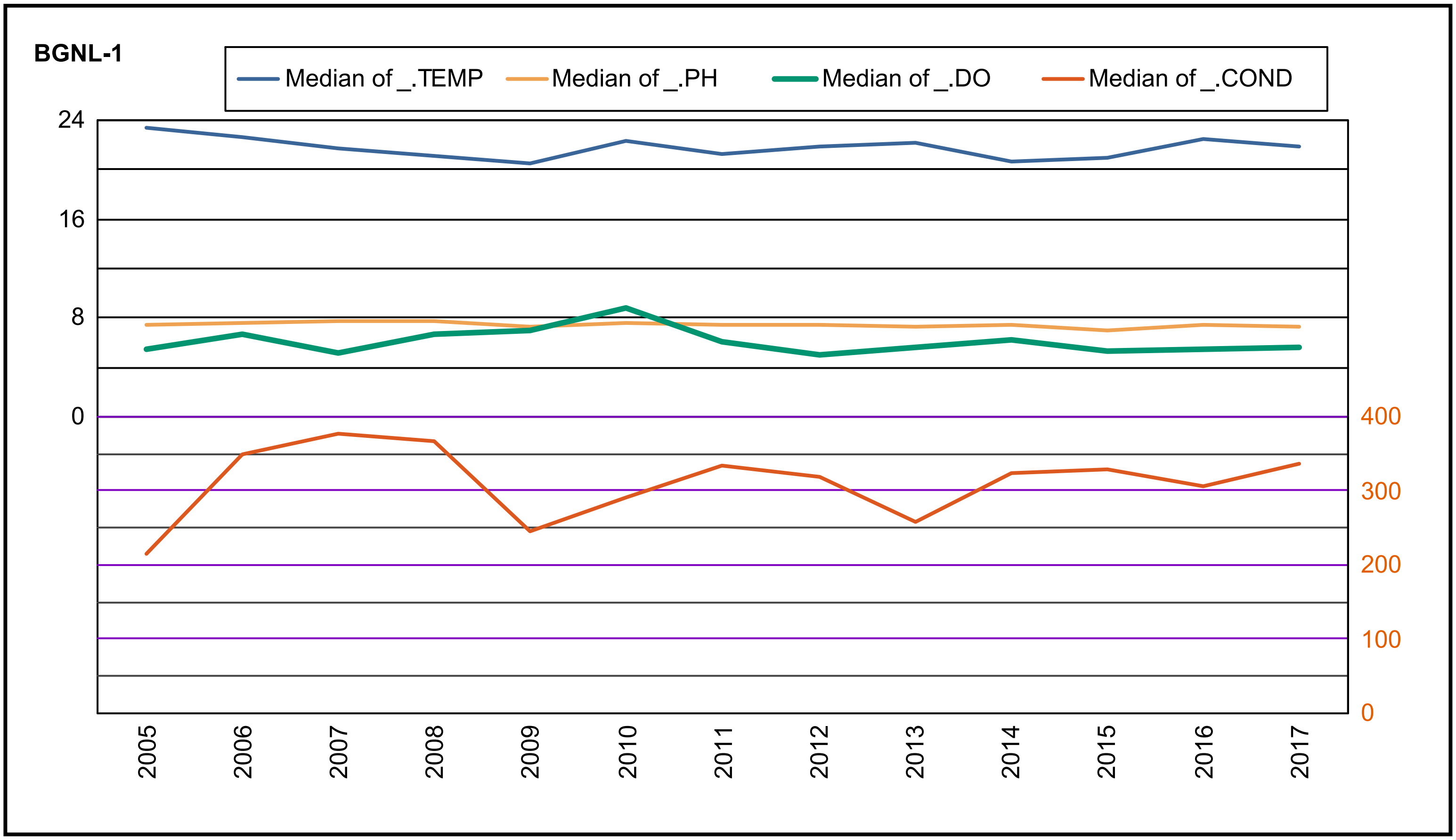


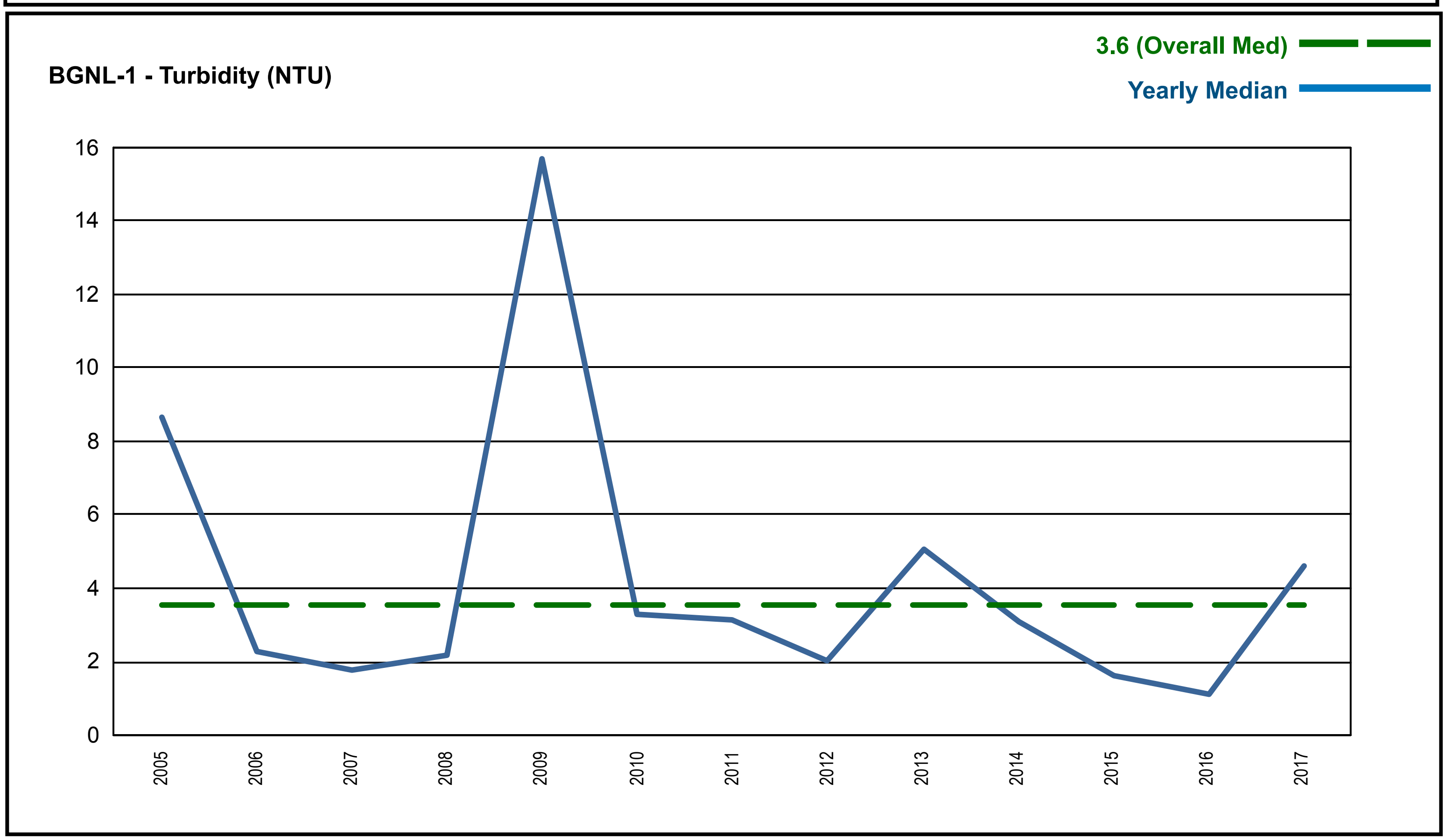


ADEM Ambient Trend Stations - Sampled 1977 - 2018

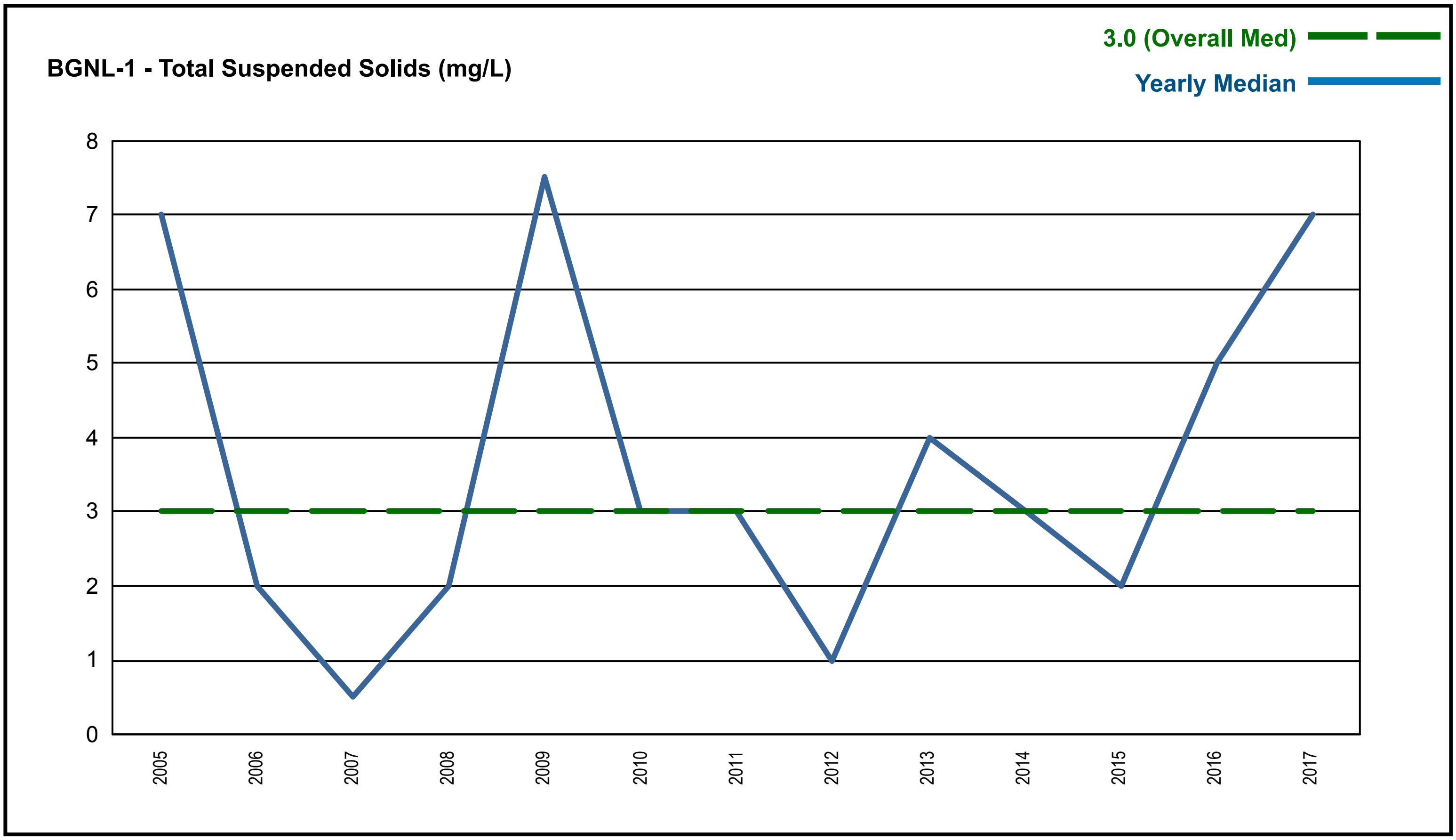


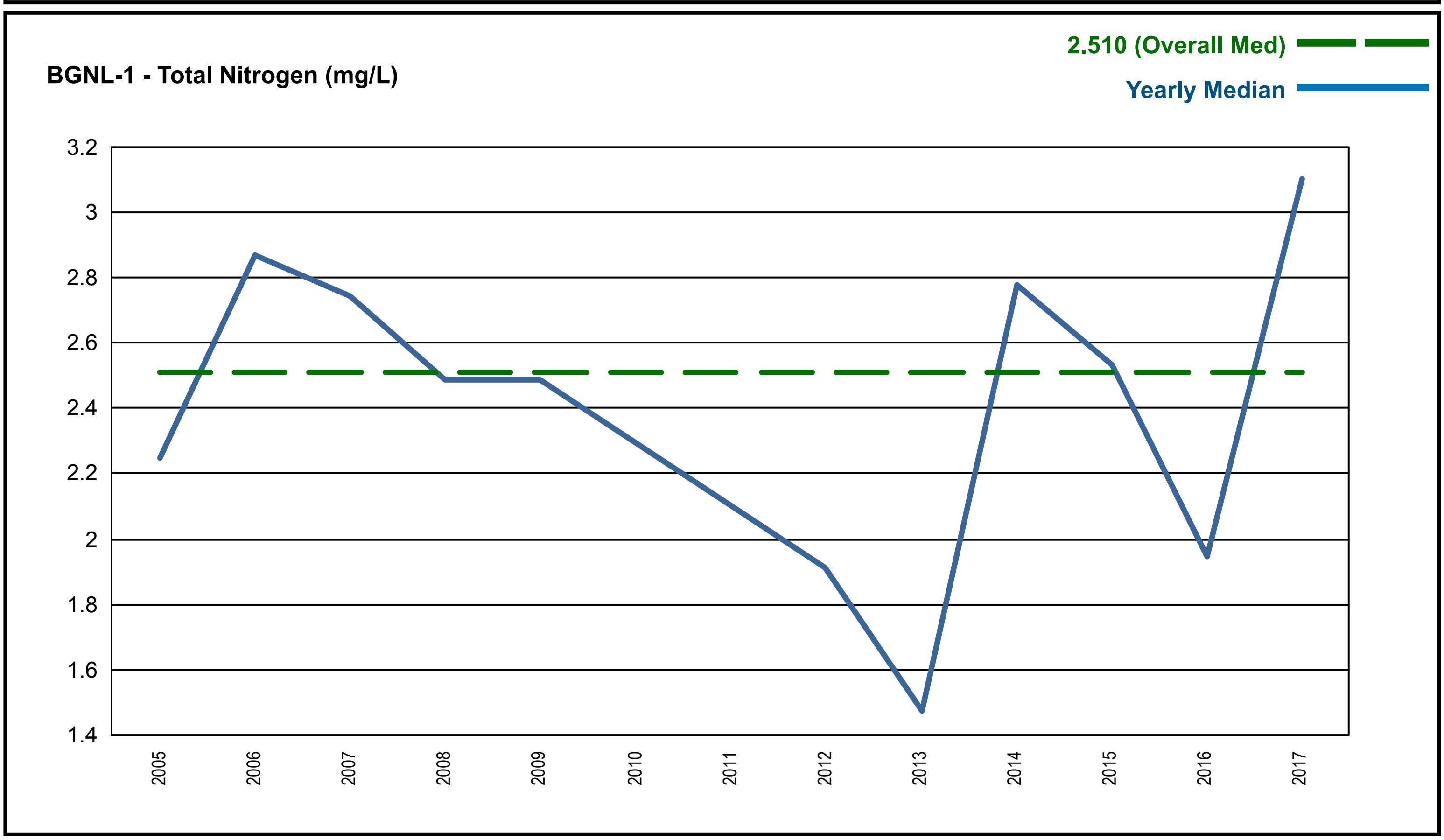
ADEM Ambient Trend Stations - Sampled 1977 - 2018



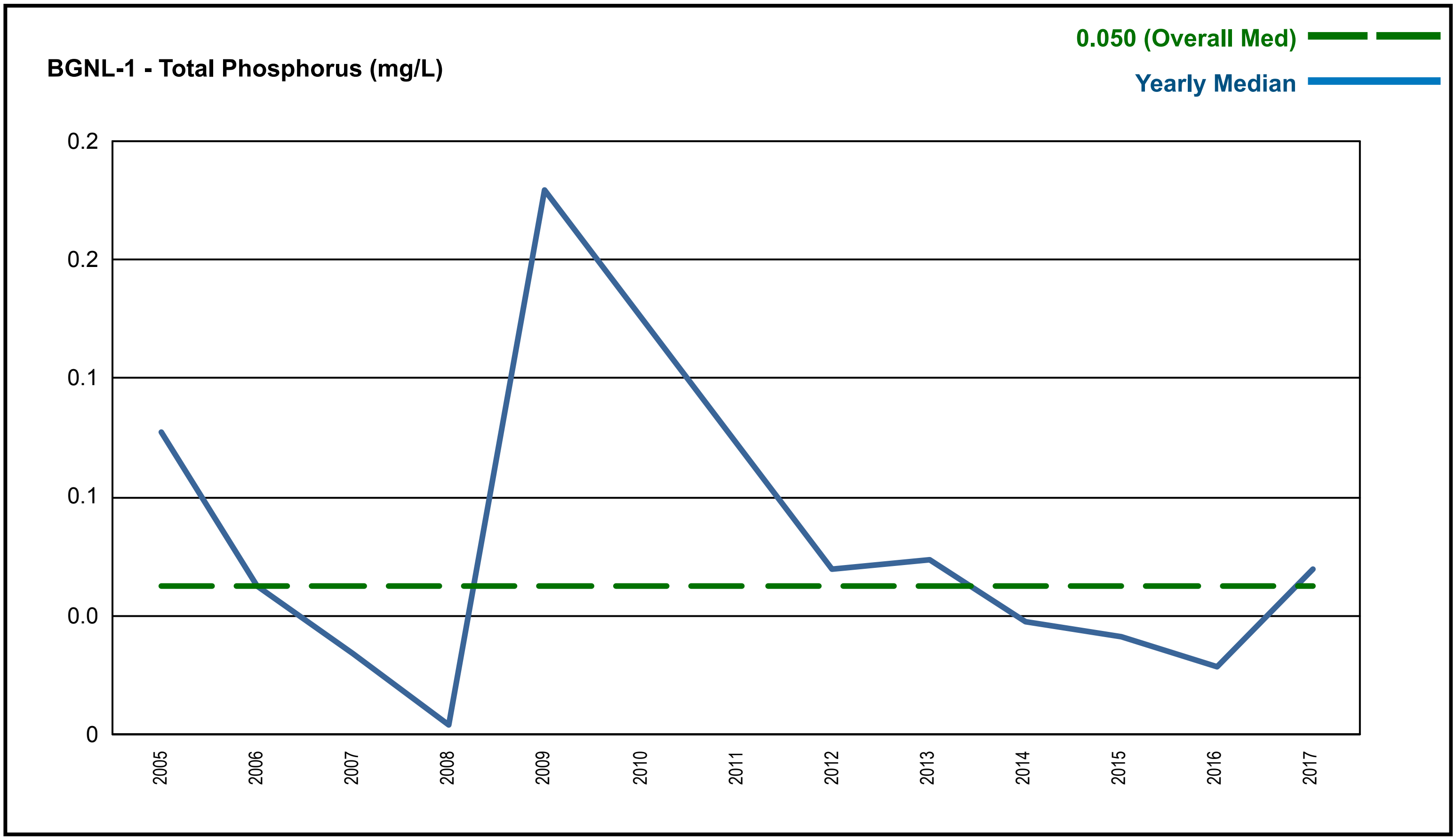


ADEM Ambient Trend Stations - Sampled 1977 - 2018

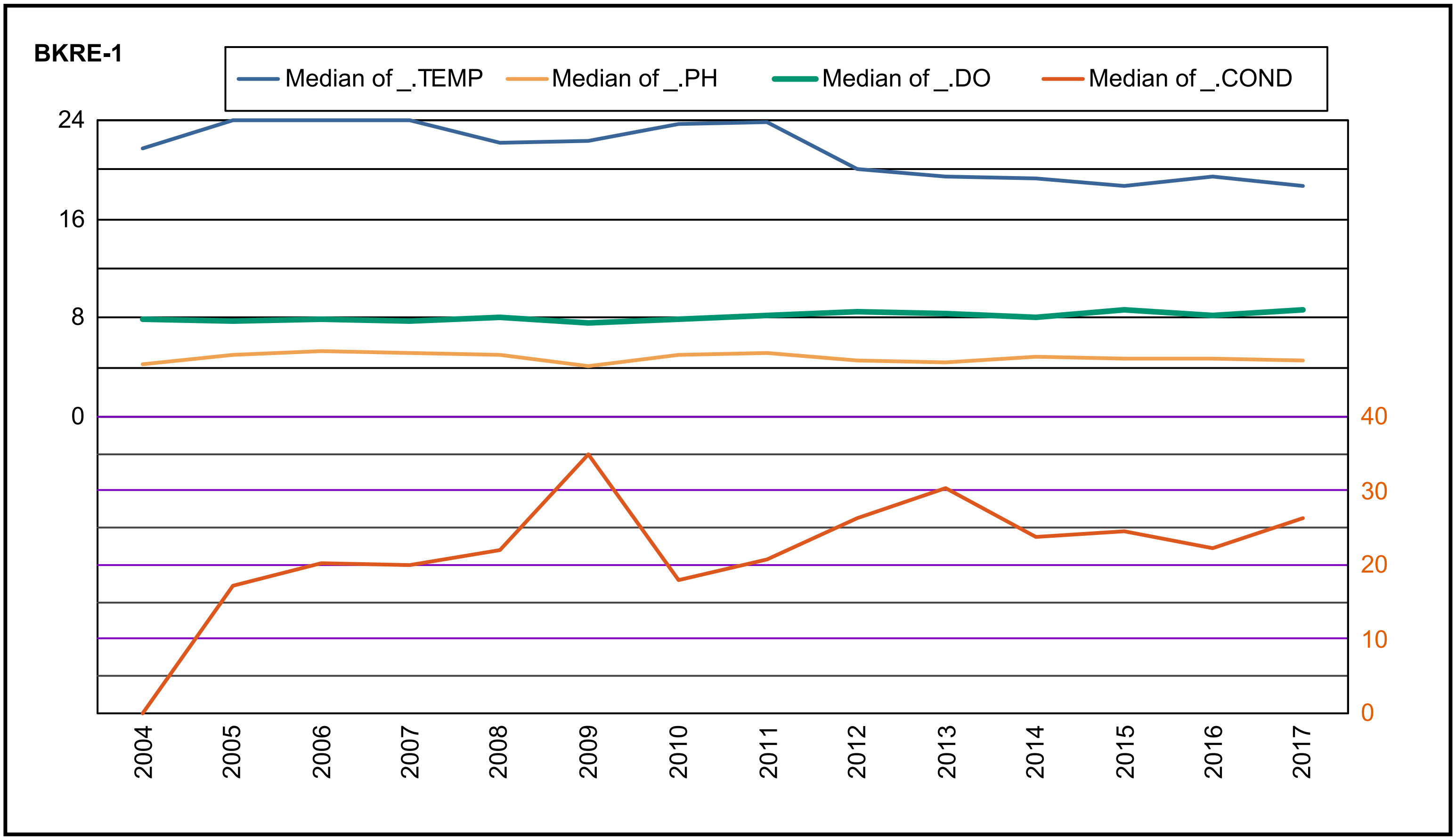


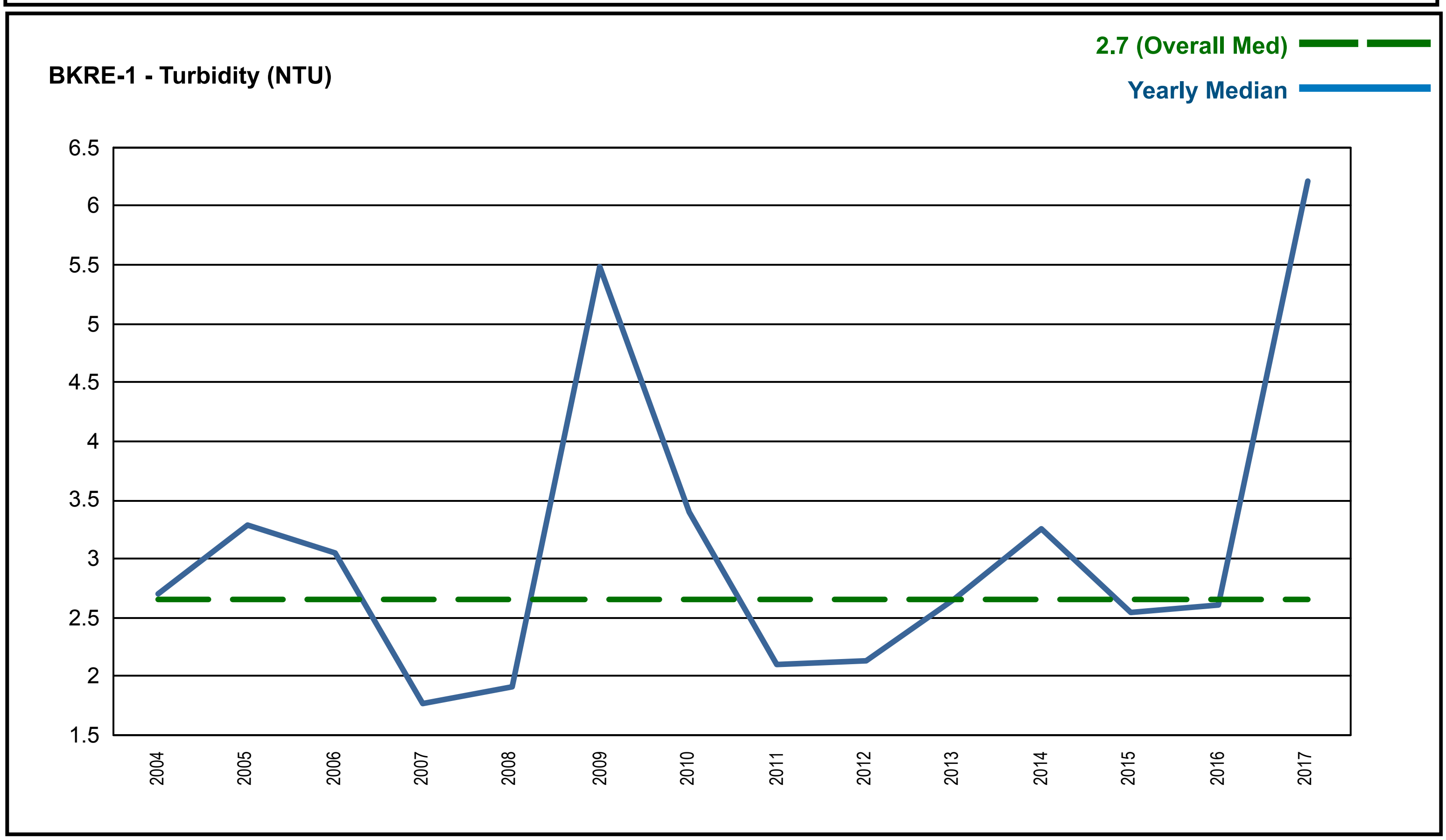


ADEM Ambient Trend Stations - Sampled 1977 - 2018

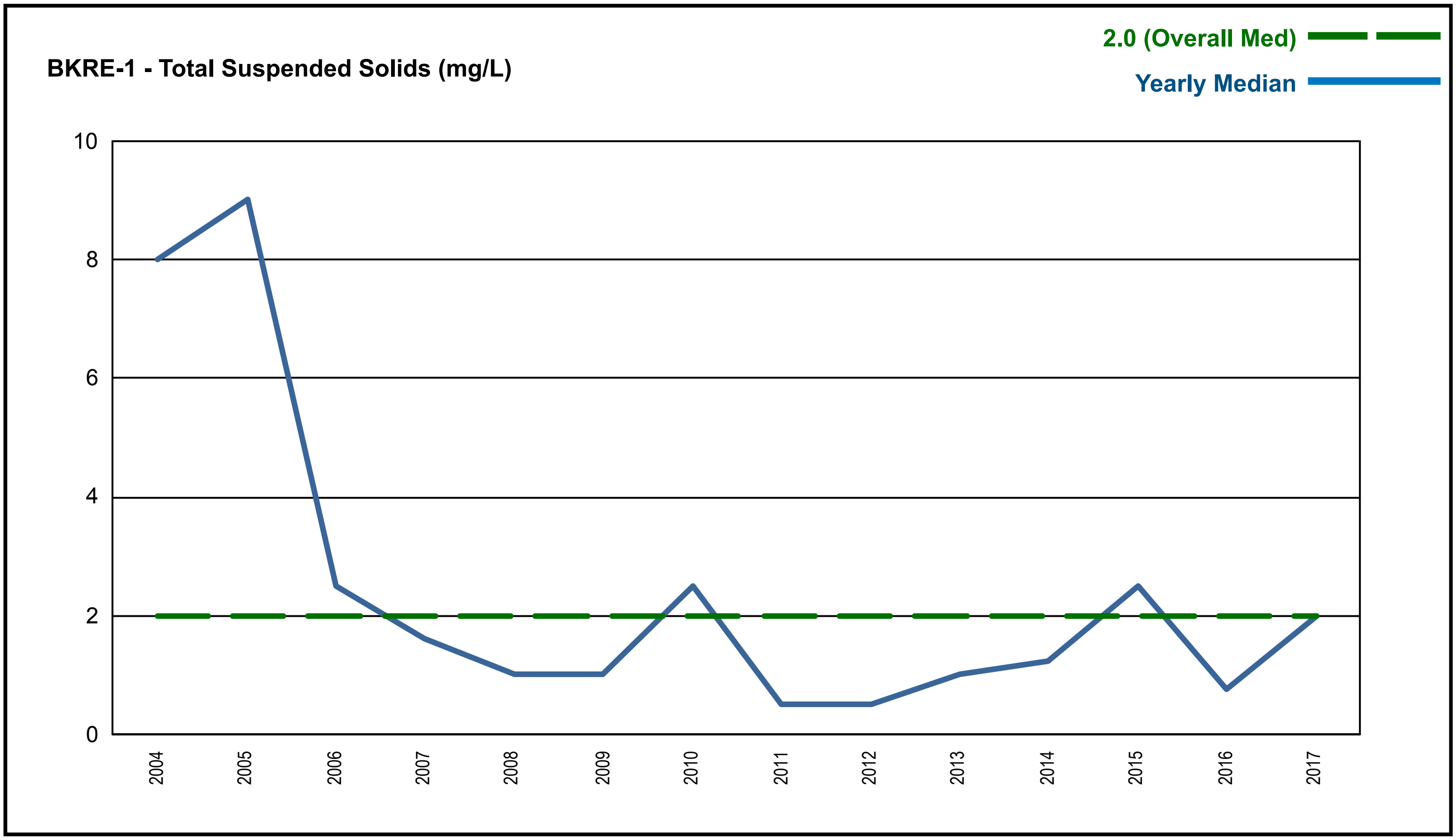


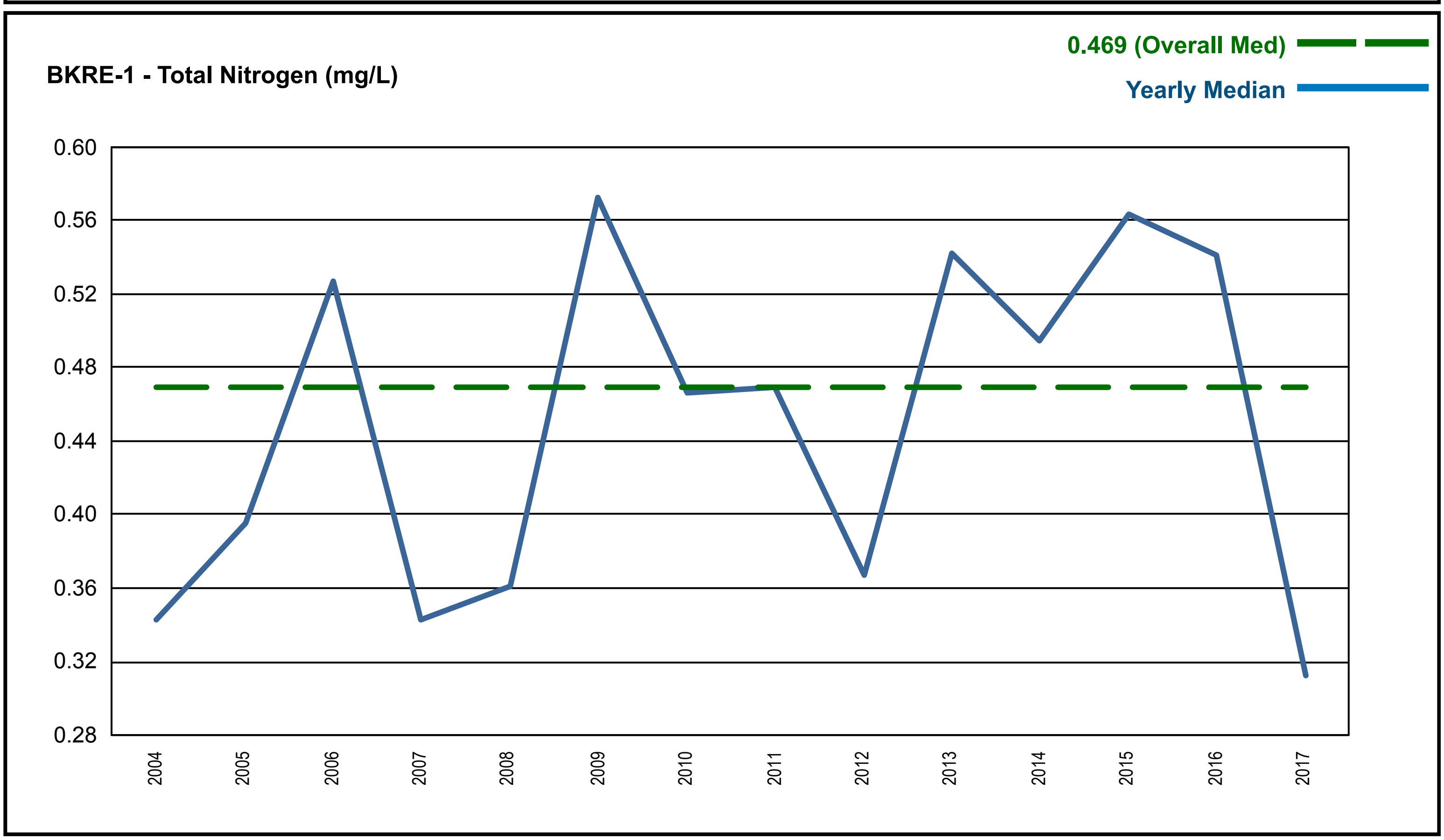
ADEM Ambient Trend Stations - Sampled 1977 - 2018



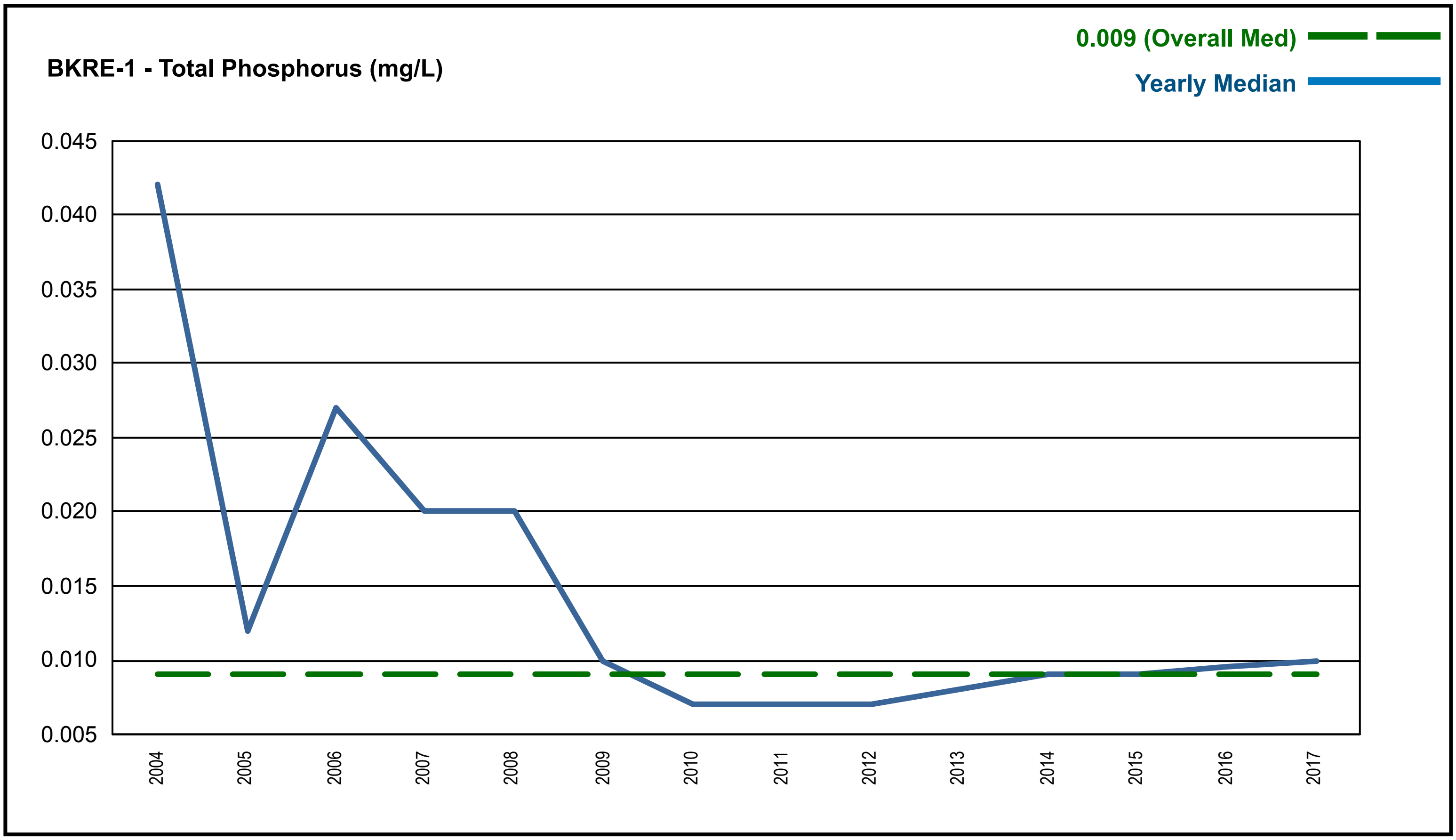


ADEM Ambient Trend Stations - Sampled 1977 - 2018

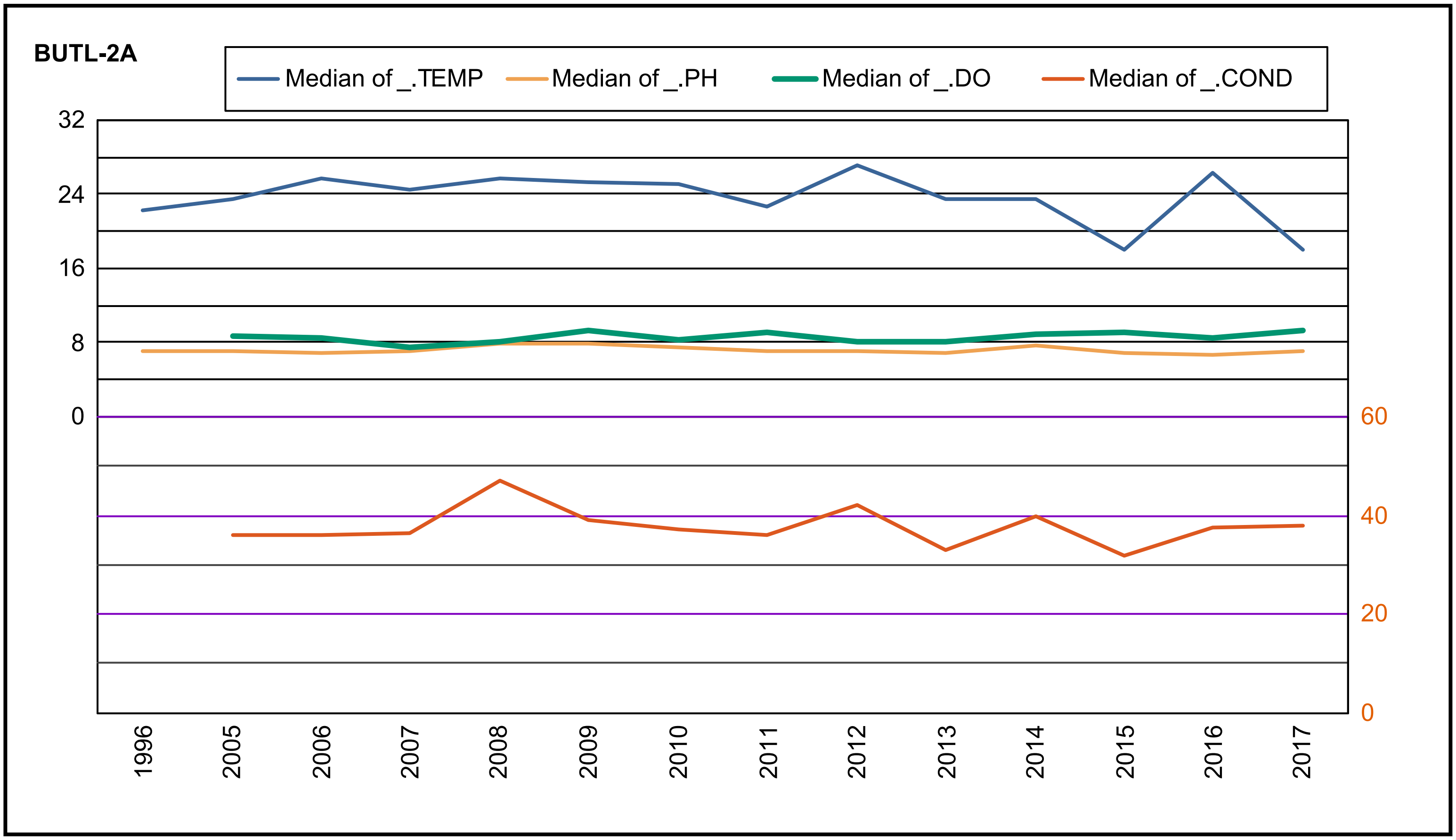


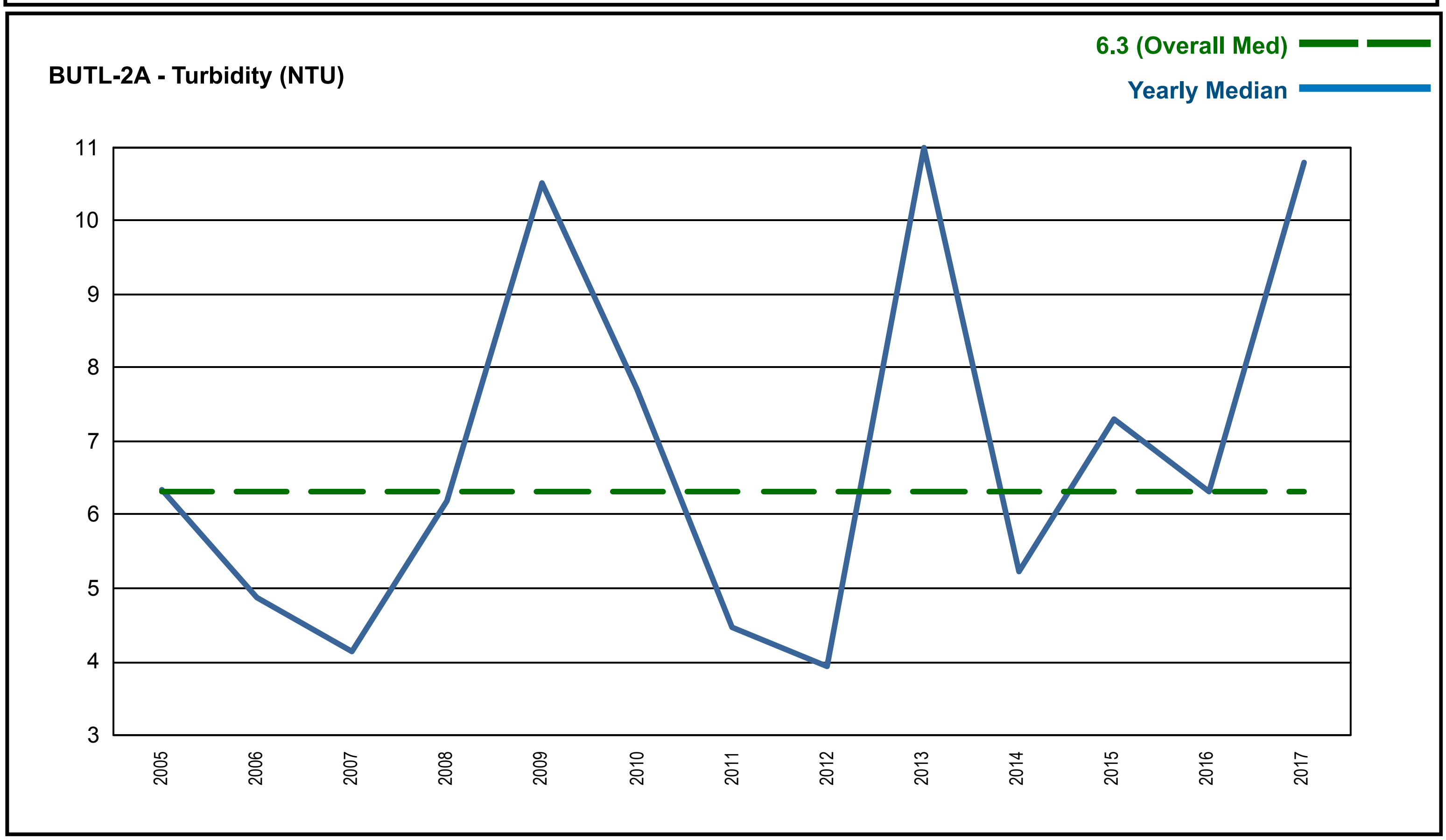


ADEM Ambient Trend Stations - Sampled 1977 - 2018

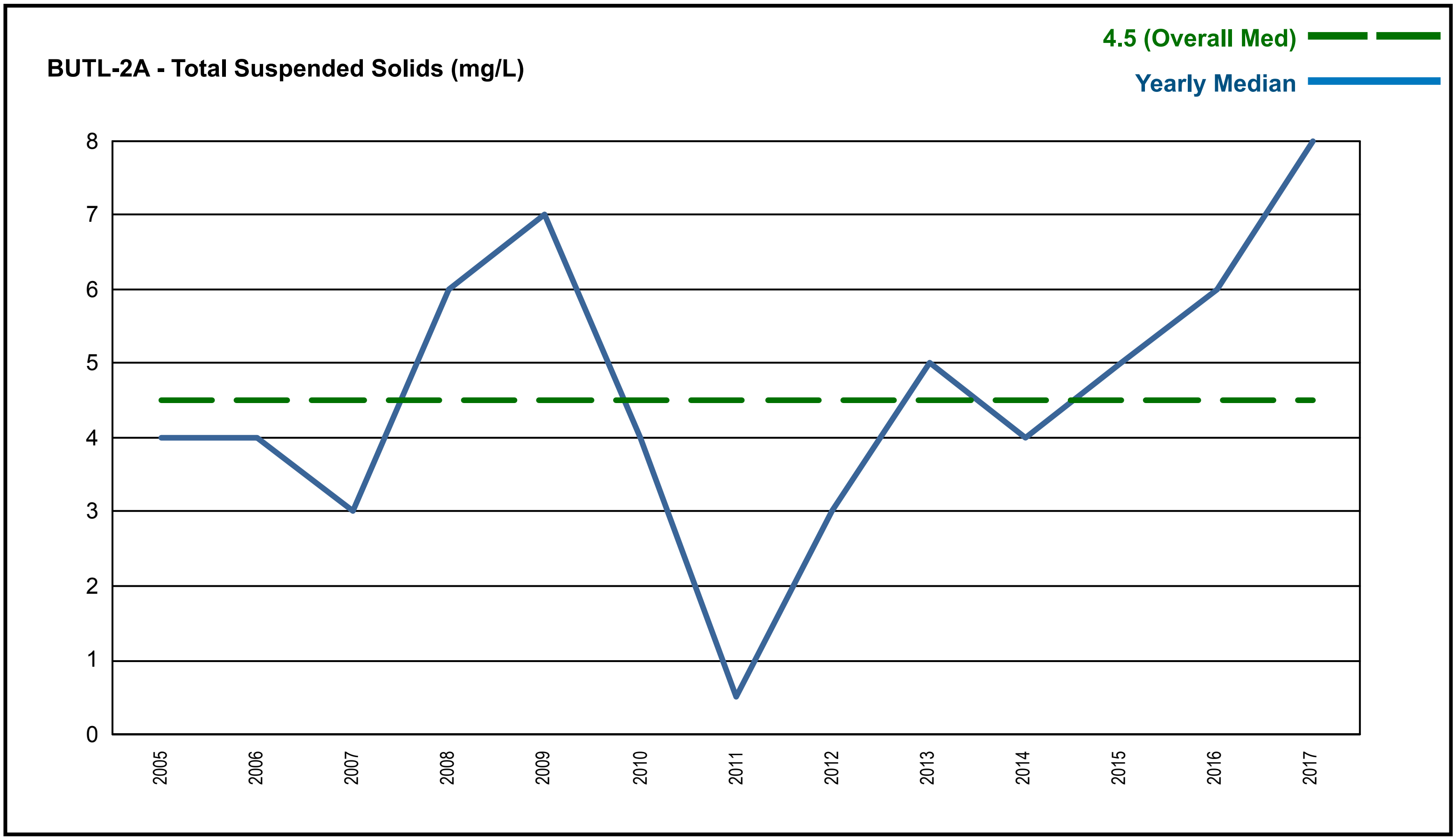


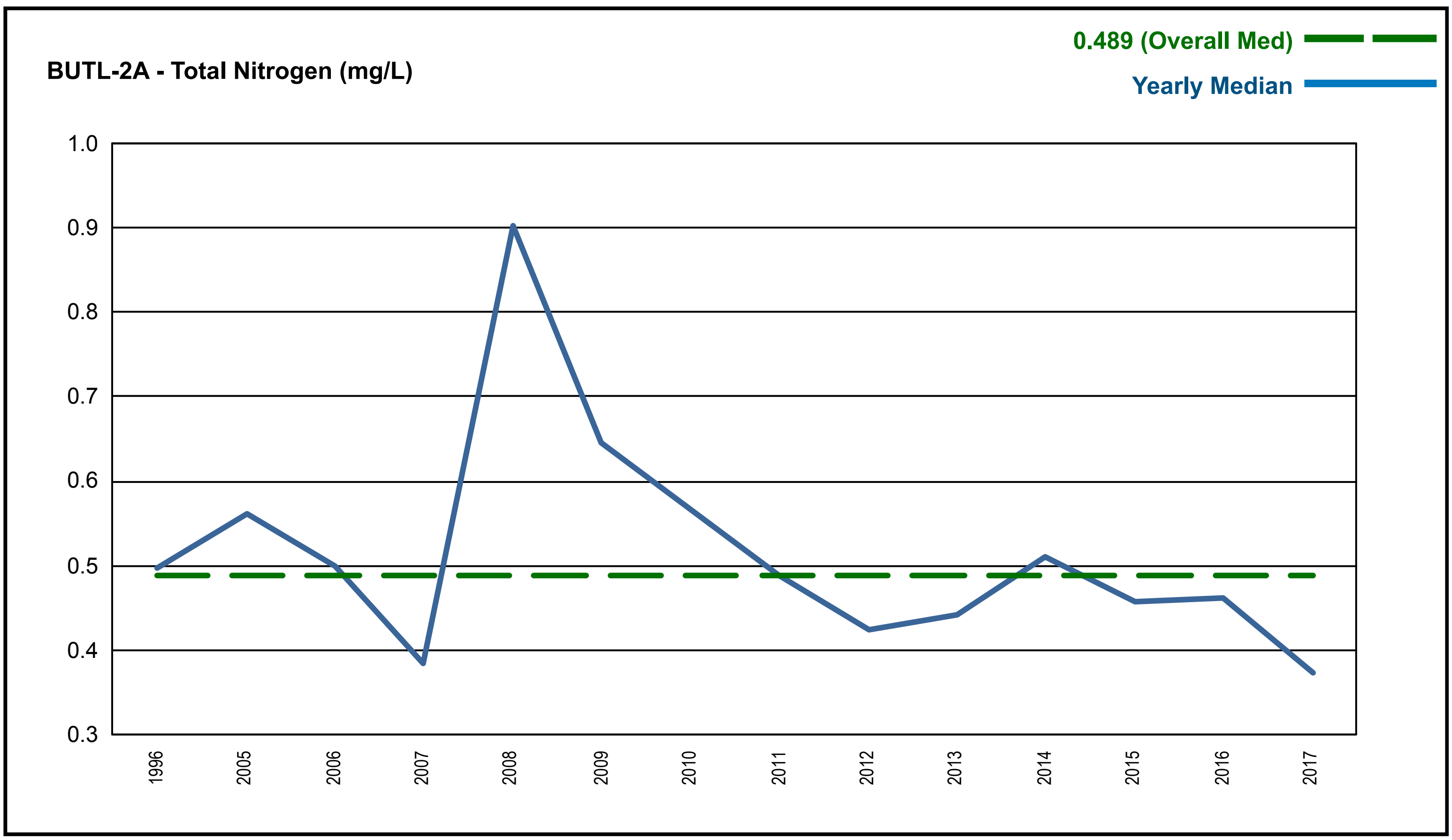
ADEM Ambient Trend Stations - Sampled 1977 - 2018



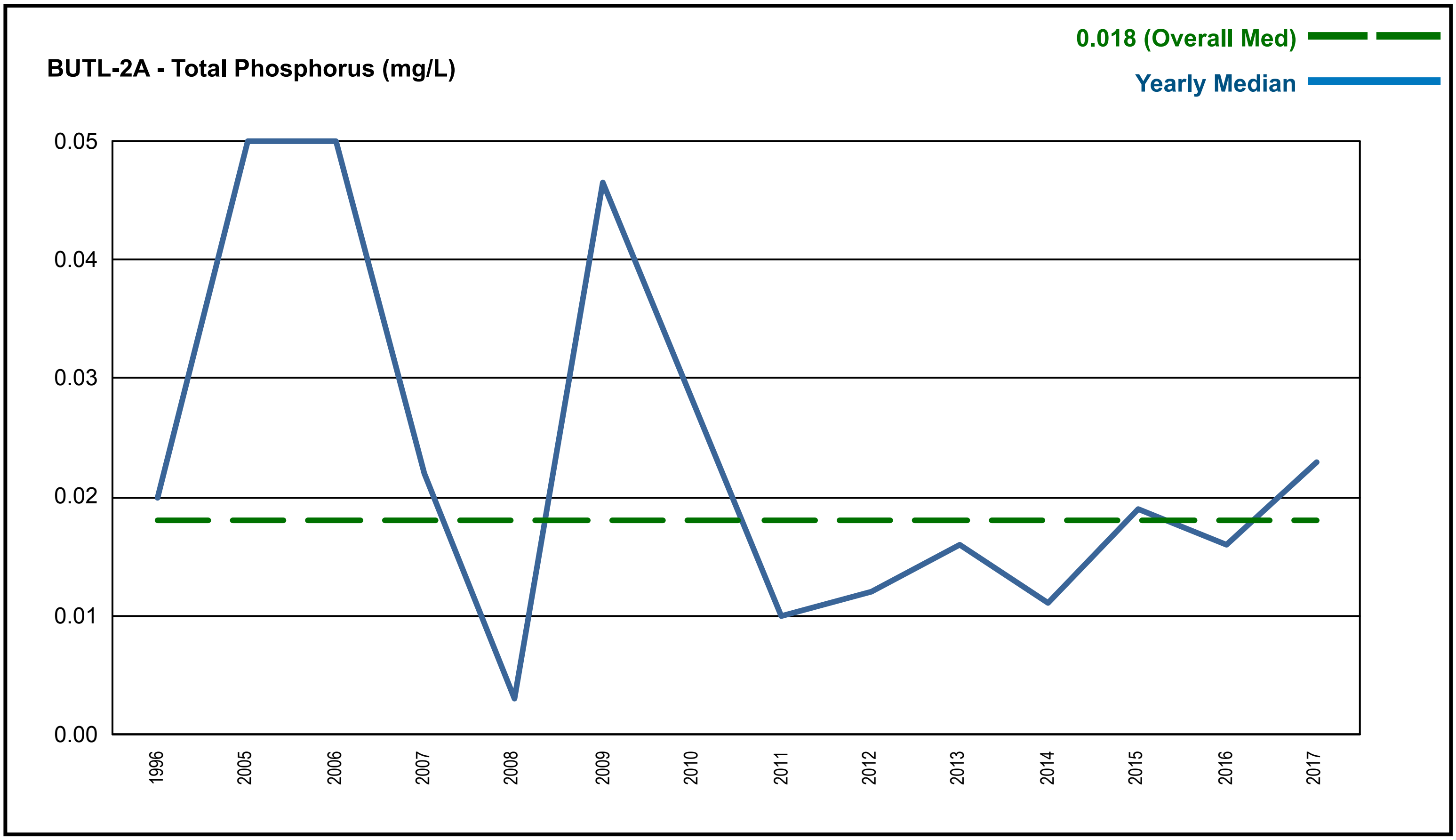


ADEM Ambient Trend Stations - Sampled 1977 - 2018

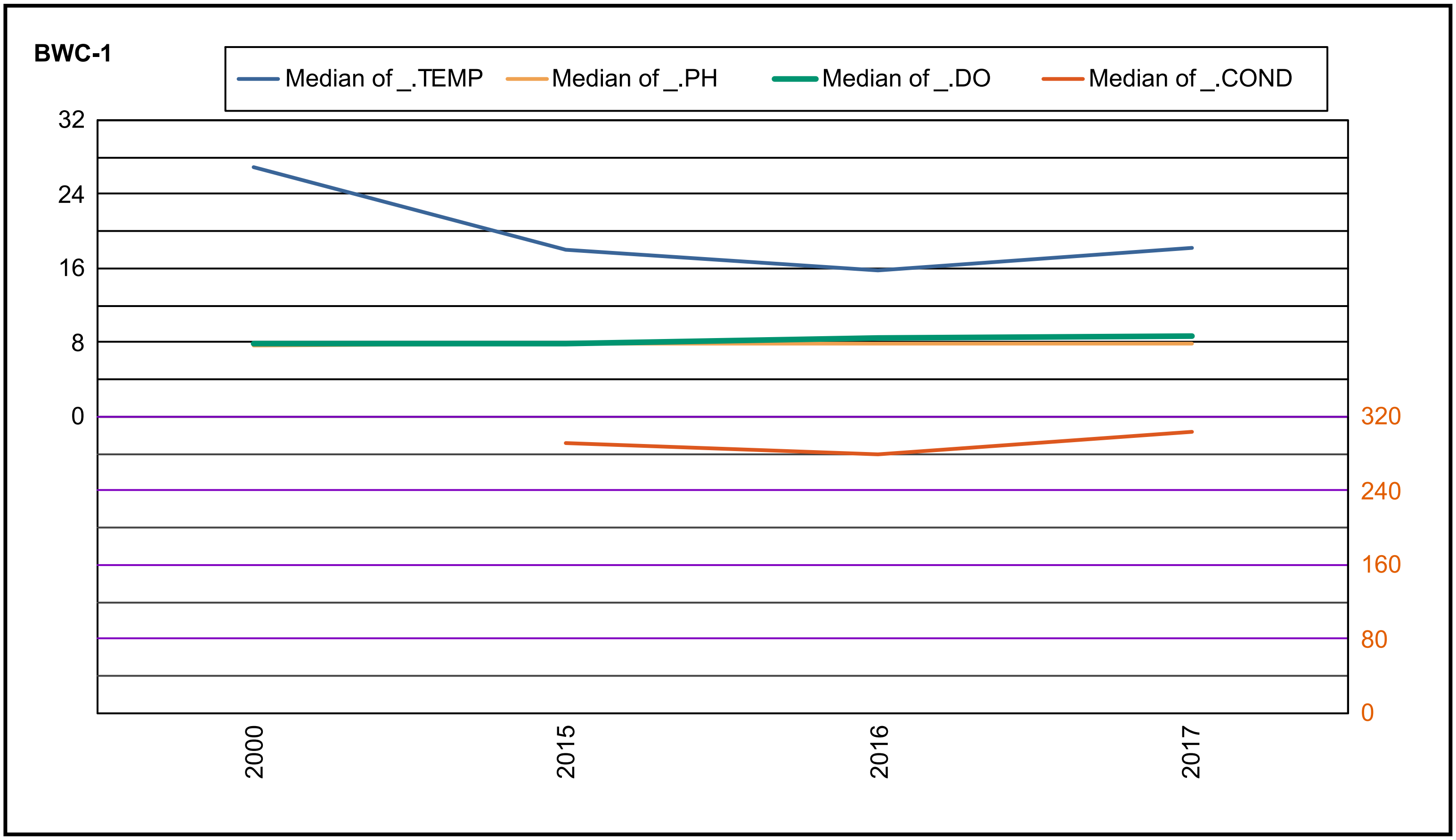


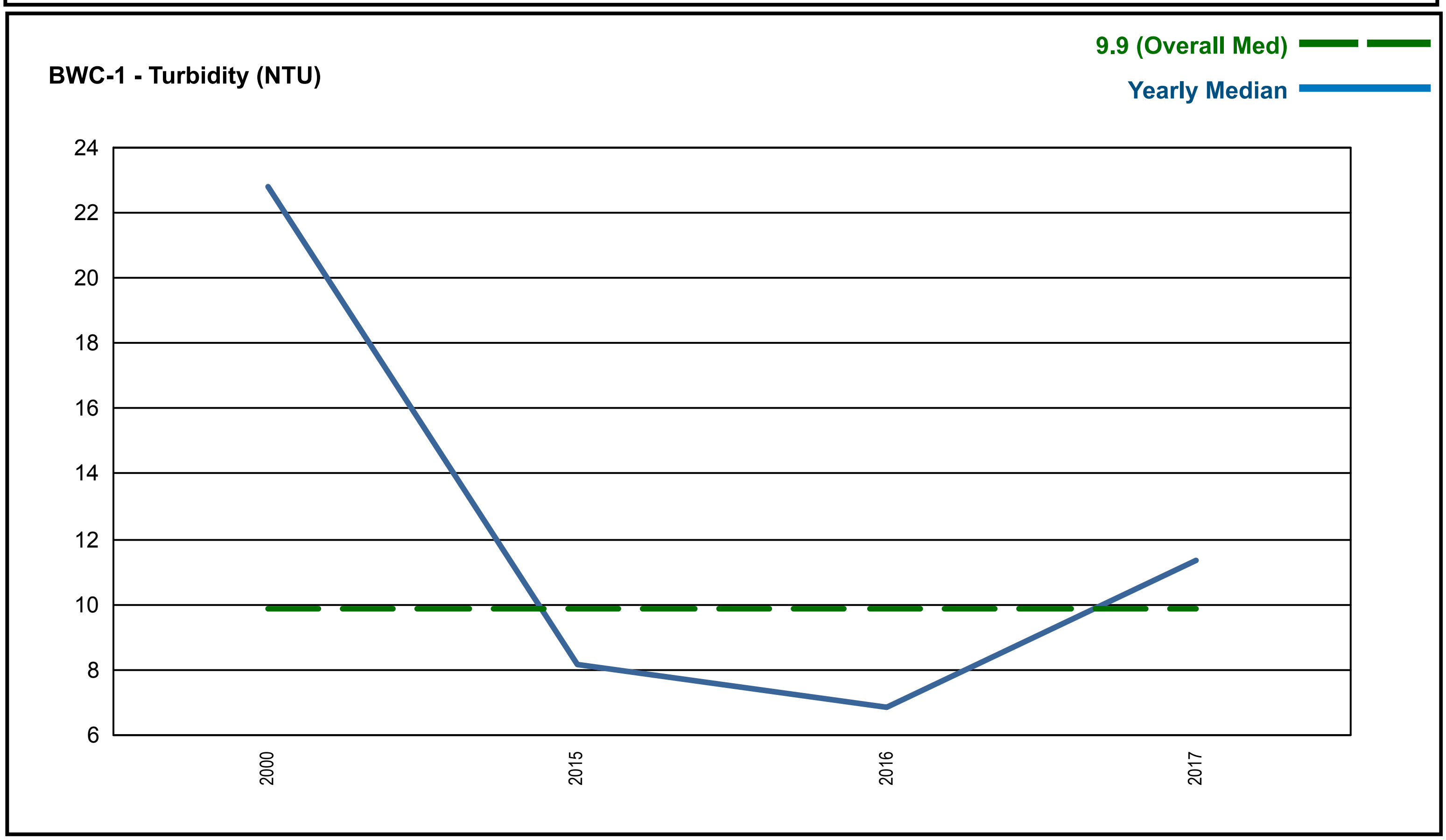


ADEM Ambient Trend Stations - Sampled 1977 - 2018

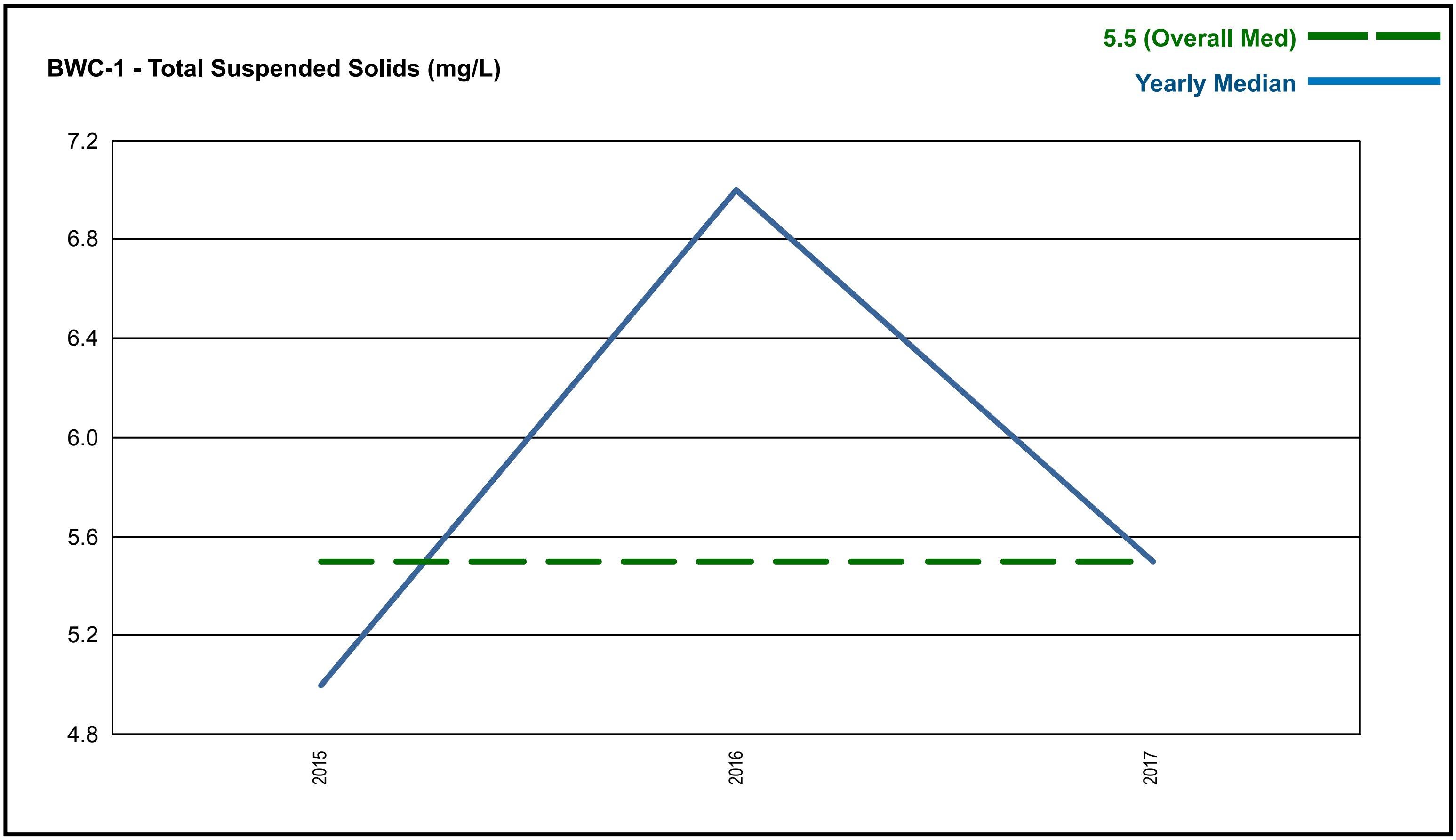


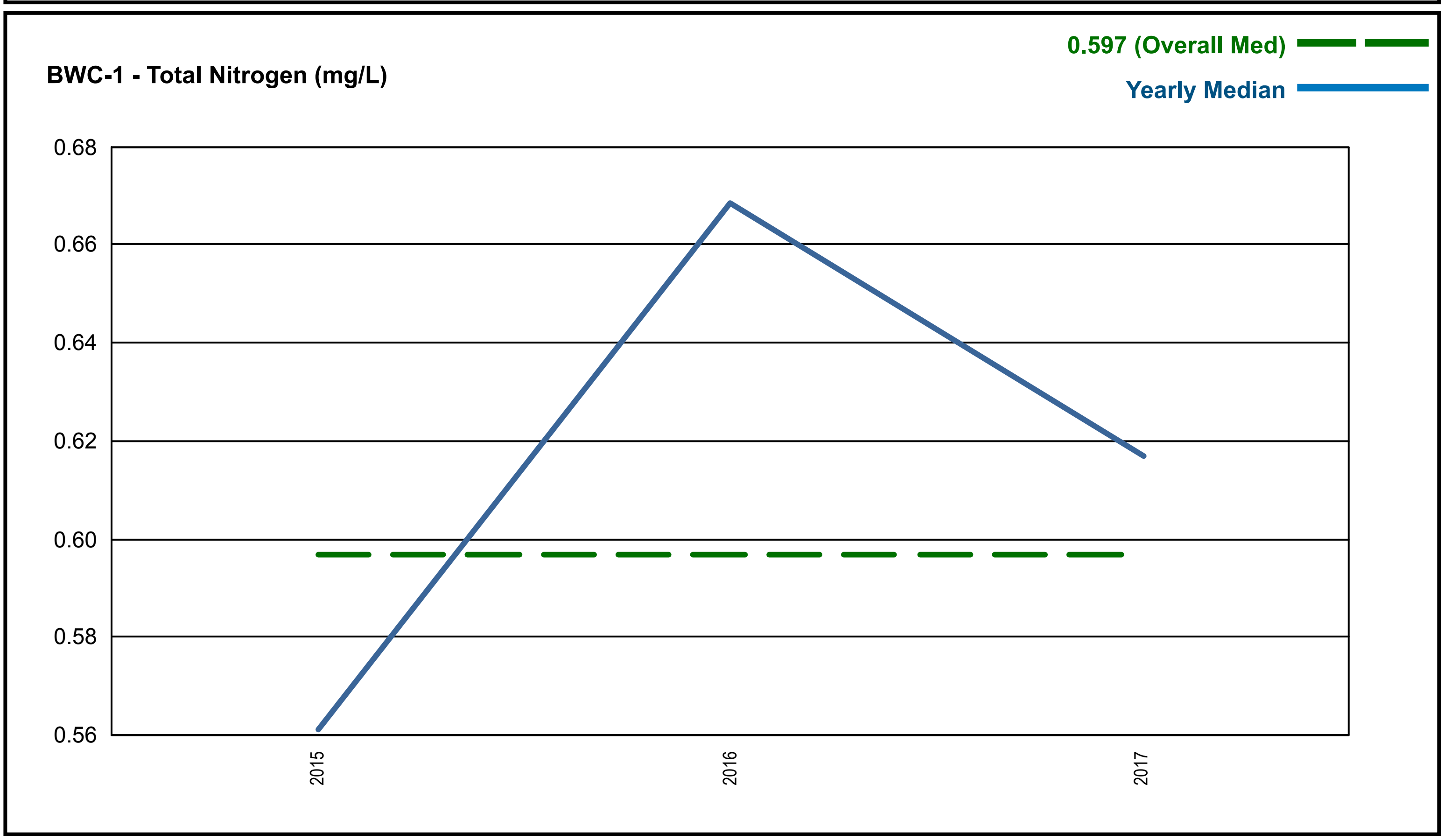
ADEM Ambient Trend Stations - Sampled 1977 - 2018



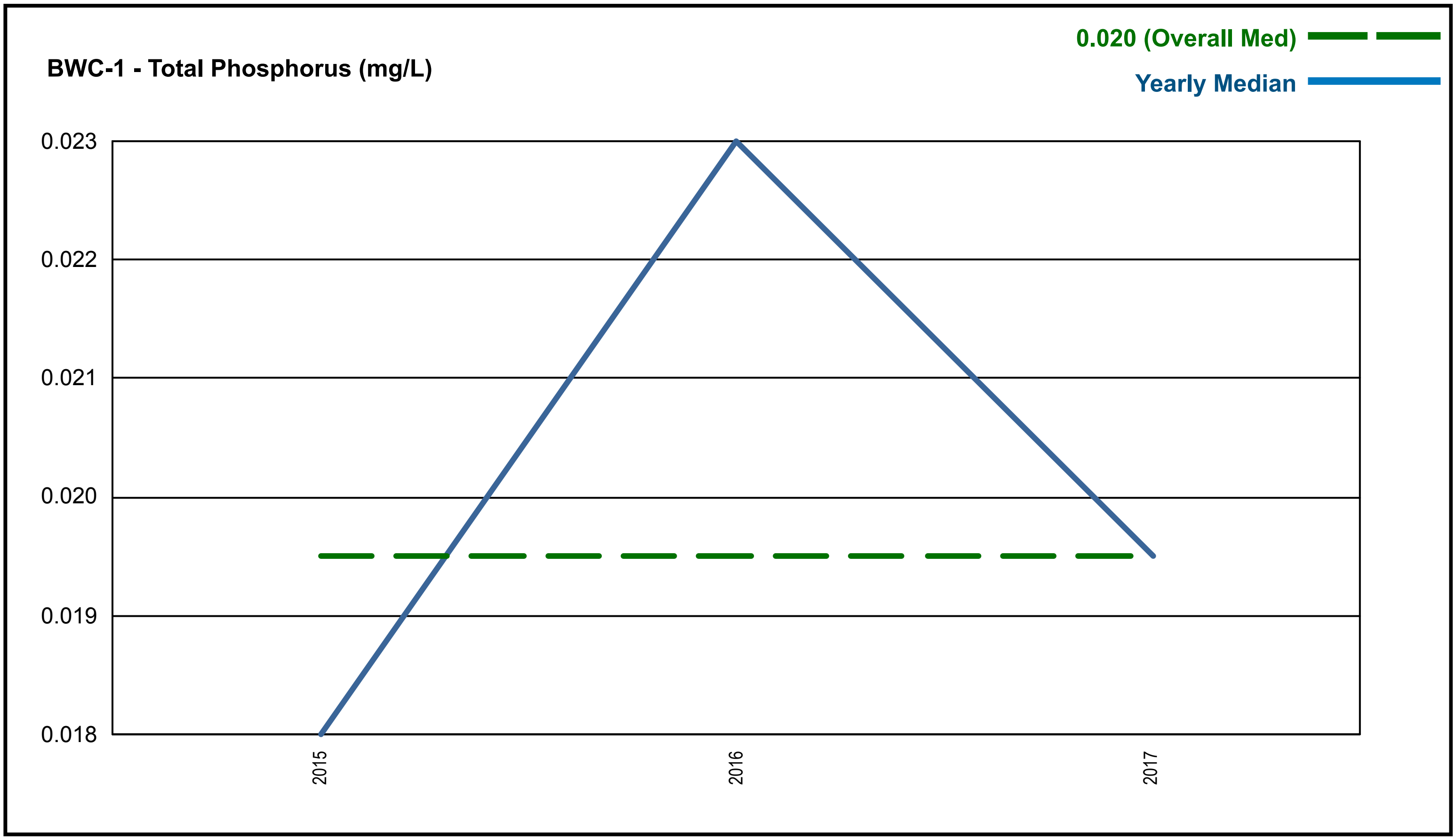


ADEM Ambient Trend Stations - Sampled 1977 - 2018

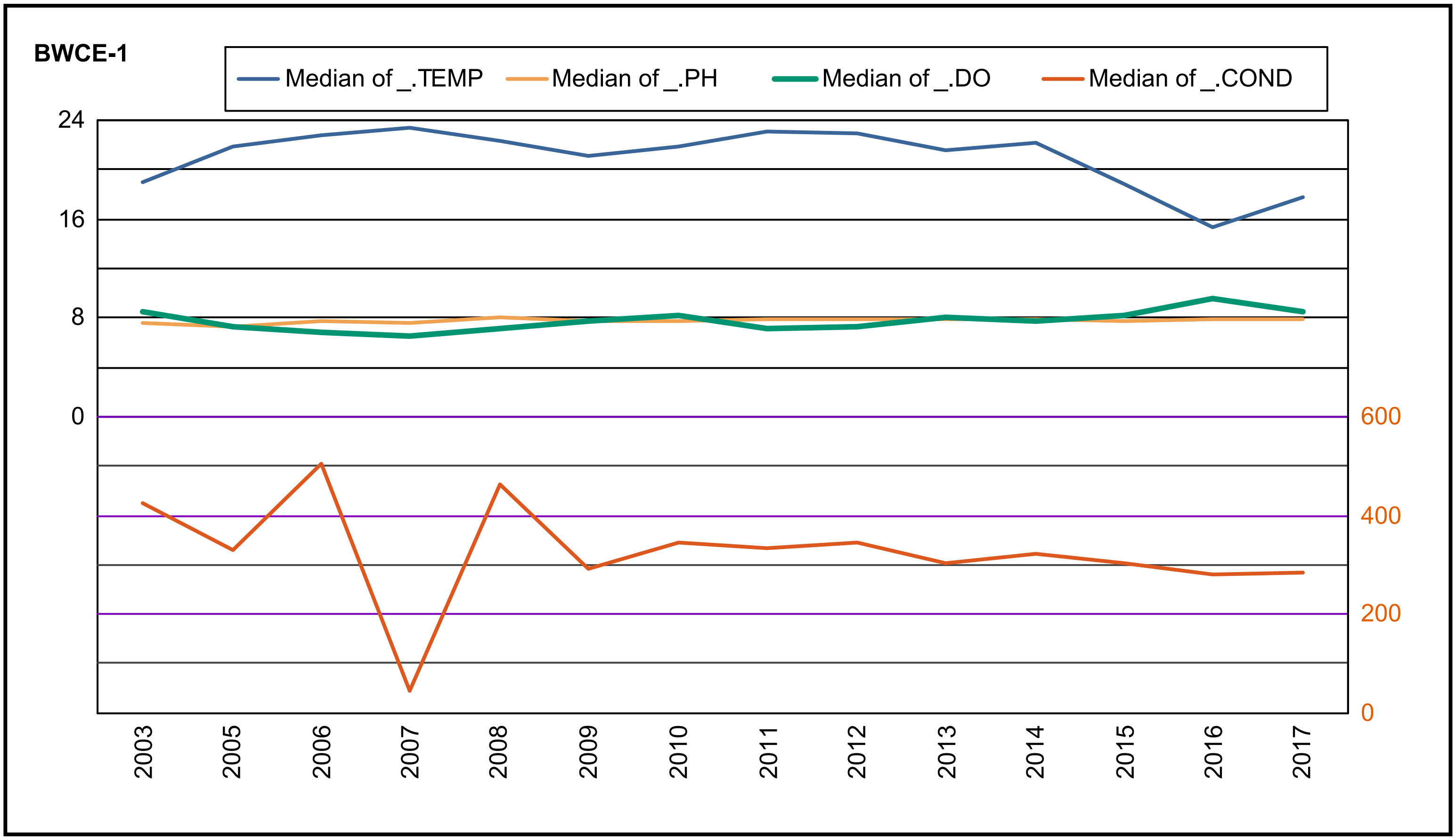


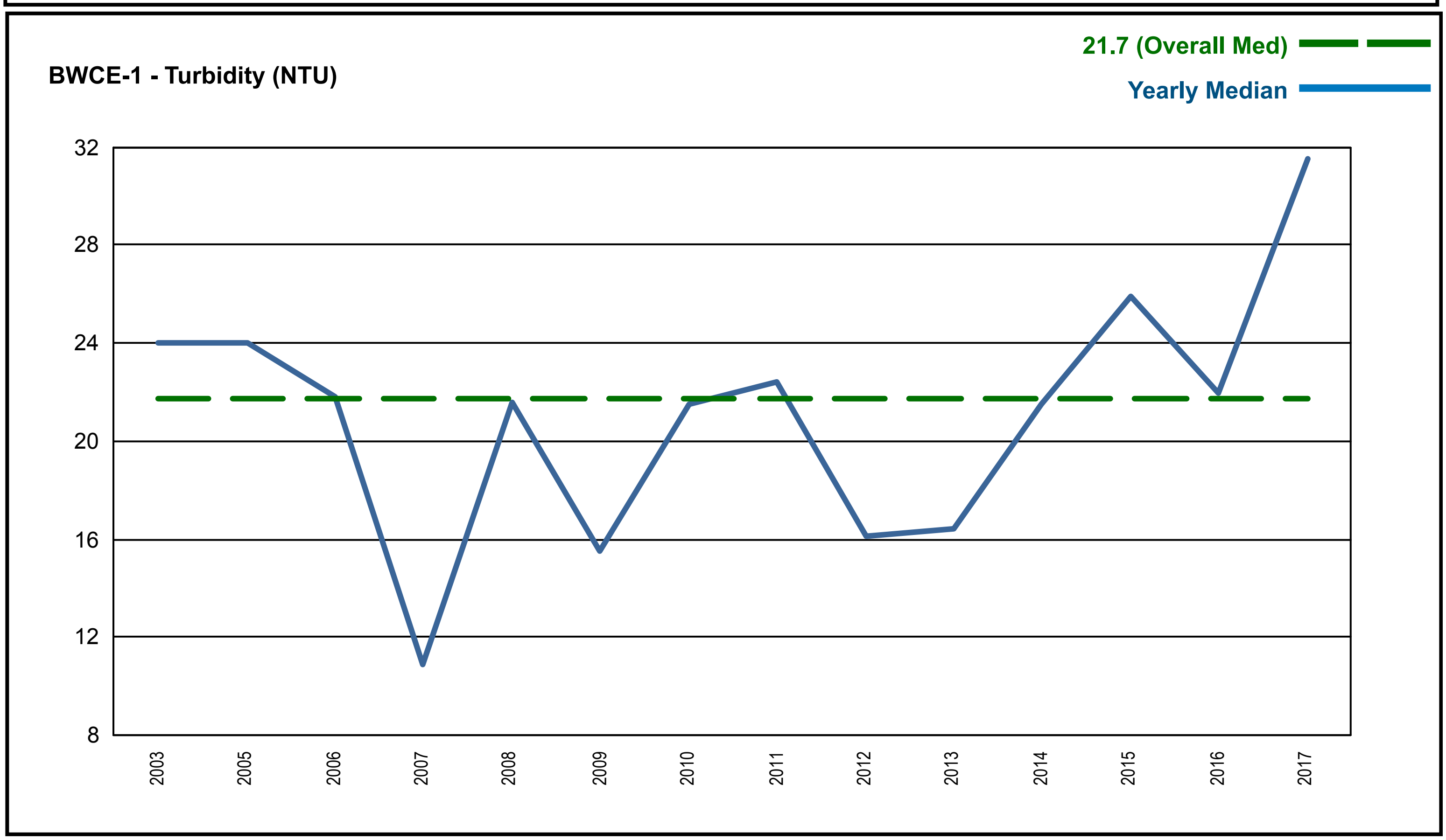


ADEM Ambient Trend Stations - Sampled 1977 - 2018

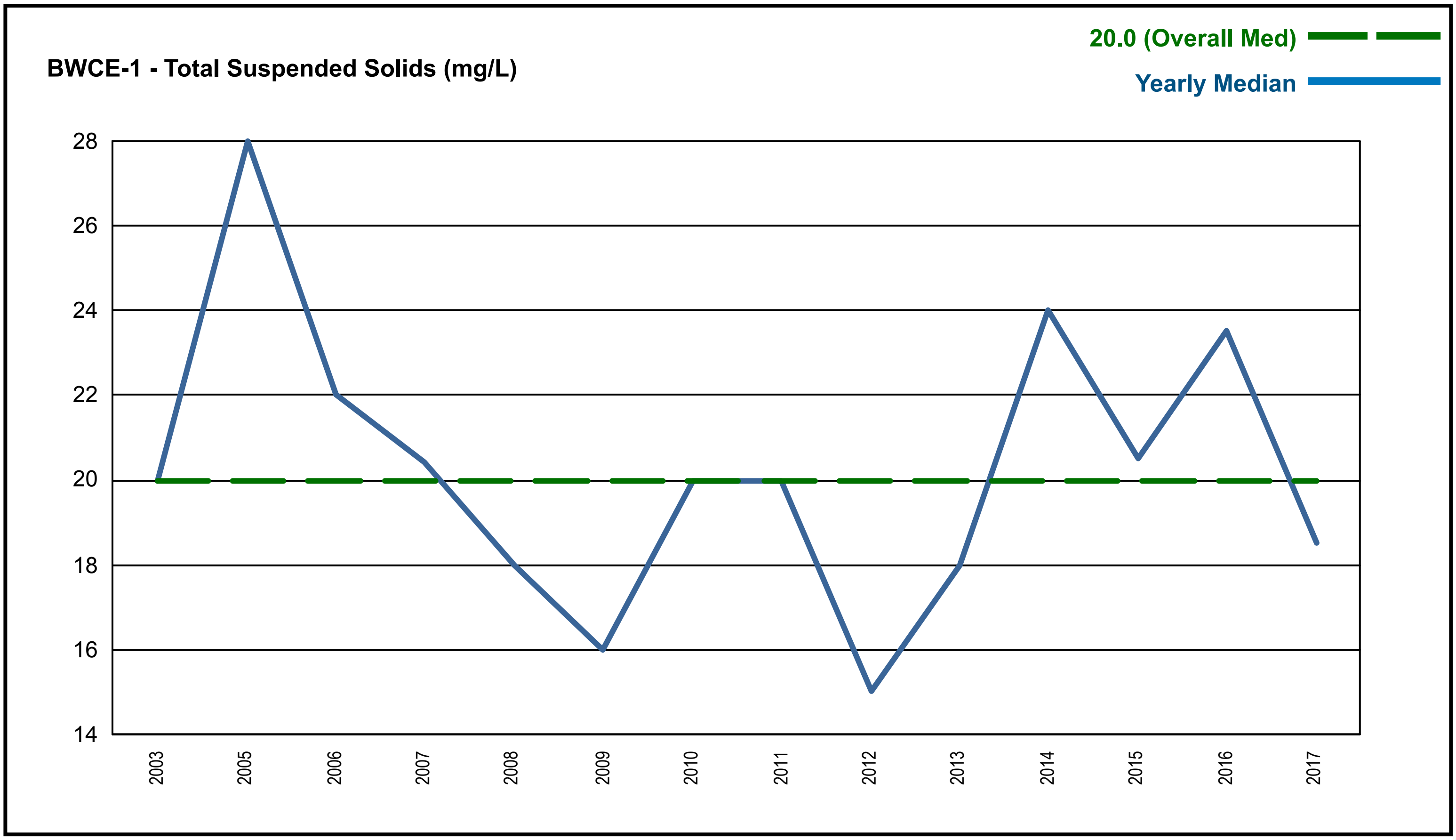


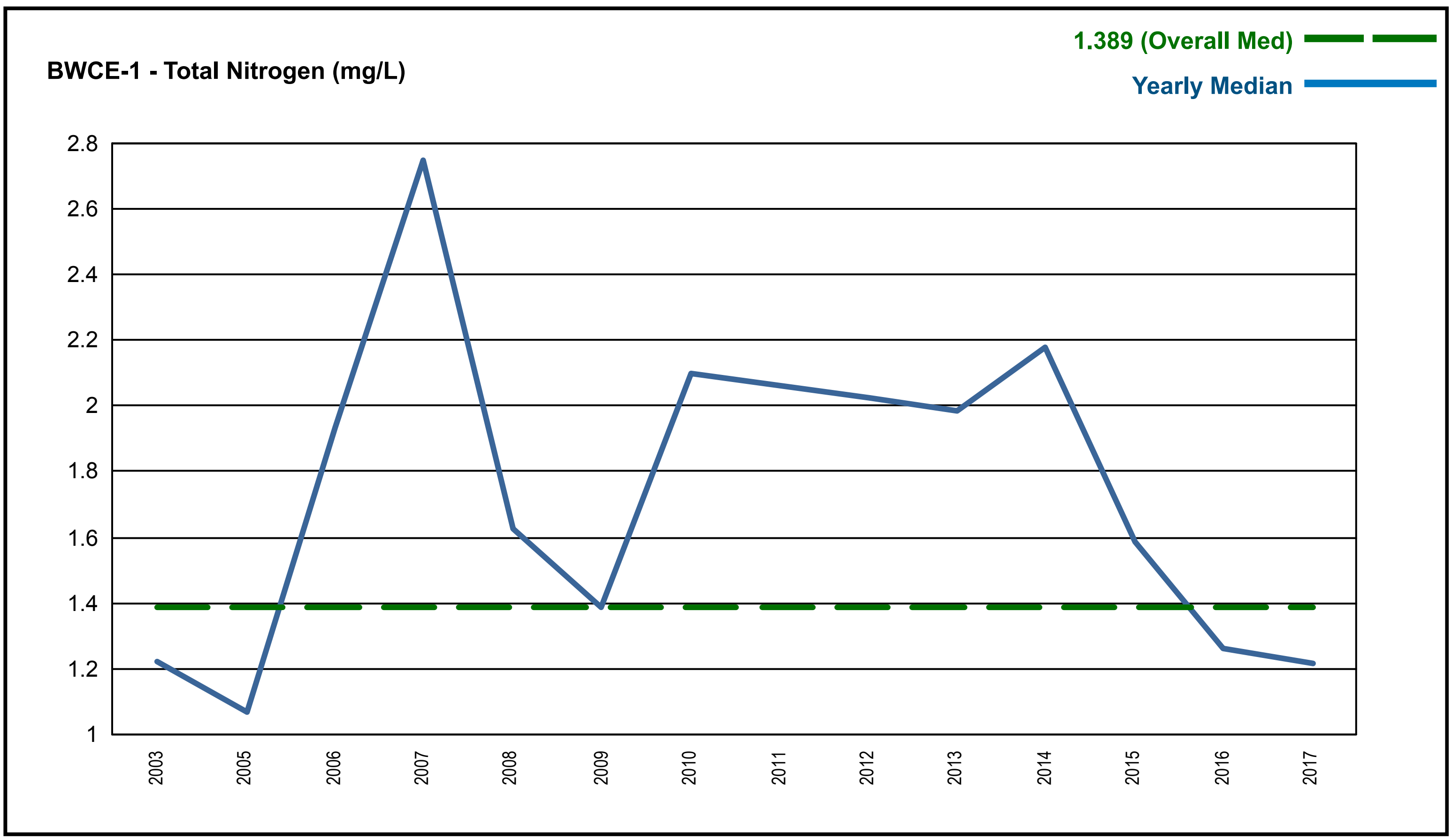
ADEM Ambient Trend Stations - Sampled 1977 - 2018

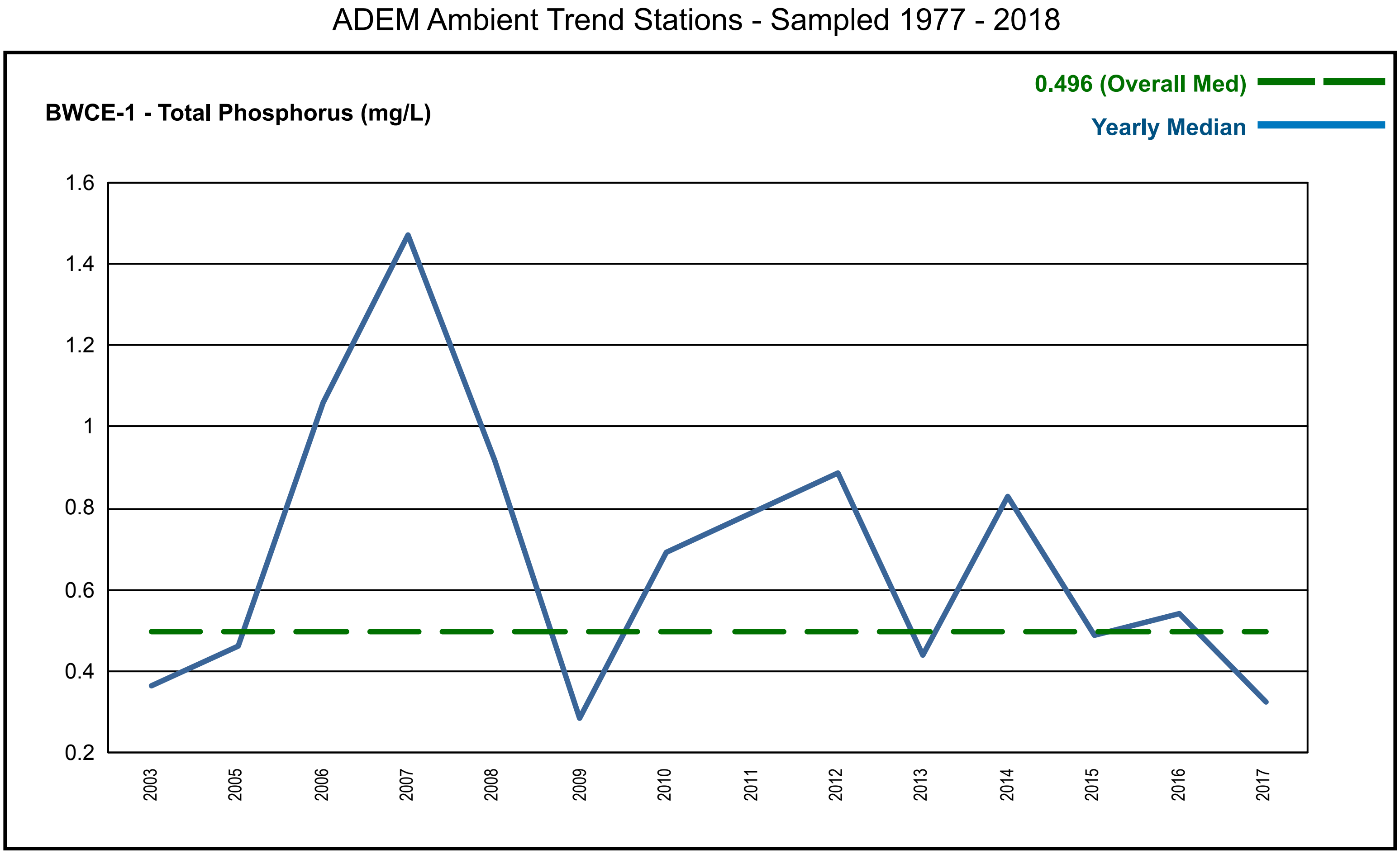




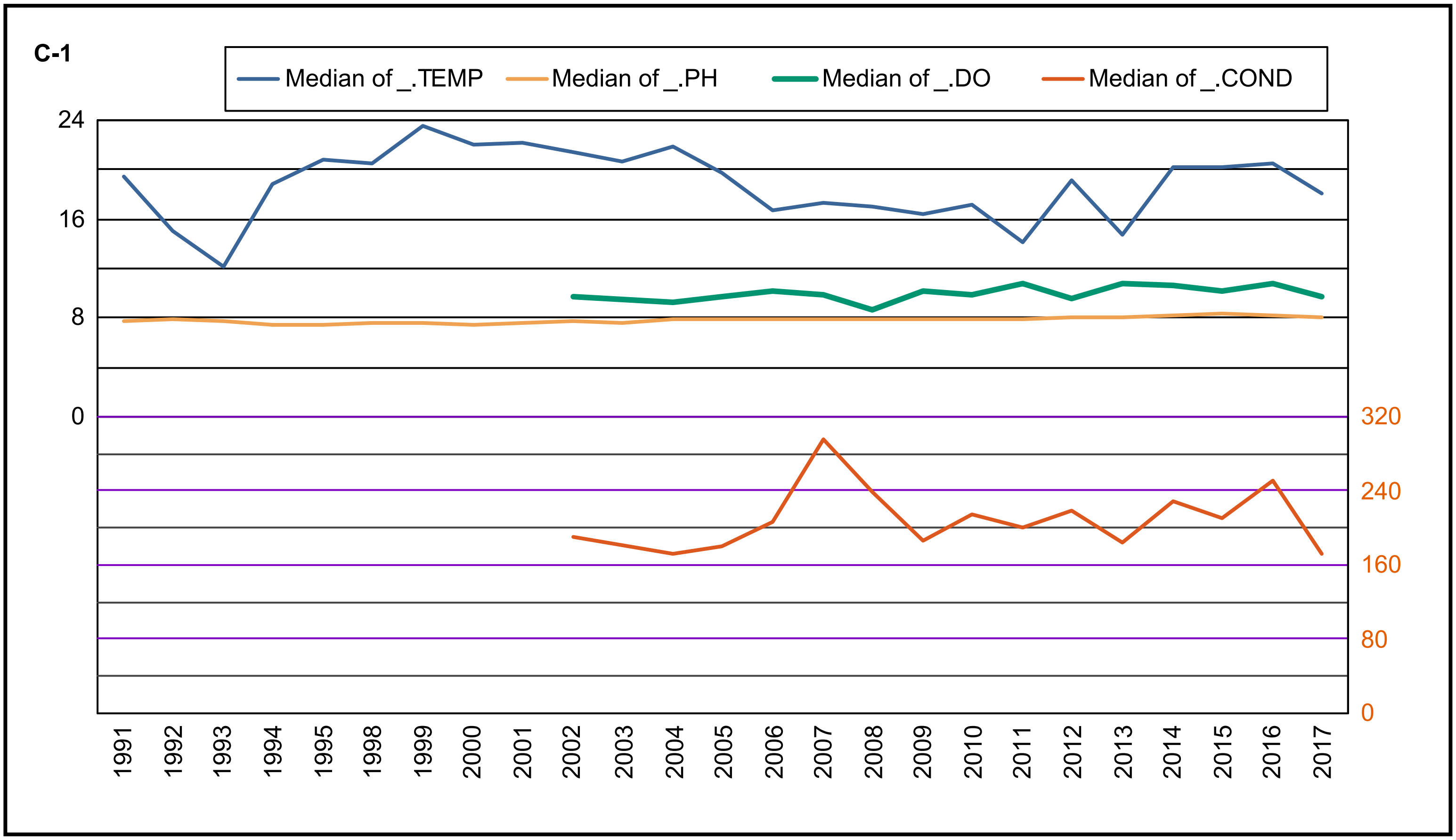
ADEM Ambient Trend Stations - Sampled 1977 - 2018

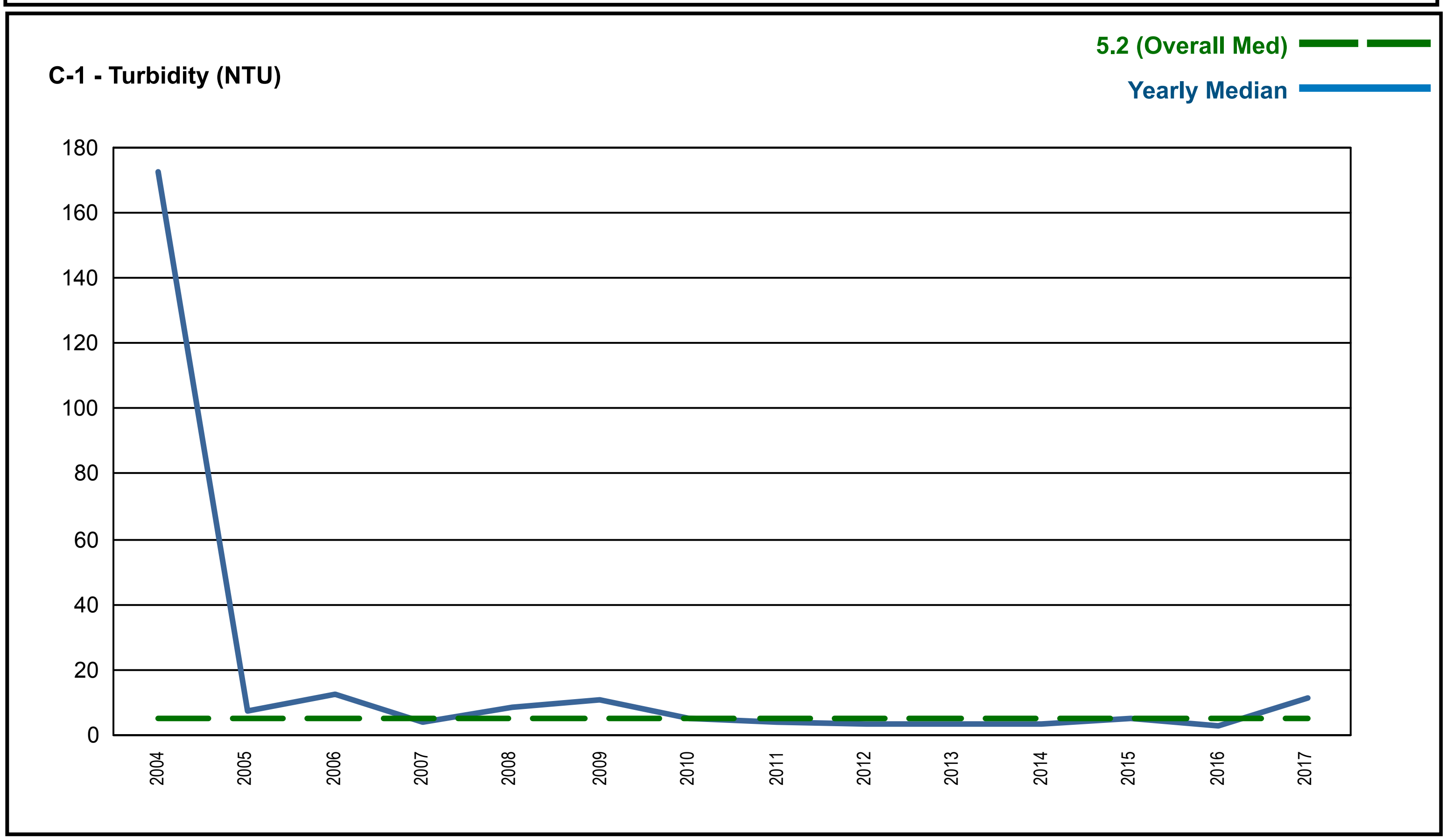




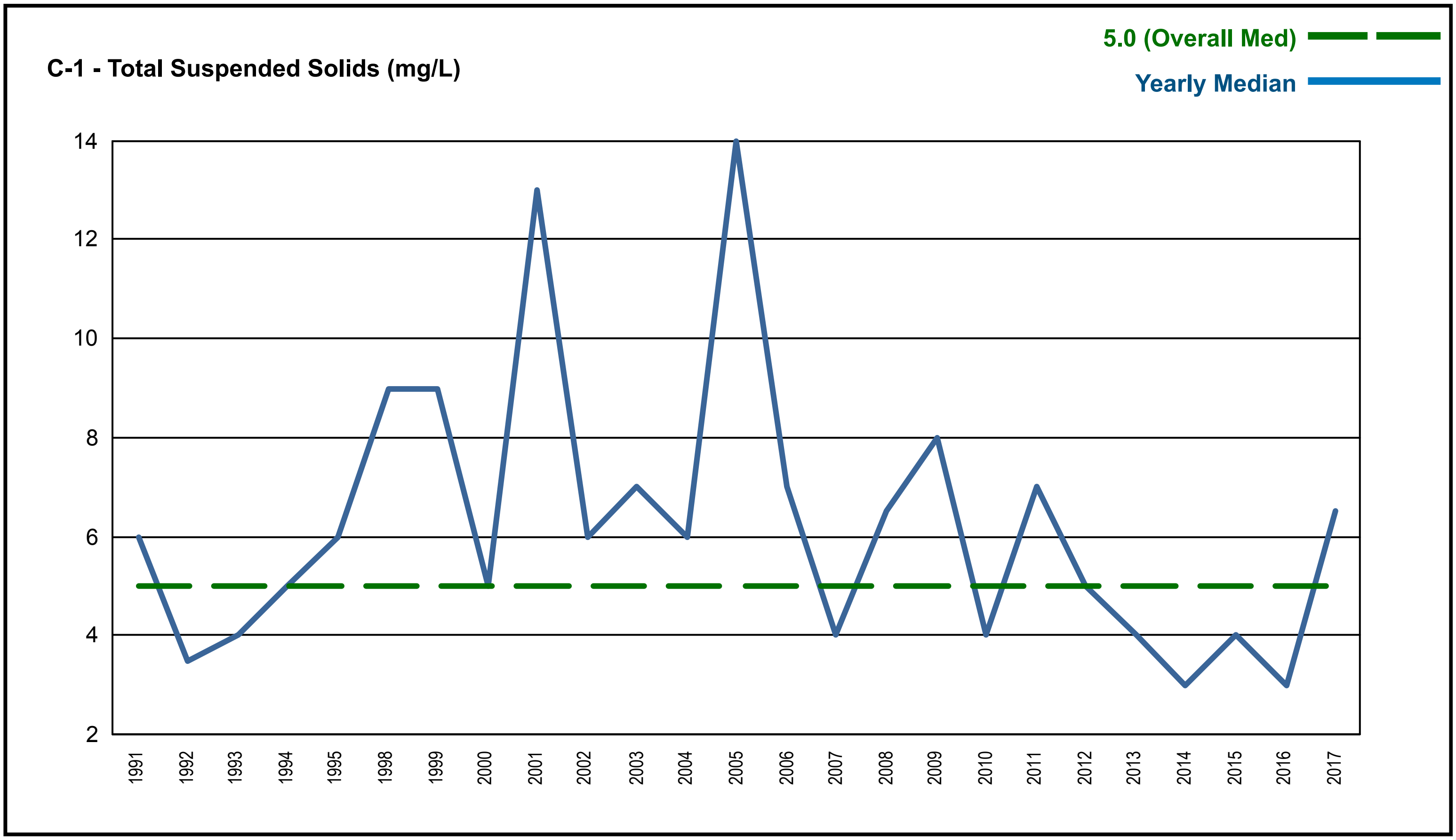

ADEM Ambient Trend Stations - Sampled 1977 - 2018
BWCE-1 - Total Phosphorus (mg/L)
0.496 (Overall Med)
Yearly Median
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

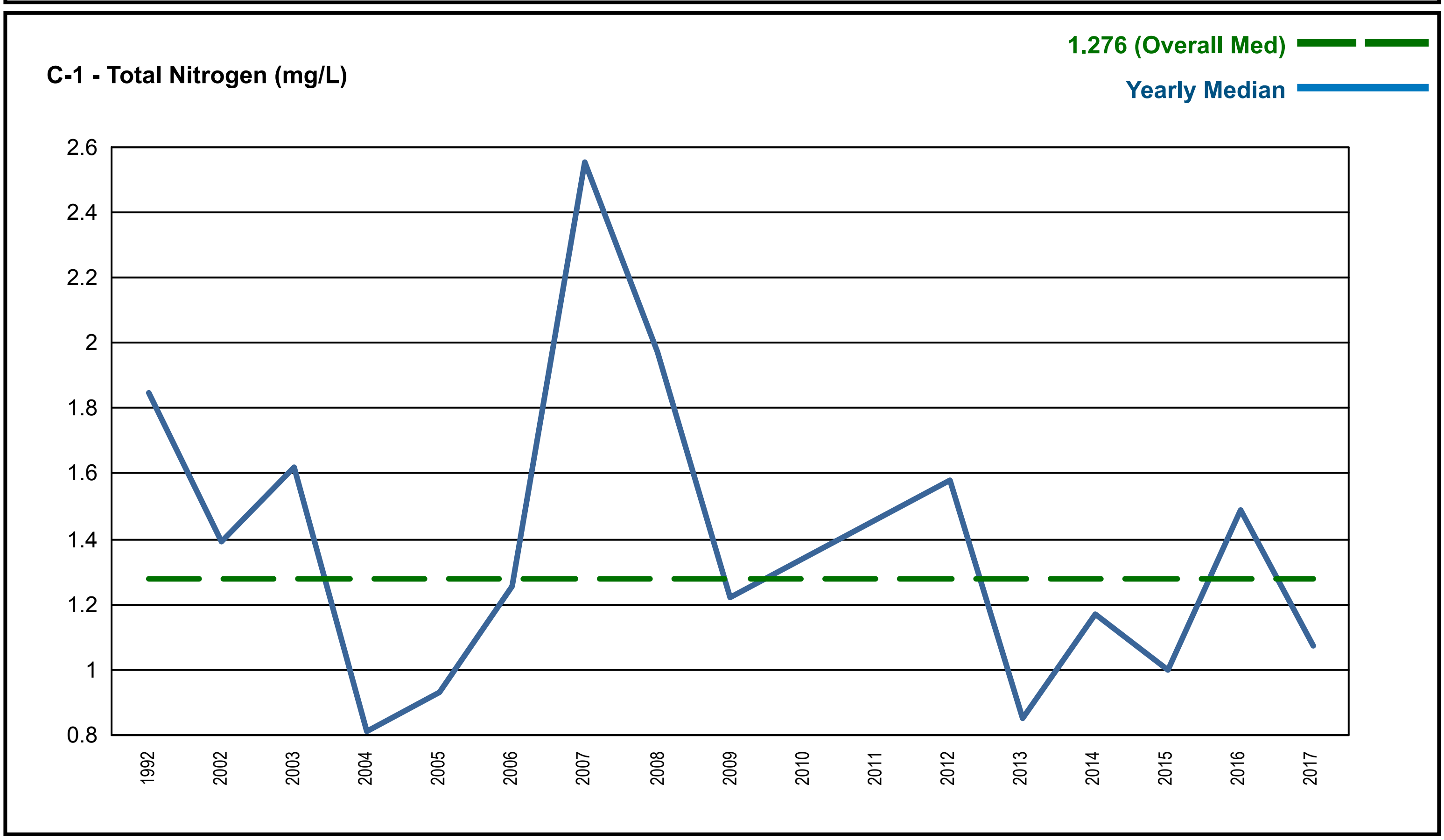
ADEM Ambient Trend Stations - Sampled 1977 - 2018



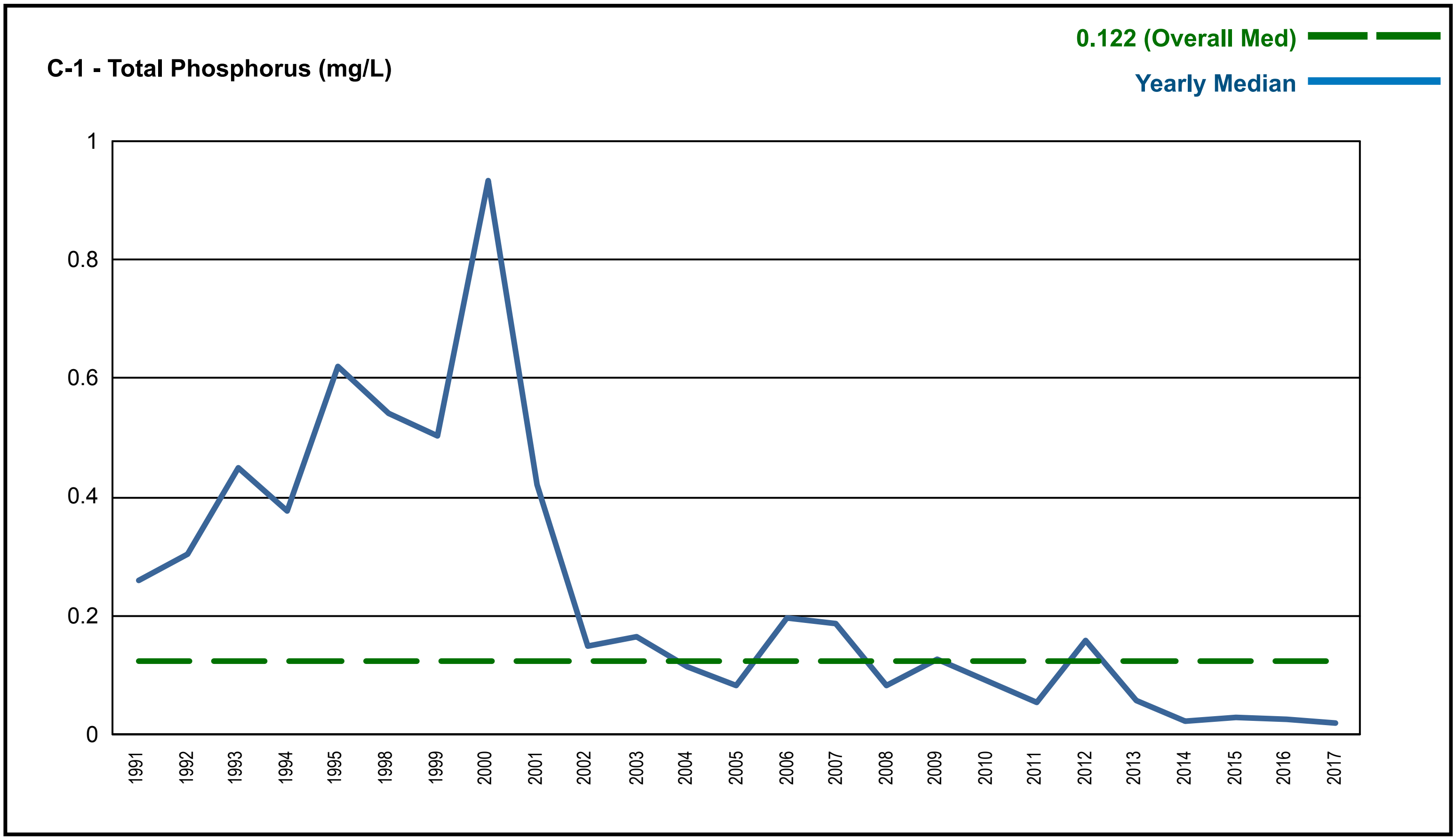


ADEM Ambient Trend Stations - Sampled 1977 - 2018

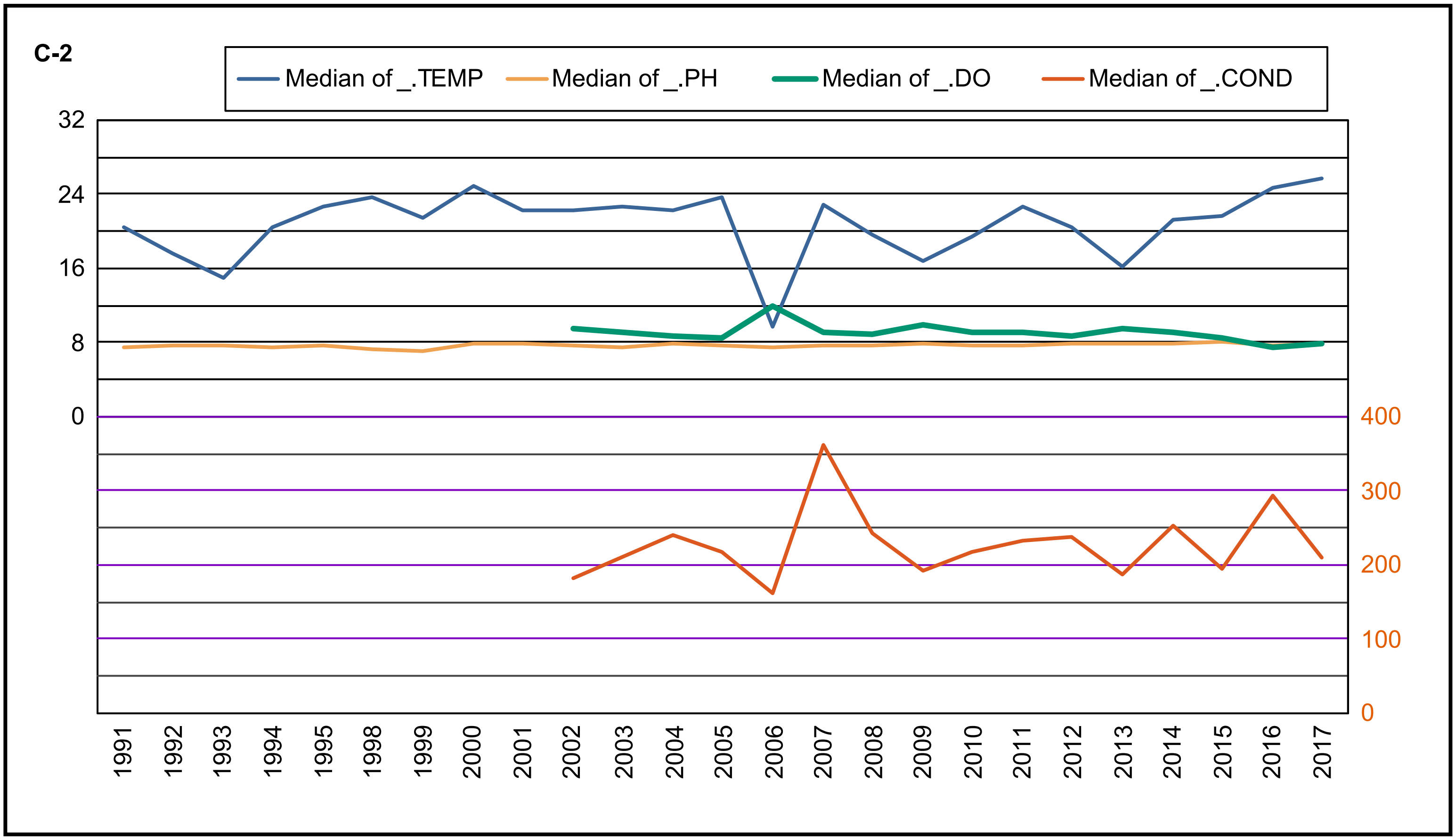


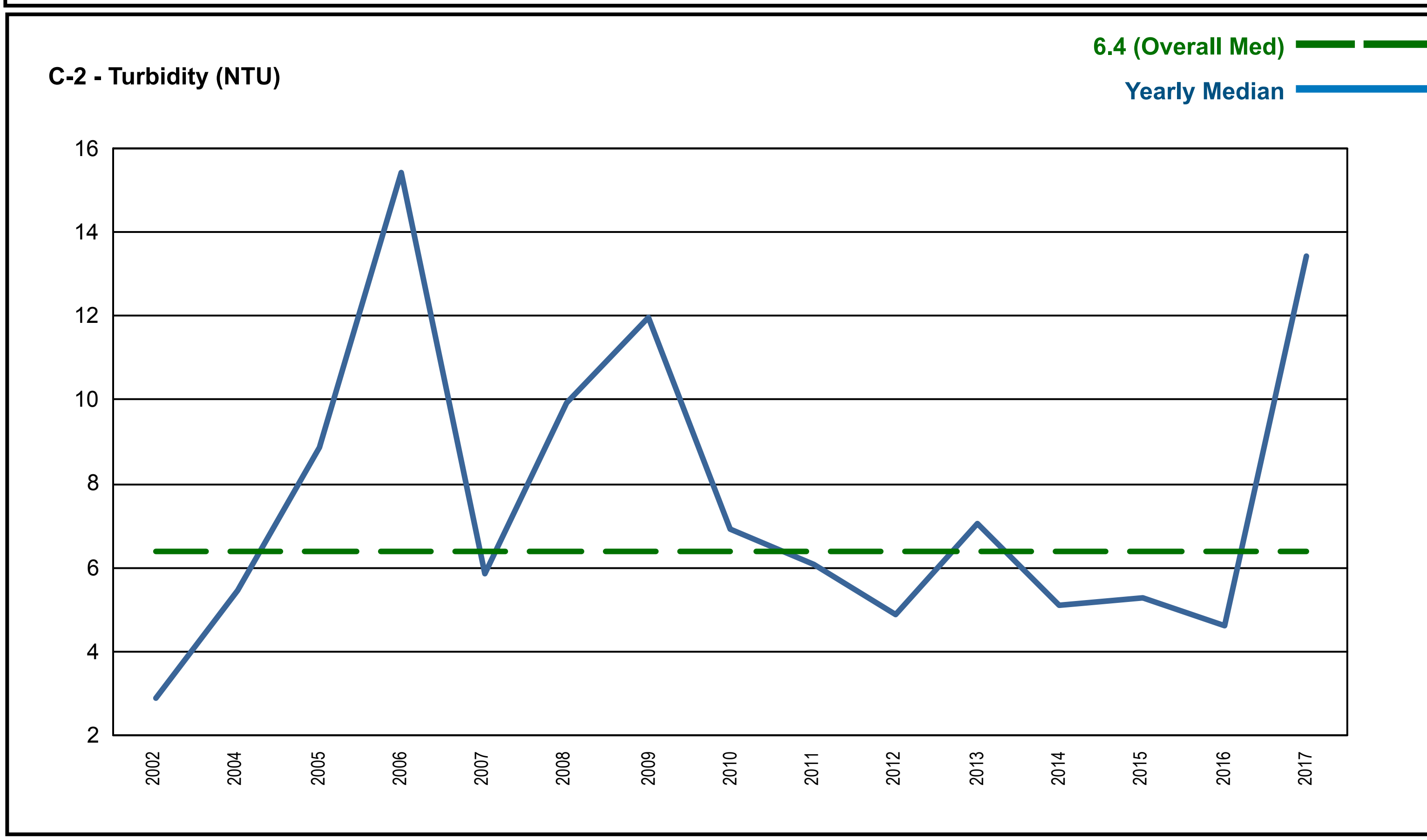


ADEM Ambient Trend Stations - Sampled 1977 - 2018

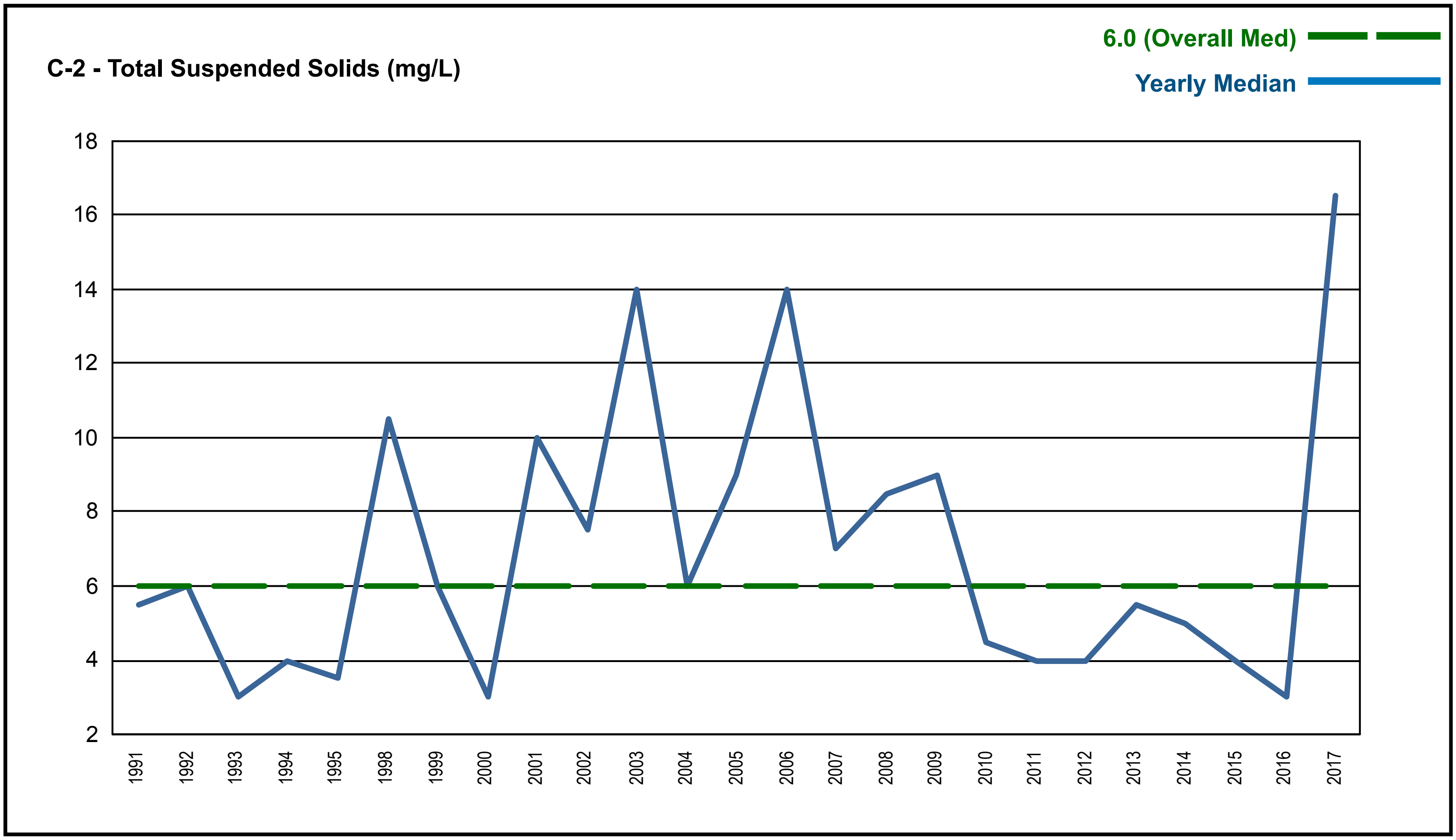


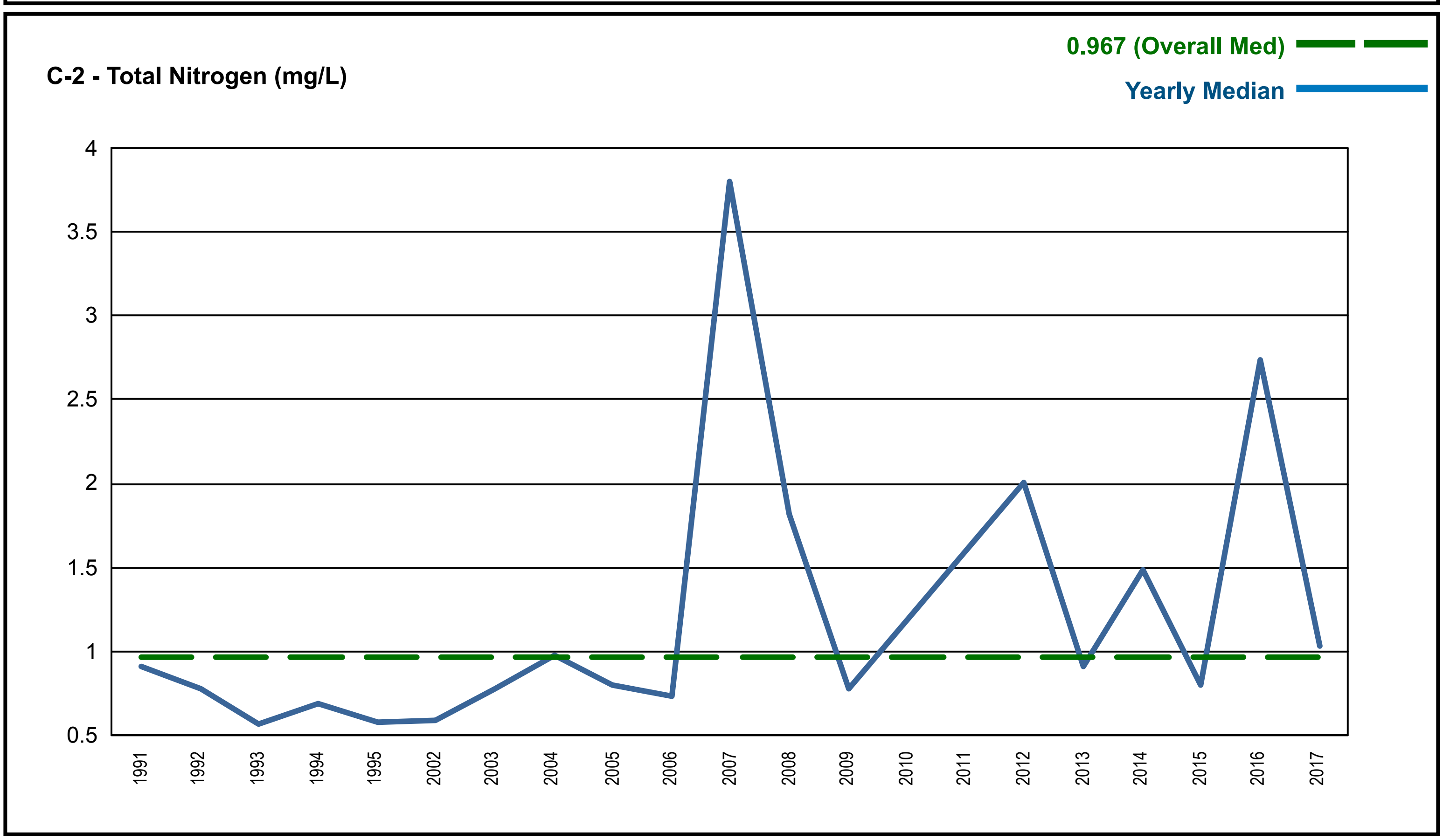
ADEM Ambient Trend Stations - Sampled 1977 - 2018



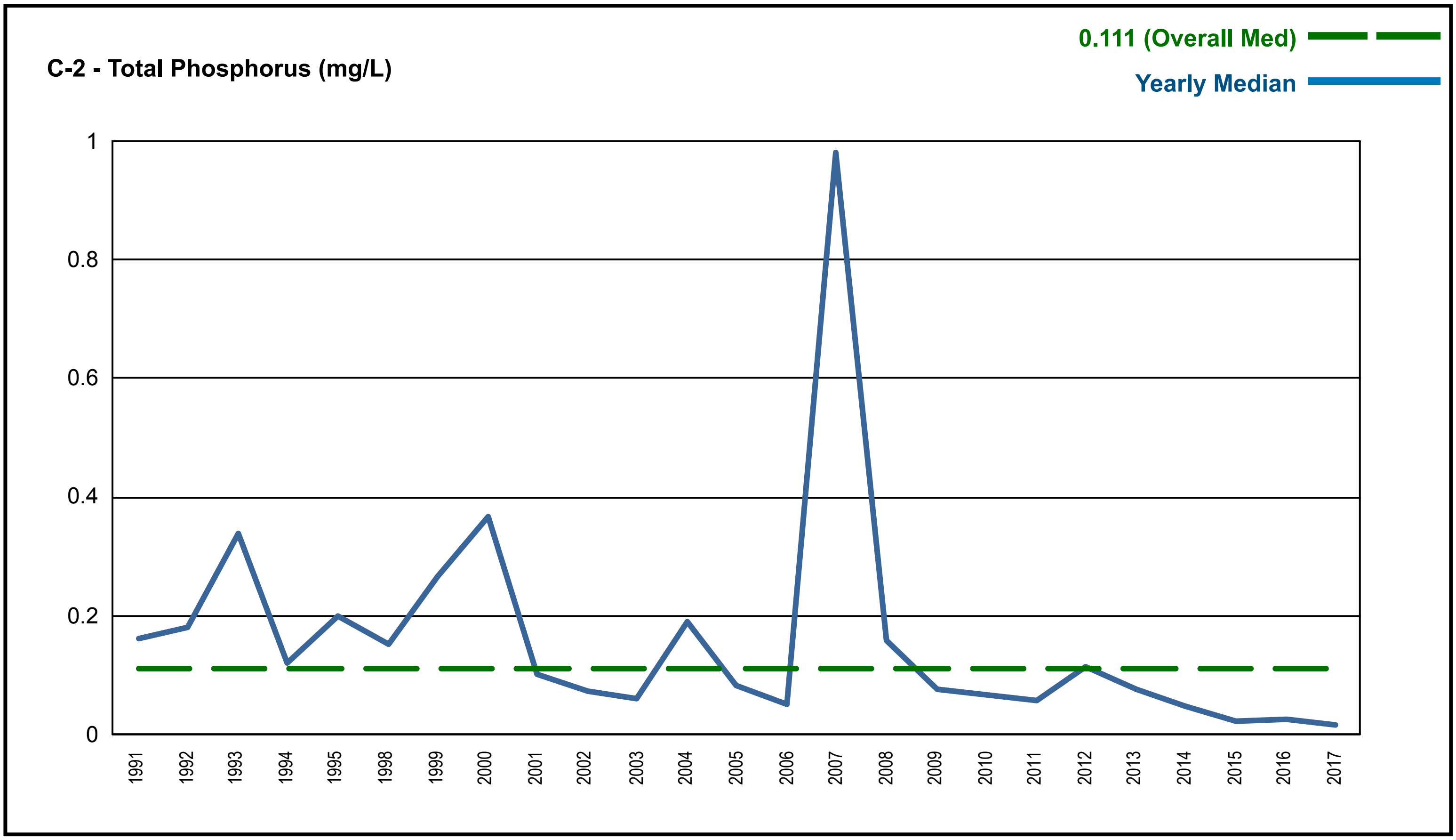


ADEM Ambient Trend Stations - Sampled 1977 - 2018

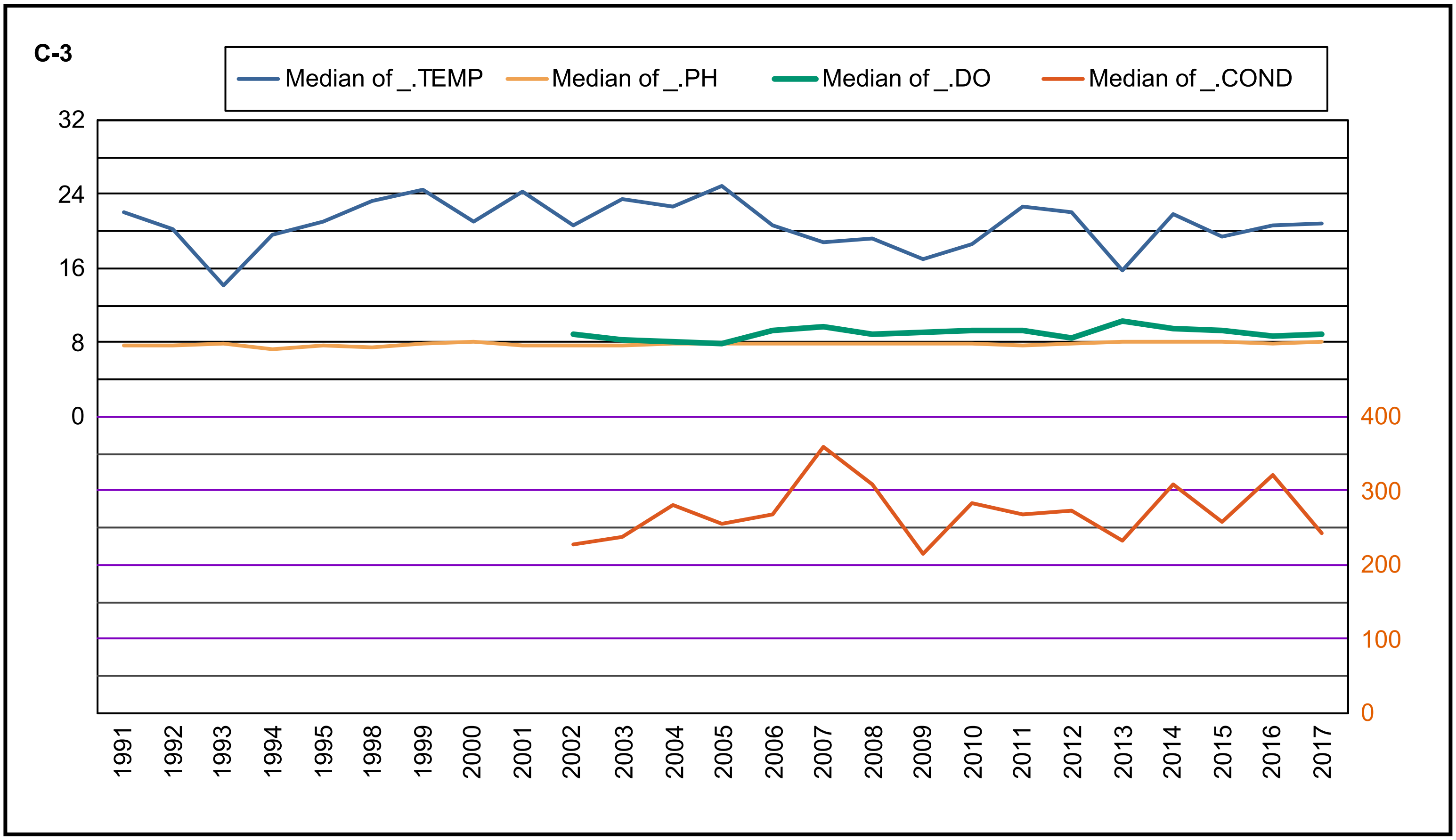


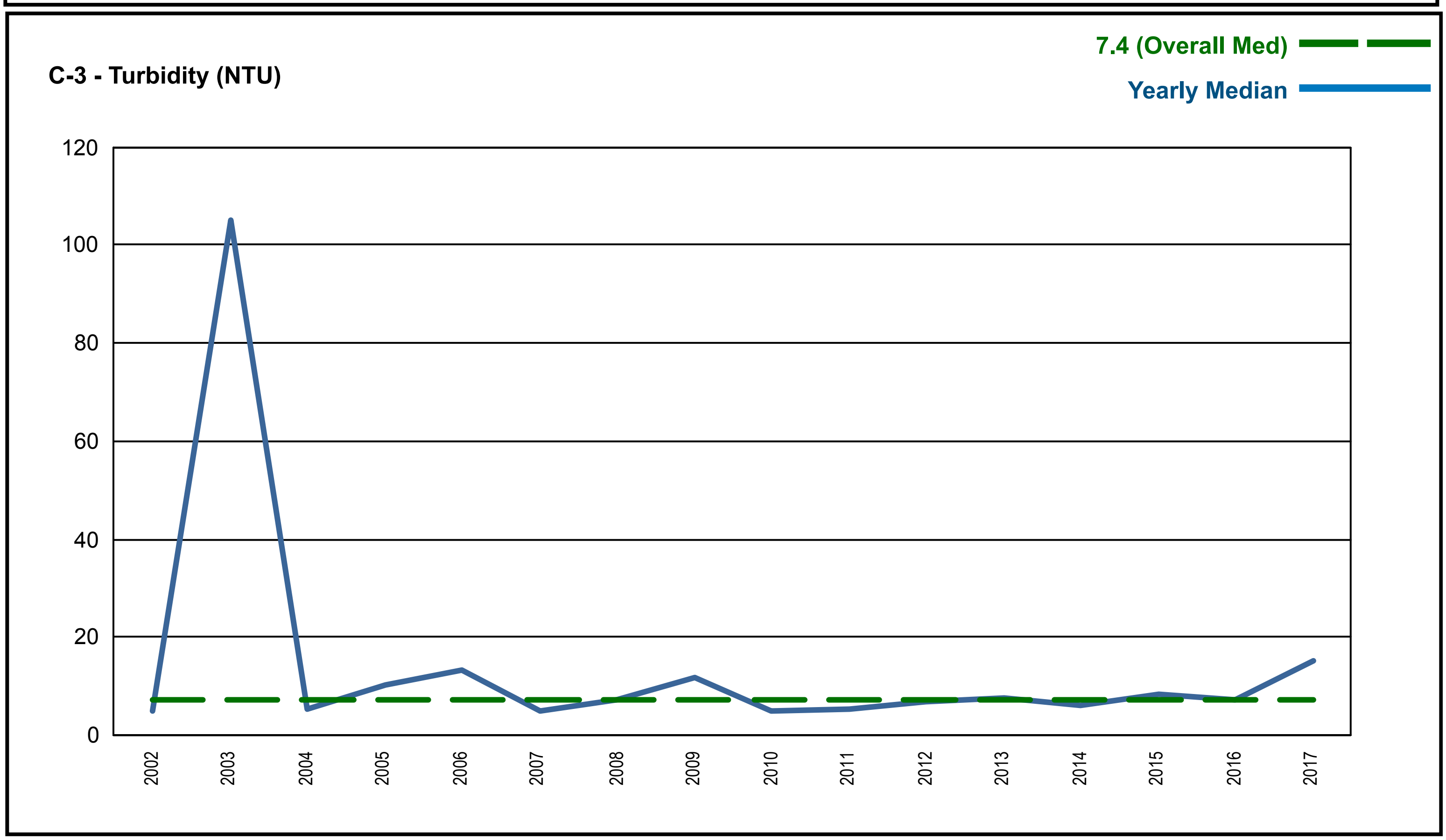


ADEM Ambient Trend Stations - Sampled 1977 - 2018

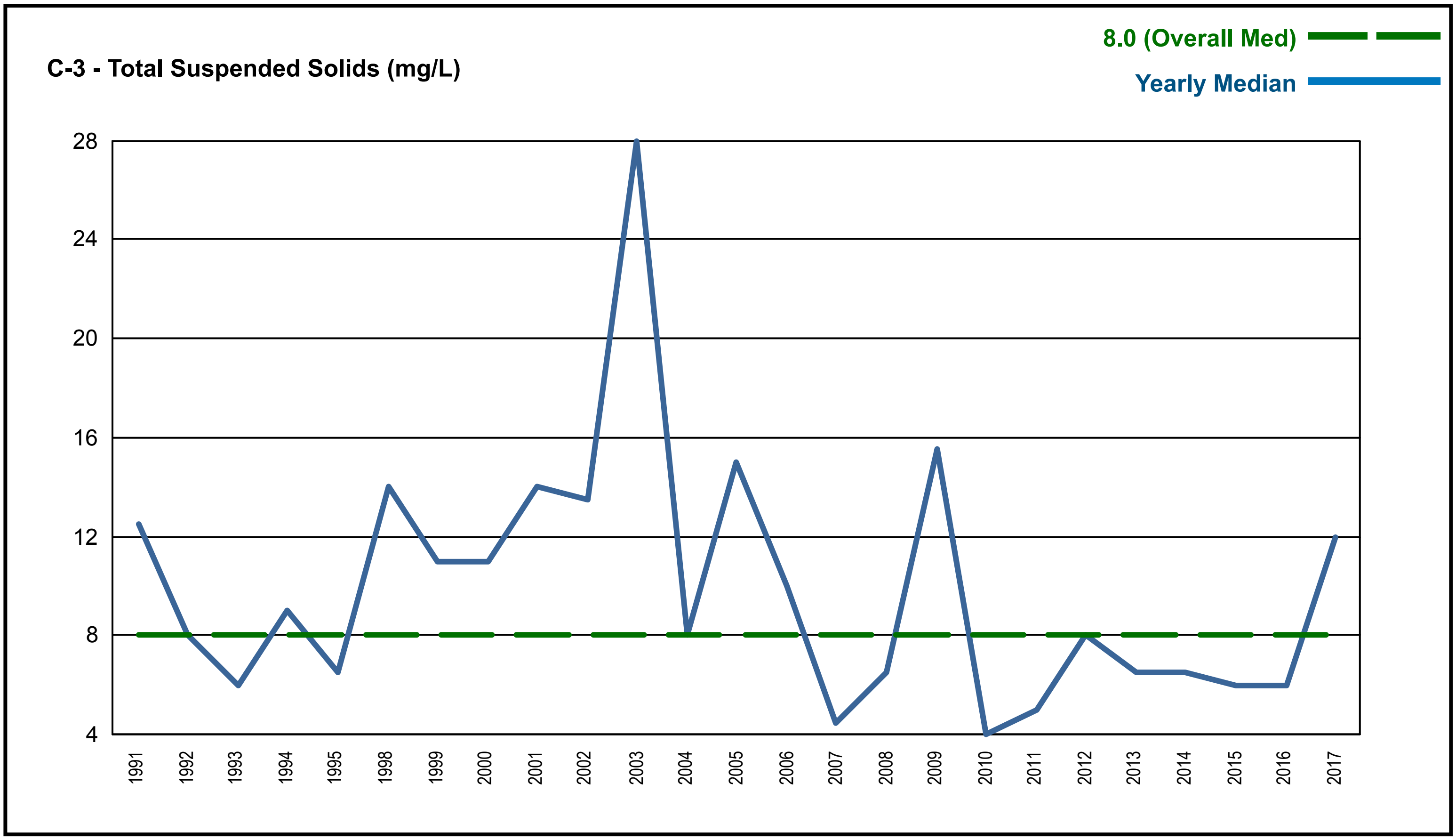


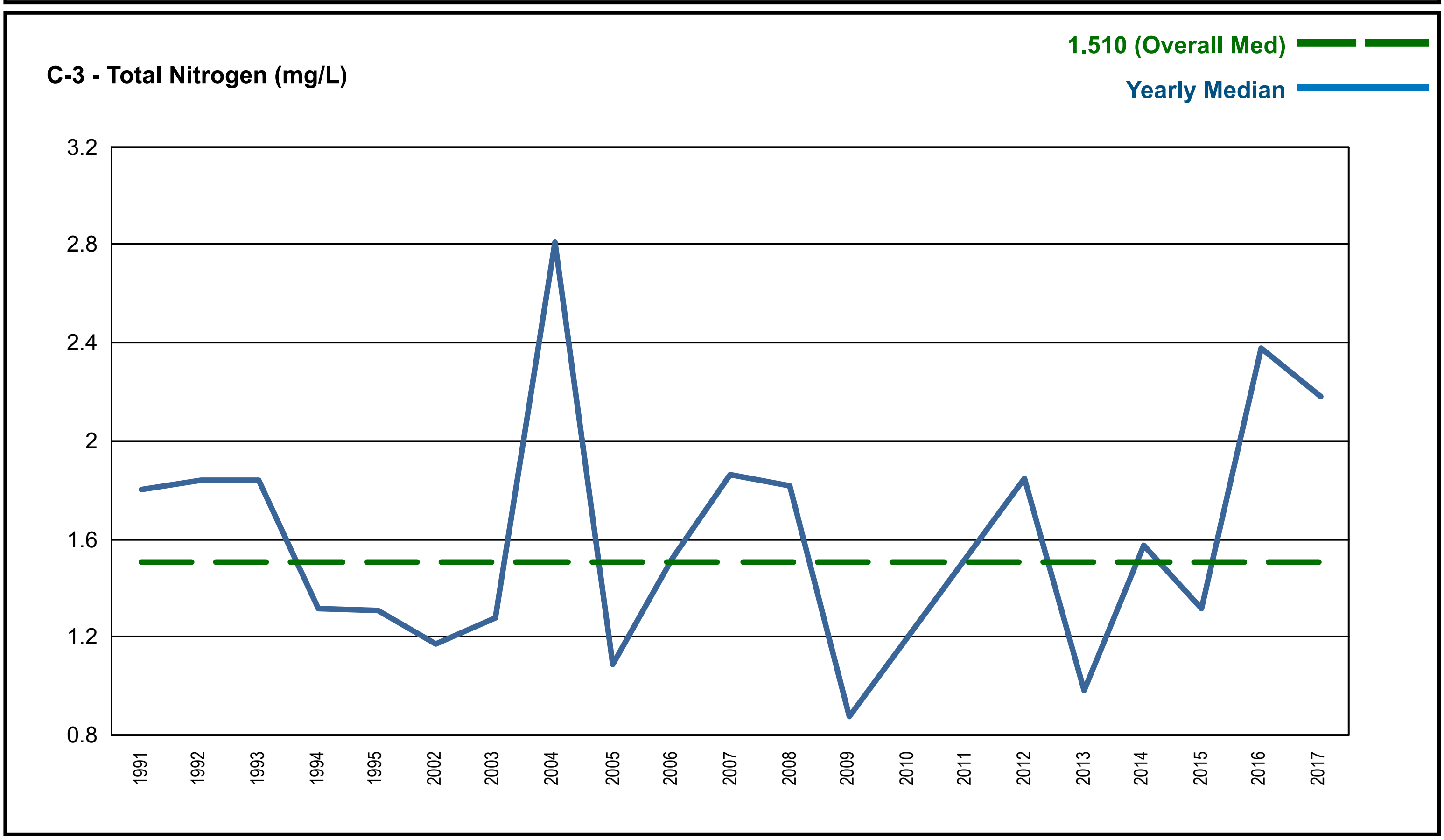
ADEM Ambient Trend Stations - Sampled 1977 - 2018



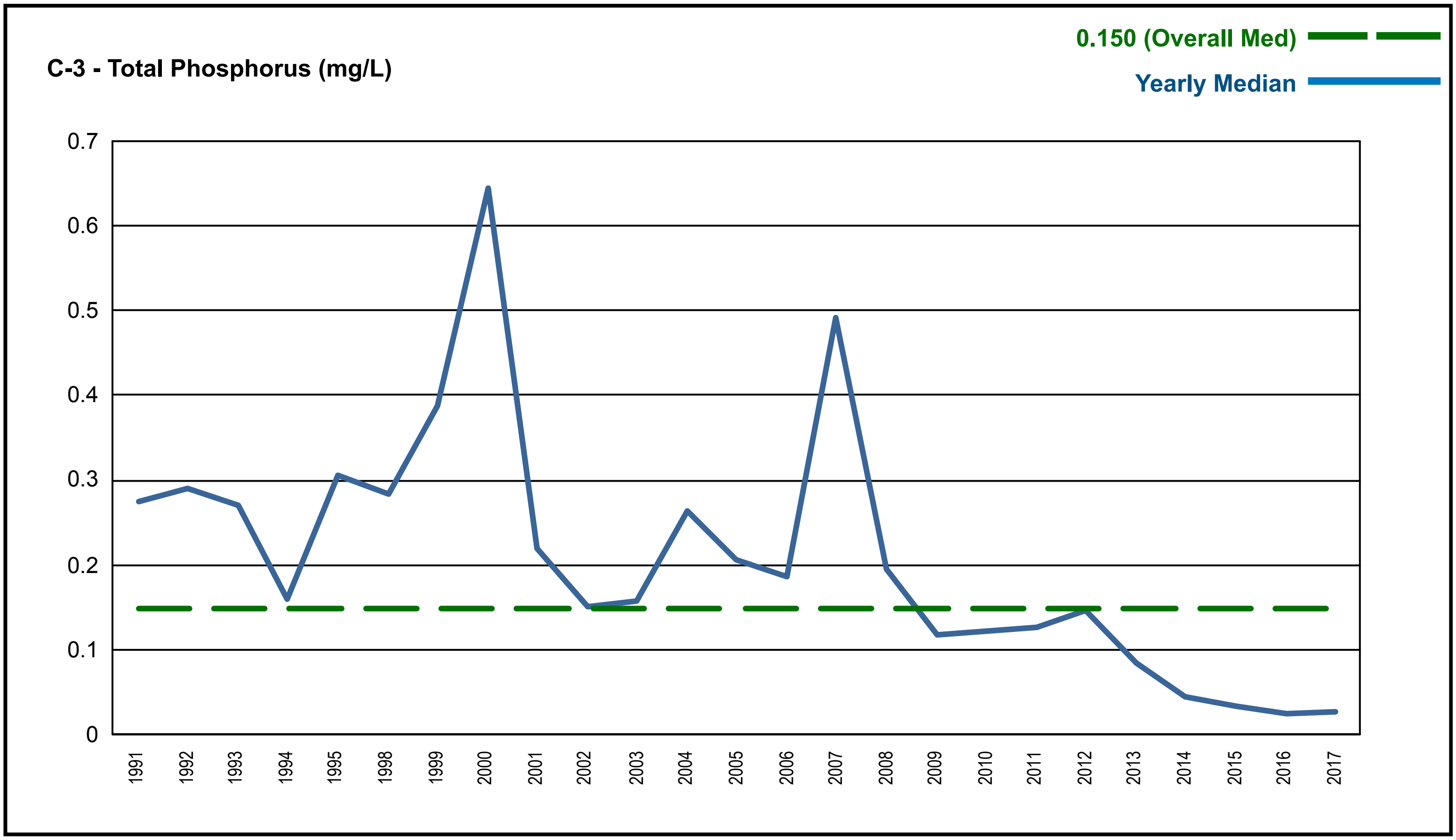


ADEM Ambient Trend Stations - Sampled 1977 - 2018

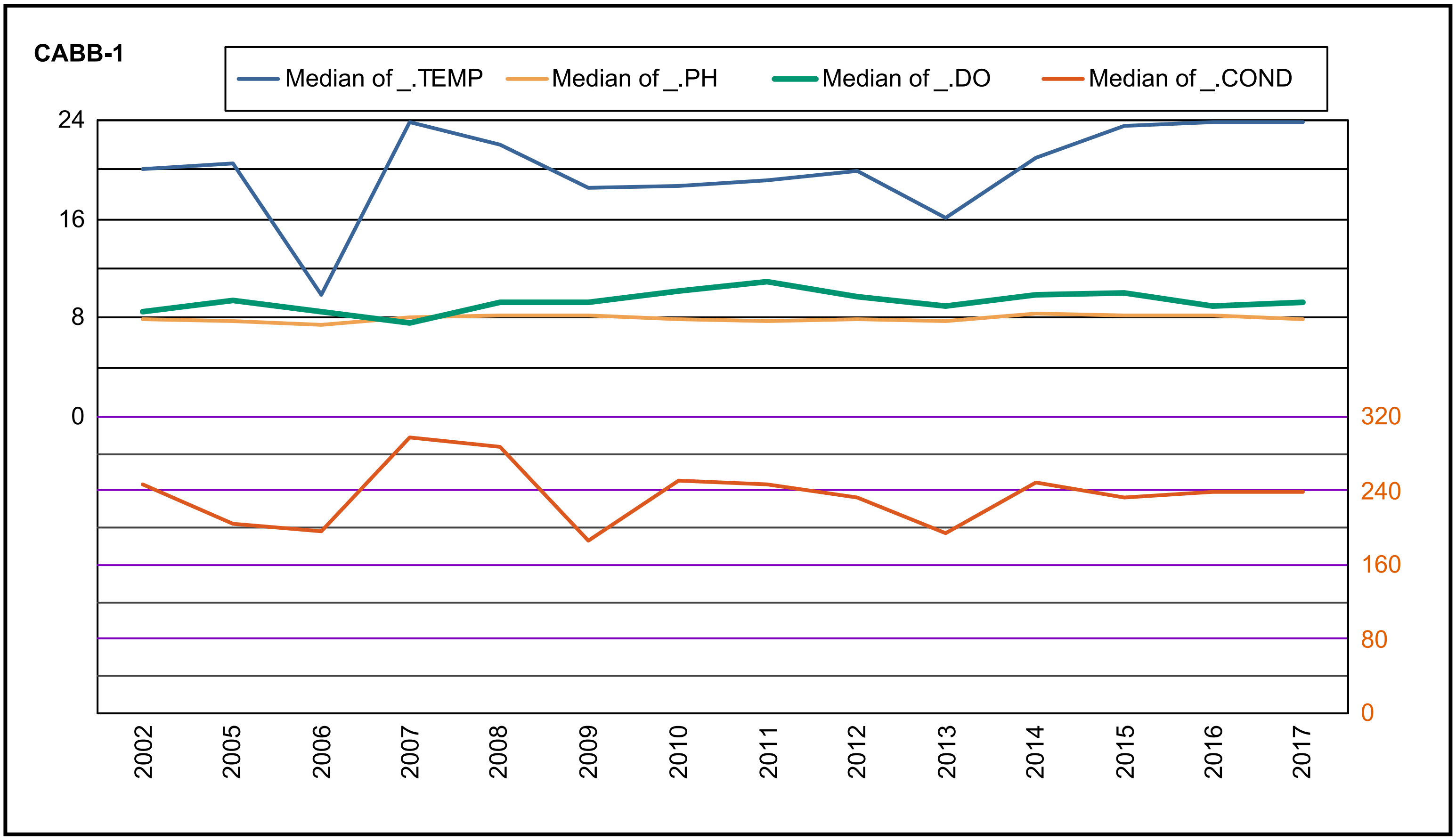


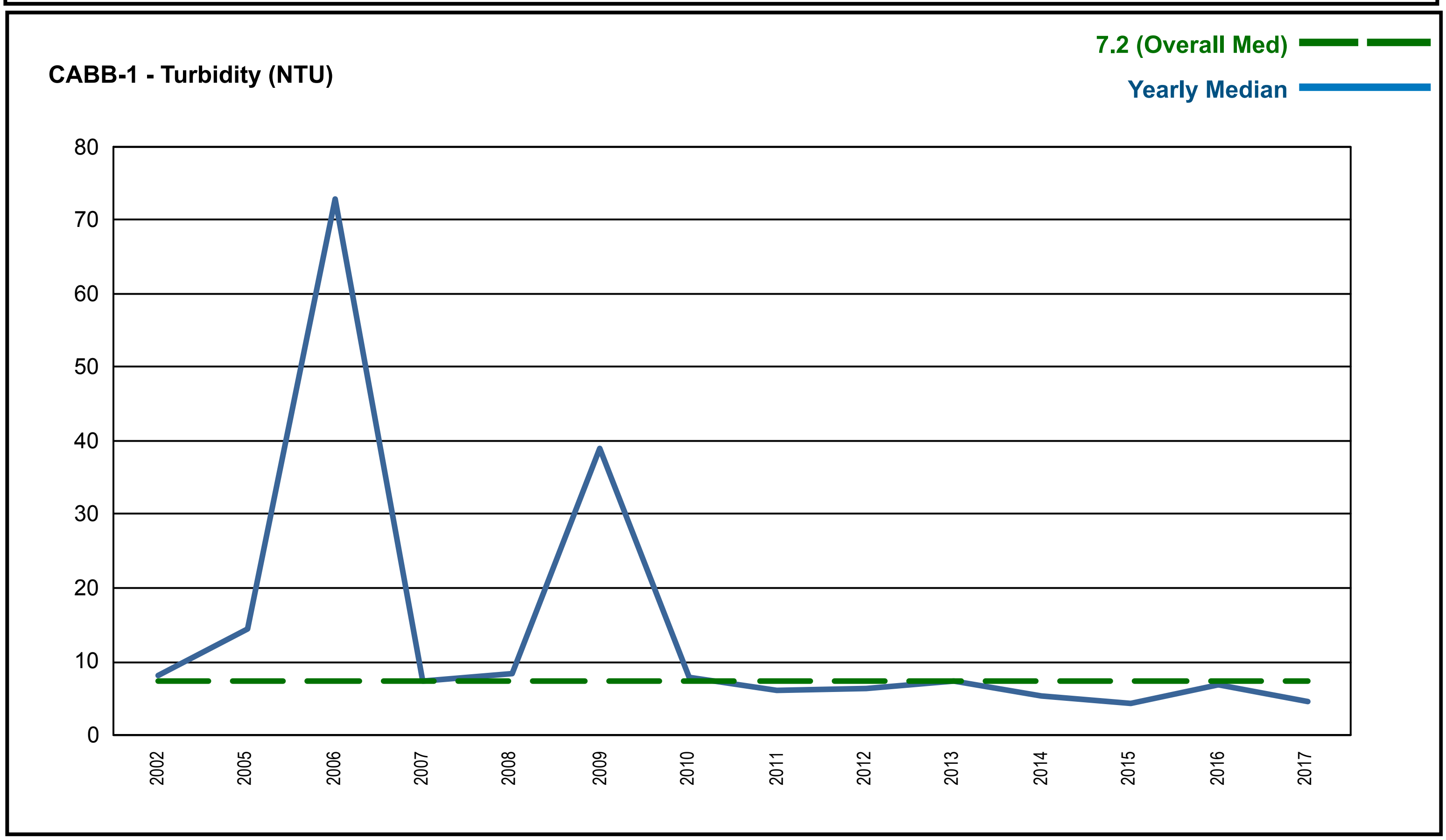


ADEM Ambient Trend Stations - Sampled 1977 - 2018

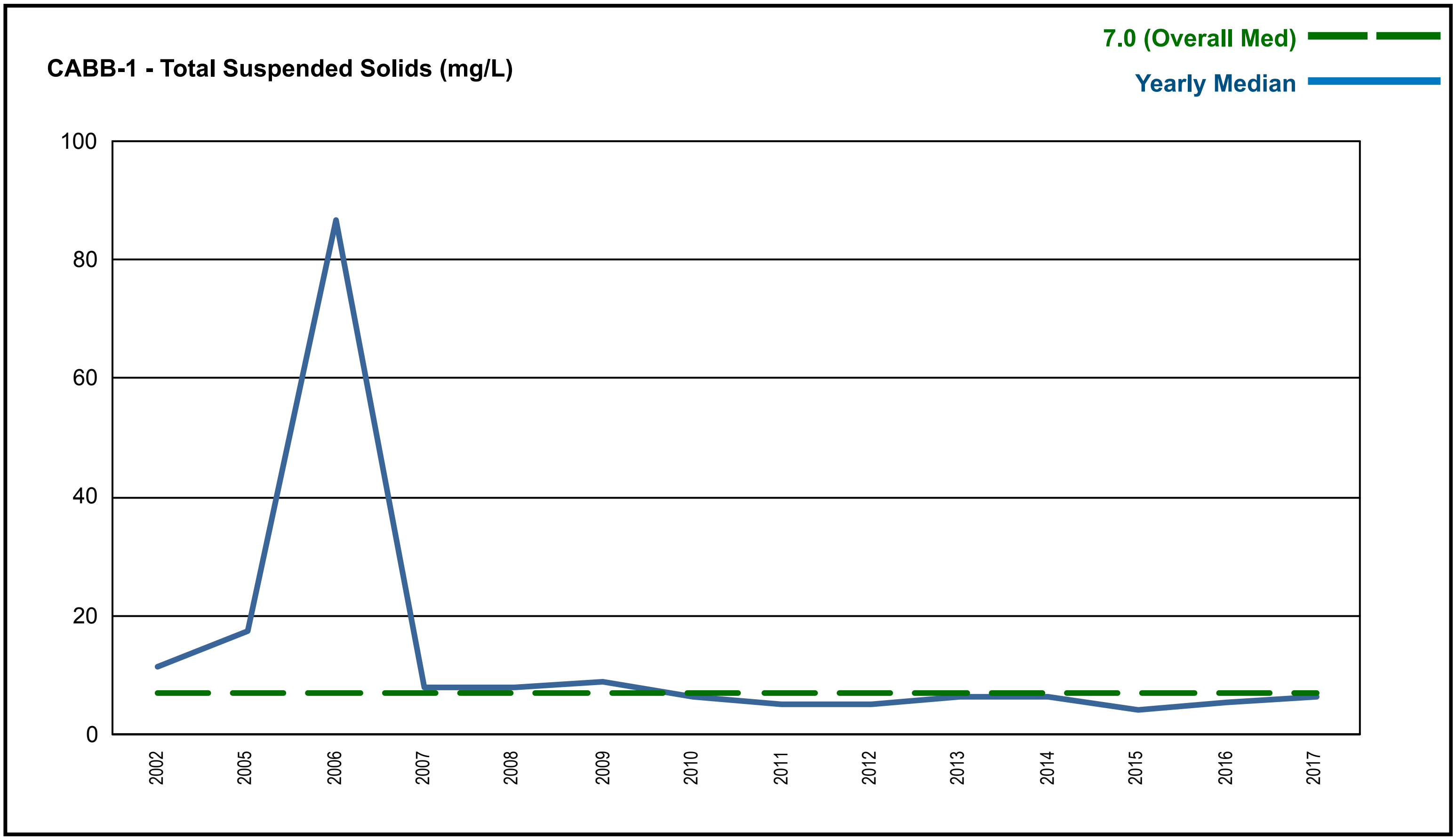


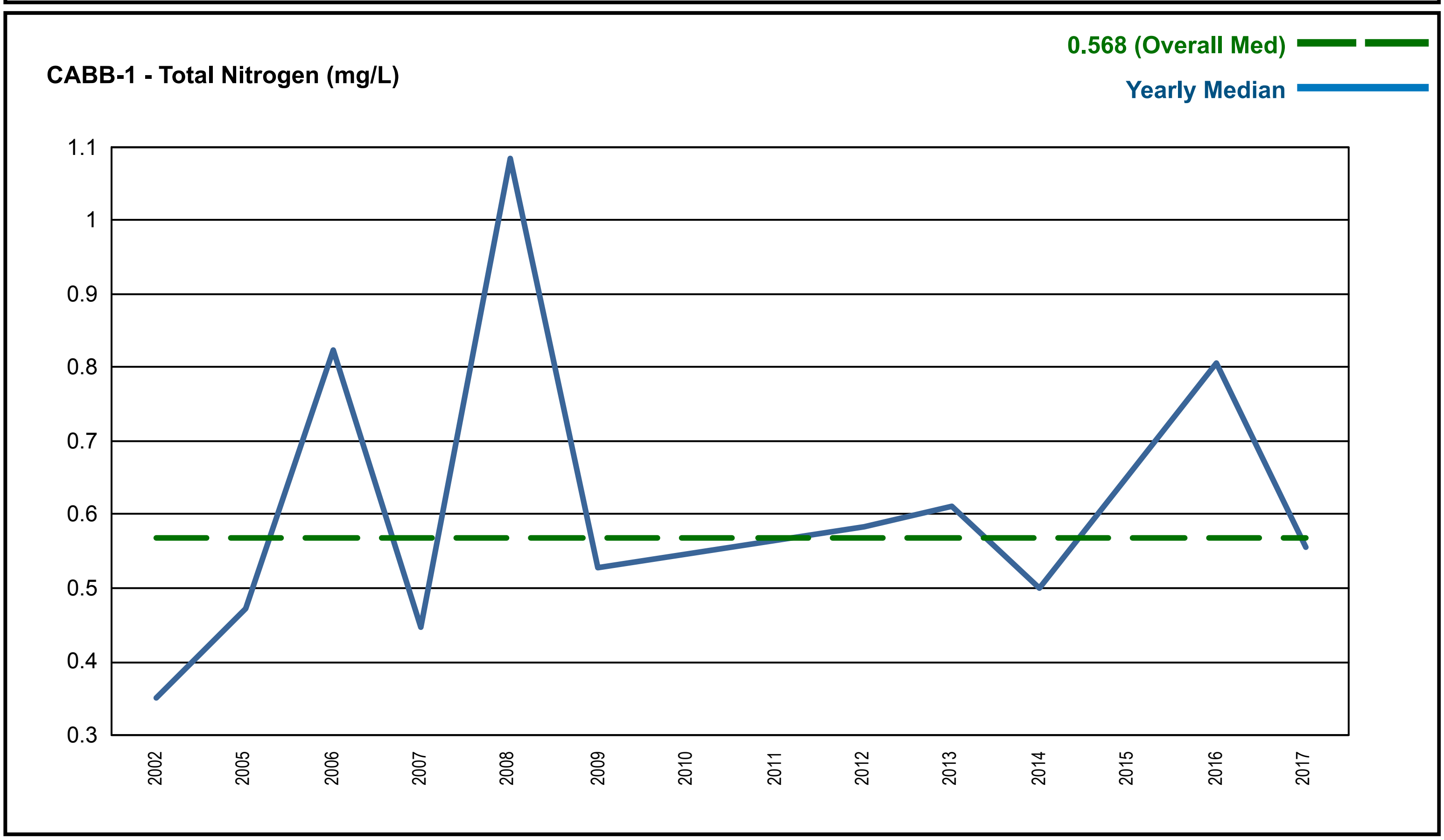
ADEM Ambient Trend Stations - Sampled 1977 - 2018



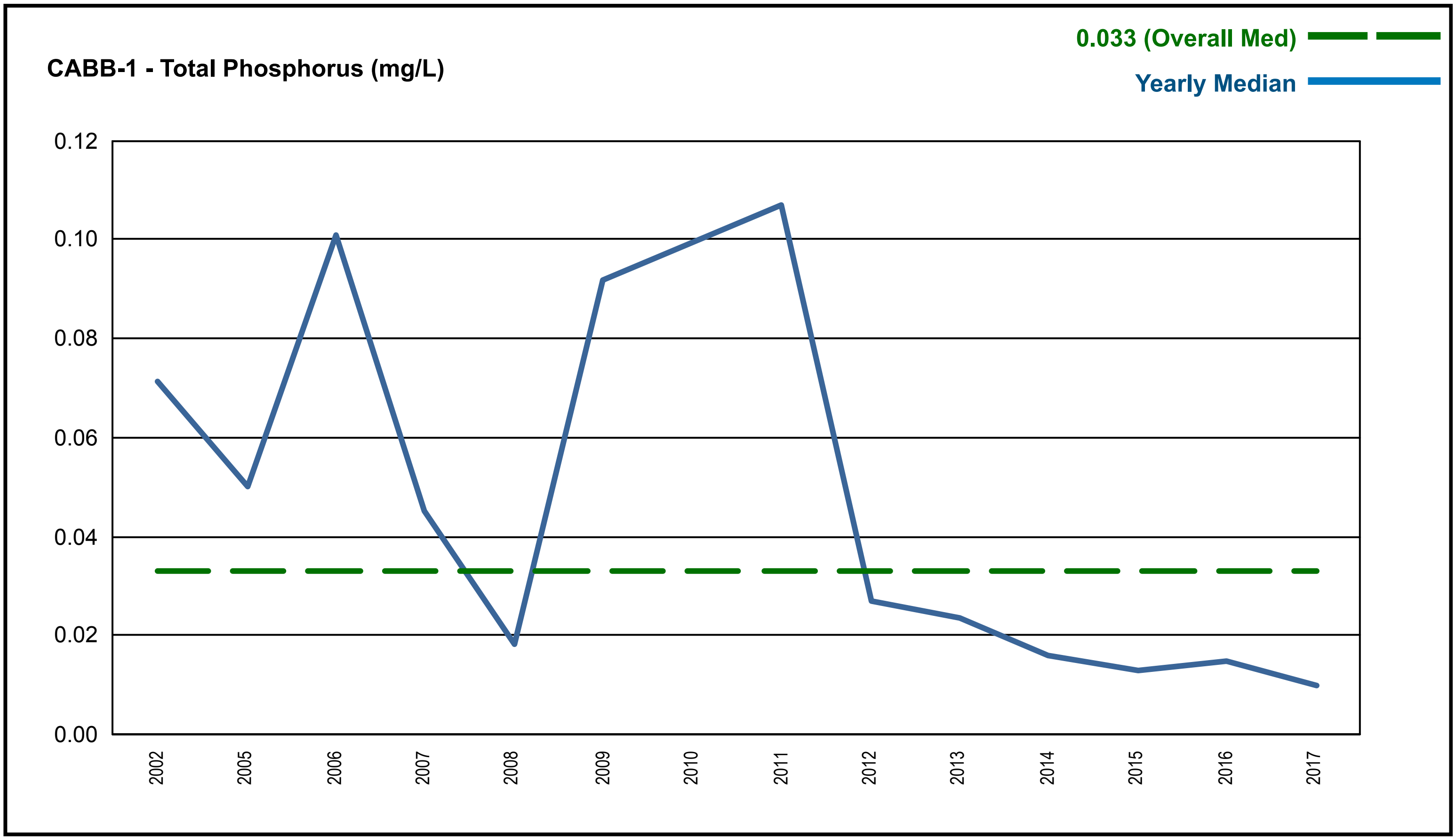


ADEM Ambient Trend Stations - Sampled 1977 - 2018

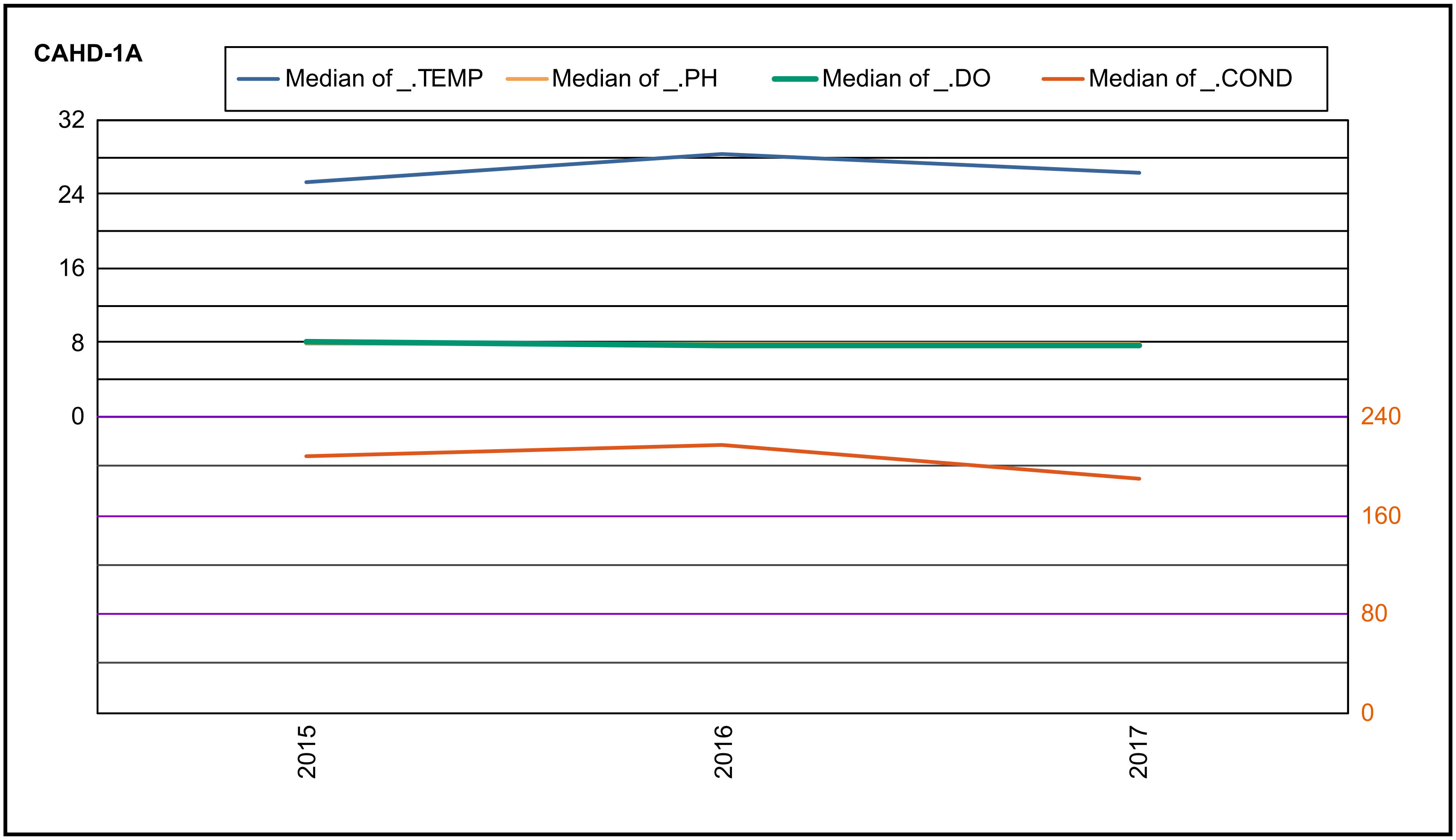


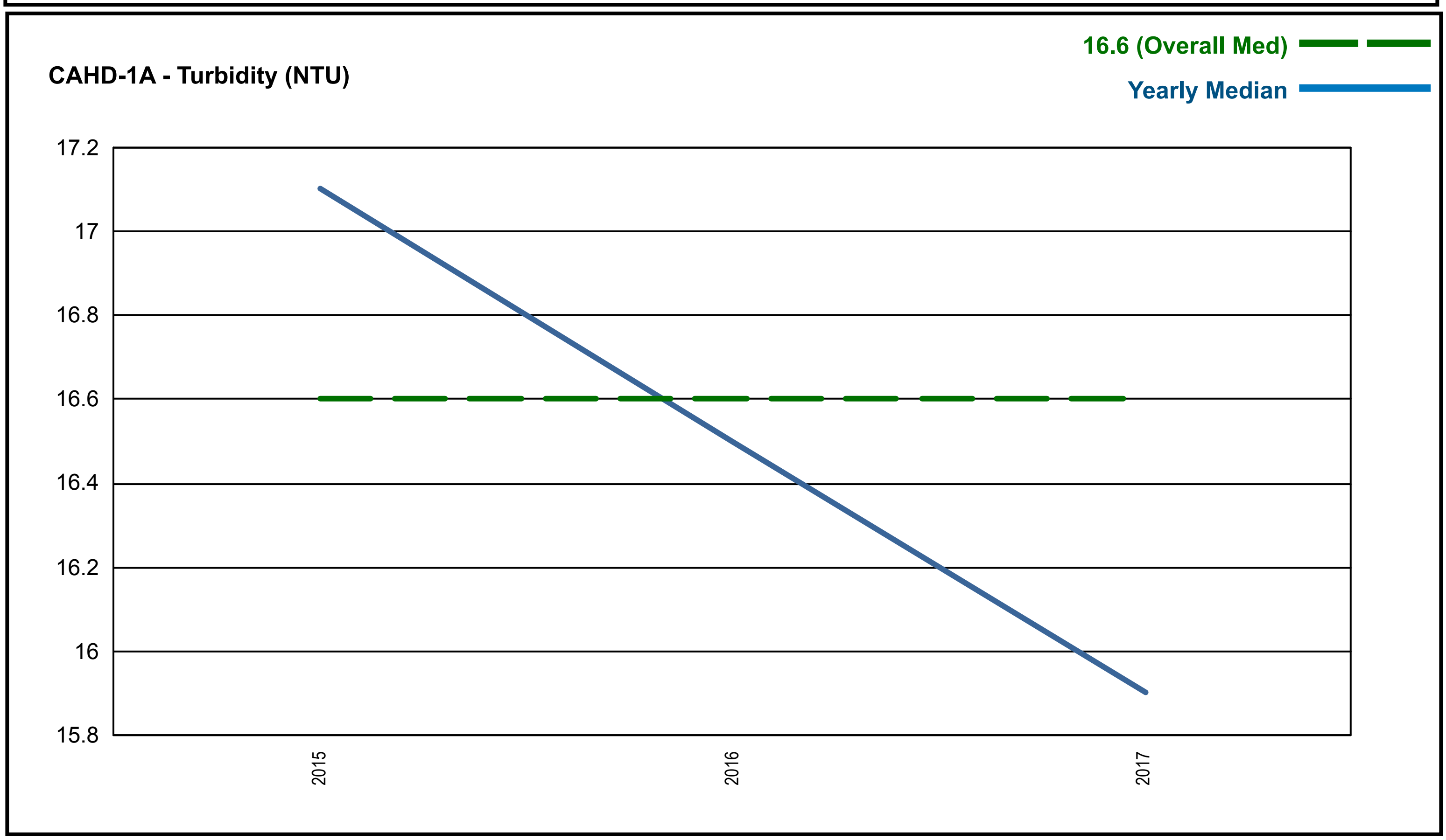


ADEM Ambient Trend Stations - Sampled 1977 - 2018

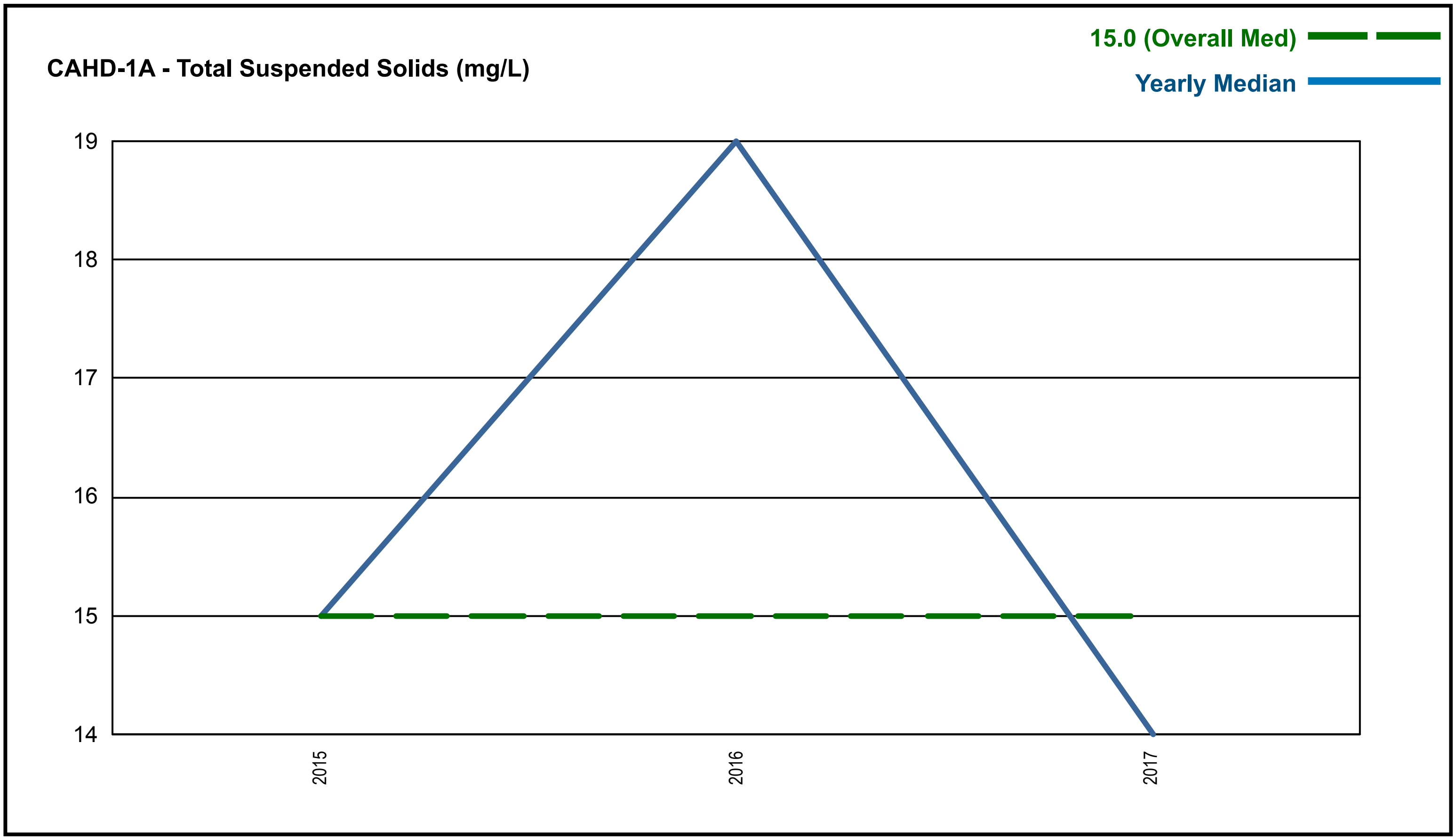


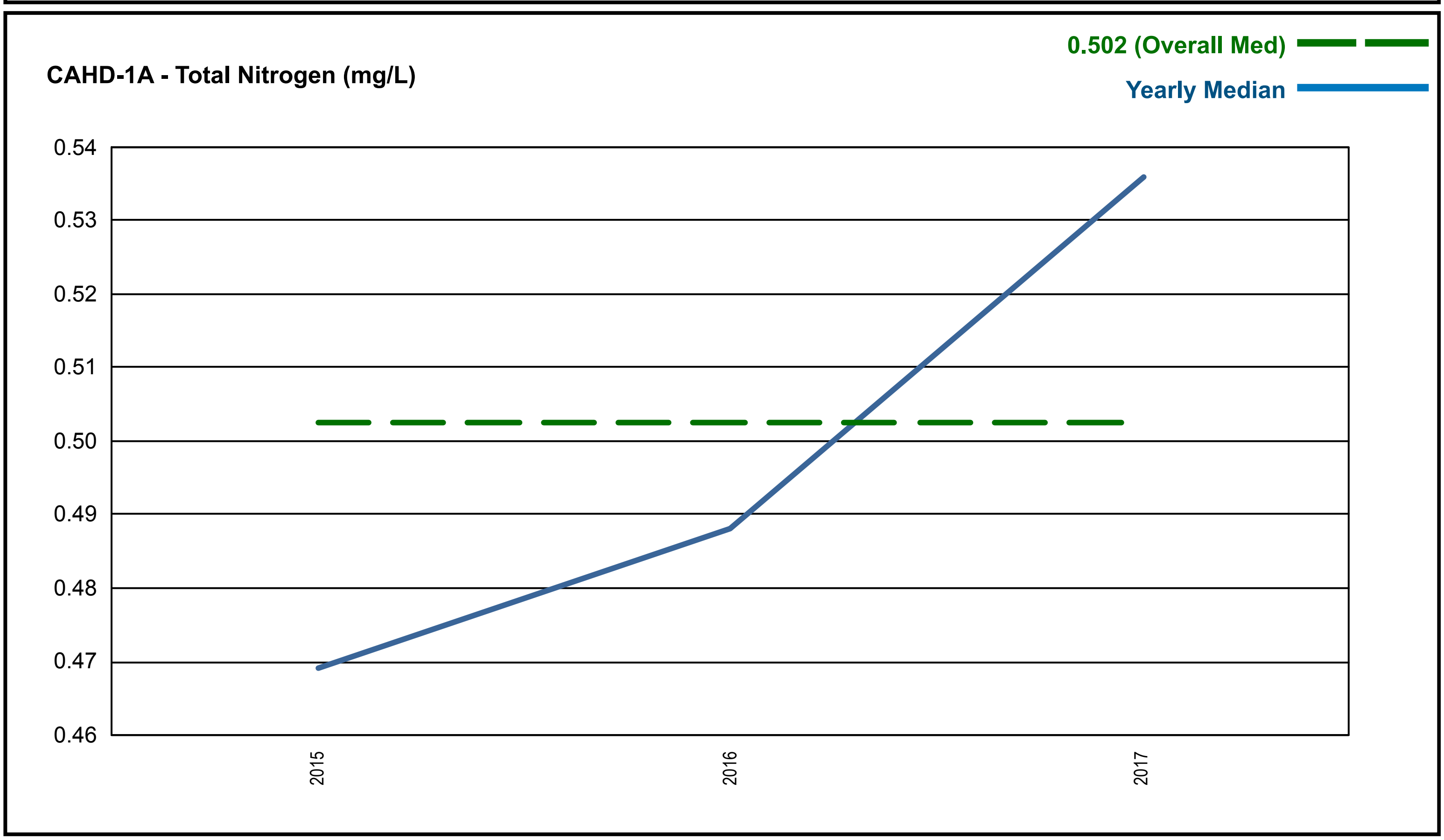
ADEM Ambient Trend Stations - Sampled 1977 - 2018

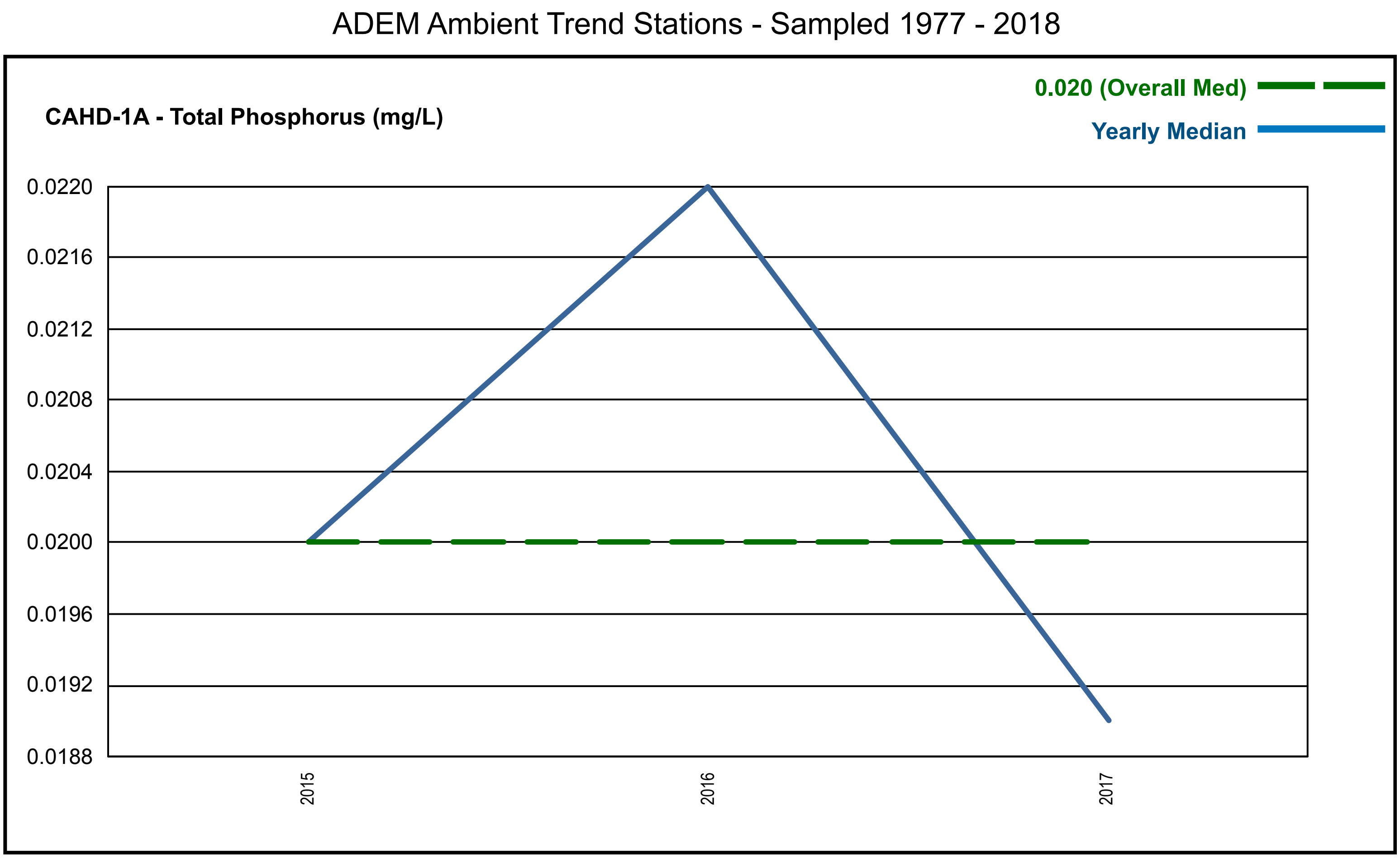




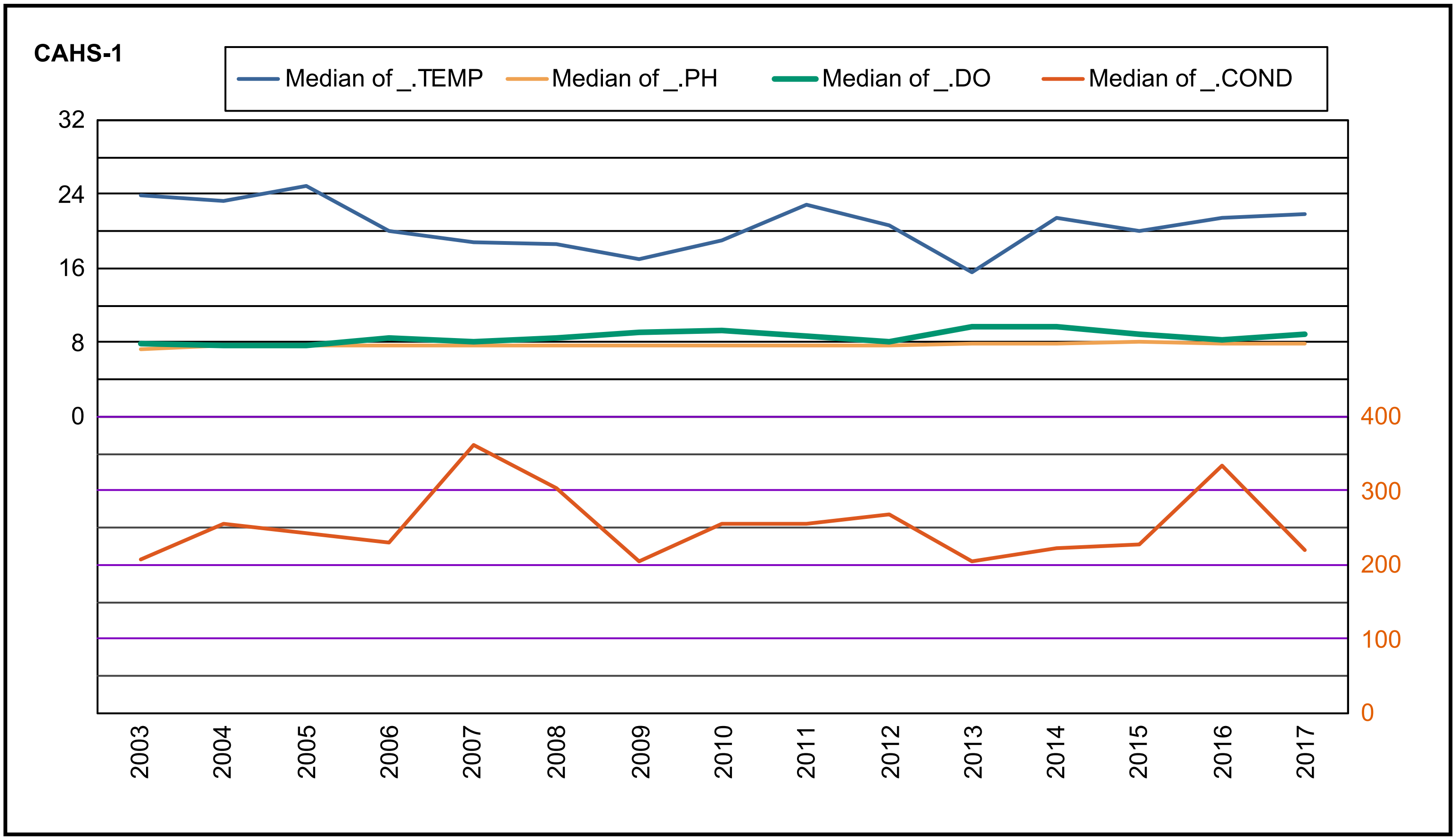
ADEM Ambient Trend Stations - Sampled 1977 - 2018

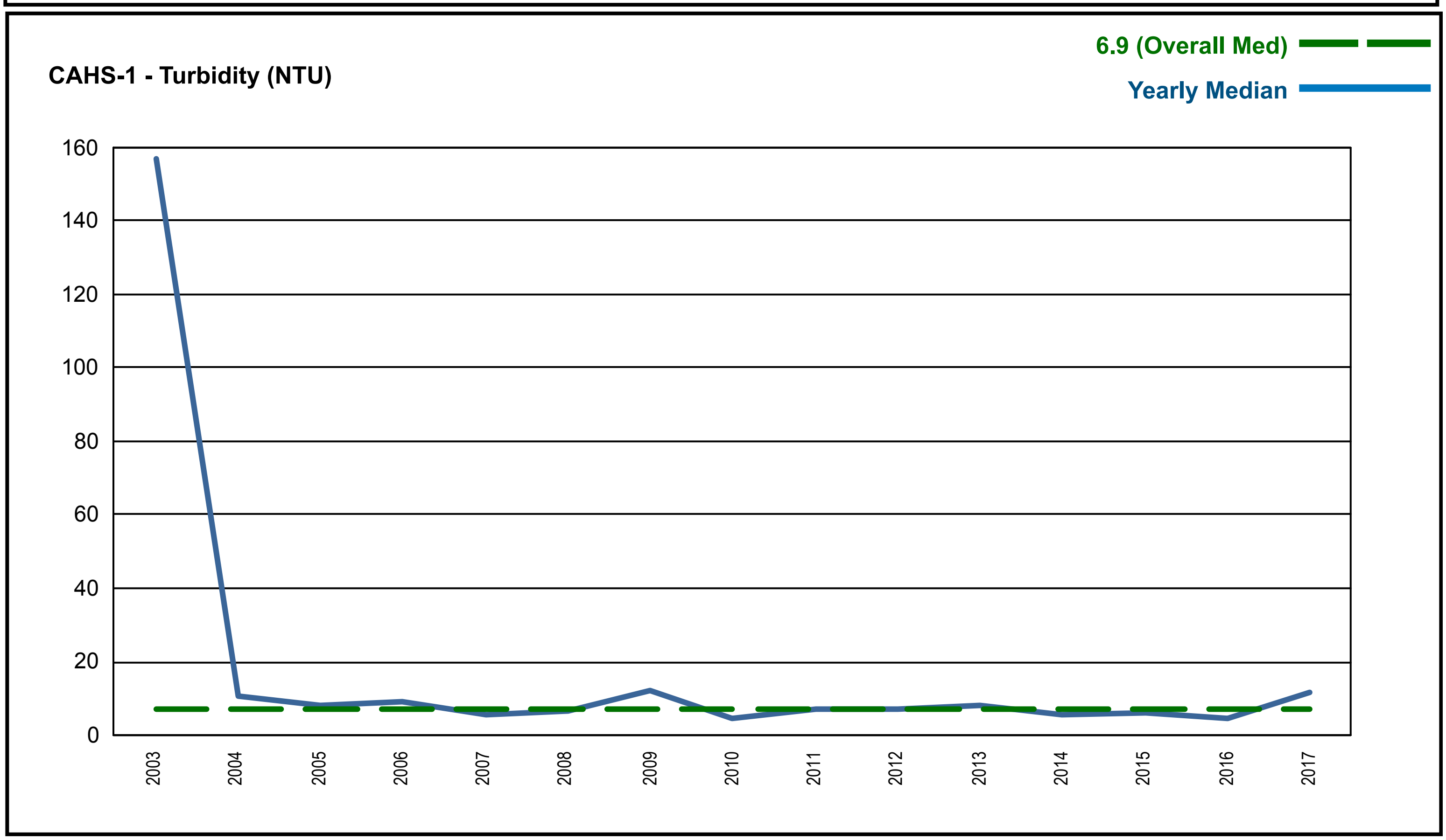




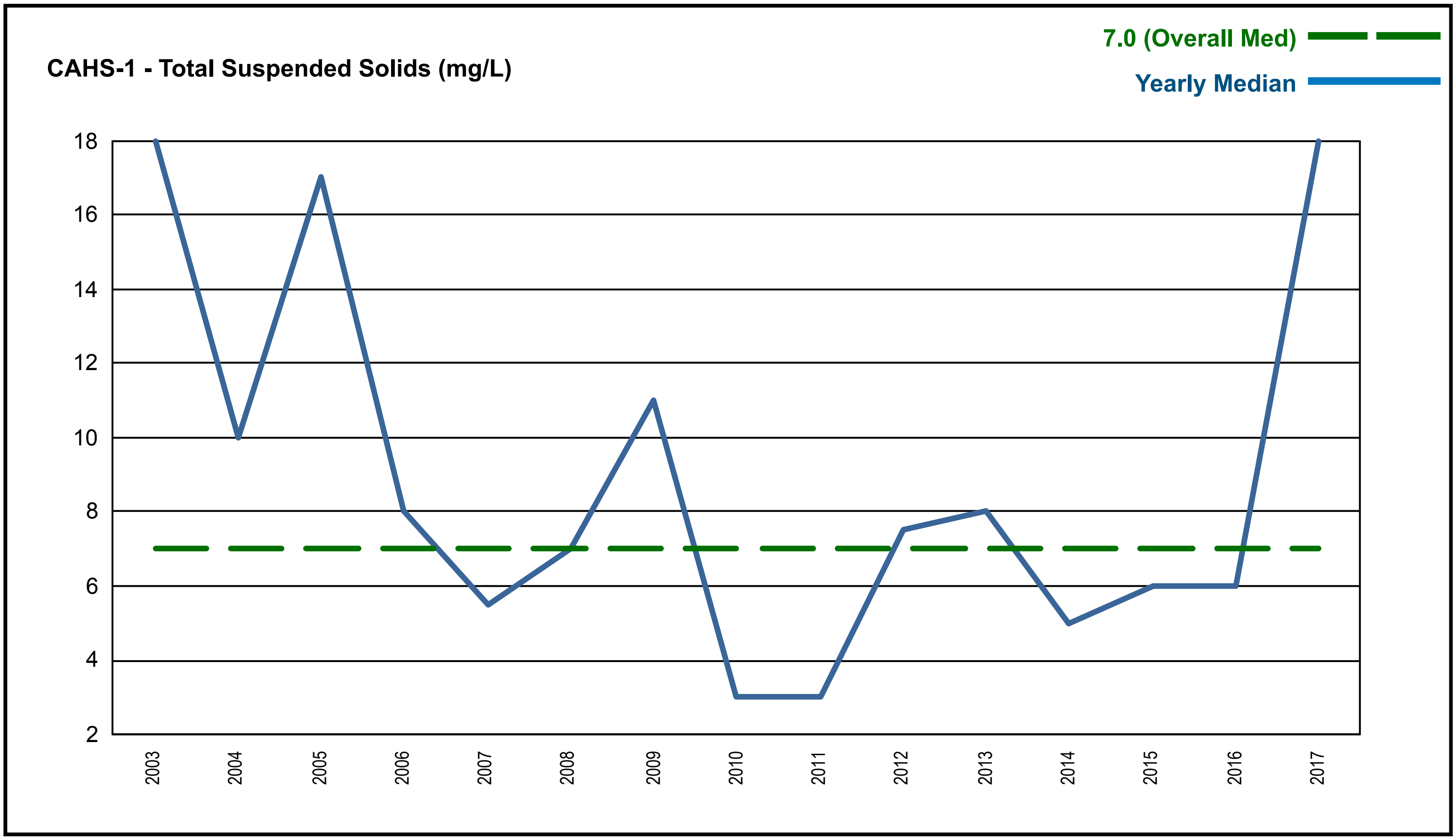

ADEM Ambient Trend Stations - Sampled 1977 - 2018
CAHD-1A - Total Phosphorus (mg/L)
0.020 (Overall Med)
Yearly Median
0.0220
0.0216
0.0212
0.0208
0.0204
0.0200
0.0196
0.0192
0.0188
2015
2016
2017

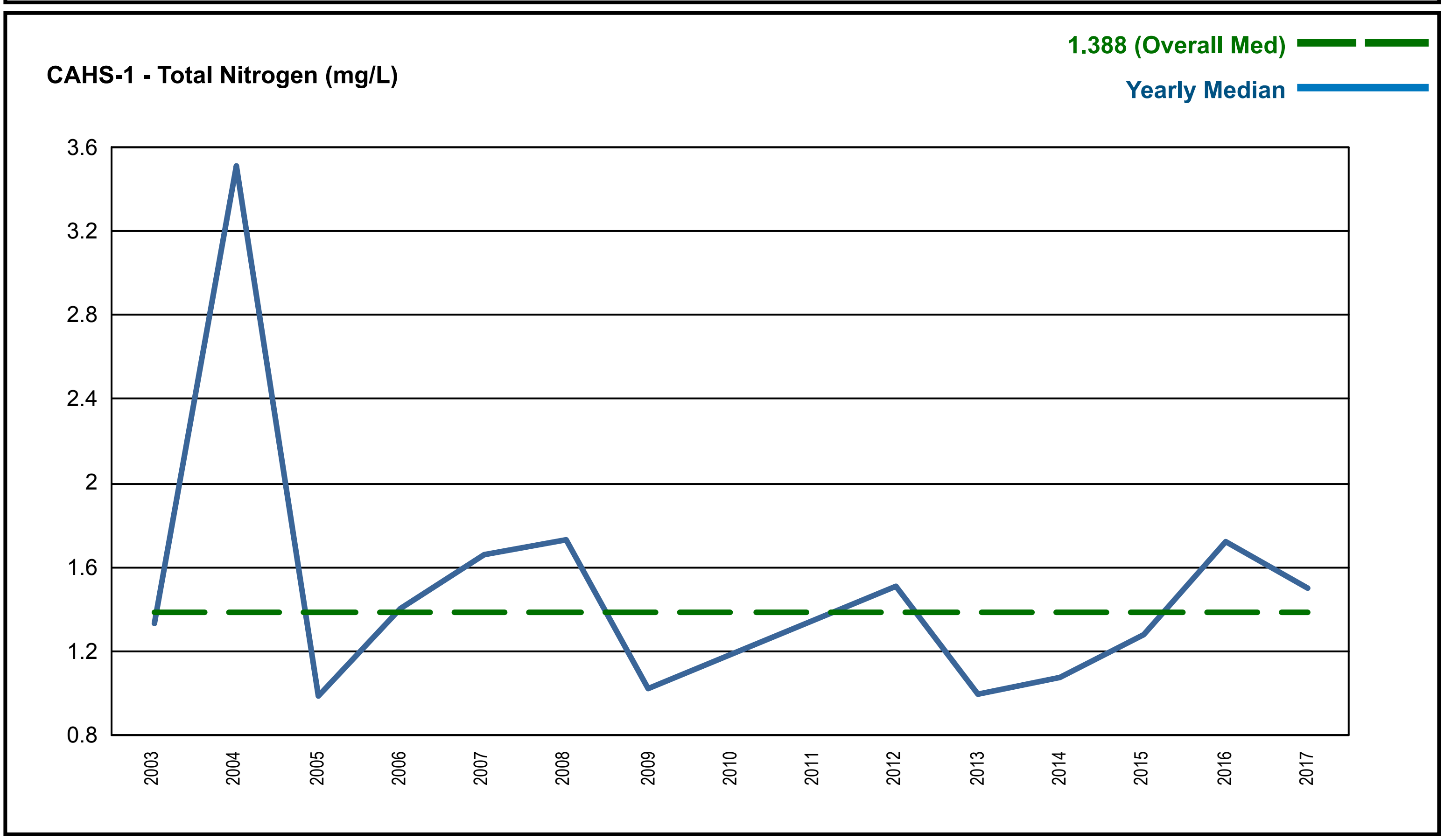
ADEM Ambient Trend Stations - Sampled 1977 - 2018



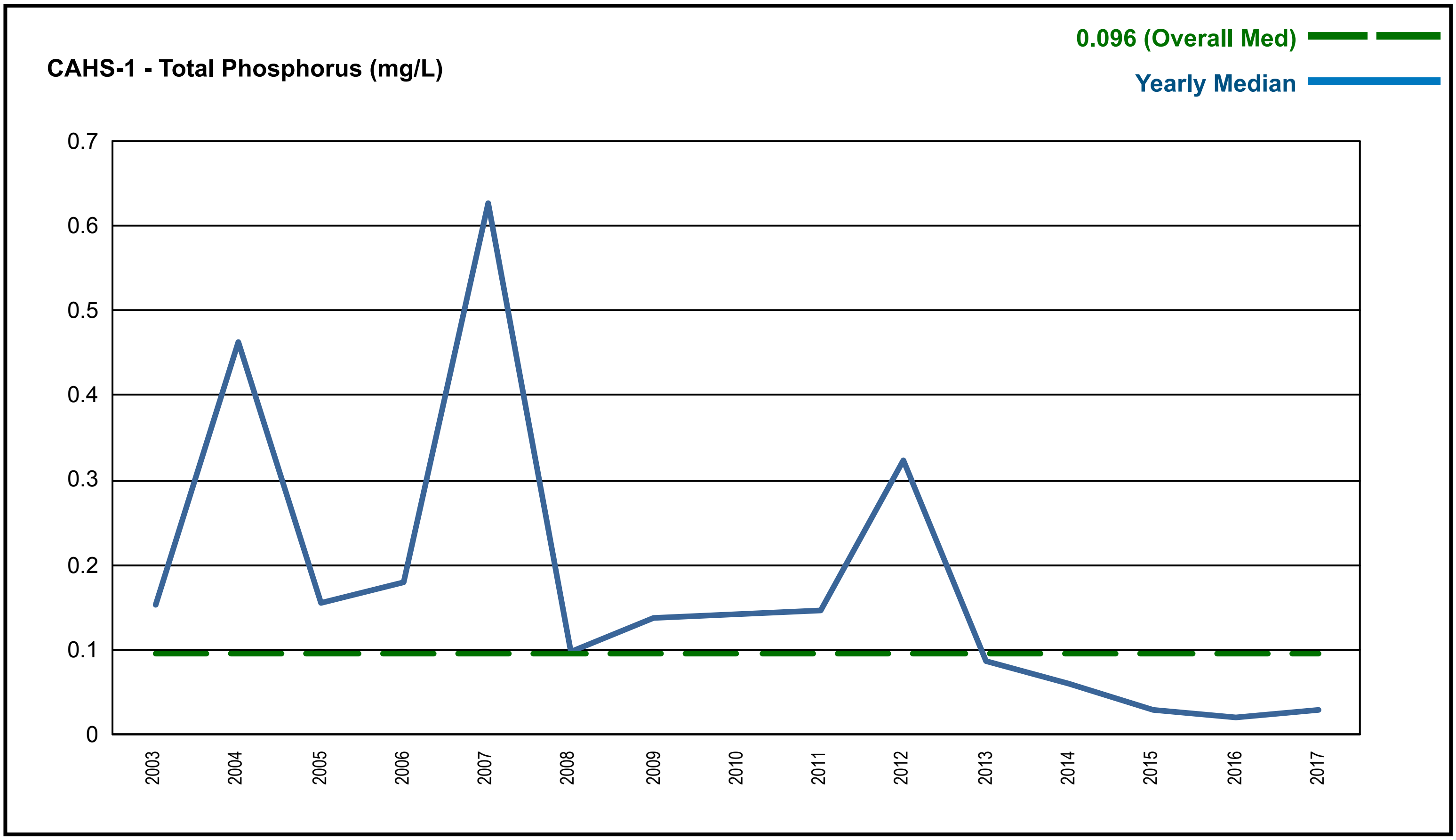


ADEM Ambient Trend Stations - Sampled 1977 - 2018

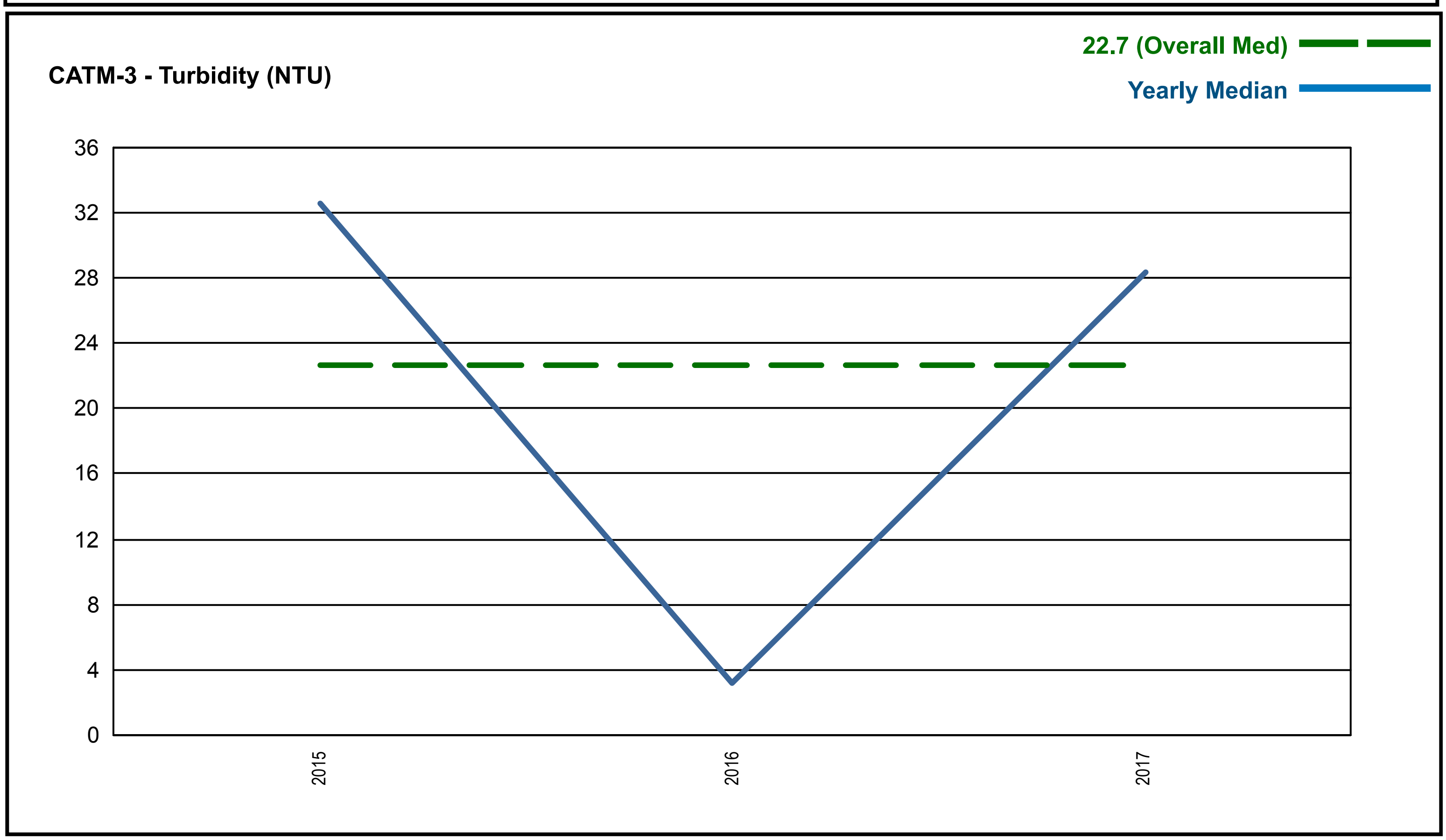




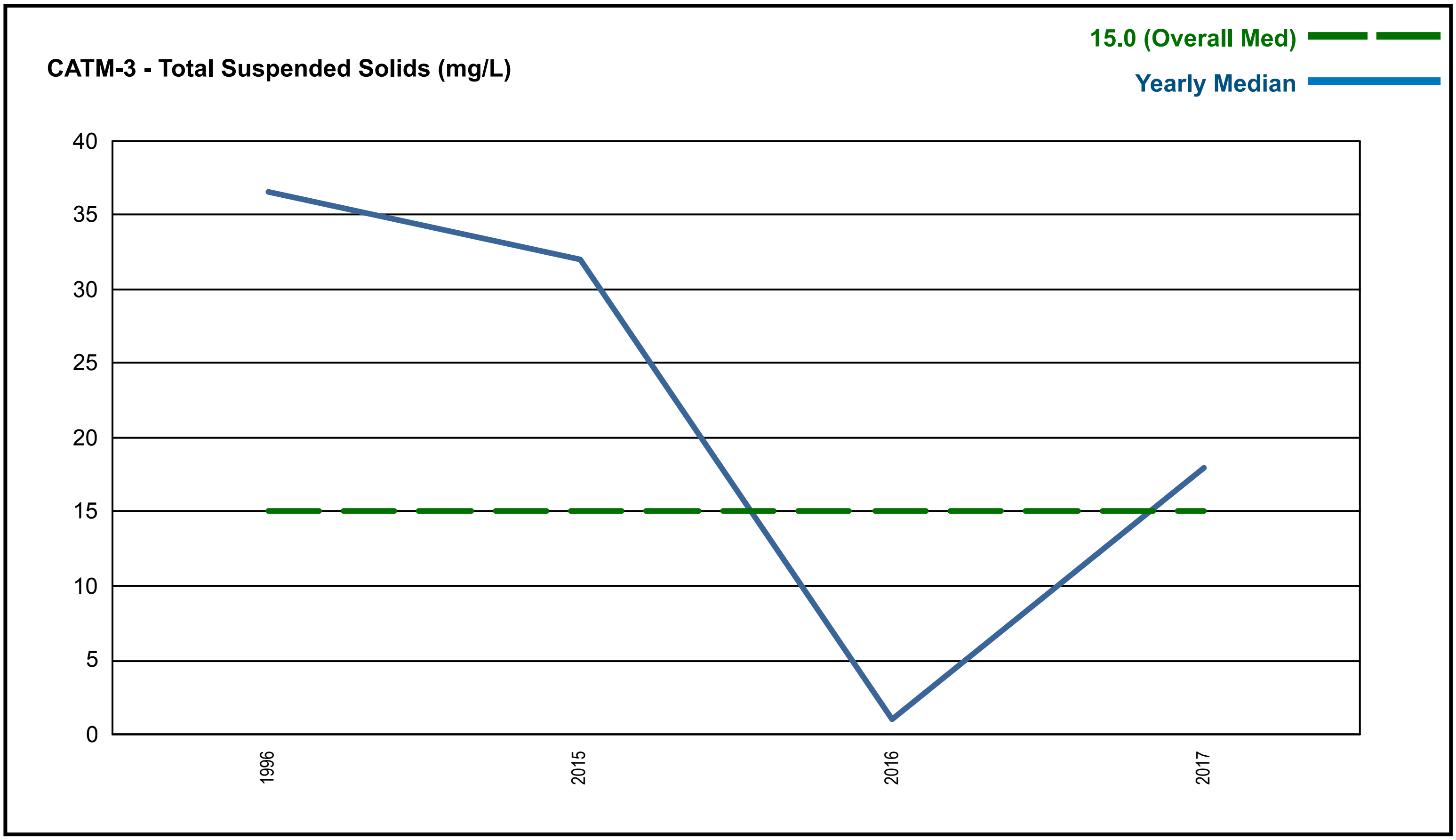
ADEM Ambient Trend Stations - Sampled 1977 - 2018

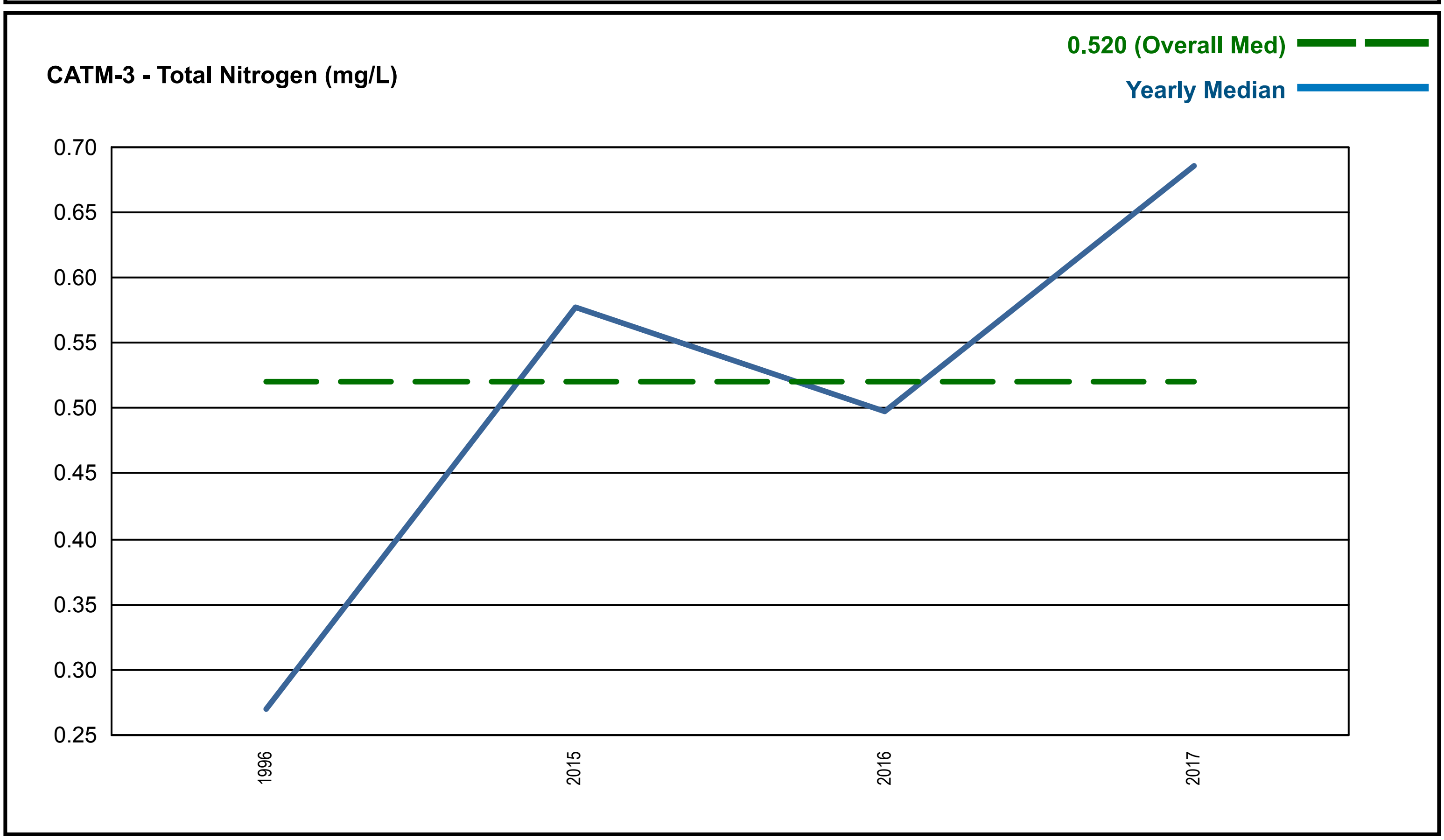


ADEM Ambient Trend Stations - Sampled 1977 - 2018

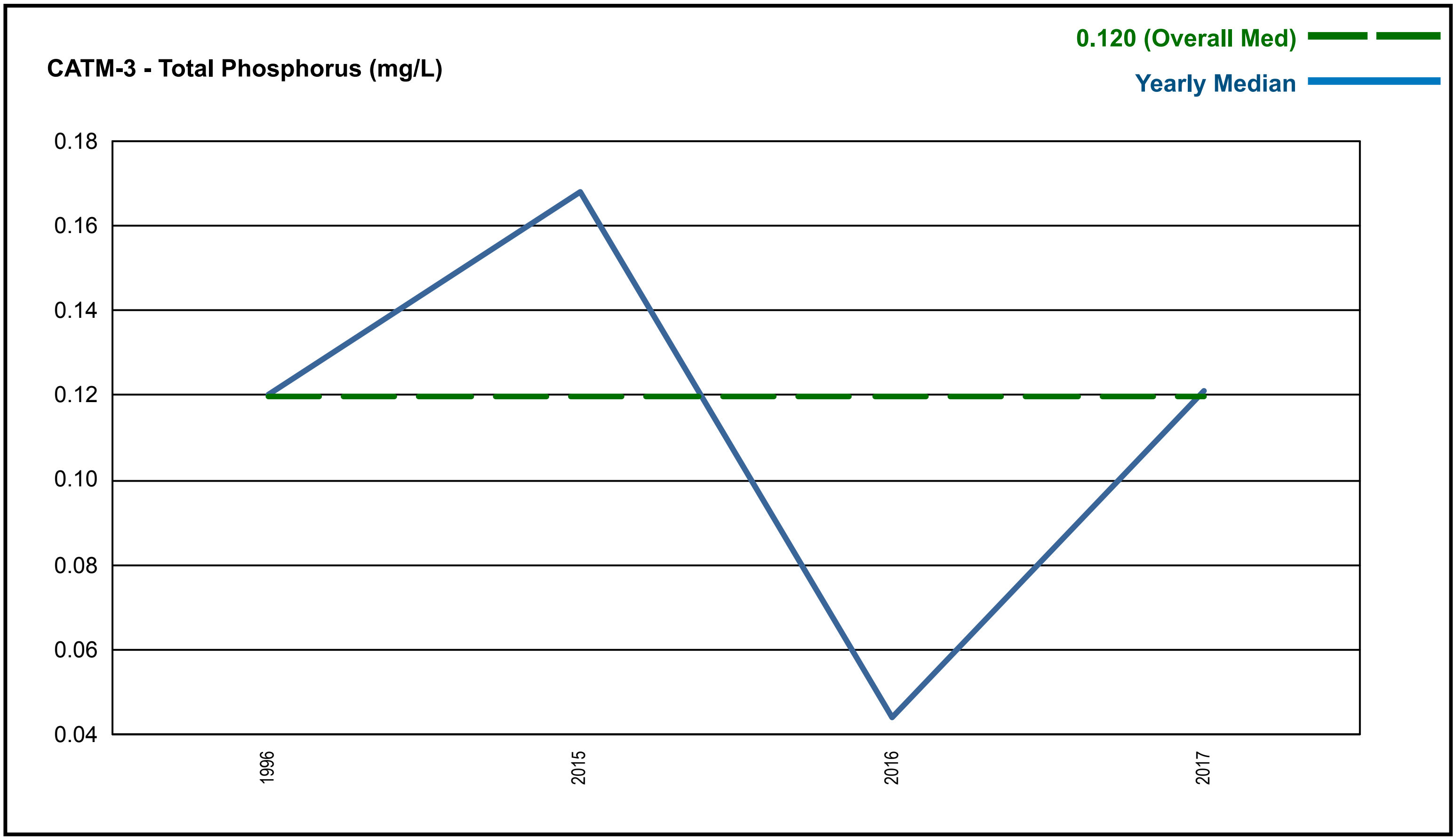


ADEM Ambient Trend Stations - Sampled 1977 - 2018

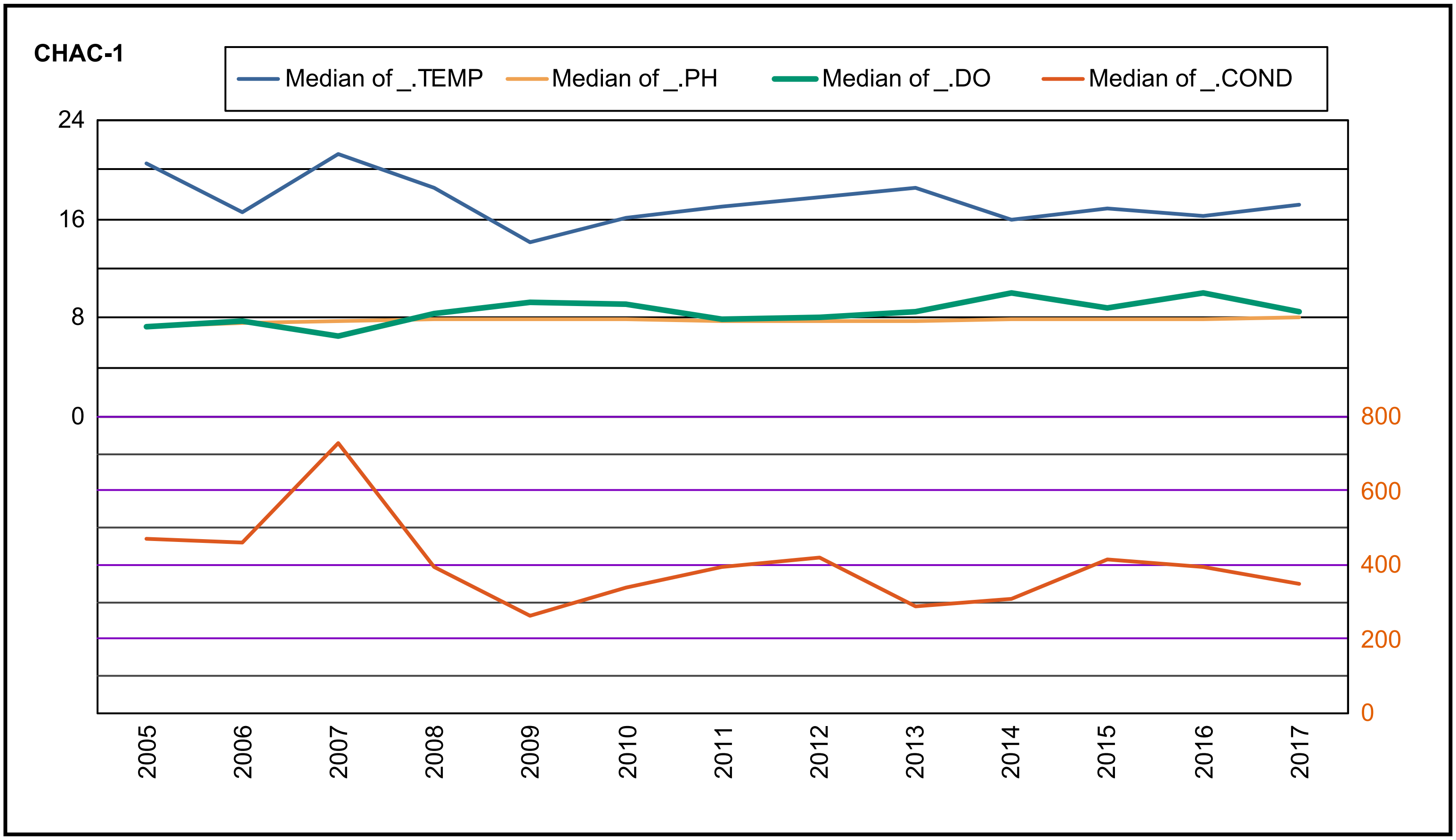


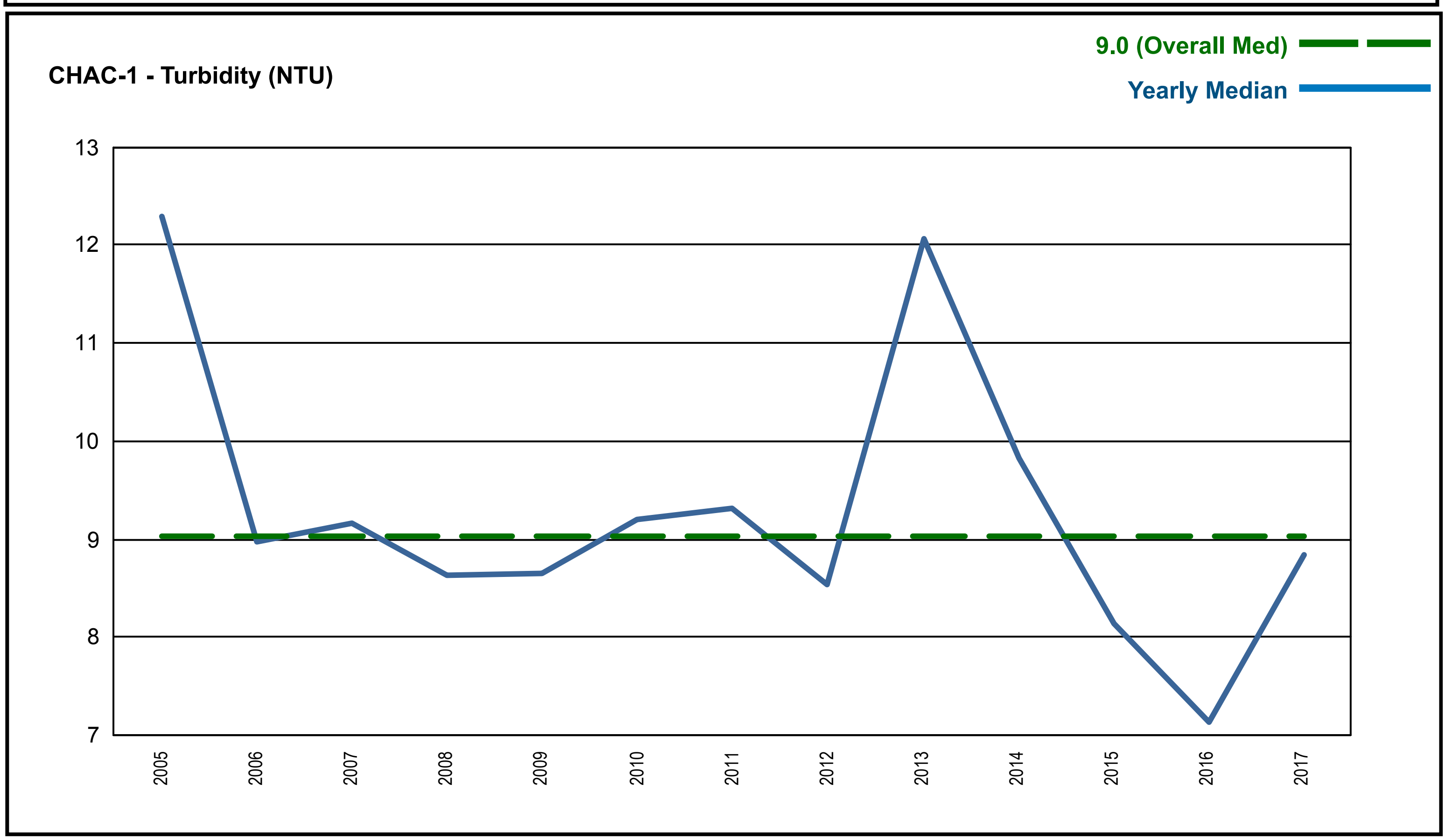


ADEM Ambient Trend Stations - Sampled 1977 - 2018

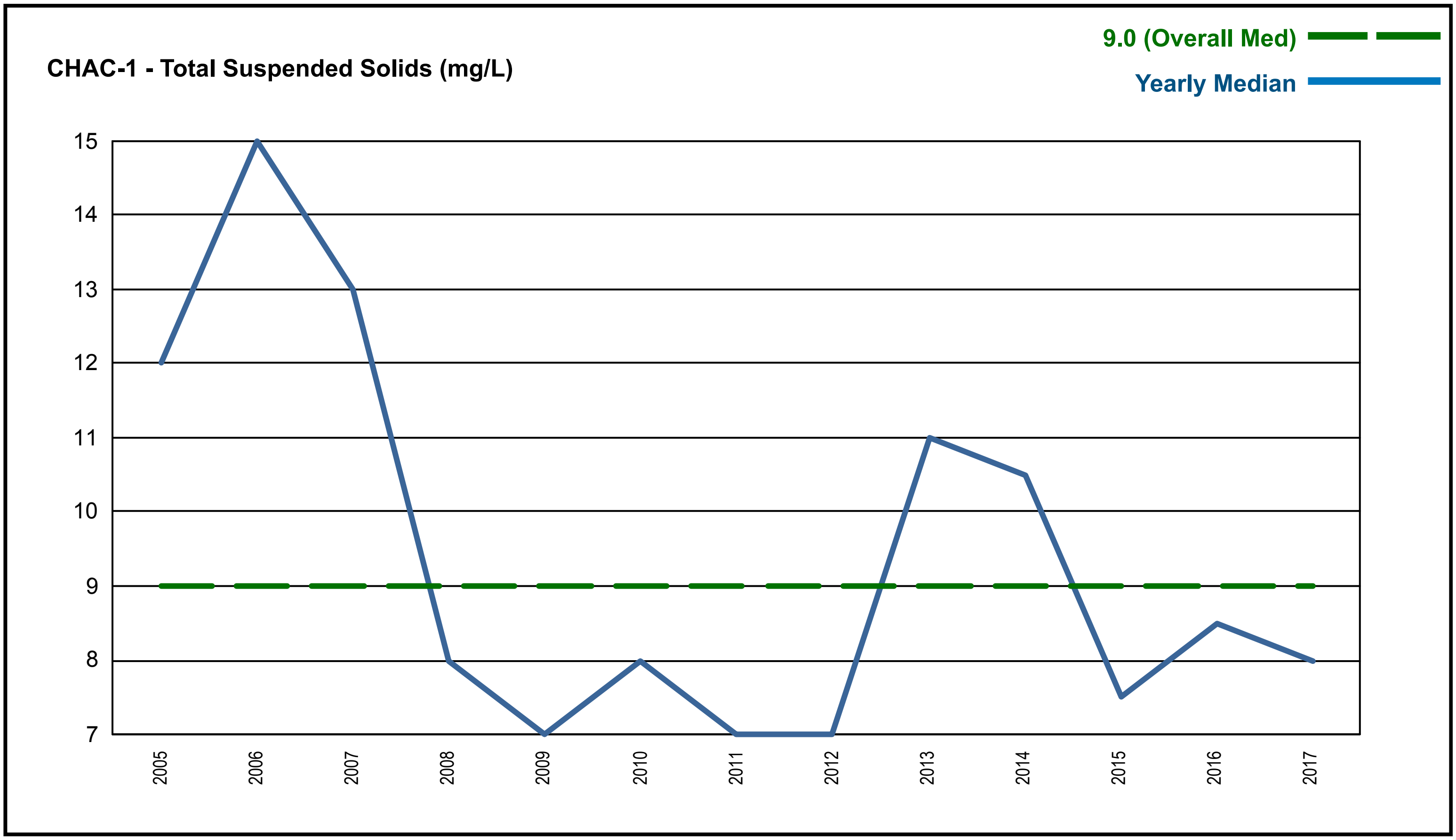


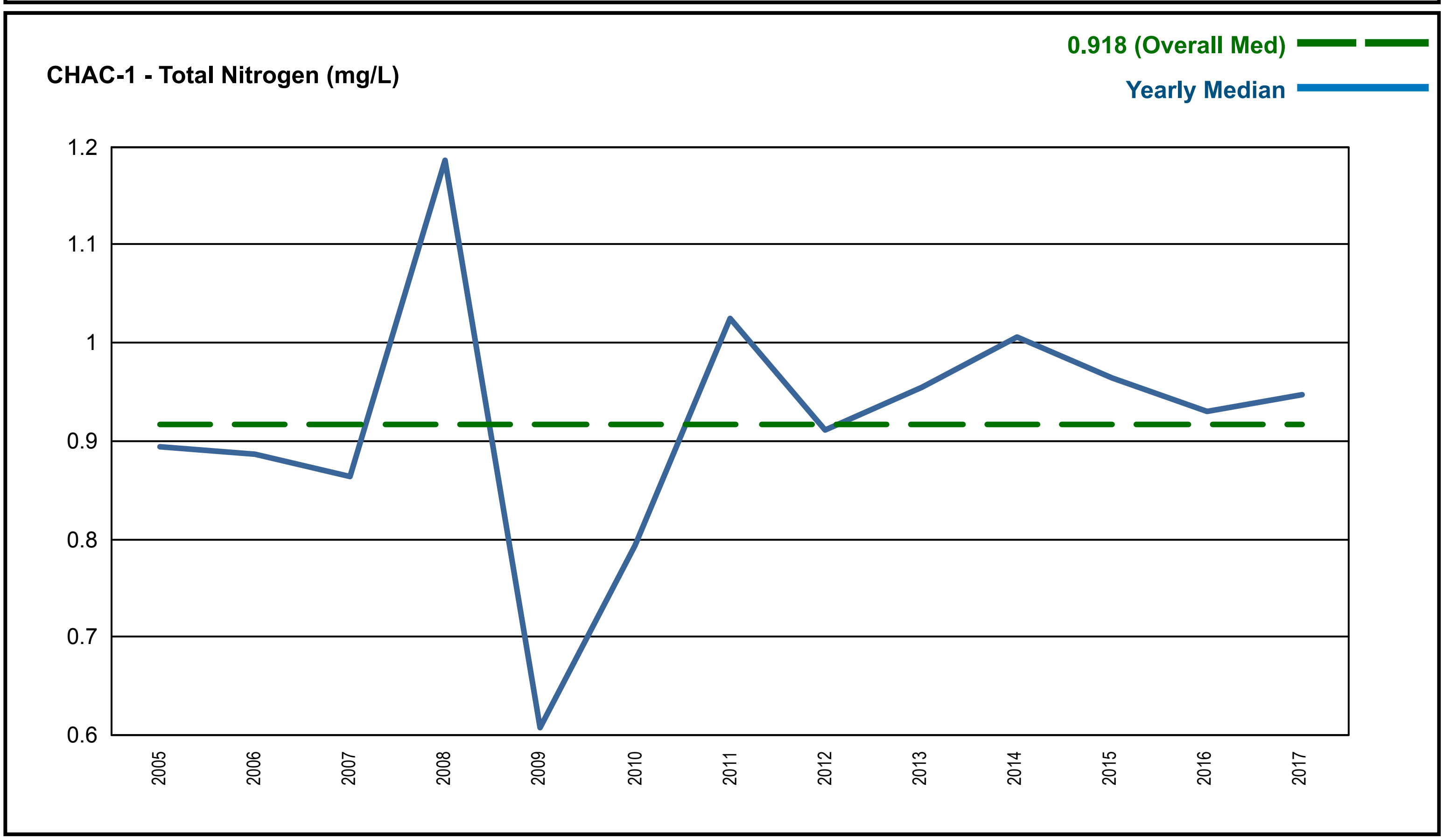
ADEM Ambient Trend Stations - Sampled 1977 - 2018



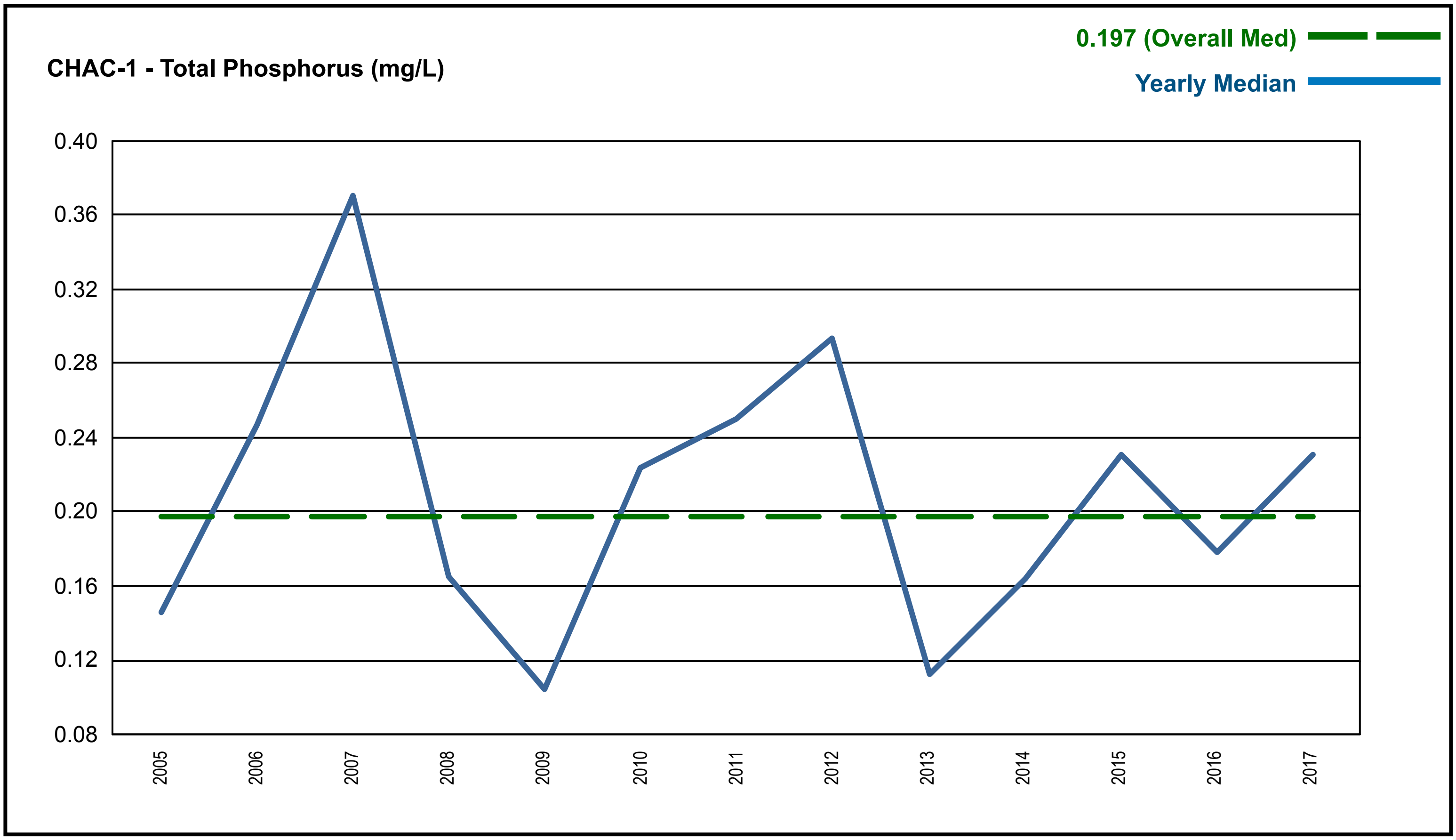


ADEM Ambient Trend Stations - Sampled 1977 - 2018

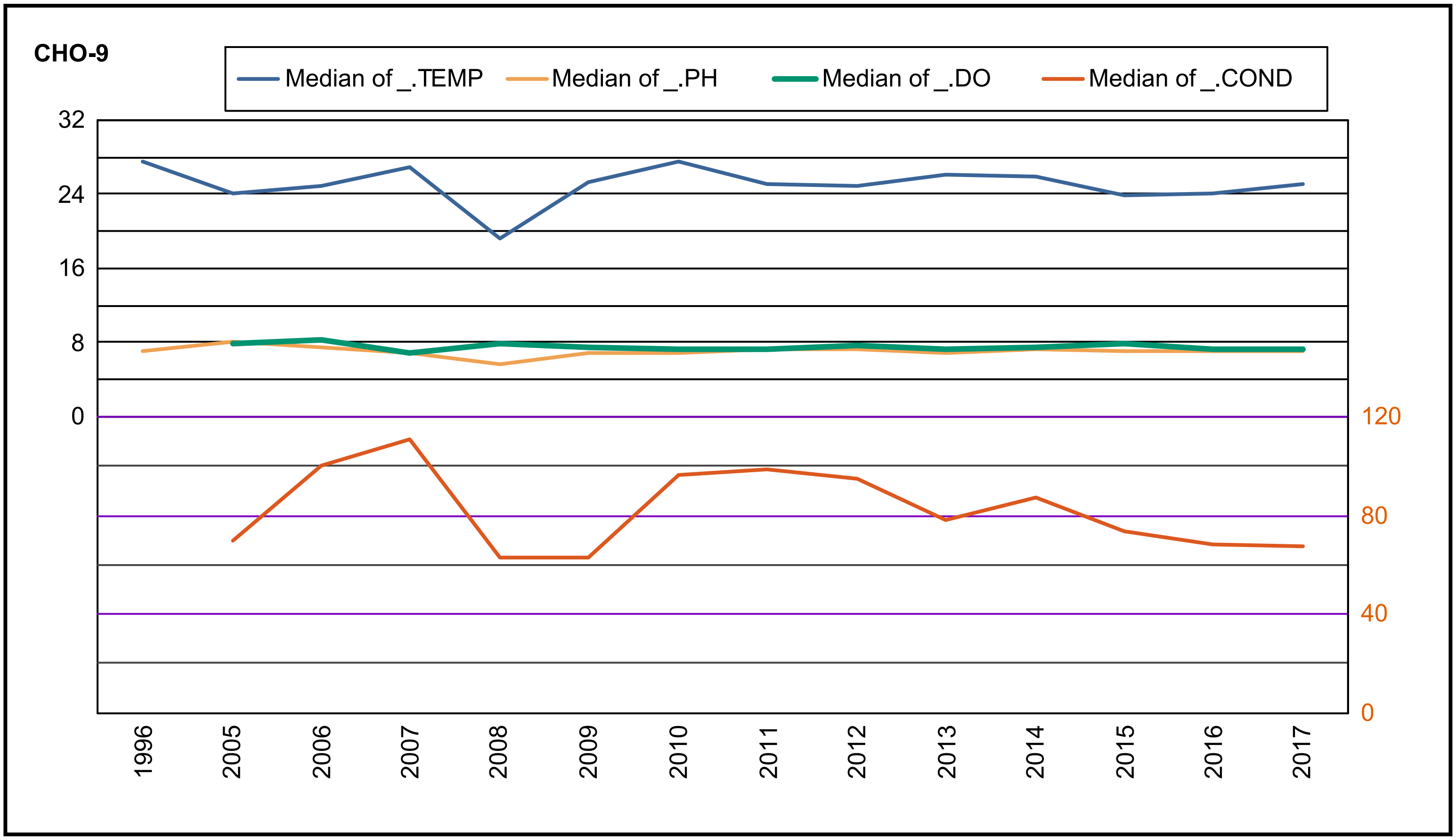


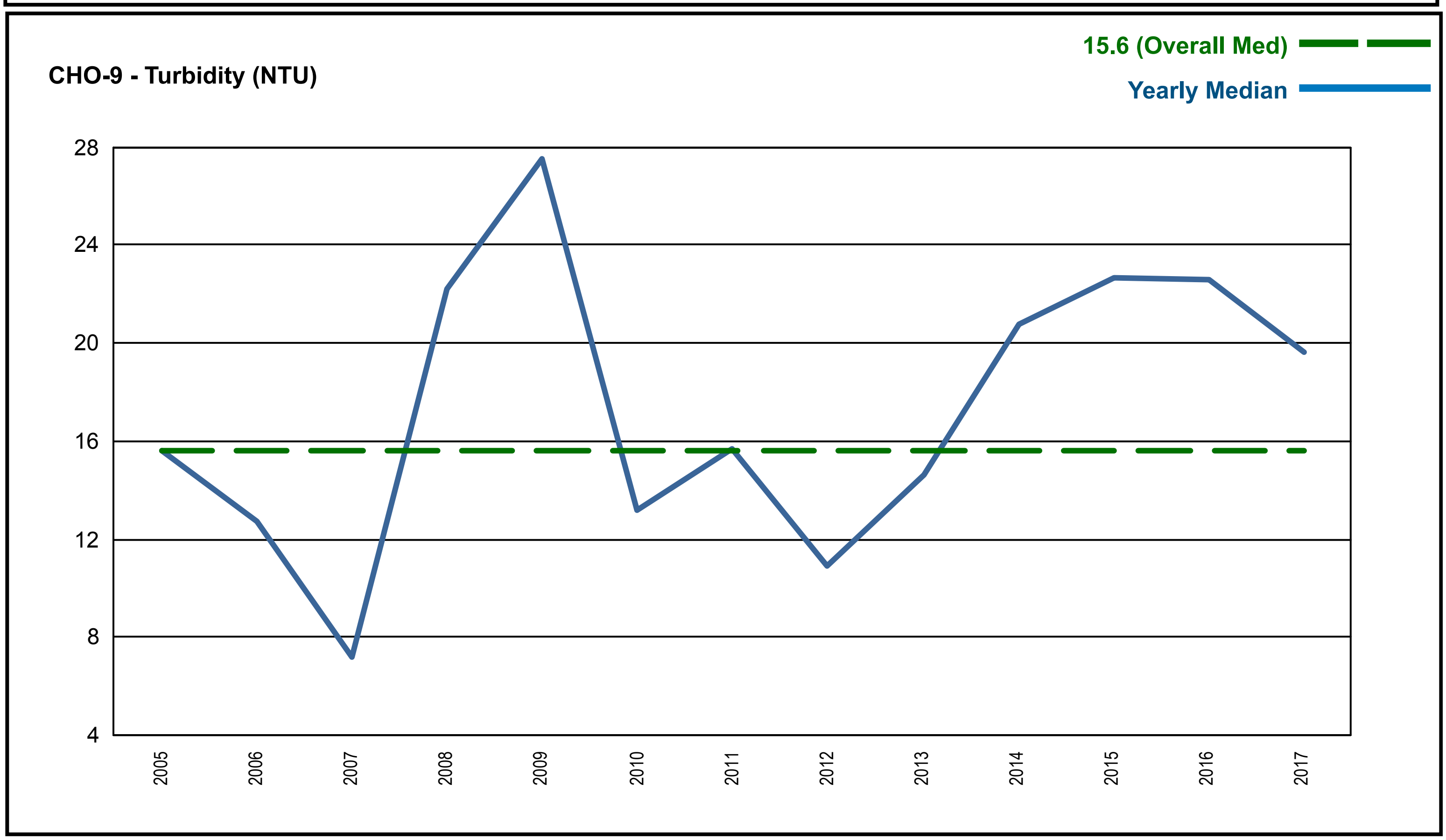


ADEM Ambient Trend Stations - Sampled 1977 - 2018

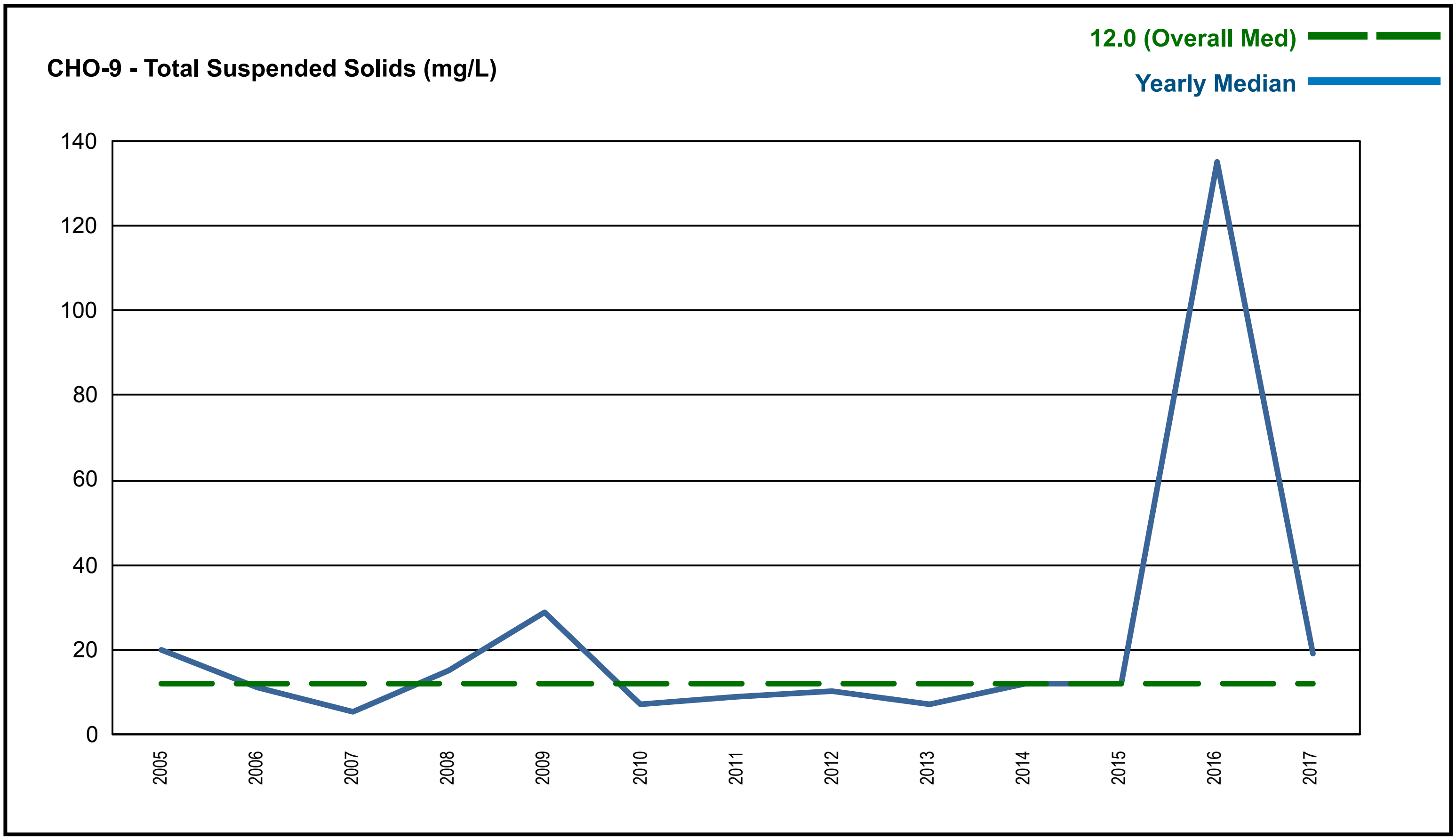


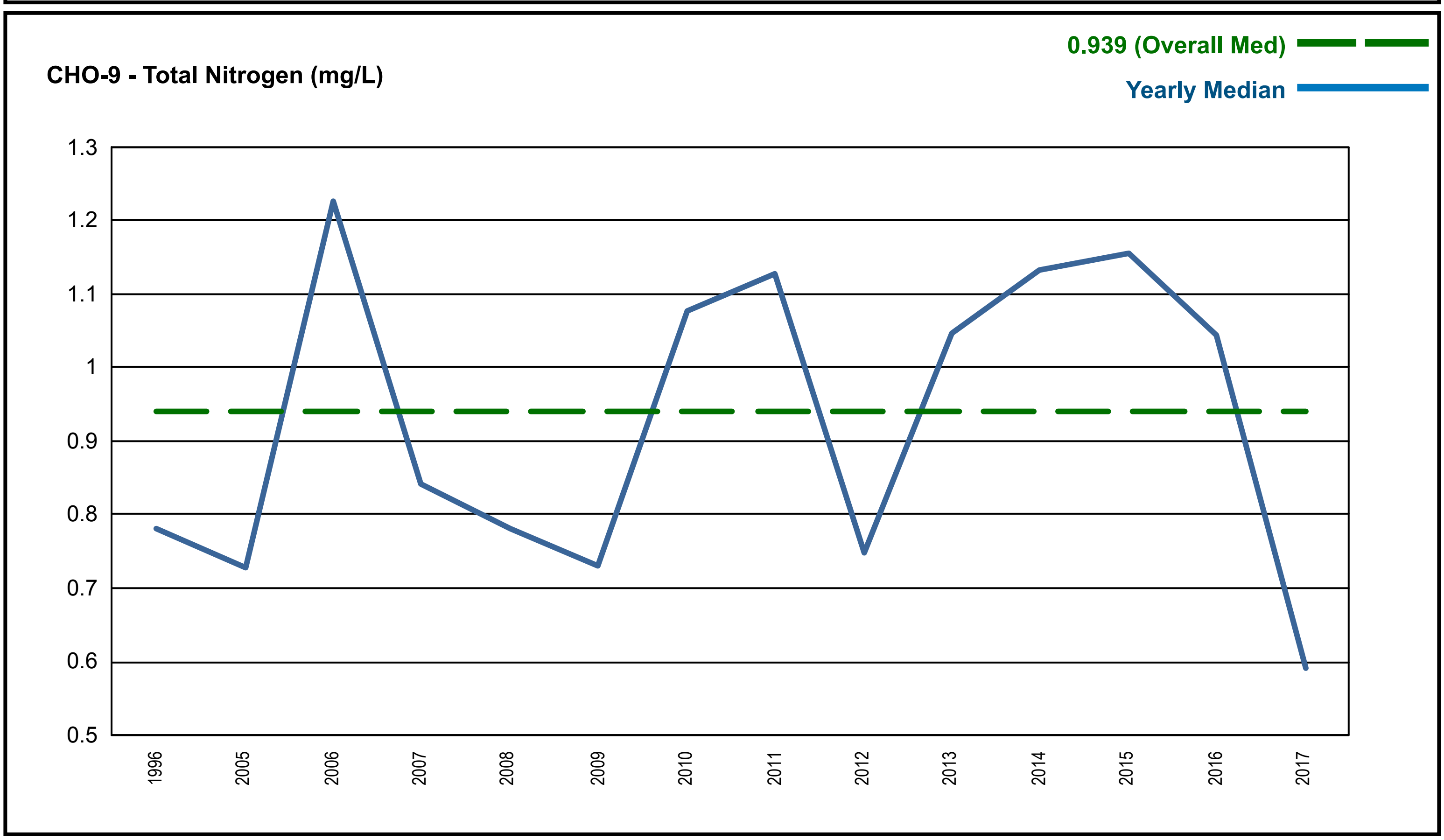
ADEM Ambient Trend Stations - Sampled 1977 - 2018





ADEM Ambient Trend Stations - Sampled 1977 - 2018





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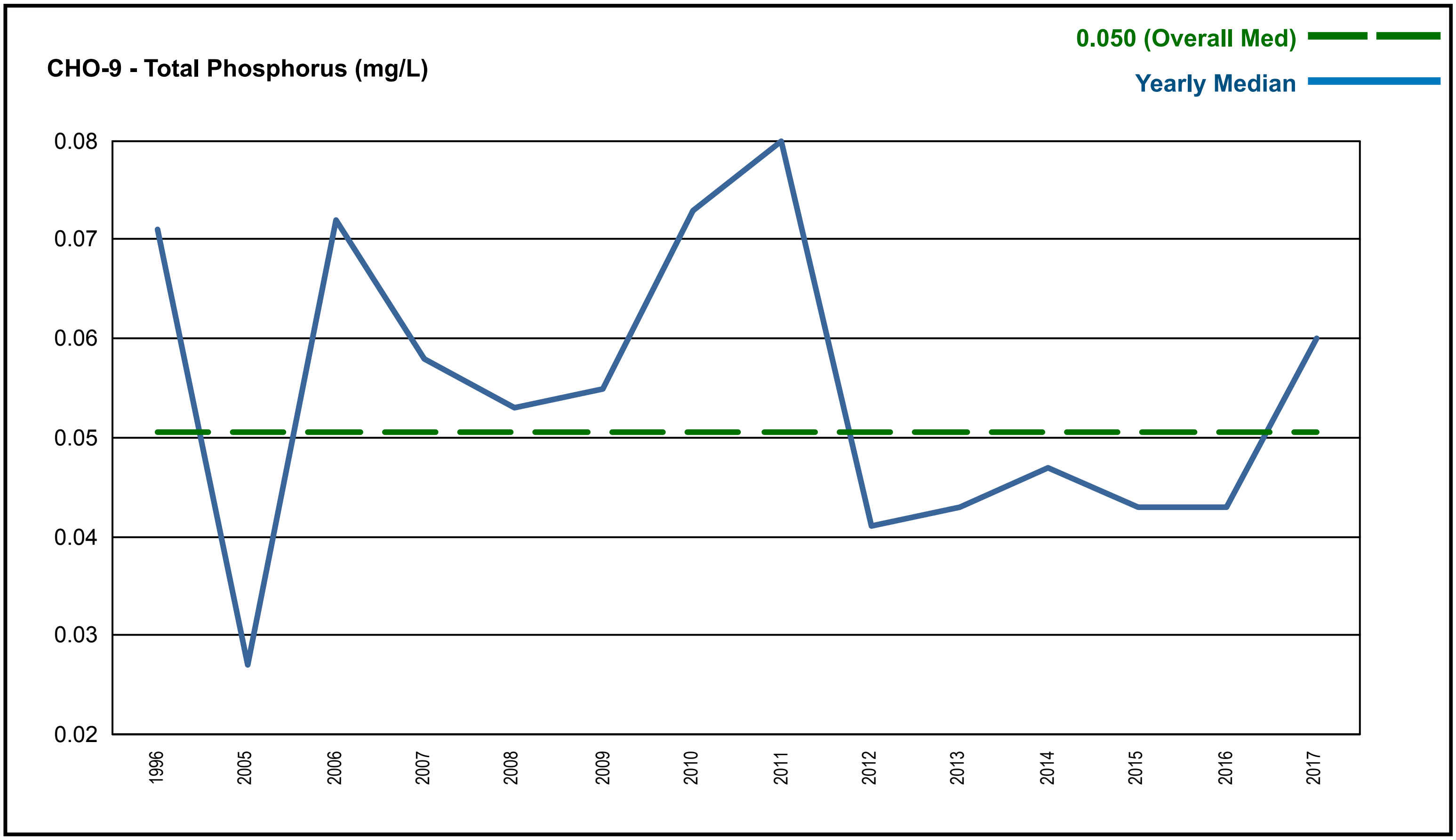

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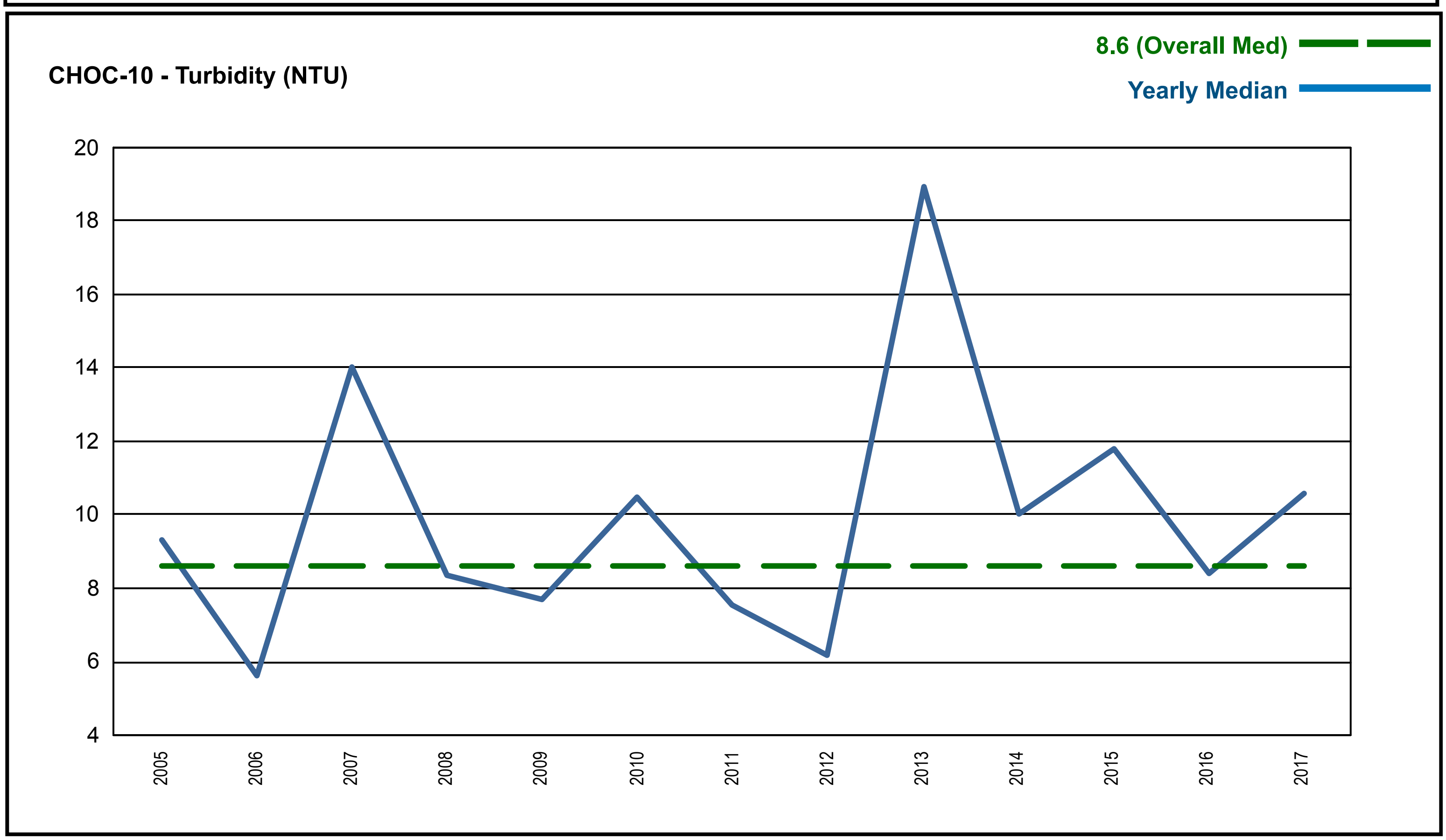

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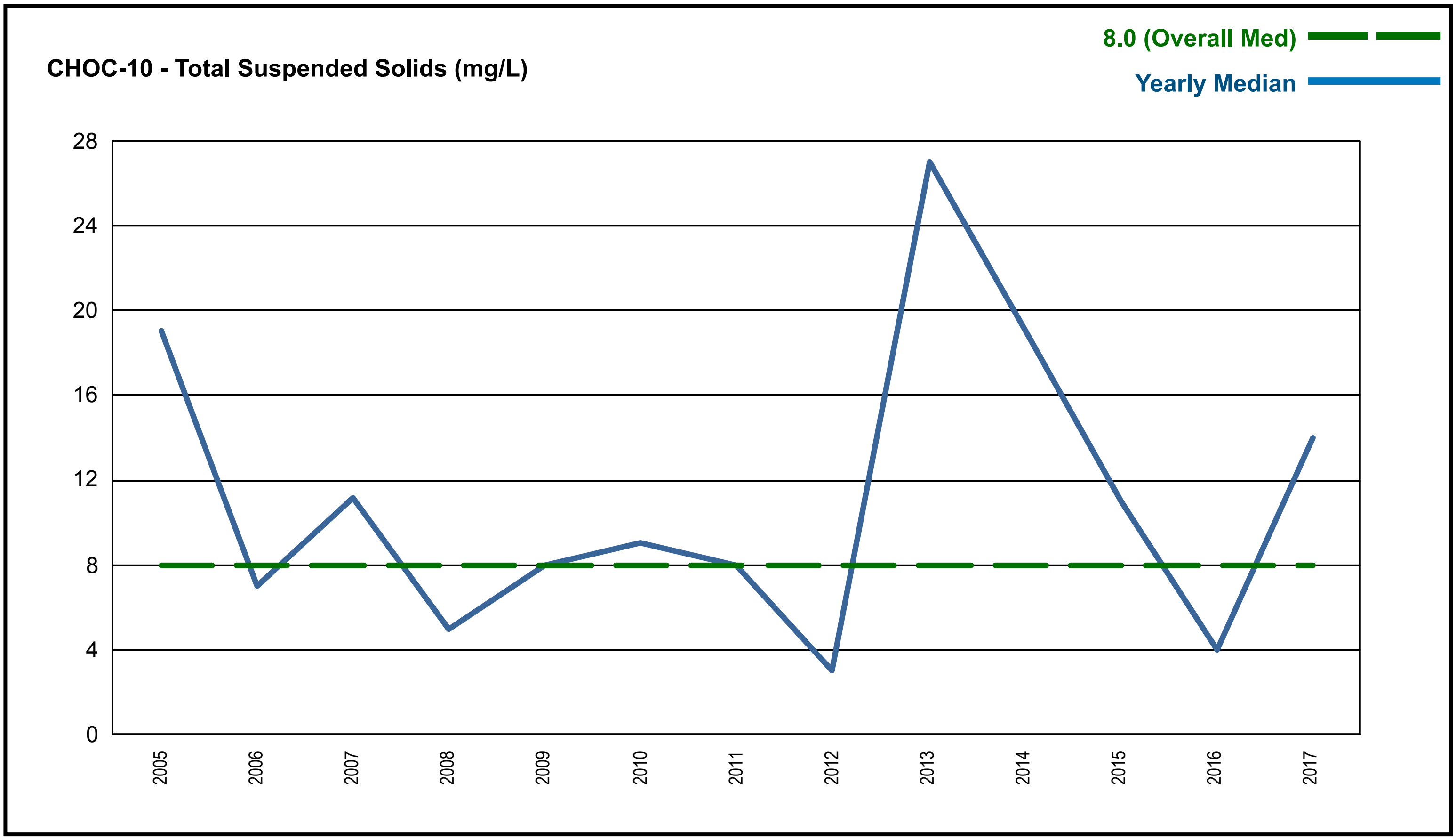

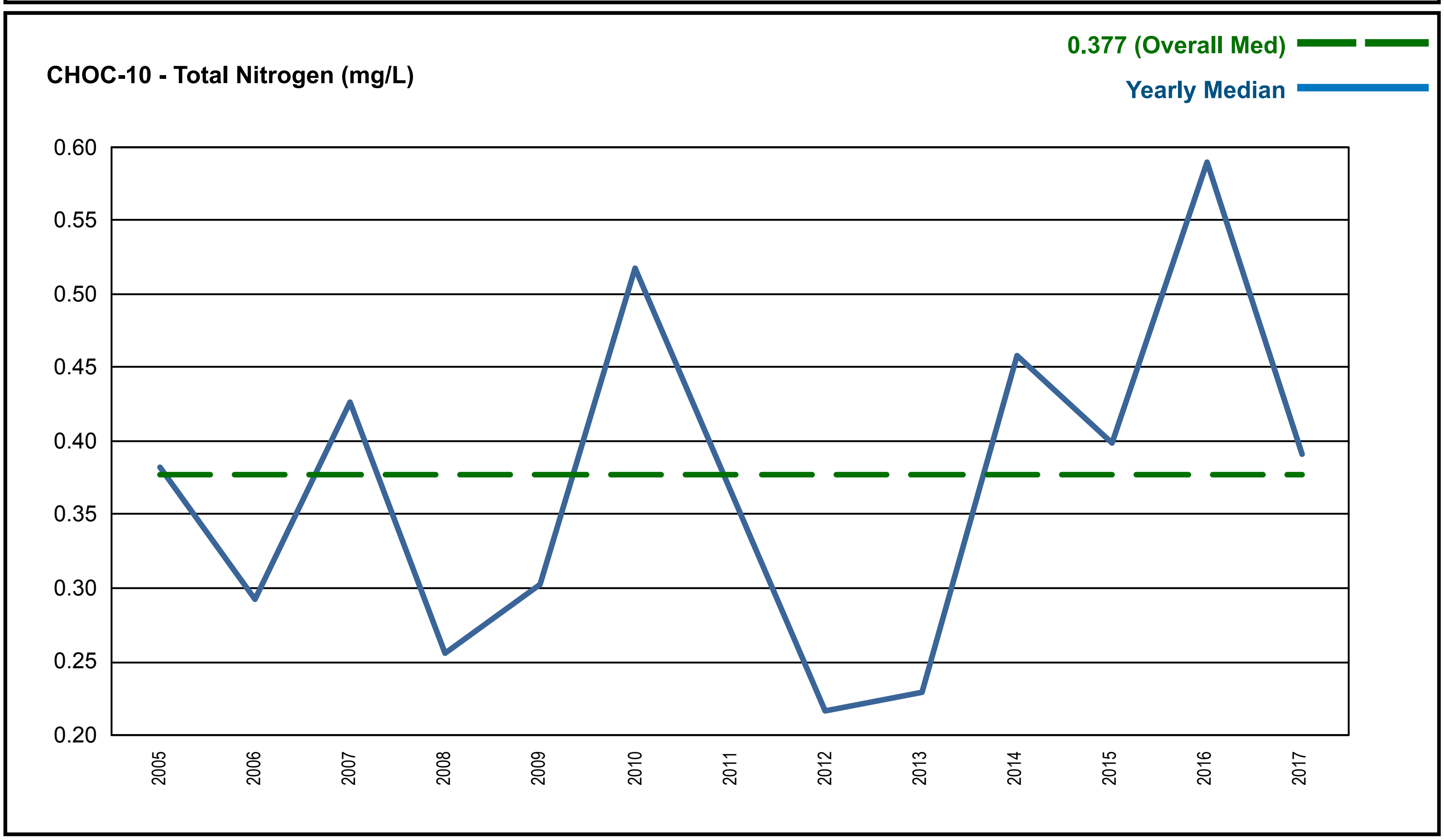

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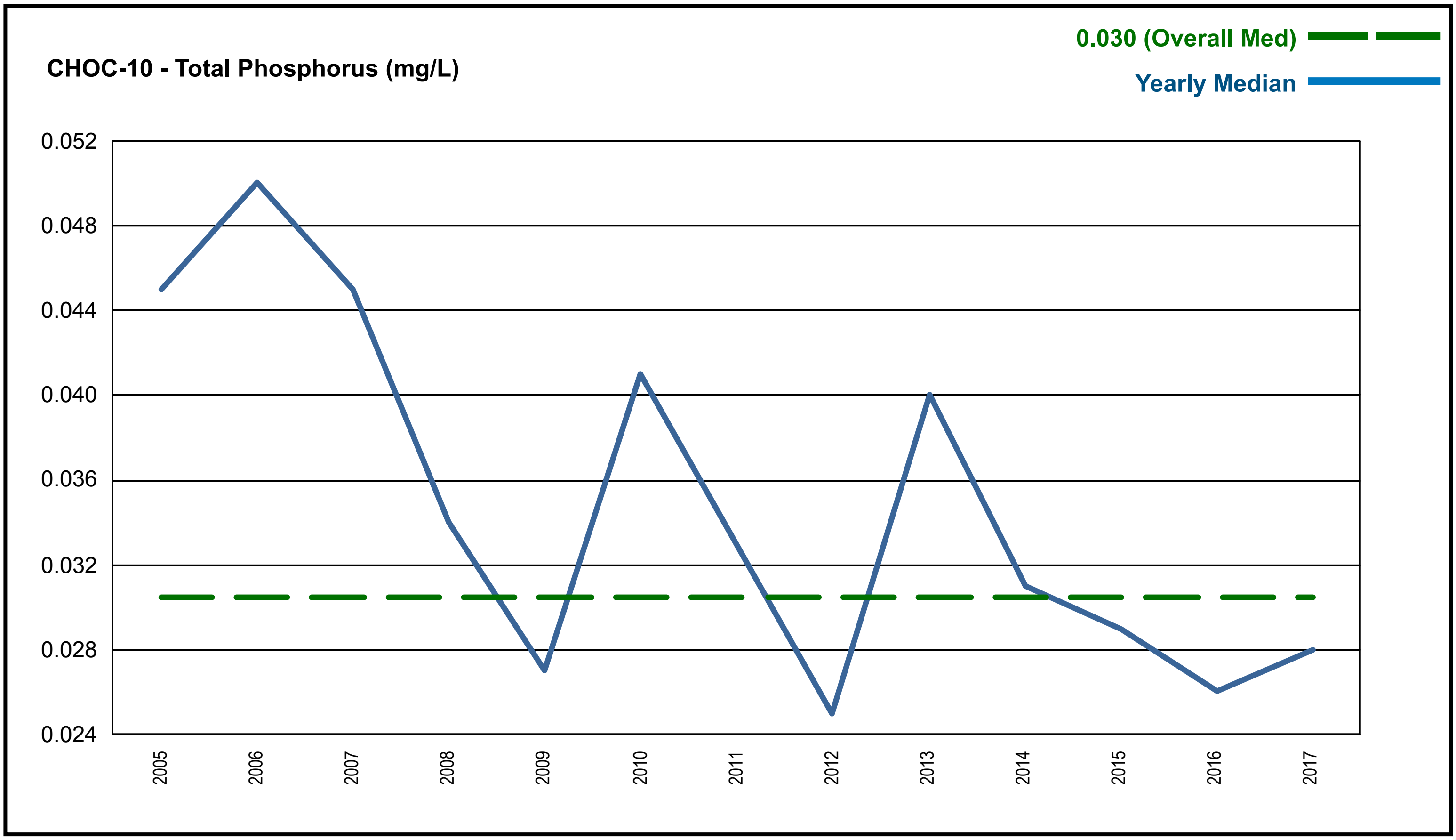

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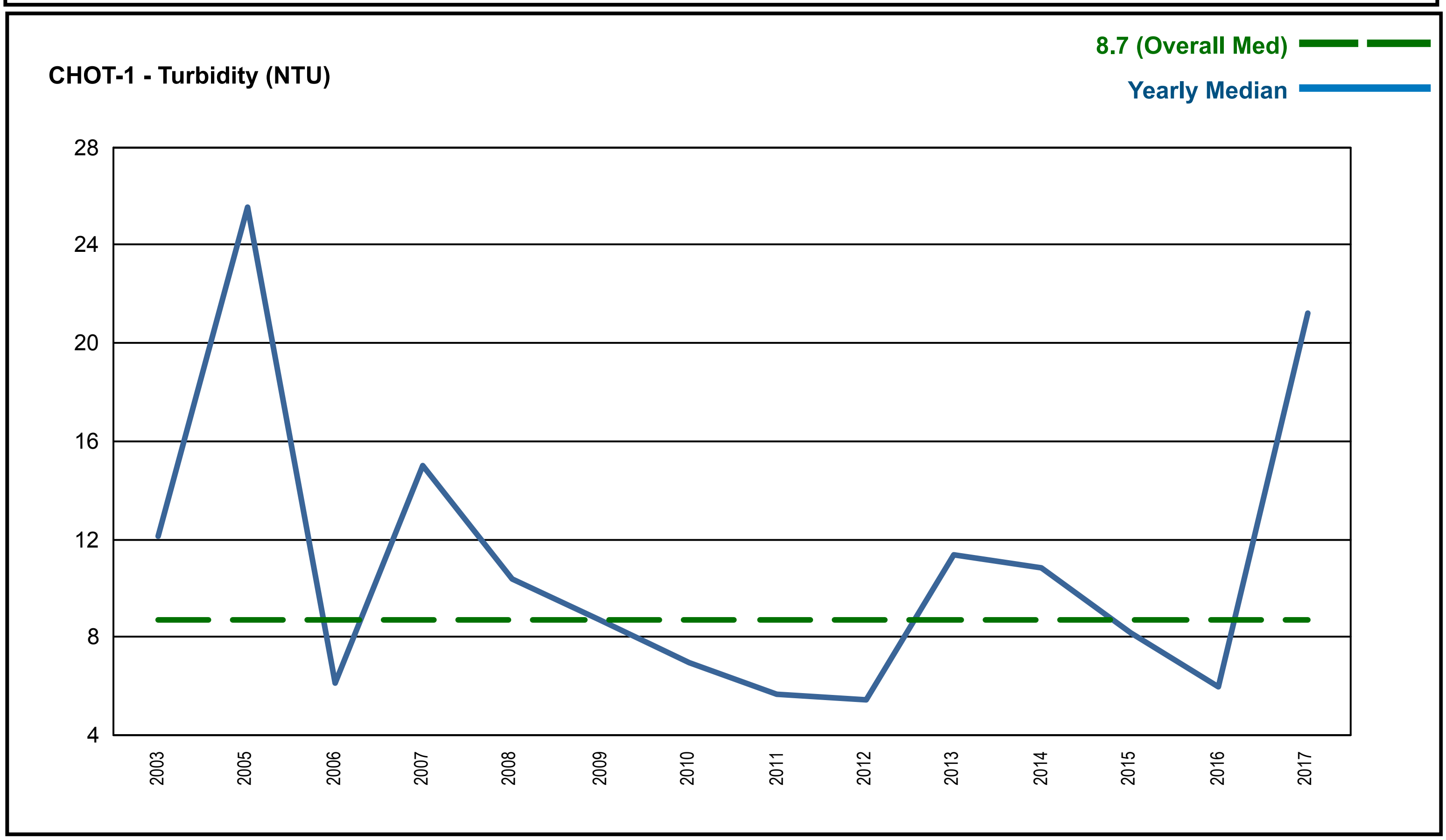

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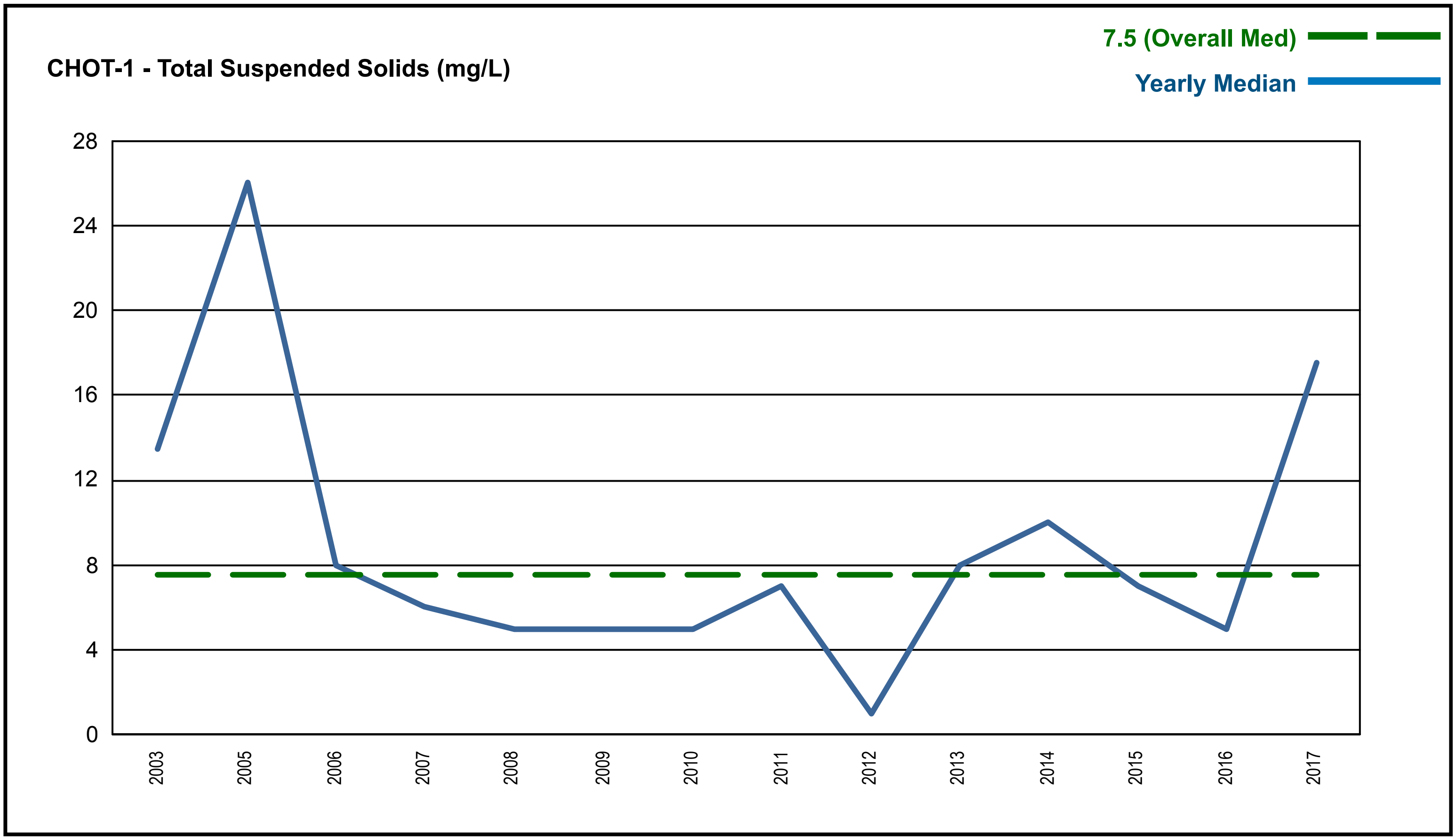

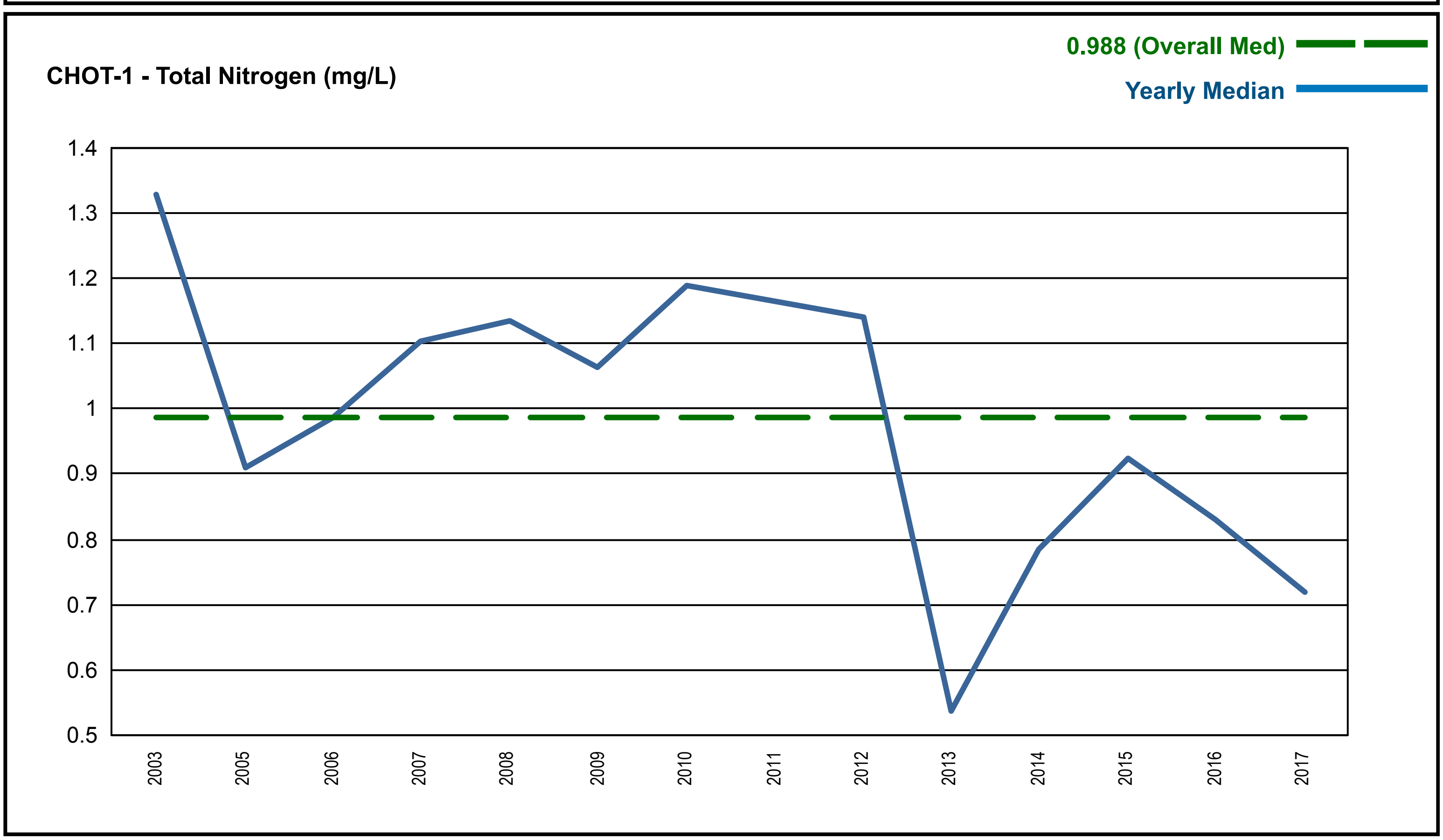

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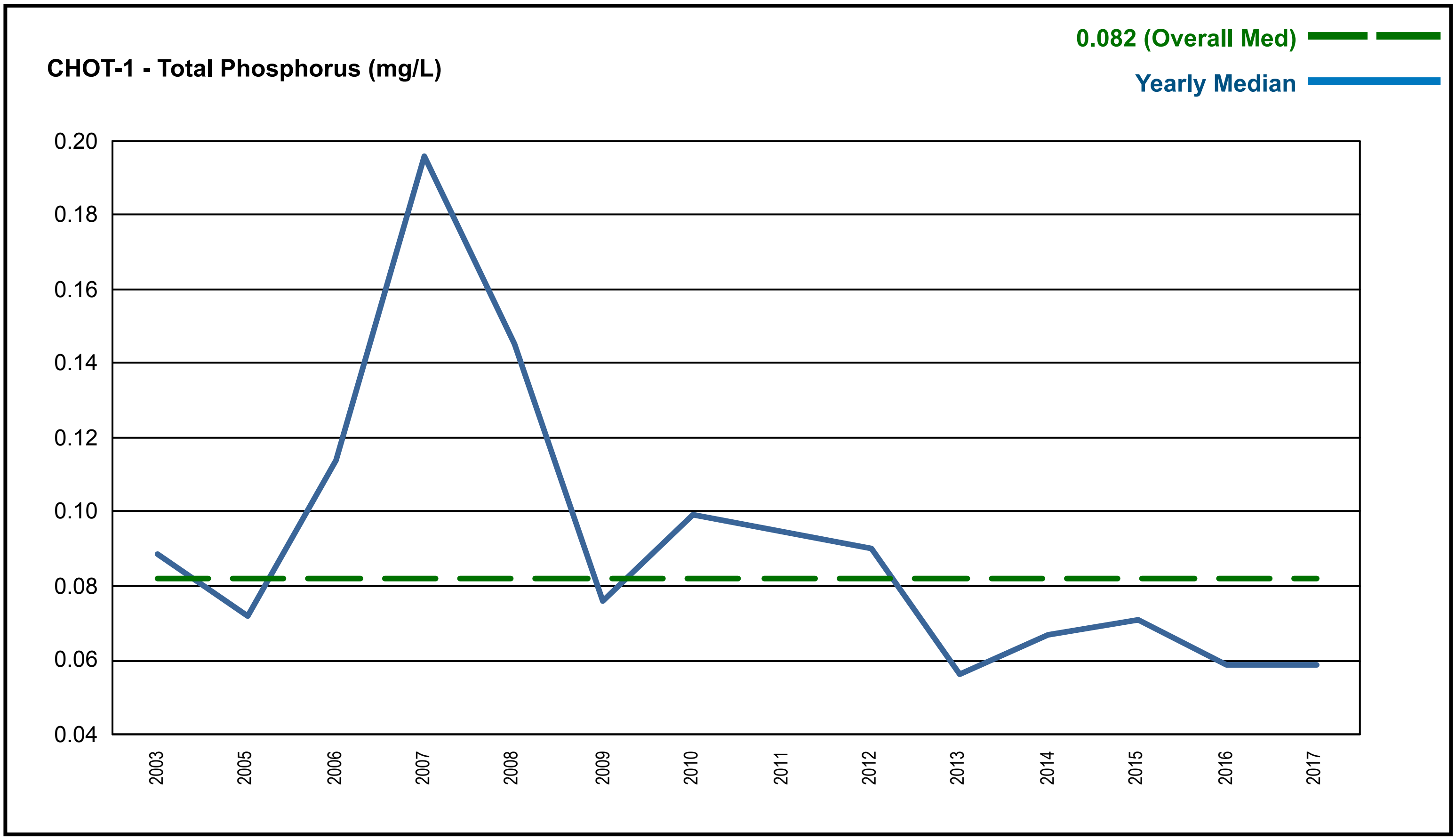

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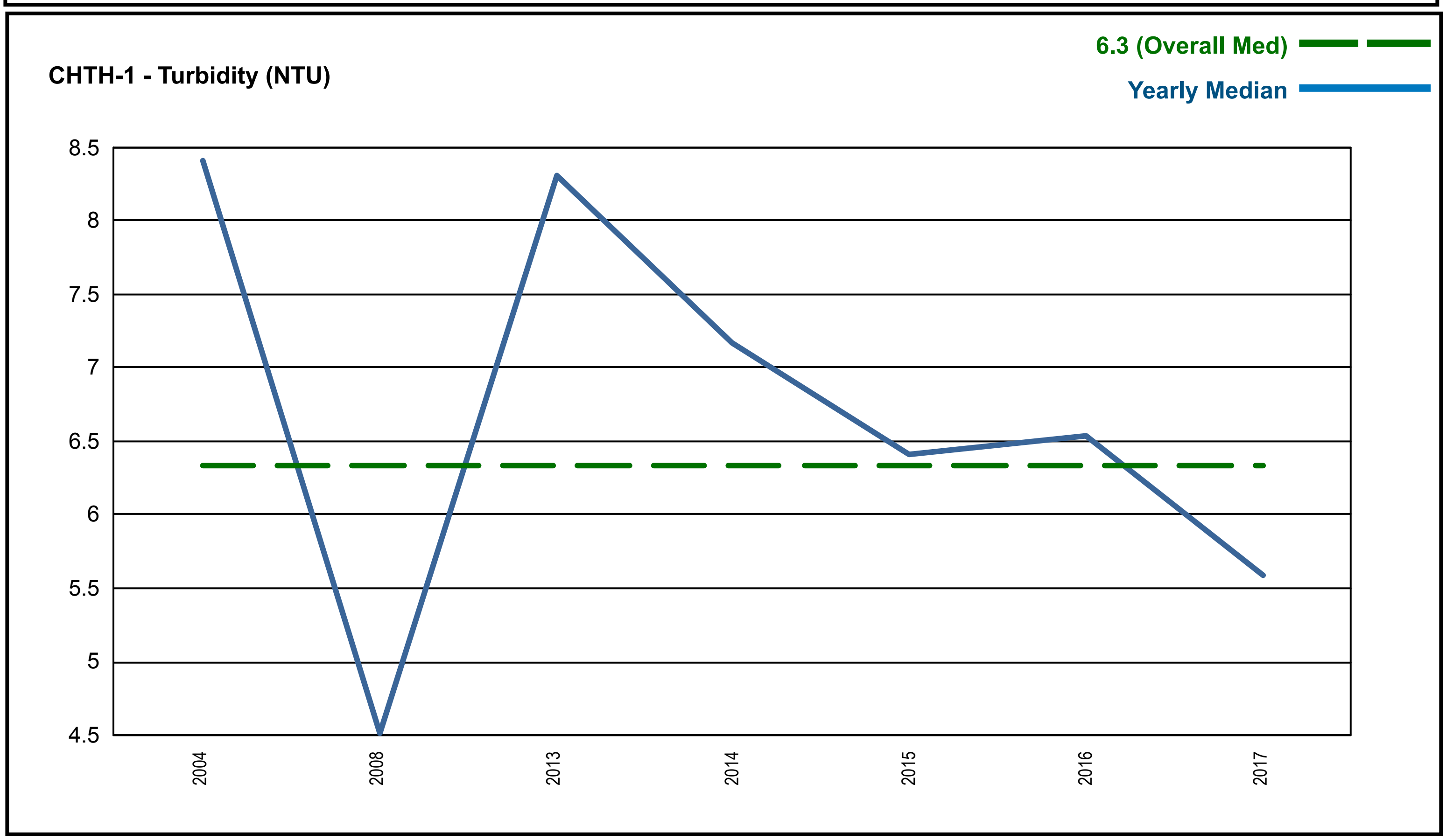

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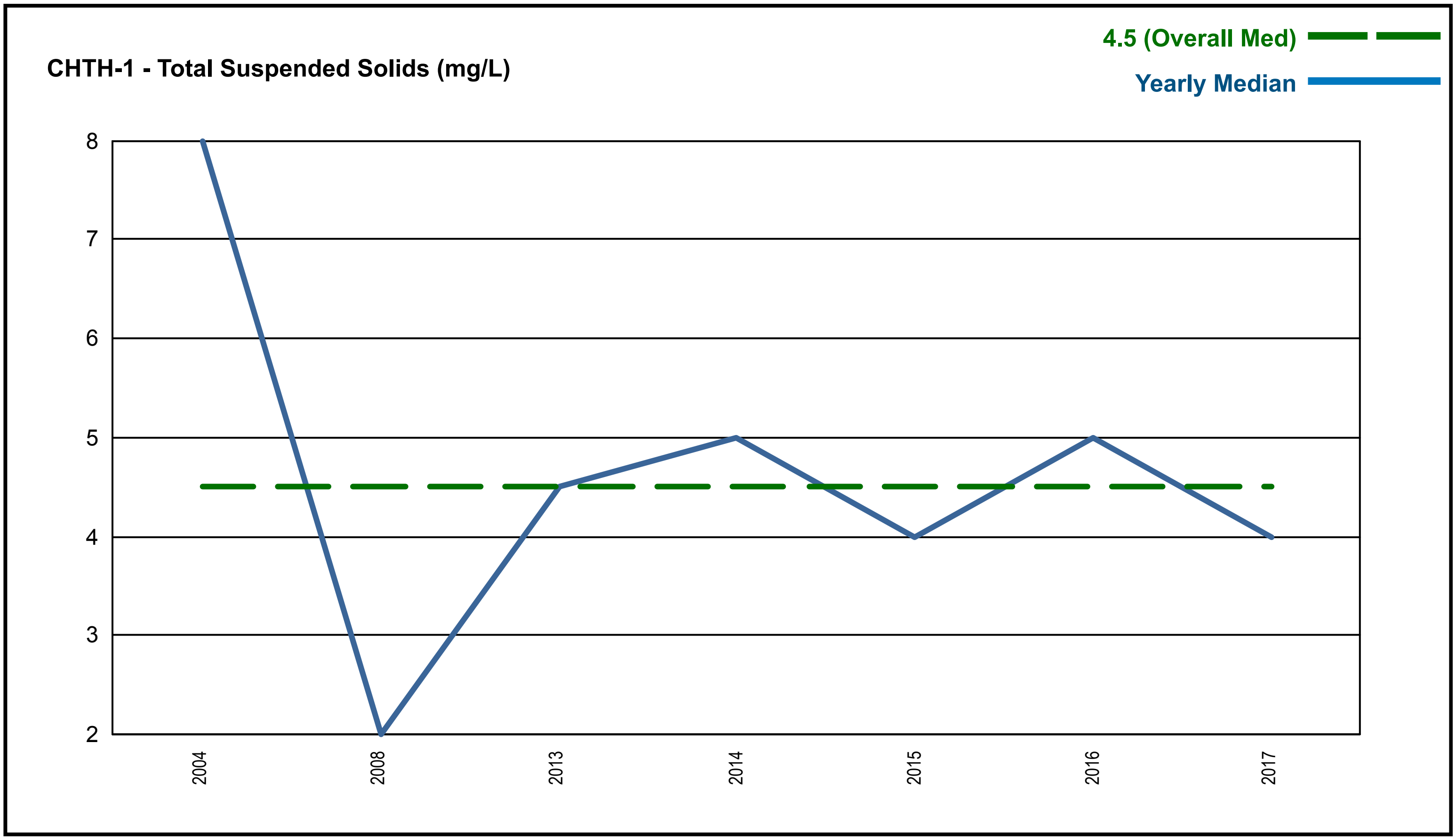

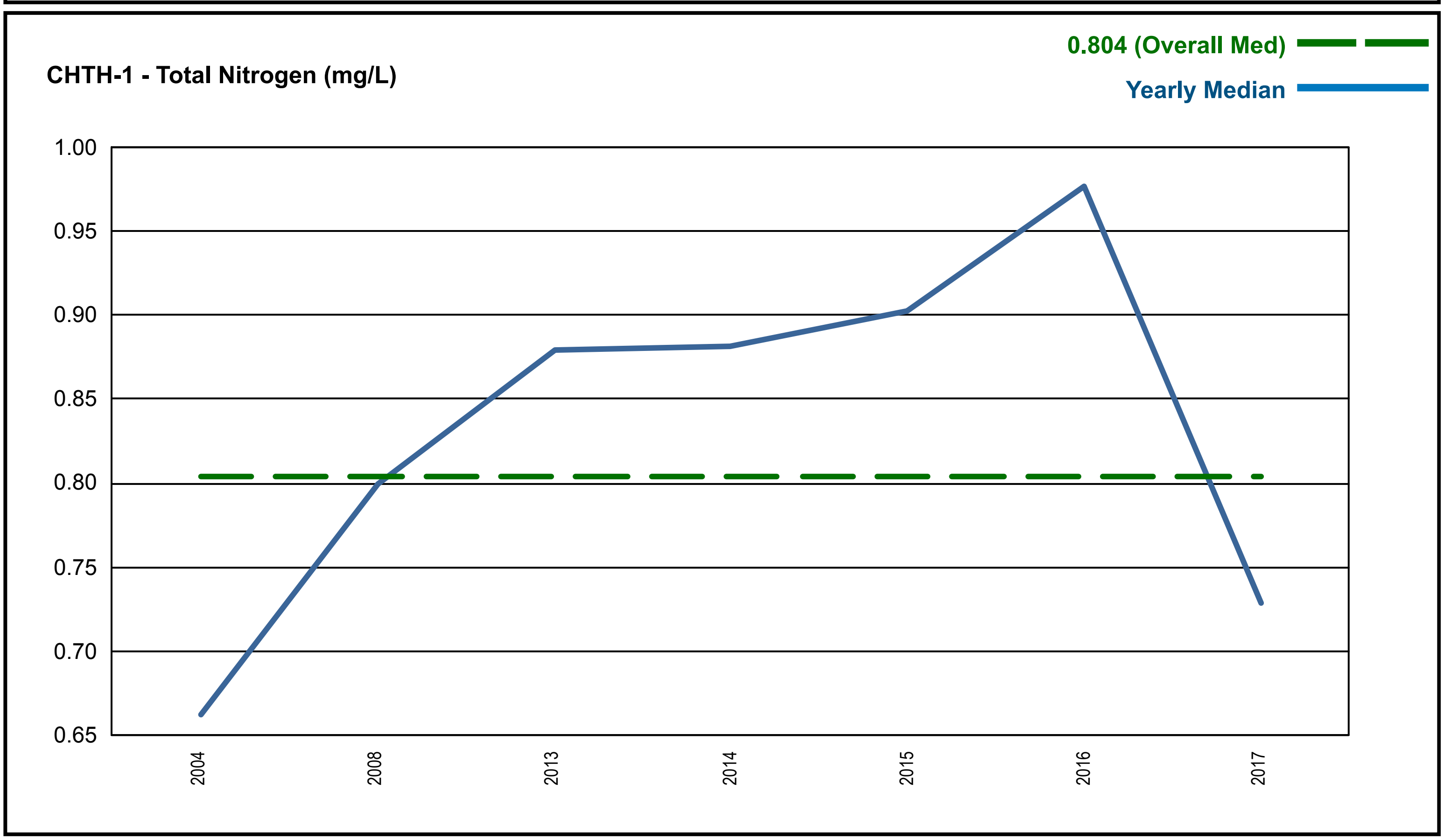

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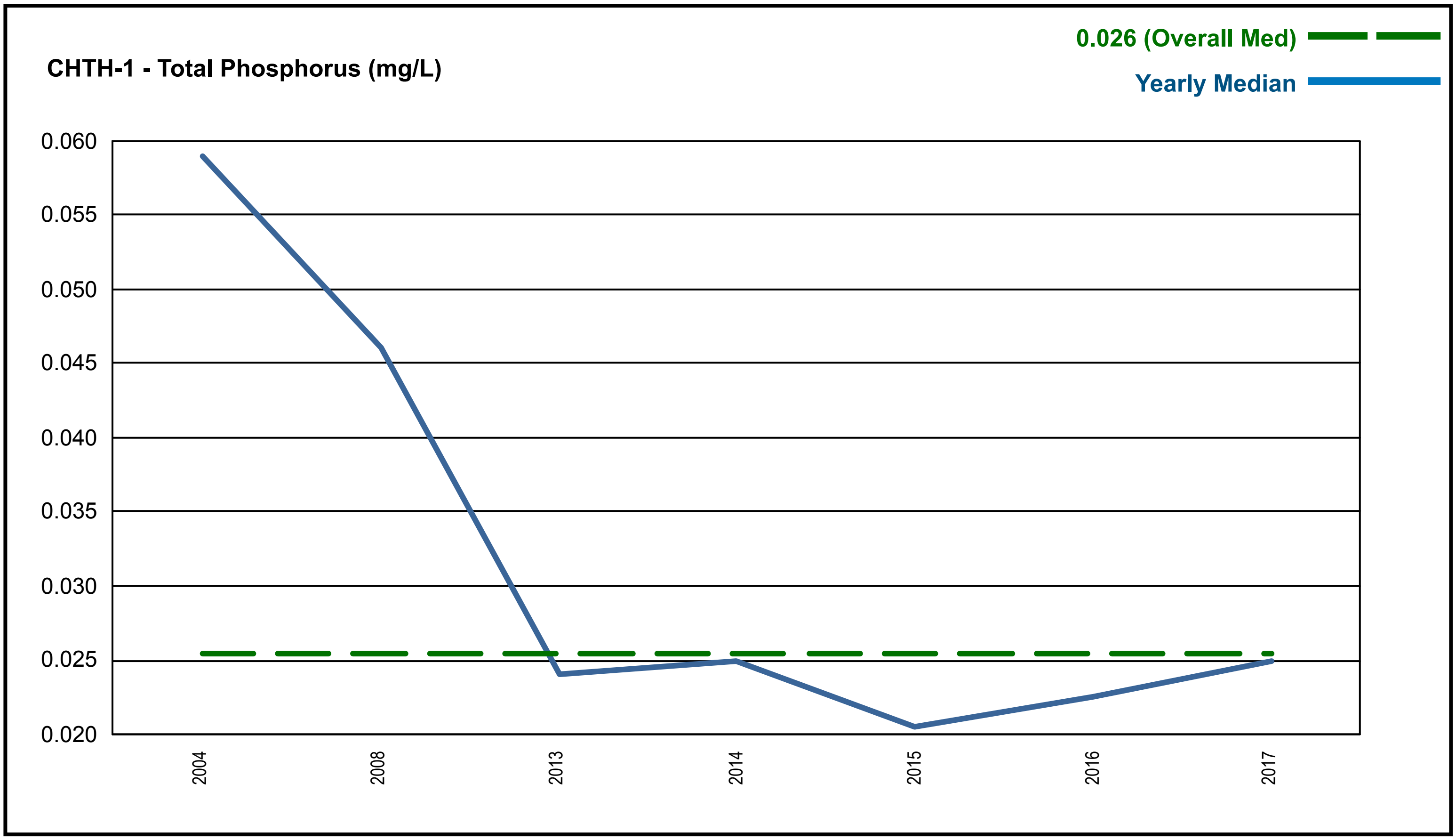

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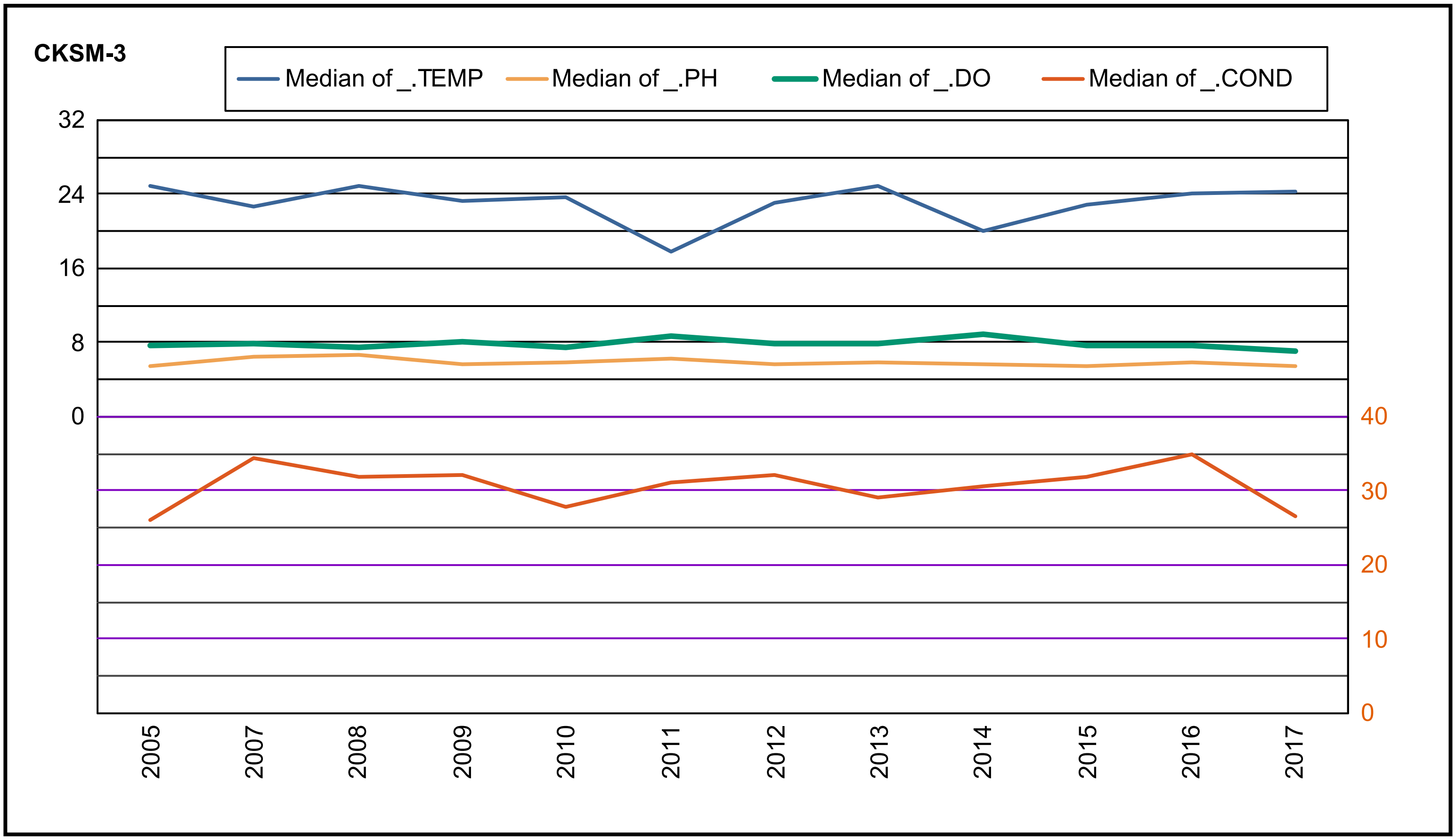

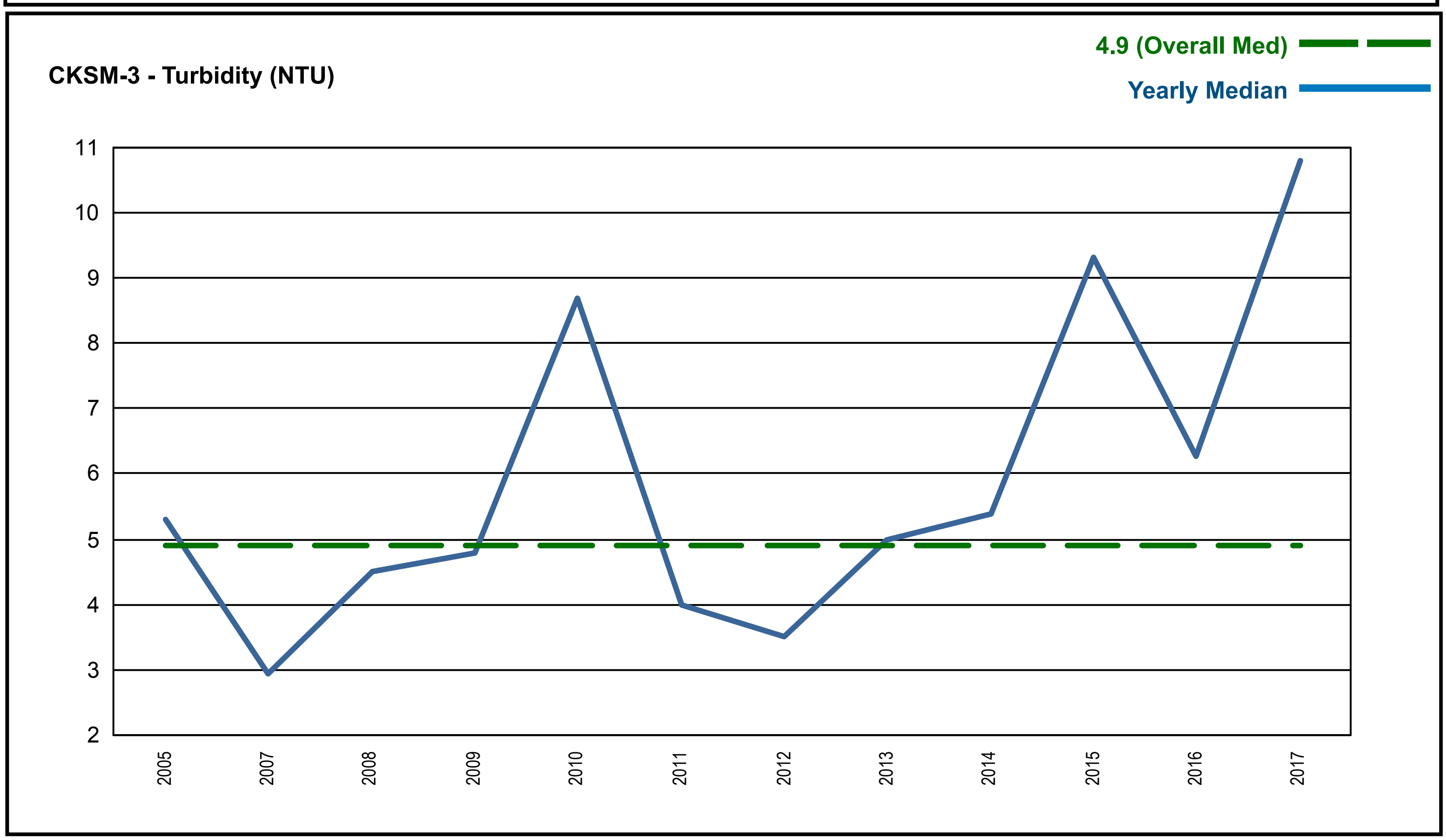

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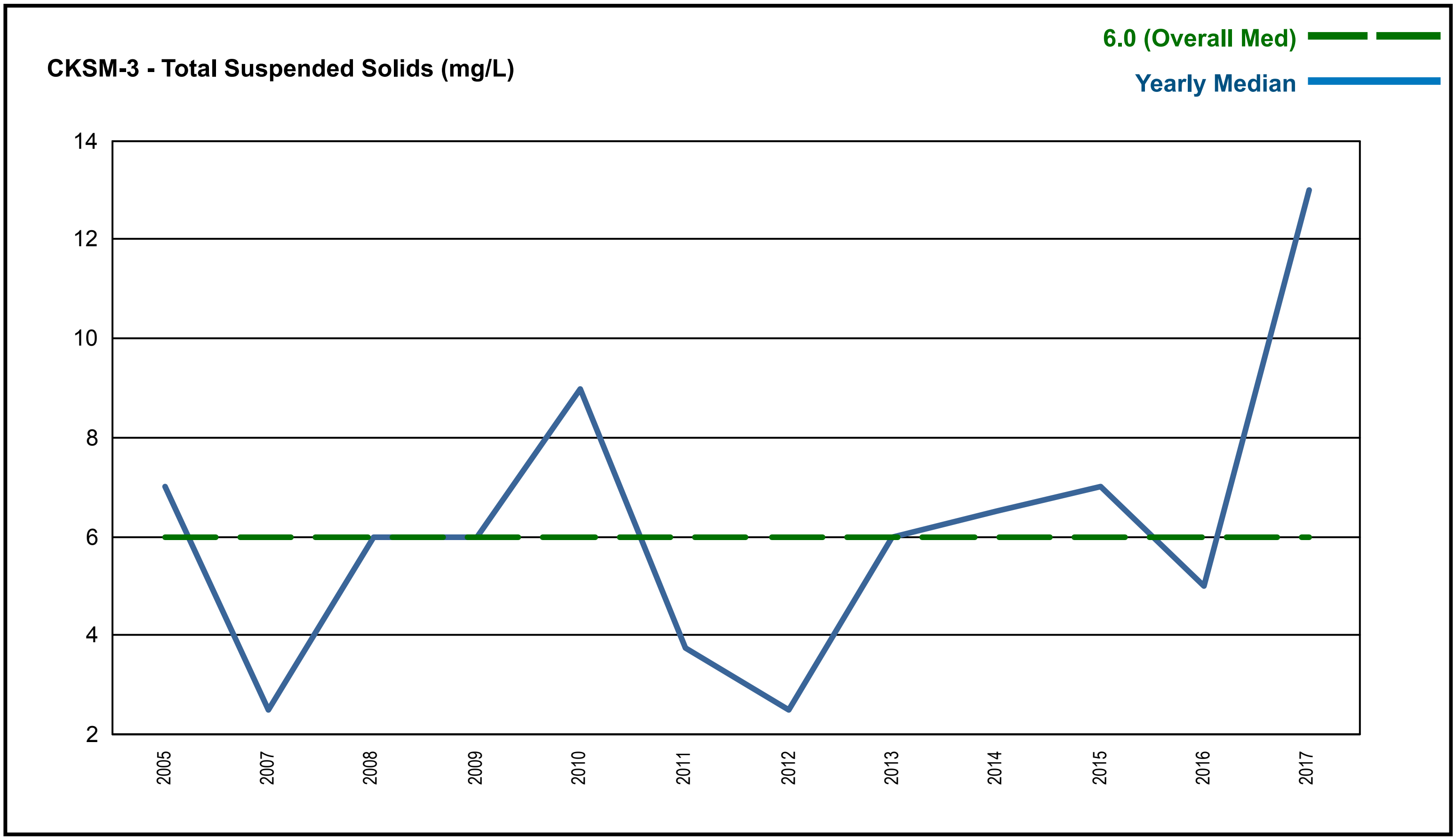

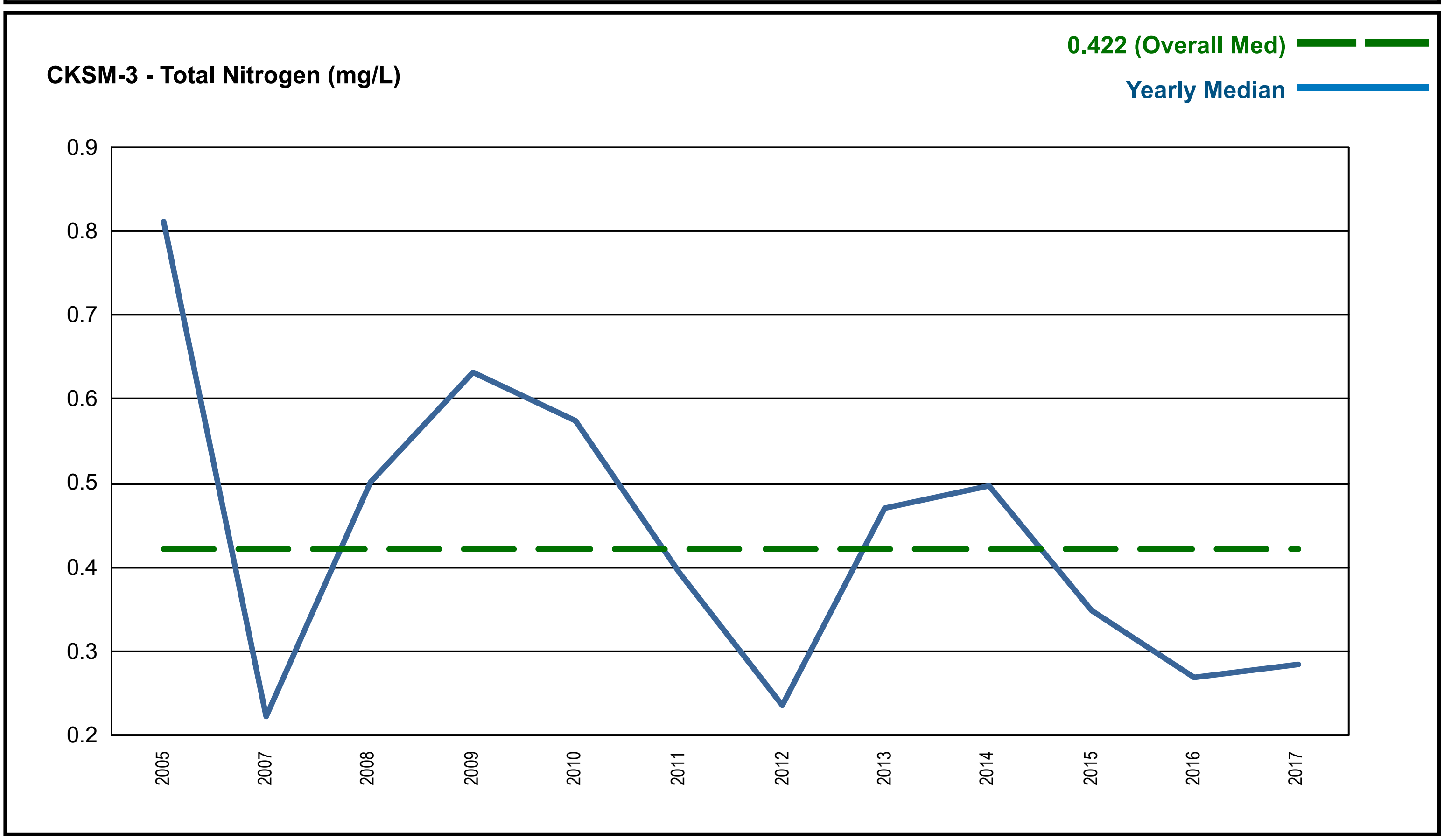

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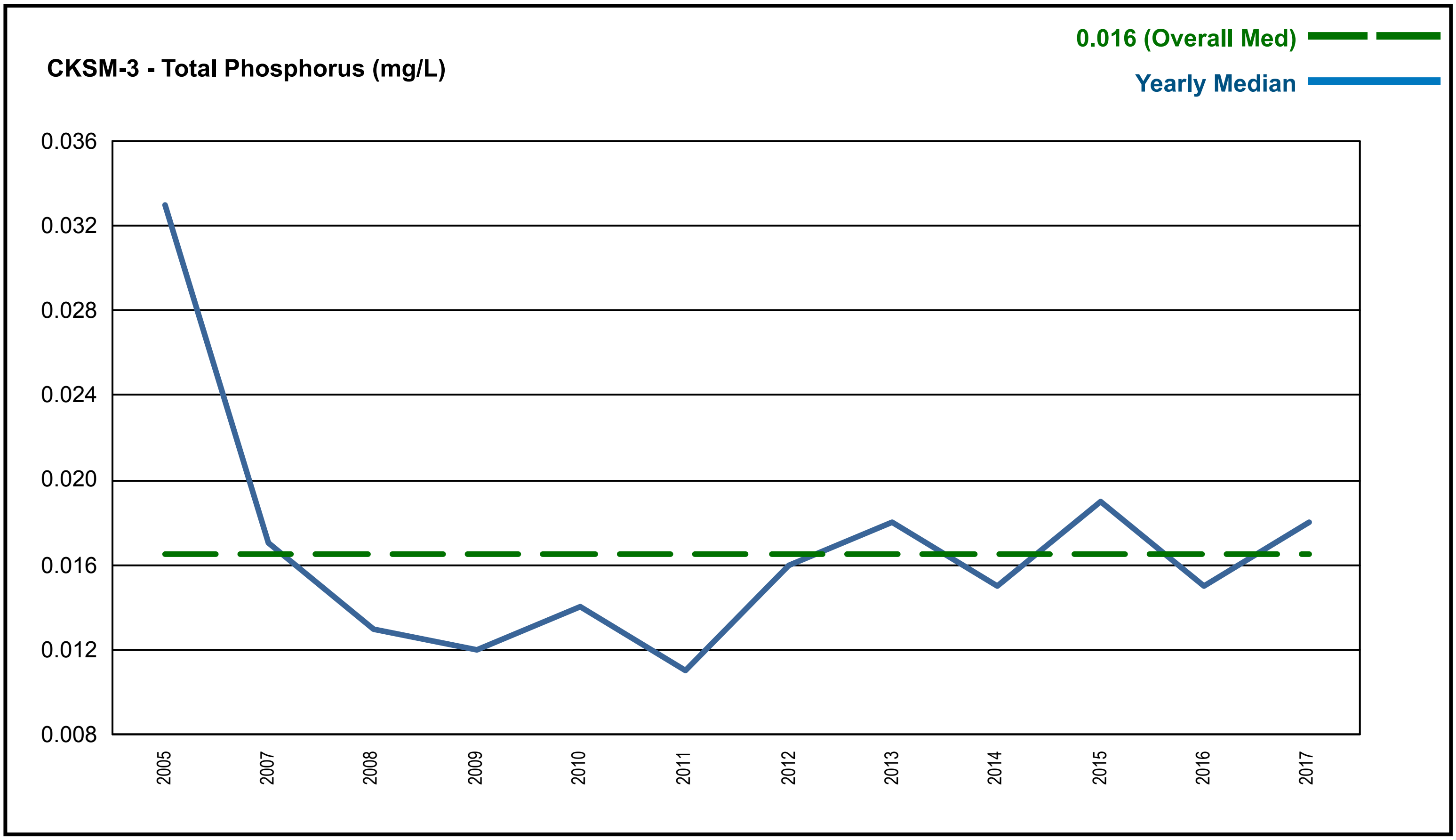

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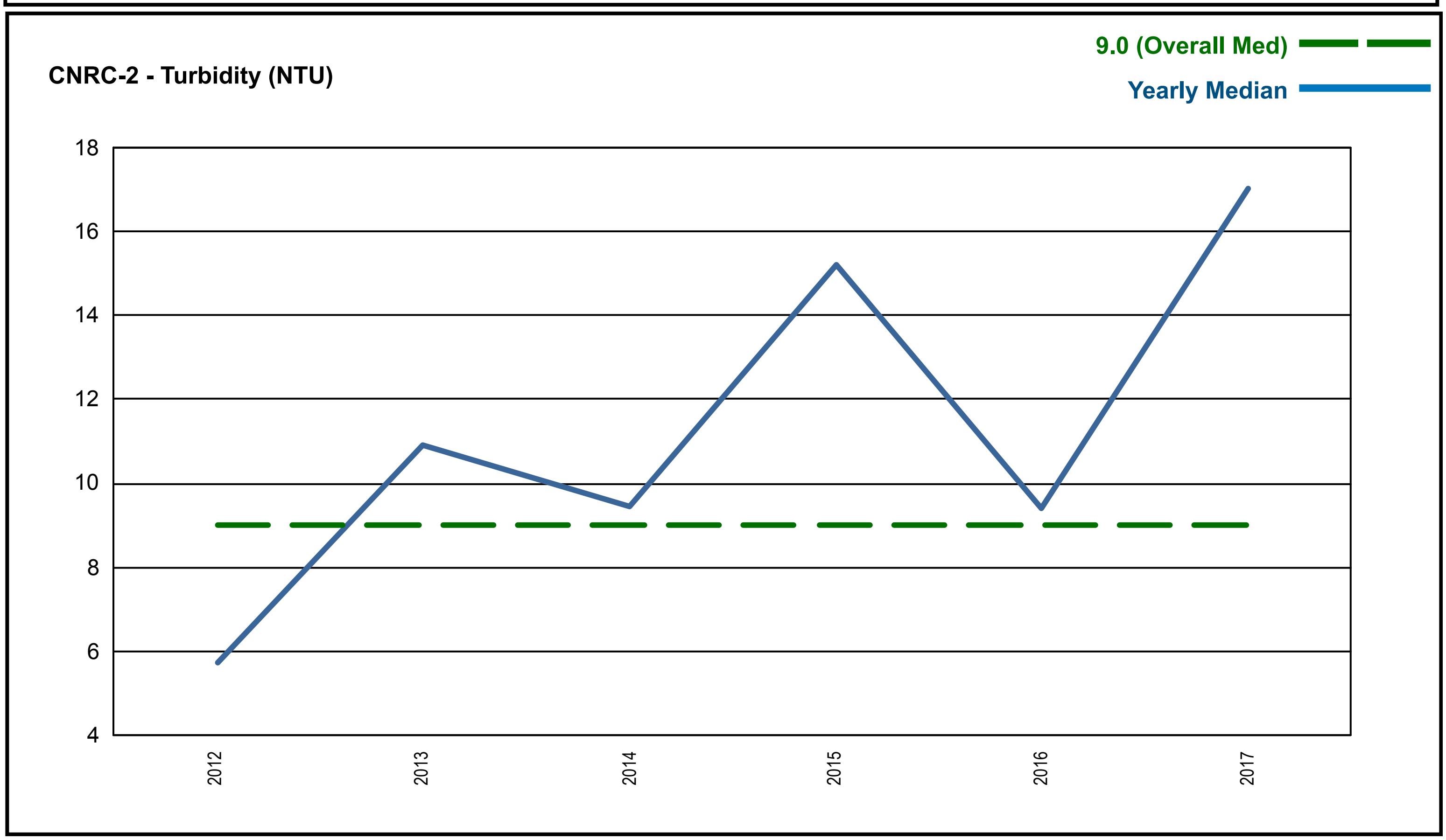

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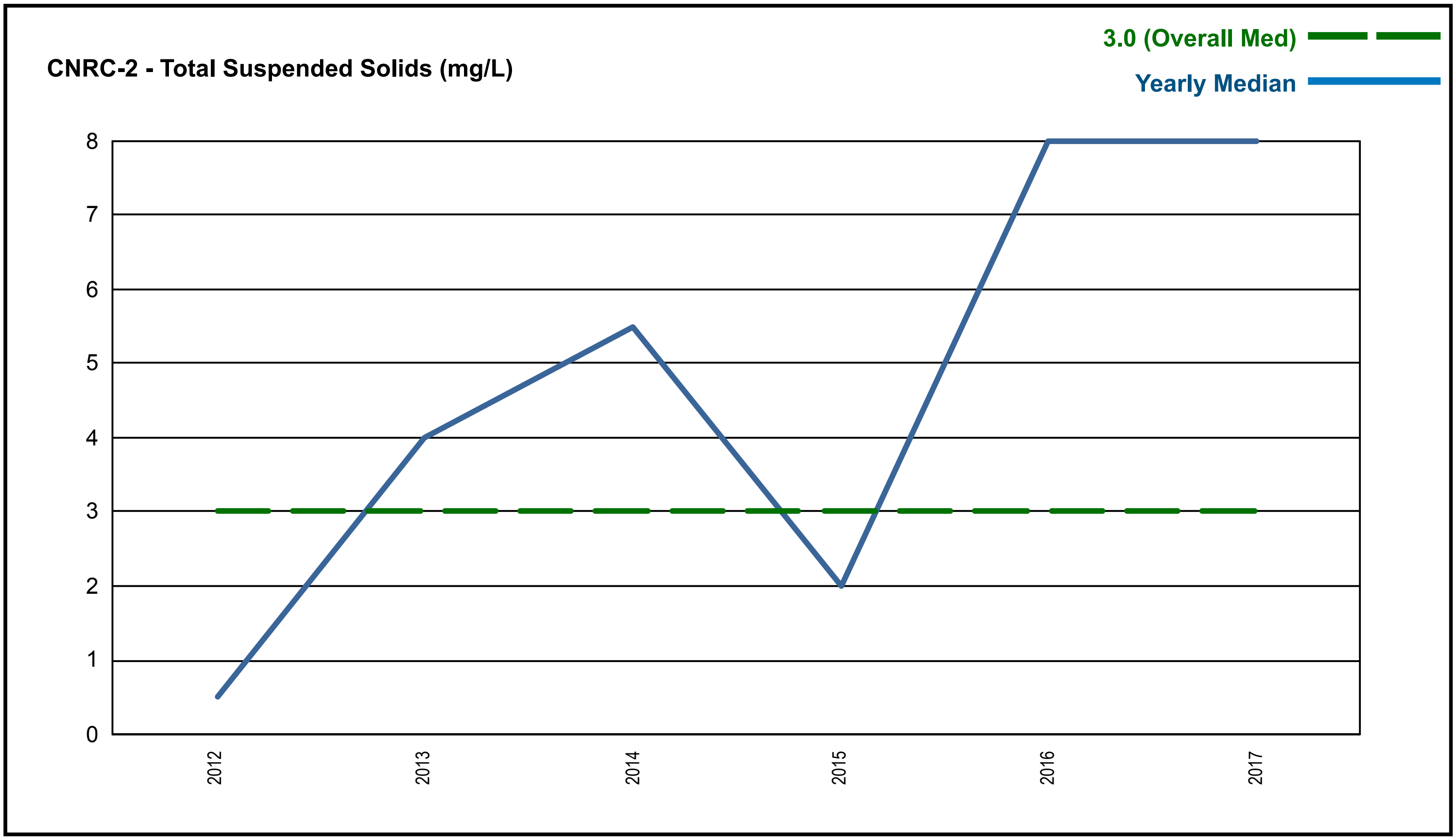

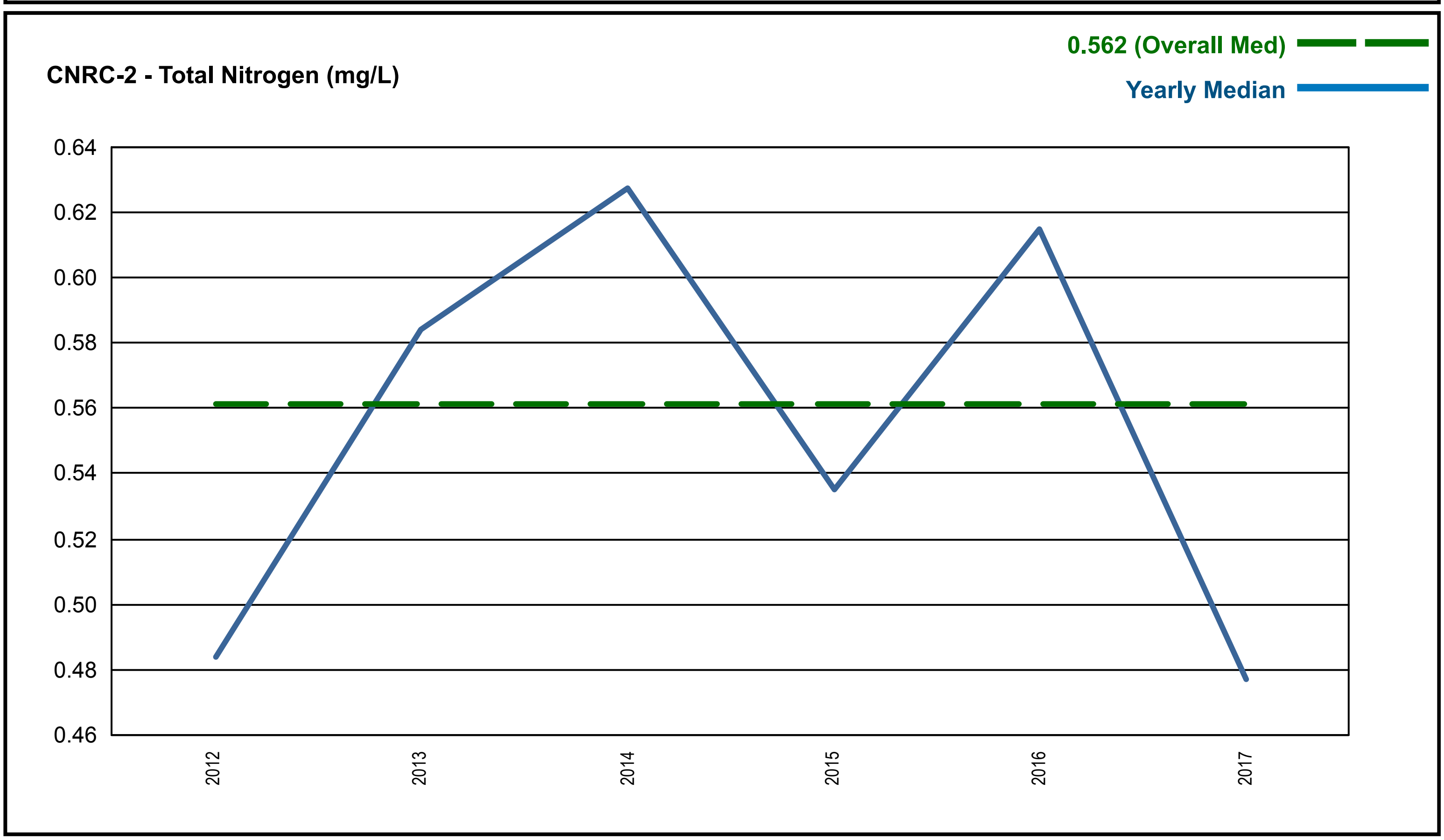

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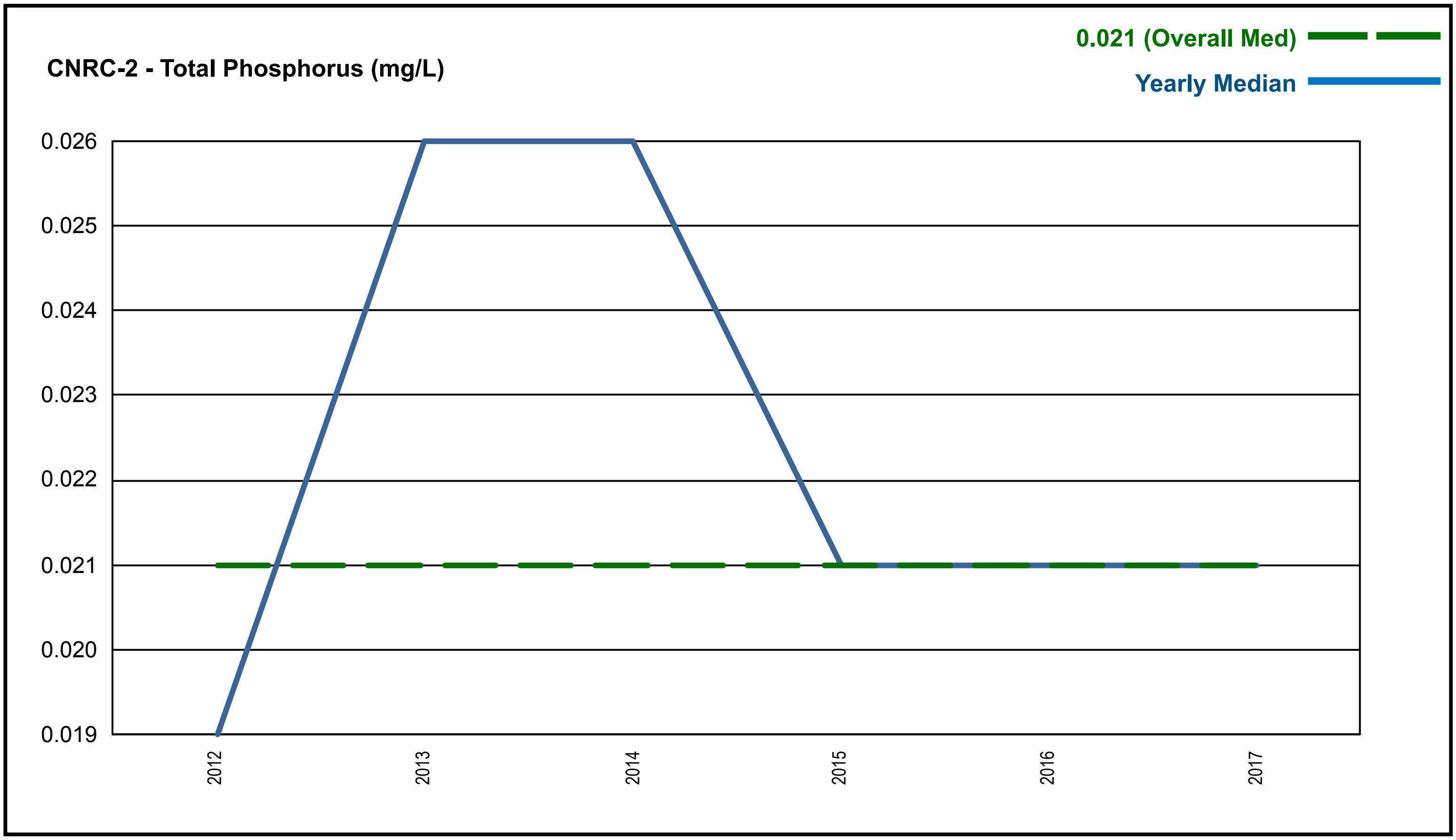

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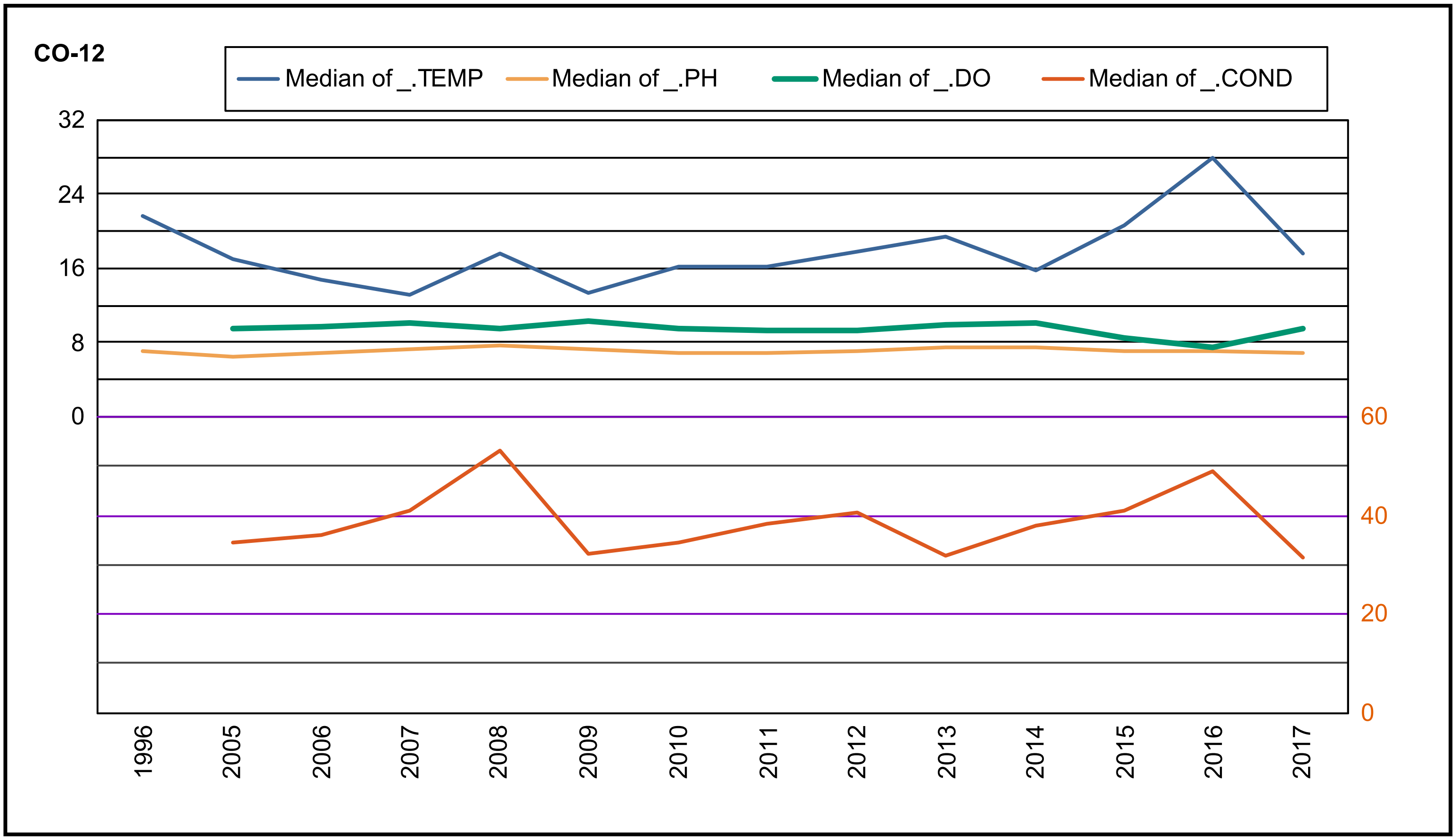

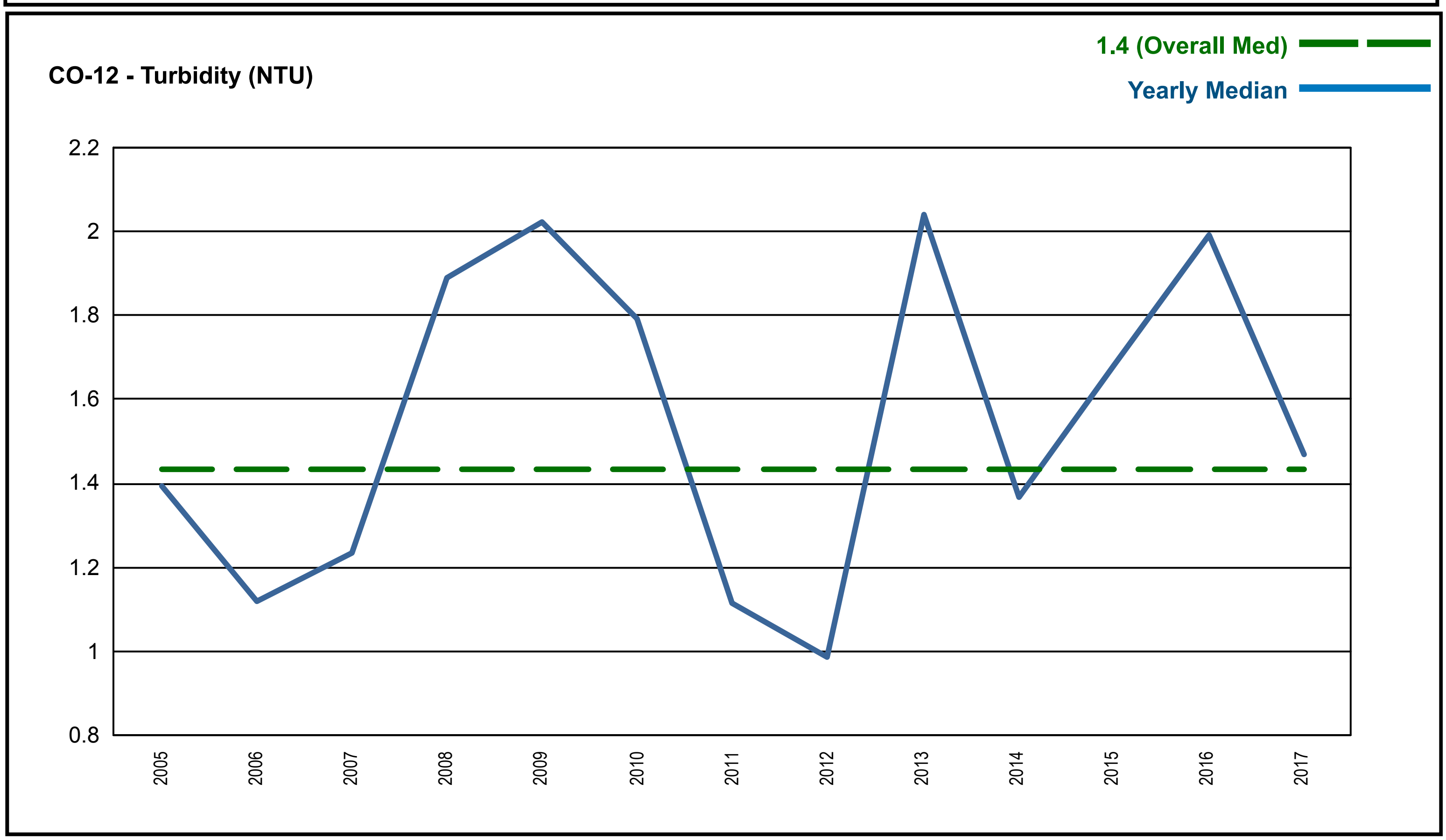

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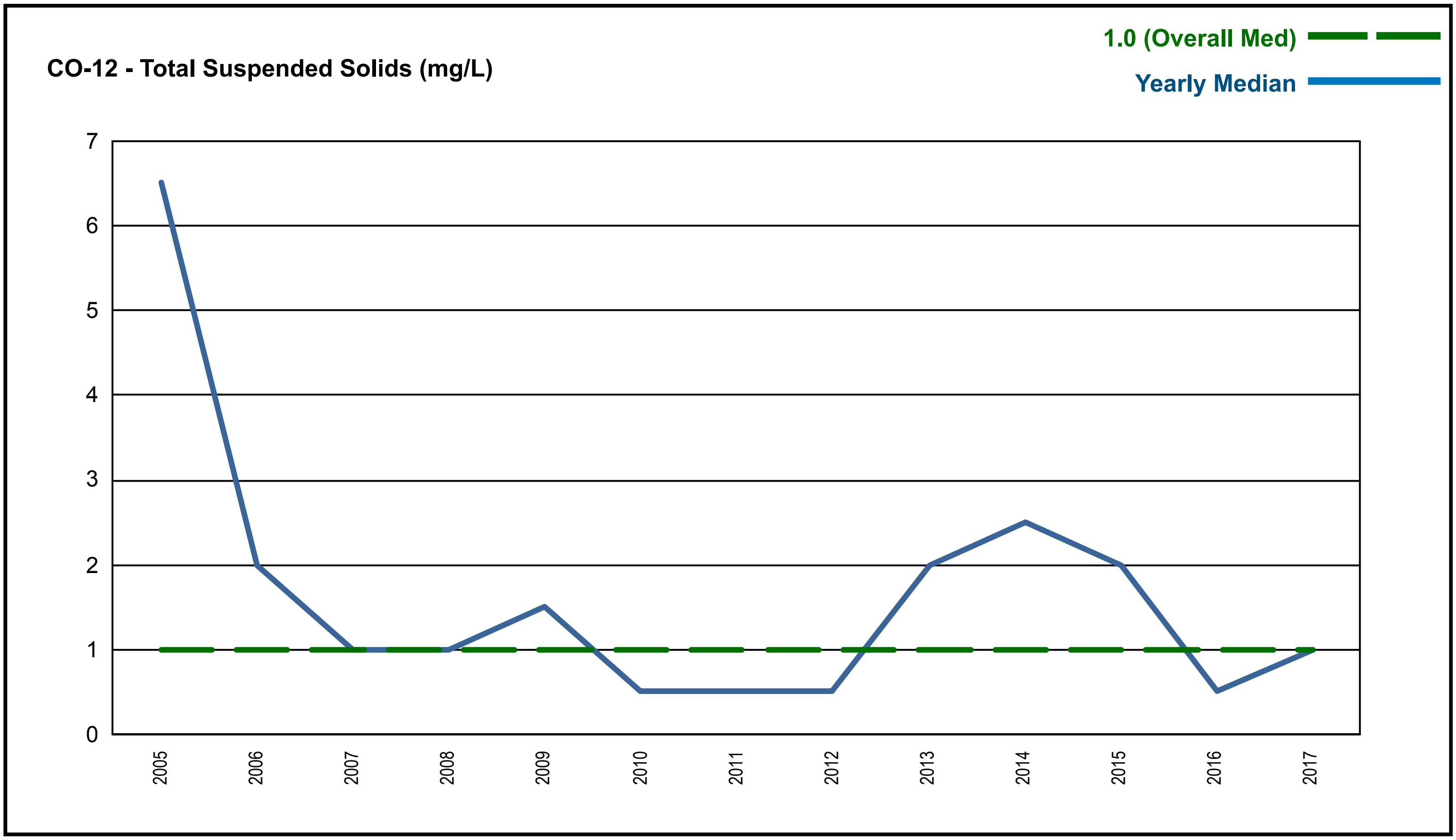

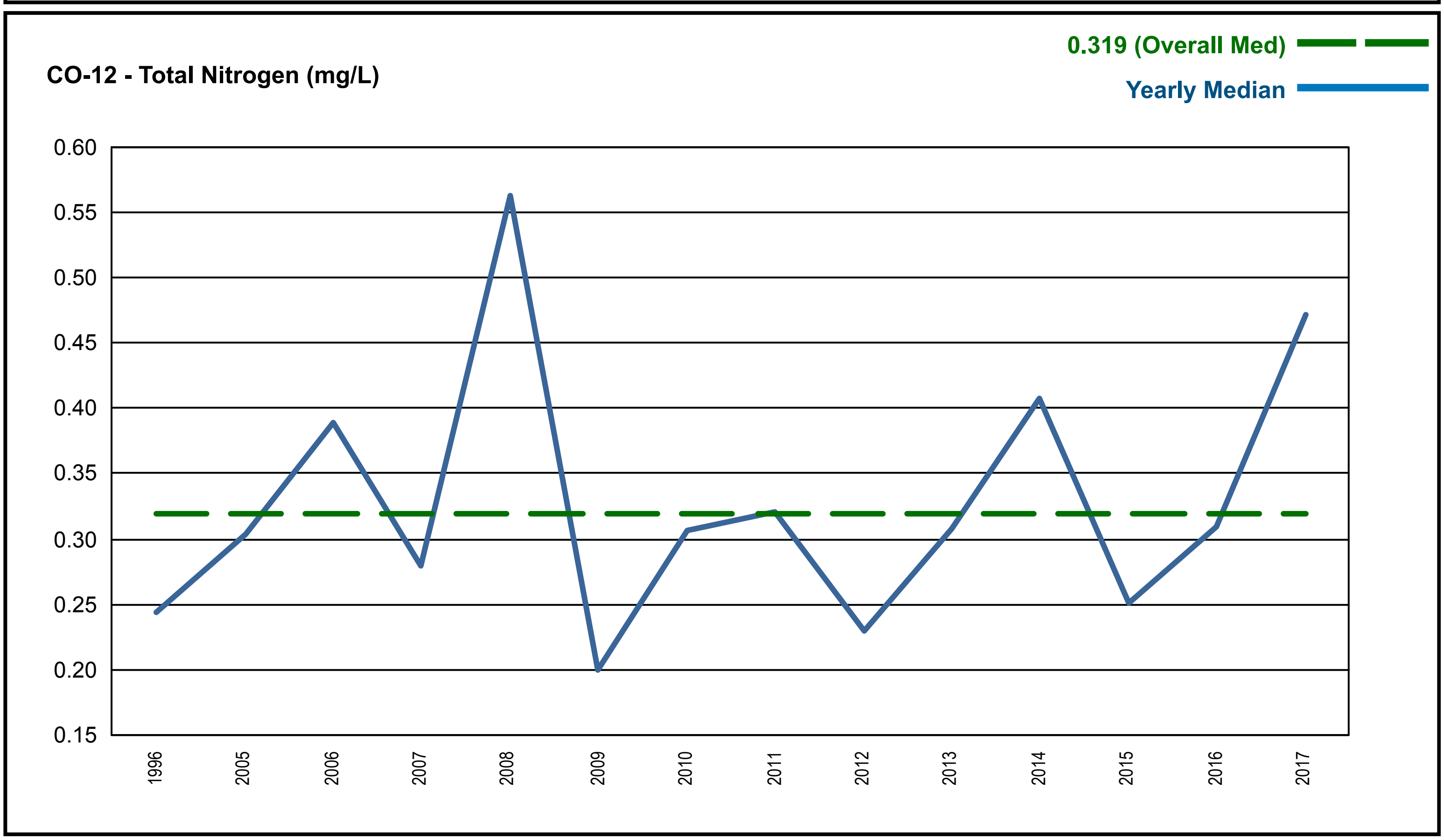

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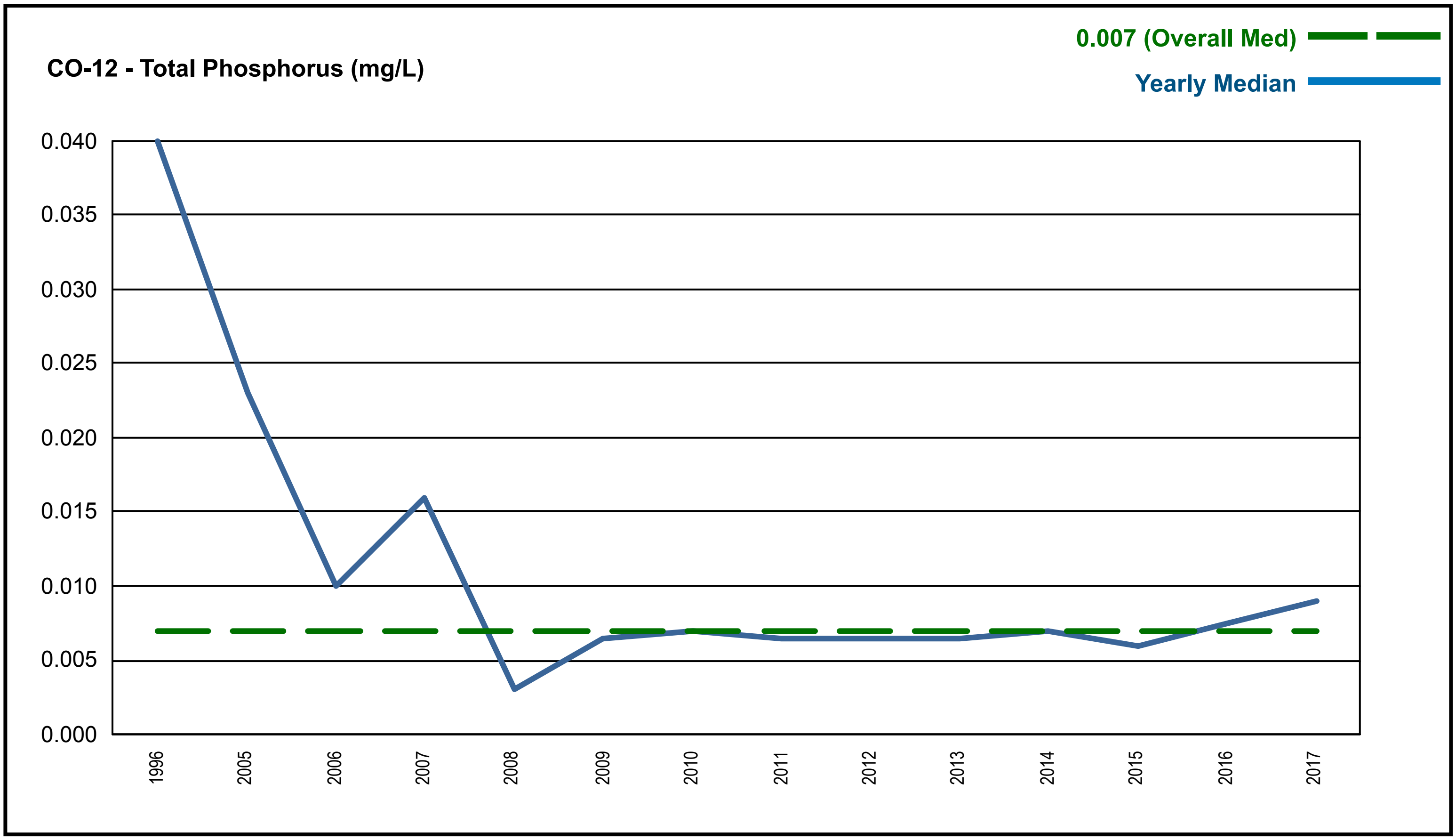

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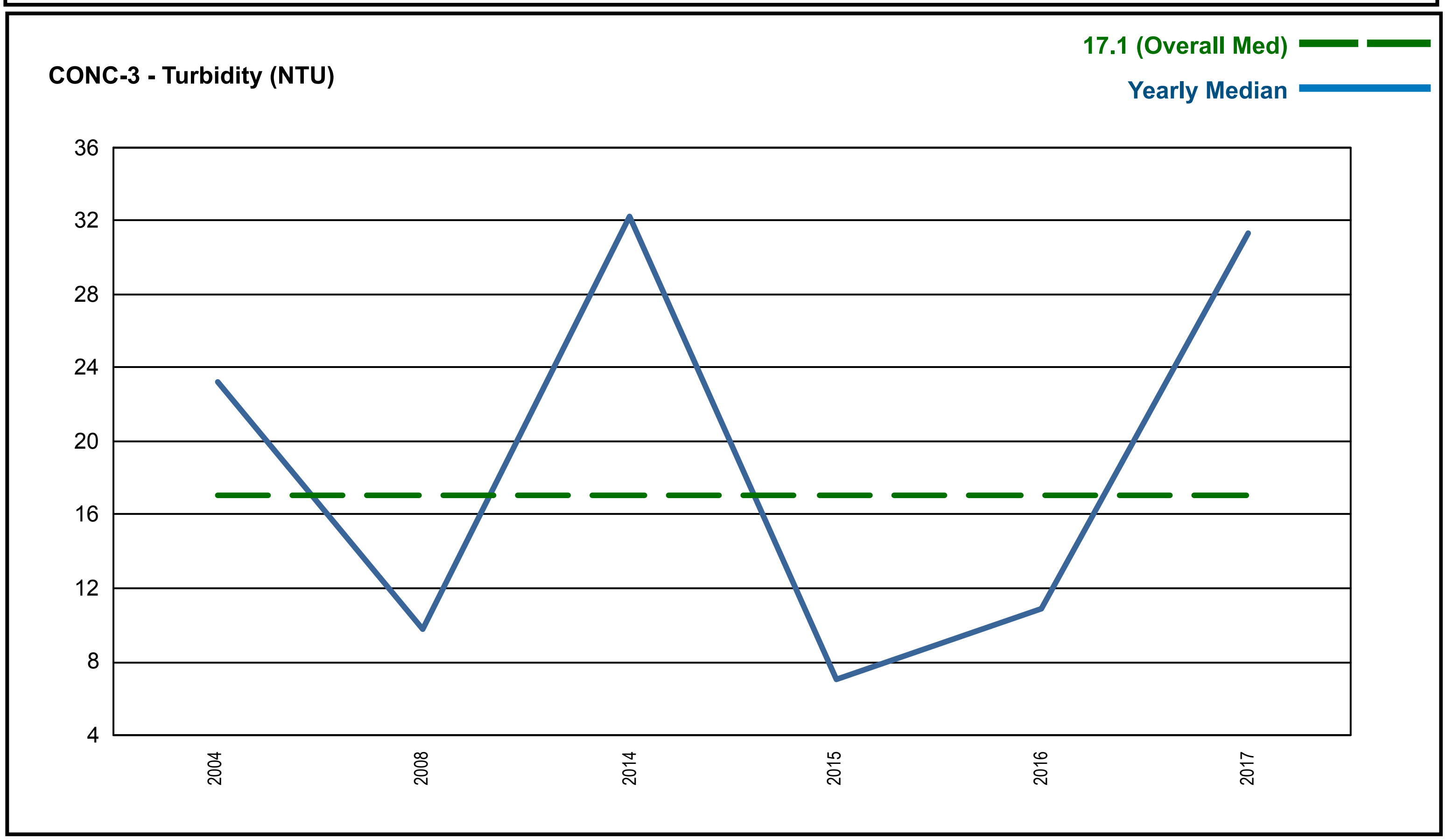

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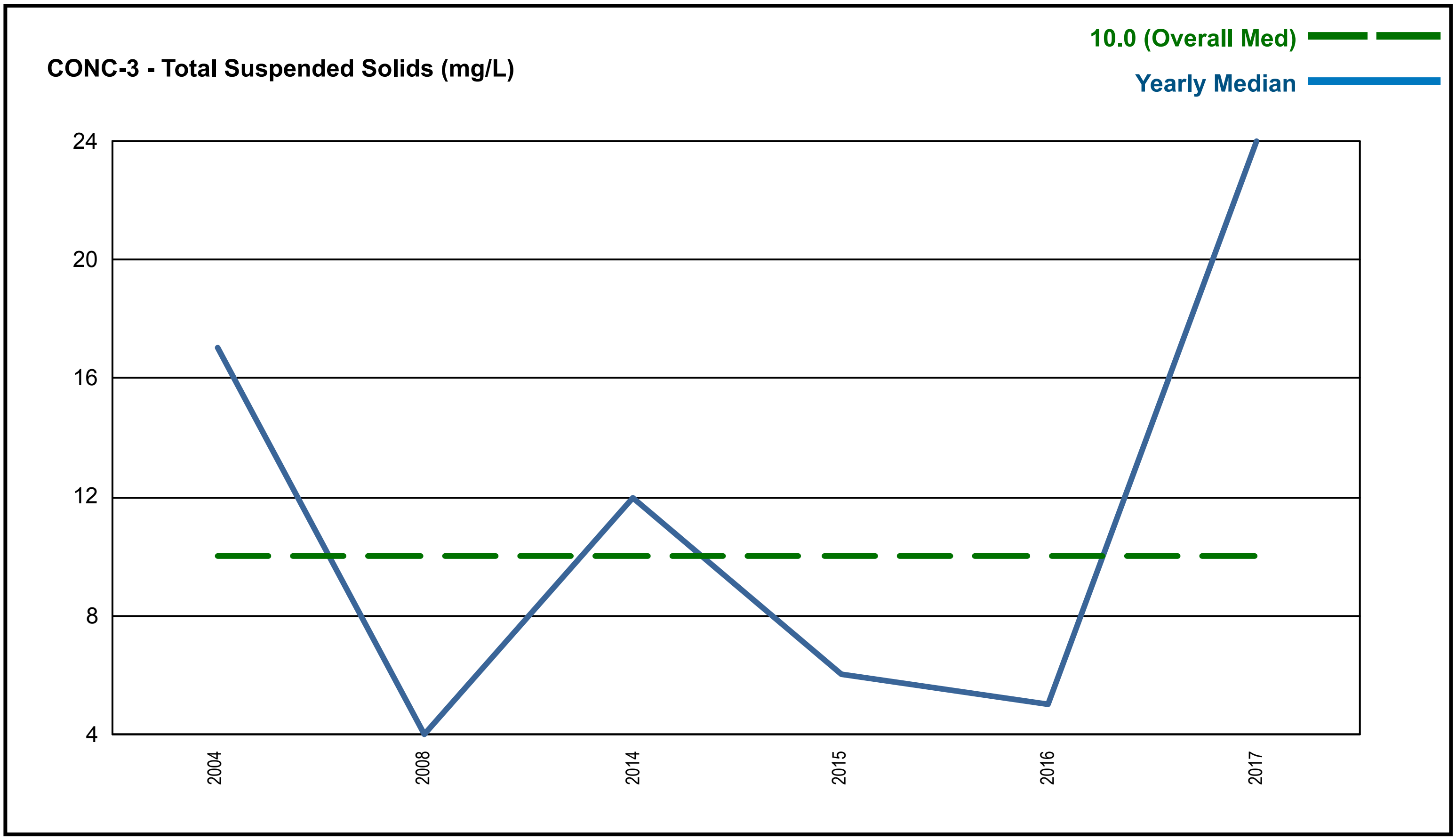

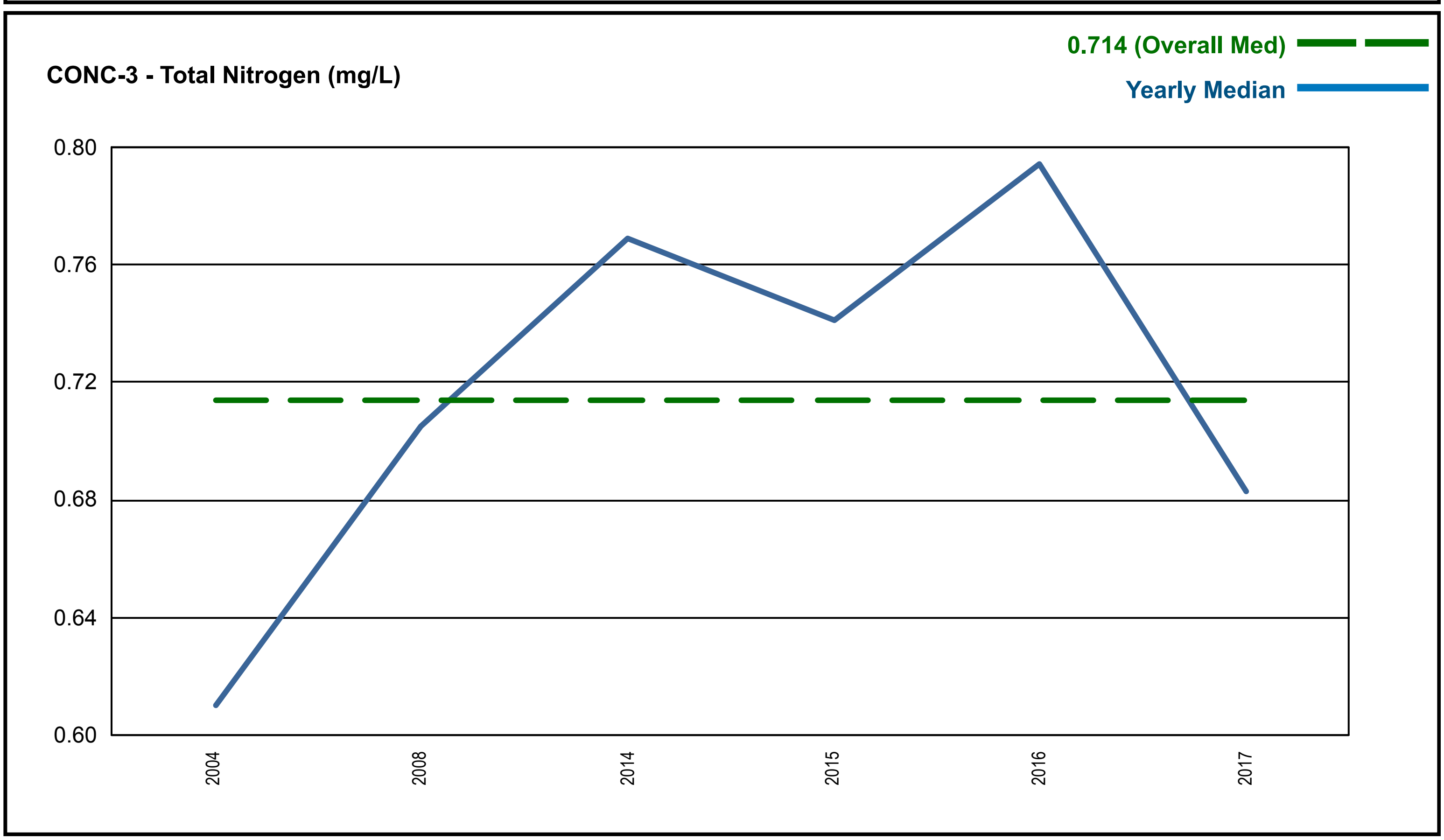

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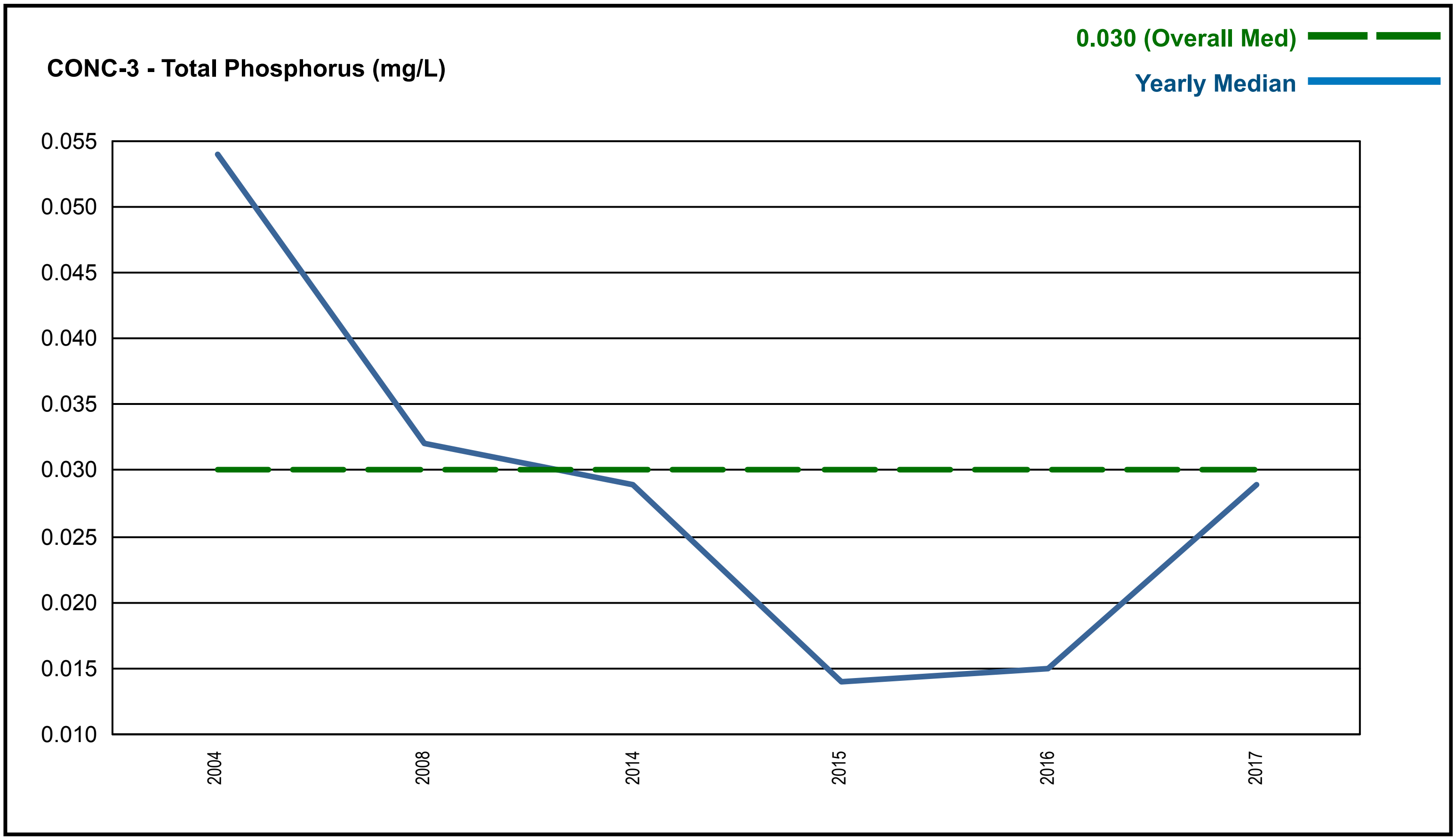

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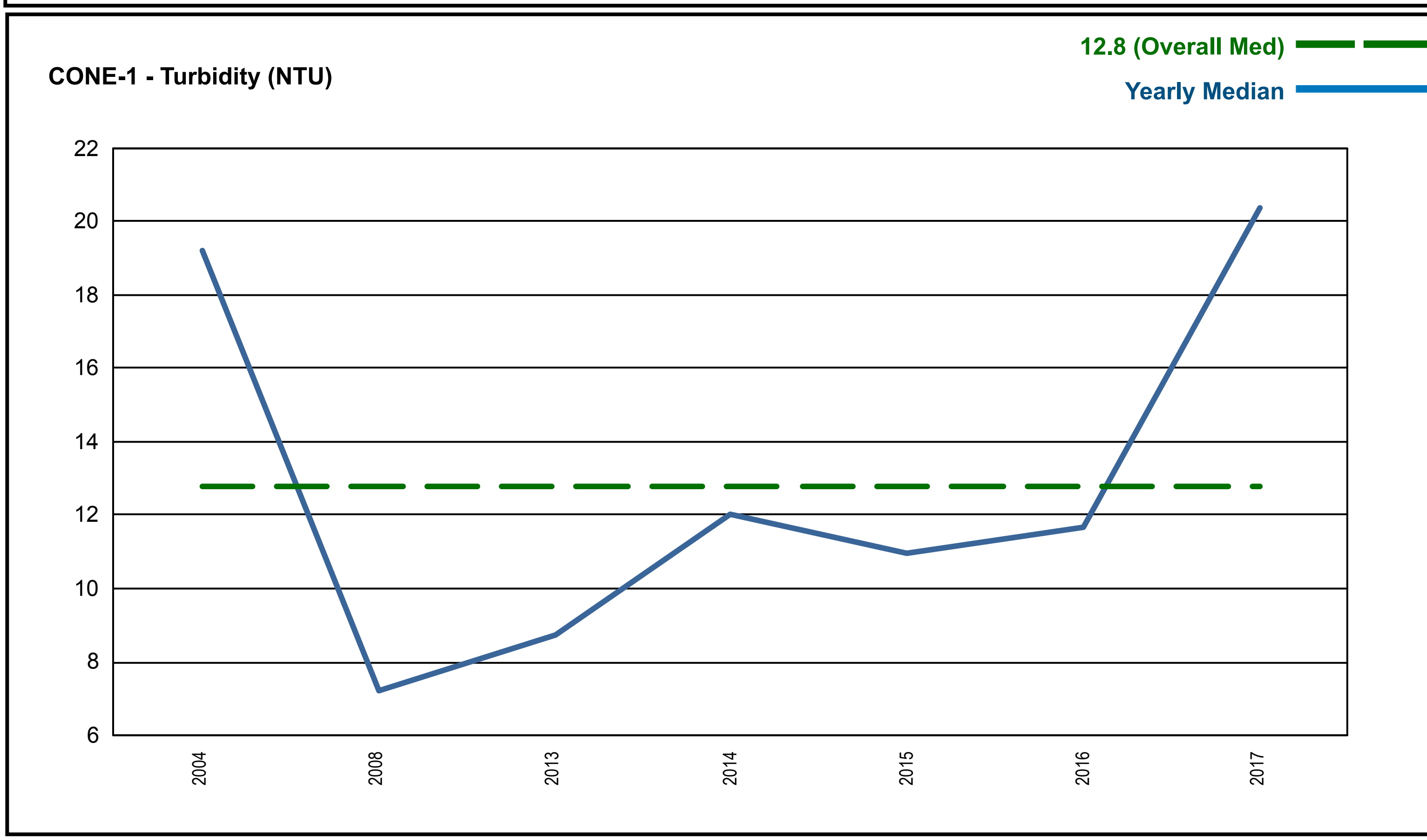

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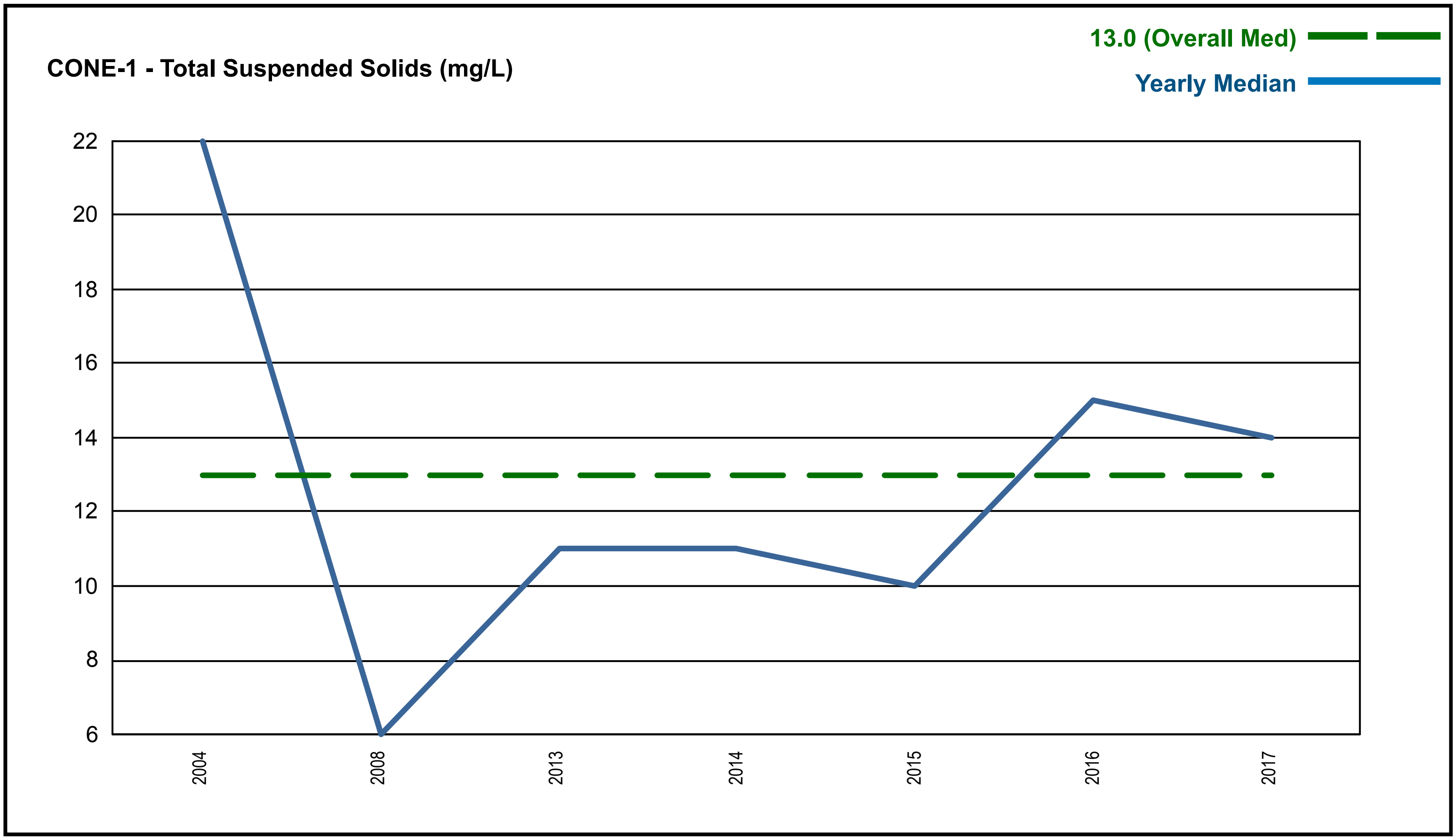

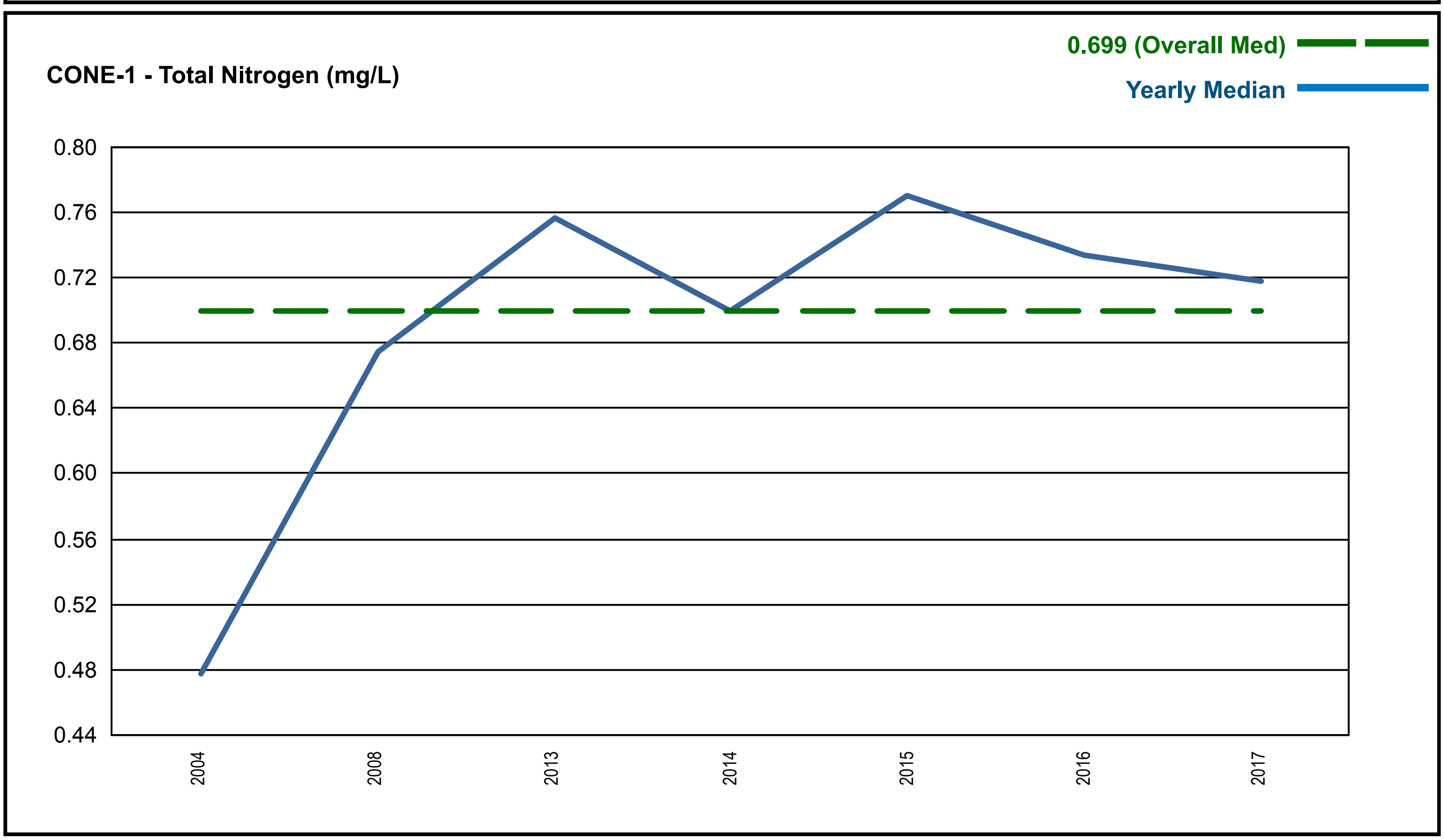

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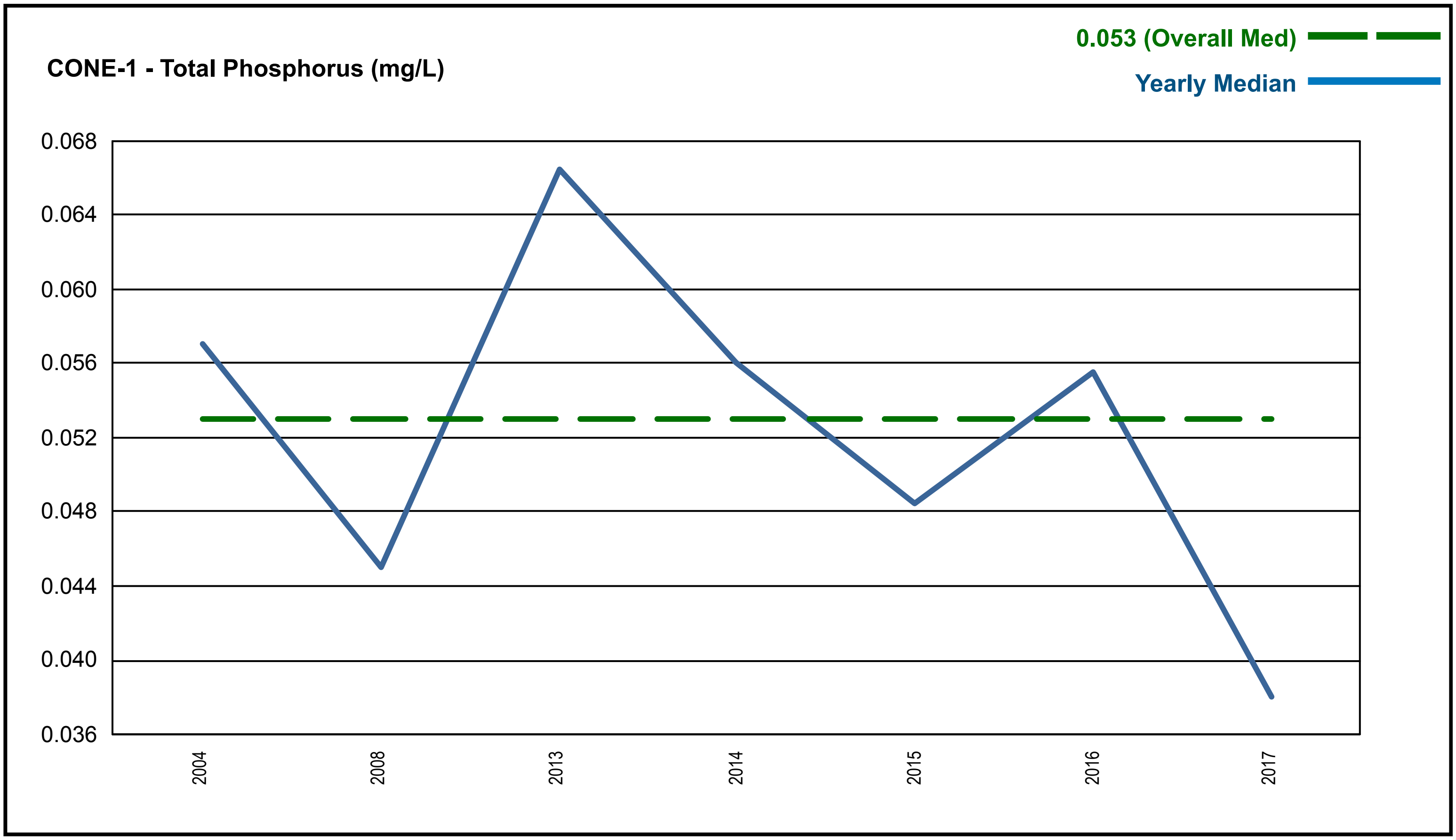

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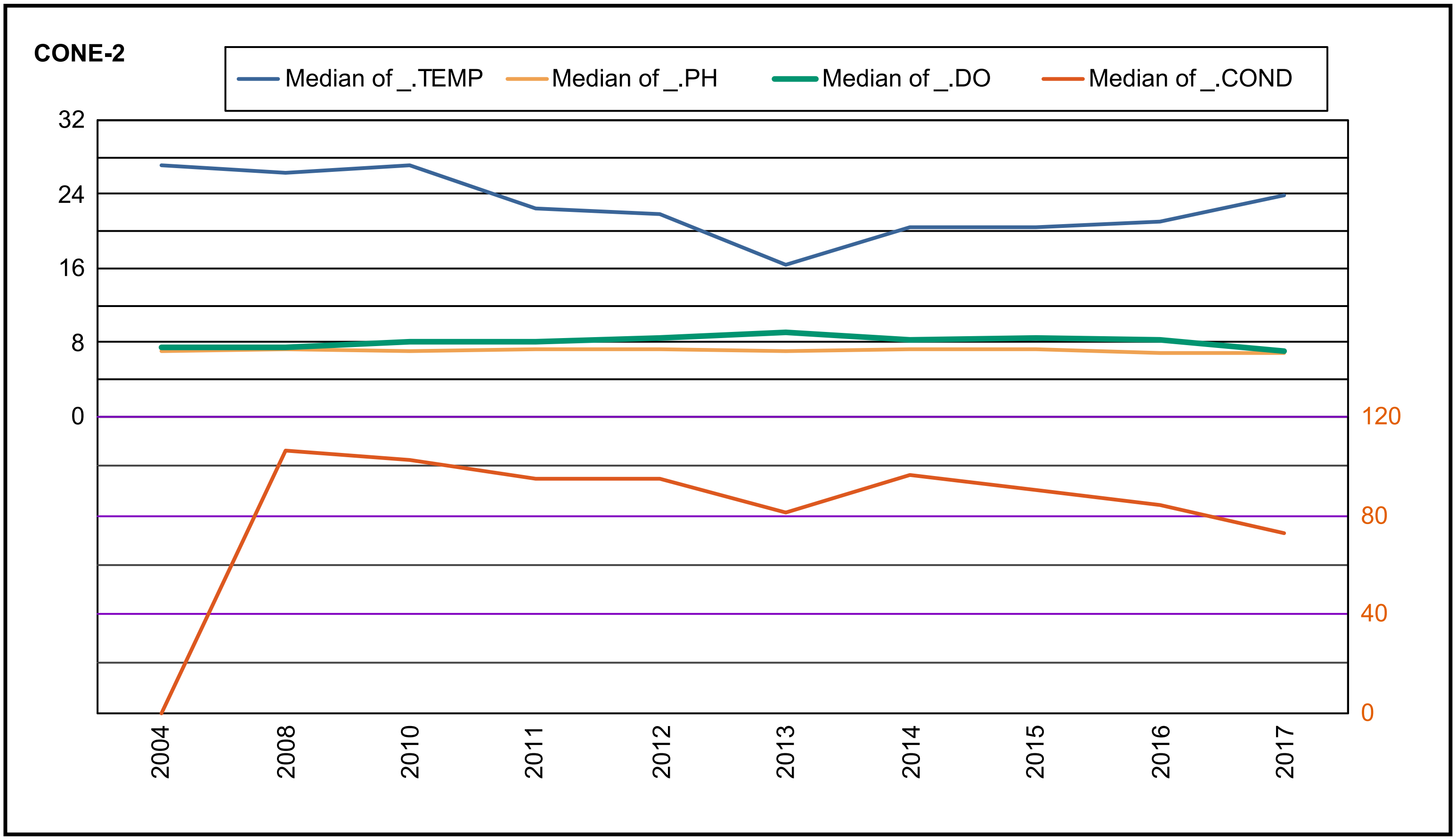

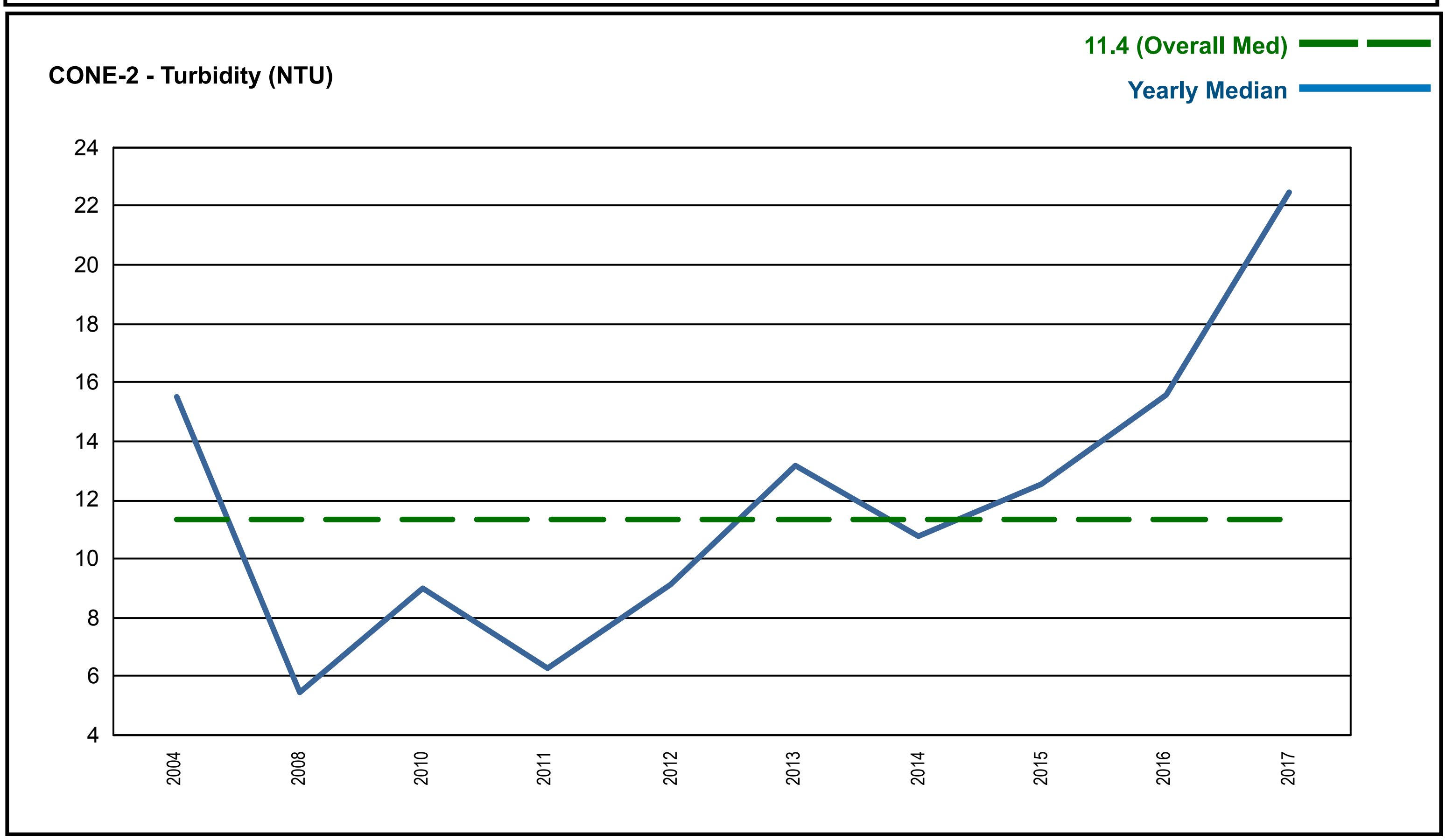

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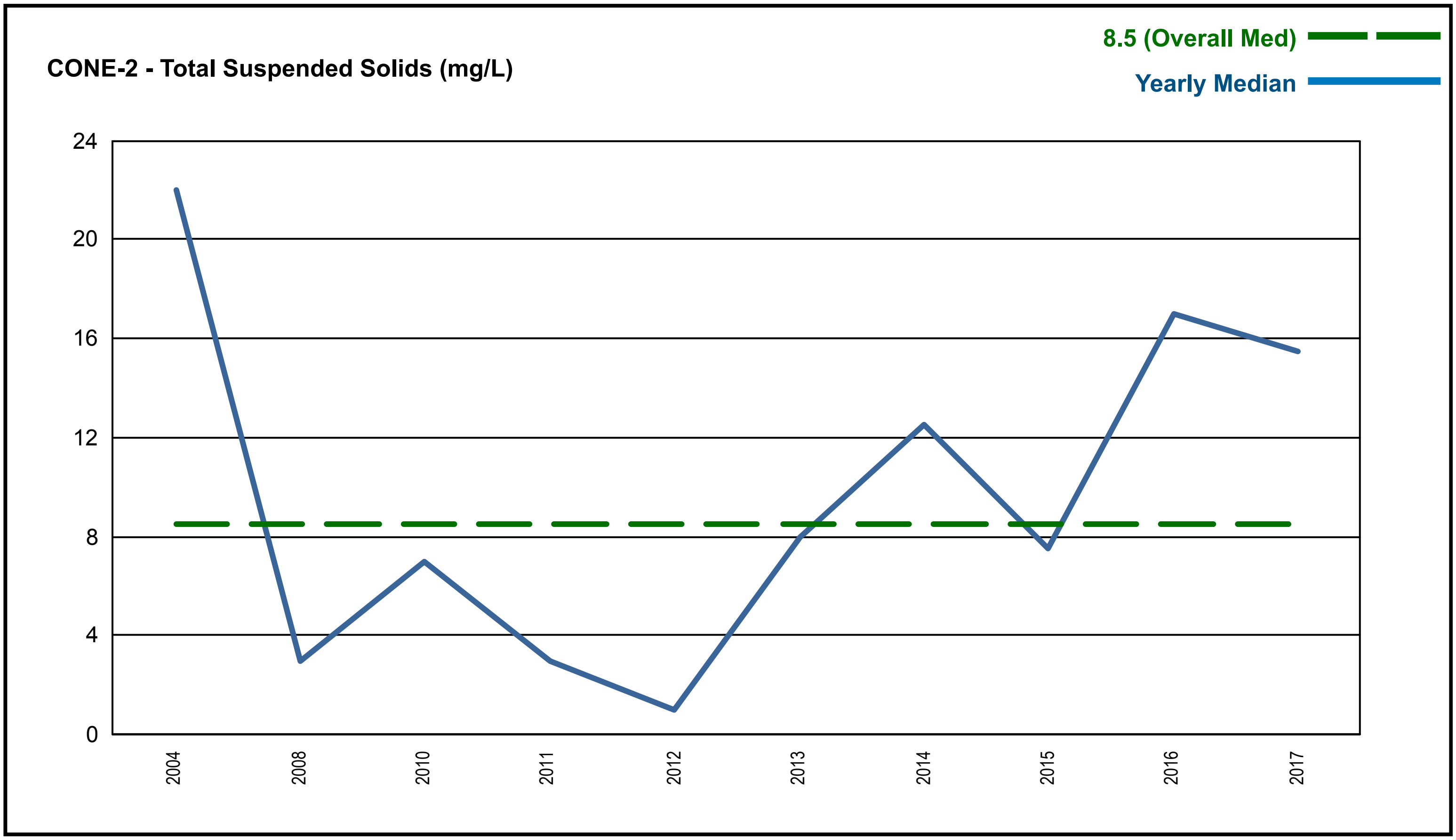

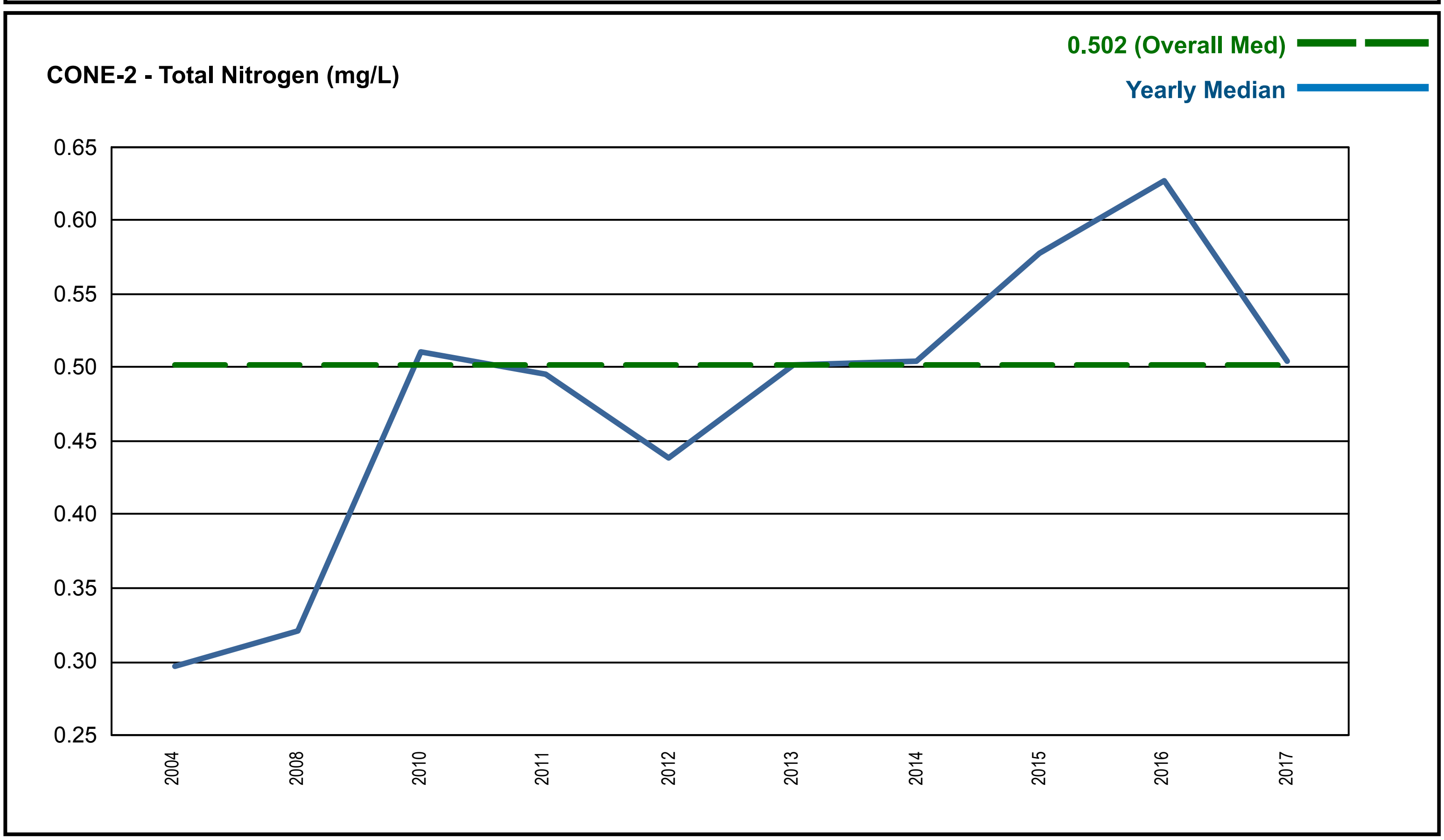

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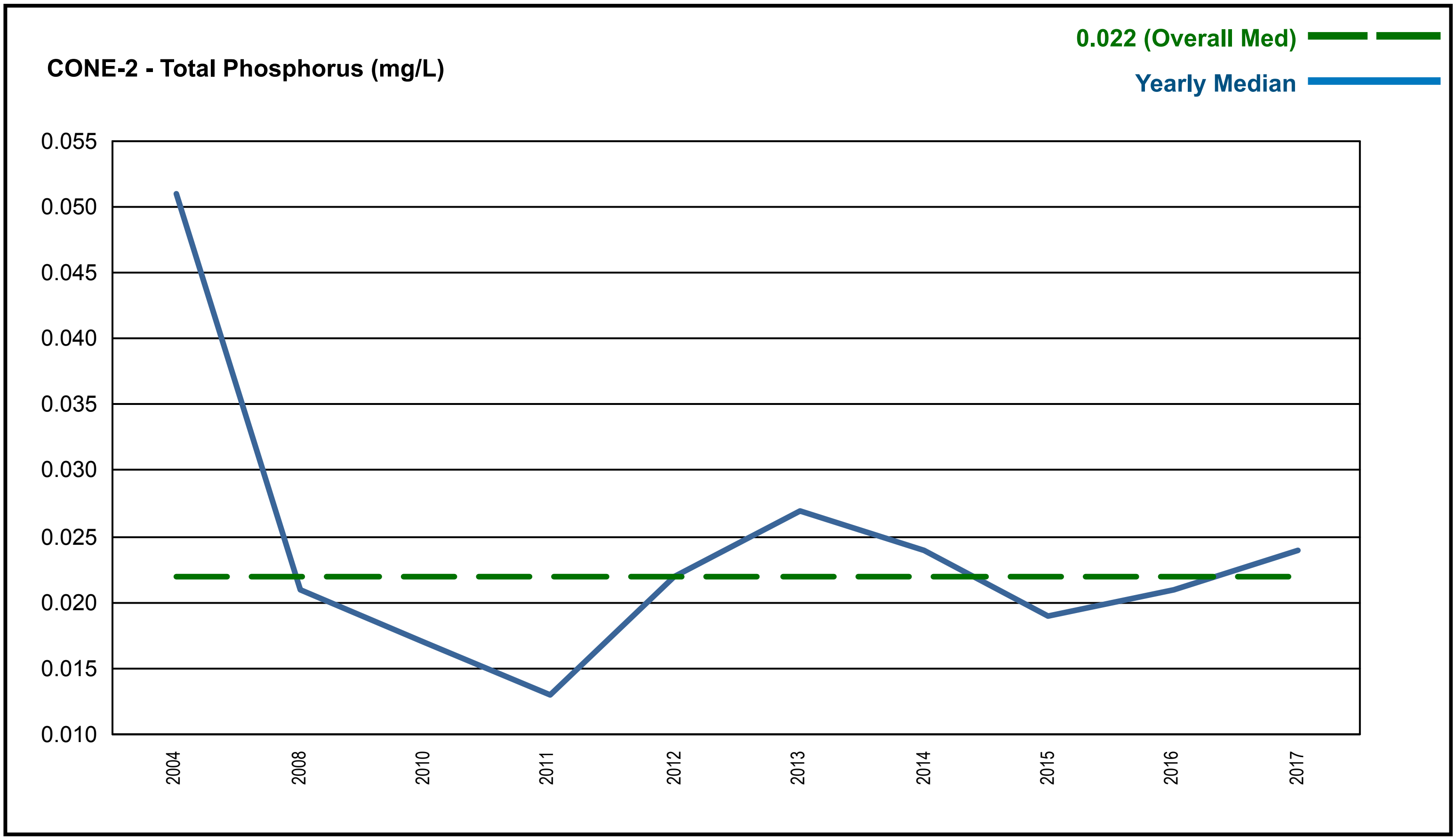

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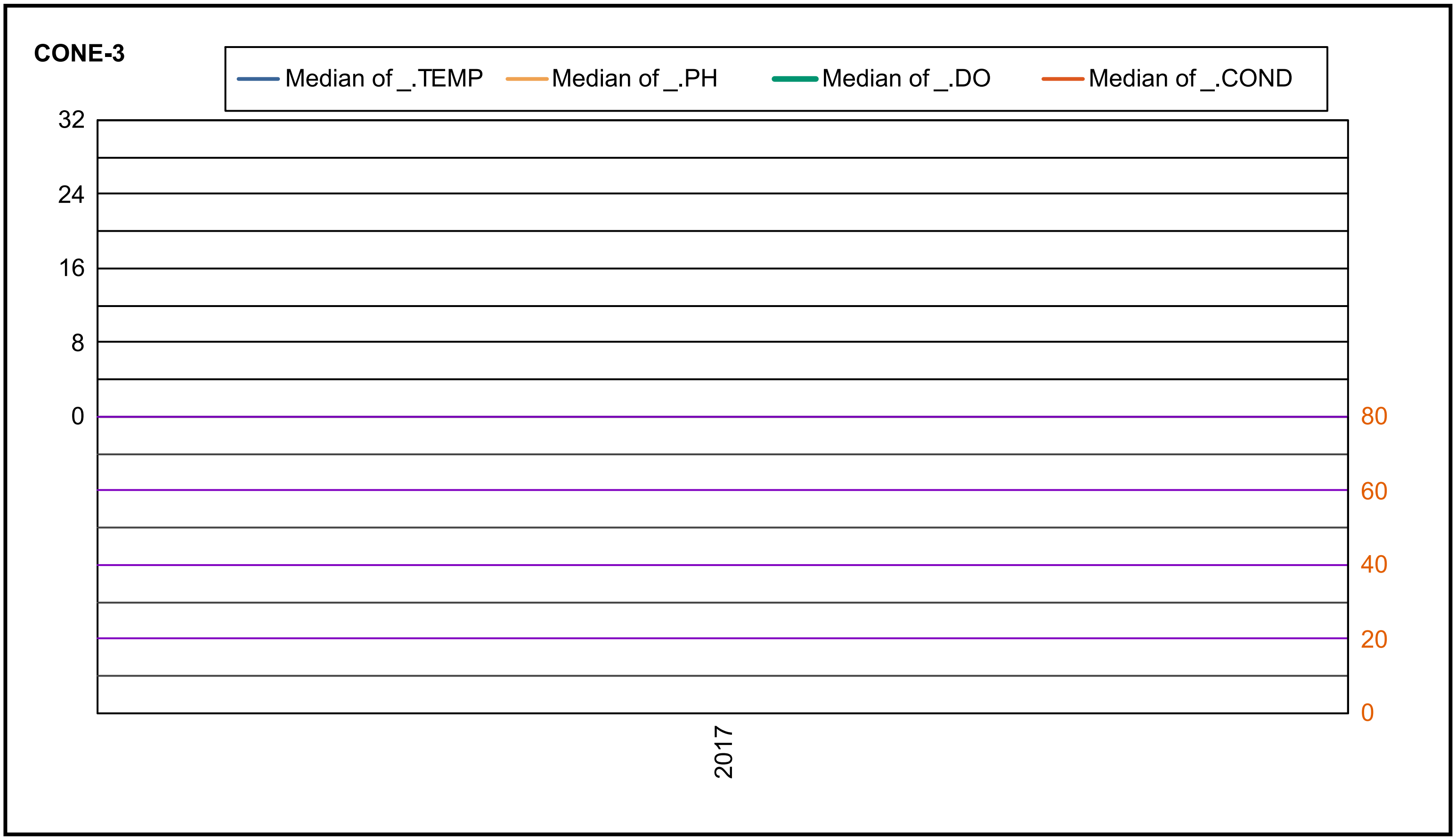

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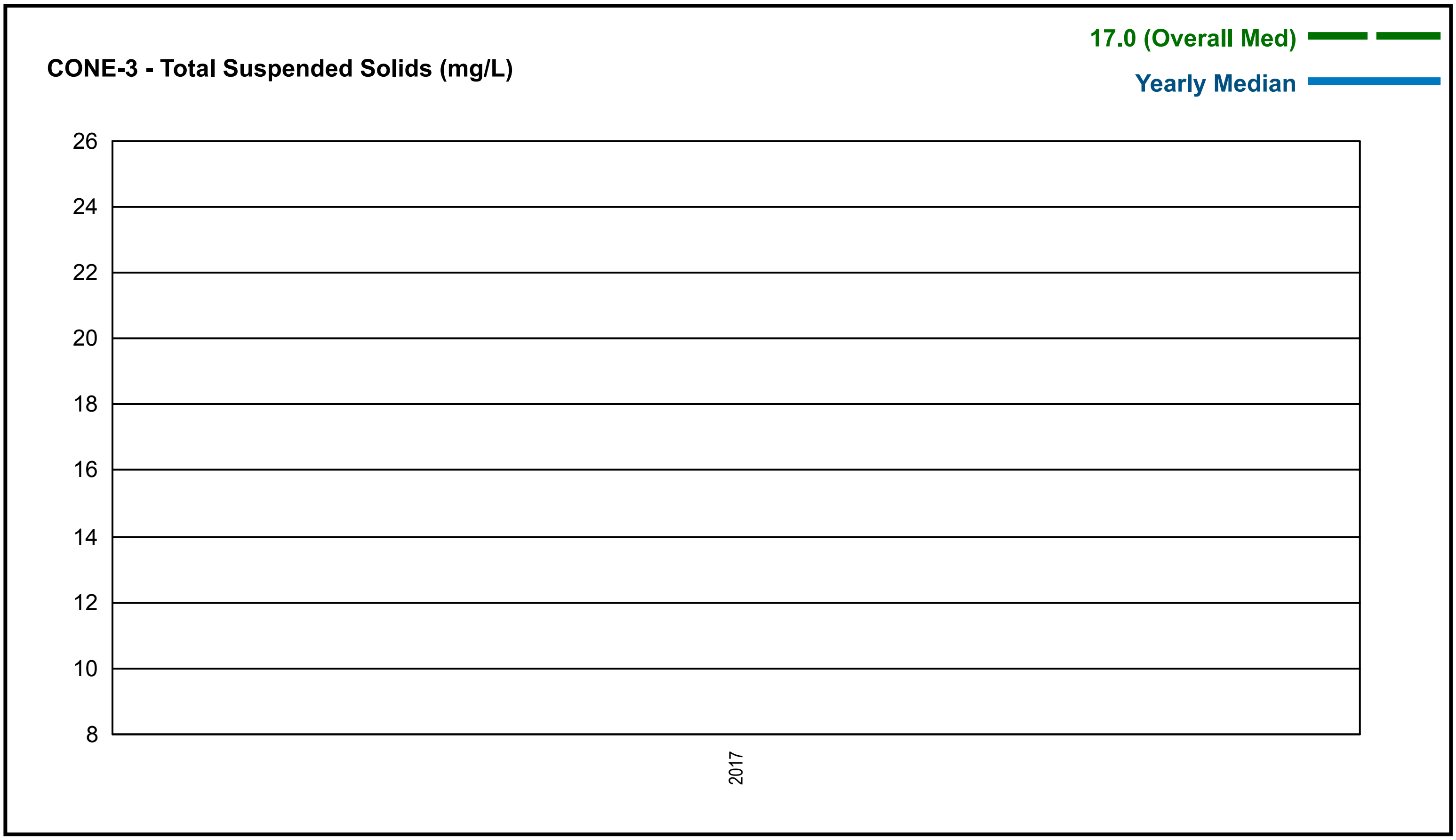

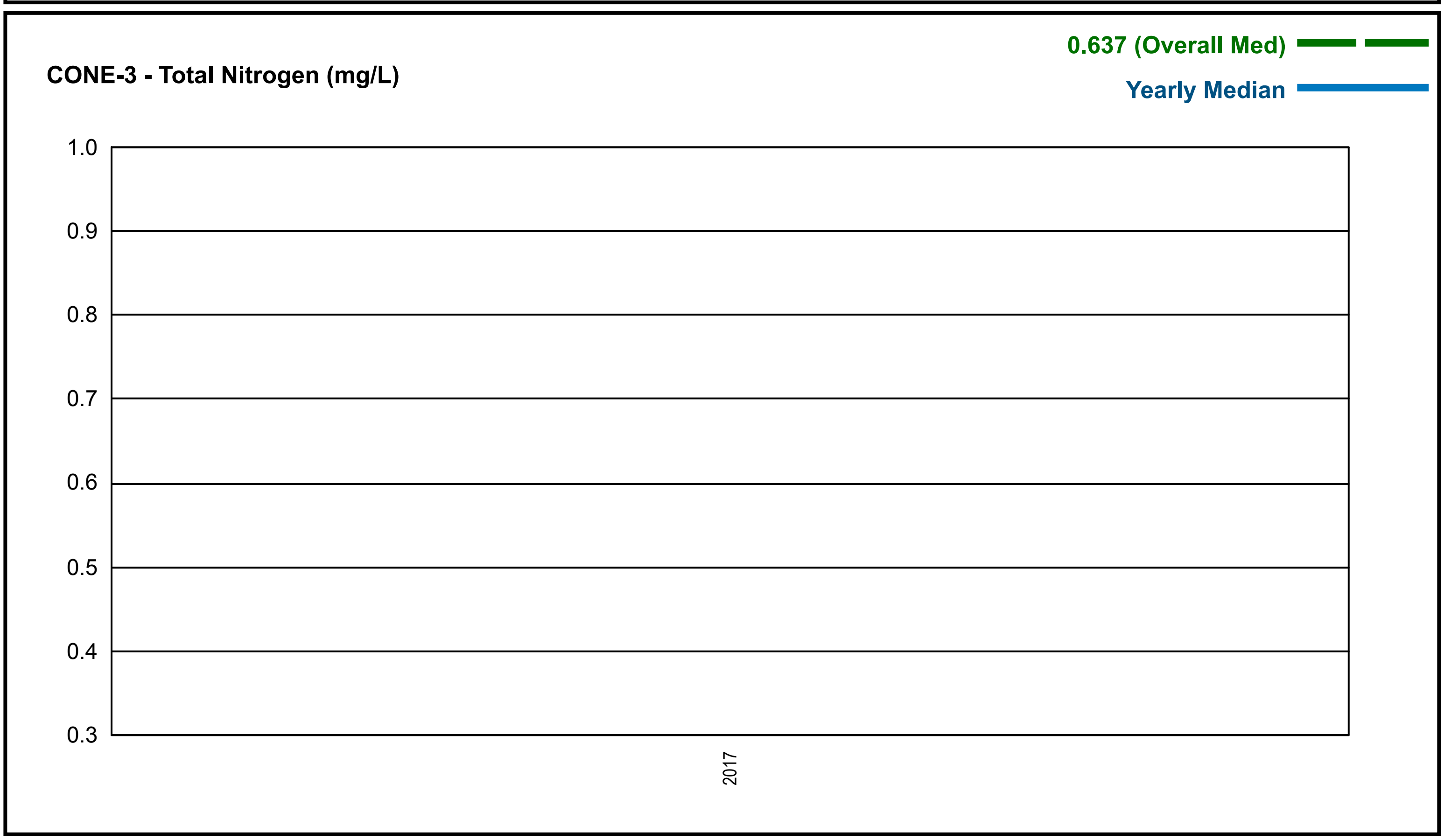

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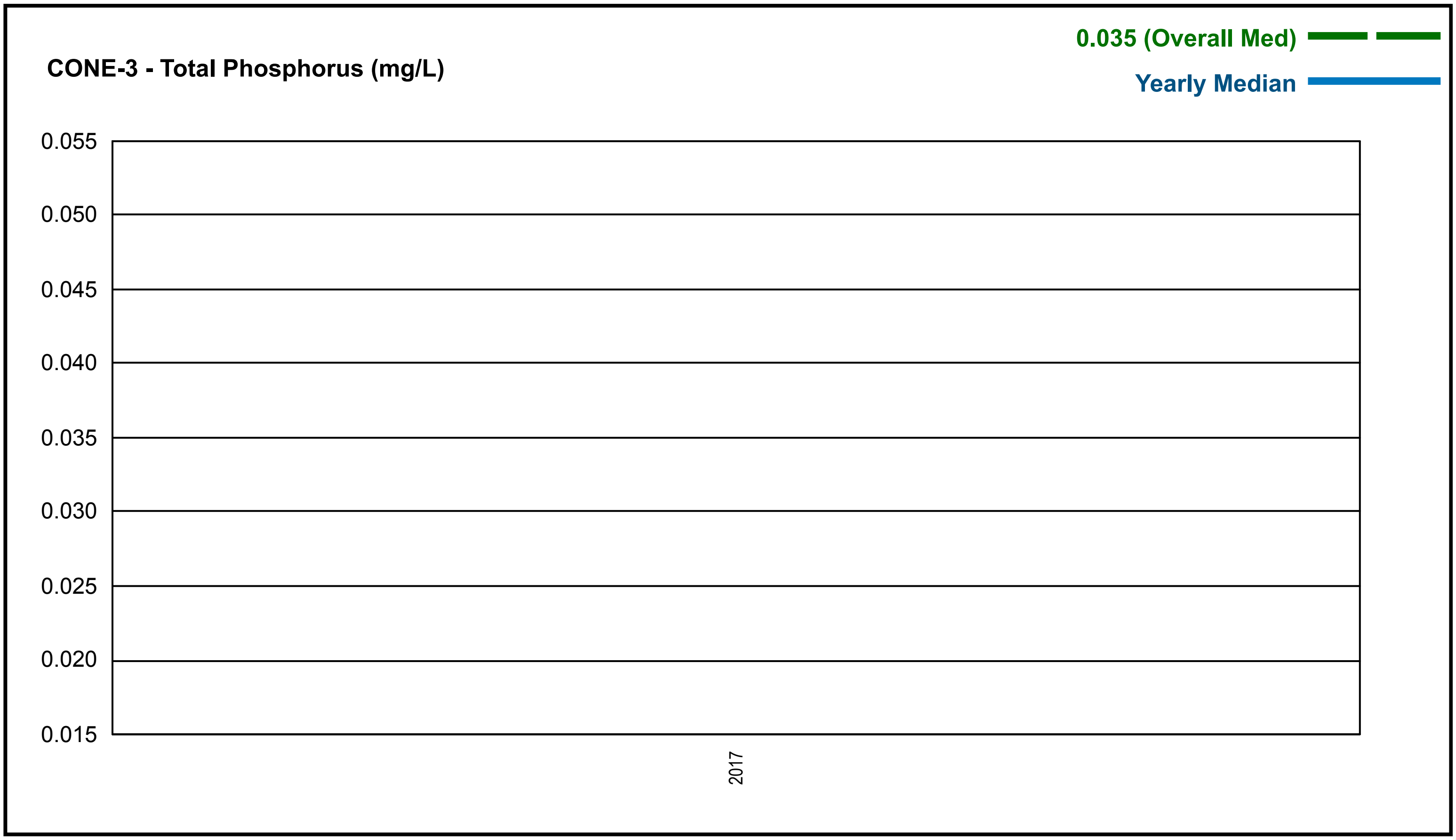

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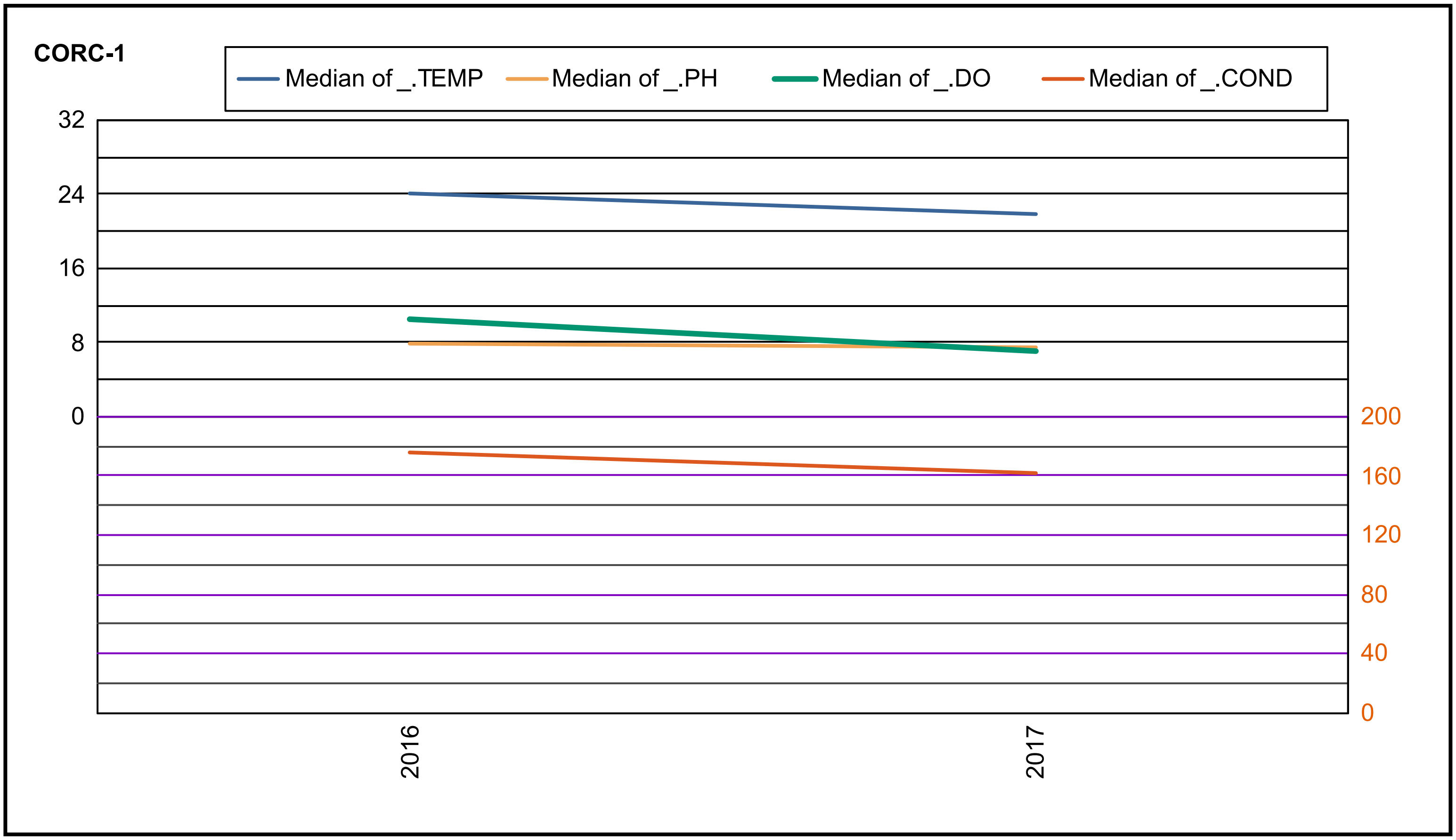

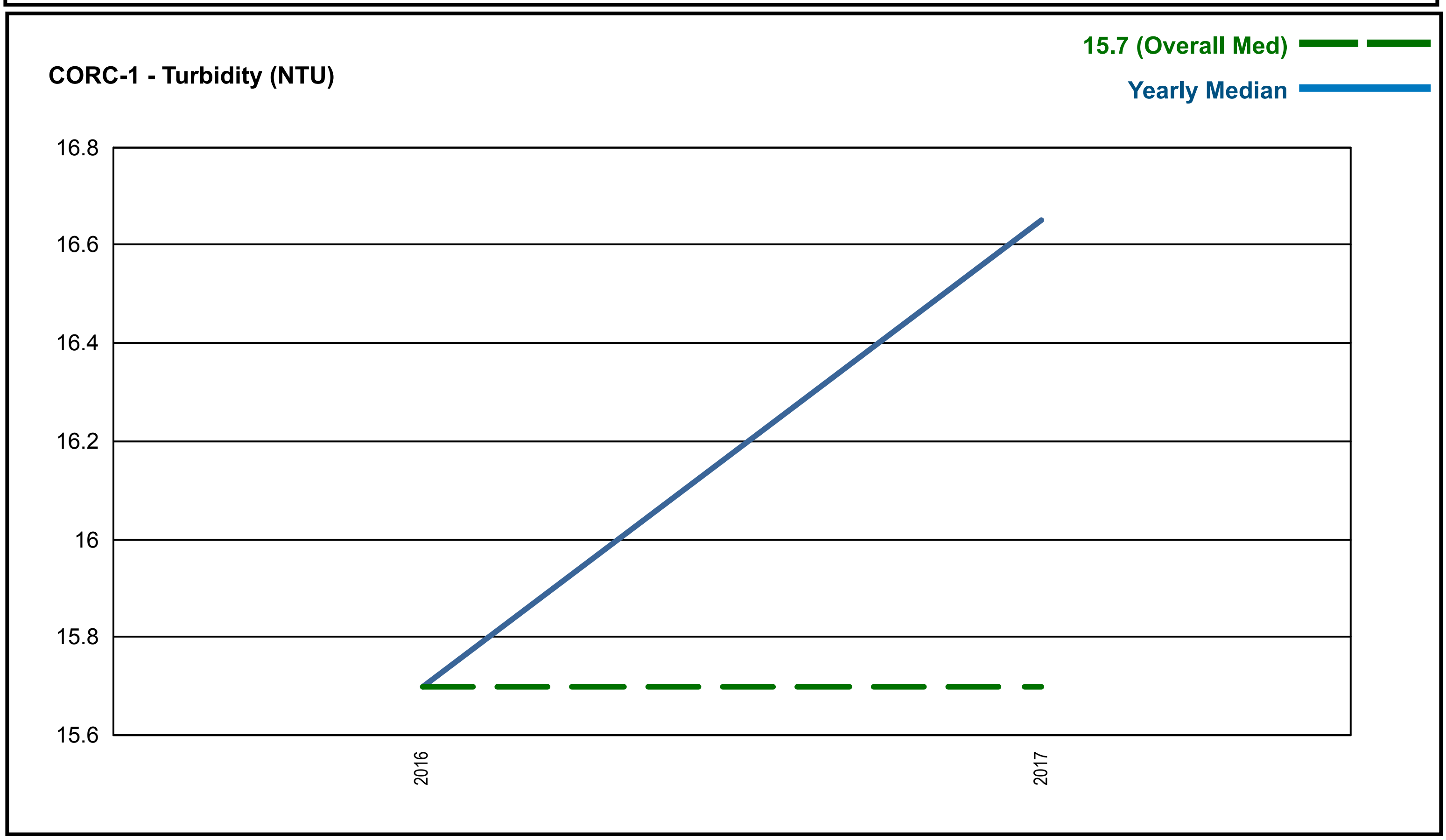

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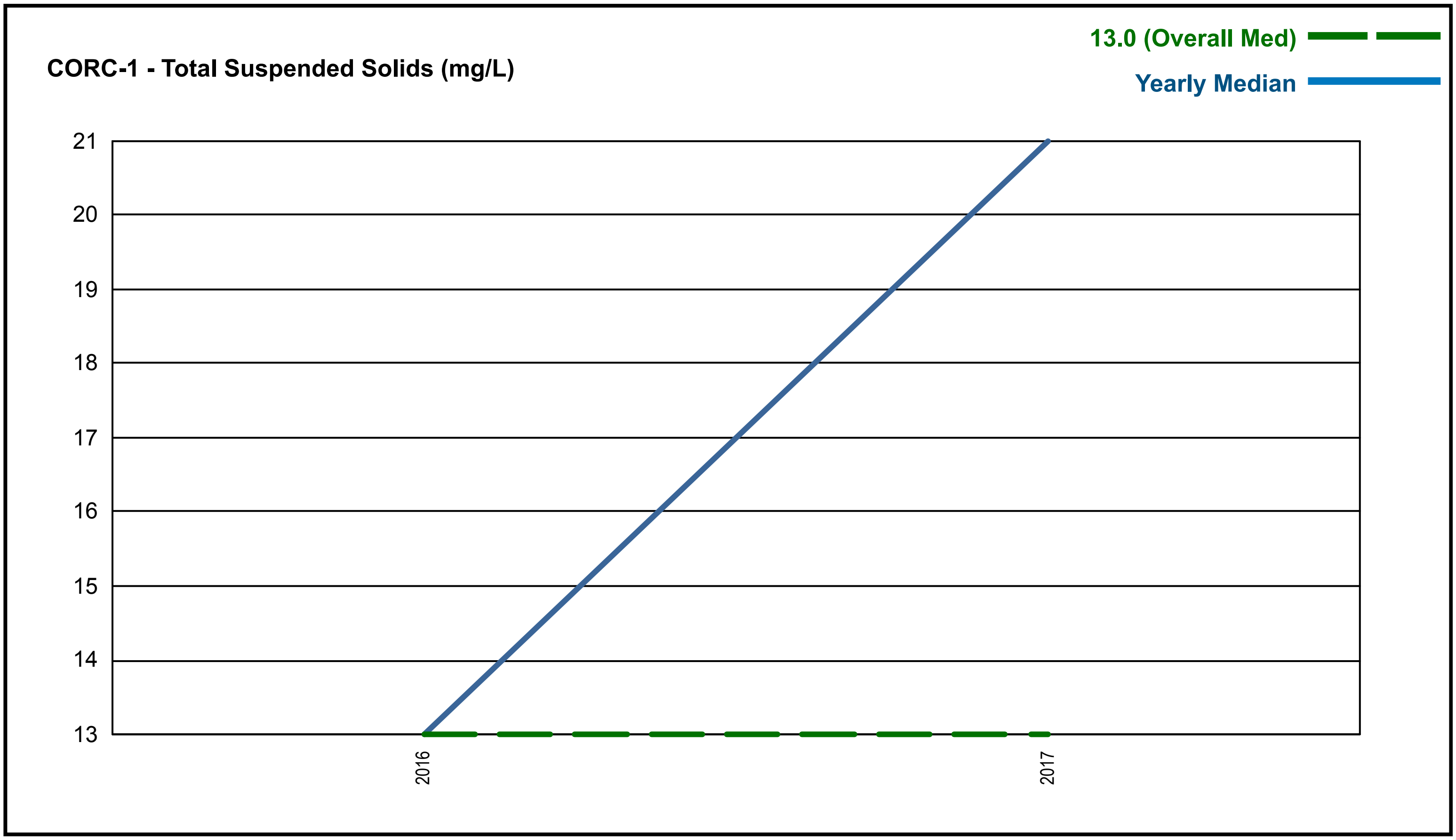

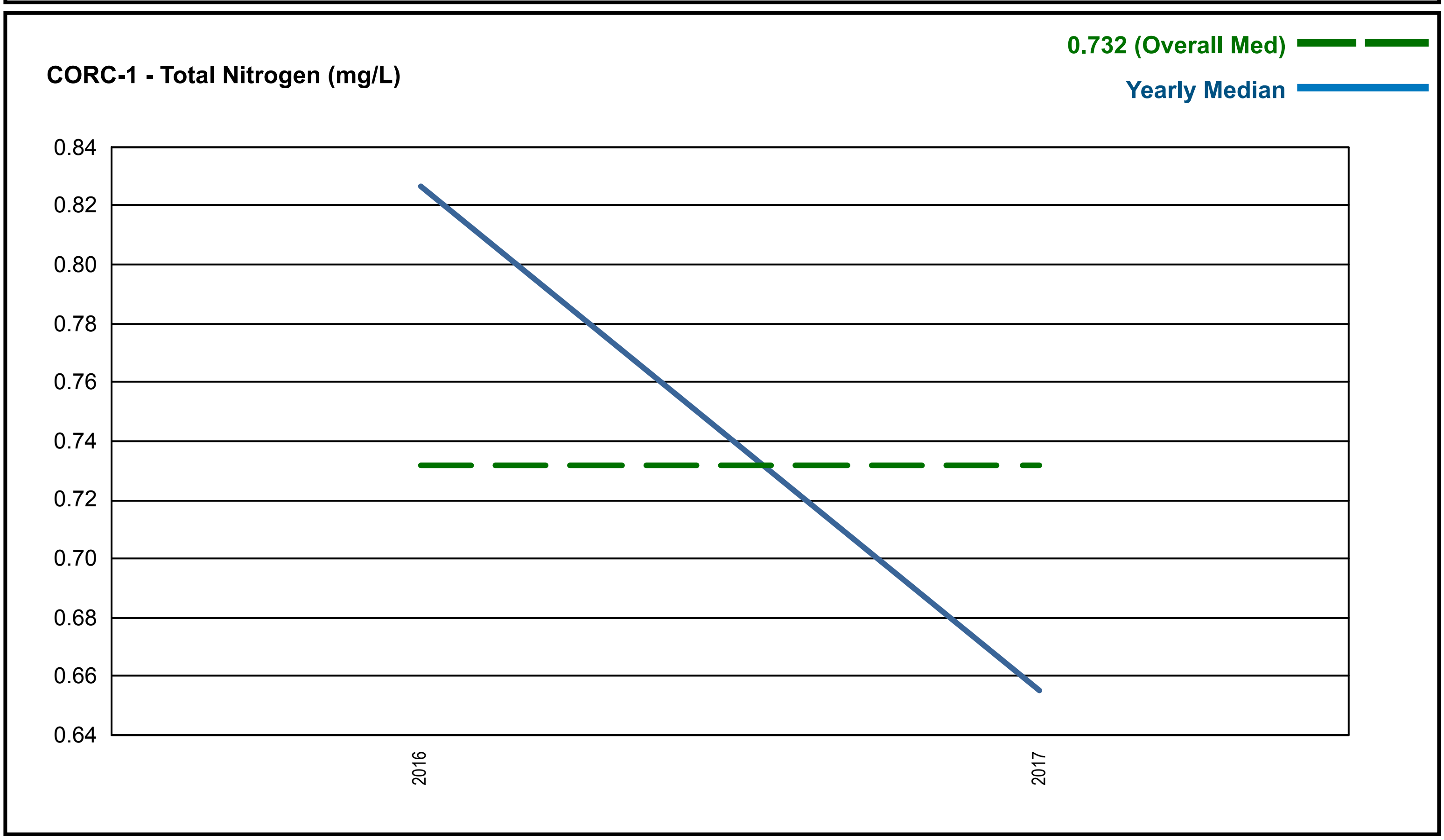

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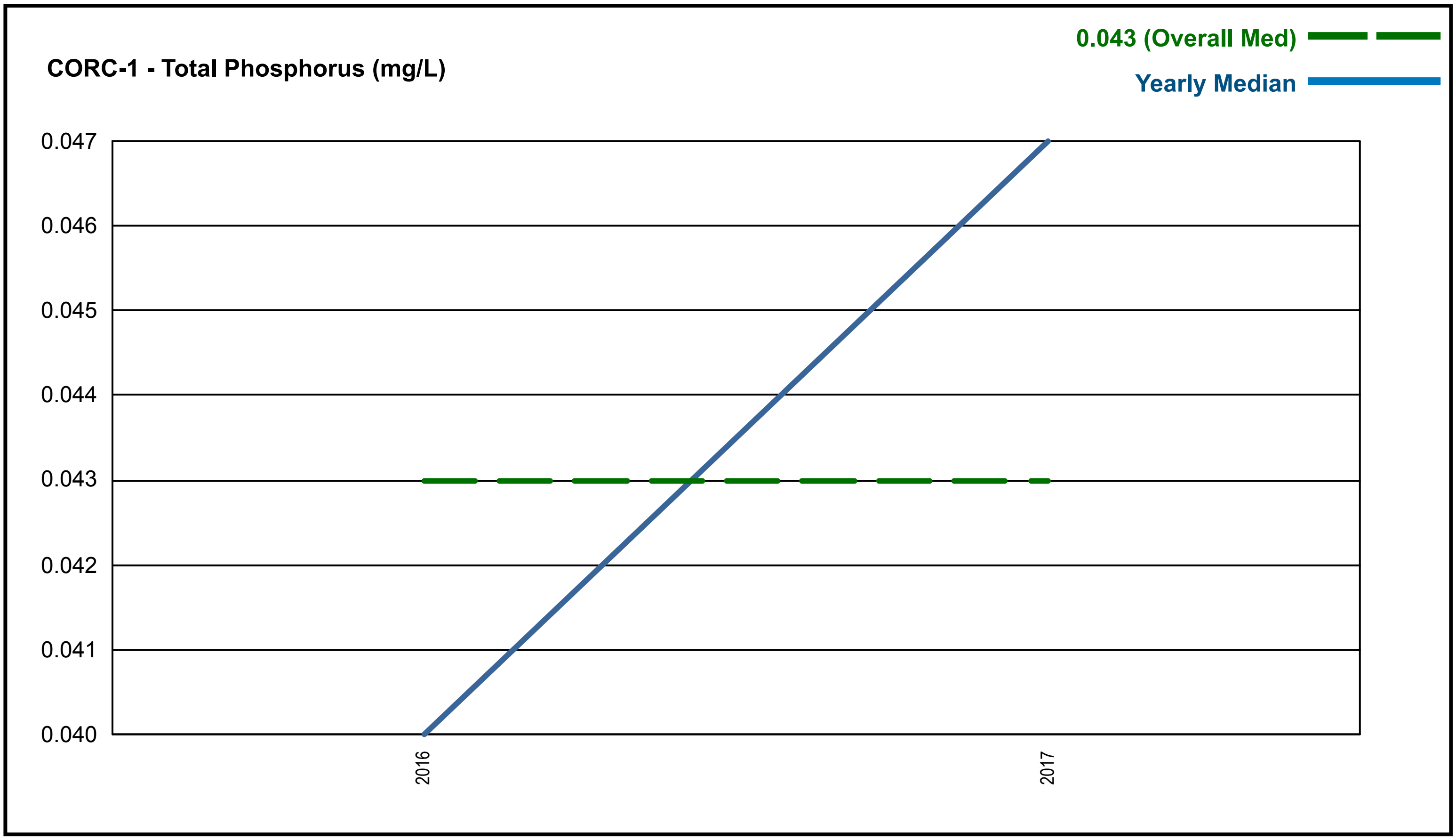

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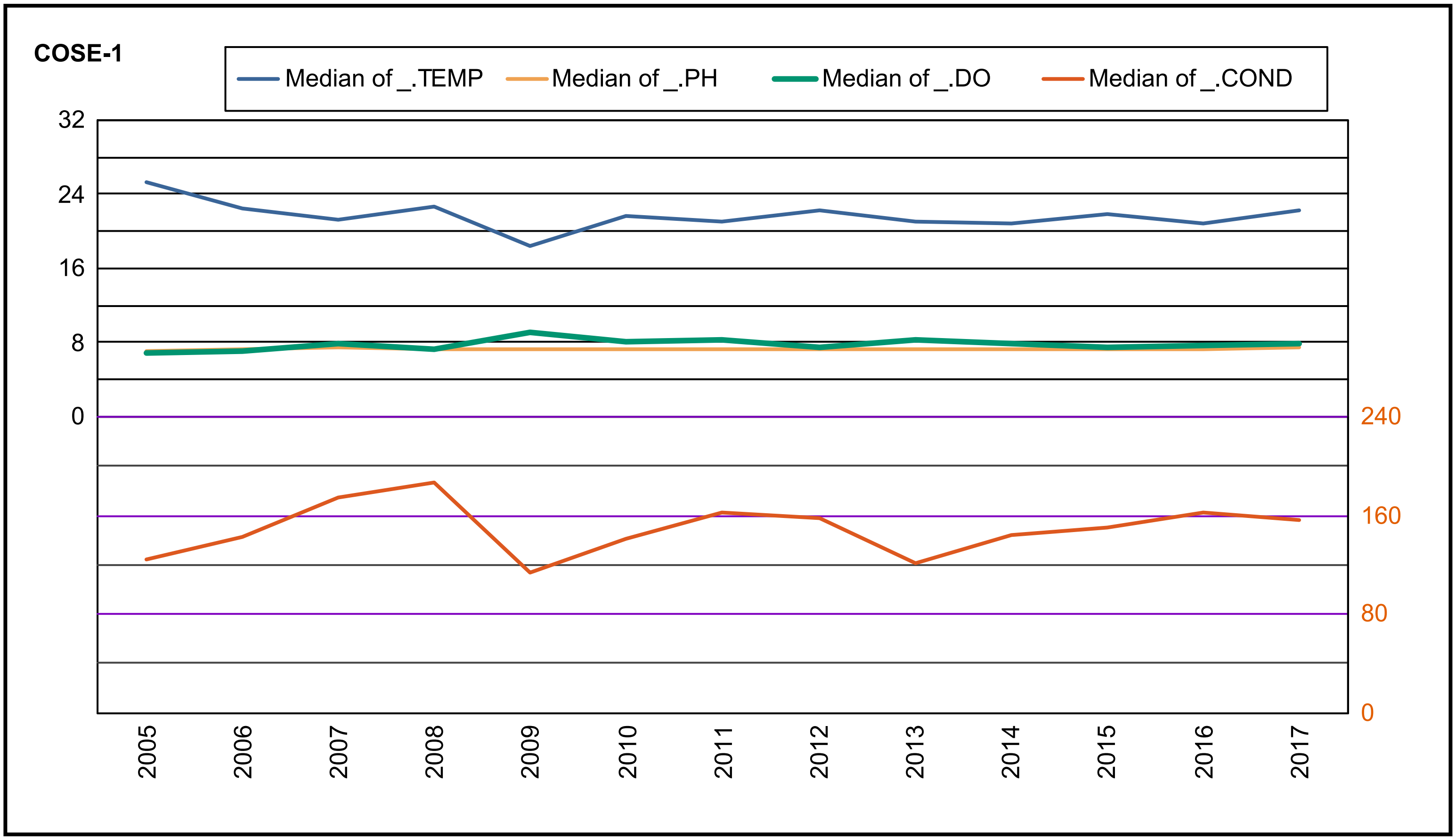

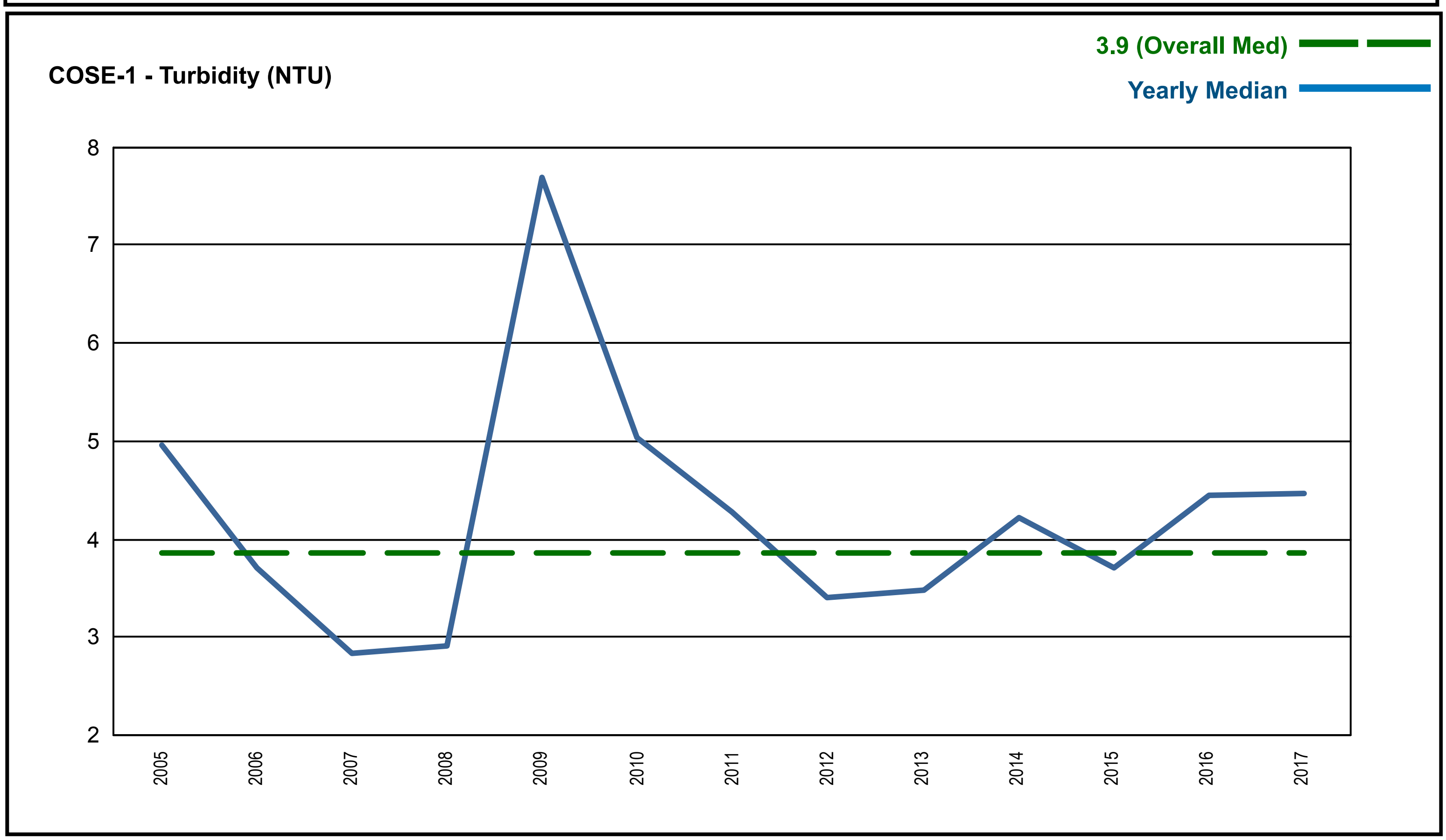

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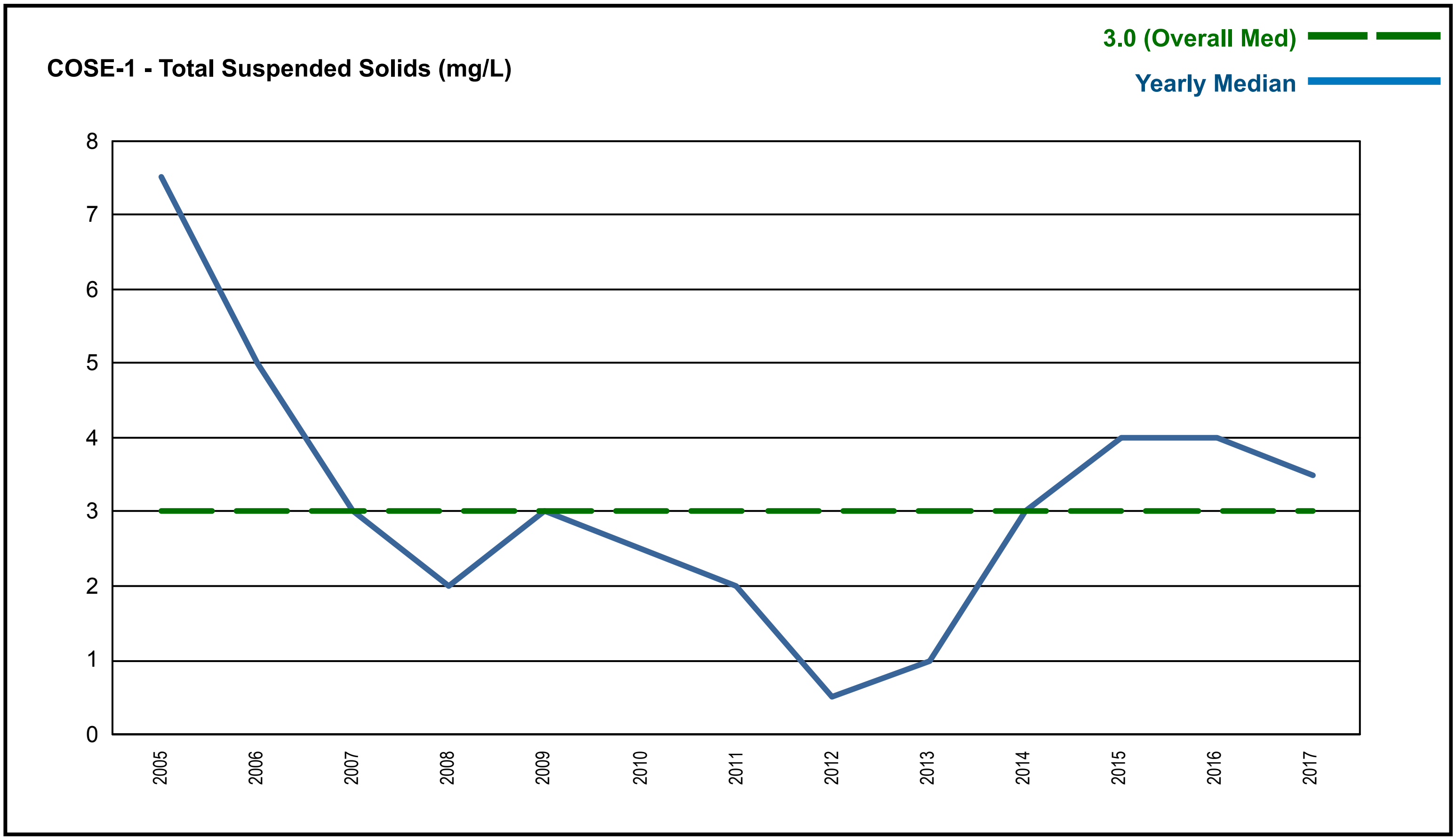

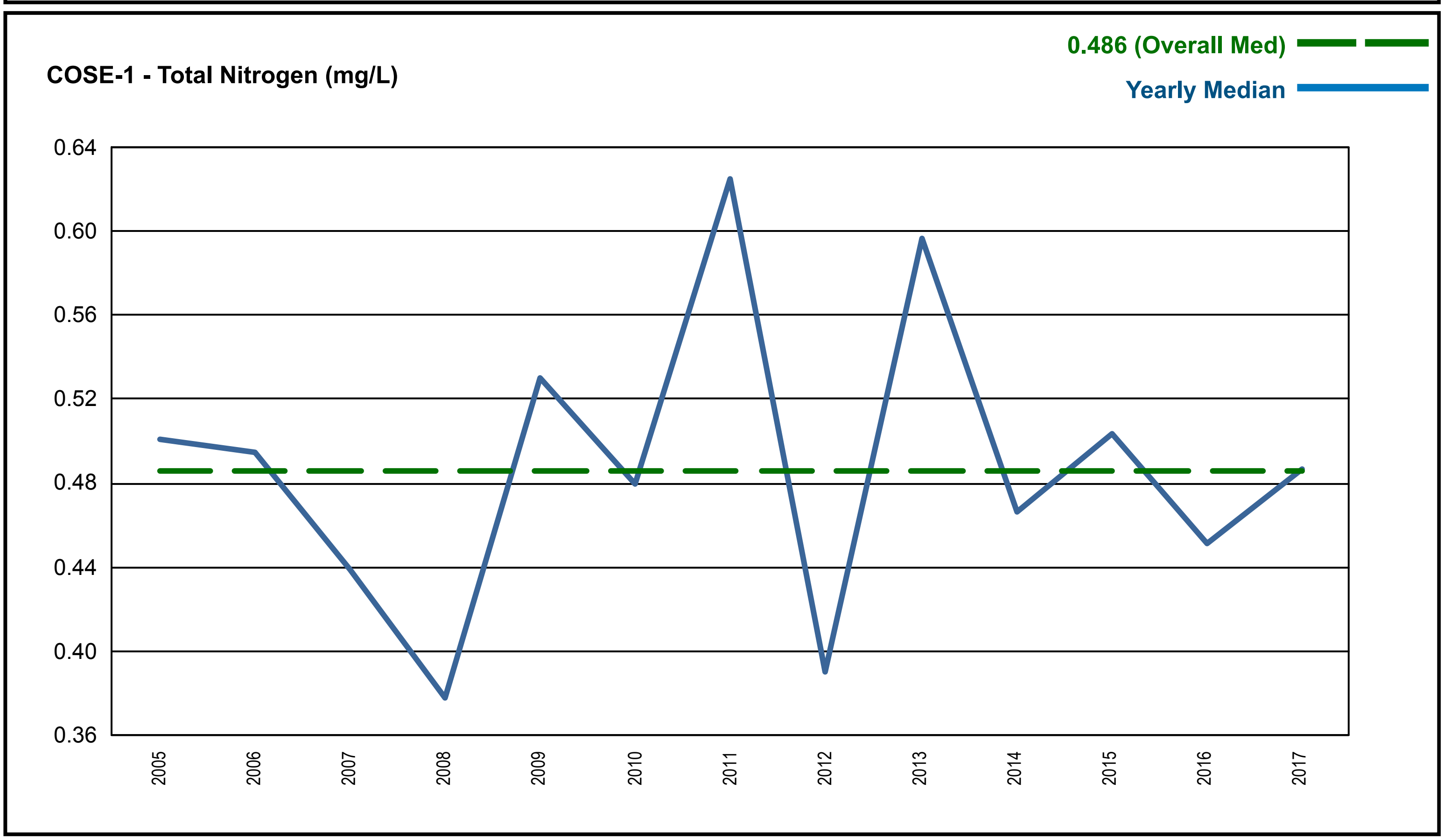

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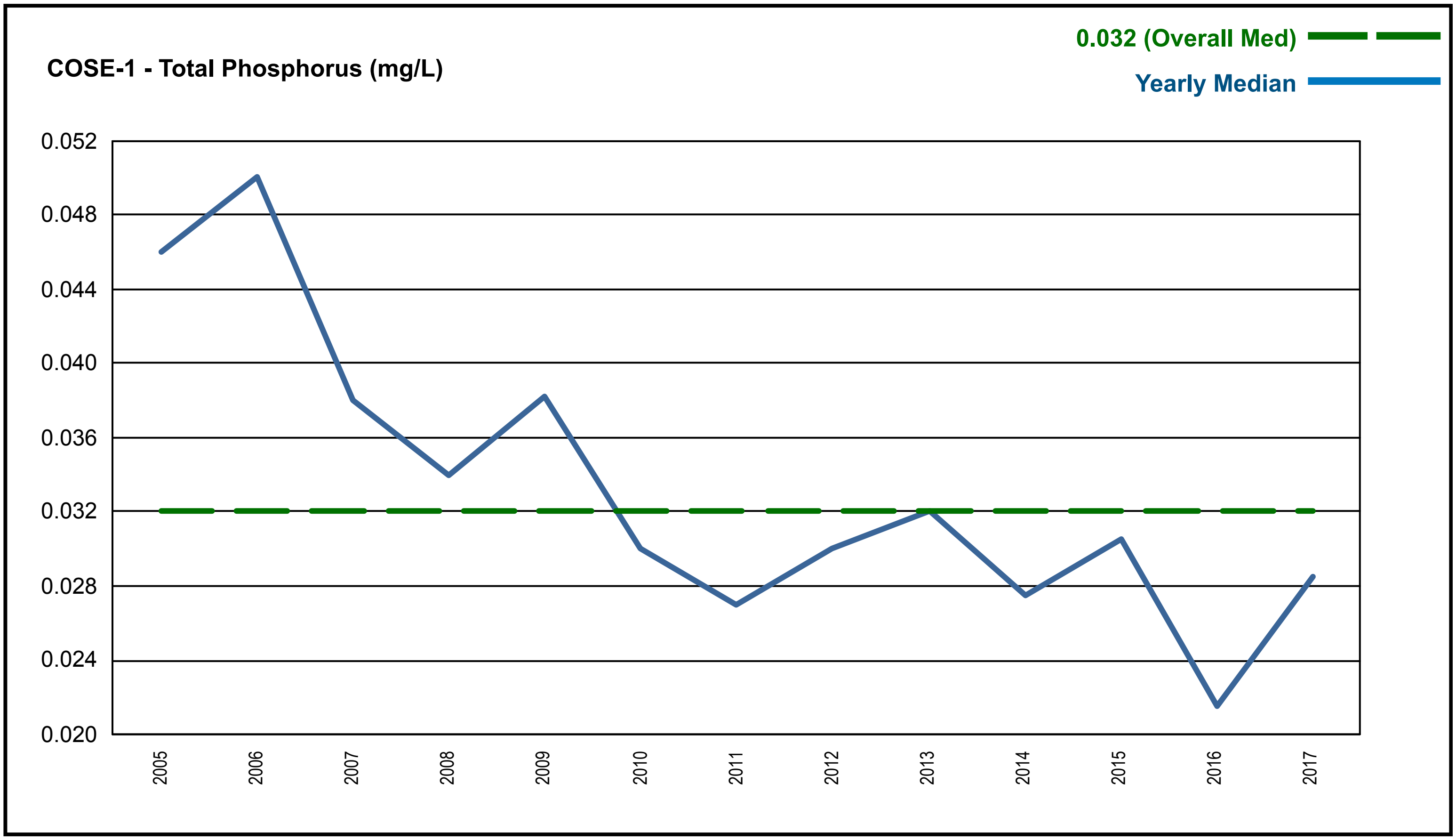

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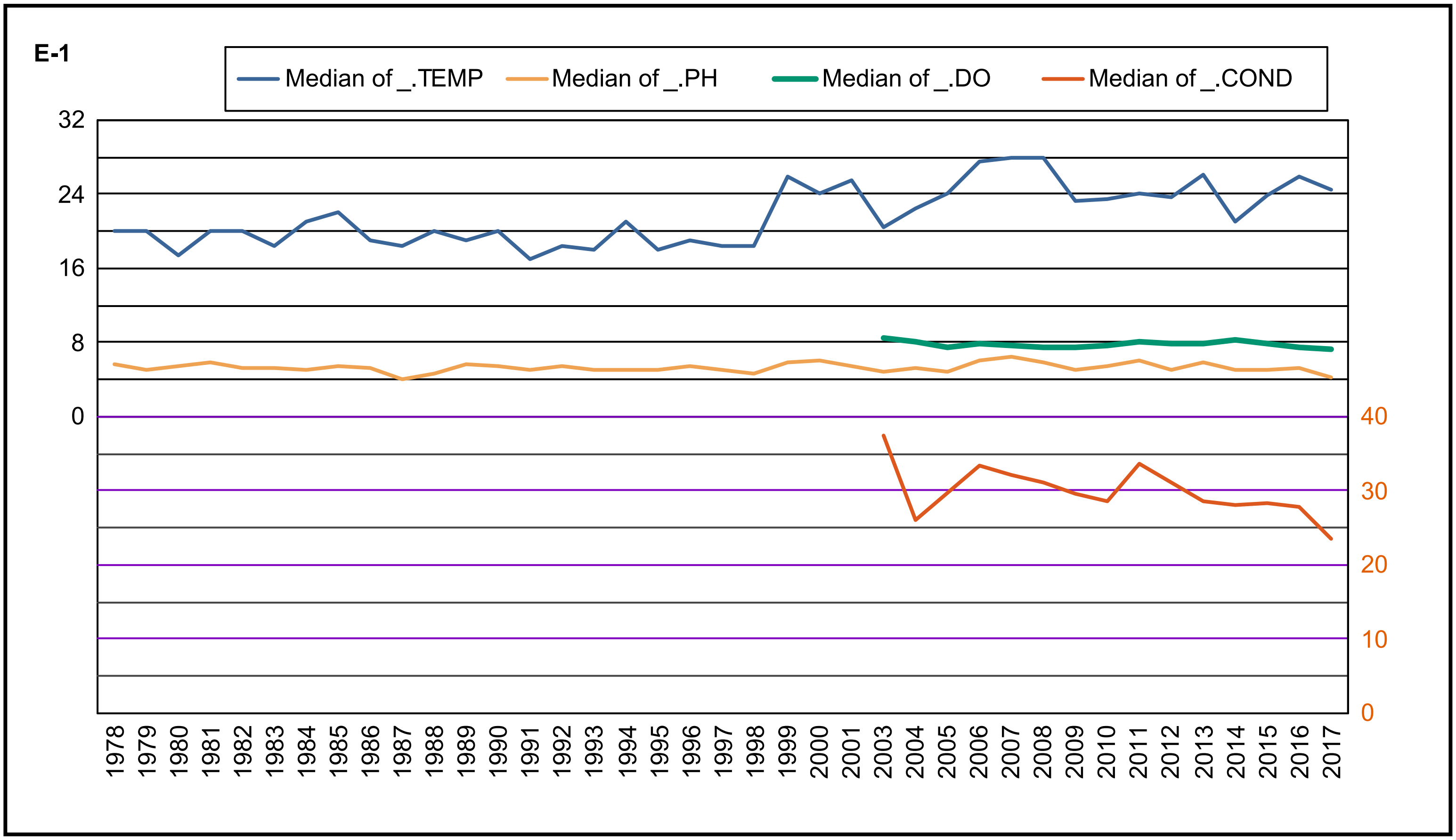

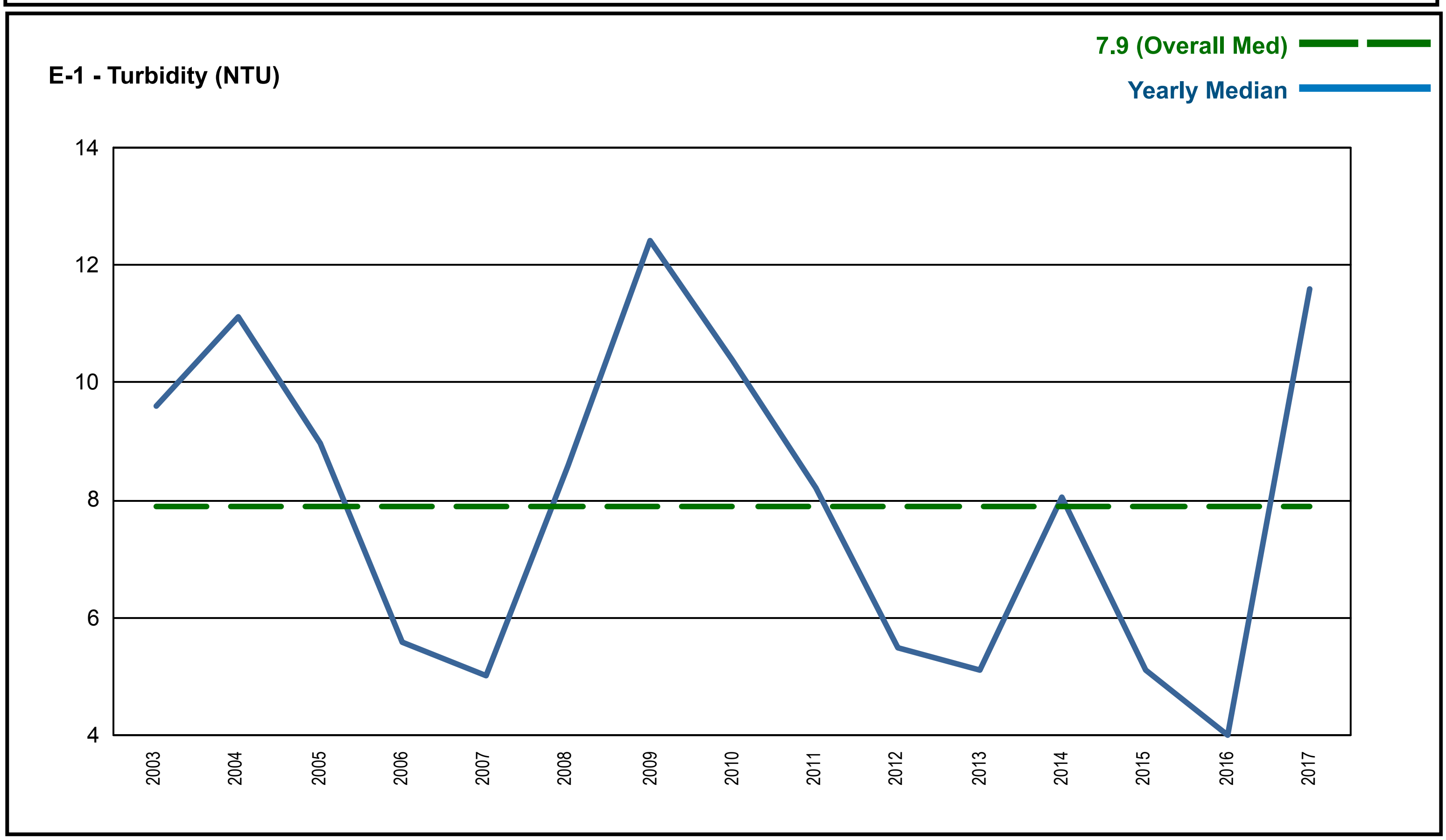

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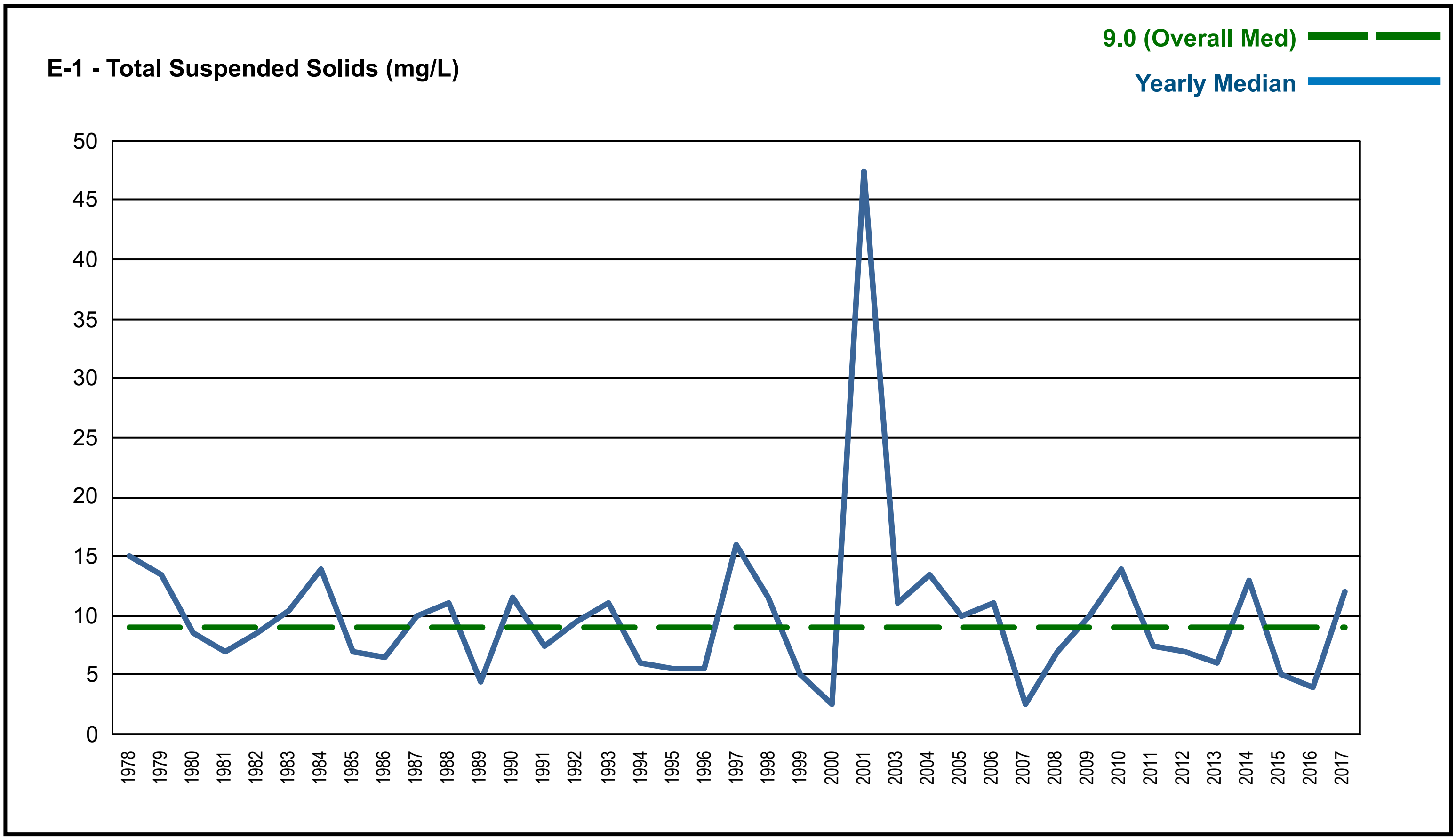

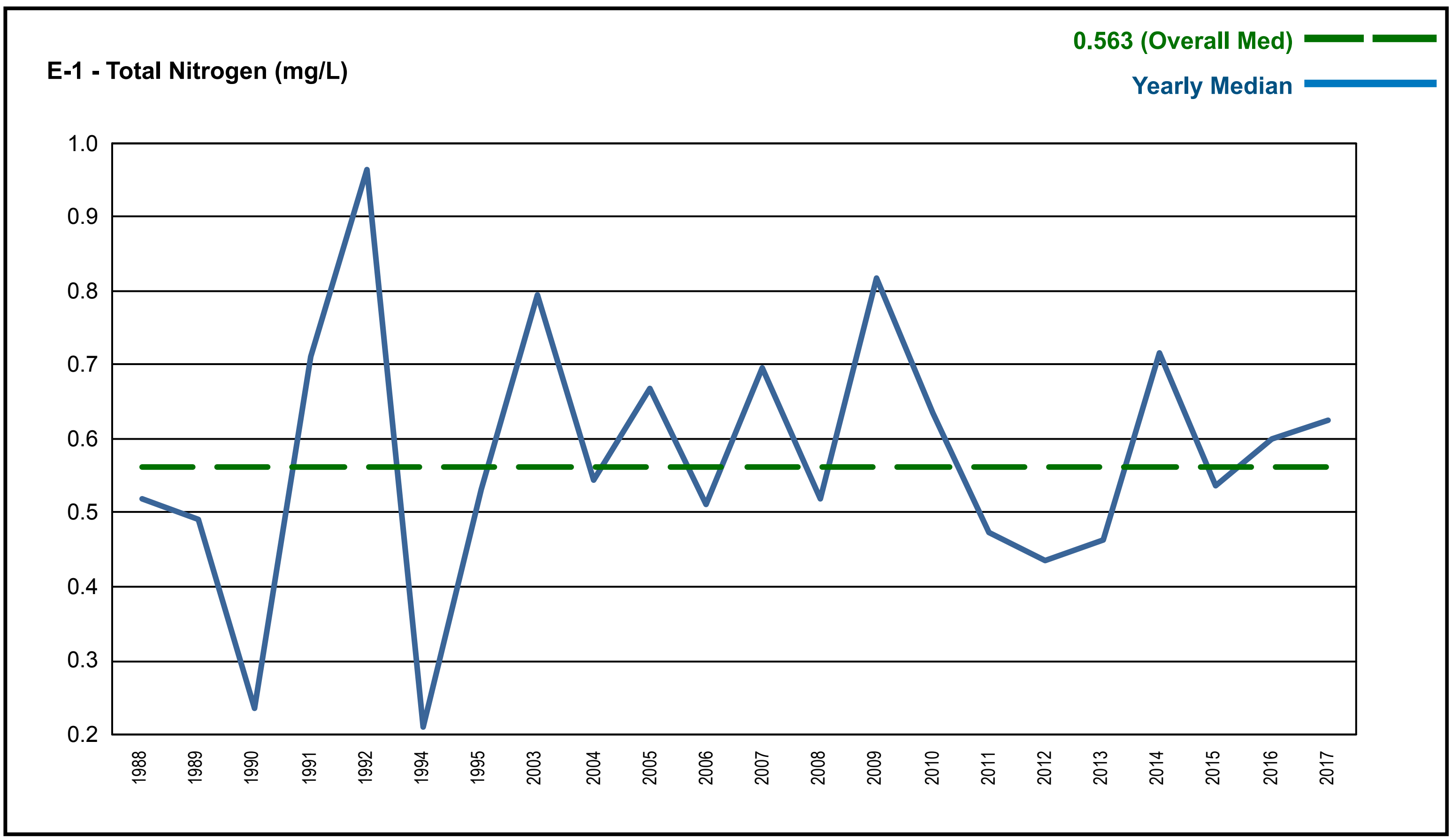

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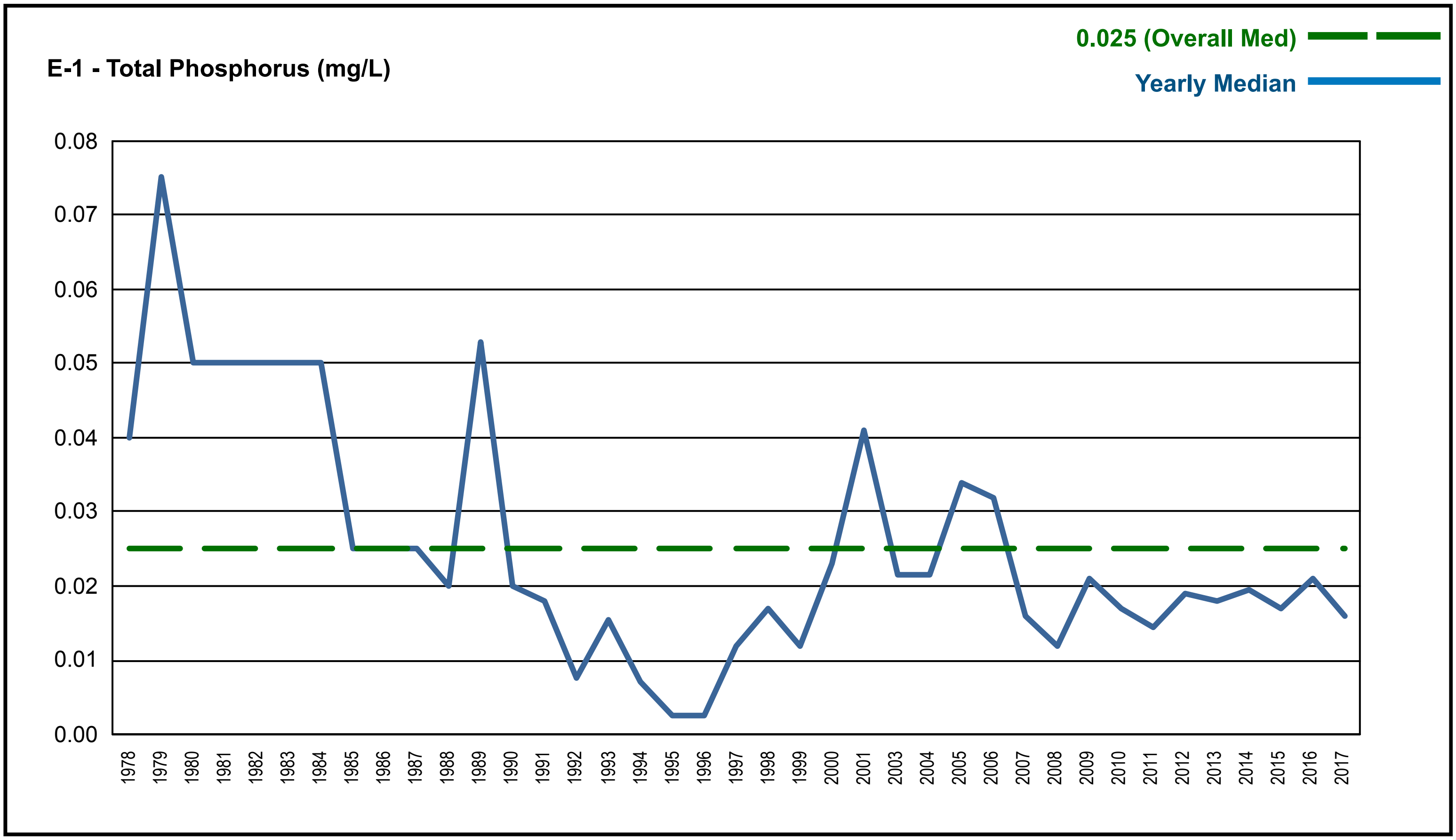

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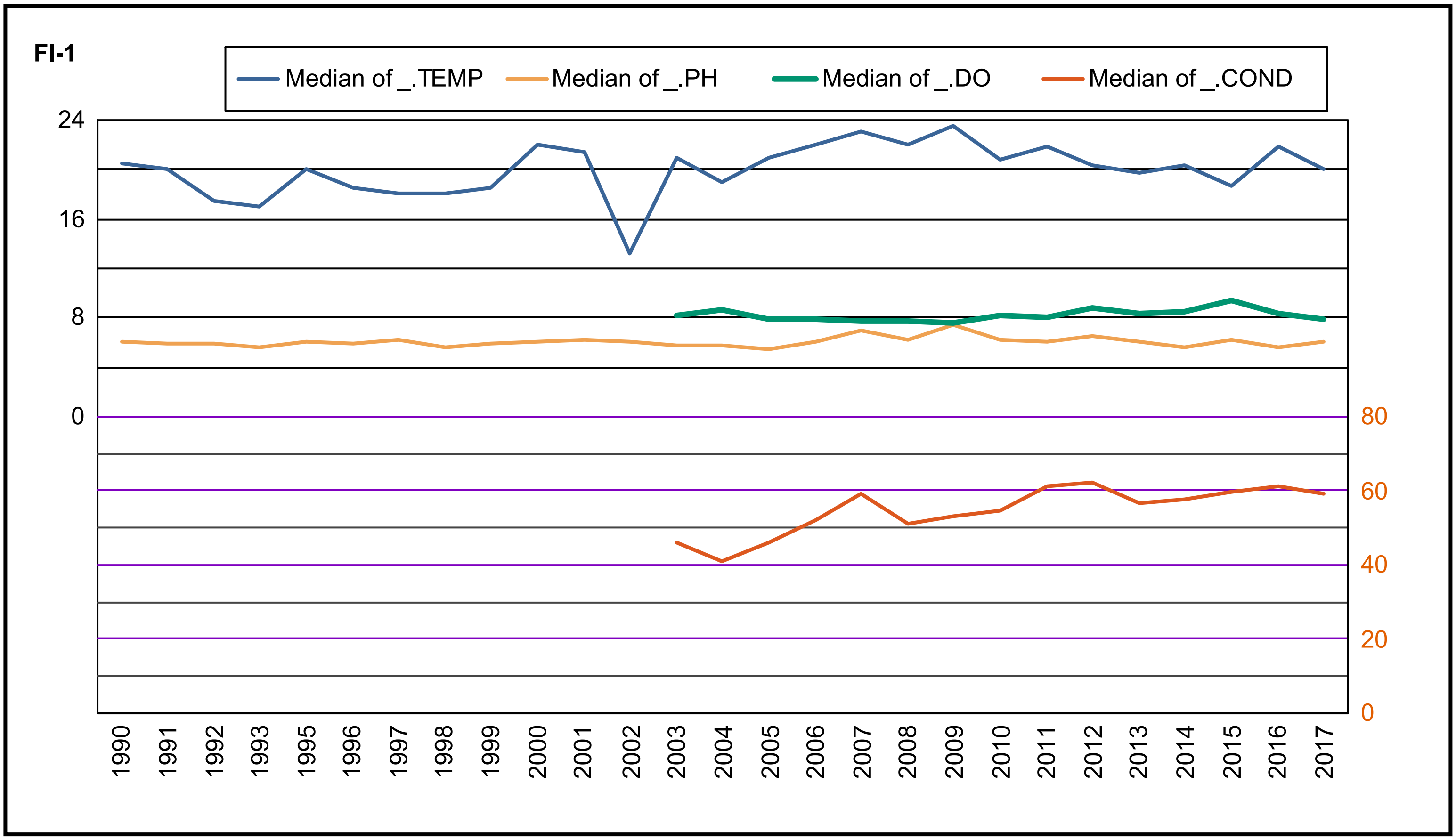

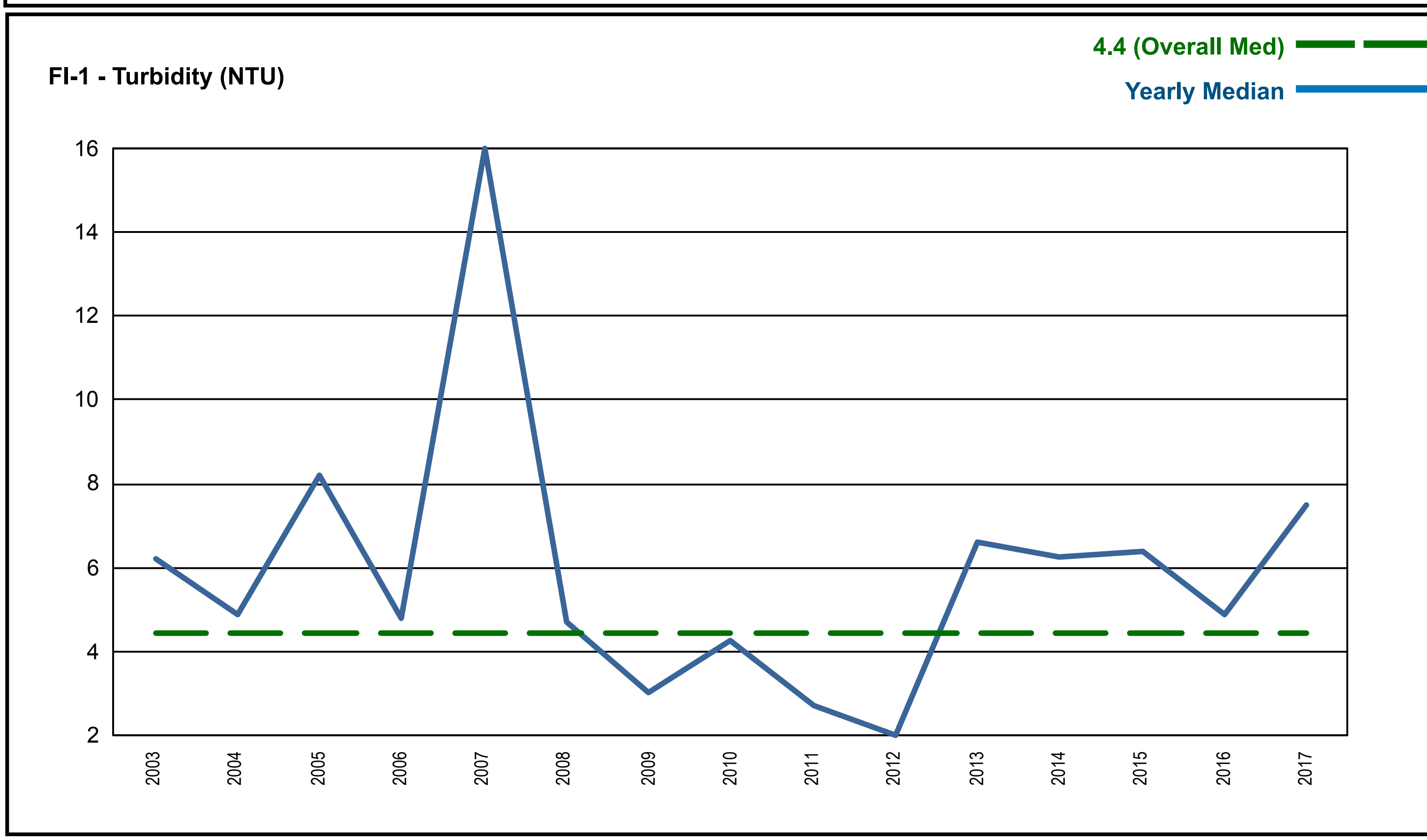

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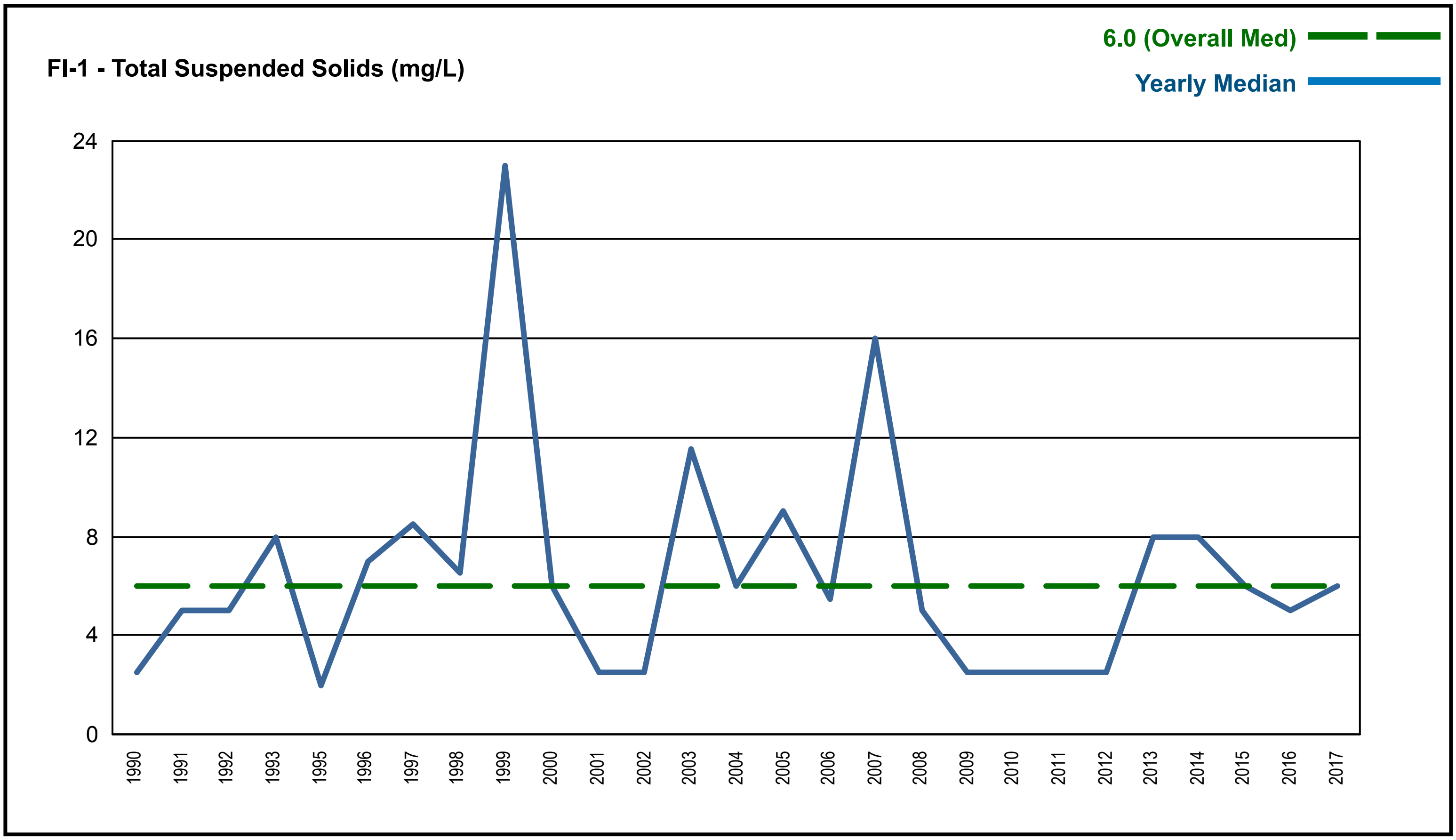

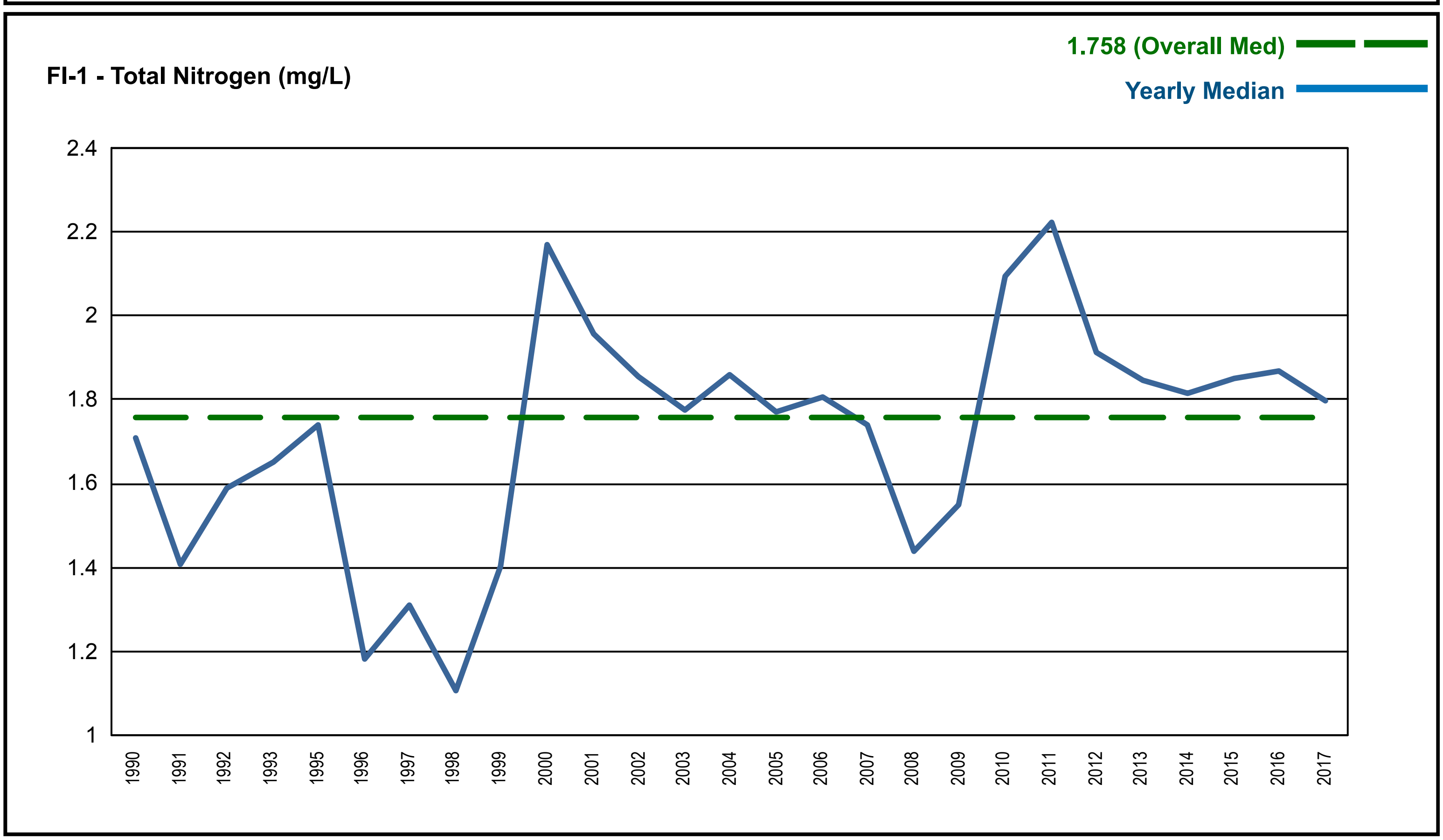

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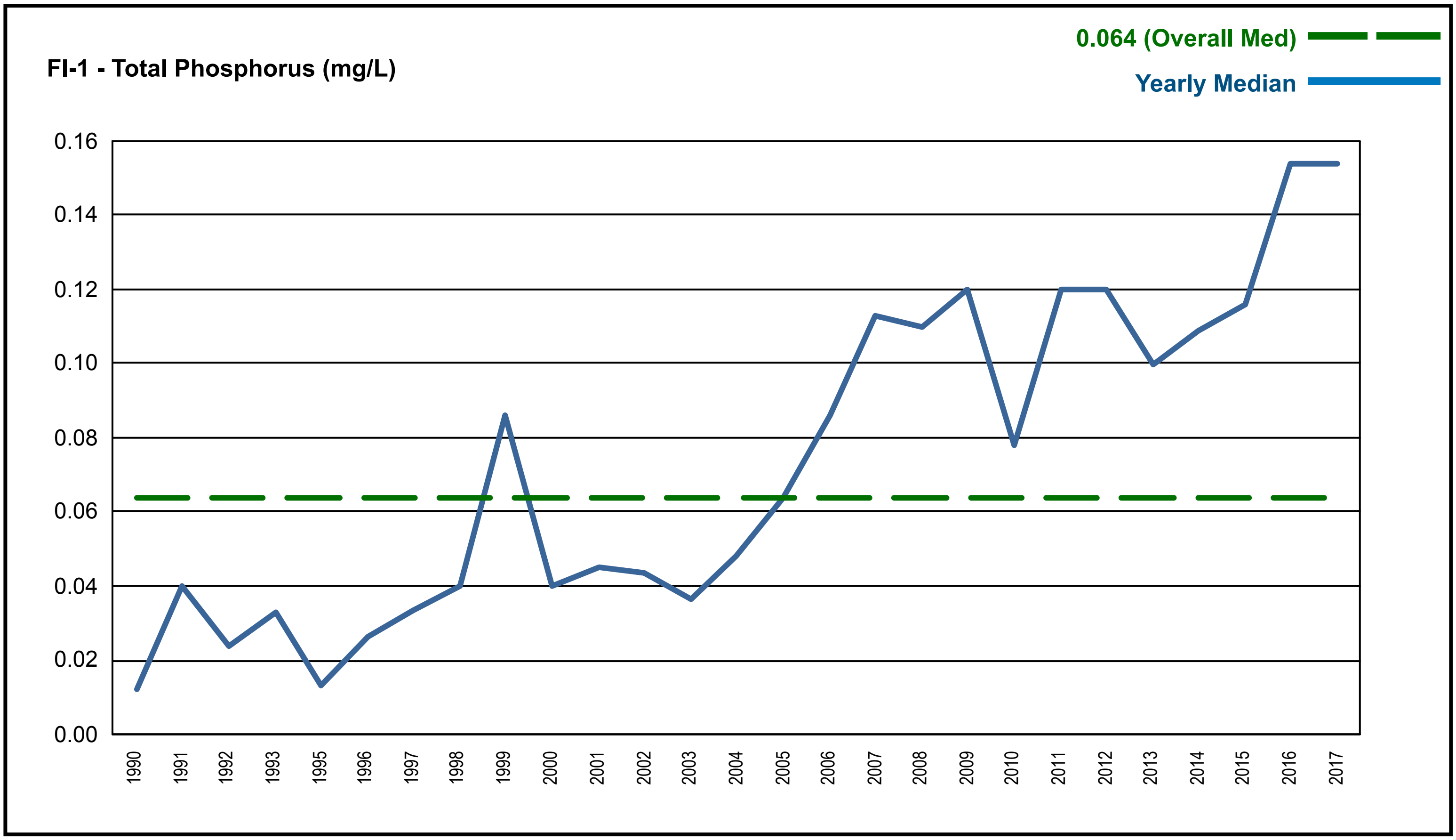

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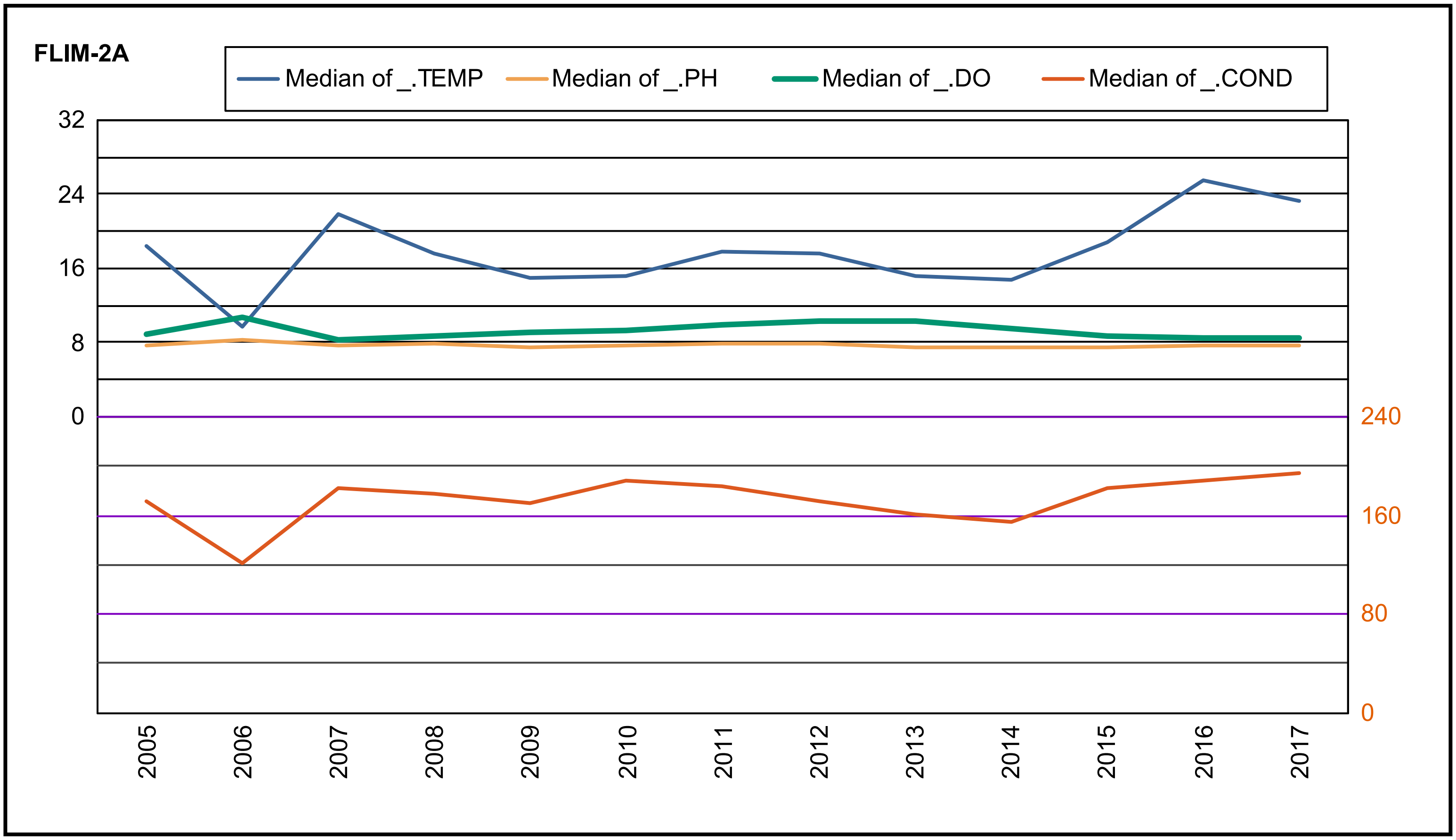

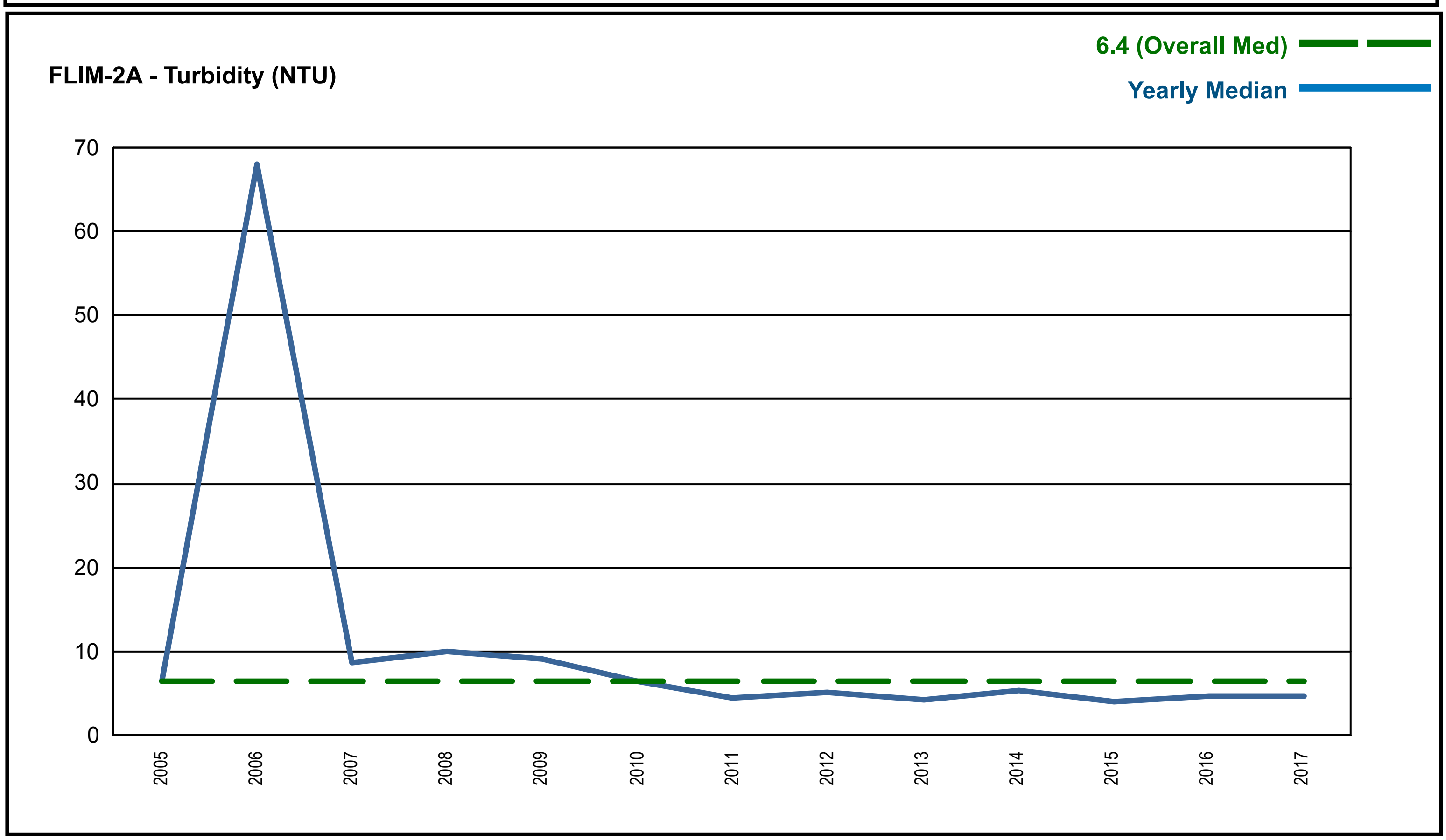

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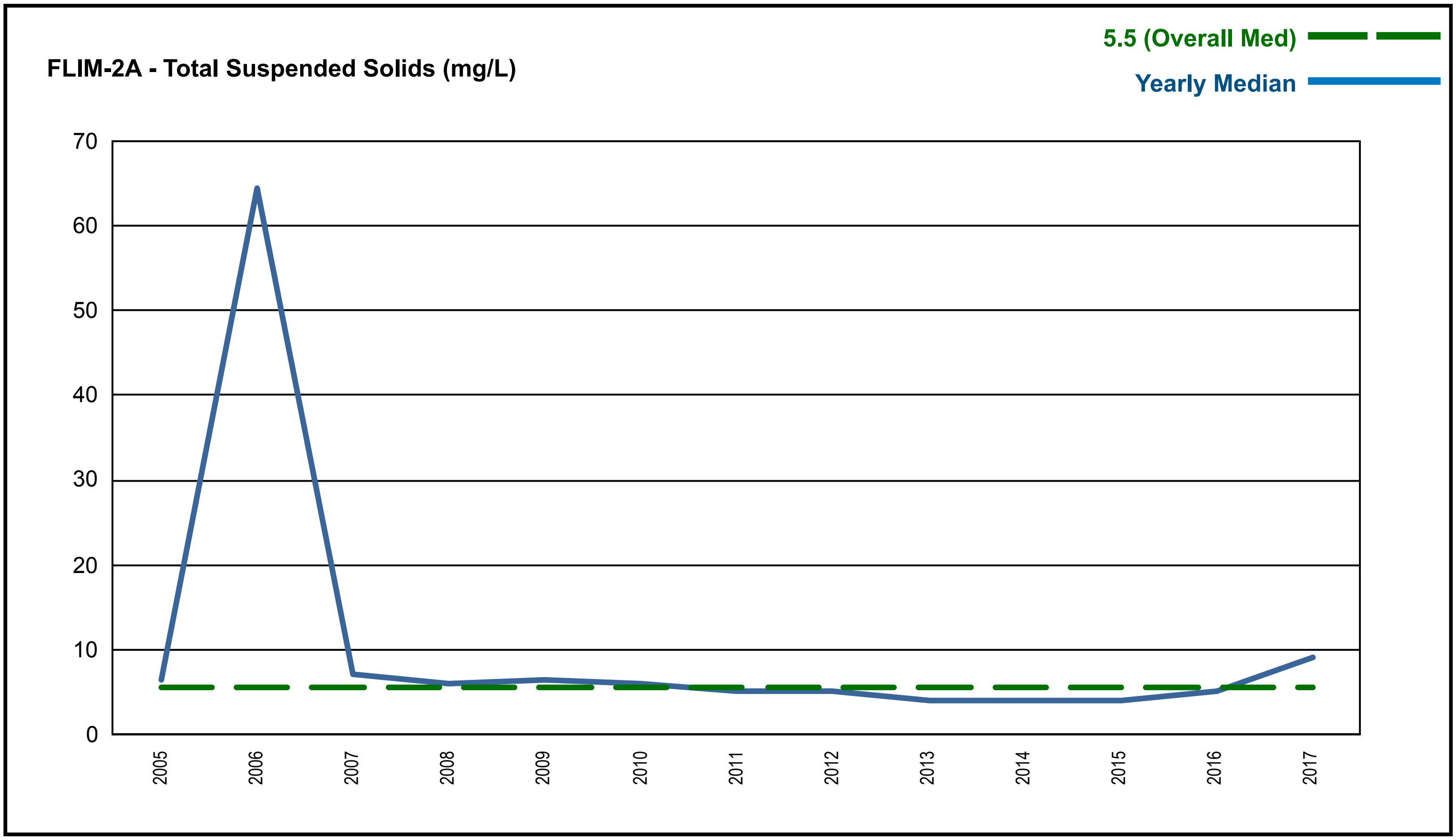

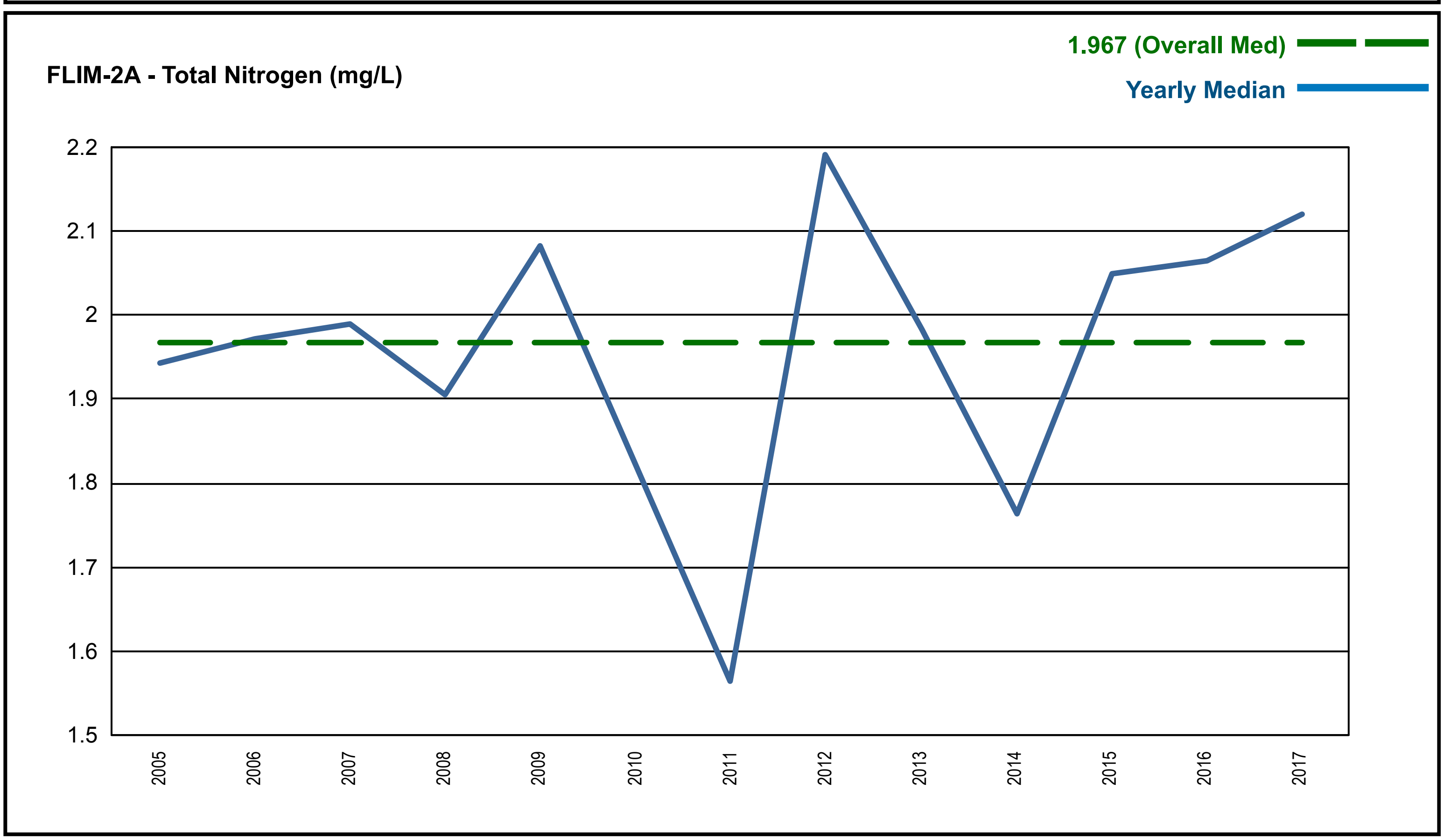

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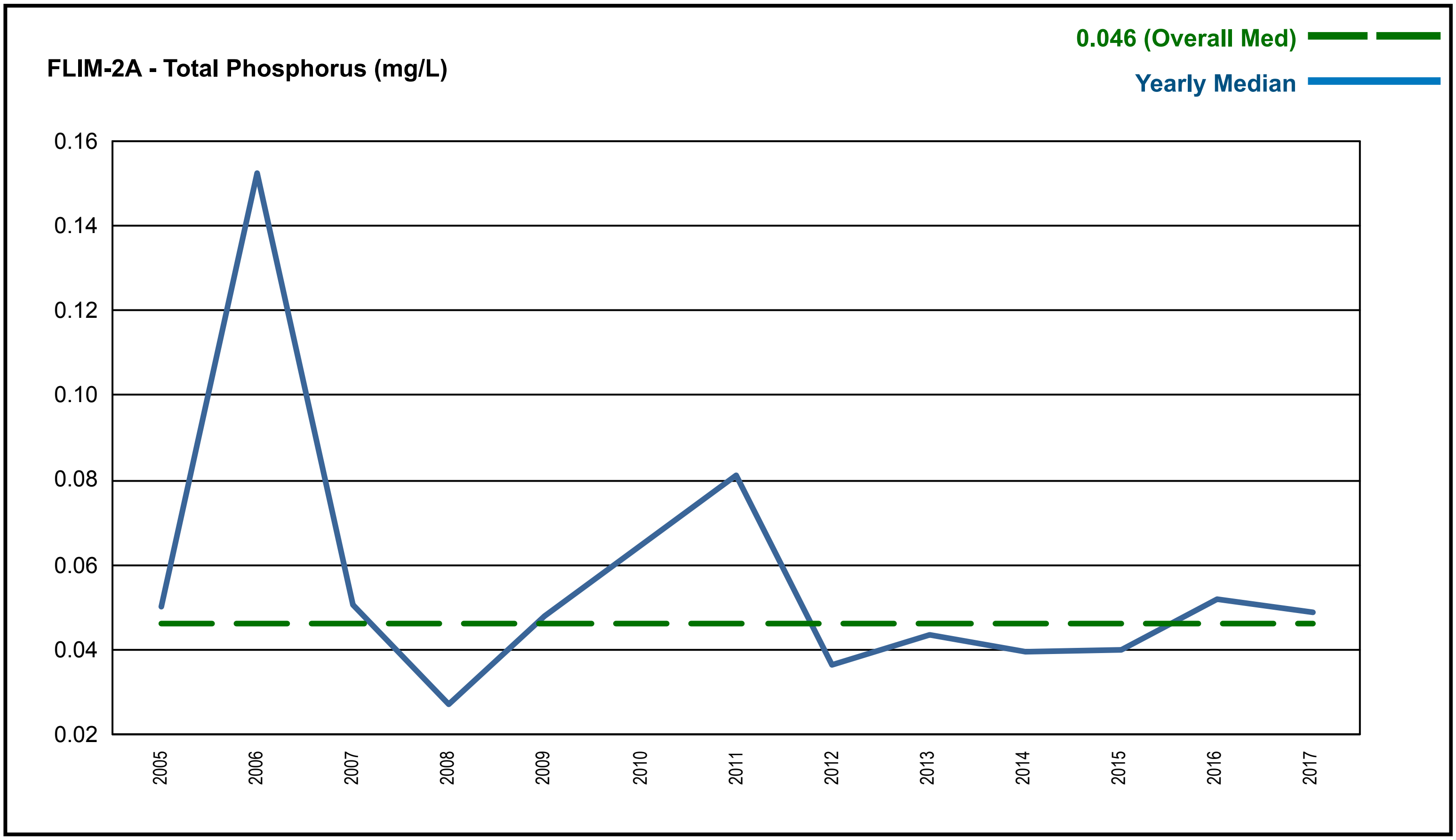
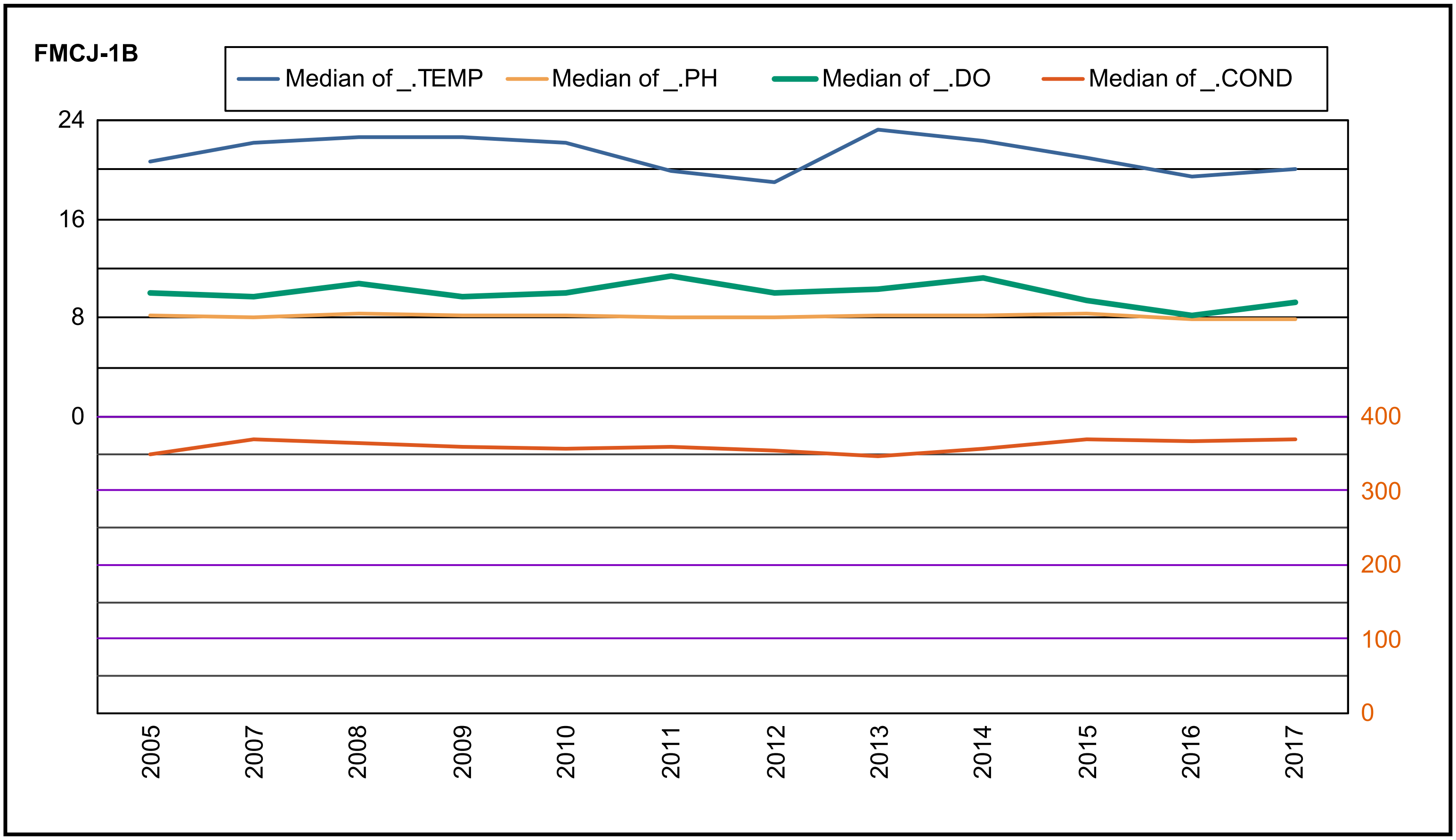
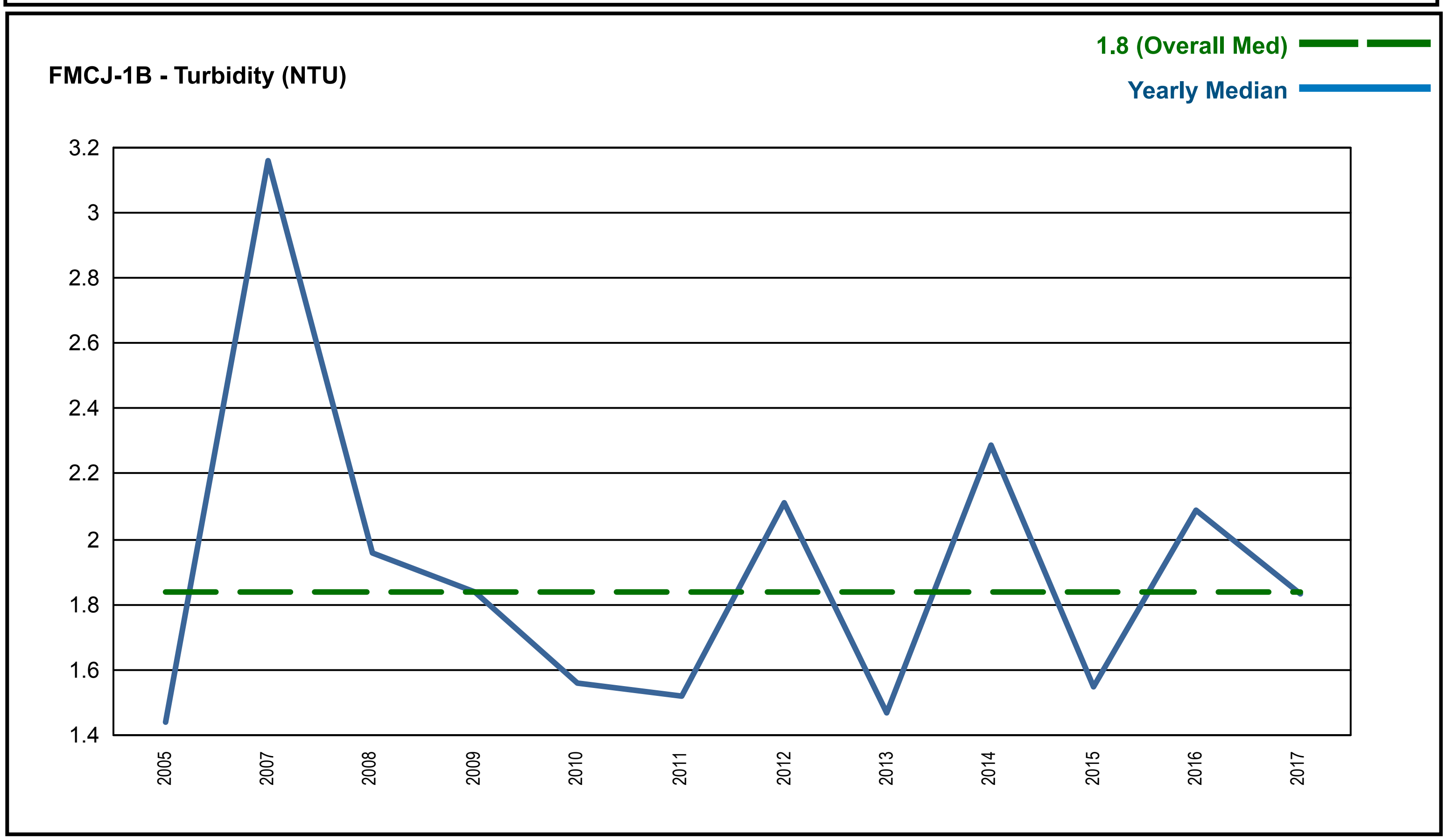


ADEM Ambient Trend Stations - Sampled 1977 - 2018





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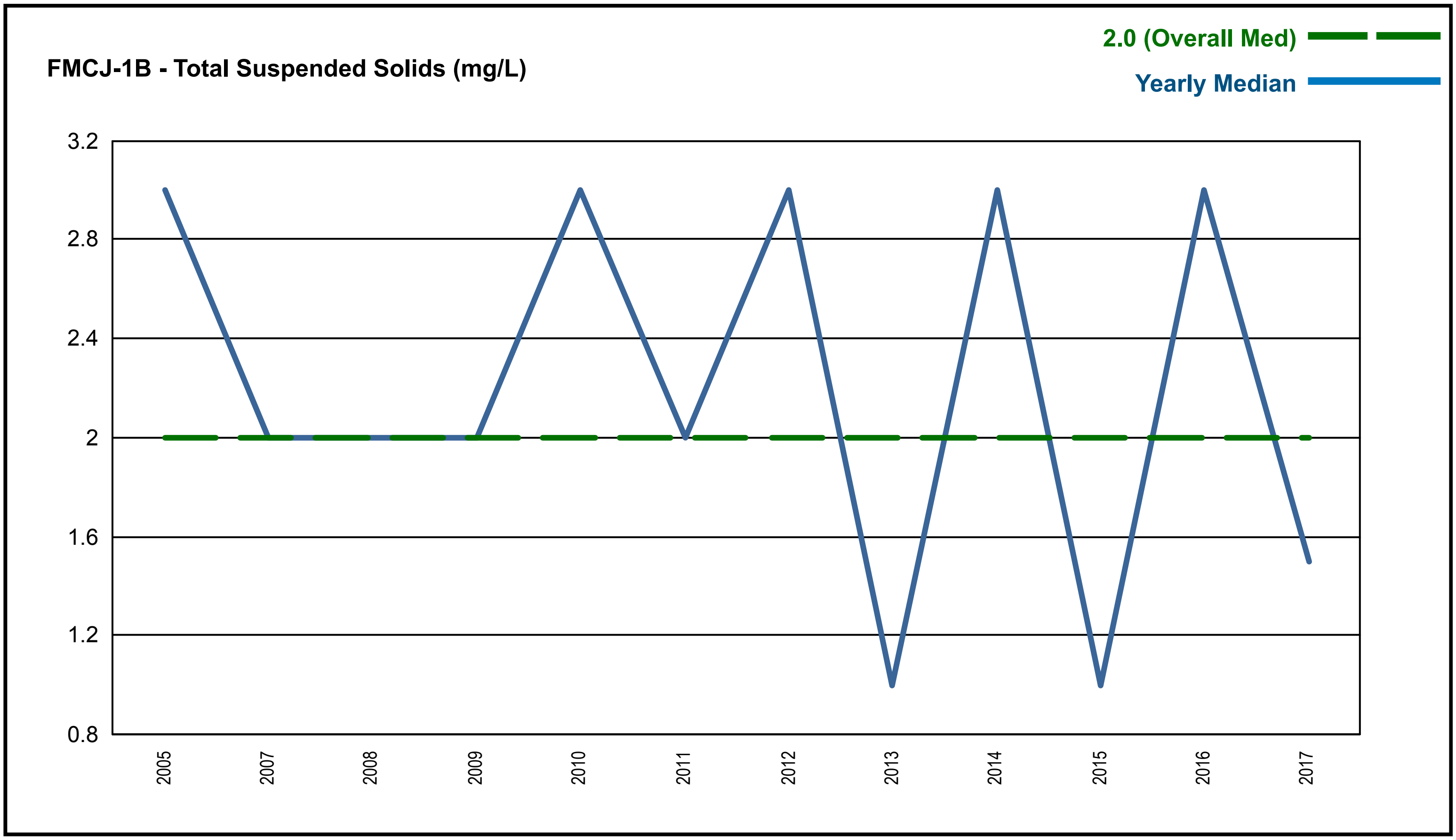

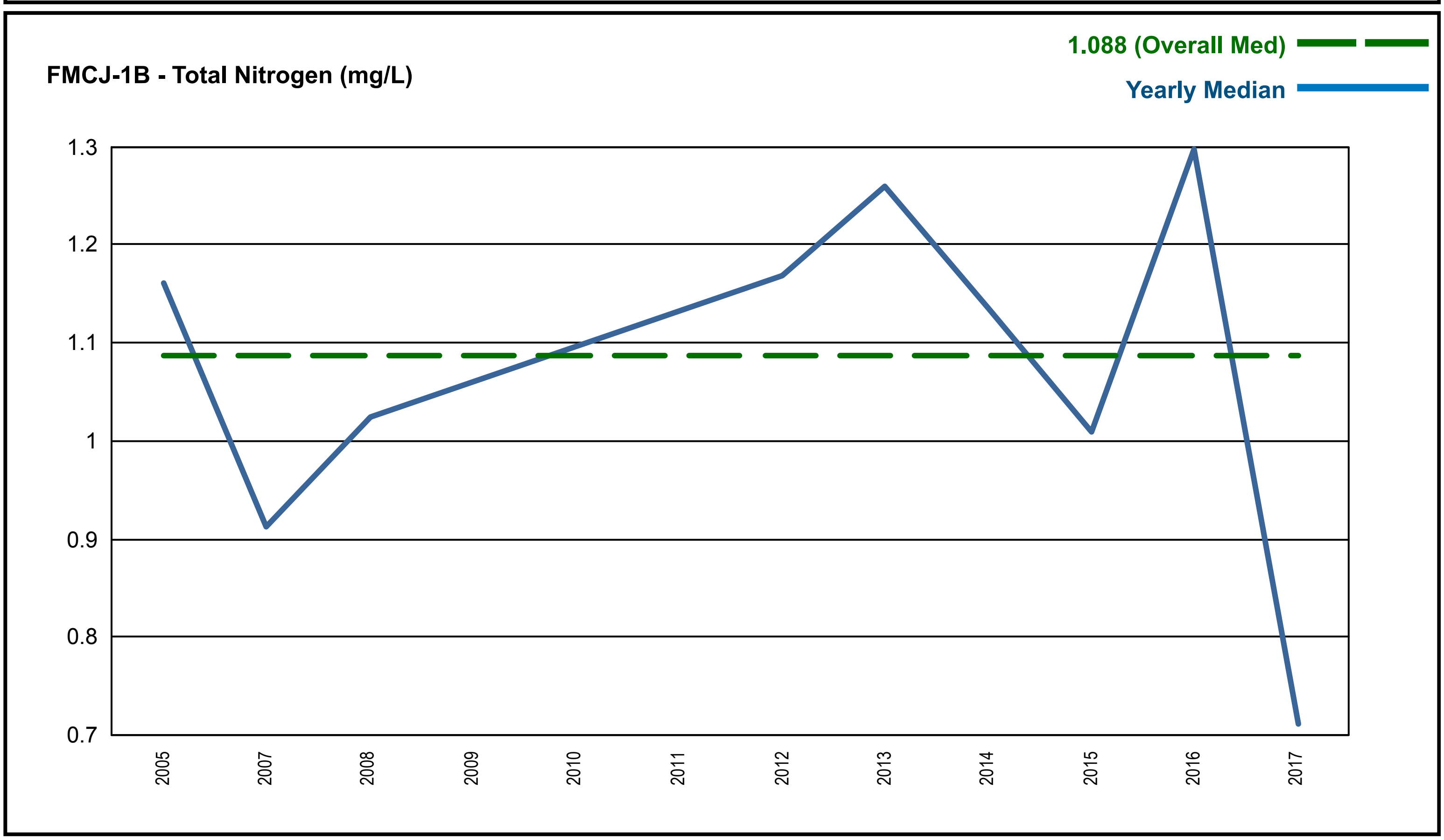

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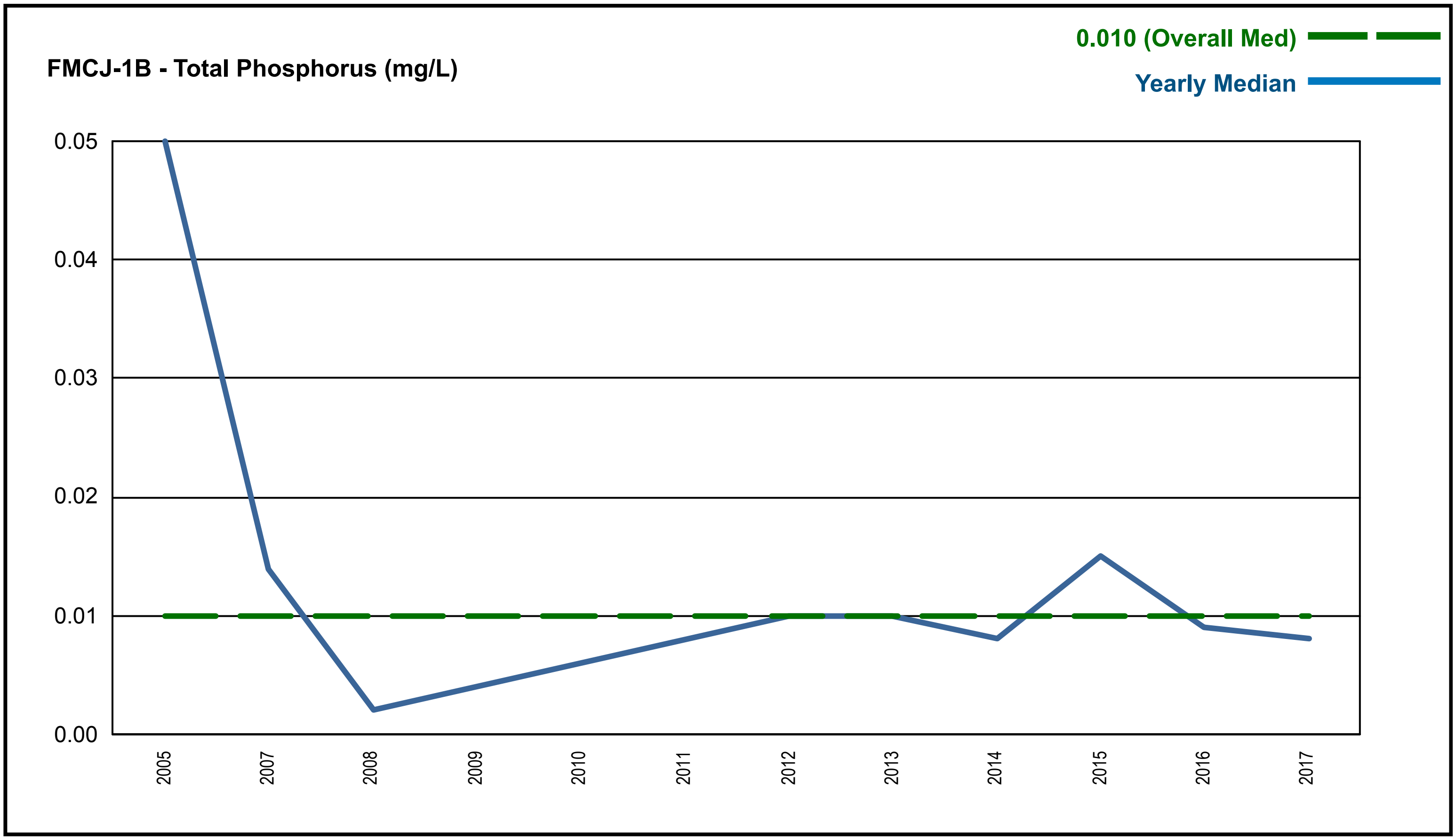

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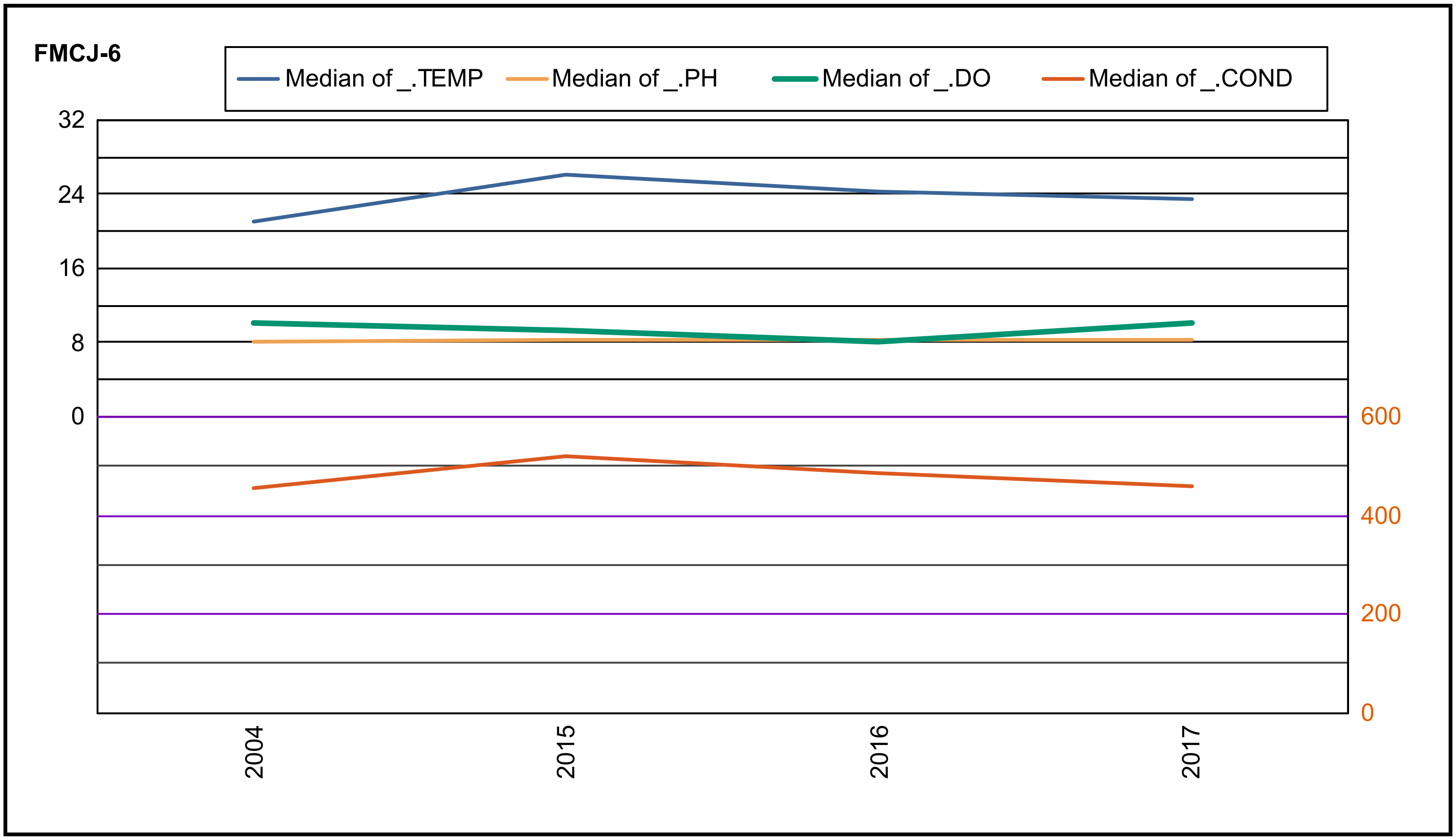

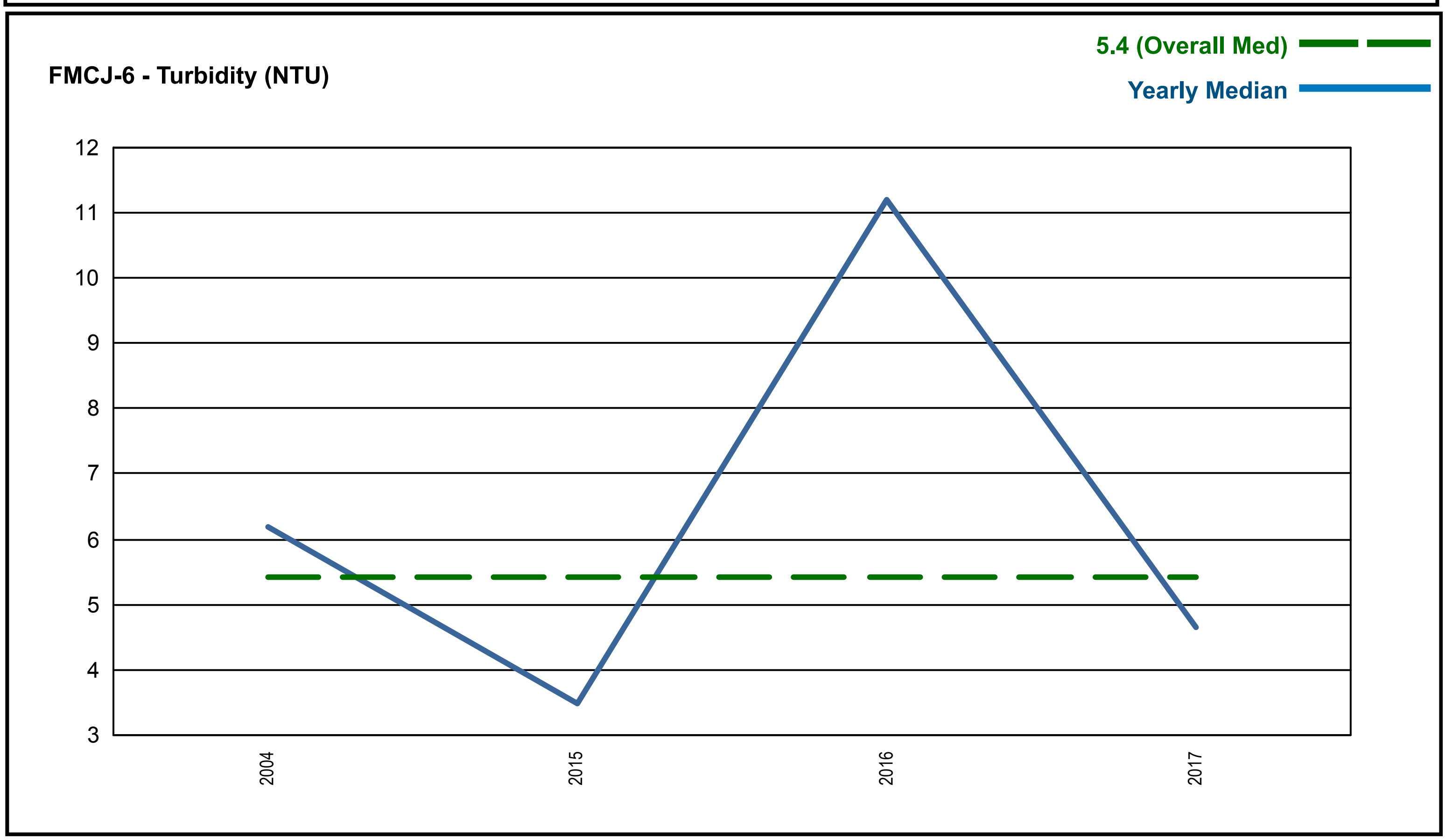

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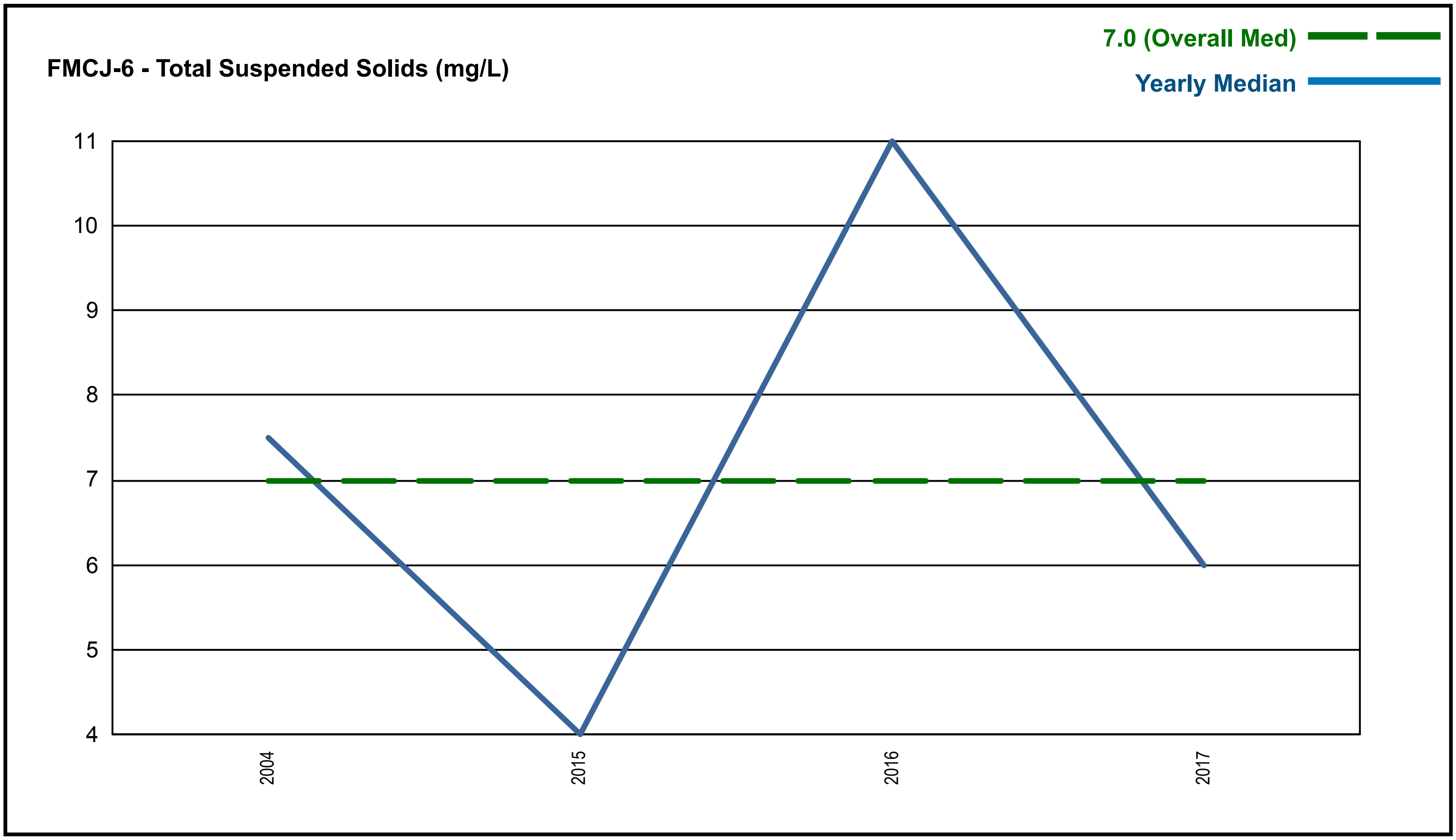

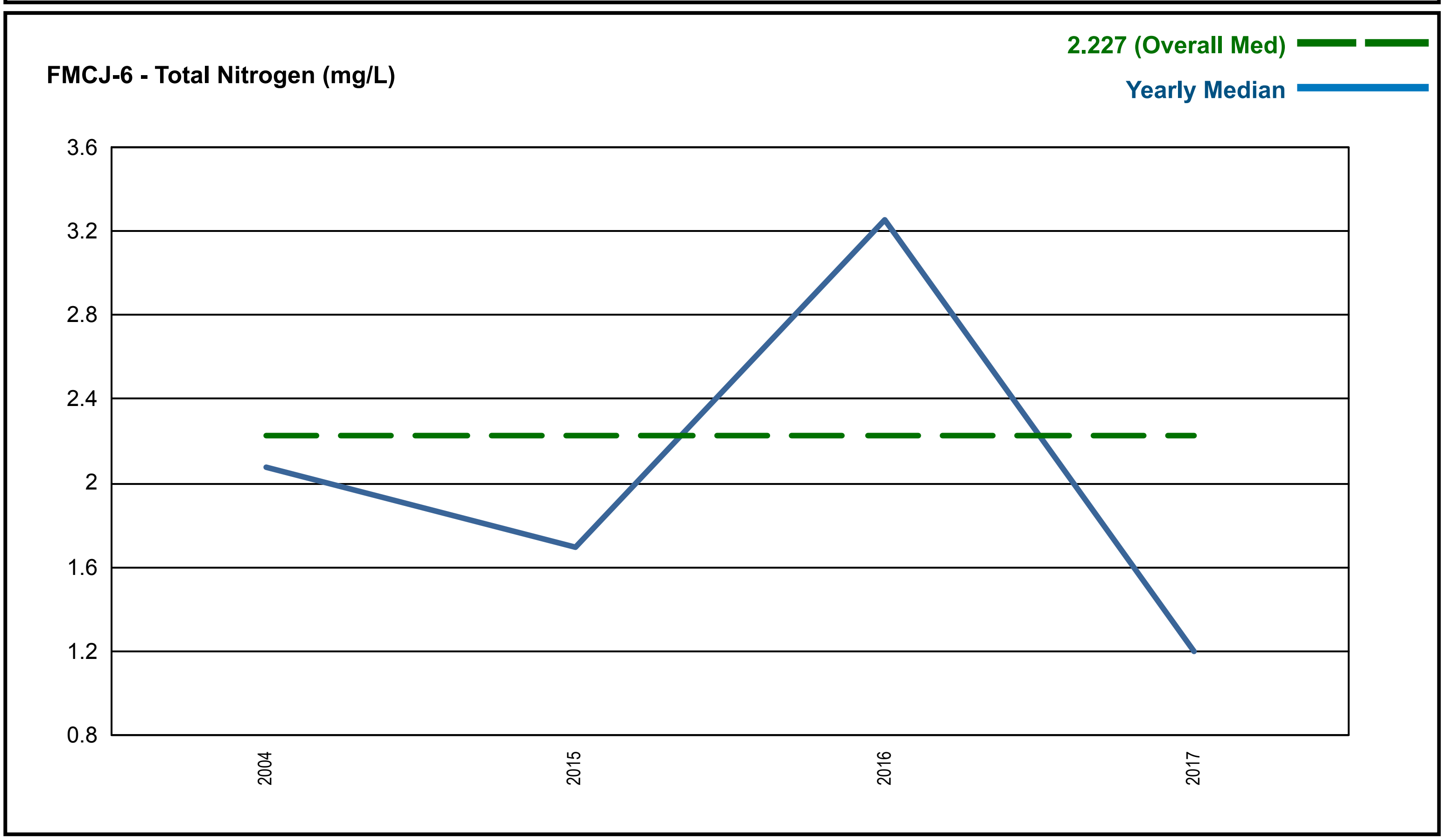

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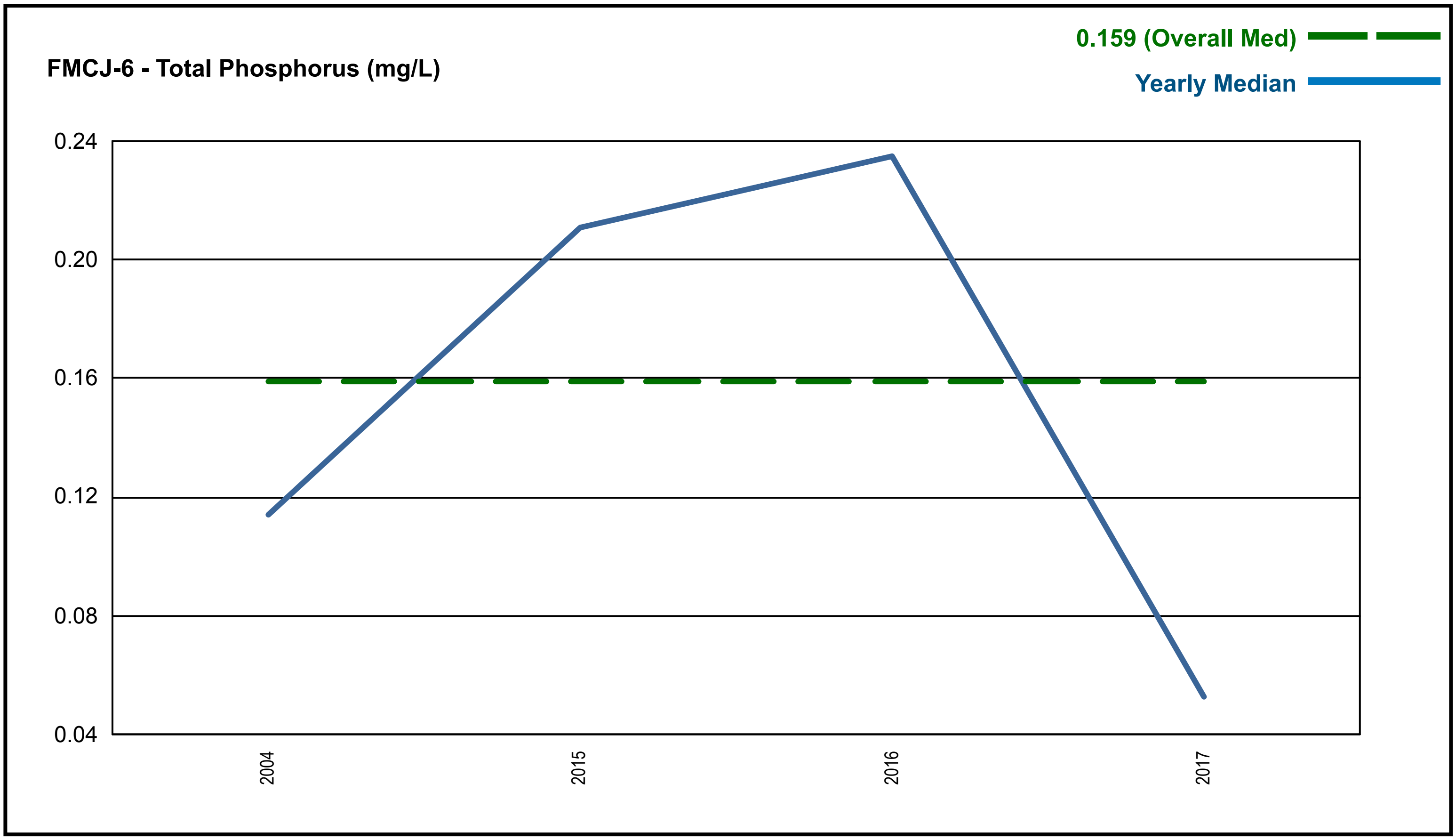

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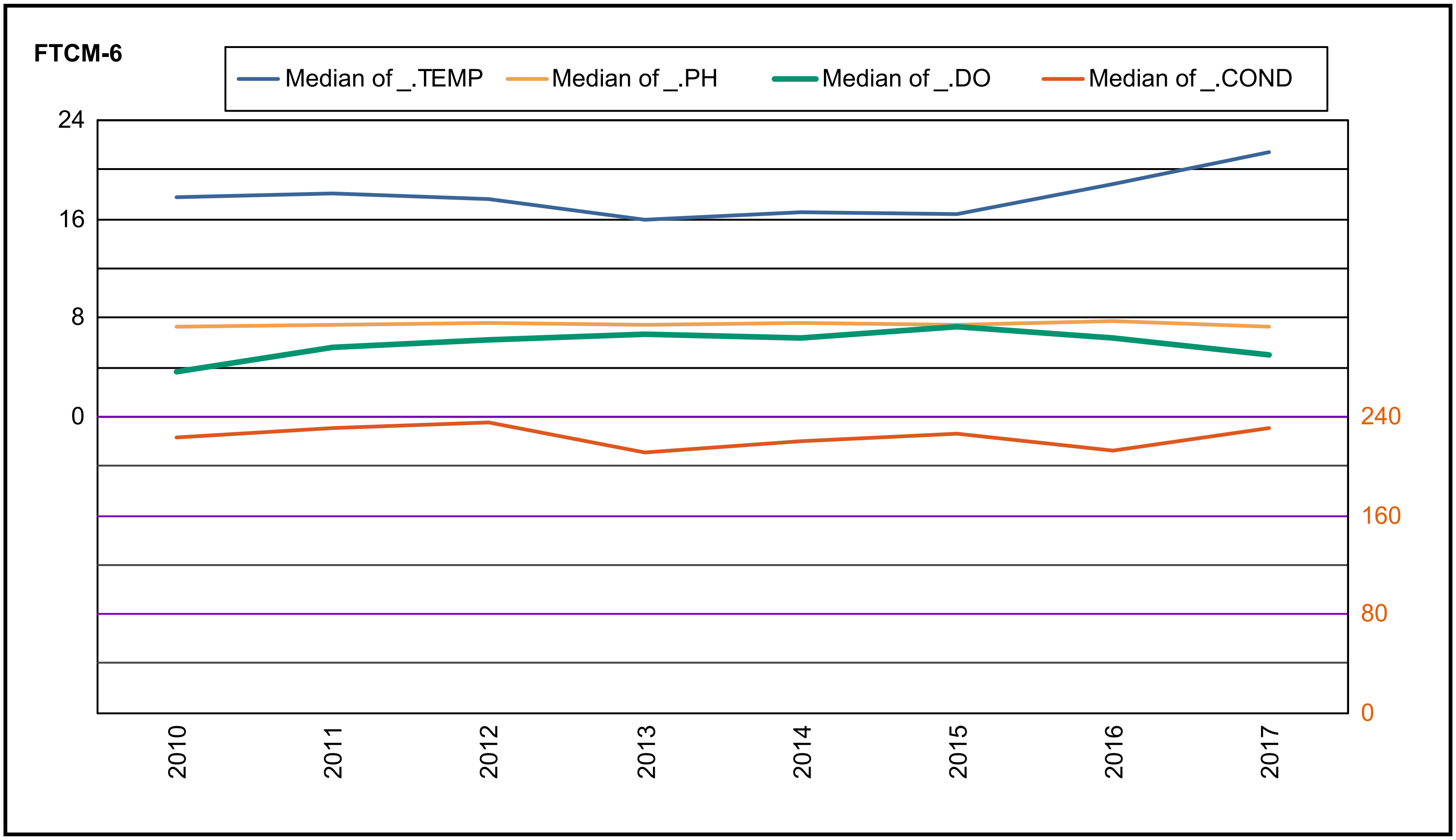

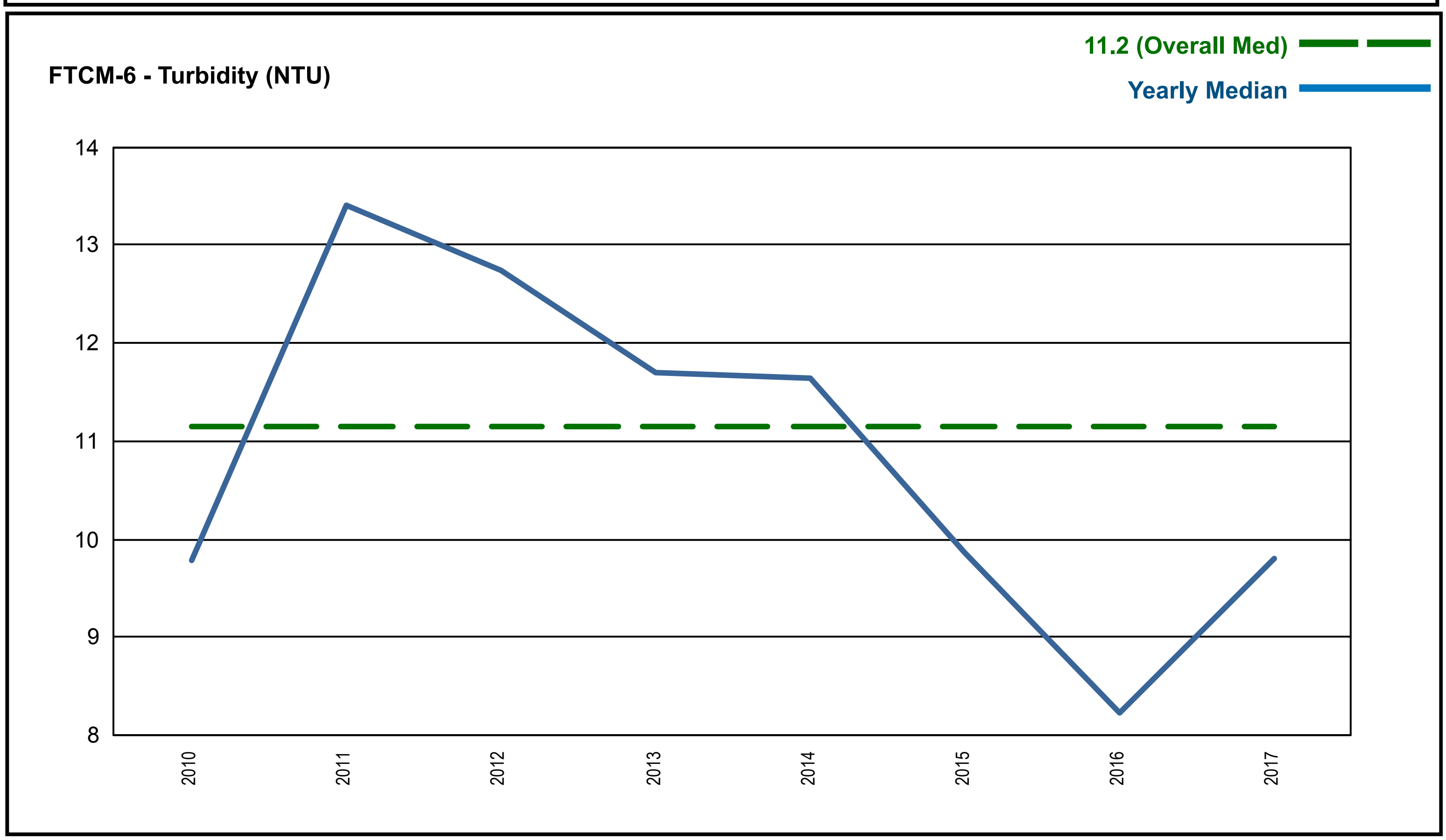

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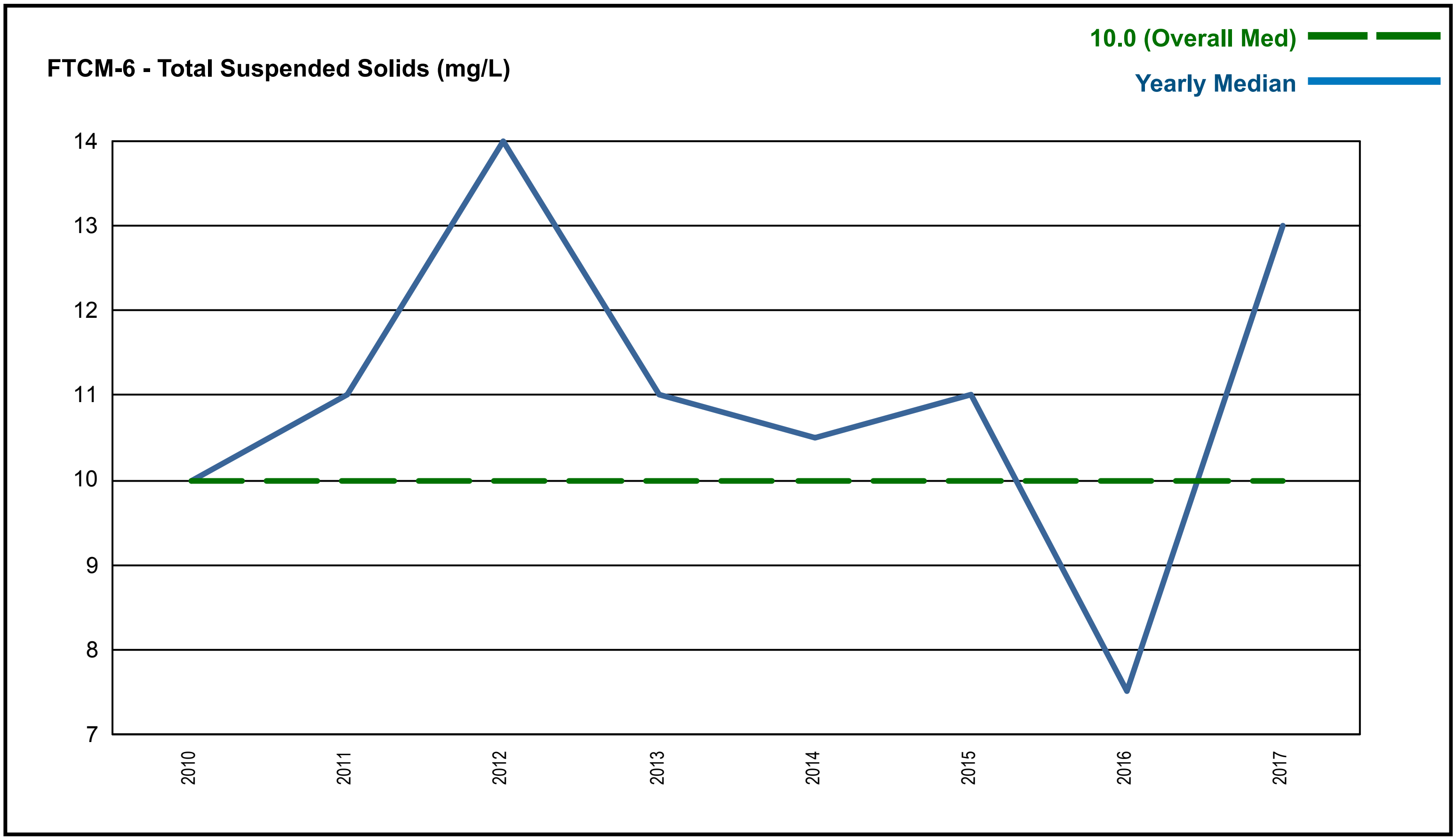

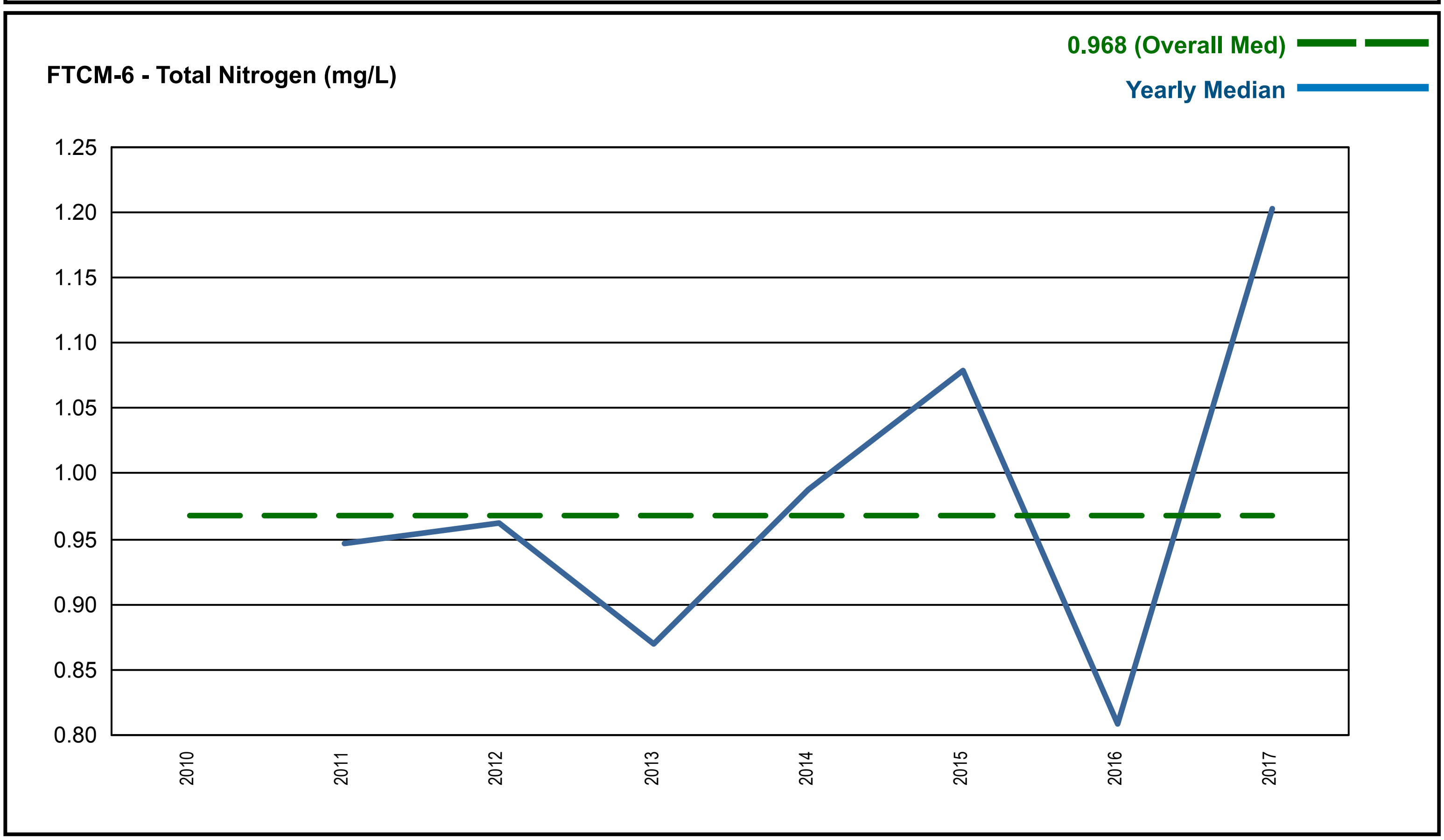

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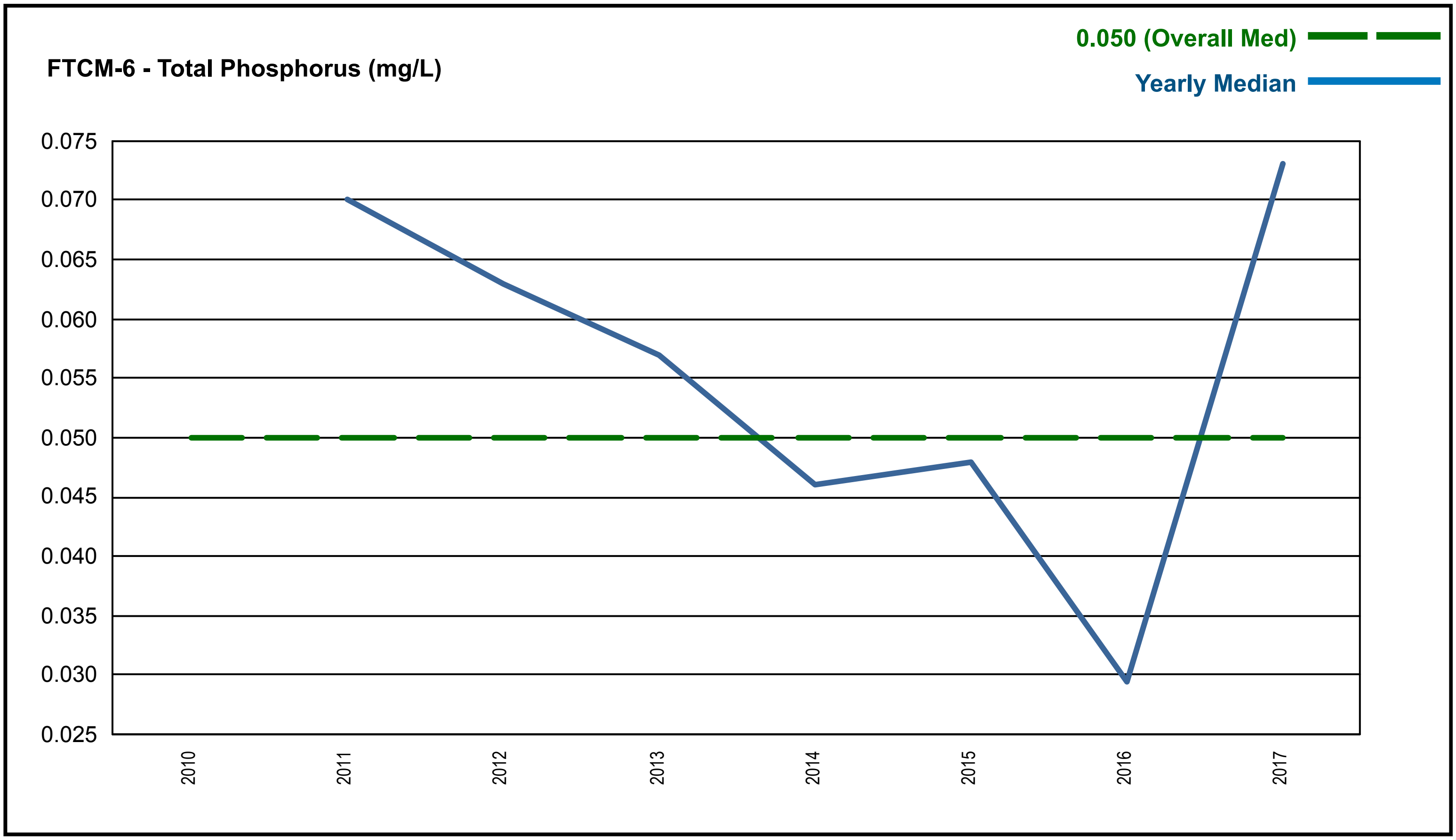

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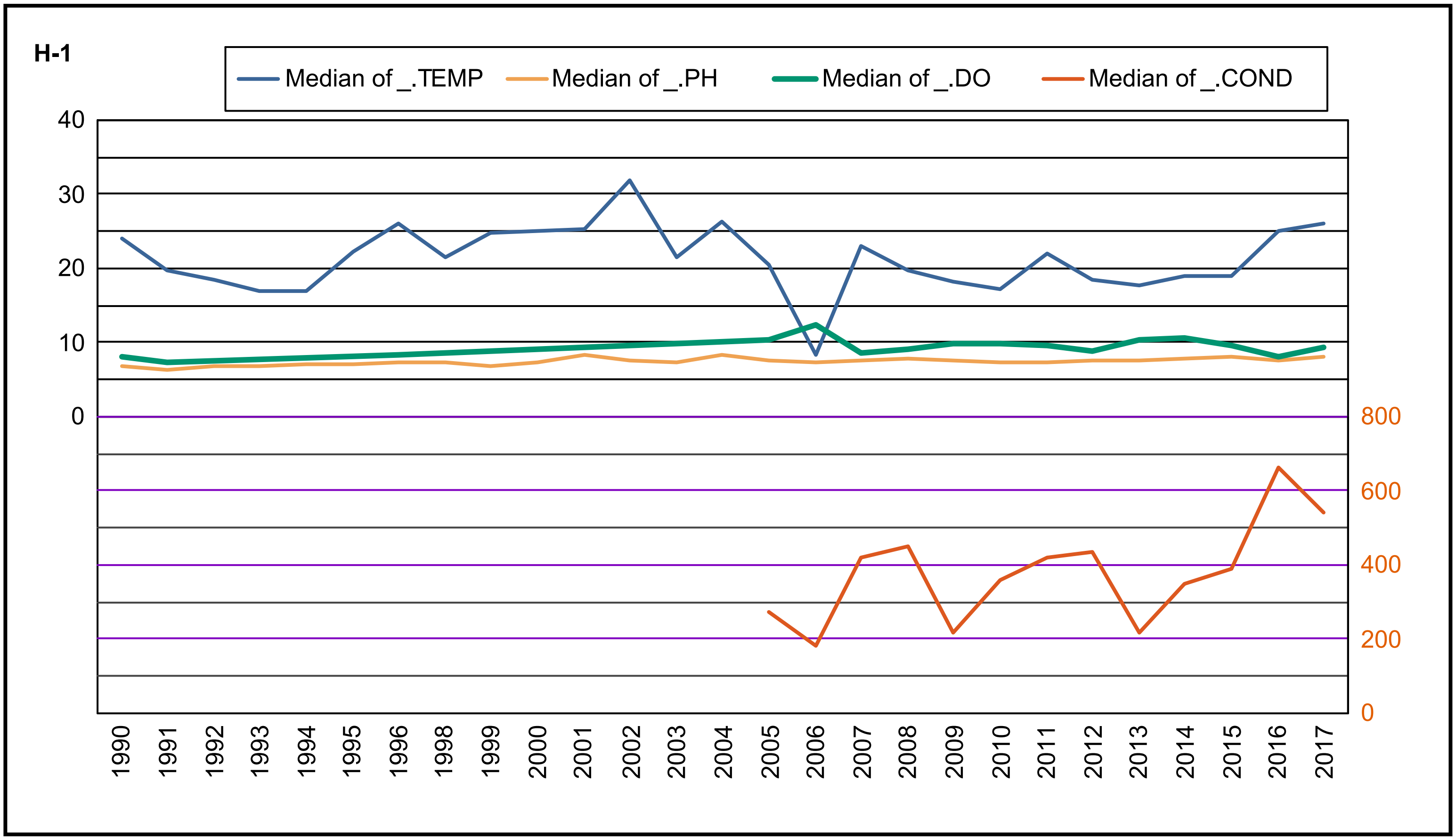

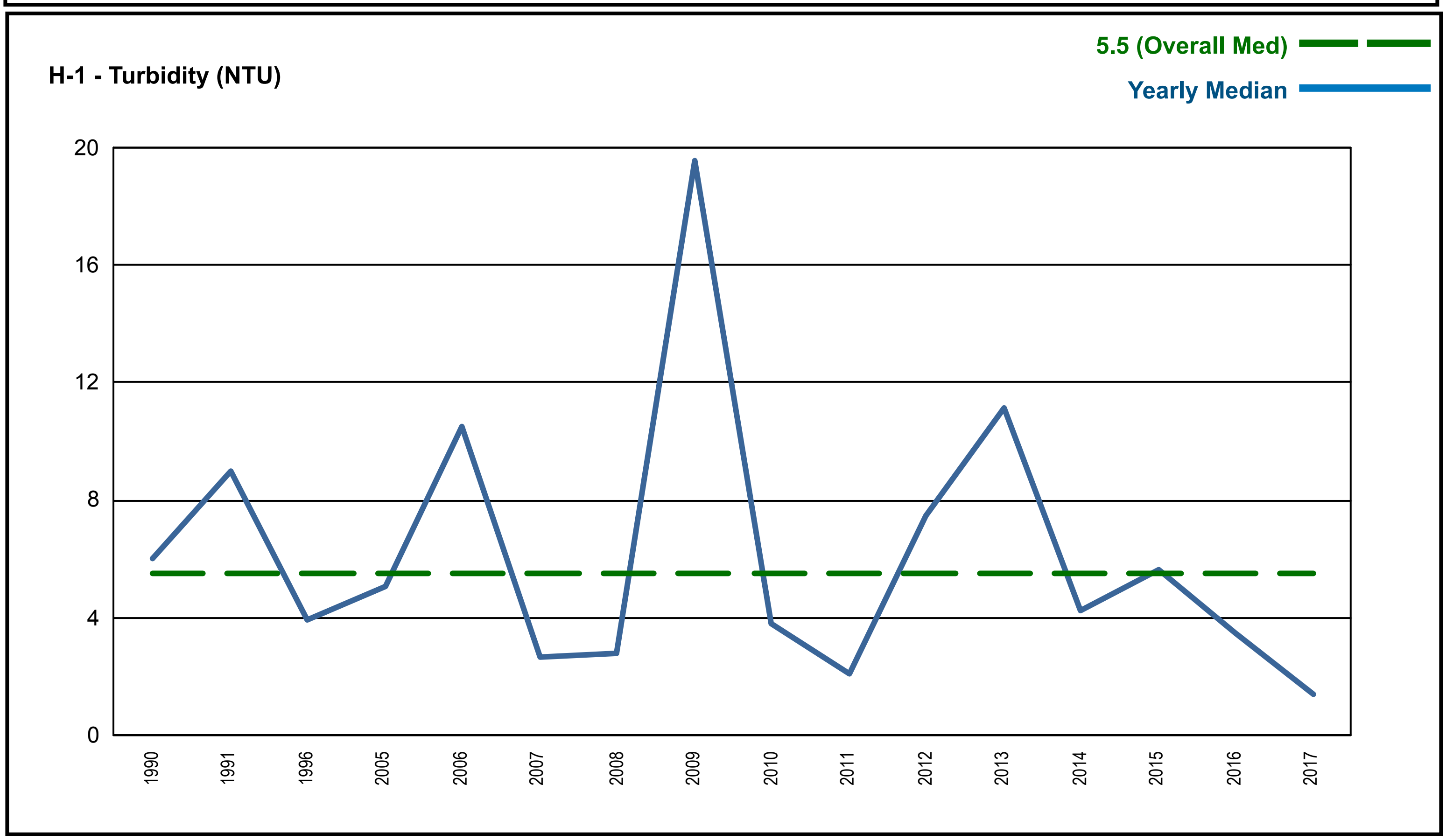

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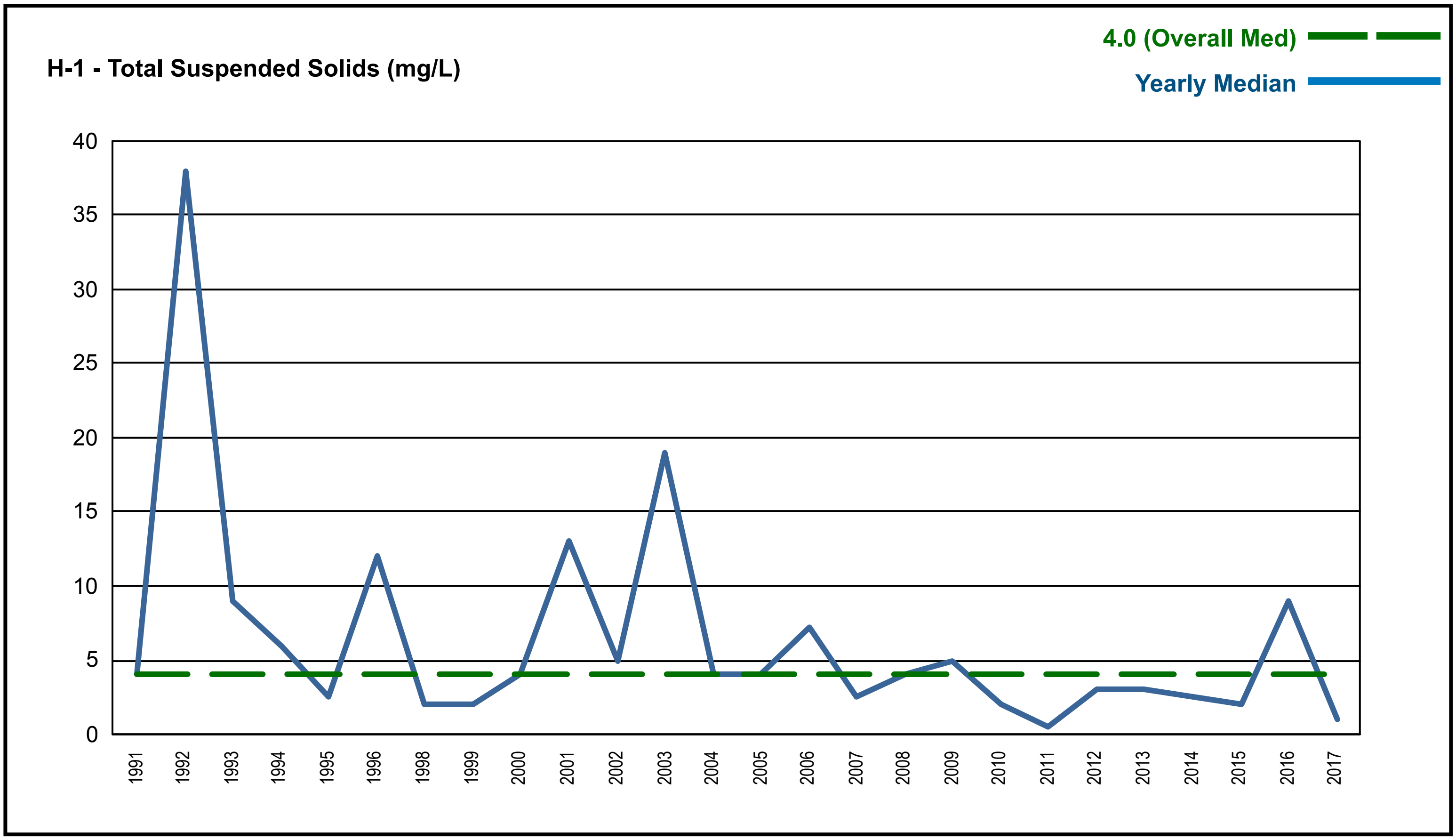

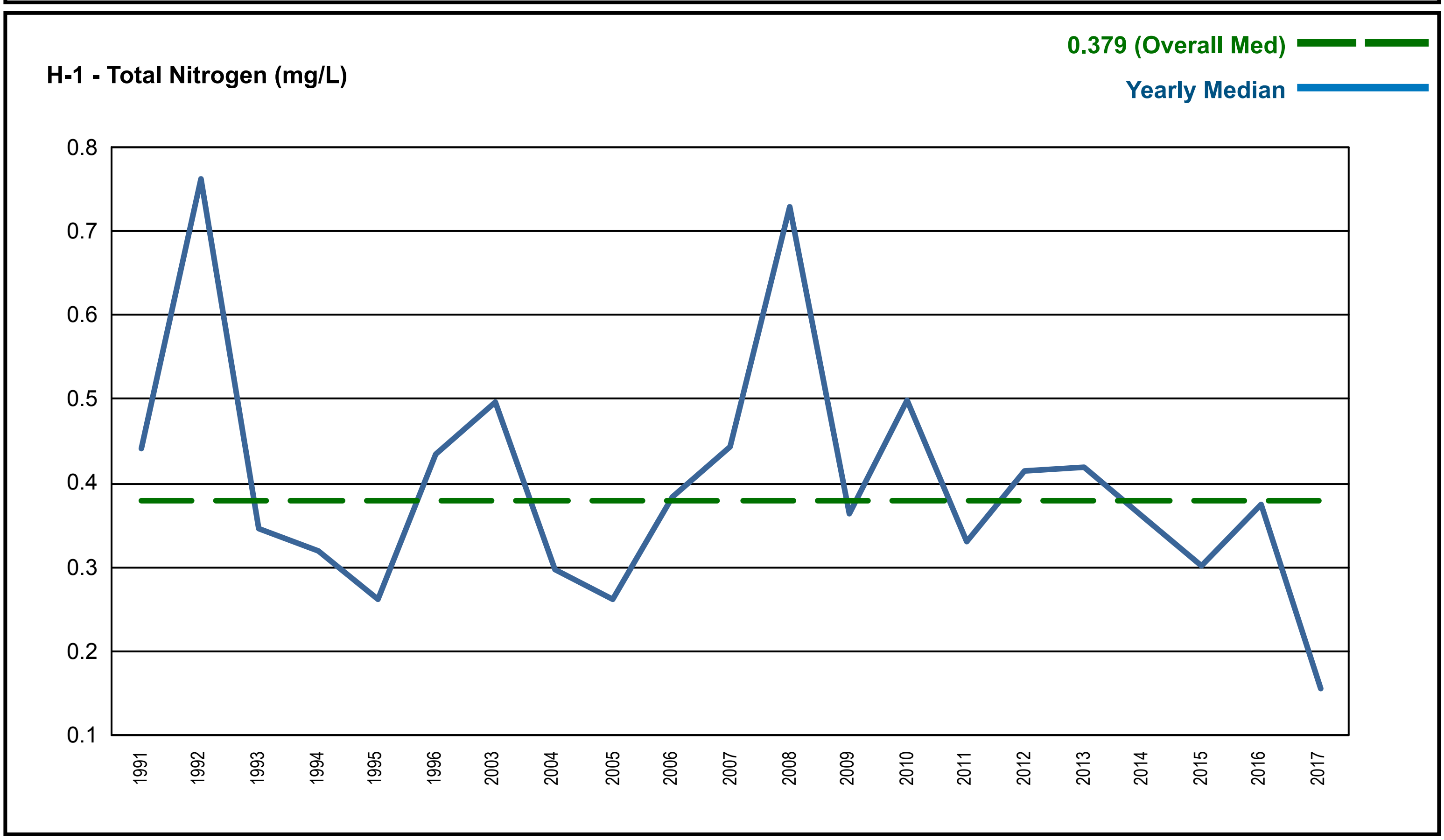

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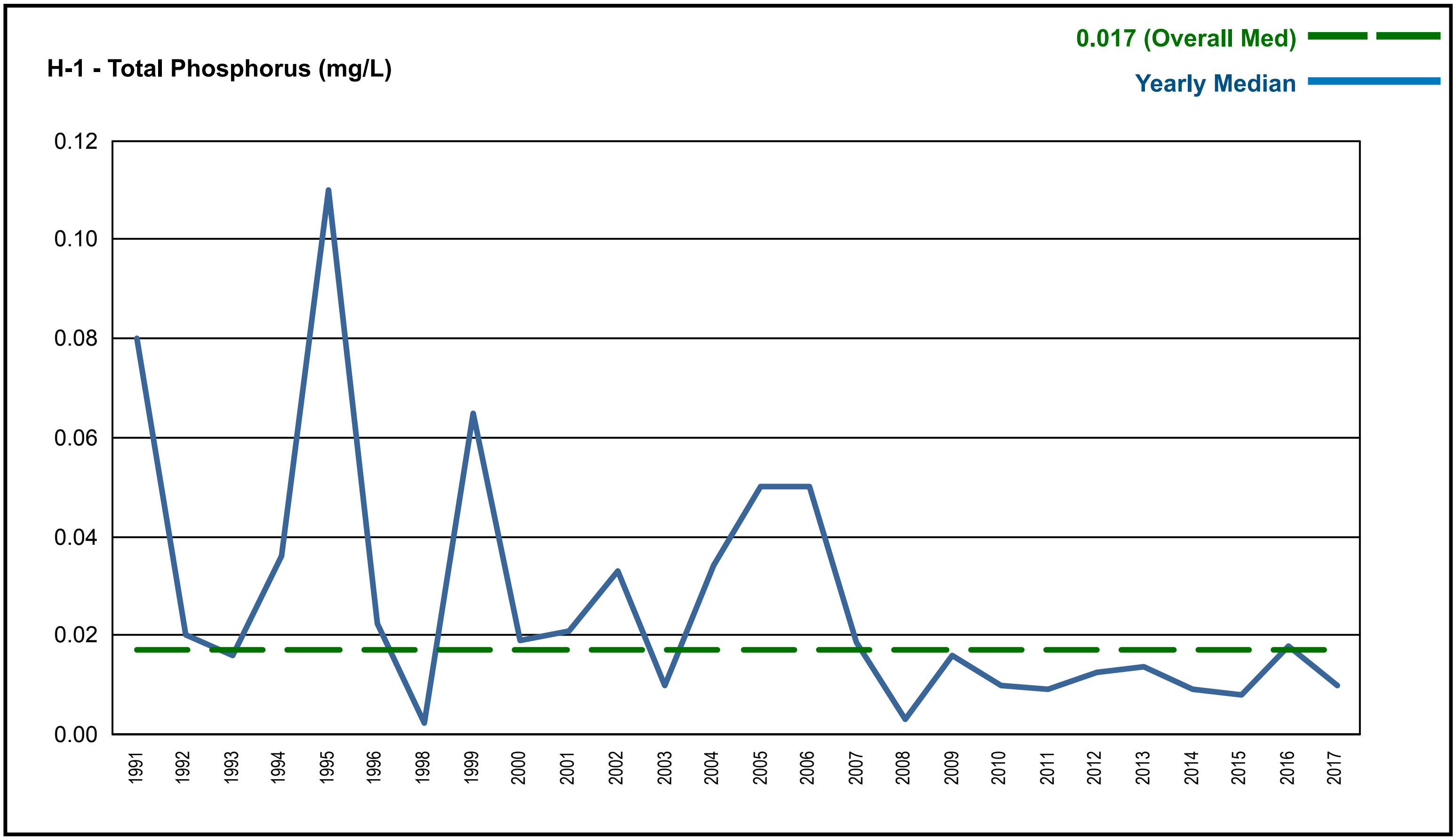

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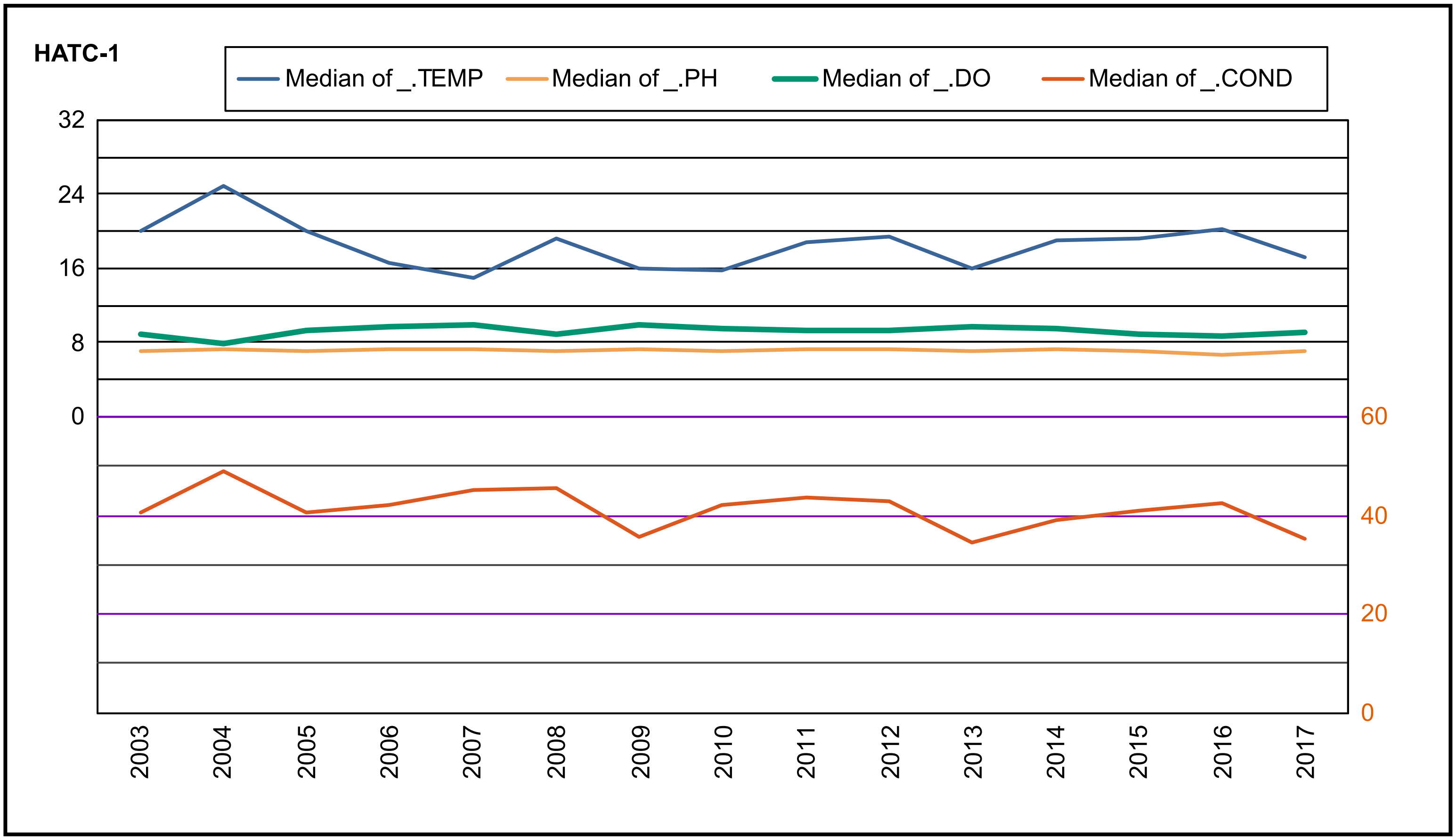

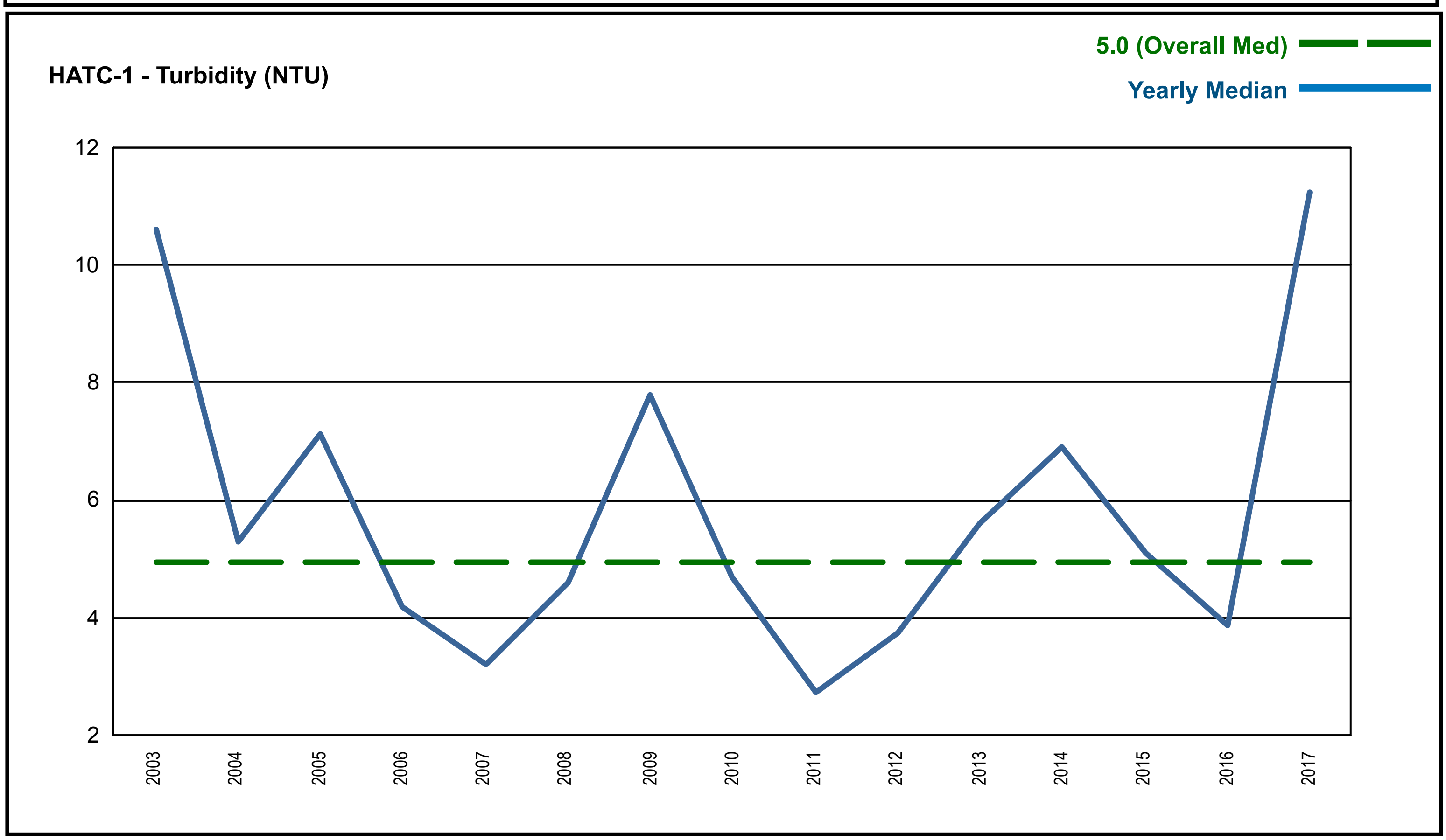

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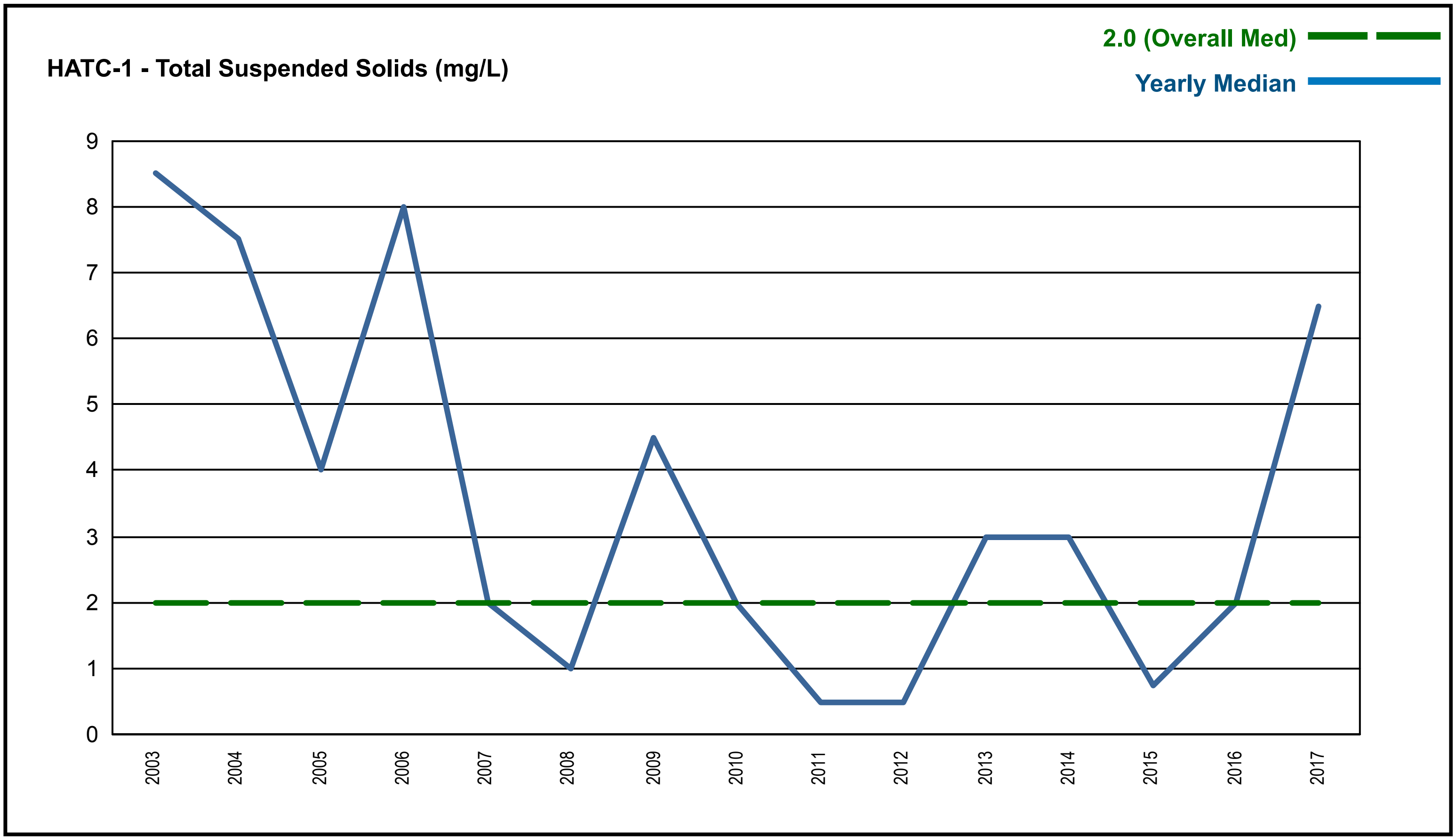

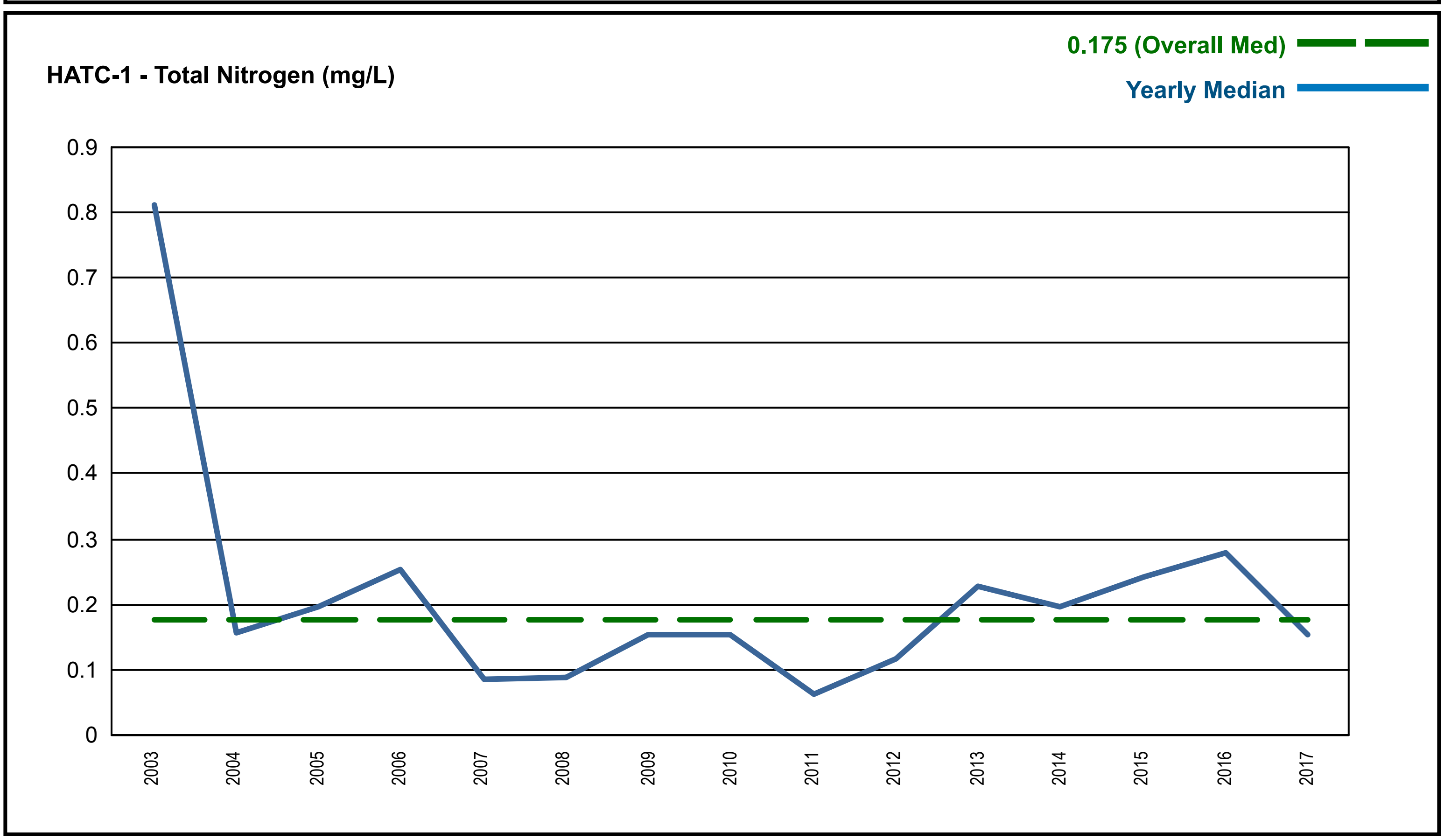

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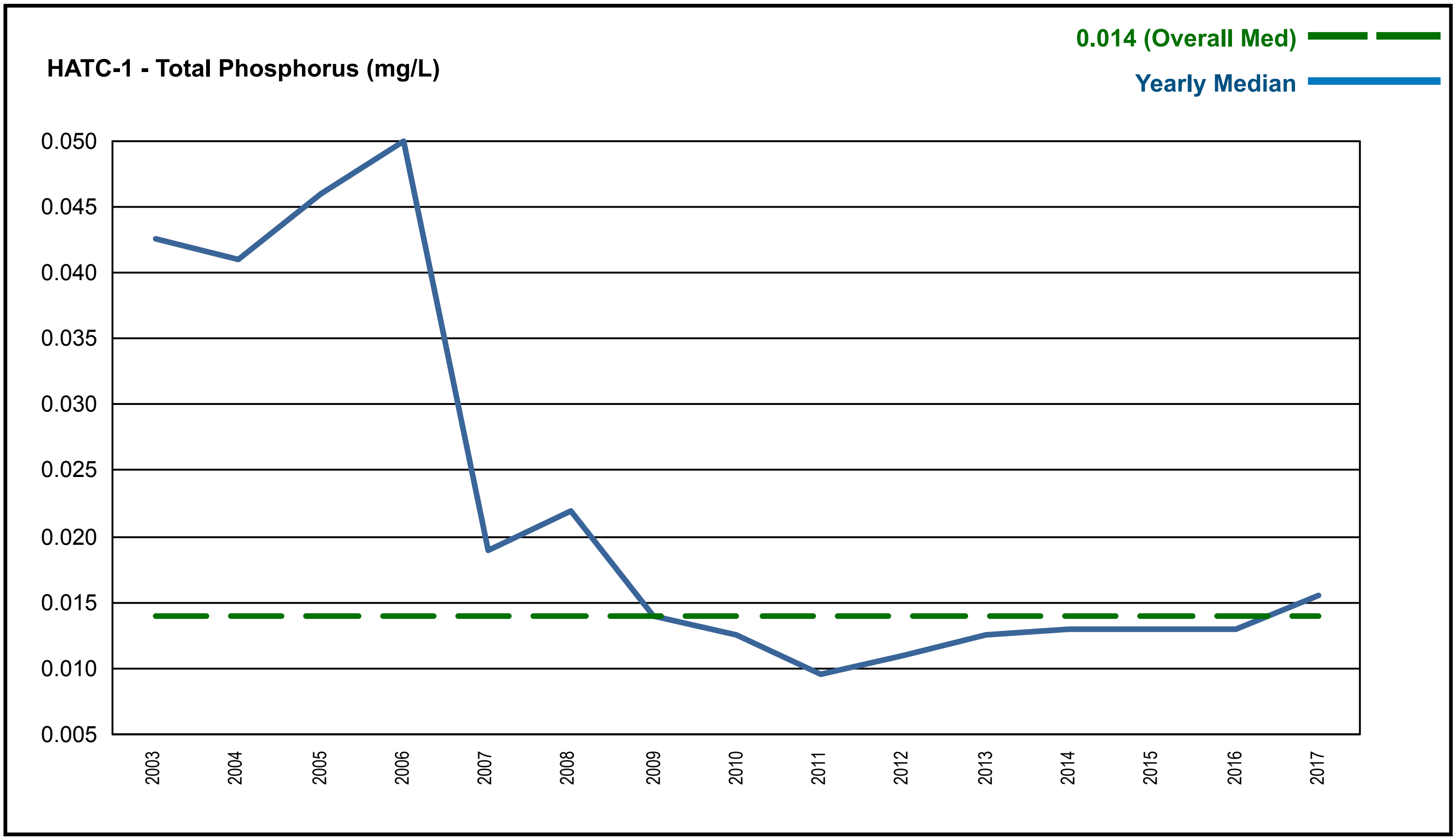

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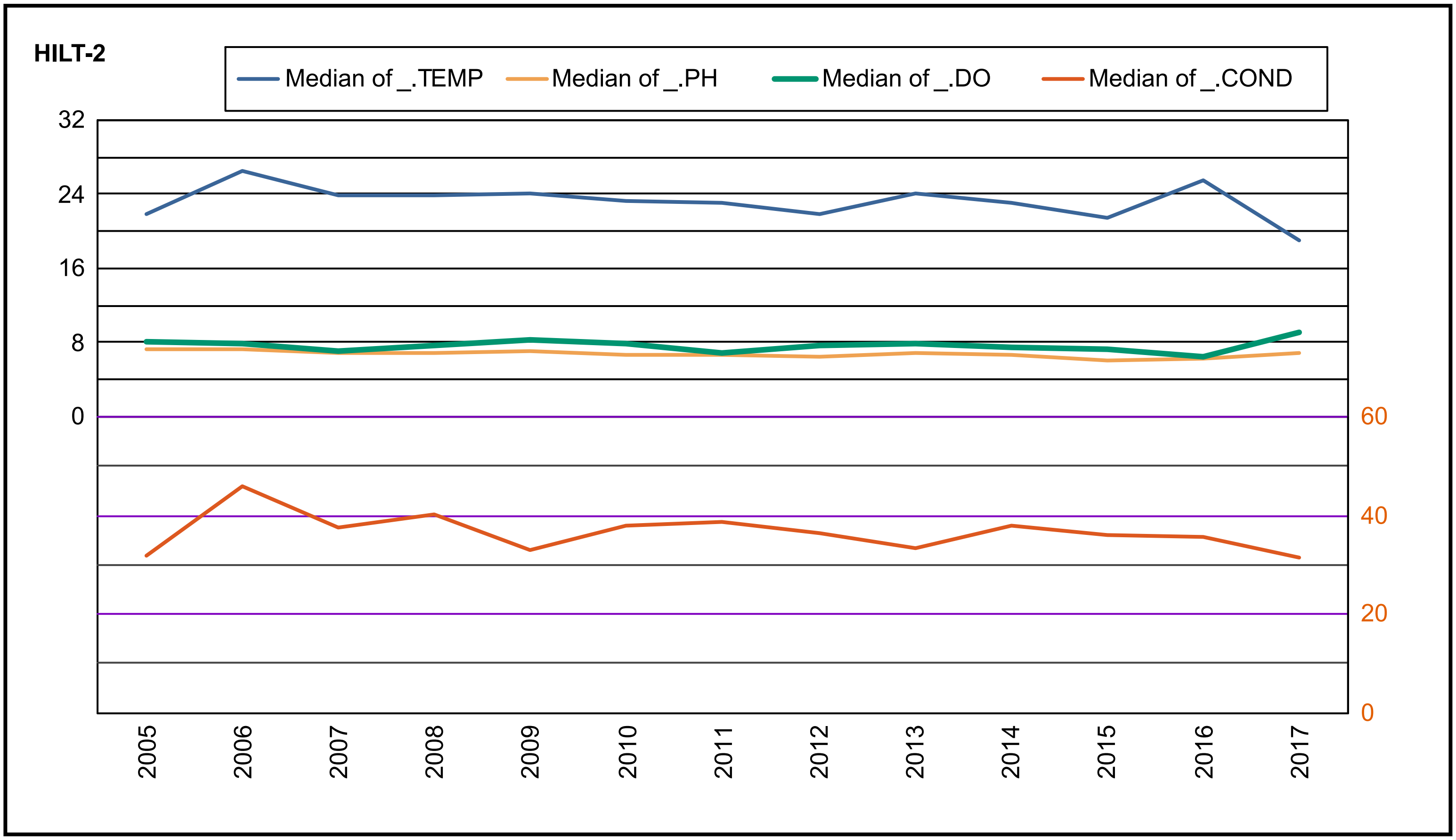

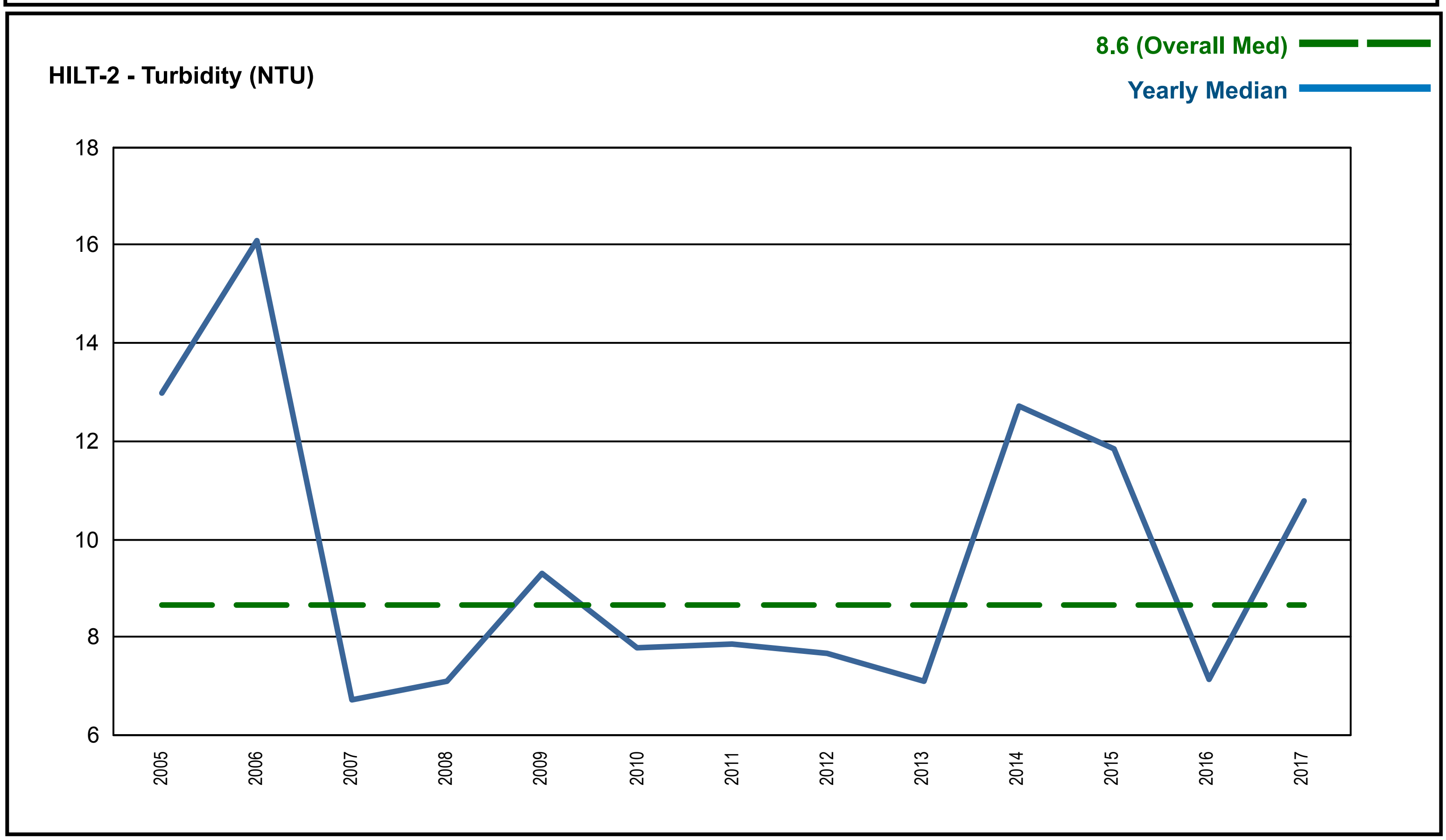

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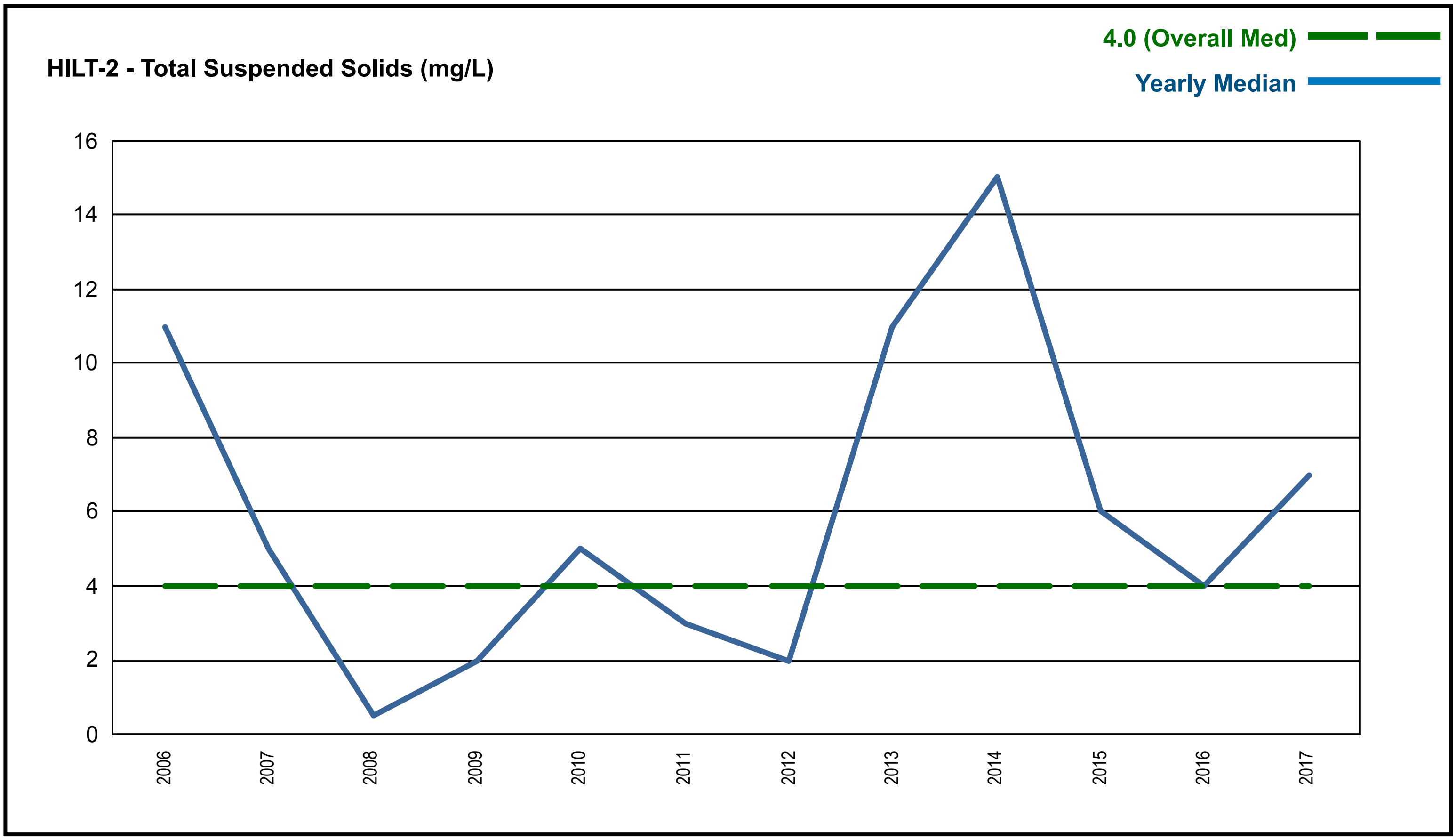

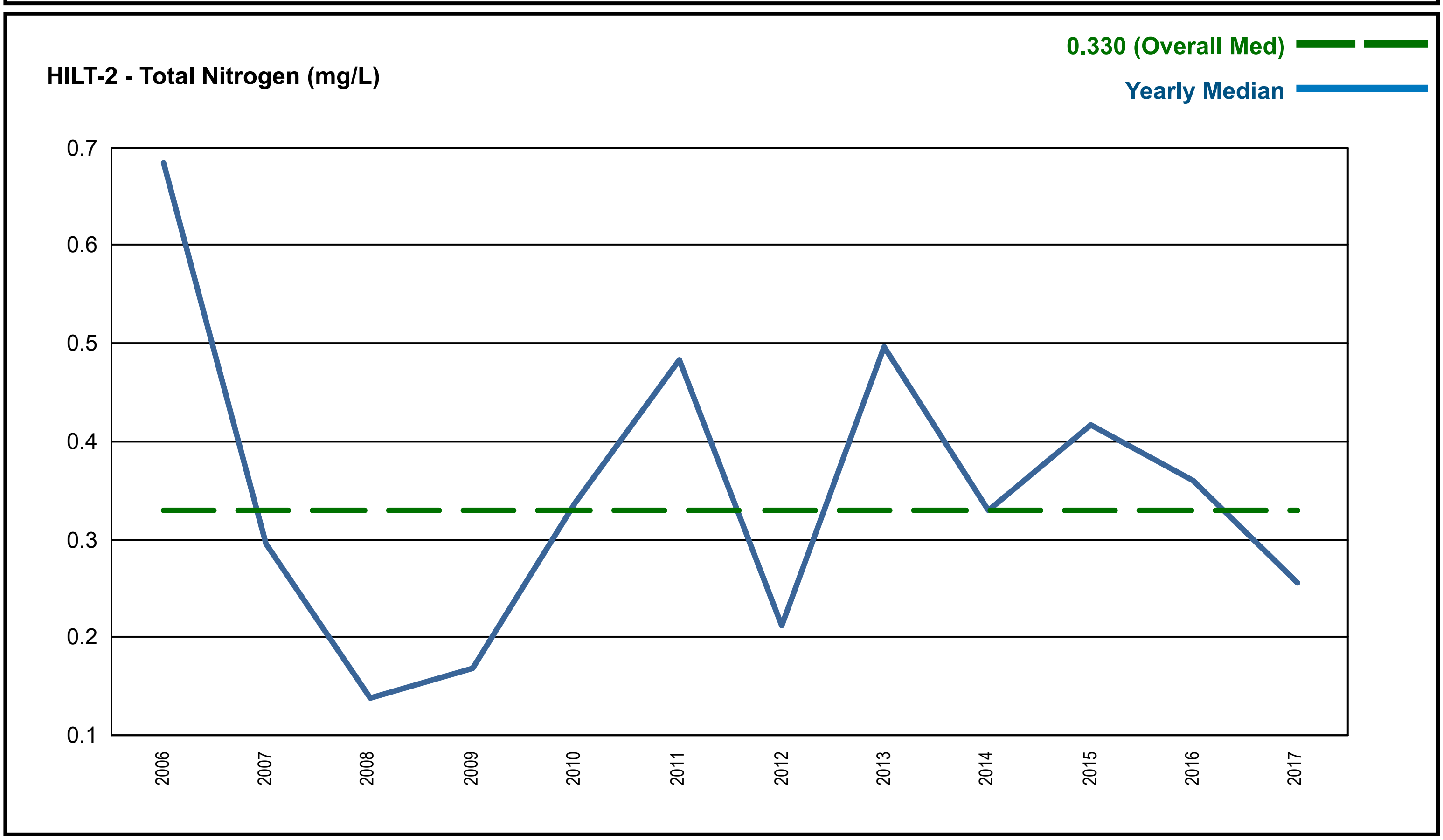

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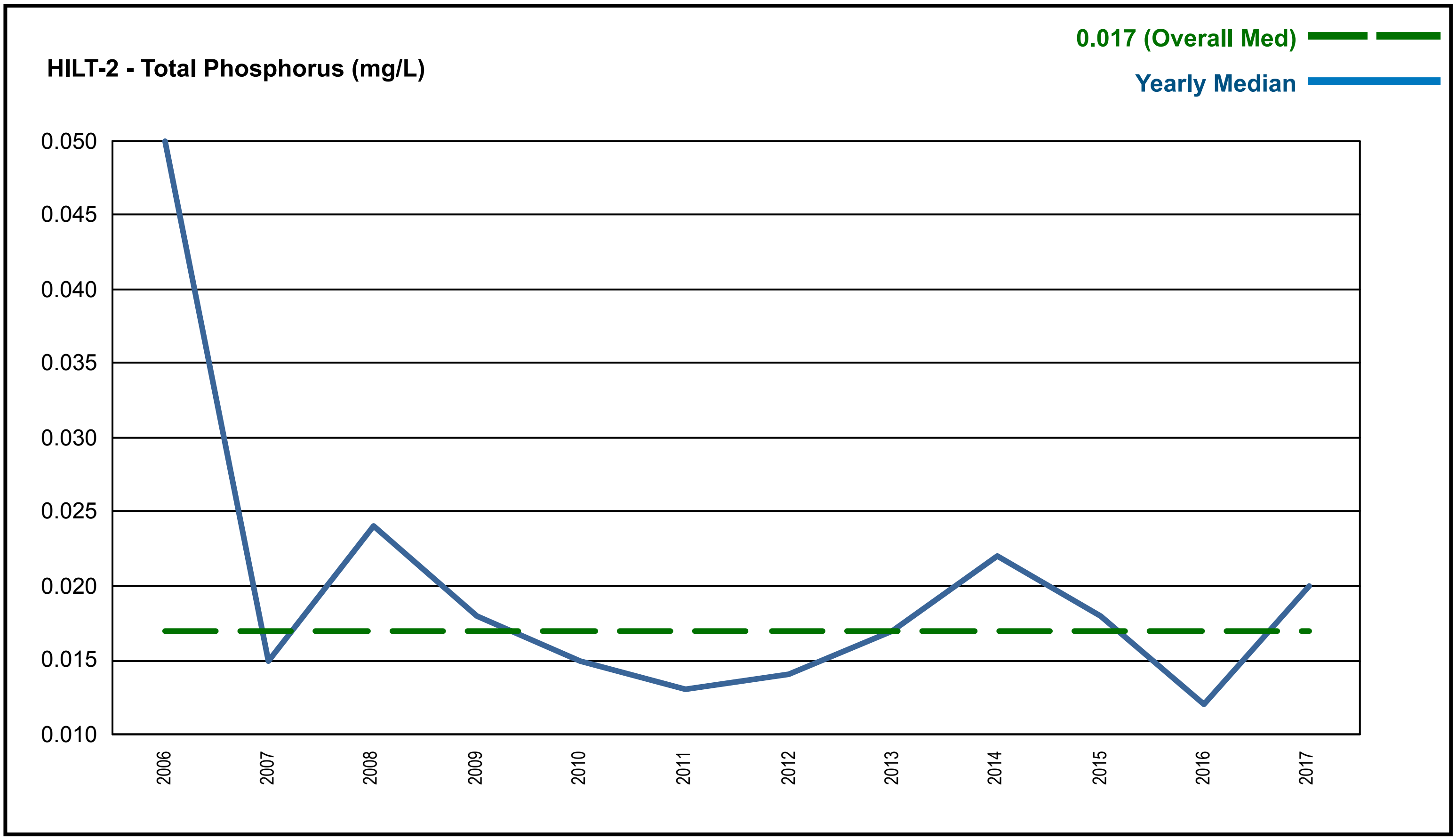

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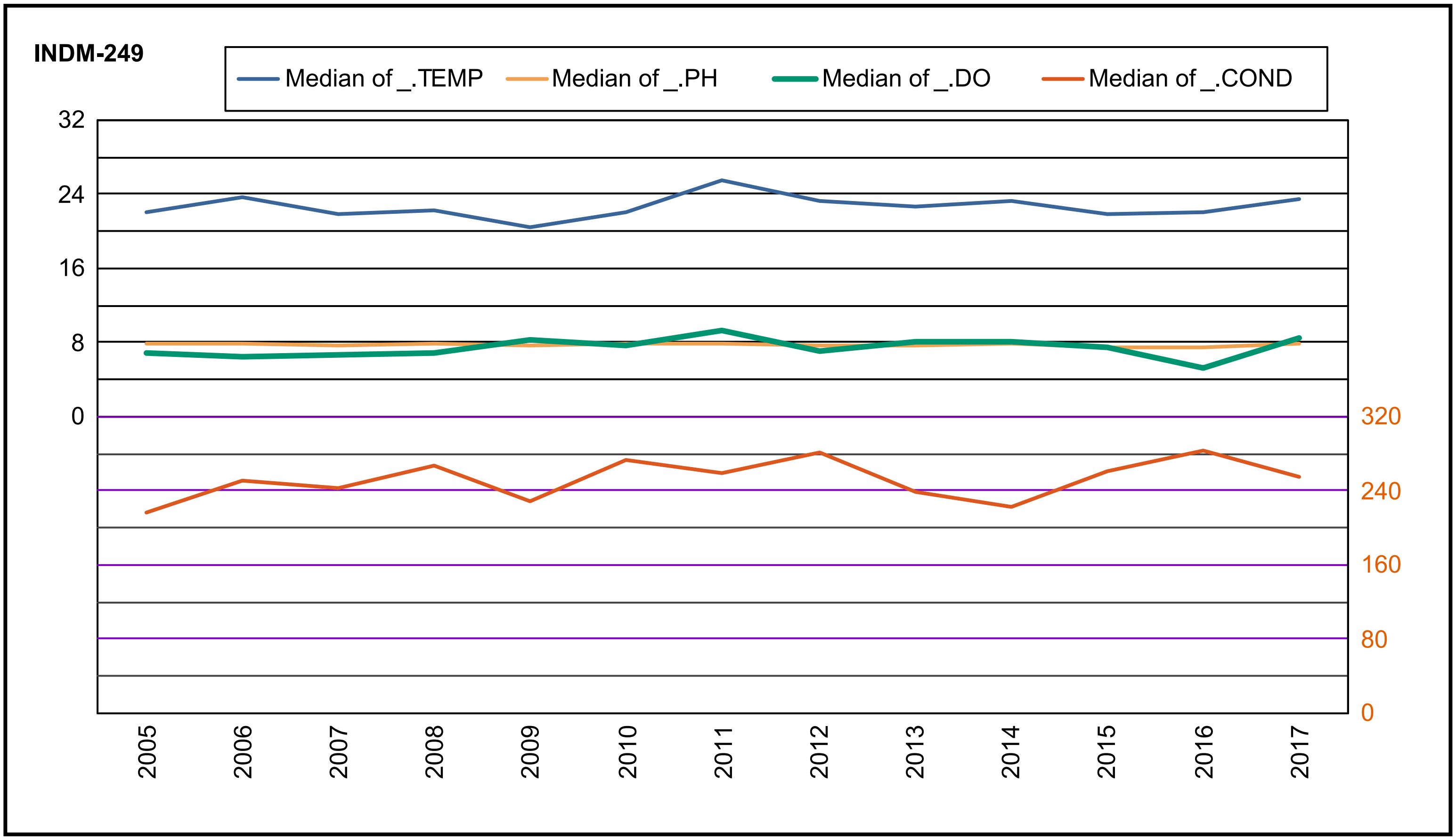

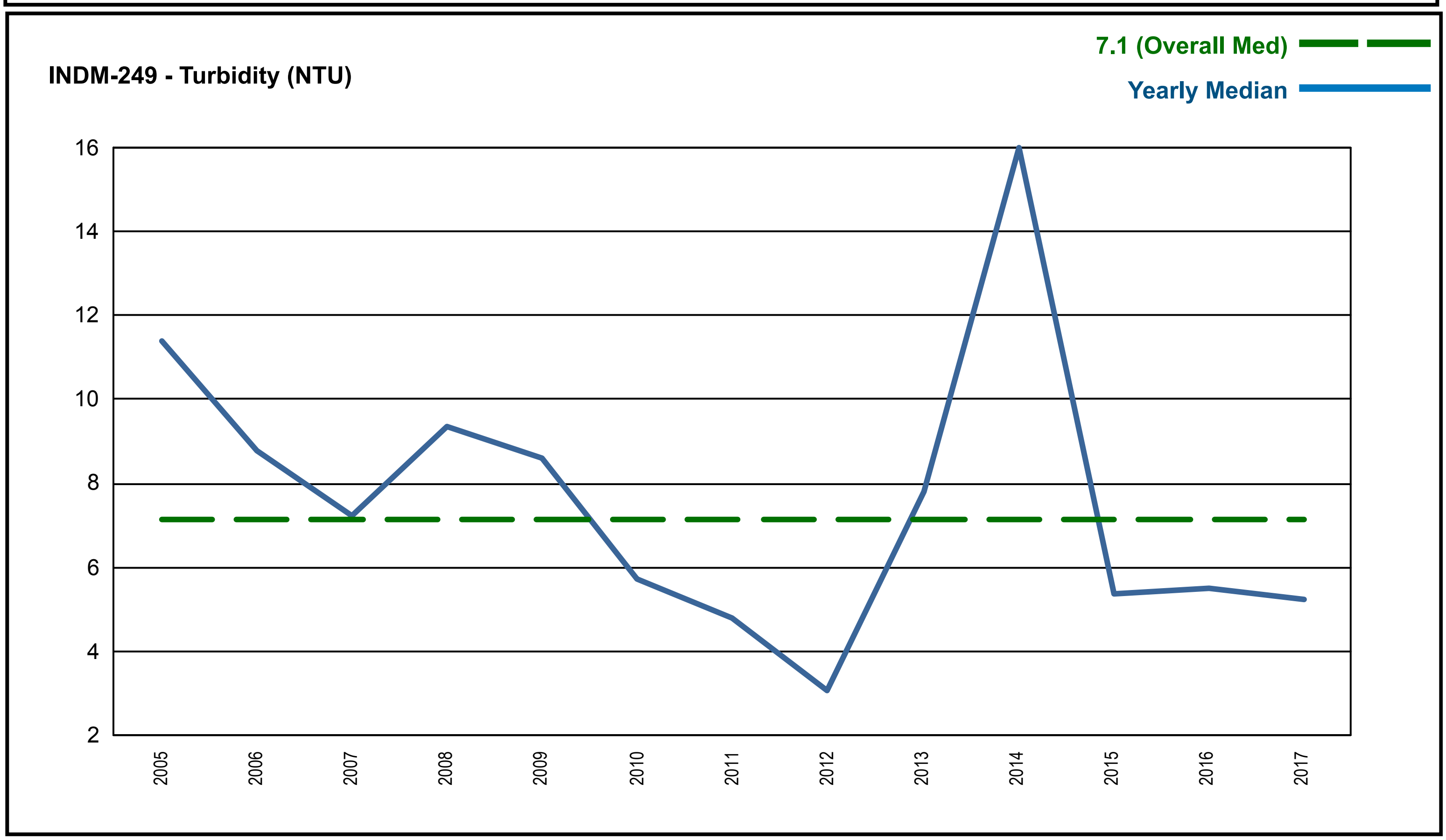

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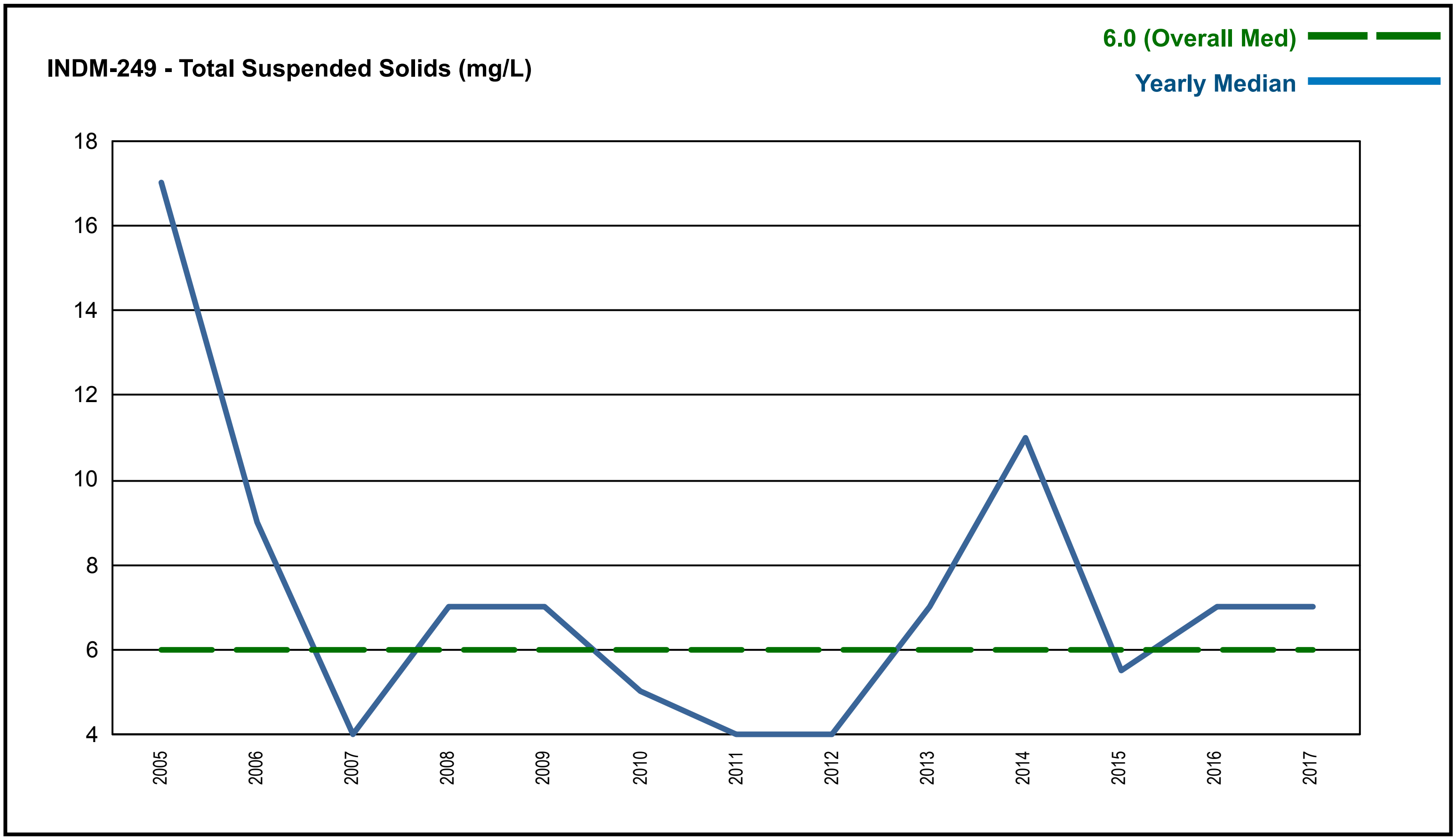

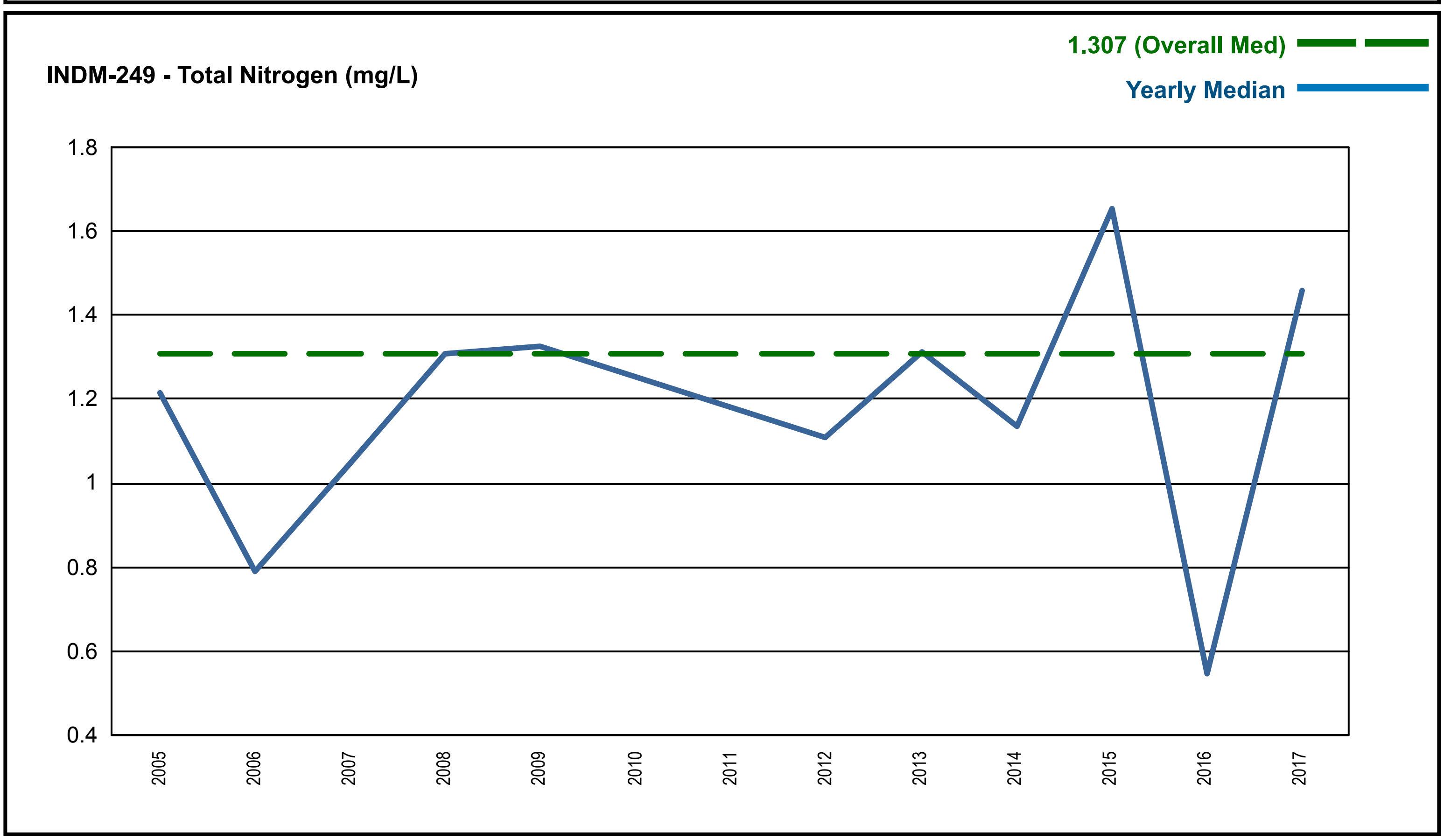

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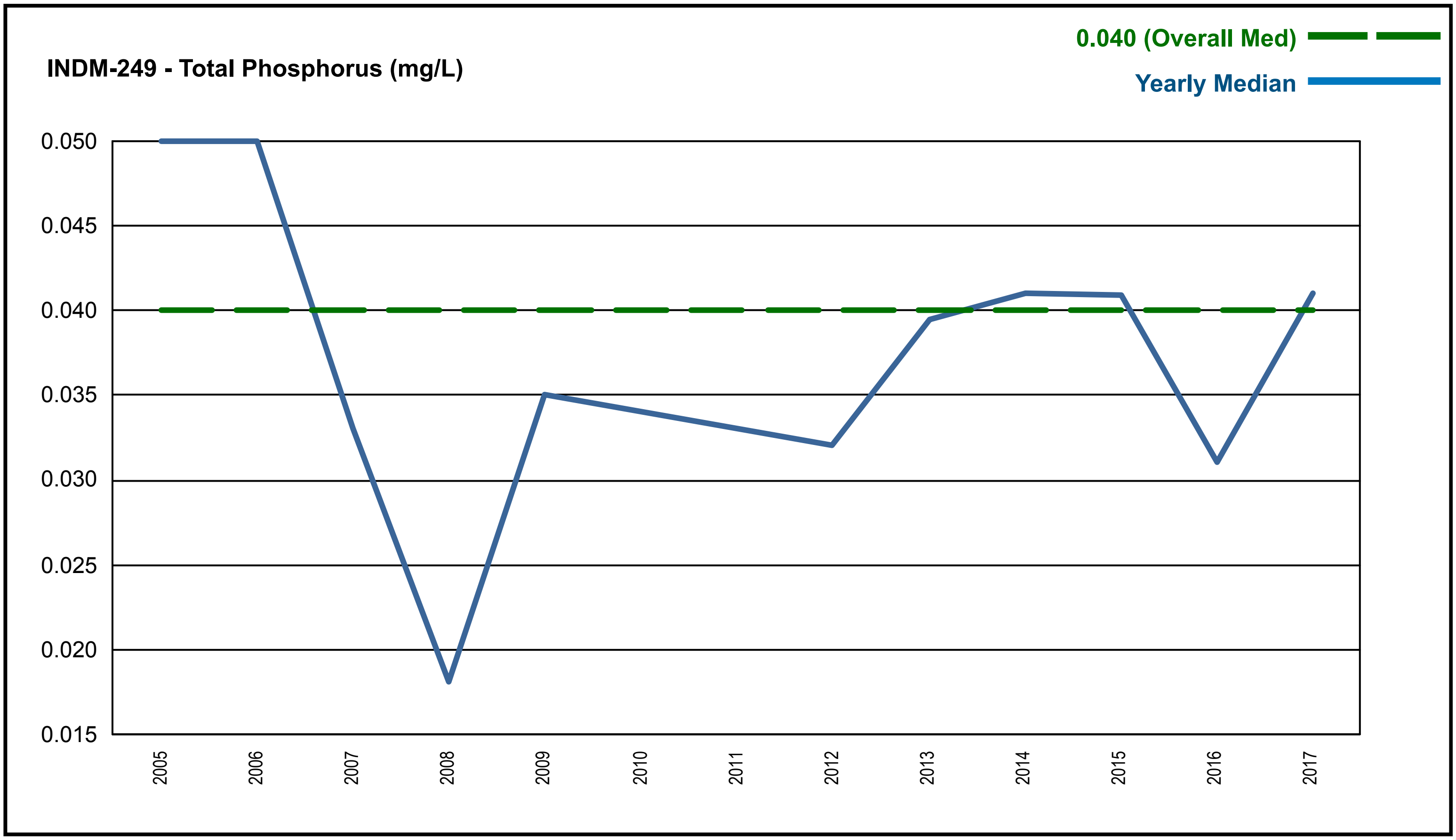

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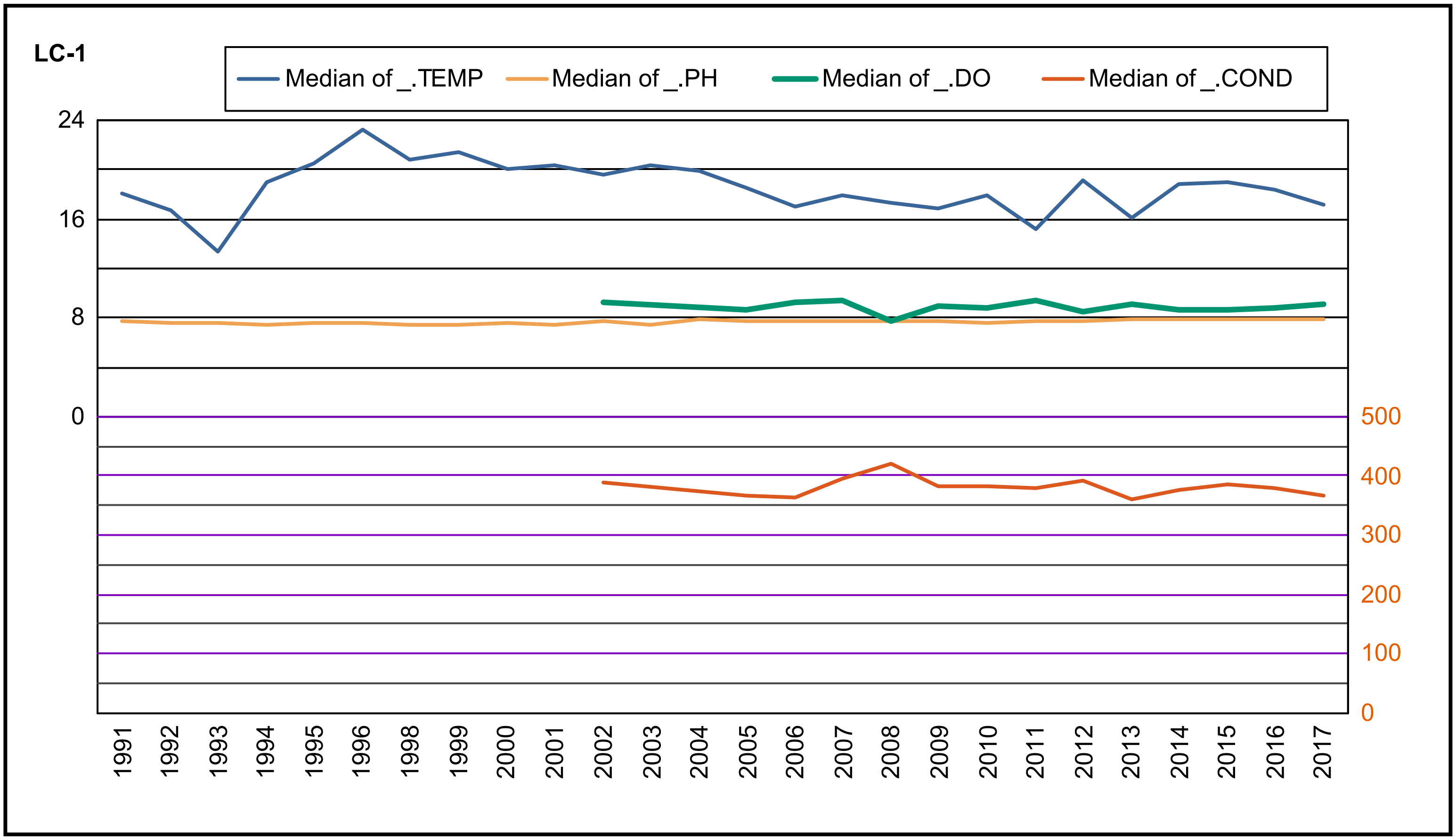

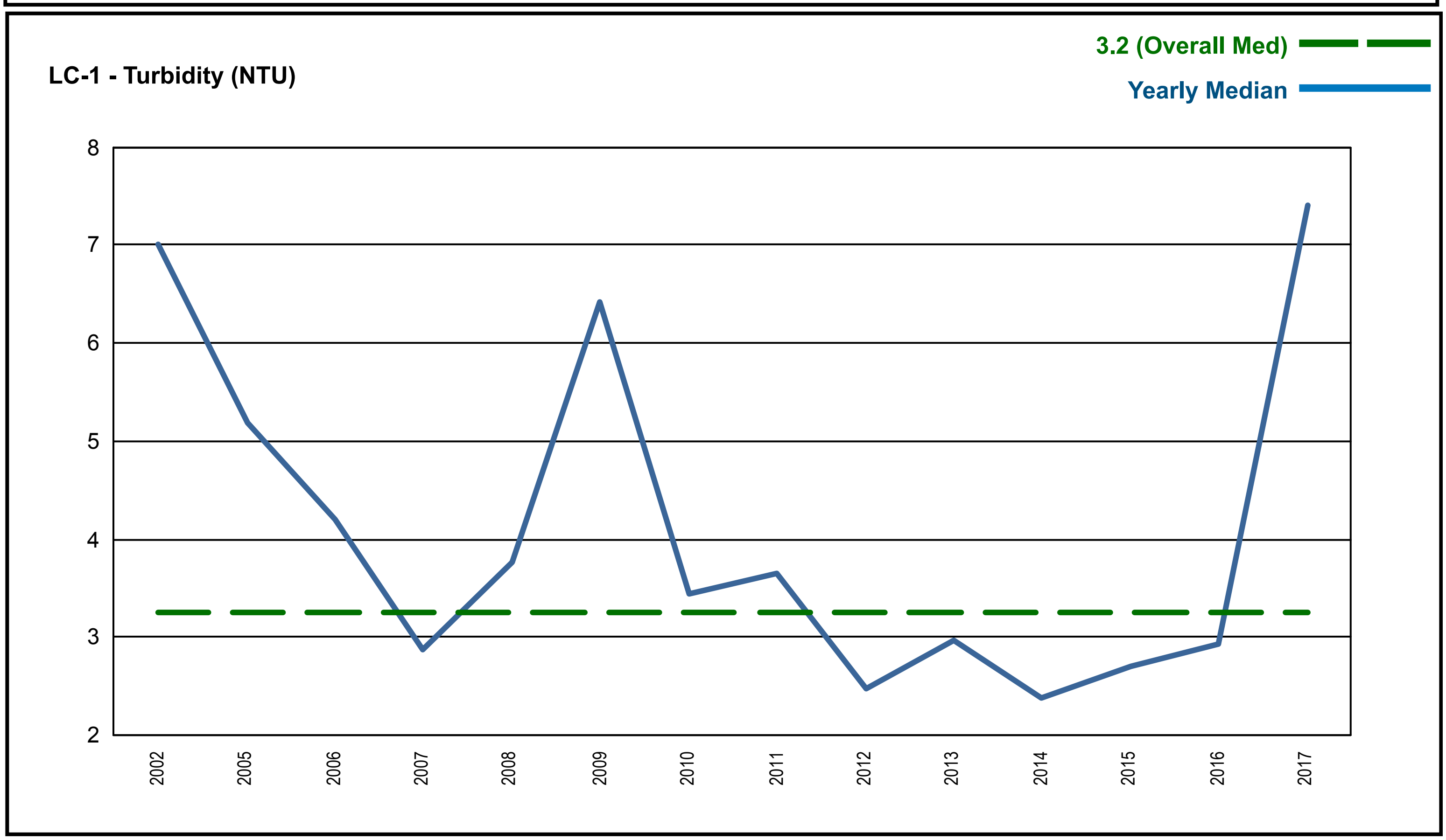

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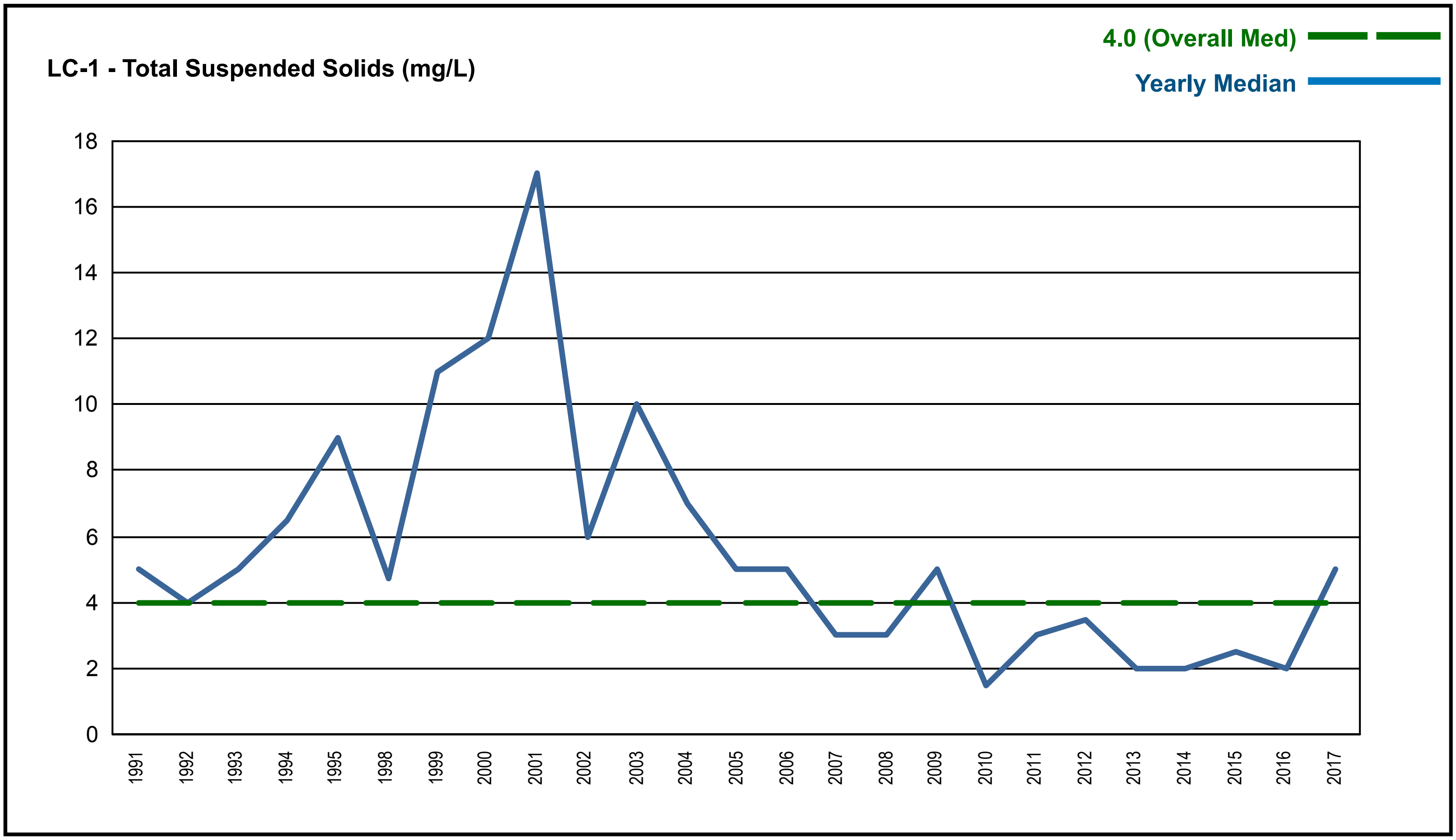

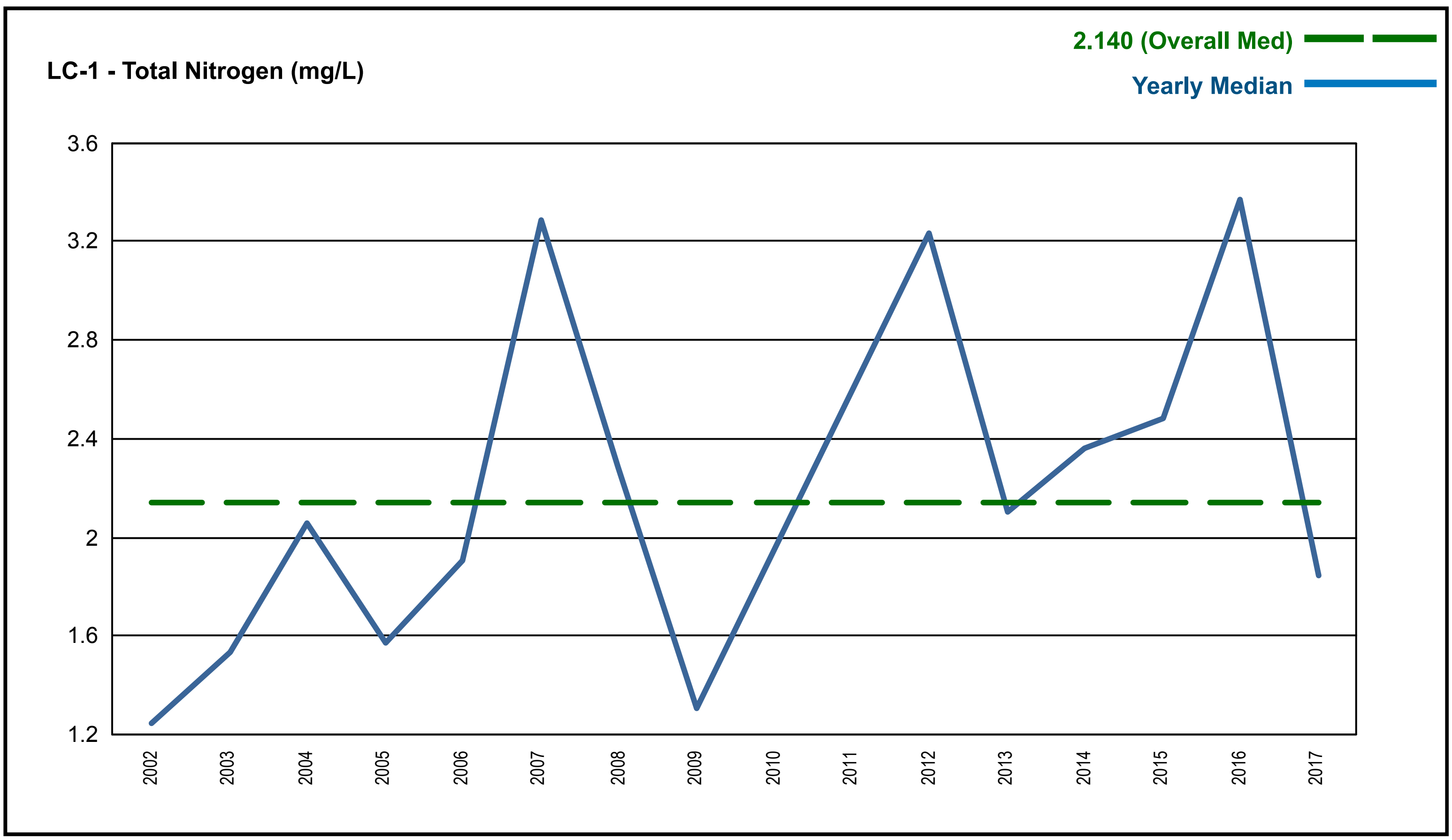

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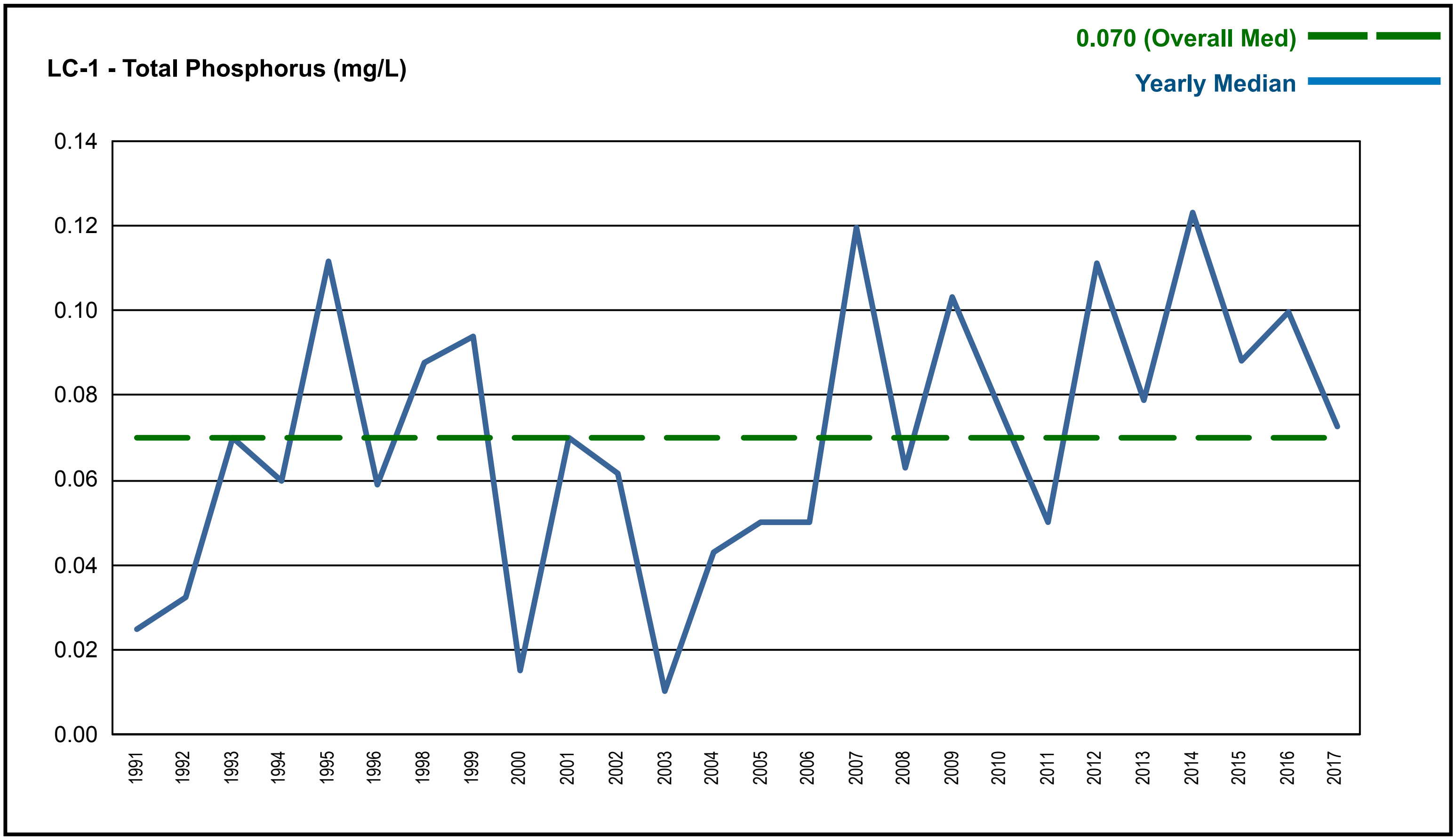

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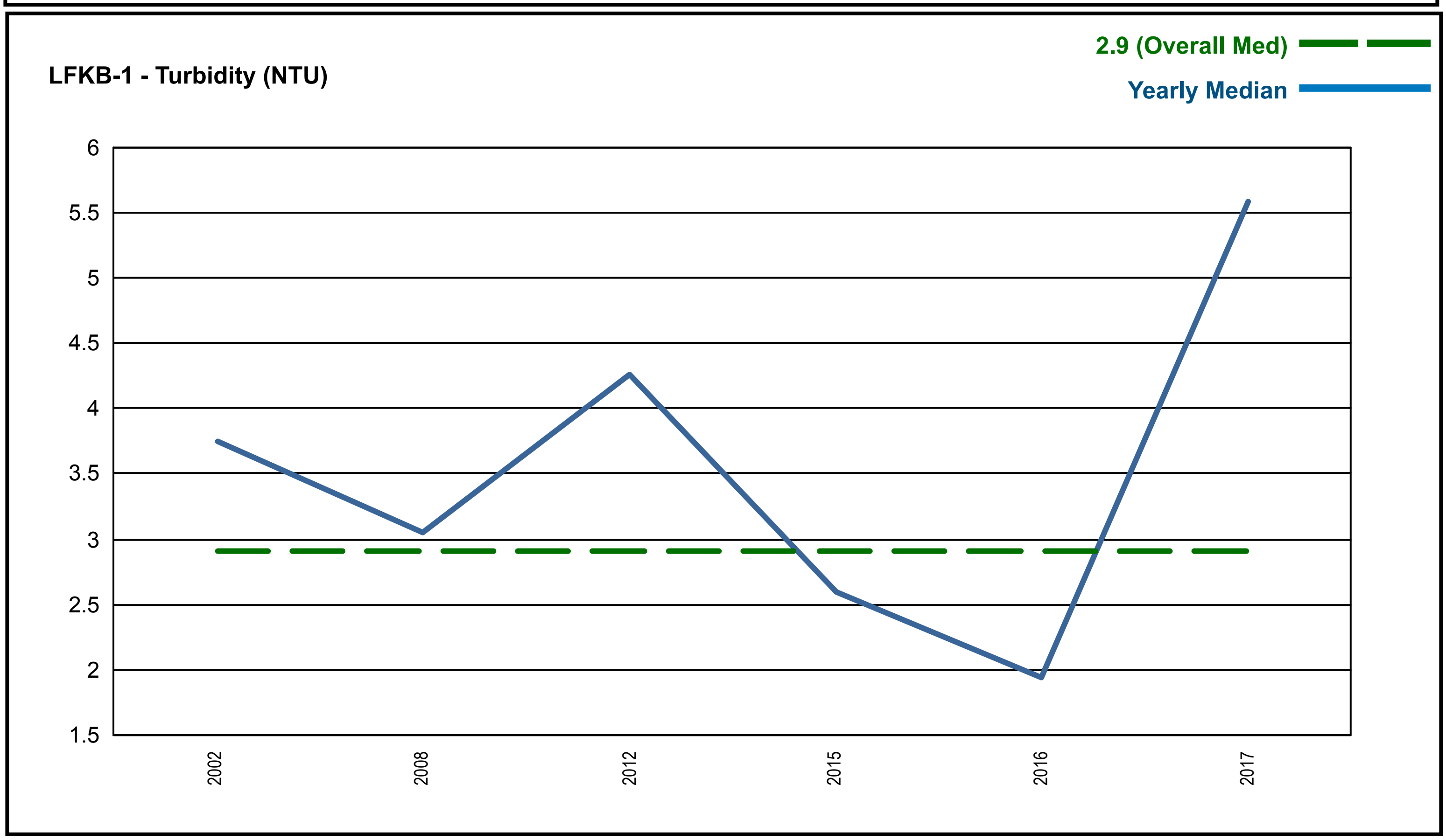

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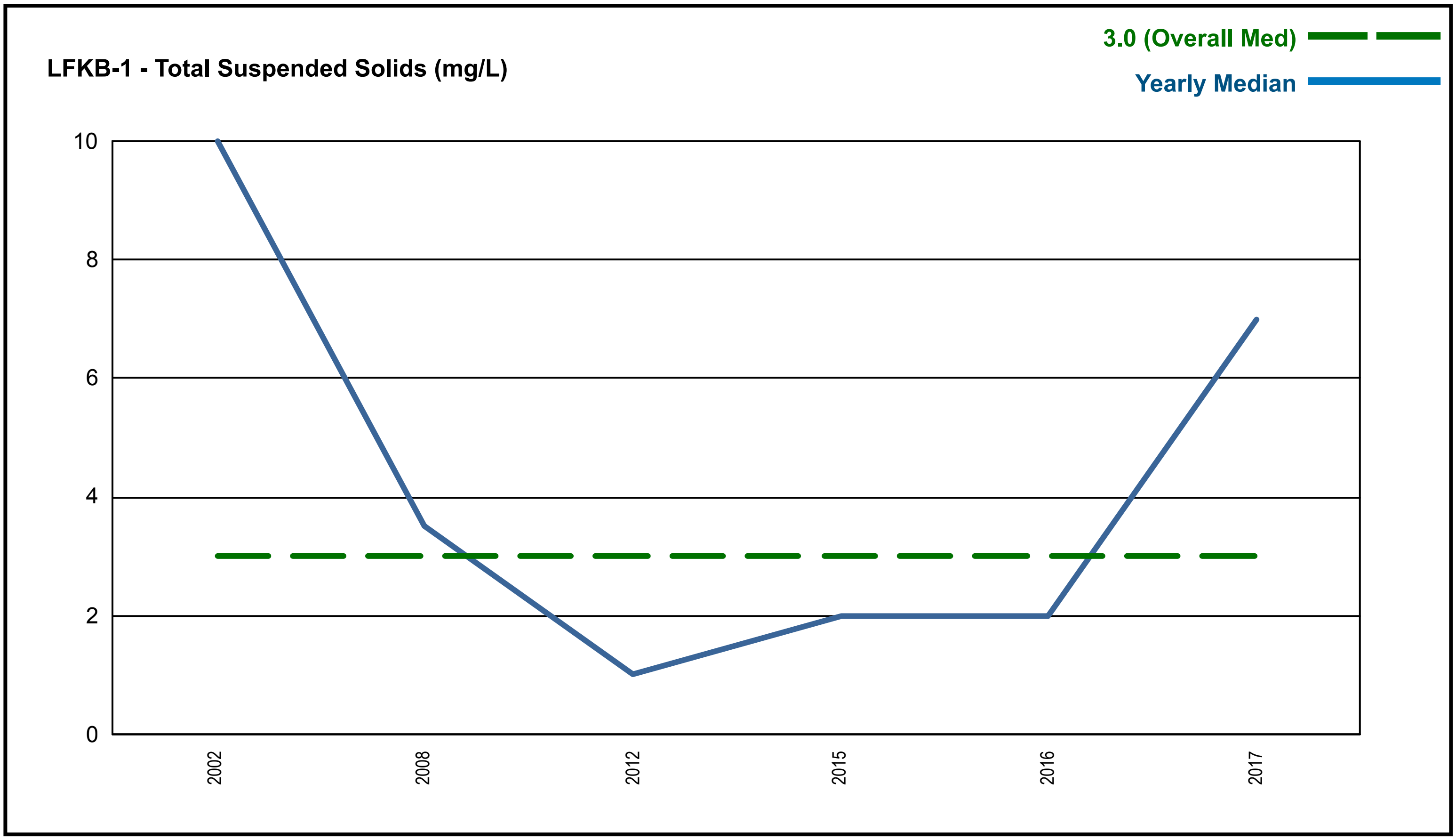

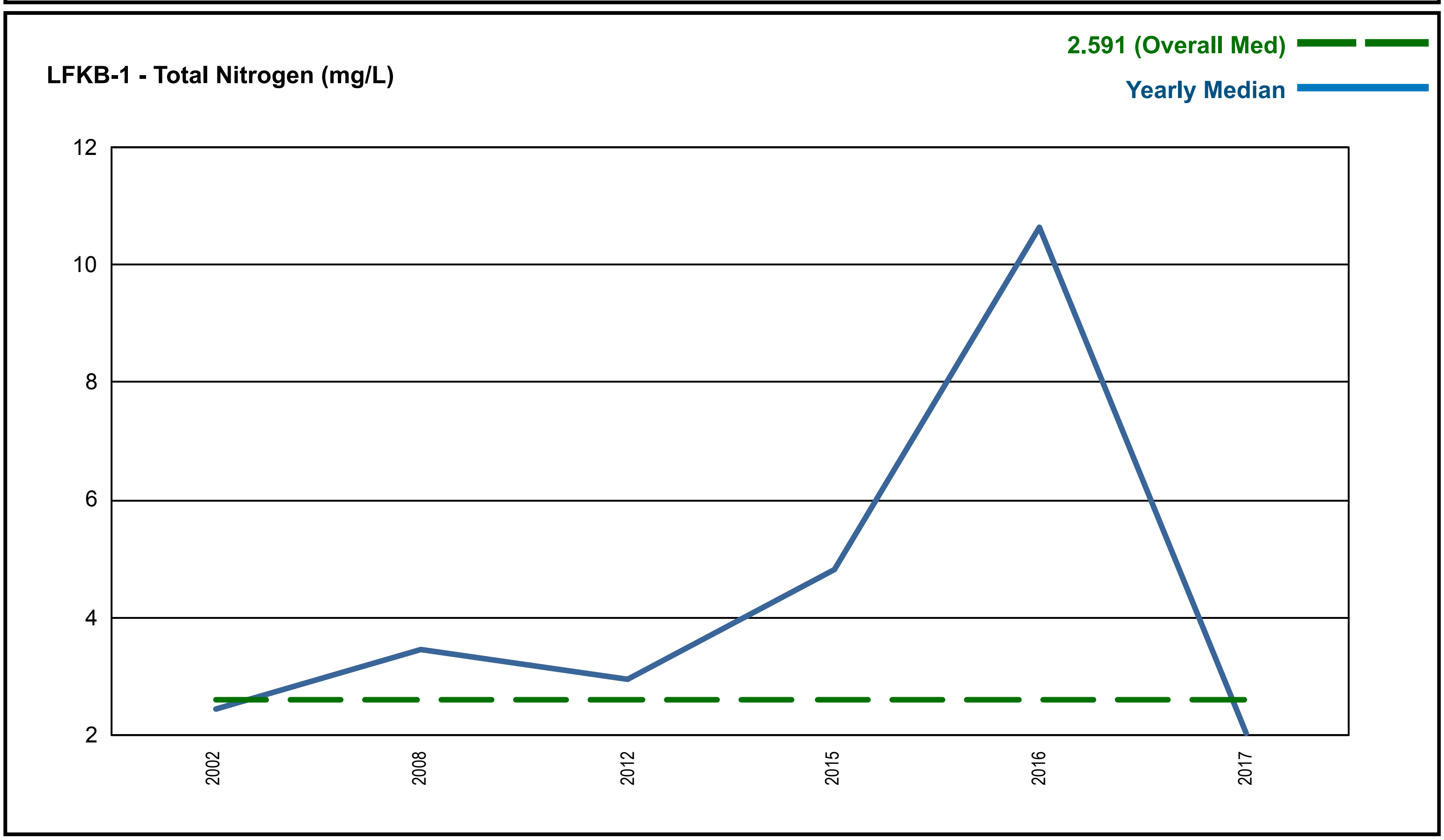

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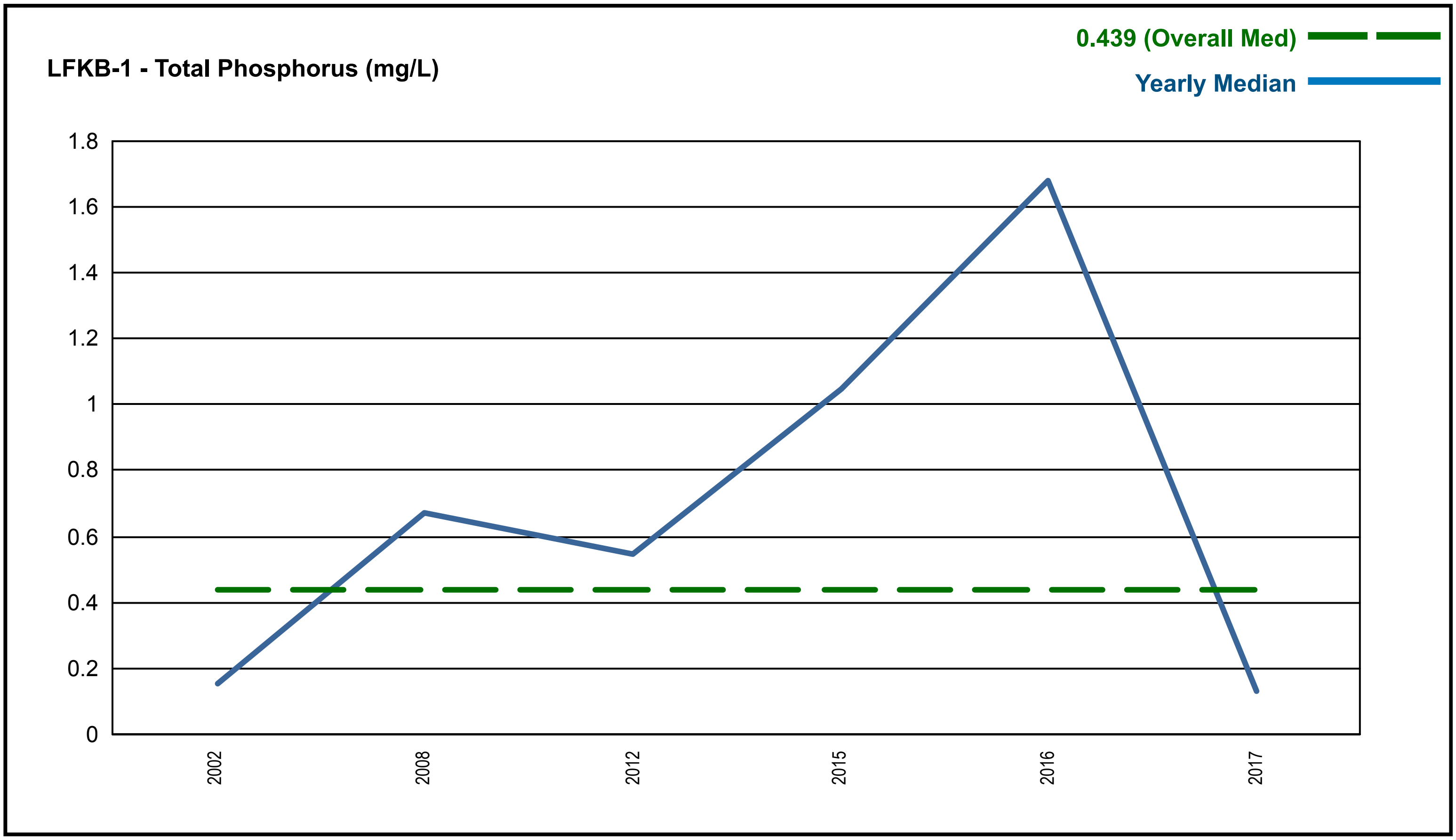

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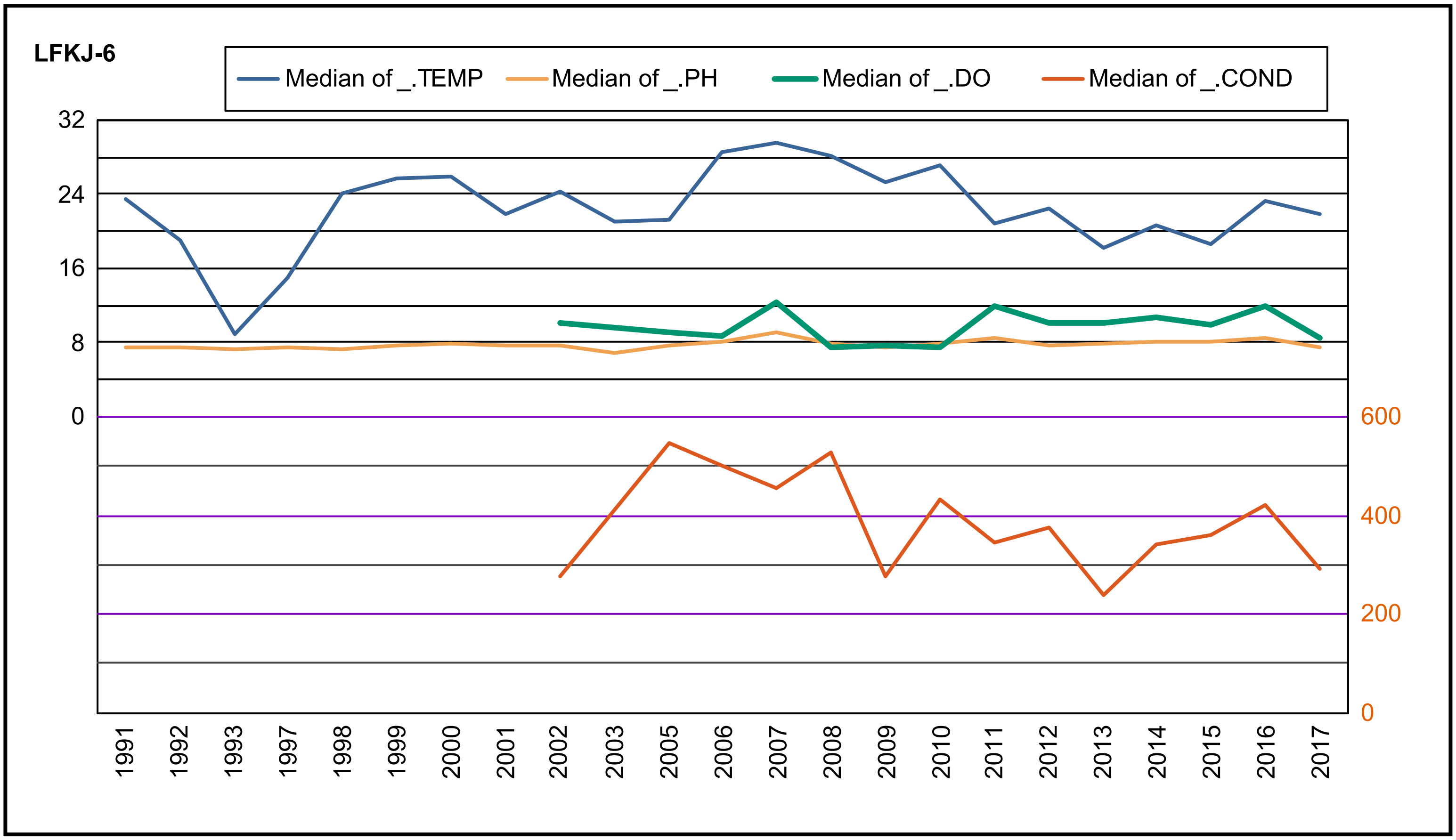

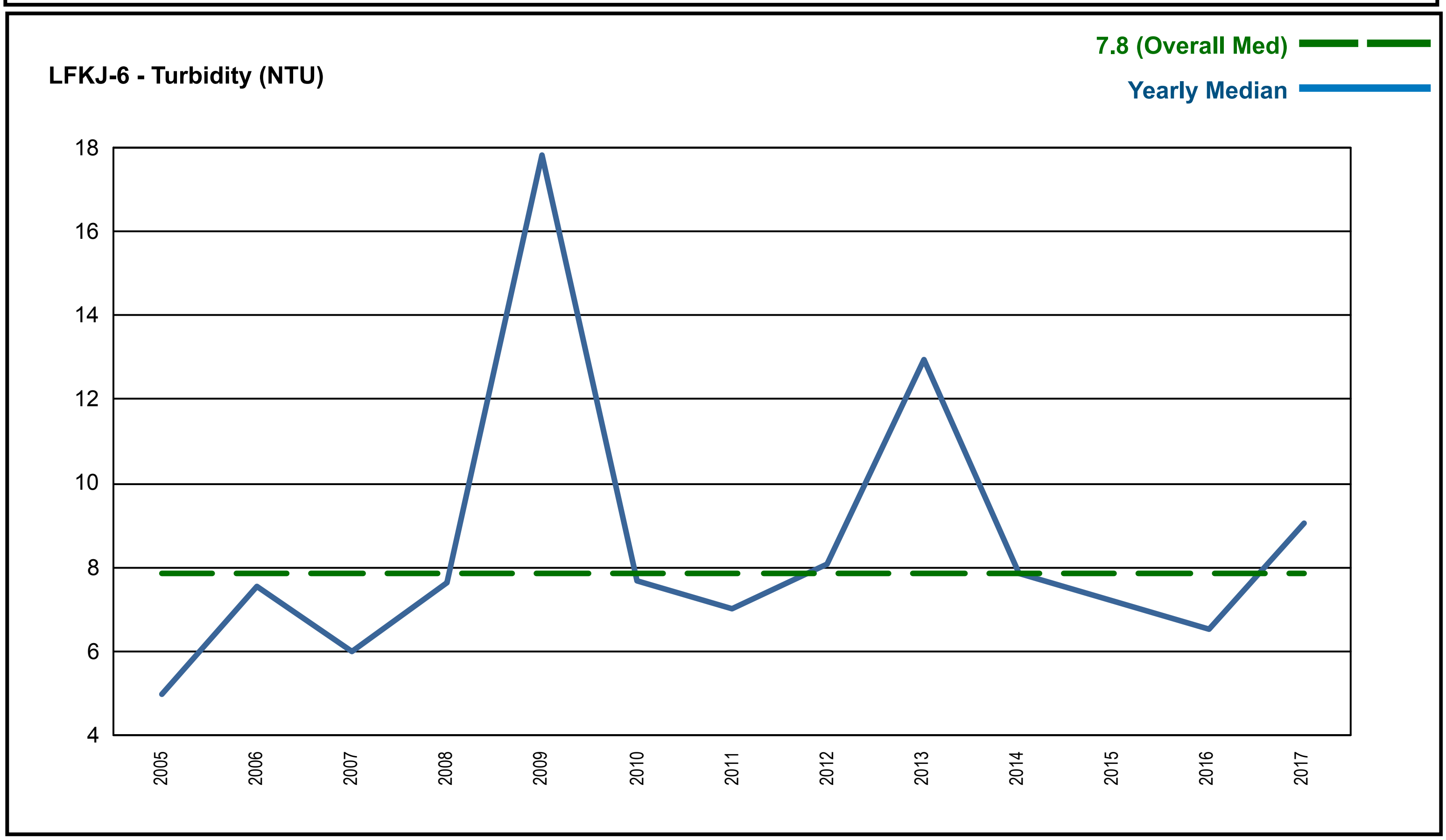

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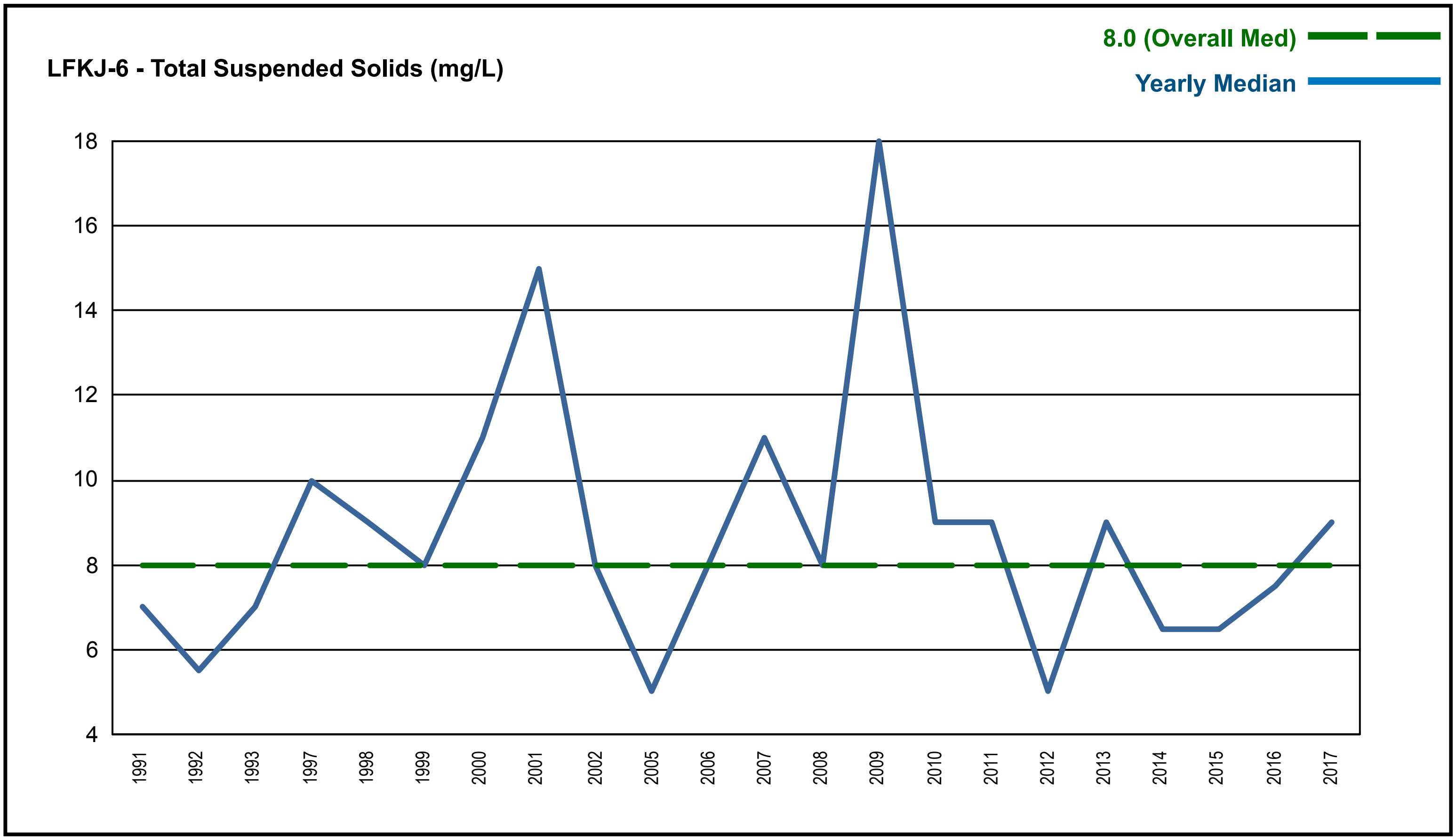

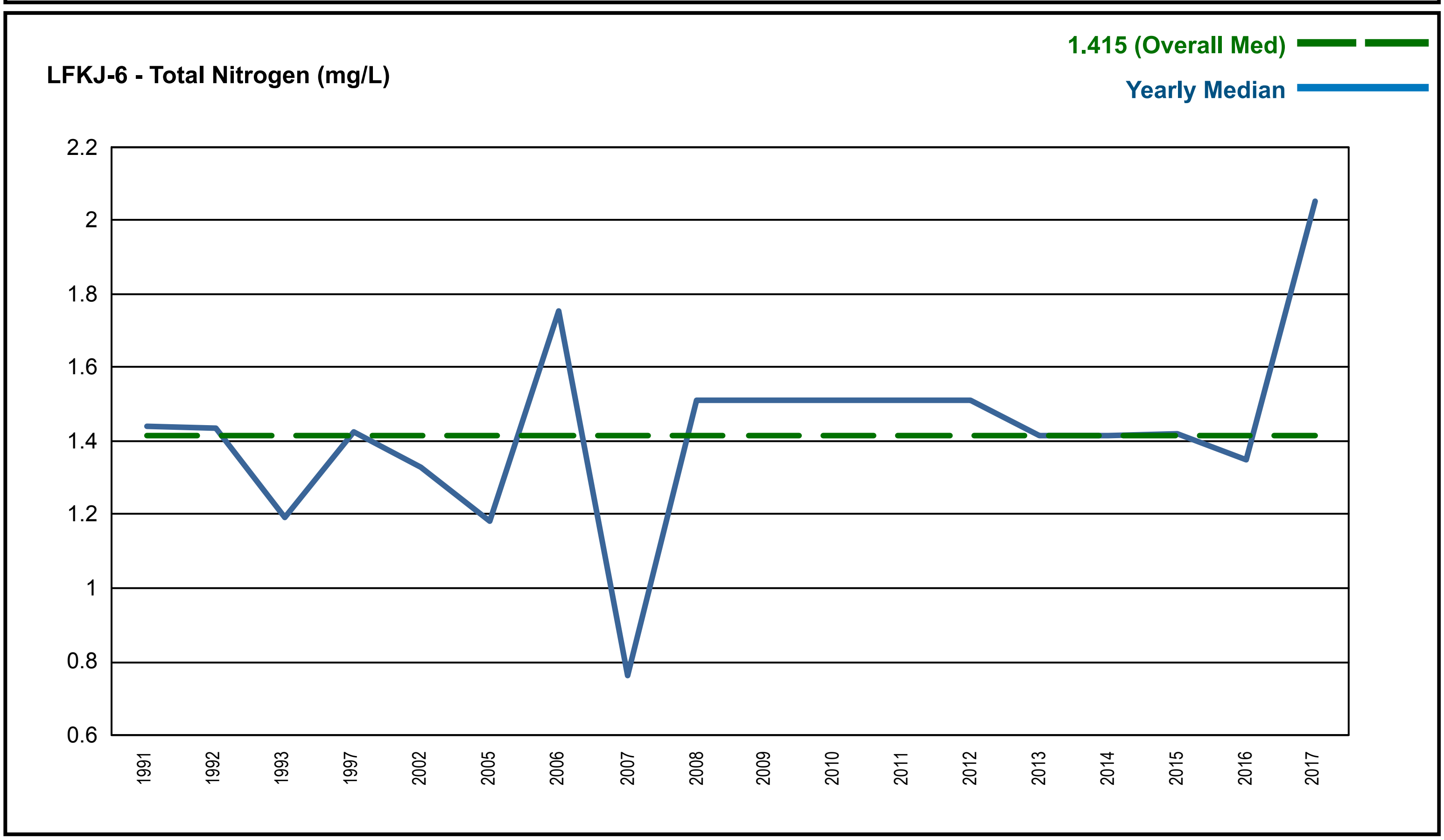

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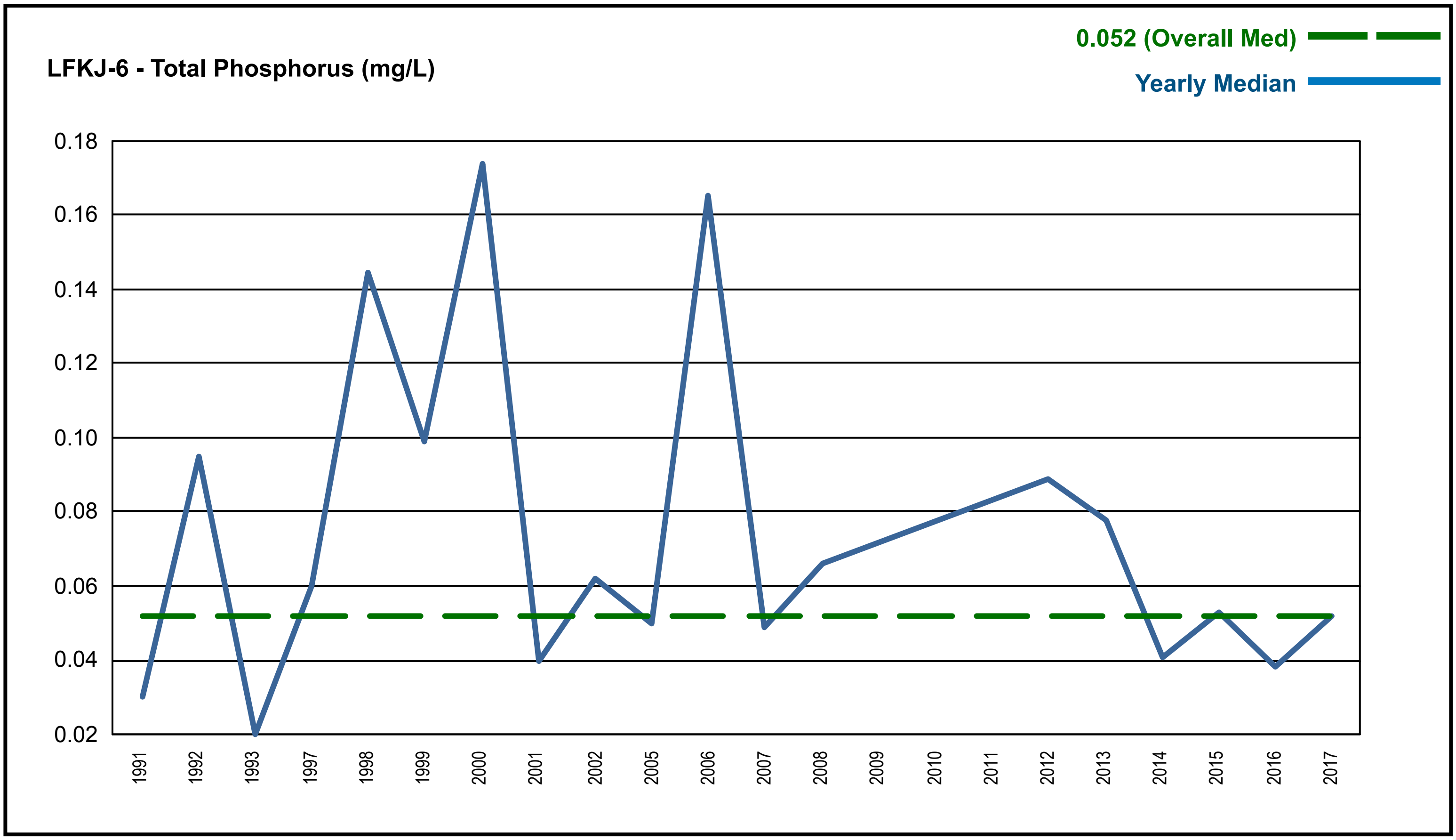

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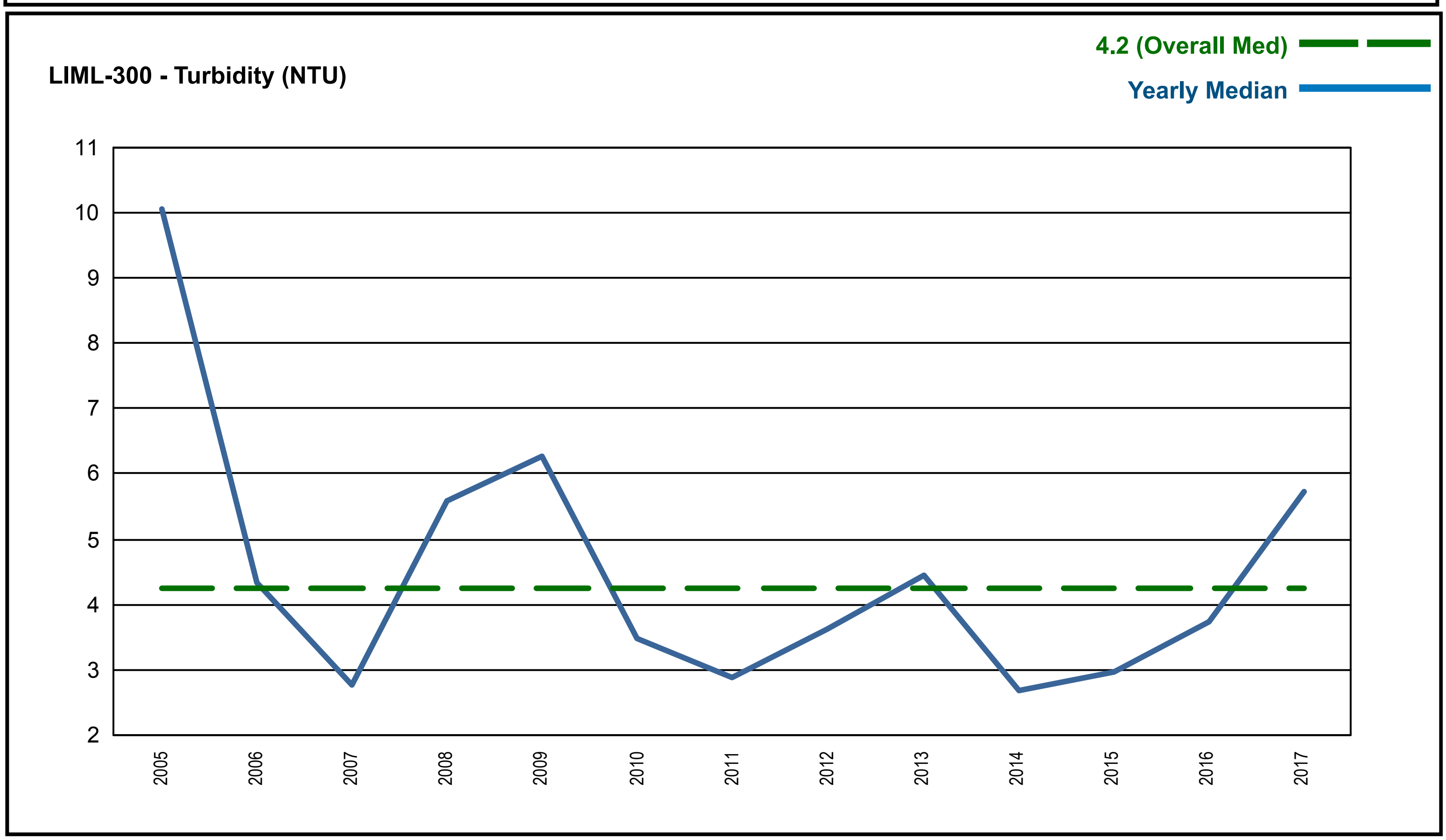

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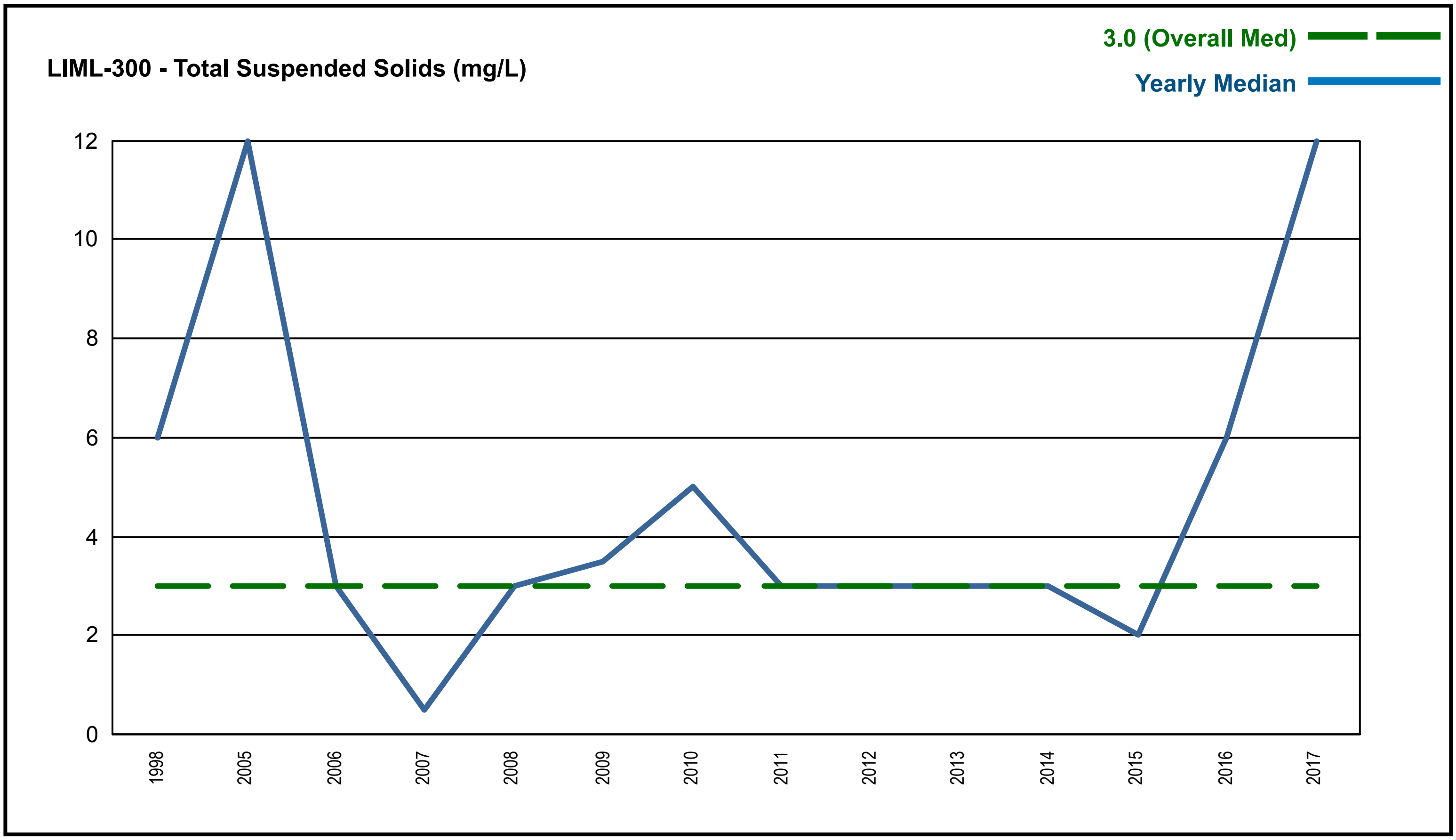

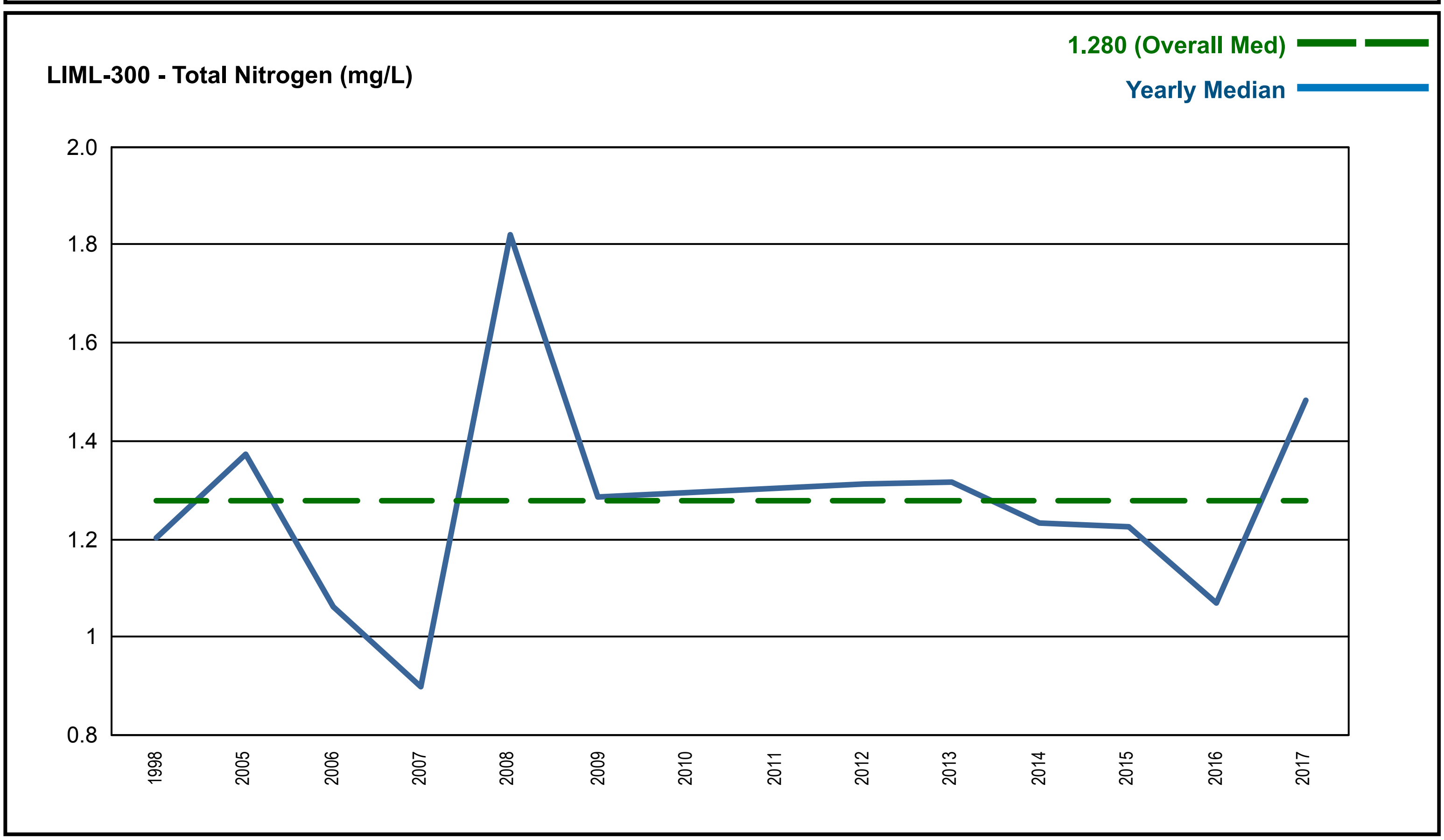

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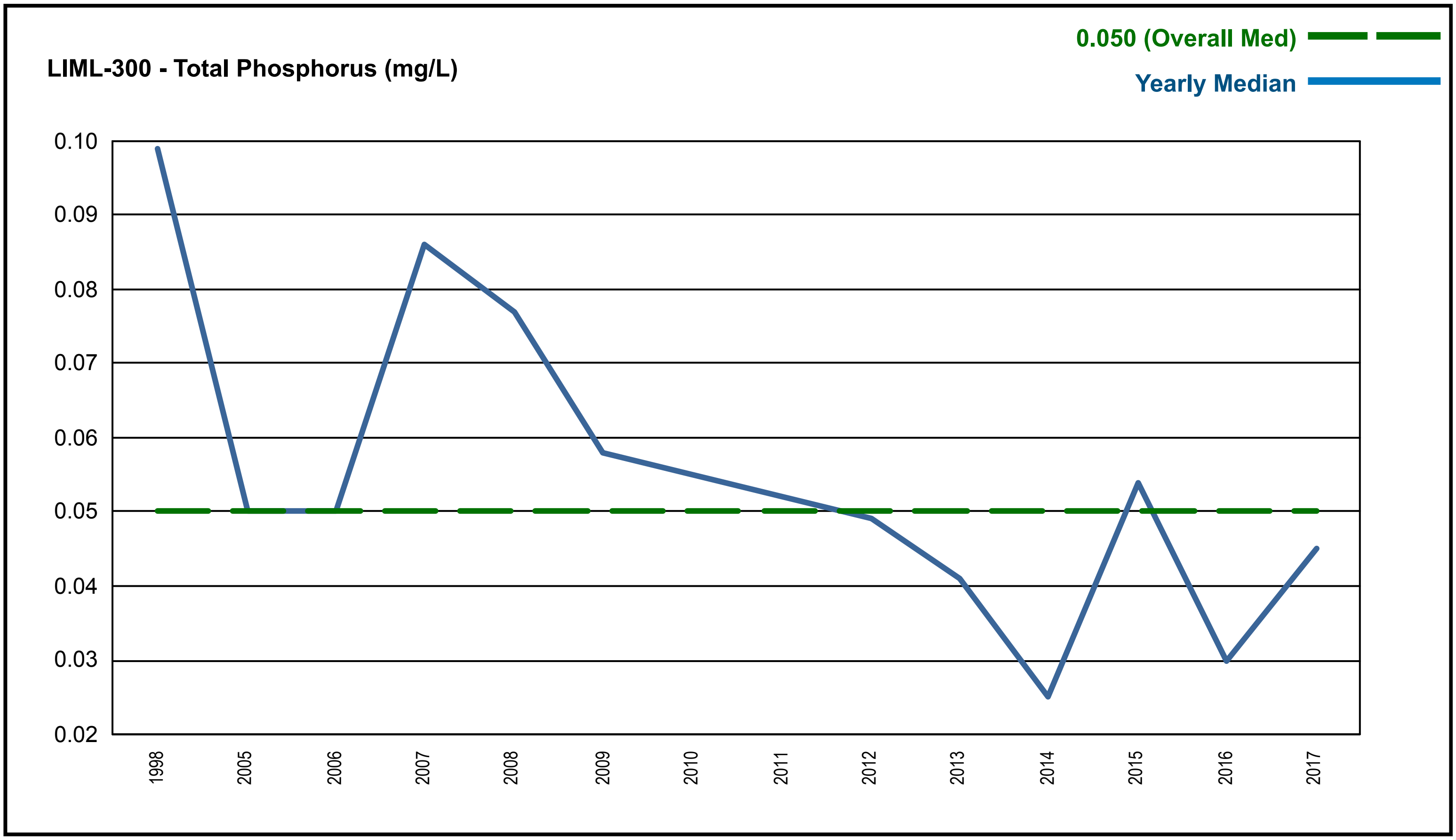

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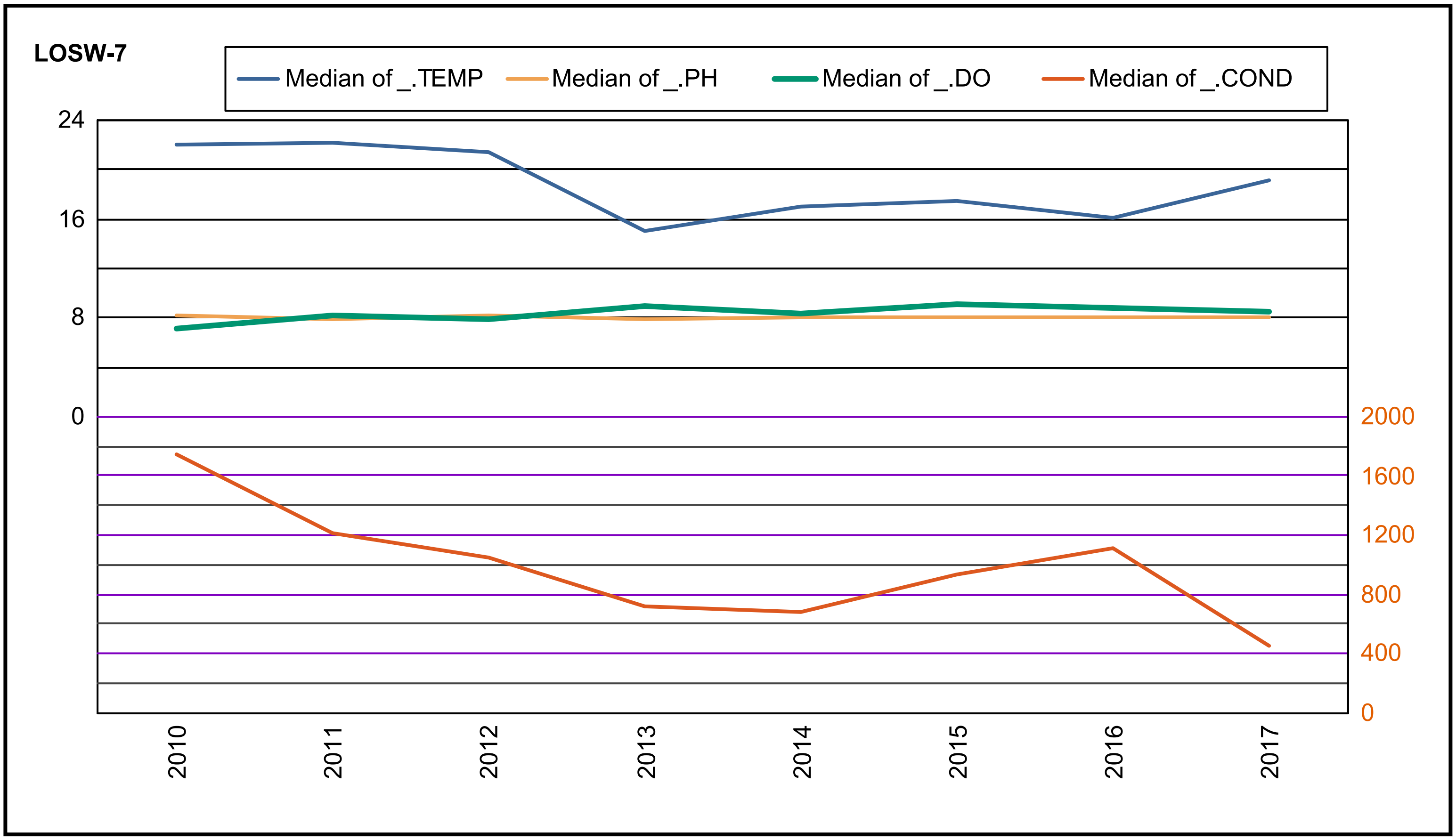

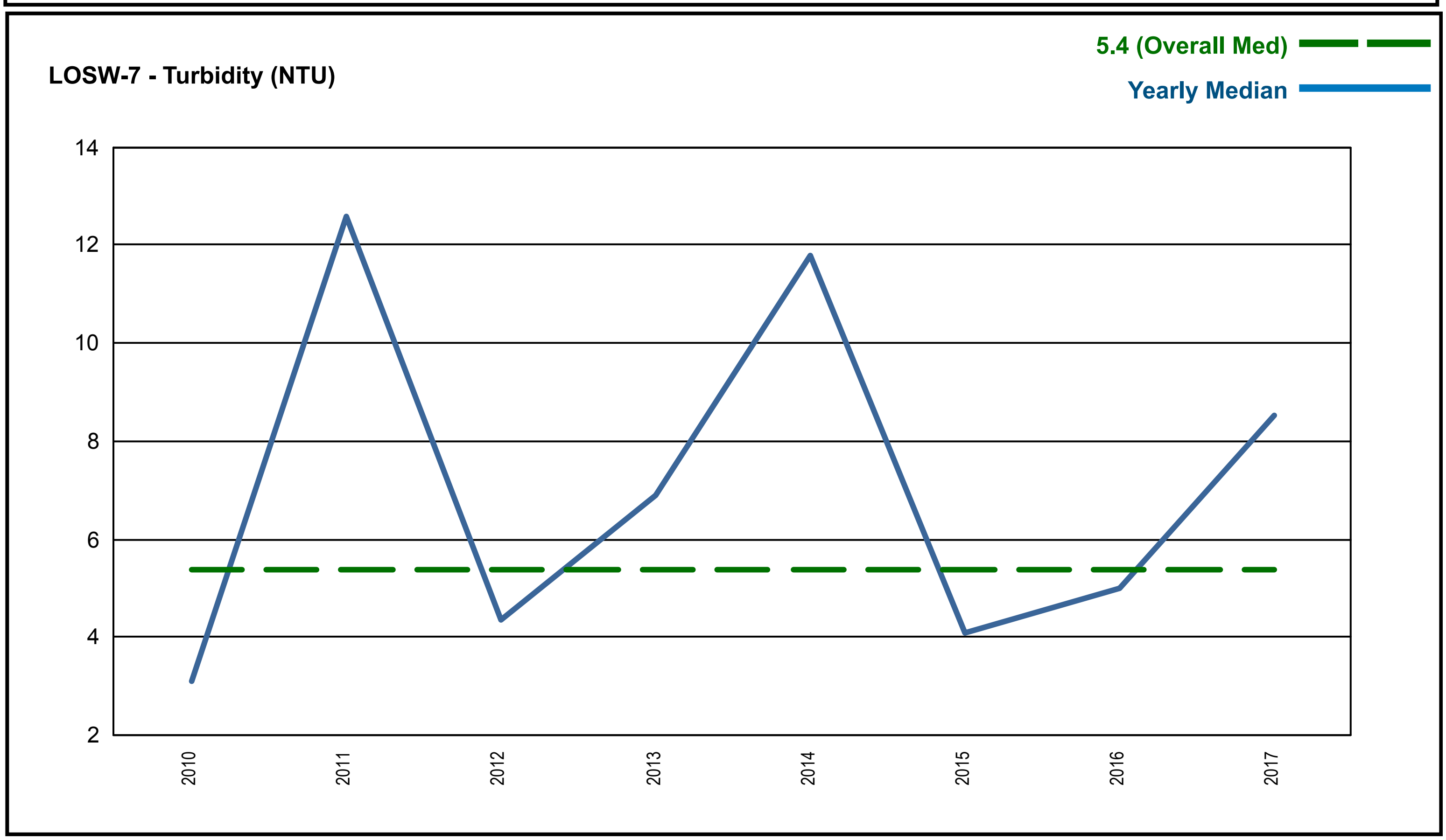

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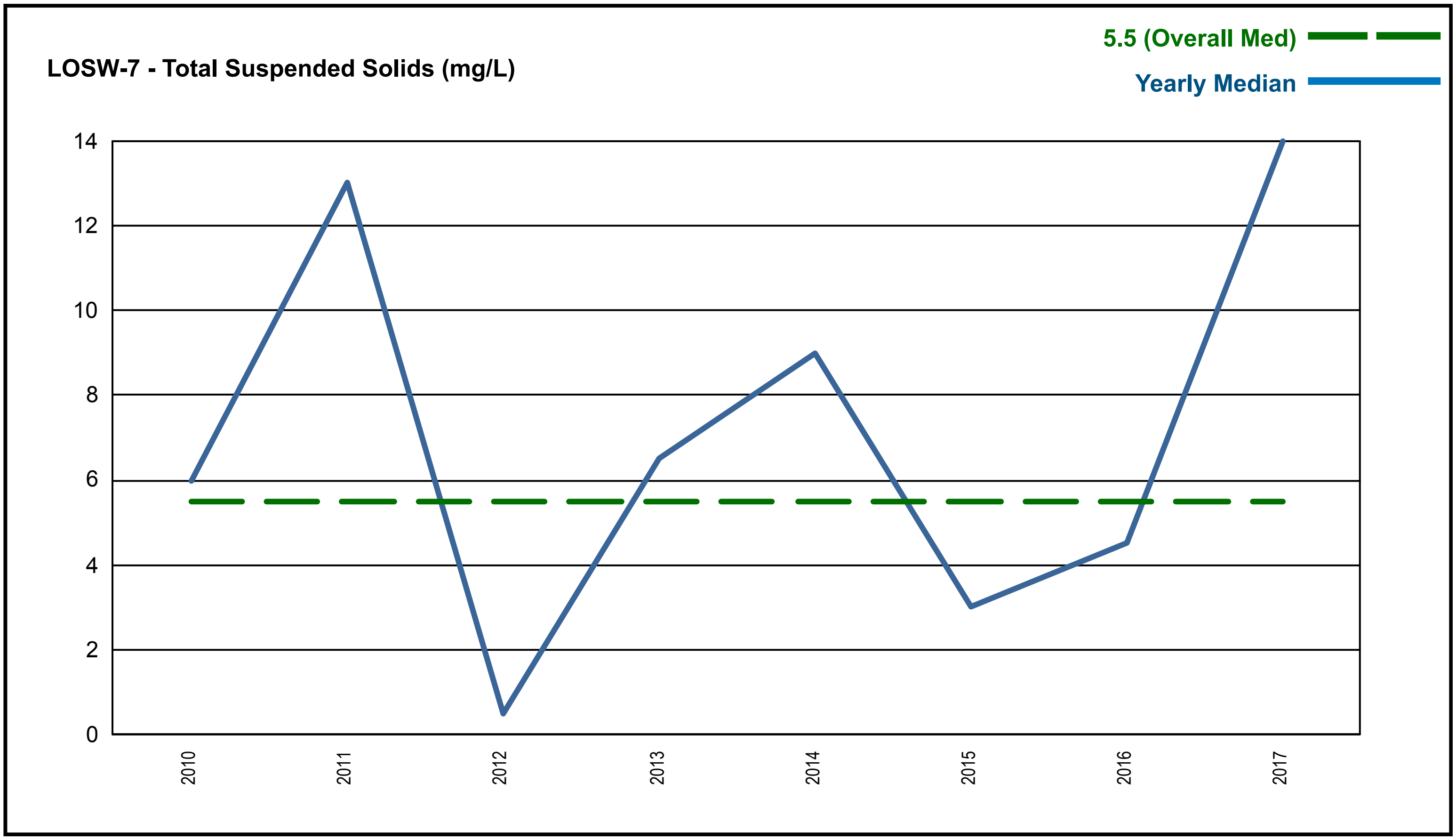

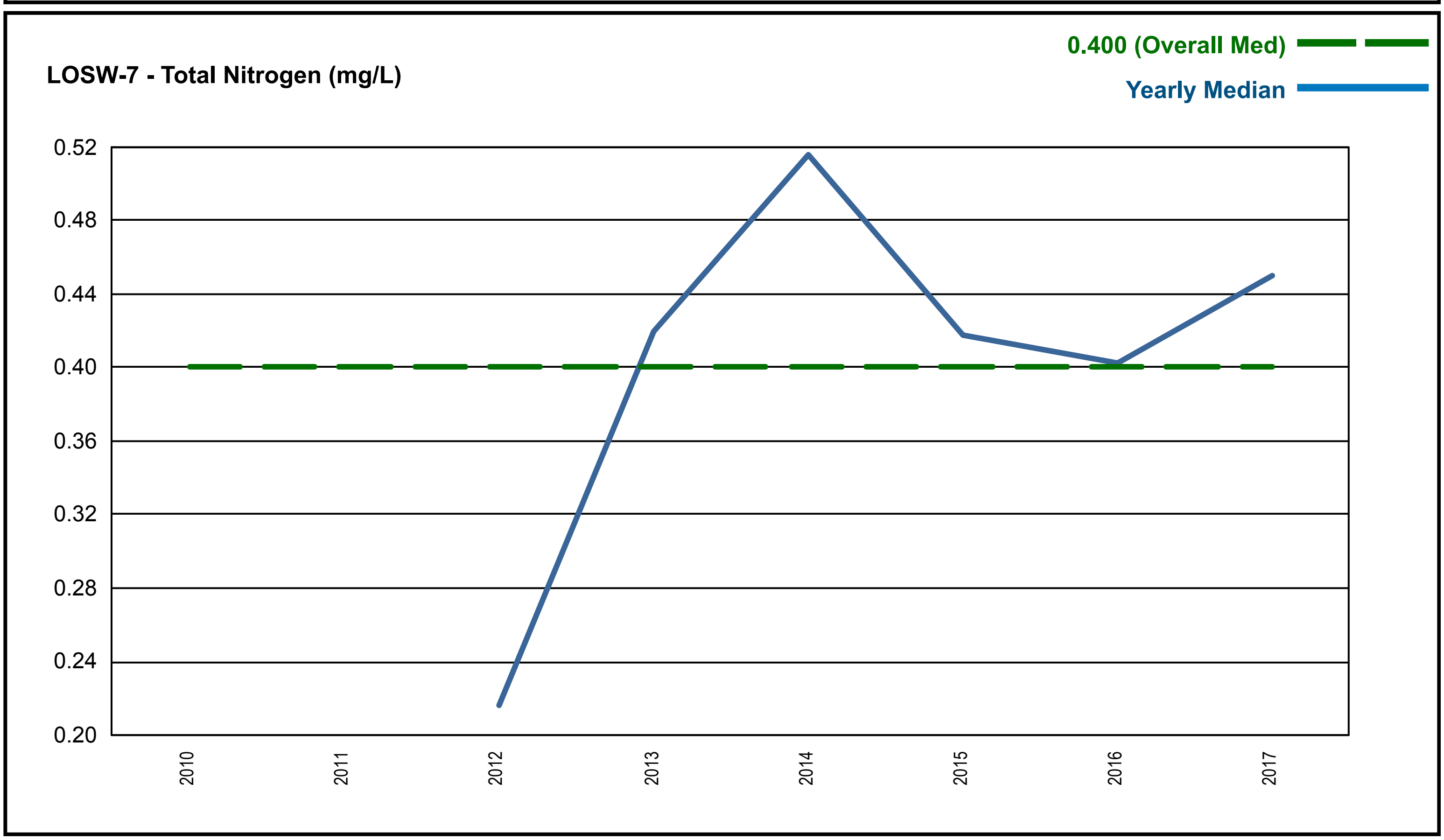

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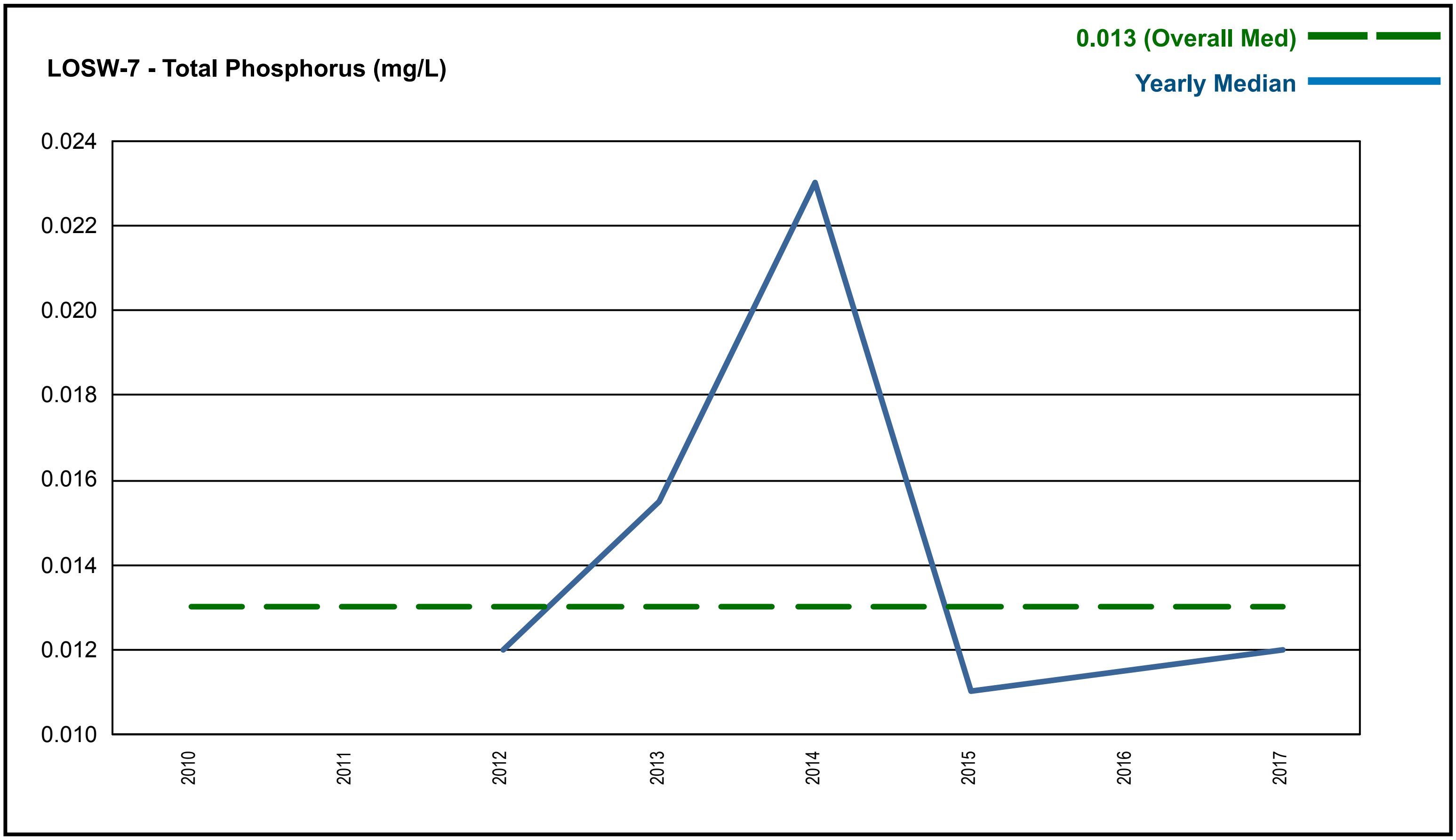

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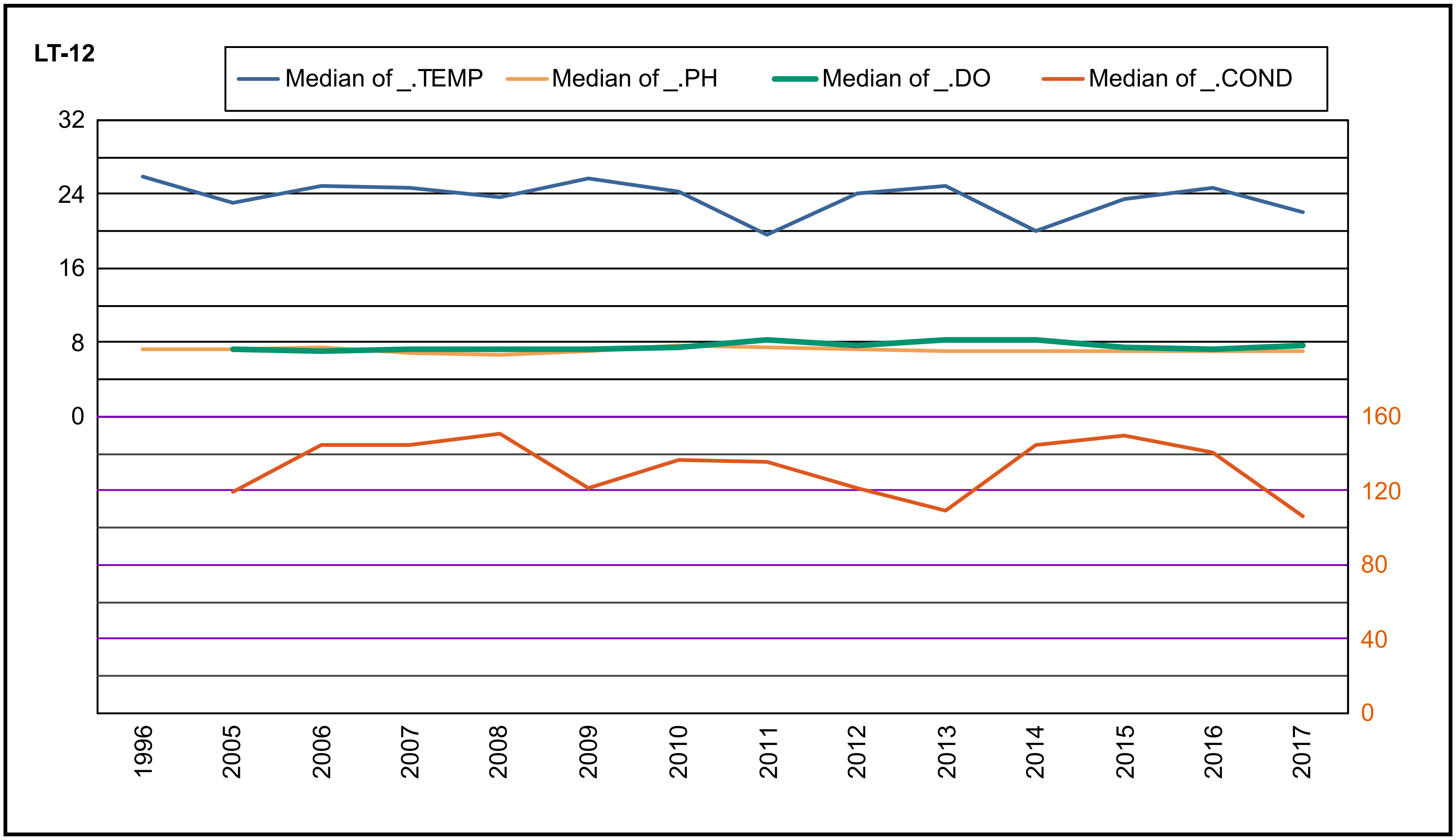

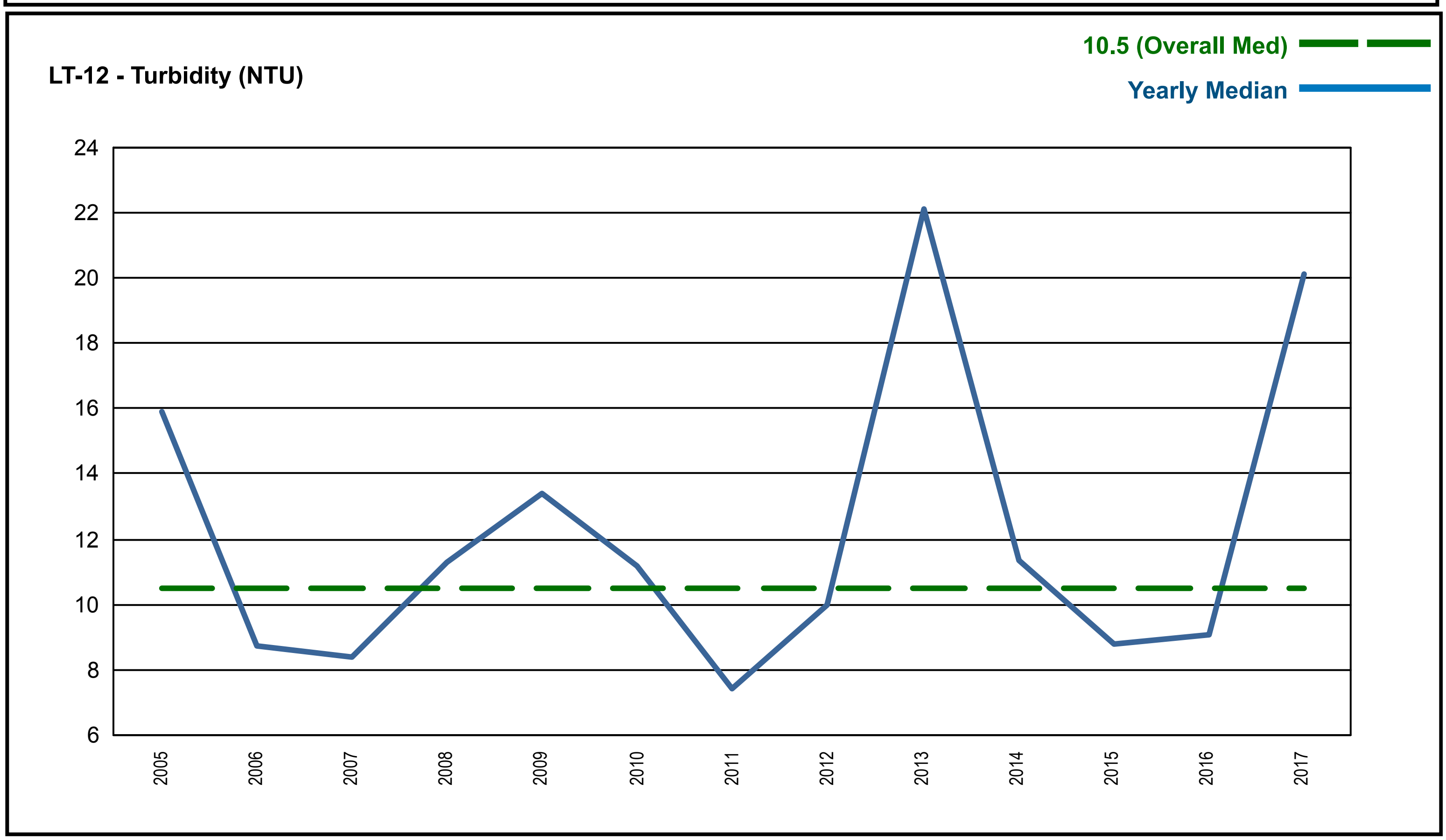

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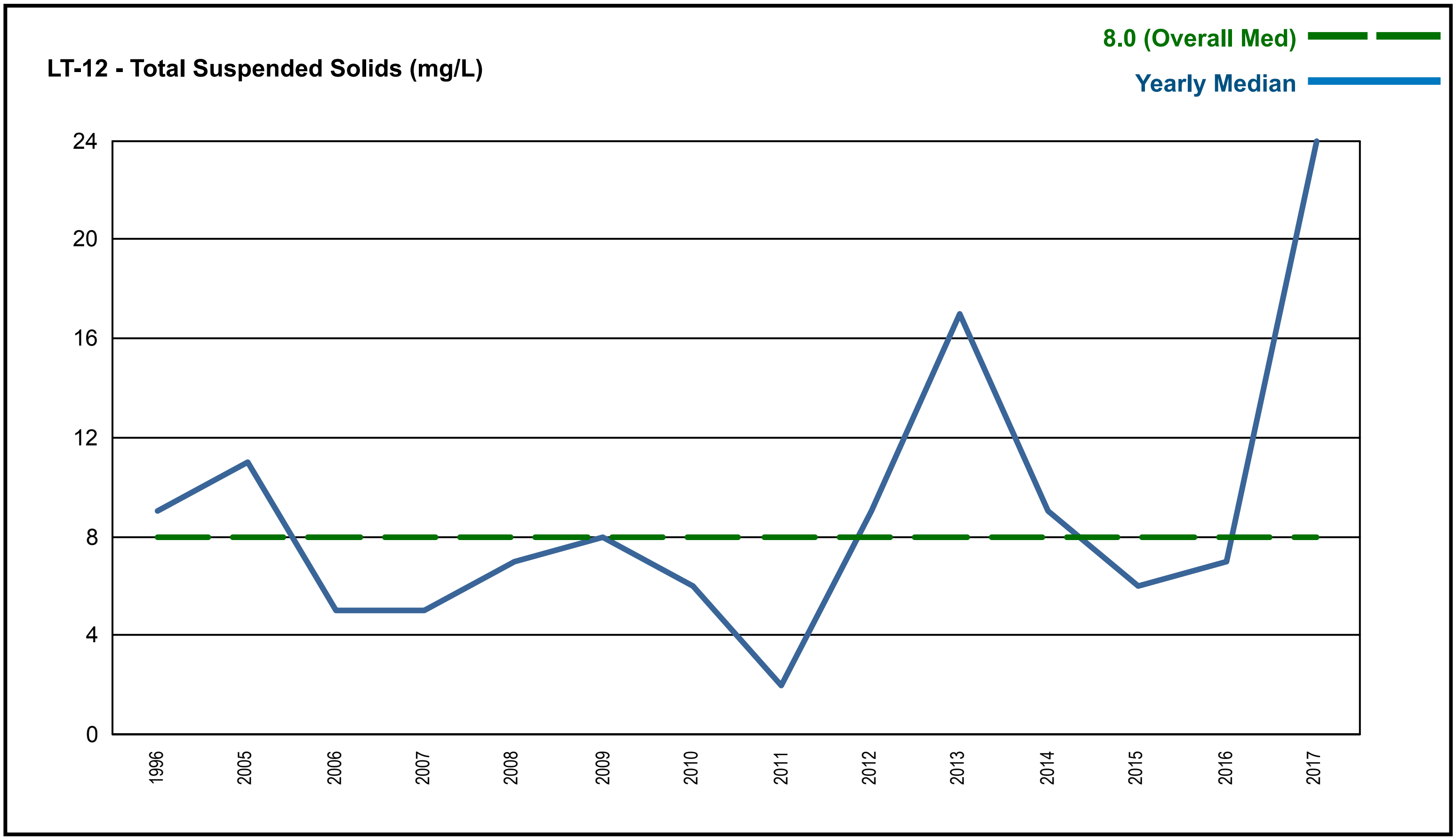

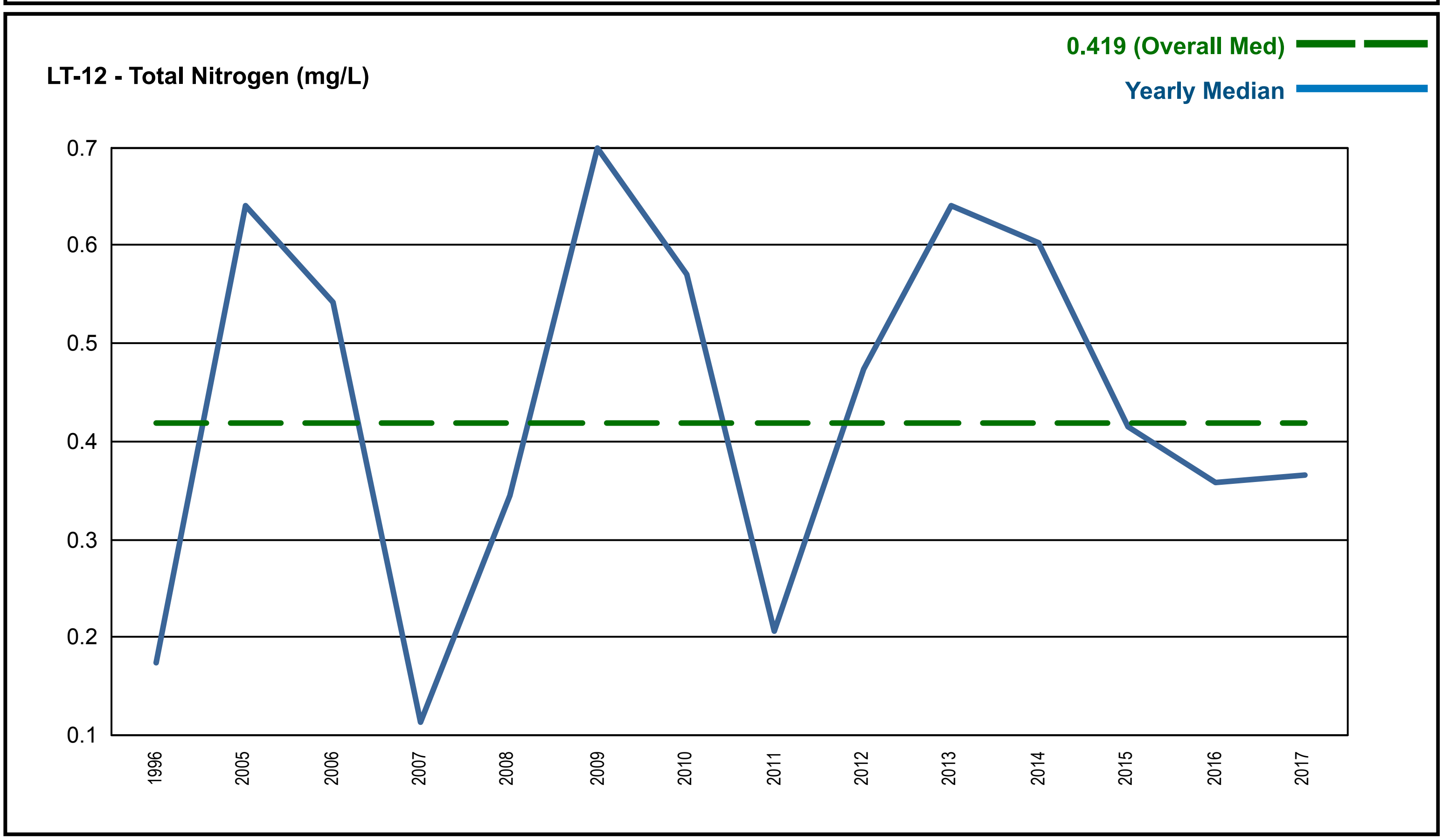

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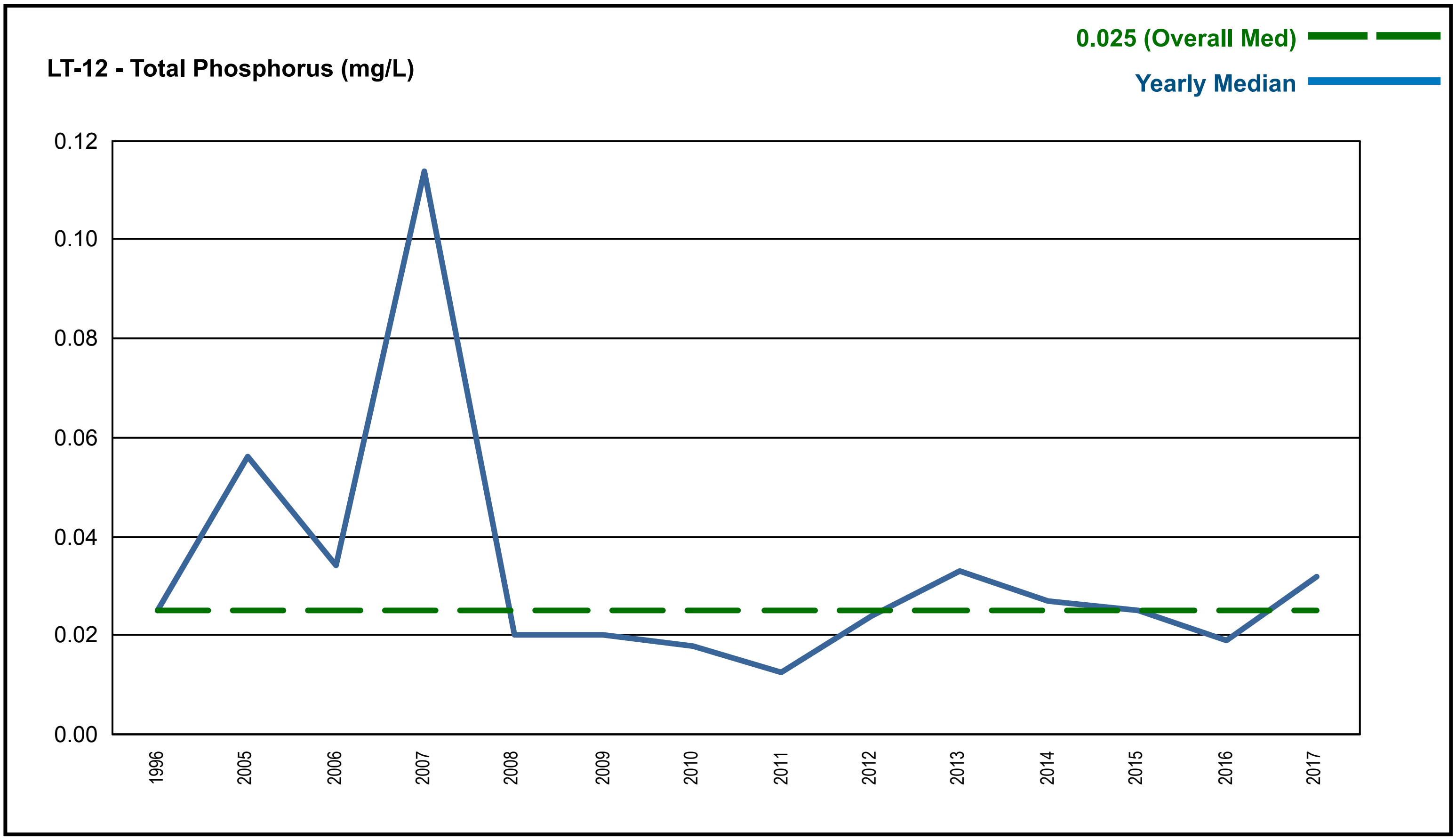

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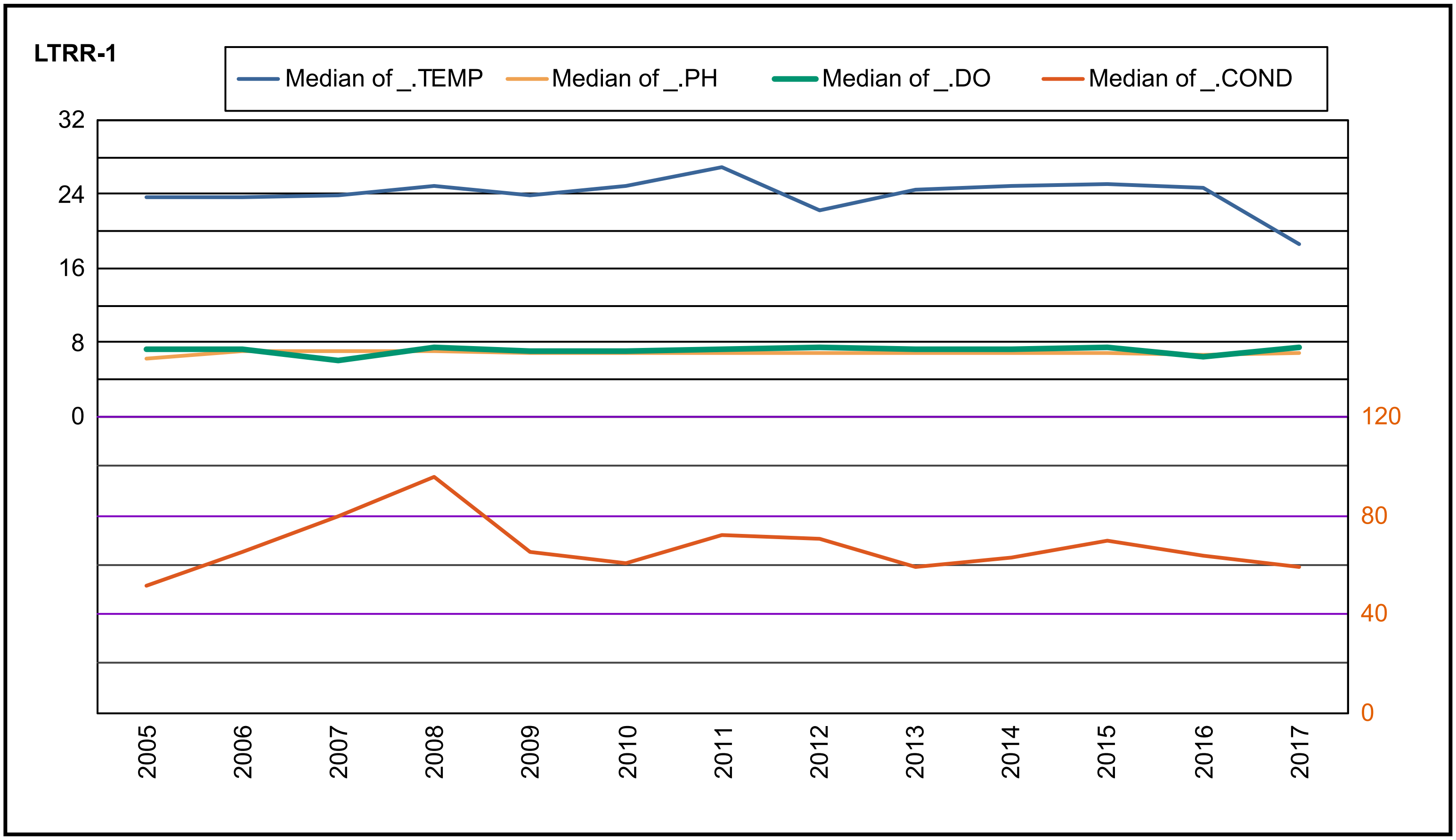

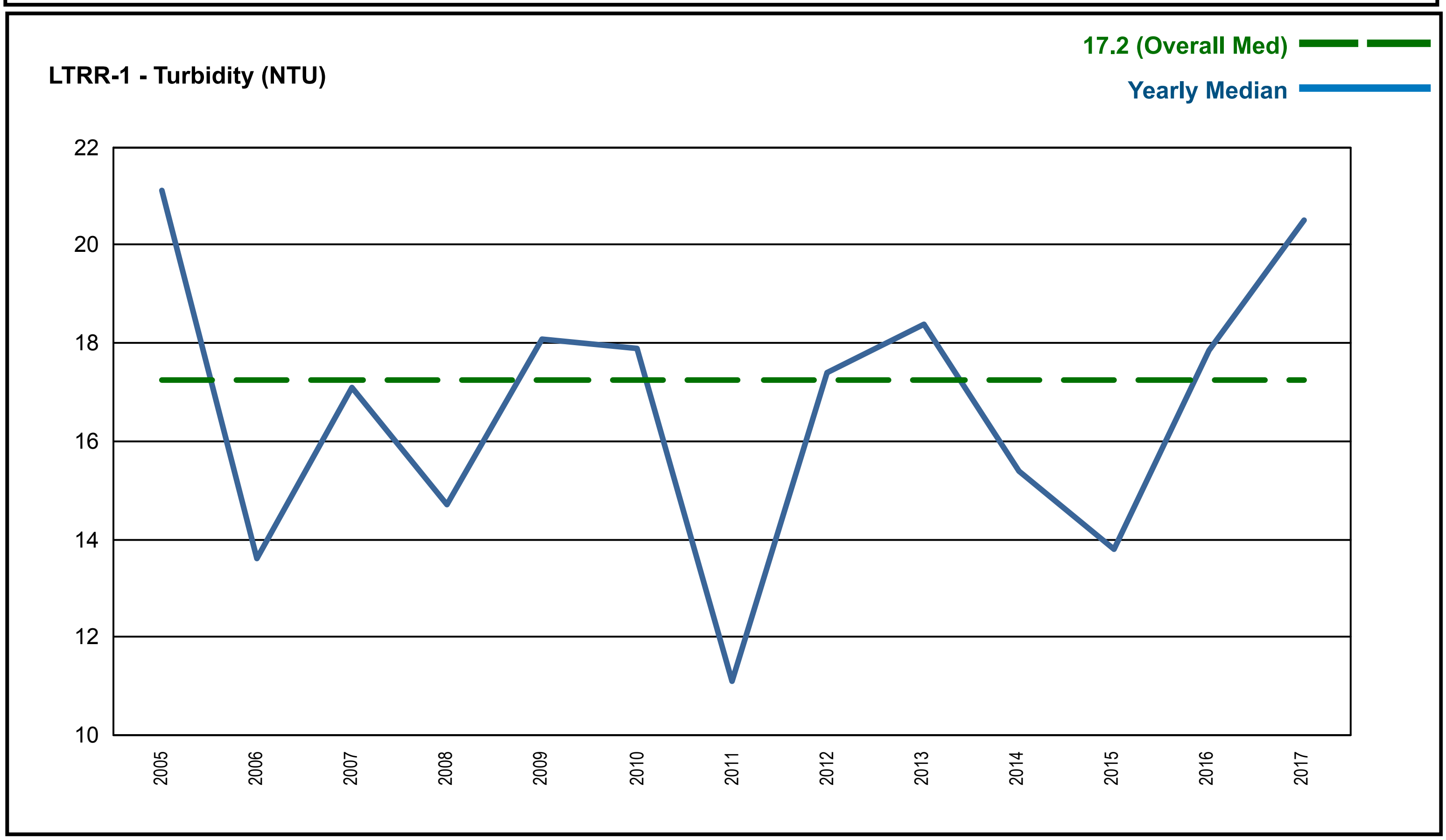

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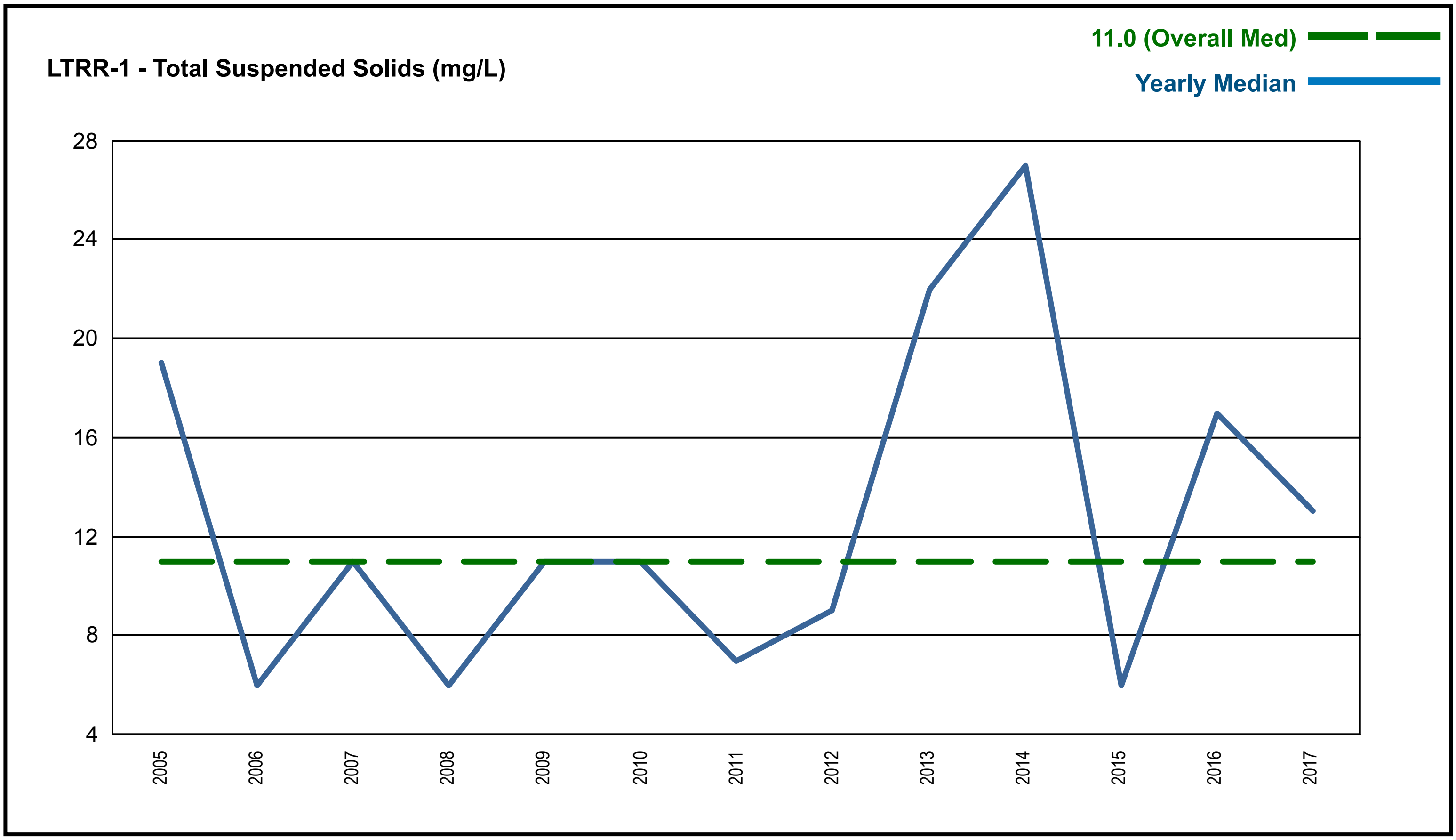

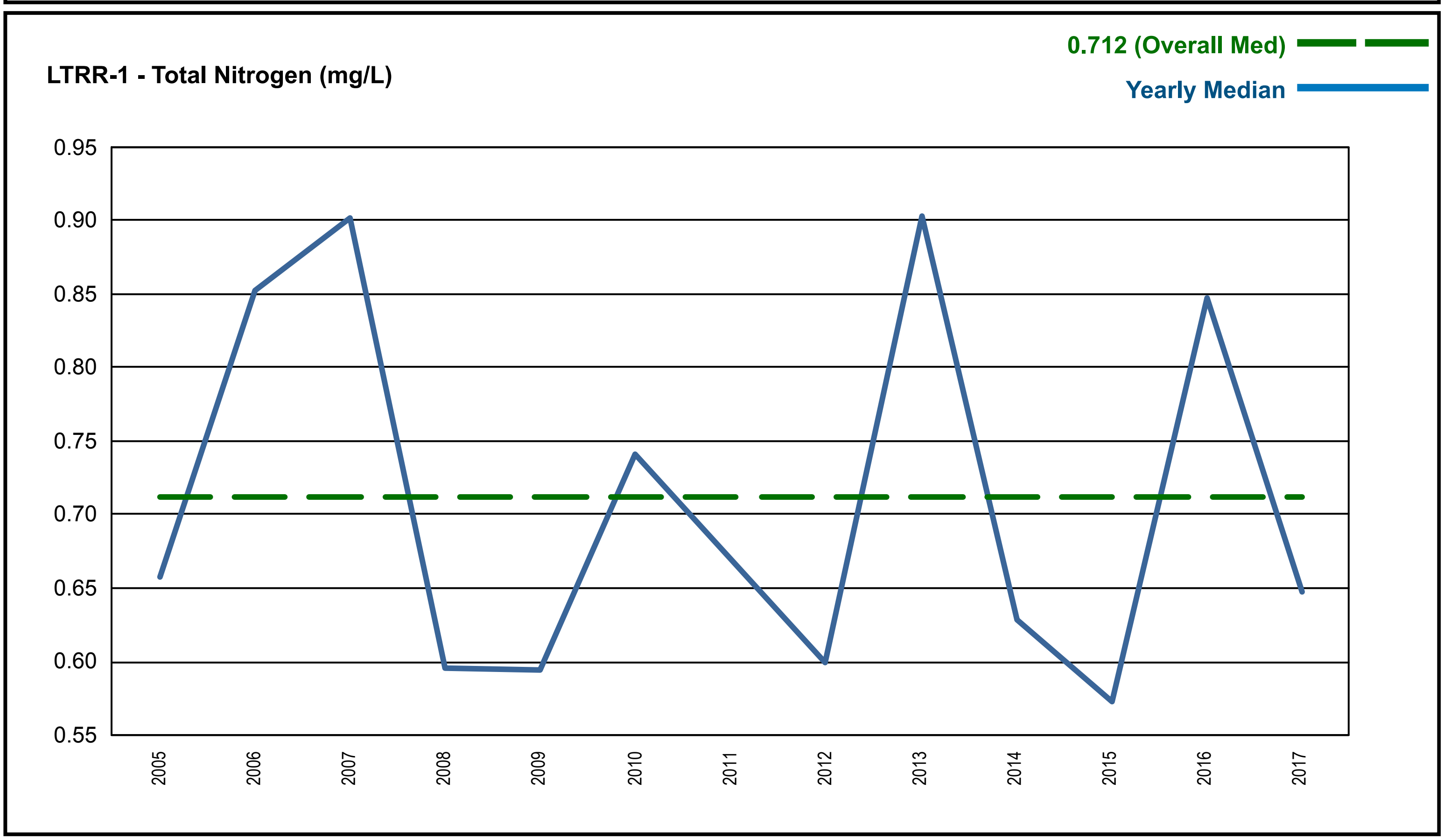

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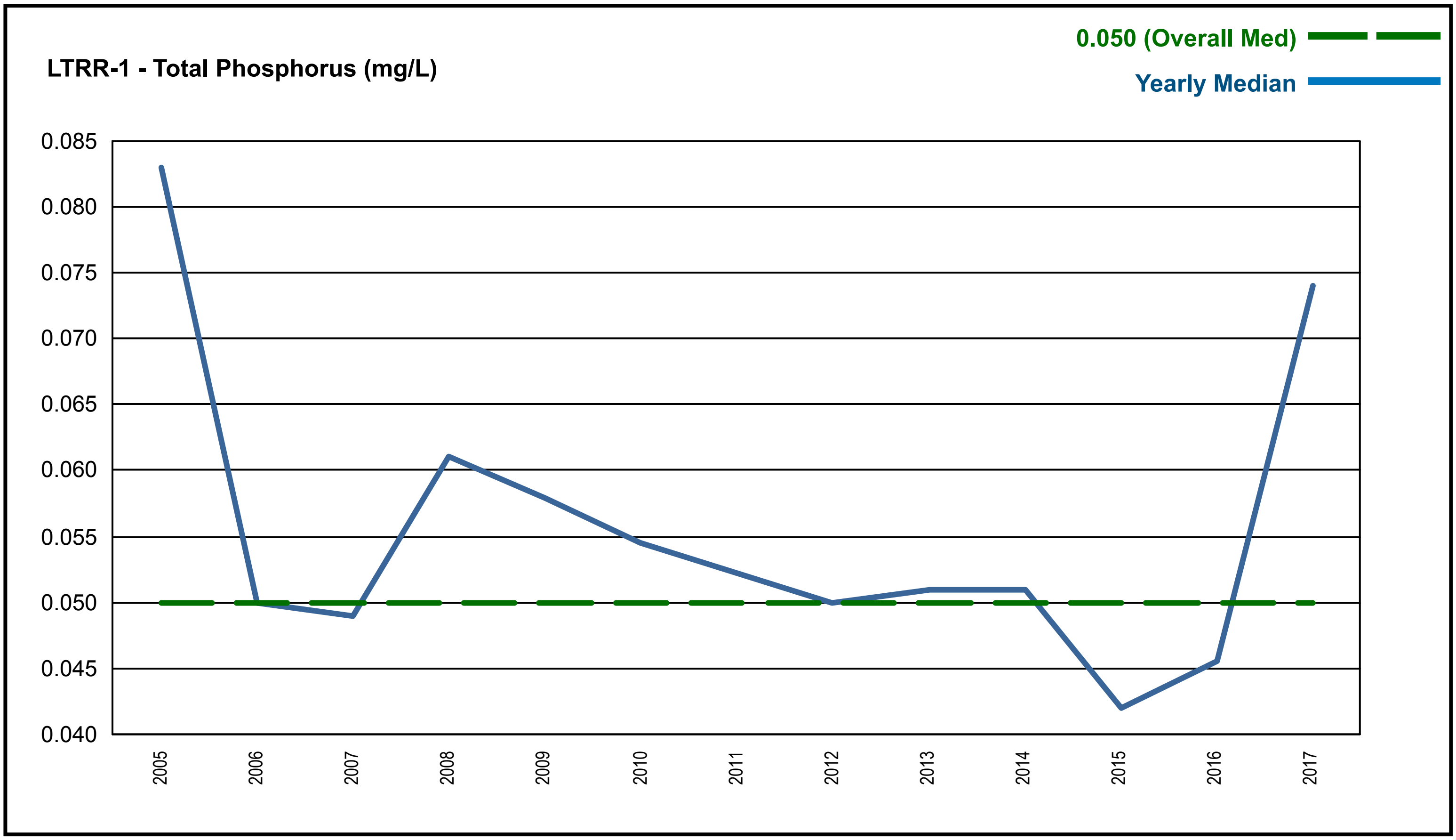

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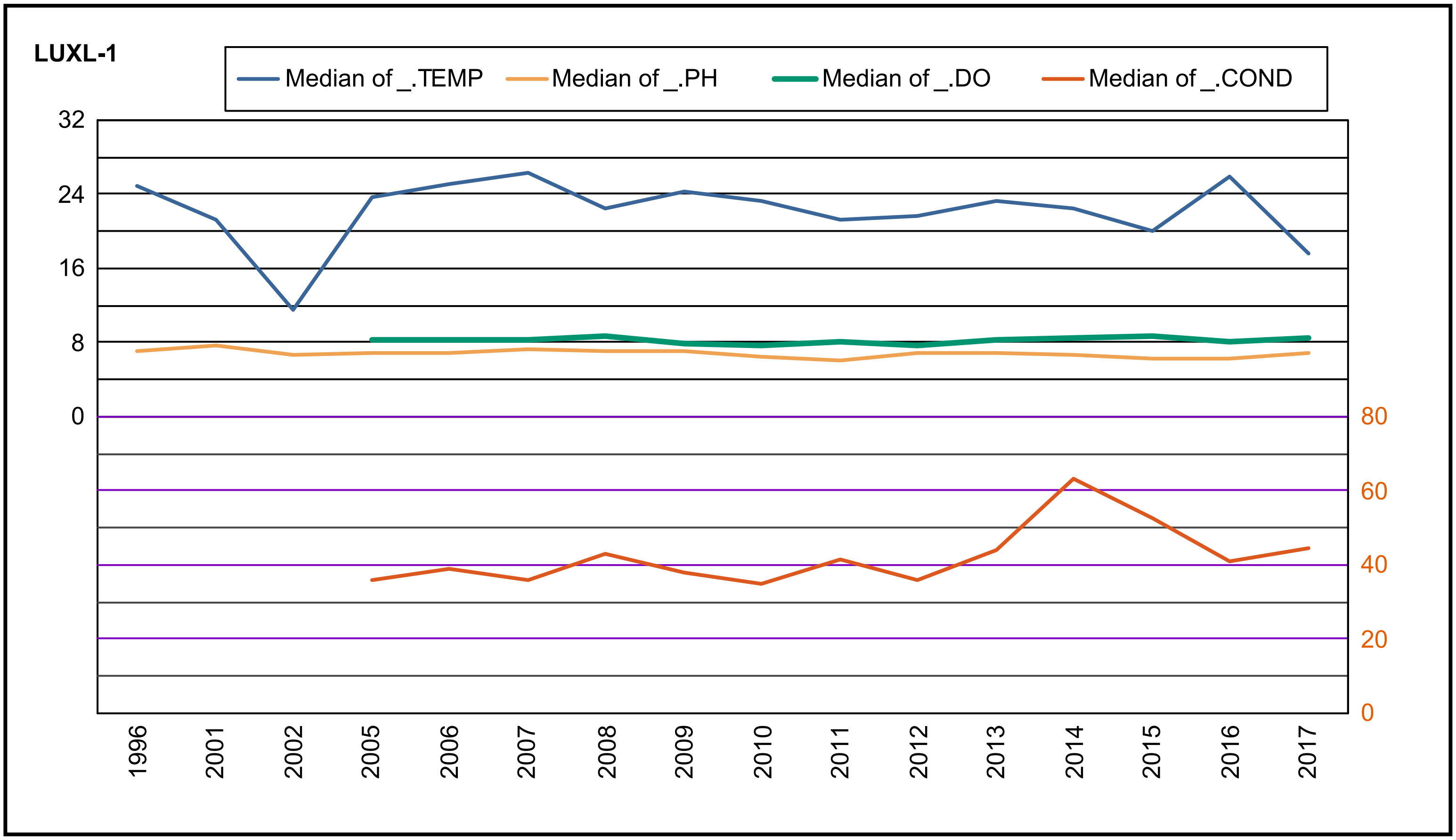

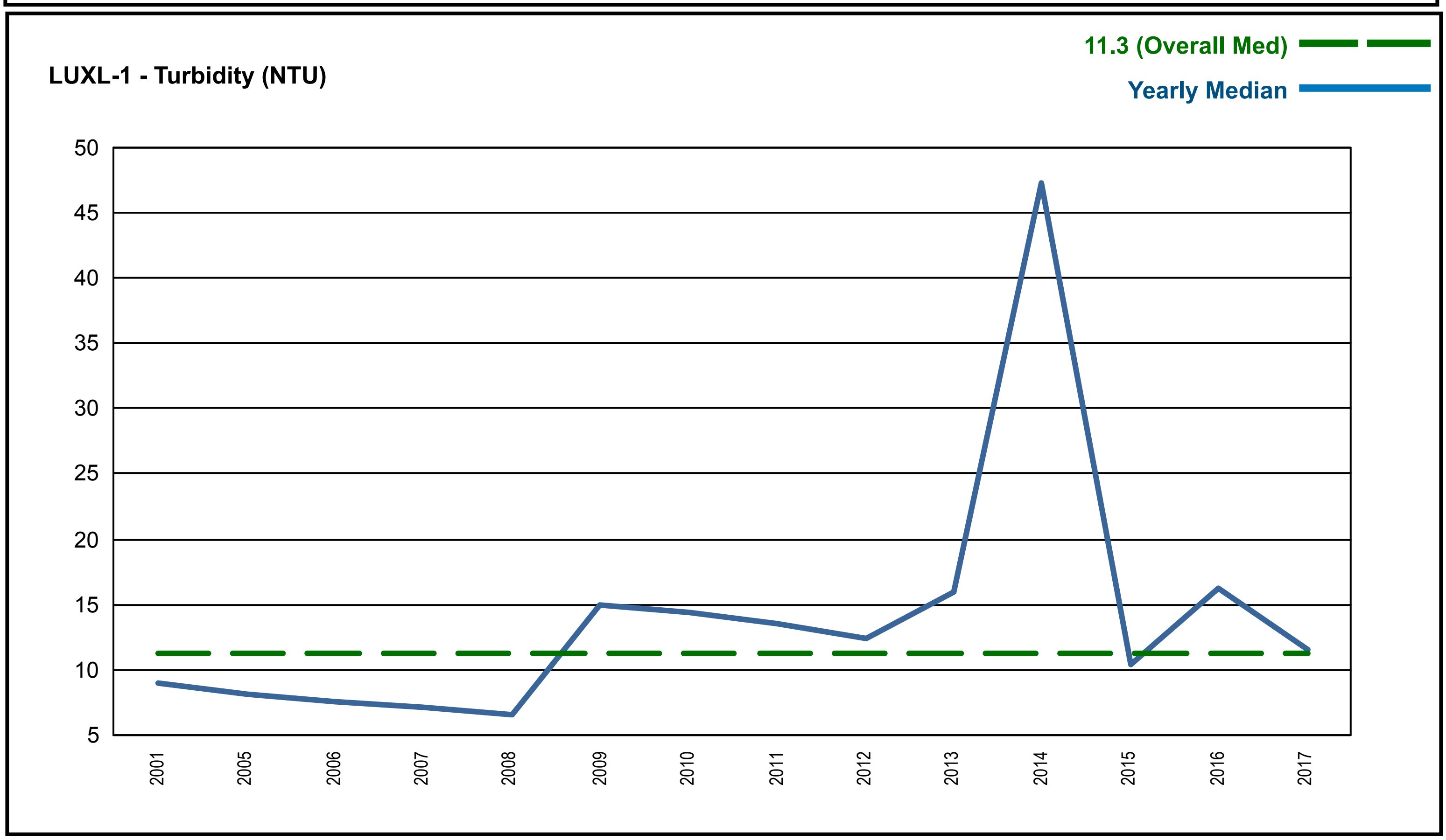

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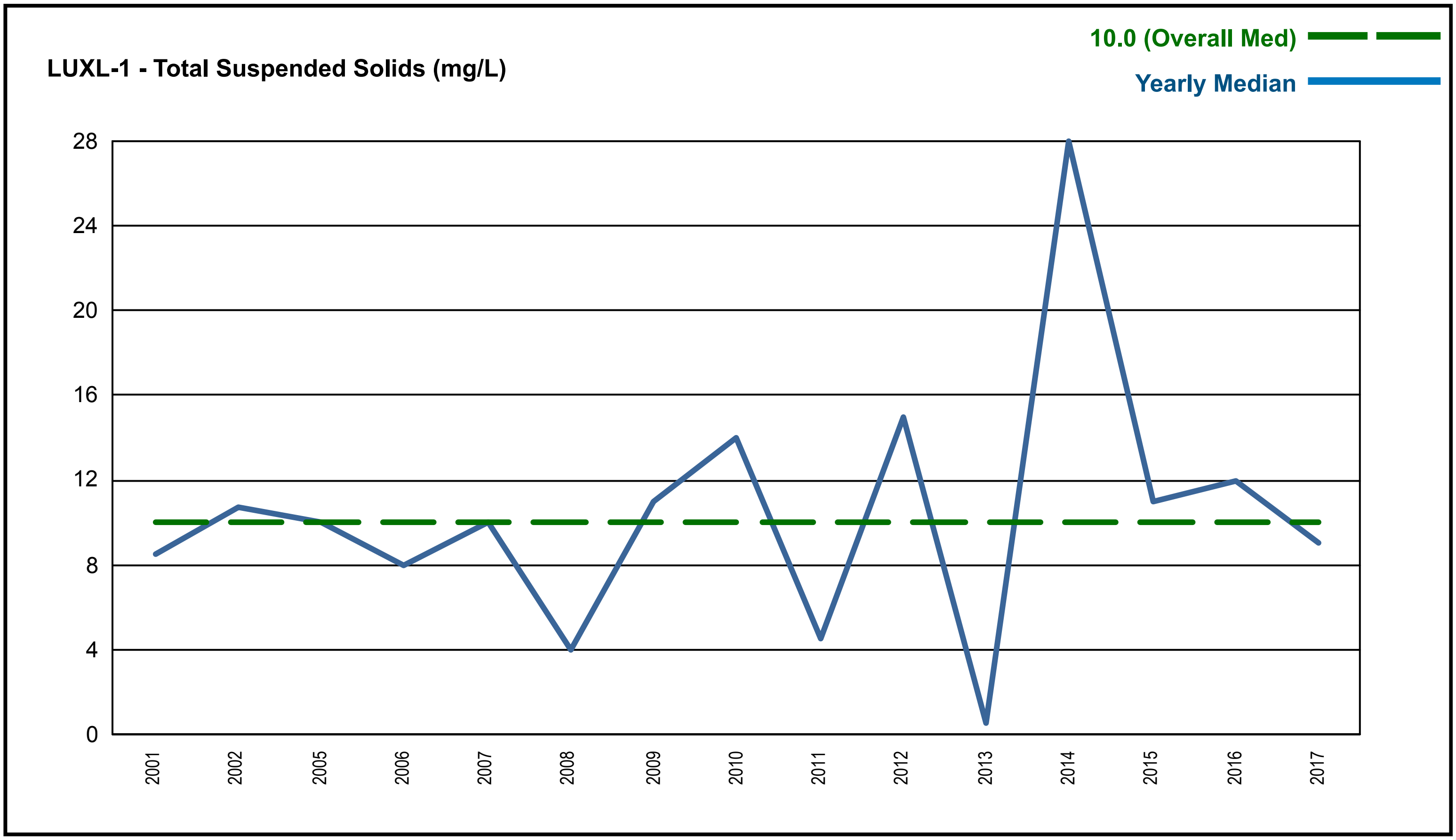

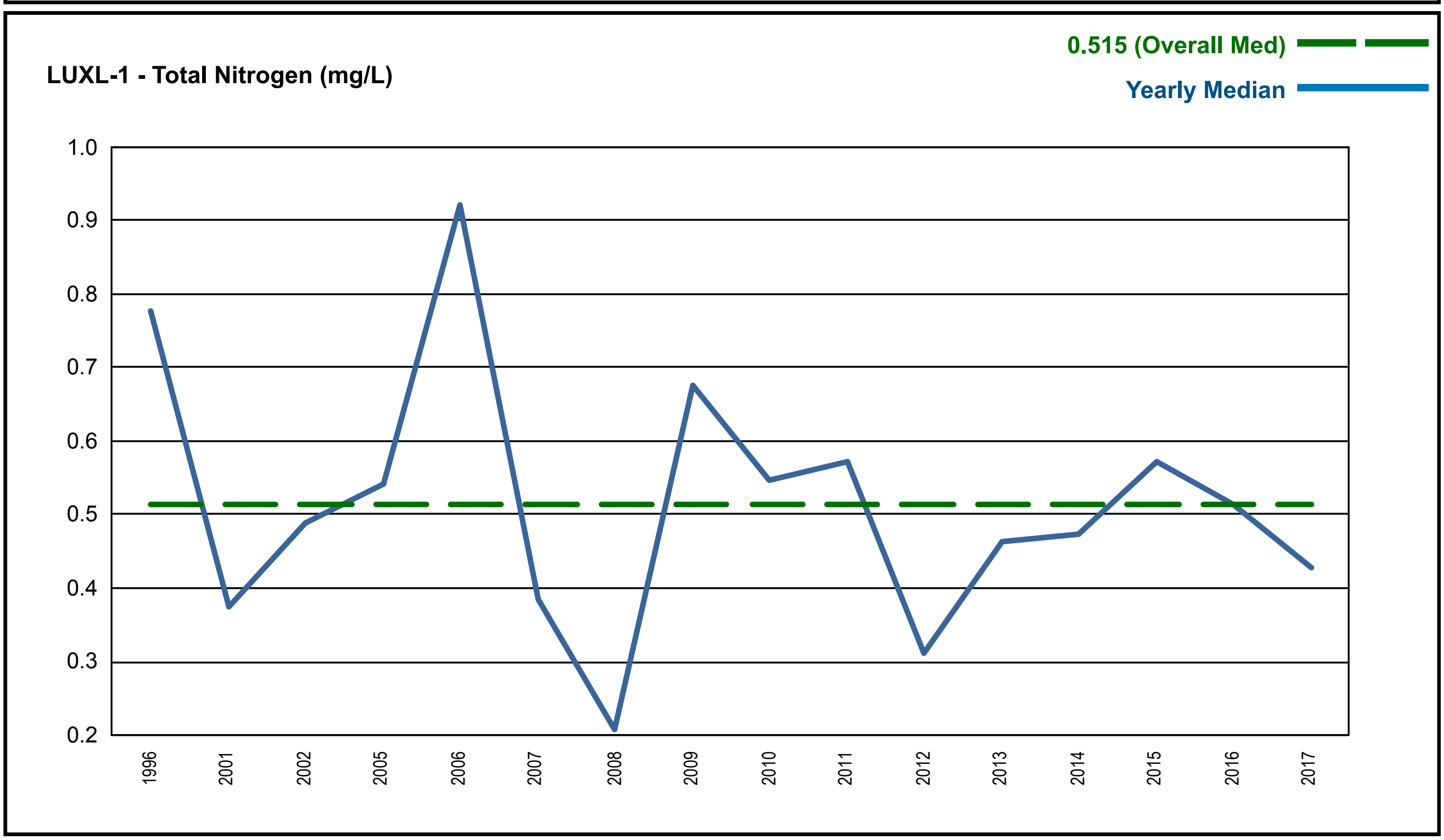

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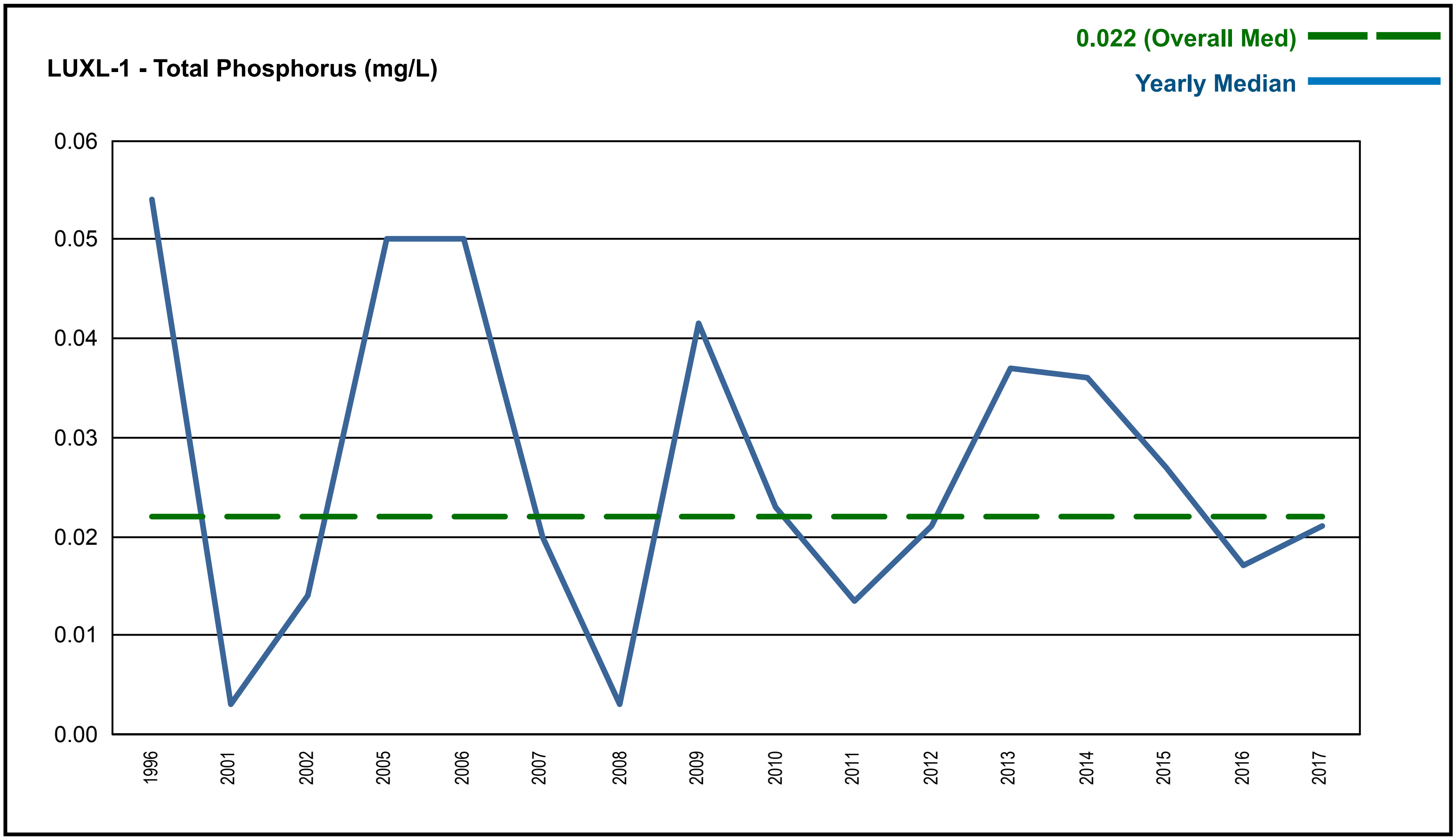

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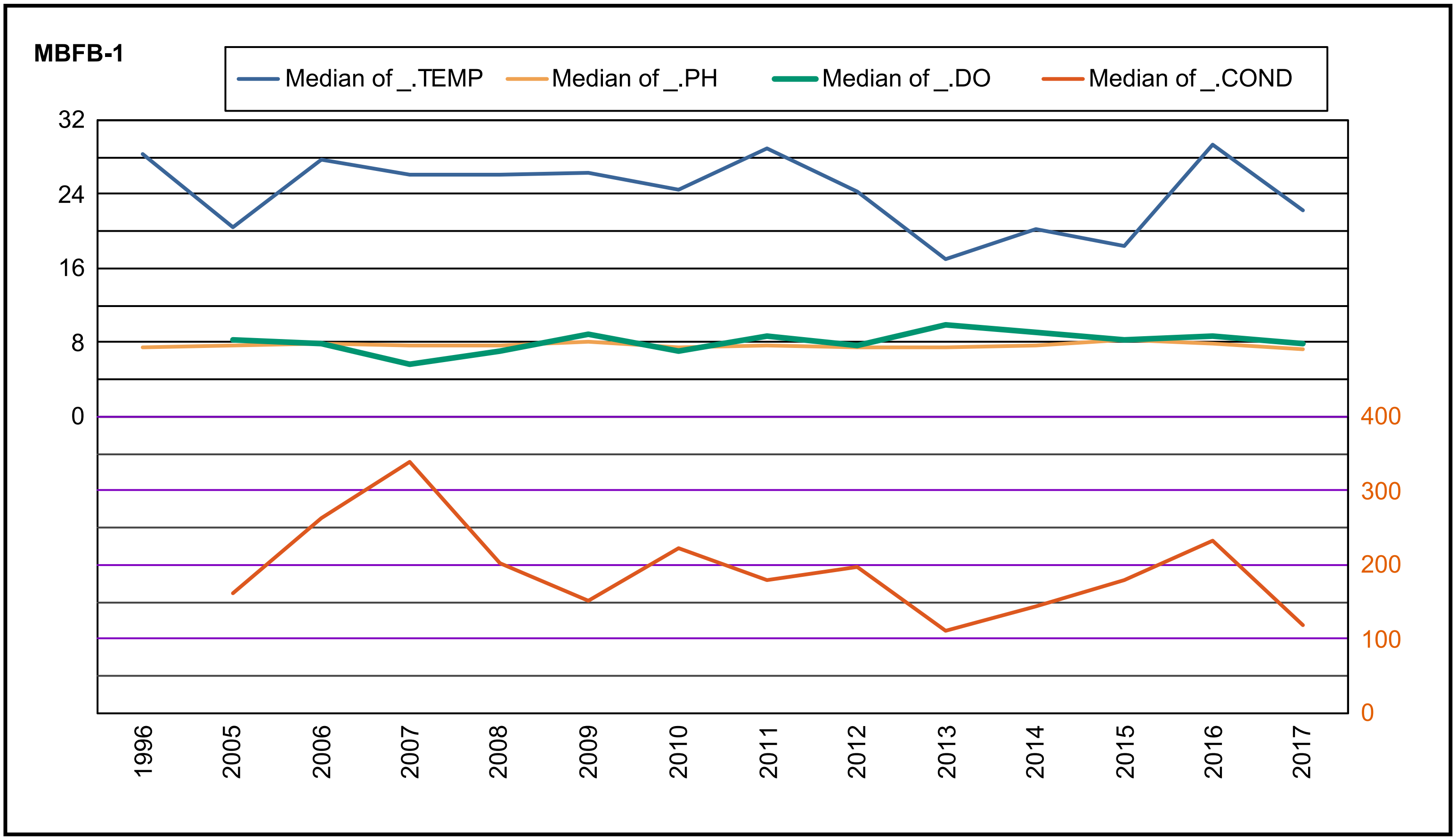

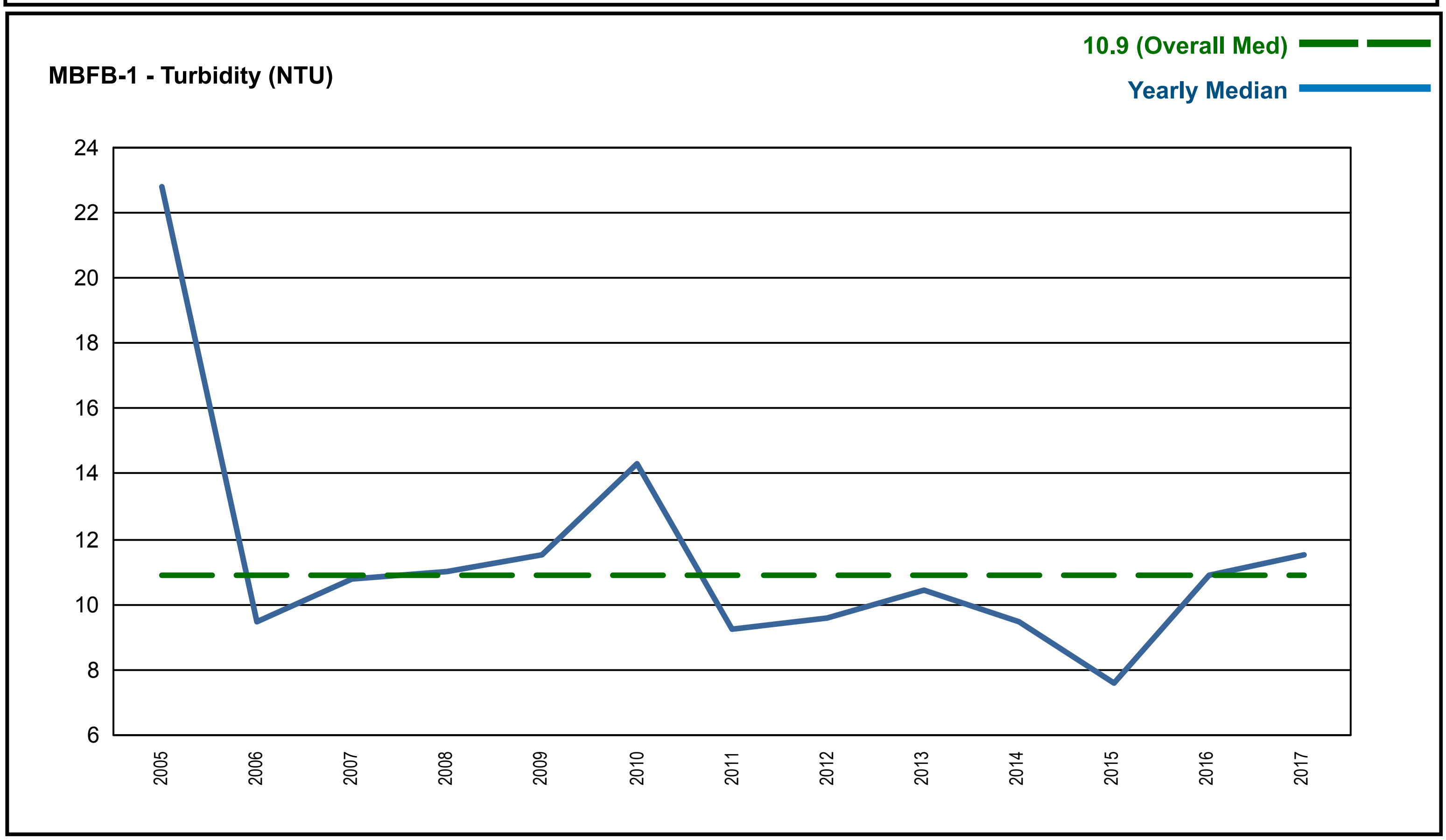

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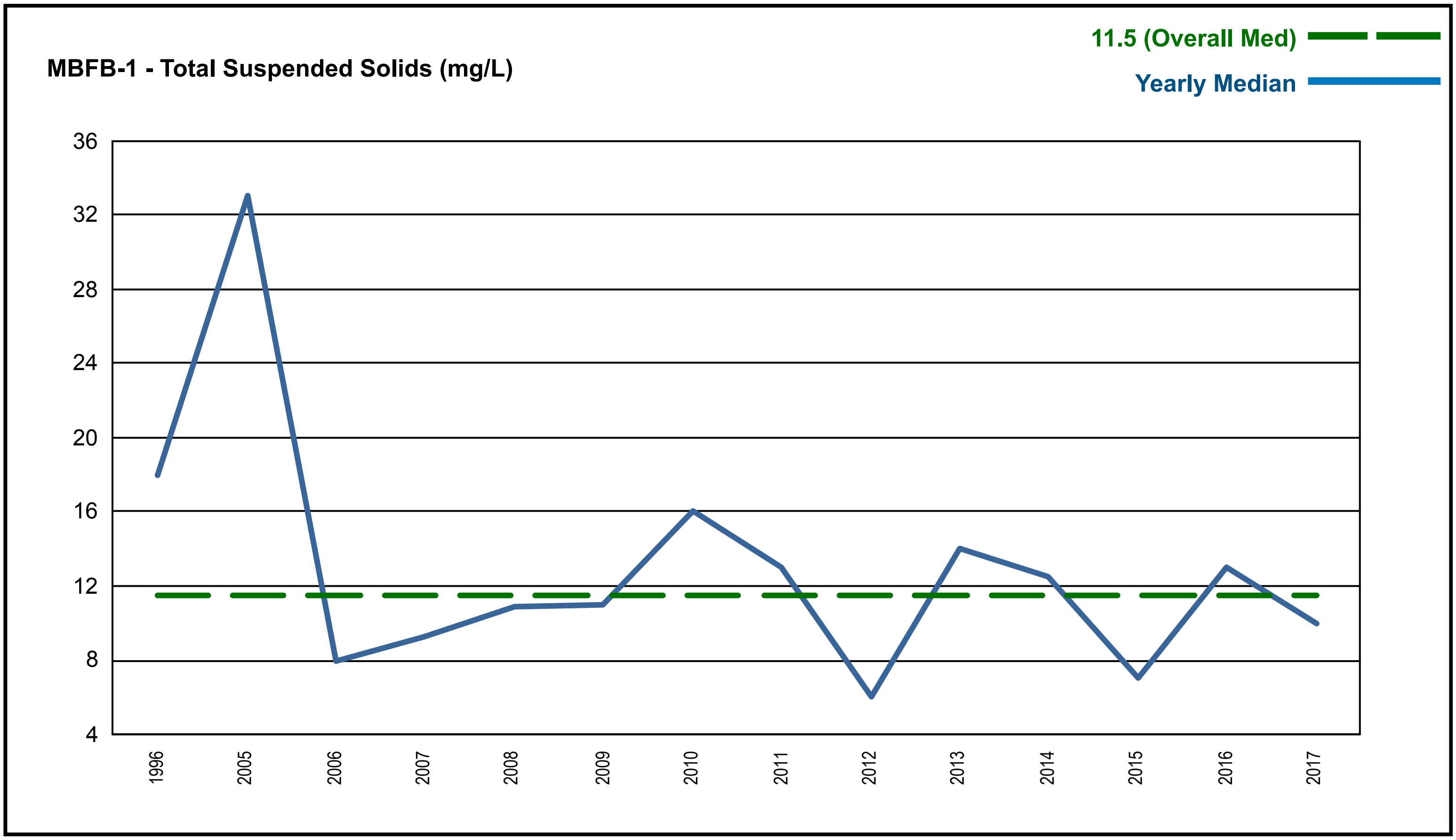

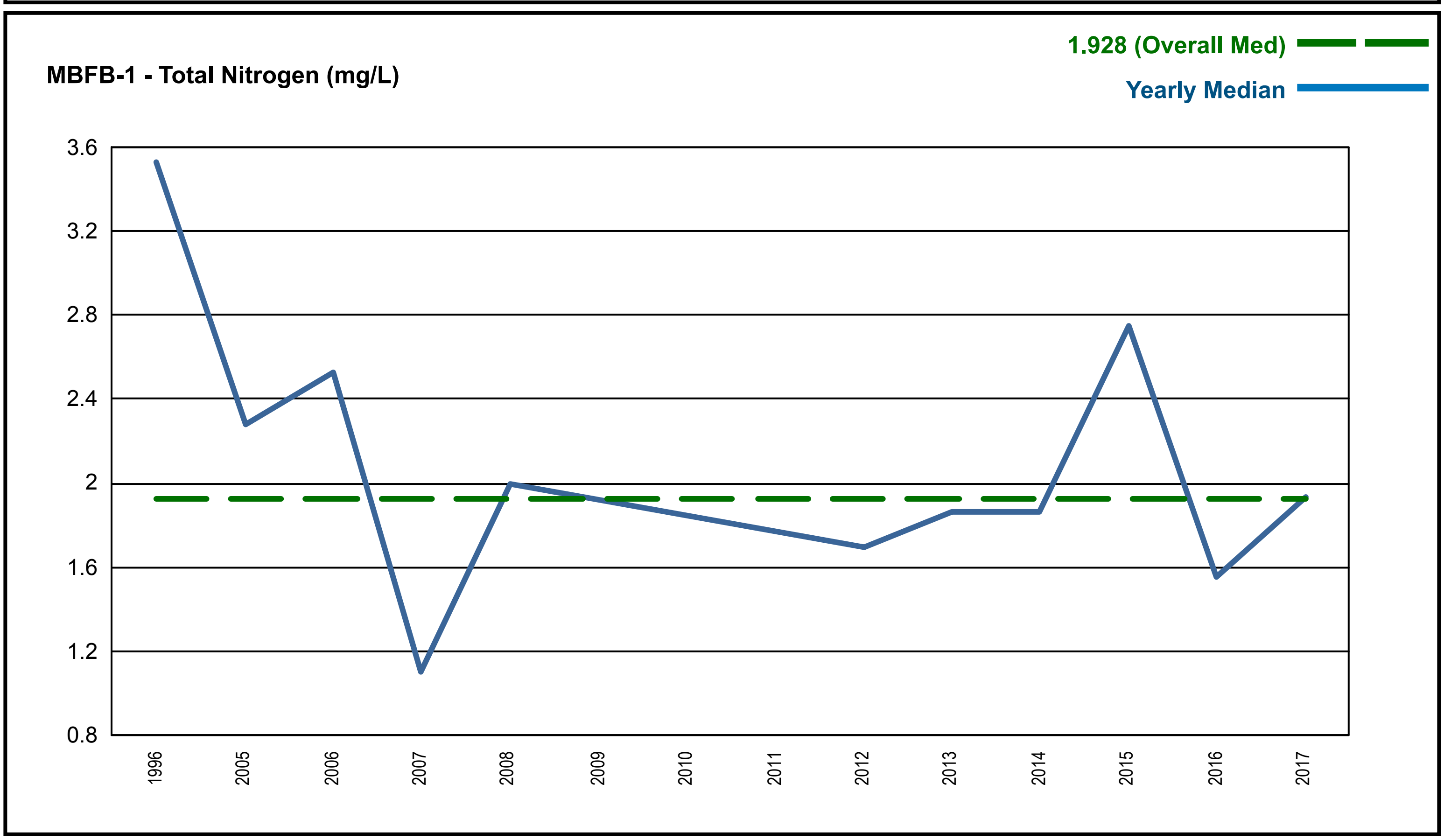

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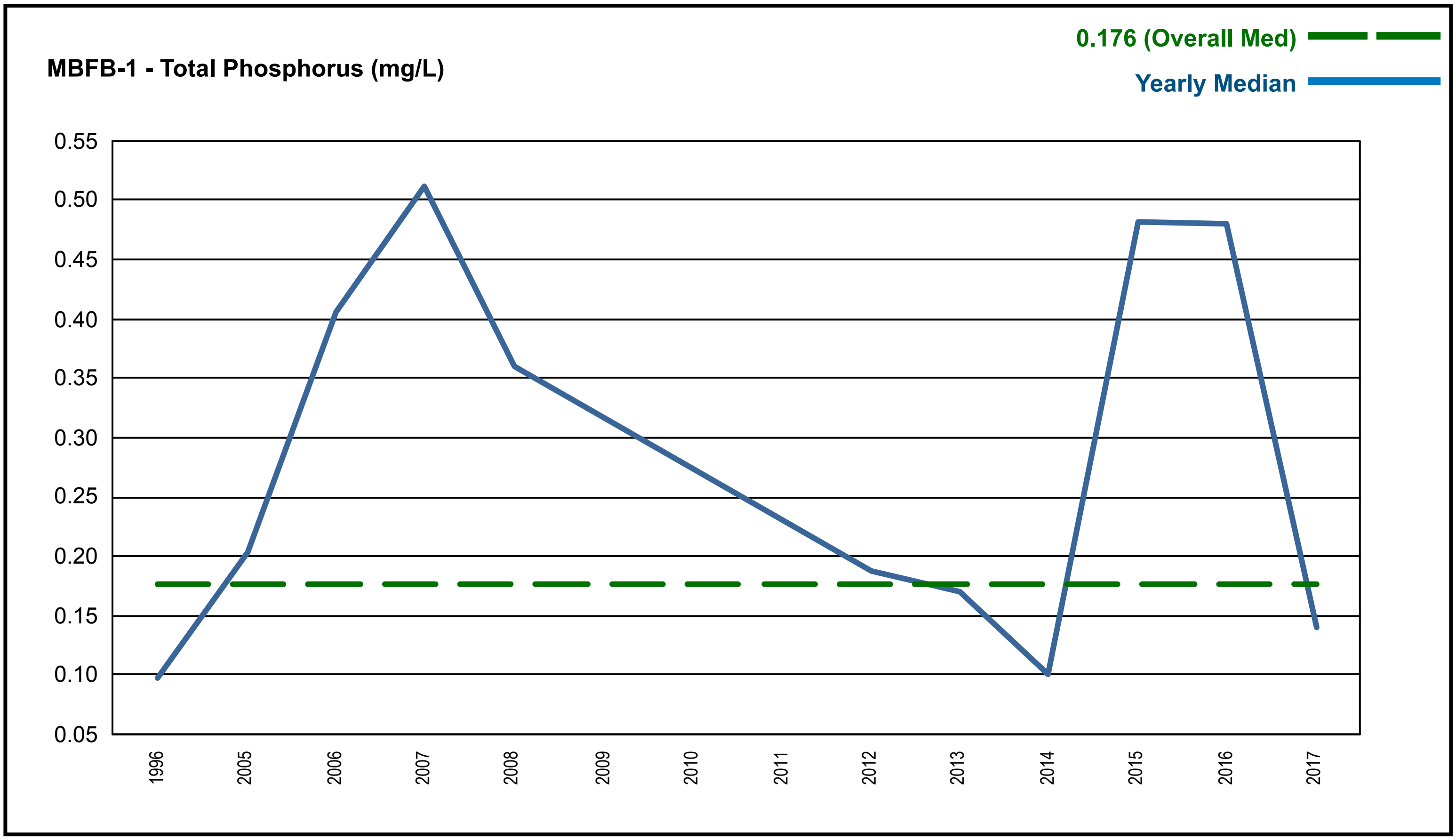

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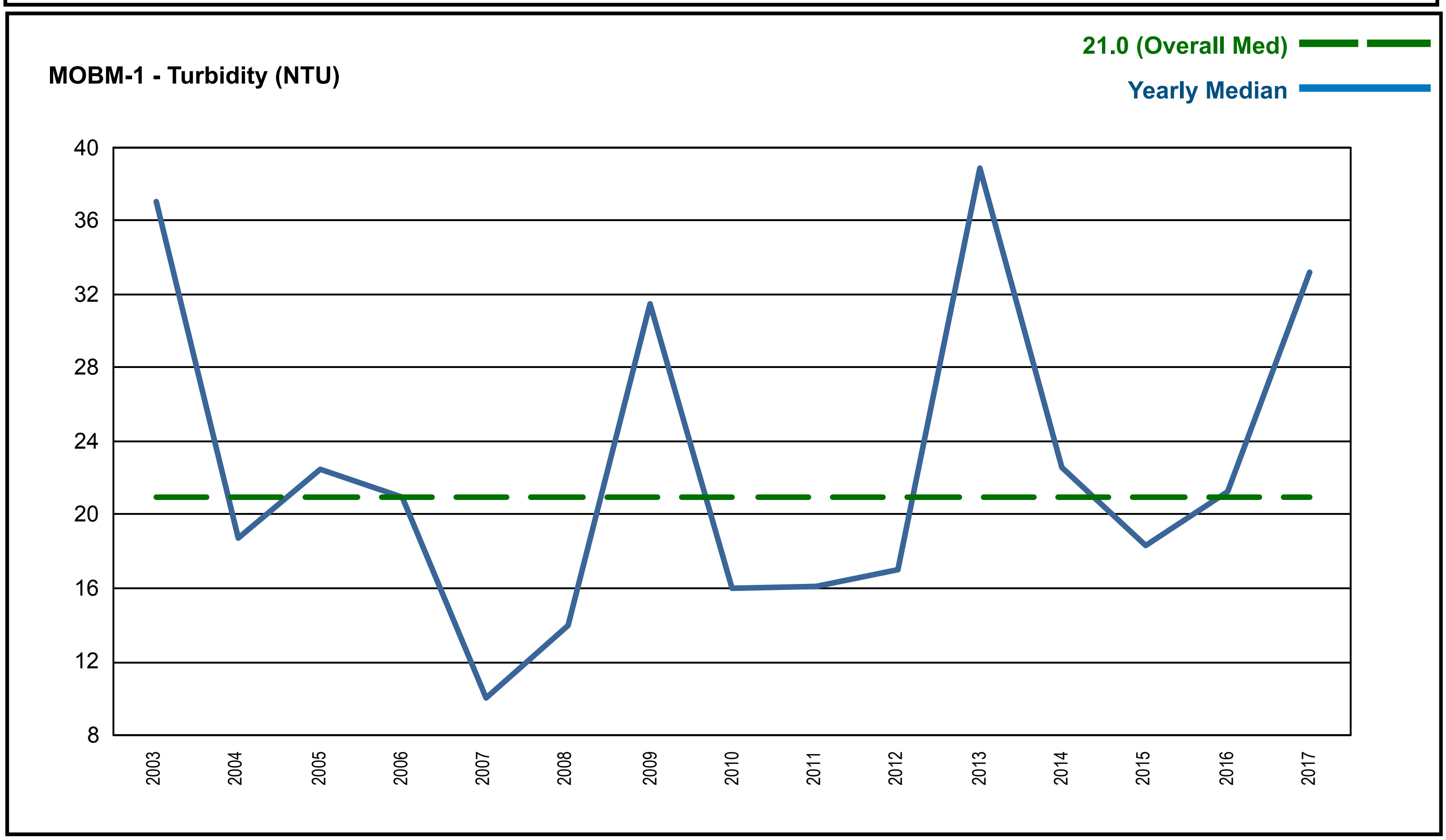

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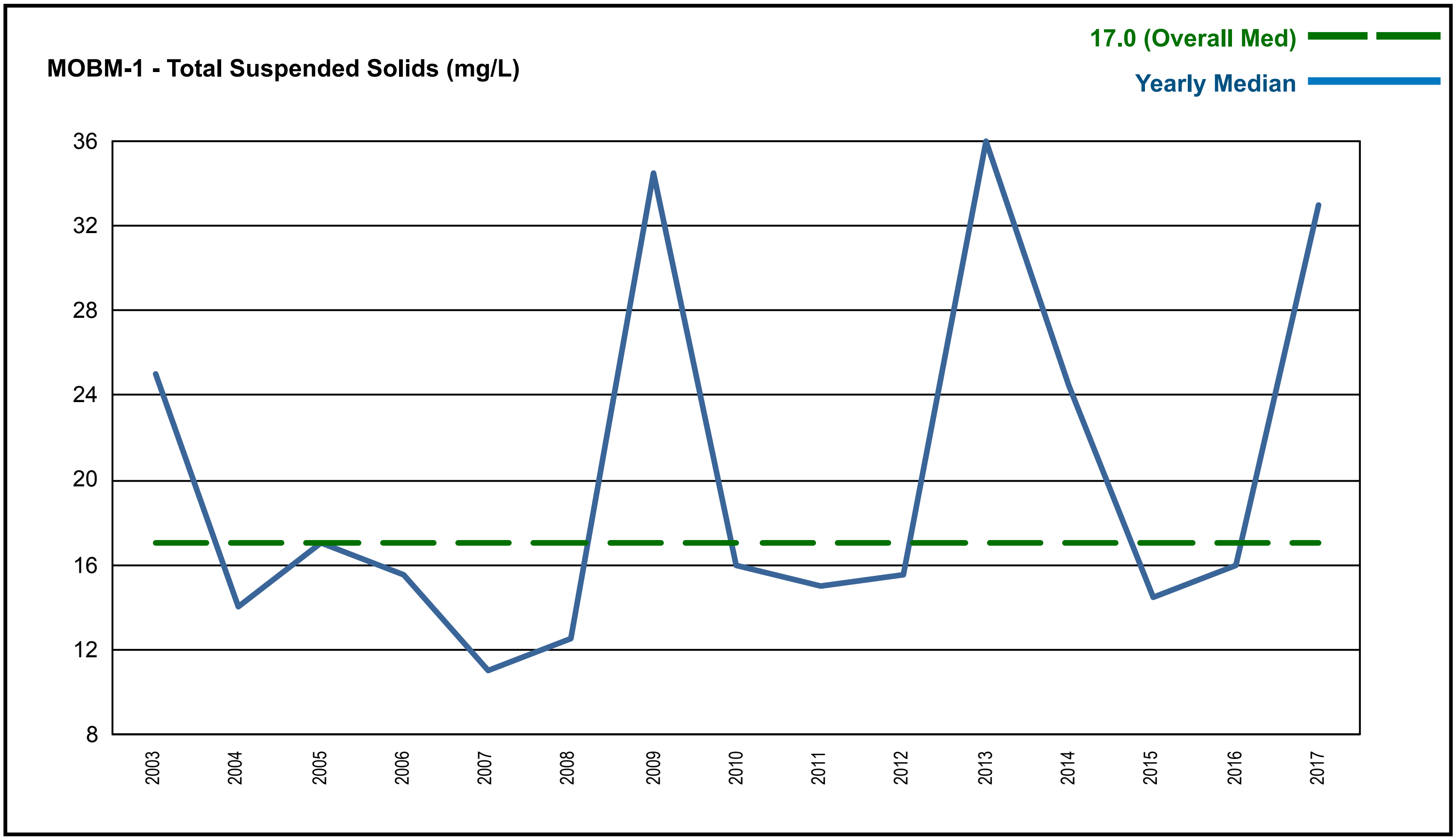

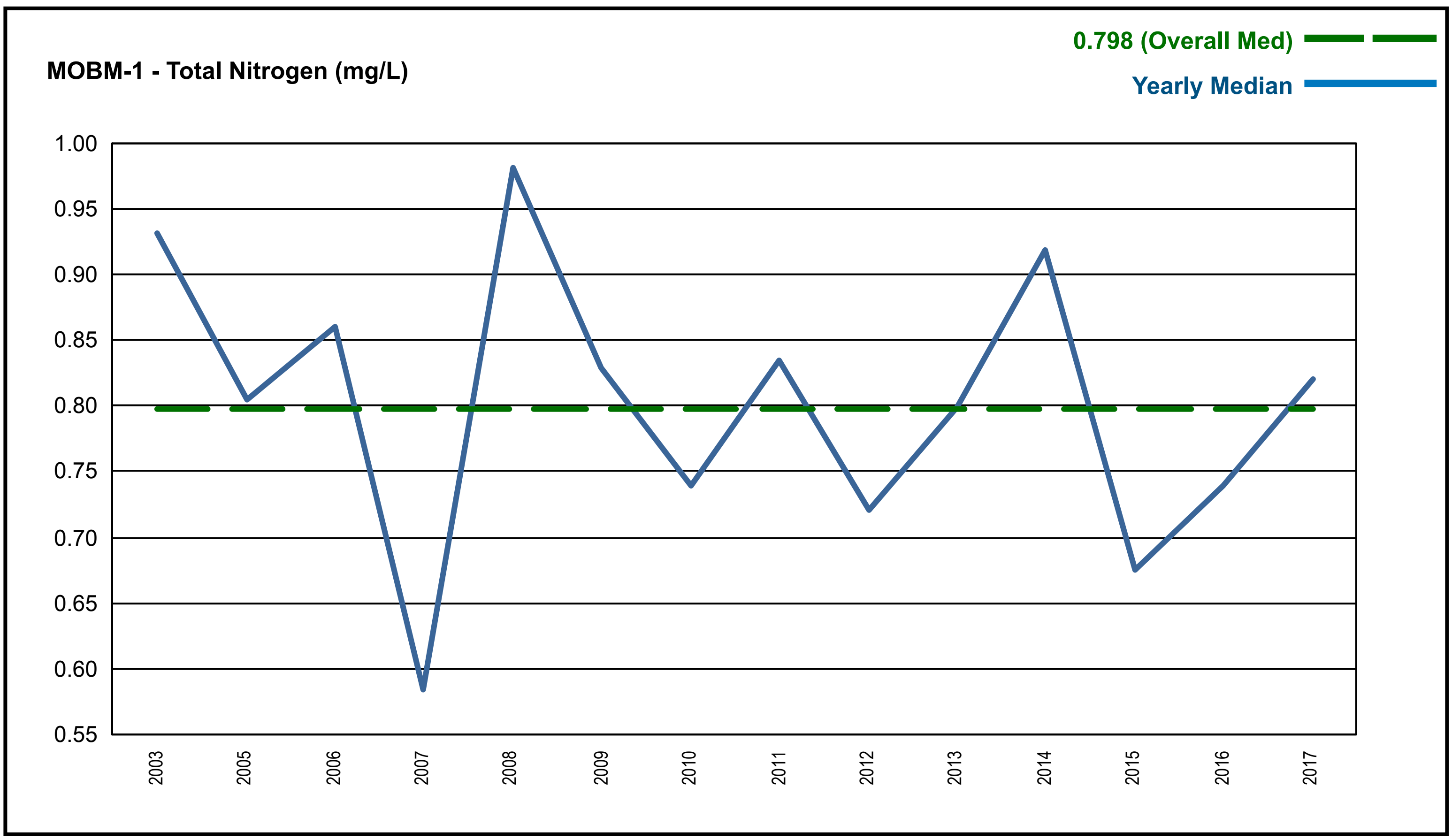

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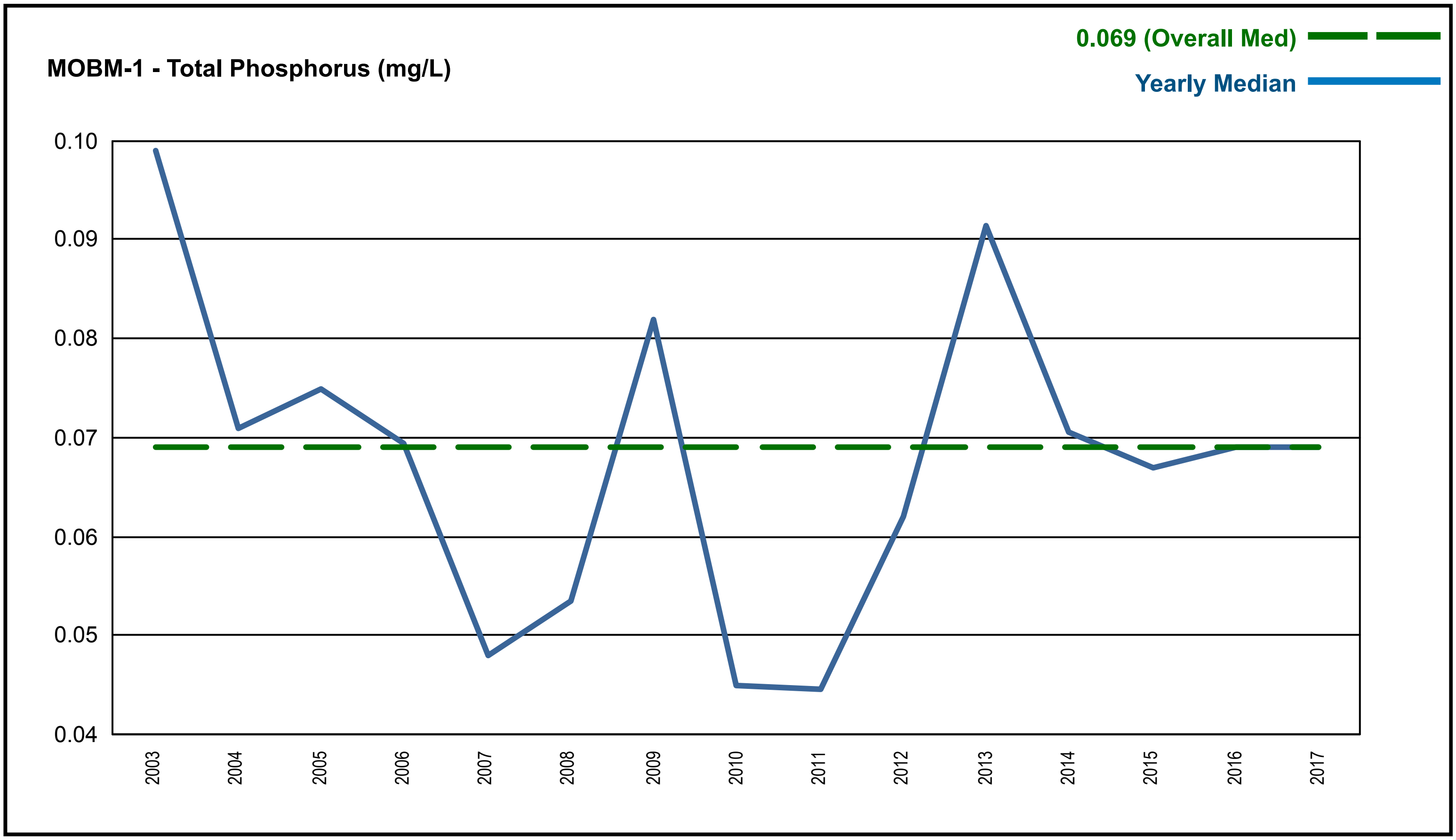

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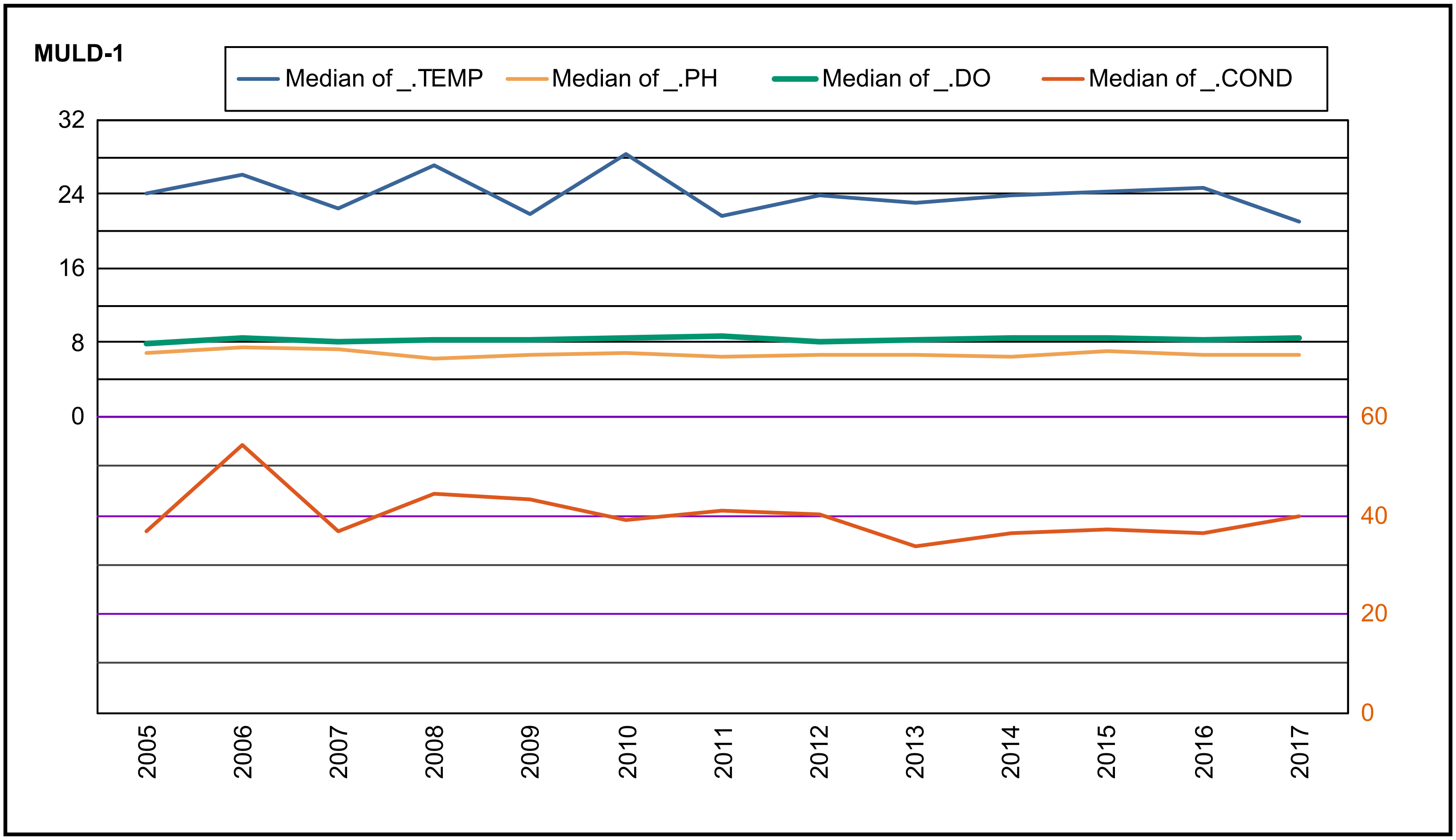

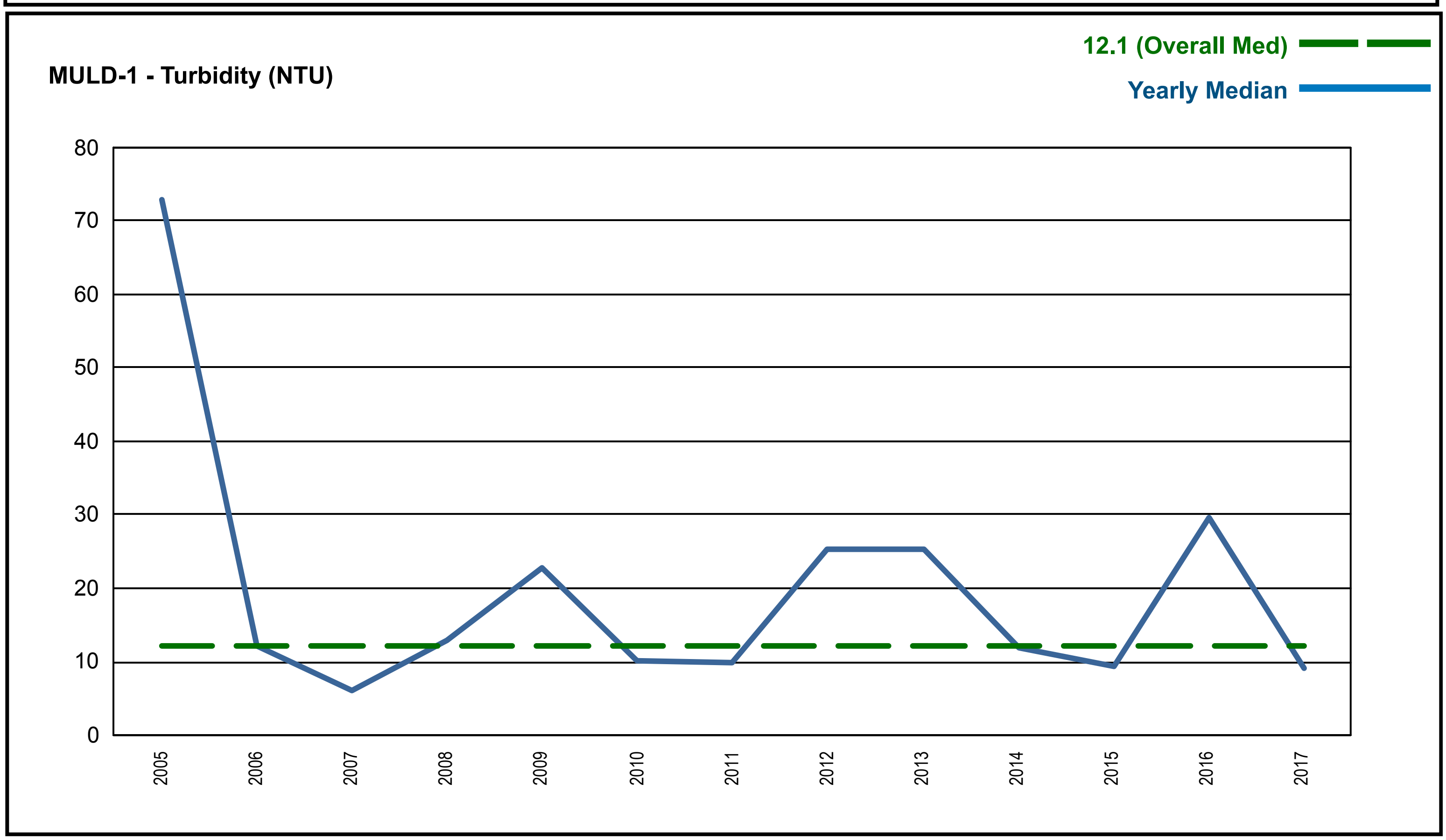

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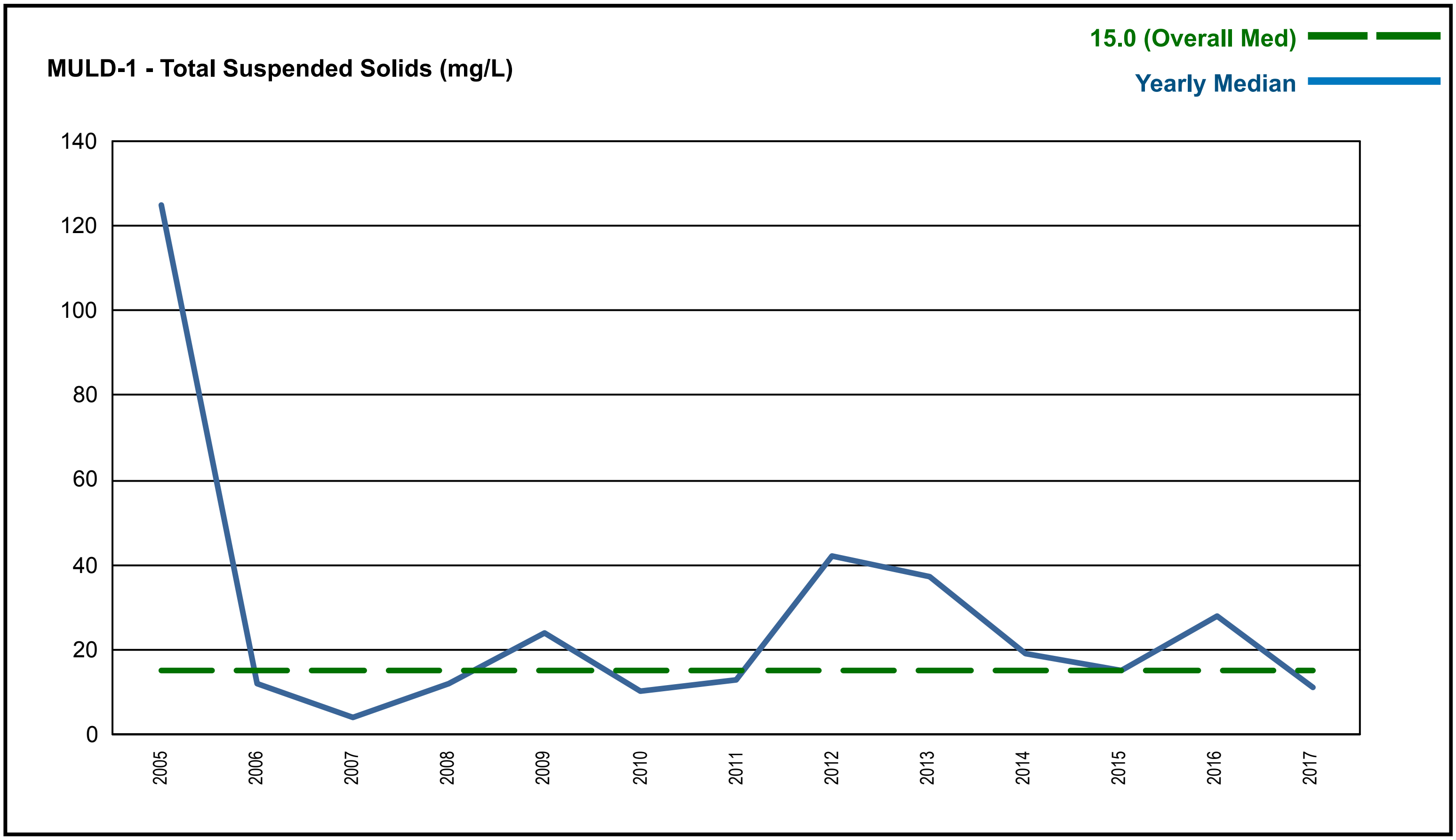

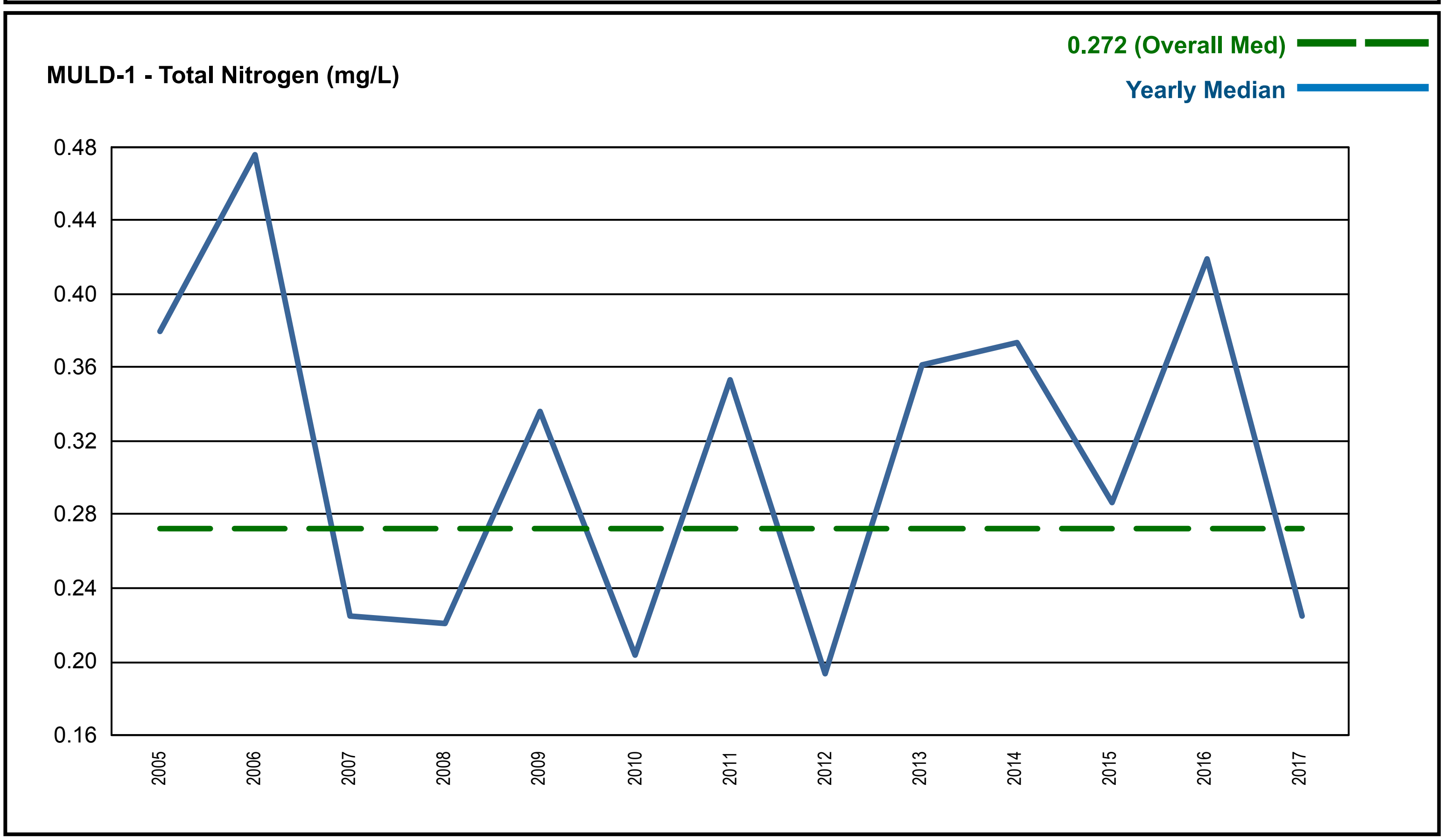

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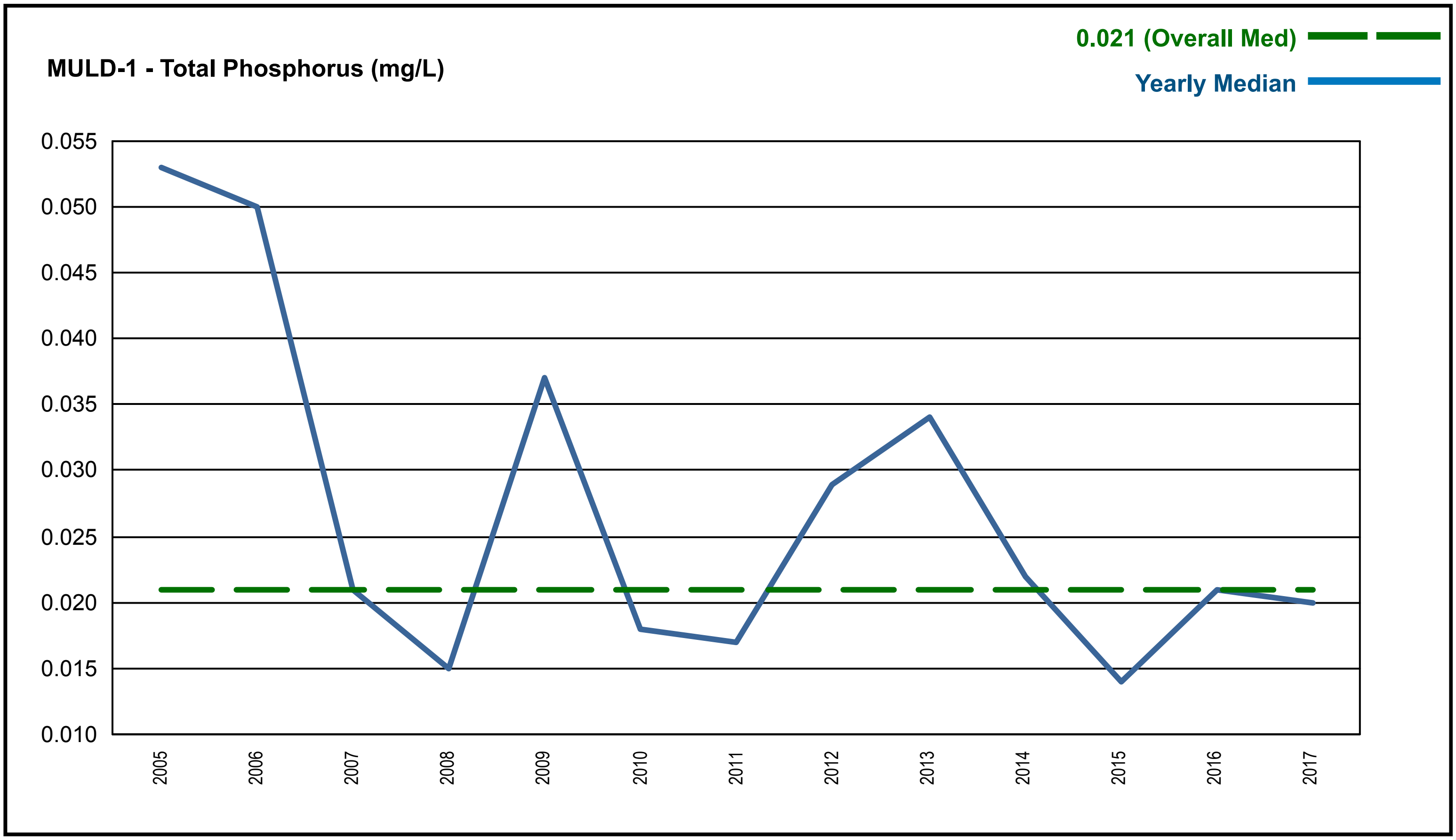

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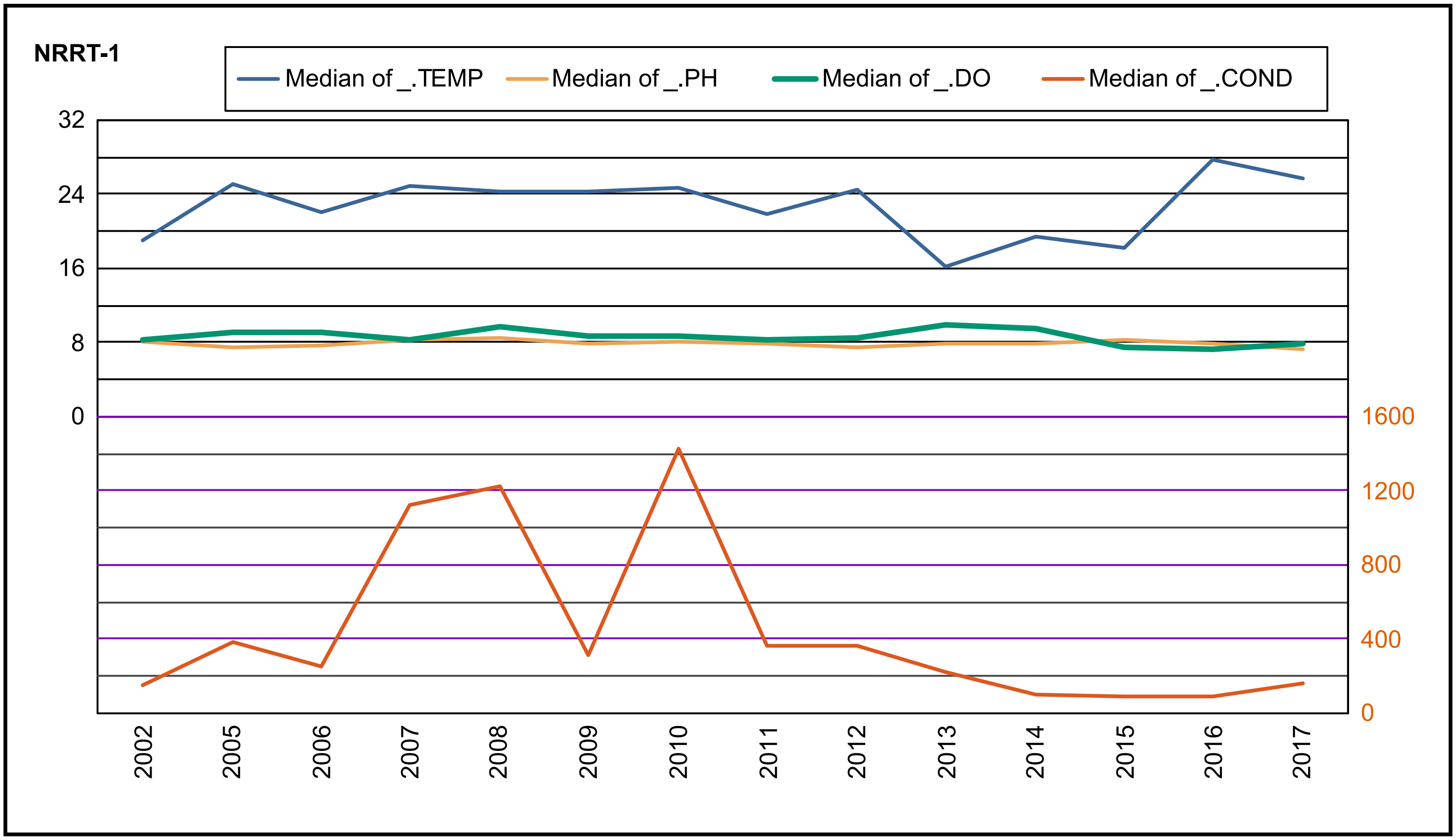

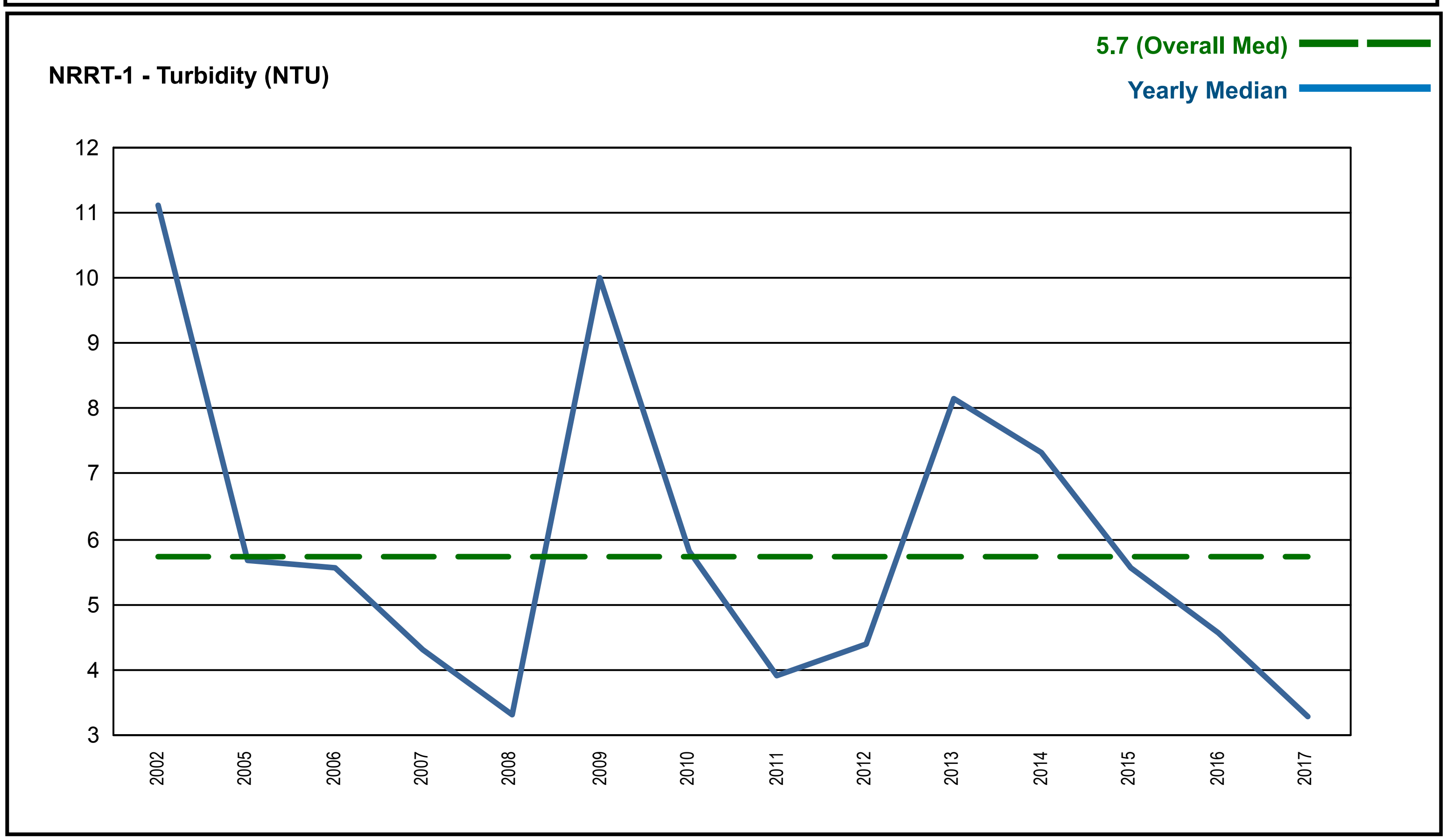

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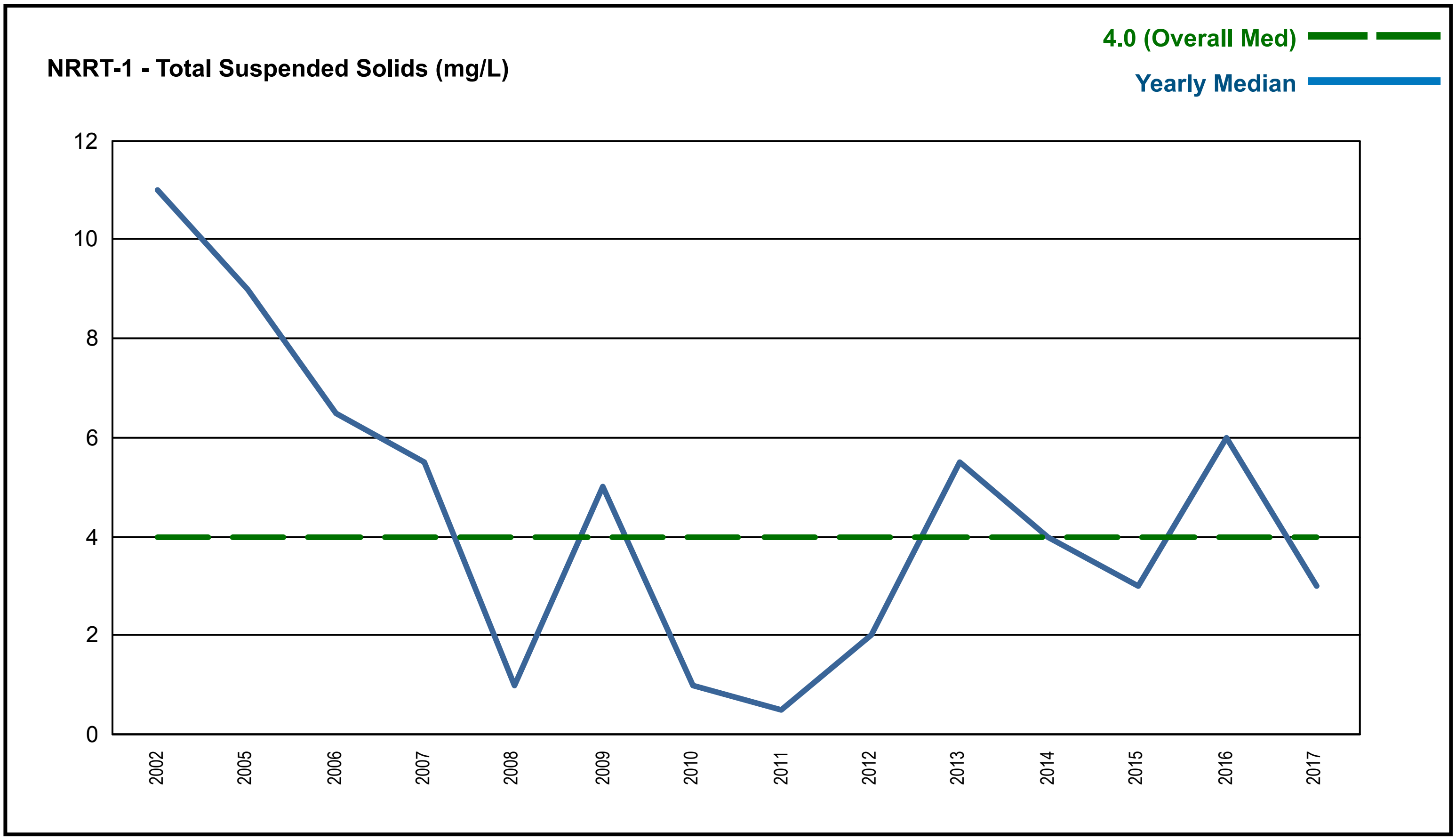

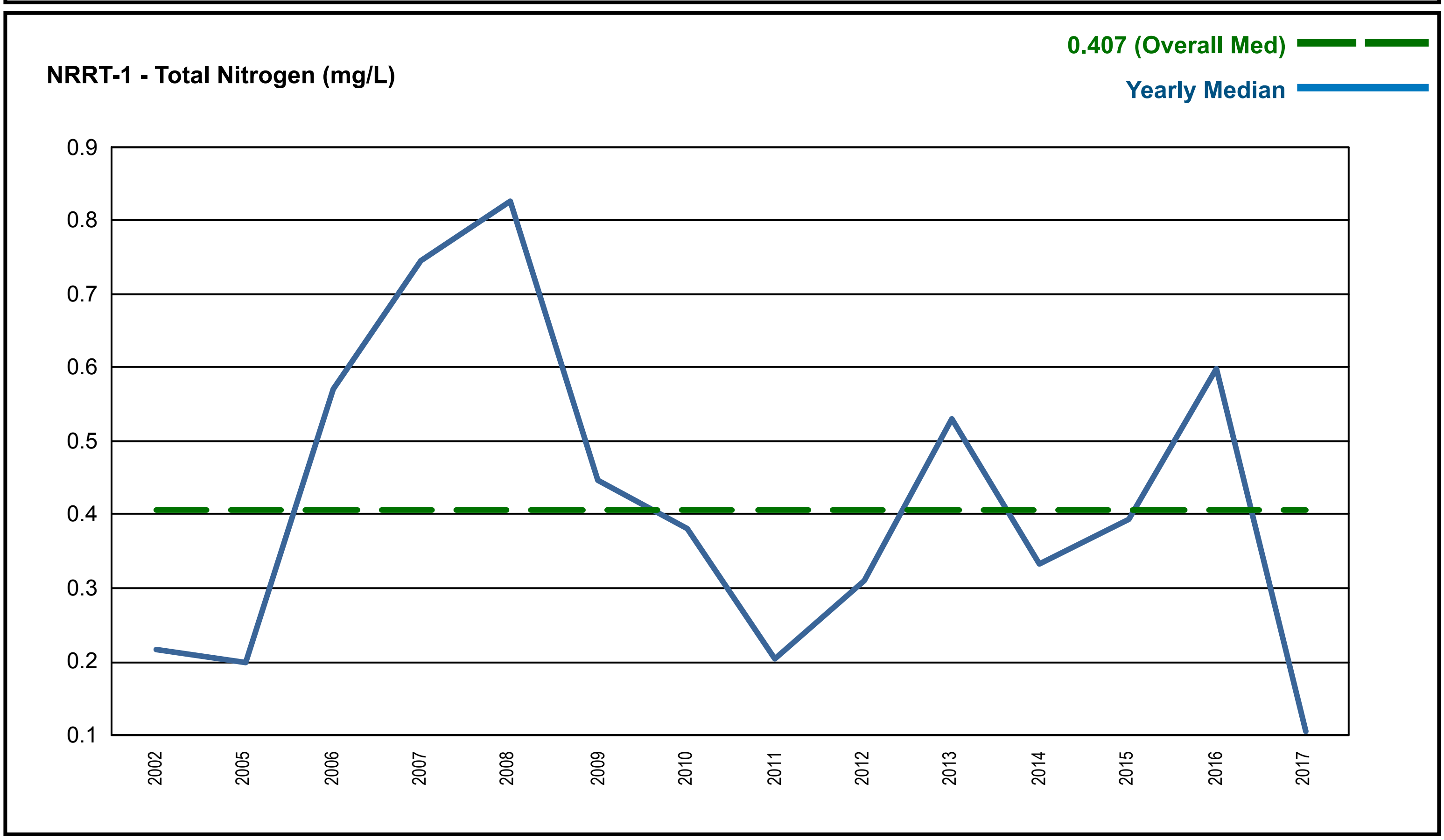

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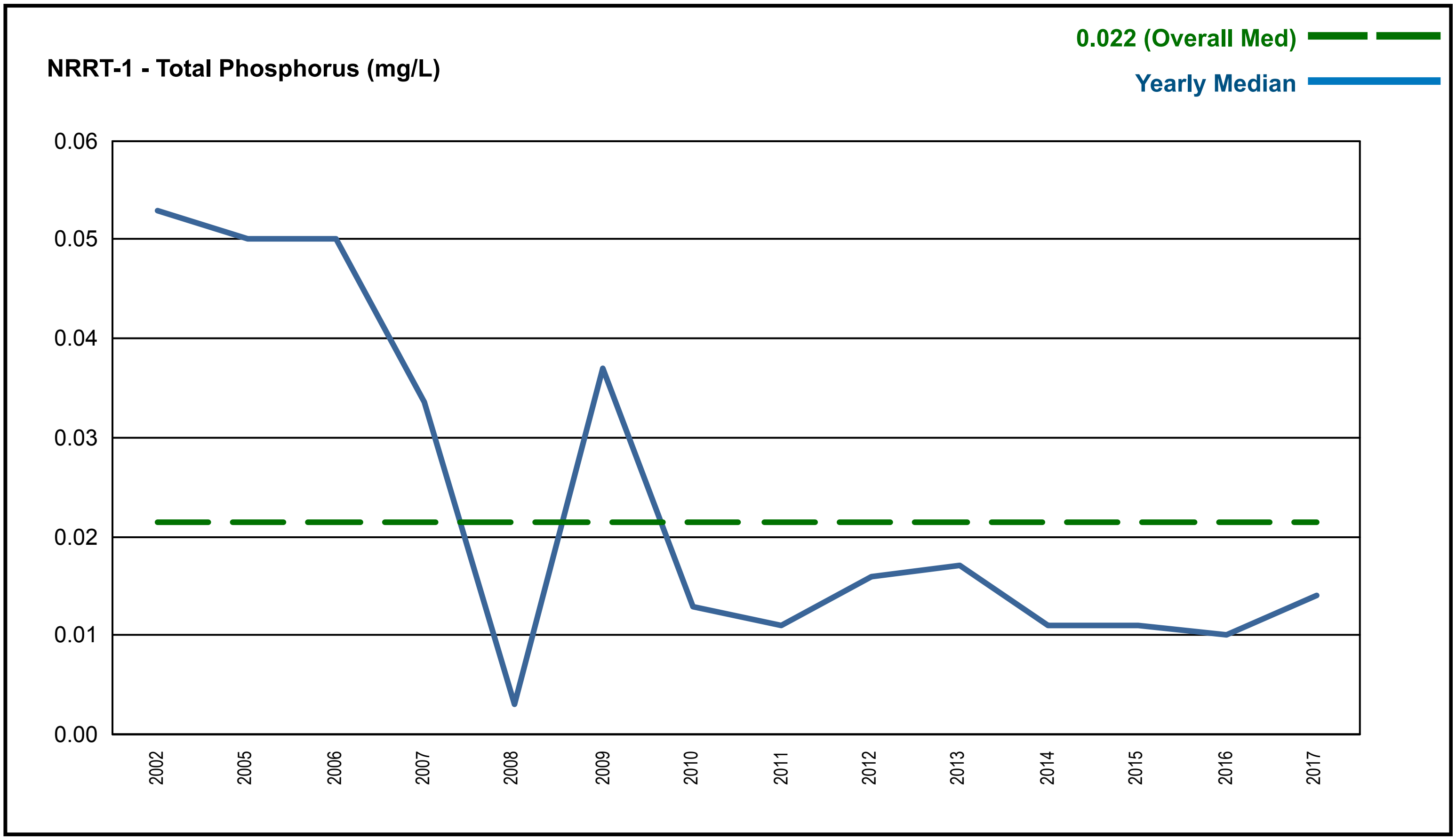

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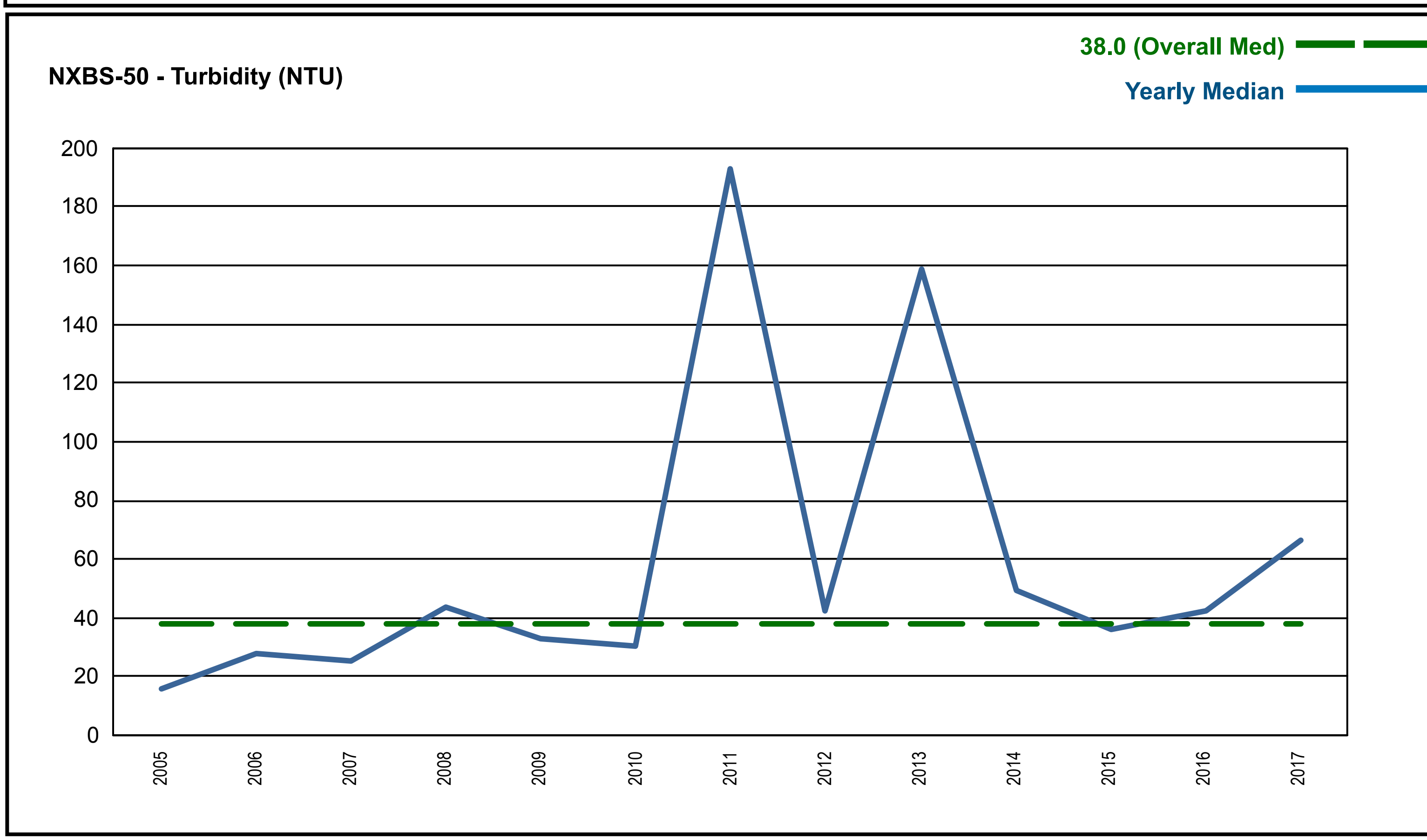

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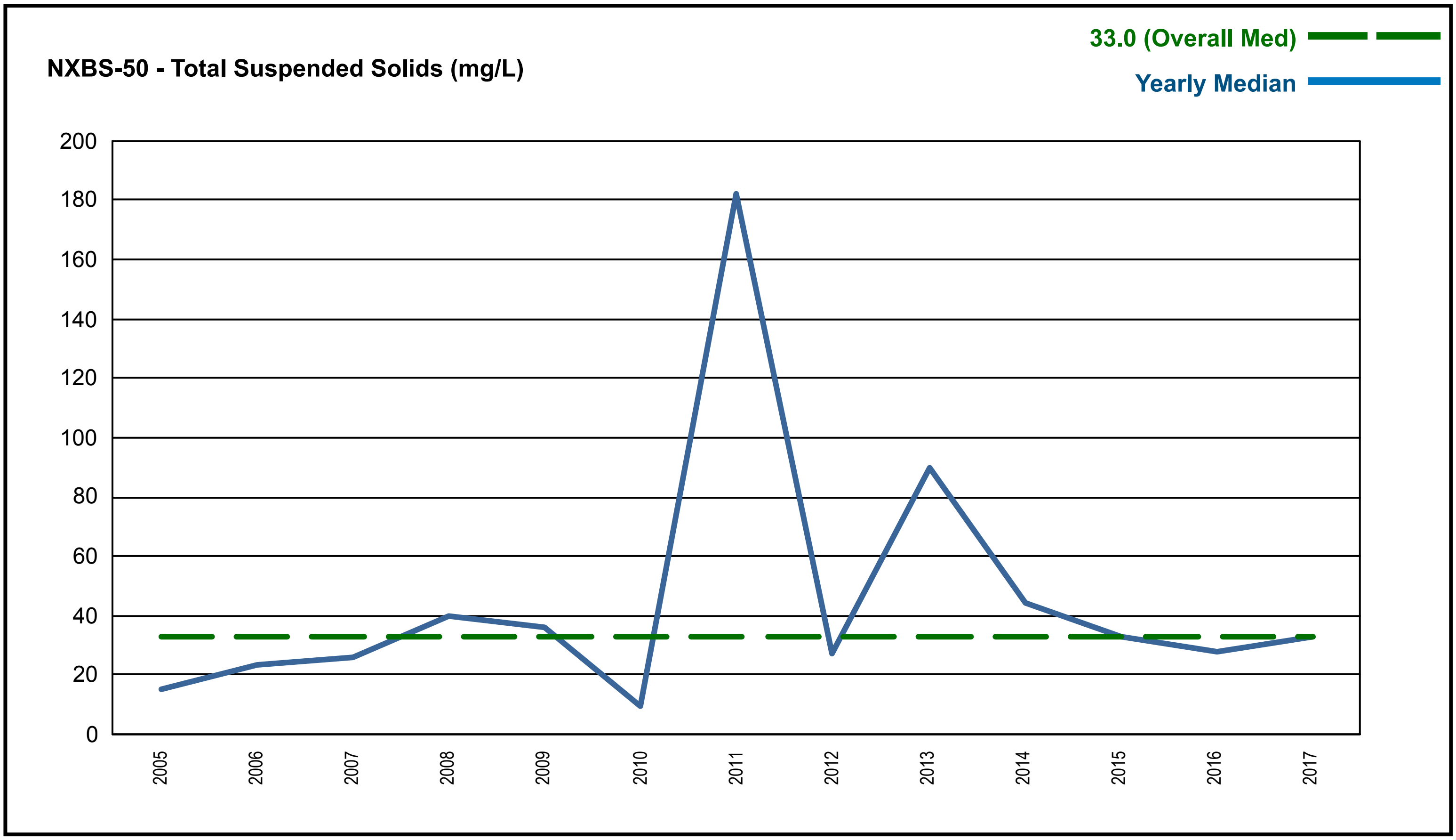

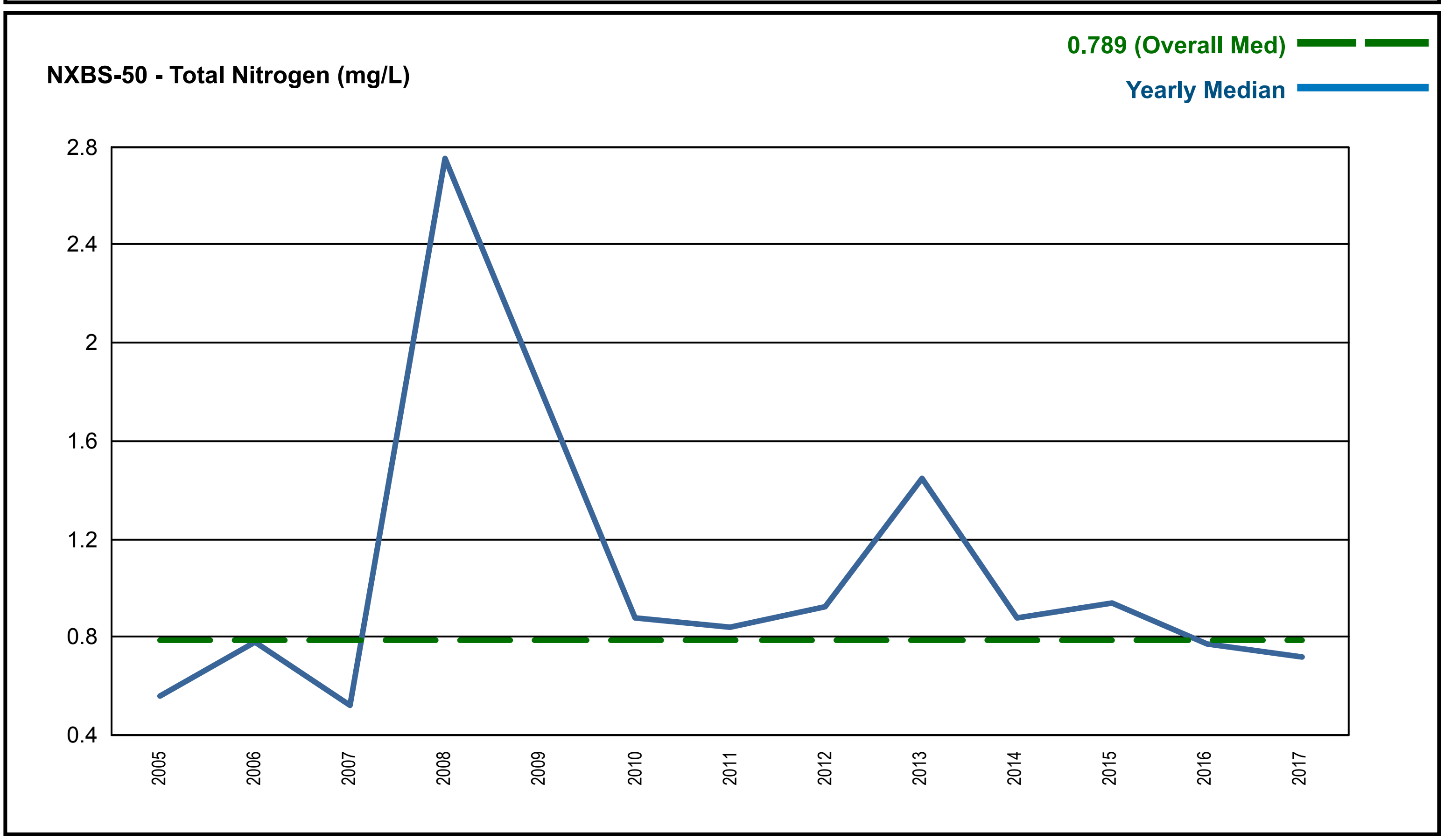

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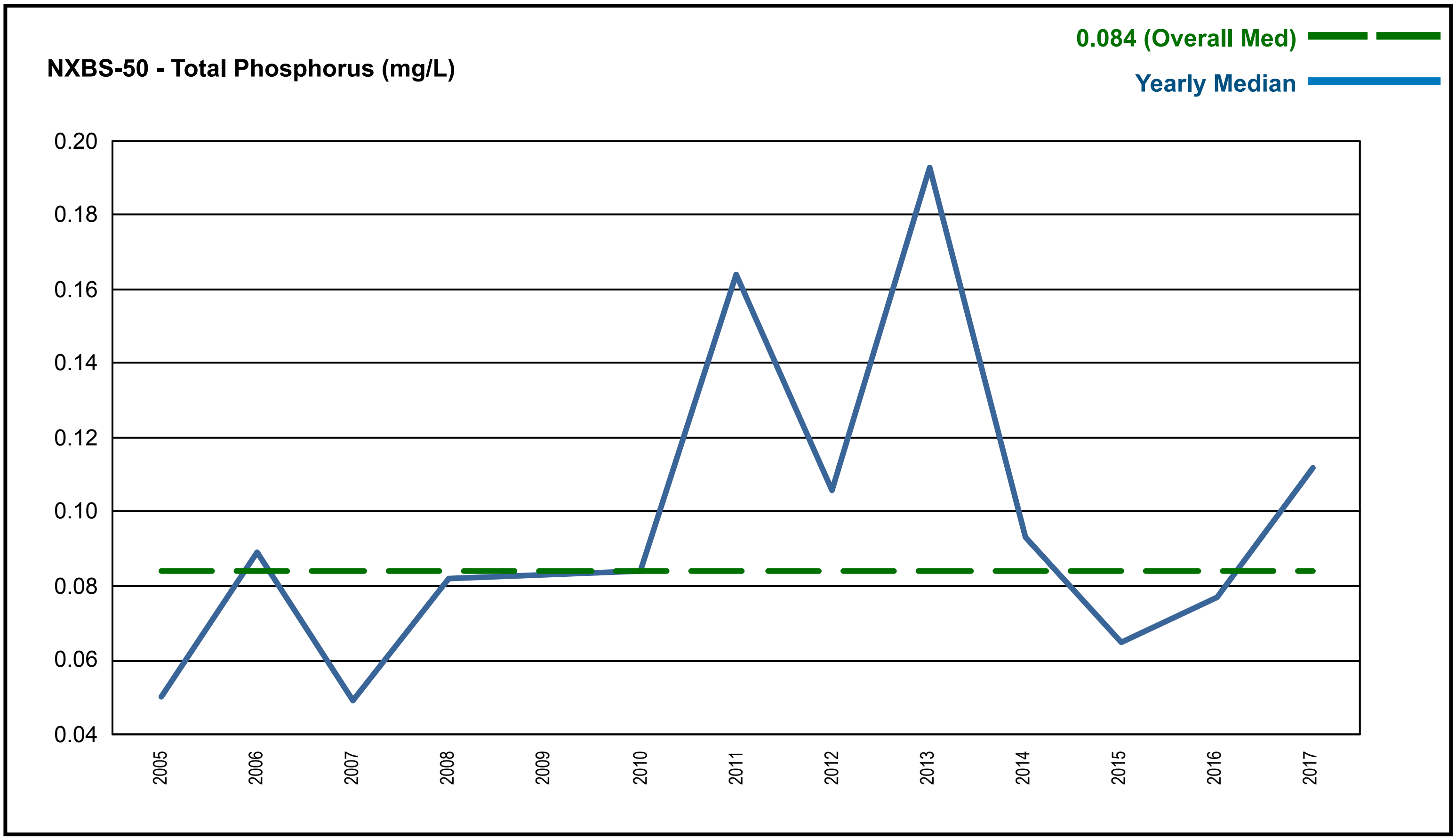

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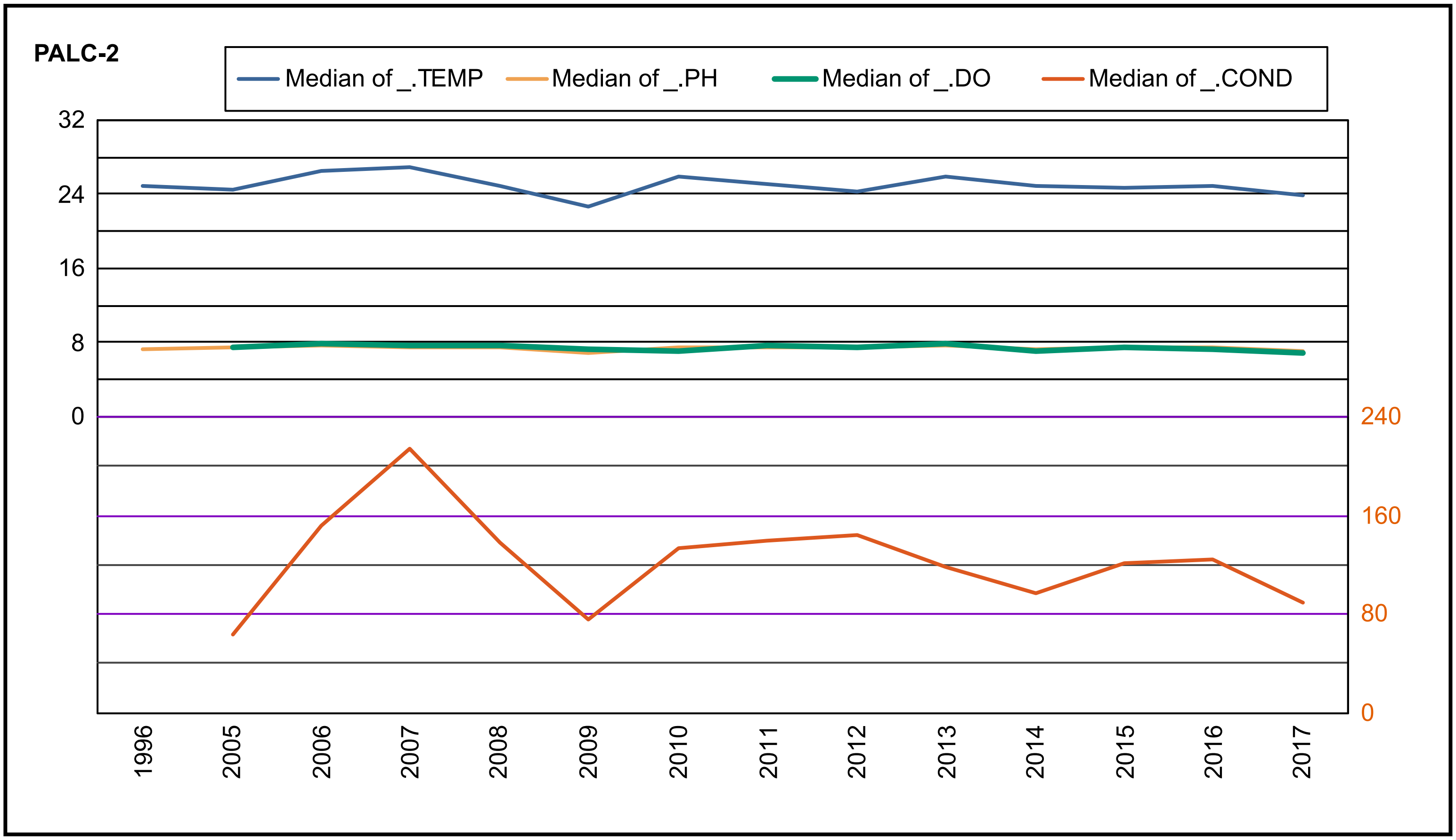

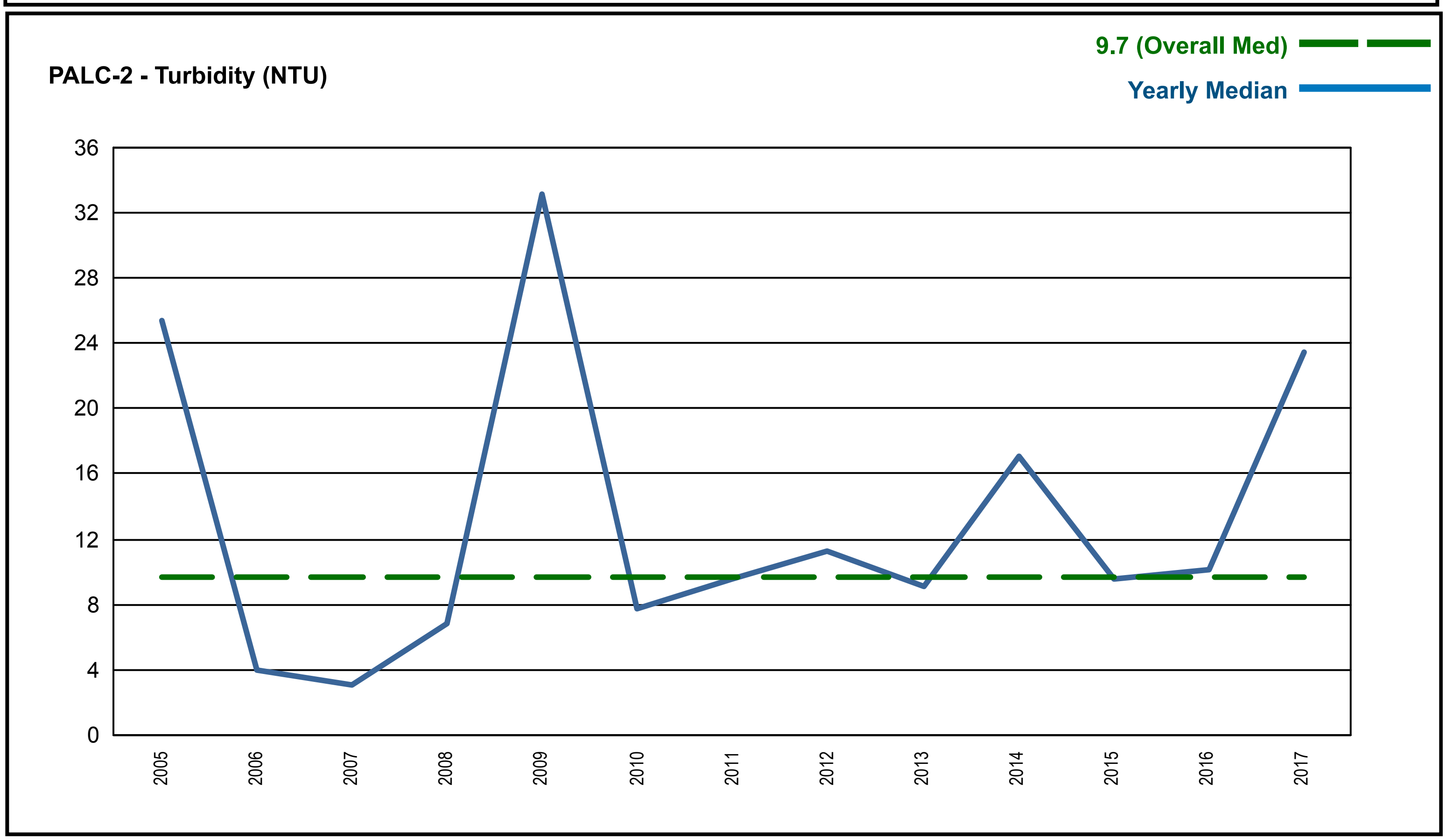

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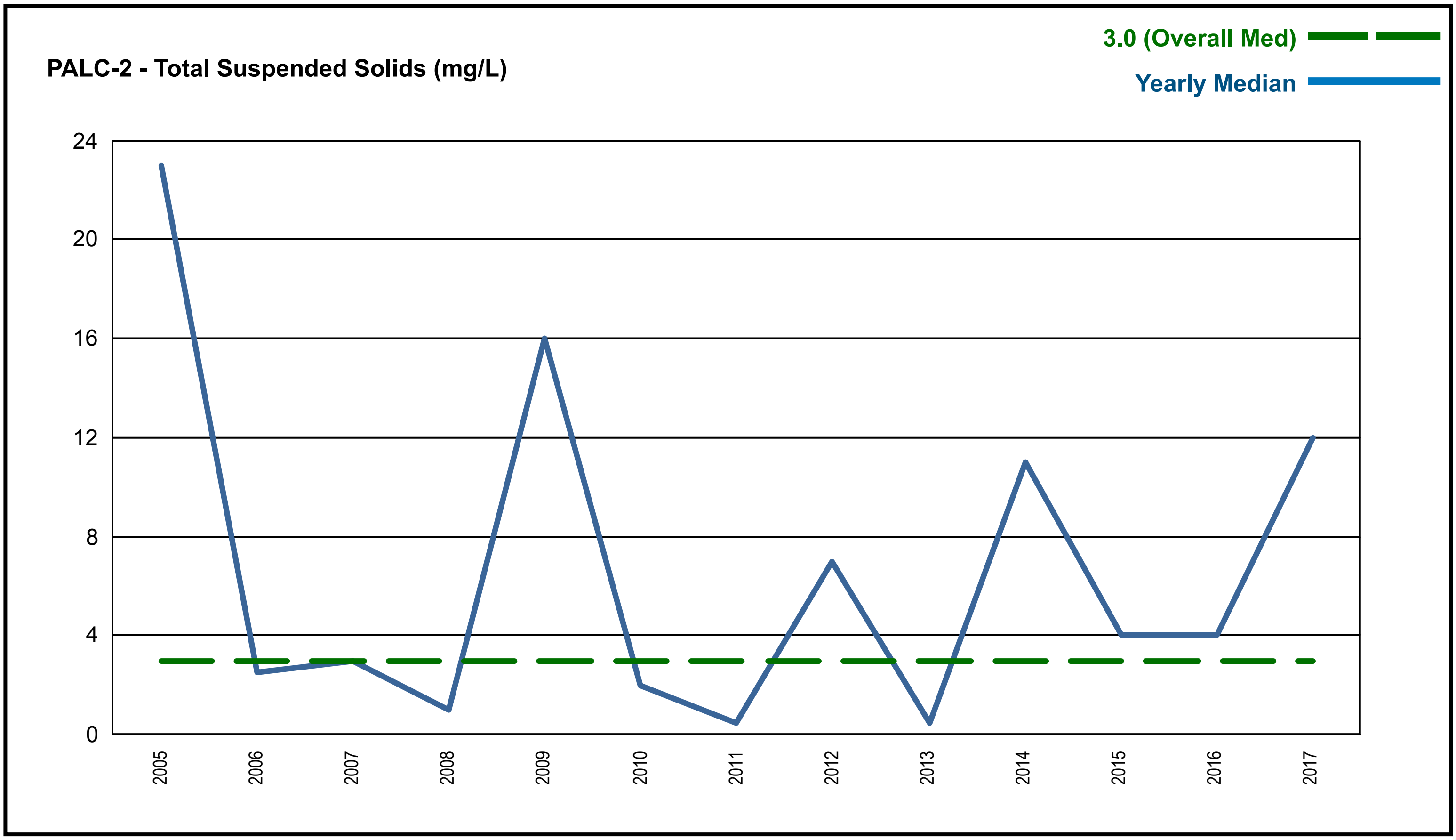

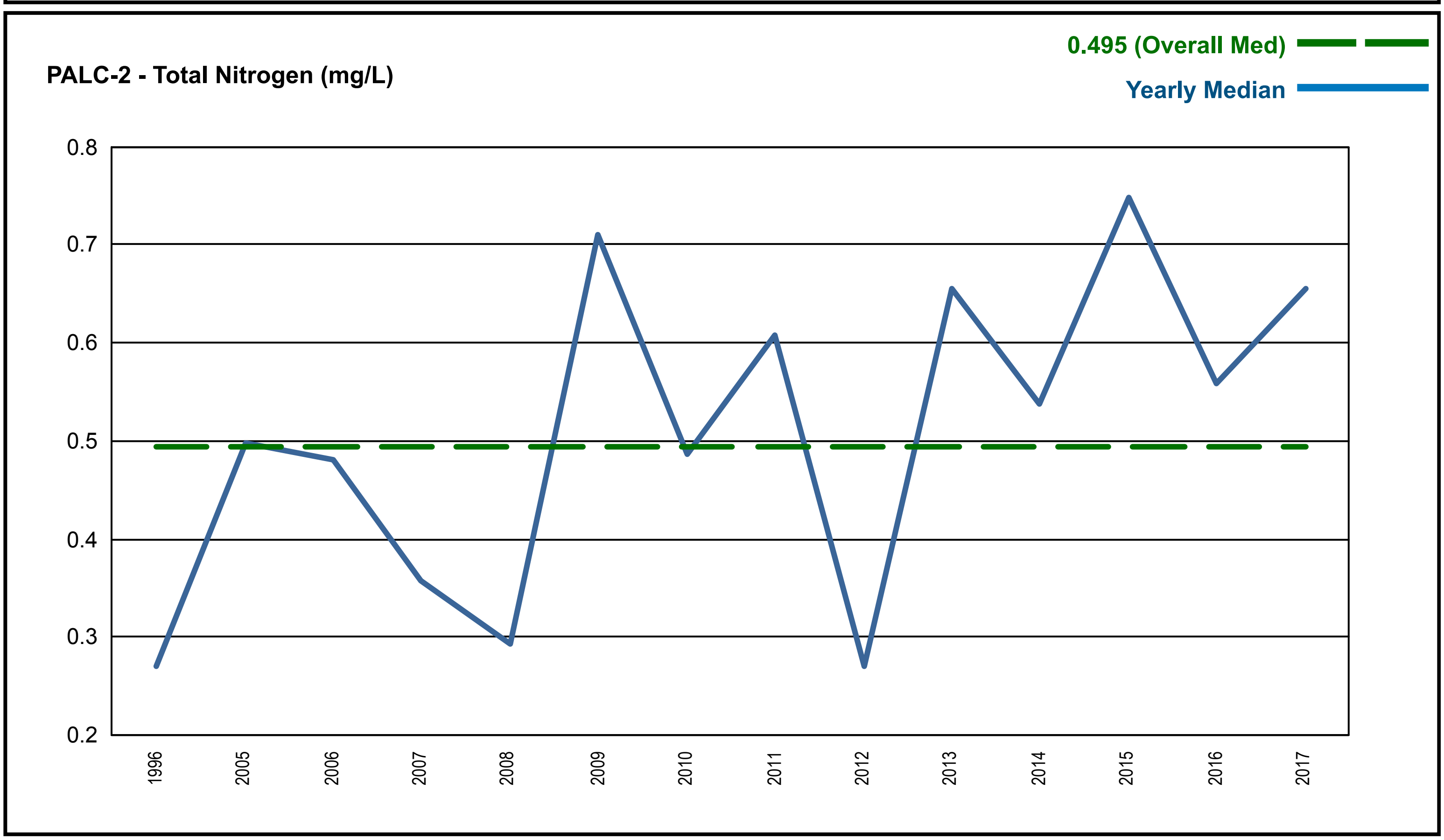

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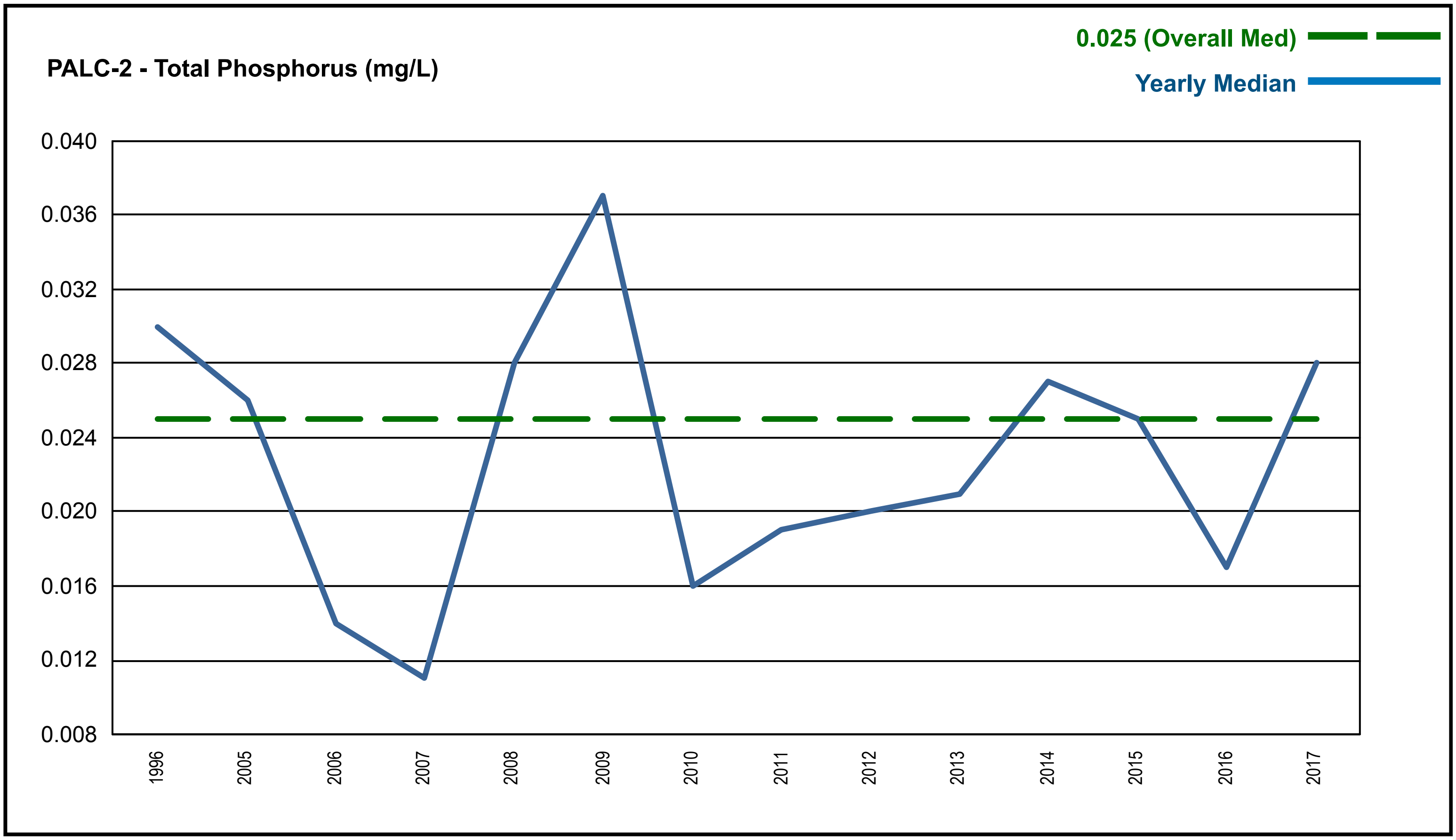

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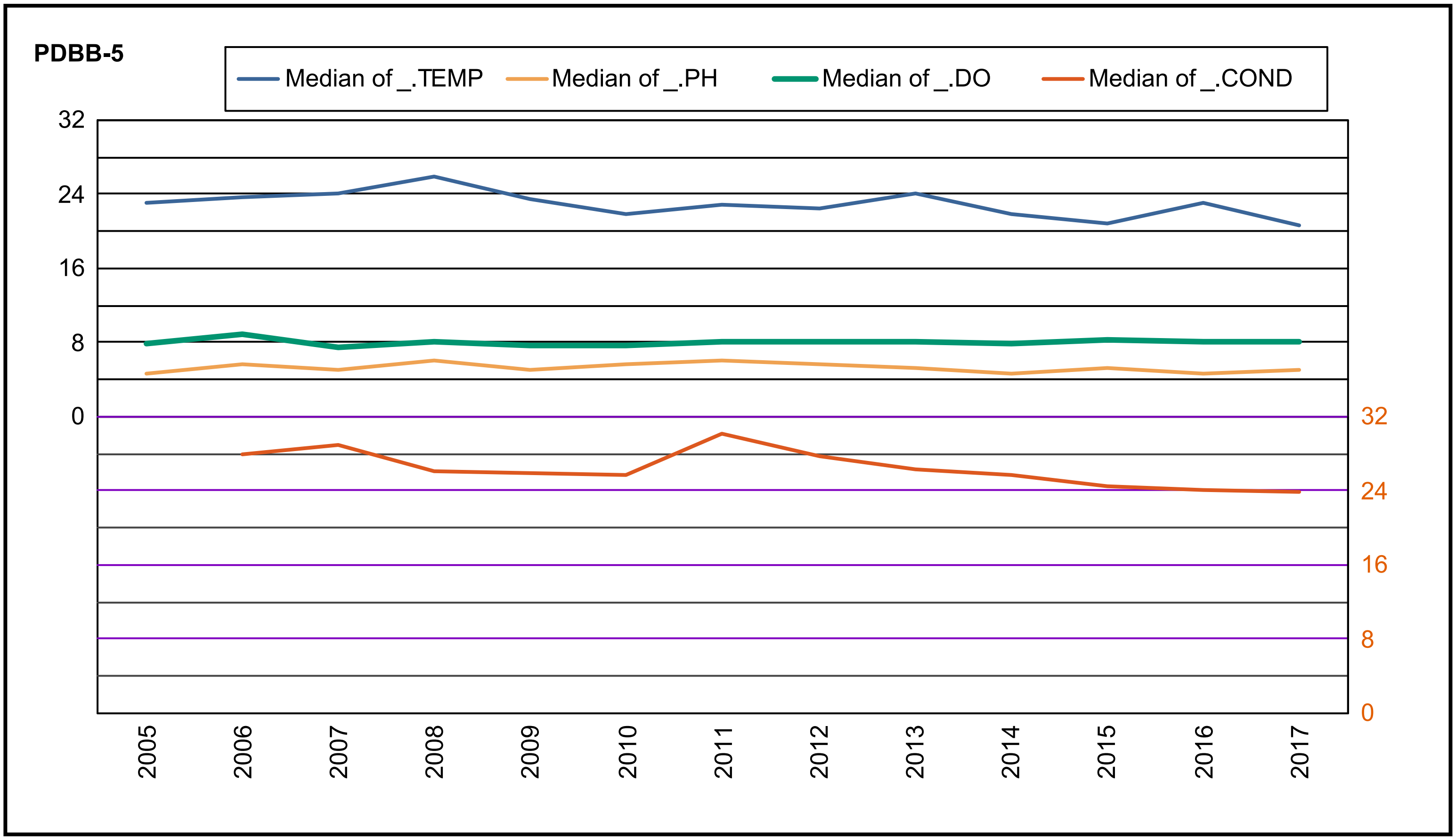

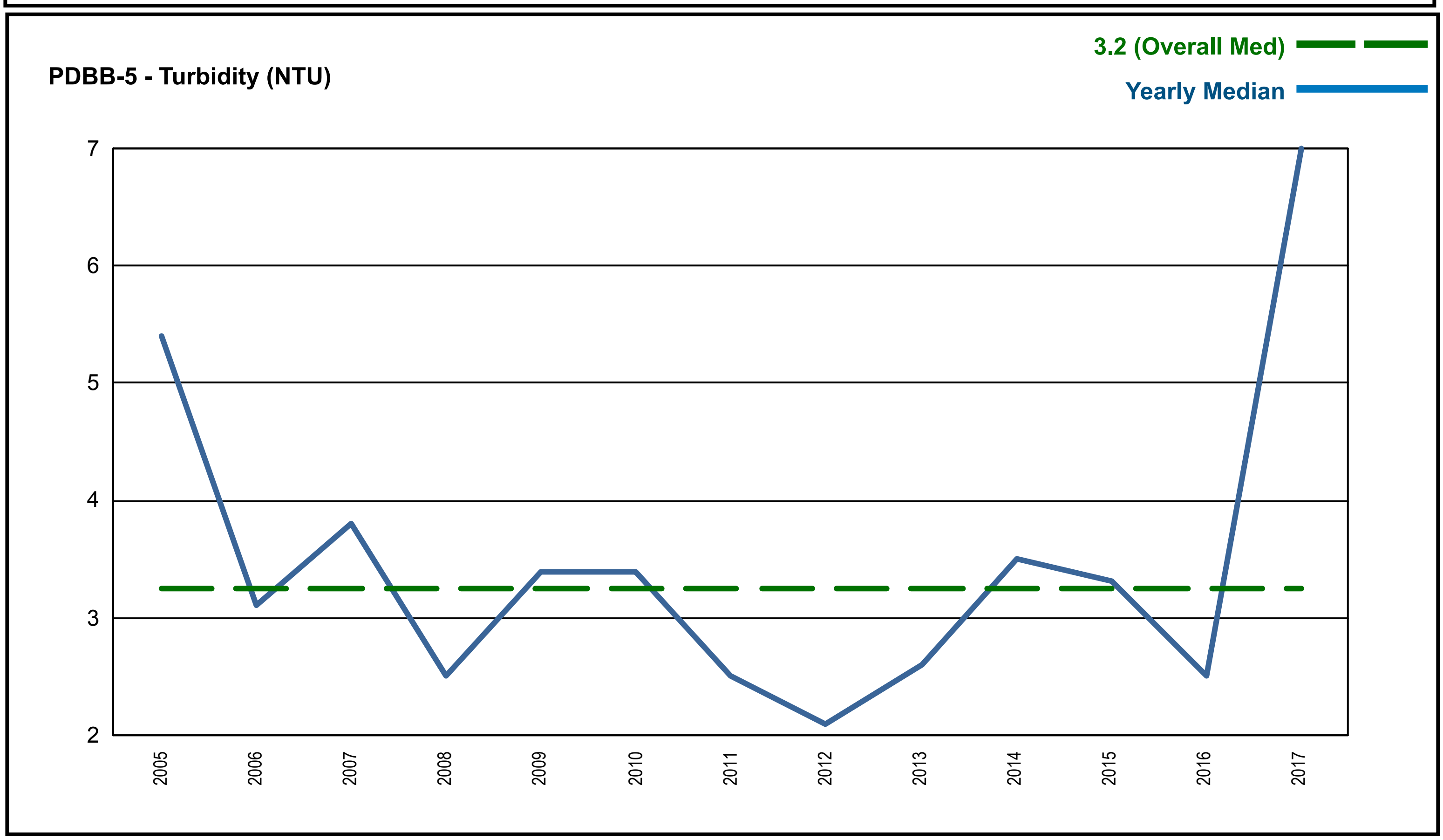

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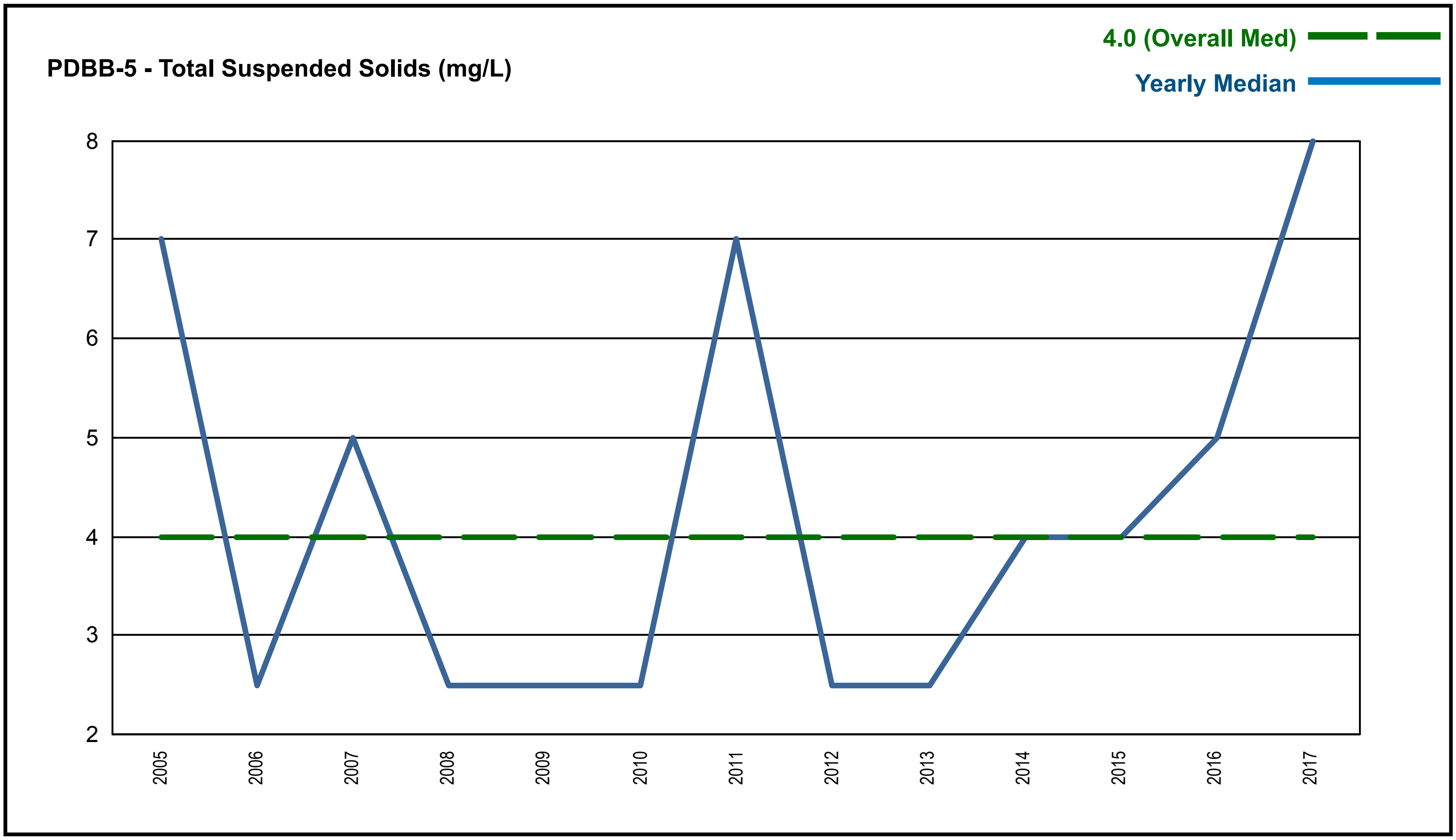

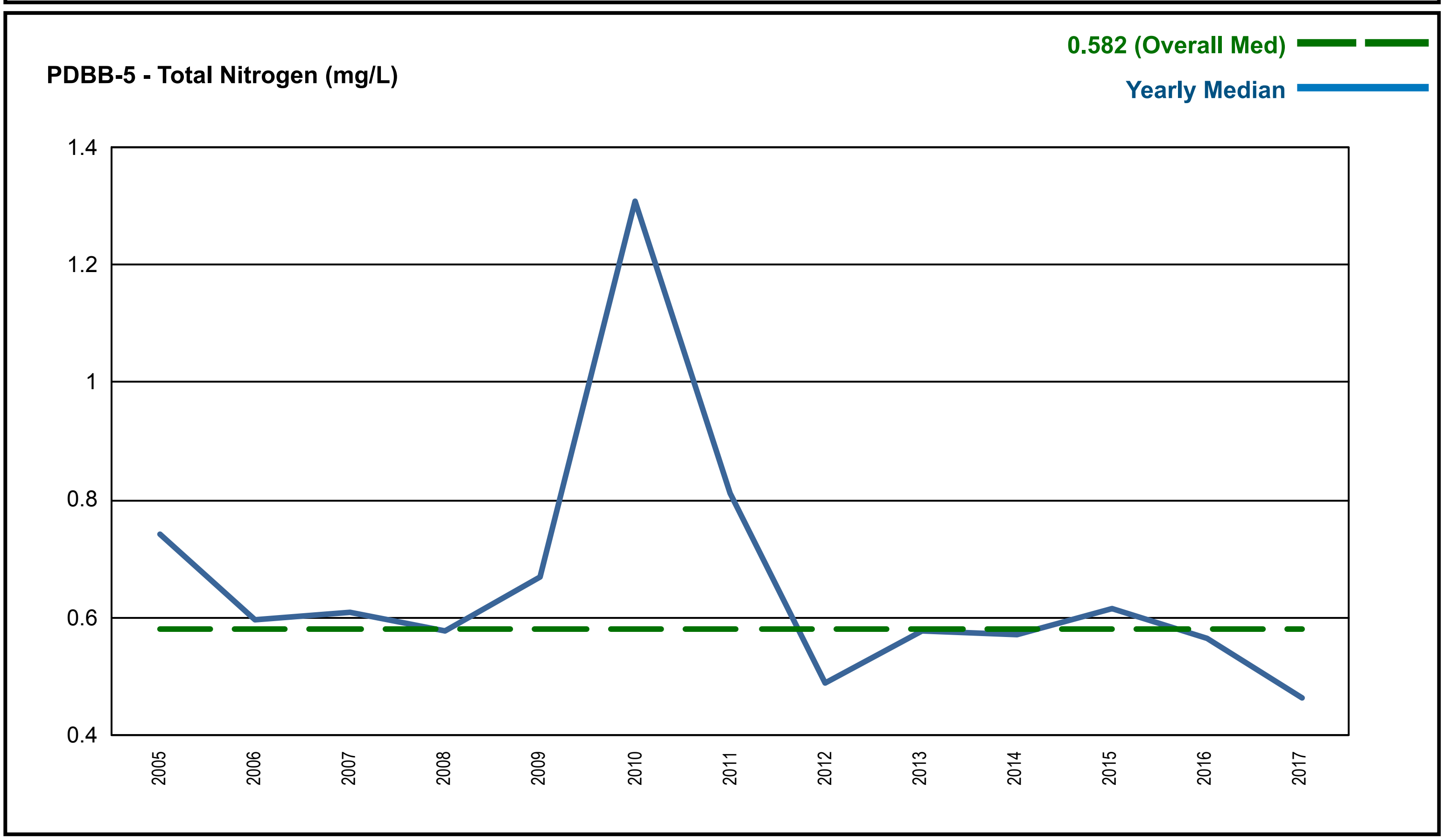

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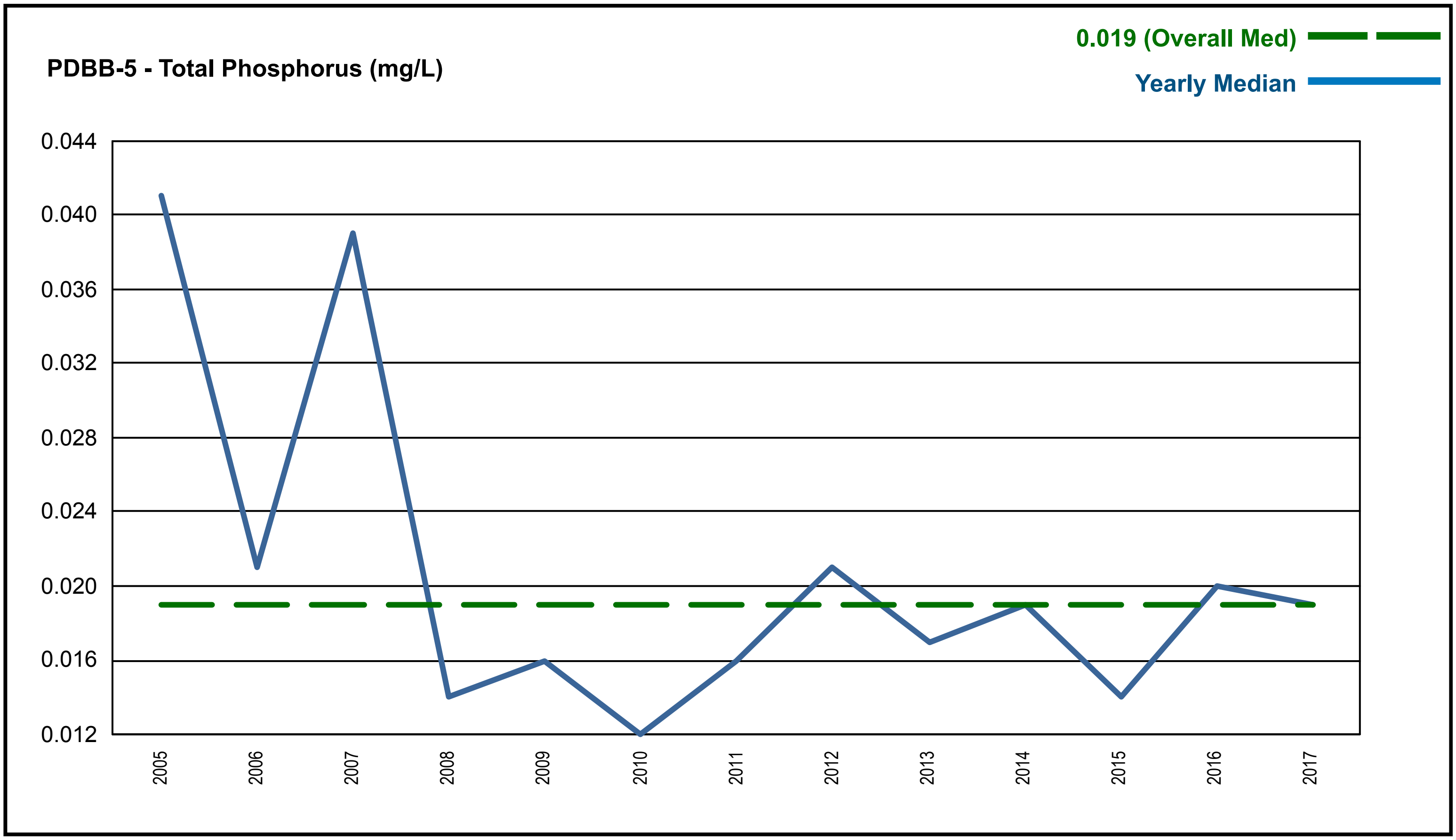

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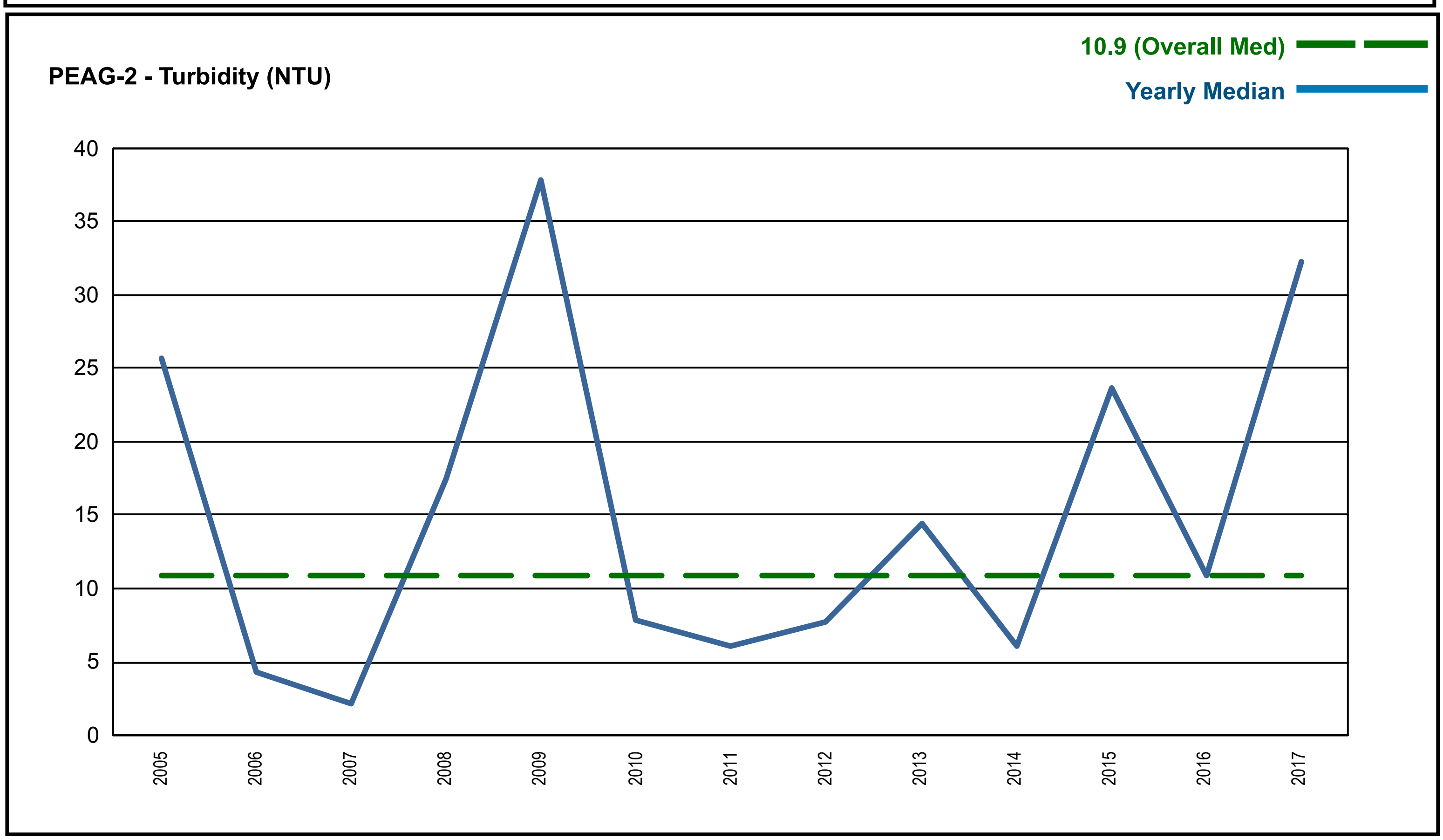

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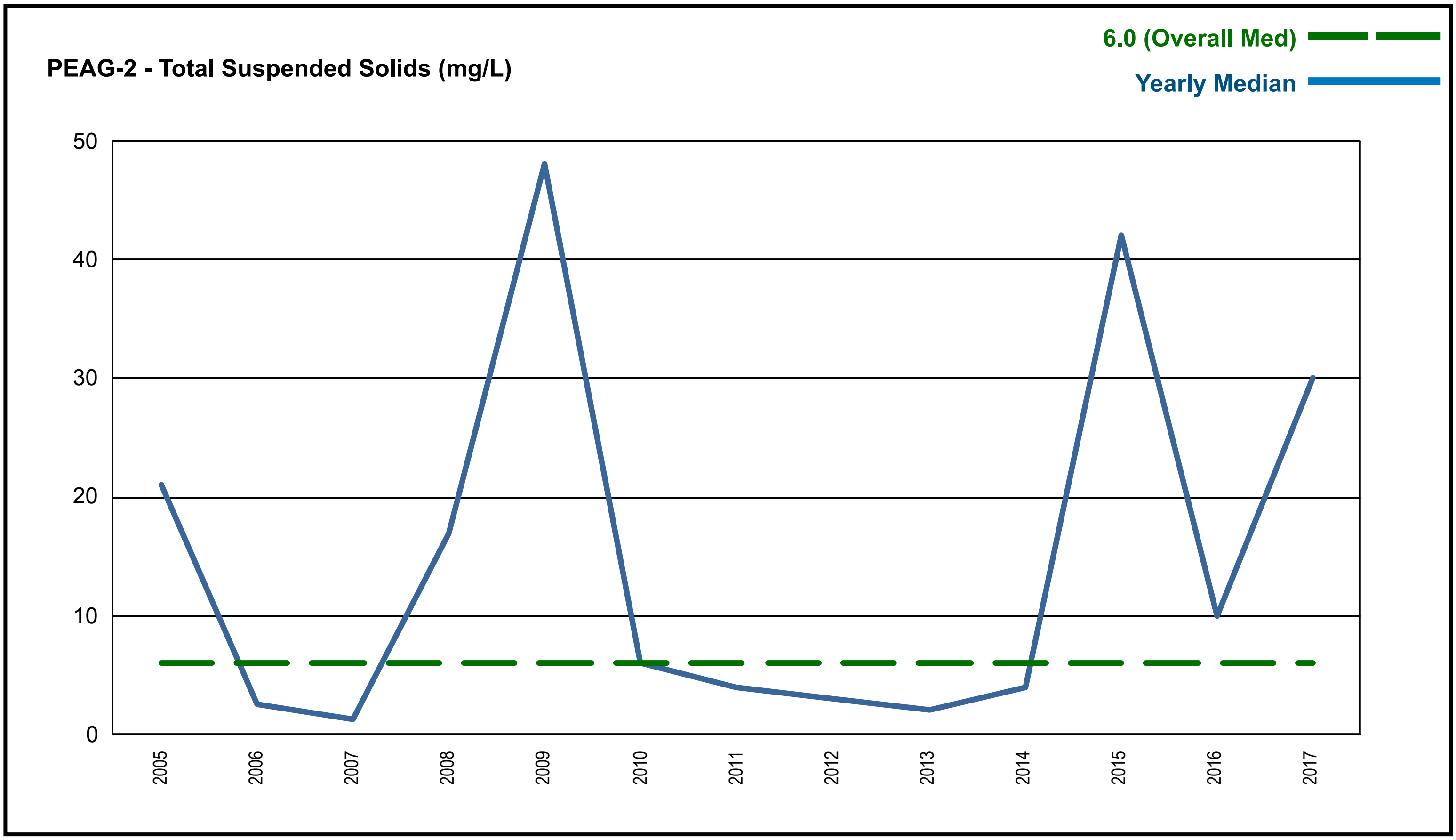

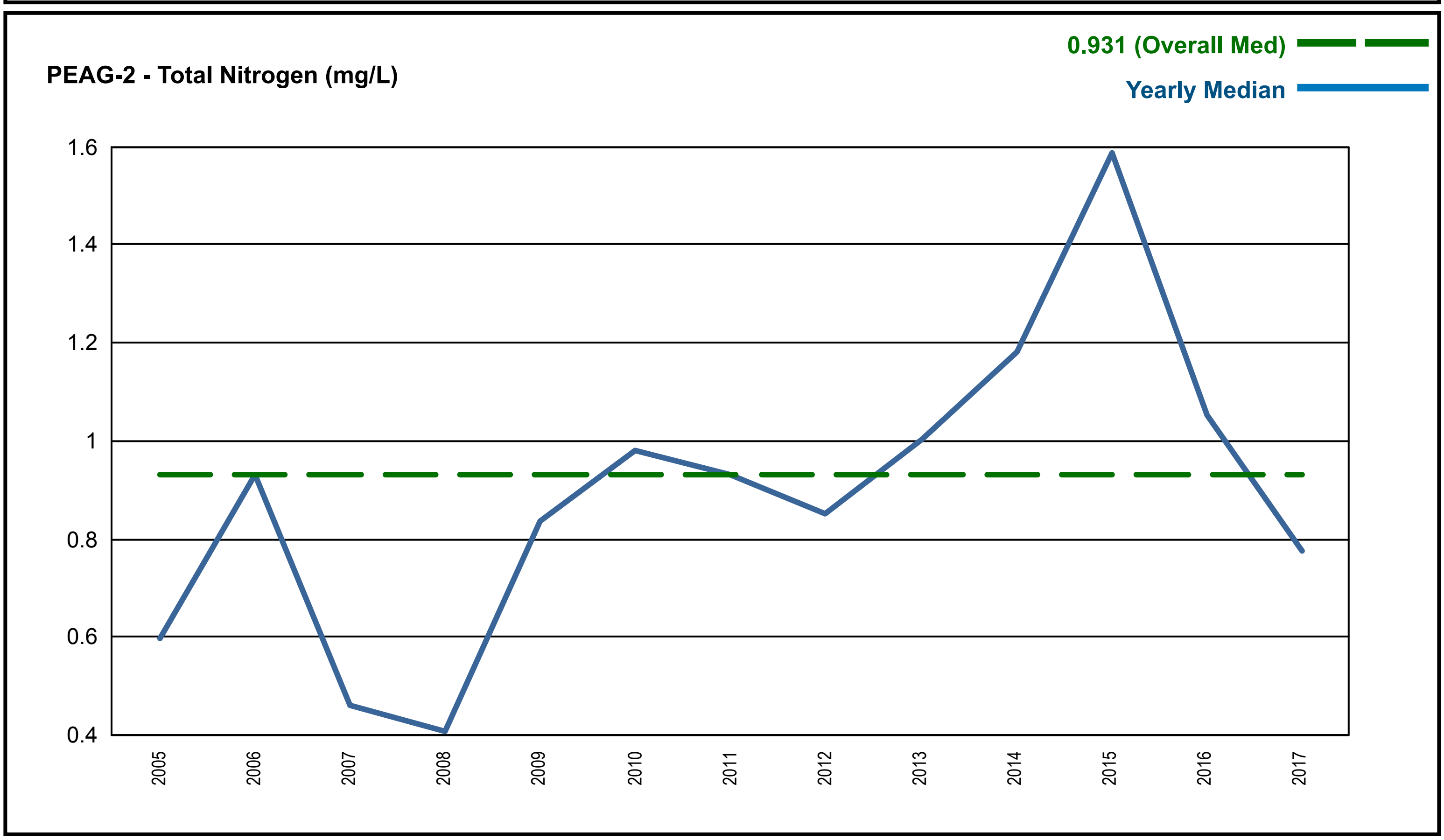

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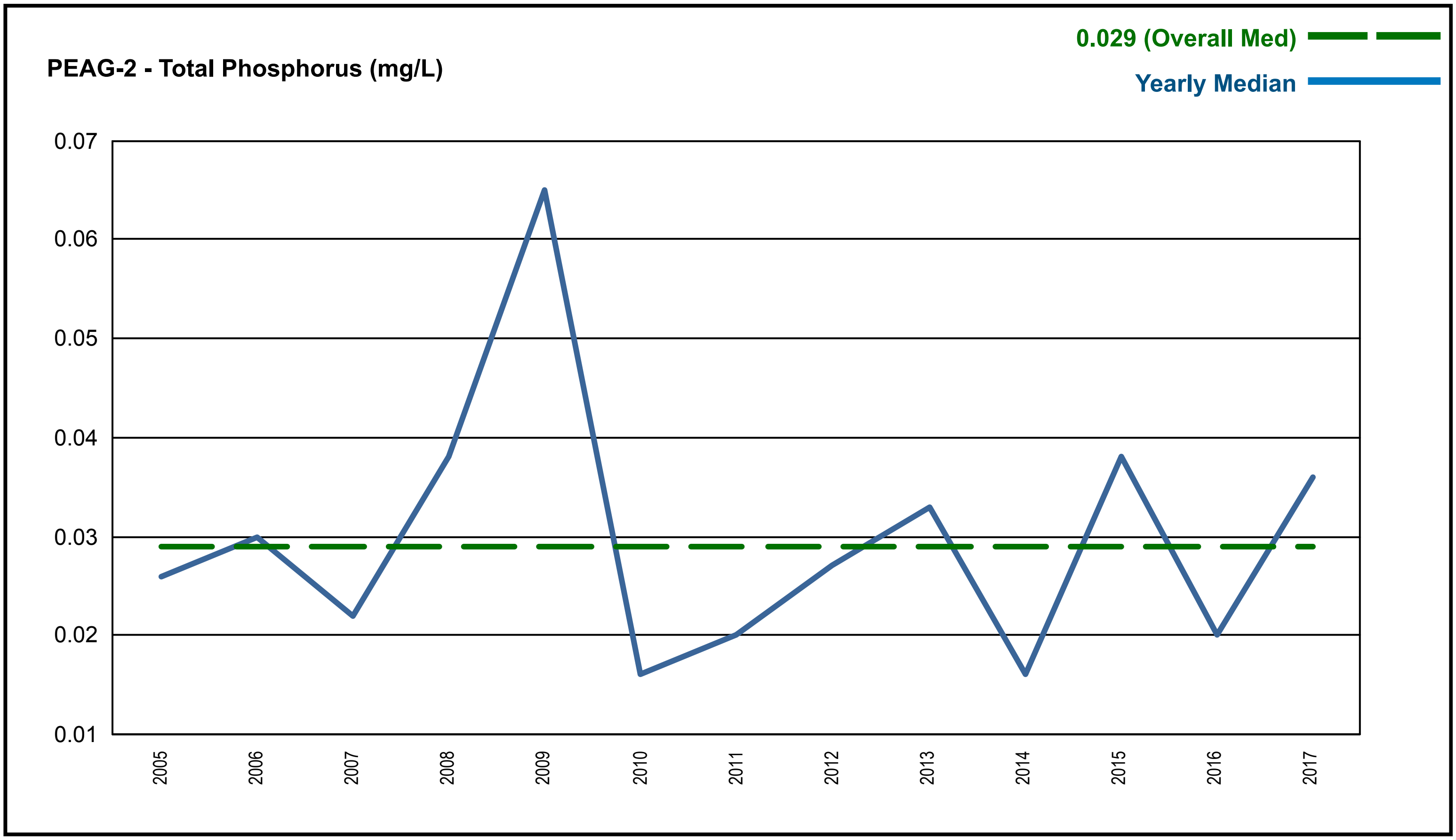

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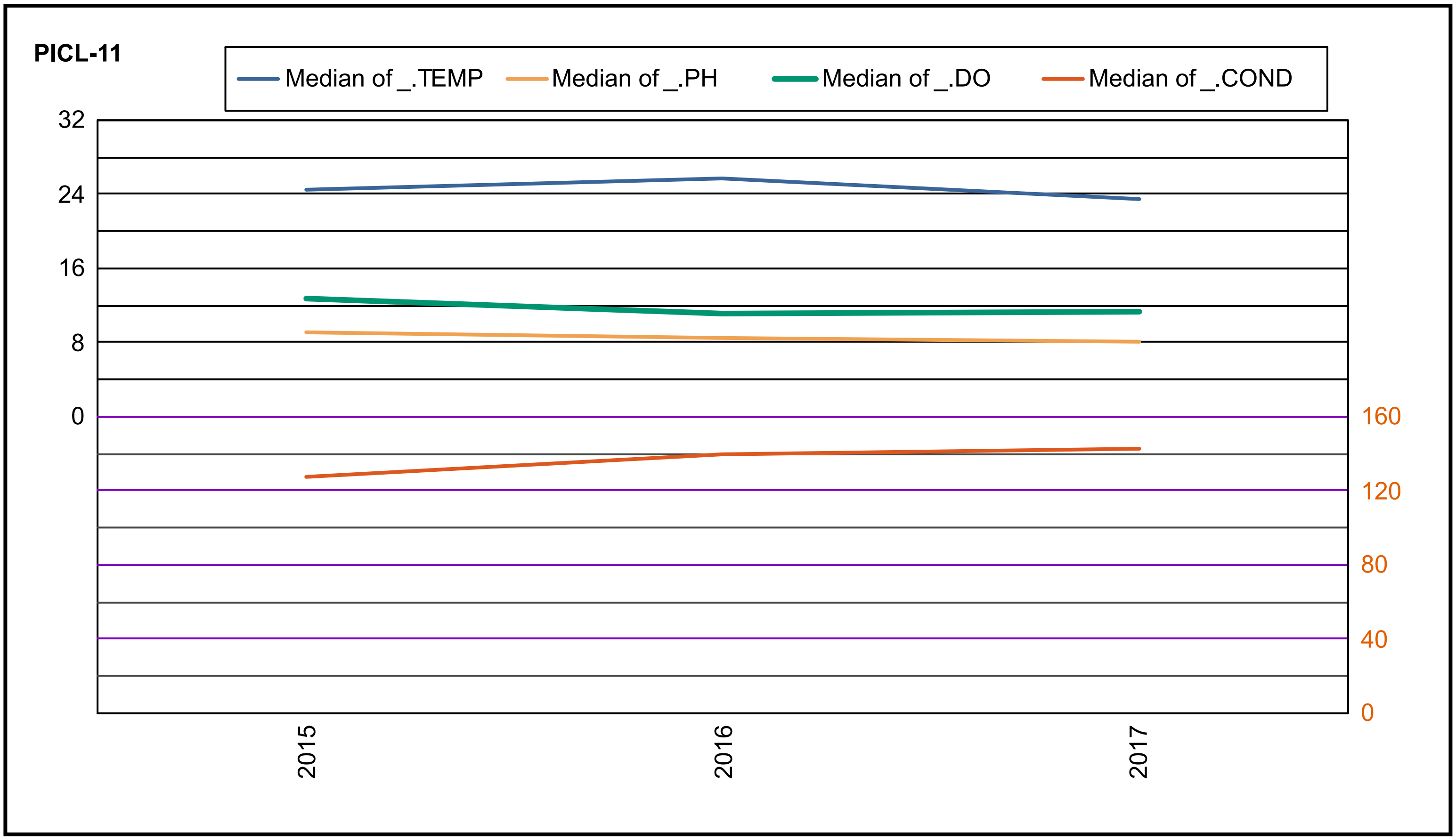

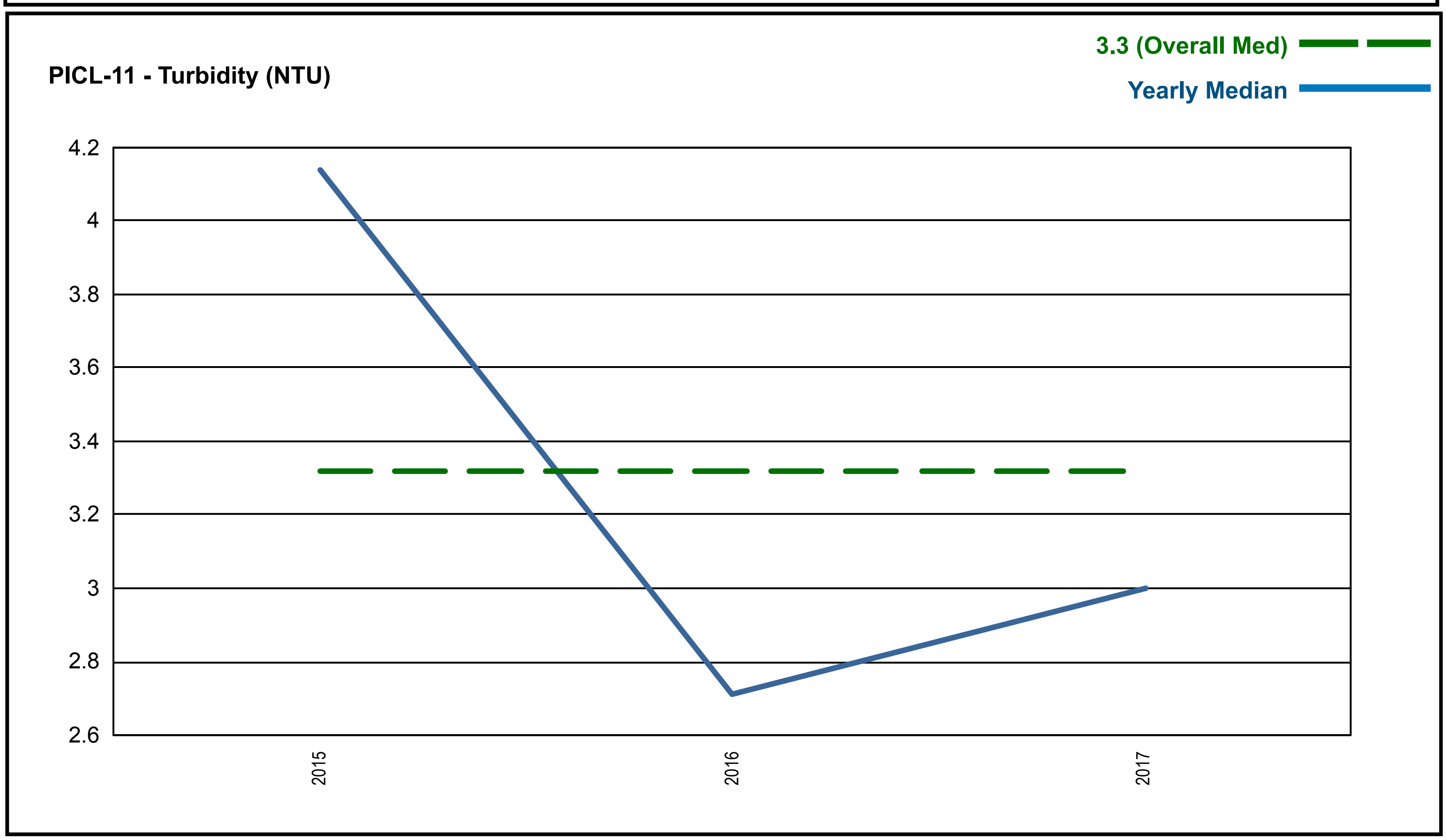

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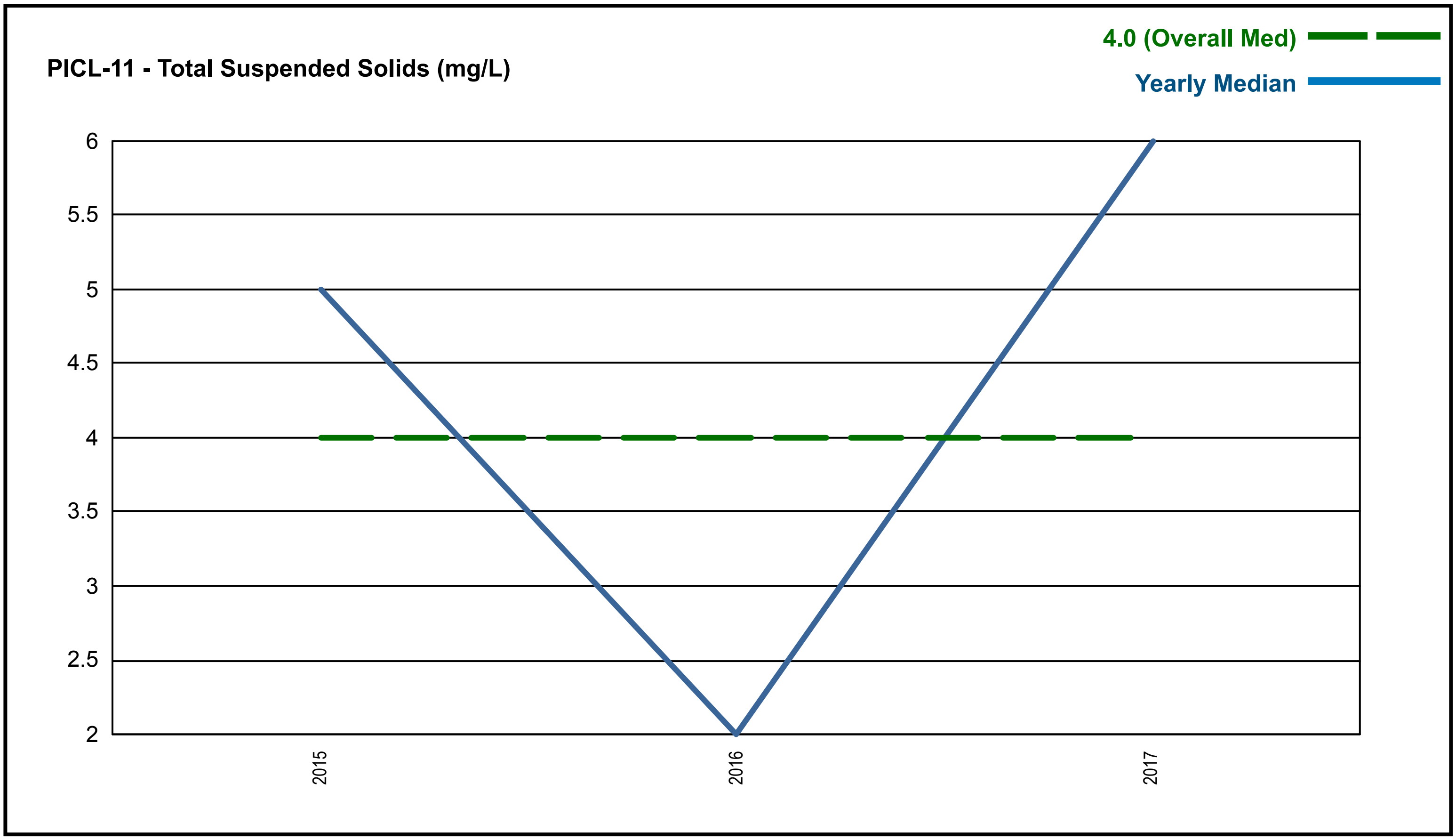

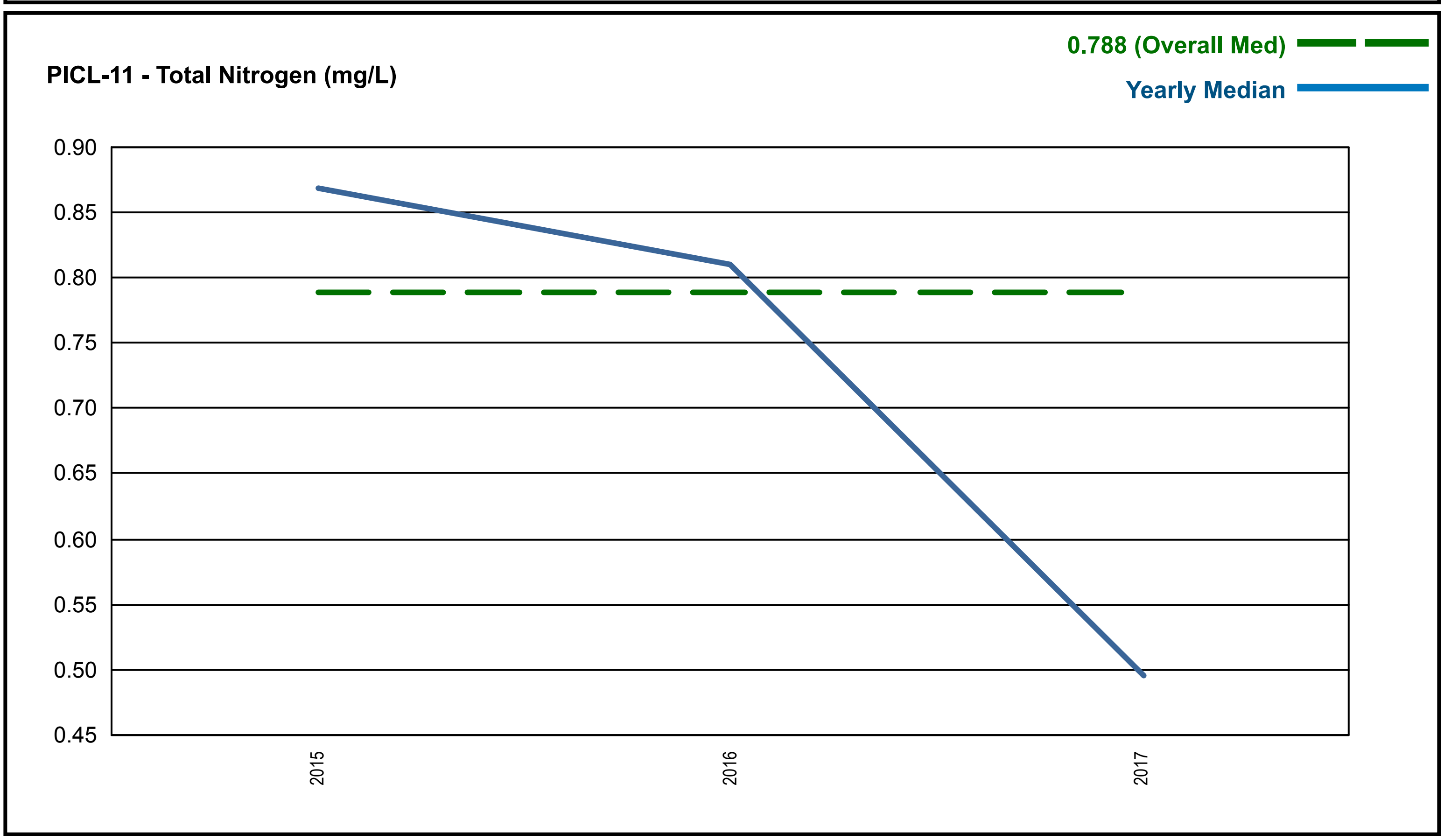

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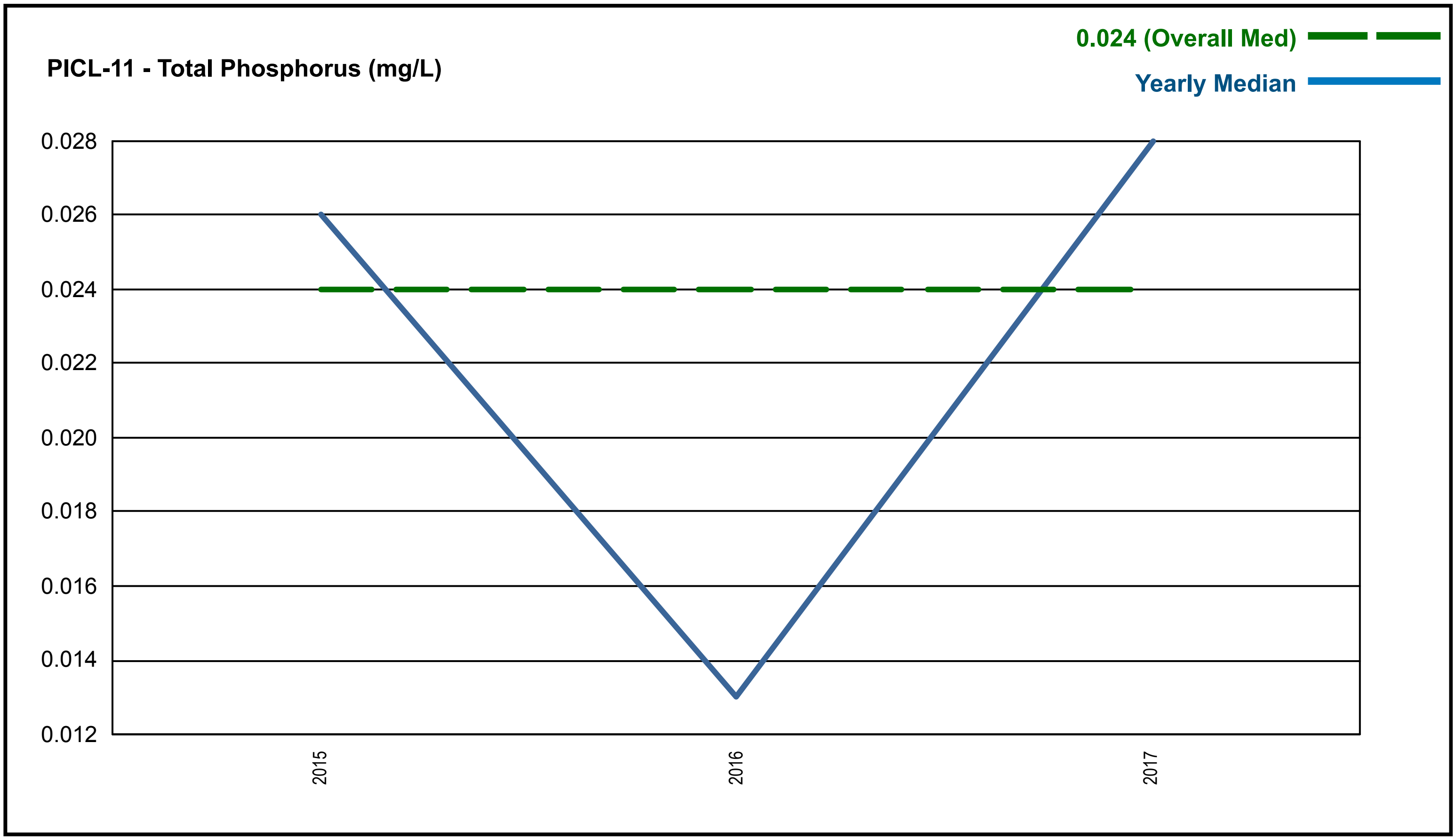

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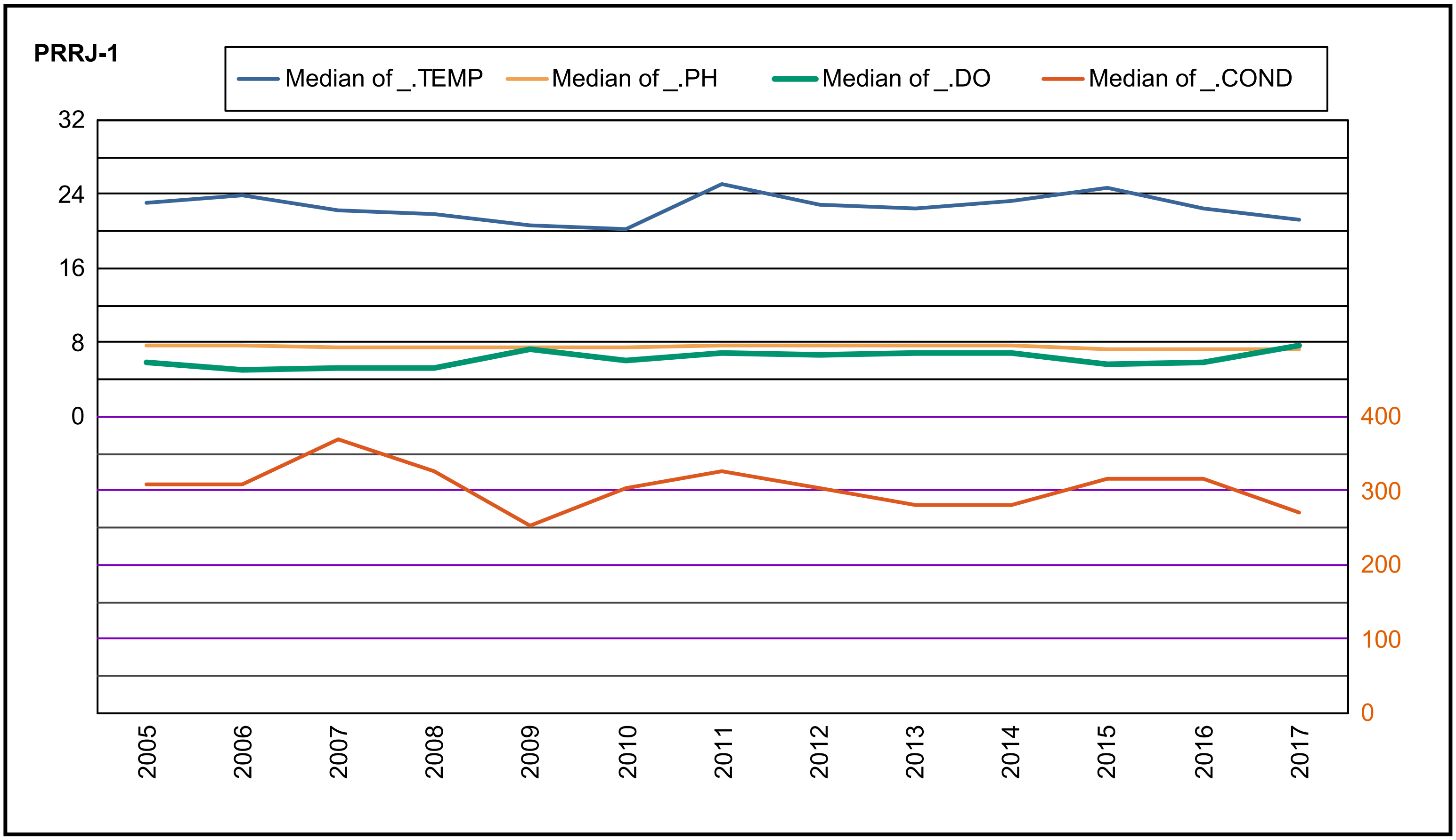

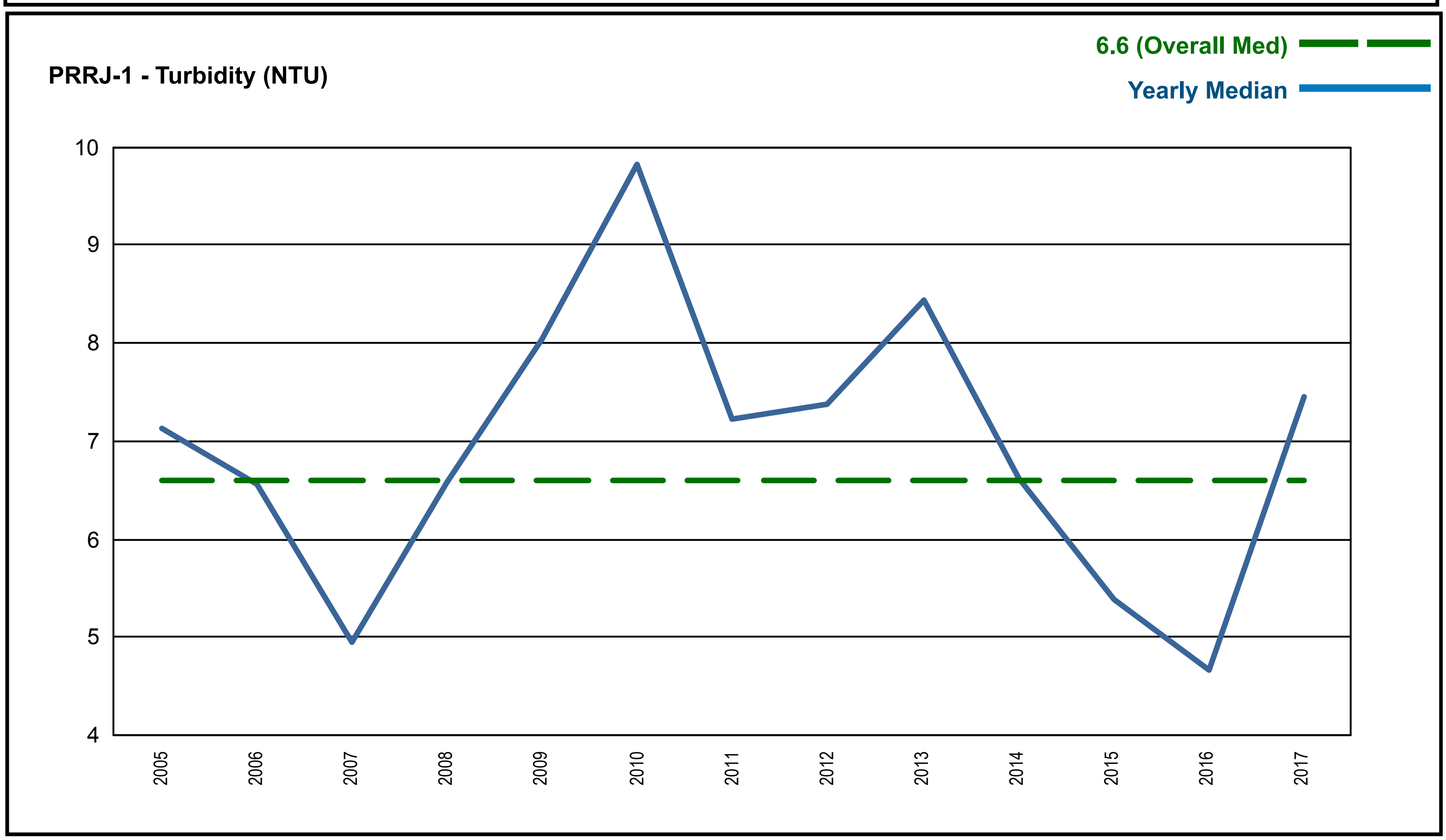

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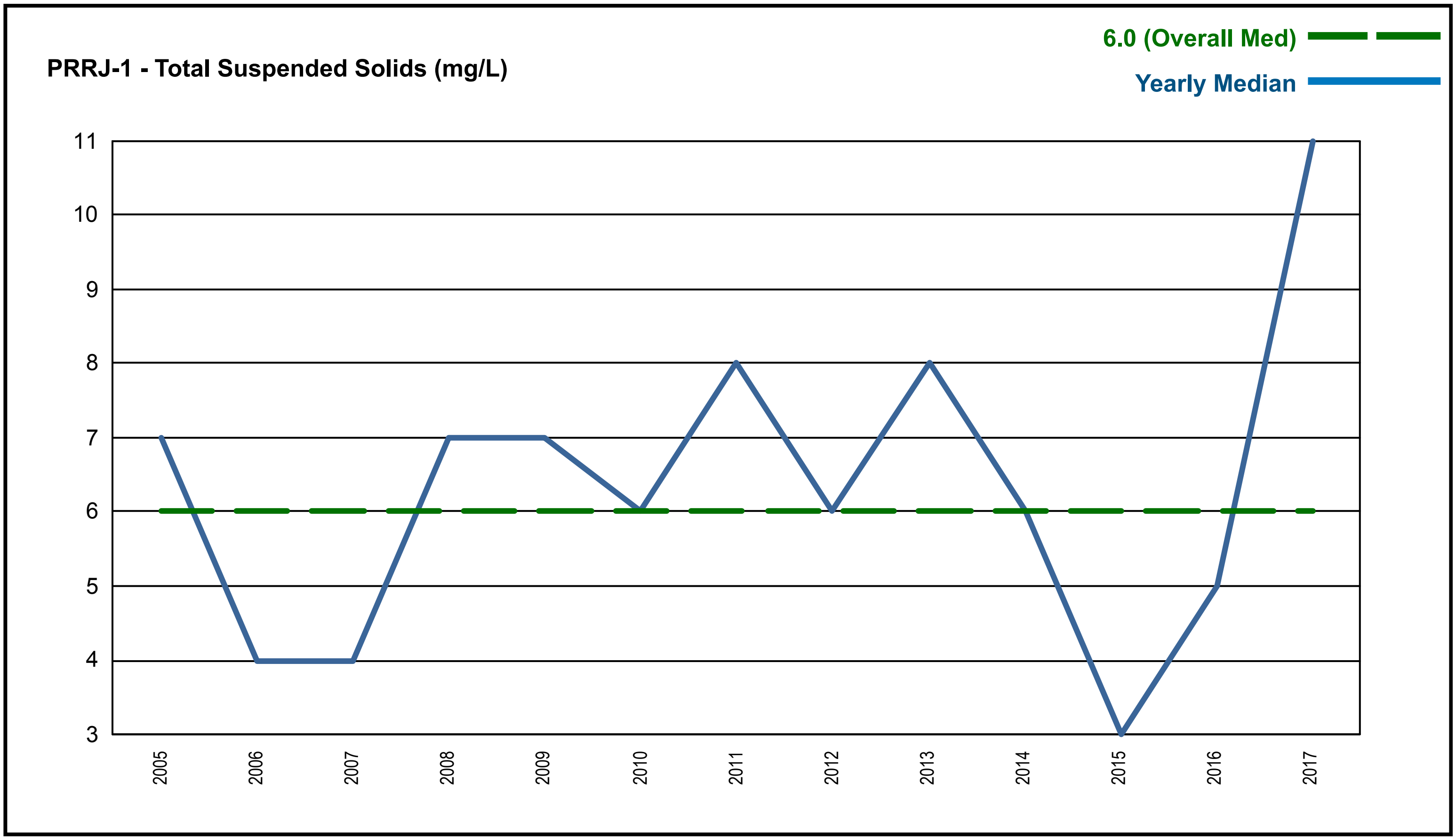

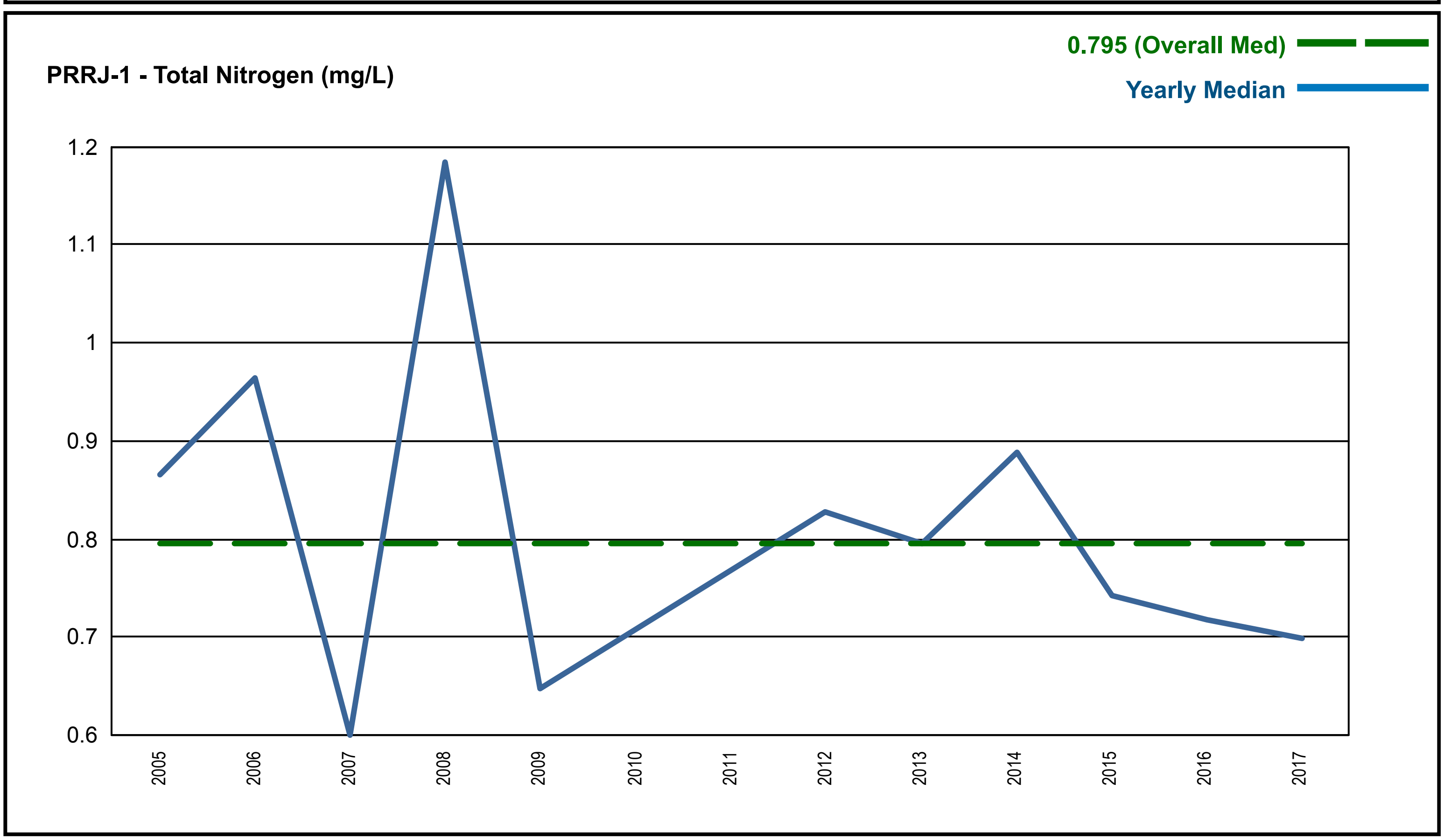

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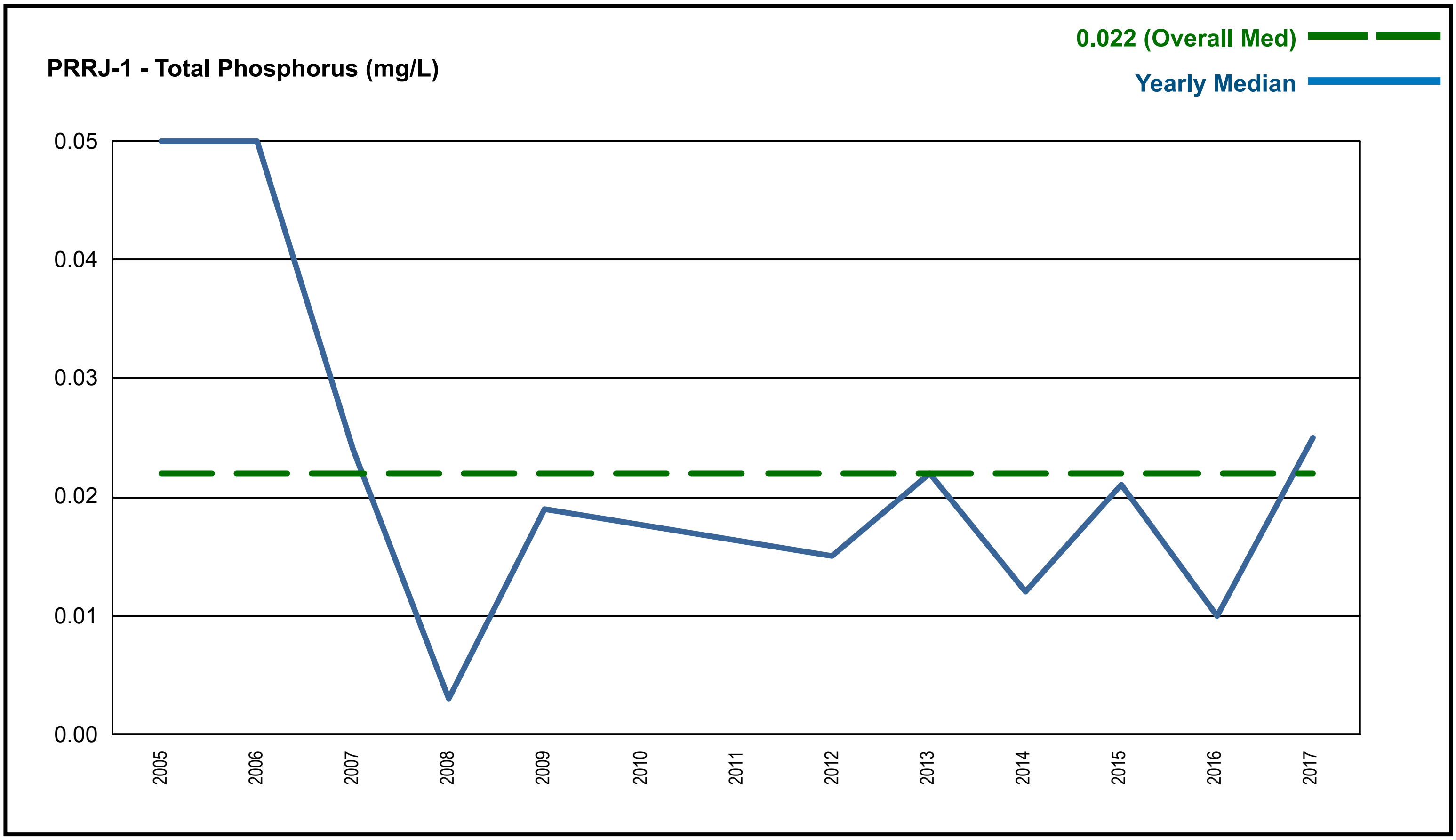

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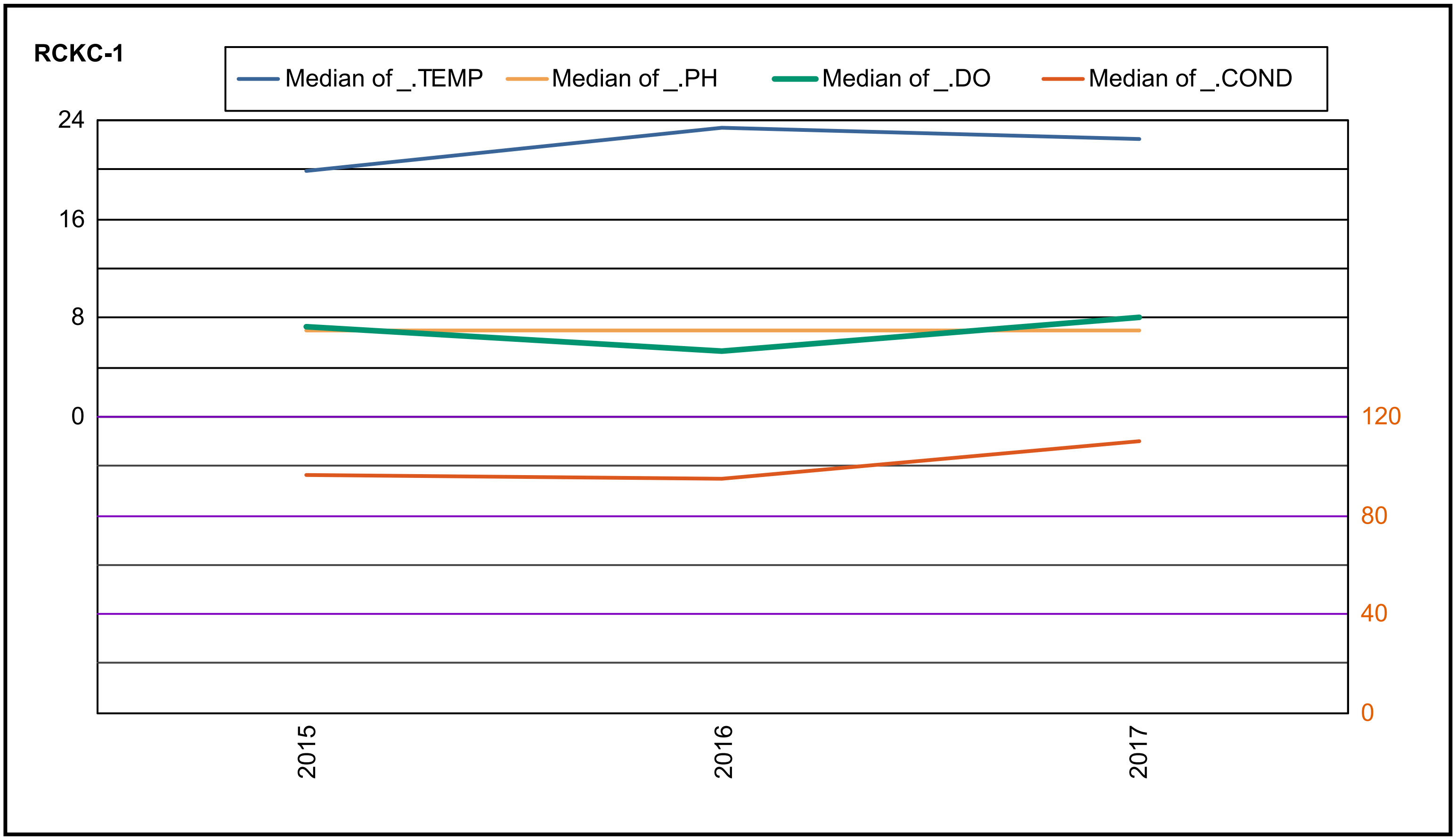

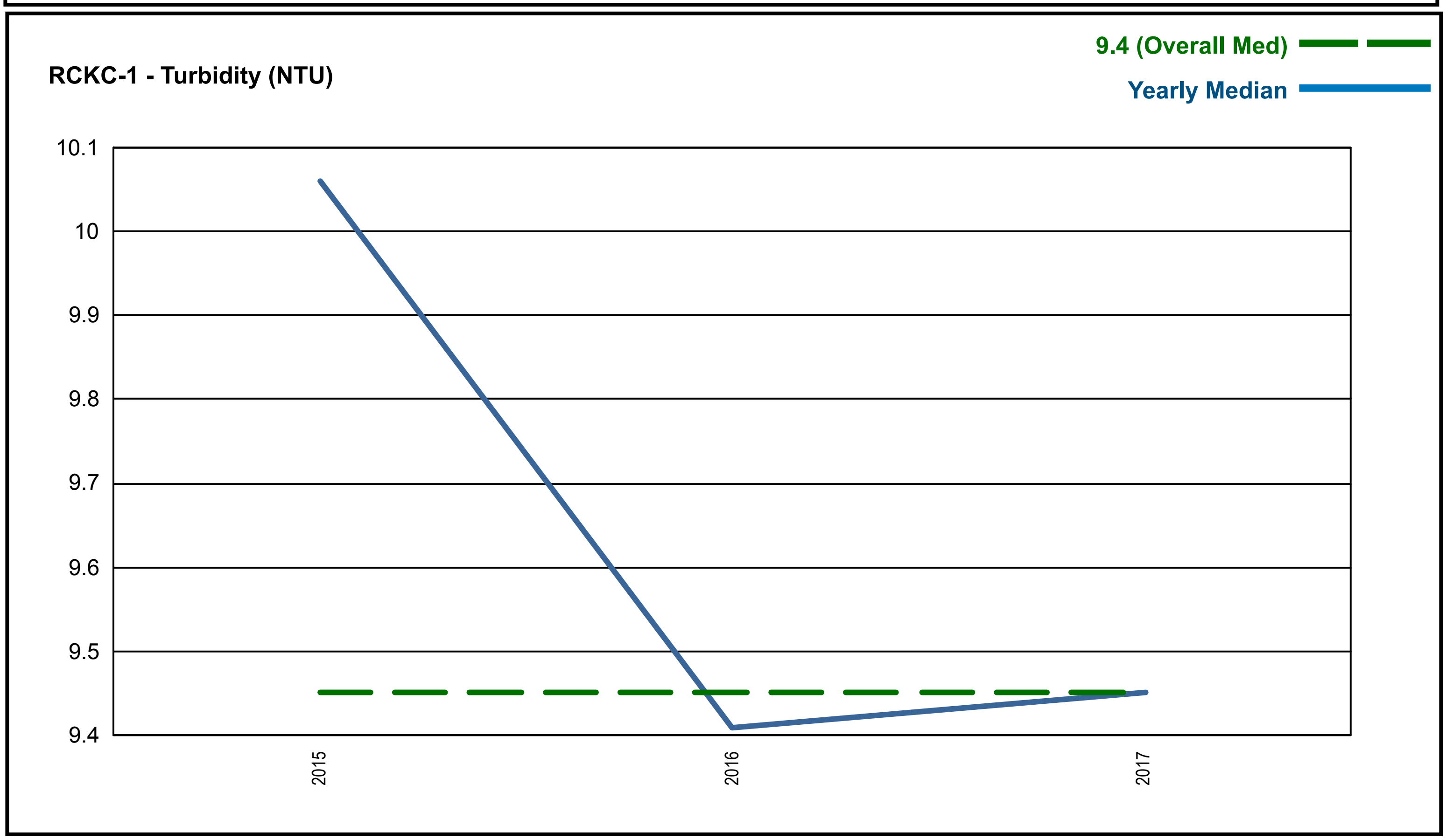

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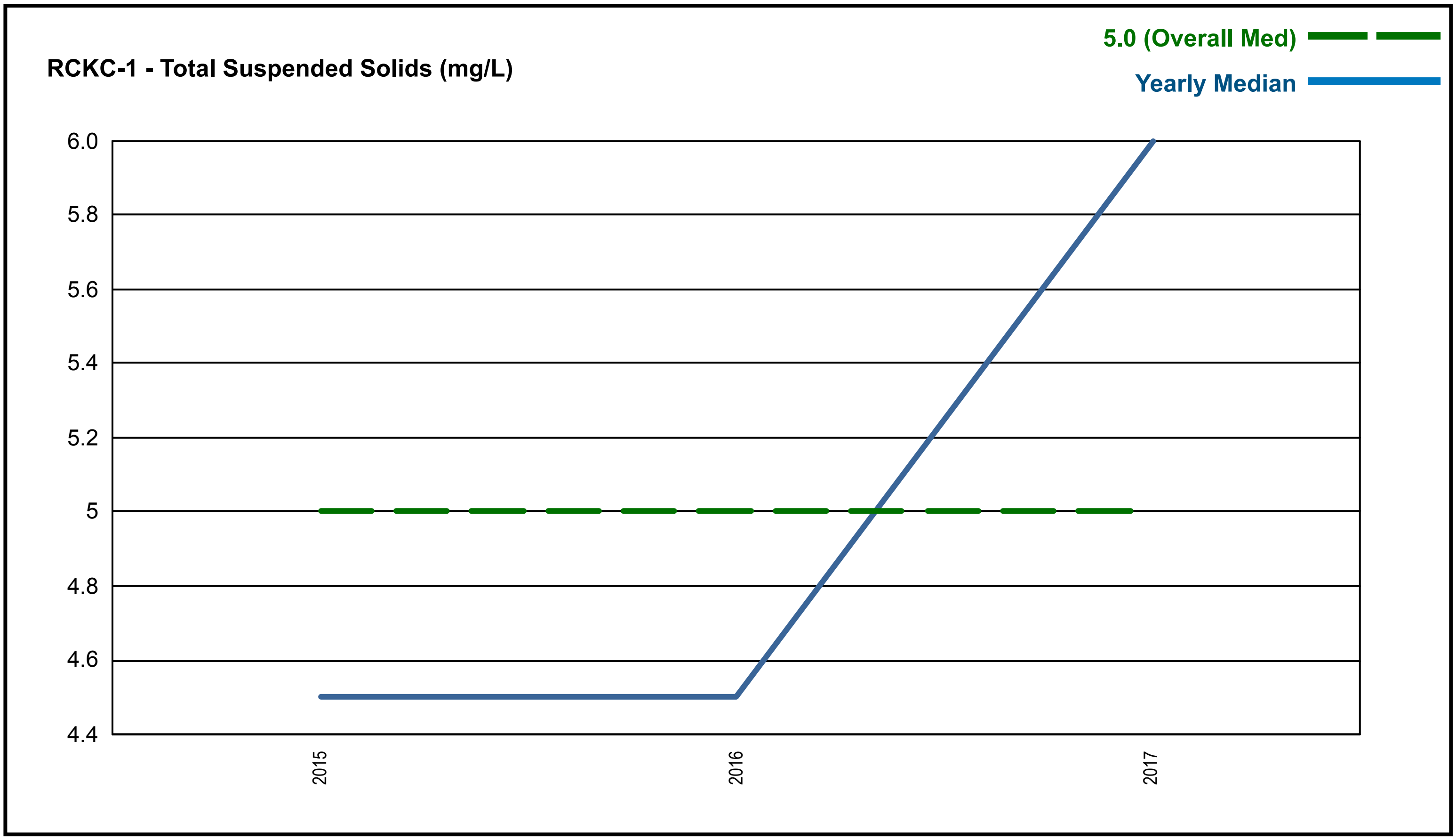

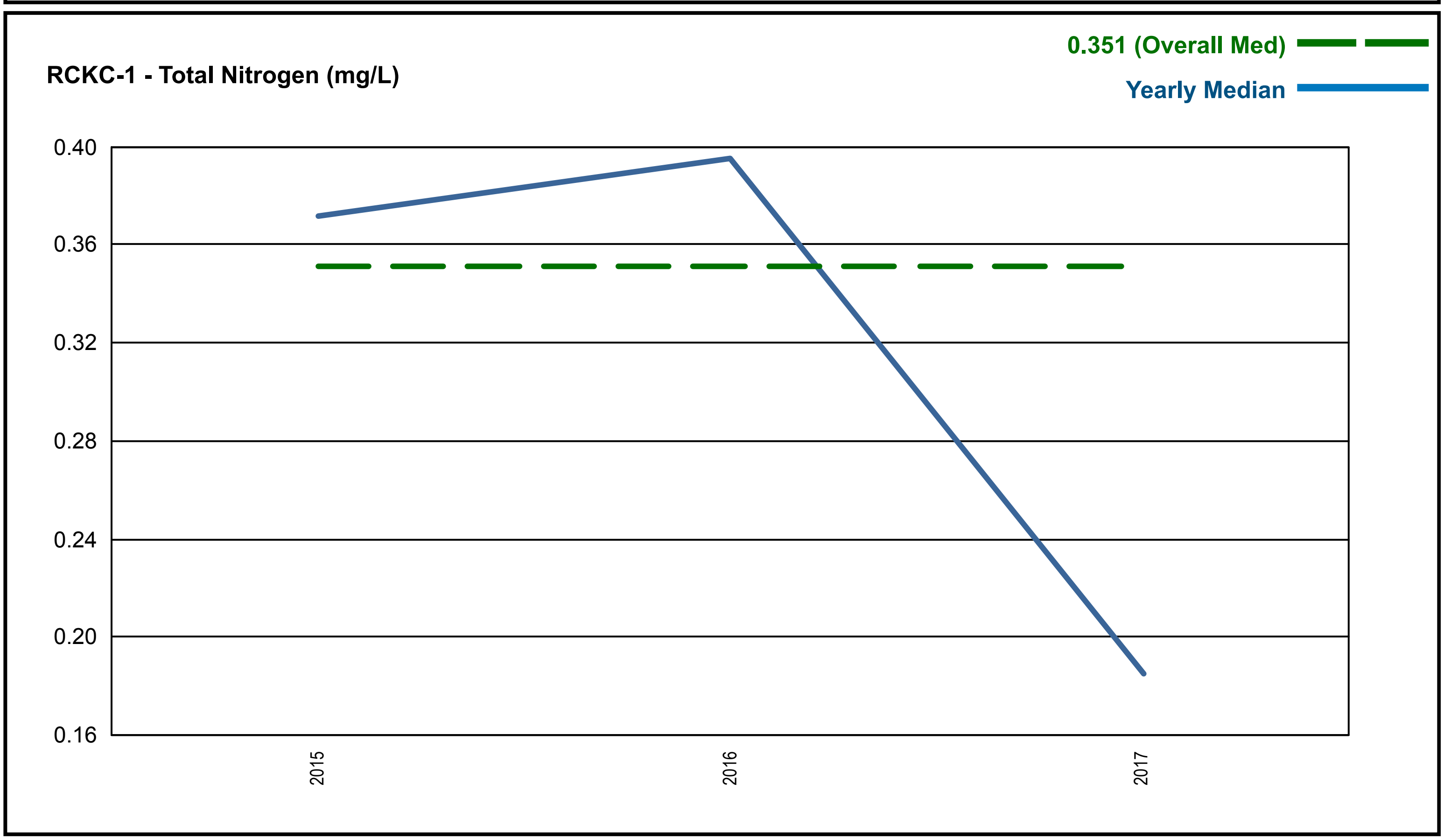

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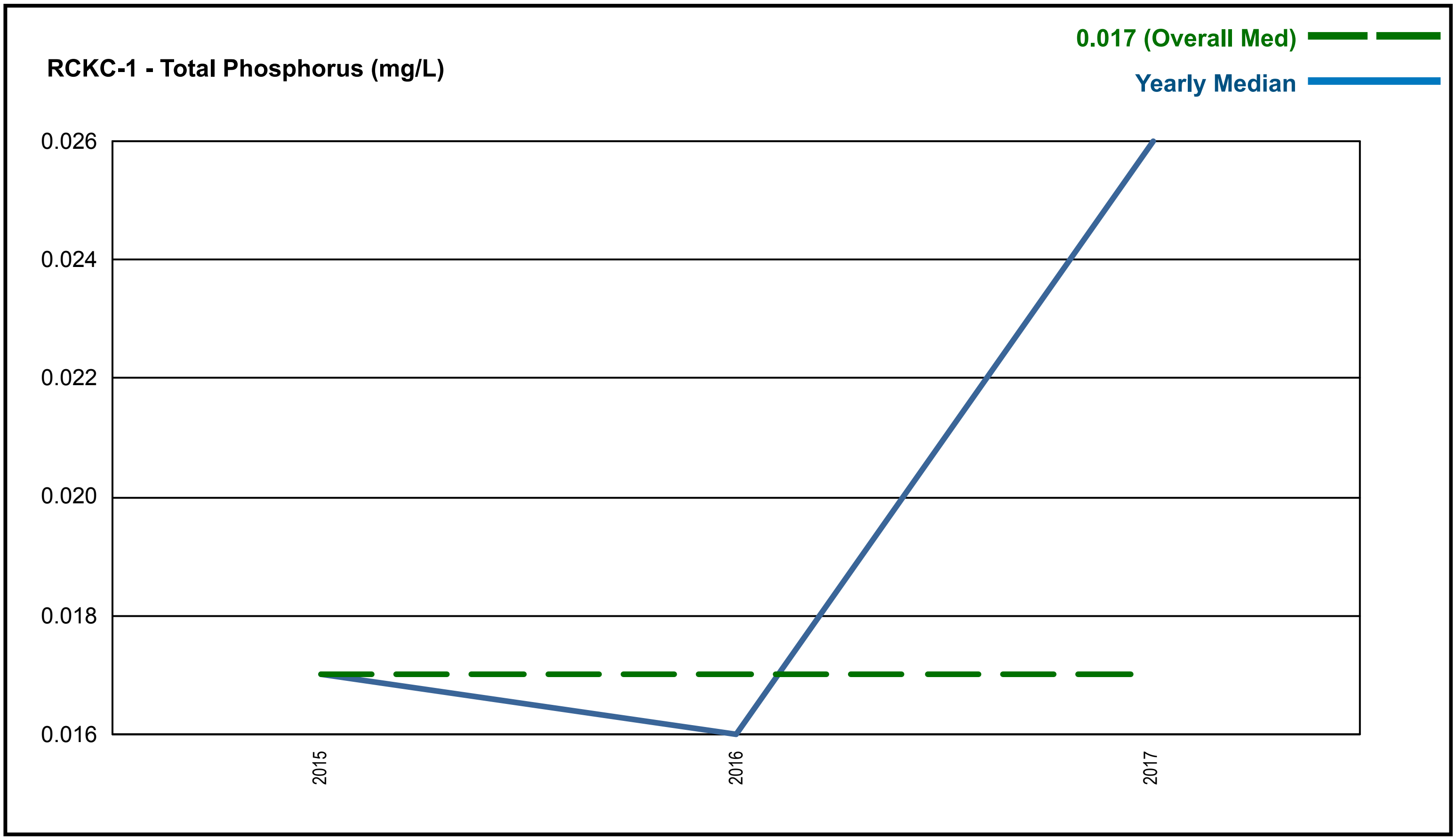

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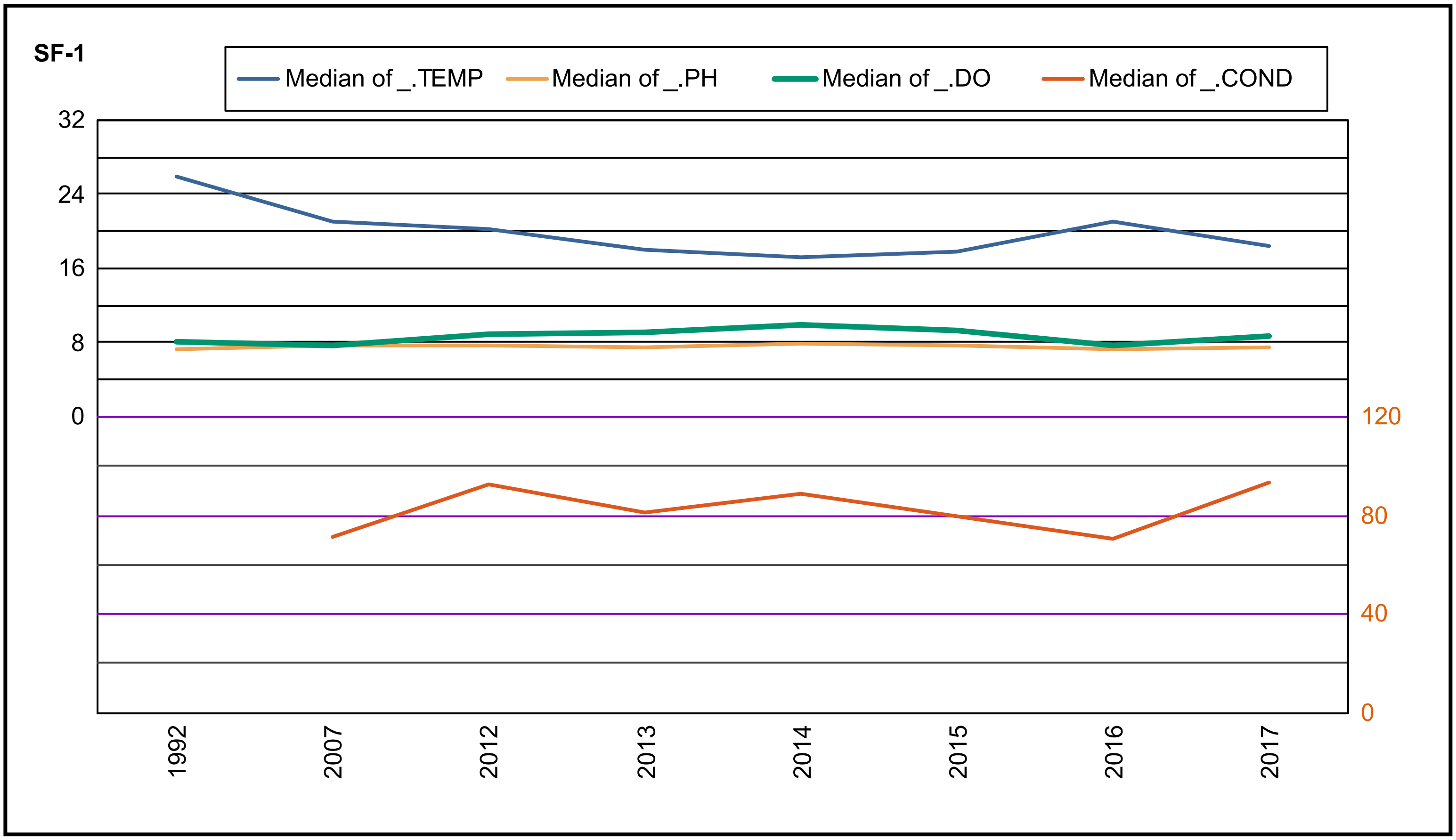

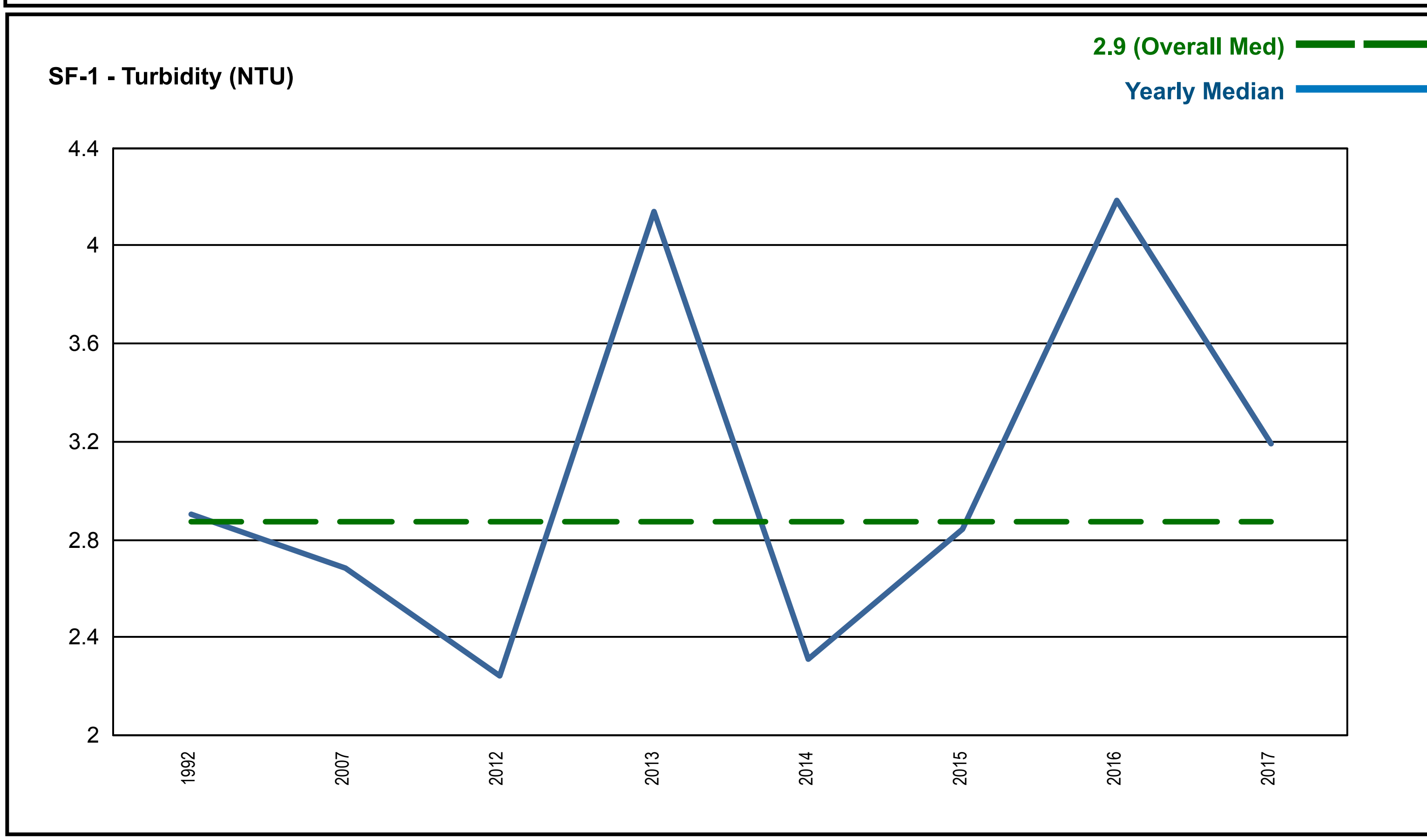

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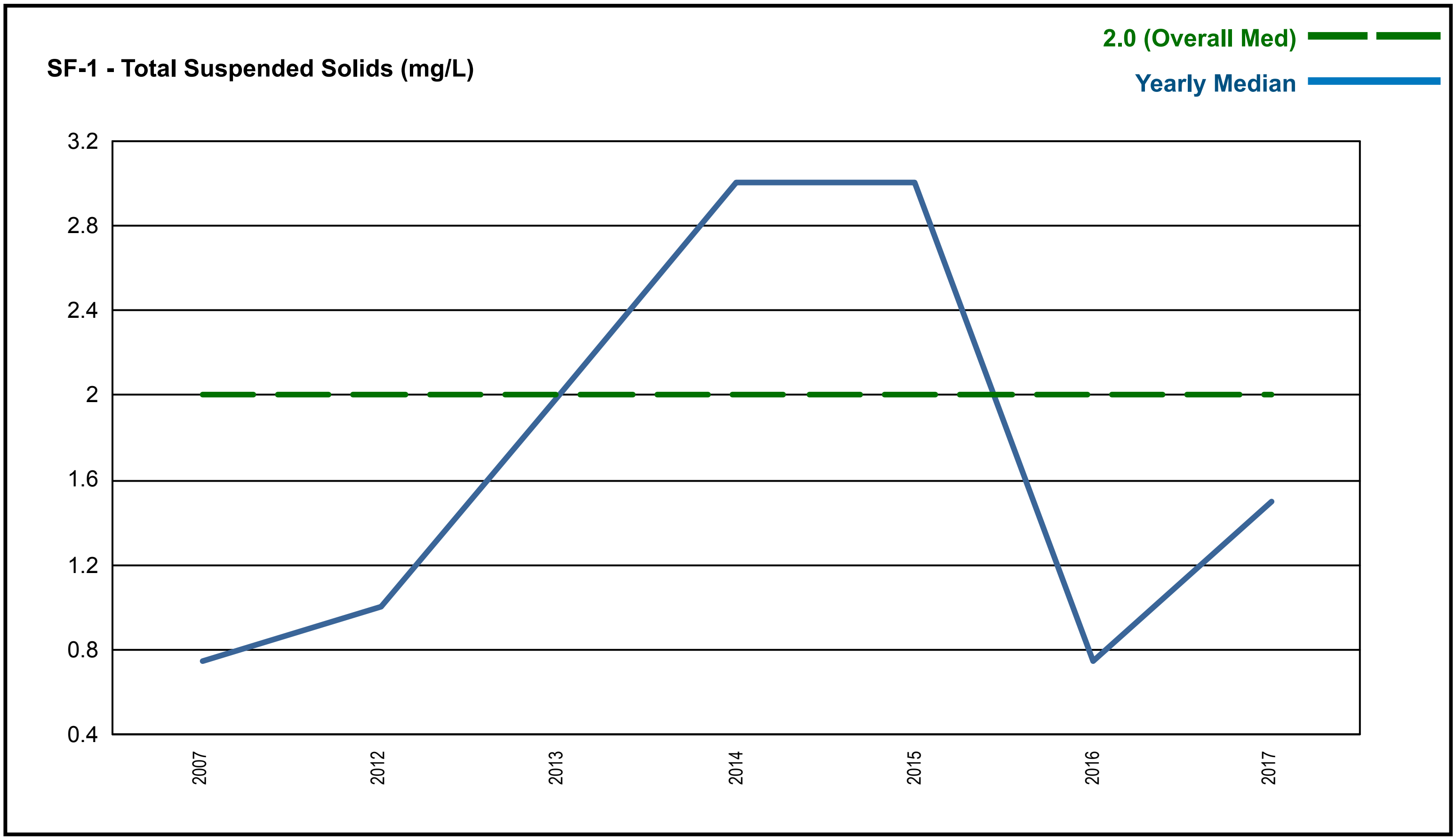

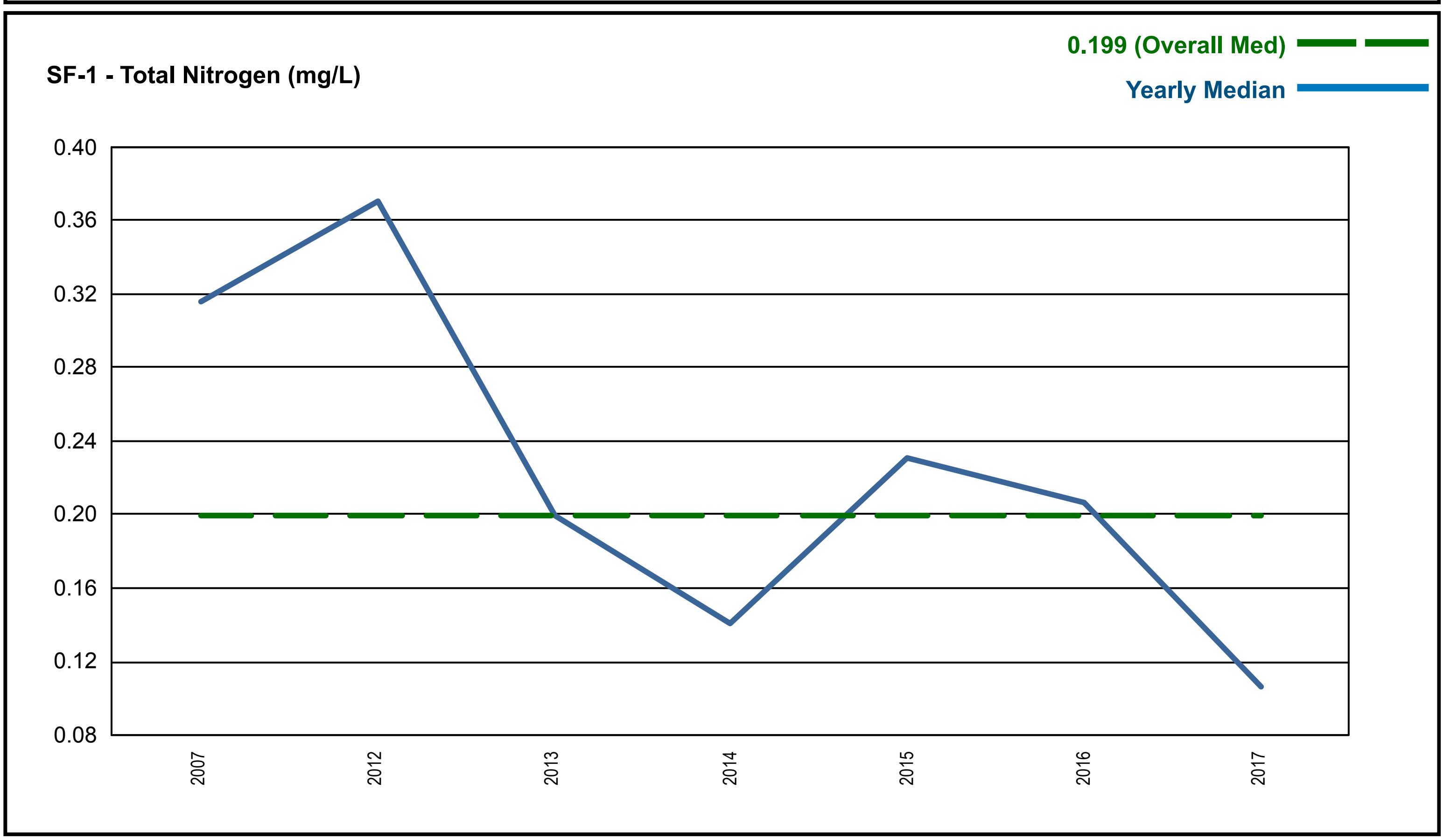

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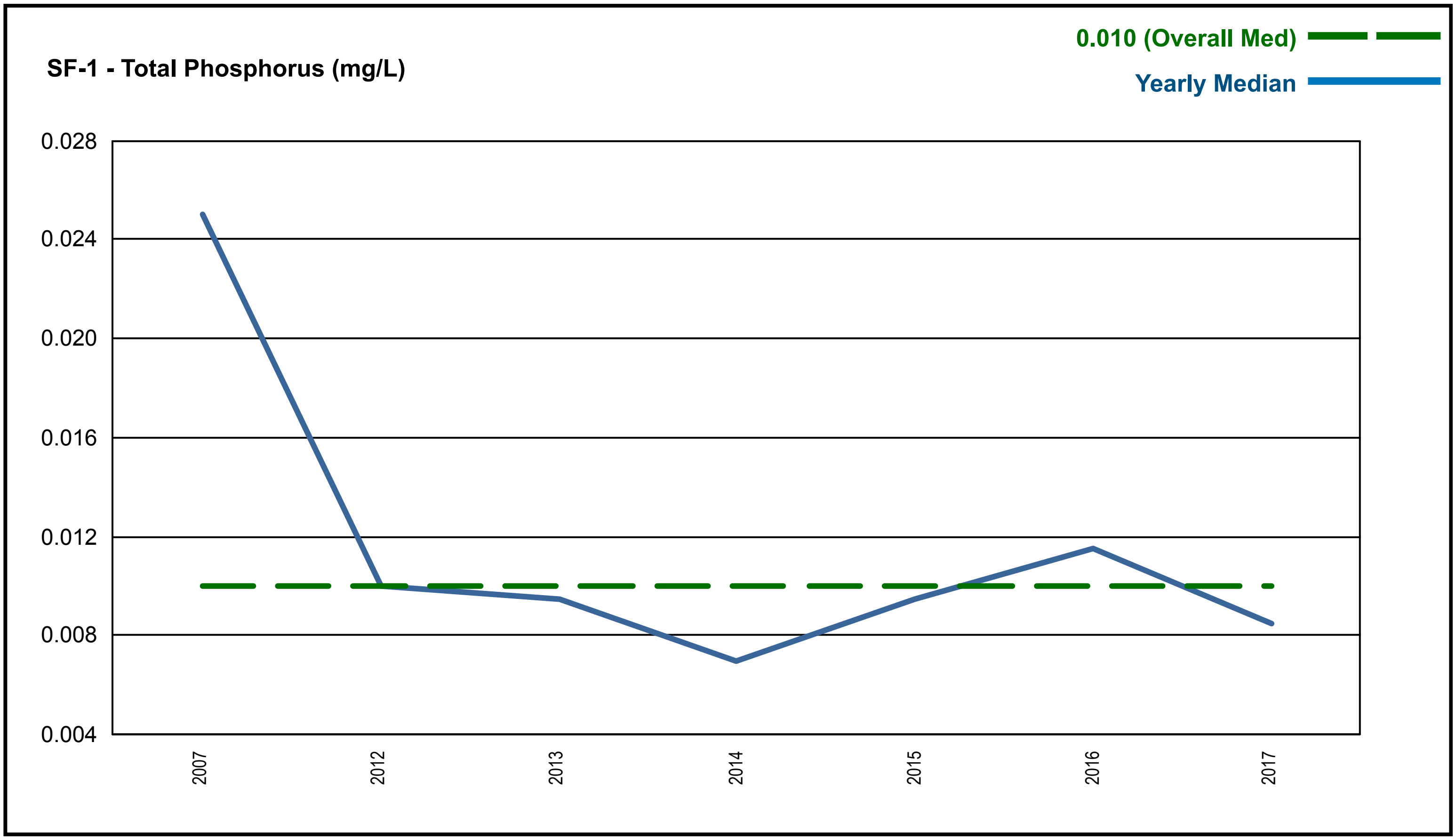

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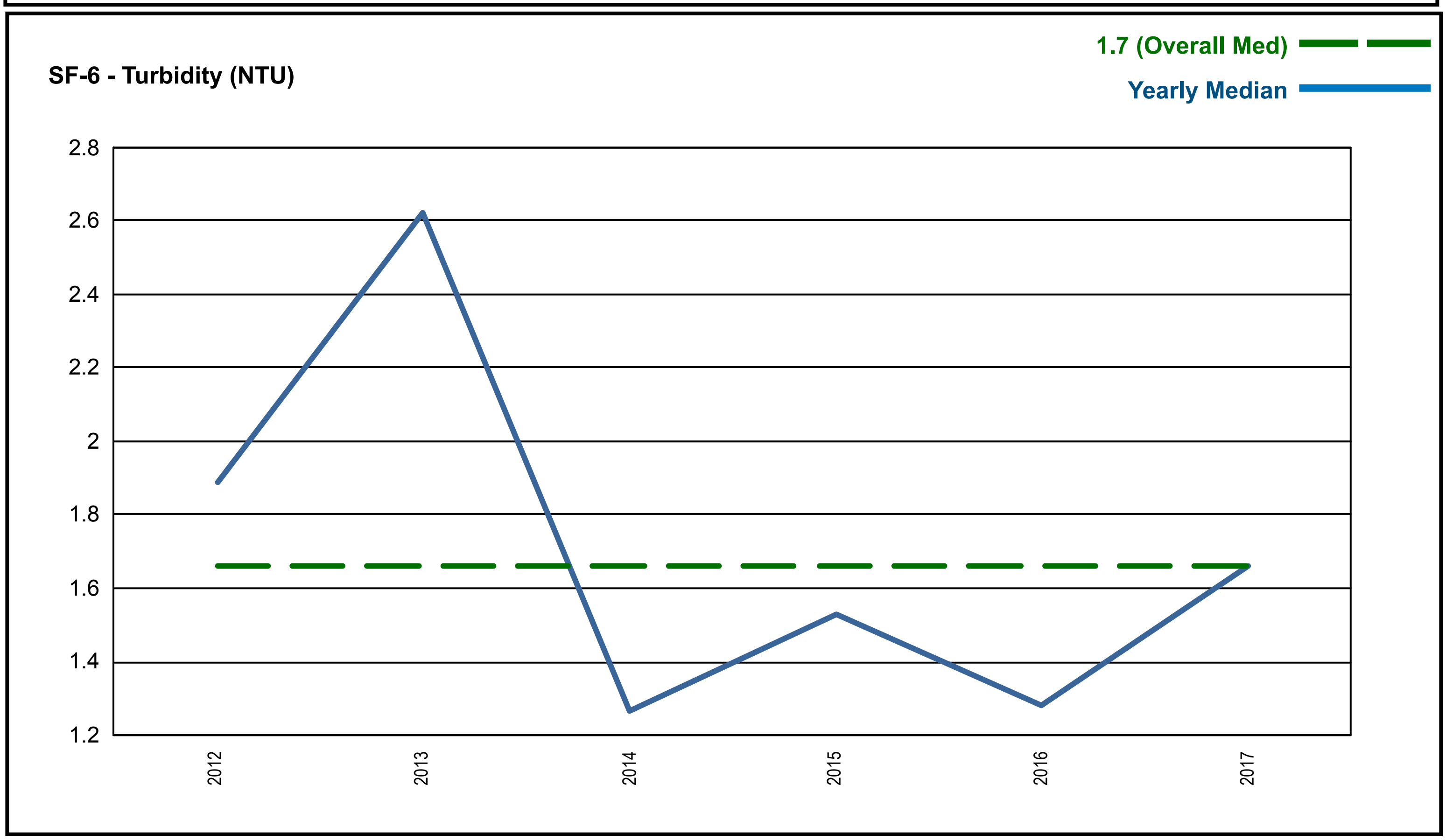

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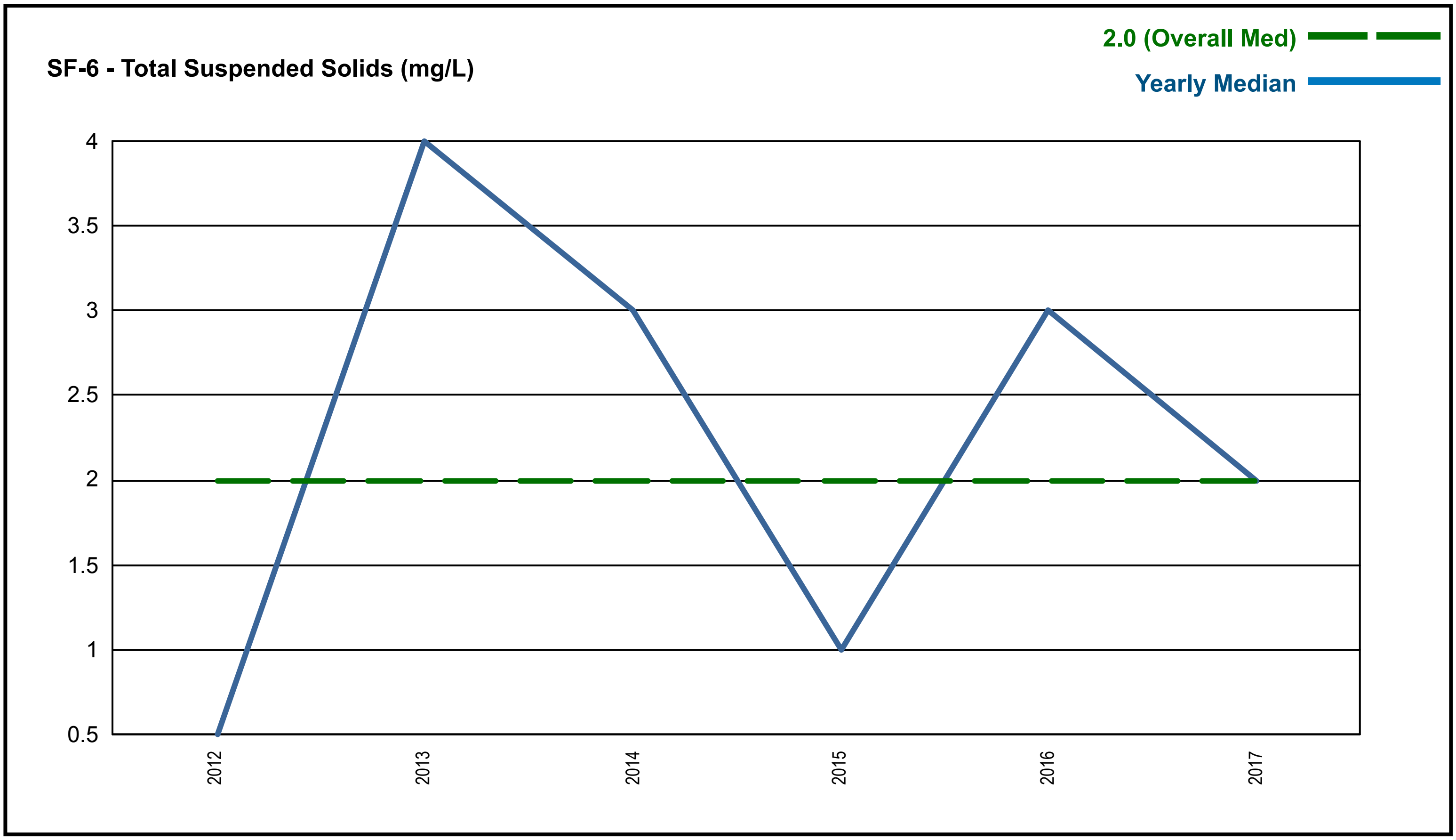

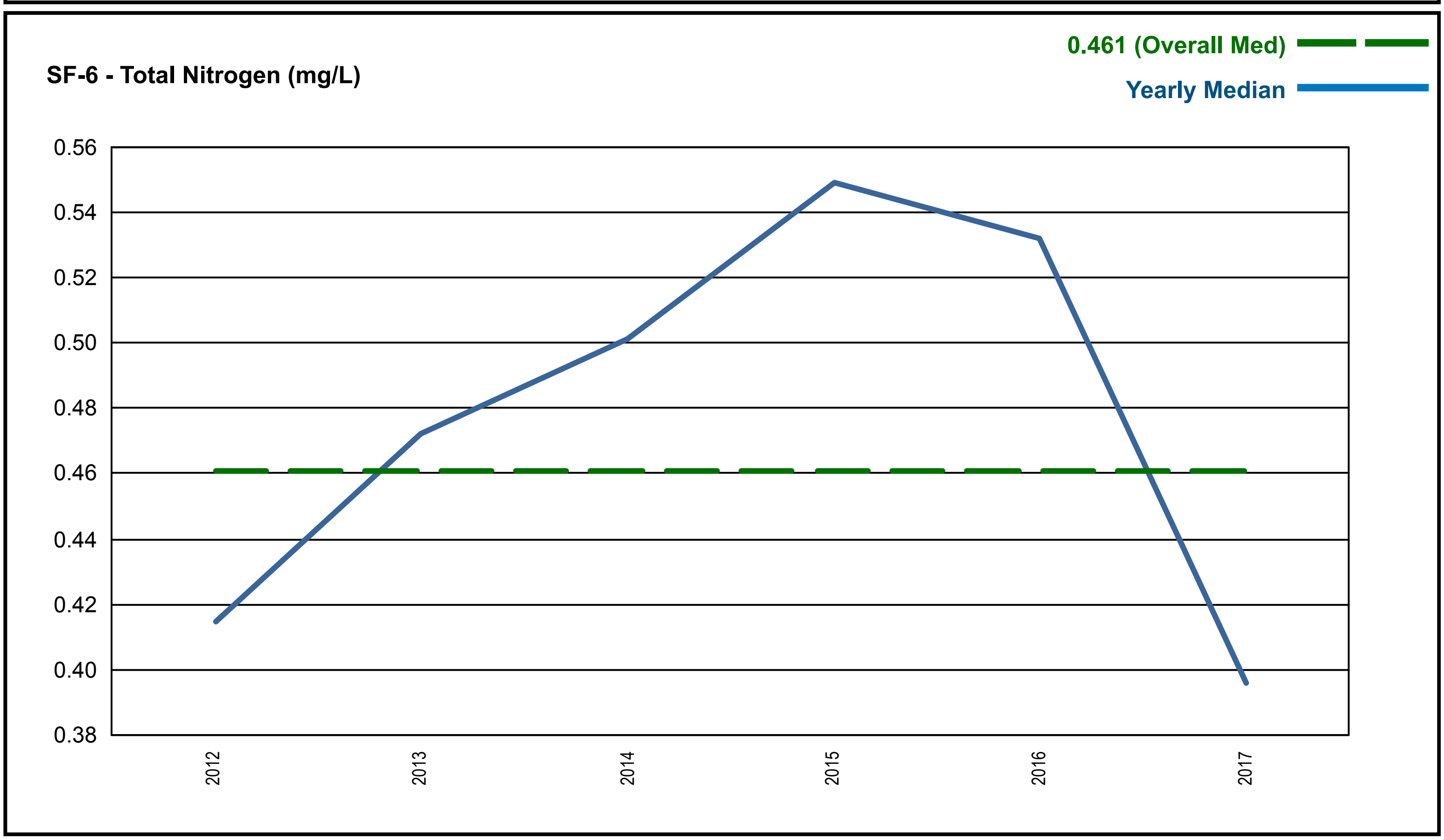

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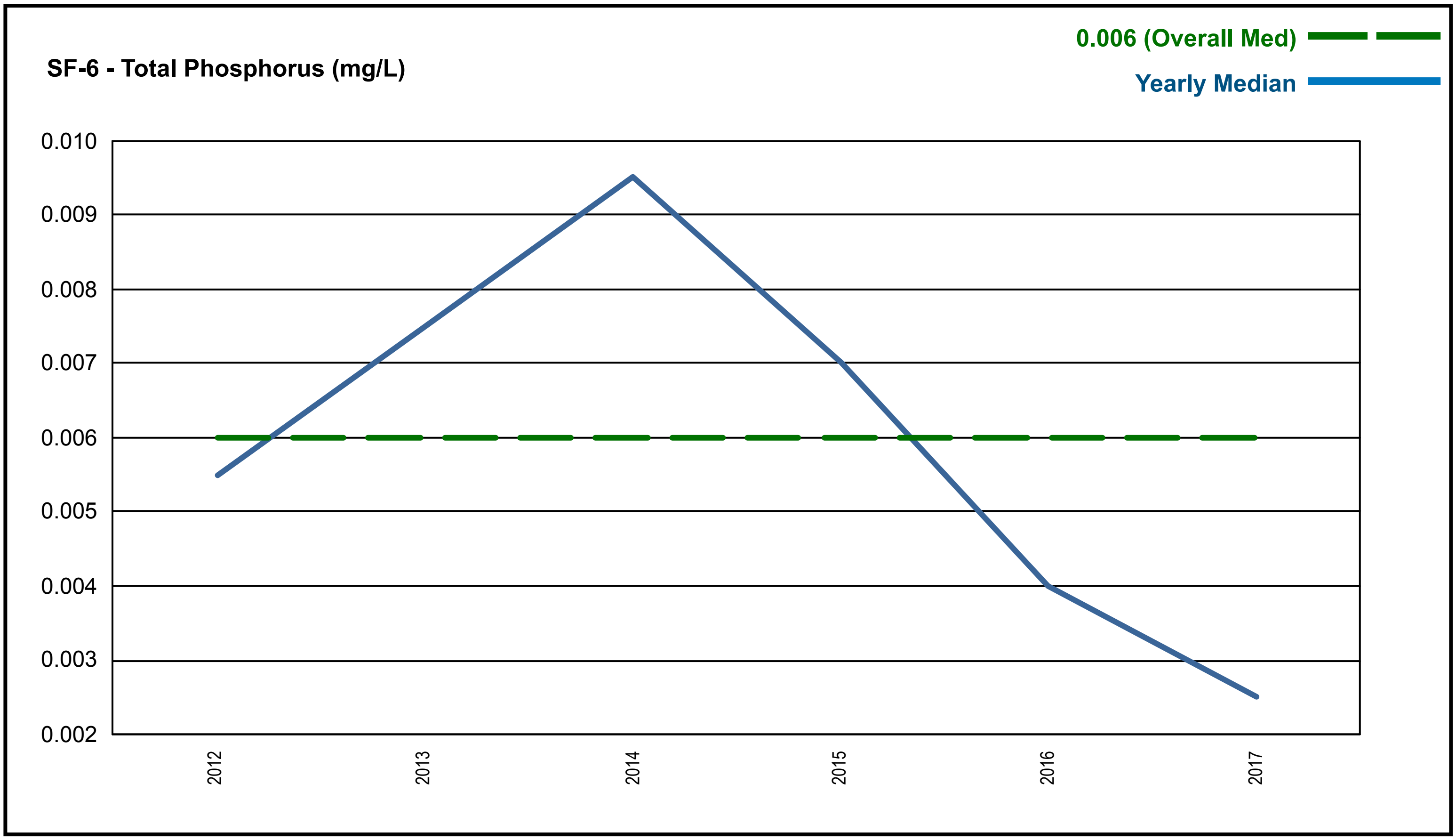

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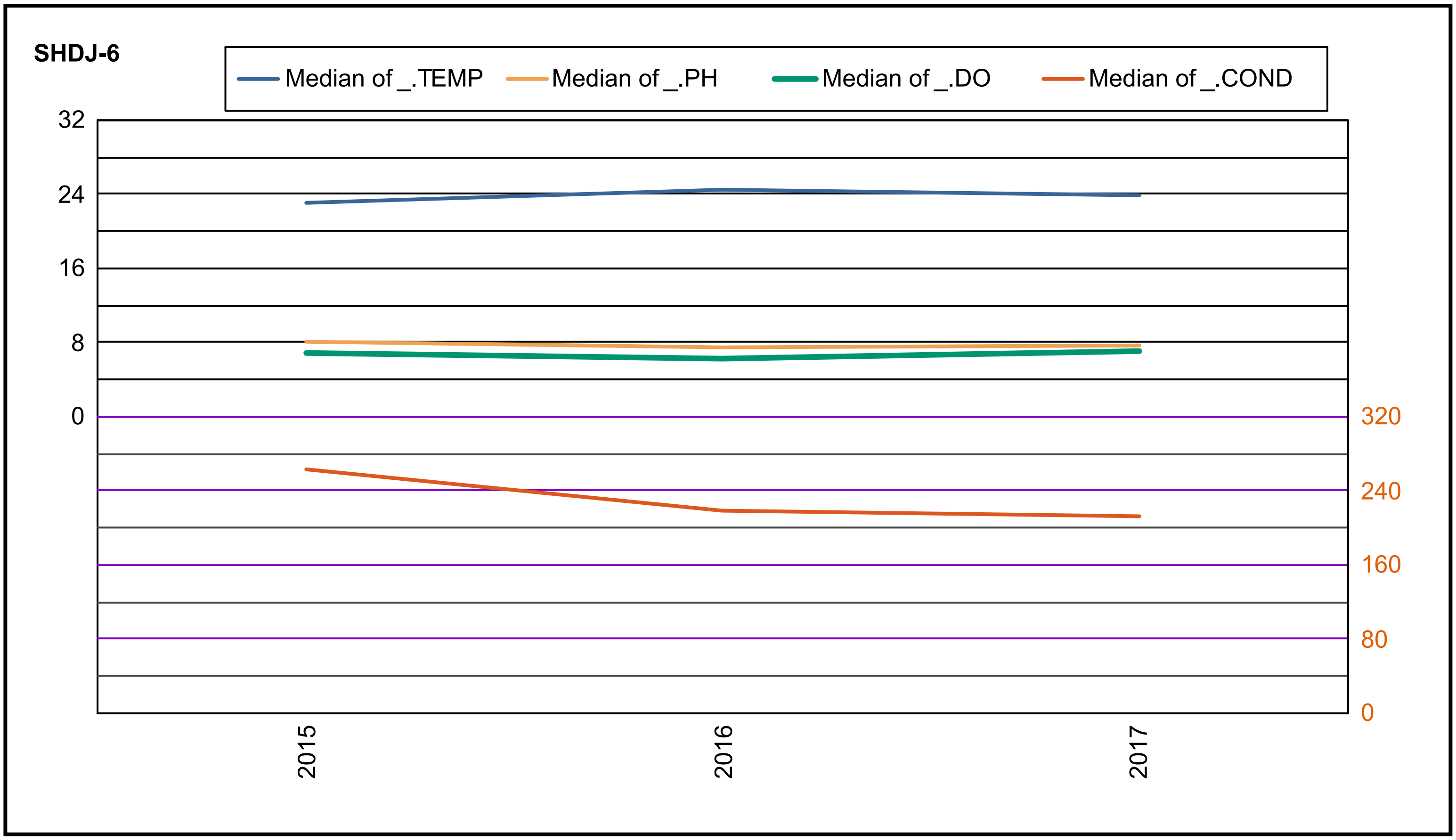

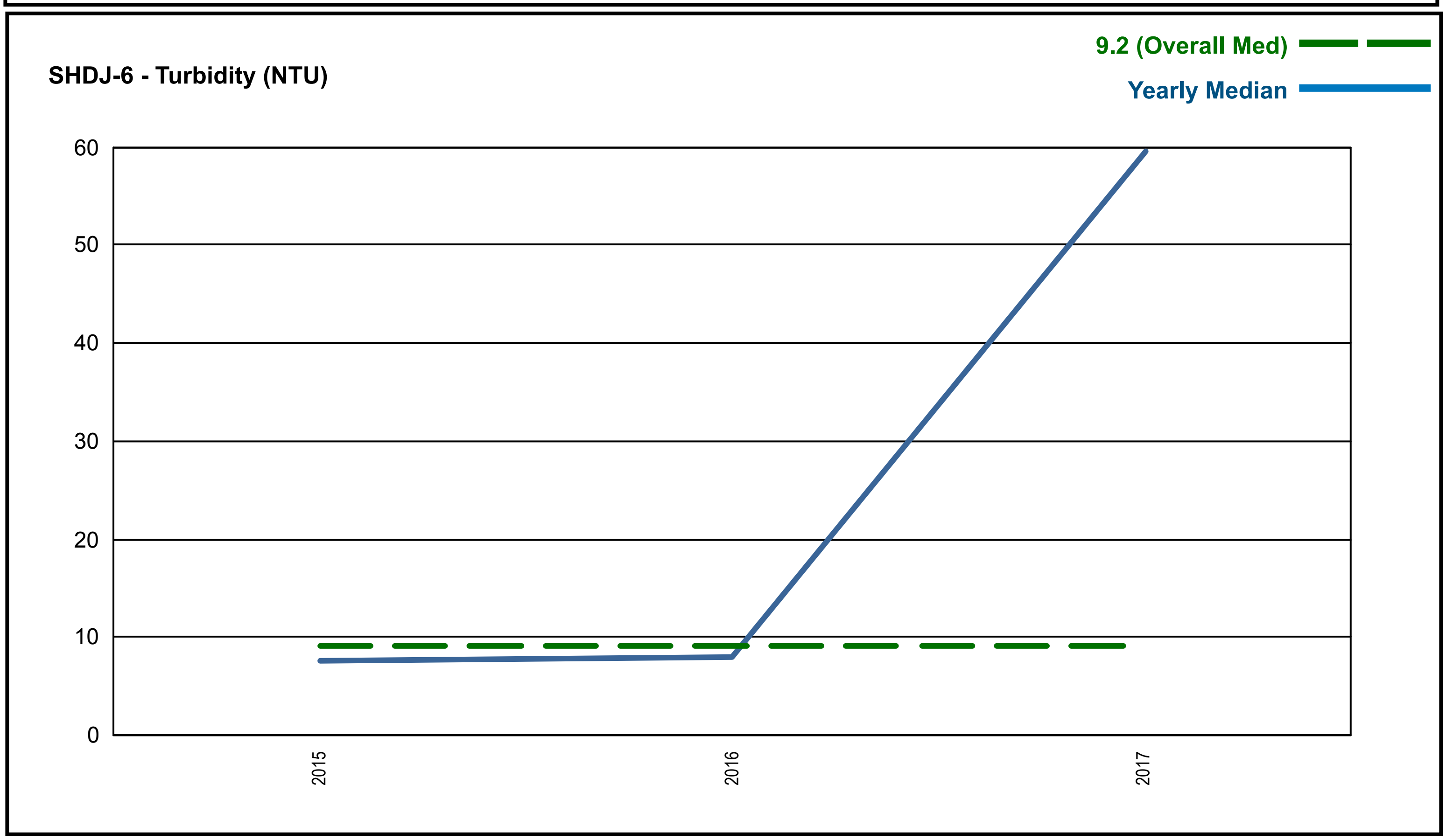

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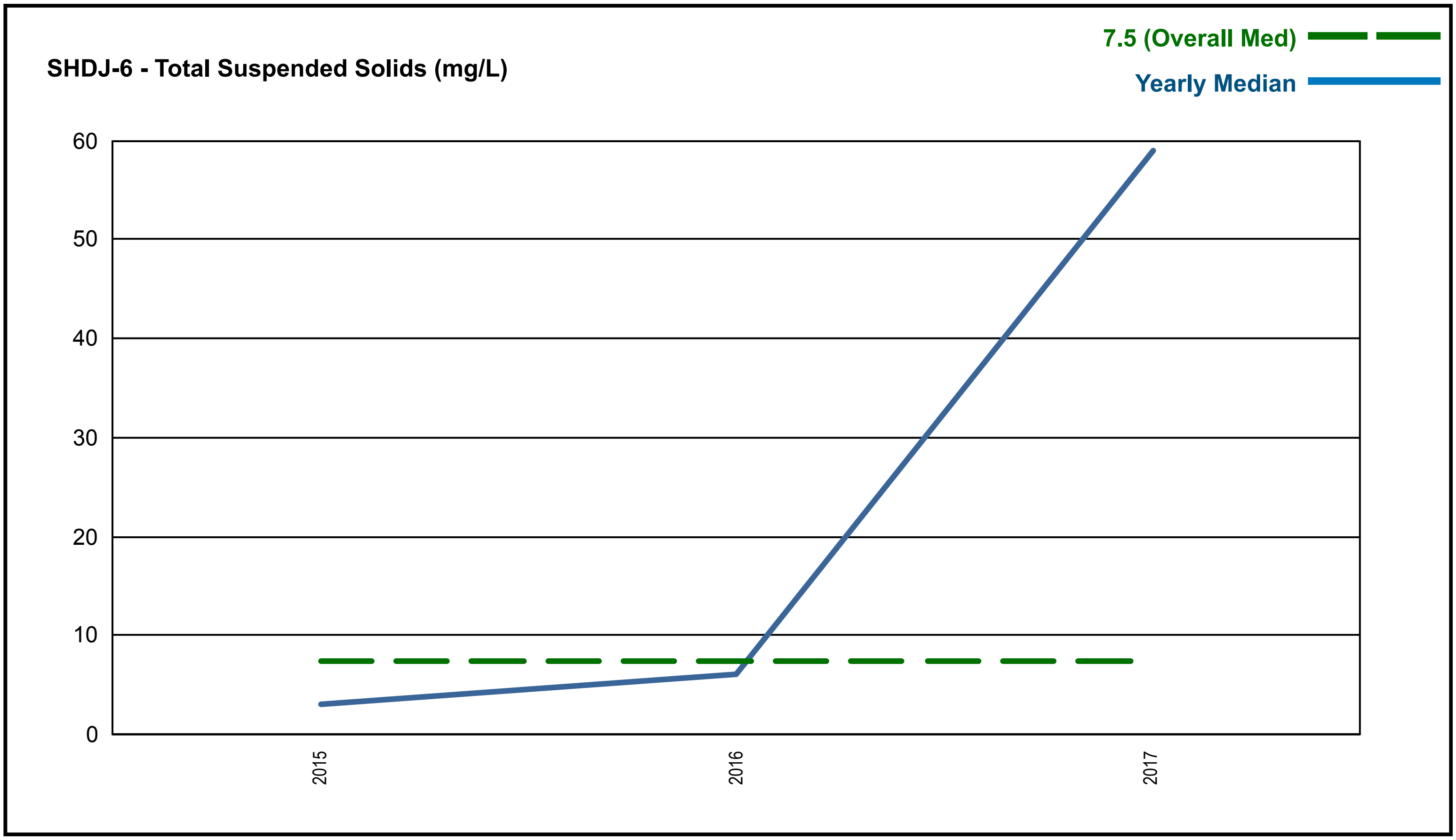

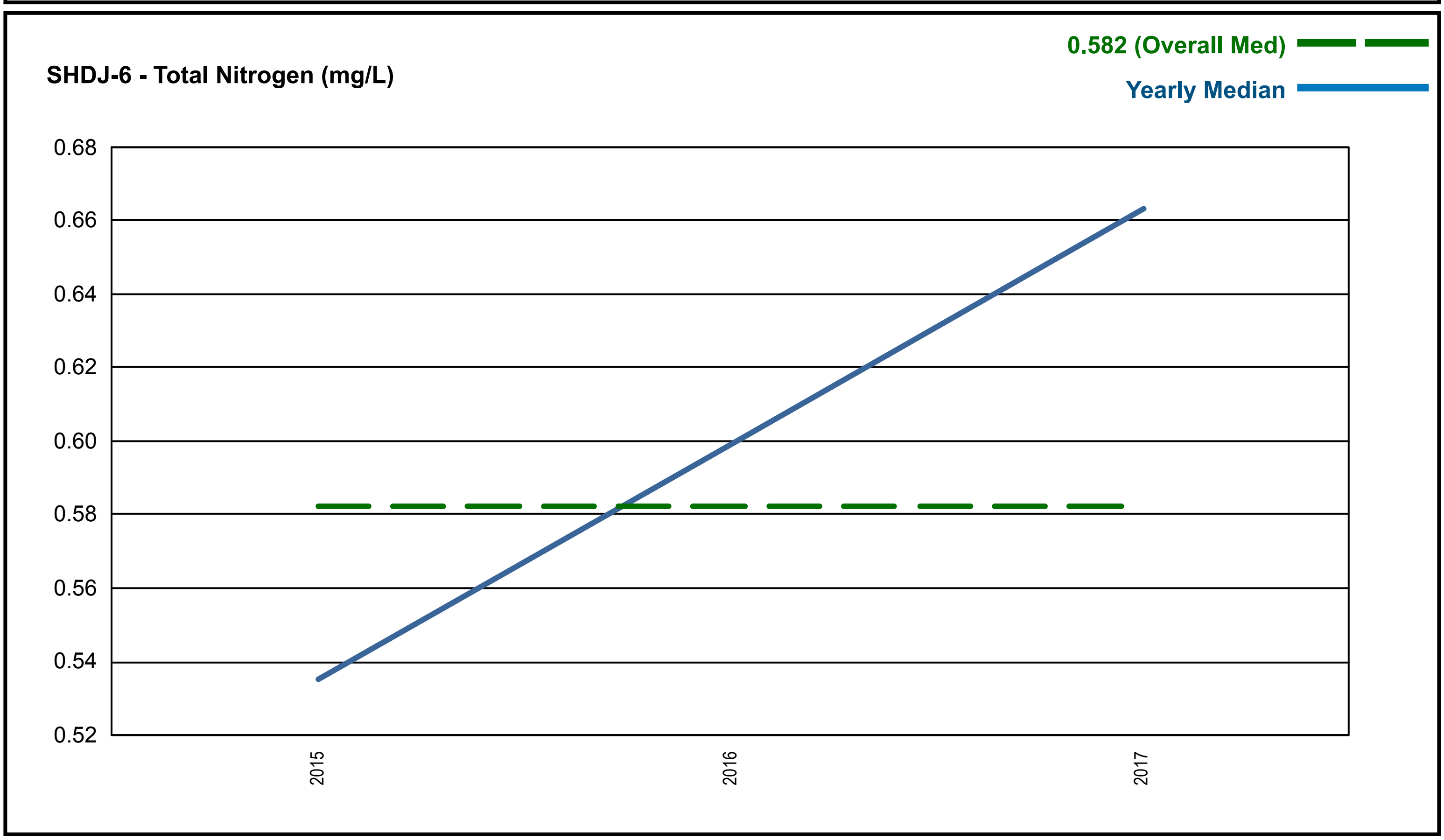

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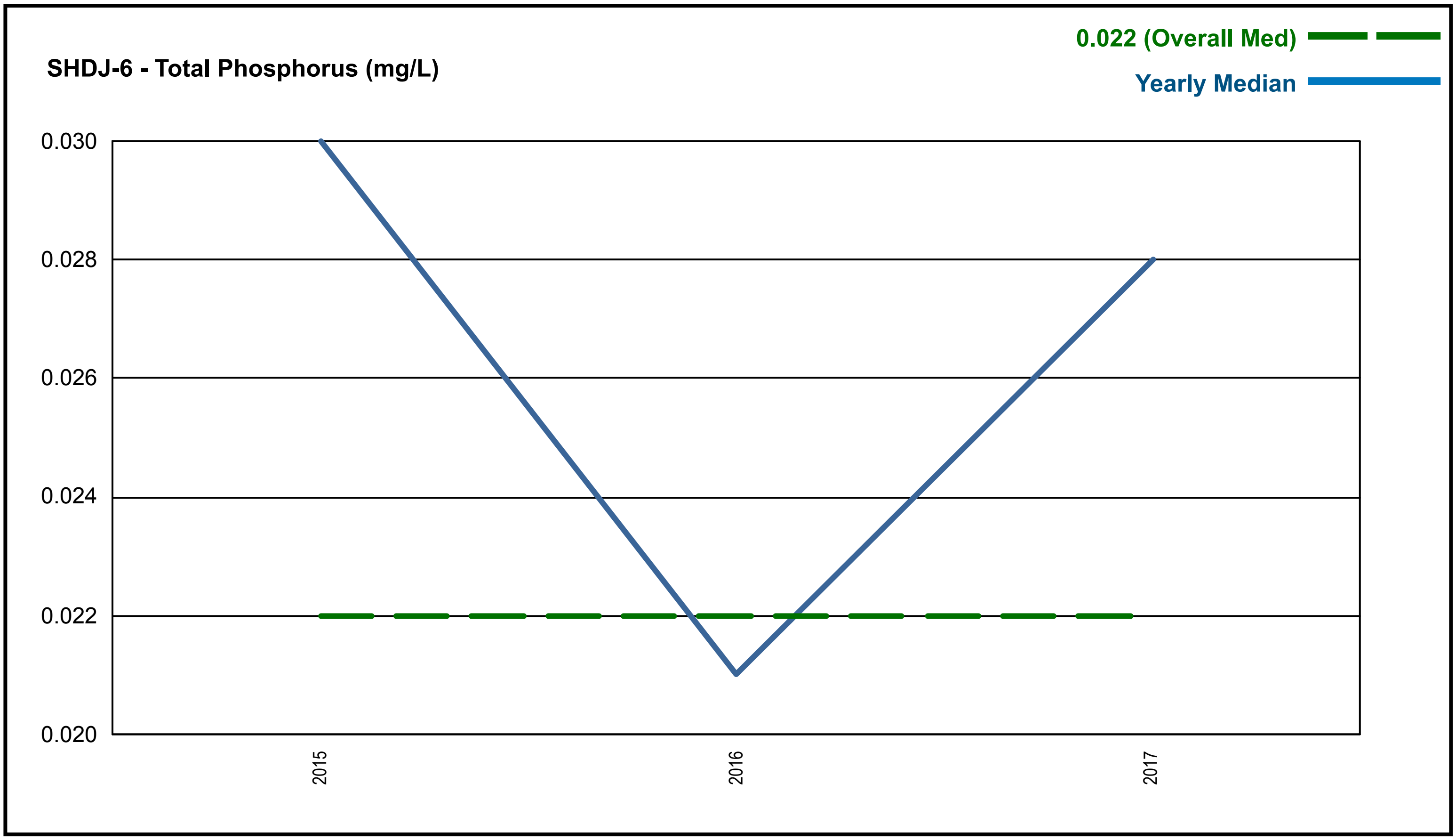

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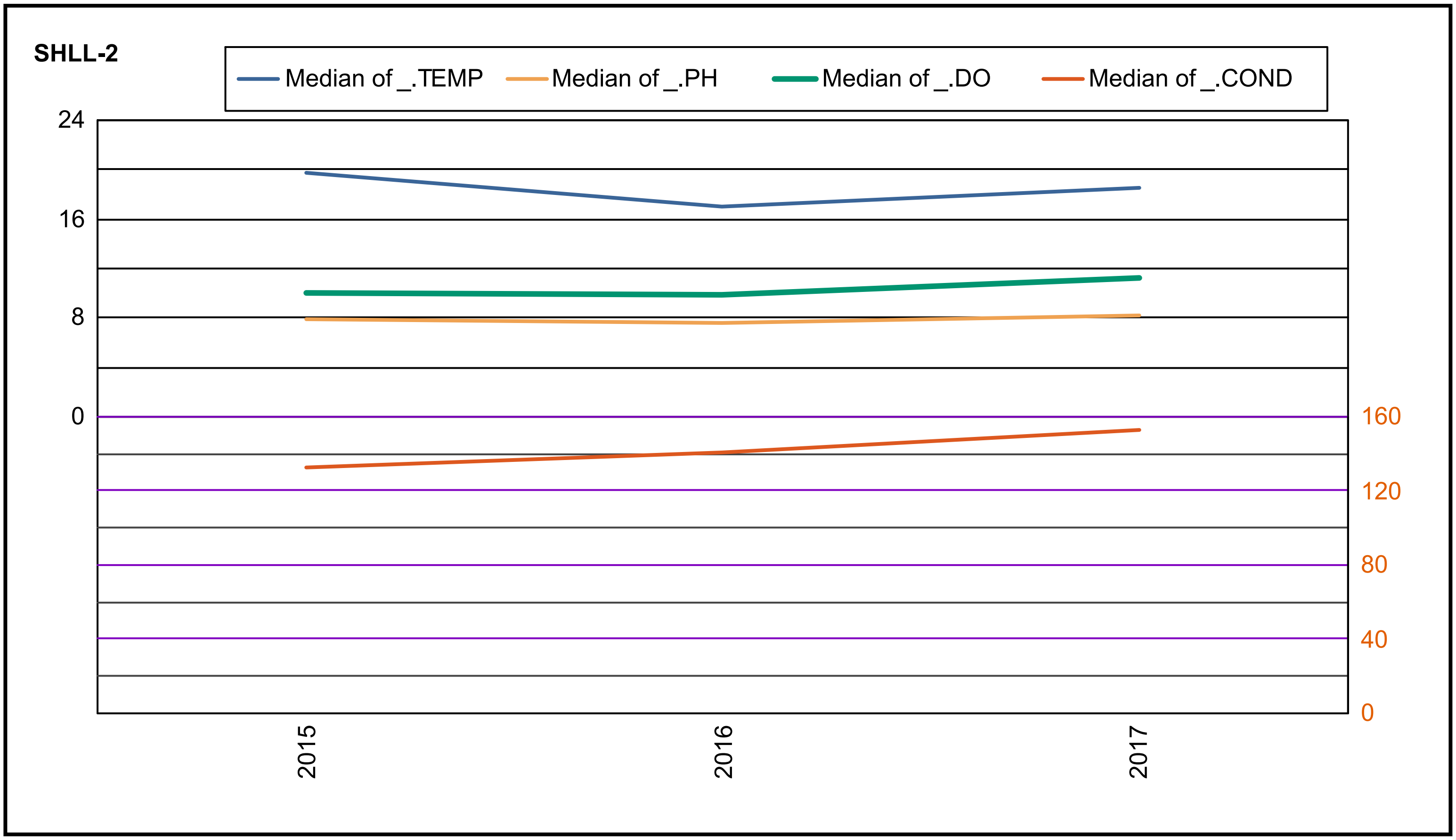
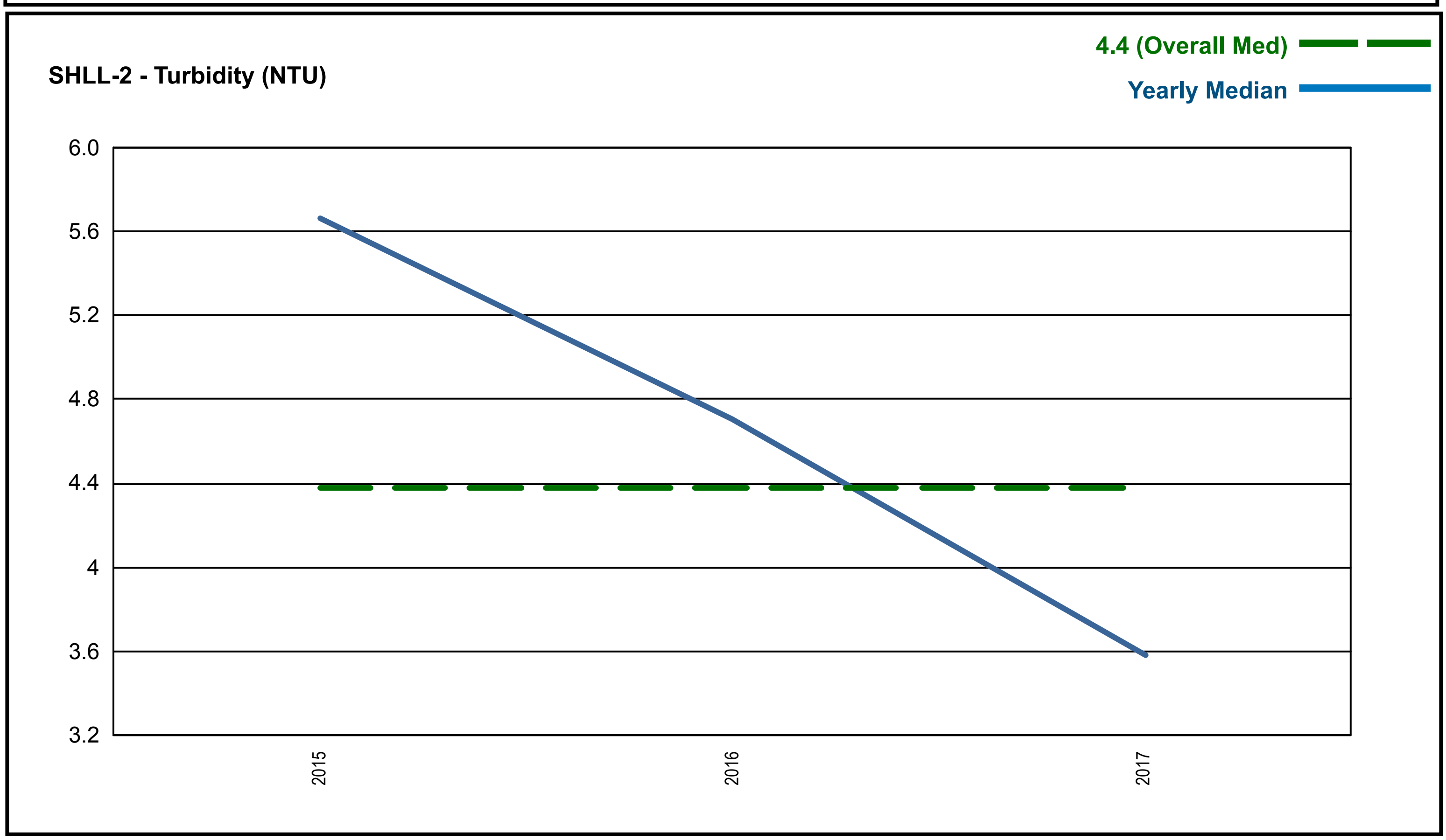
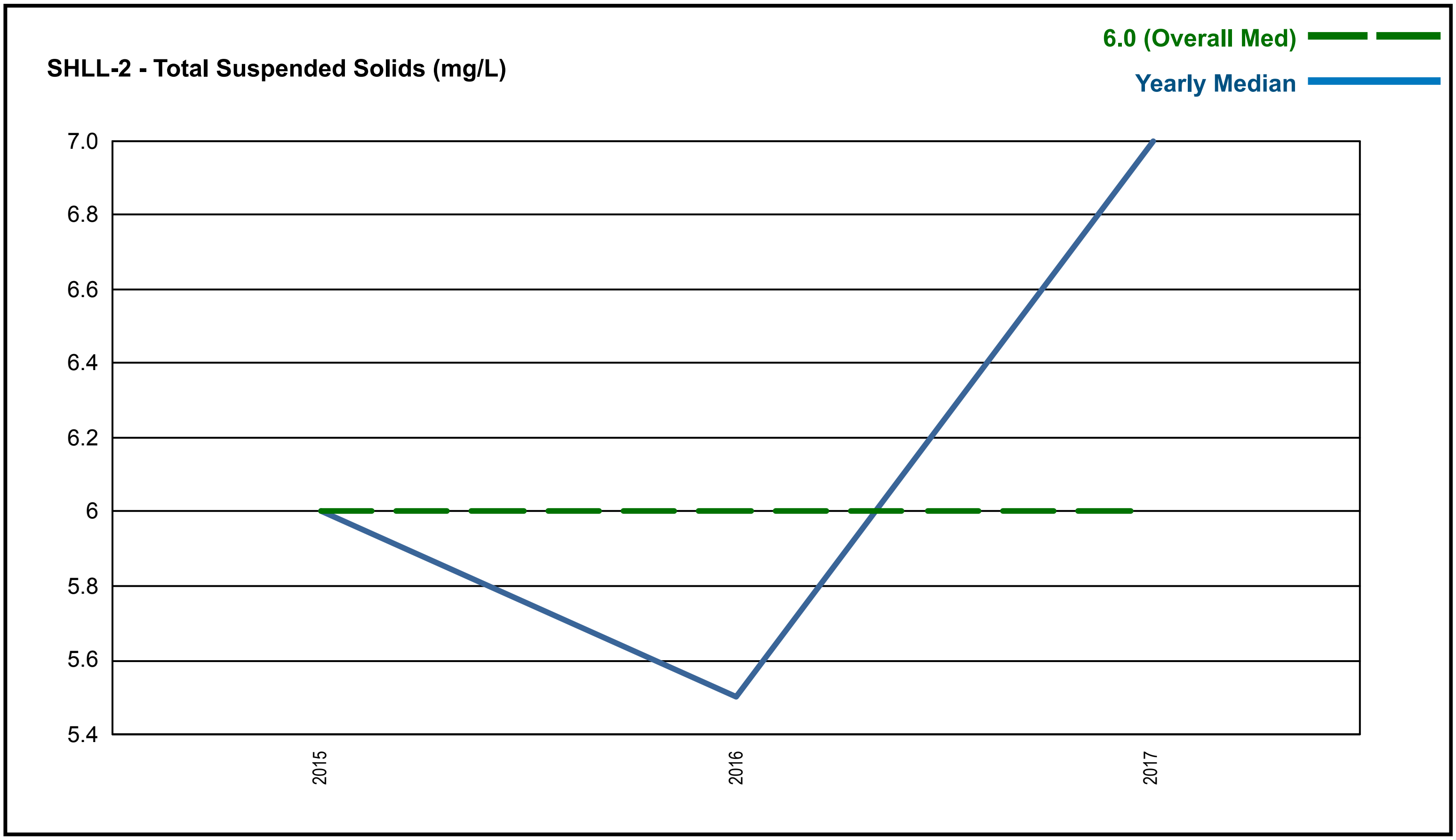
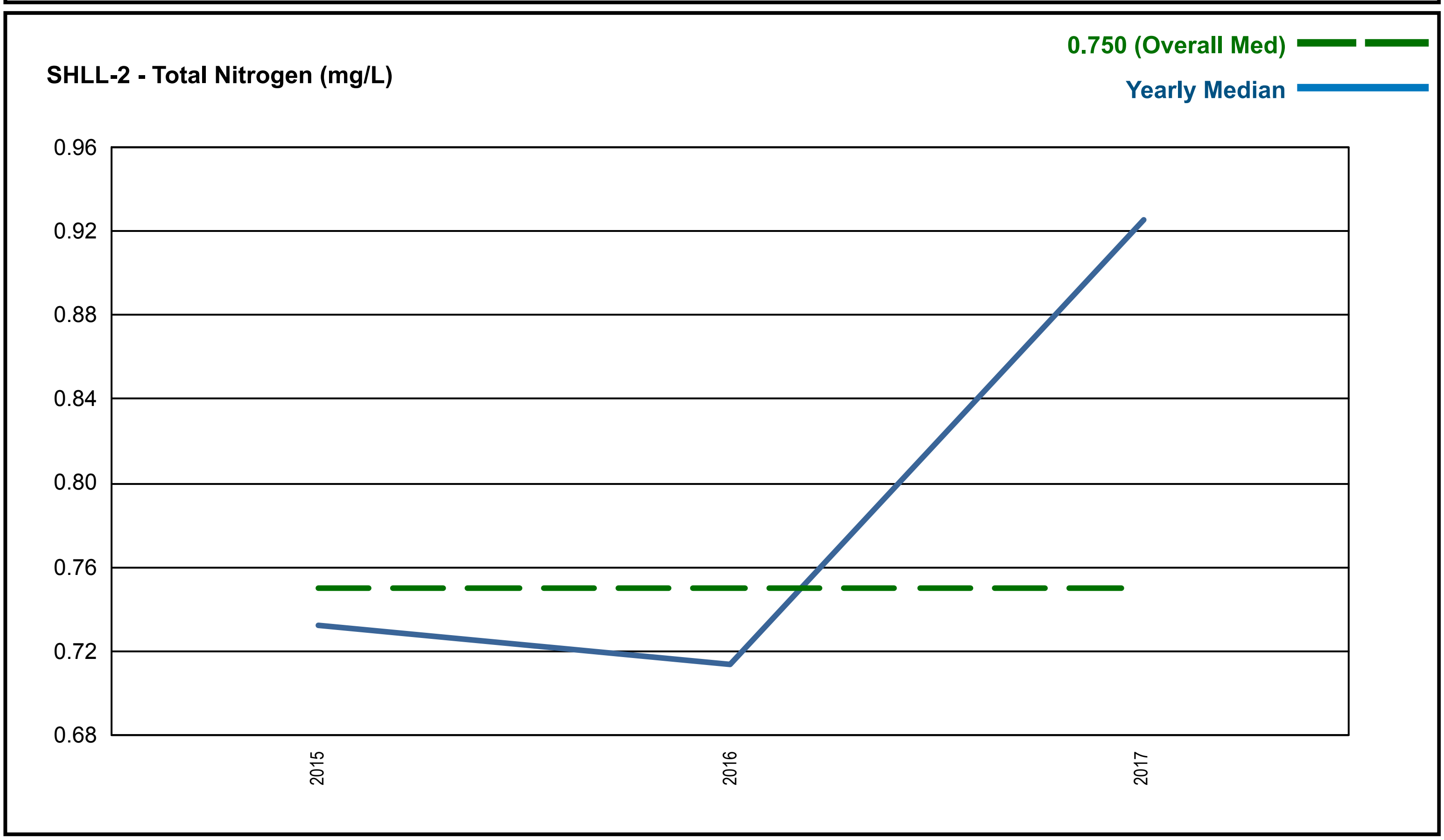




ADEM Ambient Trend Stations - Sampled 1977 - 2018





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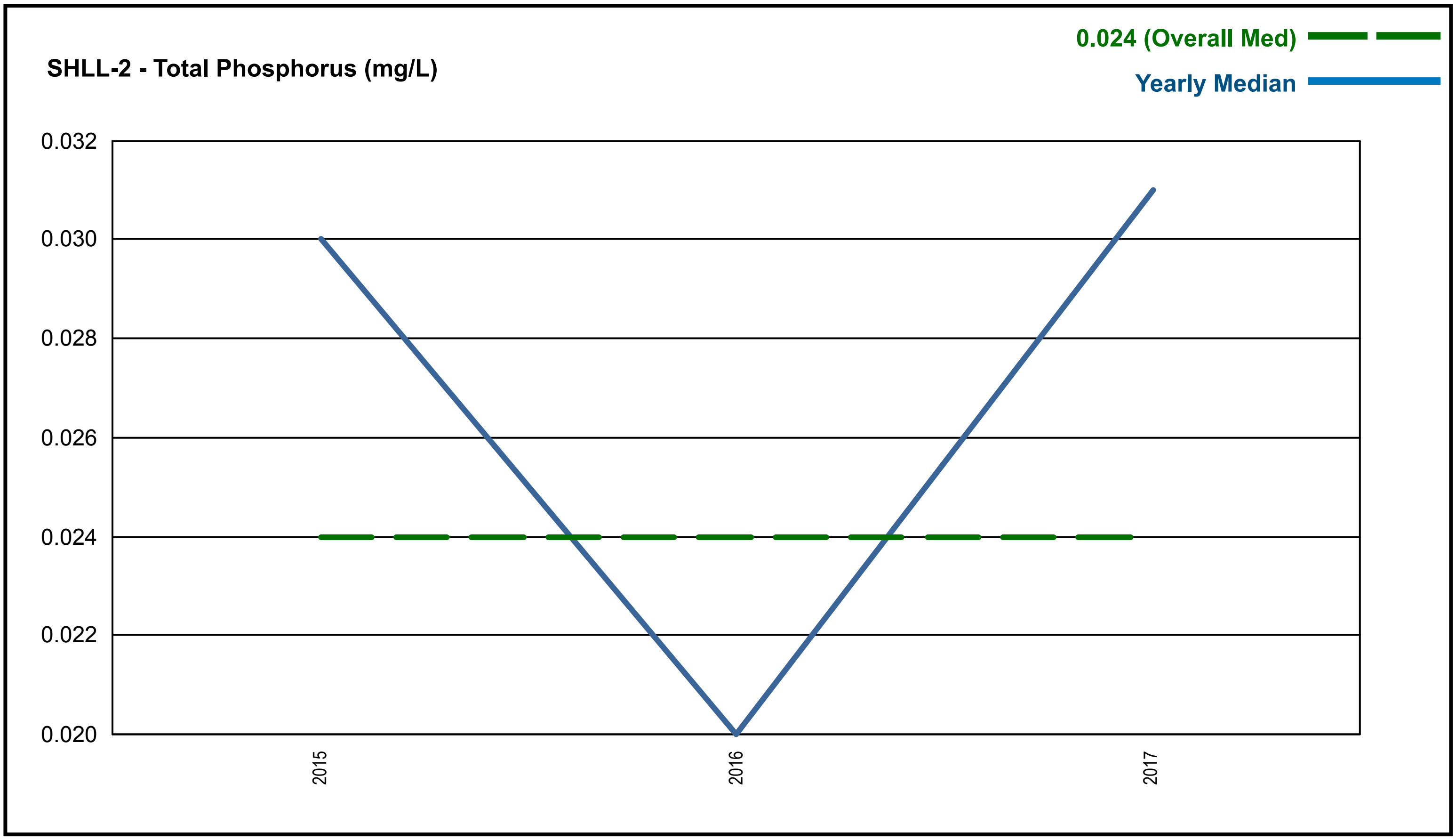

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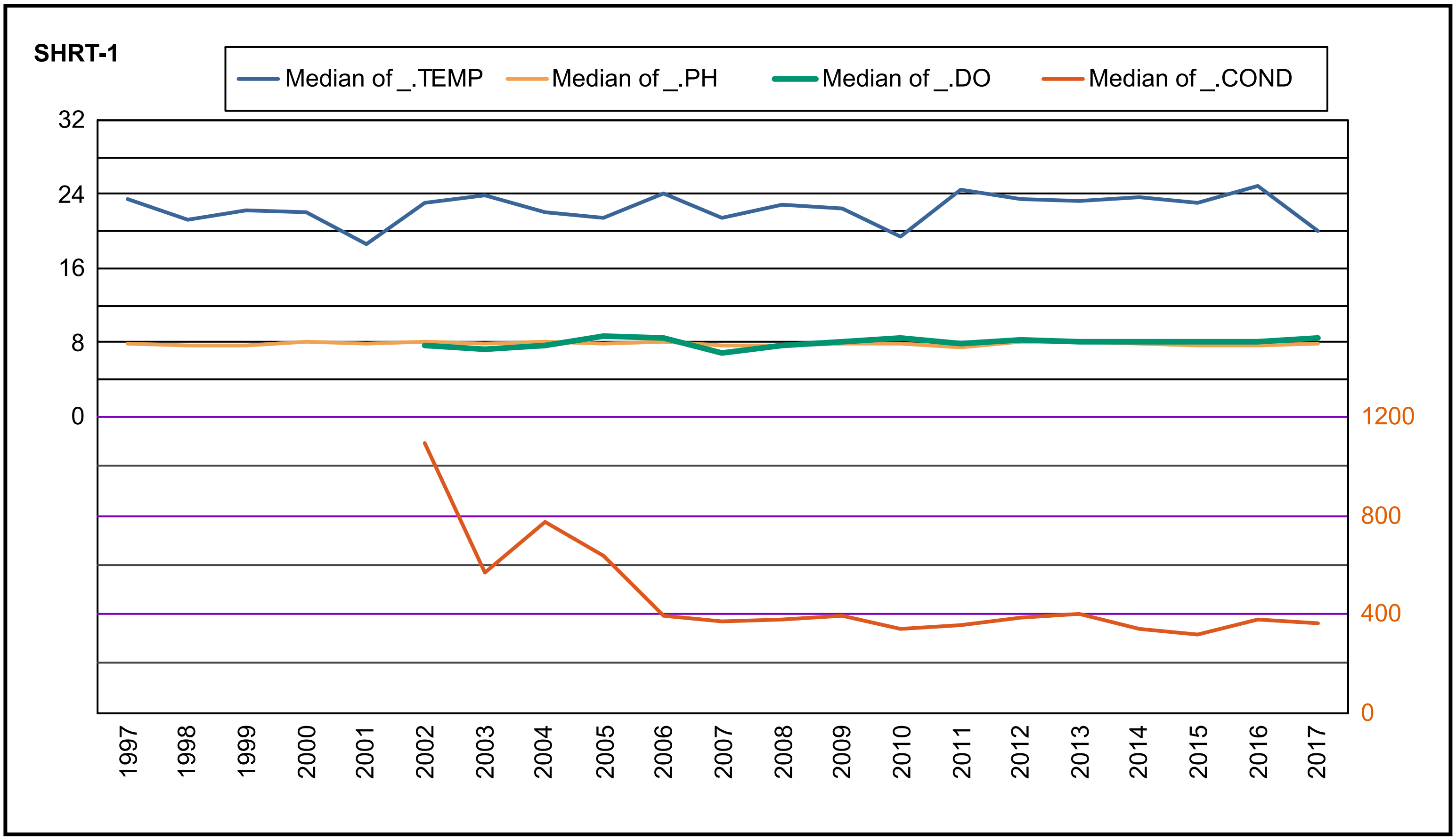

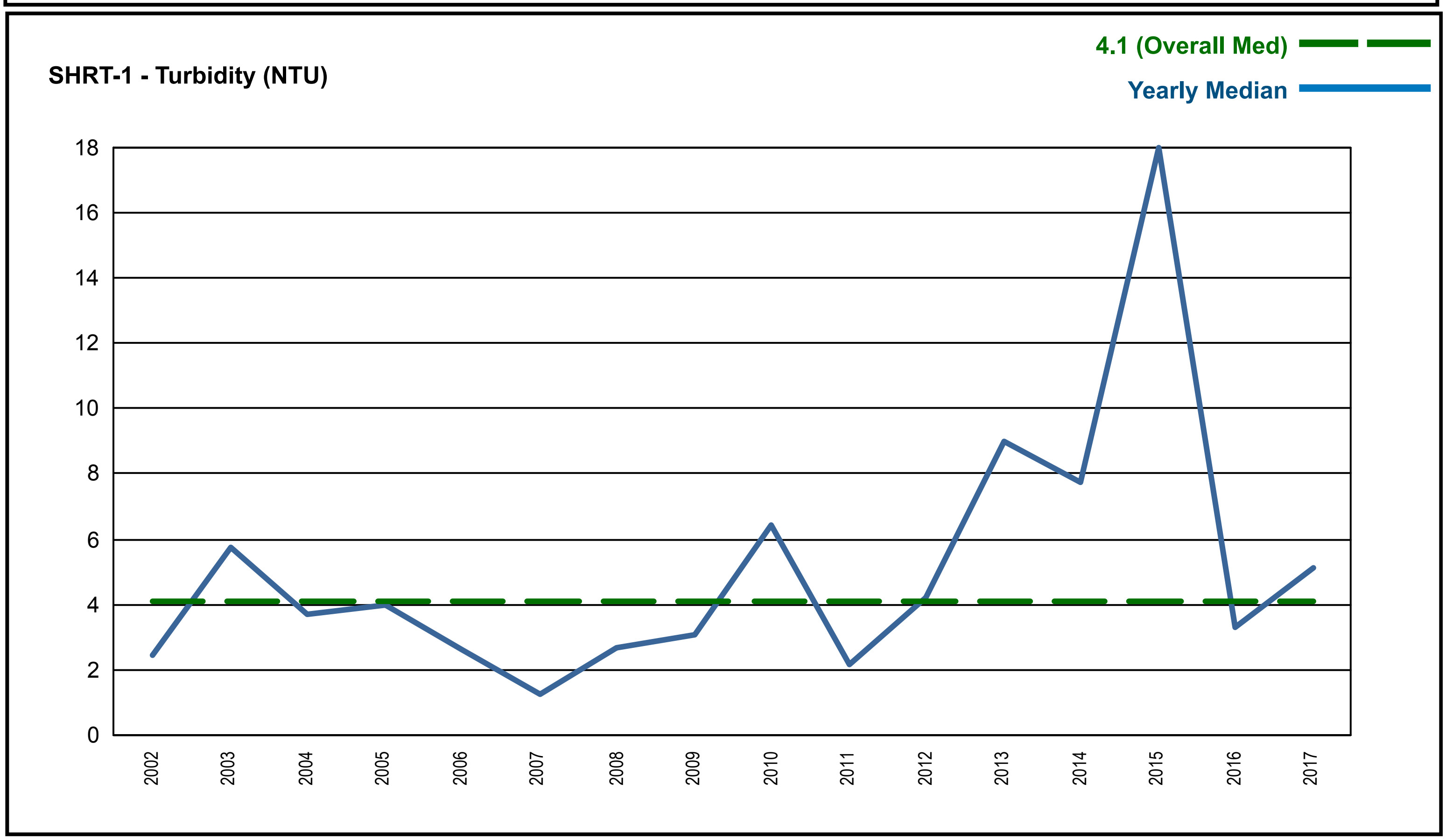

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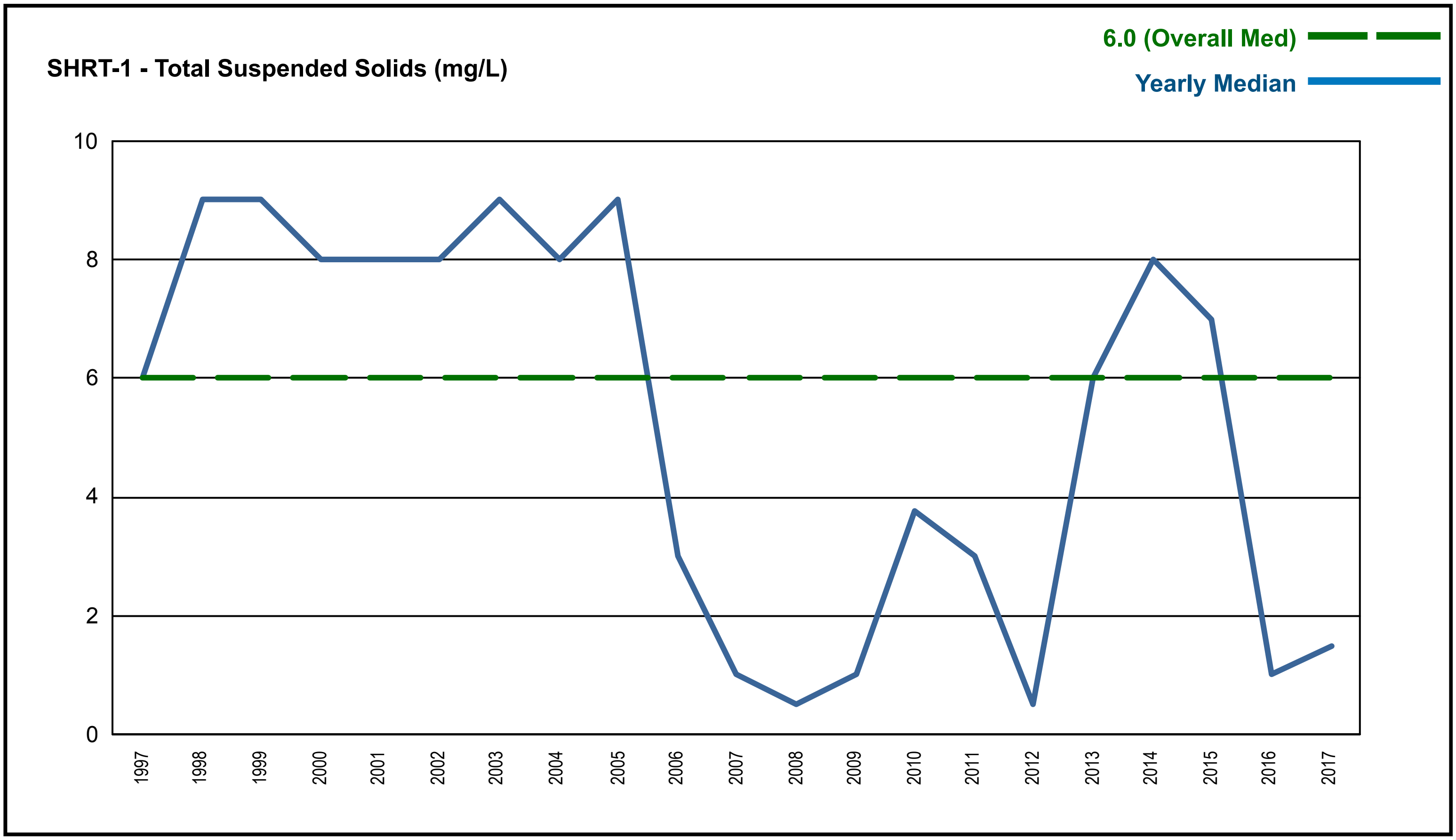

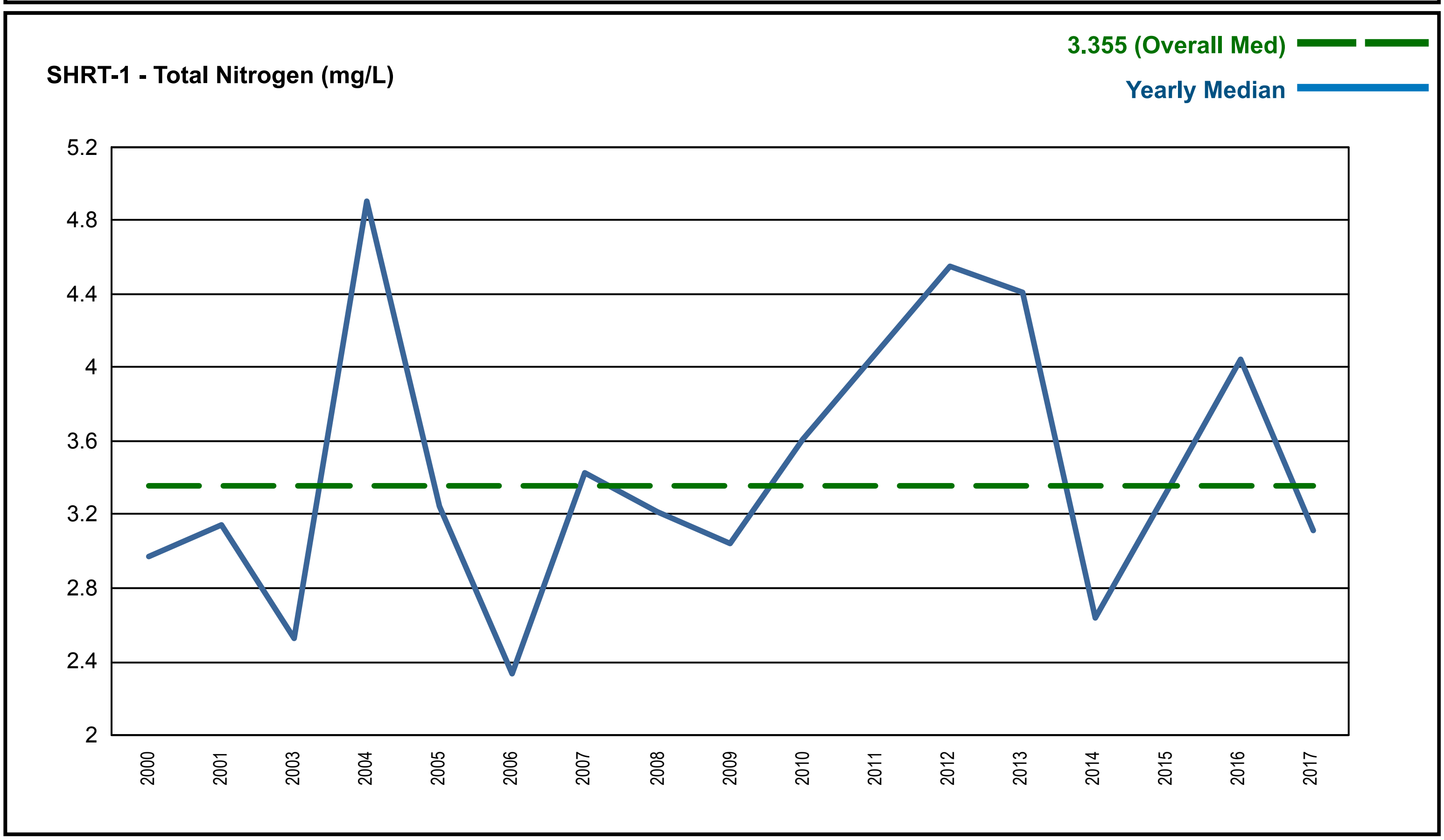

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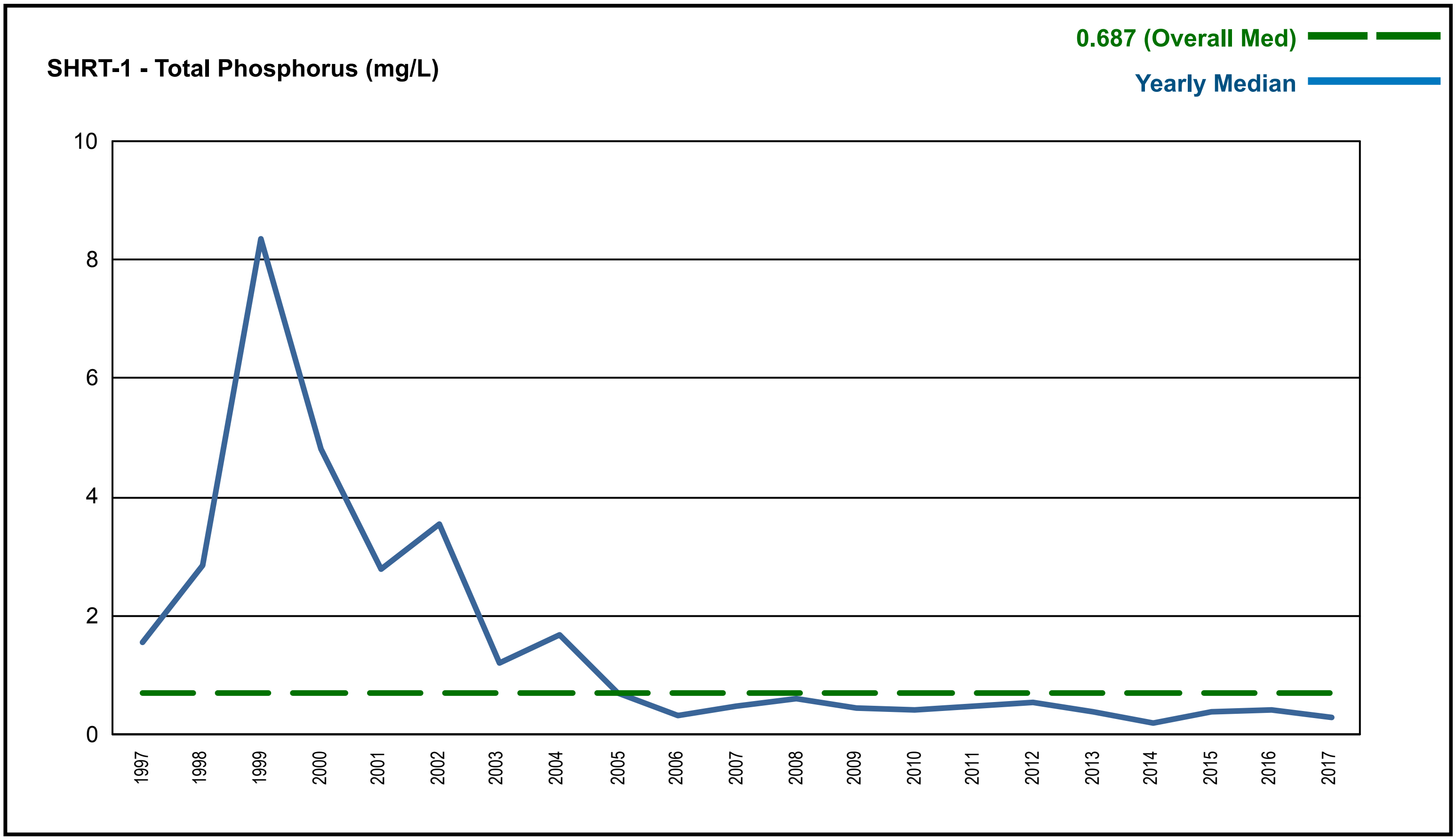

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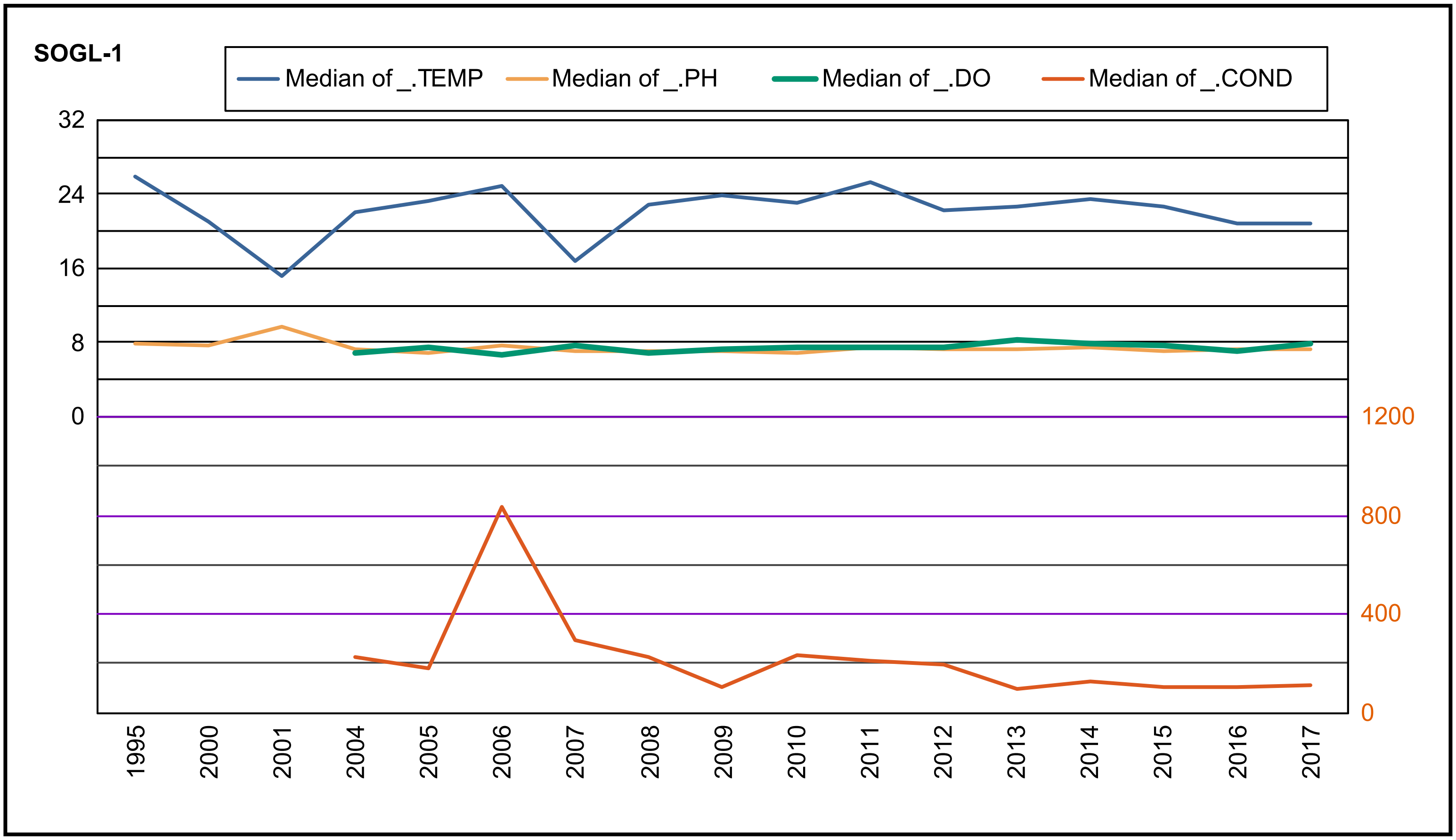

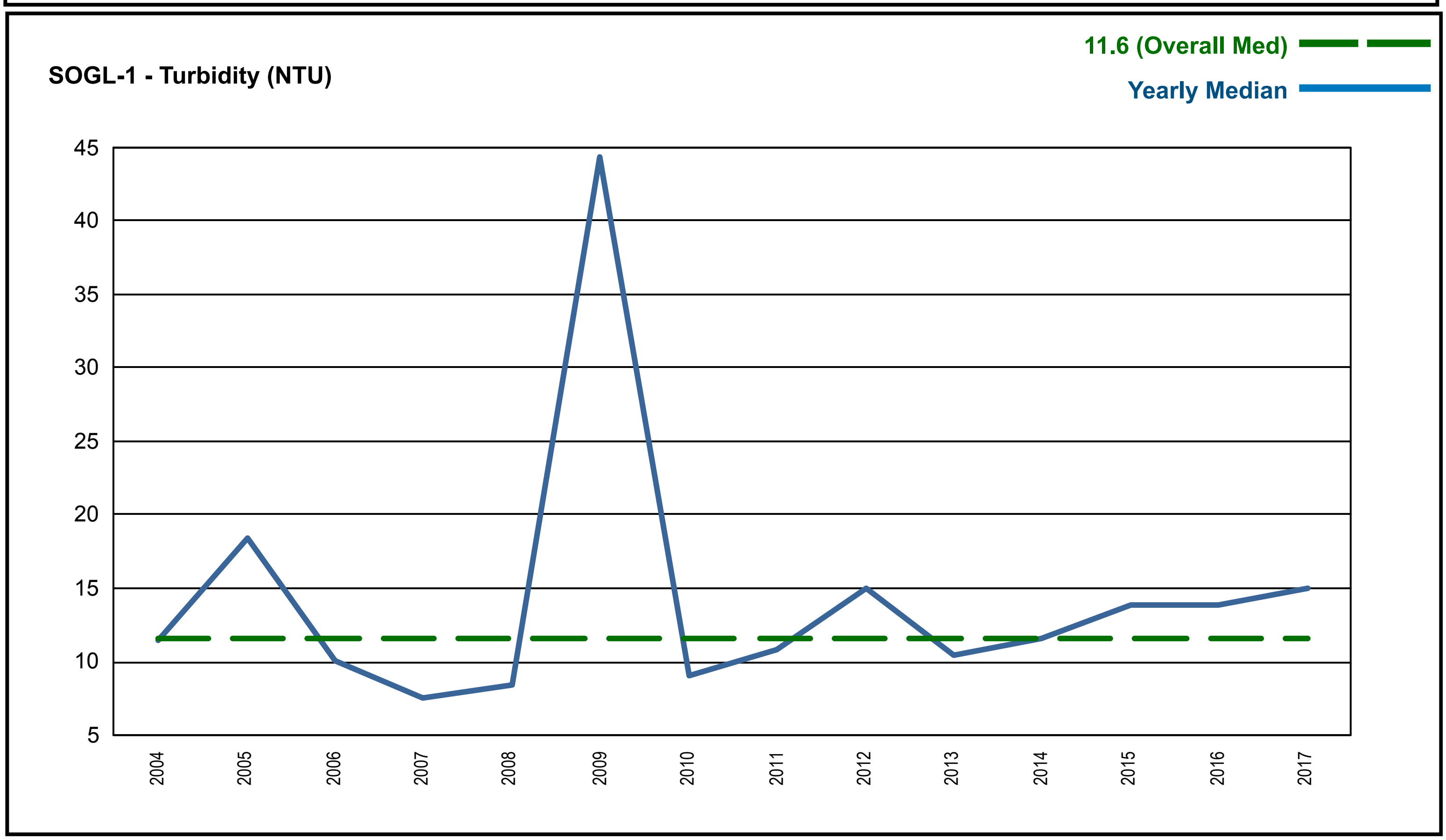

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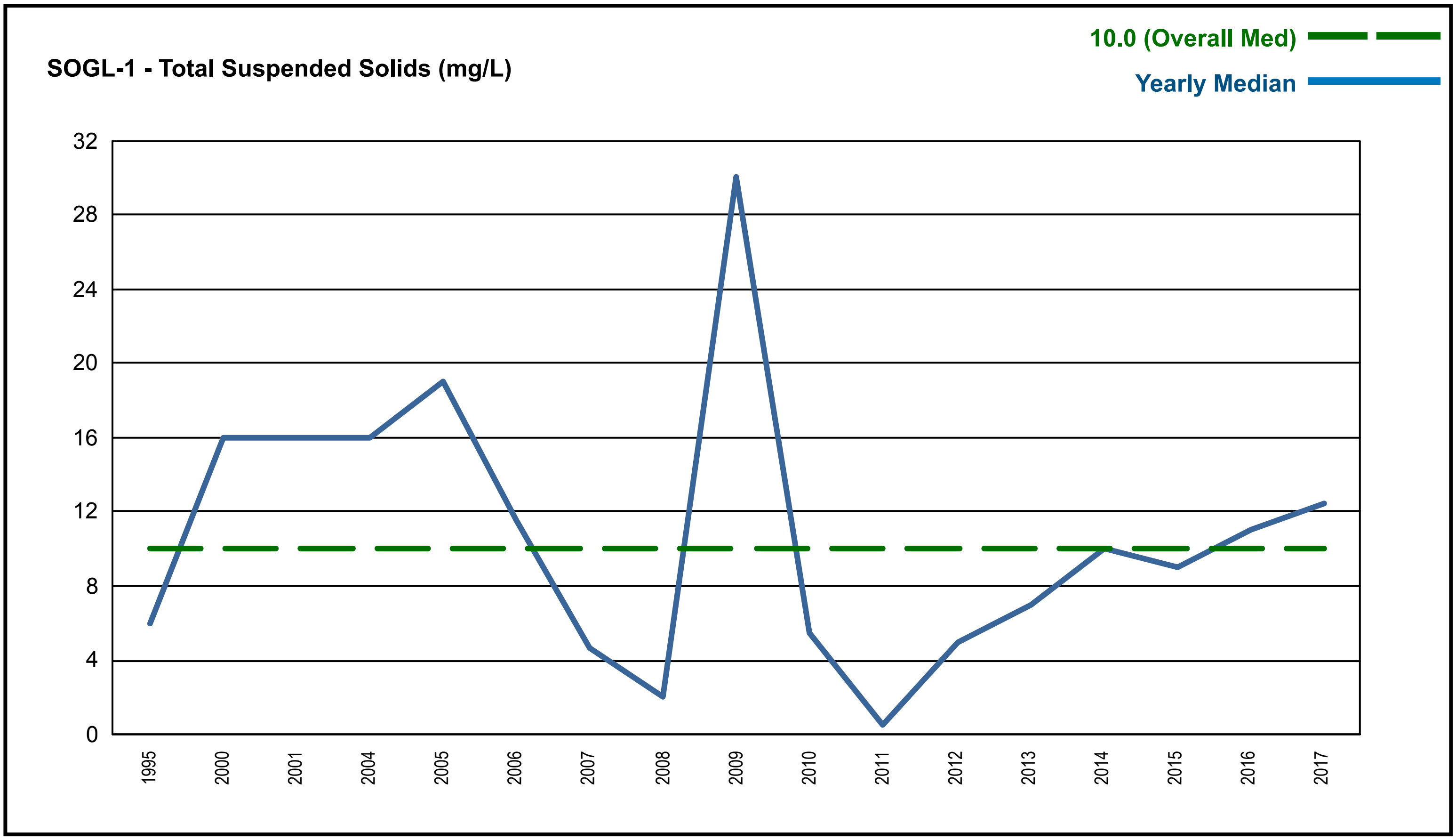

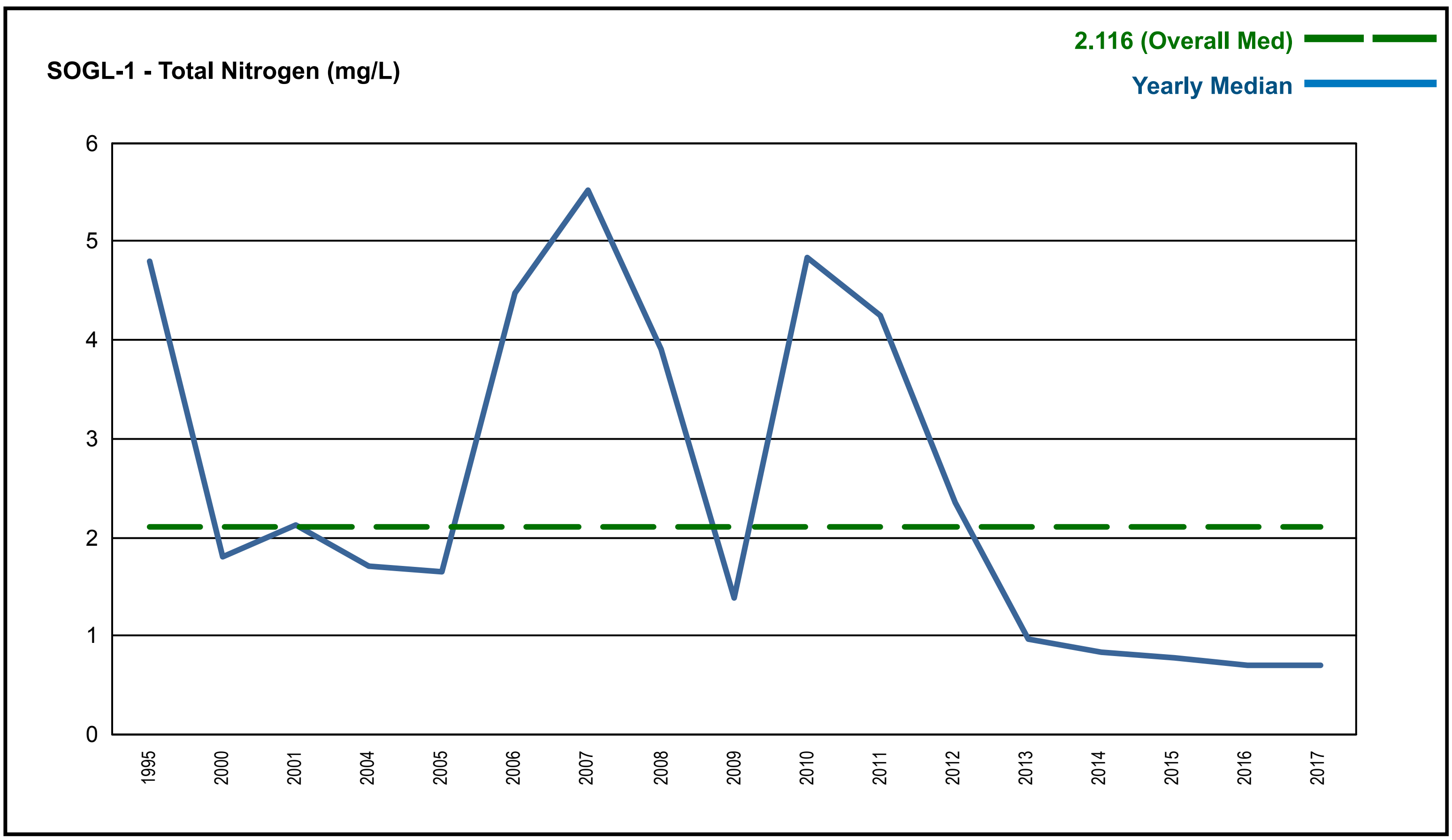

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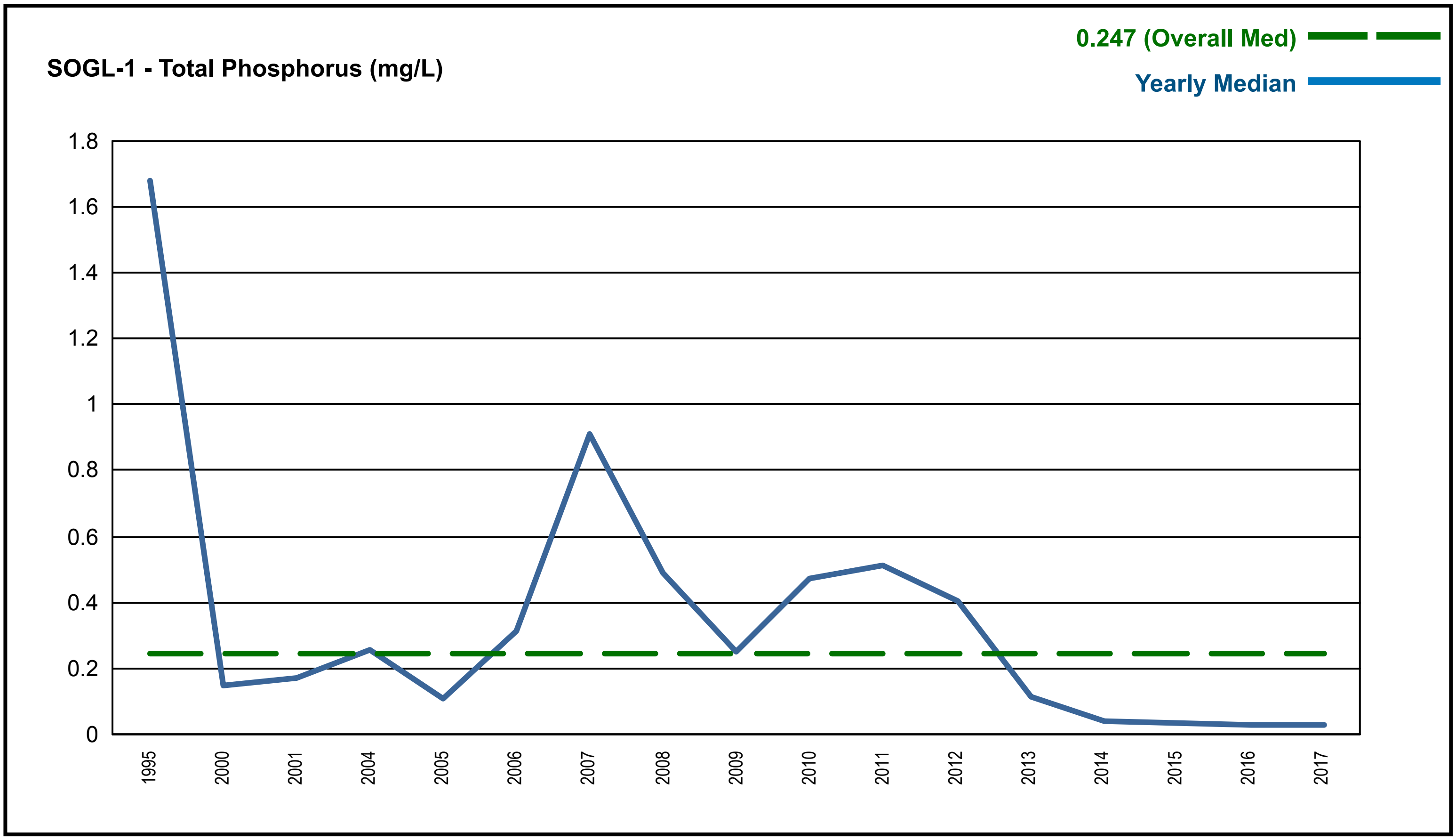

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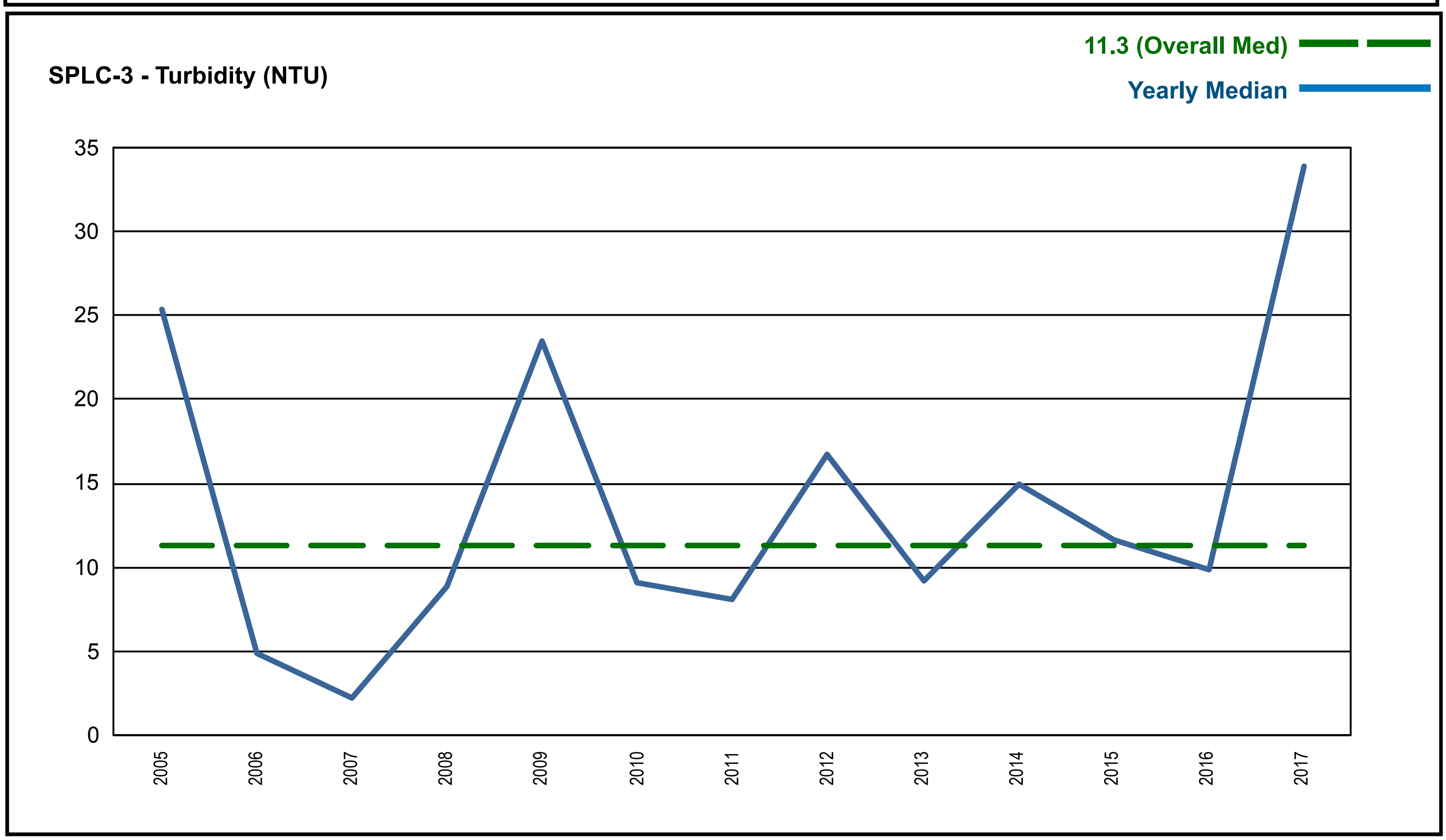

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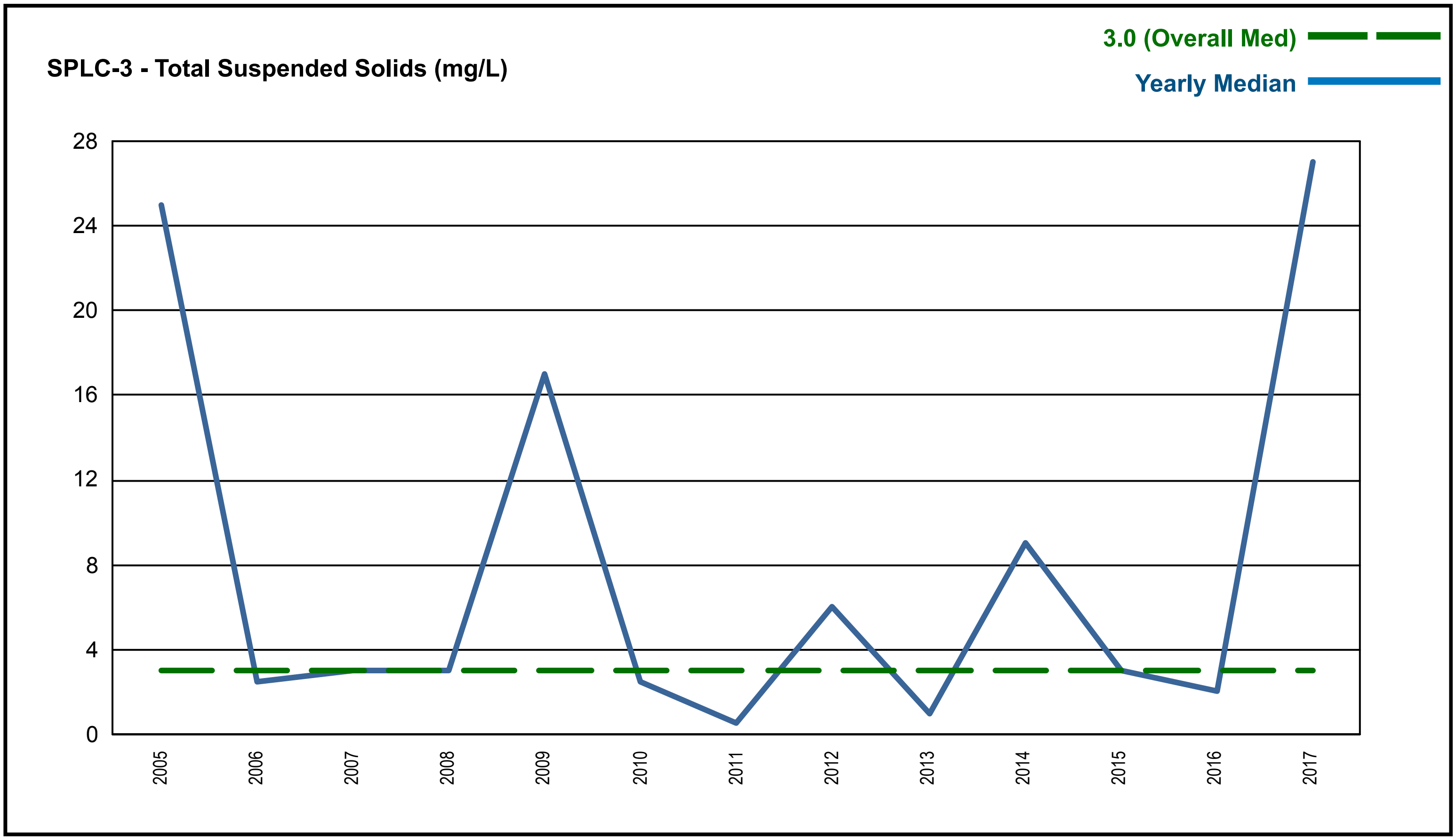

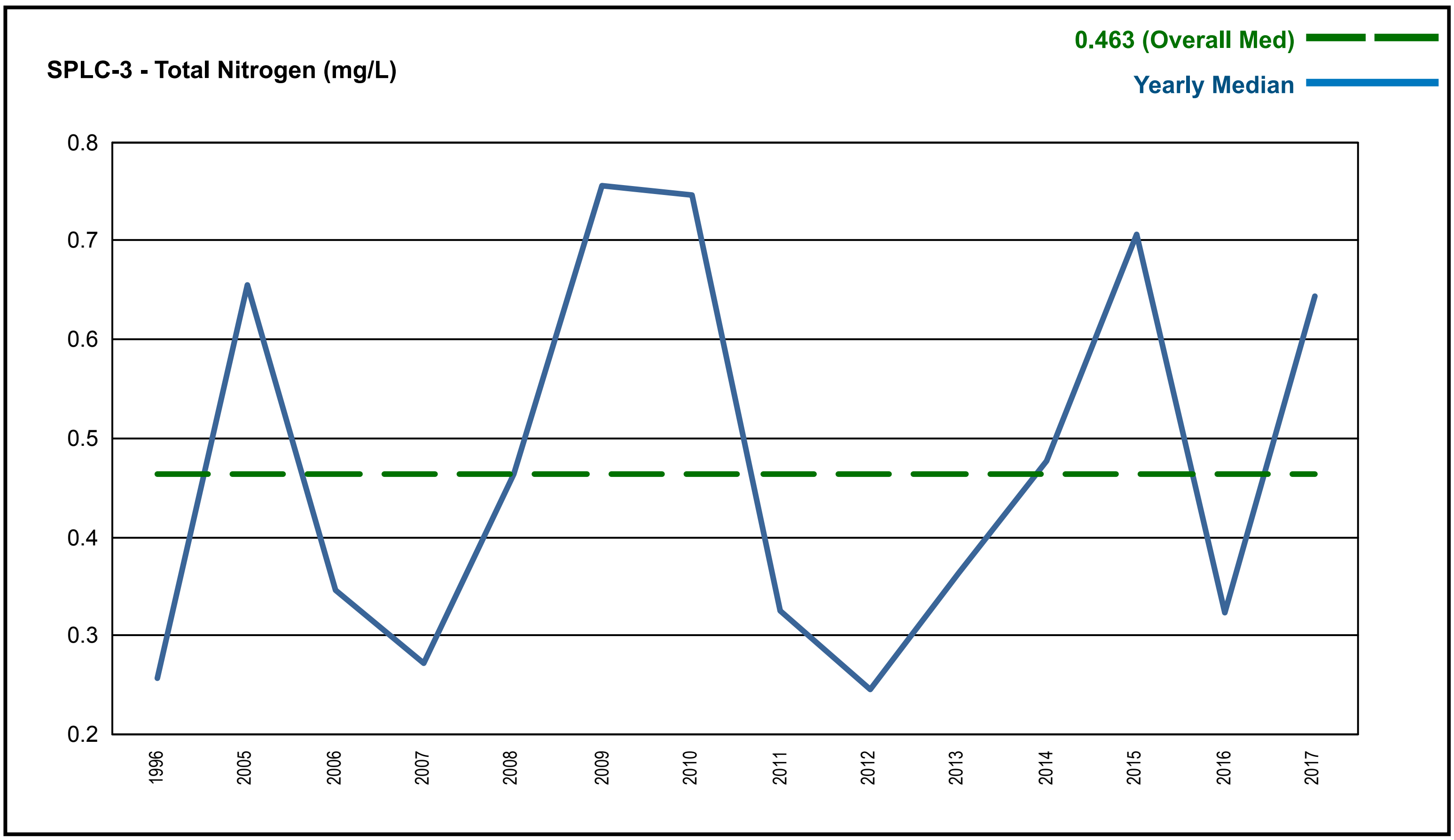

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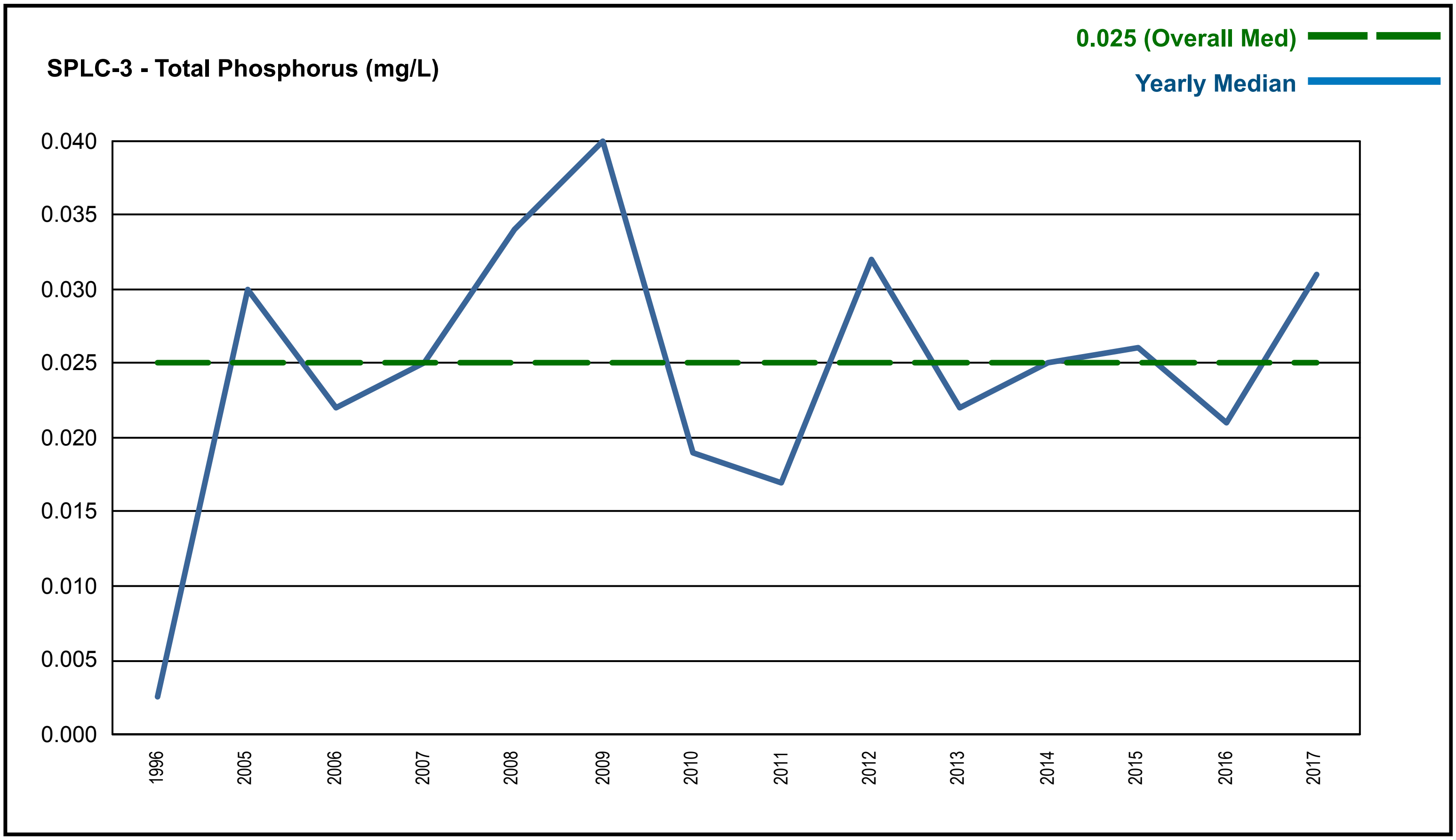

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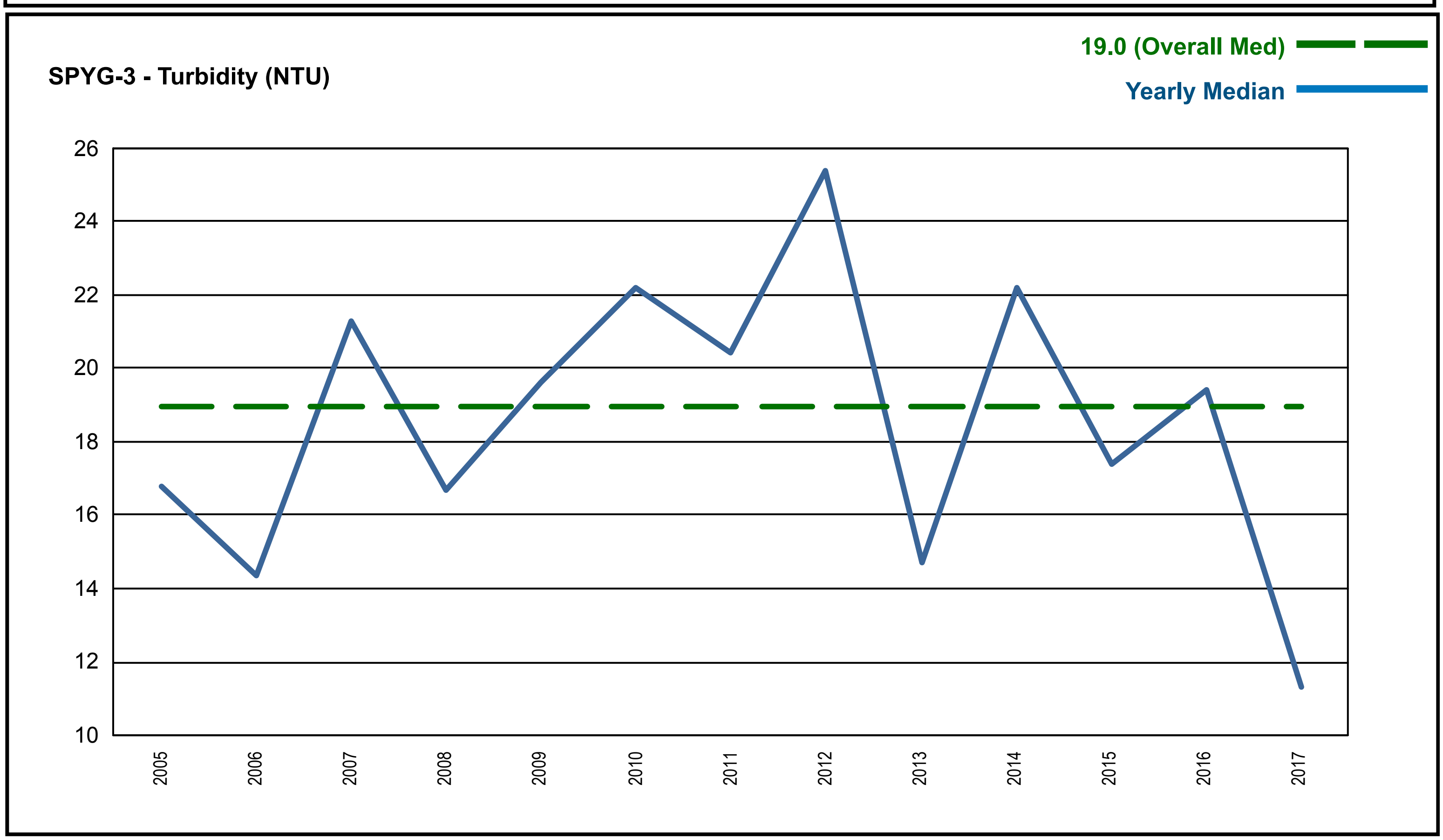

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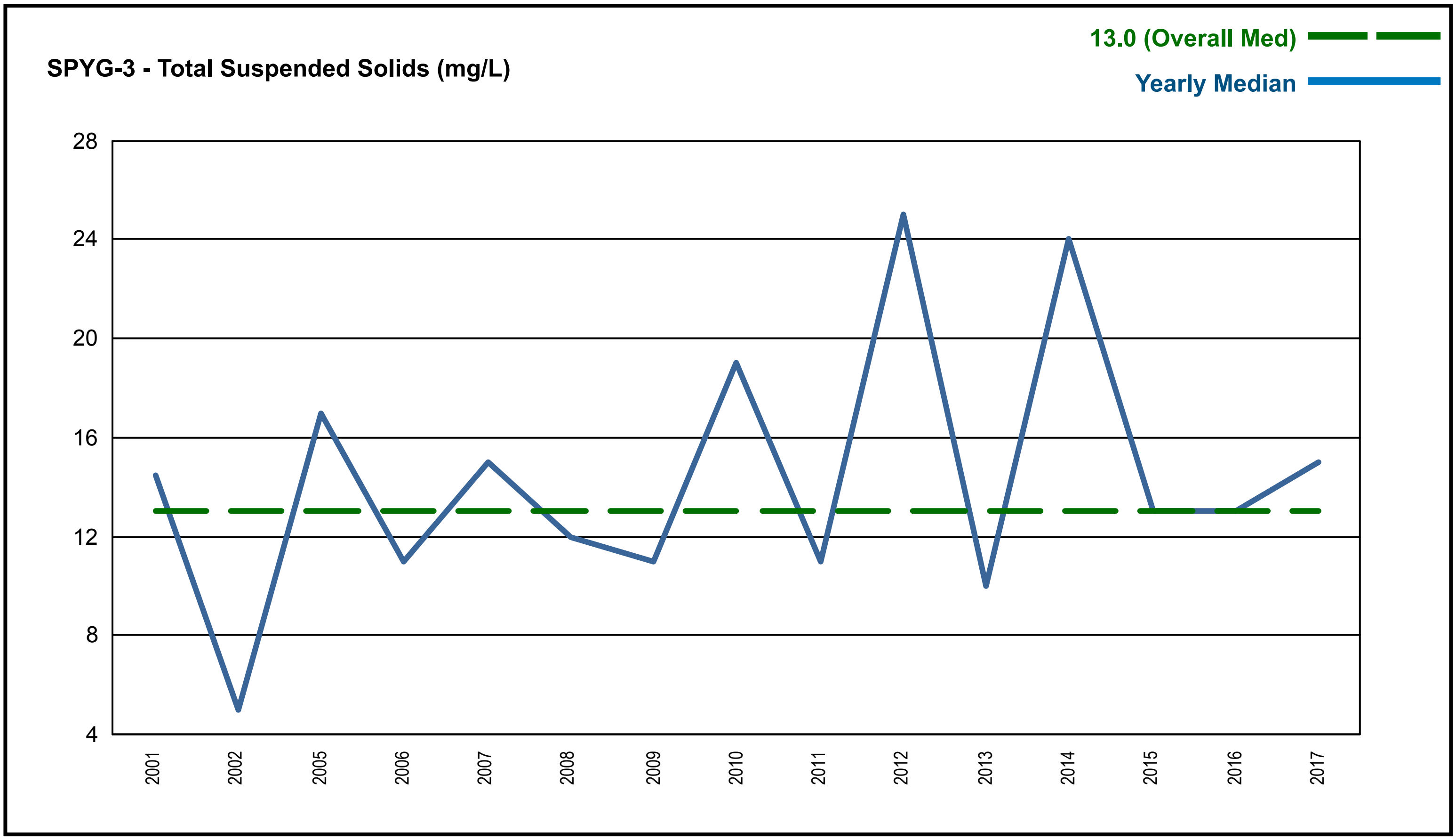

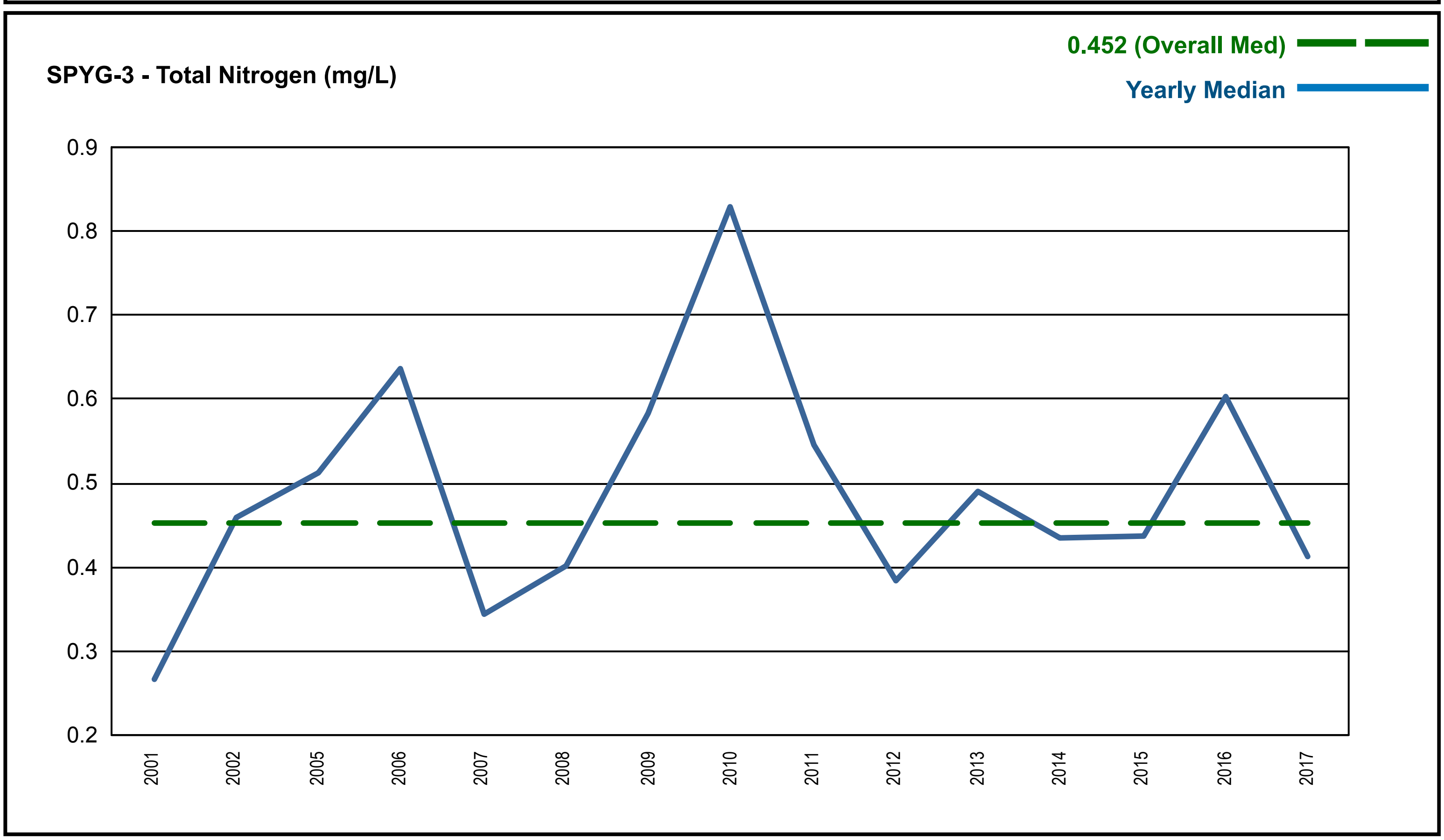

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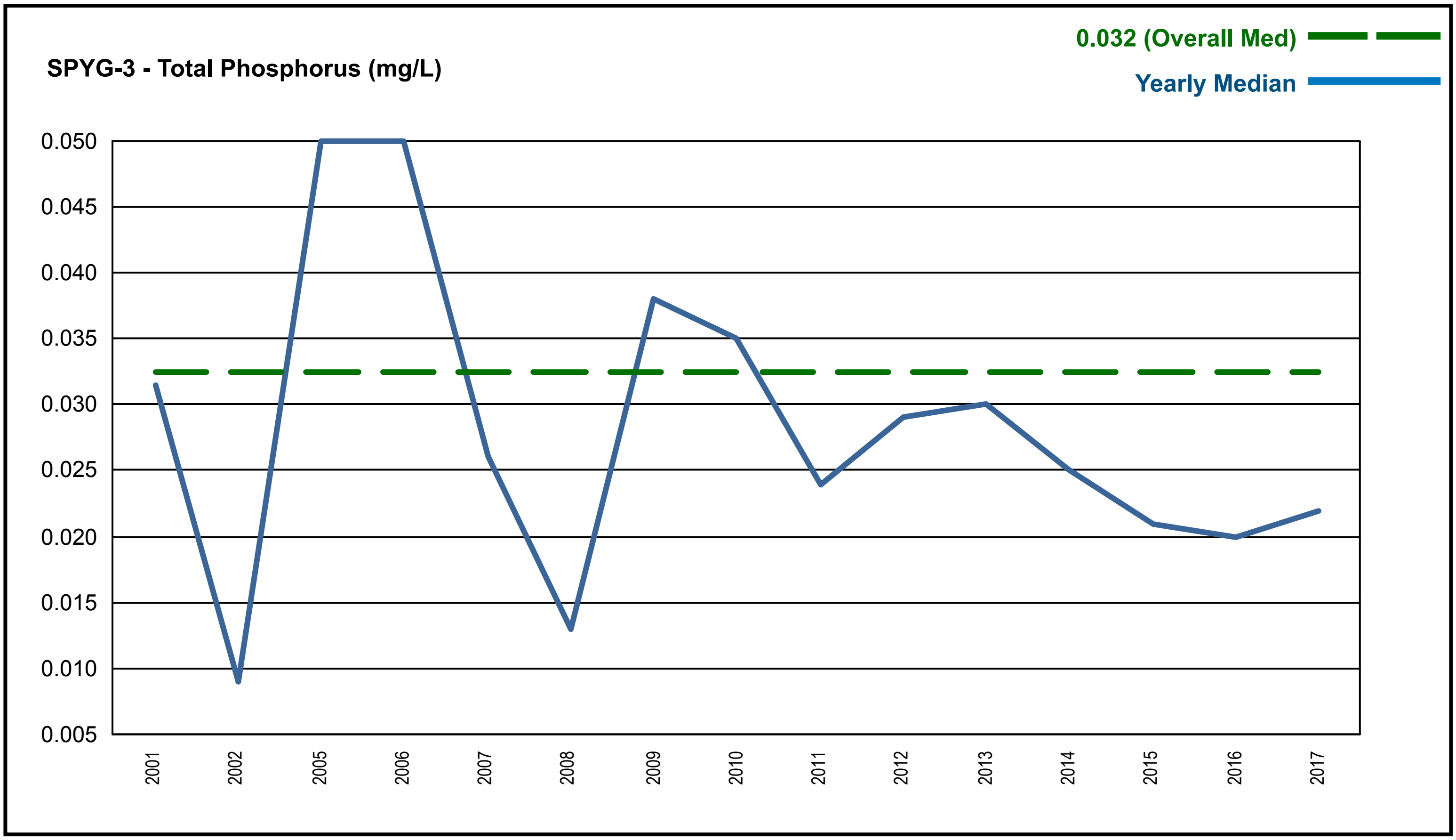

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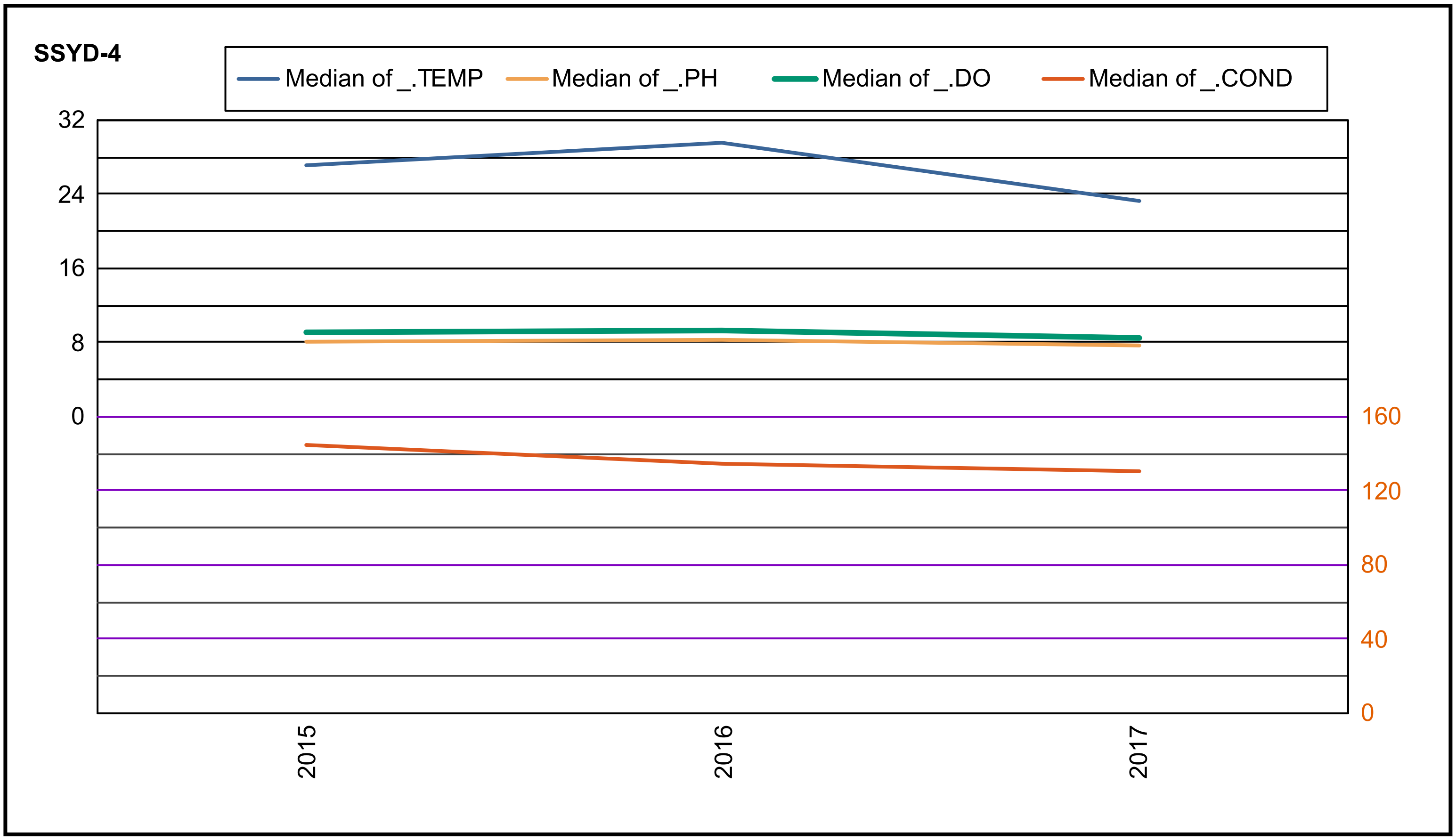

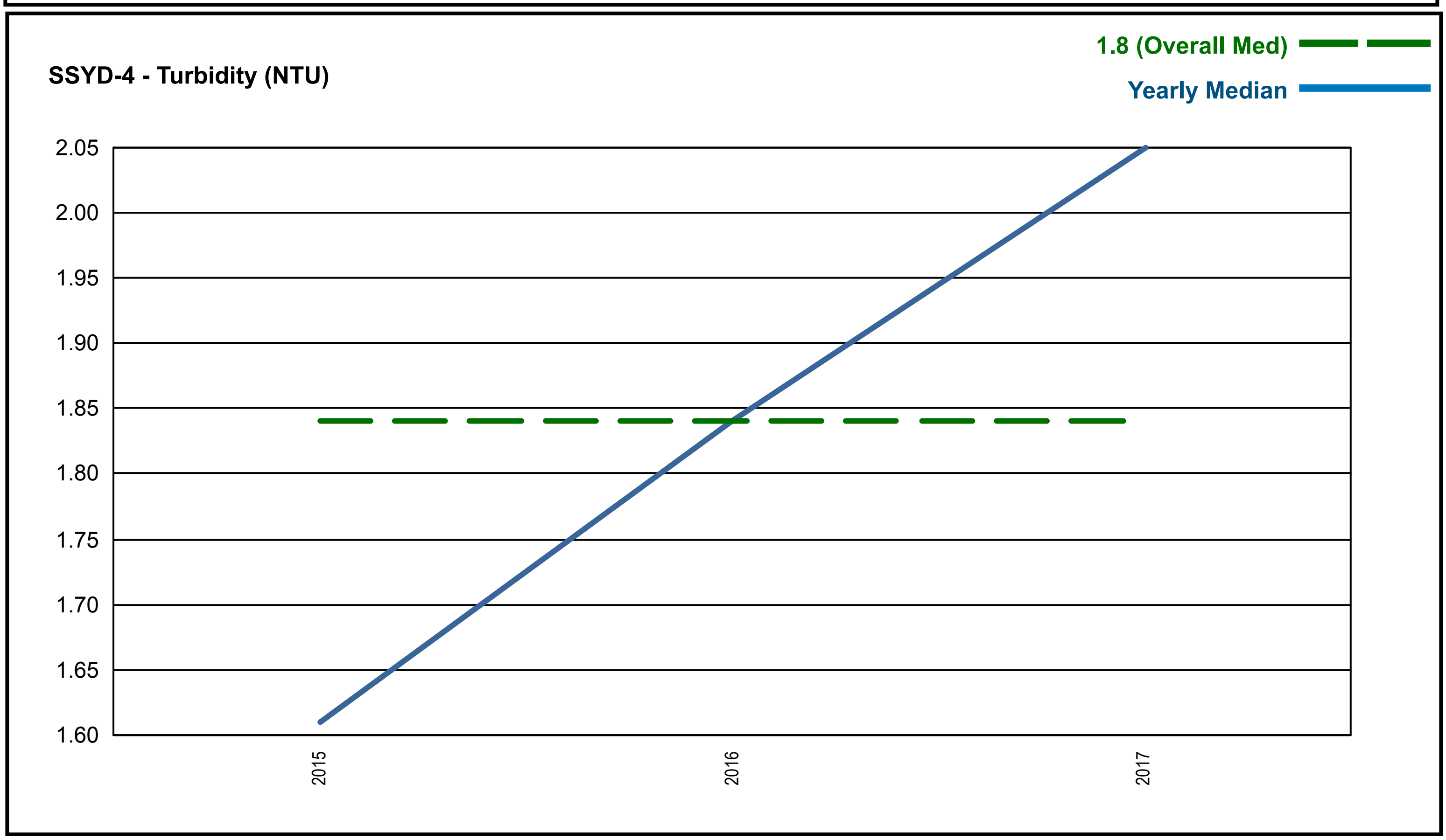

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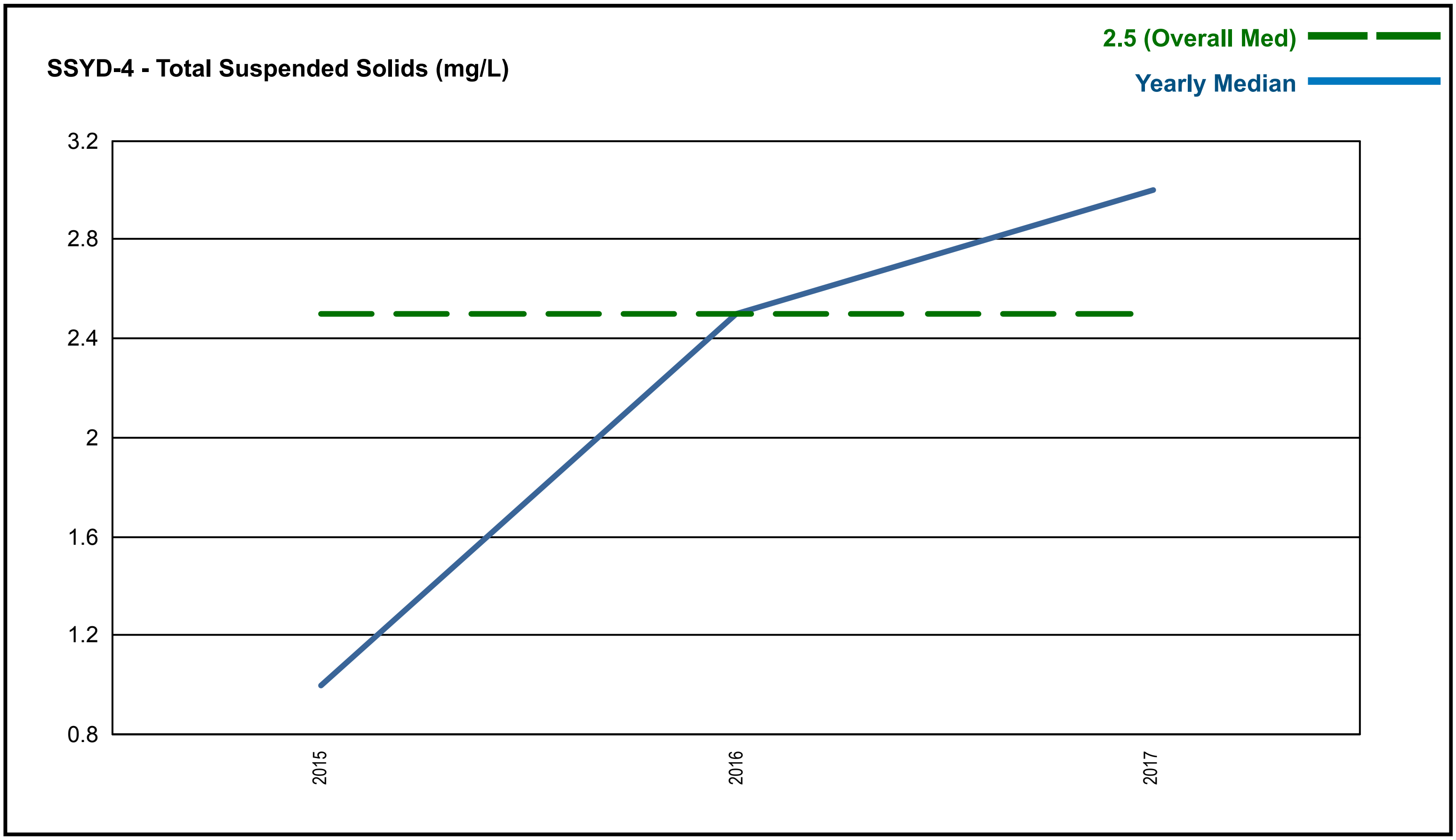

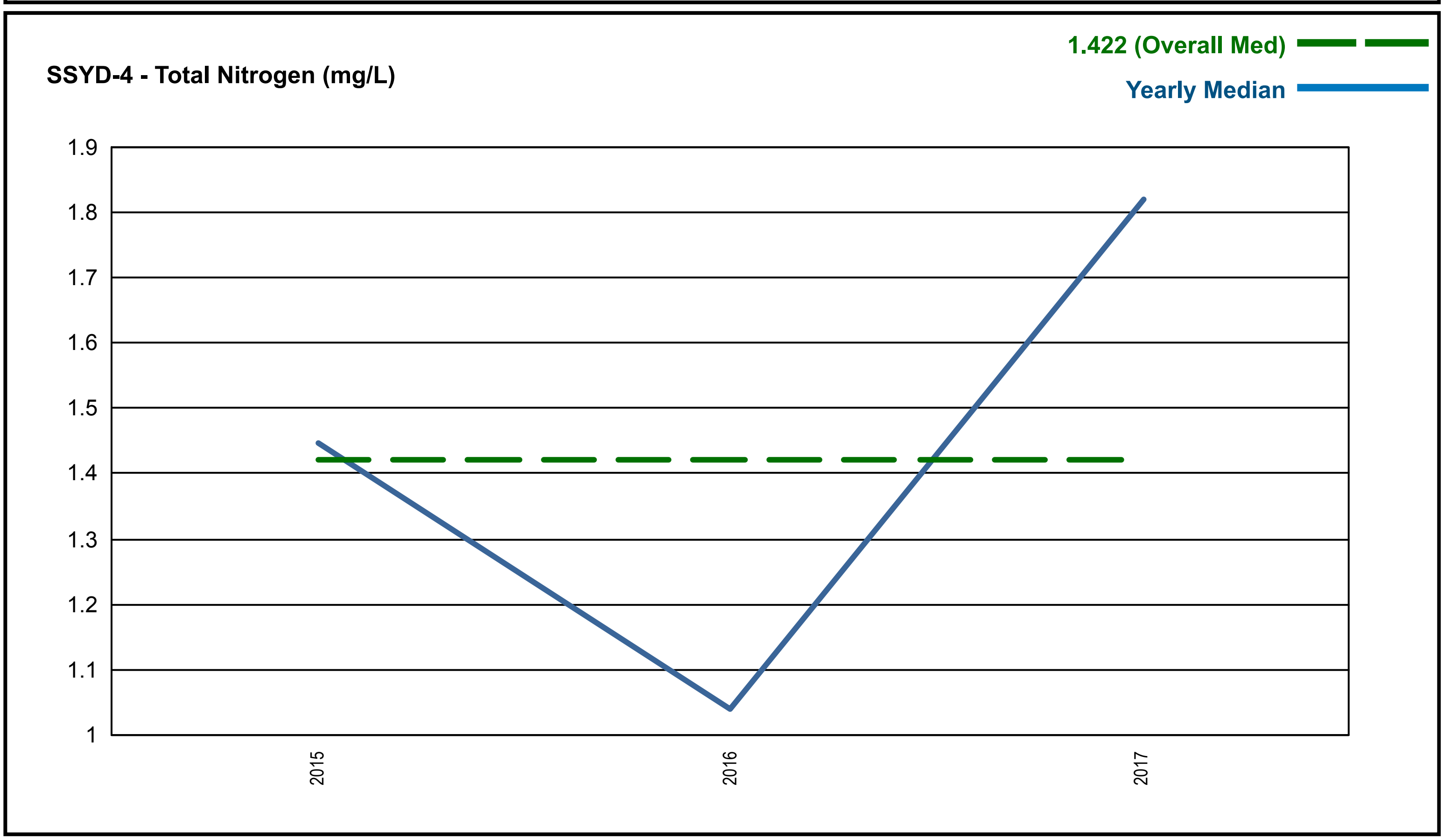

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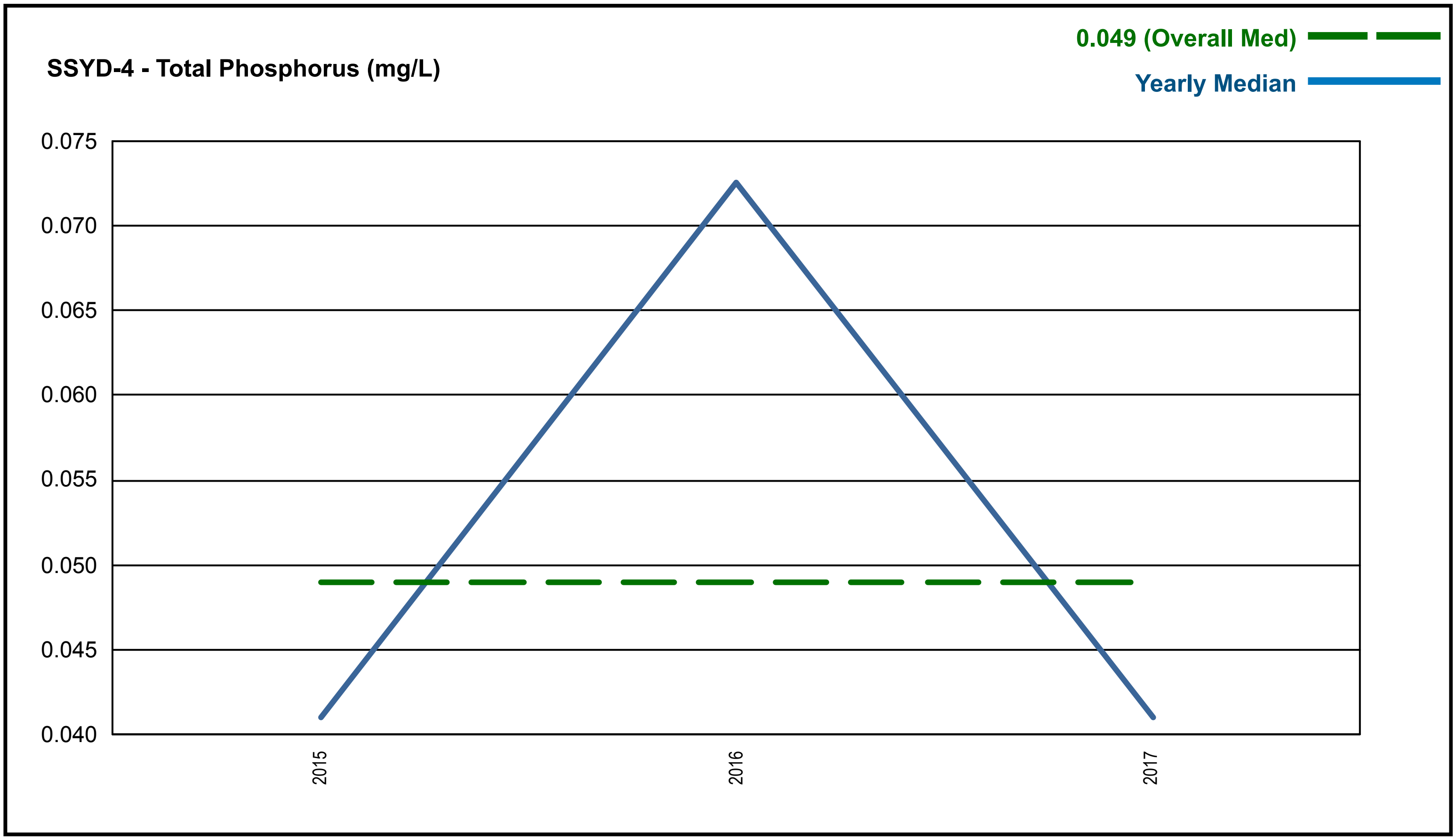

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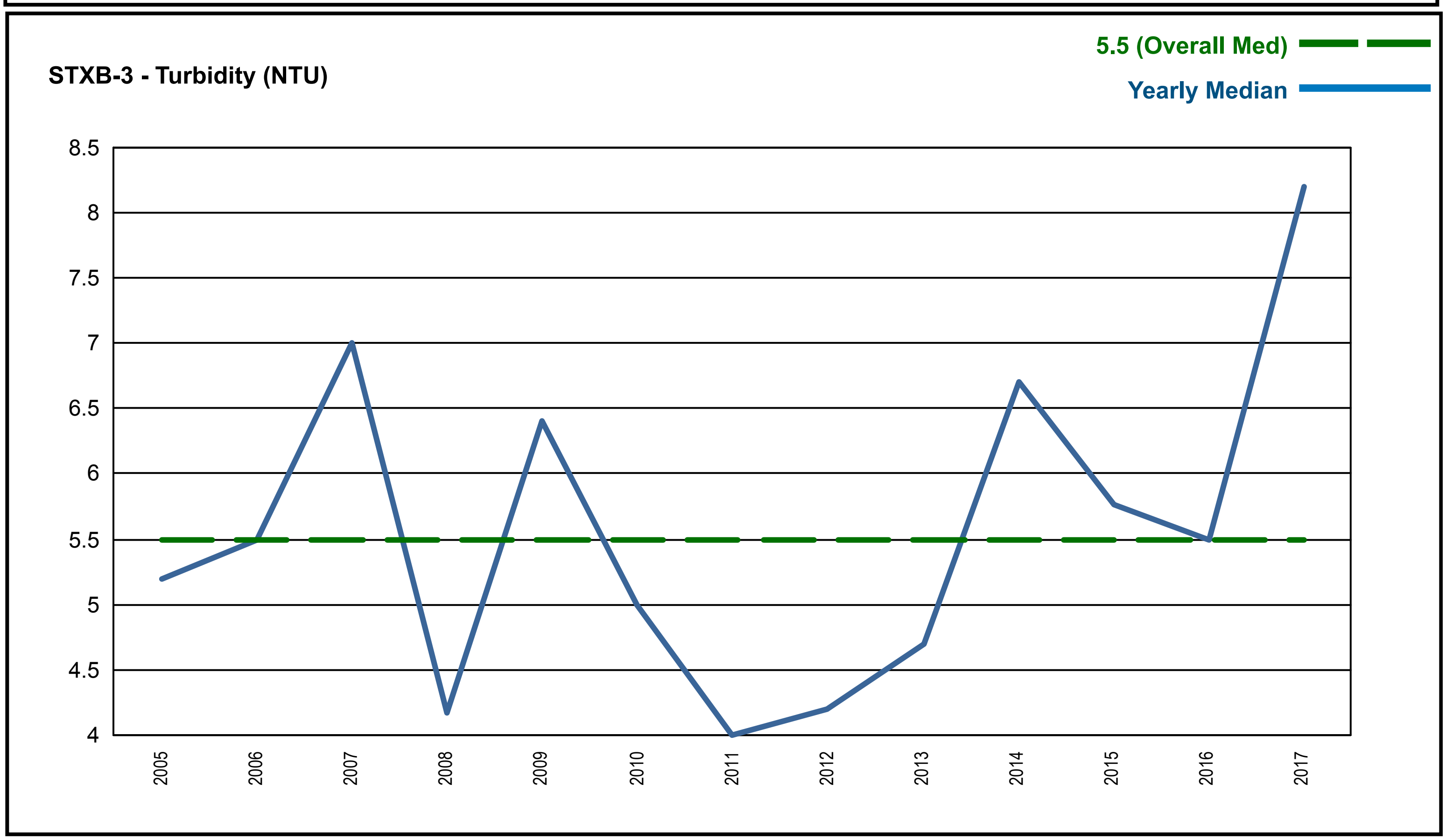

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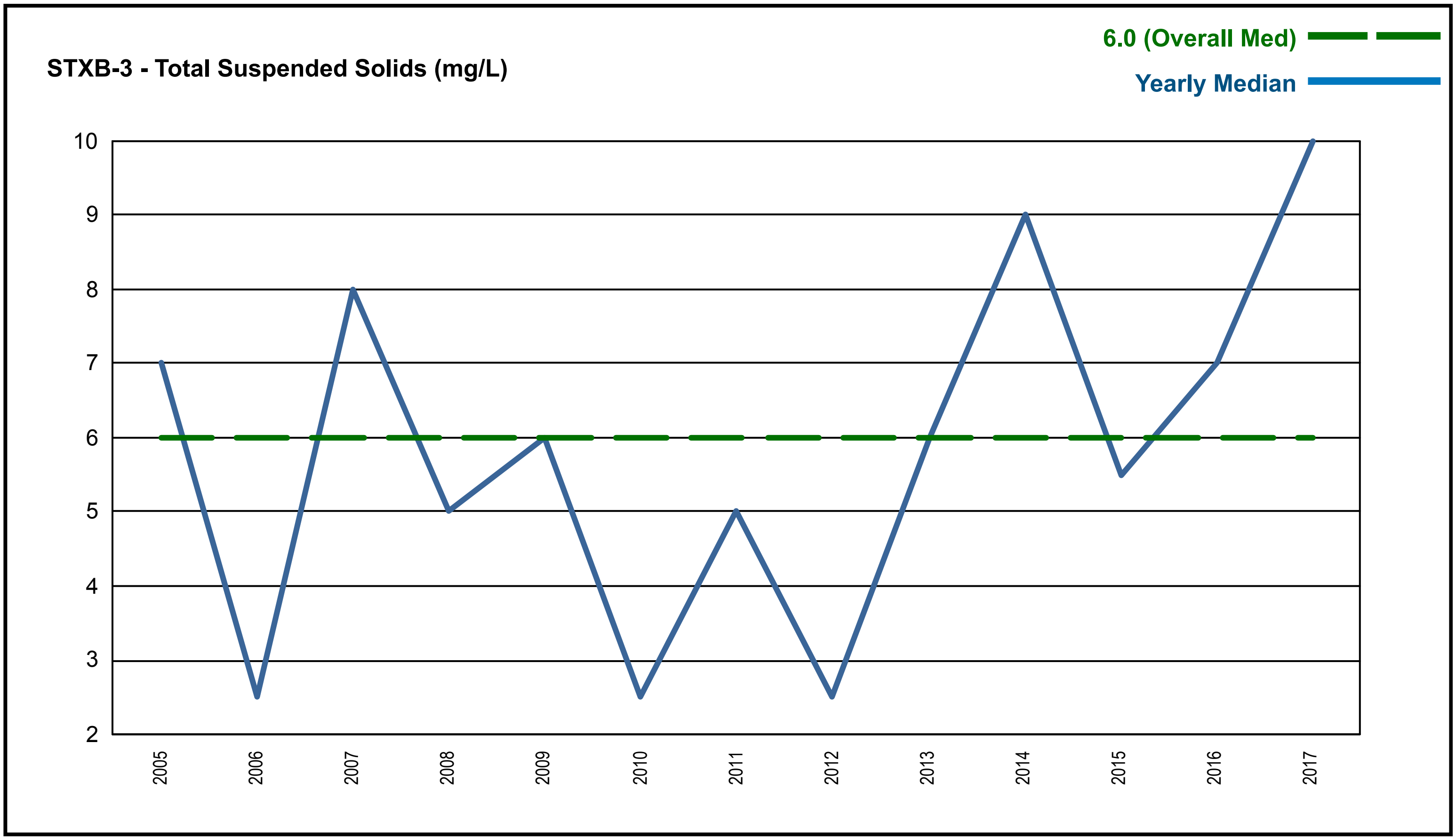

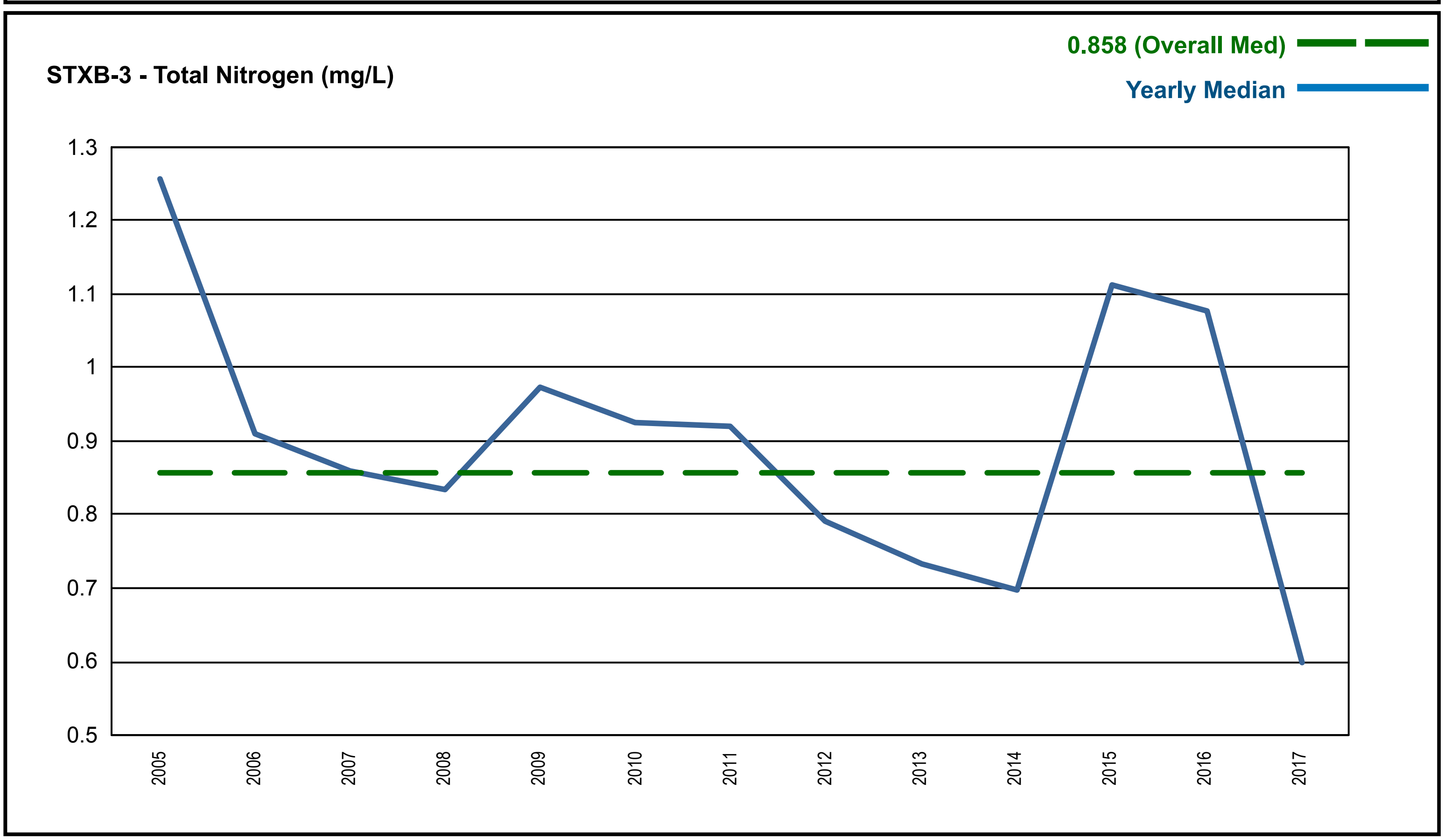

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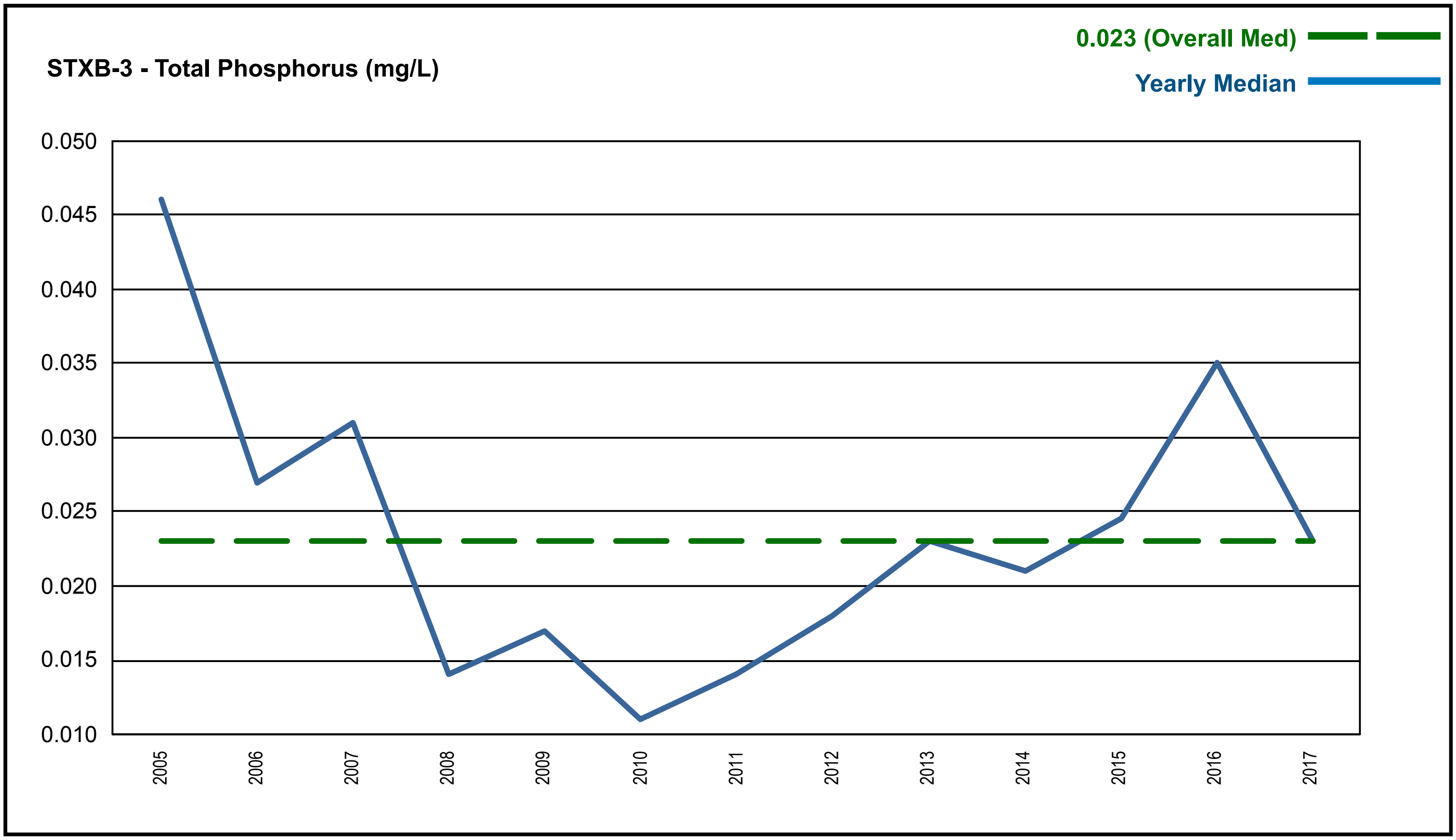

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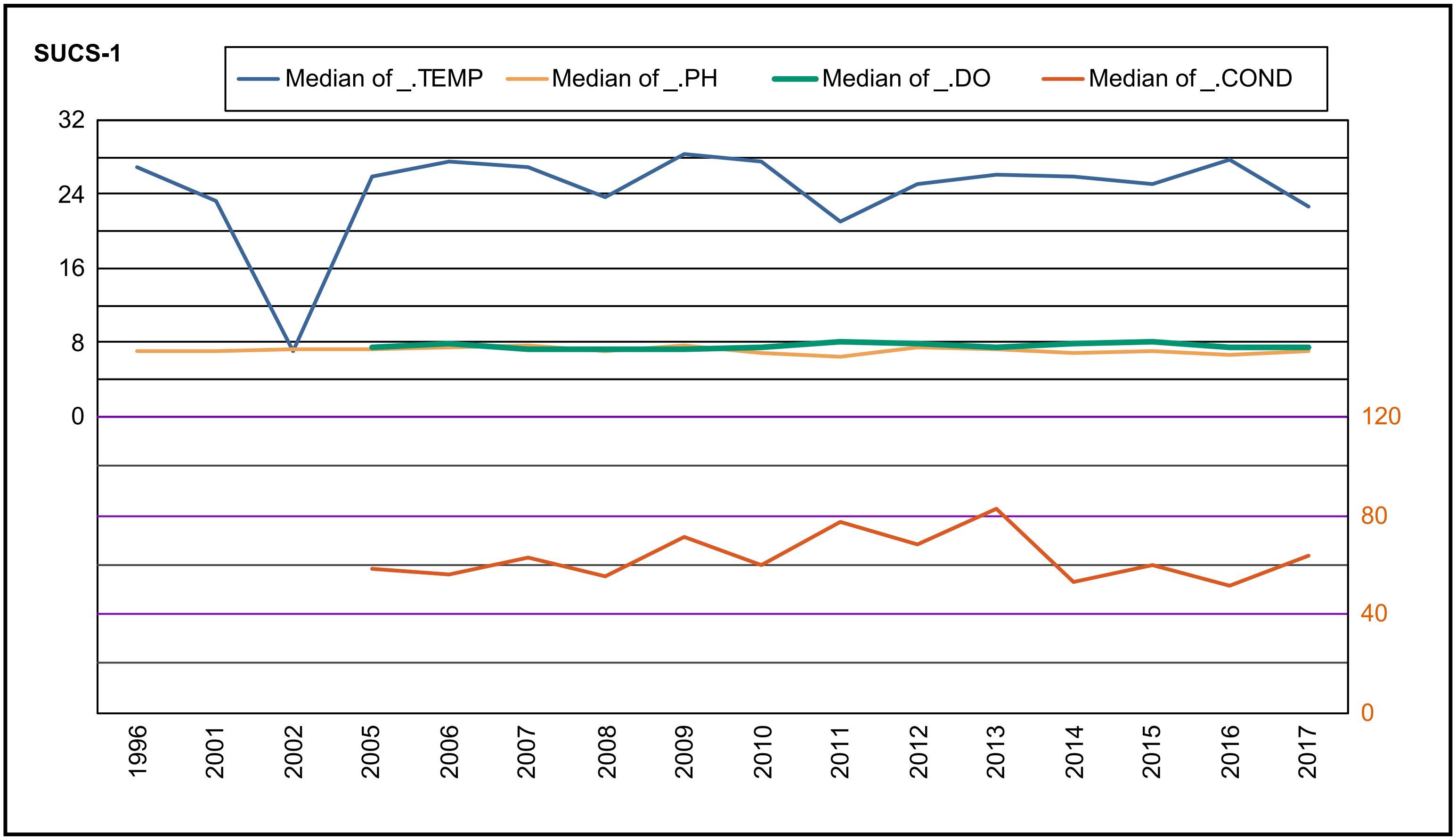

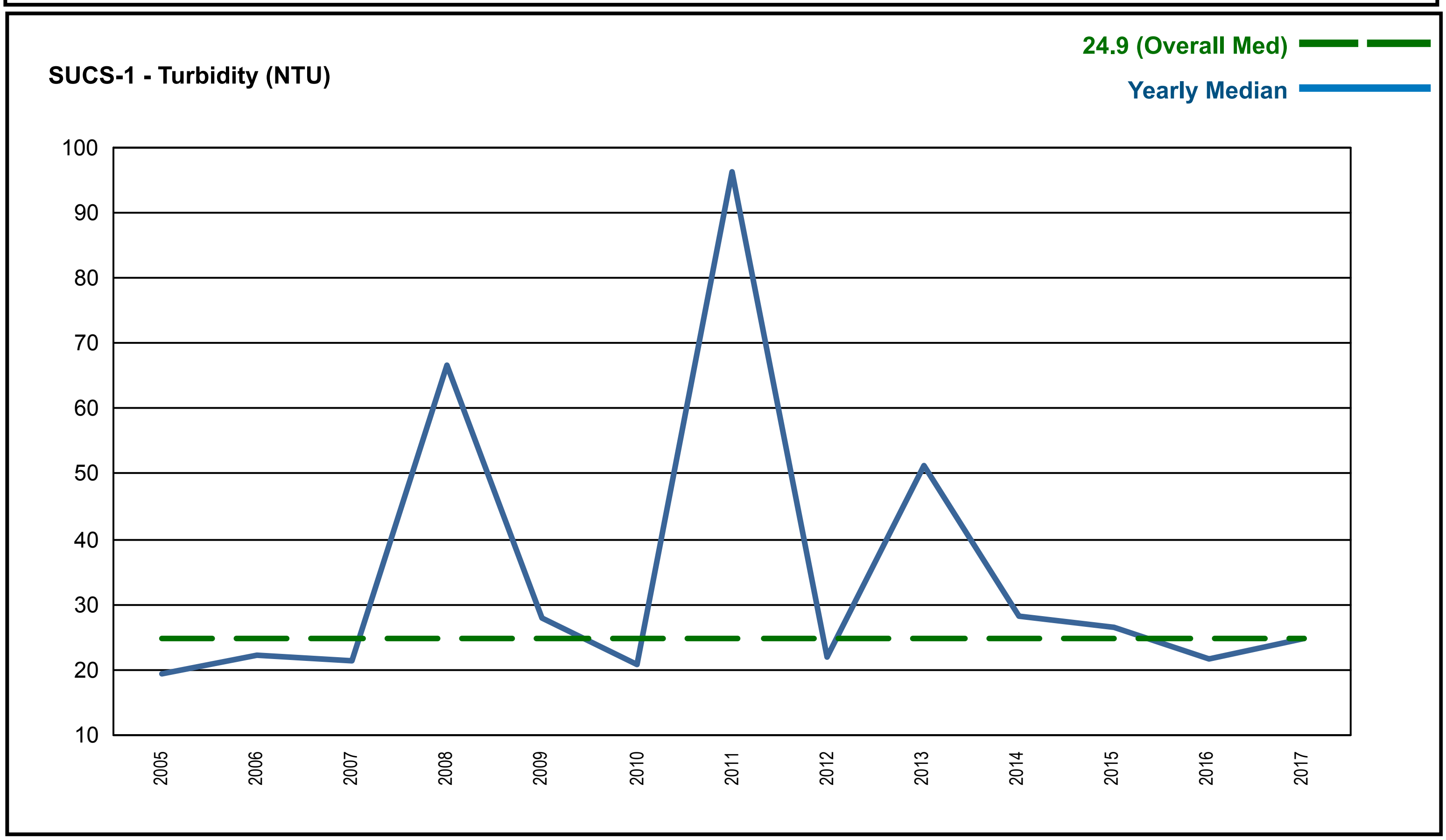

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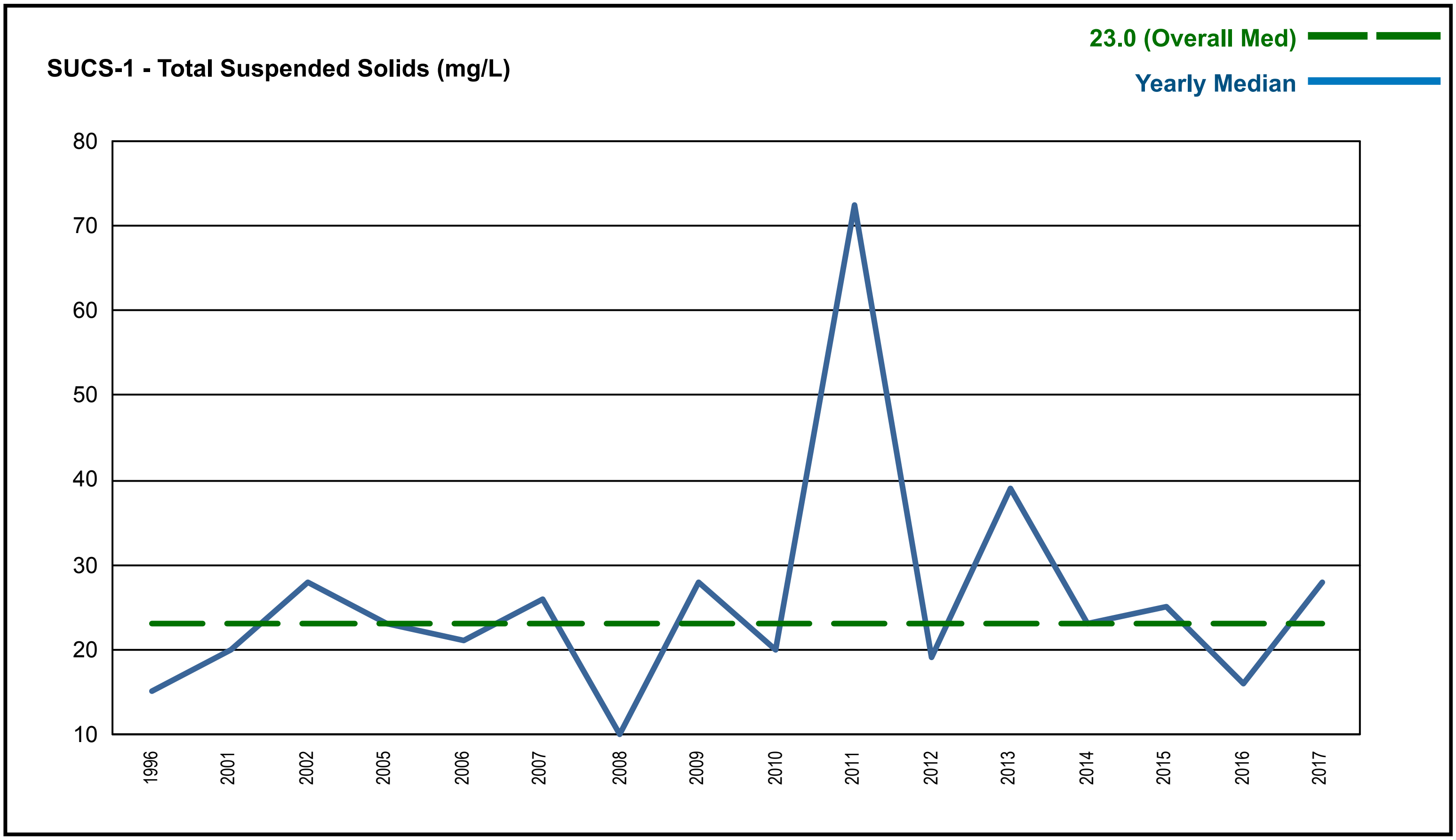

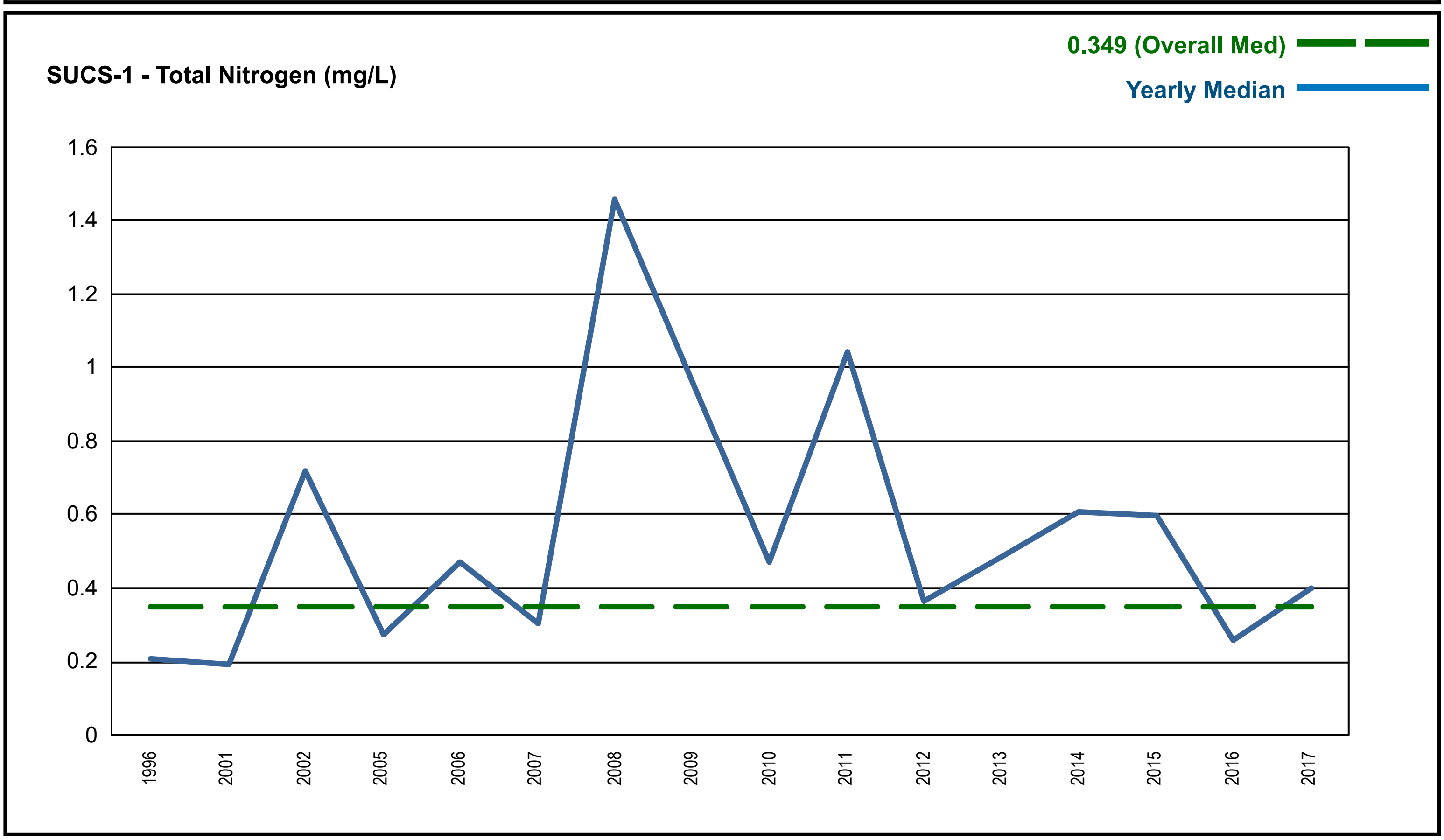

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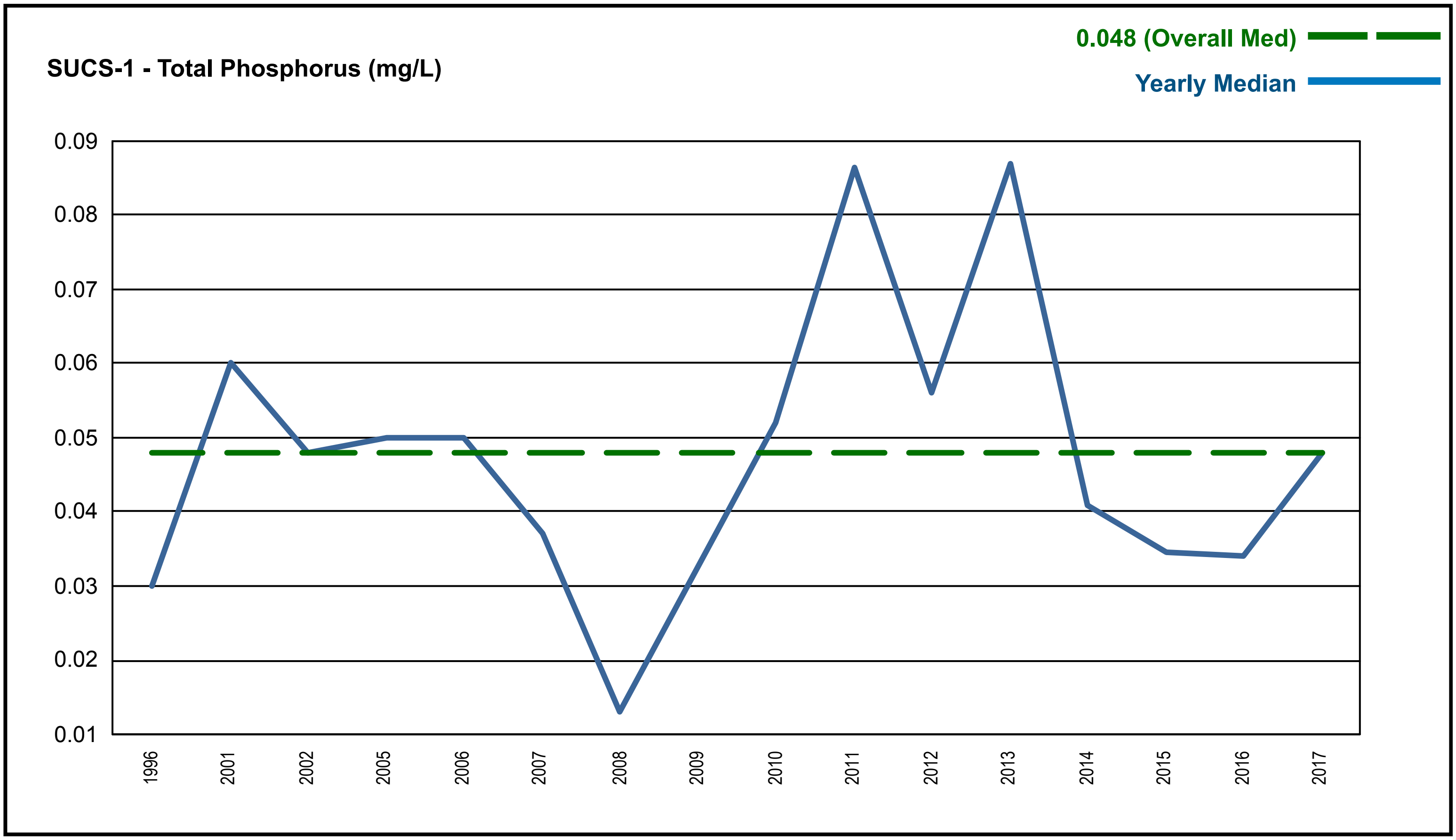

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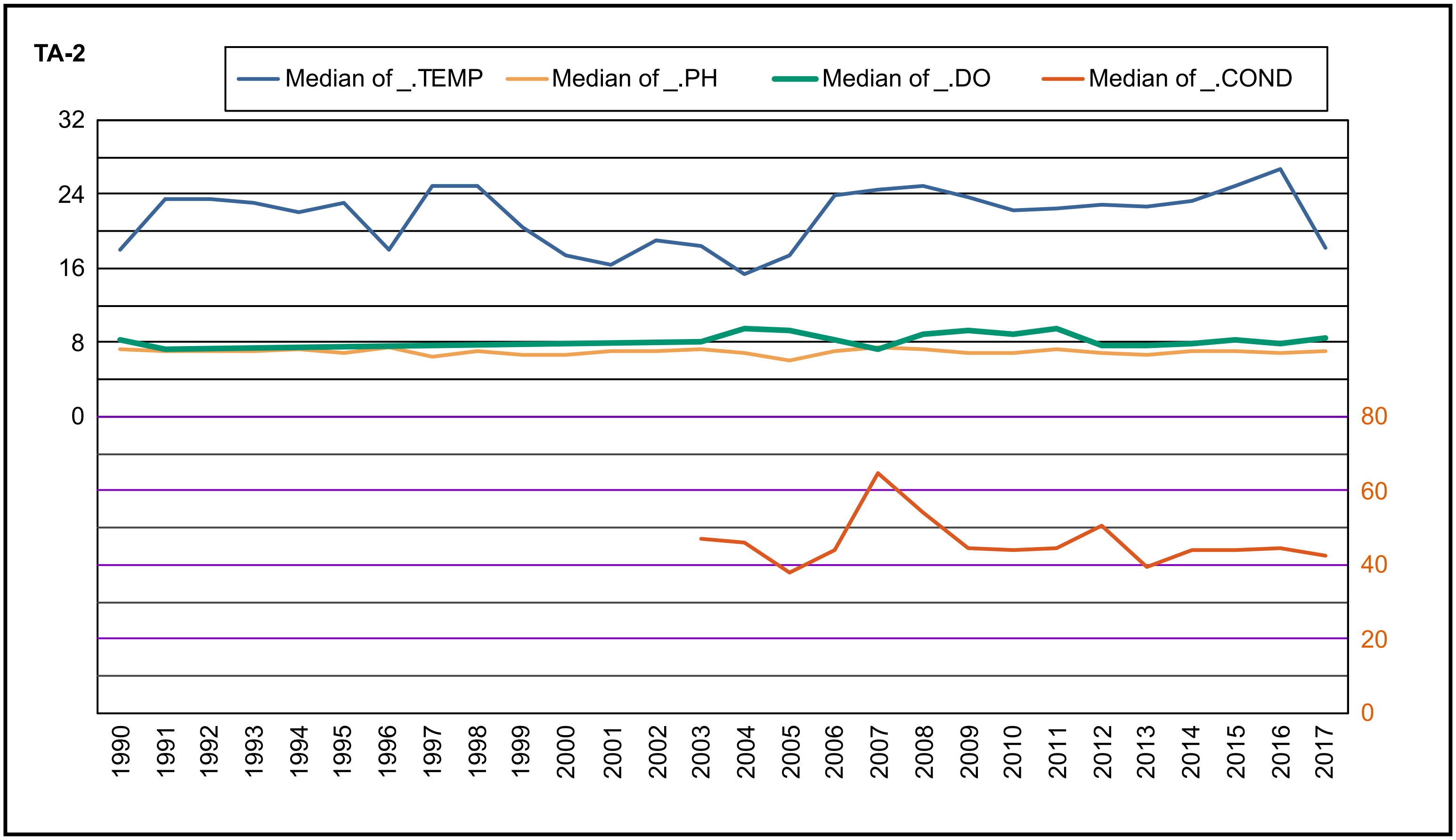

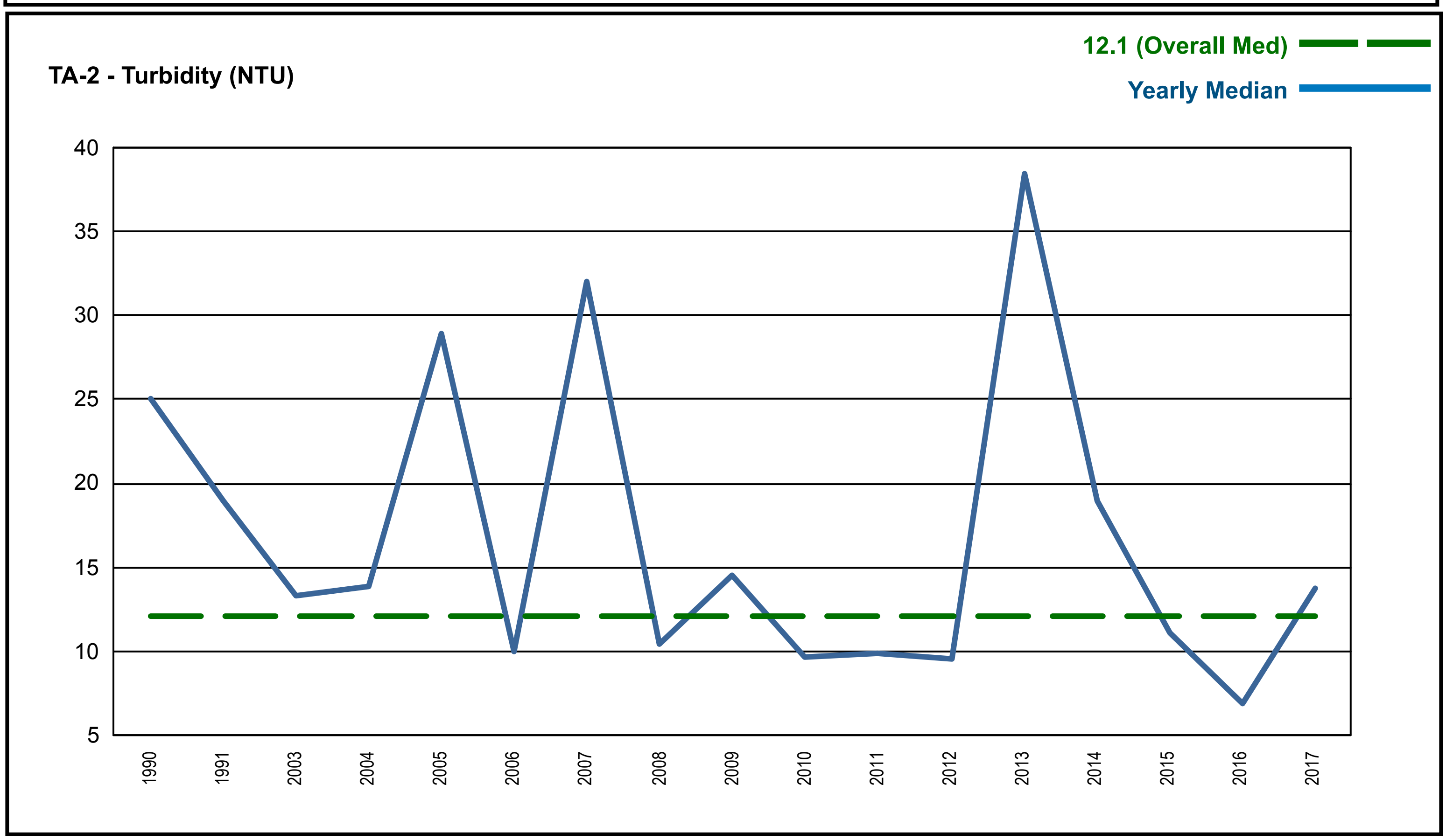

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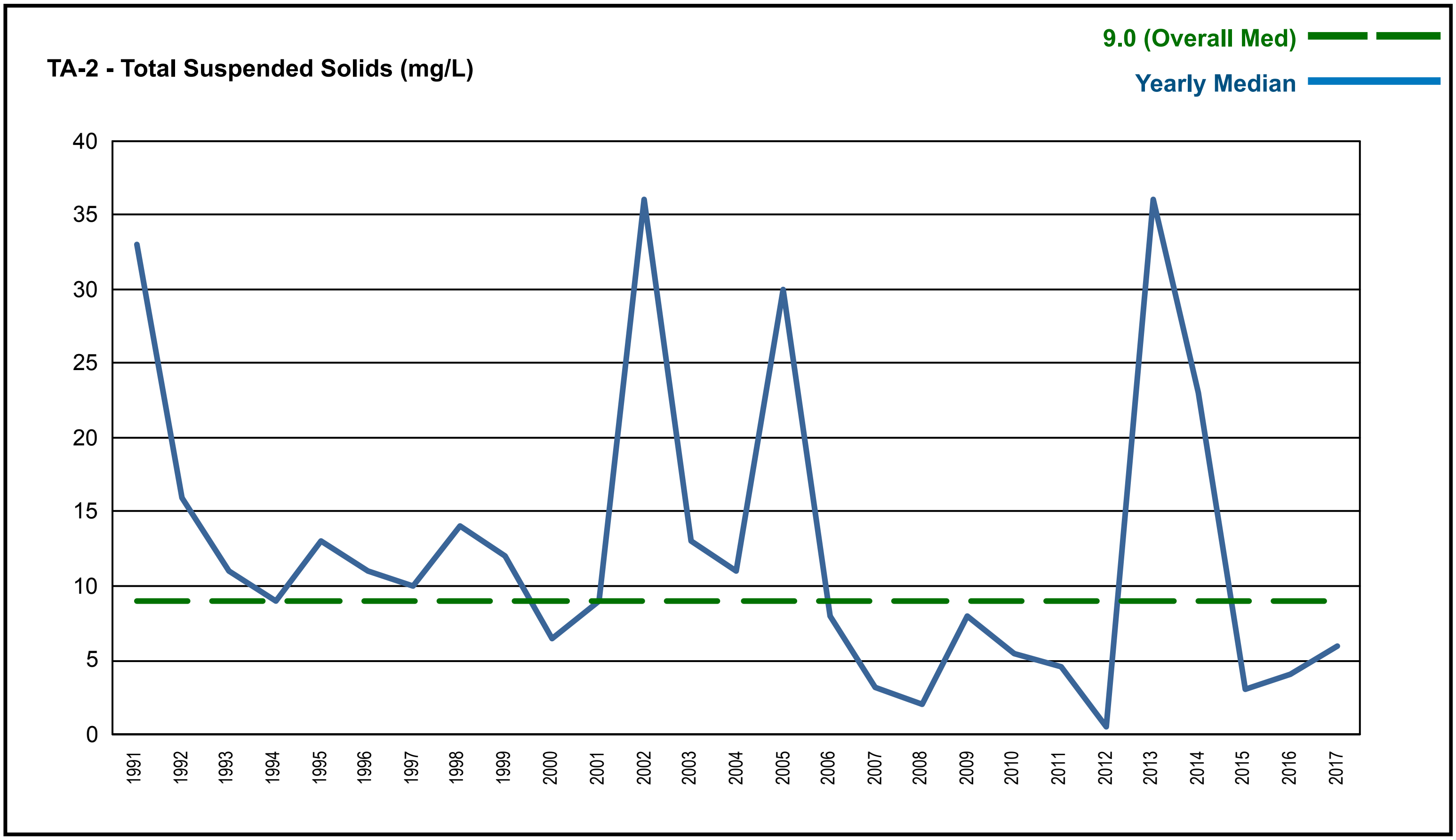

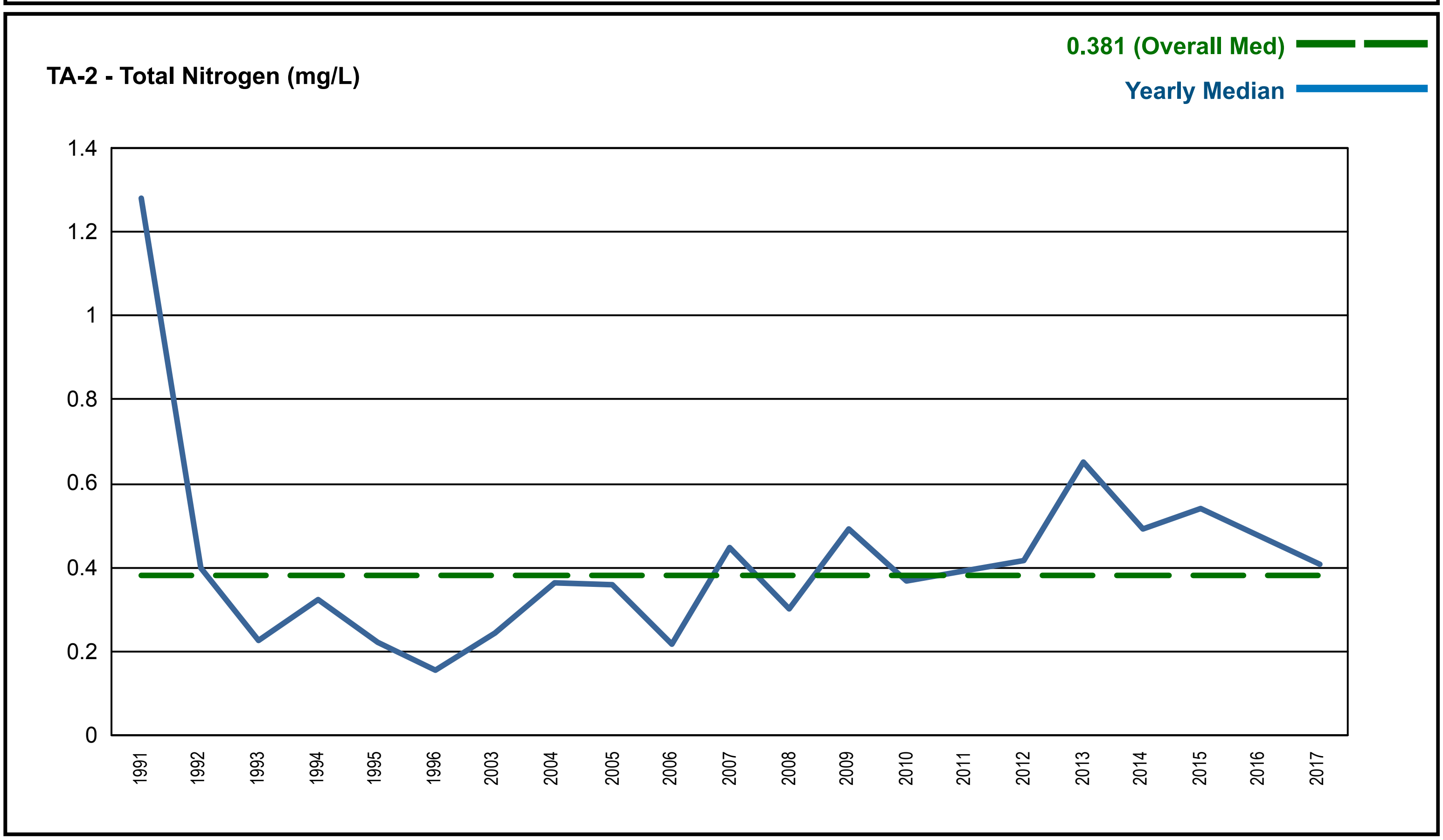

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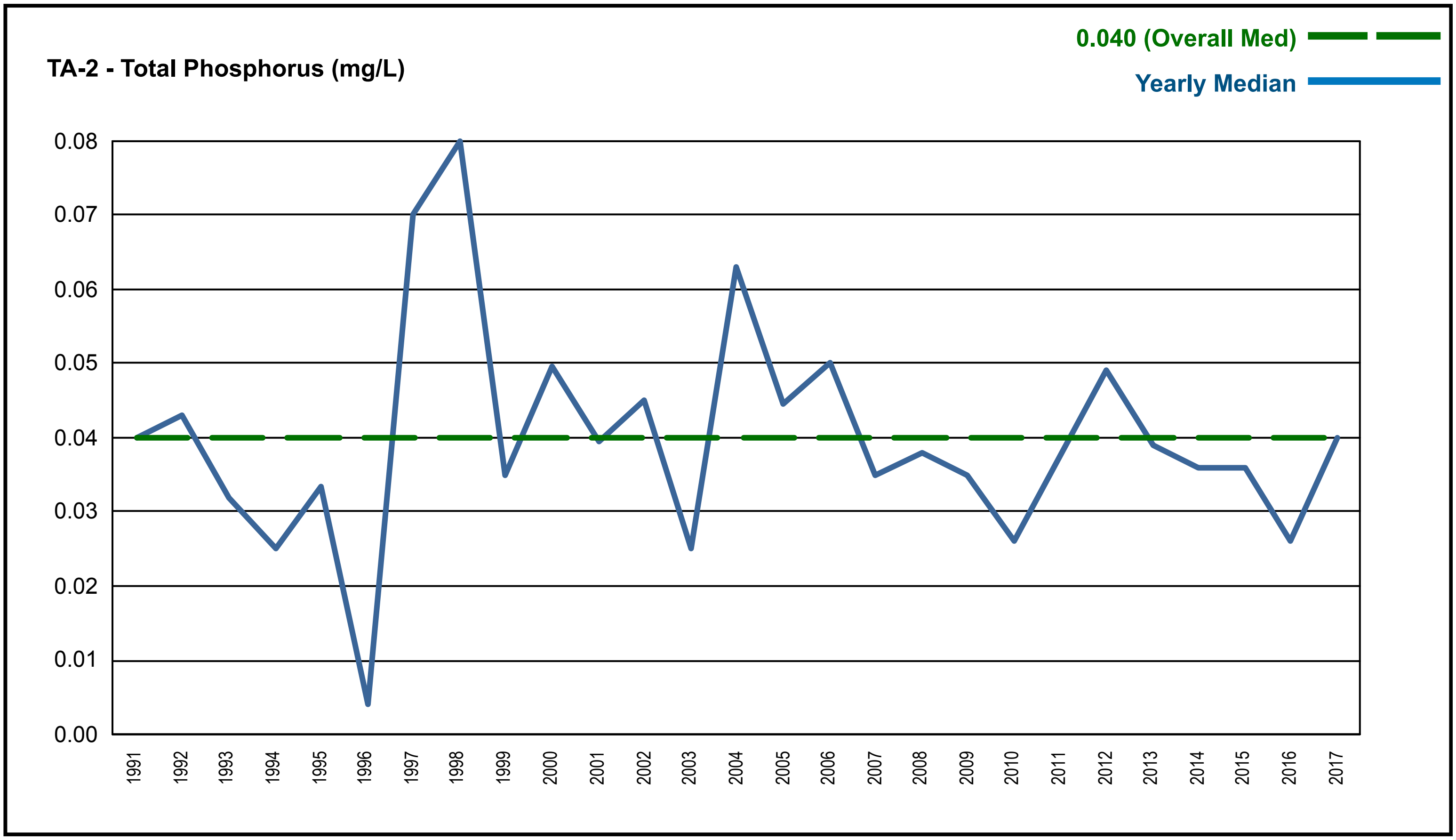

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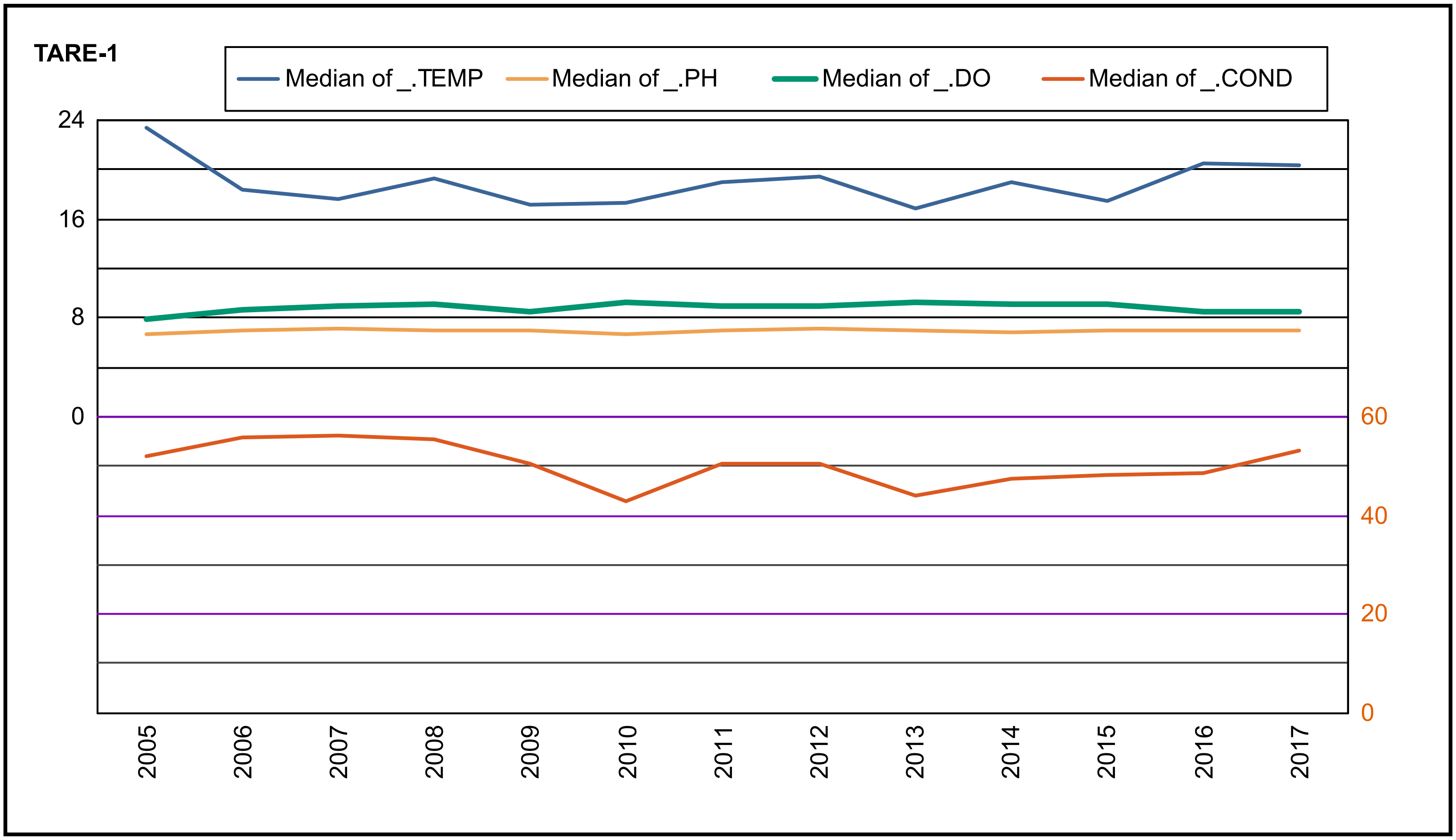

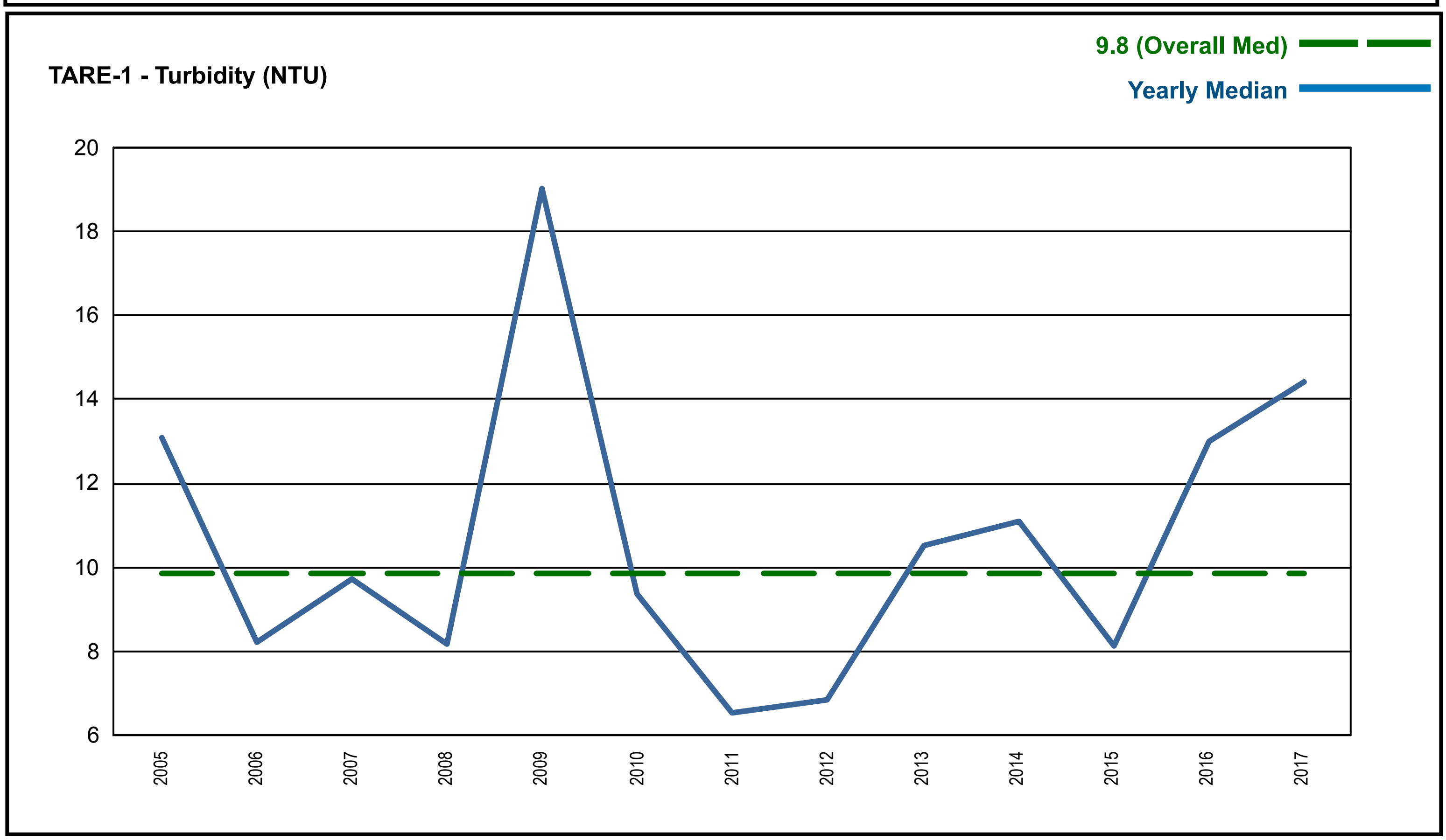

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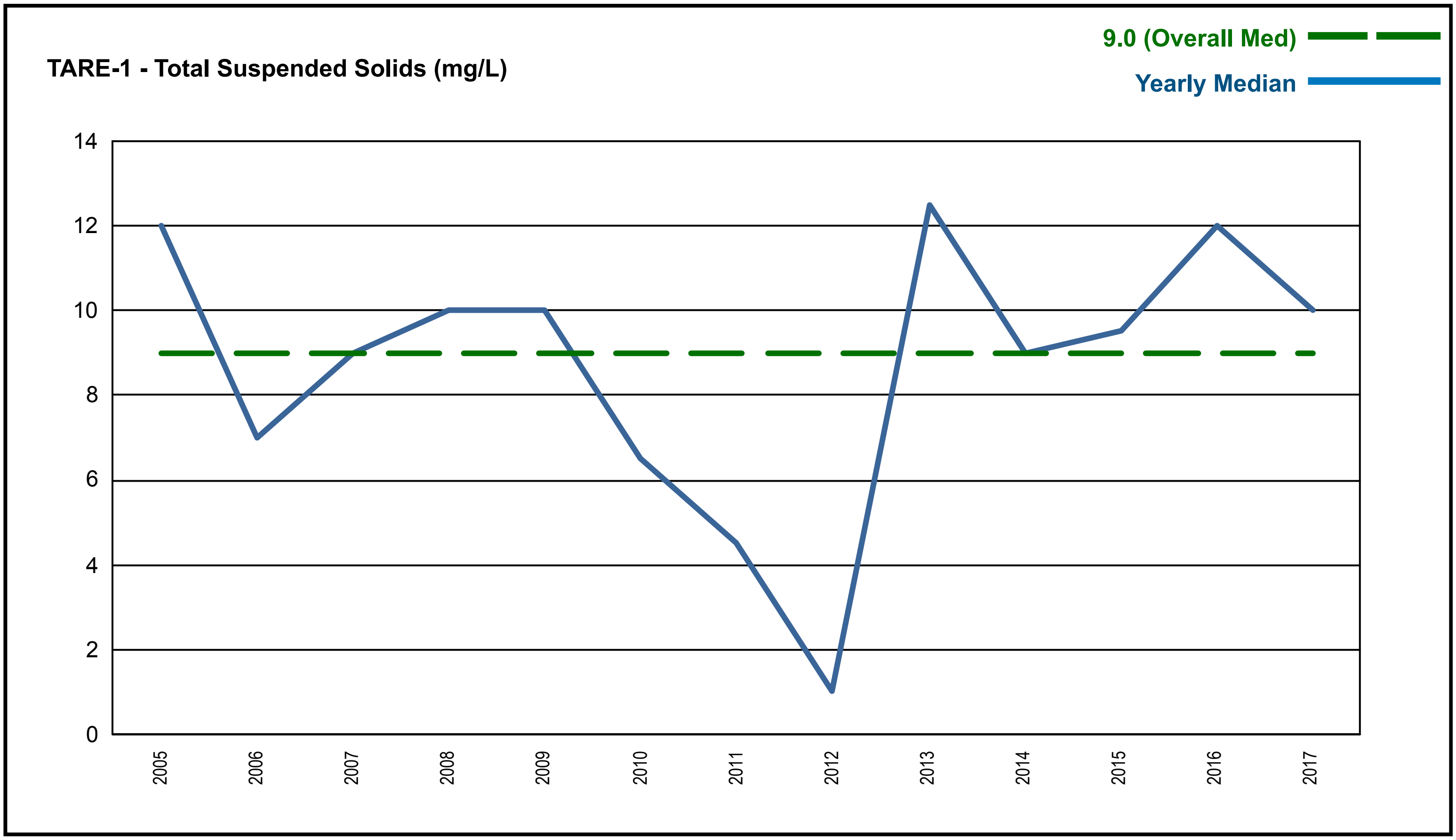

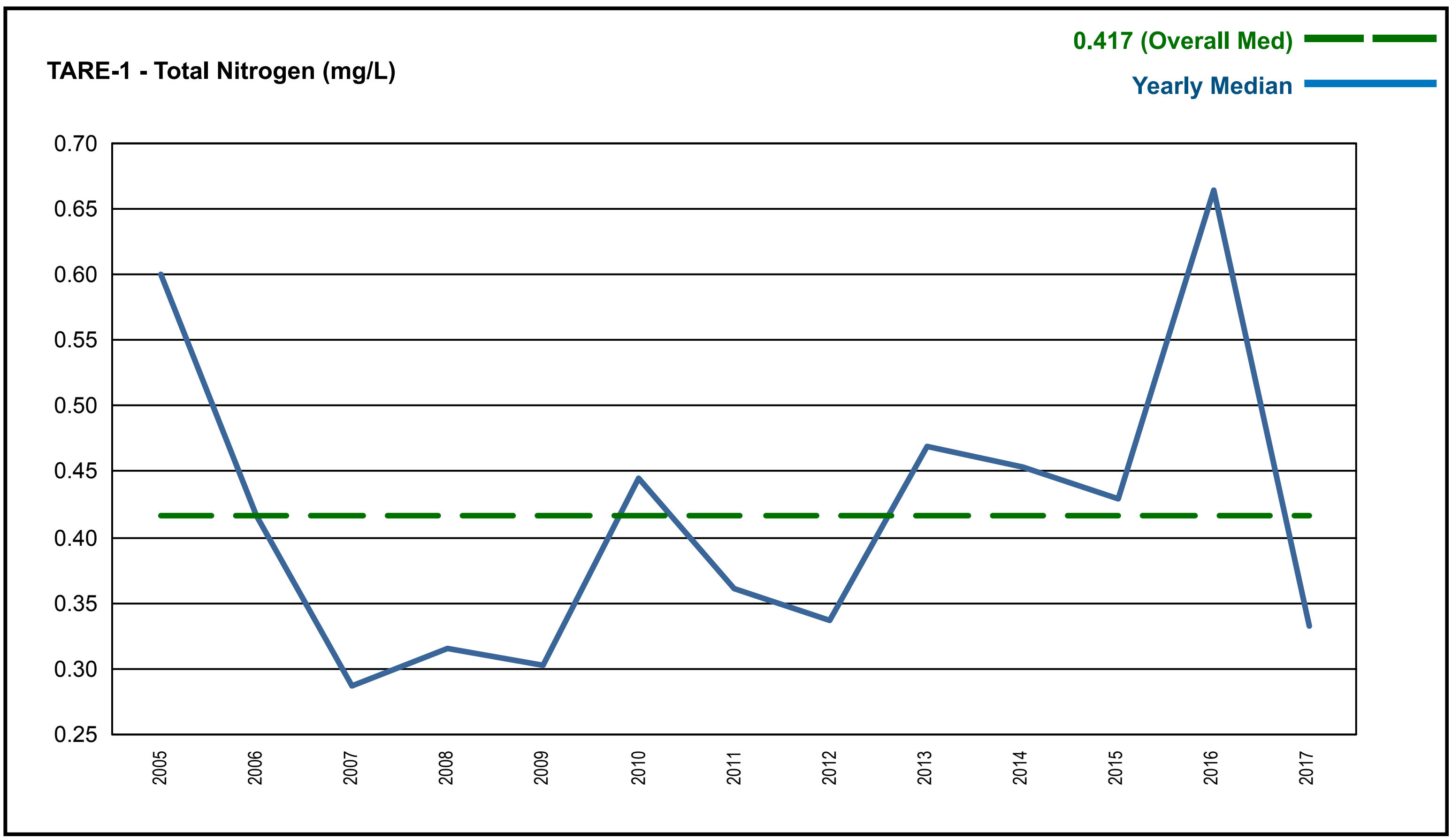

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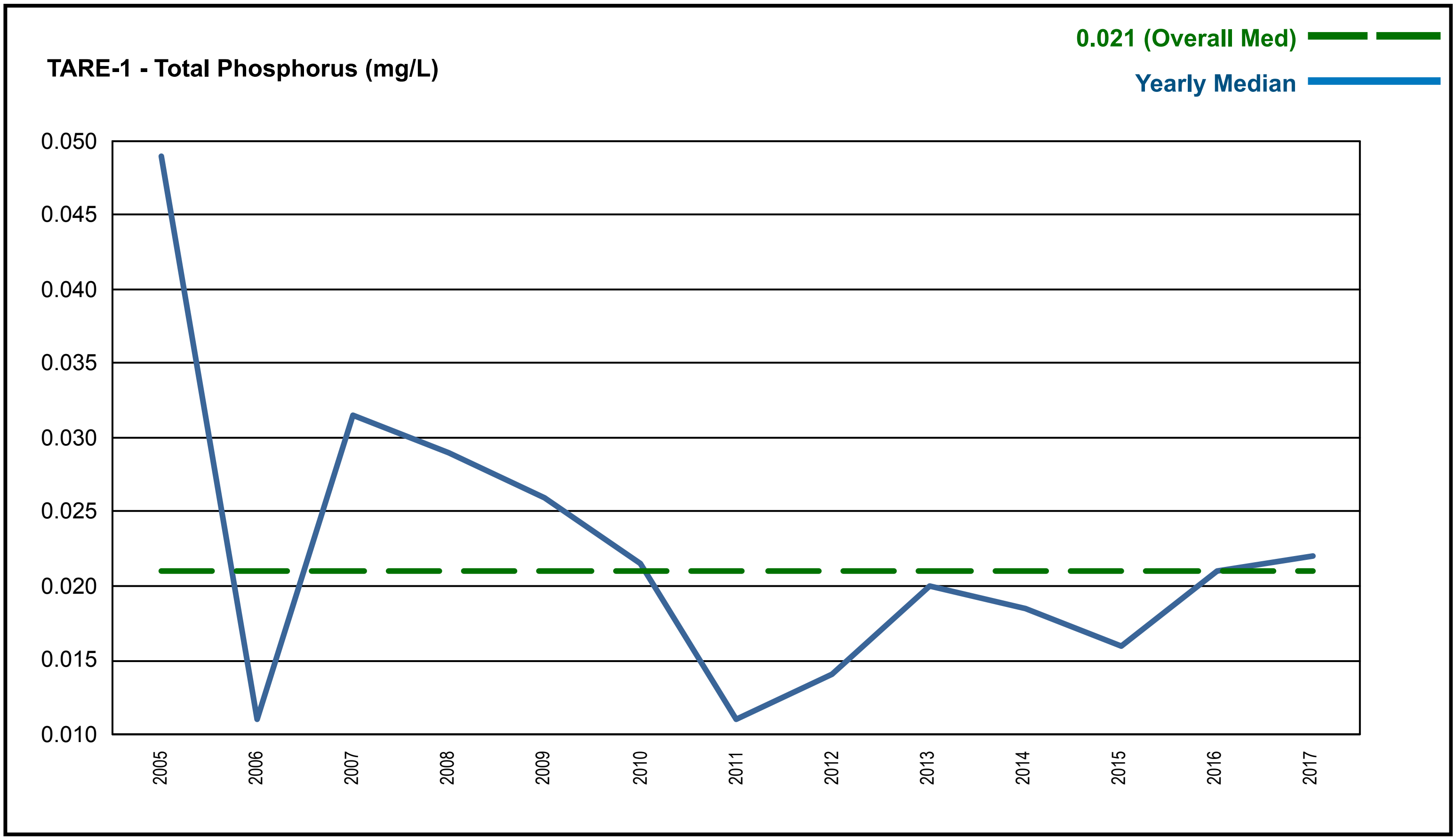

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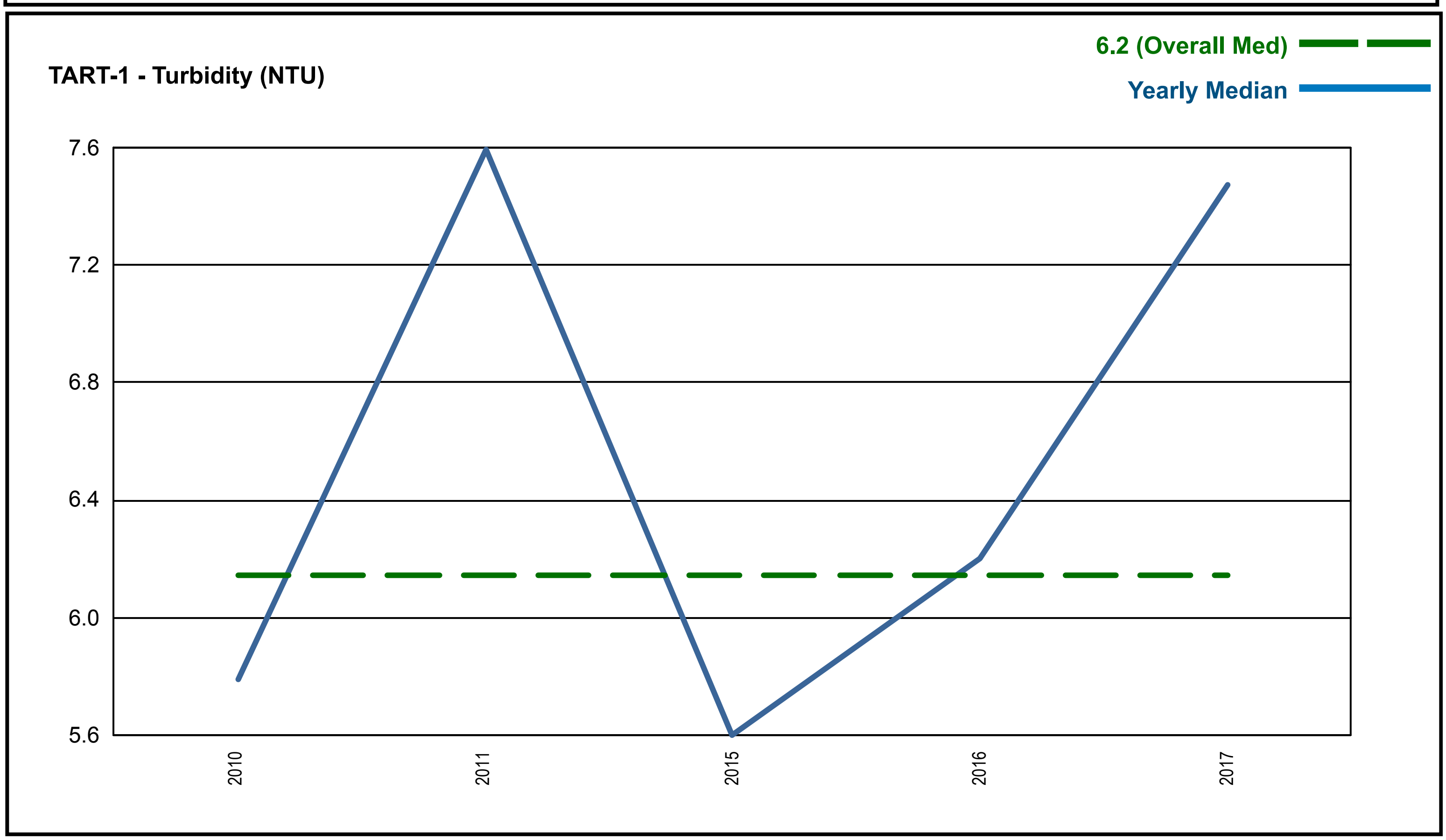

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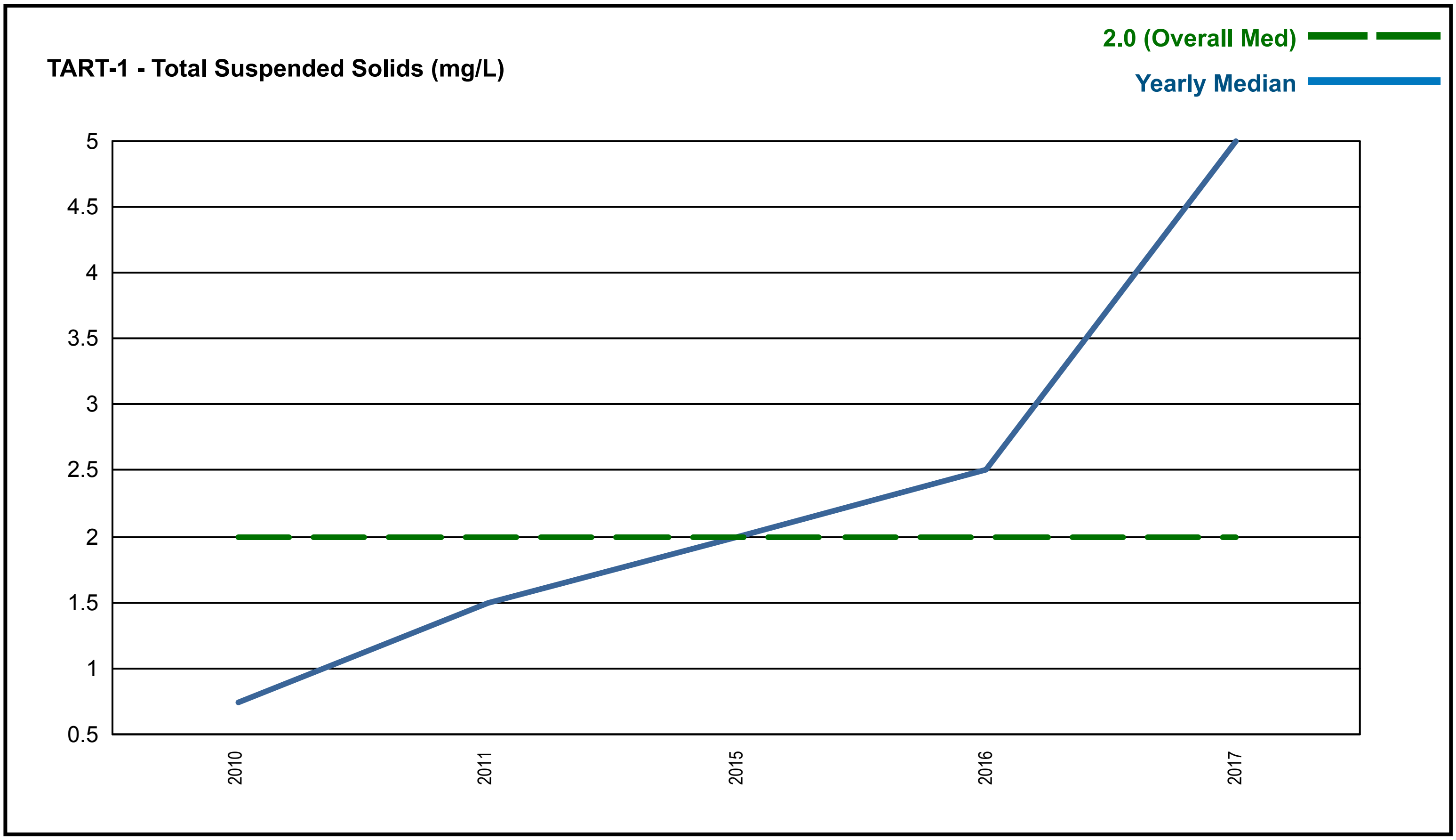

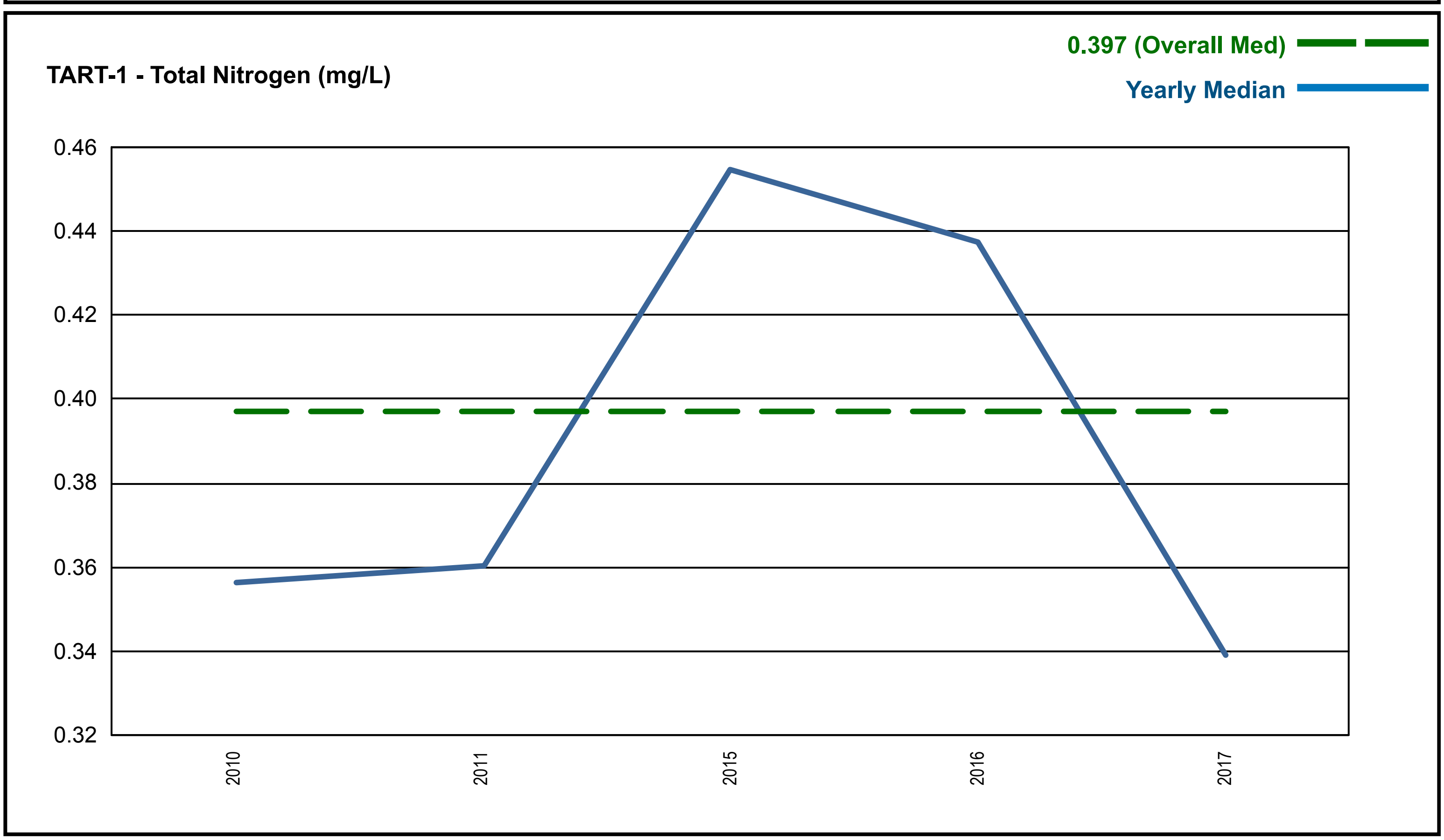

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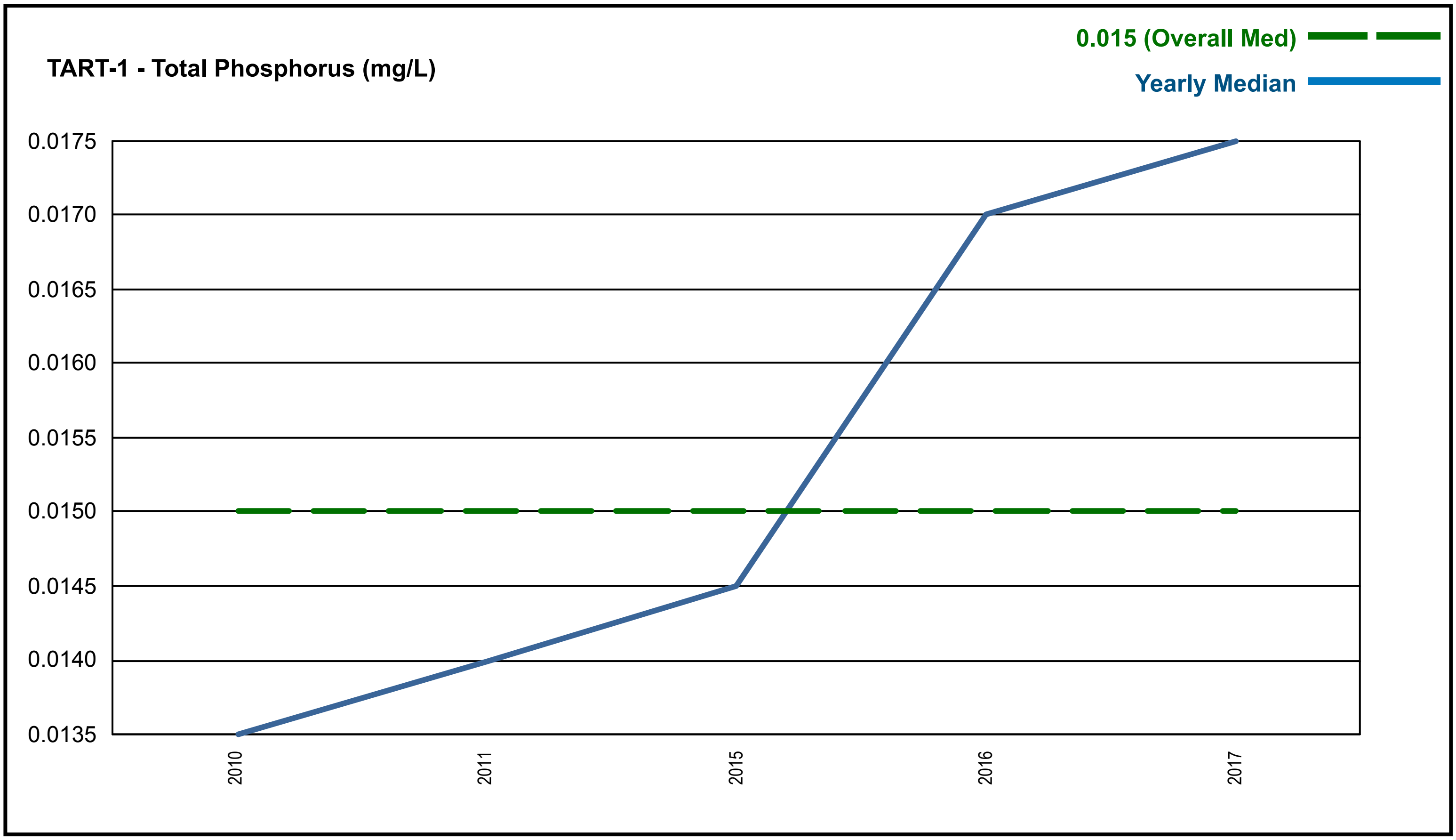

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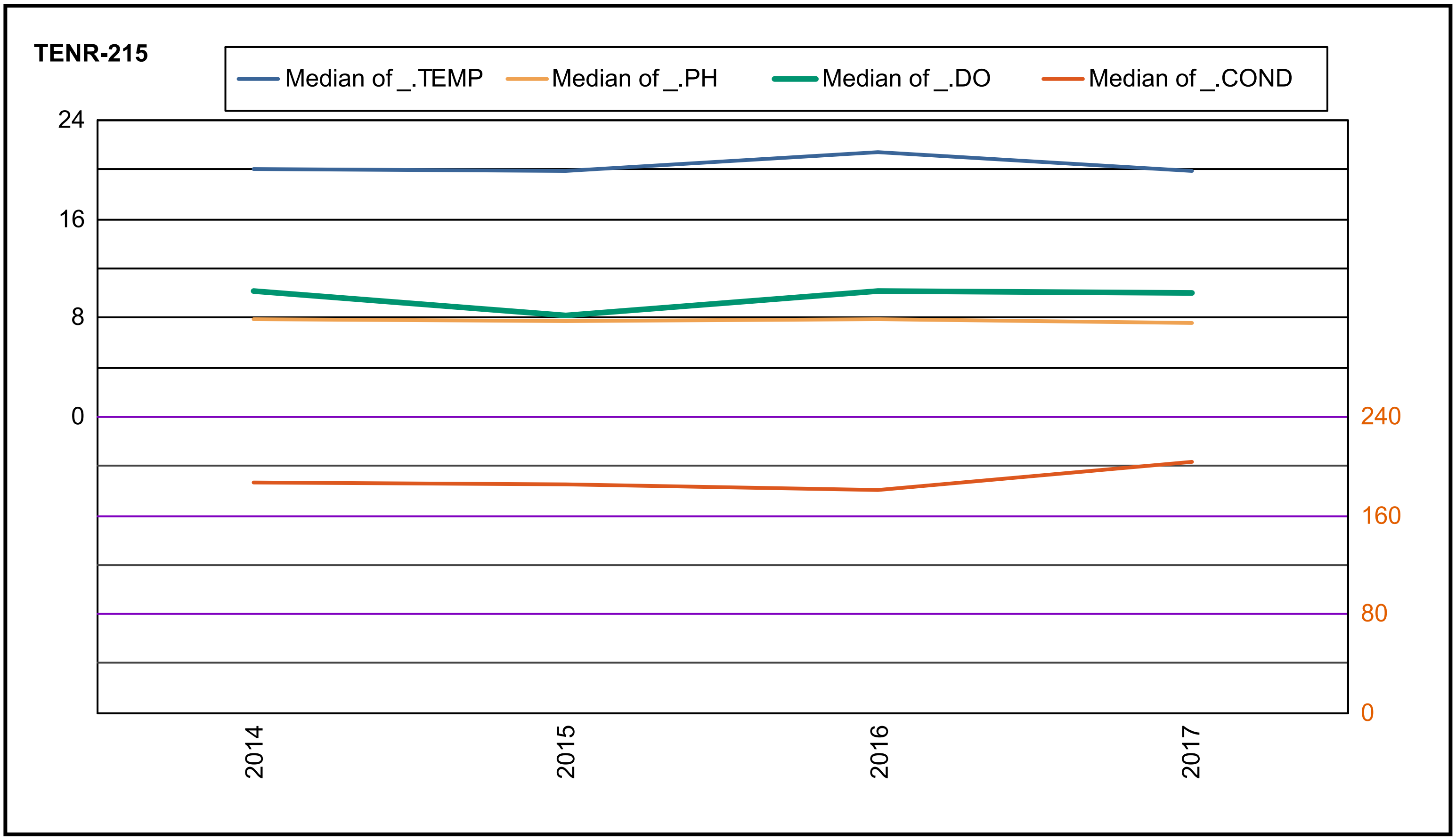

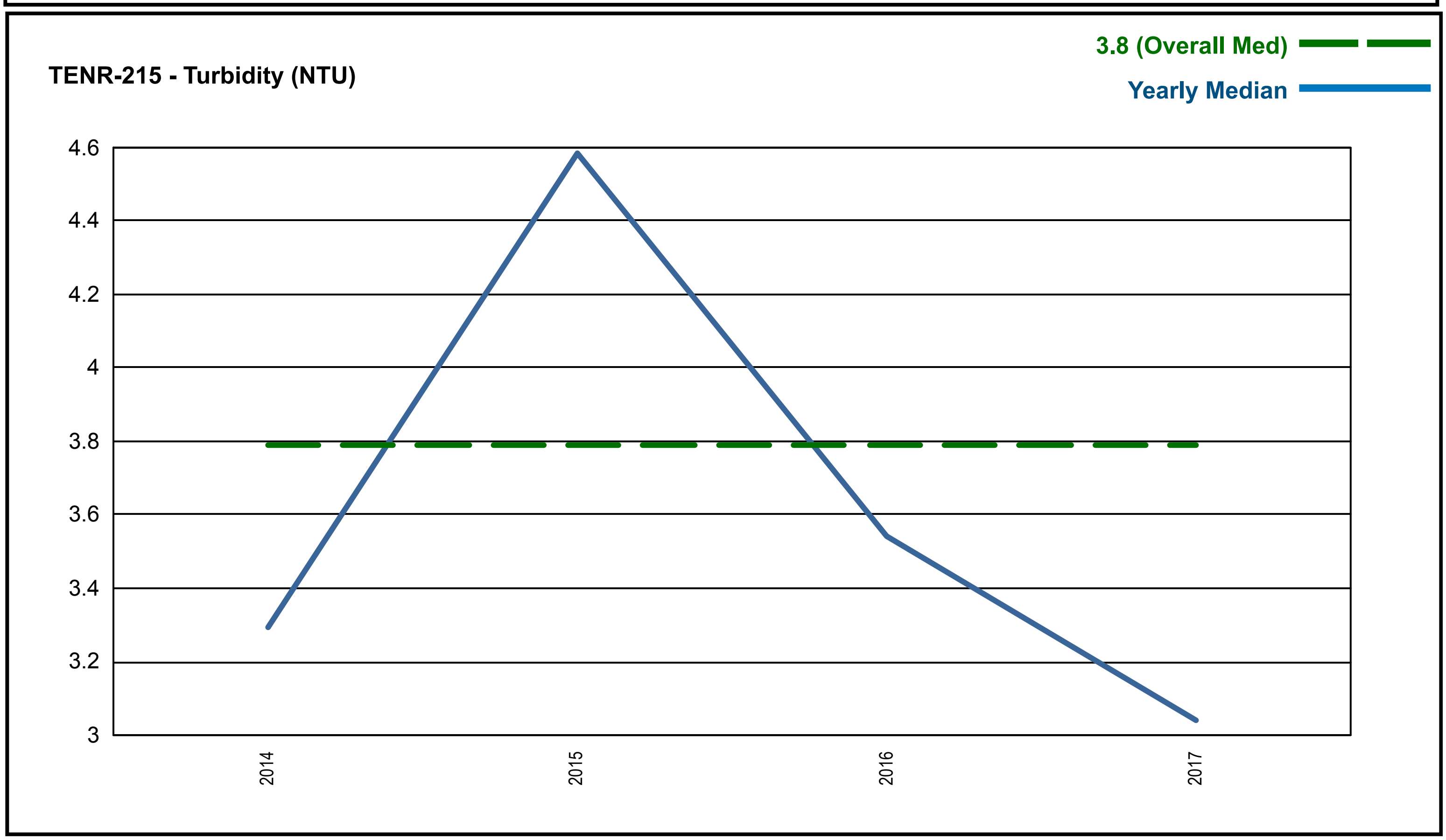

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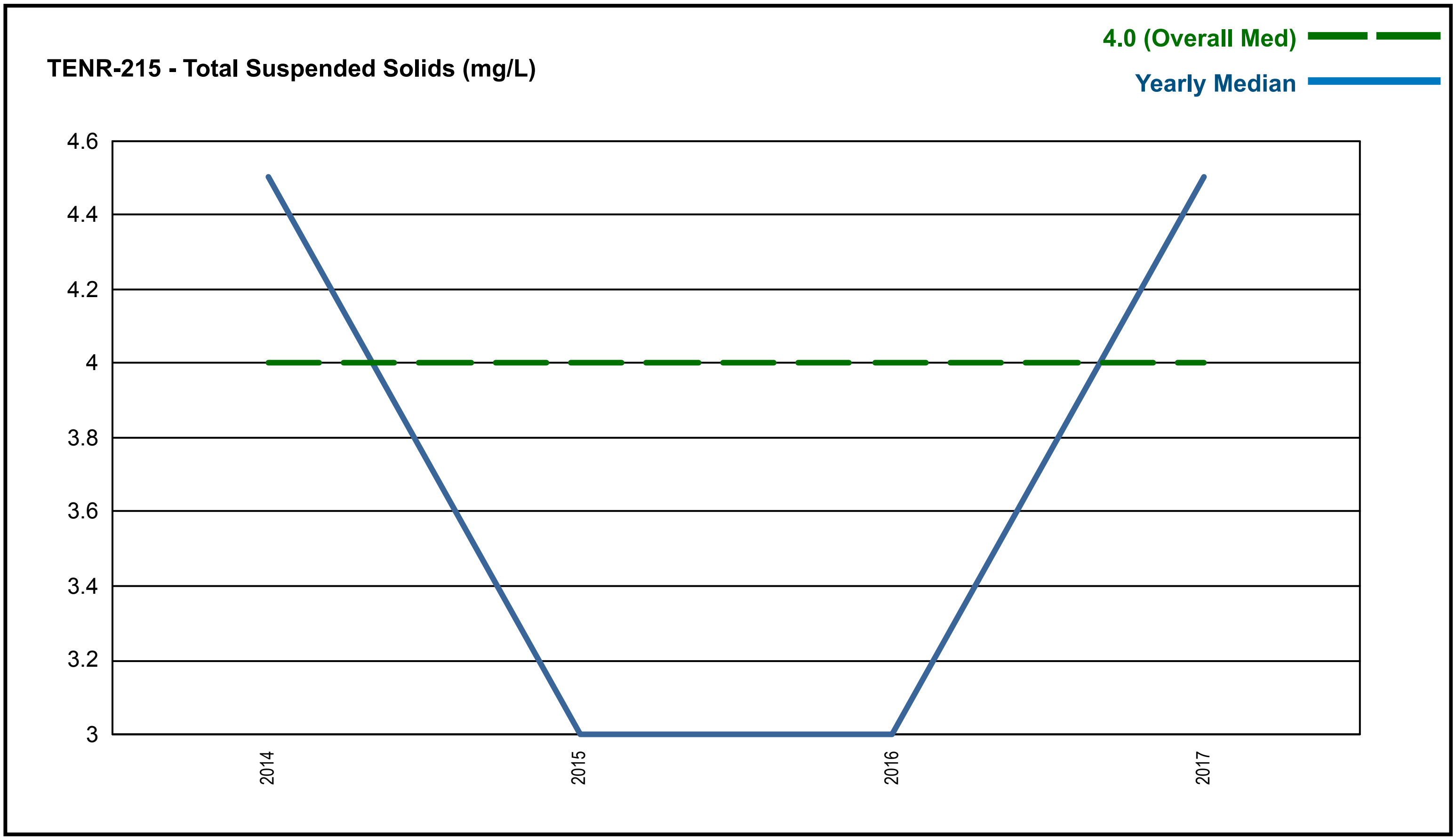

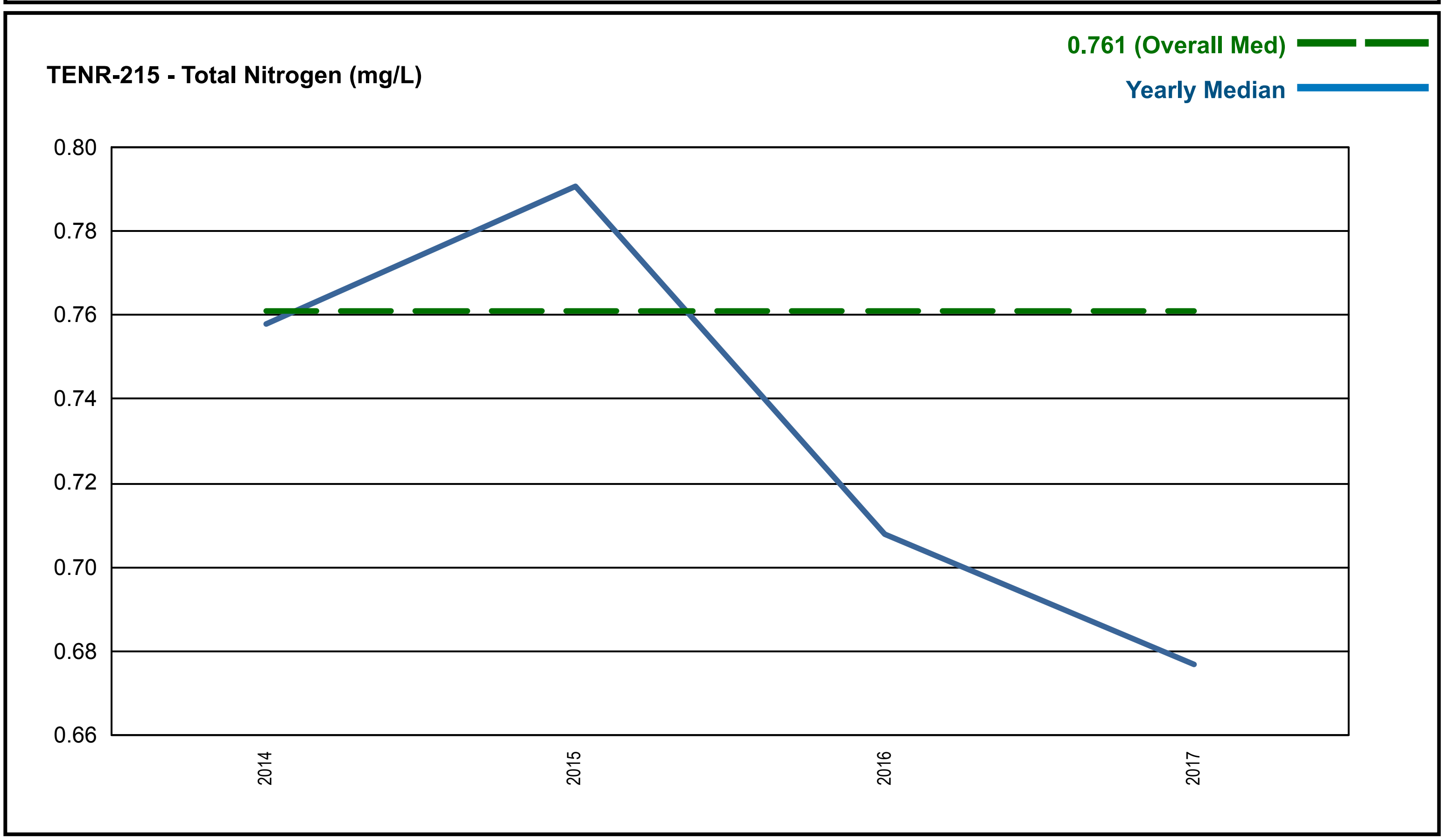

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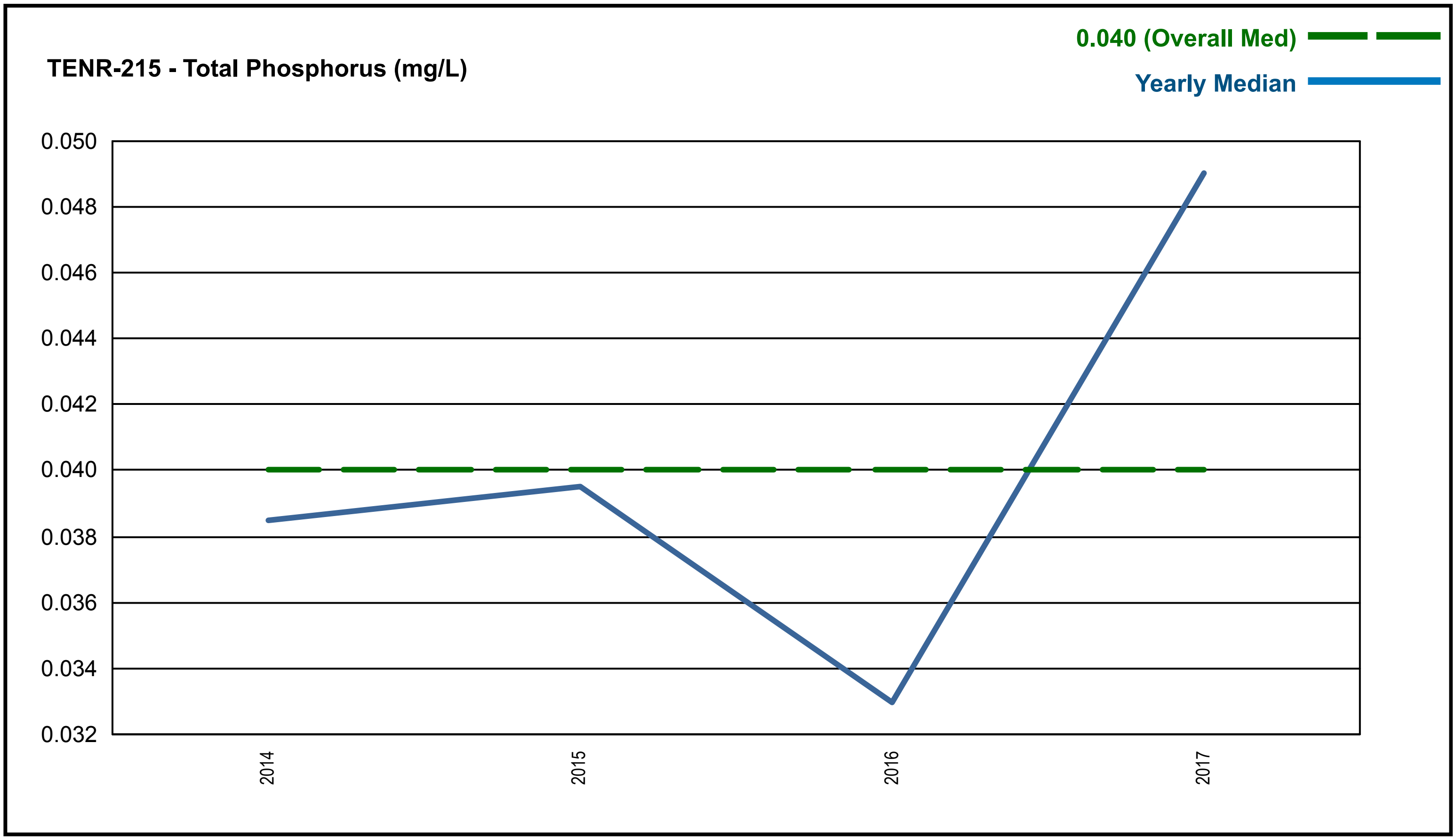

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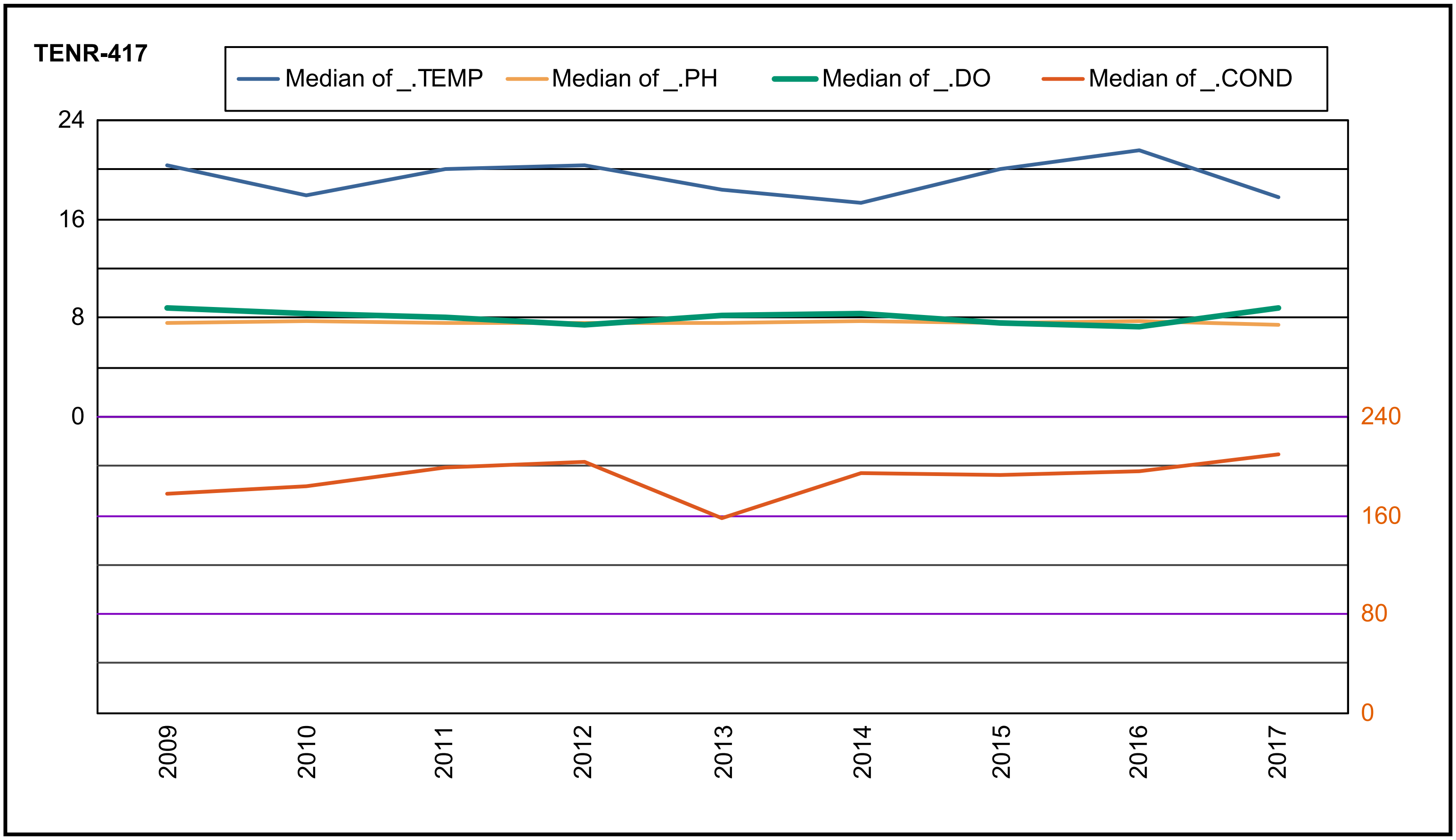

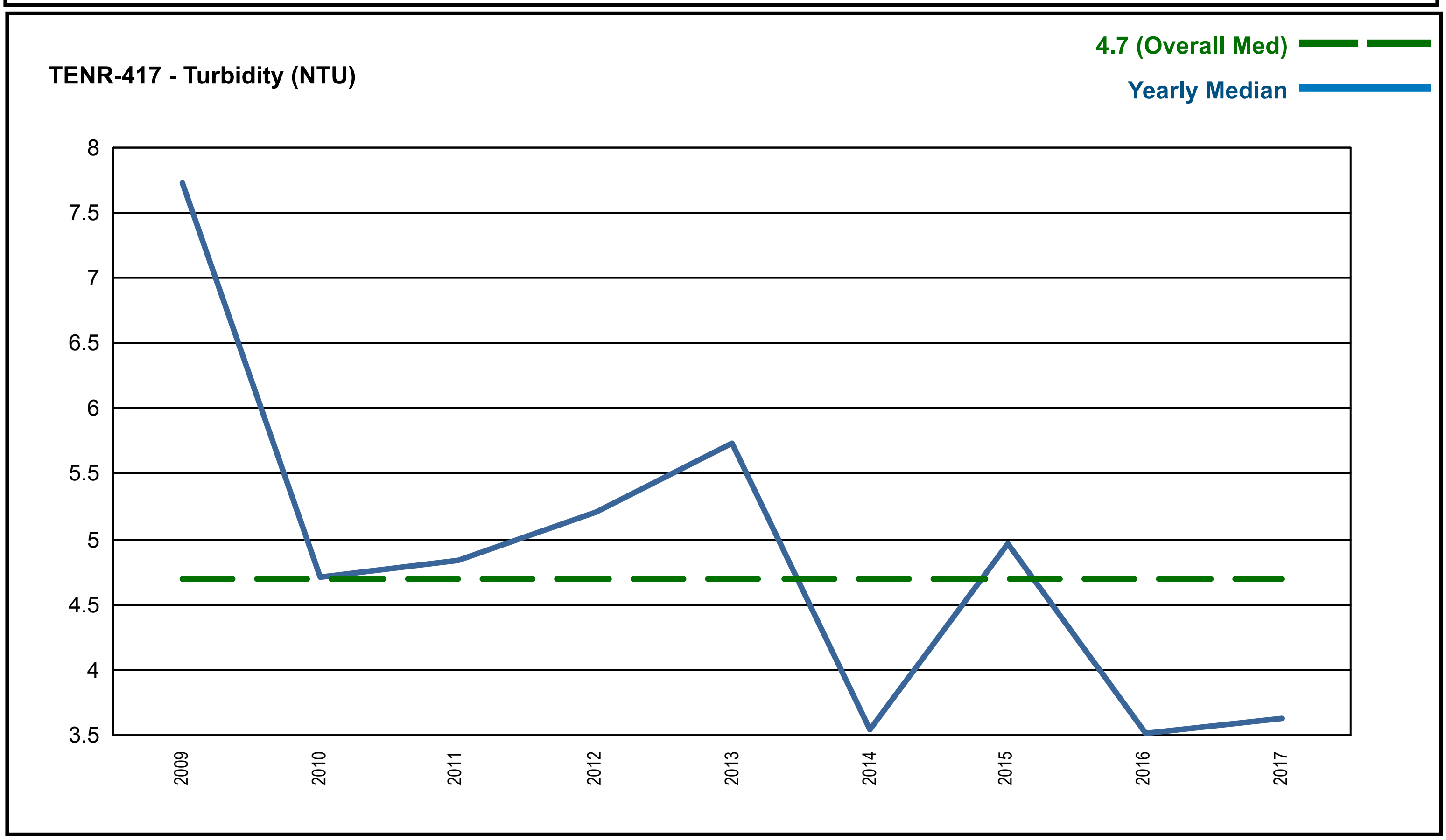

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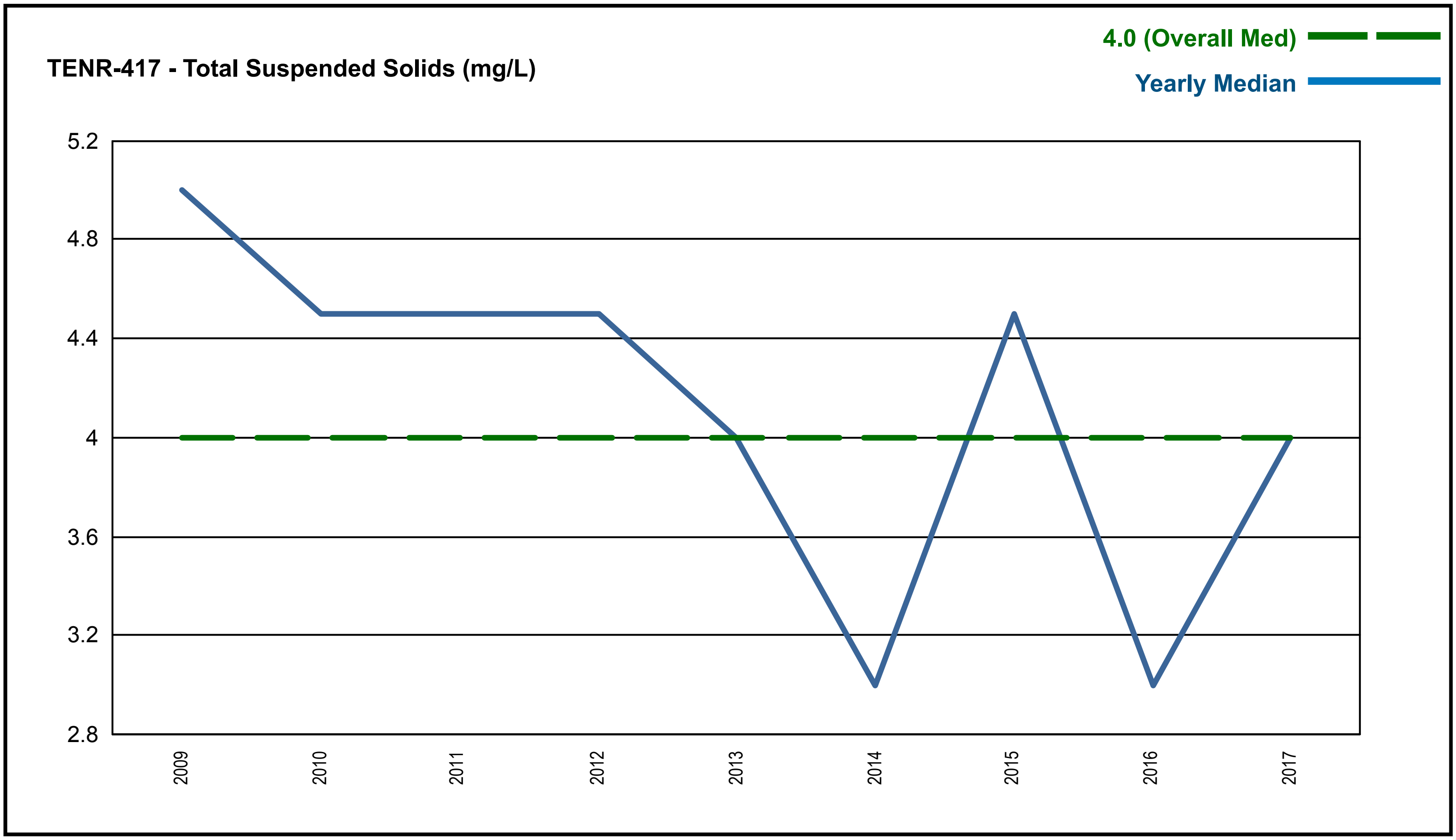

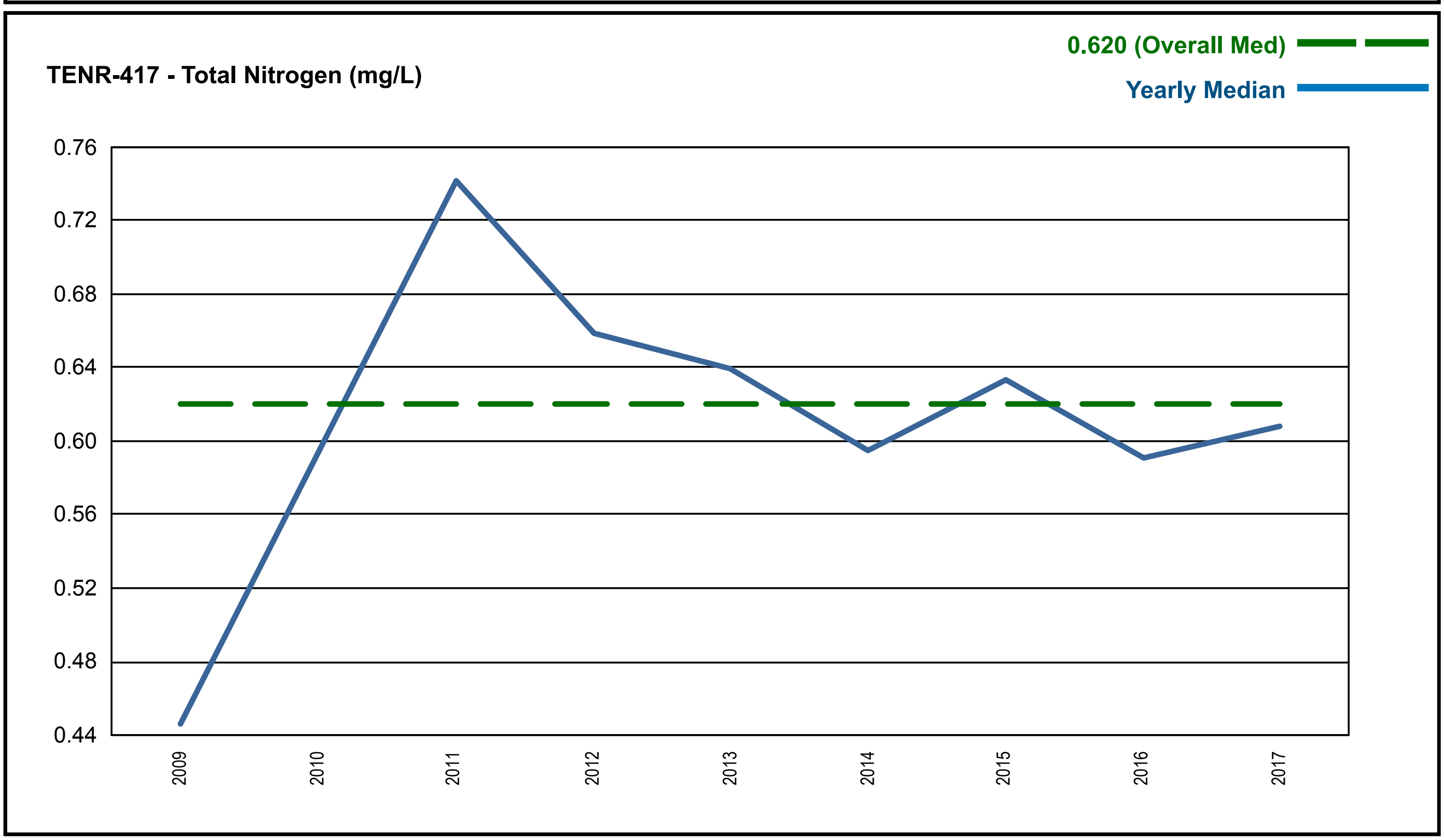

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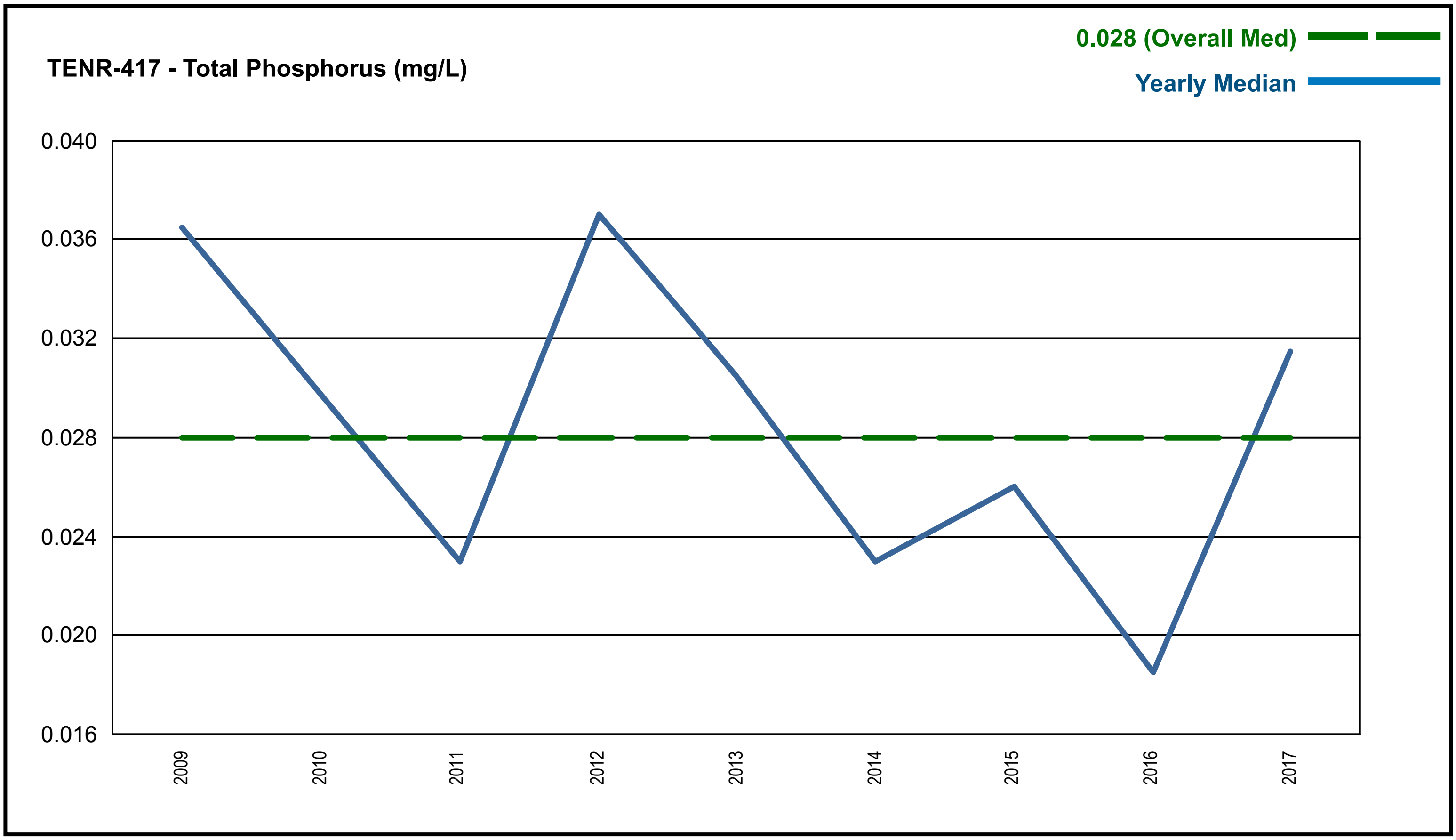

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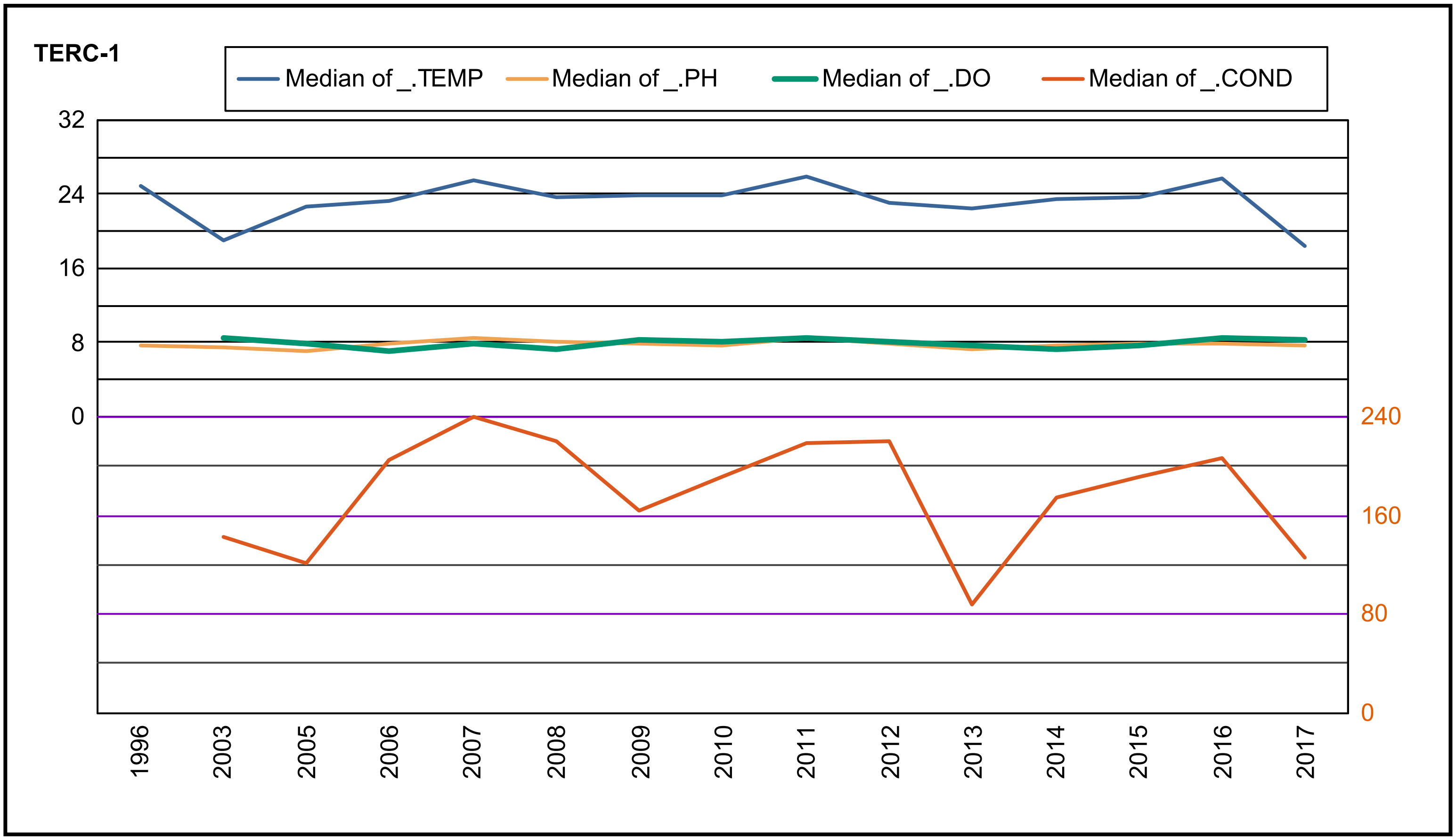

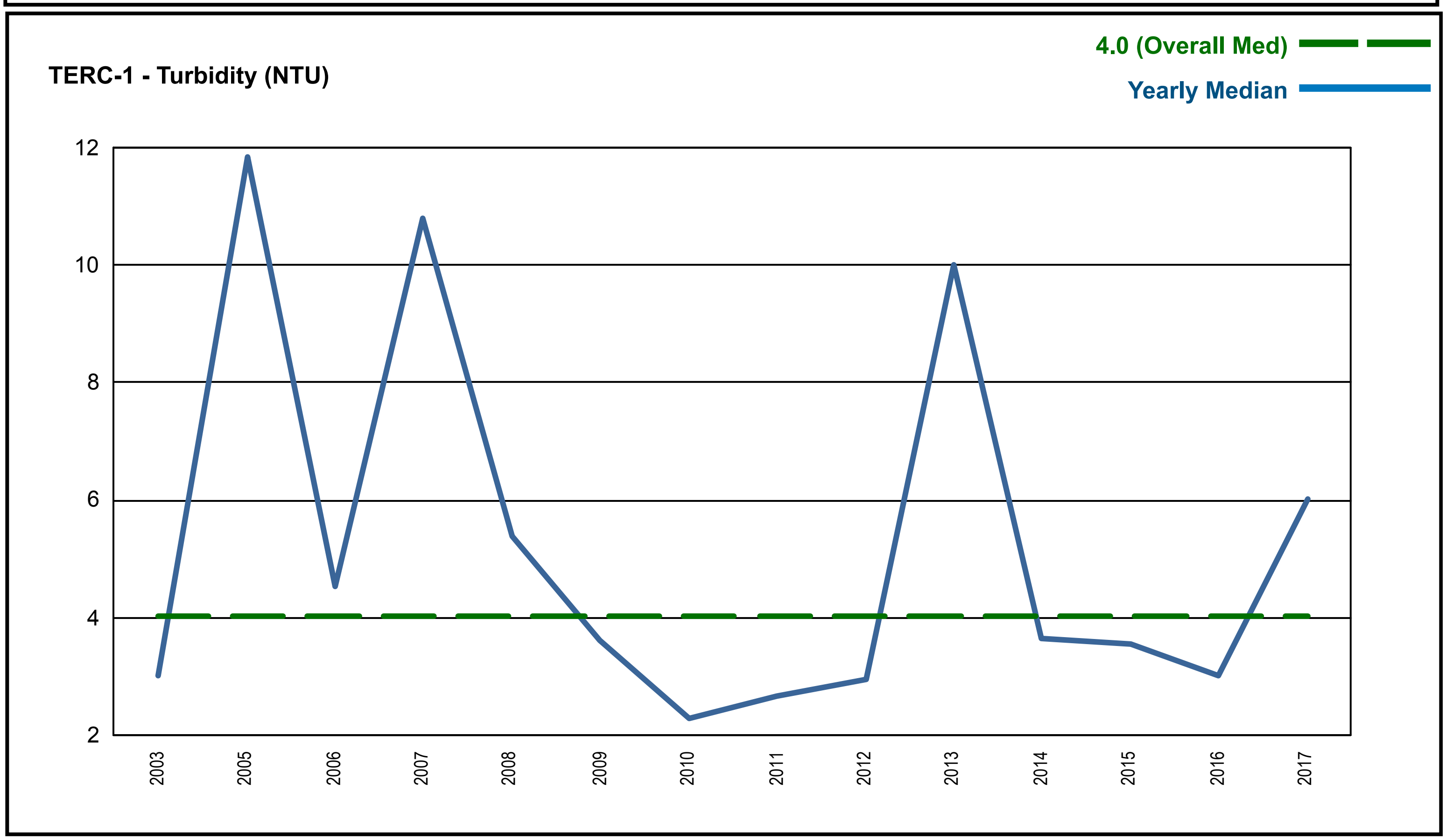

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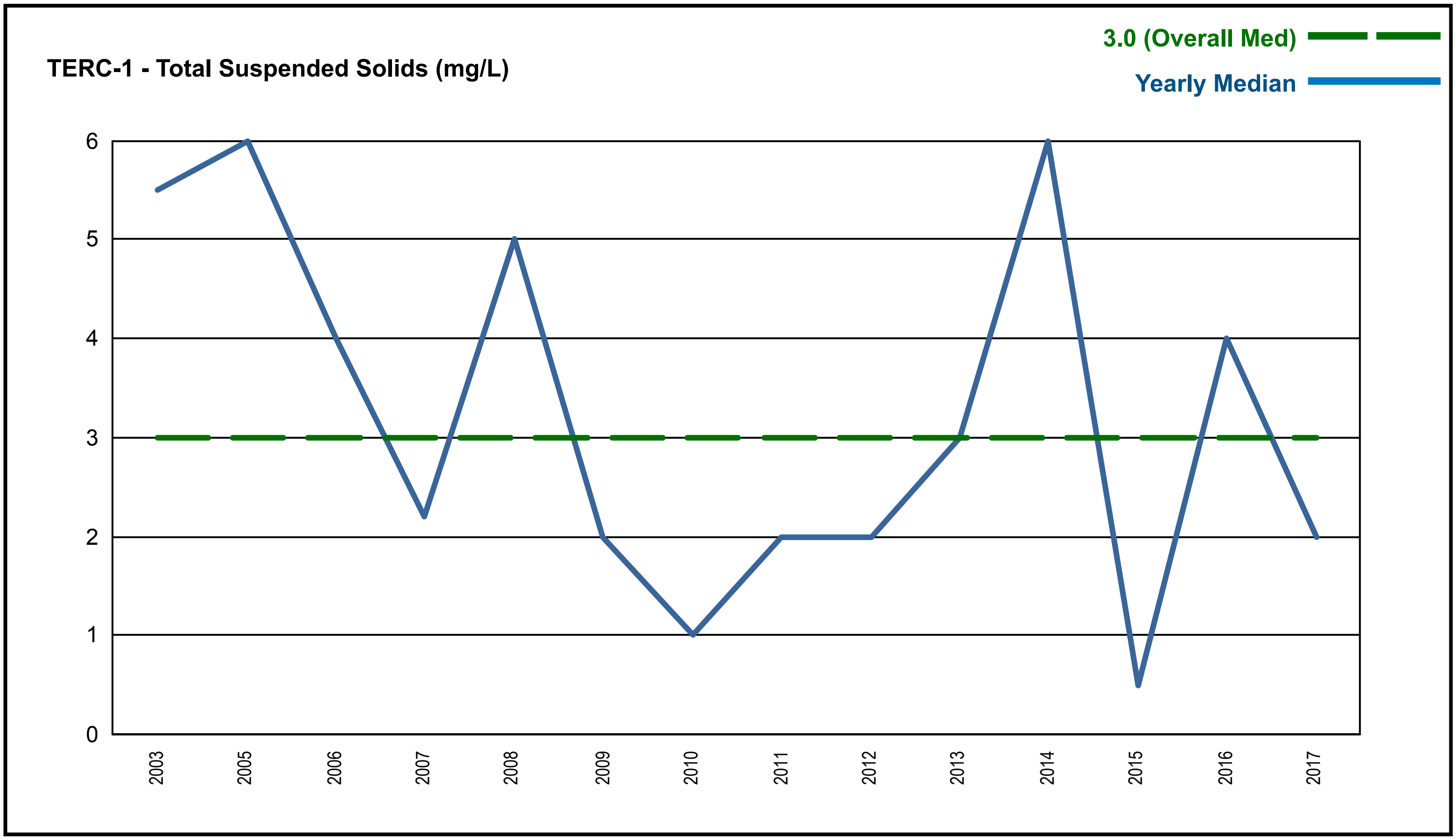

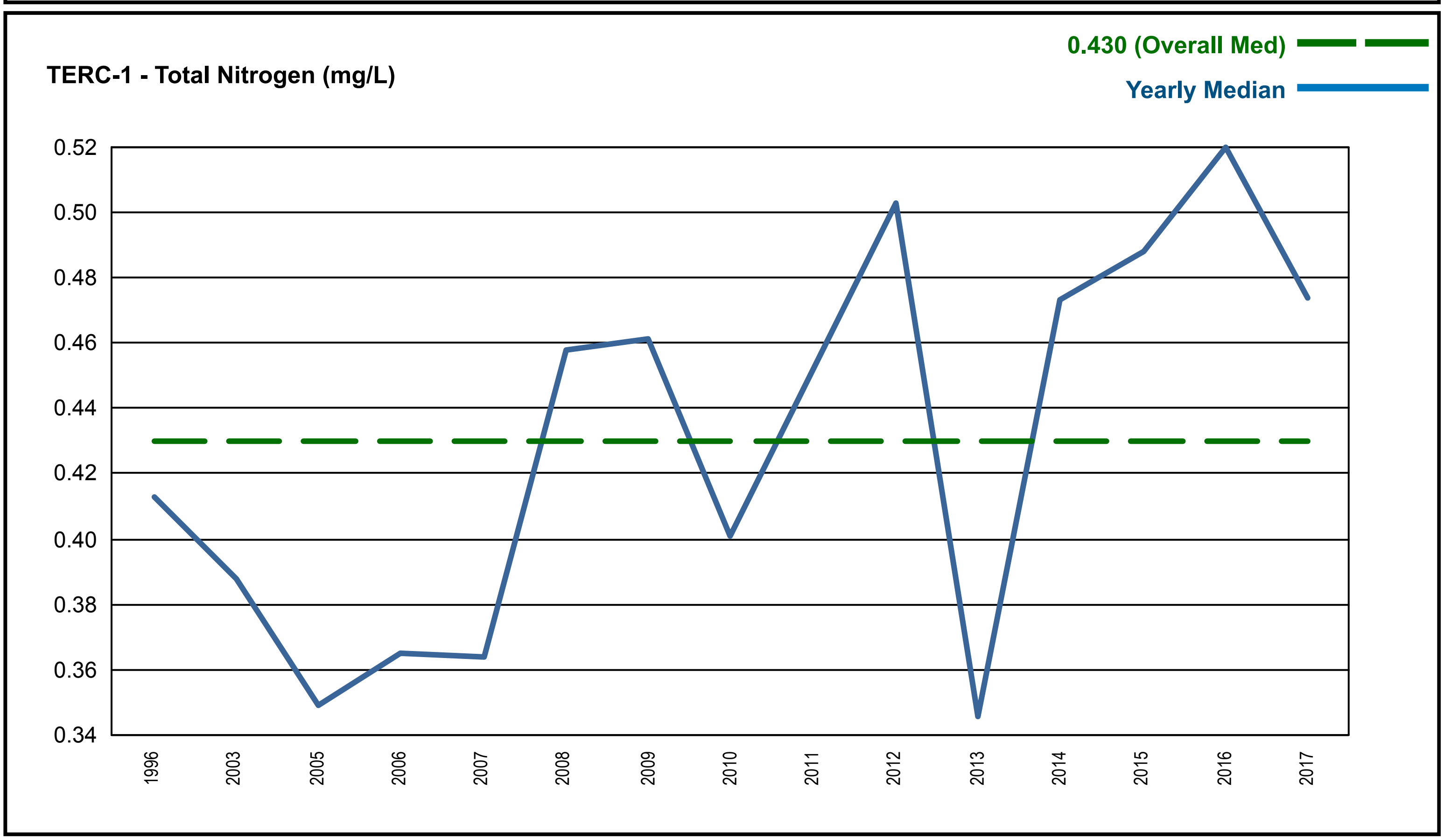

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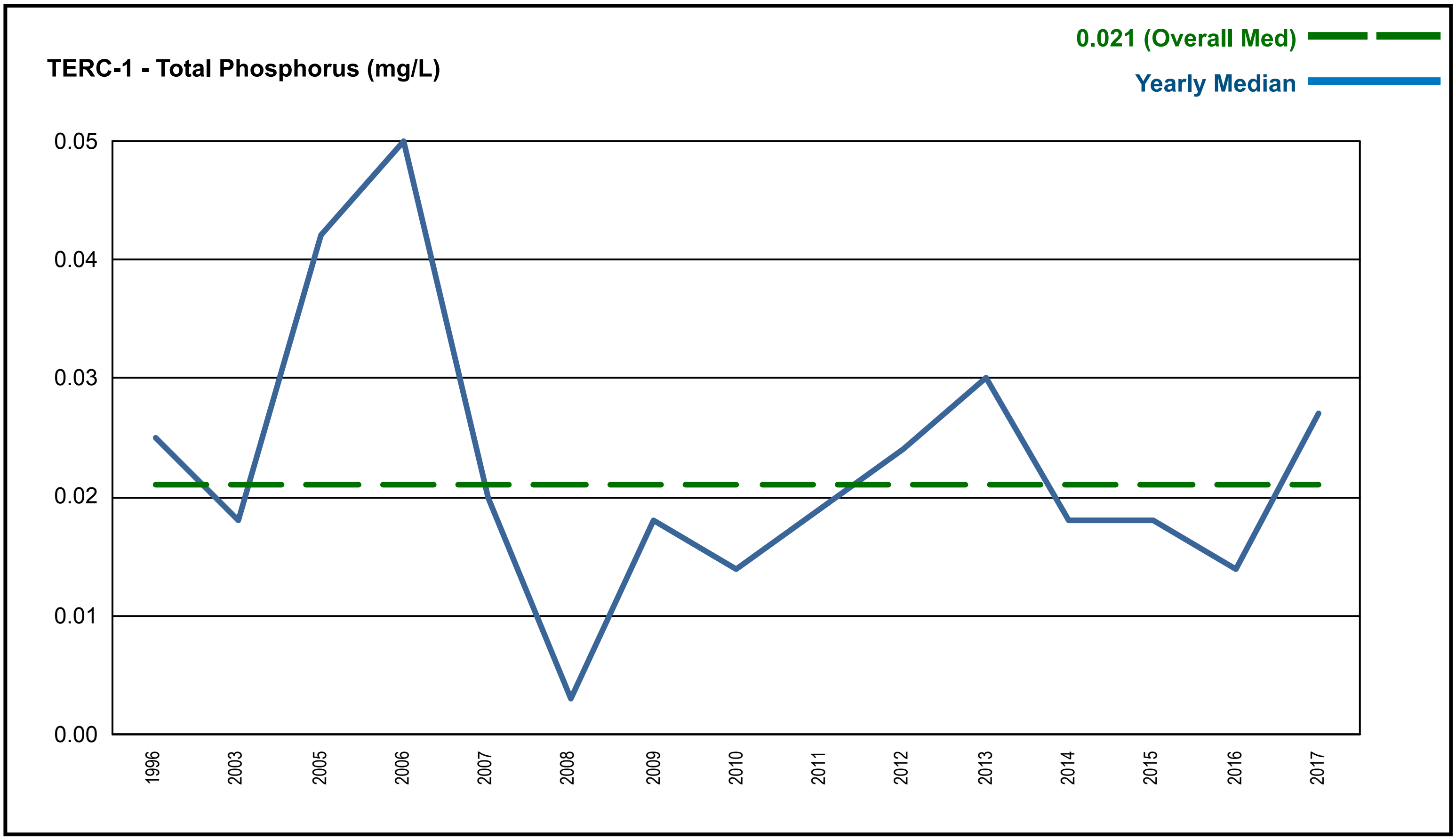

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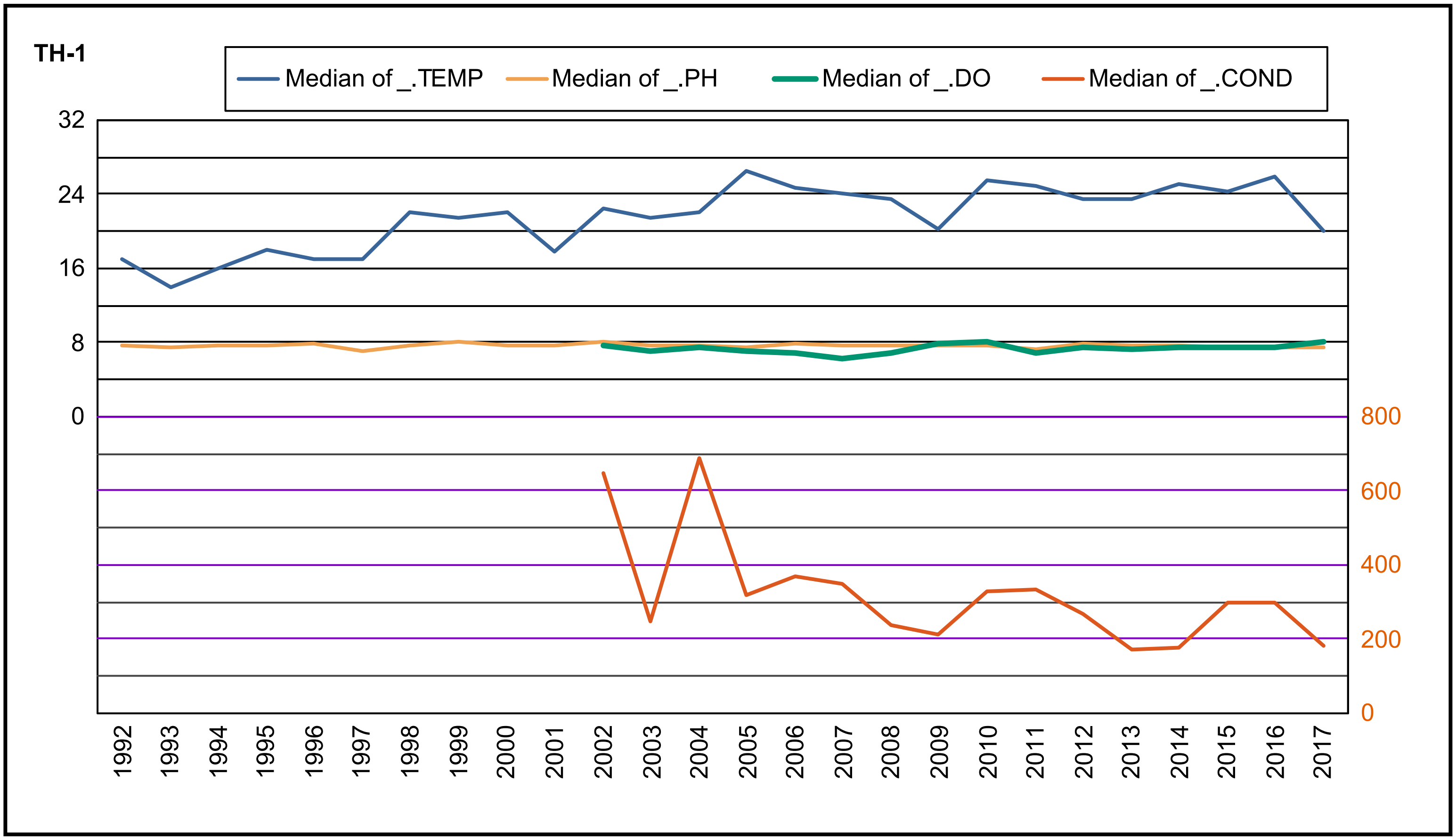

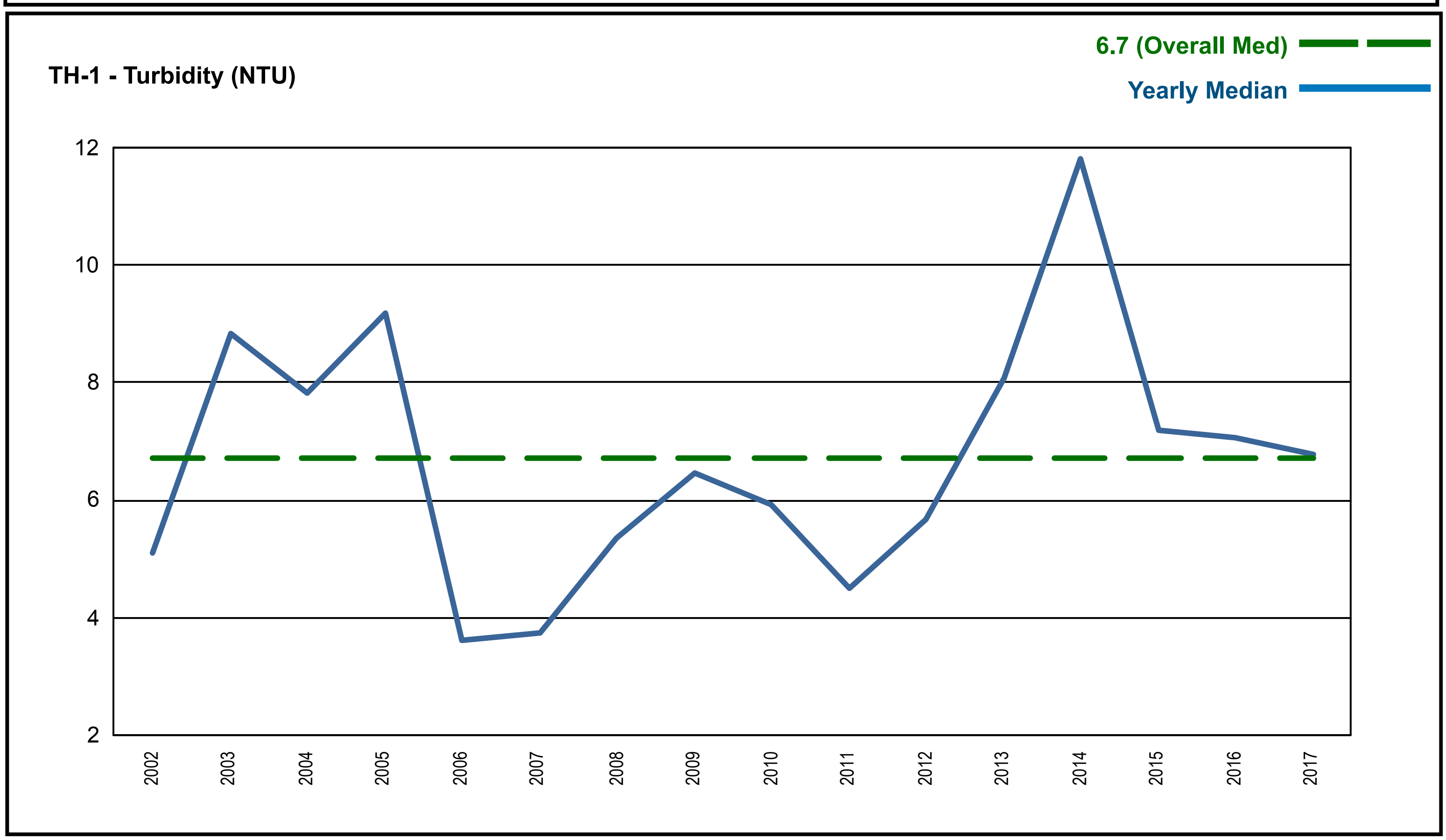

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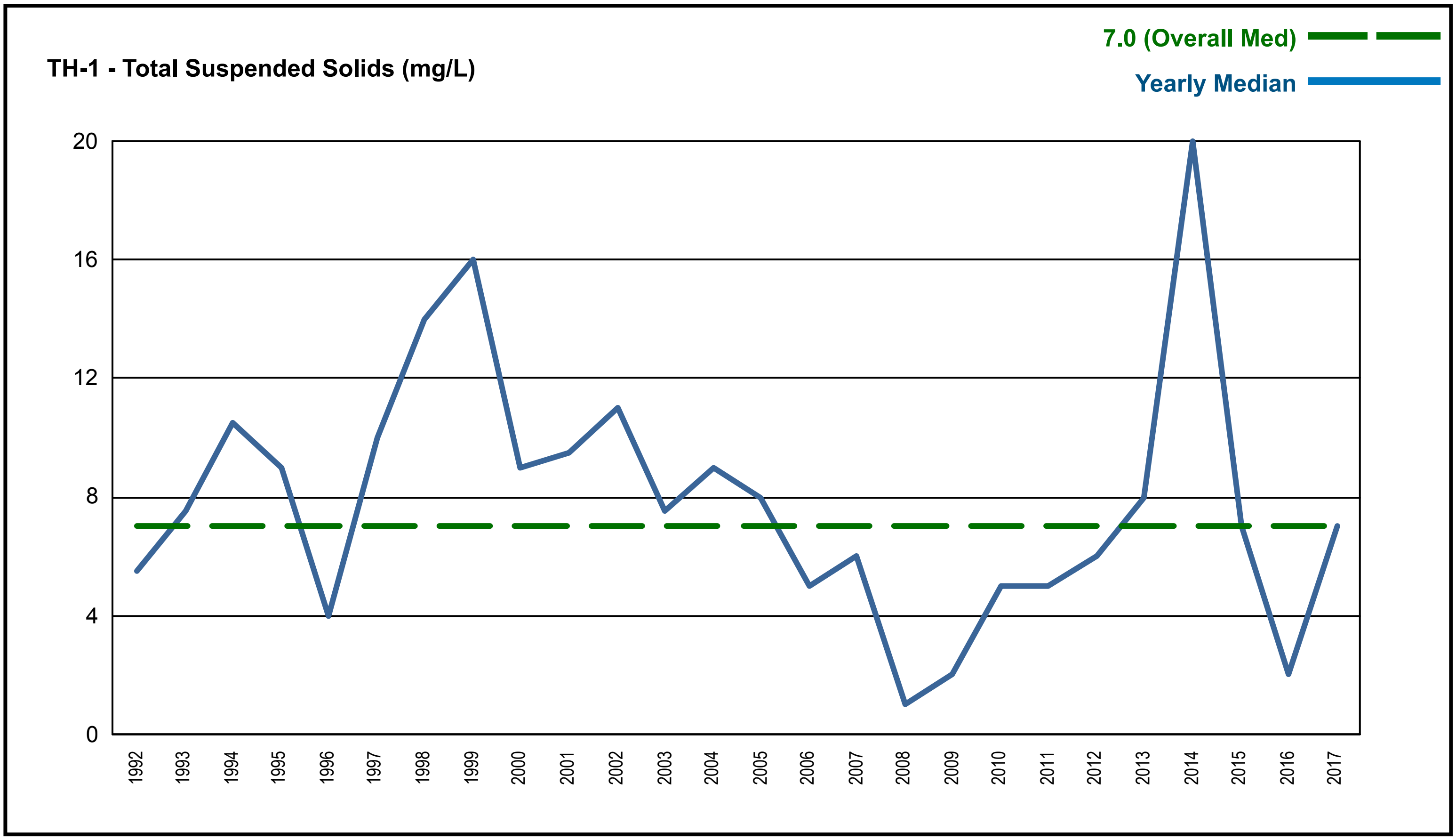

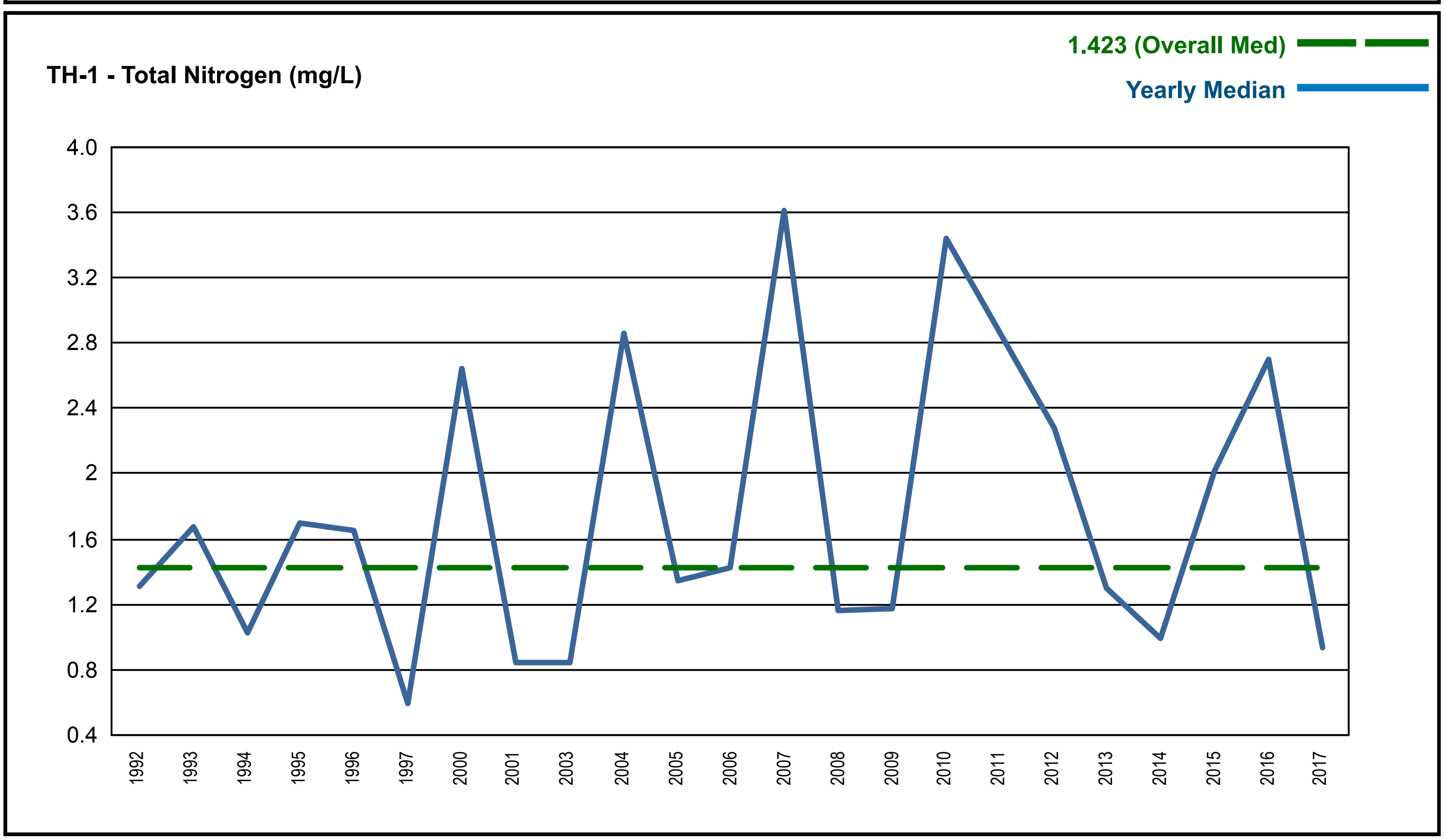

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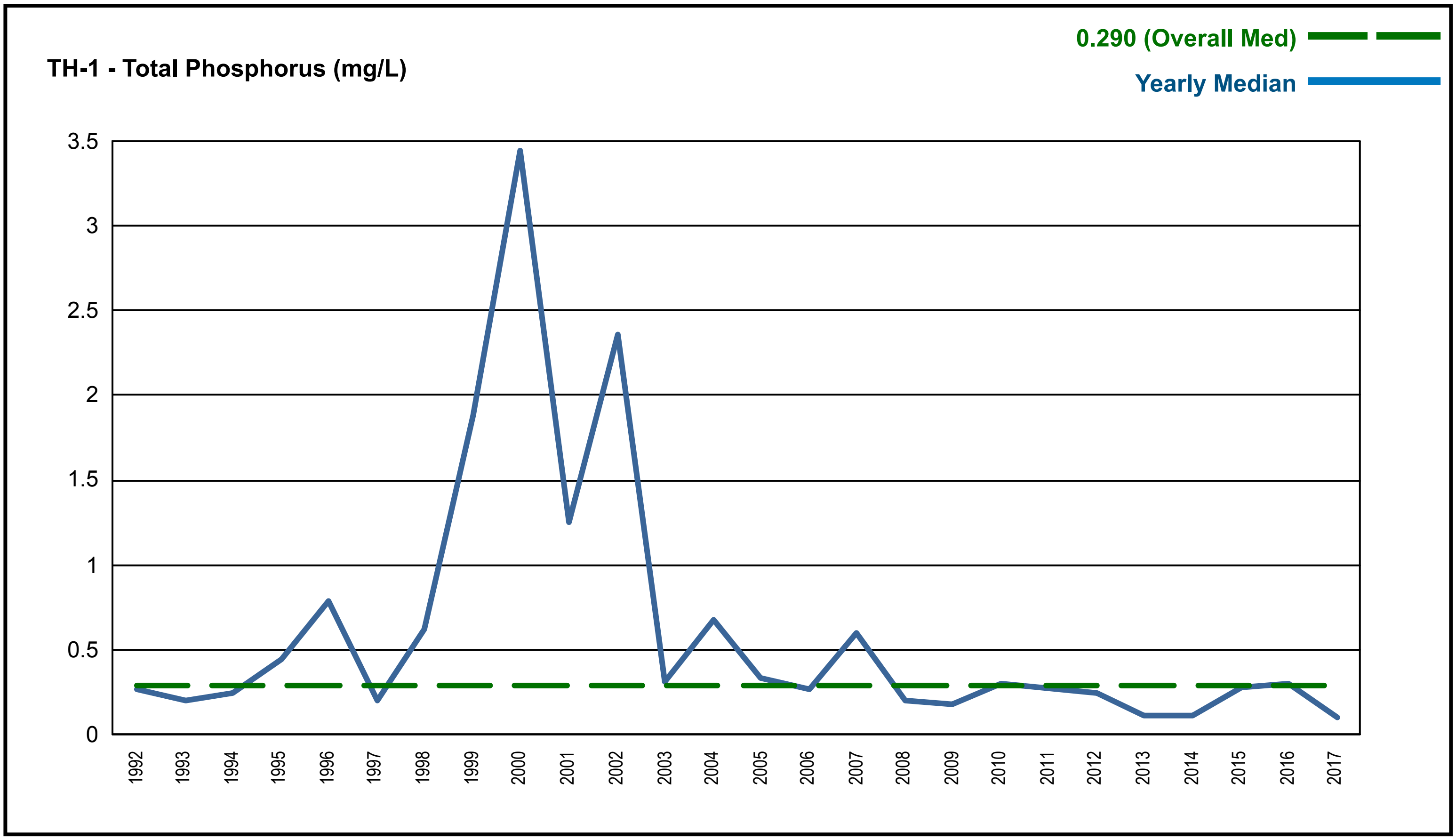
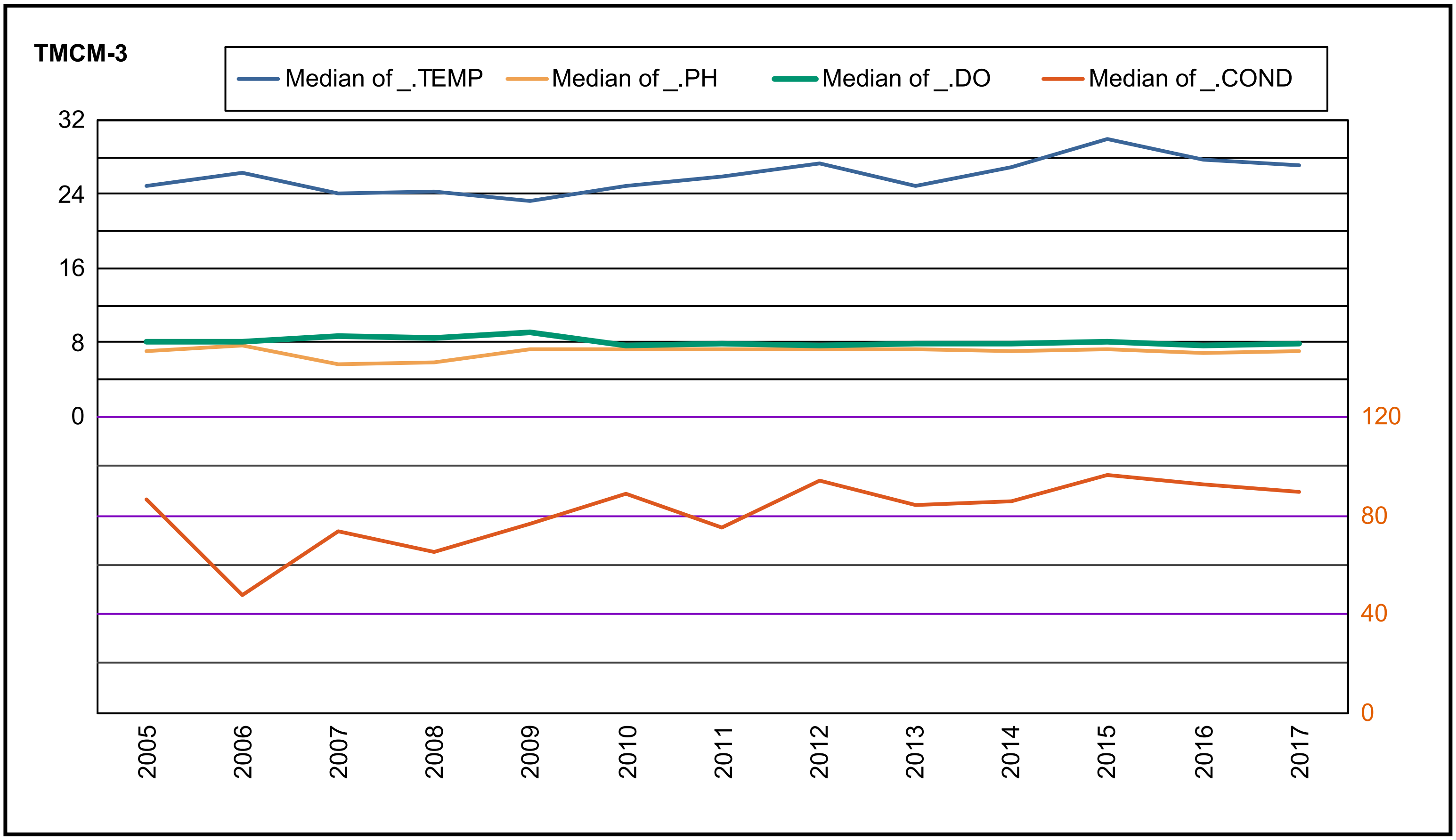
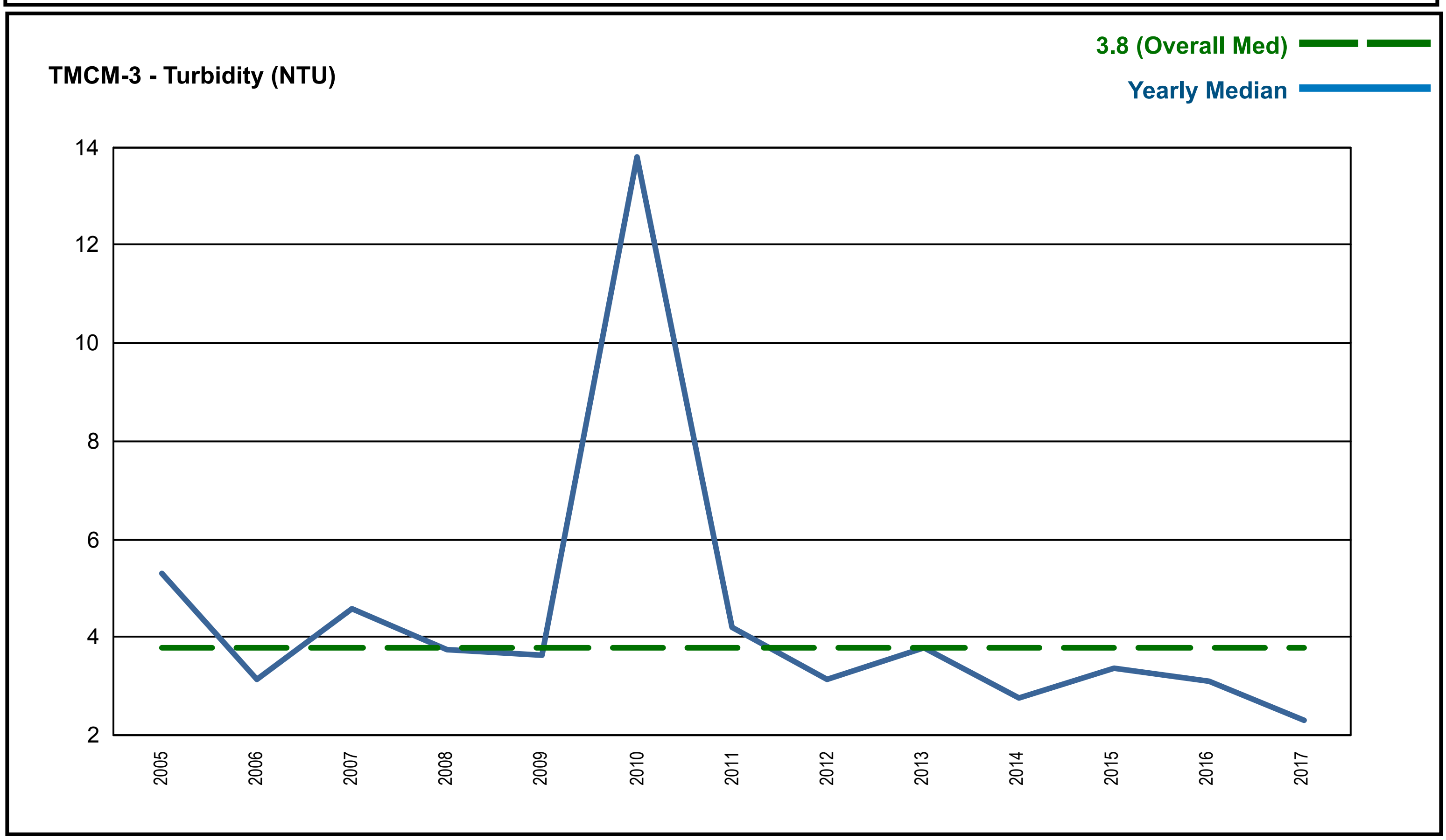
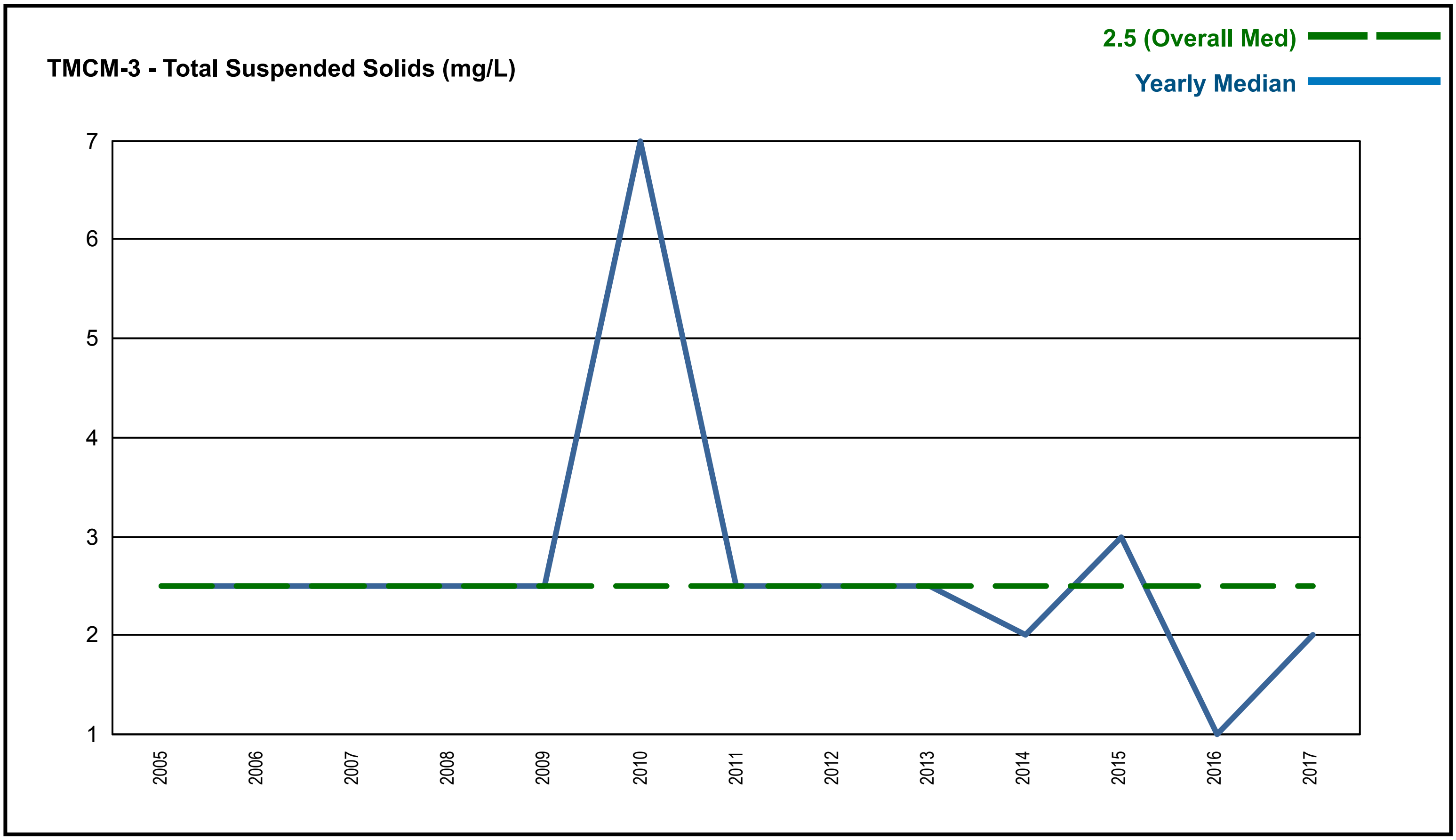


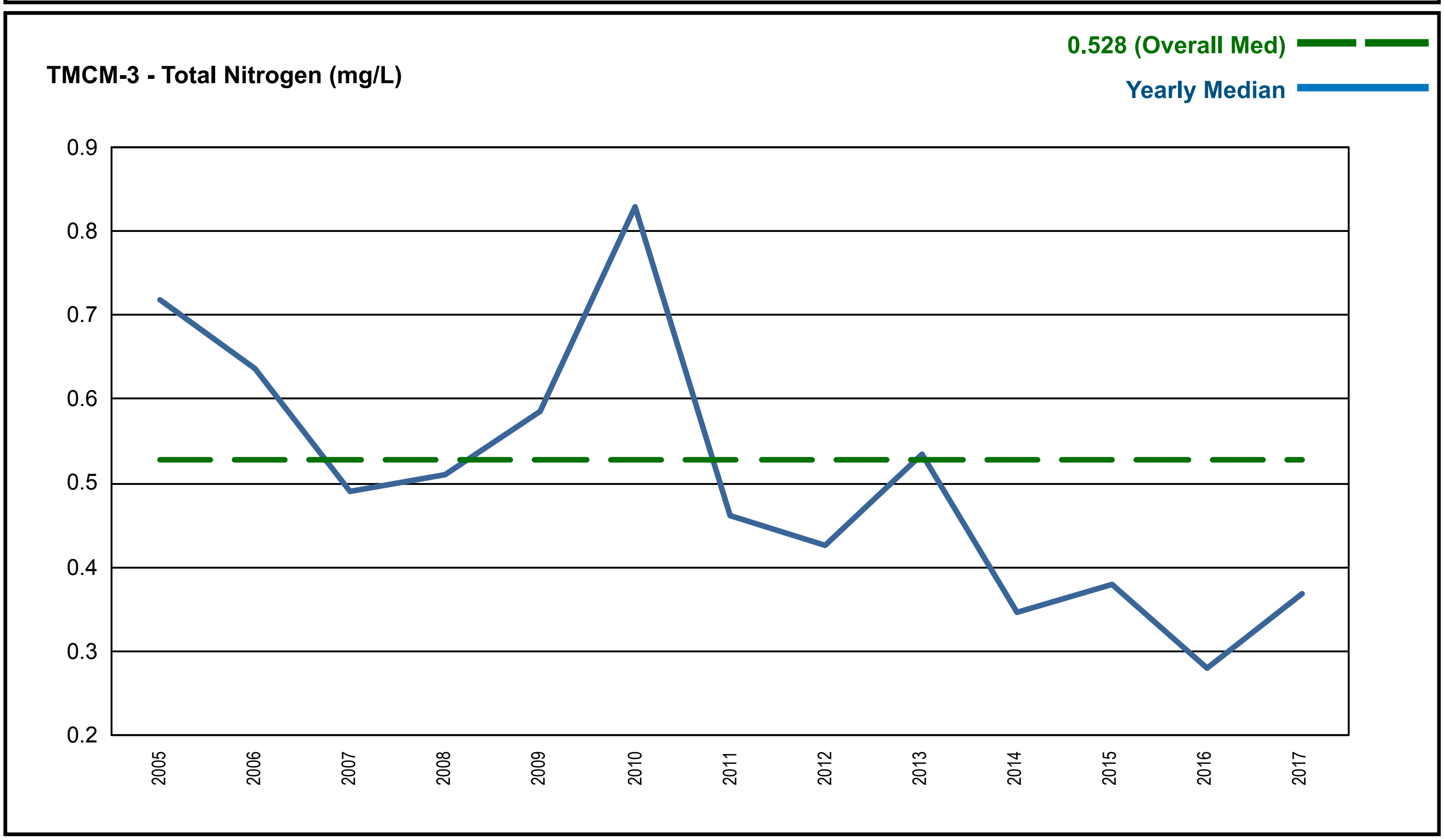
ADEM Ambient Trend Stations - Sampled 1977 - 2018



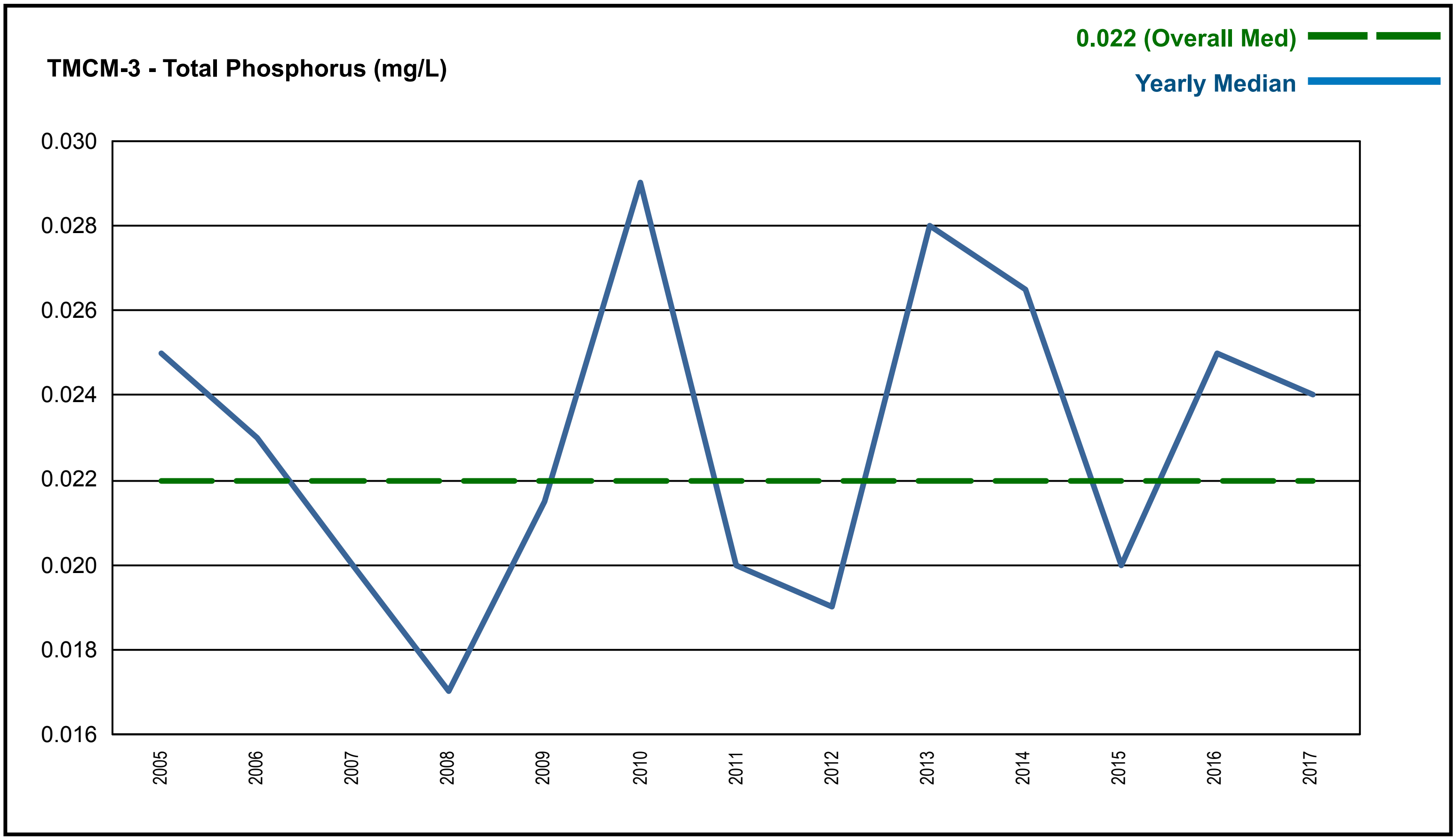


ADEM Ambient Trend Stations - Sampled 1977 - 2018





ADEM Ambient Trend Stations - Sampled 1977 - 2018



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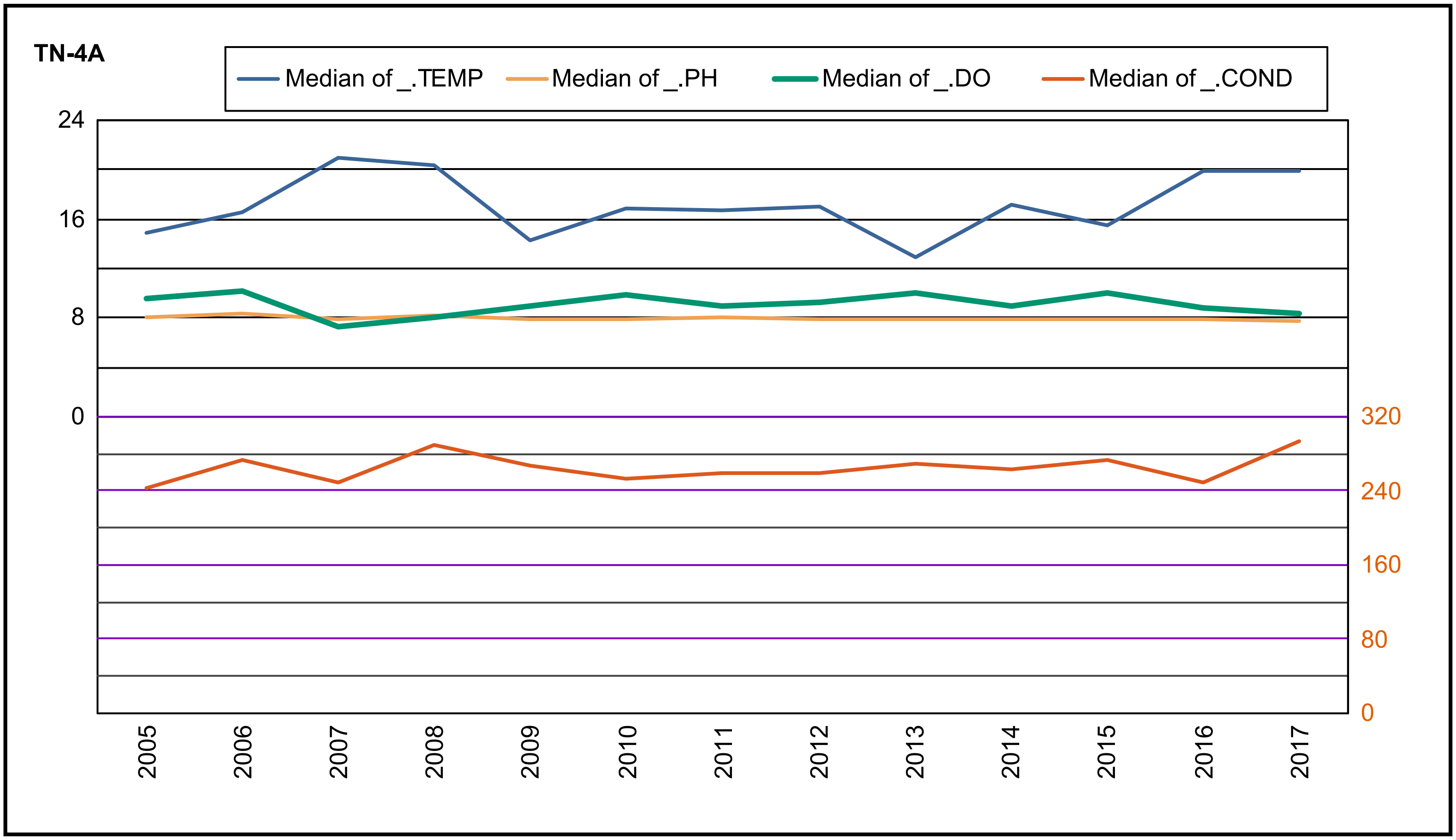
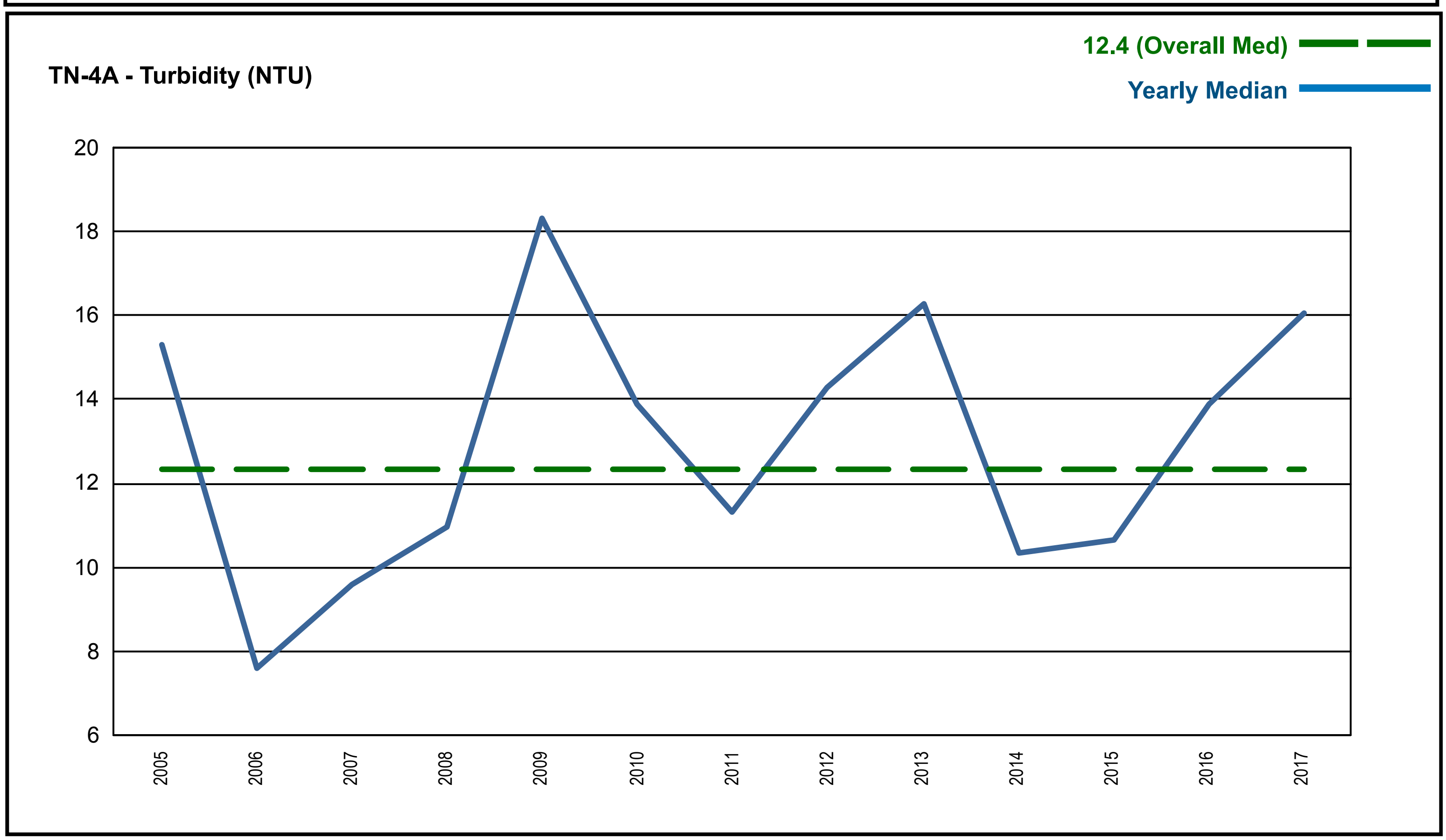
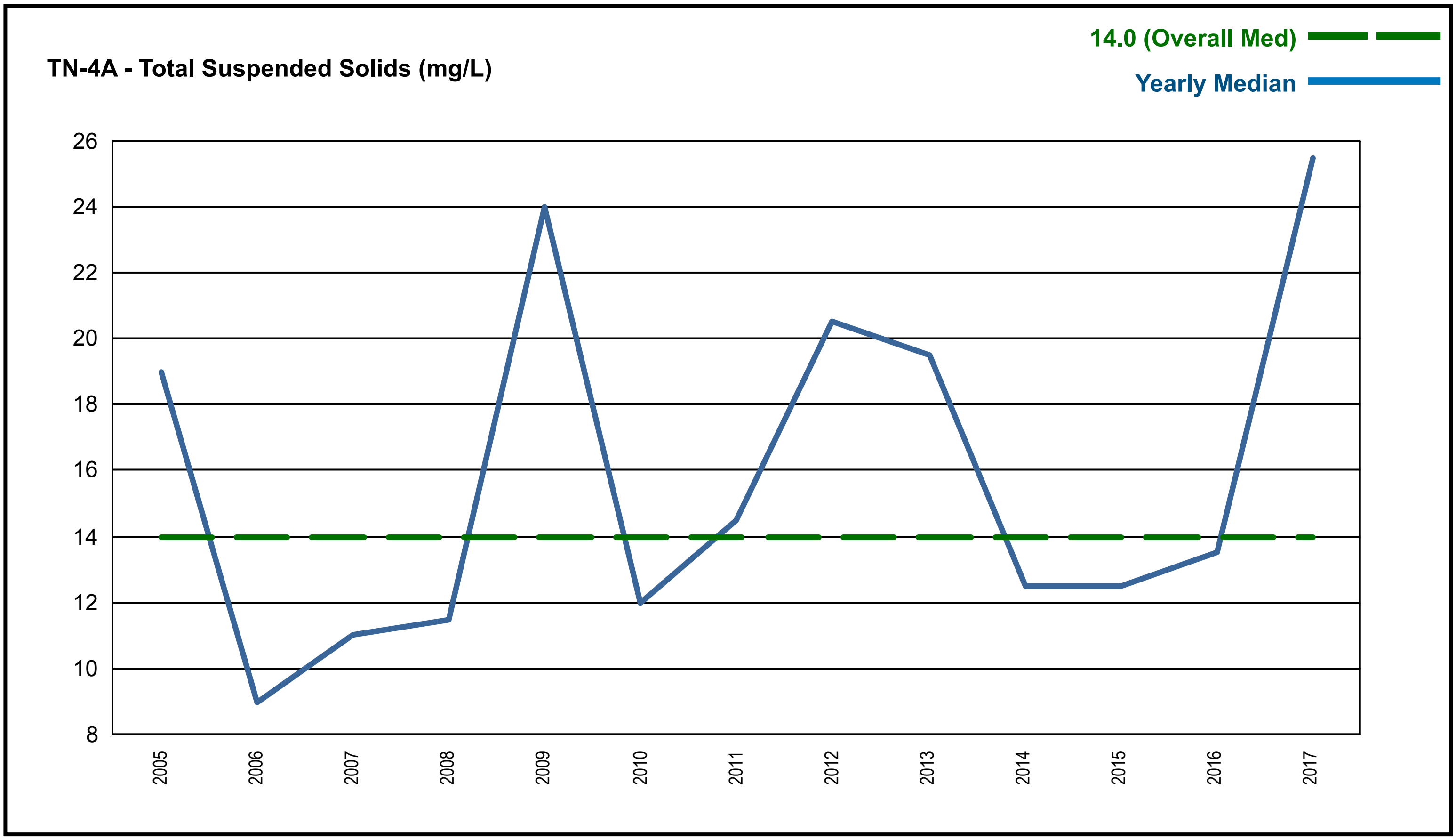
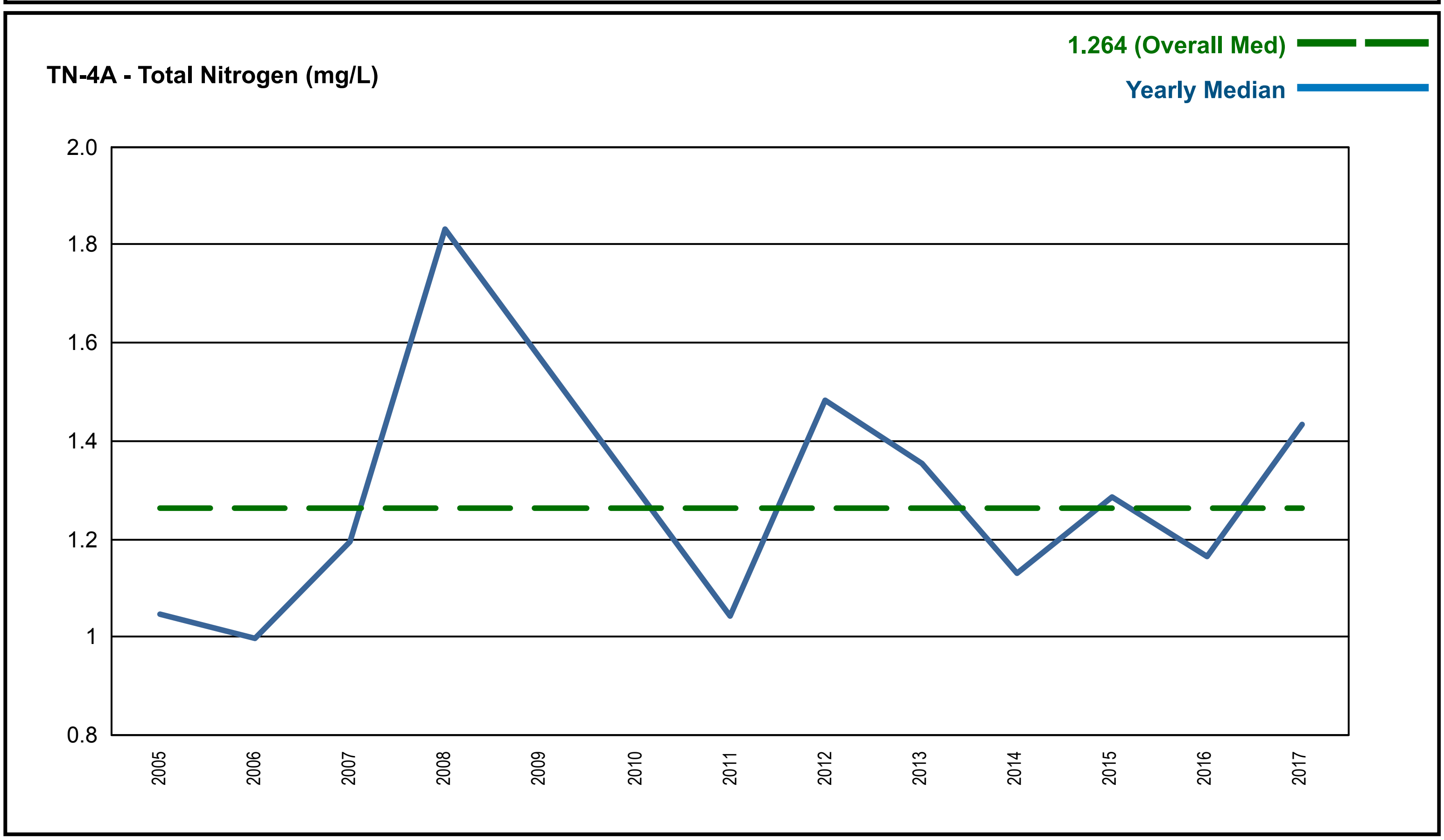




ADEM Ambient Trend Stations - Sampled 1977 - 2018





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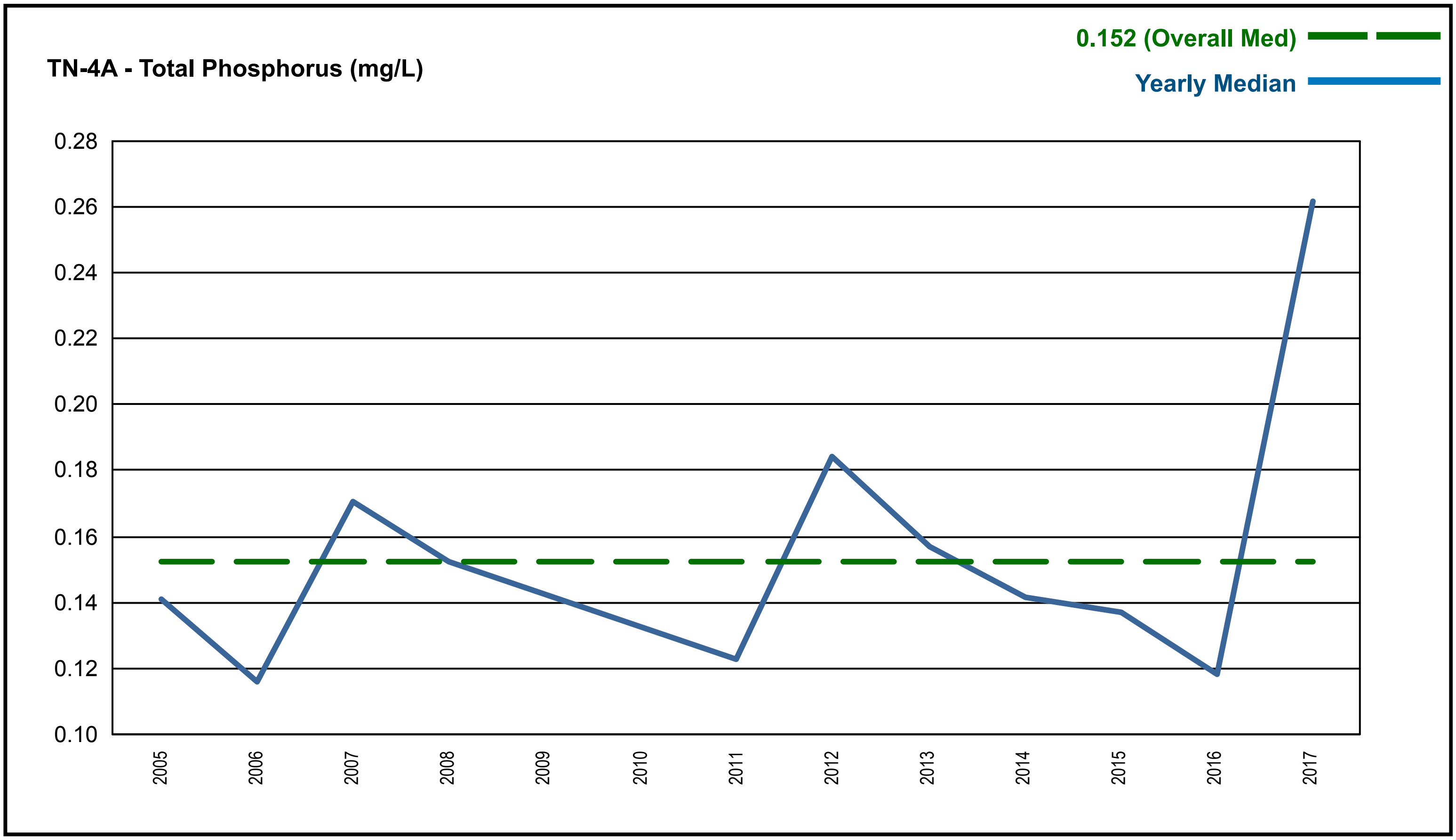

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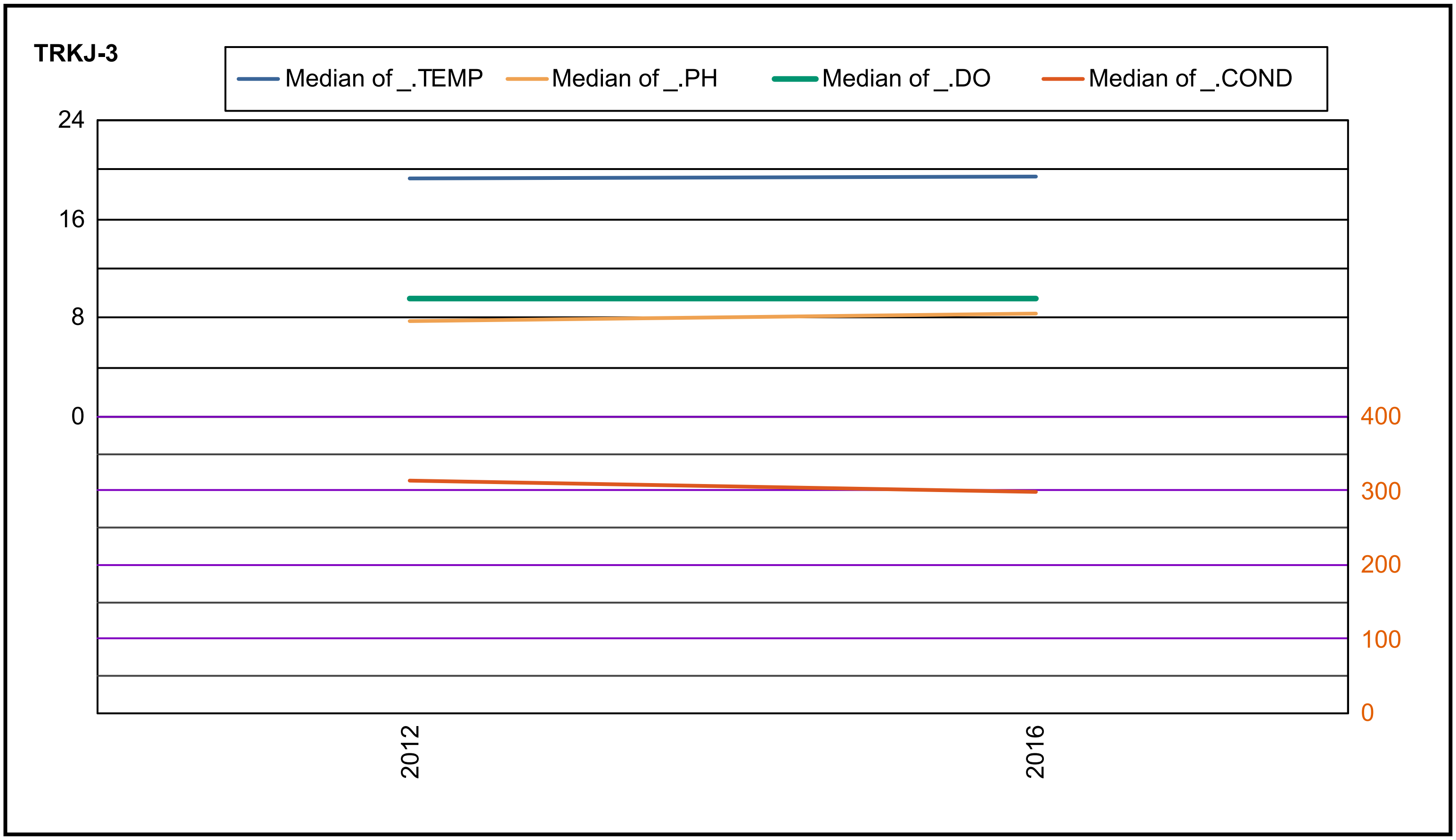

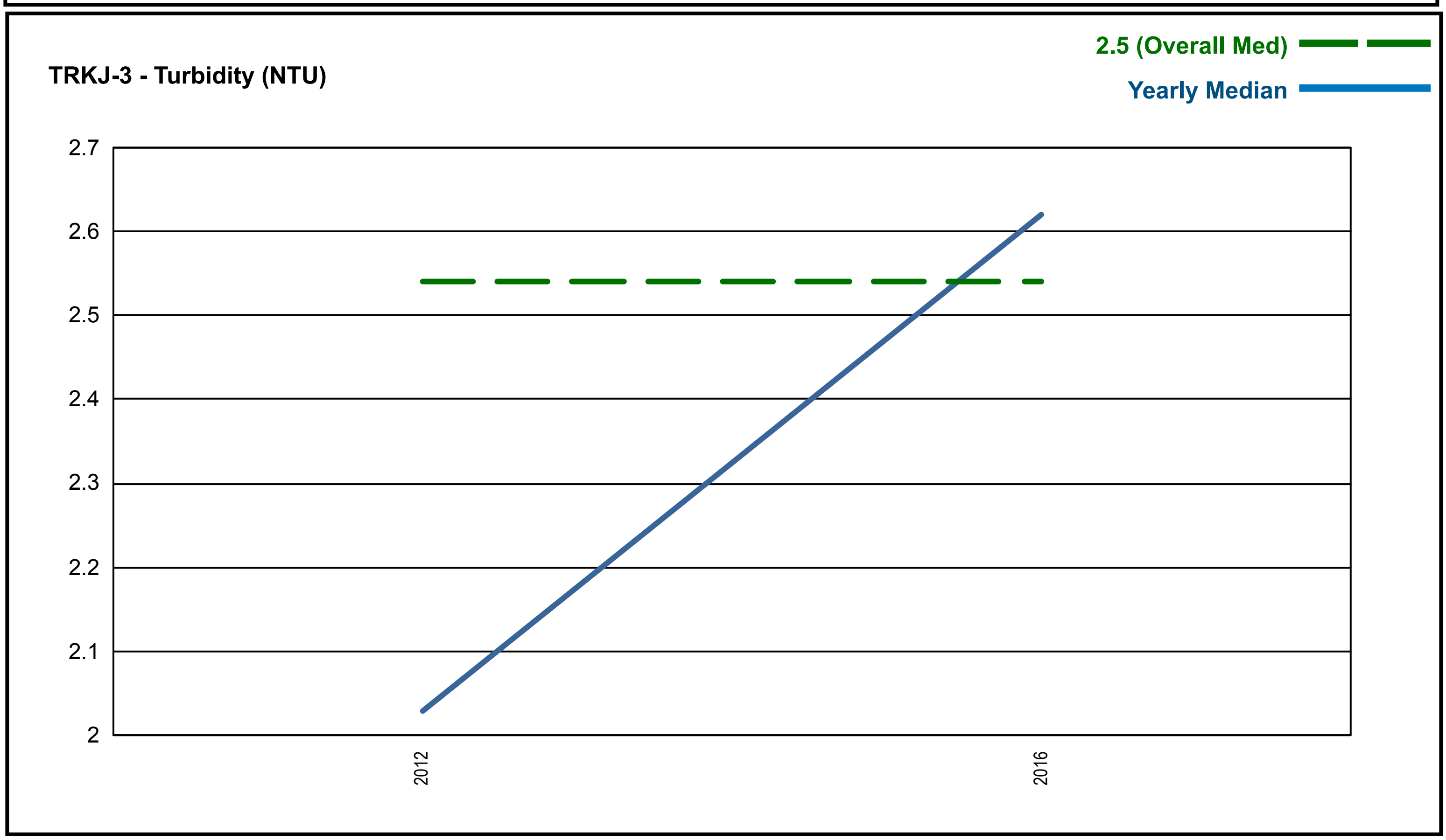

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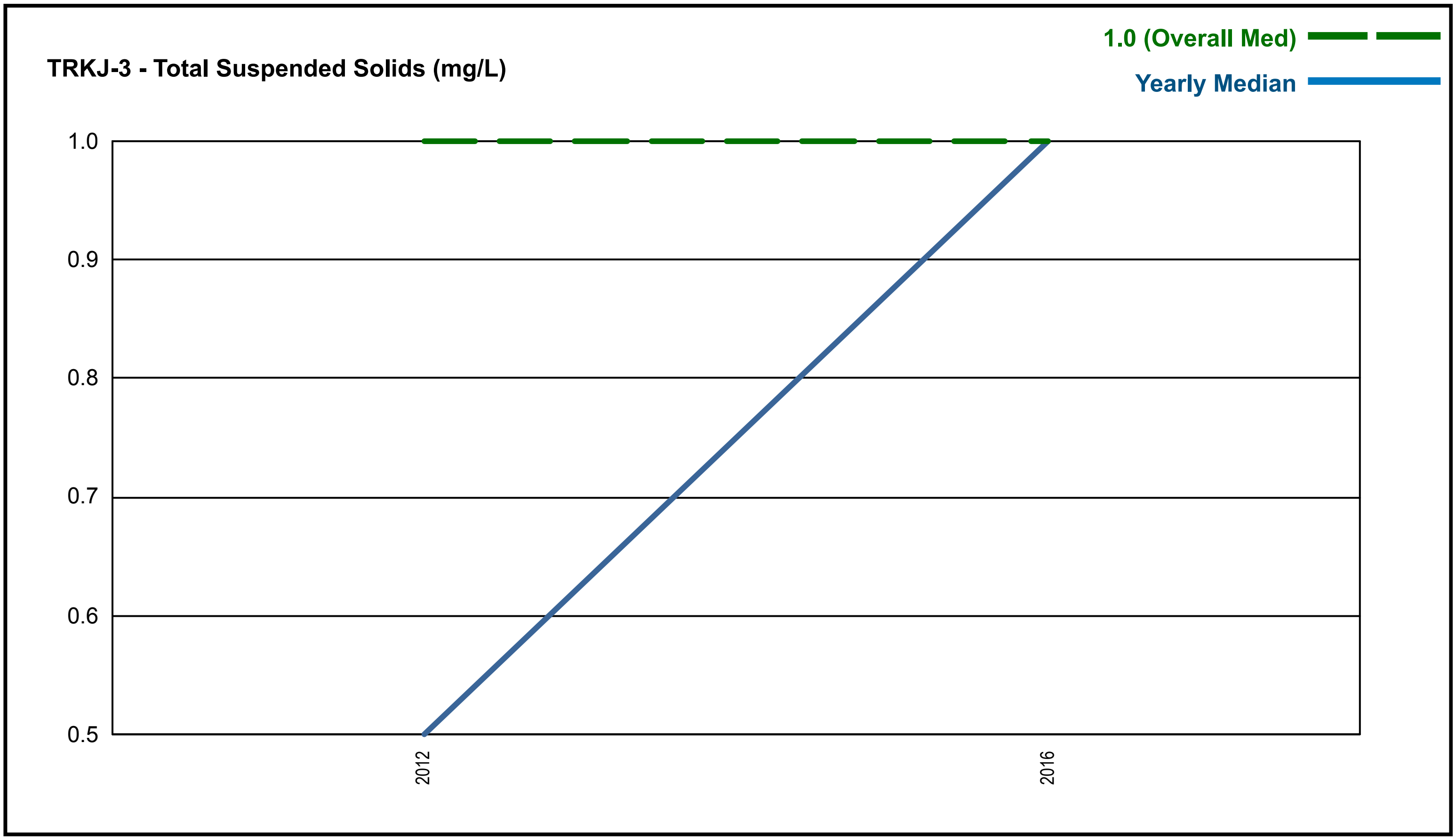

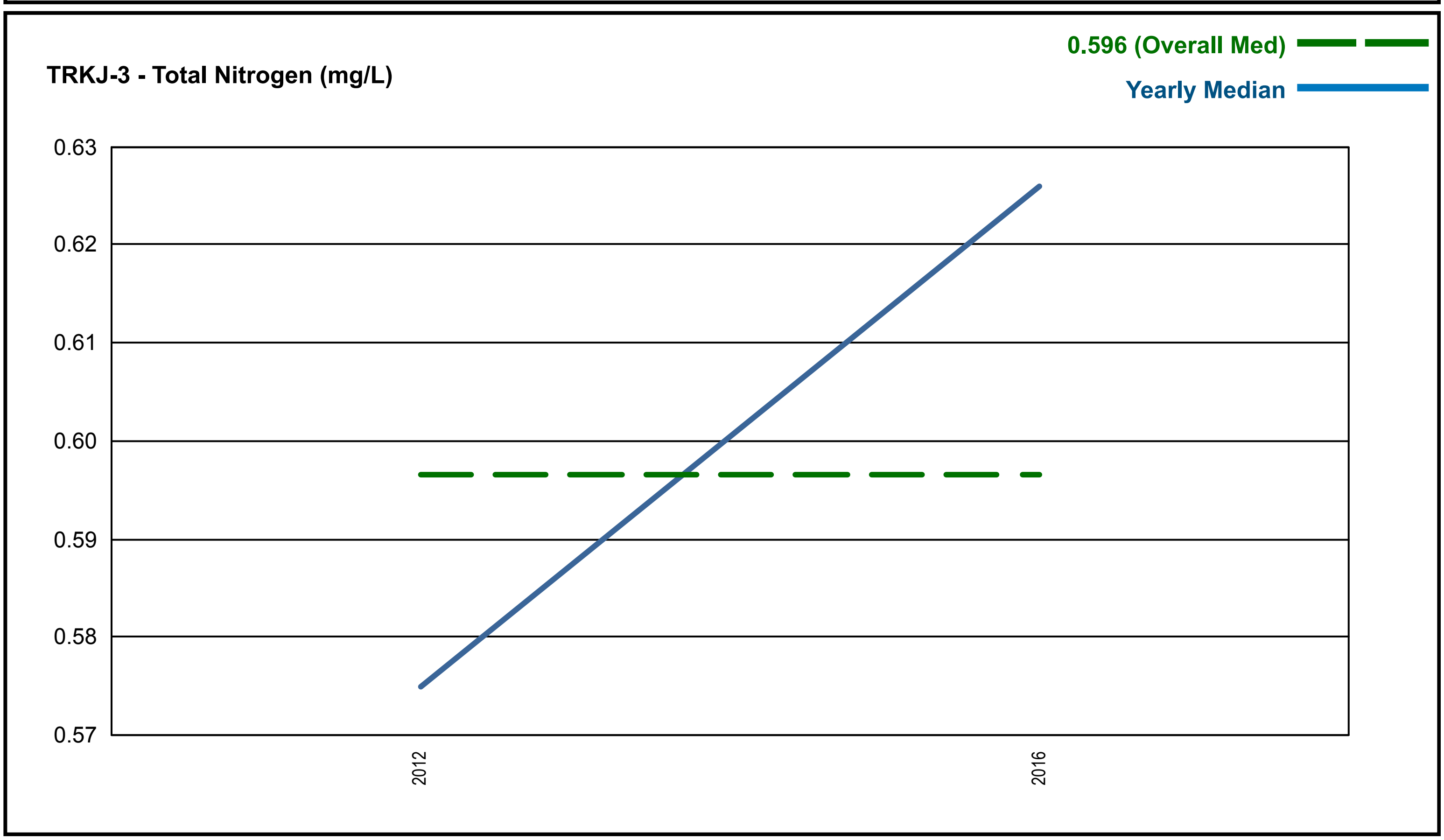

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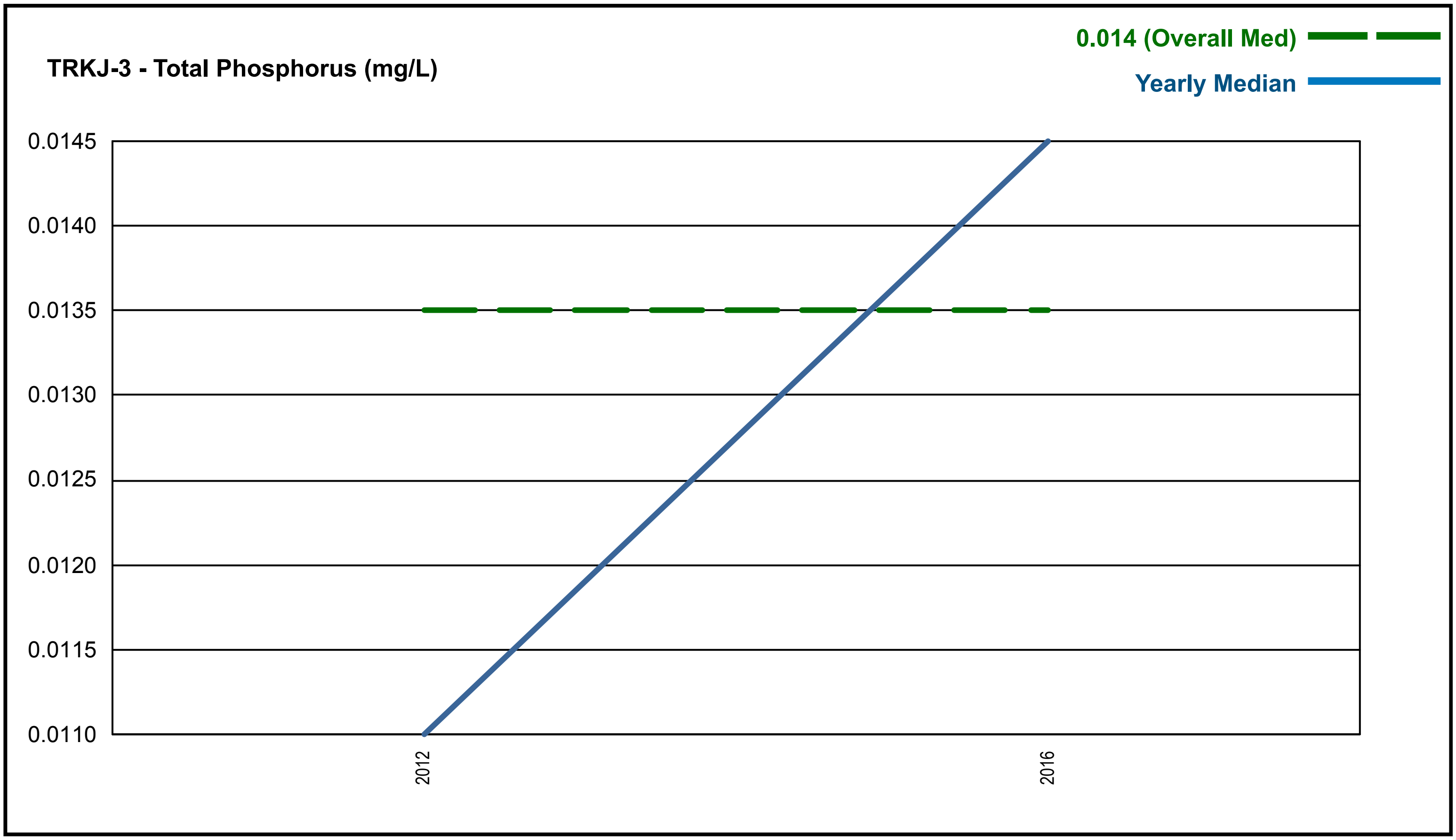

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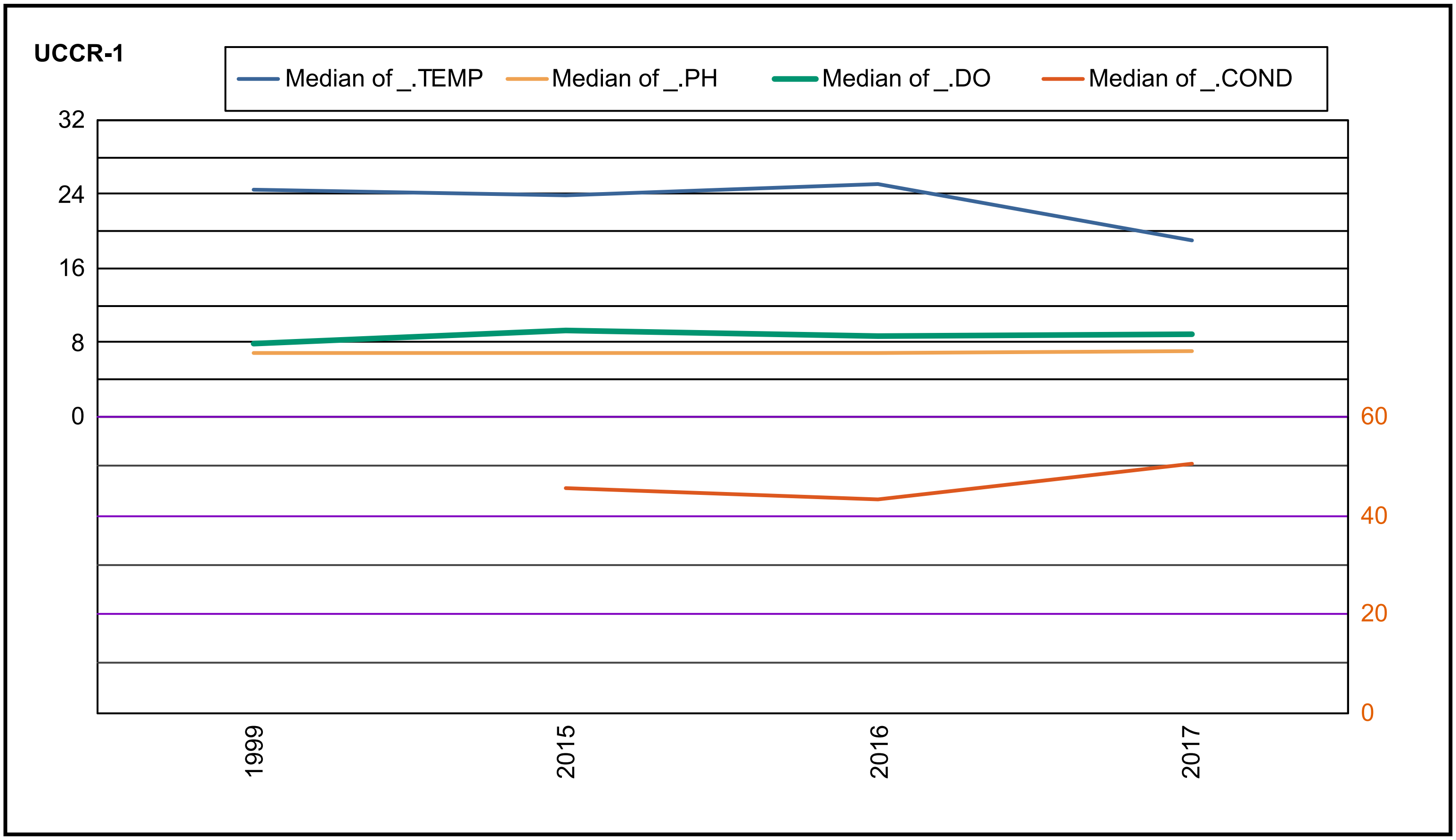

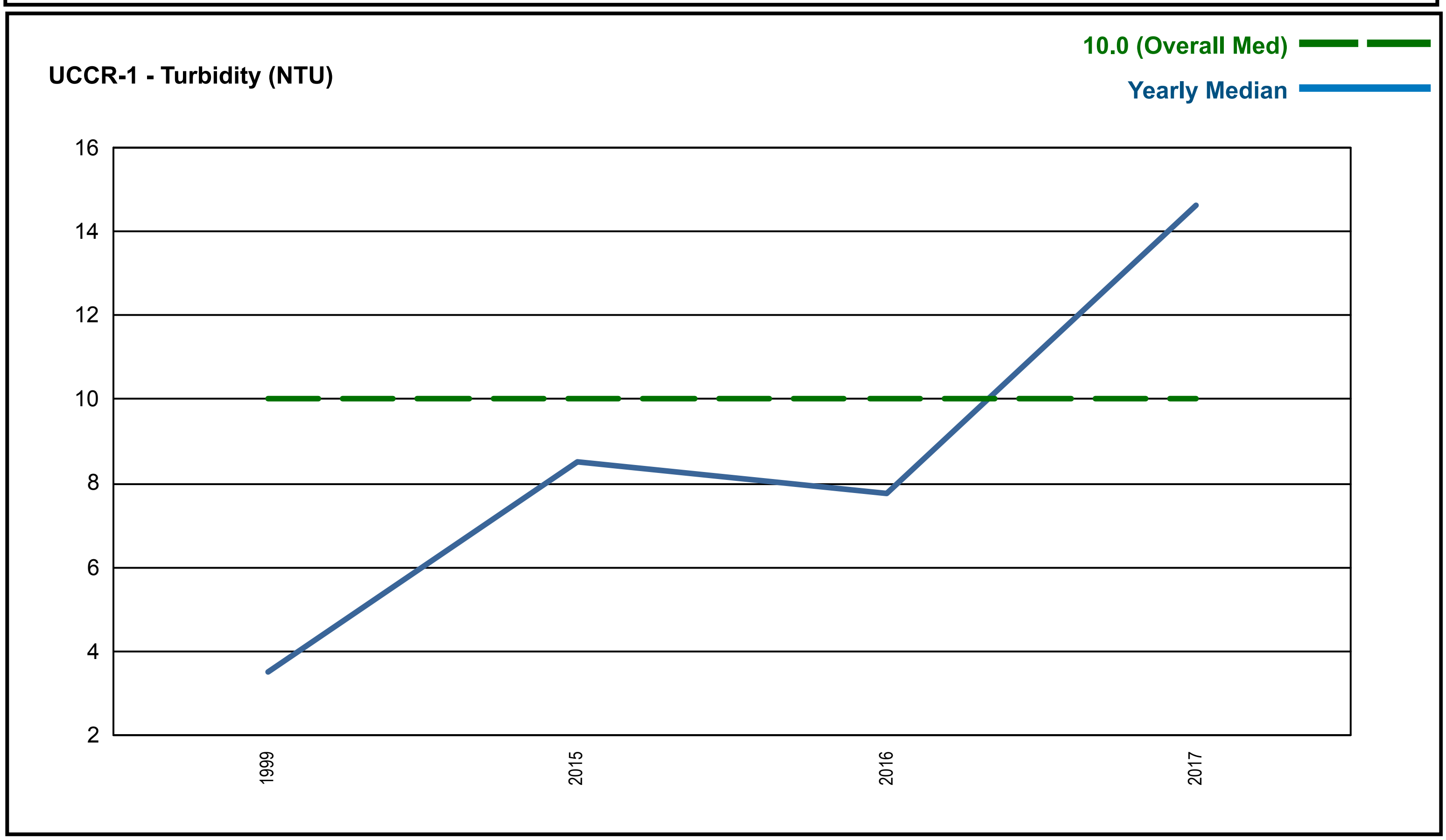

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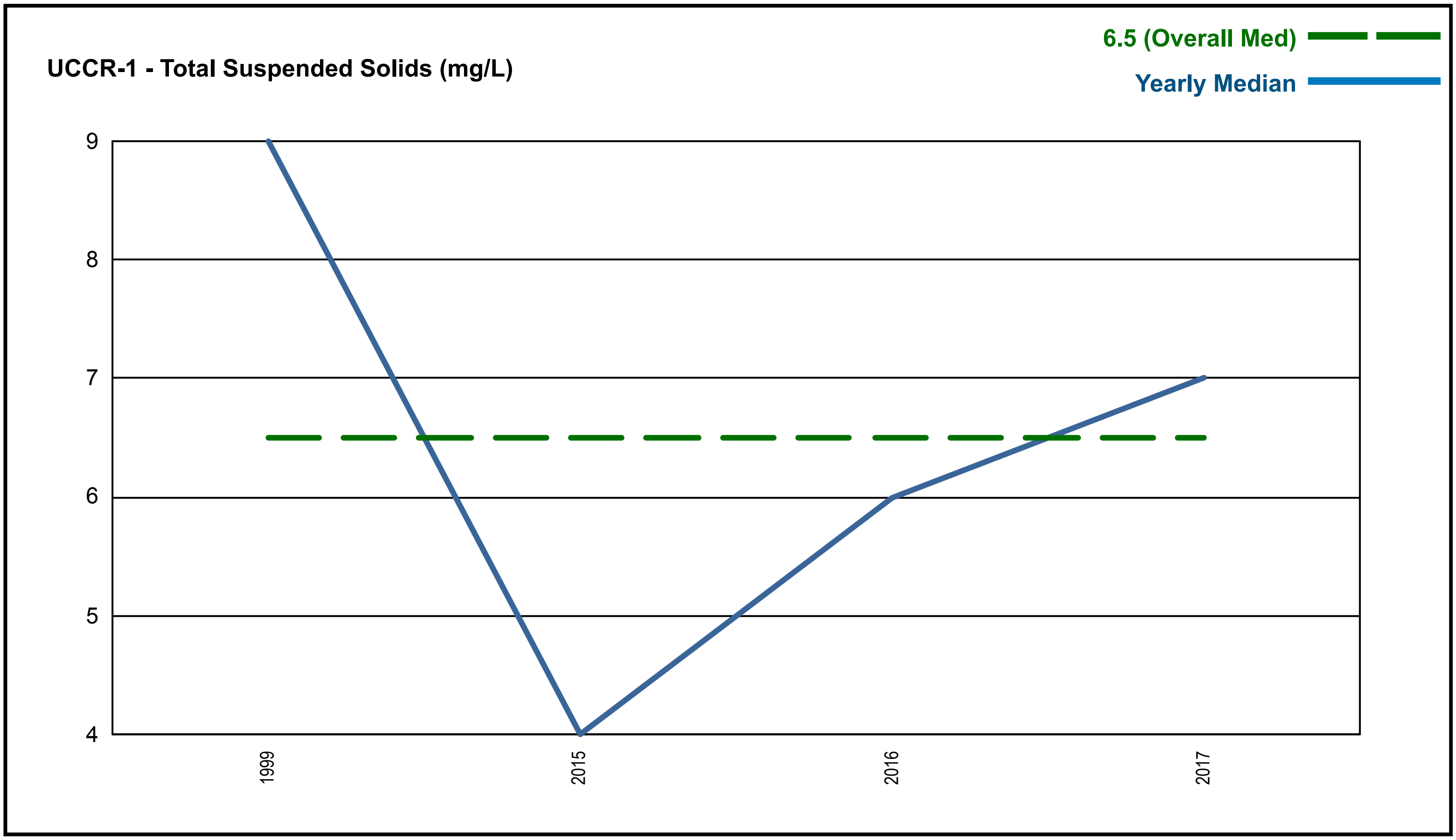
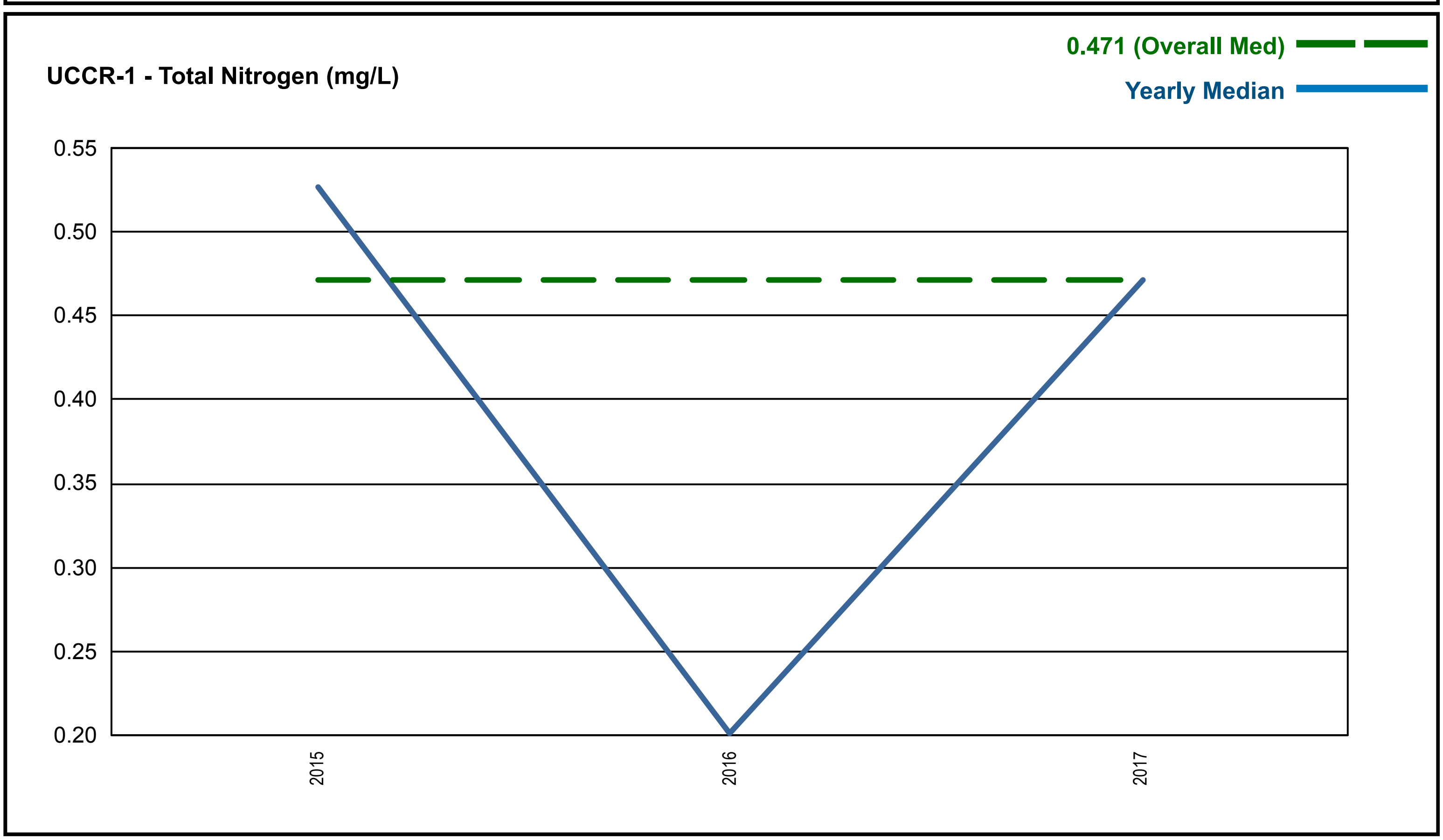
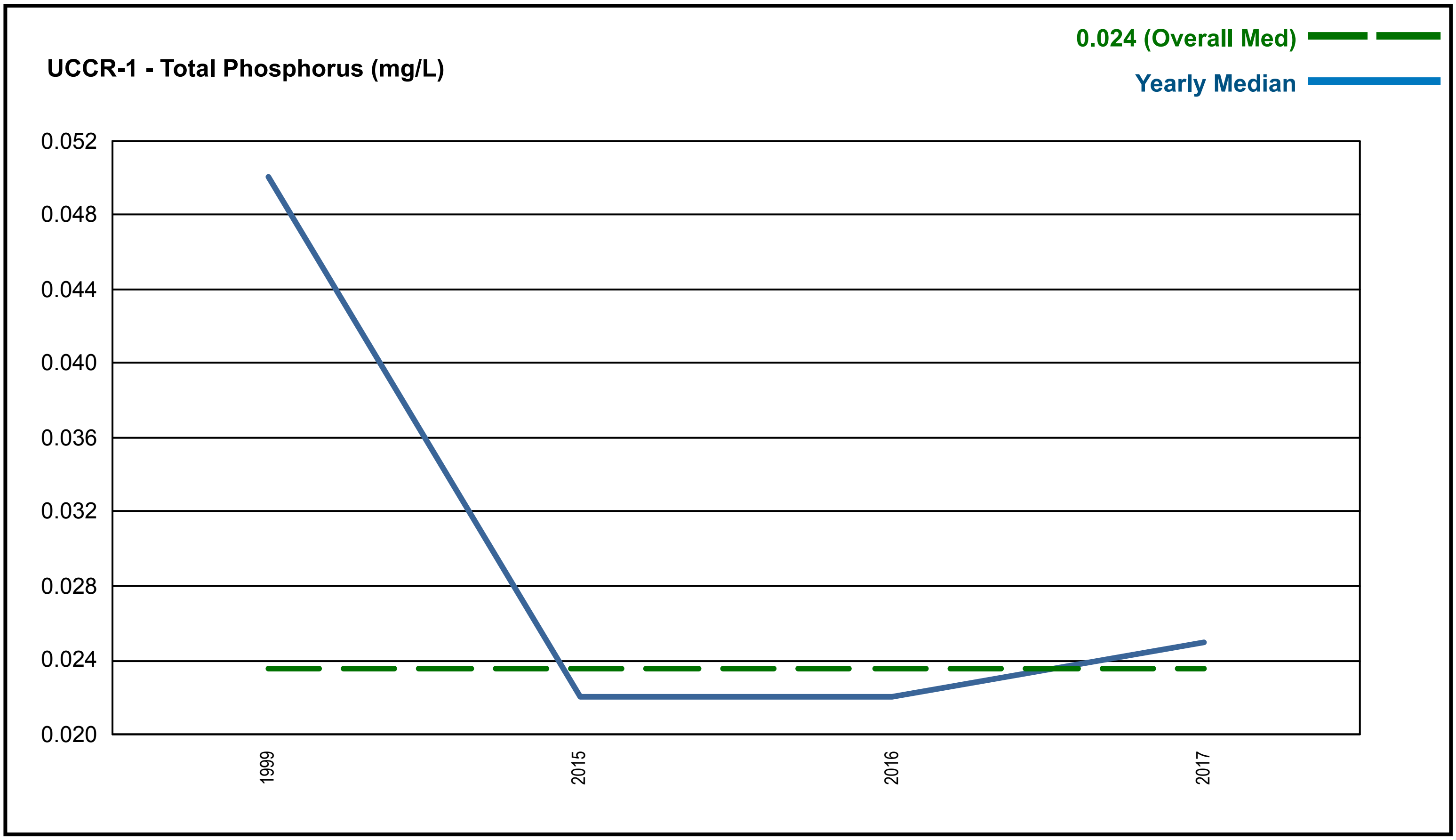




ADEM Ambient Trend Stations - Sampled 1977 - 2018



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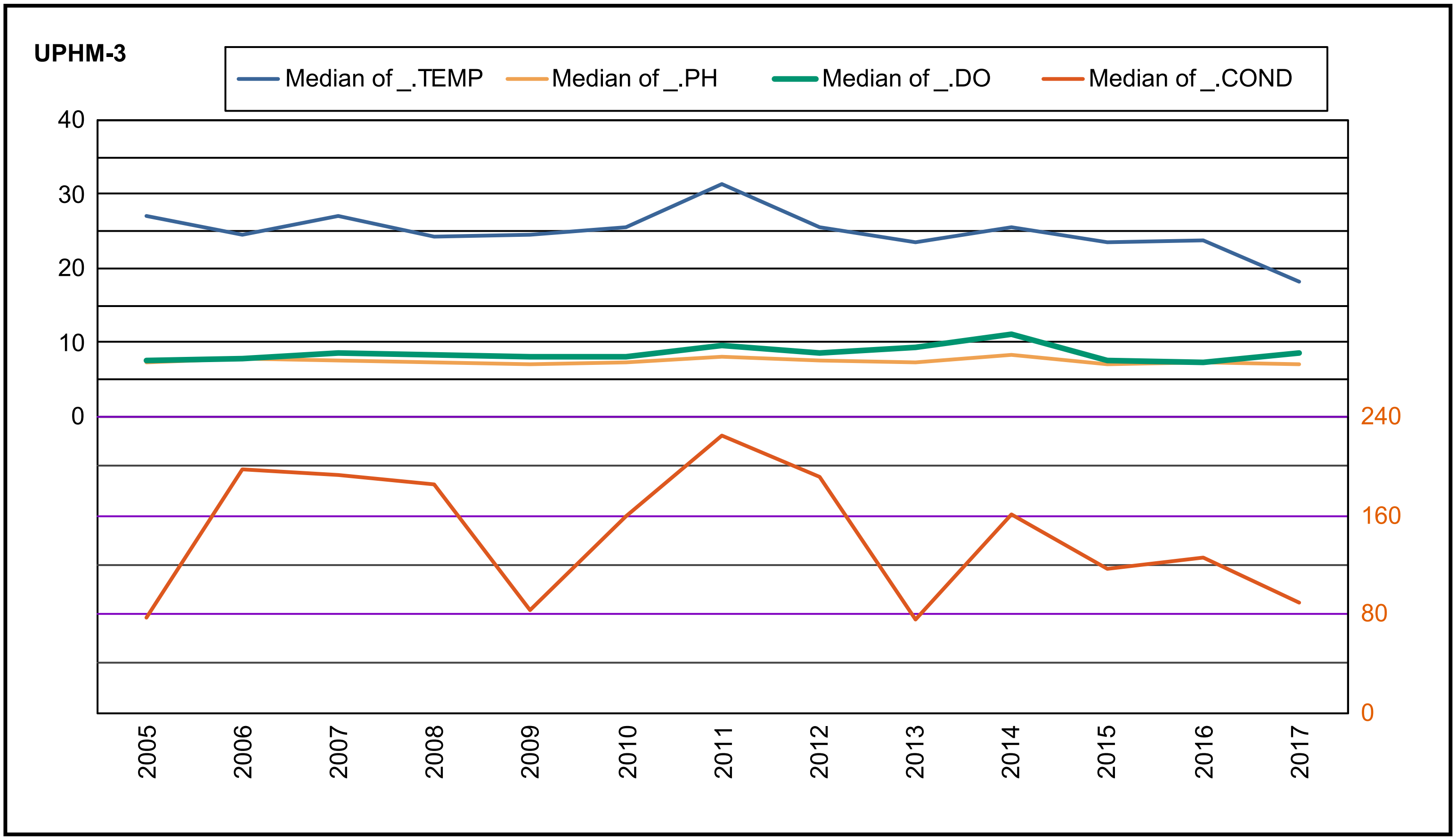

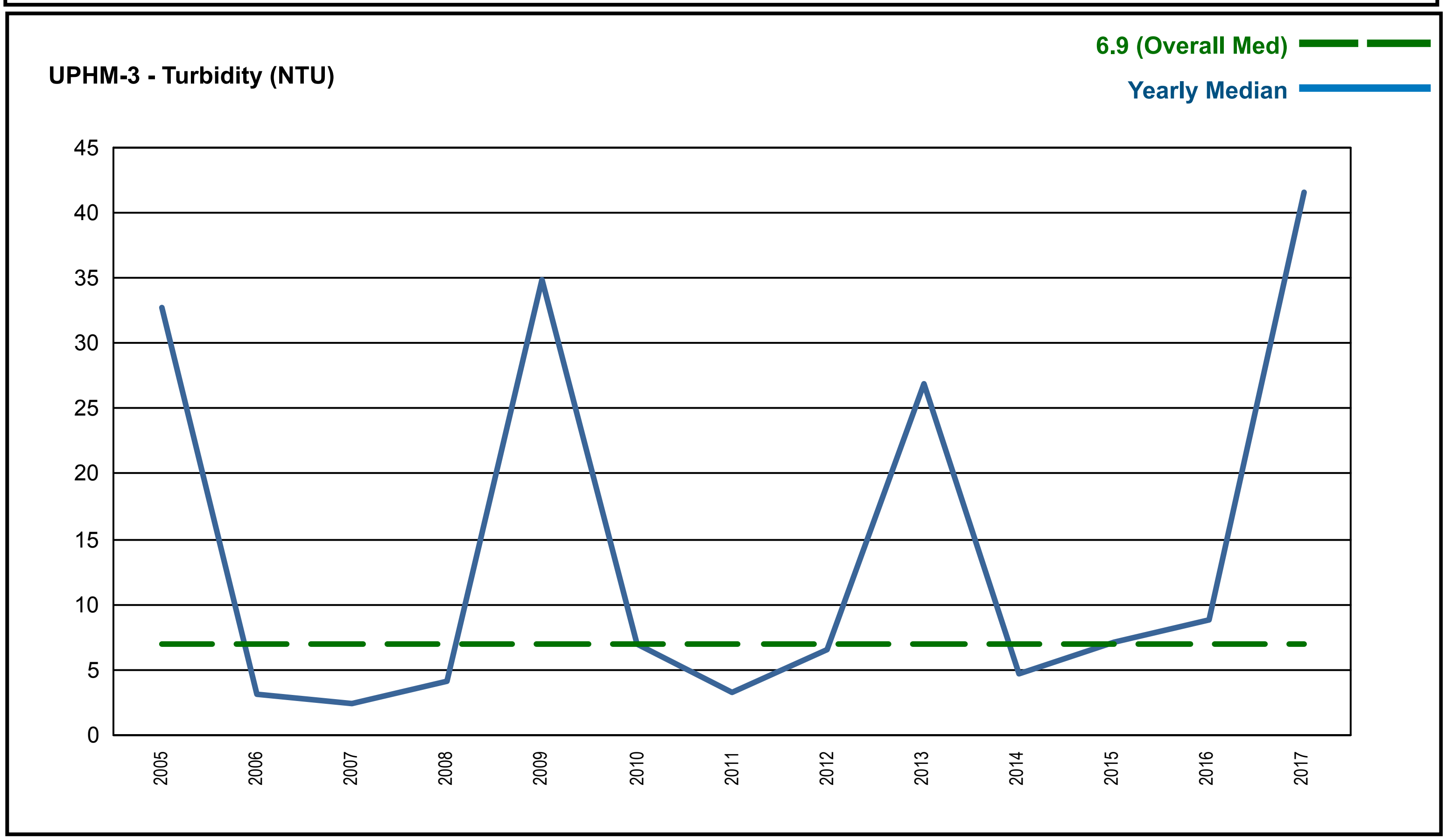

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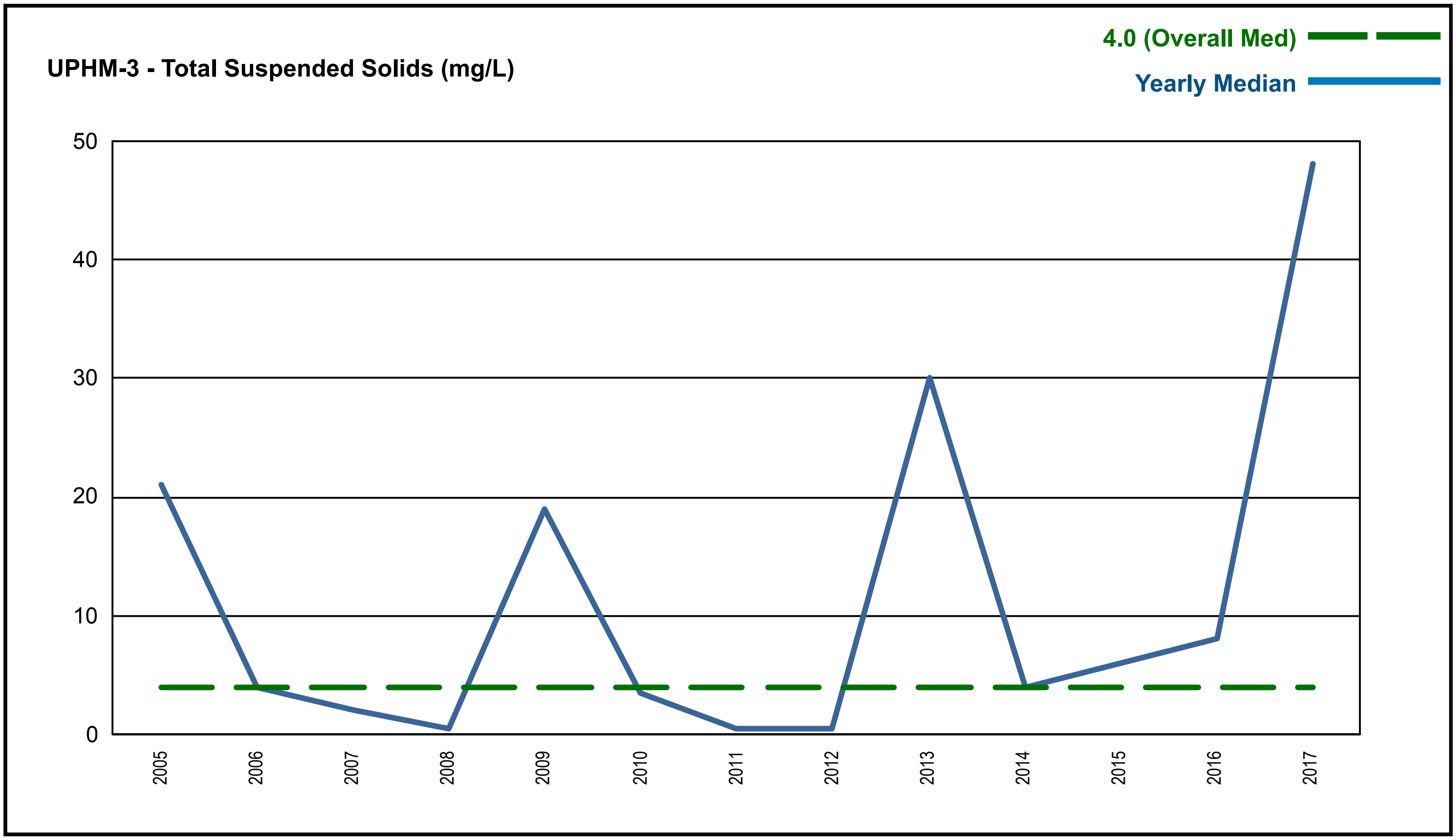

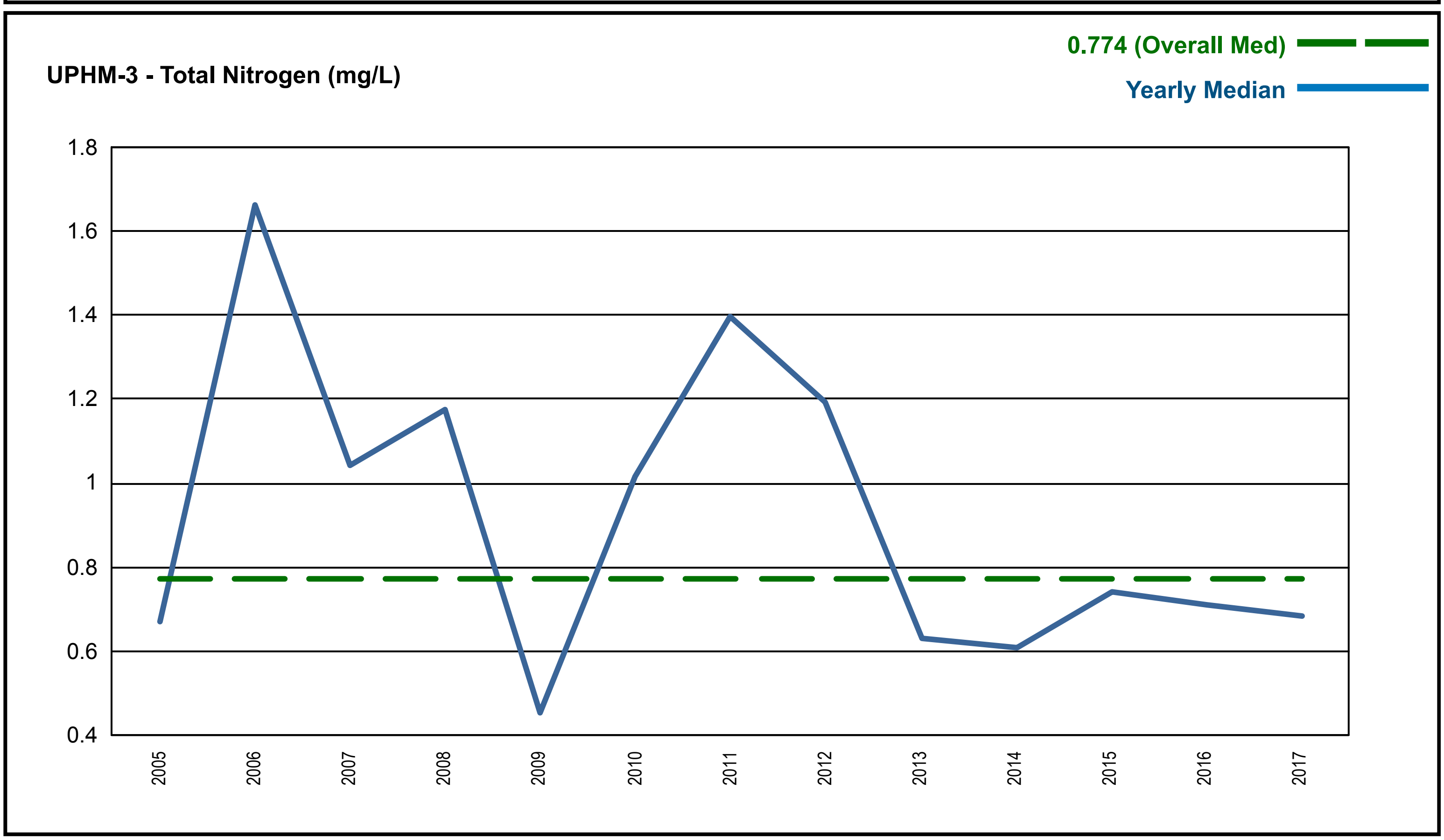

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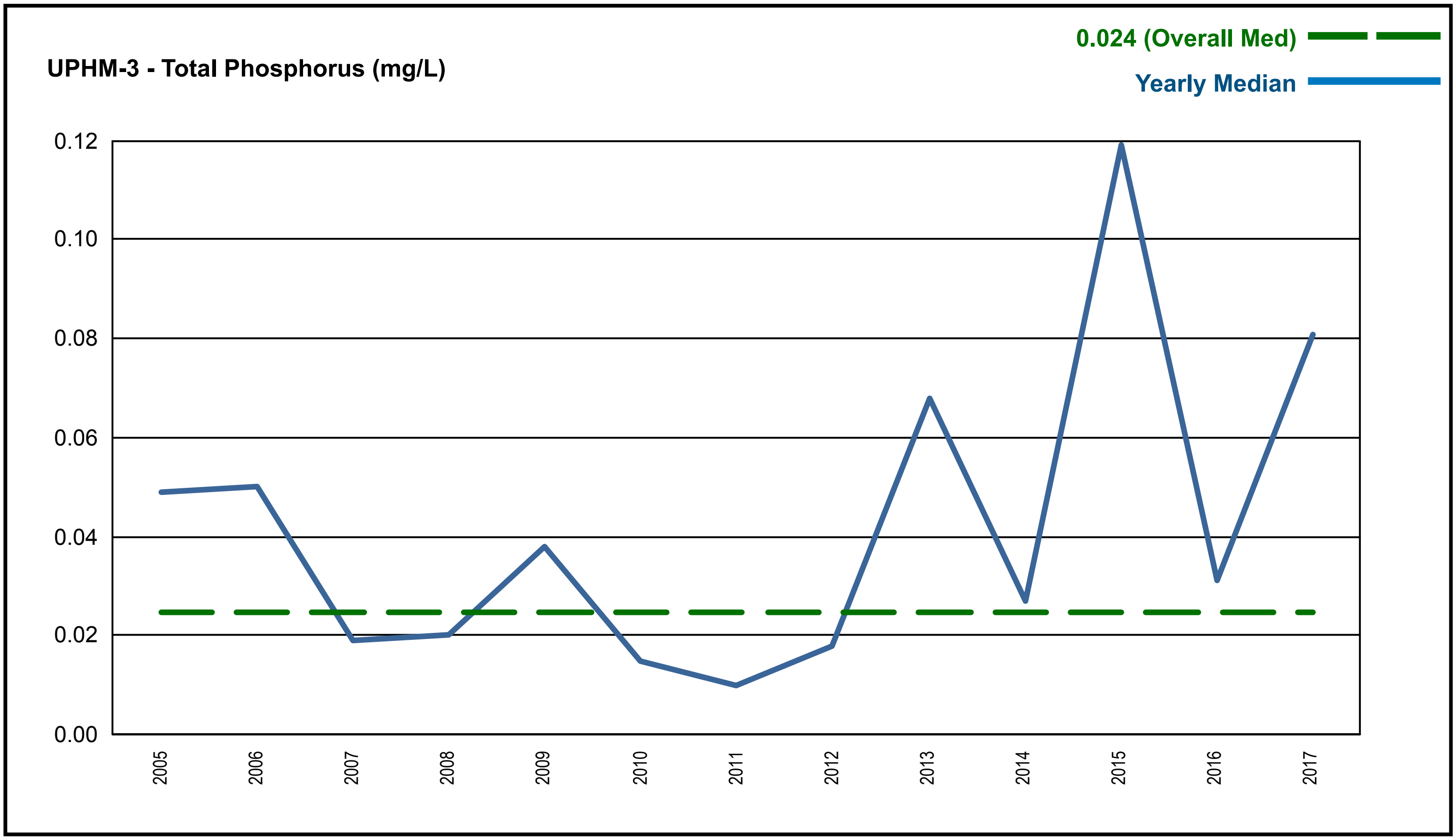

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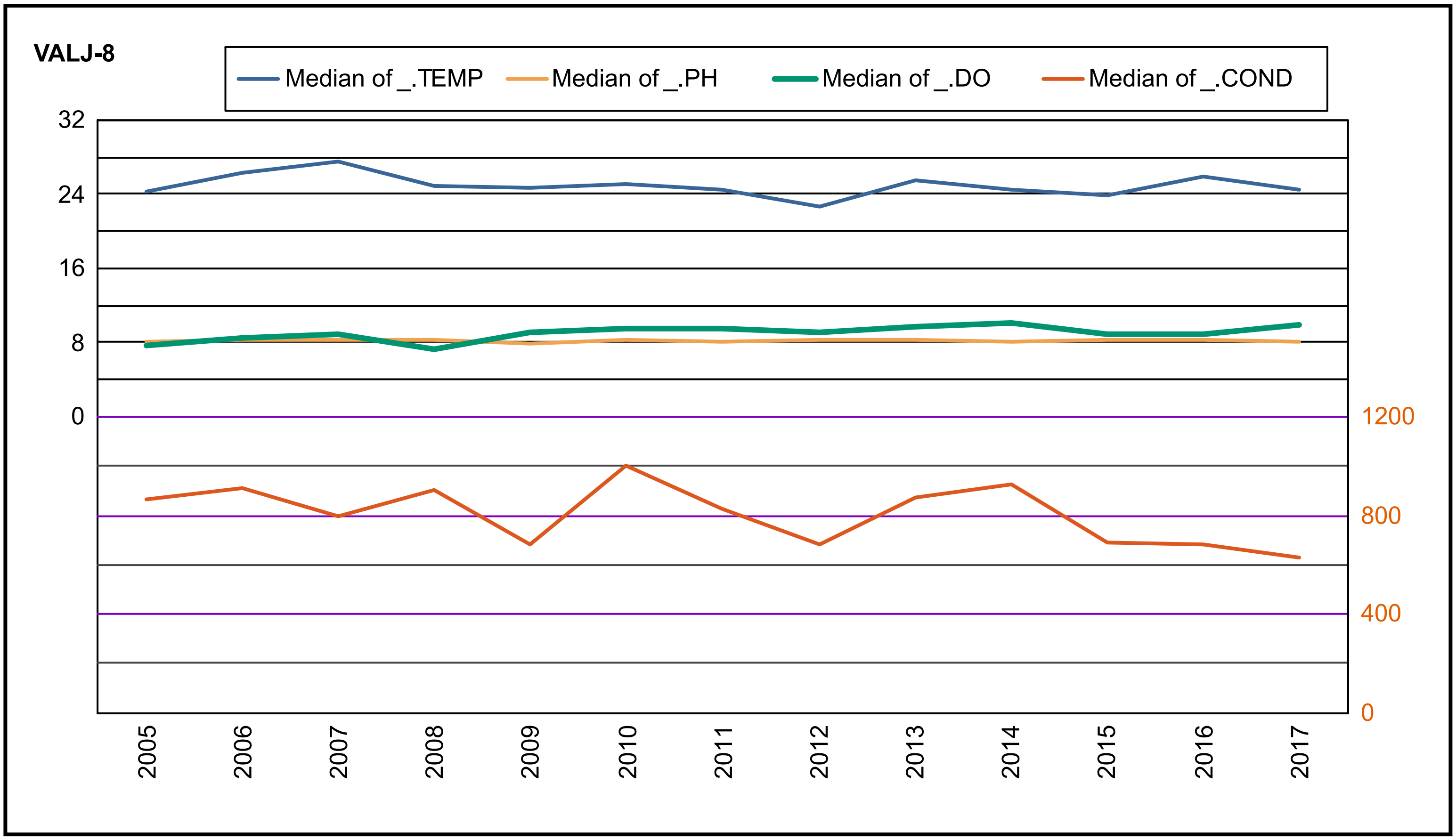

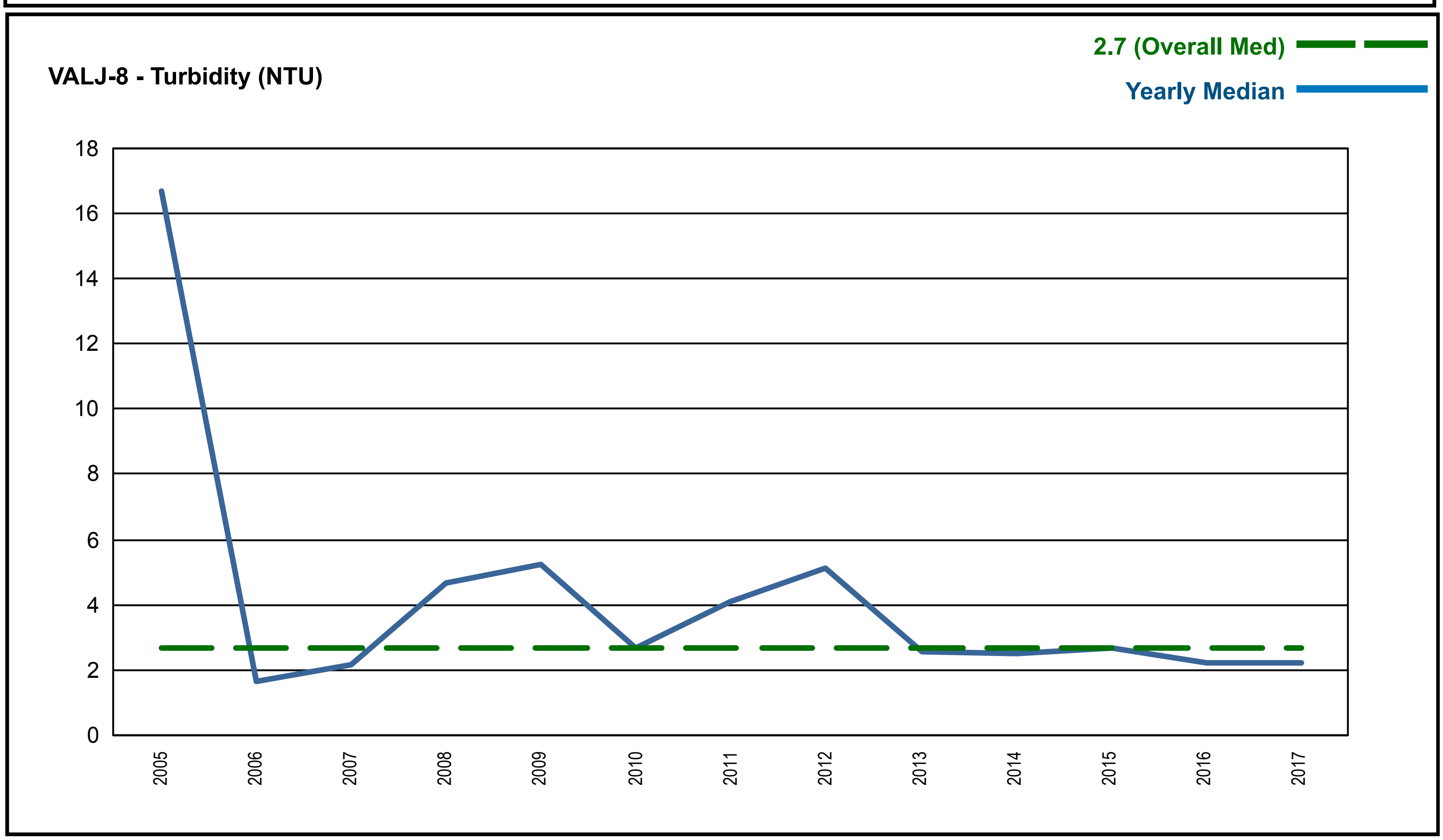

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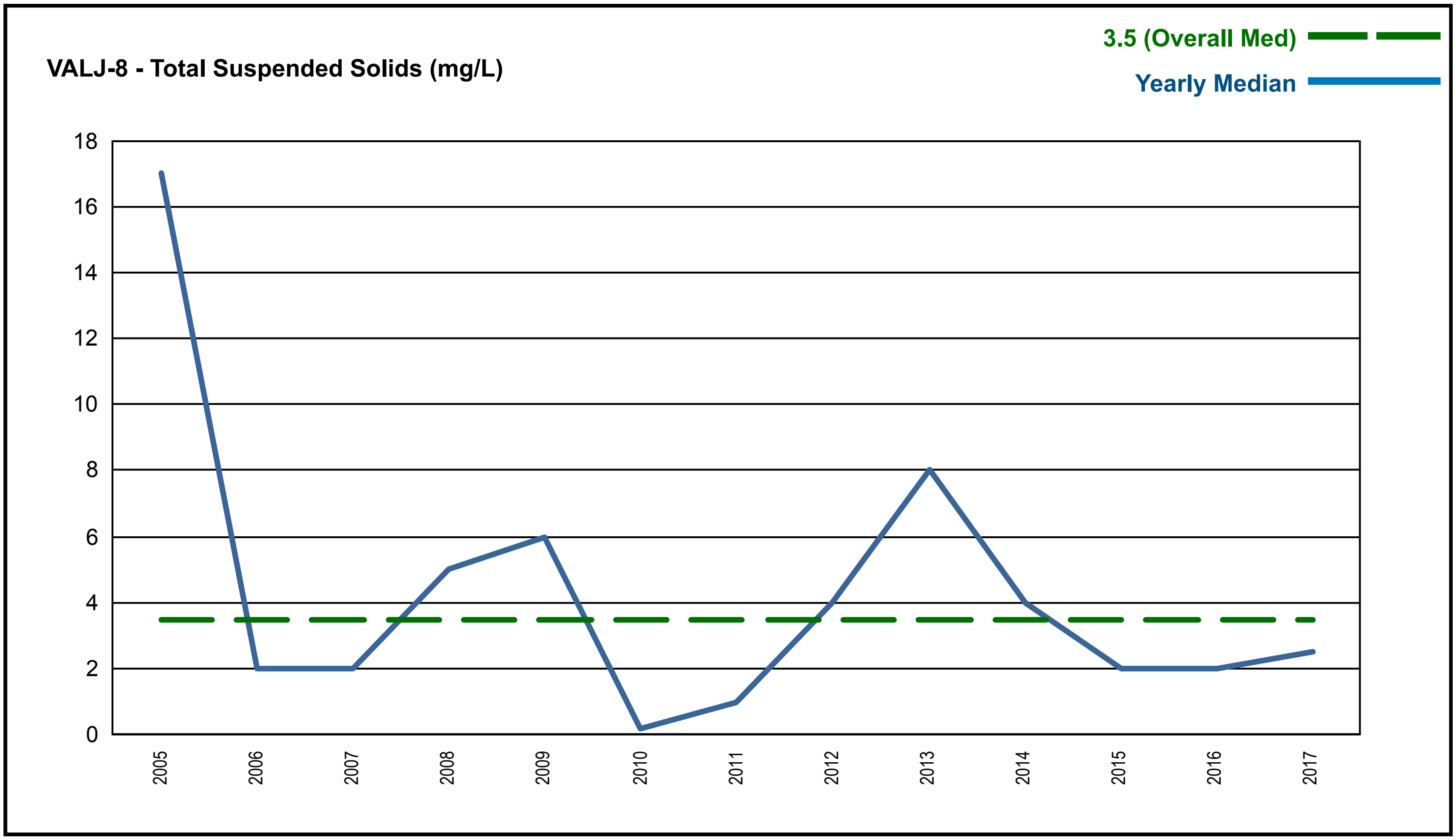

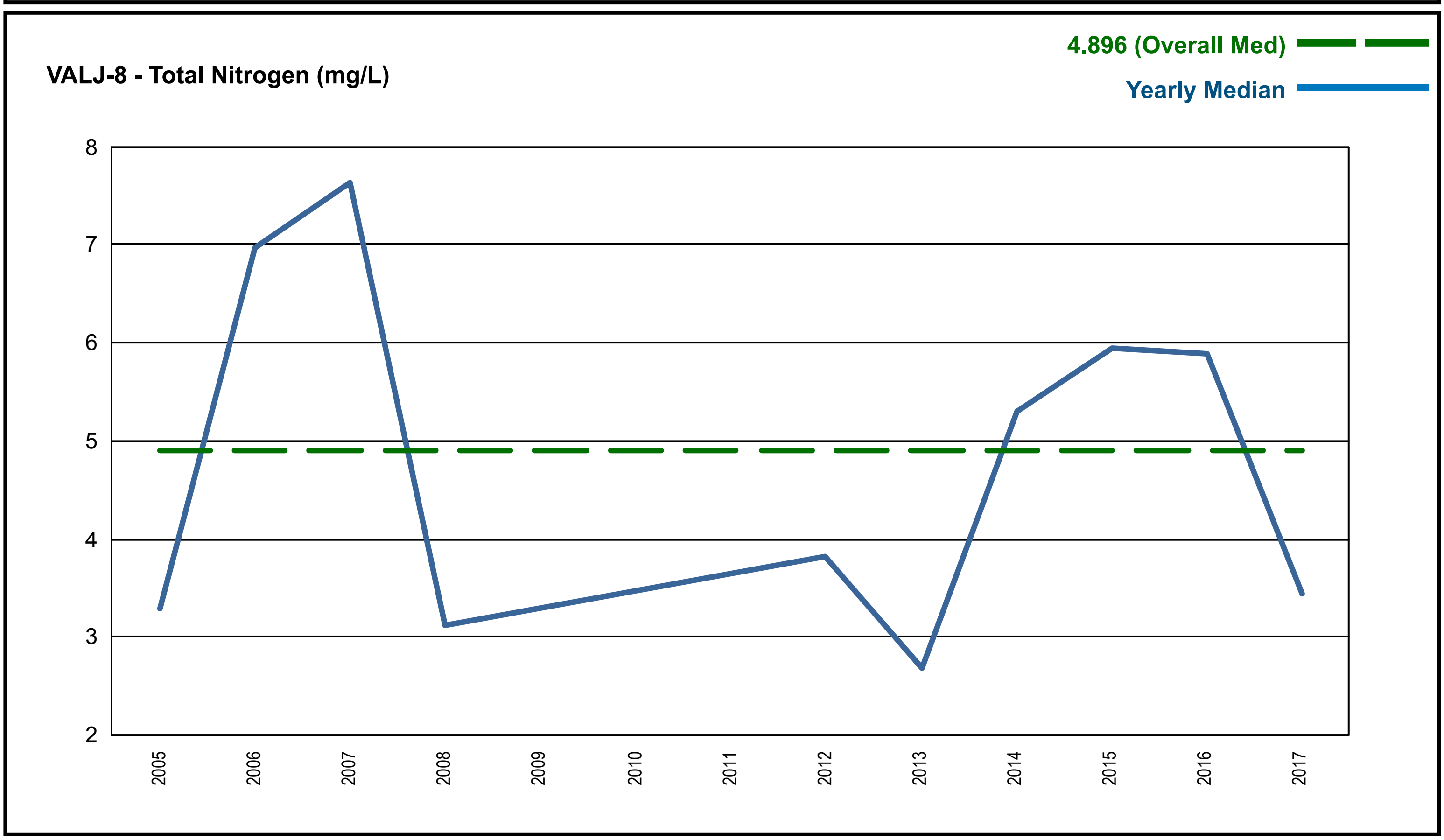

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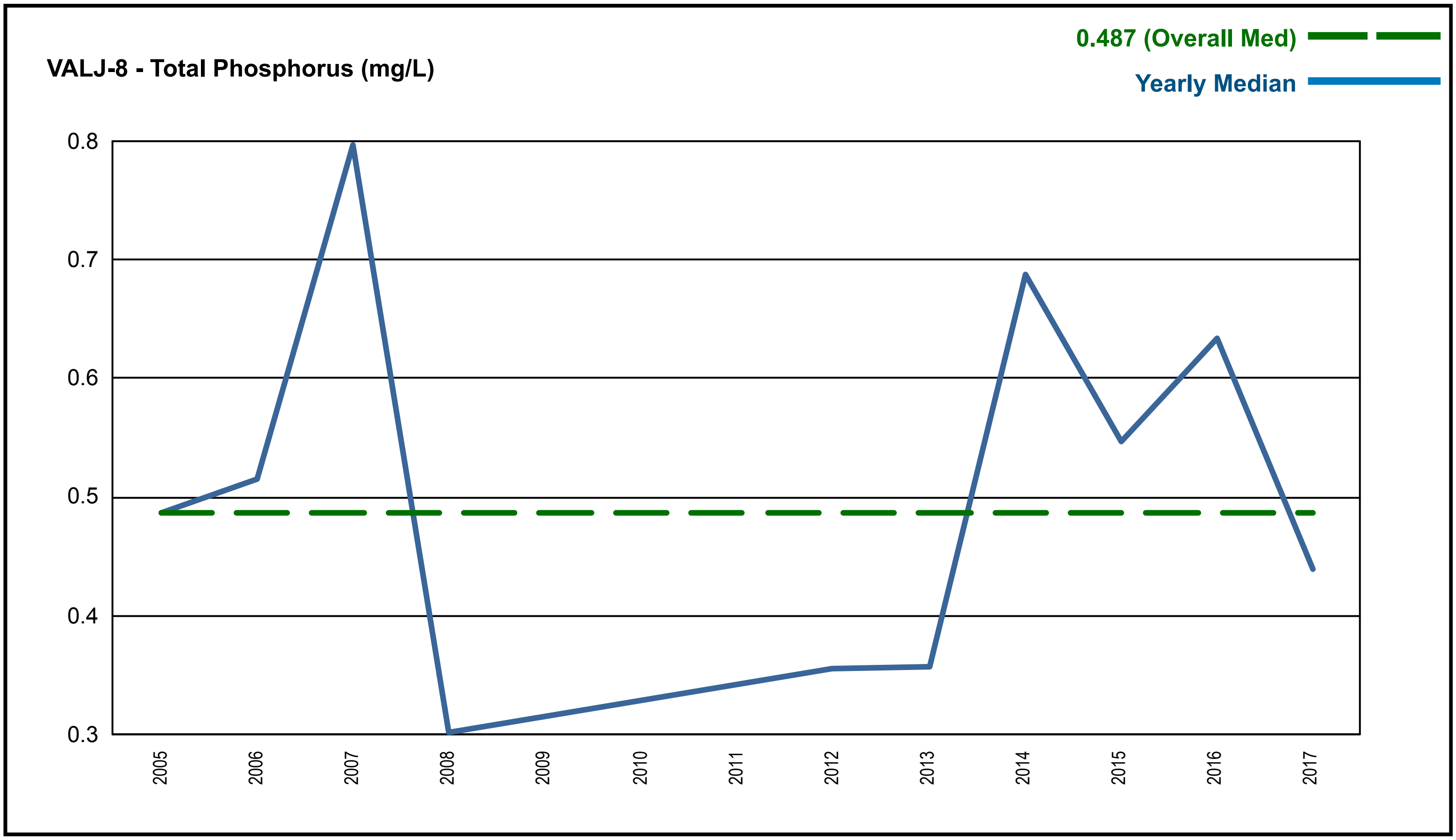

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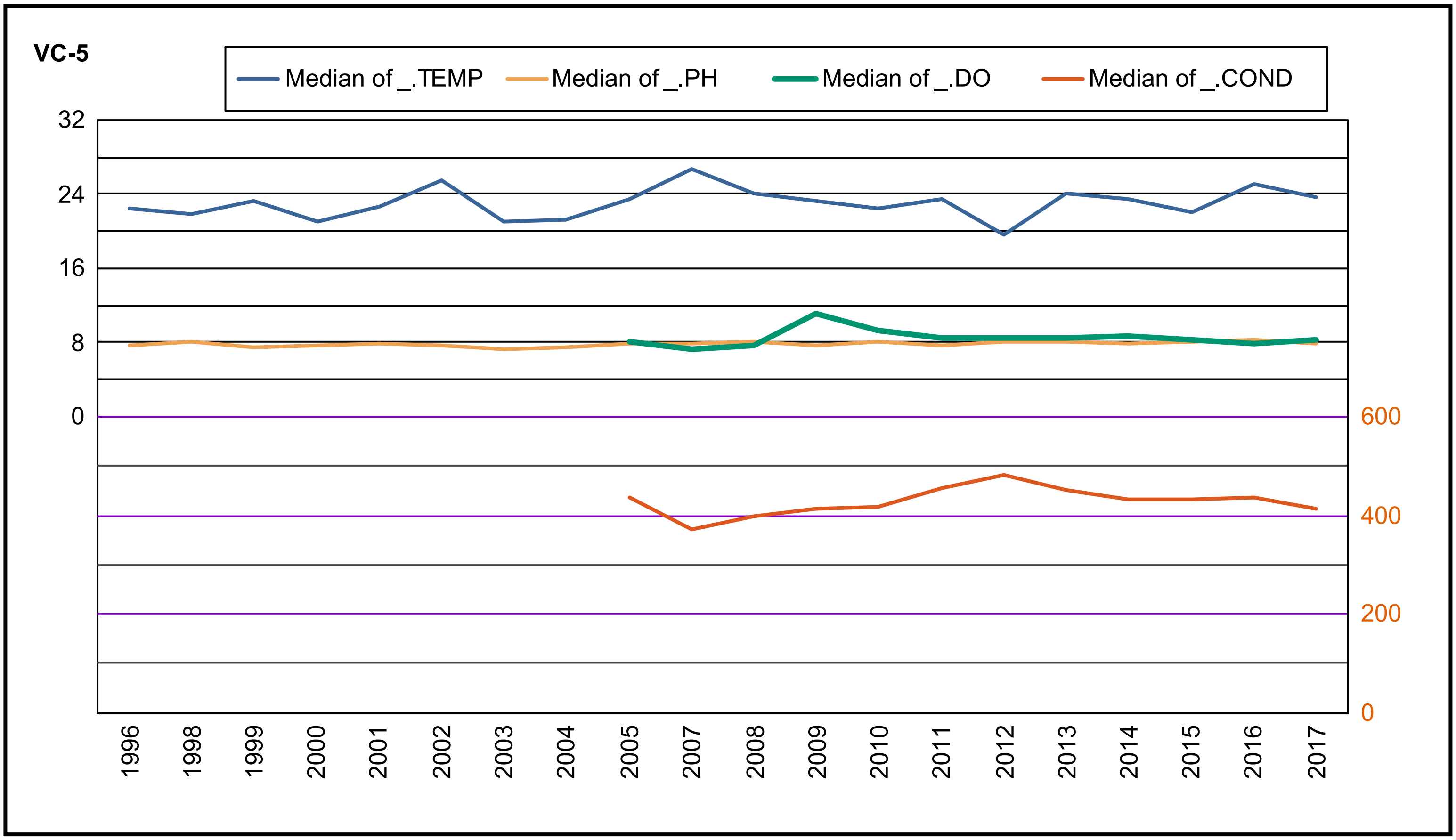

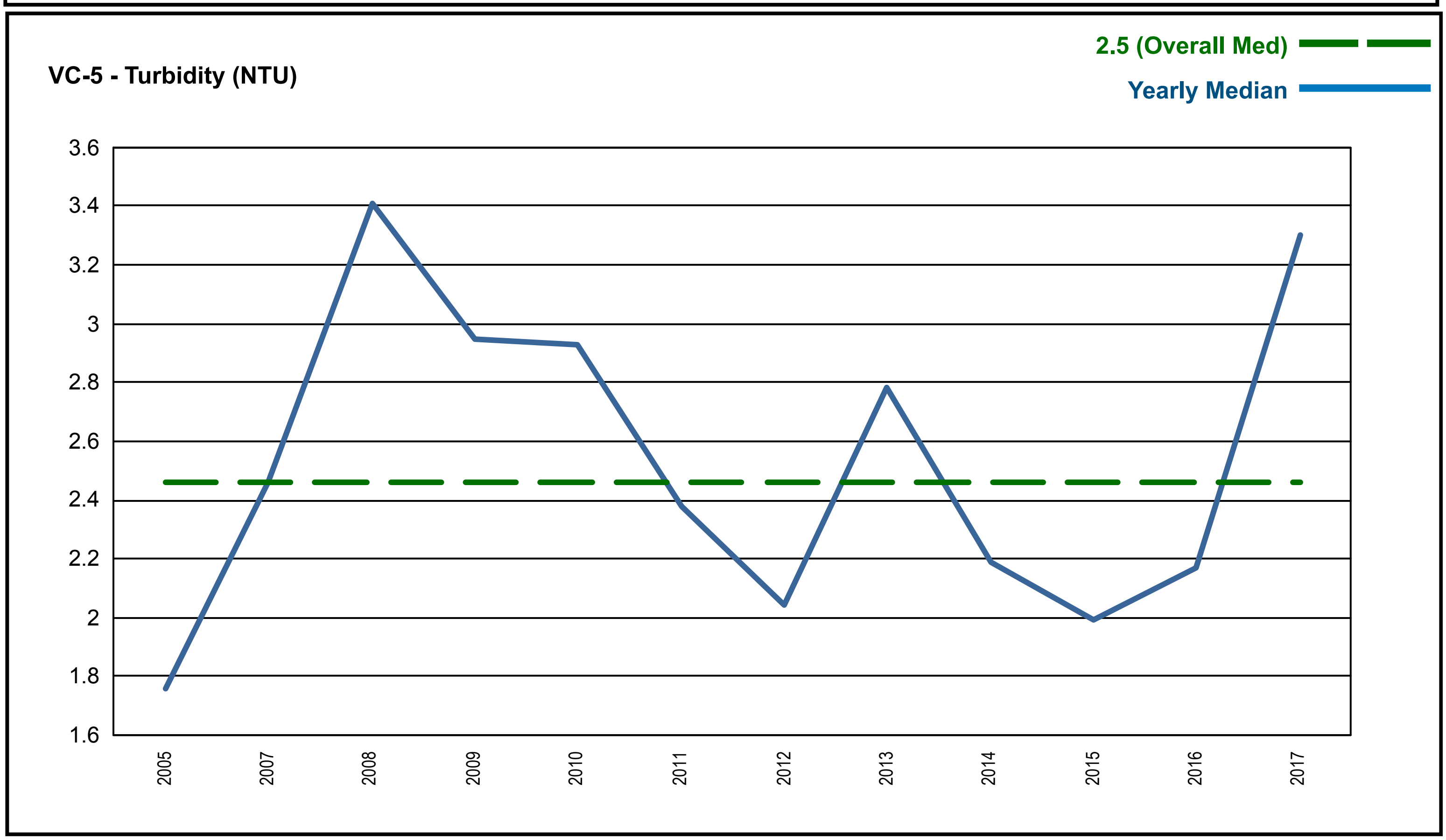

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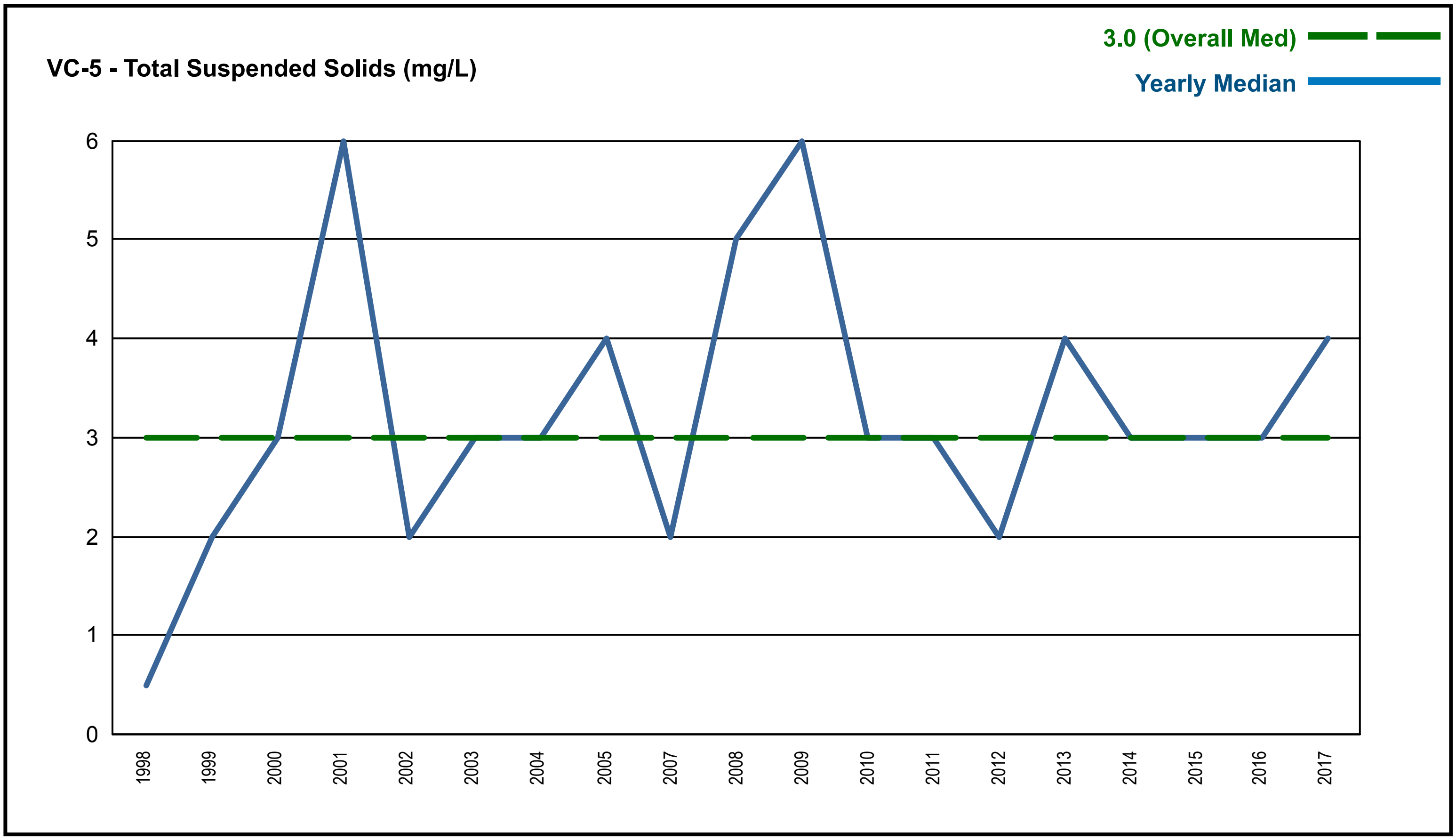

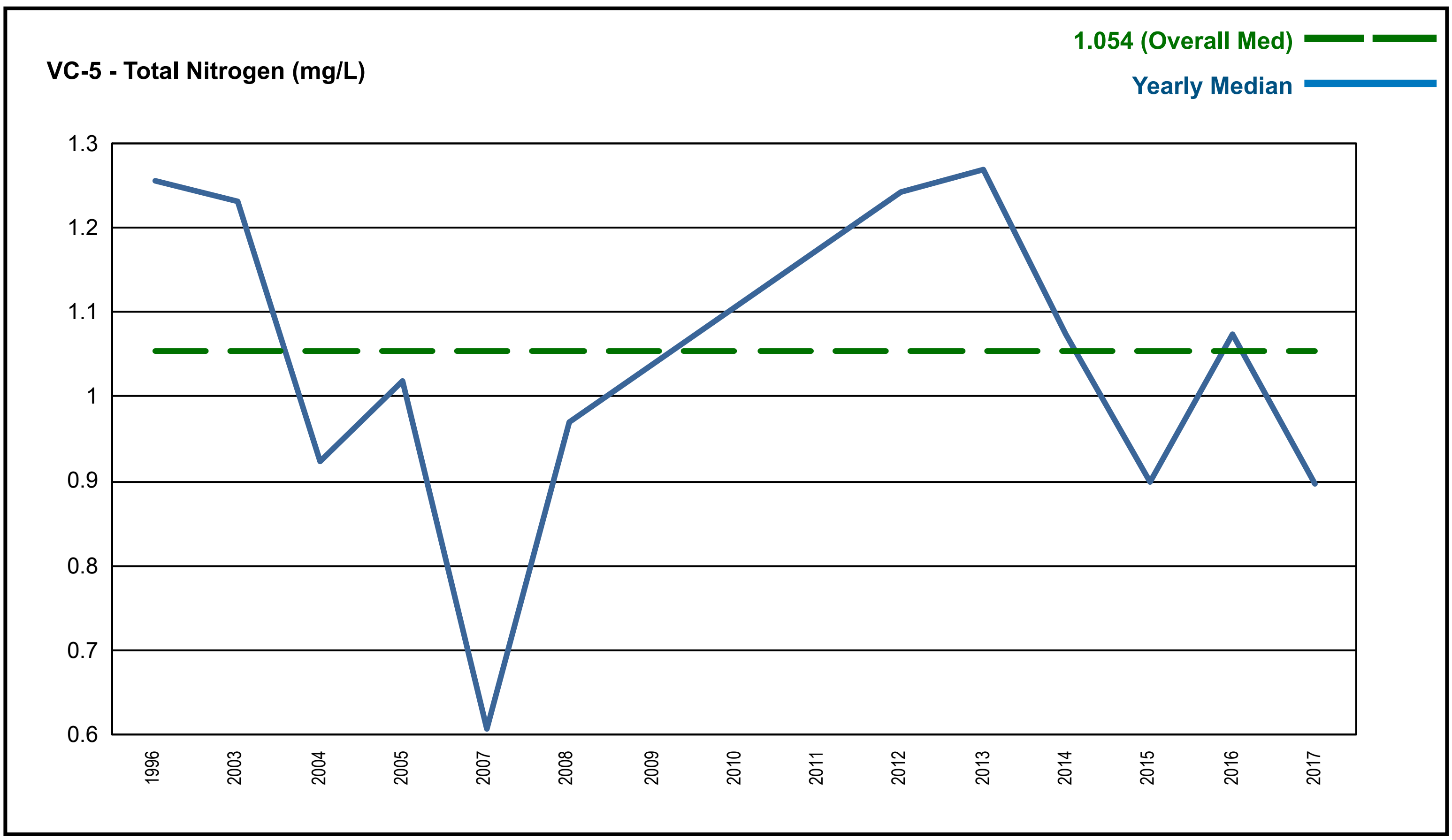

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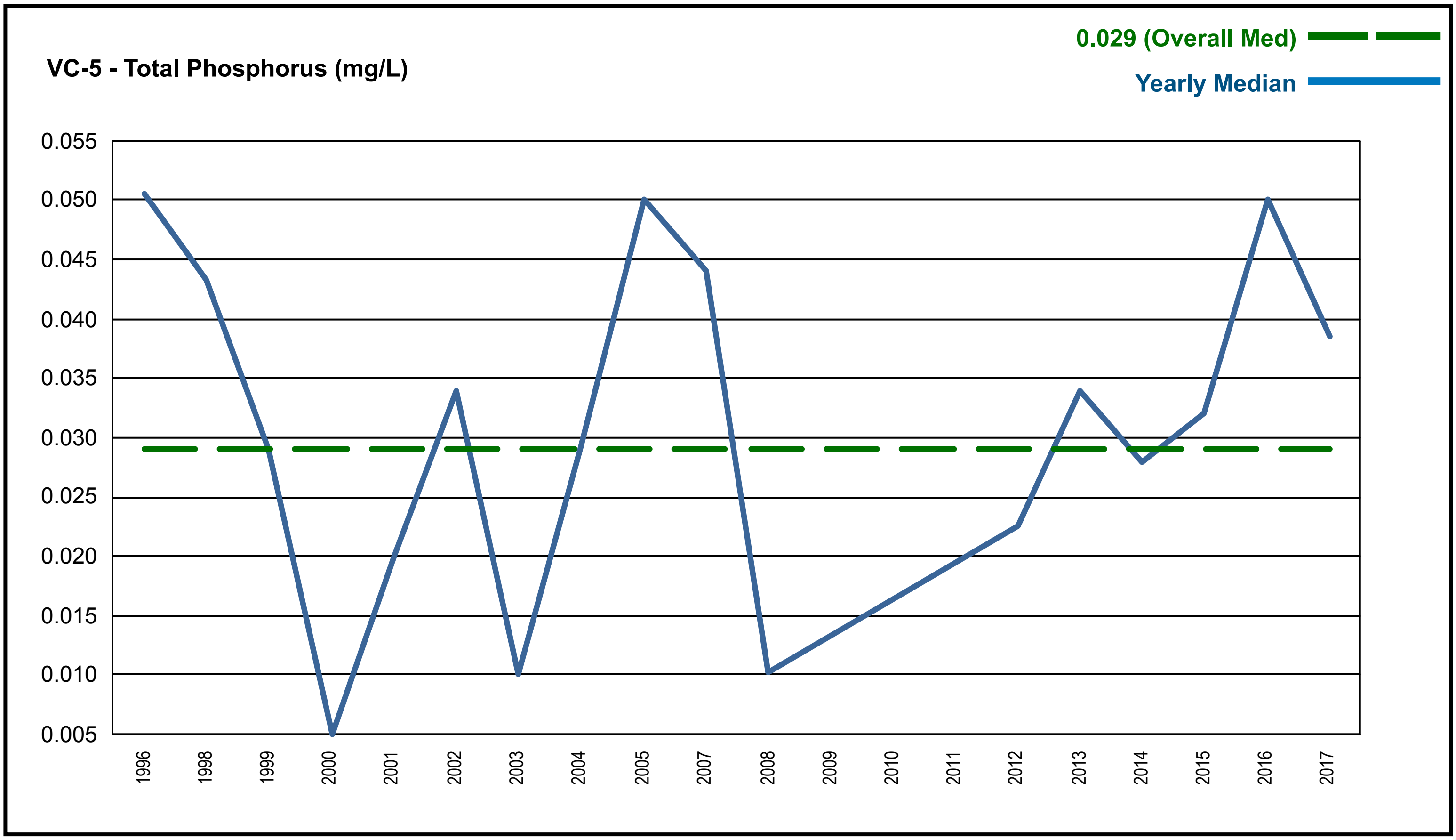

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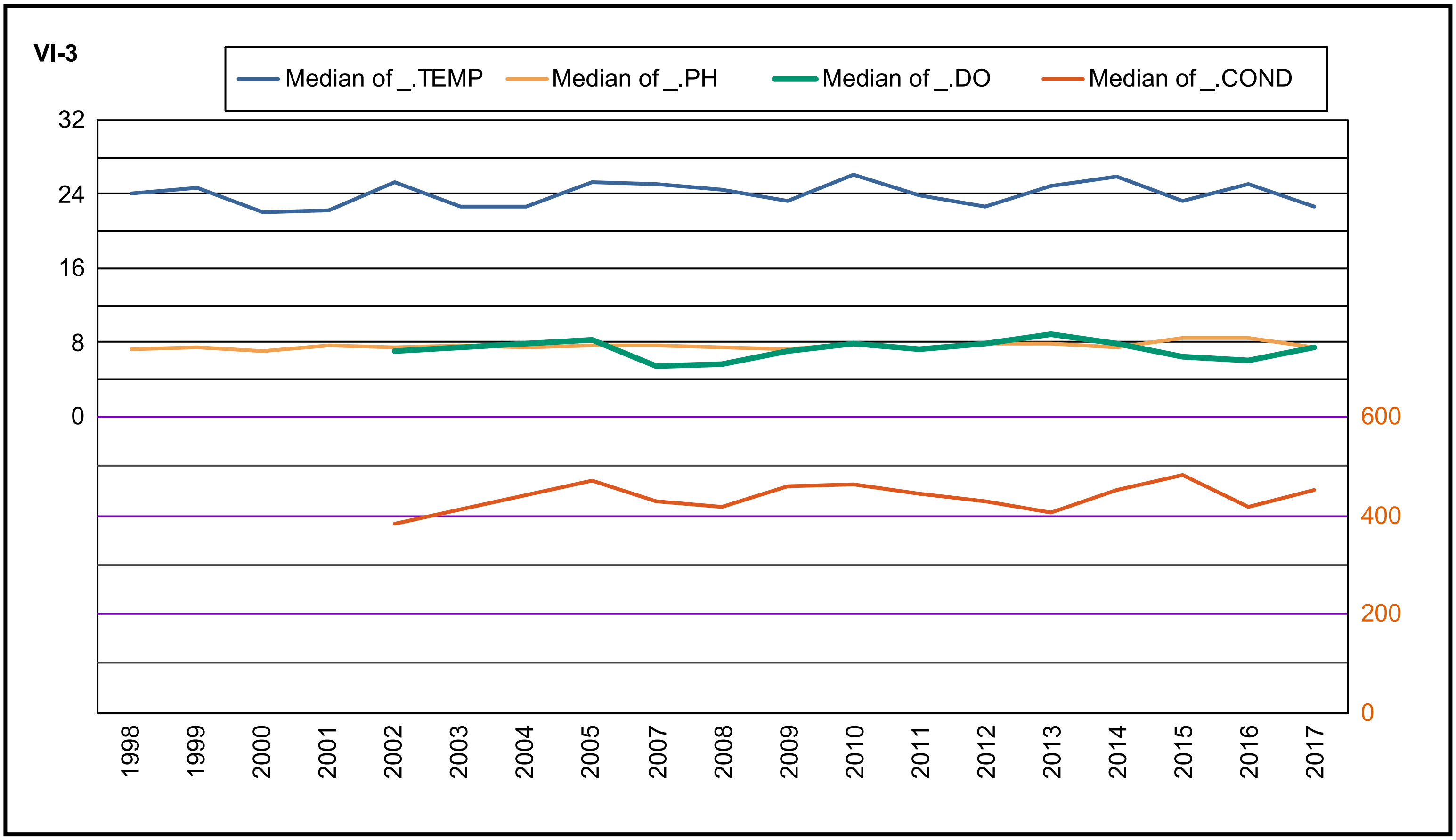

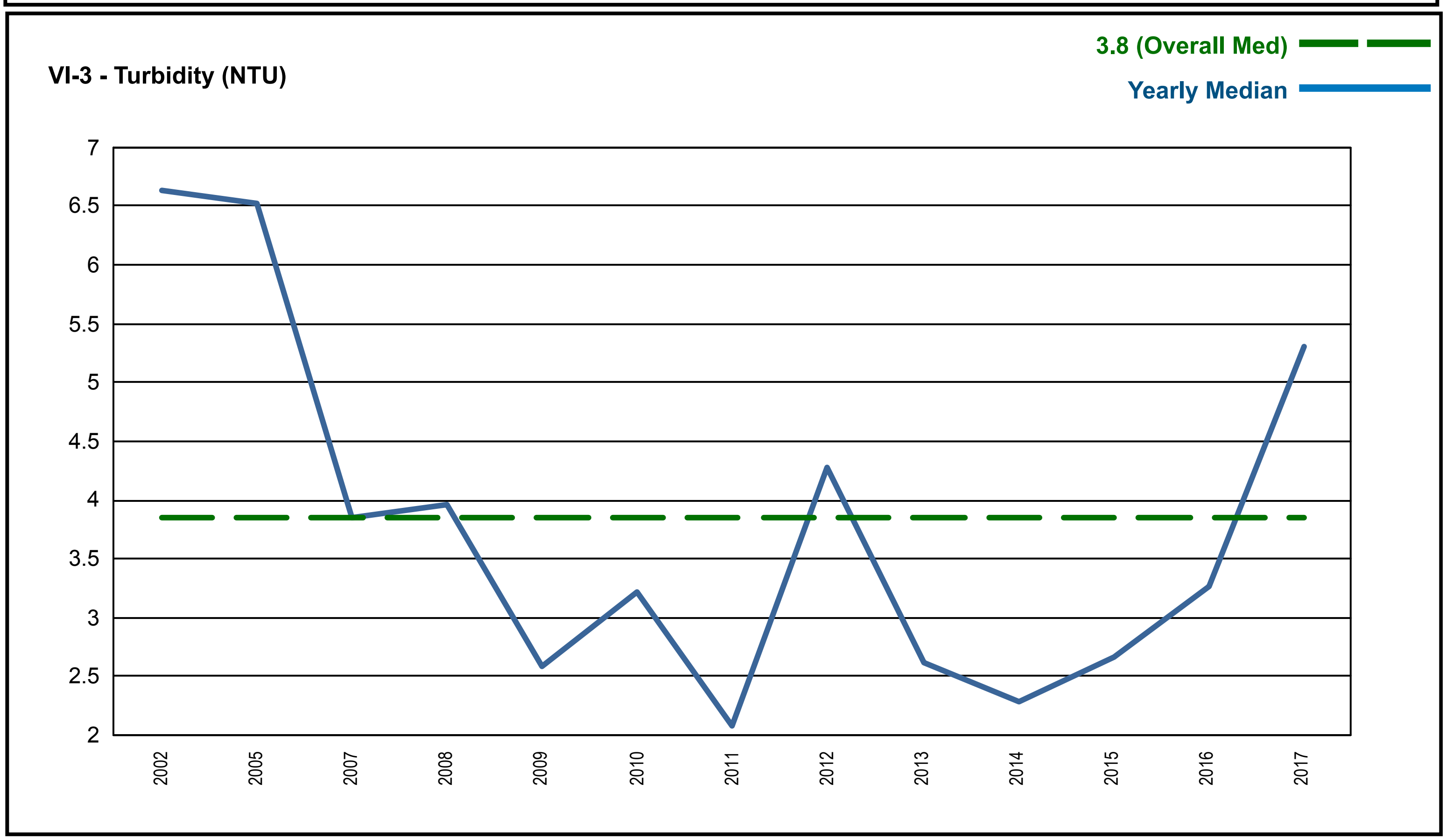

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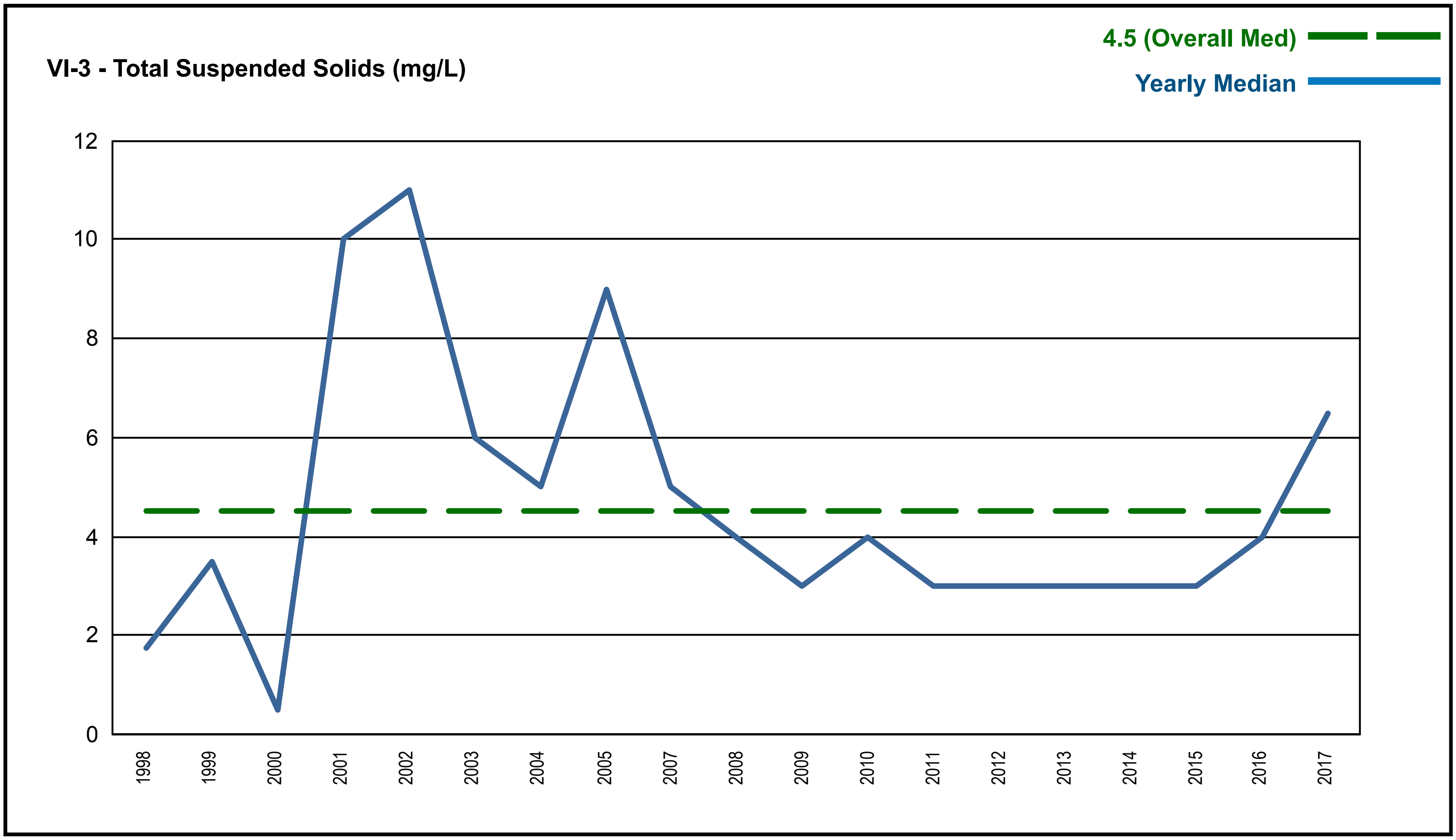

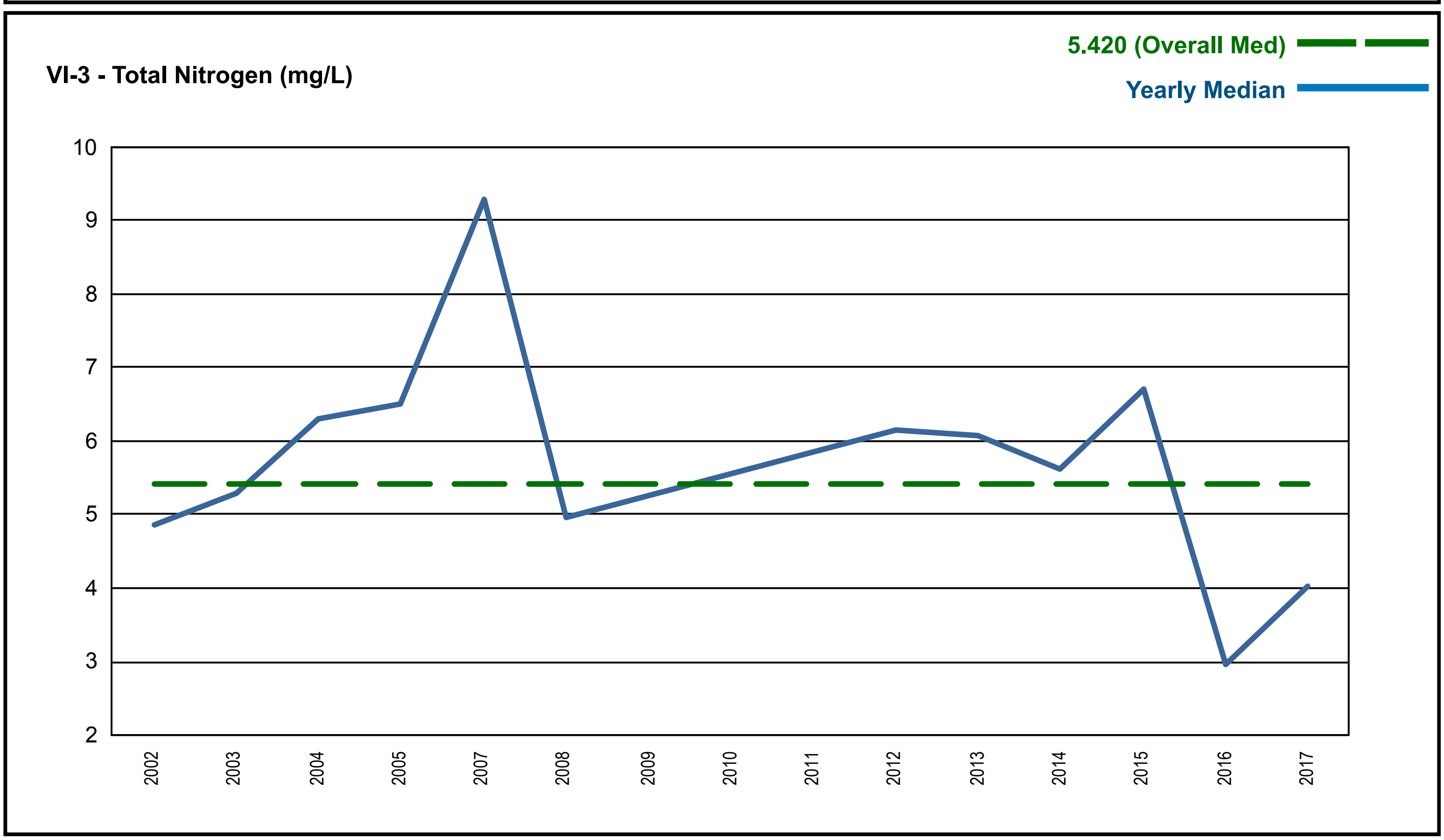

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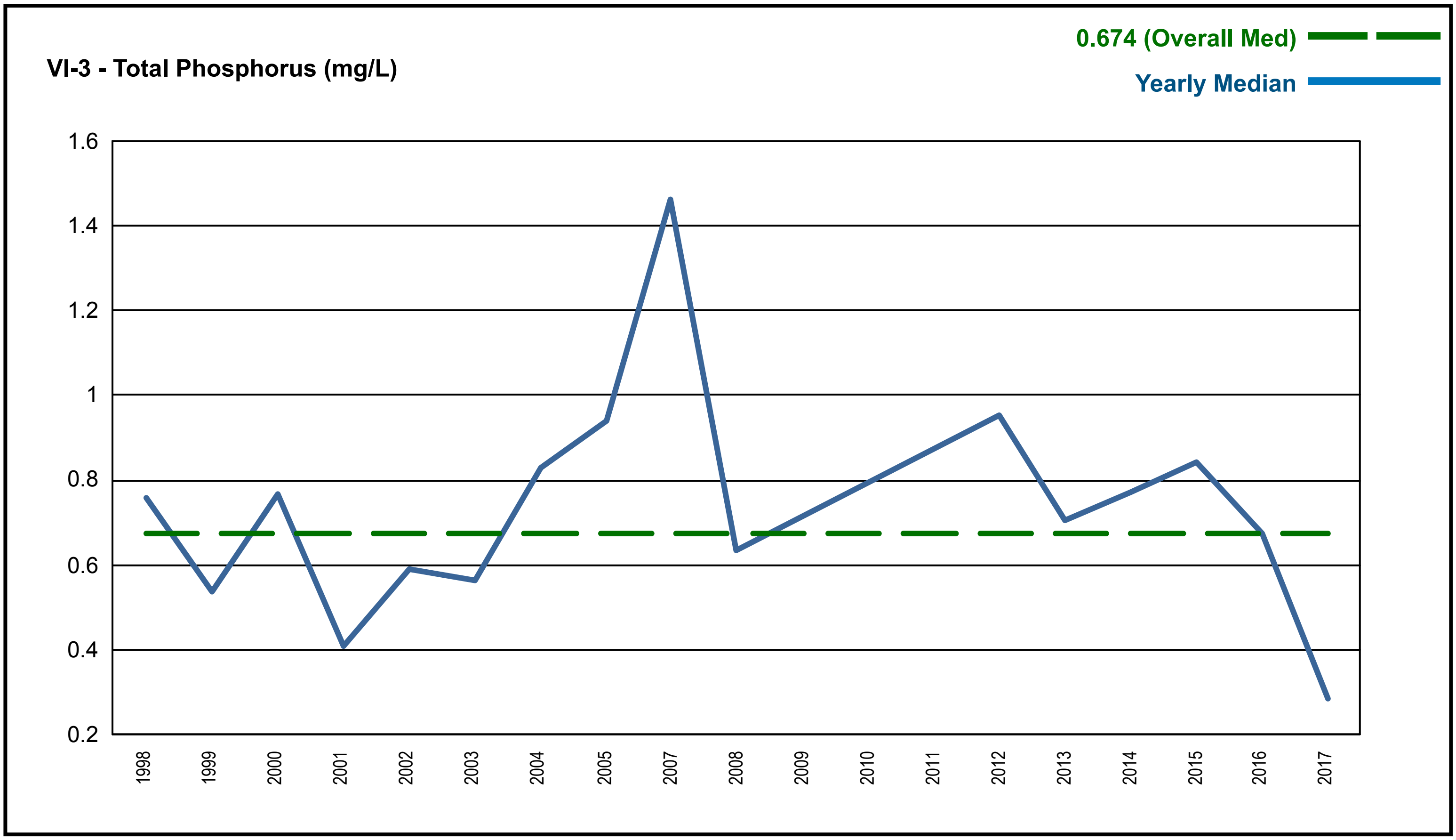

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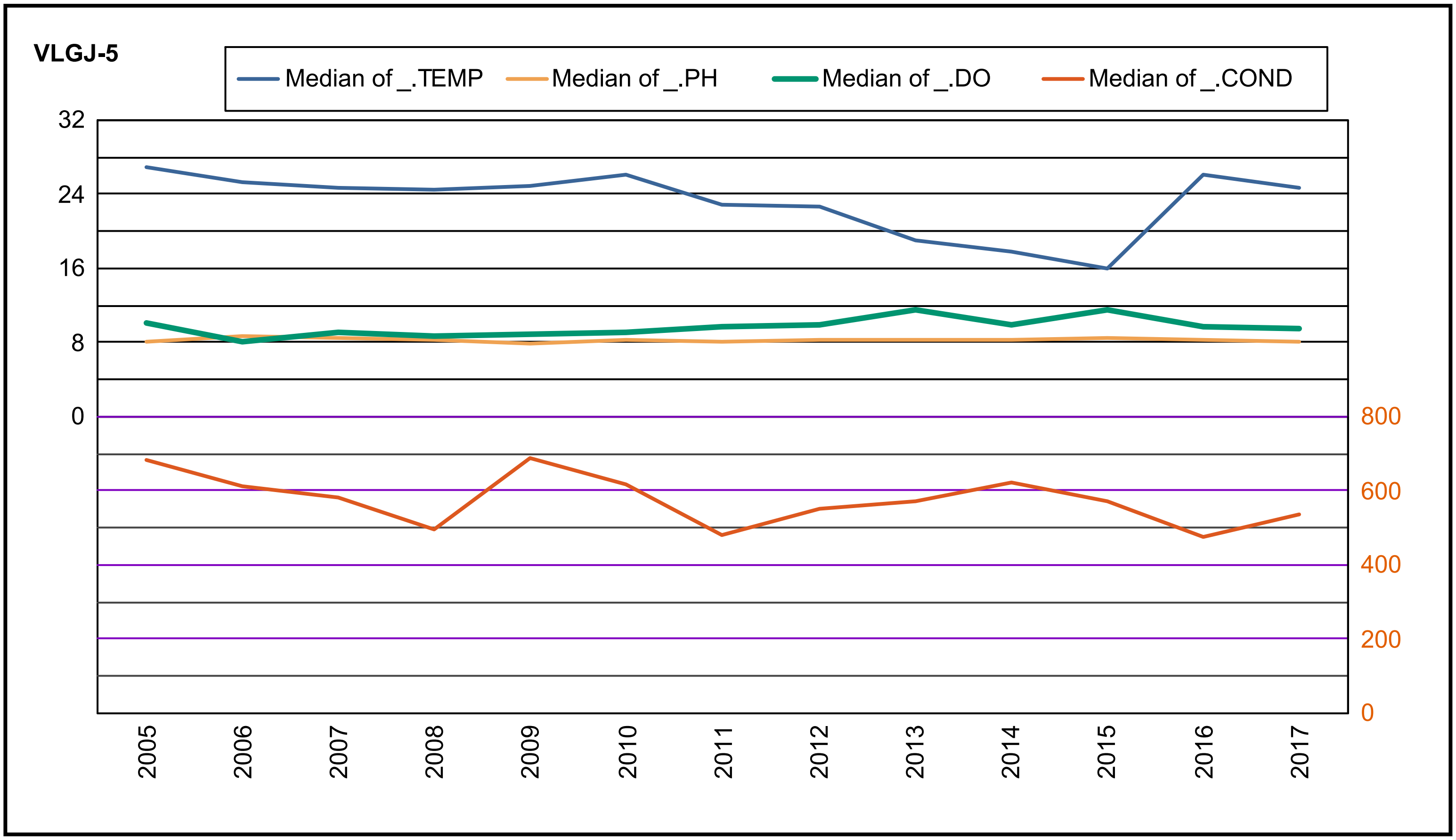

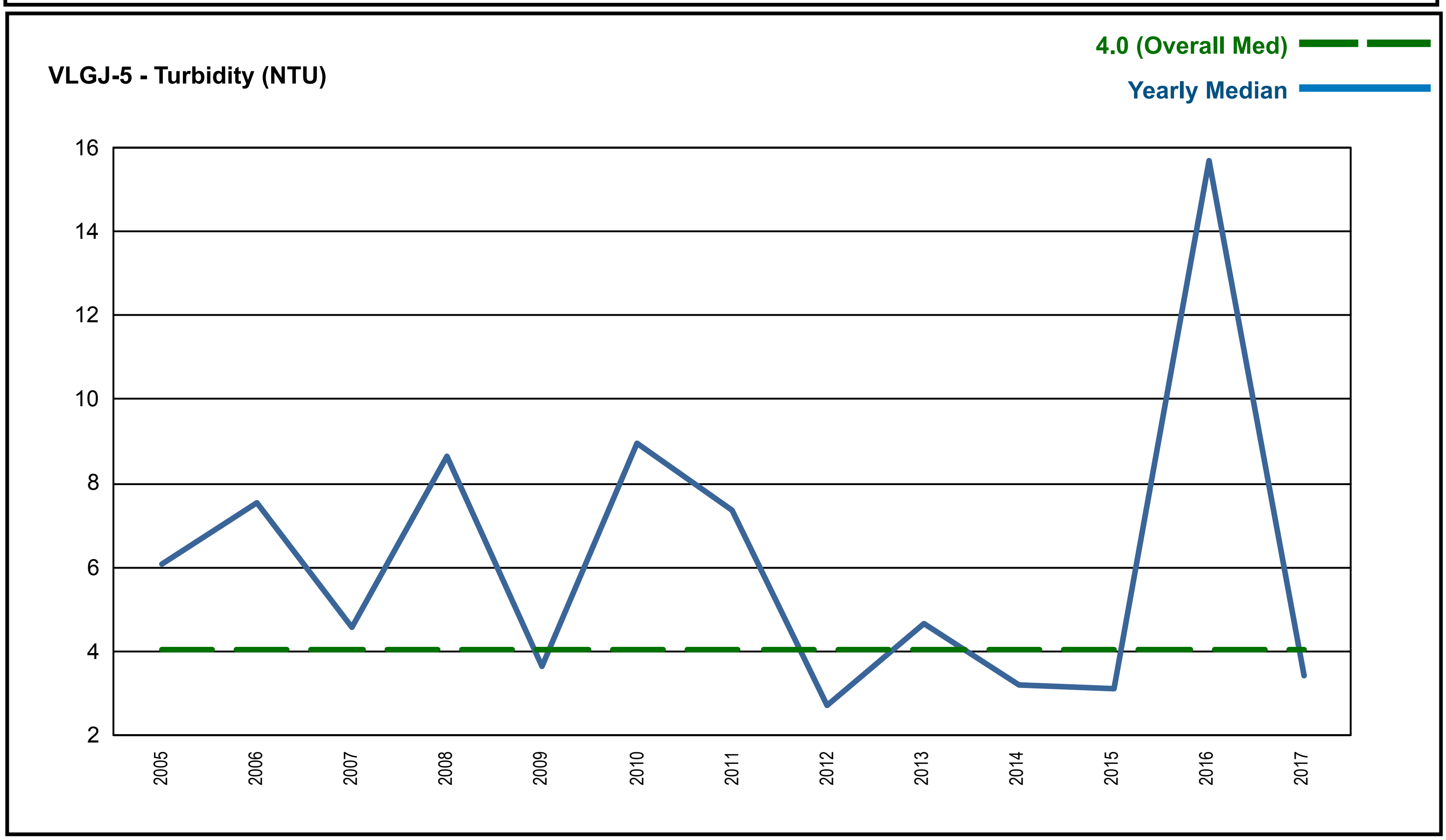

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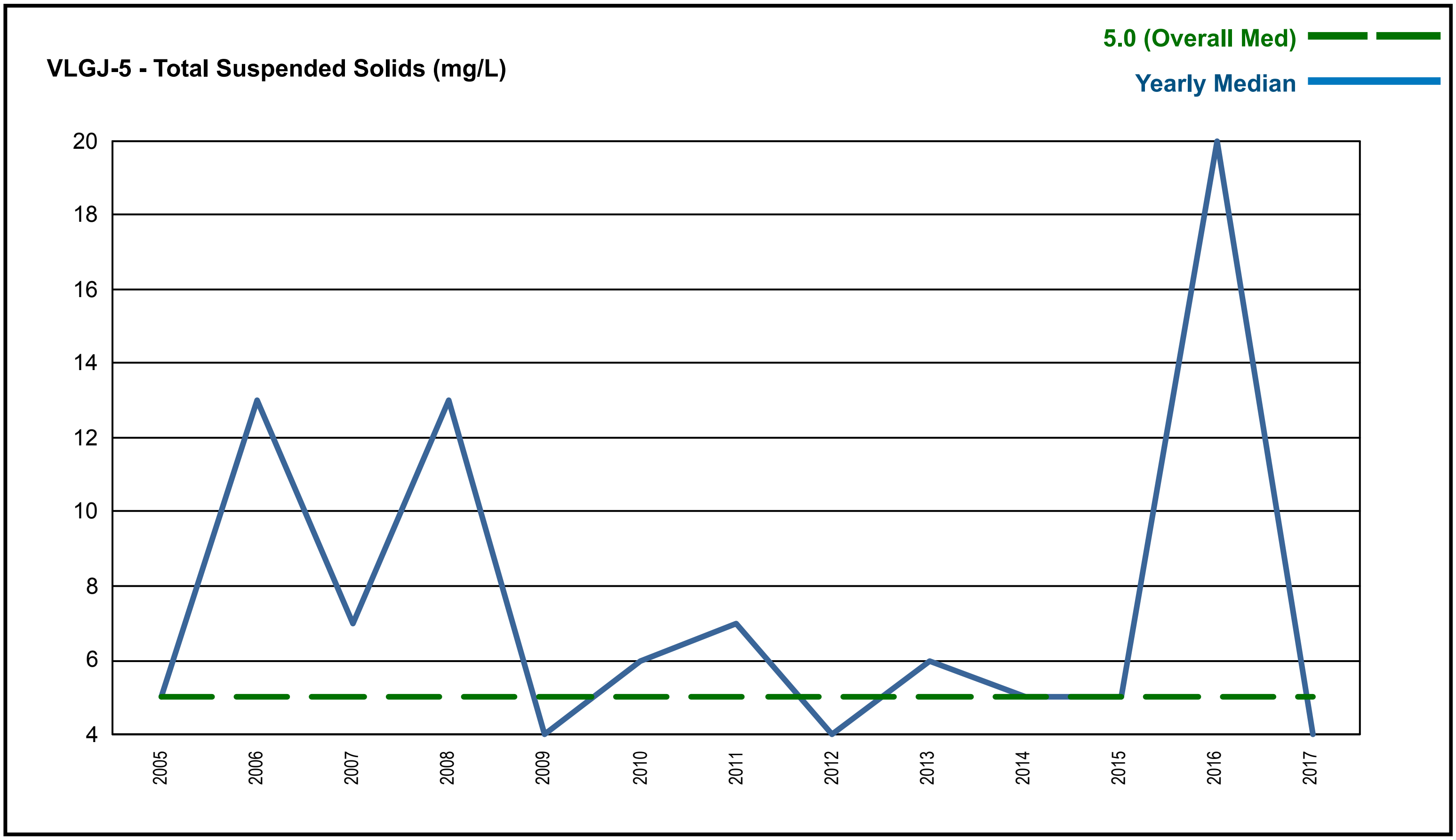

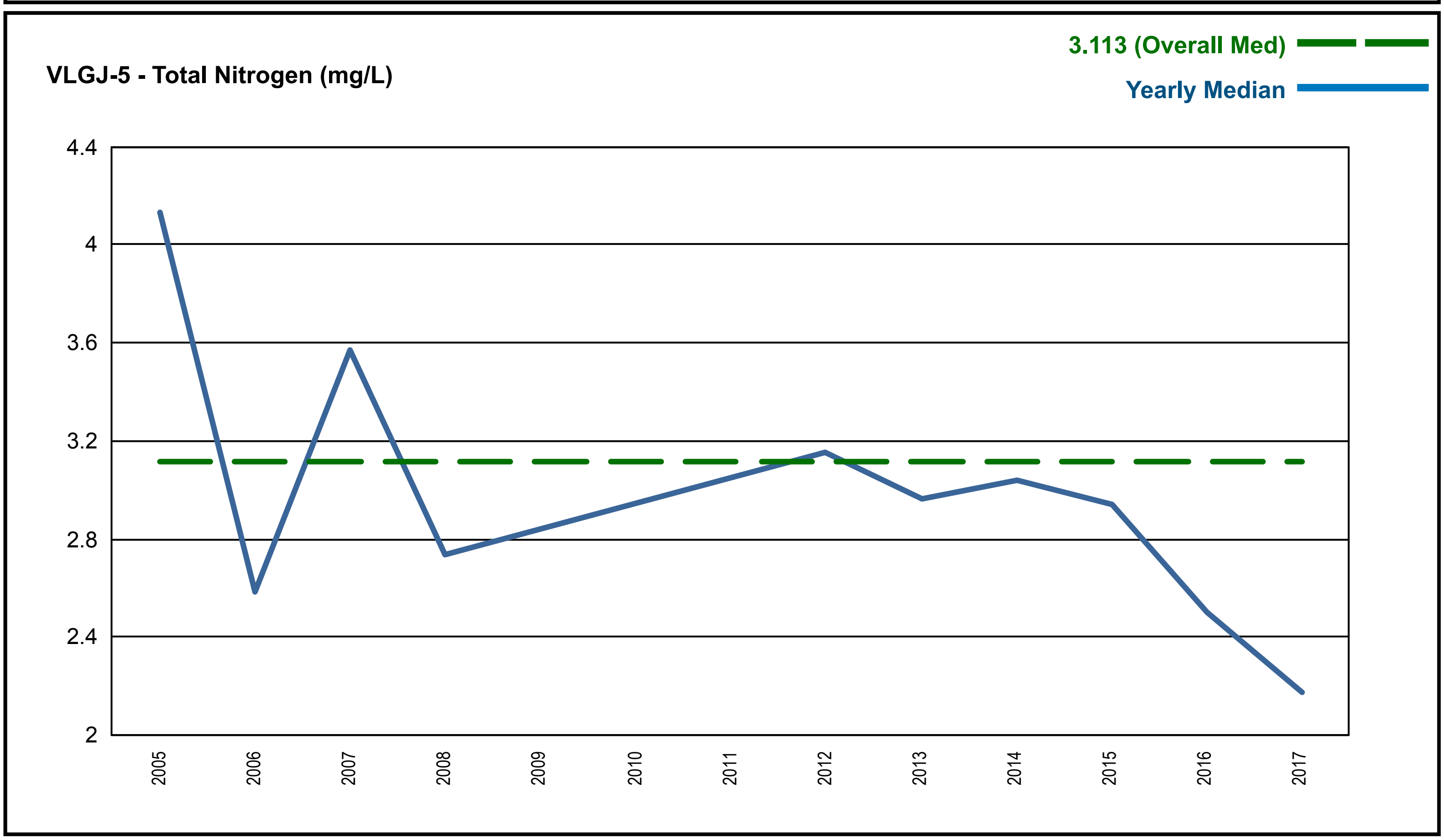

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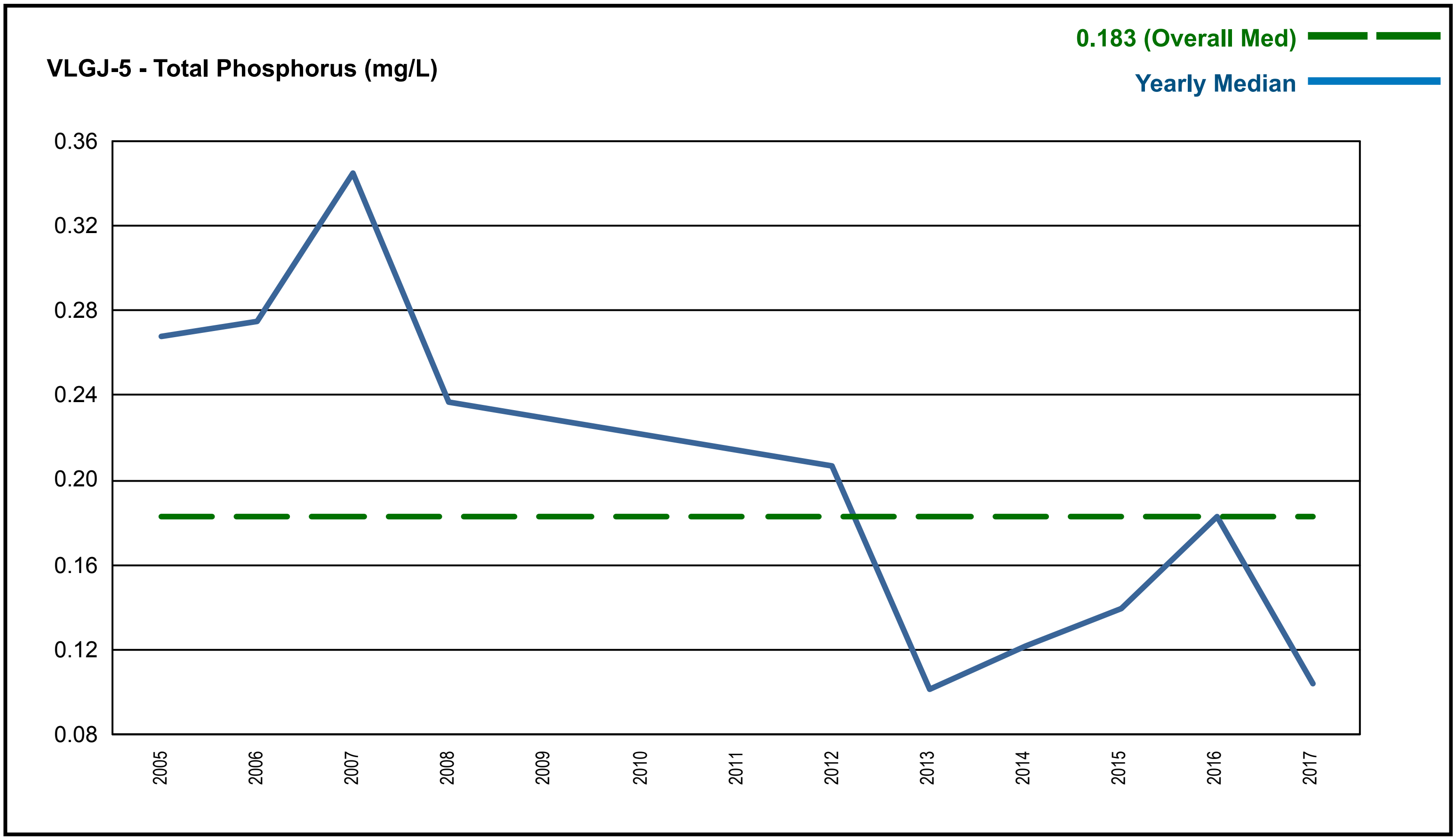

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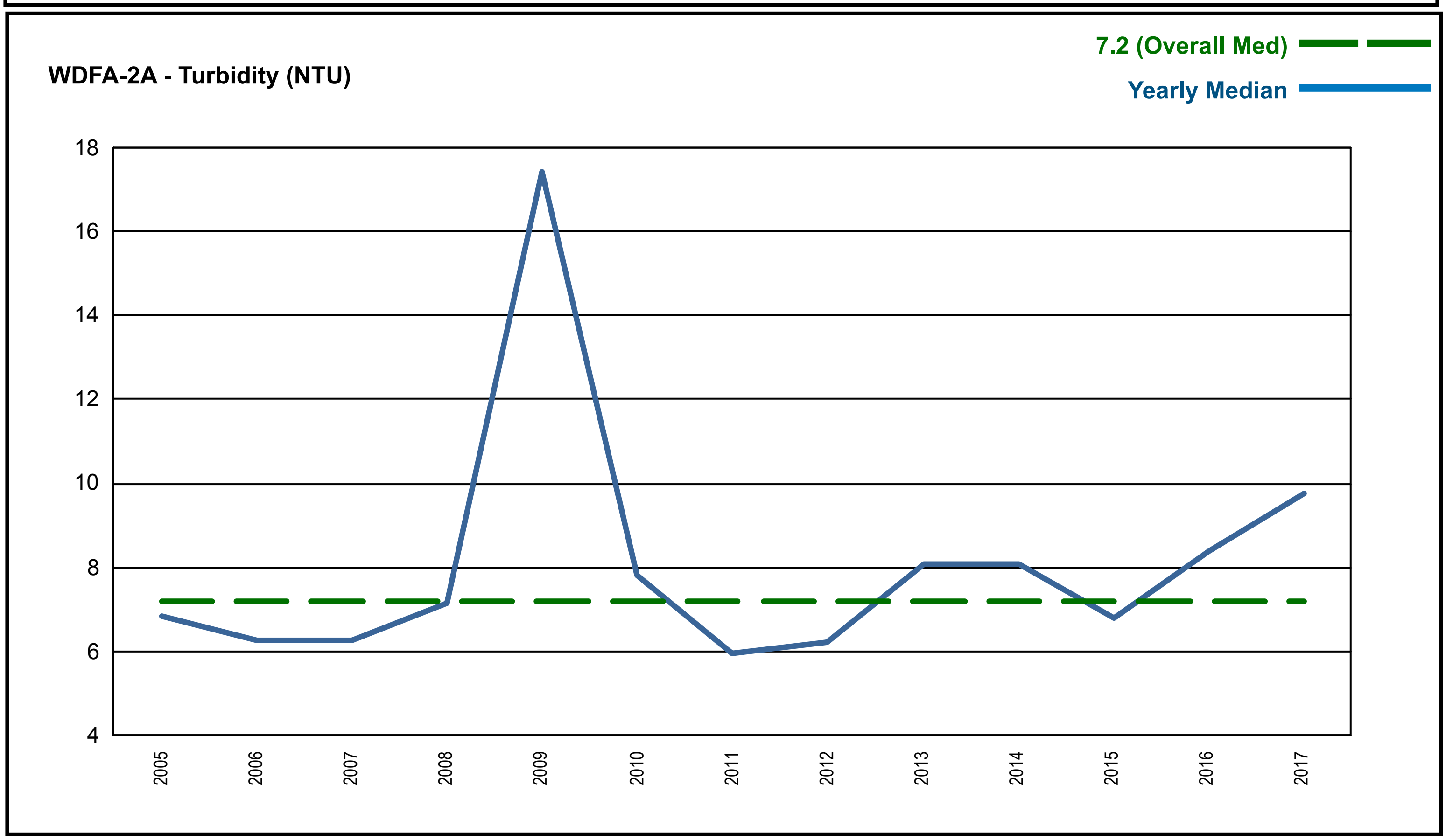

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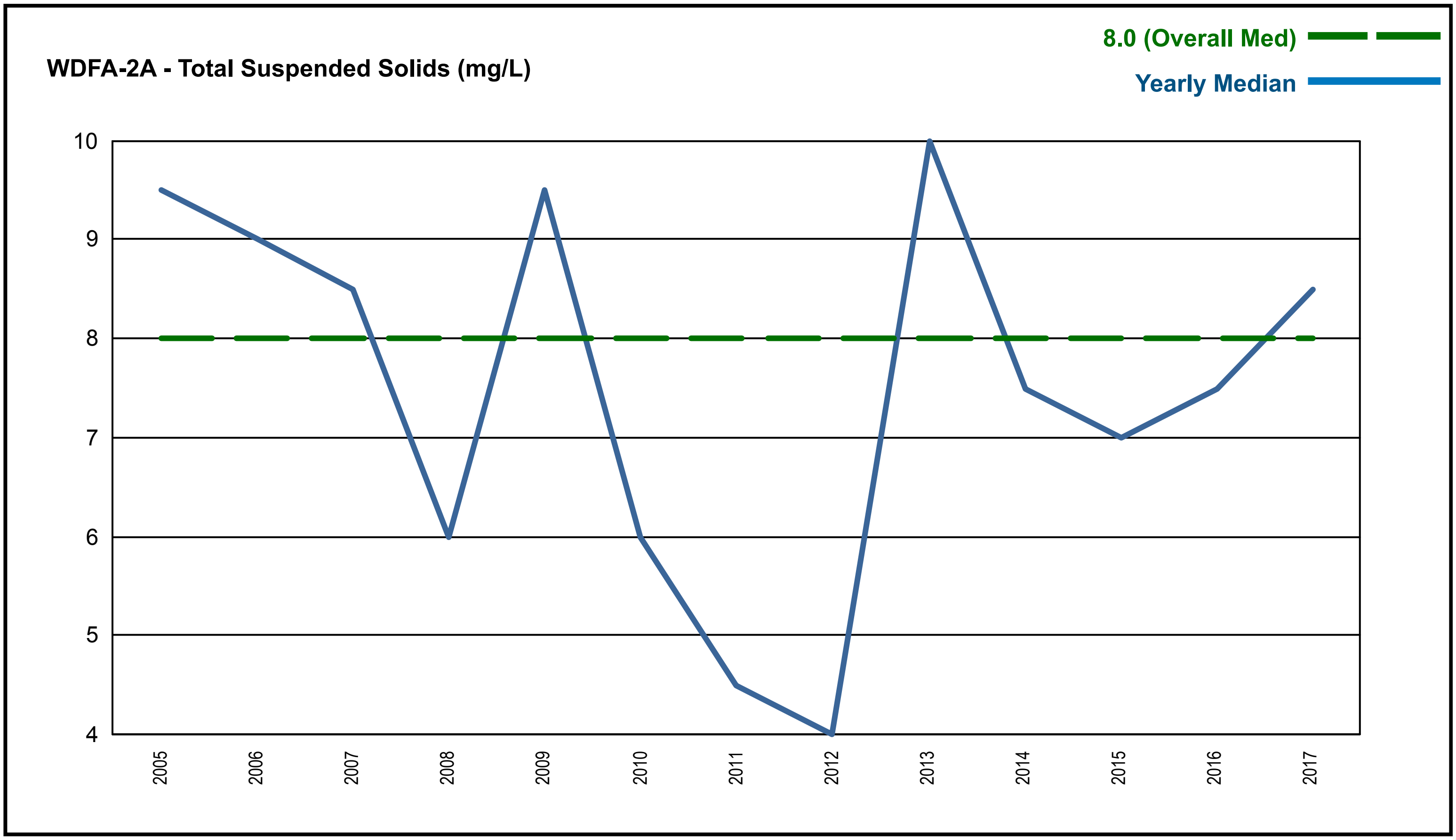

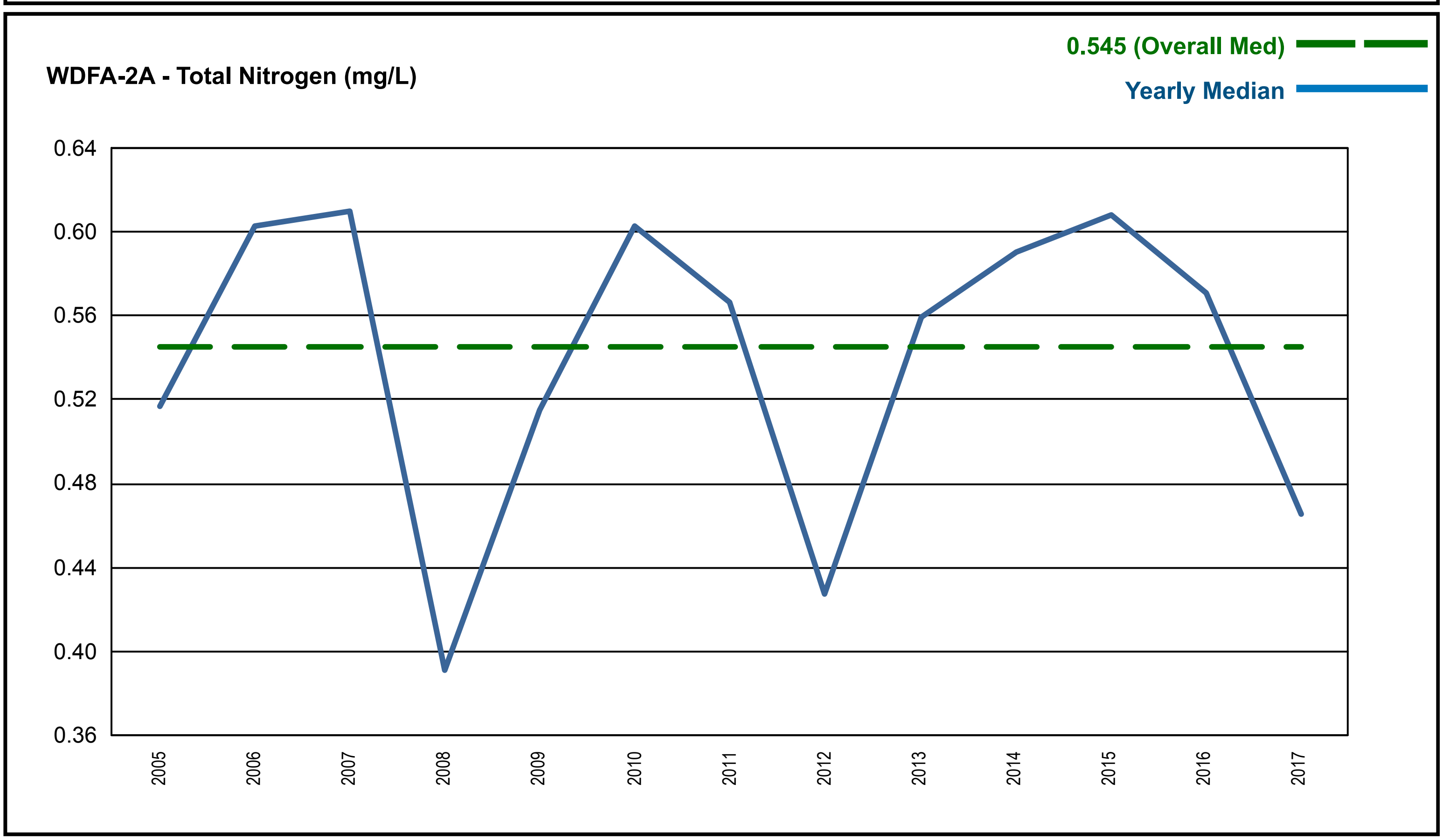

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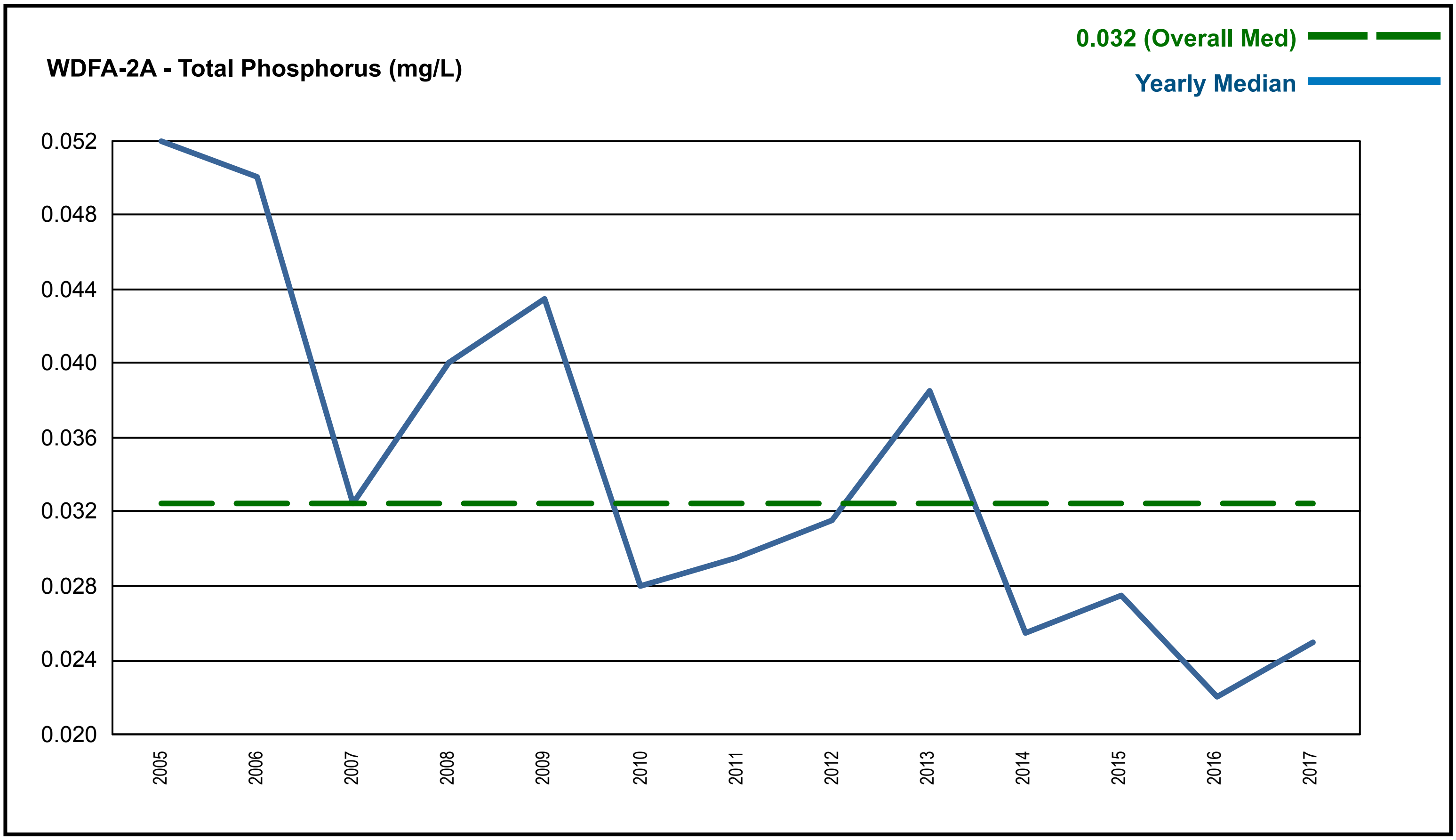

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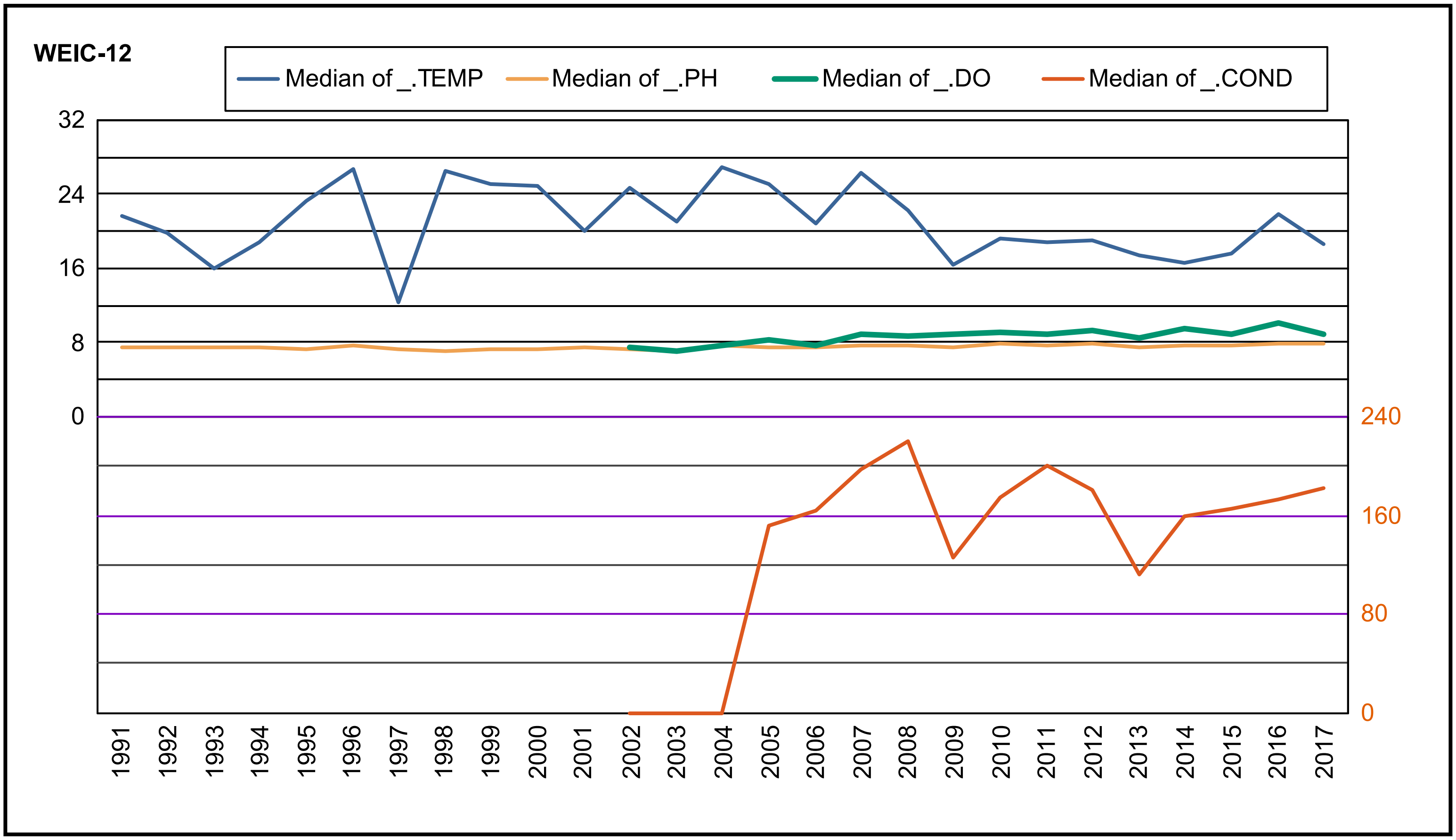

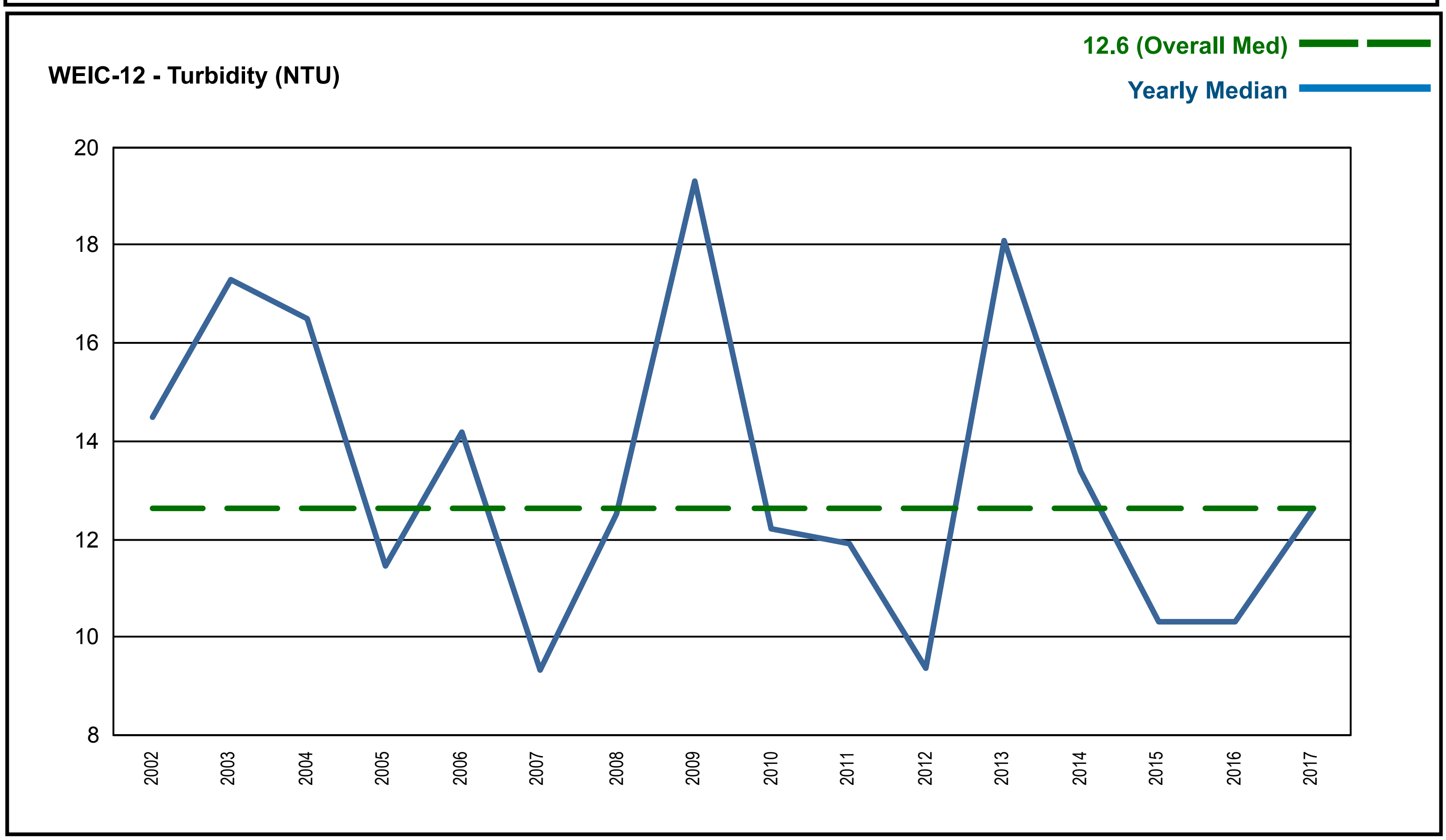

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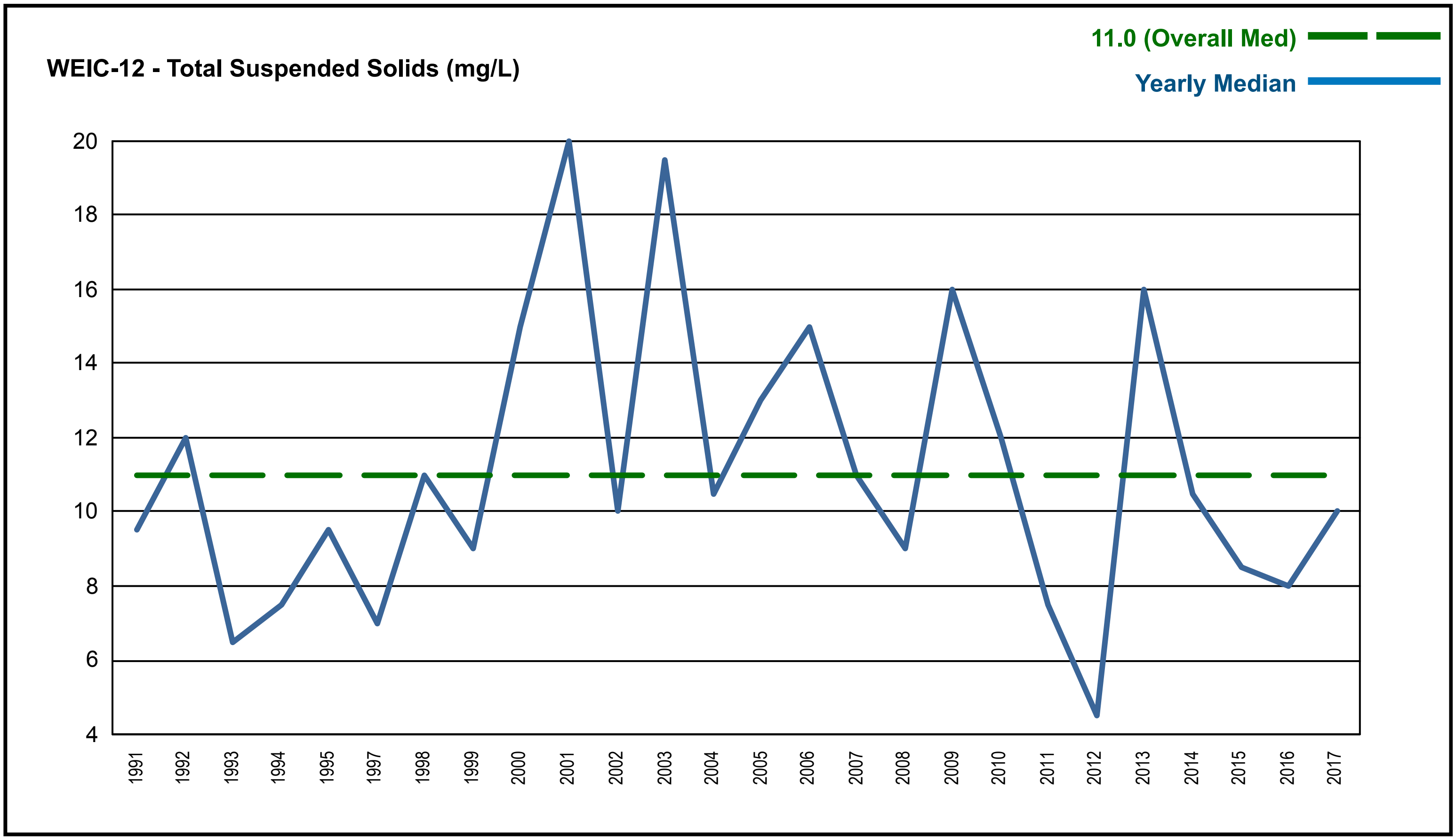

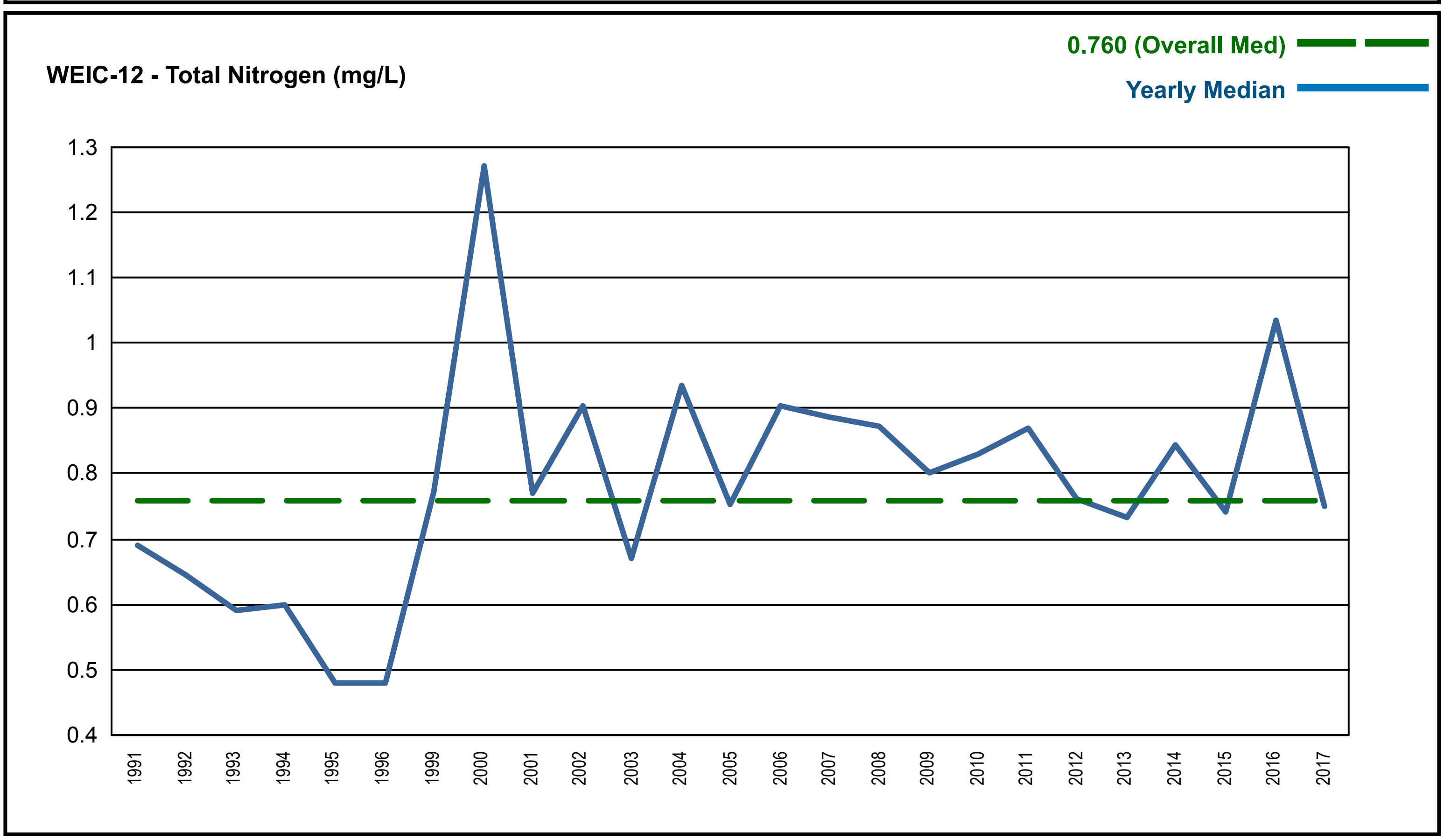

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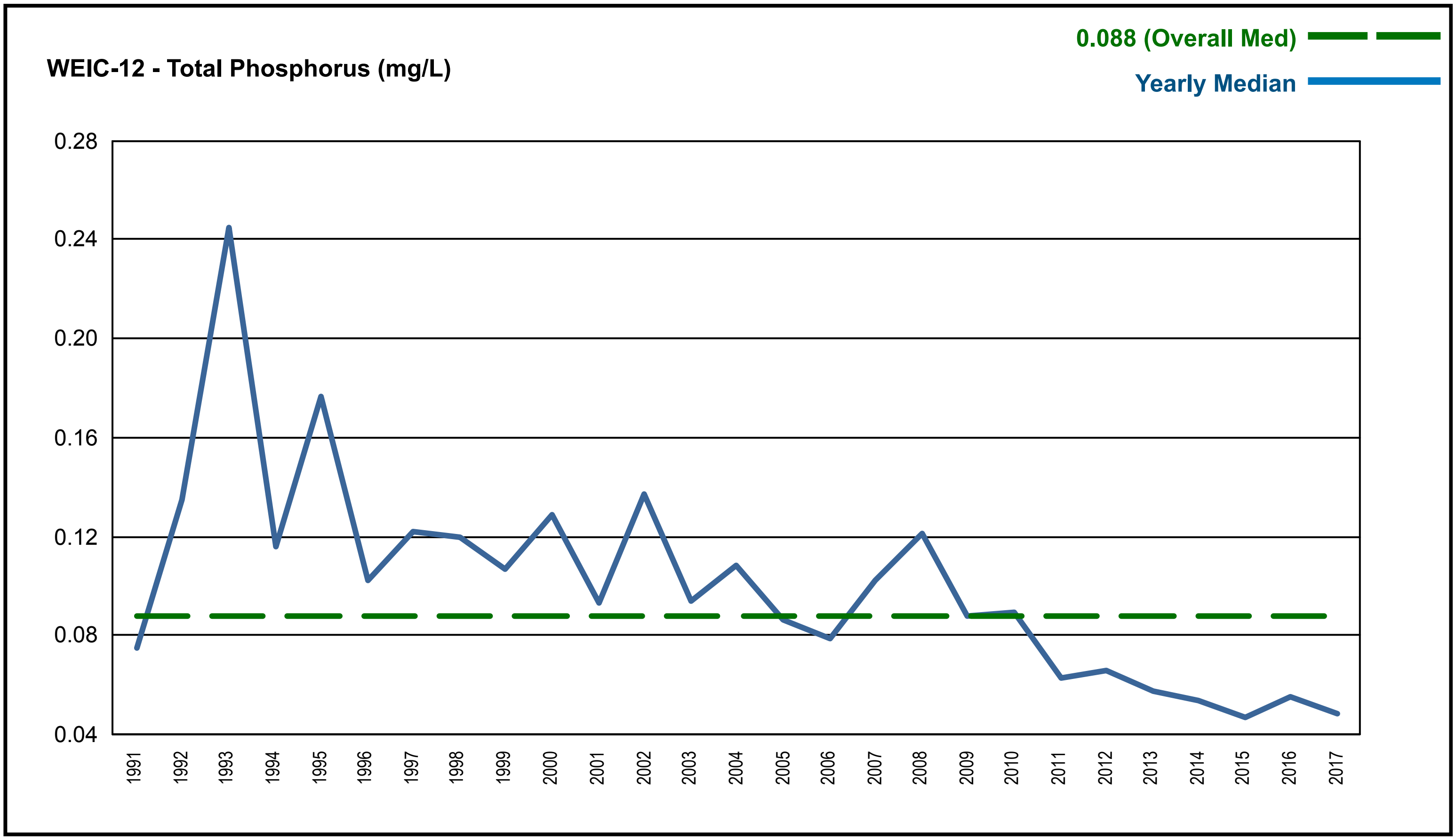

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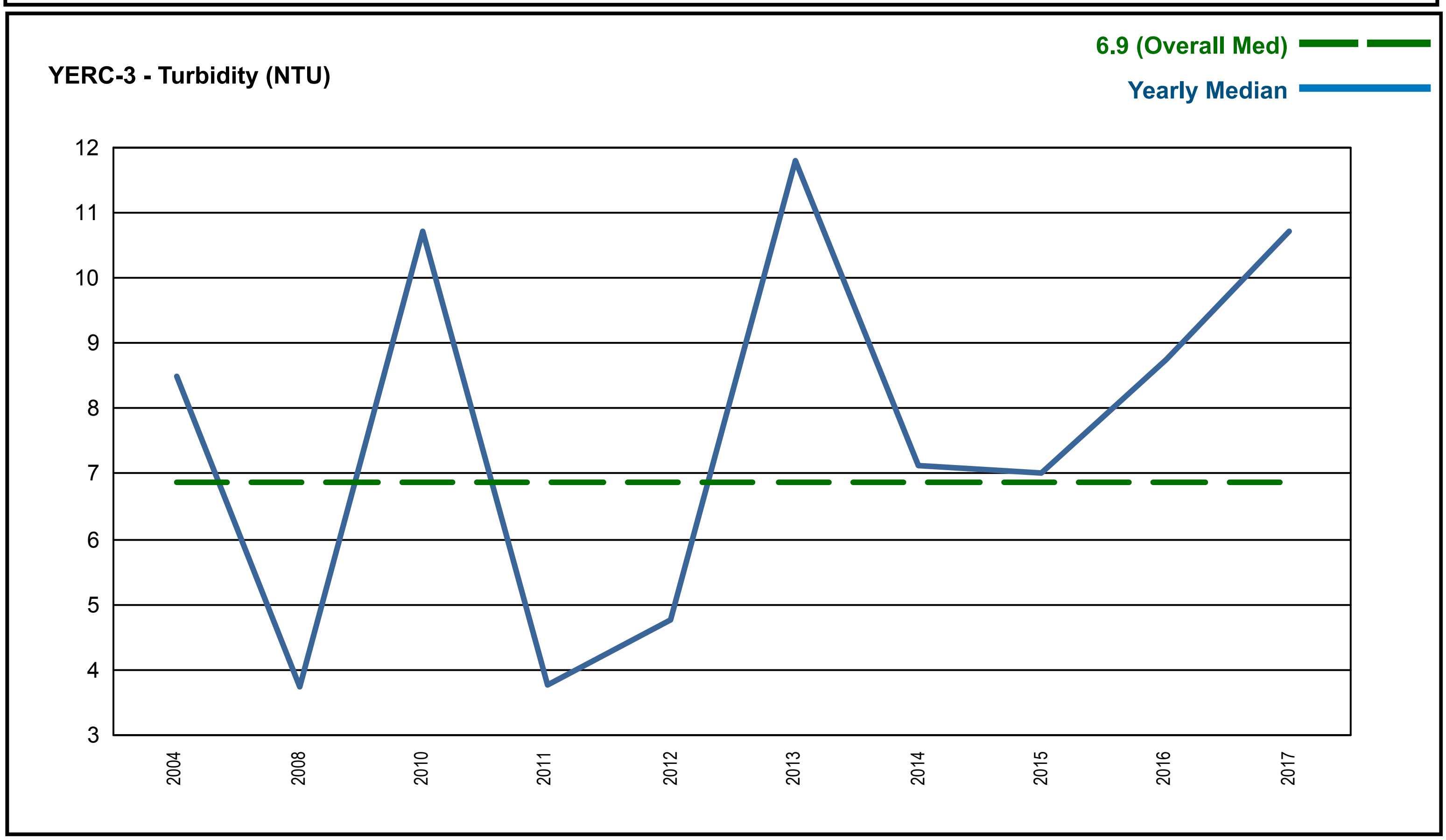

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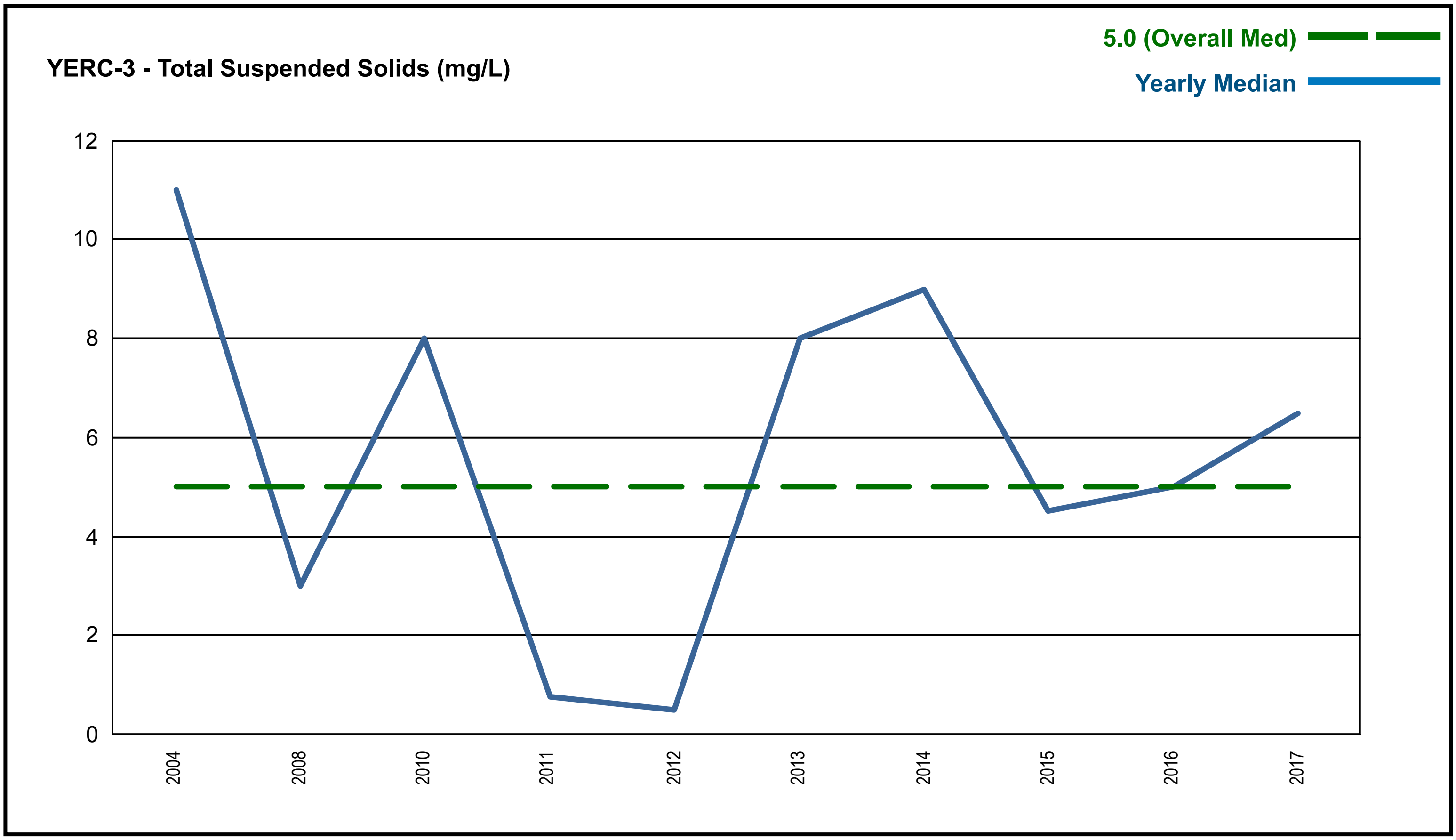

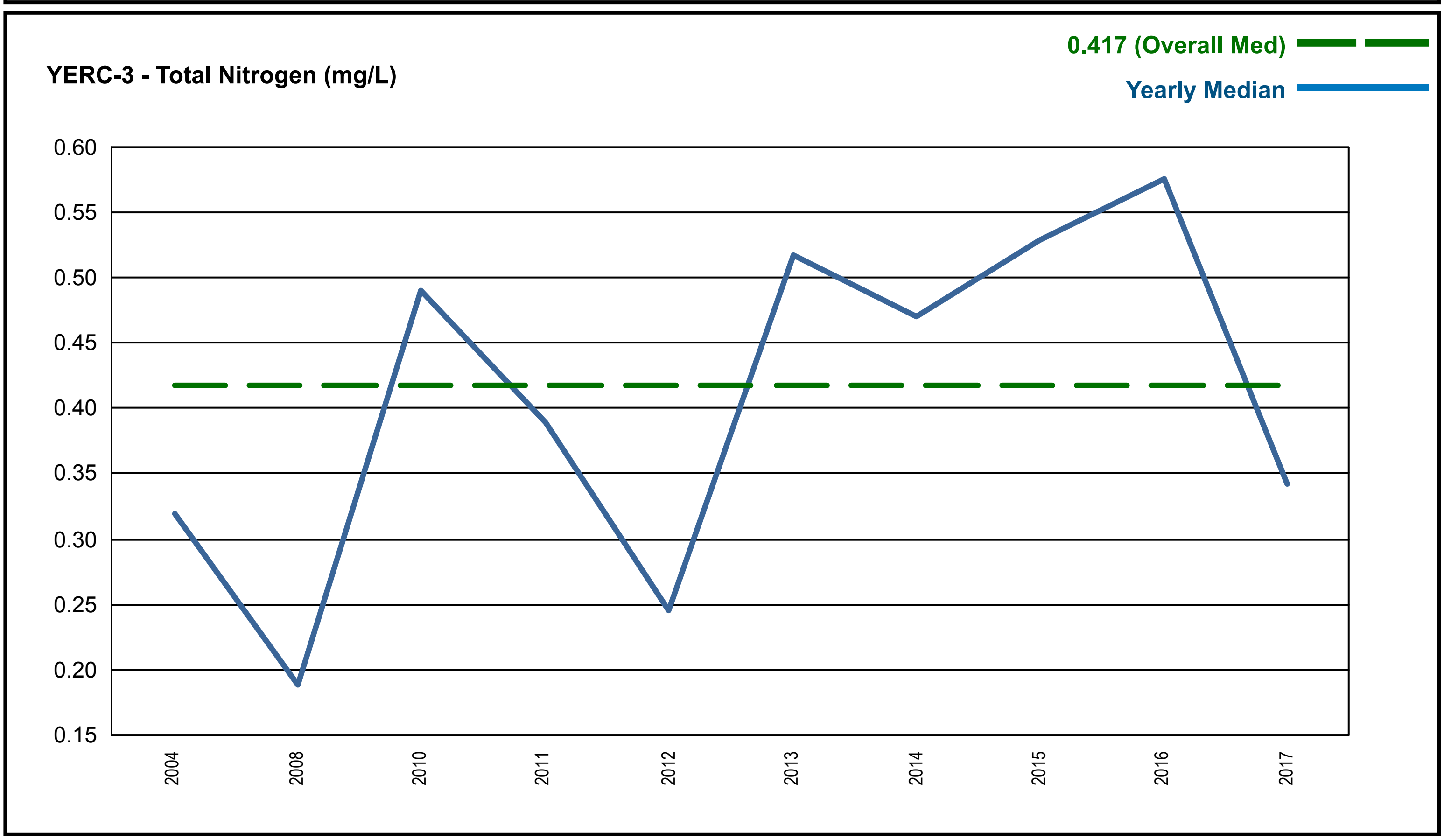

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