2022 INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT

Water Quality in Alabama
2020-2022

2022 Alabama Integrated Water Quality Monitoring and Assessment Report

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Prepared by:

Water Quality Branch

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 2022 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 2008-2022 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 2022 §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 2015 and 2020. For example, the Department collected over 887,104 samples at 1,048 stations during an estimated 17,623 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.

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, 89 trend stations are sampled statewide annually.

Table ES-1 River Basins

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

The U.S. Census estimates the population of Alabama in 2020 to be 5,039,877. The 2010 Census population was 4,779,736. This is a percent change of 5.4%. 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.

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

Figure ES-1 River Basins

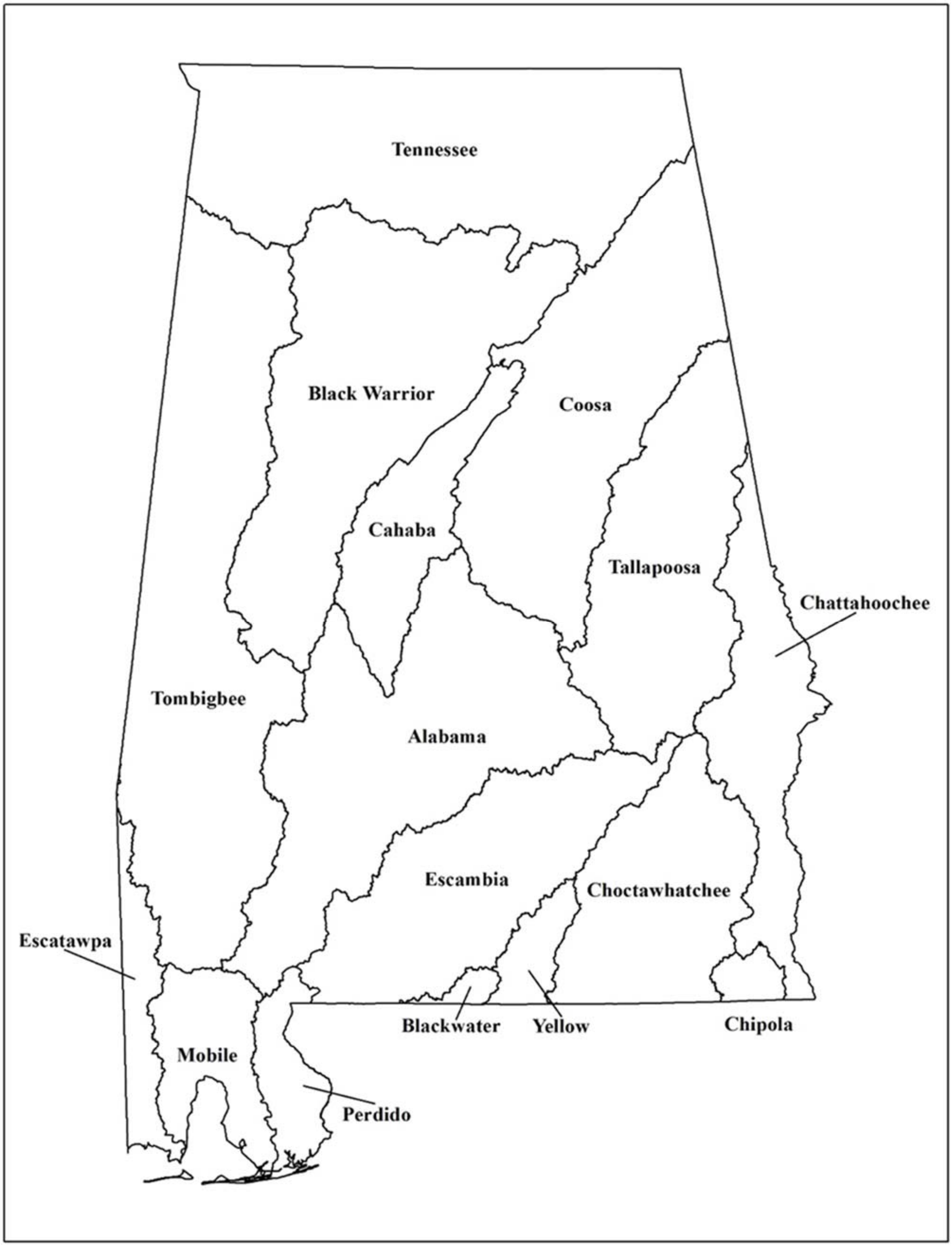


Table ES-2 Atlas

Topics	Value
State population	5,039,877.
State surface area (square miles)	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/reservoirs/ponds	7,694
Number of significant publicly-owned lakes/reservoirs/ ponds	43
Acres of lakes/reservoirs/ponds	490,472
Acres of significant publicly-owned lakes/reservoirs/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

for rivers and streams not supporting designated uses is 5,572 miles. This total is 37% of the almost 15,000 river and stream miles which have been assessed . Approximately 46% 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 eachday, provided with treatment, and made available to approximately four million citizens in Alabama. Five hundred five (505) community systems, forty-three (43) transient noncommunity systems and twenty-three (23) 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, ninety-seven (97) percent meet trihalomethane standards, ninety-seven

(97) 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.

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)	5,928.18	1,418.67	2,262.56	2,273.97	1,501.82	48.52	33.47	3,988.26	15,181.48
Reservoir/Lake (acres)	202,302.79	2,168.45	5,156.29	1,778.48	42,904.78	0	0	183,946.90	436,479.21
Estuary/Ocean (square miles)	148.33	0.63	0.22	0	5.59	0	0	628.86	783.63

*category 3 not included in total assessed waters

Table ES-4 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				13,977.29		4.41	13,977.29	
METALS							**1,148.18**	**81,779.64**	**305.83**
Aluminum				50.10			50.10		
Arsenic	19.56						19.56		
Chromium							0.00		
Copper				7.96			7.96		
Cyanide	12.43			27.94			40.37		
Iron				45.99			45.99		
Lead	1.17			3.30			4.47		
Mercury	933.11	81,779.64	211.21	2.78			935.89	81,779.64	211.21
Thallium	3.30		94.62				3.30		94.62
Zinc				40.54			40.54		
MINERALIZATION							**196.69**		
Total dissolved solids	76.79						76.79		
Turbidity	32.02			87.88			119.90		
NUTRIENTS							**842.55**	**152,273.33**	
Ammonia				177.84	527.25		177.84	527.25	
Nitrogen				165.01	3,021.35		165.01	3,021.35	
Phosphorus	89.26	71,185.80		410.44	77,538.93		499.70	146,969.23	
OXYGEN DEPLETION							**1,513.40**	**47,277.04**	
BOD, carbonaceous	81.95	1,711.89		664.93	43,326.01		746.88	45,037.90	
BOD, nitrogenous	81.95	1,711.89		664.93	527.25		746.88	2,239.14	
Dissolved oxygen (low)				19.64			19.64		
PATHOGENS							**3,814.49**	**7,335.56**	**427.95**
Enterococcus bacteria	37.33		418.15	23.93		9.80	61.26		427.95
Escherichia coli	2,612.95	6,602.90		562.51			3,175.46	6,602.90	
Fecal coliform (legacy)				577.77	732.66		577.77	732.66	
PESTICIDES							**169.43**	**85.73**	
Atrazine				23.42			23.42		
Chlorpyrifos				23.42			23.42		
DDT				1.96	85.73		1.96	85.73	
Dieldrin	24.29						24.29		
Endosulfan				48.17			48.17		
Methyl Parathion				48.17			48.17		
pH							**28.00**	**15,995.25**	
pH		1,569.21		28.00	14,426.04		28.00	15,995.25	
SEDIMENTATION							**930.70**	**6,781.12**	
Sedimentation/Siltation	487.37	869.04		443.33	5,912.08		930.70	6,781.12	
Total suspended solids							0.00		
TOXIC ORGANICS							**63.34**	**74,806.18**	
Benzo(a)pyrene (PAHs)				27.94			27.94		
Polychlorinated biphenyls (PCBs)	35.40	30,044.38			25,383.49		35.40	55,427.87	
Perfluorooctane Sulfonate (PFOS)		19,378.31						19,378.31	
UNKNOWN							**0.00**		
Unknown toxicity							0.00		

* 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
LWF	Limited Warmwater Fishery use classification
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 special 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 special designation
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**:

- No changes/additions

Changes made to previous **Chapter 335-6-11 Use Classifications for Surface Waters :**

- No changes/additions

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 14 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 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

Figure 1-1 Alabama's General Soils

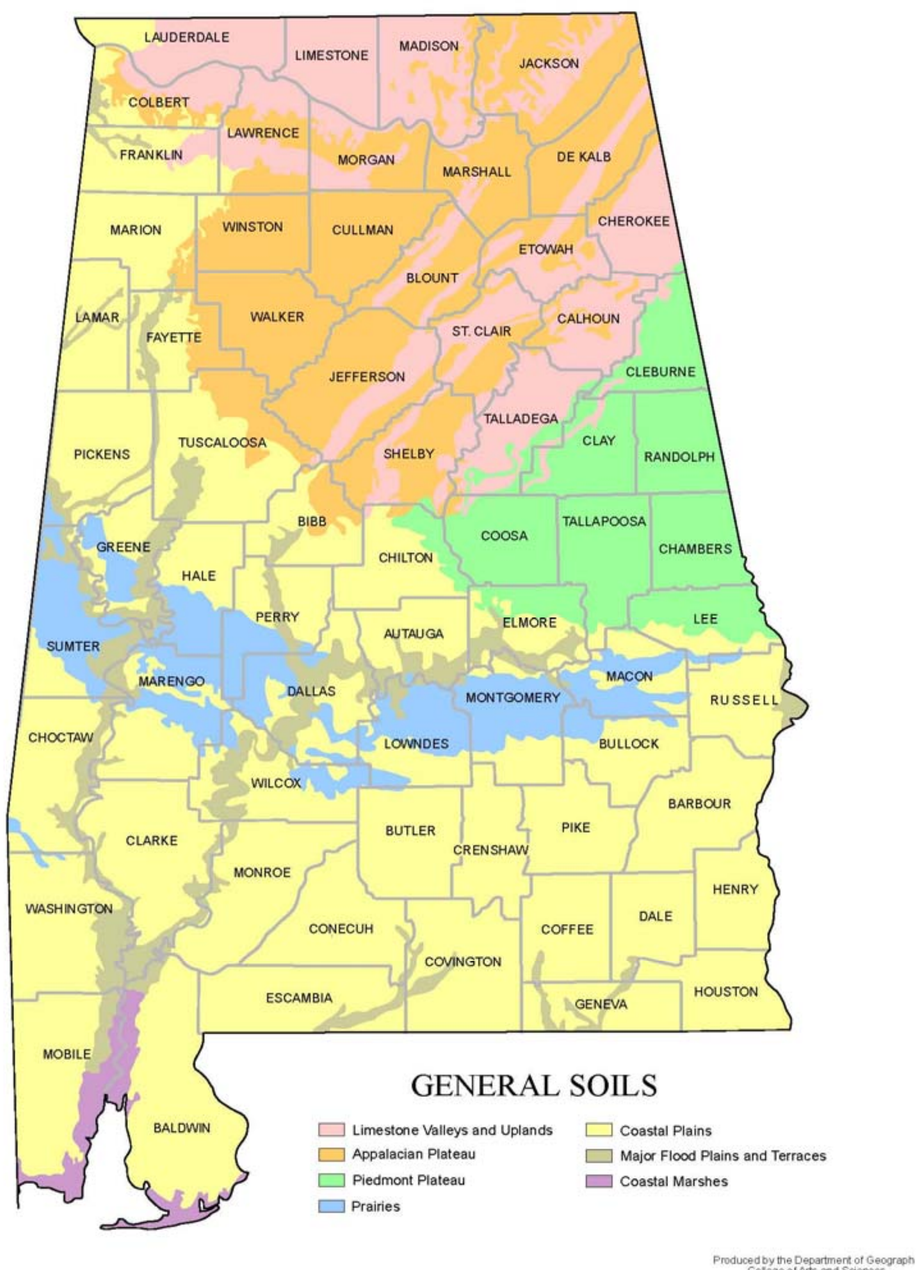


Figure 1-2 Alabama's Level III and IV Ecoregions

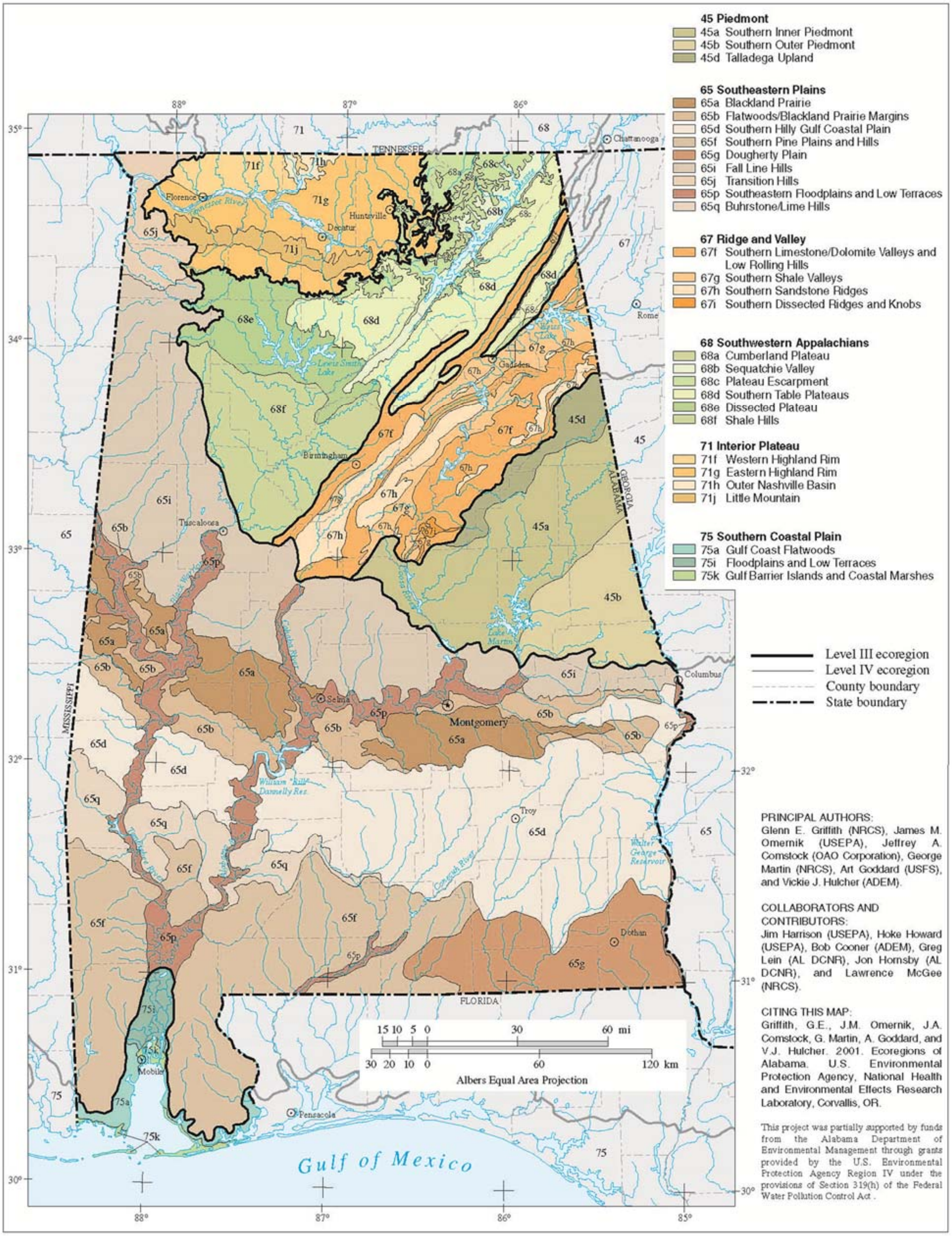


Table 1-1 Nutrient Criteria Implementation Schedule for Alabama Reservoirs

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

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.

The revised Nutrient Criteria Implementation Plan reflects the Department's current priorities for development of nutrient criteria for waterbodies that typically have the highest risk for nutrient over-enrichment, which based on our findings are tributary embayments of lakes/reservoirs and coastal/ estuarine waters. In addition, the development of numeric nutrient criteria for rivers and streams may be difficult to implement due to the varying ecology and topography within Alabama; therefore, the Department is also investigating the option of adopting narrative nutrient criteria to address nutrients in rivers and streams.

The Department has had great success in addressing nutrient issues throughout Alabama via the TMDL program. TMDL limits have been established for both point and nonpoint sources to address nutrient impairments, and post TMDL follow-up monitoring has shown a significant reduction in nutrient loadings and corresponding improvements in various response parameters such as chlorophyll-a (algae), dissolved oxygen, pH, fish and macroinvertebrates. The Department has and will continue to use scientifically valid approaches to develop nutrient criteria that are protective of designated uses, implementable, and scientifically defensible.

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 October 4, 2019).* Table 1-2 shows Surface Water Classifications and Designations. Figures and Tables 1-3 through 1-13 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

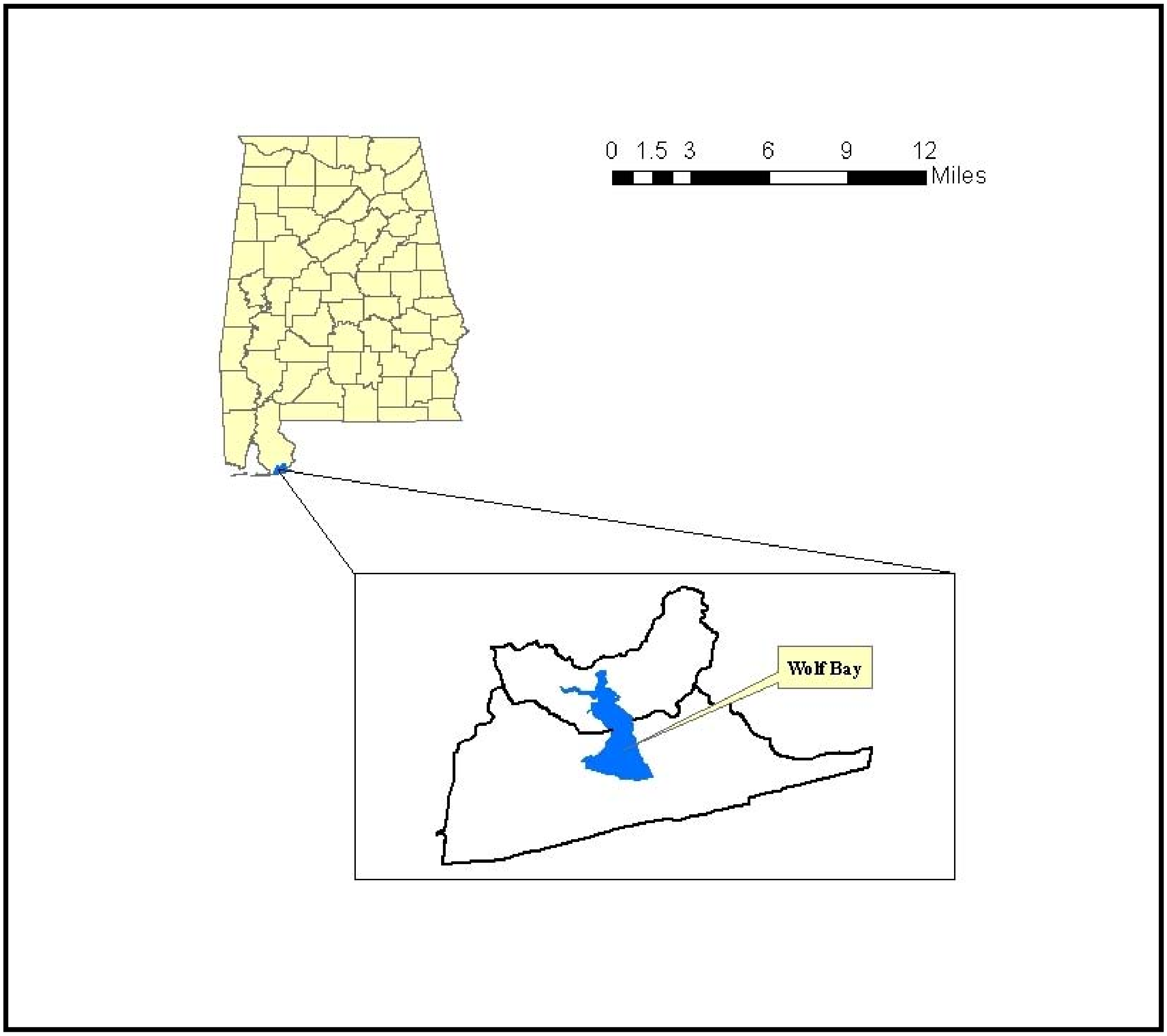


Table 1-3 Wolf Bay - Outstanding Alabama Water

#	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 Water

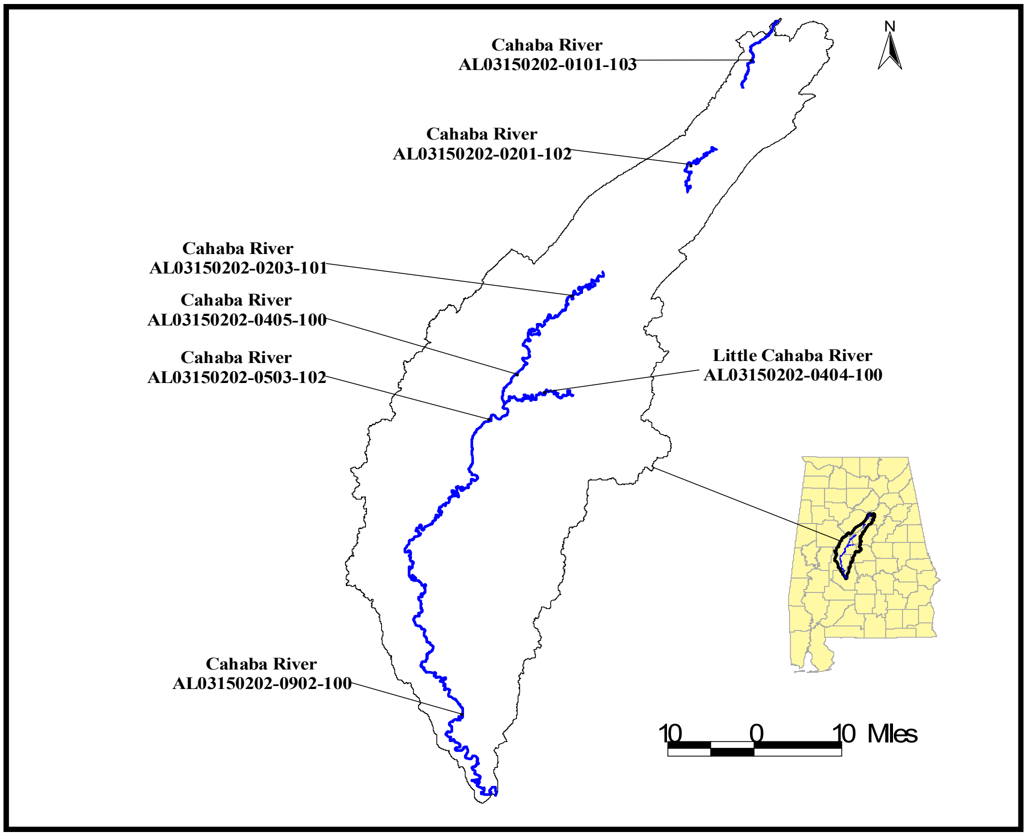


Figure 1-5 Hatchet Creek and Tributaries - Outstanding Alabama

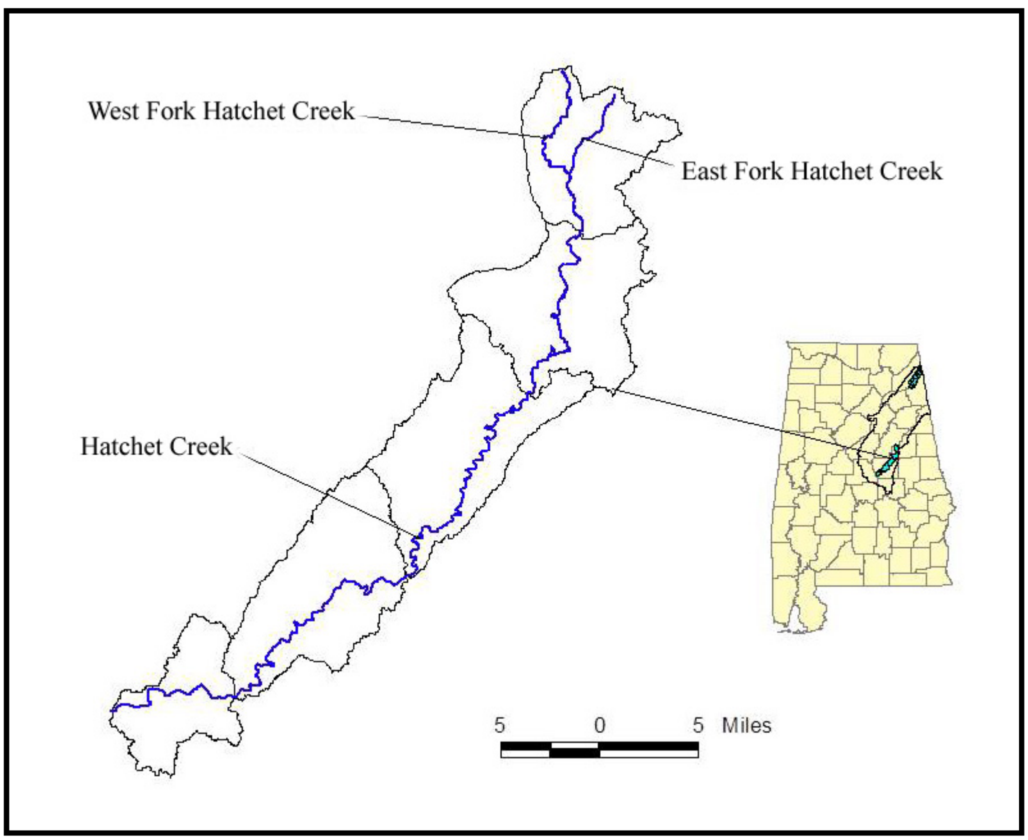


Table 1-4 Cahaba River and Tributaries - Outstanding Alabama Water

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
1	AL03150202-0902-101	Cahaba River	Alabama River	Waters Creek	OAW/S	40.45
2	AL03150202-0702-100	Cahaba River	Waters Creek	Blue Girth Creek	OAW/S	27.25
3	AL03150202-0506-100	Cahaba River	Blue Girth Creek	Alabama Highway 82	OAW/S	21.76
4	AL03150202-0503-102	Cahaba River	Alabama Highway 82	lower Little Cahaba River	OAW/S	10.58
5	AL03150202-0407-100	Cahaba River	lower Little Cahaba River	Shades Creek	OAW/F&W	13.51
6	AL03150202-0206-101	Cahaba River	Shades Creek	Shelby County Road 52	OAW/F&W	23.61
7	AL03150202-0204-102	Cahaba River	dam near U.S. Highway 280	Grant's Mill Road	OAW/PWS	13.45
8	AL03150202-0101-102	Cahaba River	US Highway 11	I-59	OAW/F&W	3.13
9	AL03150202-0101-103	Cahaba River	I-59	its source	OAW/F&W	2.22
10	AL03150202-0405-110	Little Cahaba River	Cahaba River	its source	OAW/F&W	16.54
					Total Miles:	172.50

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	35.47
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

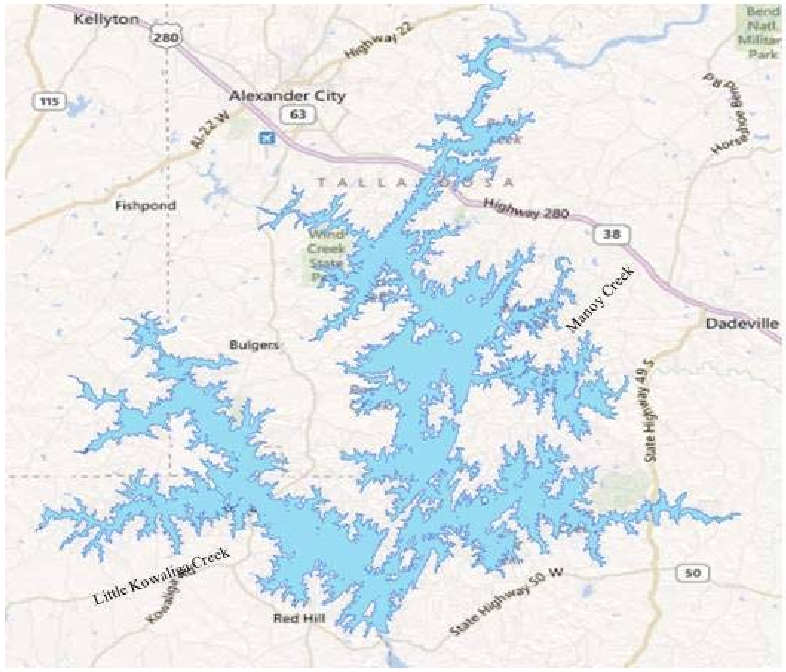


Figure 1-7 Little River and Tributaries (ONRW)

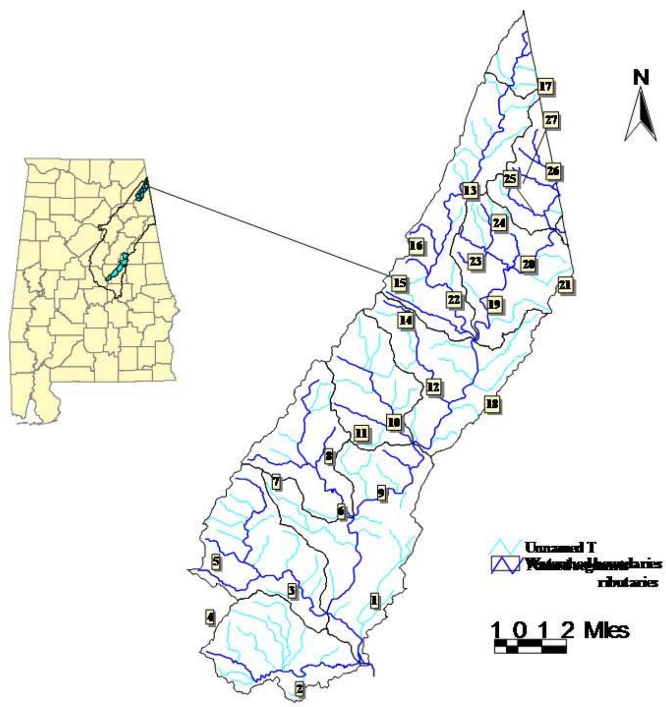


Table 1-6 Lake Martin – Treasured Alabama Lake

#	Assessment Unit #	Name	Downstream	Upstream	Use Classification	Acres
1	AL03150109-0805-100	Tallapoosa River (Lake Martin)	Martin Dam	US Highway 280	S/F&W	15,867.11
2	AL03150109-0802-102	Tallapoosa River (Lake Martin)	US Highway 280	Hillabee Creek	PWS/S/F&W	1,973.85
3	AL03150109-0802-104	Tallapoosa River (Lake Martin)	Hillabee Creek	Irwin Shoals	S/F&W	343.41
4	AL03150109-0504-111	Sandy Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	2,390.93
5	AL03150109-0802-311	Coley Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	54.29
6	AL03150109-0602-111	Blue Creek (Lake Martin)	Tallapoosa River	its source	S/F&W	5,495.14
7	AL03150109-0702-111	Oakachoy Creek (Lake Martin)	Kowaliga Creek	end of embayment	S/F&W	4,455.93
8	AL03150109-0703-201	Little Kowaliga Creek (Lake Martin)	Kowaliga Creek	end of embayment	PWS/S/F&W	2,634.38
9	AL03150109-0704-111	Kowaliga Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	5,602.95
10	AL03150109-0804-201	Manoy Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	618.88
11	AL03150109-0406-111	Hillabee Creek (Lake Martin)	Tallapoosa River	end of embayment	PWS/S/F&W	57.75
12	AL03150109-0803-111	Elkahatchee Creek (Lake Martin)	Tallapoosa River	end of embayment	S/F&W	511.41
13	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	AL03150105-0801-210	Straight Creek	Yellow Creek	its source	PWS/S/F&W (ONRW)	3.03
12	AL03150105-0802-210	Hurricane Creek	Little River	its source	PWS/S/F&W (ONRW)	6.67
13	AL03150105-0704-100	West Fork Little River	Little River	AL-GA state line	PWS/S/F&W (ONRW)	18.87
14	AL03150105-0704-200	Straight Creek	West Fork Little River	its source	PWS/S/F&W (ONRW)	4.45
15	AL03150105-0704-300	Sharp Branch	West Fork Little River	its source	PWS/S/F&W (ONRW)	1.39
16	AL03150105-0704-400	Seymour Branch	West Fork 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	AL03150105-0705-110	East Fork Little River	Little River	its source	PWS/S/F&W (ONRW)	9.55
19	AL03150105-0705-210	Laurel Creek	East Fork of Little River	its source	PWS/S/F&W (ONRW)	3.97
20	AL03150105-0705-310	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	AL03150105-0705-410	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

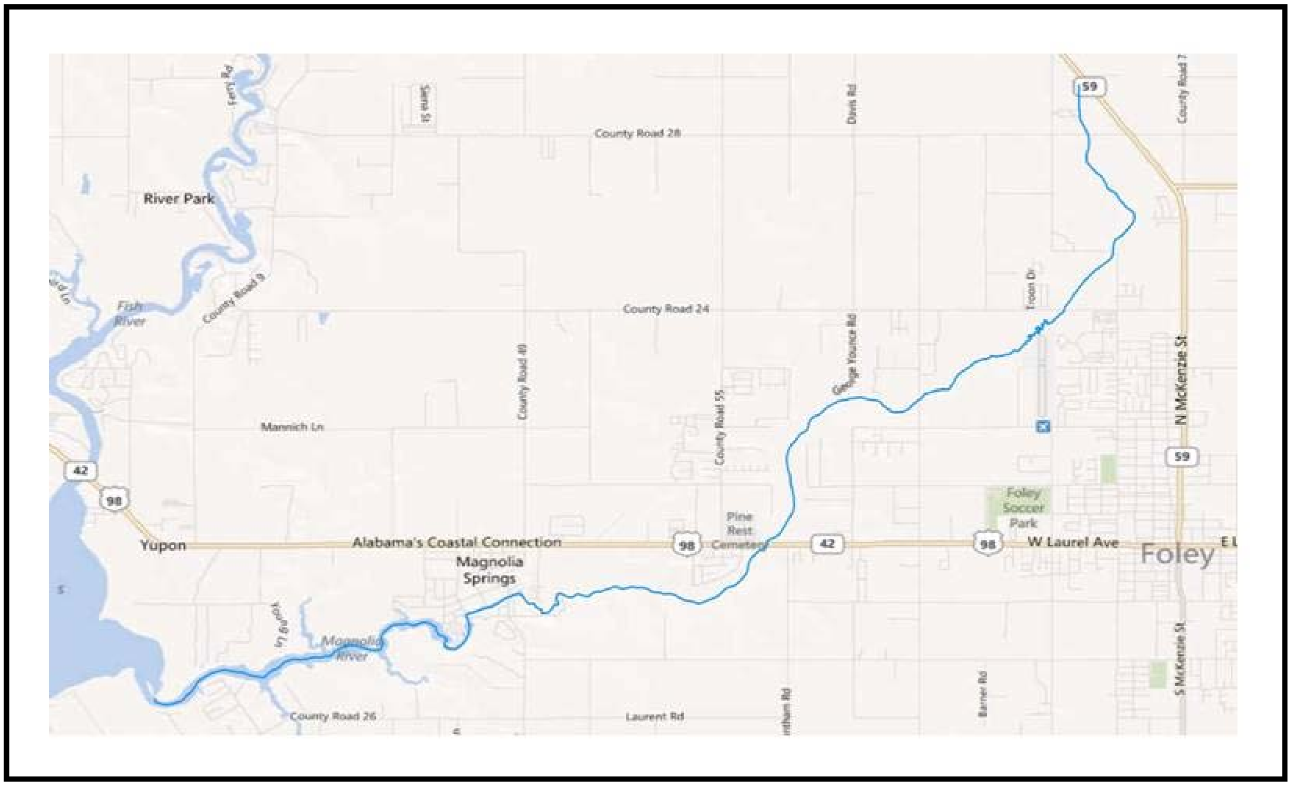


Table 1-8 Magnolia River - Outstanding Alabama Water

#	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)

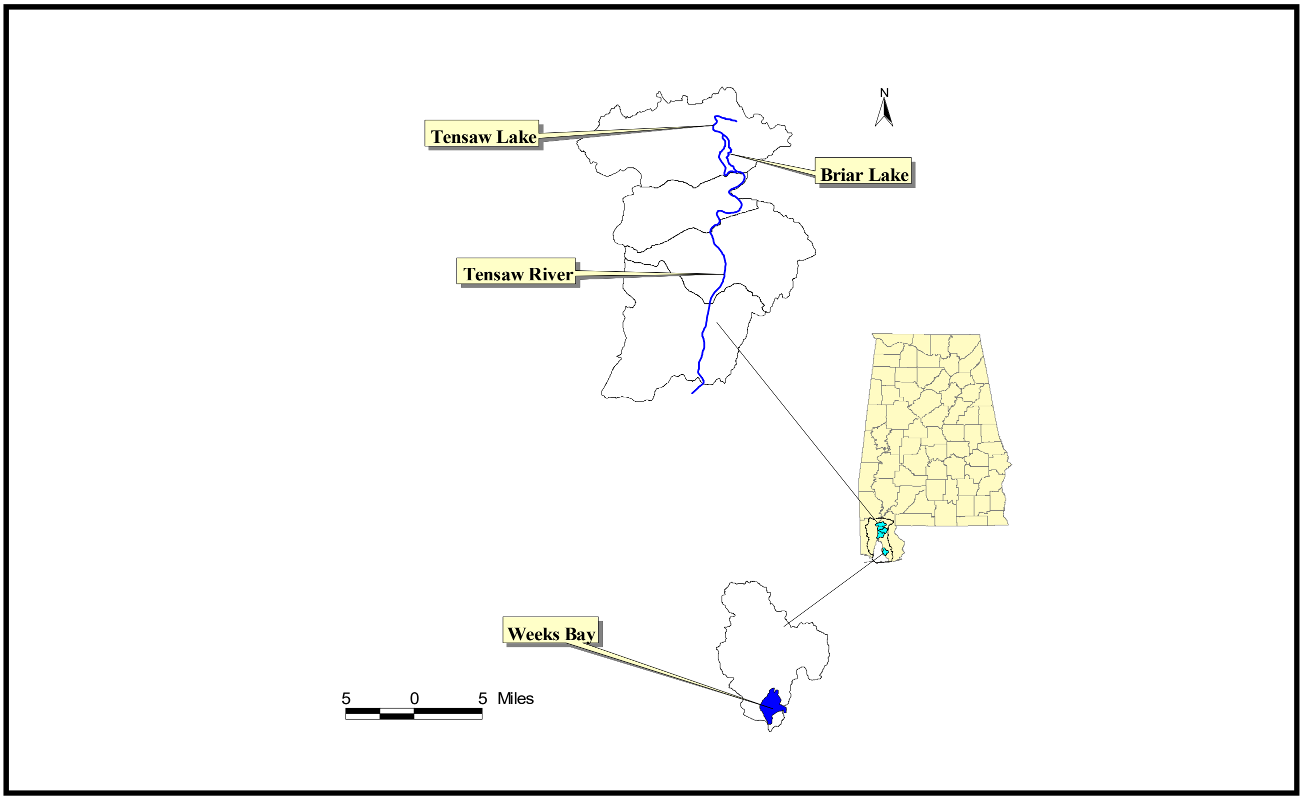


Table 1-9 Tensaw River - Outstanding Alabama Water and Weeks Bay (ONRW)

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	AL03160205-0204-111	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)

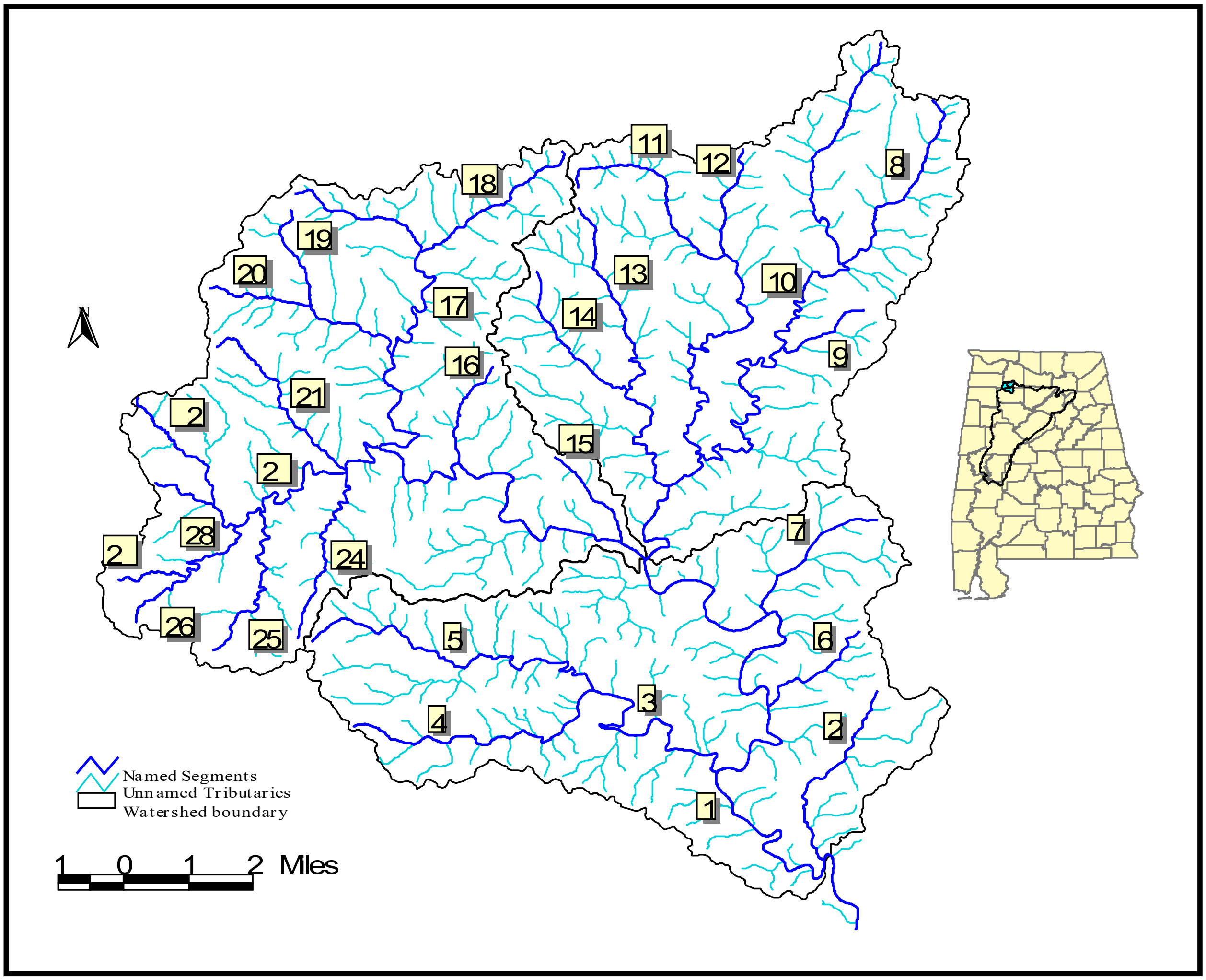


Table 1-10 Sipsey Fork and Tributaries (ONRW)

#	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	AL03160110-0101-210	Braziel Creek	Borden Creek	its source	F&W (ONRW)	5.69
4	AL03160110-0101-310	Flannagin Creek	Borden Creek	its source	F&W (ONRW)	9.99
5	AL03160110-0101-410	Horse Creek	Borden Creek	its source	F&W (ONRW)	1.76
6	AL03160110-0101-510	Montgomery Creek	Borden Creek	its source	F&W (ONRW)	3.99
7	AL03160110-0101-610	Hagood Creek	Braziel Creek	its source	F&W (ONRW)	4.23
8	AL03160110-0101-710	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	AL03160110-0102-210	Fall Creek	Sipsey Fork	its source	F&W (ONRW)	2.06
19	AL03160110-0102-310	Bee Branch	Sipsey Fork	its source	F&W (ONRW)	2.09
20	AL03160110-0102-410	Thompson Creek	Sipsey Fork	its source	F&W (ONRW)	8.59
21	AL03160110-0102-510	Hubbard Creek	Sipsey Fork	its source	F&W (ONRW)	6.59
22	AL03160110-0102-610	Tedford Creek	Thompson Creek	its source	F&W (ONRW)	3.68
23	AL03160110-0102-710	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 Estill Fork and Hurricane Creek - Outstanding Alabama Water

Table 1-11 Estill Fork and Hurricane Creek - Outstanding Alabama Water

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

Figure 1-12 Shoal Creek - Outstanding Alabama Water

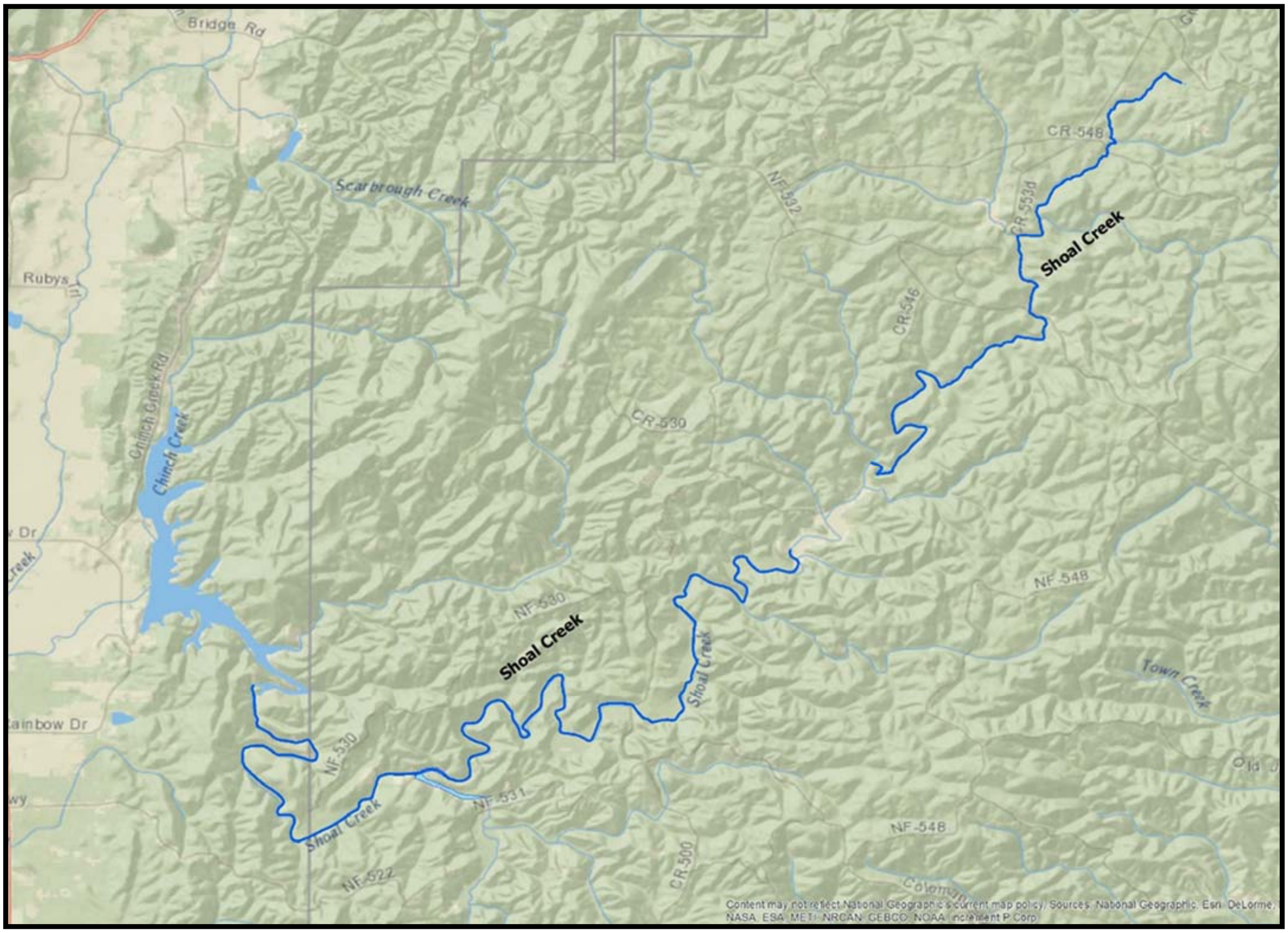


Table 1-12 Shoal Creek - Outstanding Alabama Water

Assessment Unit #	Name	Downstream	Upstream	Use Classification	Size	Type
AL03150106-0501-103	Shoal Creek	Whitesides Mill Lake	Highrock Lake dam	OAW/S/F&W	3.45	miles
AL03150106-0501-104	Shoal Creek (Highrock Lake)	Highrock Lake dam	extent of reservior	OAW/S/F&W	13.95	acres
AL03150106-0501-105	Shoal Creek	Highrock Lake	Sweetwater Lake dam	OAW/S/F&W	6.31	miles
AL03150106-0501-106	Shoal Creek (Sweetwater Lake)	Sweetwater Lake dam	extent of reservior	OAW/PWS/S/F&W	54.97	acres
AL03150106-0501-107	Shoal Creek	Sweetwater Lake	its source	OAW/S/F&W	5.71	miles
				Total Miles:	15.47	miles
				Total Acres:	68.92	acres

Figure 1-13 Tallapoosa River- Outstanding Alabama Water

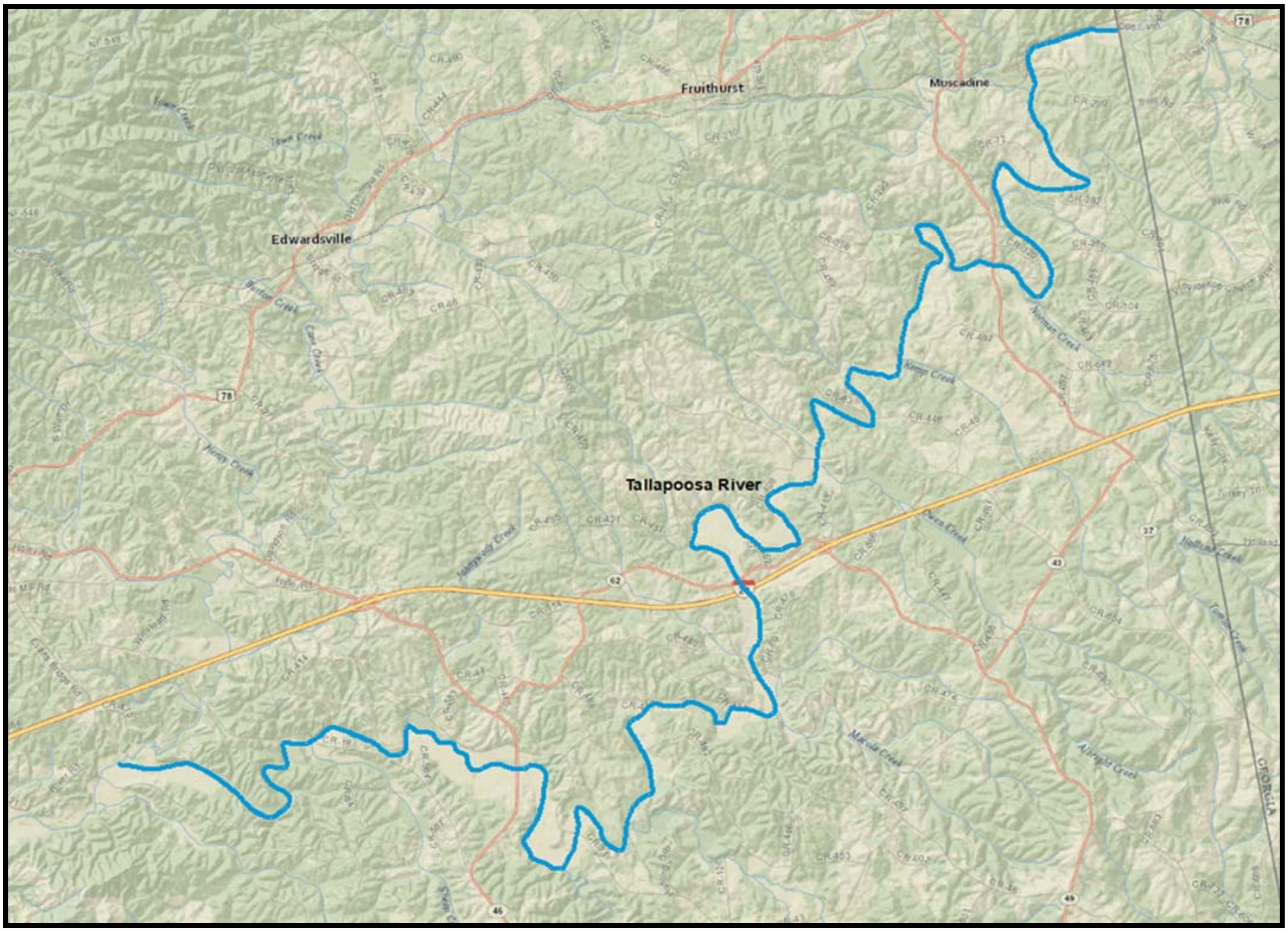


Table 1-13 Tallapoosa River - Outstanding Alabama Water

Assessment Unit #	Name	Downstream	Upstream	Use Classification	Miles
AL03150108-0405-102	Tallapoosa River	Cane Creek	AL-GA state line	OAW/F&W	31.60
				Total Square Miles:	31.60

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 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, and/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 2010 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 current 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 some trend 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 Monitoring Strategy. Therefore, a very significant part of the 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 Assessment and Listing Methodology document.

RSMP data is used to categorize and report water quality status in Alabama's Integrated Assessment Report, develop TMDLs, delisting documents, and to evaluate conditions after restoration has been implemented. Results of biological surveys are included in these documents. For high quality waters, biological survey 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.

2.1.8 Programmatic Evaluation

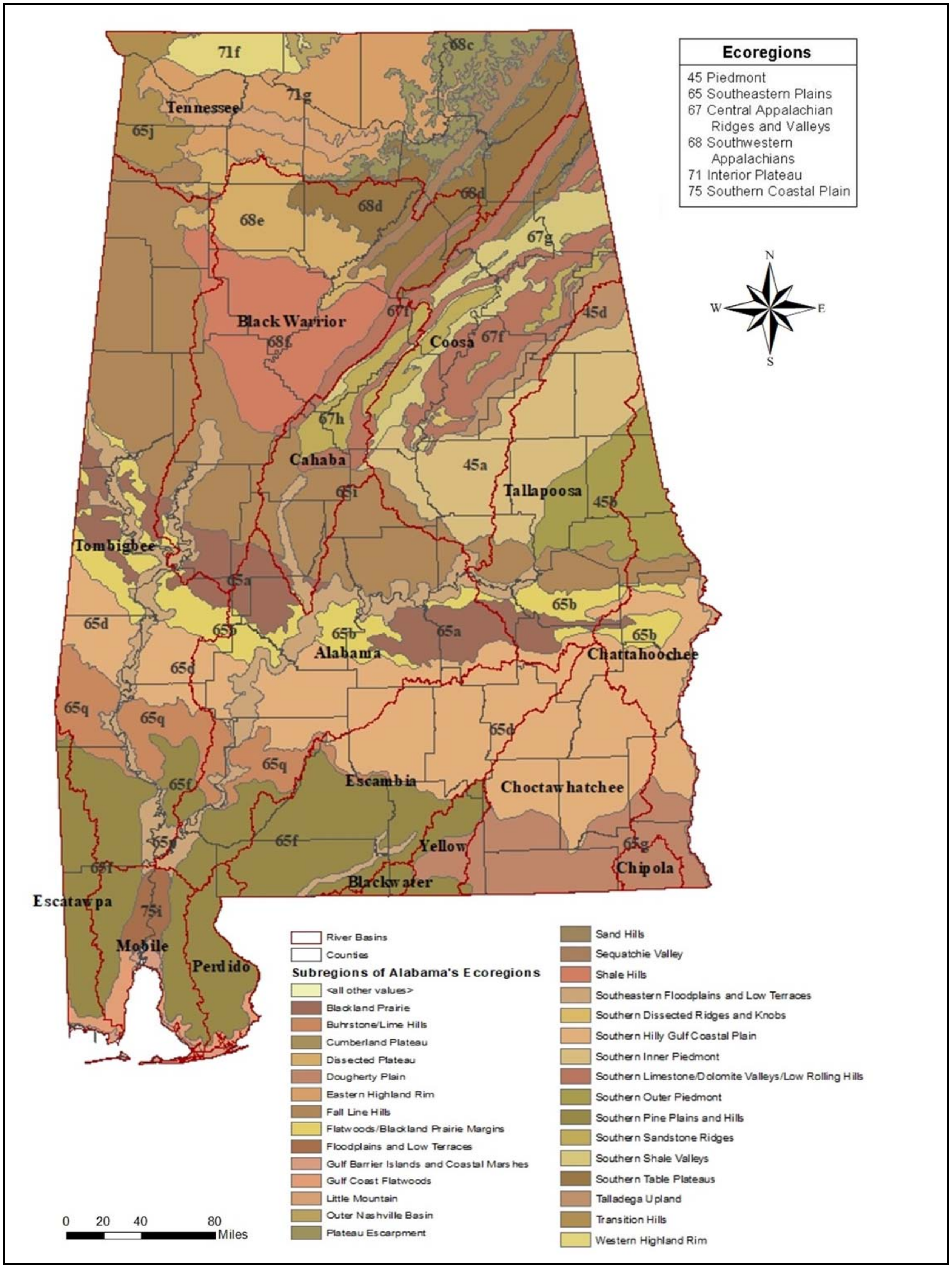
An important component of ADEM's Monitoring Strategy is a thorough review of data and assessment results from ADEM's five year monitoring cycle to address program weaknesses and changing data needs. Extensive program evaluations were conducted in 2014, and again in 2019 and 2020, in preparation for the 2015-2019 and 2020-2022 monitoring cycles. 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 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

Figure 2-1 Subregions of Alabama's Ecoregions



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(s), 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: 2015-2018

Identifying population of potential reference reaches: As part of the 2015 Monitoring Strategy, the ADEM implemented a more formalized process to review, identify and track ecoregional reference reach status and guidelines. At a minimum, potential reference reaches were identified through desktop screening level surveys every five years. Analyses were conducted more frequently if additional information was needed and available. Recommendations and information from outside agencies and stakeholders were considered. Multiple sources of information were used to evaluate and rank current watershed conditions, including ADEM's

WDG, Departmental databases, Google Earth, EPA's 2012 HWI Assessment of Alabama, and EPA's 2016 station-specific RPS information. Each set of potential reference reaches was stored as a project in ALAWADR.

Selecting candidate reference reaches: Candidate reference reaches were selected from the population of potential reference reaches for monitoring. They were monitored intensively for one year. Candidate reference reaches were selected as study-specific reference reaches to support current monitoring efforts, or to provide additional data for development or revision of ecoregional guidelines. As part of the 2015 Monitoring Strategy, the ADEM expanded its efforts to establish ecoregional reference reaches in non-wadeable flowing waterbodies, as well as braided, blackwater and swamp systems to determine if these waters constitute distinct site classes, with distinct background conditions.

Candidate reference reaches were selected from the current list of active candidate, verified, and potential reference reaches. Within each site class, highest priority was given to waterbodies within protected areas, such as state parks and national forests.

Reviewing and verifying reference reach status: Candidate reference reach data was intensively reviewed. As with all stations, data were entered and QAed by the collectors to ensure that the dataset in ALAWADR was complete and correct. Collectors also added notes concerning status of a candidate reference during a station visit or suggest a current sampling station as a candidate reference reach.

Once data entry was complete, the field collectors and program managers reviewed the annual surface water quality monitoring dataset by waterbody type, sampling protocol, ecoregion, and drainage area to ensure that the data is of the highest quality, and to evaluate conditions at each monitoring location. Draft reports were completed and reviewed by Field Operations and Basin Teams.

Candidate ecoregional reference reach data was reviewed by reference reach project managers and Basin Teams, and a decision was made to reject or verify the site as a reference reach, or to continue monitoring. In 2015, the ADEM added functionality to ALAWADR to track reference reach status decisions and the reference reach dataset at the station level.

Calculating ecoregional reference guidelines: Data from verified ecoregional reference reaches were used to document "best attainable" baseline conditions. The methods used to calculate these guidelines are outlined in ADEM 2008a, 2011a, and 2015. The data were reviewed to ensure that the collected data met the criteria set for use in the dataset. Verified ecoregional reference data were also reviewed to ensure that the data represent "best attainable" conditions, or if the status of some of these data should be revised. For example, minimum detection limits of older data may be much higher than what is currently used; using these data could skew guidelines to higher concentrations. In other instances, data from "least-impaired" stations were used because they were the best available at the time; if data from watersheds in better conditions become available, the dataset should be reviewed to determine if the lower quality data are needed, or if they can be dropped as verified reference reaches.

Ecoregional reference reach guidelines are updated every five years, when a complete 5-year cycle becomes available. However, where verified reference reach data are limited, or no longer representative of "best attainable" conditions, guidelines were updated more frequently on an as -needed basis.

2.2.3 ADEM's Ecoregional Reference Reach Project: 2019-2020

Since 1991, the ADEM has evaluated 1,221 stations as candidate reference reaches, and data has been collected during approximately 6,000 visits to 600 candidate reference reaches. Since 2005, the ADEM has also delineated 5,030 watersheds statewide to provide watershed condition information. Over time, this has provided a very clear picture of best available conditions within each ecoregion, and enabled the Department to define criteria to identify the least disturbed watersheds within each sub-ecoregion, particularly for perennial, wadeable streams. In addition, the ADEM has conducted 2,777 macroinvertebrate and fish biological surveys at 1,355 stations statewide. Using this extensive dataset of watershed, habitat, chemical, physical, and biological data, the ADEM has developed macroinvertebrate and fish indices calibrated to conditions naturally expected in different regions of the state. Gradual development of the ALAWADR database management and reporting tools has also drastically improved ADEM's ability to access and analyze chemical and physical data, and habitat and biological survey results, particularly since 2015. The accessibility of the dataset enabled ADEM to revise its process for selecting the final guideline dataset to improve representativeness and to decrease bias. The method used to calculate guidelines was also revised to improve comparability of guidelines to results collected using ADEM's Monitoring Strategy and CALM. These revised methods will be used to calculate the next update of the Ecoregional Reference Guidelines.

Core and Supplemental Indicators

Core Indicators: Flow (where appropriate), Total stream depth, Sampling depth, Water temperature, Dissolved oxygen, pH, Specific conductance, Turbidity, Total suspended solids, Total dissolved solids, Hardness, Alkalinity, Ammonia-nitrogen, Nitrate+nitrite-nitrogen, Total Kjeldahl nitrogen, Total phosphorus, Dissolved reactive phosphorus, Chlorophyll *a*, Sulfate, Total organic carbon, Five-day carbonaceous biochemical oxygen demand, Chlorides, color, Dissolved organic carbon

Supplemental Indicators: Supplemental indicators are determined by the data needs at each targeted site and may include: total and dissolved Aluminum, total and dissolved Antimony, total and dissolved Arsenic^{+3}, total and dissolved Cadmium, total and dissolved Chromium^{+3}, total and dissolved Copper, total and dissolved Iron, total and dissolved Manganese, total and dissolved Lead, total and dissolved Nickel, total and dissolved Selenium, total and dissolved Silver, total and dissolved Thallium, total and dissolved Zinc, habitat survey/physical characterization, macroinvertebrate, fish or diatom community surveys, screening level-periphyton and siltation surveys, diurnal dissolved oxygen studies, bacteriological geomean studies, and pesticides, semi-volatiles, atrazine, and glyphosate.

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),

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		
Copper		7.96
Cyanide	12.43	27.94
Iron		45.99
Lead	1.17	3.30
Mercury	933.11	2.78
Thallium	3.30	
Zinc		40.54
Mineralization		
Total dissolved solids	76.79	
Turbidity	32.02	87.88
Nutrients		
Ammonia		177.84
Nitrogen		165.01
Phosphorus	89.26	410.44
Oxygen depletion		
BOD, carbonaceous	81.95	664.93
BOD, nitrogenous	81.95	664.93
Dissolved oxygen (low)		19.64
Pathogens		
Escherichia coli	2612.95	562.51
Fecal coliform (legacy pollutant)		577.77
Enterococcus bacteria	37.33	23.93
Pesticides		
Atrazine		23.42
Chloripyrifos		23.42
DDT		1.96
Dieldrin	24.29	
Endosulfan		48.17
Methyl Parathion		48.17
pH		
pH		28.00
Sedimentation		
Siltation	487.37	443.33
Total suspended solids		
Toxic Organics		
Benzo(a)pyrene (PAHs)		27.94
Polychlorinated biphenyls (PCBs)	35.40	
Unknown		
Unknown toxicity		

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	276.64	267.24
Animal feeding operations	970.51	324.65
Aquaculture	69.91	
Atmospheric deposition	914.88	2.78
Channelization	4.41	
Collection system failure	632.12	76.89
Contaminated sediments	43.36	1.96
Dam construction		28.17
Flow regulation/modification		63.50
Highway/Road/Bridge construction		98.84
Industrial	60.06	155.61
Land development	140.56	242.99
Landfills		42.28
Mill tailings		17.53
Mine tailings		17.53
Mining	11.86	
Municipal	156.54	354.71
Natural	12.43	28.80
Non-irrigated crop production	25.61	248.28
On-site wastewater systems	50.19	71.81
Pasture grazing	2760.01	535.71
Riparian habitat loss		56.38
Sources outside state	31.60	30.78
Streambank modification	4.41	56.38
Surface mining	67.36	4.93
Surface mining-abandoned	29.95	50.46
Unknown source	50.55	134.04
Urban development	46.69	
Urban runoff/storm sewers	170.84	517.72
Wet weather discharge		

but due to recent monitoring changes, there are now eighty-eight 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. Seventy-five percent (66) of these reaches 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-three wadeable and thirty-five nonwadeable sampling reaches are monitored statewide; One of these monitoring locations is 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. Data from the ambient trend stations is discussed in more detail in Appendix E.

For more information on Alabama's Trend Monitoring Sites, contact David Moore in ADEM's Water Quality Branch at (334)-274-4165 or djmoore@adem.alabama.gov

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 Ms. Jennifer Haslbauer in ADEM's Water Quality Branch at (334) 274-4250 or jhaslbauer@adem.alabama.gov.

2.5 Industrial River Monitoring

The Industrial River Monitoring Program is a water quality monitoring program with the participation of fourteen (14) 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. Figure 2-2 and Table 2-3 show industrial facilities that conduct river monitoring. Table 2-4 shows Industrial River Monitoring Exceedances and Ambient Dissolved Oxygen Summaries for 2019-2020. For more information about Industrial River Monitoring, contact Ms. Carla Crews in ADEM's Water Quality Branch 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
BASF-The Chemical Company (Ciba Specialty Chemical)	AL0003093	Chemical Plant	Stream Temperature, pH, DO, Chloride,	Tombigbee River	6	Lower Tombigbee	McIntosh	Washington
Essity-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
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
PCA/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
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
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 2019-2020

		2019							2020						
Facility Name	NPDES #	Total Samples	Temp. °C Exceedances	pH Exceedances	# of Samples < 5.0 mg/l	% DO < 5	# of Samples < 4.0 mg/l	% DO <4	Total Samples	Temp. °C Exceedances	pH Ex-ceedances	# of Samples < 5.0 mg/l	%DO < 5	# of Samples < 4.0 mg/l	% DO <4
Alabama River Cellulose LLC	AL0025968	125	0	0	0	0.00	0	0.00	105	0	0	0	0.00	0	0.00
BASF-Ciba Specialty Chemical	AL0003093	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Essity-SCA Tissue North America	AL0074667	34	0	0	14	41.18	3	8.82	31	0	0	7	22.58	0	0.00
Georgia Pacific Corporation-Brewton Mill, Inc.	AL0002682	132	0	0	0	0.00	0	0.00	65	0	0	0	0.00	0	0.00
Georgia Pacific Corporation-Naheola Mill	AL0003301	**	**	**	**	**	**	**	**	**	**	**	**	**	**
International Paper-Pine Hill Mill	AL0002674	268	0	0	6	2.24	0	0.00	139	0	0	0	0.00	0	0.00
International Paper- Prattville Mill	AL0003115	223	0	0	0	0.00	0	0.00	95	0	0	0	0.00	0	0.00
International Paper-Riverdale Mill	AL0003018	256	3	NR	0	0.00	0	0.00	64	5	NR	0	0.00	0	0.00
Kimberly Clark Corporation	AL0002801	**	**	**	**	**	**	**	**	**	**	**	**	**	**
PCA-Boise White Paper LLC	AL0002755	114	0	0	0	0.00	0	0.00	117	0	0	0	0.00	0	0.00
Resolute Forrest Products US, Inc.	AL0003518	221	3	0	26	11.76	3	1.36	**	**	**	**	**	**	**
WestRock Coated Board (non-continuous)	AL0000817	78	0	0	8	10.26	2	2.56	132	0	0	4	3.03	1	0.76
WestRock Mill Company-Demopolis	AL0002828	99	0	0	0	0.00	0	0.00	53	0	0	0	0.00	0	0.00
WestRock Mill Company-Stevenson	AL0022314	28	0	0	0	0.00	0	0.00	20	0	0	0	0.00	0	0.00

Table prepared with incomplete data received

**Data not reported

NR= Not required by facilities NPDES

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.

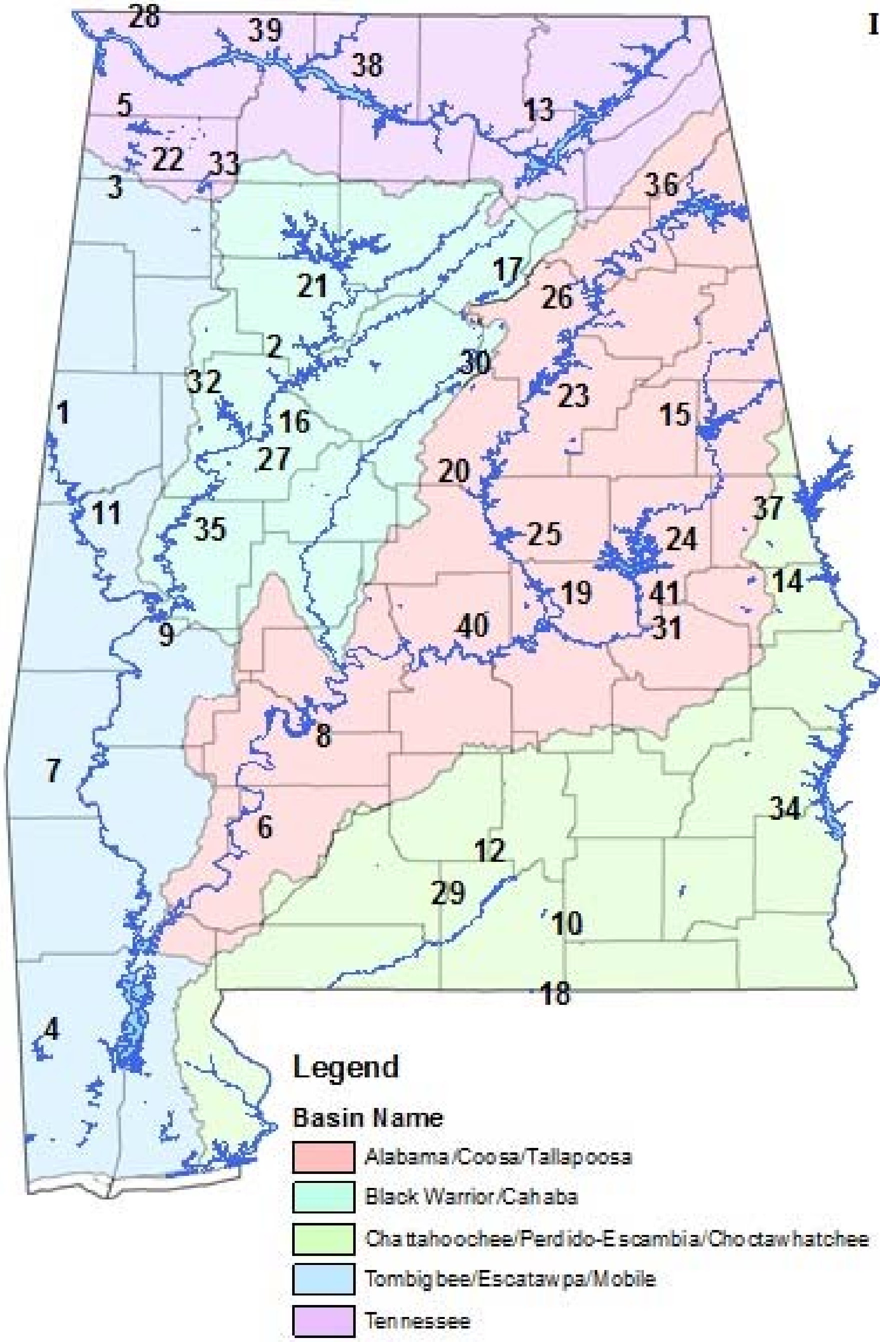
Beginning in 1994, the frequency of reservoir monitoring in the RRMP was increased to a minimum of once every two years (August monitoring) so that the water quality database and trends in trophic status could be more rapidly developed. Lakes indicated to be use-threatened or impaired continued to be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

Figure 3-1 Publicly Accessible Reservoirs of Alabama



ID #	Reservoir
1	Aliceville
2	Bankhead
3	Bear Creek
4	Big Creek
5	Cedar Creek
6	Claiborne
7	Coffeeville
8	Dannelly
9	Demopolis
10	Frank Jackson
11	Gainesville
12	Gantt
13	Guntersville
14	Harding
15	Harris
16	Holt
17	Inland
18	Jackson
19	Jordan
20	Lay
21	Lewis Smith
22	Little Bear Creek
23	Logan Martin
24	Martin
25	Mitchell
26	Neely Henry
27	Oliver
28	Pickwick
29	Point A
30	Purdy
31	Thurlow
32	Tuscaloosa
33	Upper Bear Creek
34	Walter F. George
35	Warrior
36	Weiss
37	West Point
38	Wheeler
39	Wilson
40	Woodruff
41	Yates

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. Ashley Lockwood in ADEM's Montgomery Office at (334) 260-2766 or alockwood@adem.alabama.gov.

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.

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

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	2	4,185
Mesotrophic	11	78,520
Eutrophic	28	396,765
Hypereutrophic	0	0
Dystrophic	0	0
Unknown	0	0

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 Lakes/ Reservoirs Impaired by Causes appears in Table 3-5. The Size of Lakes/ Reservoirs 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.

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.

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	Coosa	59	2019	62
	2	Pickwick	Tennessee	59	2020	57
	3	Gainesville	Tombigbee	59	2019	53
	4	Weiss	Coosa	57	2019	60
	5	Wheeler	Tennessee	57	2019	59
	6	Purdy	Cahaba	56	2020	57
	7	Lay	Coosa	56	2019	57
	8	Bear	Tennessee	56	2020	57
	9	Bankhead	Warrior	56	2021	54
	10	Woodruff	Alabama	55	2020	53
	11	Upper Bear	Tennessee	55	2020	57
	12	Coffeeville	Tombigbee	55	2019	51
	13	Claiborne	Alabama	54	2020	50
	14	Demopolis	Tombigbee	54	2019	50
	15	West Point	Chattahoochee	53	2021	52
	16	Guntersville	Tennessee	53	2020	54
	17	Wilson	Tennessee	53	2020	57
	18	Holt	Warrior	53	2021	53
	19	Warrior	Warrior	53	2021	53
	20	Logan Martin	Coosa	52	2019	57
	21	Gantt	Perdido Escambia	52	2021	49
	22	Dannelly	Alabama	51	2020	54
	23	W.F. George	Chattahoochee	51	2021	53
	24	Little Bear	Tennessee	51	2020	49
	25	Harding	Chattahoochee	50	2021	48
	26	Frank Jackson	Perdido Escambia	50	2021	51
	27	Aliceville	Tombigbee	50	2019	55
	28	Smith	Warrior	50	2021	42
Mesotrophic (40-49)	29	Jordan	Coosa	49	2019	53
	30	Harris	Tallapoosa	49	2020	49
	31	Point A	Perdido Escambia	48	2021	46
	32	Martin	Tallapoosa	48	2020	41
	33	Cedar	Tennessee	48	2020	48
	34	Oliver	Warrior	48	2021	49
	35	Inland	Warrior	46	2021	42
	36	Mitchell	Coosa	45	2019	55
	37	Tuscaloosa	Warrior	45	2021	40
	38	Yates	Tallapoosa	44	2020	43
	39	Jackson	Perdido Escambia	42	2021	41
Oligotrophic (<40)	40	Thurlow	Tallapoosa	36	2020	41
	41	Big Creek	Escatawpa	29	2021	41

*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

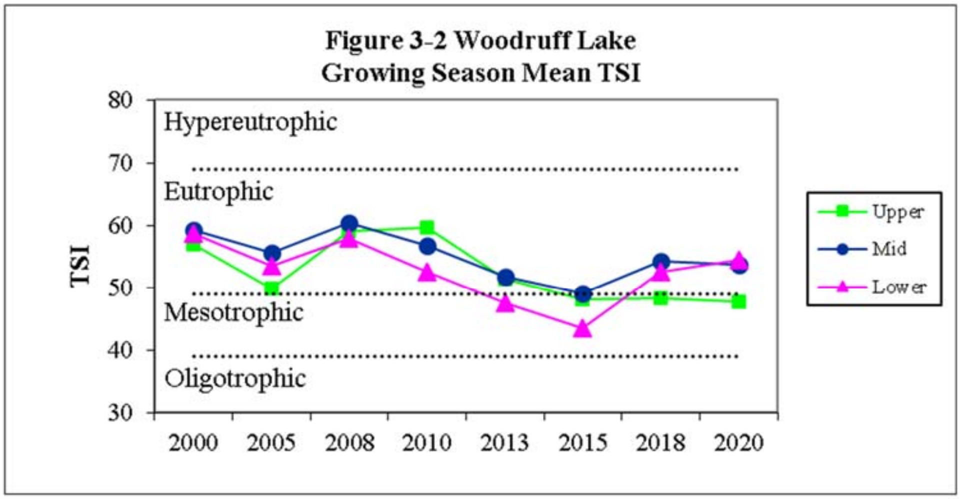
Table 3-5 Size of Lakes/ Reservoirs Impaired by Causes

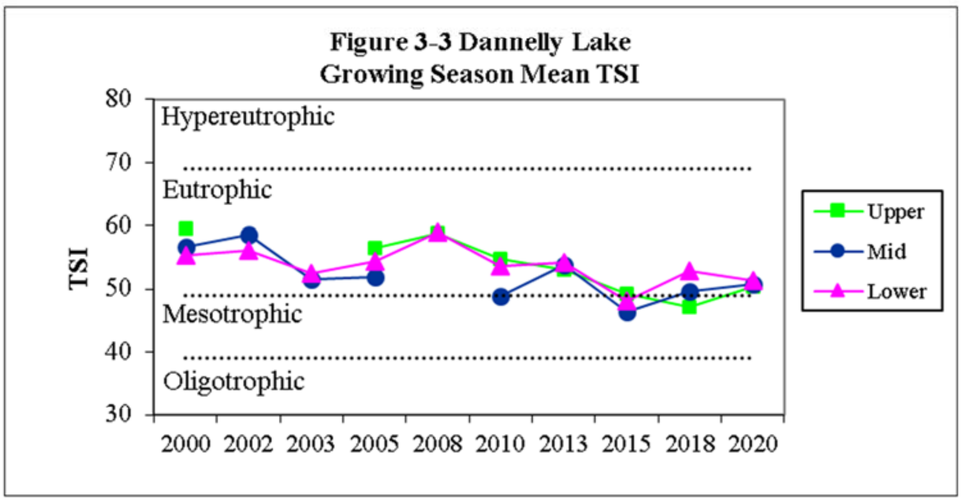
	Category 5	**Category 4**
Cause	Lake/Reservoir (acres)	Lake/Reservoir (acres)
Flow Alterations		
Habitat alteration		13,977.29
Metals		
Mercury	81,779.64	
Nutrients		
Ammonia		527.25
Nitrogen		3,021.35
Phosphorus	71,185.80	77,538.93
Oxygen depletion		
BOD, carbonaceous	1,711.89	43,326.01
BOD, nitrogenous	1,711.89	527.25
Pathogens		
Escherichia coli	6,602.90	
Fecal coliform (legacy pollutant)		732.66
Pesticides		
DDT		85.73
pH		
pH	1,569.21	14,426.04
Sedimentation		
Siltation	869.04	5,912.08
Toxic Organics		
Perfluorooctane Sulfonate (PFOS)	19,378.31	
Polychlorinated biphenyls (PCBs)	30,044.38	25,383.49

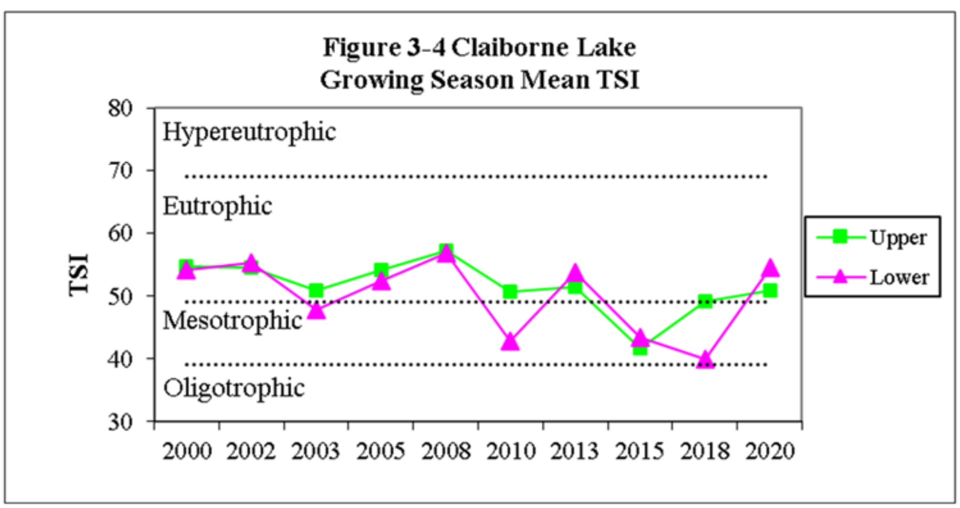
Table 3-6 Size of Lakes/ Reservoirs Impaired by Sources

	Category 5	**Category 4**
Source	Lake/Reservoir (acres)	Lake/Reservoir (acres)
Agriculture	70,561.11	2,427.99
Animal feeding operations		732.66
Atmospheric deposition	81,693.91	
Collection system failure		527.25
Contaminated sediments	30,130.11	2,374.42
Dam construction		2,288.69
Flow regulation/modification		76,655.51
Industrial	19,893.16	37,069.48
Municipal	688.81	41,447.71
Non-irrigated crop production	1,569.21	3,275.38
Nonpoint source runoff	62.63	20,663.21
Pasture grazing	1,604.25	3,069.97
Sources outside state	6,567.86	38,991.64
Spills from trucks or trains		412.49
Surface mining-abandoned		412.49
Urban runoff/storm sewers	402.65	18,446.24

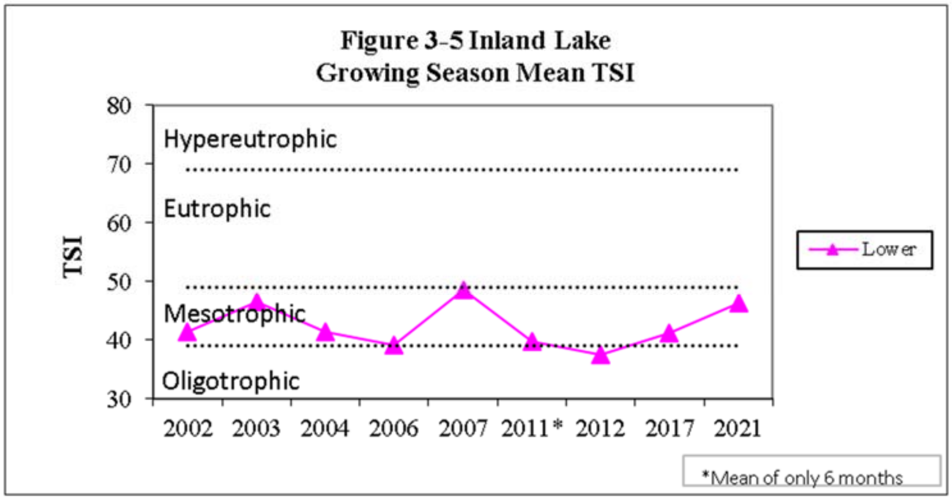
Alabama River Basin

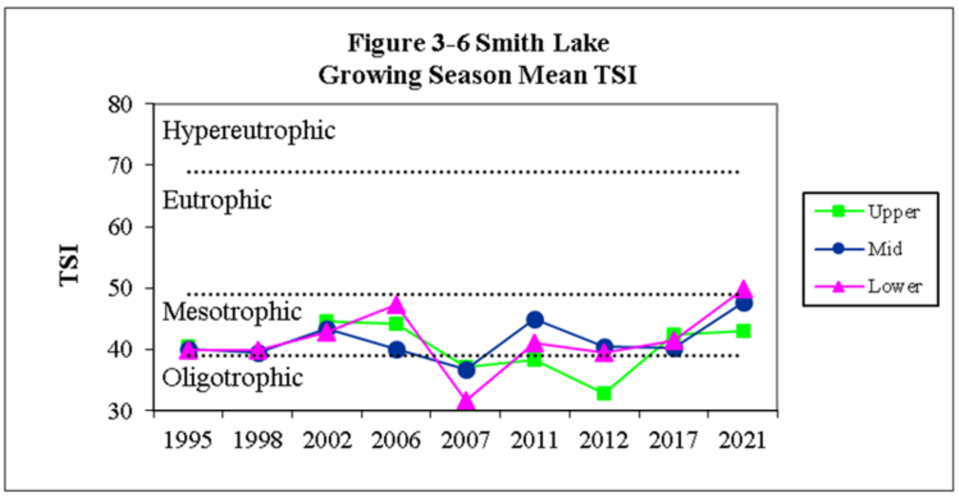


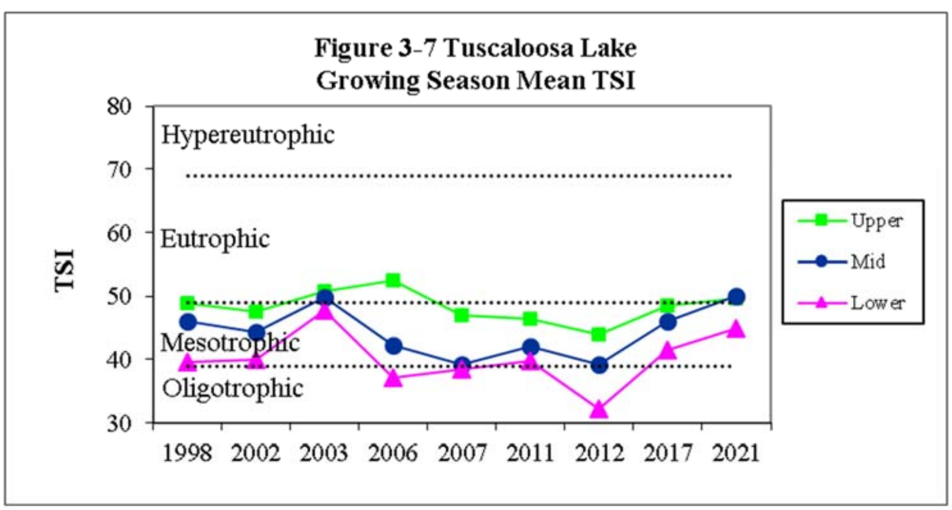




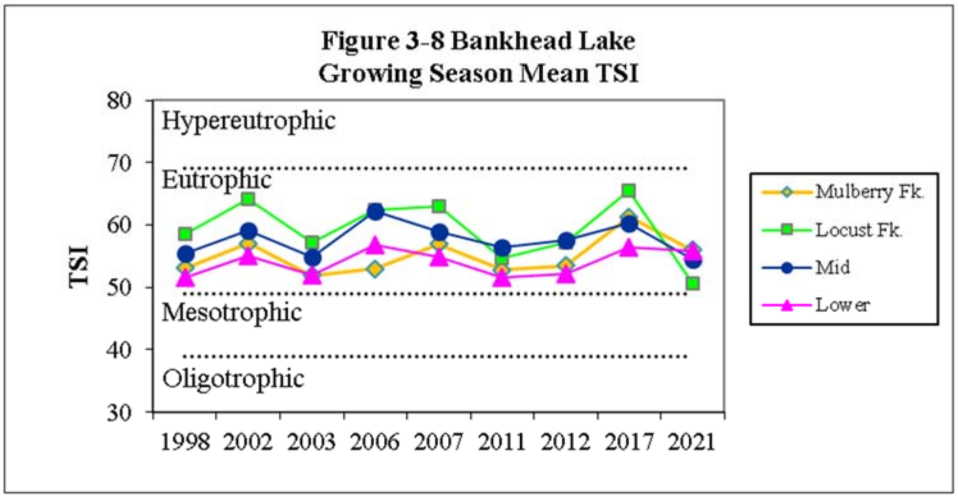
Black Warrior River Basin

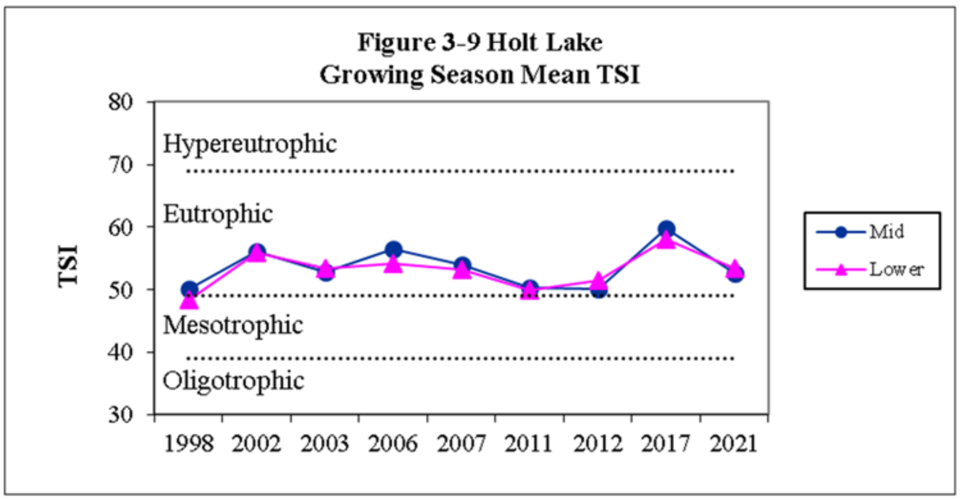


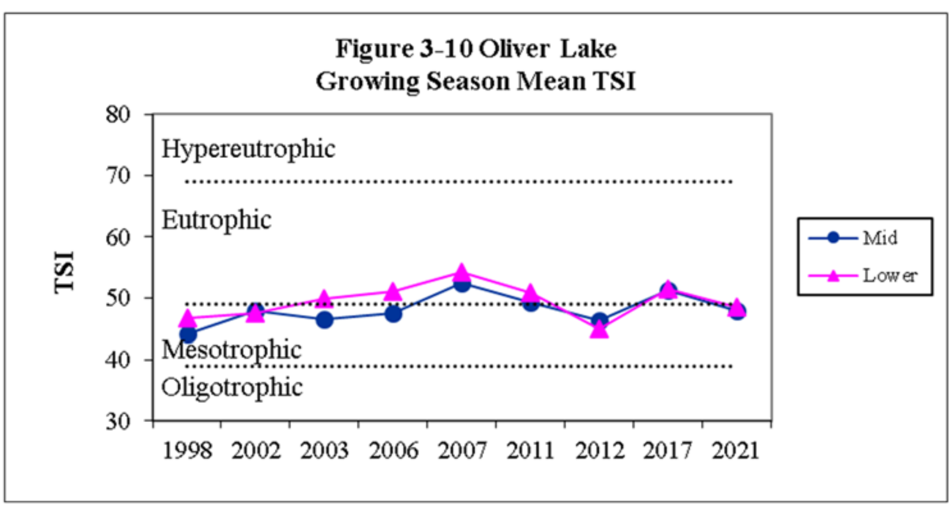




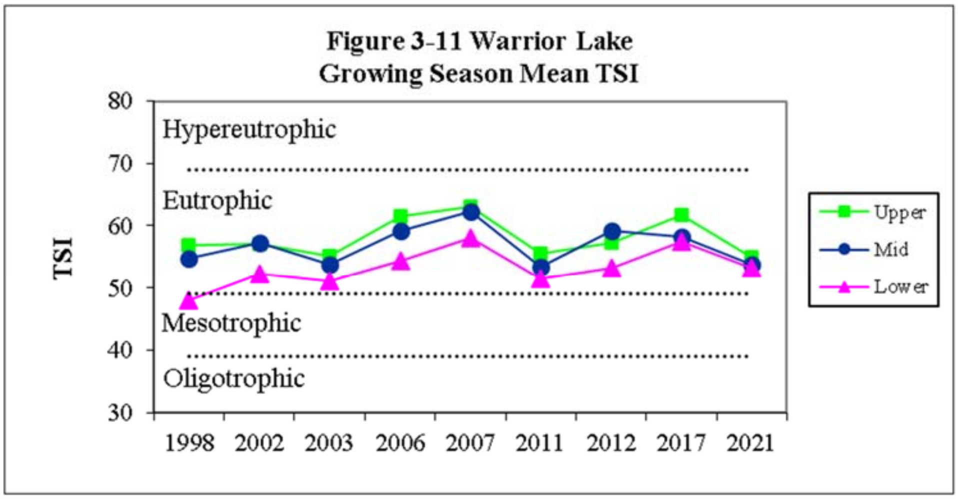
Black Warrior River Basin



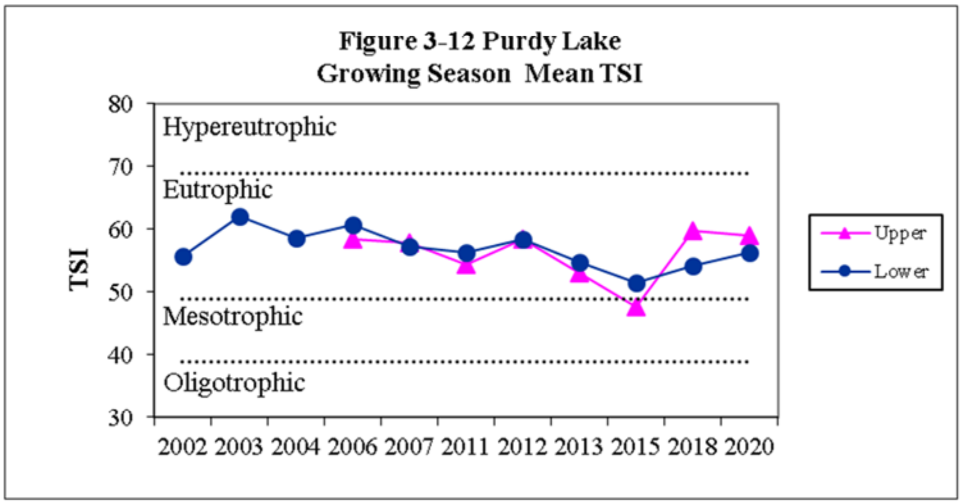




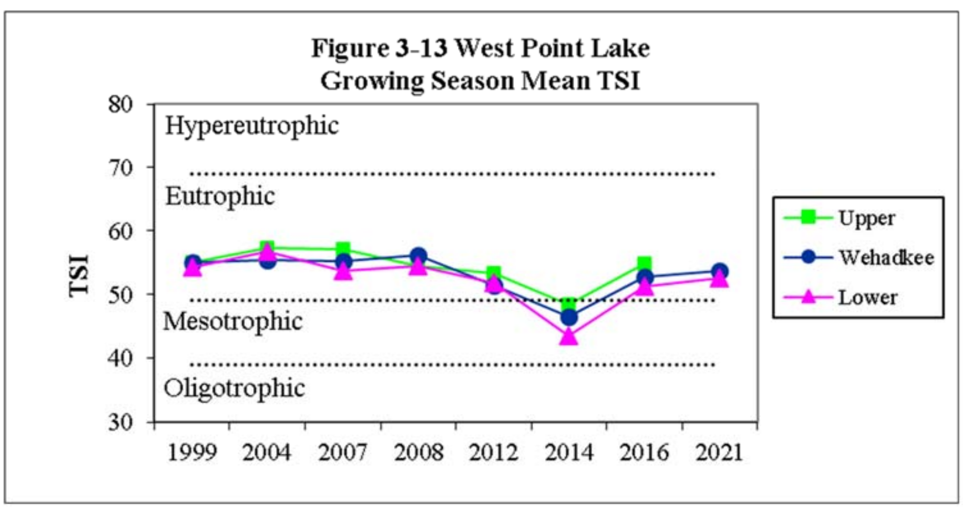
Black Warrior River Basin



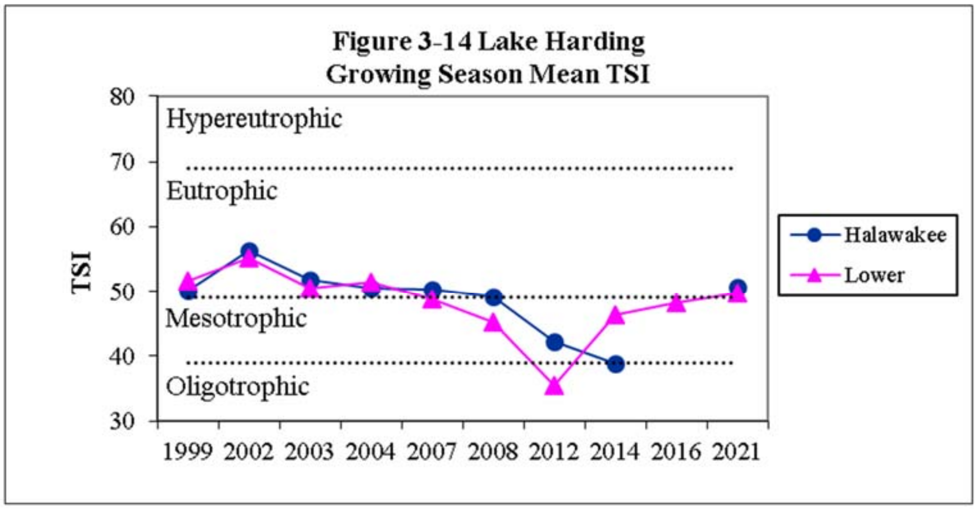
Cahaba River Basin

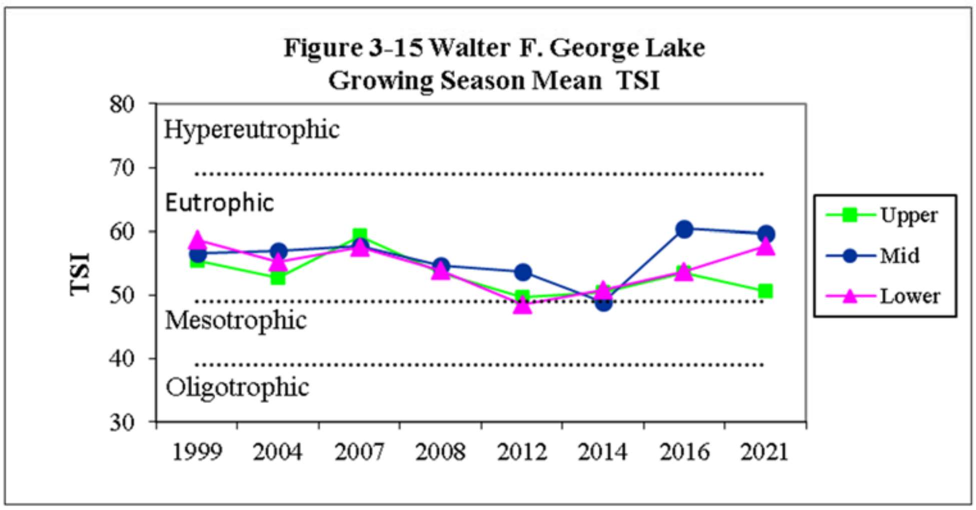


Chattahoochee River Basin

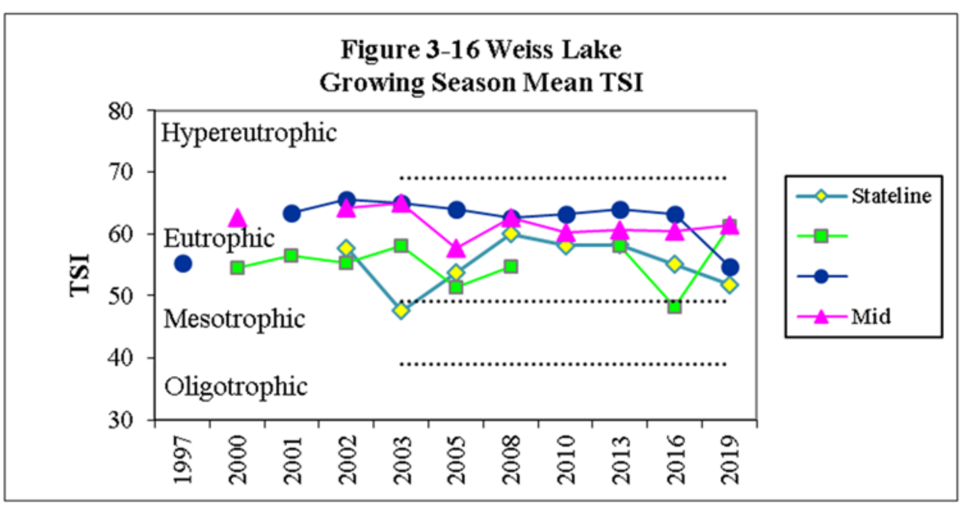


Chattahoochee River Basin

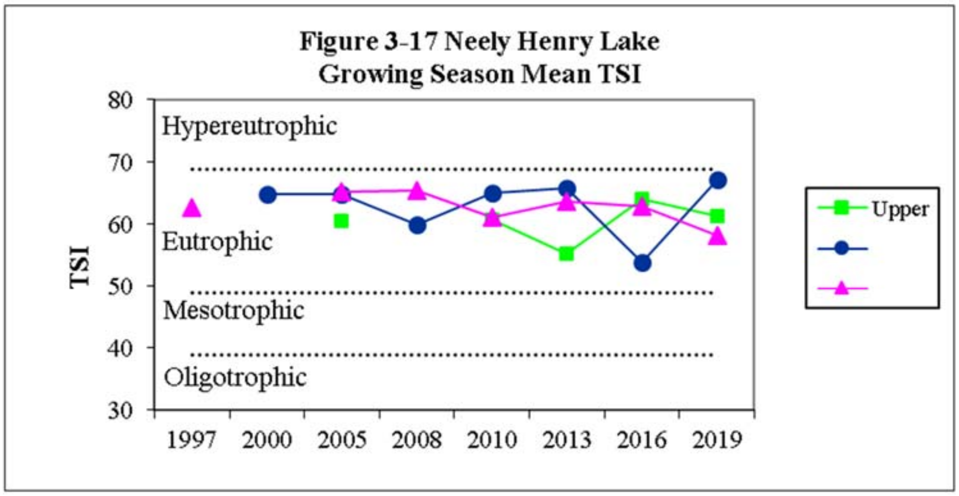


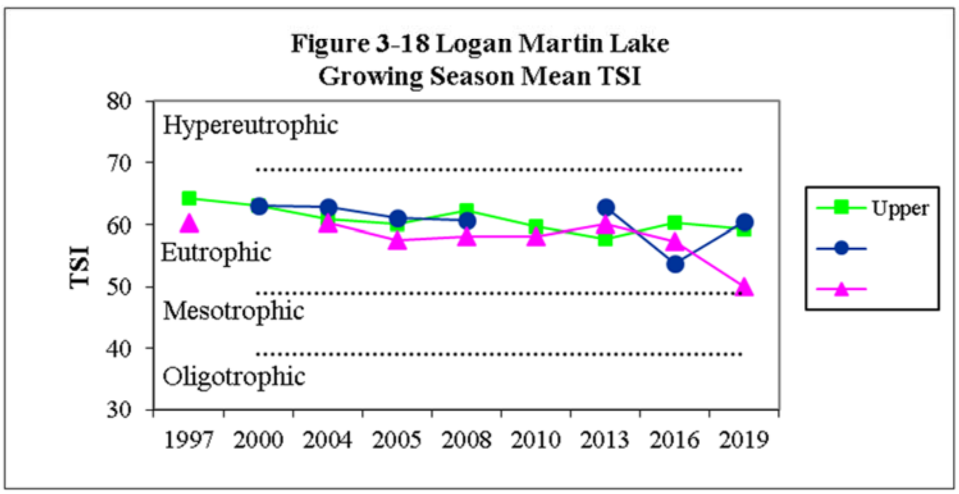


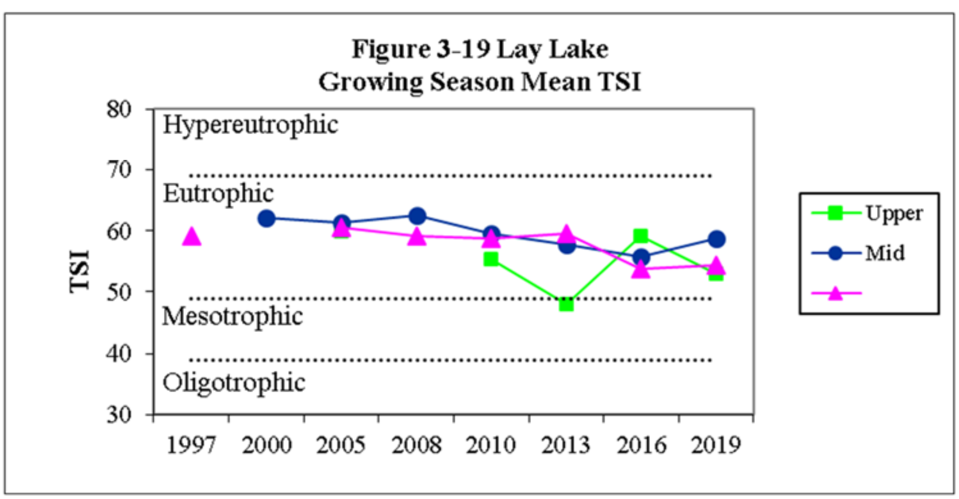
Coosa River Basin



Coosa River Basin







Coosa River Basin

Figure 3-20 Mitchell Lake
Growing Season Mean TSI

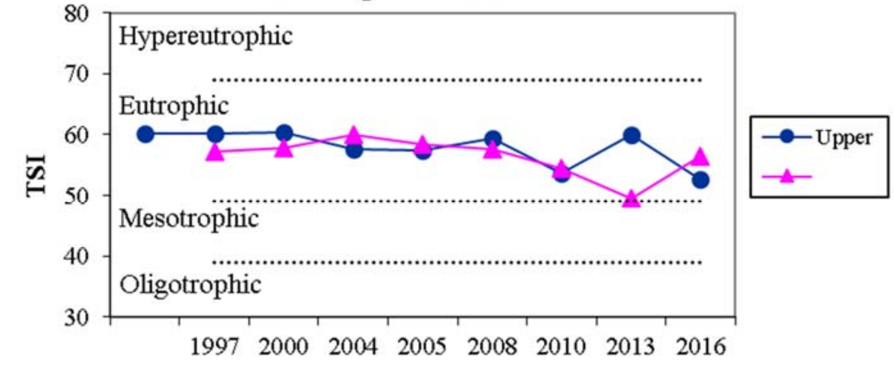
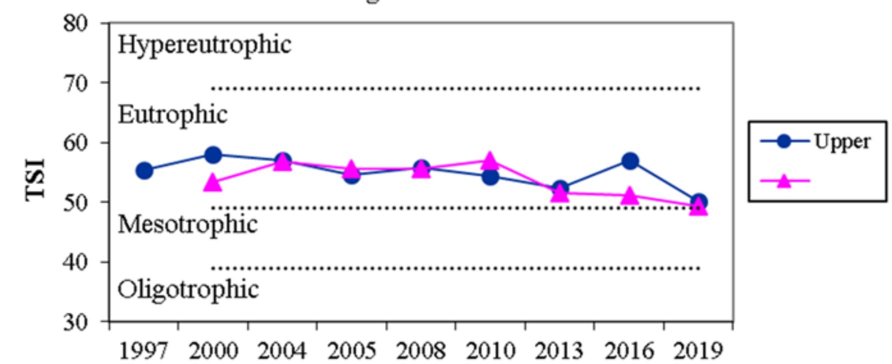
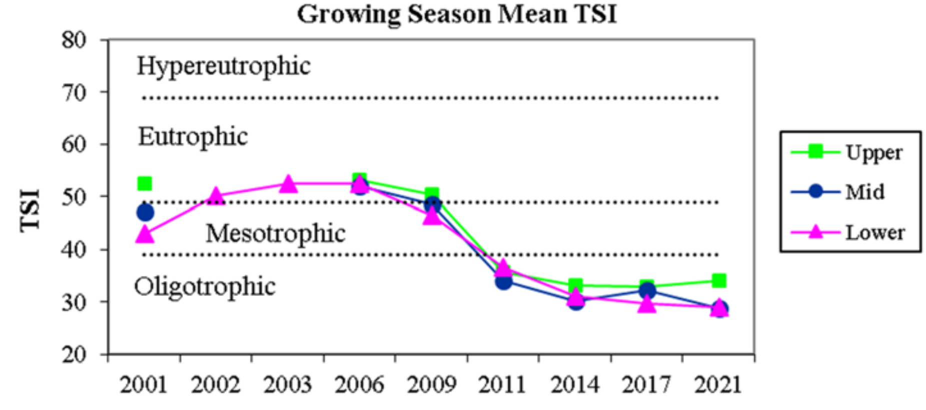


Figure 3-21 Jordan Lake
Growing Season Mean TSI

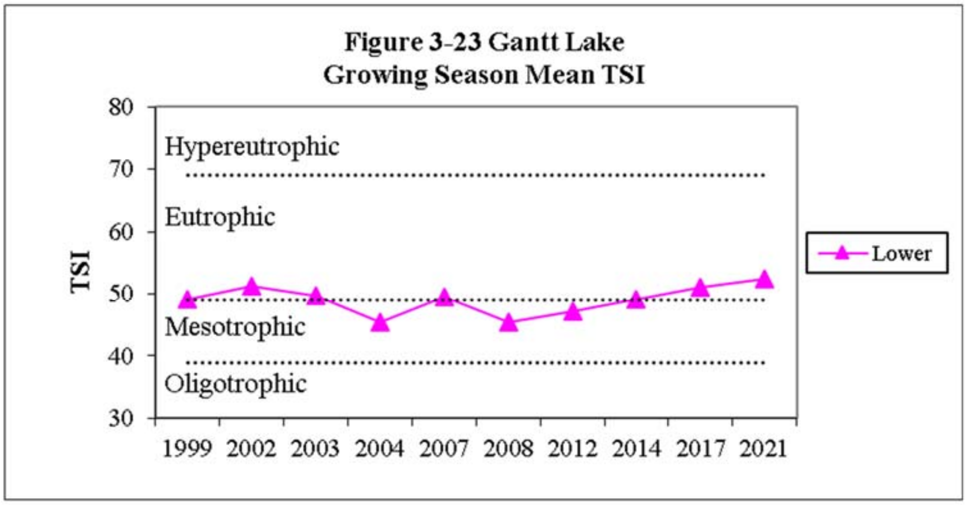


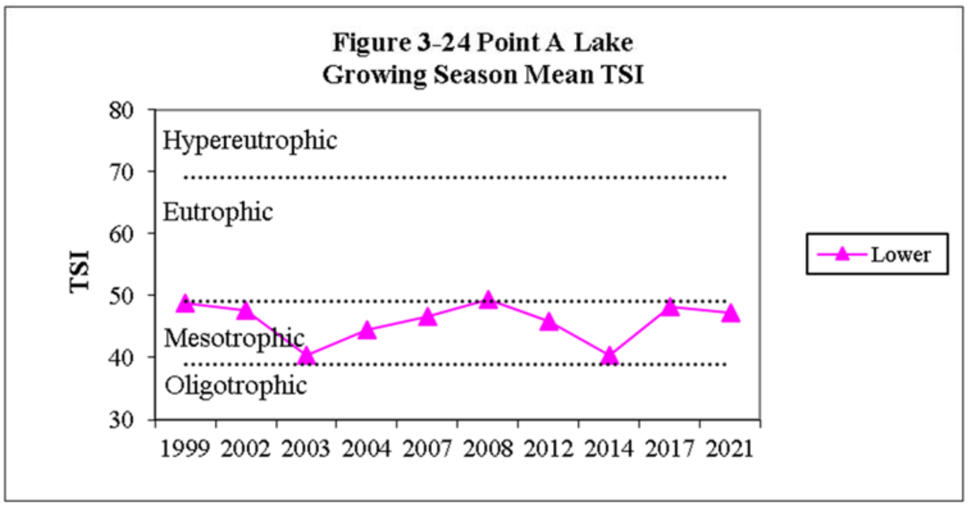
Escatawpa River Basin

Figure 3-22 Big Creek Lake
Growing Season Mean TSI

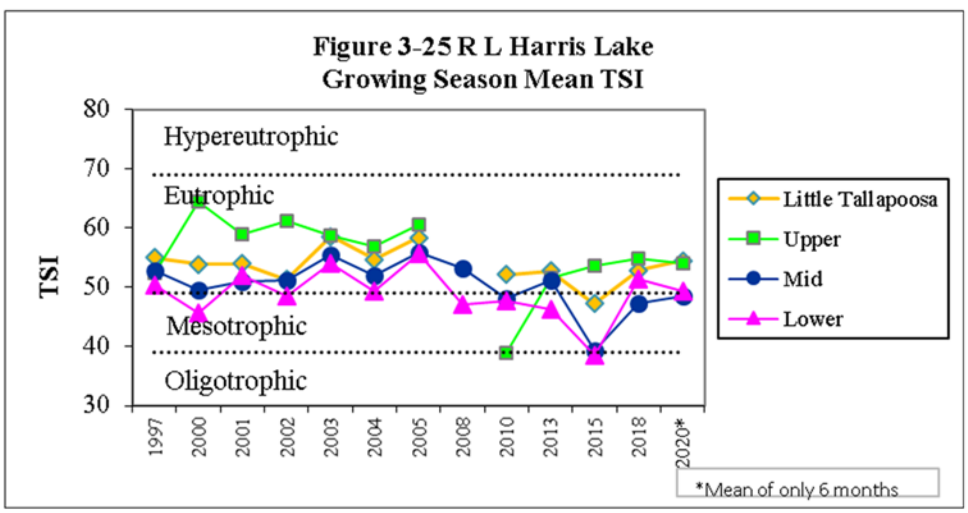


Escambia River Basin

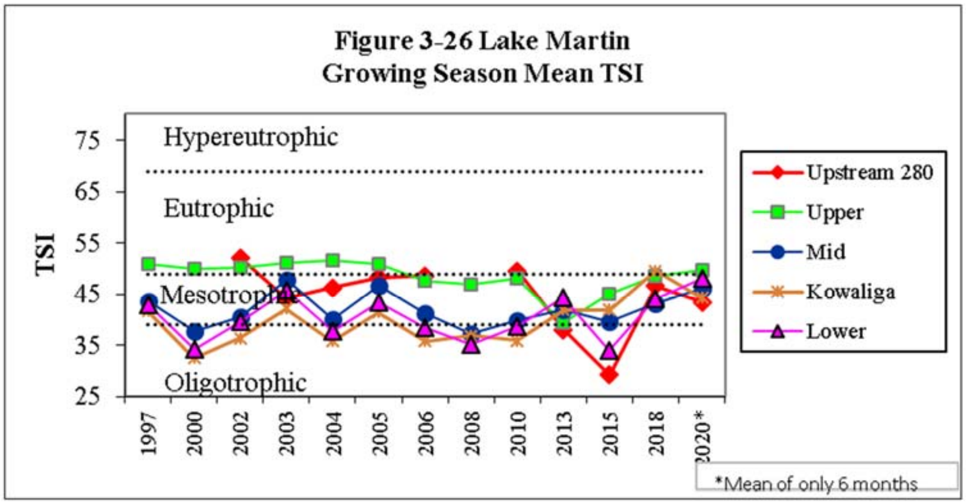


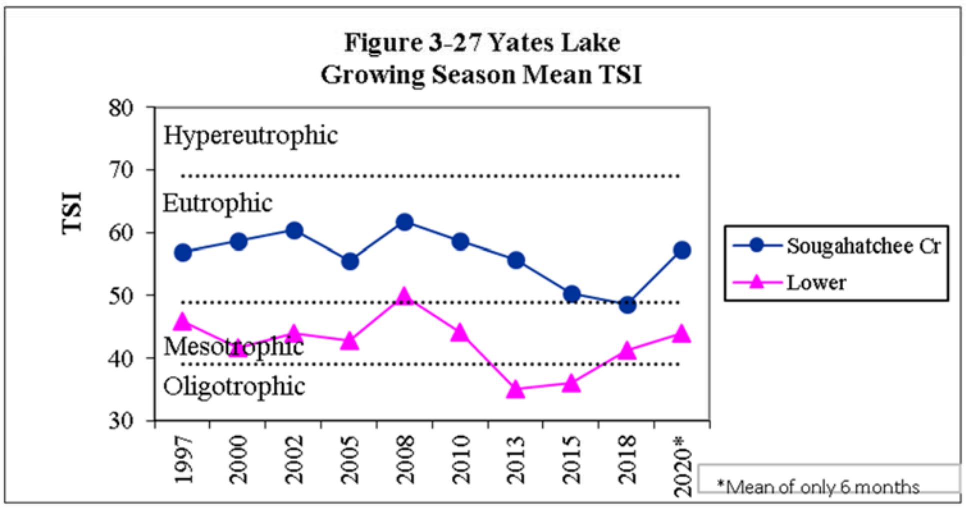


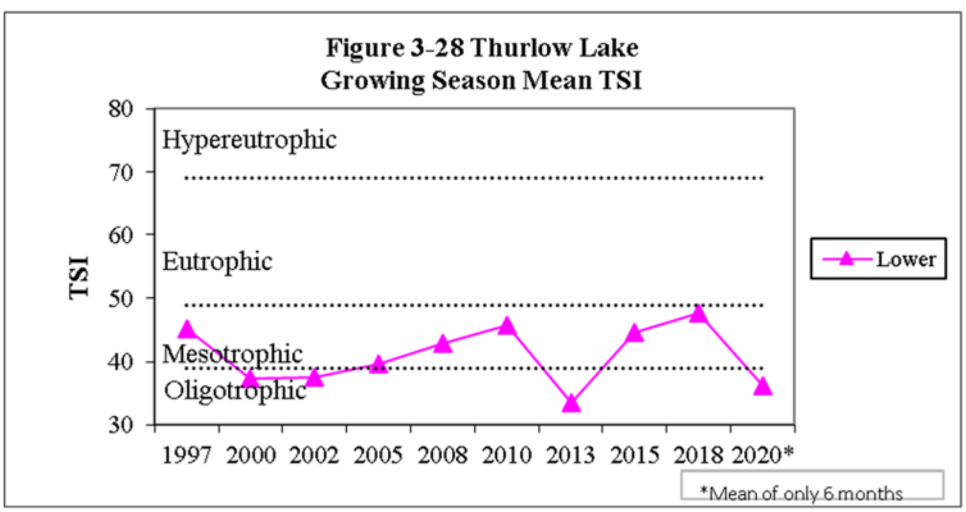
Tallapoosa River Basin



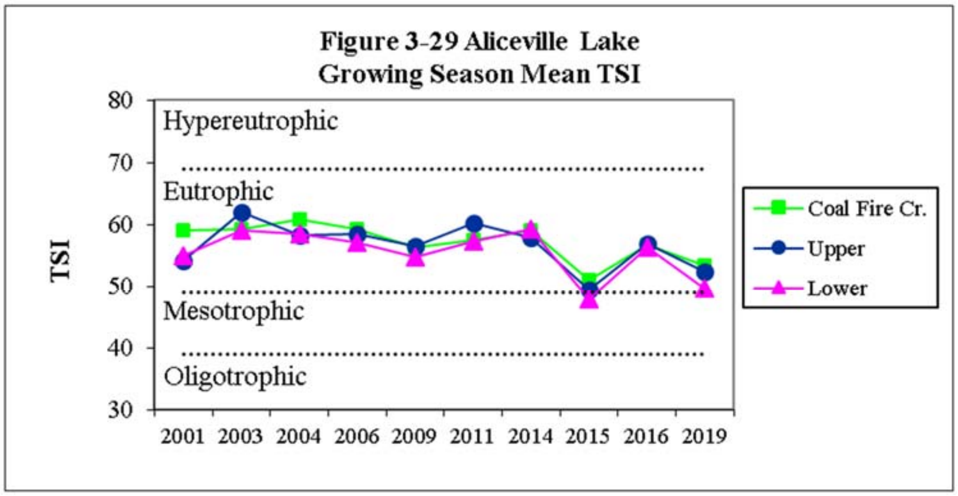
Tallapoosa River Basin

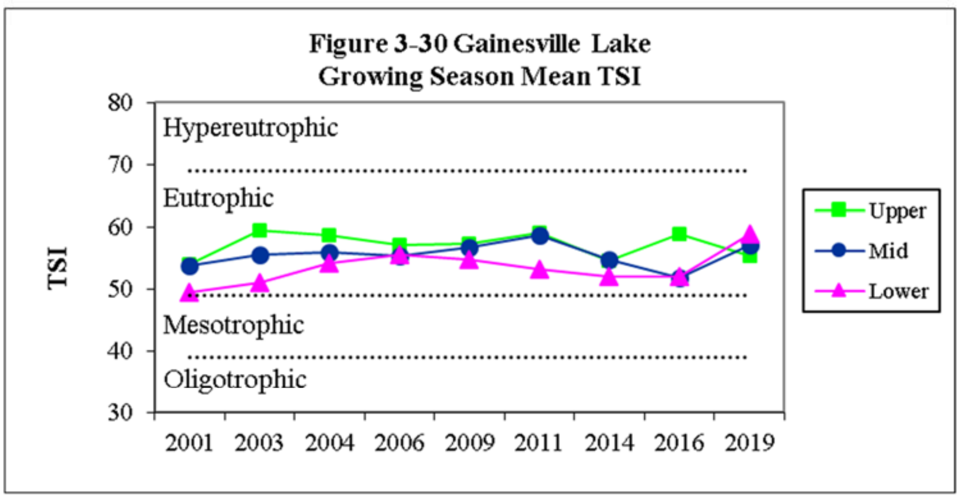


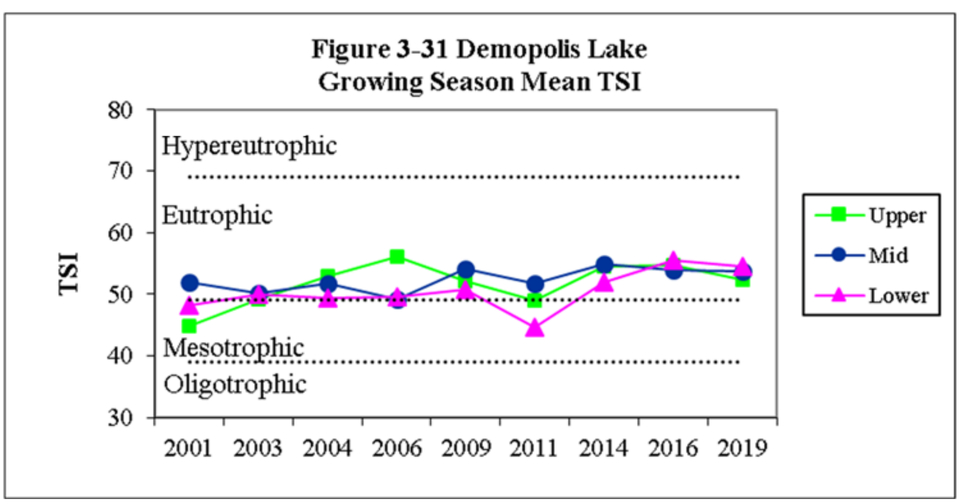




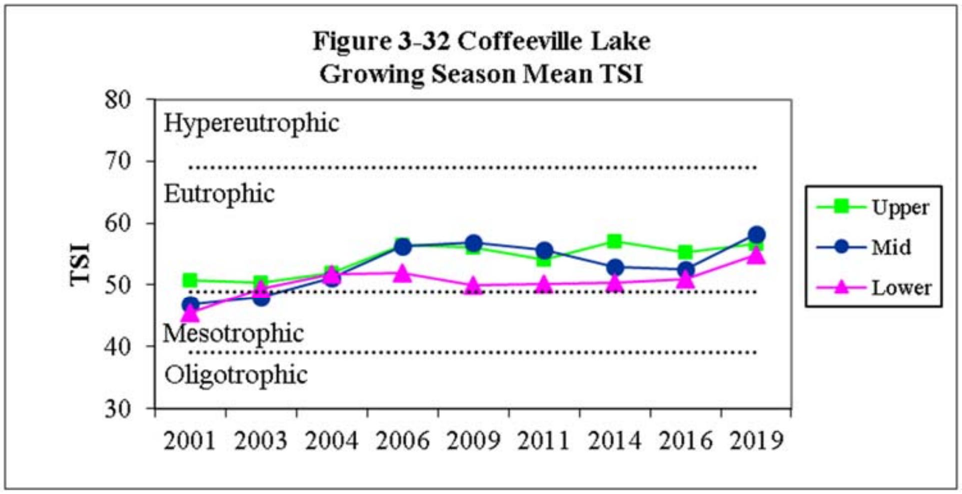
Tombigbee River Basin



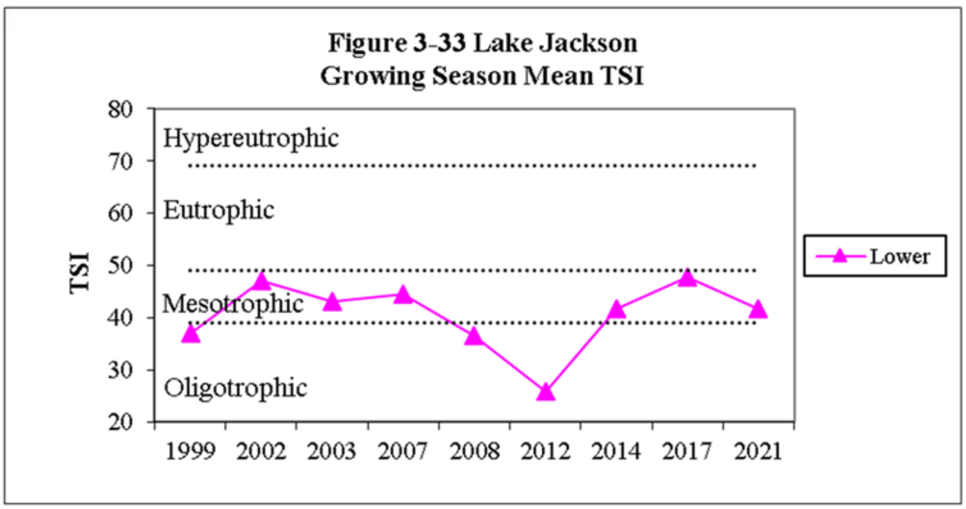


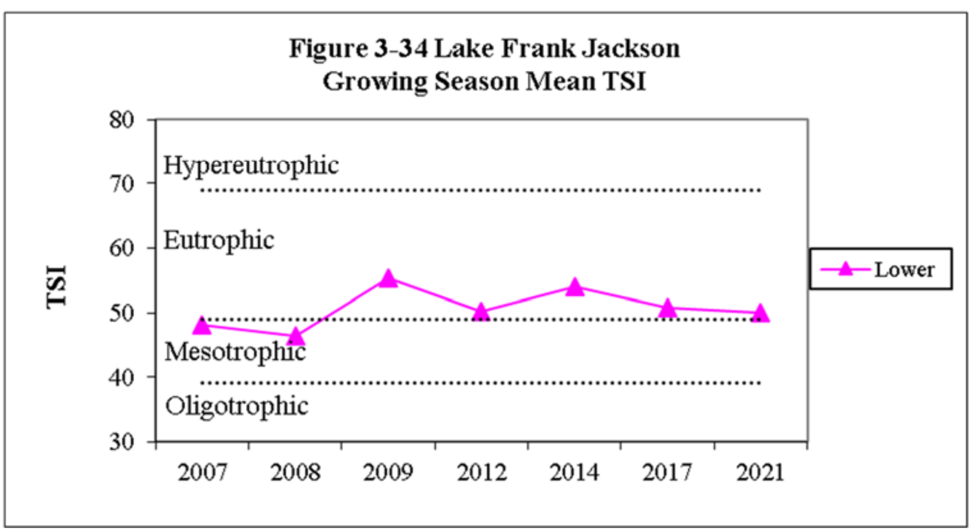


Tombigbee River Basin



Yellow River Basin





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 2021.

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. Ashley Lockwood in ADEM's Montgomery Office at (334) 260-2766 or alockwood@adem.alabama.gov.

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 3-42

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

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	51,150
Stable	36	427,735
Degrading	1	585
Trend Unknown	0	0

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

Figure 3-35 Bear Creek Lake Growing Season Mean TSI

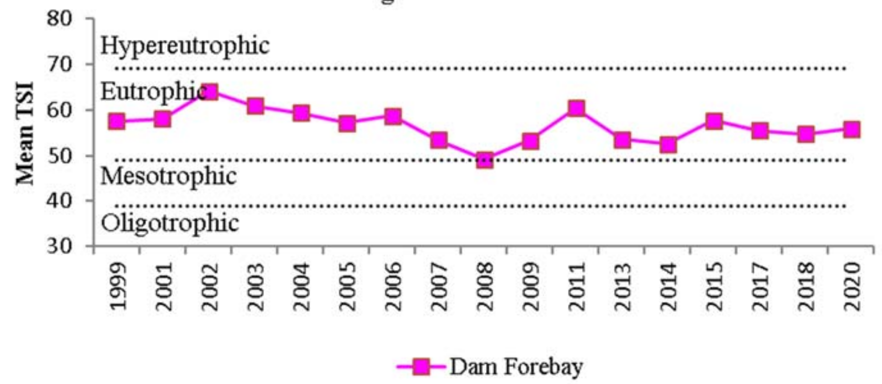
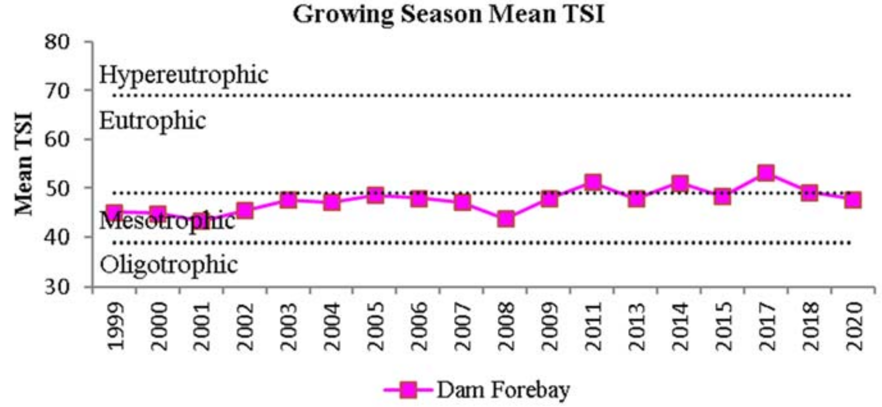
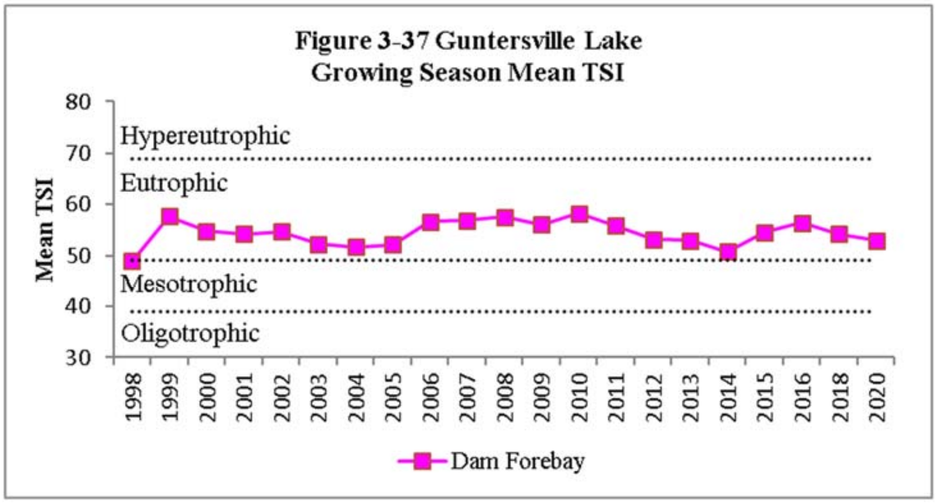
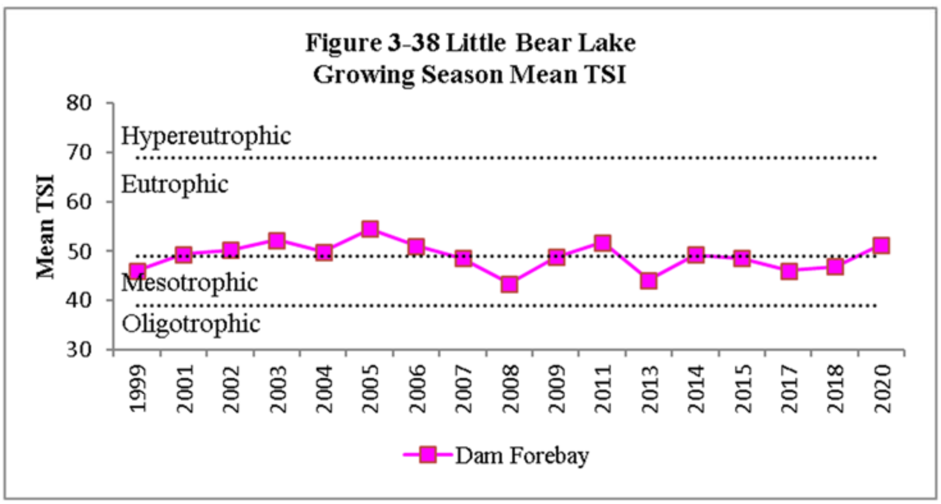


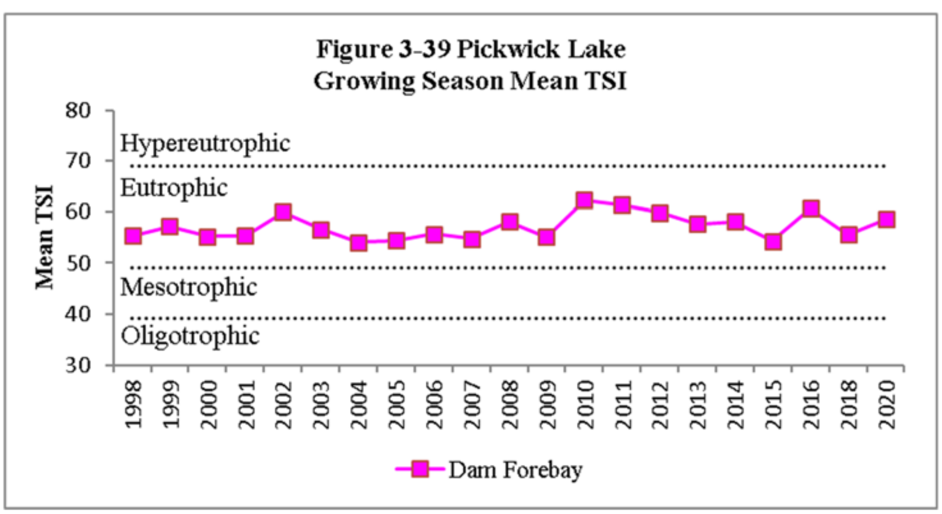
Figure 3-36 Cedar Creek Lake Growing Season Mean TSI



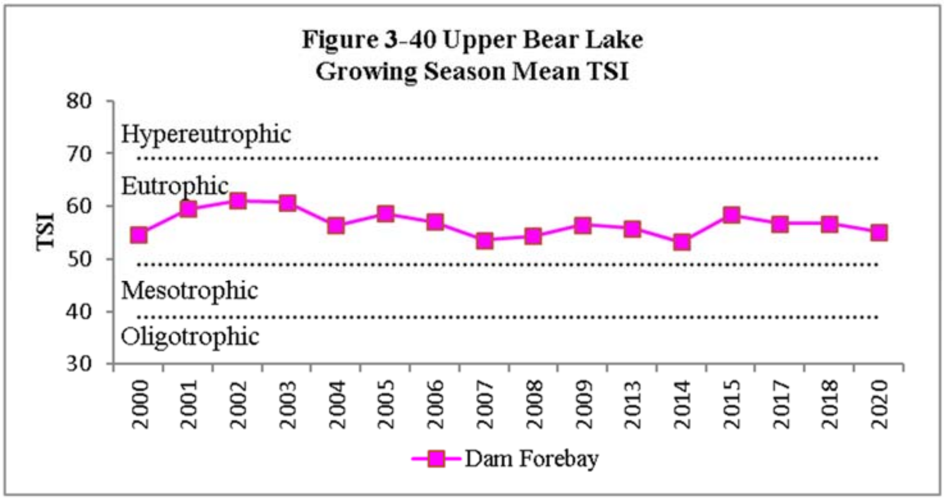
<u>**Tennessee River Basin**</u>

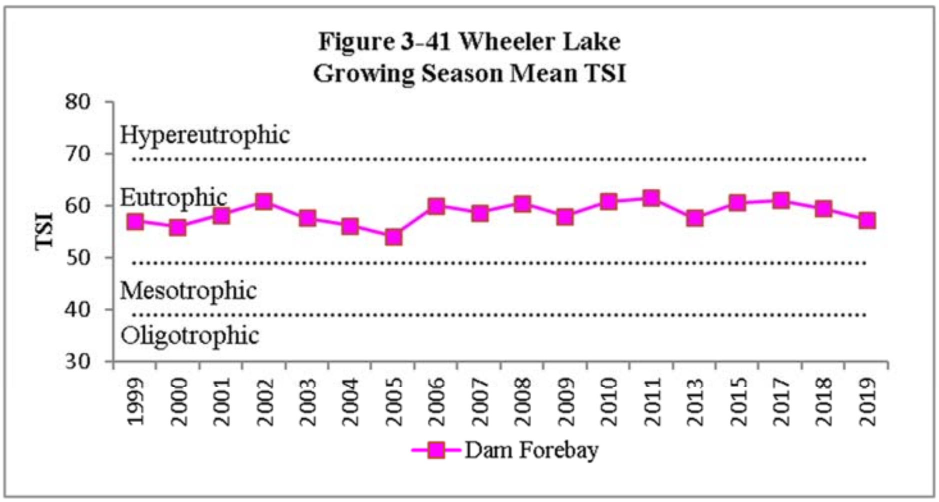


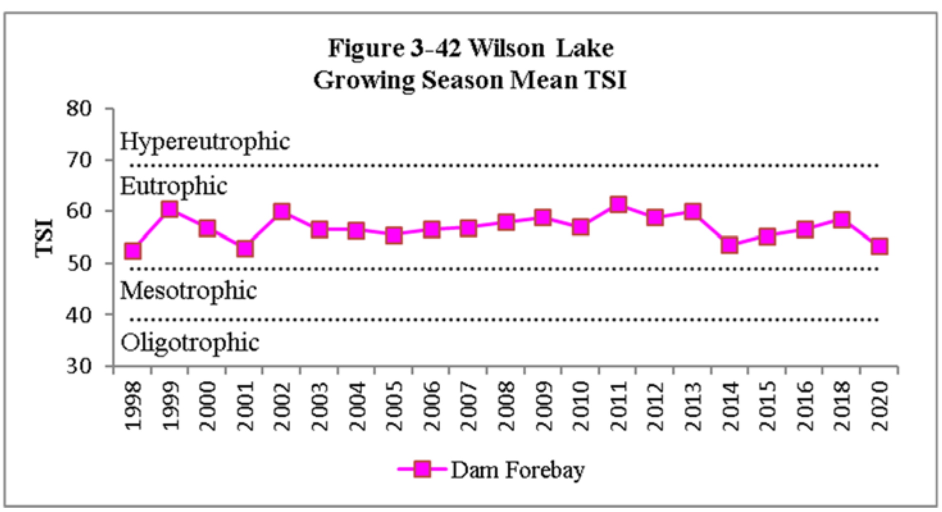




Tennessee River Basin







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. These surveys included water chemistry parameters, soil profiles, vegetation plots, Wetland Rapid Assessment Protocols (WRAP), and groundwater well monitoring.

This initial effort provided information that assisted the development of the current efforts aimed towards developing a 5-year Wetlands Monitoring Strategy that was 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 (AWMW) was established by ADEM-FOD with assistance from the ACNPCP to identify interagency partners and offer participation that would enhance future WMP development. The AWMW worked through teleconferencing and e-mail to assist the development of goals and objectives, which included the following:
Identify and document essential objectives for Alabama's Wetlands Monitoring Program.
Identify the data needed to achieve these goals and objectives for wetland types statewide.
Determine the objectives, methods, and indicators for a first 5-yr Wetland Monitoring Strategy.
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, since 2015, the program has focused on three goals identified by the Department:
Define the percentage of wetlands within wadeable river and stream watersheds at which these waters are distinct from clear, flowing wadeable river and stream system systems with little or

no wetlands, based on expected chemical, physical, and biological conditions;
Characterize natural background conditions in the blackwater wadeable river and stream systems (braided, swamps, etc.) common in south Alabama; and
Characterize natural background conditions in riverine wetland and swamp 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.

In 2014, the ADEM received a WPDG to develop ADEM's Wetland Program Development Plan (WPDP), QAPP, and standard operating procedures. The project concentrated on three Category 5 waterbodies in the Tallapoosa River Basin. Two types of reference watersheds within the same ecoregion and characterized by similar drainage areas, gradients and other natural features were selected for comparison to the listed streams. One set of reference reaches were characterized by a high percent wetland area within their watersheds, and the other set did not. The purpose of sampling these two sets of reference reaches was to: 1) determine if coastal plain stream systems characterized by a high percentage of forested wetland constitute a distinct water body type, with unique chemical, physical, and biological characteristics; and, 2) develop appropriate assessment methods and tools for these wetland/stream systems. The methods used during this study included: water chemistry, amphibian survey, soil survey, Floristic Quality Index vegetation survey, Wetland Rapid Assessment Procedure (WRAP) assessment and groundwater well monitoring.

In 2019, the ADEM received an extension on this grant to continue monitoring reference reaches characterized by a high percent riverine wetland areas within their watersheds. Since that time, wetland monitoring was refined to include: water chemistry (Mar-Oct), a spring amphibian survey, a summer vegetation survey, and Wetland Rapid Assessment Procedure (WRAP) assessment. In 2022, the ADEM is incorporating a second plant survey conducted in the spring, and monitoring multiple locations of one wetland system to better characterize overall conditions within the system.

The amphibian surveys may also be refined in the future to ensure a thorough sample and accurate assessment of overall conditions of the community. Recommended refinements include: incorporating a summer survey, use of carefully monitored drift fences and pitfall traps, and call boxes to monitor nocturnal frog calls.

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, ten (10) 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

Scott Hughes /ADEM-Field Operations Division at (334) 394-4304 or ash@adem.alabama.gov ,

Fred Leslie/ ADEM-Montgomery Branch at (334) 260-2748 or fal@ adem.alabama.gov ,

Scott Brown / ADEM-Mobile Branch at (251) 304-3229 or jsb@adem.alabama.gov ,

Autumn Nitz / ADEM-Coastal Programs at (251) 304-1176 or autumn.nitz@adem.alabama.gov .

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 multi-family residential systems operated by management entities with 15,000 gallon-per-day or less are regulated 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 other than Underground Storage Tanks (USTs). This regulatory guidance was last revised in February, 2017, (Revision 3.0) and is available at: http://adem.alabama.gov/programs/land/landforms/arbcamanual.pdf
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 Laserfiche imaging system 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. 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.
6. In September 1997, a contract was signed with the Geological Survey of Alabama to revise a series of 13 Aquifer Vulnerability Reports. These reports have been 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

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	X	Fully established	ADEM/WSB & Federal RSLs
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, OGB = Alabama Oil and Gas Board

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. The Statewide Assessment takes the place of all the area reports and contains information about aquifers on a more comprehensive, statewide scale. It has over 100 plates of cross sections, potentiometric surface maps, geologic formation maps, and other hydrogeologic information in addition to the report are contained well-specific hydrographs and discussions. This is 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.

7. 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.
8. 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.
9. The Alabama Department of Public Health has completed its on-site sewage regulations that went into effect on March 9, 2006.

5.3 Summary of Groundwater Contamination Sources

5.3.1 Reporting Area

There are five Physiographic Sections in Alabama. For FY2021, the Alabama Department of Environmental Management selected the physiographic districts between the Southern Pine Hills district and the Black Prairie districts in Alabama for evaluation. The districts included in this report are the Dougherty Plain district, the Hatchetigbee Dome subdistrict, the Lime Hills district, the Buhrstone Hills subdistrict, the Flatwoods subdistrict, the Southern Red Hills district, the Chunnenuggee Hills district, and the Alluvial-Deltaic Plain of the East Gulf Coastal Plain Province. These districts are underlain by the Nanafalia-Clayton Aquifer, Lisbon Aquifer, Providence-Ripley Aquifer, and Upper Floridan Aquifer. These aquifers are significant sources of drinking water supplies for private residential use as well as for municipalities. Counties included in the reporting area in whole or part are Barbour, Bullock, Butler, Choctaw, Clarke, Coffee, Conecuh, Covington, Crenshaw, Dale, Dallas, Geneva, Henry, Houston, Lowndes, Macon, Marengo, Monroe, Montgomery, Pike, Russell, Sumter, and Wilcox. 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.

Figure 5-1 to 5-3 shows the physiographic region, geology, and aquifers of the East Gulf Coastal Plain, Alabama respectively. 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.

Figure 5-1 Physiographic Region the East Gulf Coastal Plain, Alabama

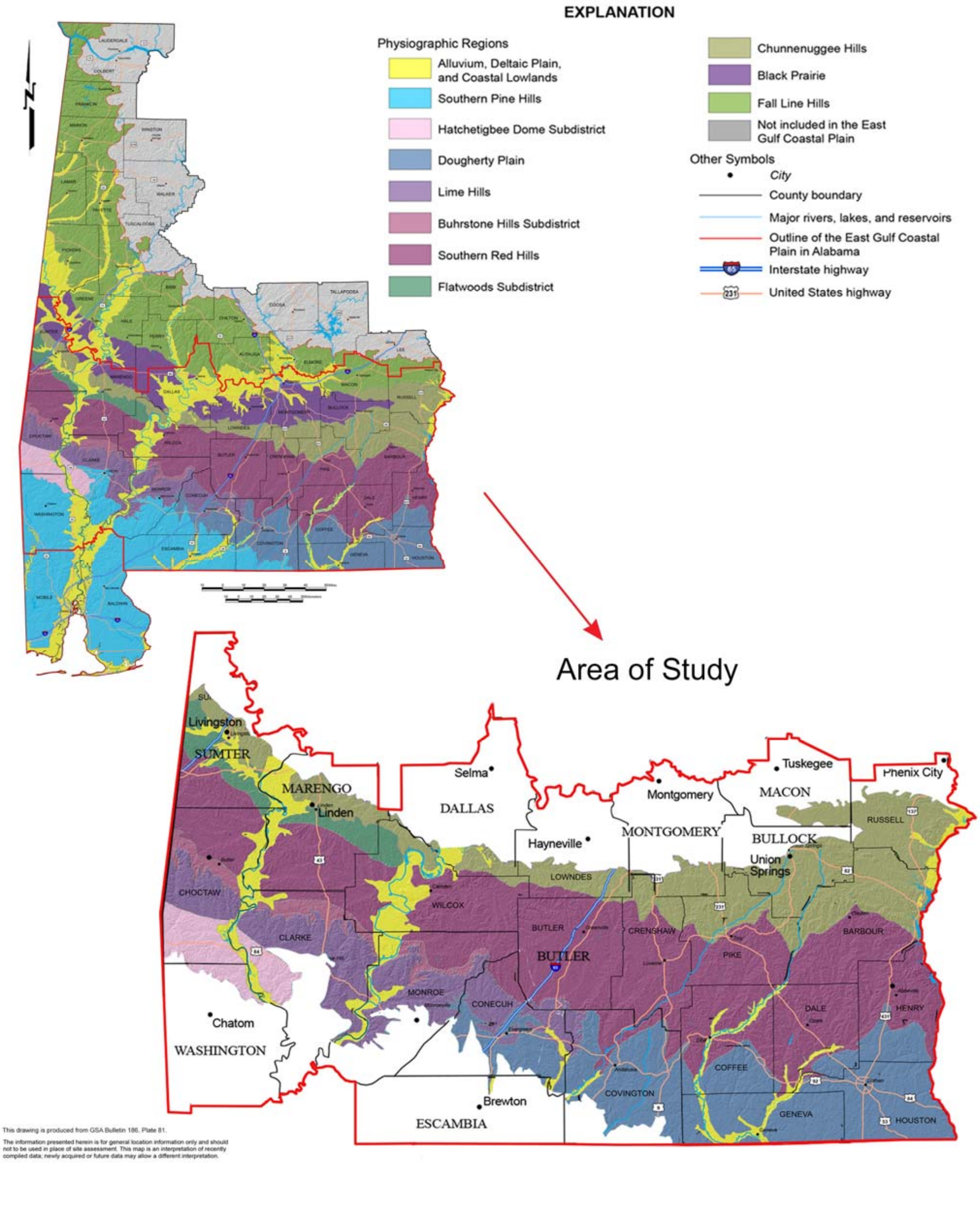


Figure 5-2 Geology of the Physiographic Region the East Gulf Coastal Plain, Alabama

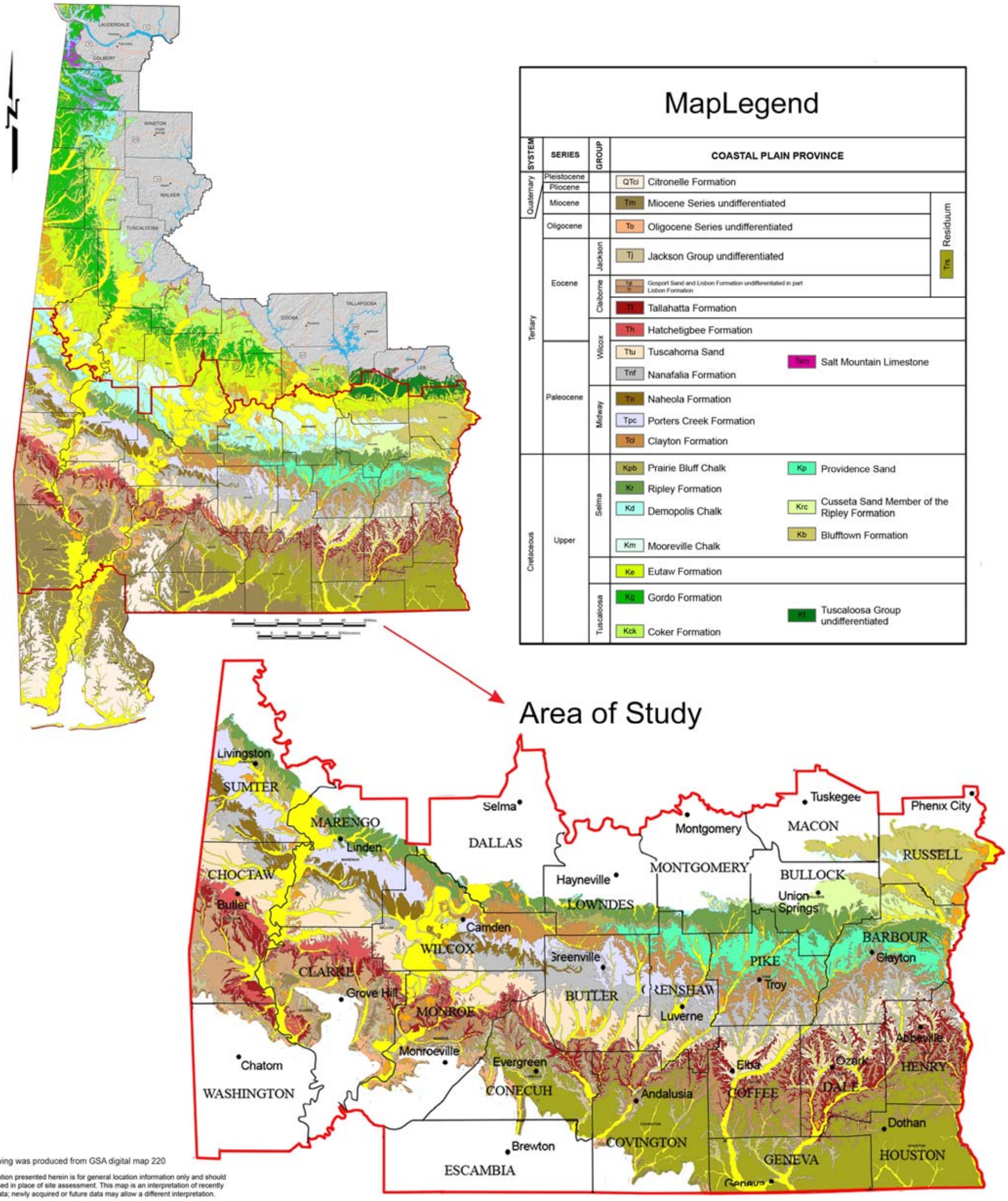


Figure 5-3 Aquifers of the Physiographic Region the East Gulf Coastal Plain, Alabama

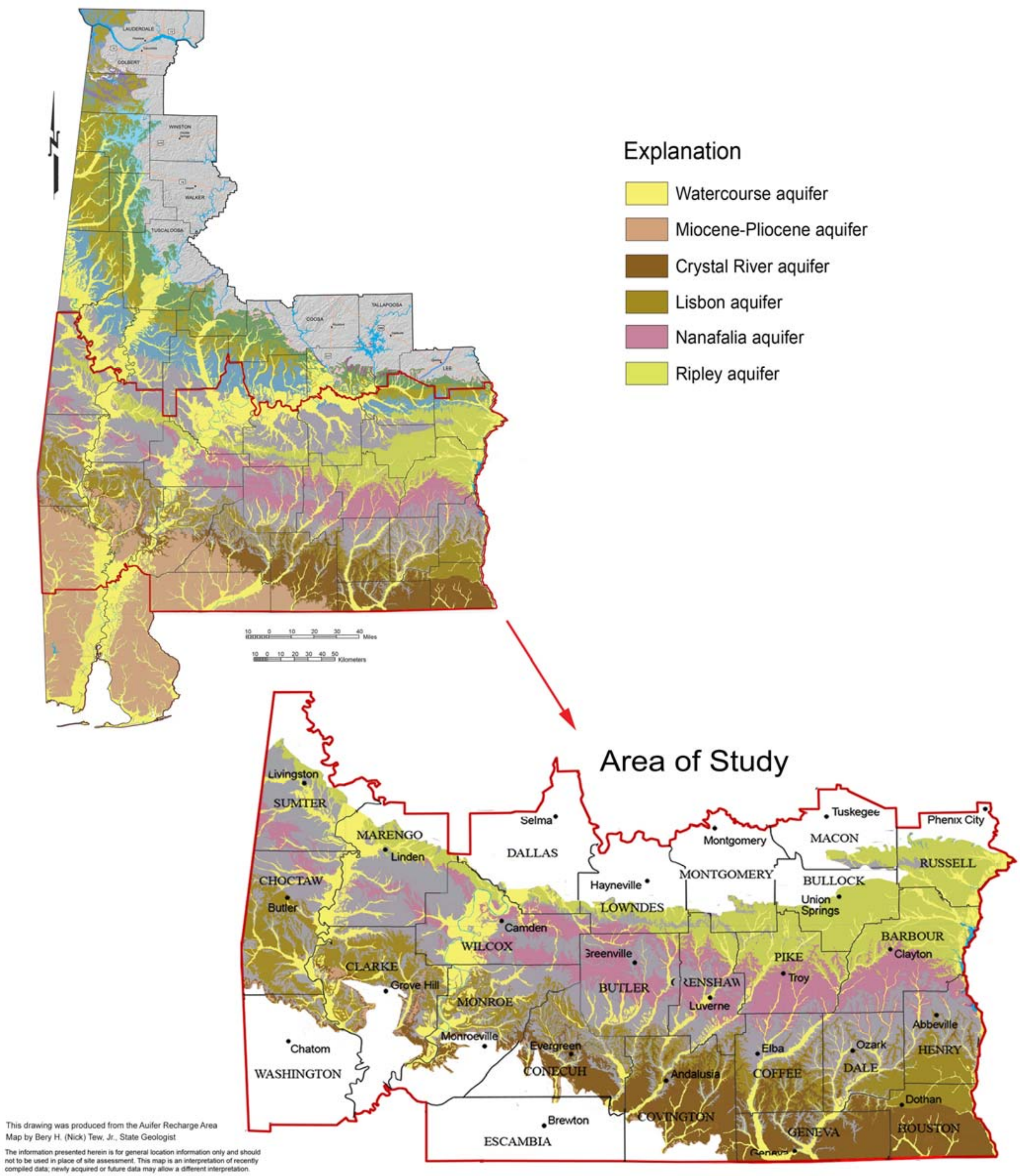


Table 5-2. Groundwater Contamination Summary (2020-2021)

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	boron, manganese, selenium, iron, ammonia, nitrate, PCE, TCE		2	2	2	
CERCLIS (non-NPL)	1		0		0	1	0	0	1
DOD/DOE	7		7	VOCs, SVOCs, PAHs, metals, pesticides, PFAS	4	1	7	7	0
Brownfields & VCP Sites	7	6	1	VOCs, SVOCs, PAHs, and metals					
Drycleaning Trust Fund	27	0	20	PCE,TCE,DCE, Vinyl Chloride	1	0			
UST #	248	248	248	BTEX,MtBE, PAHs		248			
RCRA Corrective Action	5	5	5	VOCs, SVOCs, PAHs, Metals		5			
Underground Injection *	129	0	0						
State Sites	19	17	17	PAHs, VOC/SVOCs, Metals					
Solid Waste	29	15	13	Metals, VOCs					
Totals	474	291	313		5	257	9	9	1

Hydrogeologic Setting: Southern Pine Hills and Coastal Lowlands Physiographic Sections Map Available: See Figure 5-1 Date Reporting Period: 2018-2019

*Sites with Underground Injection used only for remediation are investigated through other programs (primarily UST)

The number of UST sites reflects releases that have been reported but are not yet closed/NFA.

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

	Water Withdrawals - 2015 (Mgal/d)															
	Public Supply		Commer-cial	Domestic	Industrial		Thermoelectric		Mining		Livestock	Aquaculture		Irrigation	Total	
County	Fresh	Saline	Fresh	Fresh	Fresh	Saline	Fresh	Saline	Fresh	Saline	Fresh	Fresh	Saline	Fresh	Fresh	Saline
Barbour	3.23			0.12	1.50		0.00		0.30		0.16	0.18		0.58	6.07	
Bullock	2.11			0.07	0.00		0.00		0.00		0.06	0.00		0.92	3.16	
Butler	2.28			0.27	0.19		0.00		0.00		0.13	0.00		0.01	2.88	
Choctaw	1.21			0.41	0.00		0.00		0.00		0.03	0.00		0.00	1.65	
Clarke	2.5			0.45	0.00		0.00		0.86		0.00	0.00		0.02	3.85	
Coffee	6.35			0.8	1.74		0.00		0.00		0.34	0.00		0.68	9.91	
Conecuh	1.32			0.18	0.00		0.00		0.04		0.05	0.00		0.05	1.64	
Covington	4.09			1.01	0.00		0.00		0.00		0.23	0.00		1.27	6.60	
Crenshaw	1.94			0.15	0.00		0.00		0.00		0.30	0.00		0.00	2.39	
Dale	5.9			0.68	0.00		0.00		0.05		0.17	0.00		0.33	7.13	
Dallas	5.91			0.66	0.24		0.00		0.50		0.10	7.79		0.69	15.89	
Geneva	1.77			0.68	0.00		0.00		0.05		0.32	0.13		2.52	5.47	
Henry	1.66			0.24	0.26		0.00		0.00		0.10	0.00		1.43	3.70	
Houston	18.96			1.11	0.30		0.00		0.00		0.10	0.00		5.17	25.64	
Lowndes	0.95			0.05	4.24		0.00		0.16		0.27	0.65		0.00	6.31	
Macon	1.37			0.15	0.00		0.00		1.05		0.04	0.00		2.40	5.01	
Marengo	2.77			0.53	0.00		0.00		0.02		0.11	0.69		0.17	4.29	
Monroe	2.3			0.38	0.12		0.00		0.15		0.06	0.07		0.41	3.50	
Montgom-ery	13.19			0.3	1.78		0.00		0.80		0.37	0.20		4.26	20.90	
Pike	4.58			0.33	0.00		0.00		0.00		0.23	0.00		0.41	5.56	
Russell	1.59			0.3	1.44		0.00		0.34		0.05	0.21		0.00	3.93	
Sumter	2.06			0.07	0.00		0.00		1.06		0.18	0.40		0.50	4.26	
Wilcox	0.84			0.23	0.00		0.00		0.00		0.06	0.00		0.06	1.18	
Total:	88.88	0	0	9.17	11.81	0	0	0	5.38	0	3.46	10.32	0	21.88	107.3	0

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

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 and compiled by 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. Two (2) facilities identified in Table 5-2 are Superfund sites listed on the National Priority List (NPL) in the reporting area.

There is one (1) CERCLIS (non-NPL) site located in the reporting area. These are sites where state and federal funds could be used to conduct preliminary assessments and secondary investigations by ADEM and EPA.

There are seven (7) DOD/DOE sites located within the reporting area. Groundwater has been investigated primarily for VOCs, SVOCs, PAHs, metals, pesticides, PFAS.

5.3.4 Underground Storage Tank Program

The largest category of sites listed in Table 5-2 is Underground Storage Tanks (USTs). There are two hundred forty eight (248) UST sites in the reporting area that have been assessed for contaminated 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 five (5) 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 VOCs and metals 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 seven (7) sites managed under the Alabama Brownfields and

Voluntary Cleanup Program within the reporting area. Groundwater impacted with constituents such as VOCs, SVOCs, 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 twenty seven (27) facilities managed under the Alabama DERTF in the reporting area. VOCs associated with chlorinated solvents have impacted soil and groundwater at these sites.

5.3.8 Underground Injection Control Program

The Underground Injection Control (UIC) program is managed by the ADEM Groundwater Branch. There are one hundred twenty nine (129) 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 a discharge permit issued by the UIC Program. The UIC program reviews permit applications; issues individual and general performance-based discharge permits for 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), 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. One Class III facility exists within the State. 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 seventeen (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 twenty nine (29) 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 and VOCs are the primary constituents of concern.

5.4 Summary of Groundwater Quality

5.4.1 Hydrogeology

The physiographic districts in this 305(b) Report, lie between the Southern Pine Hills district and the Black Prairie district of the East Gulf Coastal Plain. Generally speaking they trend from northwest to southeast and/or west to east. Depending on the area of the State evaluated, the various districts are comprised of as few as a single geologic formation to as many as nine separately identifiable geologic formations. They are described below as they appear from south to north across the area of this report's interest. The southernmost district in this report is the Dougherty Plain district.

Dougherty Plain District

The Dougherty Plain physiographic district consists of portions of Monroe, Escambia, Conecuh, Covington, Geneva, Coffee, Dale and Henry counties, and all of Houston County. This district has been characterized as undifferentiated limestone residuum, bedded sand and clay, and surficial terrace material (Sapp and Emplaincourt, 1975). Active limestone solution has transferred most minor drainage-ways to the subsurface, especially in extreme southeastern Alabama. Topography is that of a low cuesta that is more dissected in south central Alabama than in southeast Alabama. The area is extensively cultivated. The land surface in the area ranges from 100 to 400 feet above sea level (Castleberry, Moreland, Scott 1989) (Scott and Cobb 1988).

In the eastern portion of the Dougherty Plain district underlying sediments belong to the Ocala Limestone, Ocala Limestone and Moodys Branch Formations undifferentiated, and the Lisbon and Tallahatta Formations. The western portion of the district contains sediments belonging to the Citronelle Formation, Miocene Series undifferentiated, Oligocene Series undifferentiated, Jackson Group undifferentiated, the Gosport Sand and Lisbon Formation, and the Lisbon and Tallahatta Formations.

Lime Hills District

The Lime Hills physiographic district consists of portions of Monroe, Conecuh, Choctaw, Clarke and Wilcox Counties. This area has been characterized as rugged topography developed on more resistant limestone (Sapp and Emplaincourt, 1975). The Hatchetigbee Dome is a northwest-southeast oriented flexure within this district. The sediments that occur in the western portion of the Lime Hills district typically belong to the Citronelle Formation, Miocene Series, Oligocene Series, Jackson Group, Gosport Sand and Lisbon and Tallahatta Formations, and Hatchetigbee and Tuscahoma Formations. The eastern portion of the Lime Hills district includes sediments belonging to the Oligocene Series undifferentiated, Jackson Group undifferentiated, Gosport Sand and Lisbon Formation, Tallahatta Formation, and Hatchetigbee Formation.

Southern Red Hills District

The Southern Red Hills district and its sub districts extend across Choctaw, Clarke, Monroe, Butler, Crenshaw, Covington, Coffee, Dale and Henry Counties. The Southern Red Hills district contains two sub districts. They are the Flatwoods and Burhstone Hill sub districts. The Southern Red Hills district in Wilcox County is considered to be the most rugged topographic region in the Alabama Coastal Plain with a ten-mile wide hilly belt some 200-300 feet above nearby streams. This area has been described as a southward-sloping upland of moderate relief. The Flatwoods lowland sub district along the northern edge in the west and the rugged Burhstone Hills sub district along the southern edge of the Southern Red Hills district are developed on indurated resistant siliceous claystone and sandstone.

The geologic formations within the Southern Red Hills district are numerous. Various formations found in this district include the Naheola, Porters Creek, Clayton, Tuscahoma, Nanafalia, Hatchetigbee, Gosport Sand, Lisbon, Tallahatta undifferentiated and Midway group undifferentiated.

Chunnenuggee Hills District

The Chunnenuggee Hills district is present across many counties within the reporting area. This 73 district is encountered in the counties of Sumter, Marengo, northern Wilcox, southern Dallas, southern Lowndes, southern Montgomery, northern Pike, southern Macon, south Russell, north Barbour, south Bullock, northeastern Butler, and northern Crenshaw. The Chunnenuggee Hills is described as a pine-forested series of sand hills and cuestas developed on chalk in west Alabama, and more resistant clay, siltstone, and sandstone in the east. Geologic formations found in the Chunnenuggee Hills district include the Porters Creek, Clayton, Prairie Bluff Chalk, Ripley, Providence Sand, Demopolis Chalk, Blufftown, Mooreville Chalk, and Eutaw.

Alluvial-Deltaic Plain District

The Alluvial-Deltaic Plain district is found in and adjacent to valleys associated with all major and minor rivers and creeks throughout the study area. These areas are characterized by flat flood plains and terraces.

5.4.2 Aquifers

Upper Floridan aquifer

The Upper Floridan aquifer mainly consists of the Ocala Limestone. The Upper Floridan aquifer is the main water supply source for the southernmost part of the study area in portions of Houston, Geneva, Coffee, Covington, Conecuh, Escambia, and Monroe Counties. The recharge area for the Upper Floridan aquifer generally coincides with its area of groundwater withdrawal, and consists of a relatively flat sandy landscape containing numerous depressions formed by the solution of the underlying limestone. The residuum remaining from the dissolution of the limestone is moderately to highly permeable, and is hydraulically connected to the aquifer. Wells screened in the Upper Floridan aquifer can produce up to 1,000 gallons of groundwater per minute (Scott and Cobb, 1988).

Lisbon aquifer

The Lisbon aquifer is a water supply source for all or portions of Houston, Henry, Geneva, Coffee, Butler, Covington, Conecuh, Monroe, Washington, Clarke and Choctaw Counties. The

Lisbon aquifer generally becomes thicker and includes more geologic formations from southeast Alabama to southwest Alabama. Groundwater in the Lisbon aquifer is generally under artesian pressure. In southeast Alabama the Lisbon aquifer consists of the sand beds of the Lisbon Formation, Tallahatta Formation and Hatchetigbee Formation. In south-central and southwest Alabama the aquifer also includes the Gosport Sand, Bashi Formation, Moody's Branch Formation, and the upper part of the Tuscahoma Formation. Well yields for wells screened in the Lisbon aquifer generally ranges from 500 gallons-per-minute in southeast Alabama to 0.5 million gallons-per-day in southwest Alabama.

Nanafalia-Clayton aquifer

The Nanafalia-Clayton aquifer is a water supply source for portions of Coffee, Henry, Barbour, Pike, Crenshaw, Butler, Monroe, Wilcox, Marengo, southern Sumter and Choctaw Counties. 74 Groundwater in the Nanafalia-Clayton aquifer is generally under artesian pressure, and occurs in the Clayton Formation, Porters Creek Formation, Naheola Formation, Nanafalia Formation, and the basal sand unit of the Tuscahoma Formation (from oldest to youngest). Well yields for wells screened in the Nanafalia-Clayton aquifer generally ranges from 300 gallons-per-minute to 0.5 million gallons-per-day.

Providence-Ripley aquifer

The Providence-Ripley aquifer is a water supply source for portions of Butler, Crenshaw, Wilcox, Dallas, Barbour, Russell, Bullock and Pike Counties. In southern Bullock, and northern Pike and Barbour counties the sand beds of the Ripley are part of the Providence Ripley aquifer (Kidd, 1987). Wells screened in these sand beds may yield 0.5 to 1.0 million gallons of water per day. The Ripley is also a major aquifer and water supply source for Crenshaw, Butler, and northeastern-most Monroe Counties. (Castleberry, Moreland, and Scott, 1089). Wells screened in the Ripley in Crenshaw, Butler and Monroe counties may yield 200 to 600 gallons of water per minute. The Ripley in Dallas and Wilcox Counties only exists along and just north of the Dallas-Wilcox county line in an area of about 116 square miles (Mooty, 1987). A few private wells in southern Dallas County are screened in the Ripley. The wells for the towns of Camden and Pine Apple in Wilcox County are also screened in the Ripley as their public water supply. Reported yields ranged from less than 10 to 120 gallons-per-minute. The Providence Sand unit in Pike and Bullock Counties is also a major water supply source. Wells screened in the Providence Sand may yield up to 0.5 million gallons of water per day. The Providence Sand does not exist in Dallas and Wilcox Counties, and is not a major aquifer in Crenshaw and Butler Counties.

5.4.3 General Statement of Ground Water Quality and Vulnerability

The source of recharge to the major aquifers in the study area is rainfall. Alluvial and terrace deposits along major streams overlie parts of the recharge areas for the major aquifers of this report. The various aquifers principally receive recharge from their outcrop areas within the various counties in the study area. All recharge areas for the major aquifers are susceptible to contamination from the surface.

For more information about Groundwater Programs, contact Joe Kelly /ADEM-Montgomery at (334) 271-7831 or jrk@adem.alabama.gov

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.*.

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 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-

Figure 6-1 ACNPCP Management Area

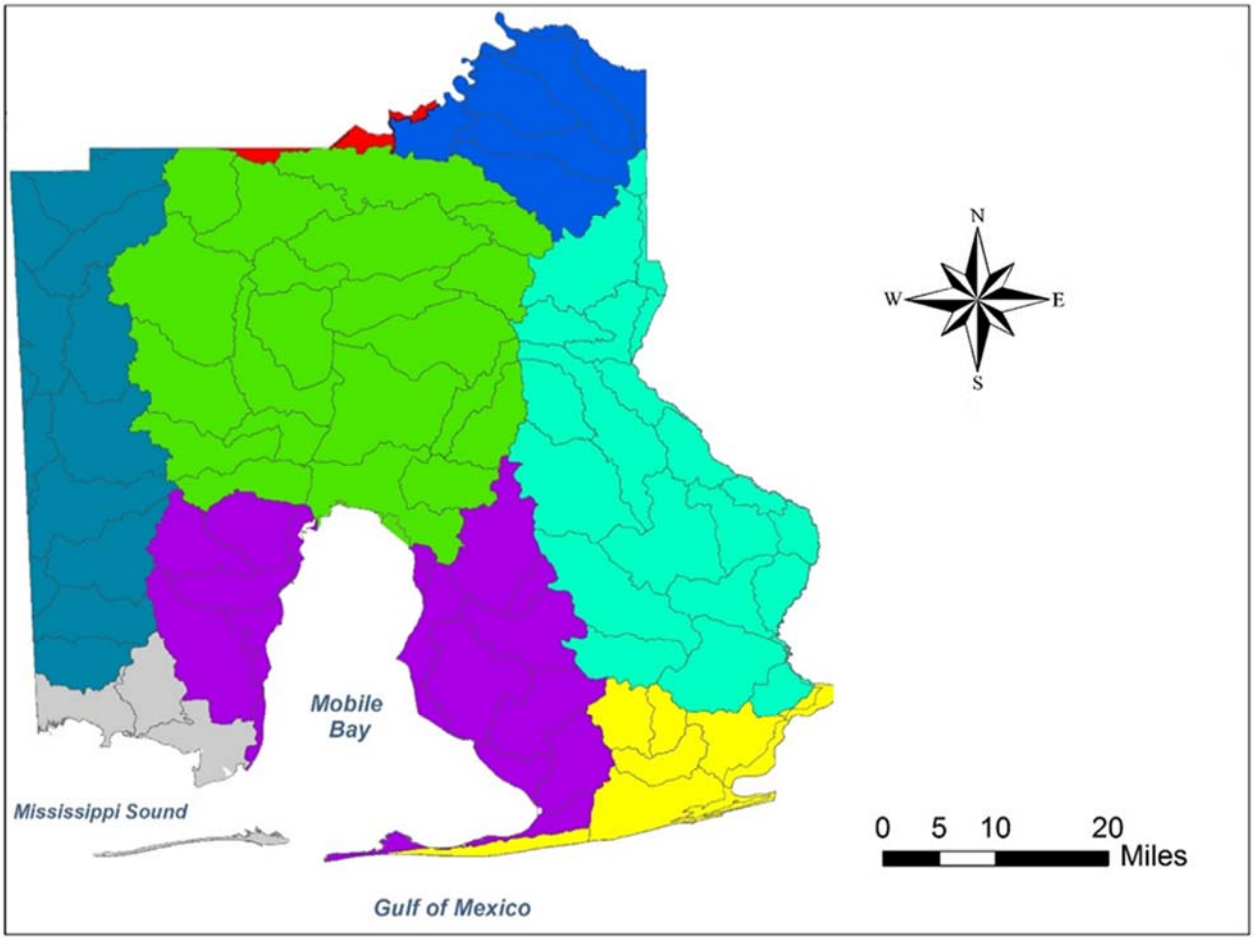


Table 6-1 ACNPCP Watershed HUC Codes

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	

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/year. Based on the reported SWCD information and estimates, in the last two years, these machines have been implemented on 3,694.2 acres, brought in approximately $21,685.00 for rental and maintenance fees, while abating erosion at an estimate of 18,432.5 tons/year. These participating SWCDs continue to offer this service and promote the implementation of other associated soil health best management measures and practices. Our partnership with the local SWCDs will continue implementation of this project with monitoring and tracking of its use projected for the next several years.

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) the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (see https://alconservationdistricts.gov/resources/erosion-and-sediment-control/) was updated again in 2018 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. <u>*Onsite Sewage Distribution Systems*</u> (*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 during the last two years 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, four (4) Sectors have been completed, including participation by over 1,309 members of the public with the presentation of 48 Workshops at locations that were facilitated by the Contractors for each County Sector. We have seen the successful issuance of 1,053 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. Both Mobile and Baldwin County SWCDs have developed plans for continuing the Program on their own, targeting the areas of Sector 1 and Sector 2 in 2020.

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 specific information related 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 2020. 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), NRDA,* and *RESTORE* projects for Mobile County, and Baldwin County, Alabama. These projects have been developed address key local land use/nutrient reduction issues and are being implemented to enhance targeted sub-watersheds (e.g. Grand Bay Swamp, Fowl River and the Fish River-Magnolia River HUCs) in coastal Alabama through on-the-ground activities of the NRCS, local SWCDs and affected landowners.

3. *Alabama-Mississippi Clean Marina Program*: 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.

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 Autumn Nitz at ADEM's Coastal Mobile Branch Office at (251) 304-1176 or email: autumn.nitz@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 231,767 in 2020. Between 2000 and 2020, the Baldwin County population increased by 60.6%. The population of Mobile County increased from 399,843 in 2000 to 414,809 in 2020. Between 2000 and 2020, the Mobile County population increased by 3.6%. 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. Recent oyster landings (121K pounds, 2011-2020) have been below a long-term average (449K pound, 1990-2020). Brown Shrimp landings remain stable at around ten million pounds annually, excluding 2010 &2019. Blue crab landings remain below a long term average, but demonstrated an uptick in 2016 and a decrease in 2020.

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, 2015, and 2020. 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 2025.

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.

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.

In 2018, sampling was 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 were sampled by the Mobile Field Office, 19 of these being part of the Eastern Mobile Bay sampling rotation.

In 2019, sampling was performed in the western portion of coastal Alabama, from the Mississippi state line to the western shore of Mobile Bay. A total of 39 stations were sampled by the Mobile Field Office, 16 of these being part of the Western Mobile Bay sampling rotation.

In 2020, sampling was performed in Mobile Bay. A total of 35 stations were sampled, of these 23 were Mobile Bay Coastal Water Monitoring Program stations.

Figures and Tables 6-2 thru 6-6 show CWMP Stations from 2016 thru 2020 respectively. All validated data is available on the ADEM web site, www.adem.alabama.gov.

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.alabama.gov

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 Ms. Jennifer Haslbauer in ADEM's Montgomery Office at (334) 274-4250 or jhaslbauer@adem.alabama.gov

Figure 6-2 2016 West Mobile Bay Stations

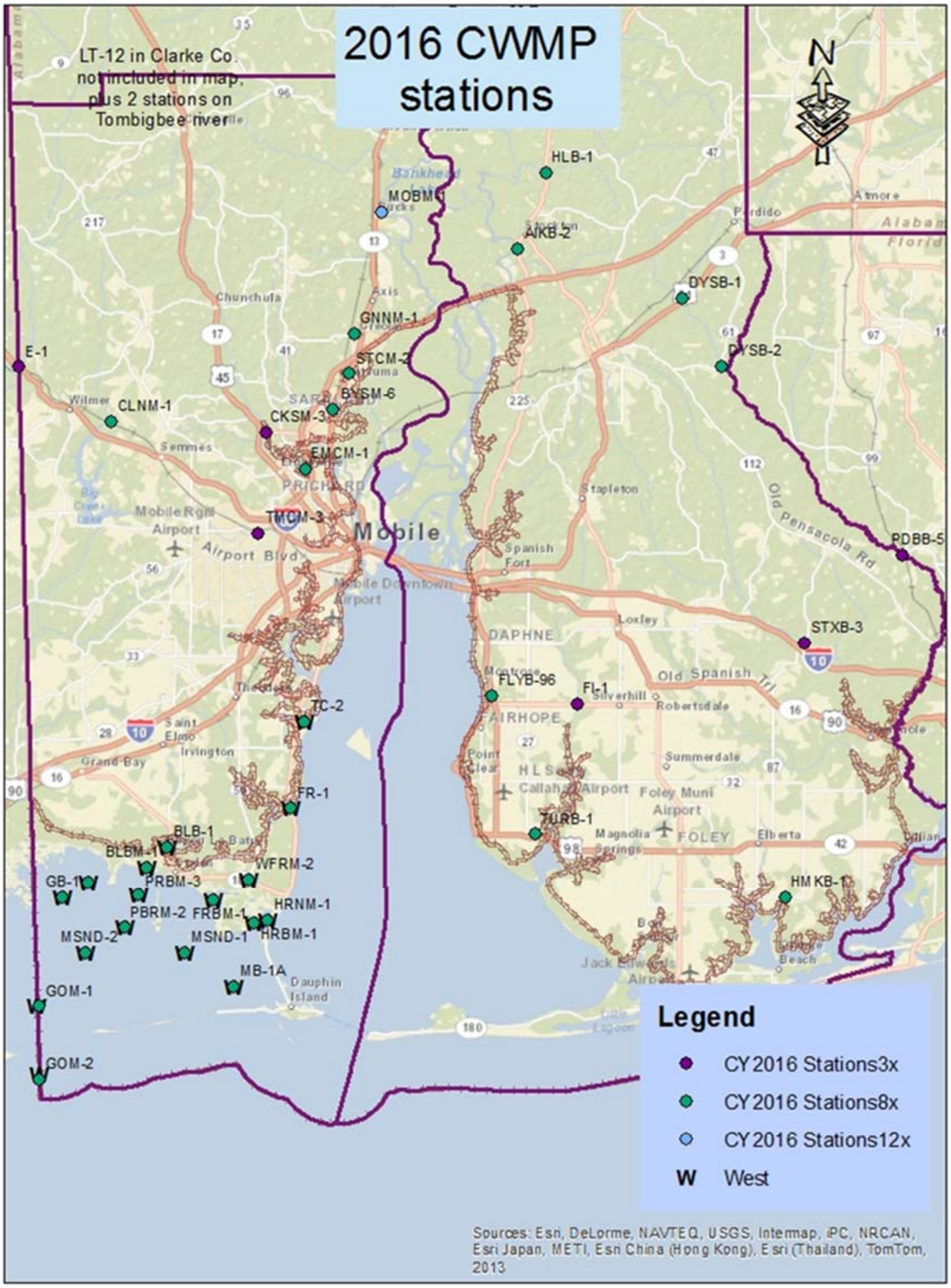


Table 6-2 2016 West Mobile Bay Stations

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 Mobile Bay Stations

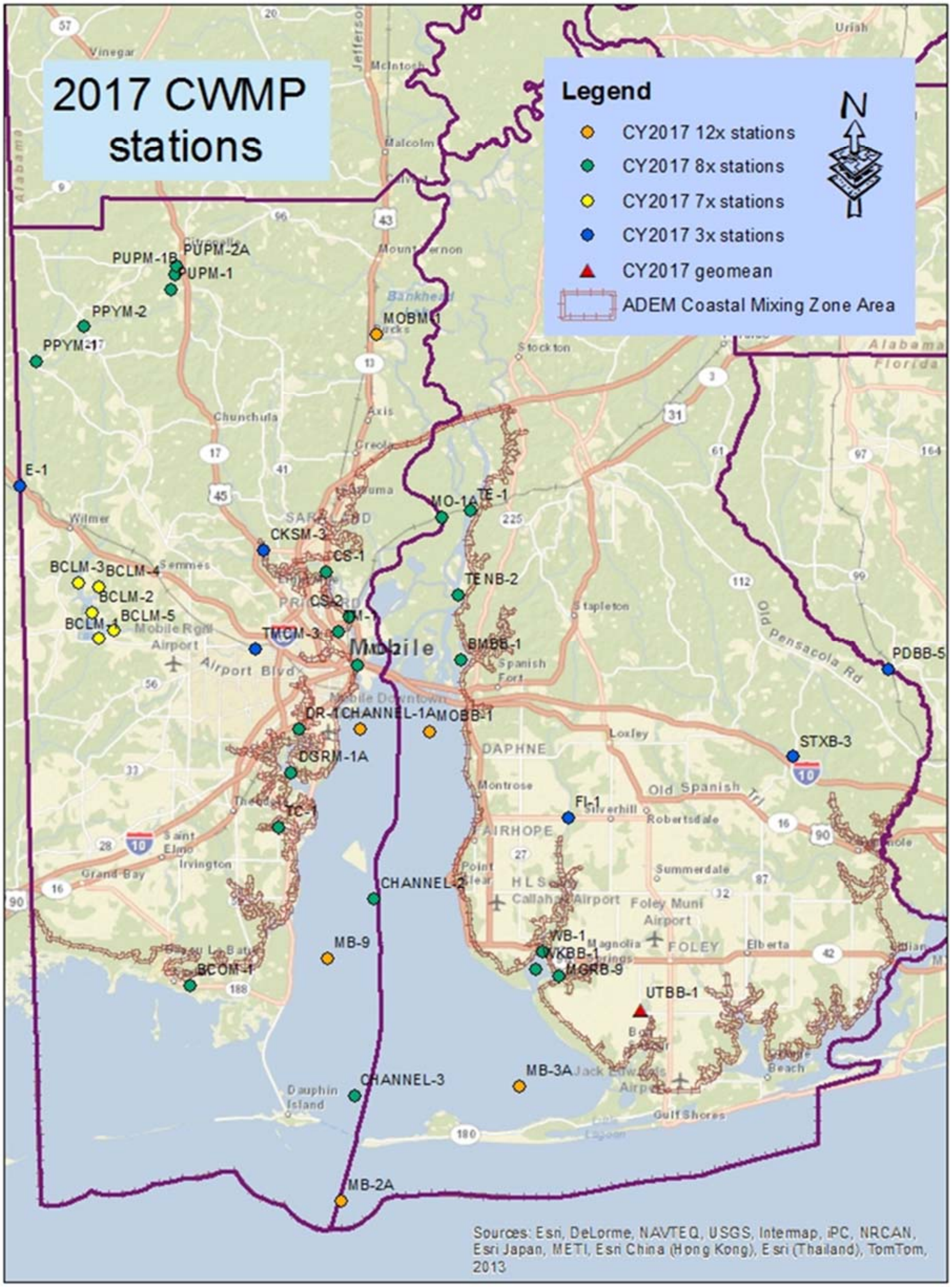


Table 6-3 2017 Mobile Bay Stations

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

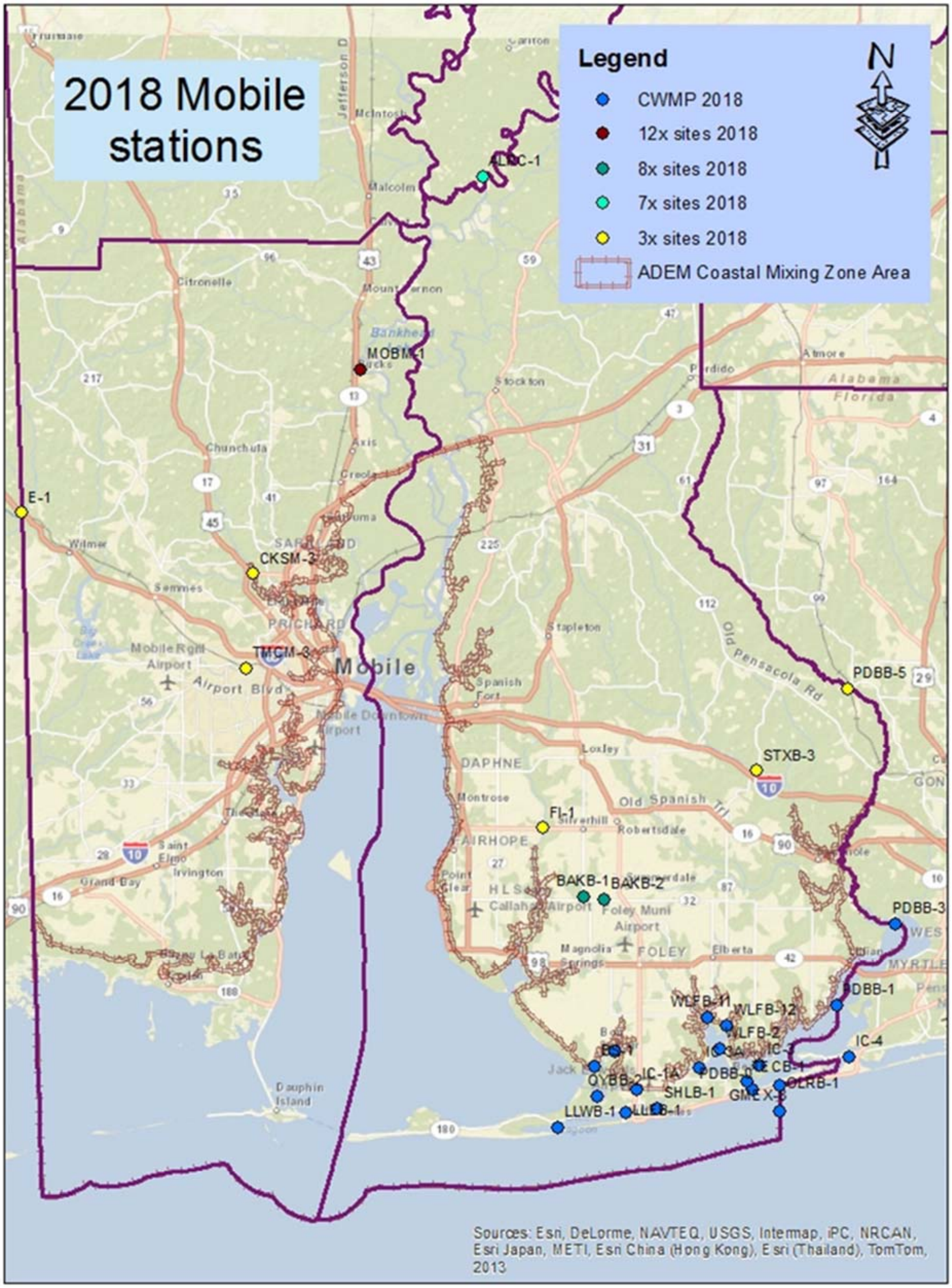


Table 6-4 2018 Mobile Bay East Stations

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

Figure 6-5 2019 Mississippi Sound West Stations

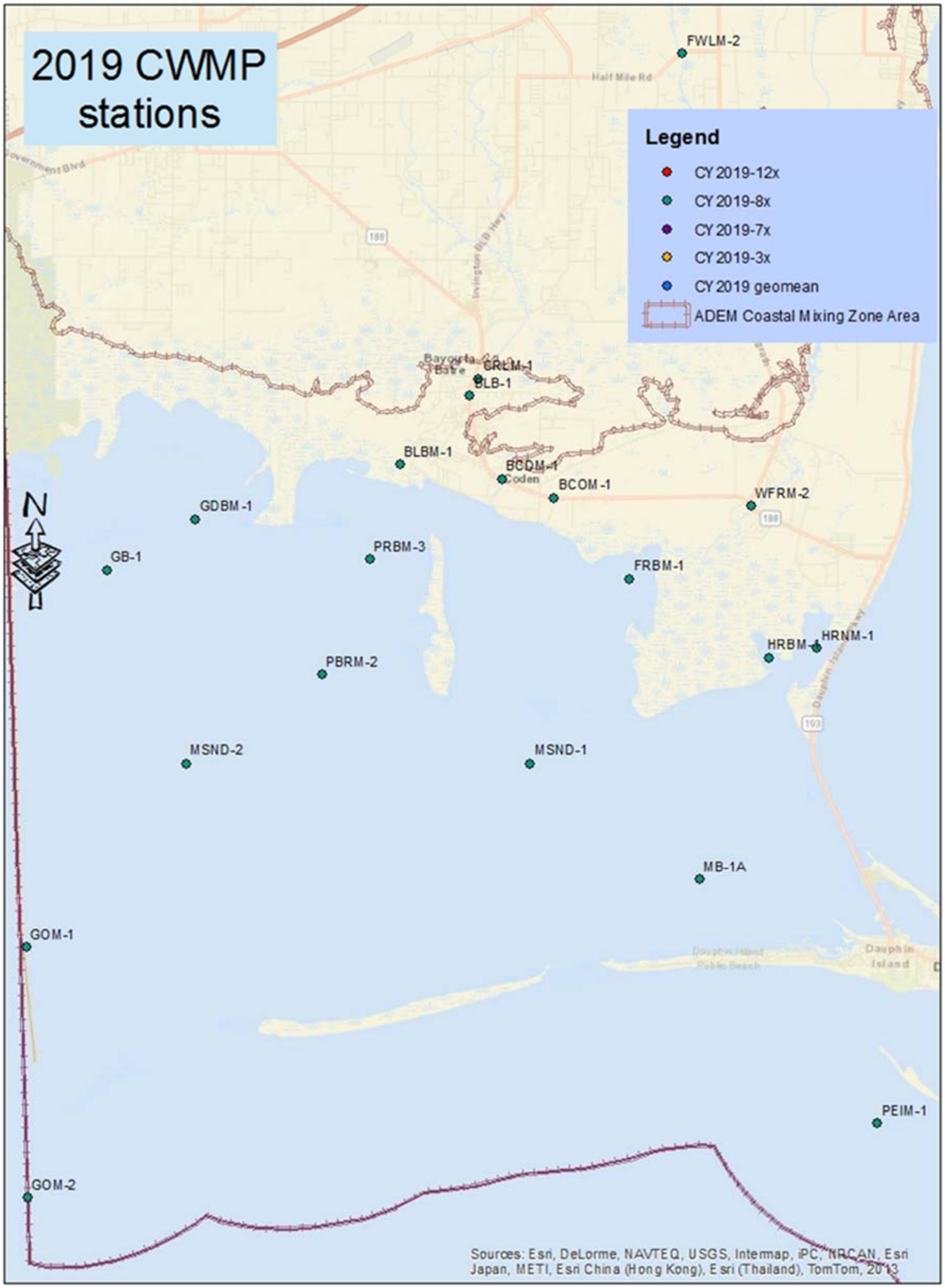


Table 6-5 2019 Mississippi Sound West Stations

StationID	Comments	Sampling Summary	Protocol	Latitude	Longitude	Locale Name
RBTM-2A	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.55959	-88.17255	Rabbit Ck
CRLM-1	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.41069	-88.24550	Carls Ck
BCOM-1	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.37788	-88.22095	Bayou Como
MSND-2	CY2019_COASTAL_WEST; CY2019_EMPT_MISSISSIPPI_SOUND_TMDL	8X Monthly (Mar-Oct)	NW Boat	30.30354	-88.33695	Mississippi Sound
BCDM-1	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	NW Boat	30.38300	-88.23759	Bayou Coden
MSND-1	CY2019_COASTAL_WEST; CY2019_EMPT_MISSISSIPPI_SOUND_TMDL	8X Monthly (Mar-Oct)	NW Boat	30.30462	-88.22746	Mississippi Sound
MB-1A	CY2019_COASTAL_WEST; CY2019_EMPT_MISSISSIPPI_SOUND_TMDL	8X Monthly (Mar-Oct)	NW Boat	30.27308	-88.17317	Mississippi Sound
BYSM-2	CY2019_EMPT_USA	3X Monthly (Mar-Oct)	NW Boat	30.84060	-88.02520	Bayou Sara
TM-1	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	NW Boat	30.72398	-88.05912	Threemile Ck
FWLM-2	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.50110	-88.18140	Fowl R
BYSM-7	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.81630	-88.07110	Norton Ck
EMCM-1	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.76759	-88.10138	Eightmile Ck
STCM-2	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	30.85977	-88.05345	Steele Ck
BGYM-1	CY2019_EMPT_BOGGY_BRANCH_TMDL	8X Monthly (Mar-Oct)	Wadeable	30.78730	-88.36670	Boggy Br
TMCM-3	CY2019_EMPT_USA; CY2019_TREND_MONITORING_106	8X Monthly (Mar-Oct)	Wadeable	30.70630	-88.15111	Threemile Ck
CKSM-3	CY2019_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	30.80297	-88.14334	Chickasaw Ck
CDRM-38	CY2019_EMPT_USA	8X Monthly (Mar-Oct)	Wadeable	31.07632	-88.02324	Cedar Ck
LT-12	CY2019_EMT_SALITPA_CK_TMDL; CY2019_TREND_MONITORING_106	SWQMP Sampling Period	Wadeable	31.74444	-88.02133	Salitpa Ck
LT-12	CY2019_EMT_SALITPA_CK_TMDL; CY2019_TREND_MONITORING_106	8X Monthly (Mar-Oct)	Wadeable	31.74444	-88.02133	Salitpa Ck
TOMW-3	CY2019_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.48028	-87.91083	Tombigbee R
TOMW-1	CY2019_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.16203	-87.95153	Tombigbee R
GB-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.35667	-88.36283	Grand Bay (Mob)
GDBM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.37090	-88.33500	Grand Bay (Mob)
PRBM-3	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.36046	-88.27922	Portersville Bay
PBRM-2	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.32847	-88.29403	Portersville Bay
GOM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.25208	-88.38714	Mississippi Sound
GOM-2	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.18303	-88.38559	Gulf Of Mexico
HRBM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.33445	-88.15178	Heron Bay
HRNM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.33719	-88.13689	Heron Bay
FRBM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.35590	-88.19650	Fowl River Bay
WFRM-2	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.37619	-88.15814	W Fowl R
BLB-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.40590	-88.24810	Bayou La Batre
BLBM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.38670	-88.27000	Bayou La Batre
PEIM-1	CY2019_COASTAL_WEST	8X Monthly (Mar-Oct)	NW Boat	30.20616	-88.11608	Gulf Of Mexico
MOBM-1	CY2019_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW Boat	31.01370	-88.01853	Mobile R
E-1	CY2019_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW Grab	30.86274	-88.41787	Escatawpa R
FI-1	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	30.54580	-87.79830	Fish R
PDBB-5	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	NW Grab	30.69047	-87.44026	Perdido R
STXB-3	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	30.60532	-87.54700	Styx R

Figure 6-6 2020 Mobile Bay Stations

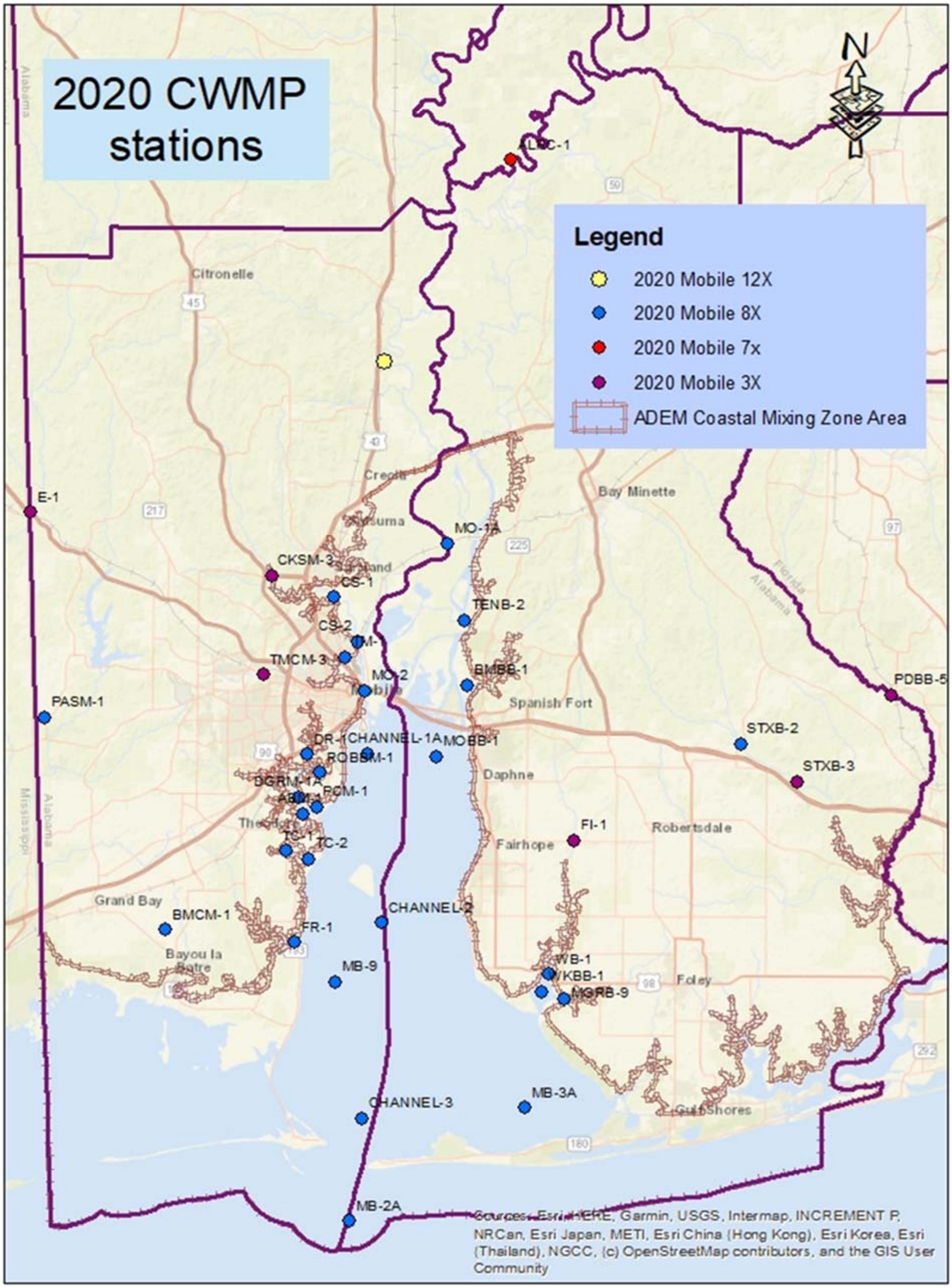


Table 6-6 2020 Mobile Bay Stations

StationID	Comments	Sampling Summary	Protocol	Latitude	Longitude	Locale Name
CHANNEL-3	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.273	-88.036	Mobile Bay
MB-2A	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.1718	-88.04895	Gulf Of Mexico
MB-3A	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.28407	-87.85137	Bon Secour Bay
CHANNEL-2	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.46437	-88.01577	Mobile Bay
FR-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	$30.44417	-$88.11306	Fowl River
MB-9	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.40598	-88.06662	Mobile Bay
DGRM-1A	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.5868	-88.1098	Dog R
DR-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.62845	-88.10166	Dog R
ROBBM-1	CY2020_EMPT_USA (fully assess cat 2b waterbody)	8X Monthly (Mar-Oct)	NW Boat	30.6108	-88.0867	Robinson Bayou
CS-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.78224	-88.072481	Chickasaw Ck
CS-2	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.73925	-88.04571	Chickasaw Ck
TM-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.723983	-88.059119	Threemile Ck
MOBM-1	CY2020_TREND_MONITORING_605	12X Monthly (Jan-Dec)	NW Boat	31.0137	-88.01853	Mobile R
MGRB-9	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.3902	-87.8082	Magnolia R
WB-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.41469	-87.82583	Fish R
WKBB-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.3975	-87.833611	Weeks Bay
ABM-1	CY2020_EMPT_USA (fully assess cat 2b waterbody)	8X Monthly (Mar-Oct)	NW Boat	30.5699	-88.1049	Alligator Bayou
PCM-1	CY2020_EMPT_USA (fully assess cat 2b waterbody)	8X Monthly (Mar-Oct)	NW Boat	30.5767	-88.0897	Perch Ck
TC-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.533333	-88.123889	M Fk Deer R
TC-2	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.526495	-88.098243	Deer R
CHANNEL-1A	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.62973	-88.03263	Mobile Bay
MO-2	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.69137	-88.03646	Mobile R
MOBB-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.6276	-87.9548	Mobile Bay
BMBB-1	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.6978	-87.9206	Bay Minette
MO-1A	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.8364	-87.94406	Mobile R
TENB-2	CY2020_COASTAL_WATERS_MONITORING_PROGRAM_MOBILE_BA	8X Monthly (Mar-Oct)	NW Boat	30.760688	-87.923883	Tensaw R
ALRC-1	CY2020_RIVERS_RESERVOIRS_MAINSTEM	7X Monthly (Apr-Oct)	NW Boat	31.212028	-87.876	Alabama R
PASM-1	CY2020_EMPT_PASTURE_CREEK_NPS_INT_PRE	8X Monthly (Mar-Oct)	Wadeable	30.66159	-88.39865	Pasture Ck
BMCM-1	CY2020_EMPT_USA (Fully Assess Site; NPS Requested	8X Monthly (Mar-Oct)	Wadeable	30.45519	-88.2590	Bishop Manor Ck
CKSM-3	CY2020_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	30.80297	-88.14334	Chickasaw Ck
E-1	CY2020_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW Grab	30.86274	-88.41786	Escatawpa R
TMCM-3	CY2020_TREND_MONITORING_106	3X Monthly (JunAugOct)	Wadeable	30.7063	-88.15111	Threemile Ck
PDBB-5	CY2020_REFERENCE_REACH_MONITORING (Alt Cand Ref fo	3X Monthly (MayJulSep)	NW Grab	30.69047	-87.44026	Perdido R
STXB-2	CY2020_REFERENCE_REACH_MONITORING (Cand Ref for PG	8X Monthly (Mar-Oct)	Wadeable	30.641727	-87.61122	Styx R
STXB-3	CY2020_TREND_MONITORING_605	3X Monthly (JunAugOct)	Wadeable	30.60532	-87.547	Styx R
E-1	CY2019_TREND_MONITORING_605	3X Monthly (JunAugOct)	NW Grab	$30.86274	-$88.41787	Escatawpa R
FI-1	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	$30.54580	-$87.79830	Fish R
PDBB-5	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	NW Grab	$30.69047	-$87.44026	Perdido R
STXB-3	CY2019_TREND_MONITORING_605	3X Monthly (MayJulSep)	Wadeable	$30.60532	-$87.54700	Styx R

Table 6-7 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 6-8 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 approved by the United States Environmental Protection Agency (EPA). 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.

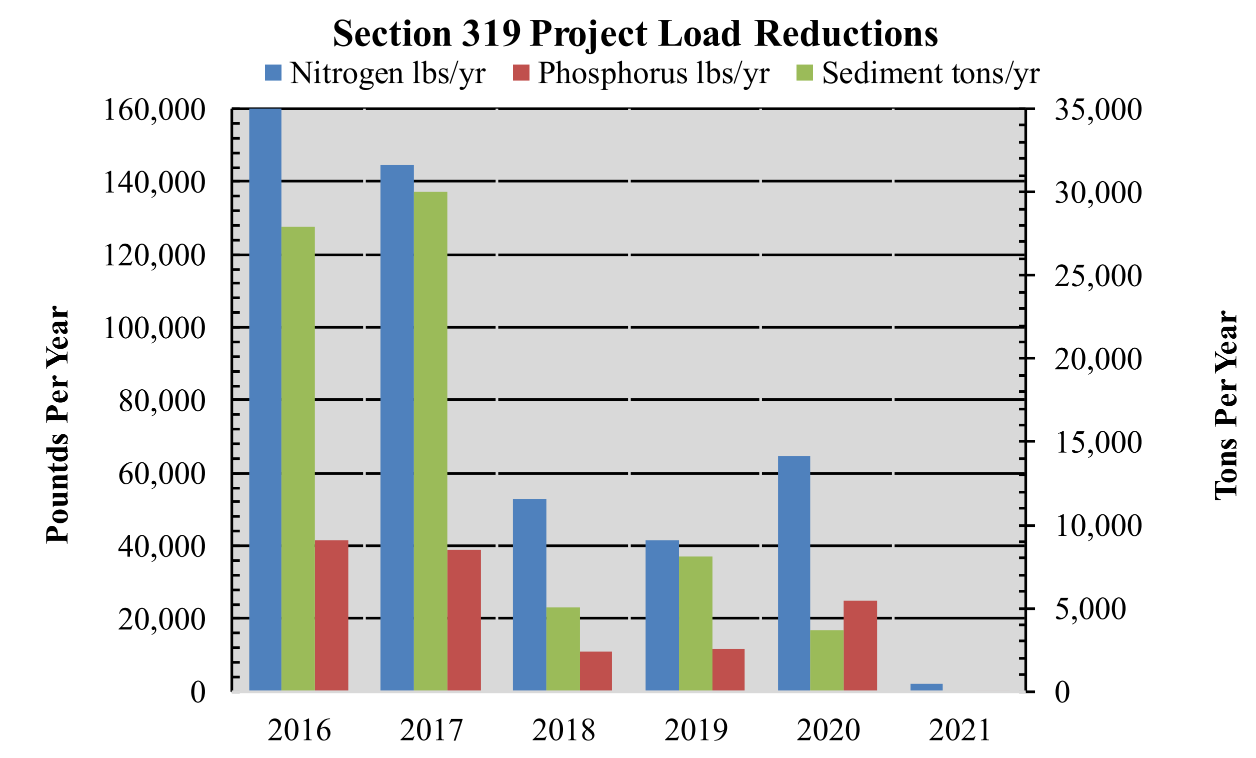
Section 319 nonpoint source pollutant load reduction estimates (Table 7-1/Figure 7-1) are used as an indicator of improvements in water quality and as a measure of success for Section 319 grant funded projects. The data is also required to be reported in the EPA Grants Reporting and Tracking (GRTS) database. Data quantity and quality continues to improve as a result of

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
2016	161,848	41,641	27,882
2017	144,528	38,931	30,037
2018	52,802	10,877	5,074
2019	41,568	11,685	8,086
2020	64,714	24,967	3,664
2021	1,979	190	57
Total	**467,439**	**128,291**	**74,800**

**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



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

Because of the wide variety of human activities on the land and the various causes of NPS pollution and impacts on water quality, the efficient and focused targeting of control measures can be problematic. Resources to implement a holistic statewide NPS program are insufficient. Nonpoint source water quality education and outreach, training, technical assistance, and technology transfer to specific and community-based audiences must continue. Dedicated and sustainable sources of NPS funding, incentives and continued outreach will improve water quality and enhance stakeholder efforts to mitigate the causes of personal or "pointless" pollution. Section 319 grant funded water quality improvement success stories are presented on the EPA-HQ and Region 4 websites, and along with other information, in the Annual Report located on the ADEM website.

No single state agency or public/private sector entity retains comprehensive authority or possesses adequate means, staff, resources, or funding to adequately address all facets of watershed health and water quality protection issues. Cooperative partnerships continue to be a NPS water quality management priority. Local stakeholders are encouraged to voluntarily assume local ownership of local water quality protection and restoration issues and provide local resources to implement locally-led solutions. Integral to this process is the continued efforts of local stakeholders, such as Alabama Water Watch.

The implementation of innovative, alternative, and creative water quality monitoring and assessment strategies will continue to be implemented where feasible and practical. Presenting opportunities for NPS stakeholders to provide input relative to water quality monitoring and assessment decision-making processes will also be maintained. Environmental, economic, human health, cultural and social conditions, threatened and endangered species, aquatic habitat, drinking water sources, recreational uses and other NPS pollution impairment issues continue to be integral components of watershed-based management plans. In addition, the roles and authorities of resource agencies, elected and appointed officials, environmental groups, producers, industries, municipalities, citizens and others is considered when developing the details of how NPS water quality will be managed in Alabama. Clearly defined goals and objectives will continue to be agreed upon before NPS water quality monitoring funds and resources are 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 ADEM.NPS.Program@adem.alabama.gov.

7.4 Management Program Challenges and Success

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.alabama.gov/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), 2) Alabama Watershed Stewards, and 3) Take Action for Clean Water. NPS education and outreach resources and information is available at http://adem.alabama.gov/programs/water/nps/319grant.cnt or from the USEPA website at https://cfpub.epa.gov/npstbx/index.cfm.

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.

7.5 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 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,

Table 7-2 Progress to Achieve Full Approval of The Alabama Coastal Nonpoint Pollution Control Program (§6217) 2005 to 2020

Year	Program Approval Activities	Status
2005	ADEM implemented 6 projects to address *IDD criteria / 2 FTE. Limited 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 tasks!**
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 2 new FY16 projects 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.	**FY15 Project-B completed 100% FY16 Project being developed- 25%**
2018	ADEM utilizes interagency coordination to develop the two current ACNPCP's Projects for Urban-OSDS Inspection & Maintenance [Sector 4] for Alabama during 2018-2019.	**FY16 Project-A completed 100%, FY16 Project-B implemented- 90%**
2019	ADEM develops 1 new FY16 projects 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.	**FY16 Project-B completed 100%, FY16 Project-C developed and implemented - 30%**
2019	ADEM utilizes interagency coordination to implement current ACNPCP's Projects for Urban-OSDS for coastal Alabama during 2018-2020.	**-**
2020	ADEM develops 1 new FY16 projects 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.	**FY16 Project-C completed 100%,**

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 ADEM.NPS.Program@adem.alabama.gov.

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. 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 2019. 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 the Alabama Department of Environmental Management 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 14 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 number of meals per week, number of meals per month, or no consumption. A meal portion consists of six (6) ounces of cooked fish or eight (8) ounces of raw fish.

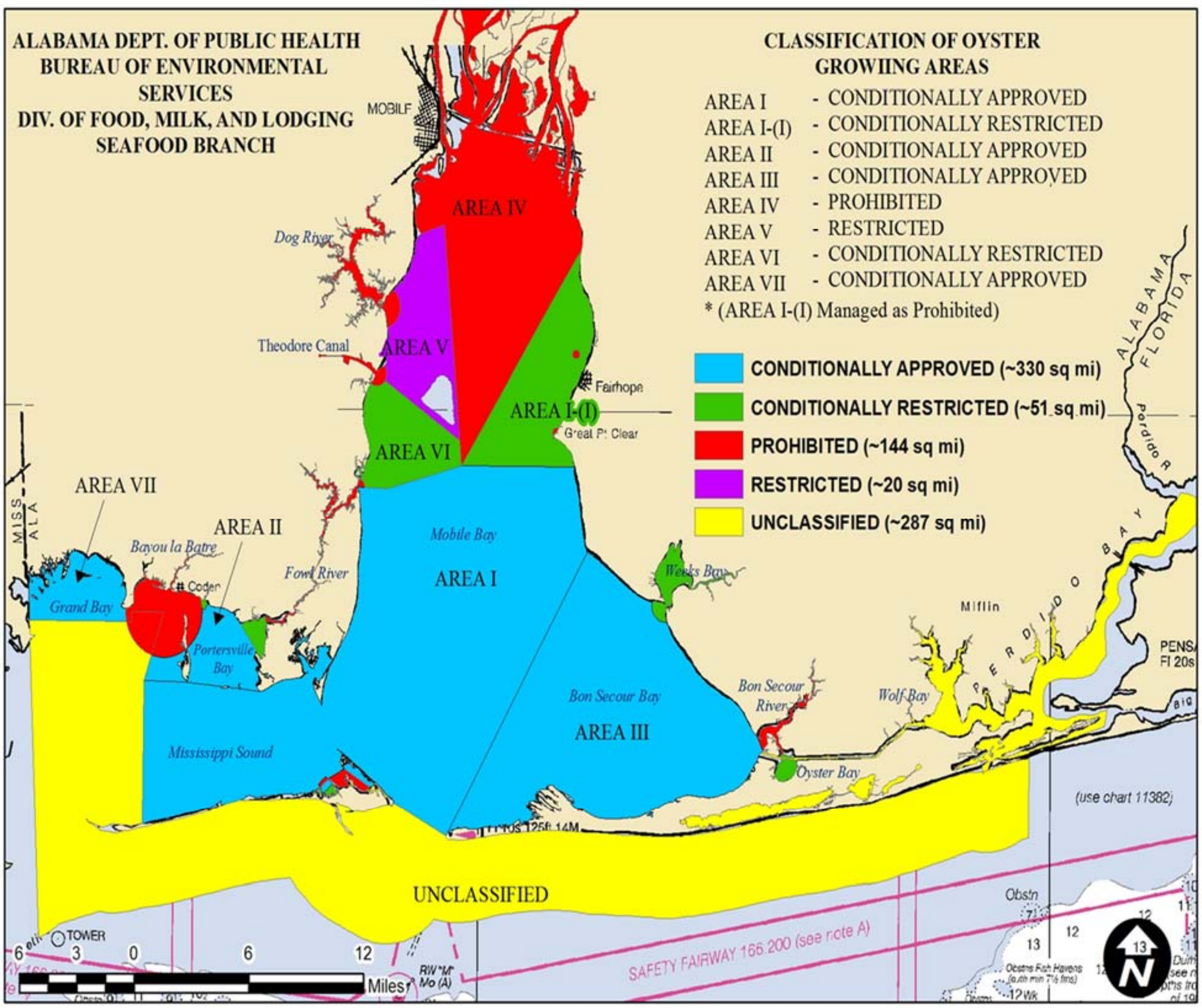
For more information about Fish Consumption Advisories, contact the Alabama Department of Public Health at 1-334-206-5973. To view current and historical notices, visit http://alabamapublichealth.gov/tox/fish-advisories.html.

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

2020																				
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
12/31/20																				
11/06/20	11/05/20	0800	CONDITIONALLY OPEN	57		CONDITIONALLY OPEN	57		CONDITIONALLY OPEN	57		CONDITIONALLY CLOSED		57	CONDITIONALLY CLOSED		57	CONDITIONALLY OPEN	57	
10/30/20	10/29/20	1500	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY OPEN	7		CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY OPEN	7	
10/01/20	10/01/20	0900	CONDITIONALLY OPEN	28		CONDITIONALLY OPEN	28		CONDITIONALLY OPEN	28		CONDITIONALLY CLOSED		28	CONDITIONALLY CLOSED		28	CONDITIONALLY OPEN	28	
09/28/20	09/25/20	1200	CONDITIONALLY OPEN	6		CONDITIONALLY OPEN	6		CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY OPEN	6	
09/22/20	09/21/20	1500	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY OPEN	4	
09/15/20	09/14/20	1600	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7	CONDITIONALLY CLOSED		7
07/01/20	07/01/20	0930	CONDITIONALLY OPEN	75		CONDITIONALLY OPEN	75		CONDITIONALLY OPEN	75		CONDITIONALLY CLOSED		75	CONDITIONALLY CLOSED		75	CONDITIONALLY OPEN	75	
06/12/20	06/12/20	1030	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY OPEN	19		CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19
06/08/20	06/08/20	0900	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4	CONDITIONALLY CLOSED		4
05/08/20	05/08/20	0945	CONDITIONALLY OPEN	31		CONDITIONALLY OPEN	31		CONDITIONALLY OPEN	31		CONDITIONALLY CLOSED		31	CONDITIONALLY CLOSED		31	CONDITIONALLY OPEN	31	
04/20/20	04/20/20	1530	CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18	CONDITIONALLY CLOSED		18	CONDITIONALLY OPEN	18	
04/09/20	04/09/20	0830	CONDITIONALLY OPEN	11		CONDITIONALLY OPEN	11		CONDITIONALLY OPEN	11		CONDITIONALLY CLOSED		11	CONDITIONALLY CLOSED		11	CONDITIONALLY OPEN	11	
03/31/20	03/31/20	1600	CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9	CONDITIONALLY CLOSED		9	CONDITIONALLY OPEN	9	
03/25/20	03/25/20	0930	CONDITIONALLY OPEN	6		CONDITIONALLY OPEN	6		CONDITIONALLY OPEN	6		CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY OPEN	6	
02/11/20	02/11/20	1500	CONDITIONALLY CLOSED		43	CONDITIONALLY CLOSED		43	CONDITIONALLY CLOSED		43	CONDITIONALLY CLOSED		43	CONDITIONALLY CLOSED		43	CONDITIONALLY OPEN	43	
02/03/20	02/03/20	0700	CONDITIONALLY OPEN	8		CONDITIONALLY OPEN	8		CONDITIONALLY OPEN	8		CONDITIONALLY CLOSED		8	CONDITIONALLY CLOSED		8	CONDITIONALLY OPEN	8	
01/01/20			CONDITIONALLY CLOSED		33	CONDITIONALLY CLOSED		33	CONDITIONALLY CLOSED		33	CONDITIONALLY CLOSED		33	CONDITIONALLY CLOSED		33	CONDITIONALLY OPEN	33	
				222	144		222	144		242	124		0	366		0	366		336	30
TOTALS					39.34%			39.34%			33.88%			100.00%			100.00%			8.20%

2019																				
NOTICE DATE	EFFECTIVE DATE	TIME EFFECTIVE	AREA I			AREA II			AREA III			AREA IV			AREA VI			AREA VII		
			STATUS	OPEN	CLOSED	STATUS	OPEN	CLOSED	STATUS	OPEN	CLOSED	STATUS	OPEN	CLOSED	STATUS	OPEN	CLOSED	STATUS	OPEN	CLOSED
12/31/19																				
12/27/19	12/27/19	1700	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY OPEN	5	
09/26/19	09/26/19	1000	CONDITIONALLY OPEN	92		CONDITIONALLY OPEN	92		CONDITIONALLY OPEN	92		CONDITIONALLY CLOSED		92	CONDITIONALLY CLOSED		92	CONDITIONALLY OPEN	92	
09/20/19	09/20/19		CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY OPEN	6		CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6	CONDITIONALLY CLOSED		6
09/06/19	09/06/19	1100	CONDITIONALLY OPEN	14		CONDITIONALLY OPEN	14		CONDITIONALLY OPEN	14		CONDITIONALLY CLOSED		14	CONDITIONALLY CLOSED		14	CONDITIONALLY OPEN	14	
08/27/19	08/27/19		CONDITIONALLY OPEN	10		CONDITIONALLY CLOSED		10	CONDITIONALLY OPEN	10		CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10	CONDITIONALLY CLOSED		10
08/07/19	08/07/19	1200	CONDITIONALLY OPEN	20		CONDITIONALLY OPEN	20		CONDITIONALLY OPEN	20		CONDITIONALLY CLOSED		20	CONDITIONALLY CLOSED		20	CONDITIONALLY OPEN	20	
07/19/19	07/19/19	1030	CONDITIONALLY OPEN	19		CONDITIONALLY CLOSED		19	CONDITIONALLY OPEN	19		CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19	CONDITIONALLY CLOSED		19
07/15/19	07/14/19		CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY OPEN	5		CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5	CONDITIONALLY CLOSED		5
07/15/19	07/13/19		CONDITIONALLY CLOSED		1	CONDITIONALLY OPEN	1		CONDITIONALLY OPEN	1		CONDITIONALLY CLOSED		1	CONDITIONALLY CLOSED		1	CONDITIONALLY OPEN	1	
05/24/19	05/24/19	0900	CONDITIONALLY OPEN	50		CONDITIONALLY OPEN	50		CONDITIONALLY OPEN	50		CONDITIONALLY CLOSED		50	CONDITIONALLY CLOSED		50	CONDITIONALLY OPEN	50	
05/16/19	05/16/19	0930	CONDITIONALLY OPEN	8		CONDITIONALLY CLOSED		8	CONDITIONALLY OPEN	8		CONDITIONALLY CLOSED		8	CONDITIONALLY CLOSED		8	CONDITIONALLY OPEN	8	
05/06/19	05/04/19	1300	CONDITIONALLY OPEN	12		CONDITIONALLY OPEN	12		CONDITIONALLY OPEN	12		CONDITIONALLY CLOSED		12	CONDITIONALLY CLOSED		12	CONDITIONALLY OPEN	12	
05/03/19	05/03/19	0930	CONDITIONALLY CLOSED		1	CONDITIONALLY CLOSED		1	CONDITIONALLY OPEN	1		CONDITIONALLY CLOSED		1	CONDITIONALLY CLOSED		1	CONDITIONALLY OPEN	1	
04/19/19	04/19/19	1400	CONDITIONALLY CLOSED		14	CONDITIONALLY CLOSED		14	CONDITIONALLY CLOSED		14	CONDITIONALLY CLOSED		14	CONDITIONALLY CLOSED		14	CONDITIONALLY OPEN	14	
03/28/19	03/28/19	1130	CONDITIONALLY OPEN	22		CONDITIONALLY OPEN	22		CONDITIONALLY OPEN	22		CONDITIONALLY CLOSED		22	CONDITIONALLY CLOSED		22	CONDITIONALLY OPEN	22	
02/25/19	02/24/19	1600	CONDITIONALLY CLOSED		32	CONDITIONALLY CLOSED		32	CONDITIONALLY CLOSED		32	CONDITIONALLY CLOSED		32	CONDITIONALLY CLOSED		32	CONDITIONALLY OPEN	32	
02/08/19	02/08/19	1130	CONDITIONALLY OPEN	16		CONDITIONALLY OPEN	16		CONDITIONALLY OPEN	16		CONDITIONALLY CLOSED		16	CONDITIONALLY CLOSED		16	CONDITIONALLY OPEN	16	
01/28/19	01/26/19	0600	CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY CLOSED		13	CONDITIONALLY OPEN	13	
01/25/19	01/24/19	1100	CONDITIONALLY OPEN	2		CONDITIONALLY OPEN	0		CONDITIONALLY OPEN			CONDITIONALLY CLOSED		2	CONDITIONALLY CLOSED		2	CONDITIONALLY OPEN	2	
01/01/19			CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		2	CONDITIONALLY CLOSED		23	CONDITIONALLY CLOSED		23	CONDITIONALLY OPEN	23	
				265	100		227	136		276	66		0	365		0	365		325	40
TOTALS					27.40%			37.26%			18.08%			100.00%			100.00%			10.96%

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 information.

***No Notice Found

Area VI added April 1, 2012

Area VII added September 2, 2016

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 five (505) community systems, forty-three (43) transient non-community systems and twenty-three (23) 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, ninety-seven (97) percent meet trihalomethane standards, ninety-seven (97) 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. One hundred (100) percent of the community and non-community systems met the bacteriological quality standard of the Department. Approximately ninety90 percent of the community systems and approximately eighty-nine (89) percent of the non-community systems were in full compliance with the bacteriological monitoring requirements. Ninety-nine (99) 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. Eight systems exceeded a lead or copper action level out of the 261 community and non-transient, non-community systems that were sampled in 2020 and 2021. 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-six (96) percent of the community systems and non-transient non-community systems required to monitor in 2020 and 2021 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. Benny Laughlin in ADEM's Montgomery Office at (334) 271-7791 or tsd@adem.alabama.gov

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

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

Name of Facility	Municipality Served	Name of Water body	Contaminants with Percent Violations
Athens Utilities	Athens	Elk River	Total Haloacetic Acids (HAA5)
Centre Water & Sewer Board	Centre	Coosa River-Lake Weiss Reservoir	Total Haloacetic Acids (HAA5)
Cherokee Water & Gas Department	Cherokee	Tennessee River	Total Haloacetic Acids (HAA5)
Dekalb-Jackson Water Supply District	Jackson County	Tennessee River	Total Trihalomethanes (TTHM)/Total Haloacetic Acids (HAA5)
Thomasville Water Works & Sewer Board	Thomasville	Alabama River	Total Trihalomethanes
Tuskegee	Tuskegee	Tallapoosa River	Total Trihalomethanes

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

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 fifteen SWAPs for new or expanded groundwater sources in 2020 - 2021. thirteen of these reports were submitted from existing public water systems. One of the reports was submitted by new Non-Community Transient public water system. One of the reports was submitted by new Non-Community Non-Transient public water system. SWAPs have been finalized for nine 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.alabama.gov.

8.5 Wellhead Protection Program

A Ground Water Branch staff member is assigned to the ADEM Public Water Supply Branch 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, coordinates with the Alabama Rural Water Association (ARWA) in recognizing water systems that have completed a Wellhead Protection Plan, and coordinates inspections and compliance issues in wellhead protection areas with ADEM Branches and other State agencies.

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. 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.

Water festival grant approvals were issued for 9 counties throughout Alabama. Each grant was issued in the amount of $1,000. These festivals were held to educate students and citizens across the state about the wise use, conservation, and development of our natural resources including groundwater sourced drinking water and aquifer preservation. Volunteers from across the state participated in the events including ADEM personnel. Funding for these grants was made available through ADEM's Pollution Control Grant Fund.

The Annual Alabama Groundwater Conference was held in June 15, 2021. This year it was a virtual conference that lasted 4 hours. The conference provides a forum for discussion of the latest technology and protection programs for groundwater. Approximately one hundred and ninety six (196) 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 or Source Water Assessment Program, contact Mr. Joe Kelly in ADEM's Montgomery Office at (334) 271-7831 or JRK@adem.alabama.gov. For information about the Water Festival Program contact Scott Hughes, ADEM Office of Education and Outreach, at (334) 271-7955 or ash@adem.alabama.gov

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. Table 8-8 shows the 2017-2018 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 2021, approximately 800 samples were collected and analyzed for enterococcus bacteria. There were 17 advisories that occurred during the swim season, May through September; resulting in a total of 48 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.

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

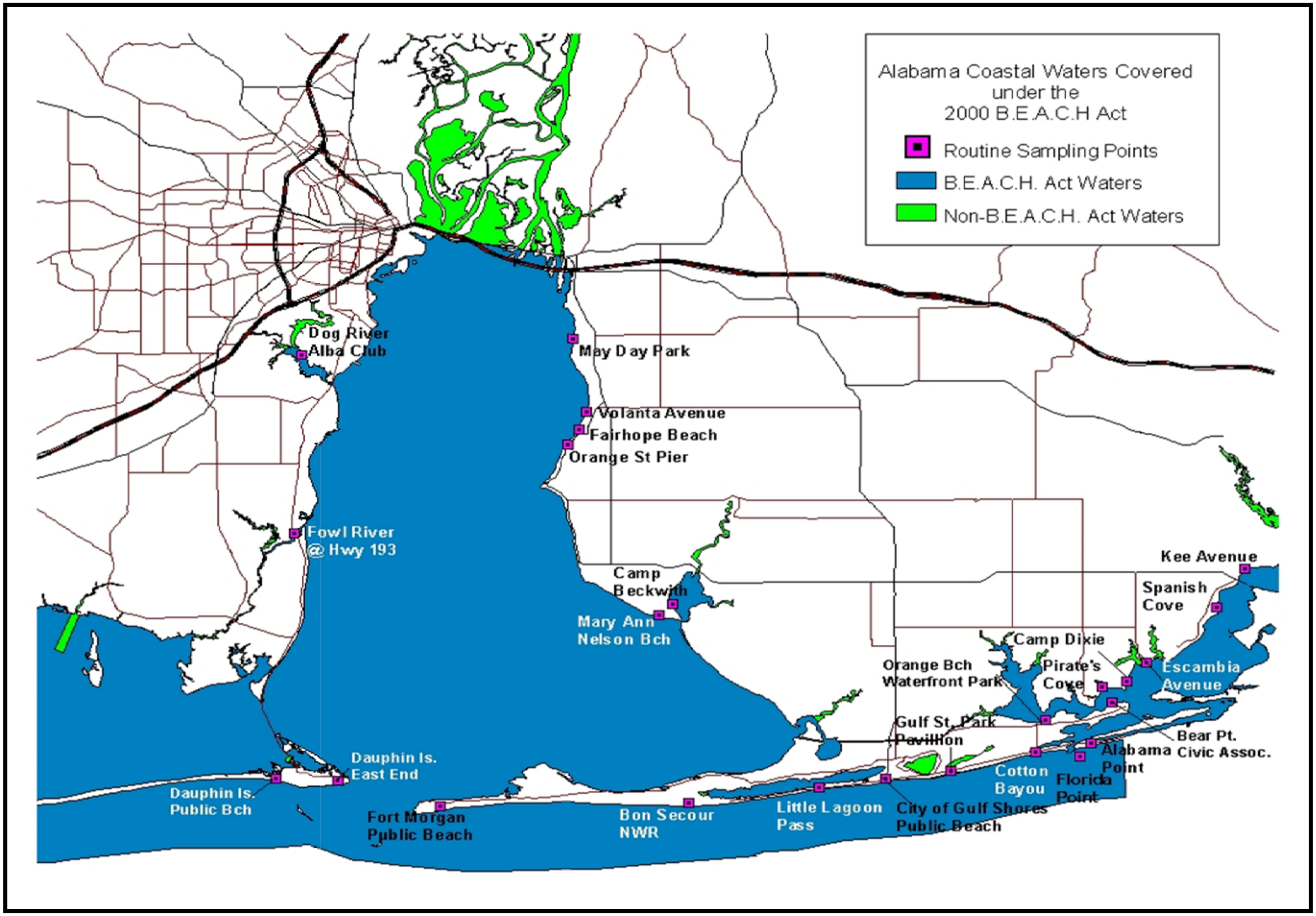


Table 8-8 2019-2020 Coastal Beach Monitoring Summary

				2019				2020			
Location	Sampling Point	Latitude	Longitude	Individual Samples	Indivdual Exceedances	Calcuated Geomeans	Geomean Exceedances	Individual Samples	Indivdual Exceedances	Calcuated Geomeans	Geomean Exceedances
Alabama Point	AL_PT	30.27694	-87.54167	29	0	1	0	26	0	1	0
Bear Point Civic Association		30.30880	-87.52680	18	0	0	0	19	0	0	0
Bon Secour NWR	BON_SEC	30.22889	-87.83139	18	0	0	0	16	0	0	0
Camp Beckwith	C_BECK	30.38858	-87.84224	52	1	5	0	52	6	5	0
Camp Dixie	C_DIXIE	30.32630	-87.51620	29	0	2	0	28	0	1	0
Cotton Bayou	COT_BYOU	30.26940	-87.58200	29	0	1	0	26	0	1	0
Escambia Avenue	ESC_AVE	30.34113	-87.50227	18	0	0	0	20	2	0	0
Fairhope Public Beach	F_HOPE	30.52807	-87.90956	56	9	5	1	46	2	4	0
Florida Point, Cotton Bayou	FL_PT	30.26620	-87.55010	29	0	1	0	26	0	1	0
Fort Morgan Public Beach	FRT_MGN	30.22580	-88.00940	18	0	0	0	17	0	0	0
Gulf Shores Public Beach	CITY_GS	30.24778	-87.69000	29	0	1	0	27	1	2	0
Gulf State Park Pavillion	GSP_PAV	30.25472	-87.64333	29	0	1	0	25	1	1	0
Kee Avenue	KEE_AVE	30.41643	-87.43187	30	1	3	0	35	7	4	1
Little Lagoon Pass	LL_PASS	30.24139	-87.73778	29	0	2	0	28	2	3	0
Mary Ann Nelson Beach	MAN_BEACH	30.37873	-87.85284	18	0	0	0	24	6	0	0
May Day Park	MAY_DAY	30.59923	-87.91407	31	2	3	1	31	6	2	1
Orange Beach Waterfront Park	OB_WP	30.29480	-87.57510	31	3	3	1	38	10	4	3
Orange Street Pier/Beach	ORANGE_ST	30.51584	-87.91740	31	2	3	1	29	2	2	0
Pirate's Cove	P_COVE	30.32140	-87.53378	30	1	1	0	32	4	3	1
Spanish Cove, Perdido Bay	SPAN_COV	30.38569	-87.45183	30	1	2	0	37	9	5	1
Volanta Avenue	VOL_AVE	30.54154	-87.90411	29	2	1	0	30	3	3	0
Dauphin Island East End	DI_EAST	30.14800	-88.04807	19	1	0	0	13	2	0	0
Dauphin Island Public Beach		30.24780	-88.12720	18	0	0	0	18	2	0	0
Dog River at Alba Club	DOGR_ALBA	30.58640	-88.10830	33	4	3	0	34	6	3	0
Fowl River at HWY. 193	FWL_R	30.44427	-88.11362	32	3	2	0	33	5	3	2

Chart Color Key

Yellow	Borderline Single Sample Exceedance
Orange	Single Sample Exceedance
Pink	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 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:

$$\text{TMDL} = \sum \text{WLA} + \sum \text{LA} + \text{MOS}$$

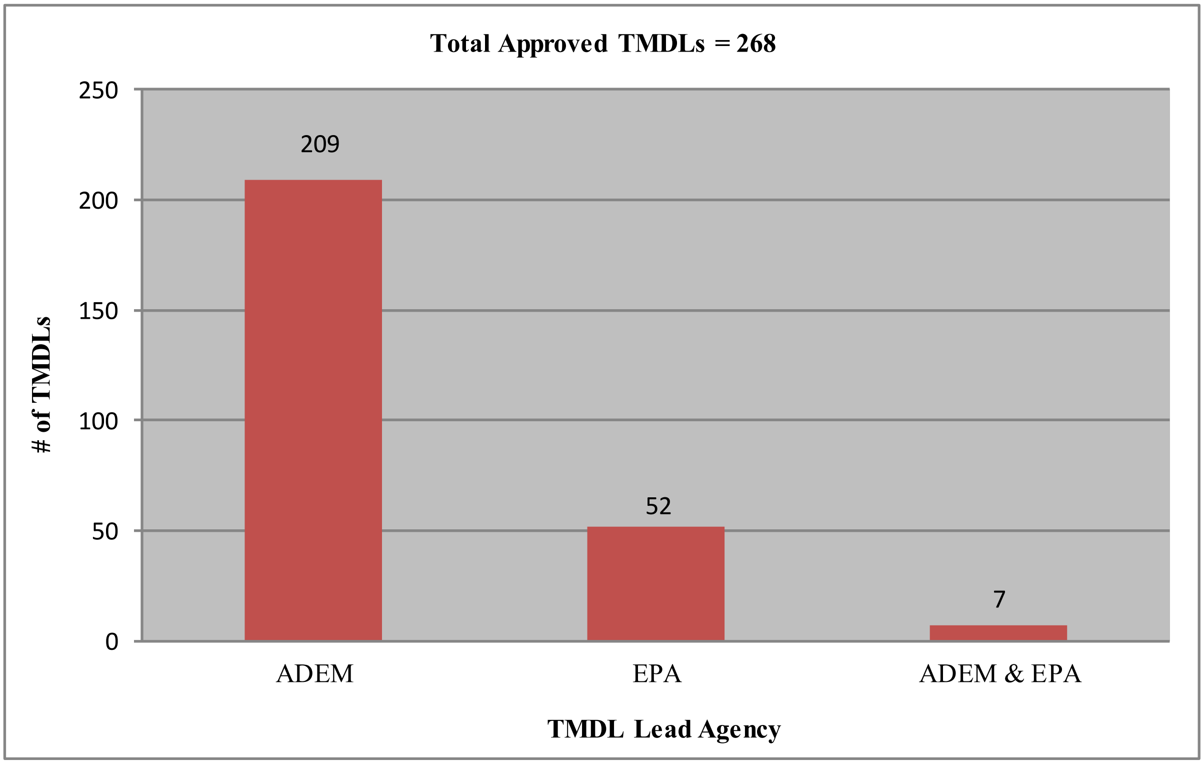
Where WLA = the sum of wasteload allocations (point sources)
LA = the sum of load allocations for nonpoint sources and background
MOS = the margin of safety

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, 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,

Figure 9-1 Alabama's Appproved TMDLs in Alabama



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 FY2020 and FY2021, Alabama's TMDL Program had several accomplishments with respect to TMDL development, pollutant delistings and waterbody/watershed investigations, all of which address impaired waters throughout Alabama. A total of twelve TMDLs were developed by ADEM's Water Quality Branch and subsequently approved by EPA Region 4. As of February 1, 2022, a total of 268 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 FY2020-FY2021. Tables 9-2 and 9-3 provide the TMDL Development Schedules for FY2022 and FY2023, 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

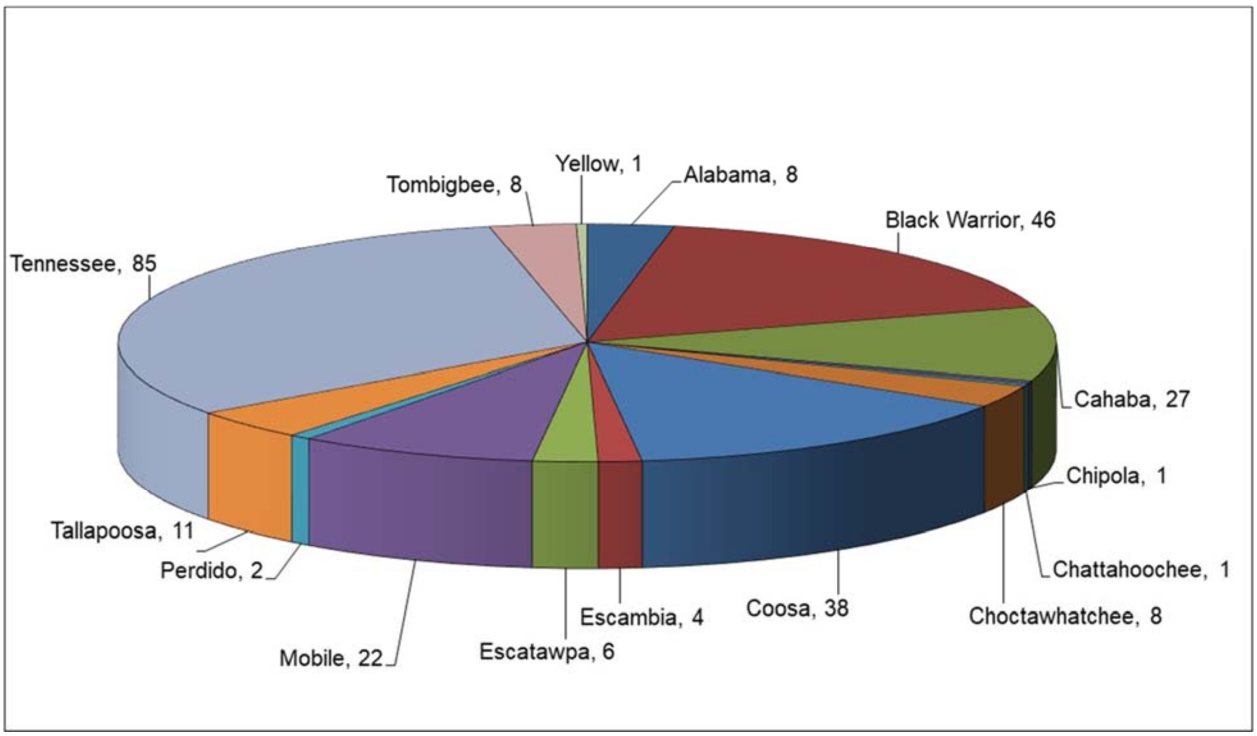


Figure 9-3 Alabama's Approved TMDLs by Pollutant

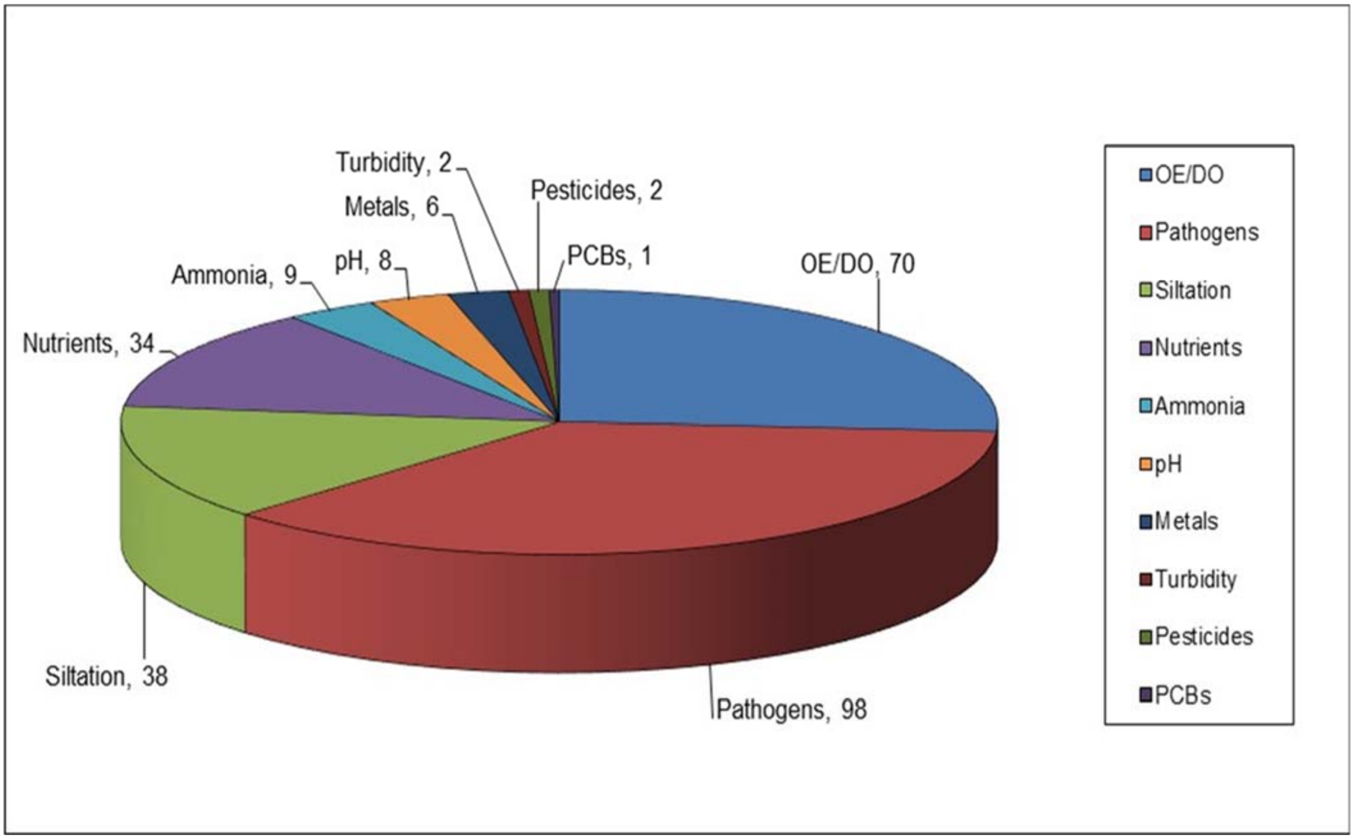


Table 9-1 TMDL Development for Fiscal Years 2020 & 2021

Waterbody Name	Waterbody ID	River Basin	County	Pollutant	Final TMDL Date (approval date)
Buxahatchee Creek	AL03150107-0405-100	Coosa	Chilton Shelby	Pathogens	8/11/2020
Salitpa Creek	AL03160203-0205-100	Tombigbee	Clarke	Pathogens	8/11/2020
Mulberry Creek	AL03150201-1006-101	Alabama	Autauga Dallas	Pathogens	8/23/2021
Blevens Creek	AL03160110-0401-100	Black Warrior	Cullman Winston	Pathogens	8/23/2021
South Fork Cowikee Creek	AL03130003-1204-100	Chattahoochee	Barbour Bullock	Pathogens	8/23/2021
Pea River	AL031340202-0505-100	Choctawhatchee	Coffee Dale	Pathogens	8/23/2021
West Fork Choctawhatchee River	AL03140201-0406-100	Choctawhatchee	Barbour Dale	Pathogens	8/23/2021
West Fork Choctawhatchee River	AL03140201-0407-101	Choctawhatchee	Dale	Pathogens	8/23/2021
West Fork Choctawhatchee River	AL03140201-0407-102	Choctawhatchee	Dale	Pathogens	8/23/2021
Luxapallila Creek	AL03160105-0101-102	Tombigbee	Marion	Pathogens	8/23/2021
Luxapallila Creek	AL03160105-0201-103	Tombigbee	Fayette Marion	Pathogens	8/23/2021
Luxapallila Creek	AL03160105-0204-102	Tombigbee	Fayette Lamar	Pathogens	8/23/2021

Table 9-2 Final TMDL Development Schedule for Fiscal Year 2022

[20]

Waterbody Name	Waterbody ID (12-Digit HUC)	River Basin	County	Pollutant
Cottondale Creek	AL03160112-0503-100	Black Warrior	Tuscaloosa	Pathogens (E. coli)
Ihagee Creek	AL03130003-0605-100	Chattahoochee	Russell	Pathogens (E. coli)
Boggy Branch	AL03140106-0302-202	Perdido	Escambia	Pathogens (E. coli)
Boggy Branch	AL03140106-0302-203	Perdido	Escambia	Pathogens (E. coli)
Cubahatchee Creek	AL03150110-0604-100	Tallapoosa	Macon	Siltation (habitat alteration)
Cubahatchee Creek	AL03150110-0603-102	Tallapoosa	Bullock Macon	Siltation (habitat alteration)
Line Creek	AL03150110-0804-101	Tallapoosa	Macon Montgomery	Siltation (habitat alteration)
Line Creek	AL03150110-0804-102	Tallapoosa	Macon Montgomery	Siltation (habitat alteration)
Chase Creek	AL06030002-0403-302	Tennessee	Madison	Pathogens (E. coli)
Indian Creek	AL06030002-0501-110	Tennessee	Madison	Pathogens (E. coli)
Indian Creek	AL06030002-0505-102	Tennessee	Madison	Pathogens (E. coli)

Table 9-3 Final TMDL Development Schedule for Fiscal Year 2023

Waterbody Name	Waterbody ID (12-Digit HUC)	River Basin	County	Pollutant
Riley Maze Creek	AL03160109-0101-150	Black Warrior	Cullman Marshall	Total Dissolved Solids
Tibb Creek	AL03160109-0101-600	Black Warrior	Cullman Marshall	Total Dissolved Solids
Bennett Mill Creek	AL03130004-0206-100	Chattahoochee	Henry	Pathogens (E. coli)
Cowarts Creek	AL03130012-0203-110	Chipola	Houston	Pathogens (E. coli)
Flat Creek	AL03140202-0702-110	Choctawhatchee	Coffee Covington	Pathogens (E. coli)
Wrights Creek	AL03140203-0201-100	Choctawhatchee	Geneva	Pathogens (E. coli)
Shirtee Creek	AL03150107-0104-100	Coosa	Talladega	Total Dissolved Solids
Tallaseehatchee Creek	AL03150107-0106-100	Coosa	Talladega	Total Dissolved Solids
Boggy Branch	AL03140106-0302-203	Perdido	Escambia	Metals (Lead)
Brushy Creek	AL03140106-0302-101	Perdido	Escambia	Metals (Lead)
Calebee Creek	AL03150110-0504-101	Tallapoosa	Macon	Siltation (habitat alteration)
Clear Creek	AL06030002-0201-100	Tennessee	Jackson	Pathogens (E. coli)
Elk River (Wheeler Lake)	AL06030004-0405-101	Tennessee	Lauderdale Limestone	Nutrients
Elk River (Wheeler Lake)	AL06030004-0405-101	Tennessee	Lauderdale Limestone	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.

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.

Since 2005, the ADEM has maintained and implemented a coordinated 5-year Monitoring Strategy that outlines ADEM's approach to ten elements as recommended by EPA: monitoring strategy, objectives, design, water quality indicators, quality assurance, data management, data analysis and assessment, reporting, programmatic review, and support planning. Each strategy sets forth a 5-year plan to address the 10 elements and is based on an in-depth review of the previous strategy to ensure that the monitoring objectives and priorities were met, evaluate emerging data needs to identify the objectives and priorities of the next 5-year cycle, and provide frequent discussions among program managers and basin teams to revise the strategy as needed to meet these objectives. Each strategy is intended to be the next step in an ongoing, iterative process. Two very important aspects of ADEM's Monitoring Strategy are to address emerging data needs and to incorporate advances in science and technology as they become available, while continuing to maintain the consistency and quality of data over time, particularly for trend analysis and indicator development.

The programmatic review of the 2015 strategy and development of the 2020 strategy began in 2019. An important change was to implement all monitoring programs the same 3-year basin rotation to collect intensive data throughout an entire basin in one year, from the downstream coastal waters and reservoirs upstream to the small streams and headwaters. Sampling each basin every three years also improves ADEM's ability to accurately measure trends in water quality, while maintaining a consistent and achievable level of effort year-to-year for ADEM's four field offices and laboratories. Two full sets of data are collected within each basin over the six-year assessment period, as defined in the CALM. The comprehensive, multi-year dataset is also essential for the development and implementation of indicators and water quality standards for additional stressors, waterbody types, and ecoregions.

The introduction of basin teams to ADEM's planning process has been instrumental in improving coordination and communication of monitoring needs among the individual monitoring, assessment/listing, TMDL, and NPS programs. It has provided extensive opportunities for staff training and experience in the planning process, and allows team members to become familiar with the data needs and issues within their basins.

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. The goals of this research are to develop meaningful relationships between turbidity and TSS; use turbidity (in-situ) versus TSS (lab) as primary indicators of stream/ watershed health; develop more practical and straightforward siltation TMDLs; and gain more knowledge of turbidity and TSS concentration under various hydrologic conditions. 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 the Data Evaluation and Assessment (DEVAS) database for tracking assessment units and assessment unit categories.

Beginning with the 2018 cycle, EPA expects all Integrated Report submissions will be submitted electronically to EPA via ATTAINS (Assessment and Total Maximum Daily Load Tracking Implementation System), an online system for accessing information about the conditions of the nation's surface waters. The Department began uploading the State's data and information in the 2020 cycle and will utilize EPA's ATTAINS going forward to submit electronic data regarding Alabama's surface waters. The advantages of this electronic submittal system include allowing EPA and states to process and transmit information in a more timely manner for stakeholders through How's My Waterway, contributing to the National Water Quality Inventory Report to Congress, and supporting analysis of actions to protect and restore waters and track progress towards that goal.

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 ensure 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 Department of Environmental Management

Alabama's Water Quality Assessment and Listing Methodology

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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	United States 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
USGS	United States Geological Survey
WMB-EPT	Wadeable Multi-habitat Bioassessment - EPT Families
WMB-I	Intensive Wadeable Multi-habitat Bioassessment

1.0 <u>Introduction</u>

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 (USGS National Hydrography Dataset High Resolution, 2015).

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, 2018, and 2020.

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 <u>Alabama's Water Quality Standards</u>

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.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf

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.

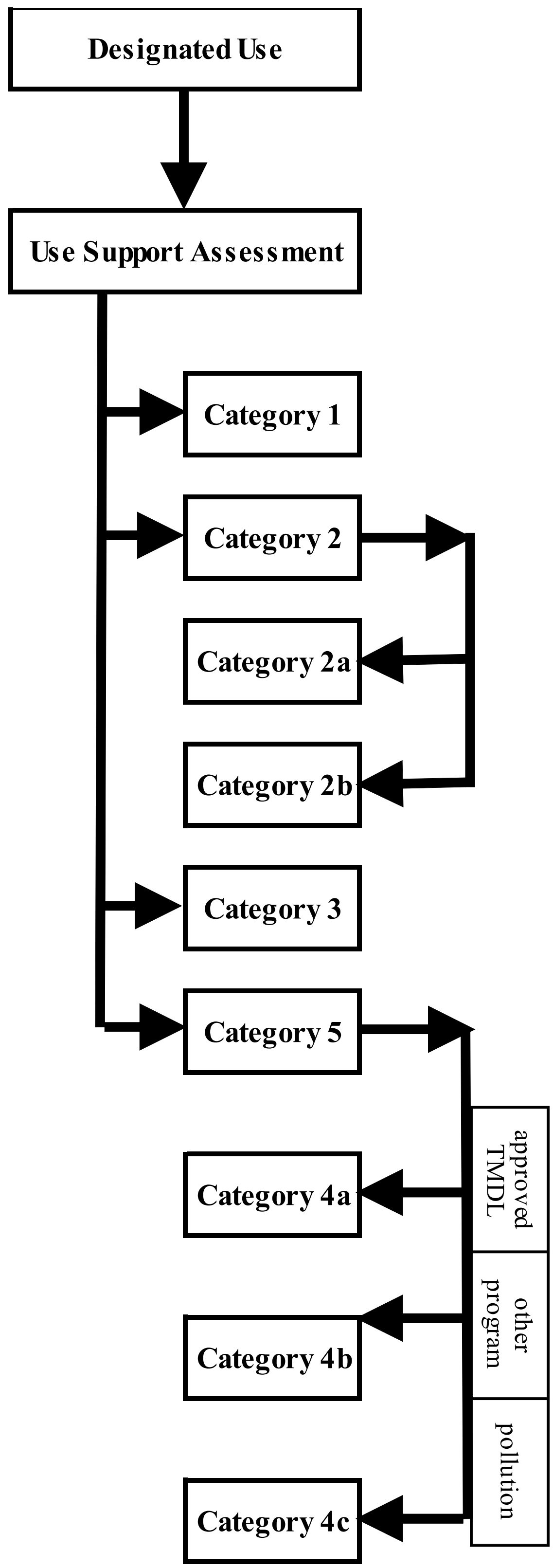
Category 3
Waters for which there are no data or information to determine if any applicable water quality standard is attained or impaired. These waters will be considered unassessed.

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.

Figure 1: Alabama's Waterbody Assessment Process



3.2 Evaluated or Monitored Assessments

When the information used to assess the waterbody consists 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-I) 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 and 6101.

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
- Caffeine (wadeable flowing streams, Montgomery FO)
- Chlorides (Cl^{-1})
- Collector Name
- Color (coastal plain streams, ecoregion 65)
- Conductivity, µmhos/cm @ 25°C
- Date (Month, Day, Year)
- Dissolved organic carbon (coastal plain streams, ecoregion 65)
- 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

Pesticide/Herbicide samples 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

Inorganic (metals) samples will include analyses for the following constituents:

- "Total" Aluminum (Al), µg/l
- "Dissolved" Aluminum (Al), µg/l
- "Total" Antimony (Sb), µg/l
- "Dissolved" Antimony (Sb), µg/l
- "Total" Arsenic^{+3} (As^{+3}), µg/l
- "Dissolved" Arsenic^{+3} (As^{+3}), µg/l
- "Total" Cadmium (Cd), µg/l
- "Dissolved" Cadmium (Cd), µg/l
- "Total" Chromium^{+3} (Cr^{+3}), µg/l
- "Dissolved" Chromium^{+3} (Cr^{+3}), µg/l
- "Total" Copper (Cu), µg/l
- "Dissolved" Copper (Cu), µg/l
- "Total" Iron (Fe), µg/l
- "Dissolved" Iron (Fe), µg/l
- "Total" Lead (Pb), µg/l
- "Dissolved" Lead (Pb), µg/l
- "Total" Manganese (Mn), µg/l
- "Dissolved" Manganese (Mn), µg/l
- "Dissolved" Mercury (Hg), µg/l
- "Total" Nickel (Ni), µg/l
- "Dissolved" Nickel (Ni), µg/l
- "Total" Selenium (Se), µg/l
- "Dissolved" Selenium (Se), µg/l
- "Total" Silver (Ag), µg/l
- "Dissolved" Silver (Ag), µg/l
- "Total" Thallium (Tl), µg/l
- "Dissolved" Thallium (Tl), µg/l
- "Total" Zinc (Zn), µg/l
- "Dissolved" Zinc (Zn), µg/l

Bacteriological Samples

- 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

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

Fish tissue analysis 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
- 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	SW 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
2302	FTMP Non-Lethal Biopsy Plug Sample Collection and Processing
5700	Algal Growth Potential Testing (AGPT)
6000	Macroinvertebrate Sample Collection
6001	Macroinvertebrate Sample Processing
6002	Macroinvertebrate Organism Identification
6004	Macroinvertebrate Sample Data Analysis
6100	Wadeable Rivers and Streams Fish Community Sample Collection
6101	Fish IBI Metrics/Data Analysis
6300	Physical Characterization
6301	Wadeable Stream Habitat Survey
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

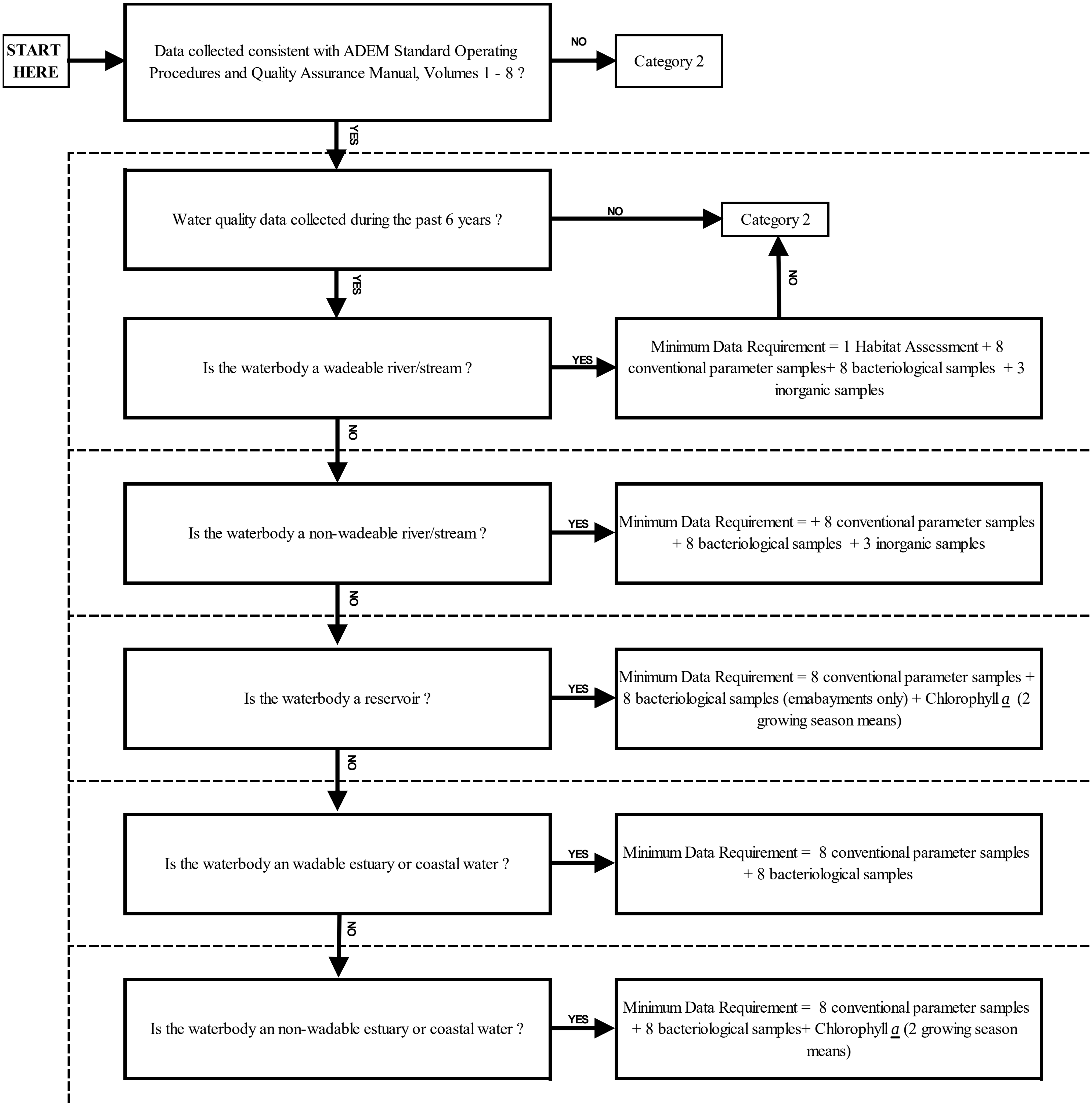
- Non-wadeable River or Stream
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

- 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 or fish IBI community assessment "good" or "excellent".[1]
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 75^{th} 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.

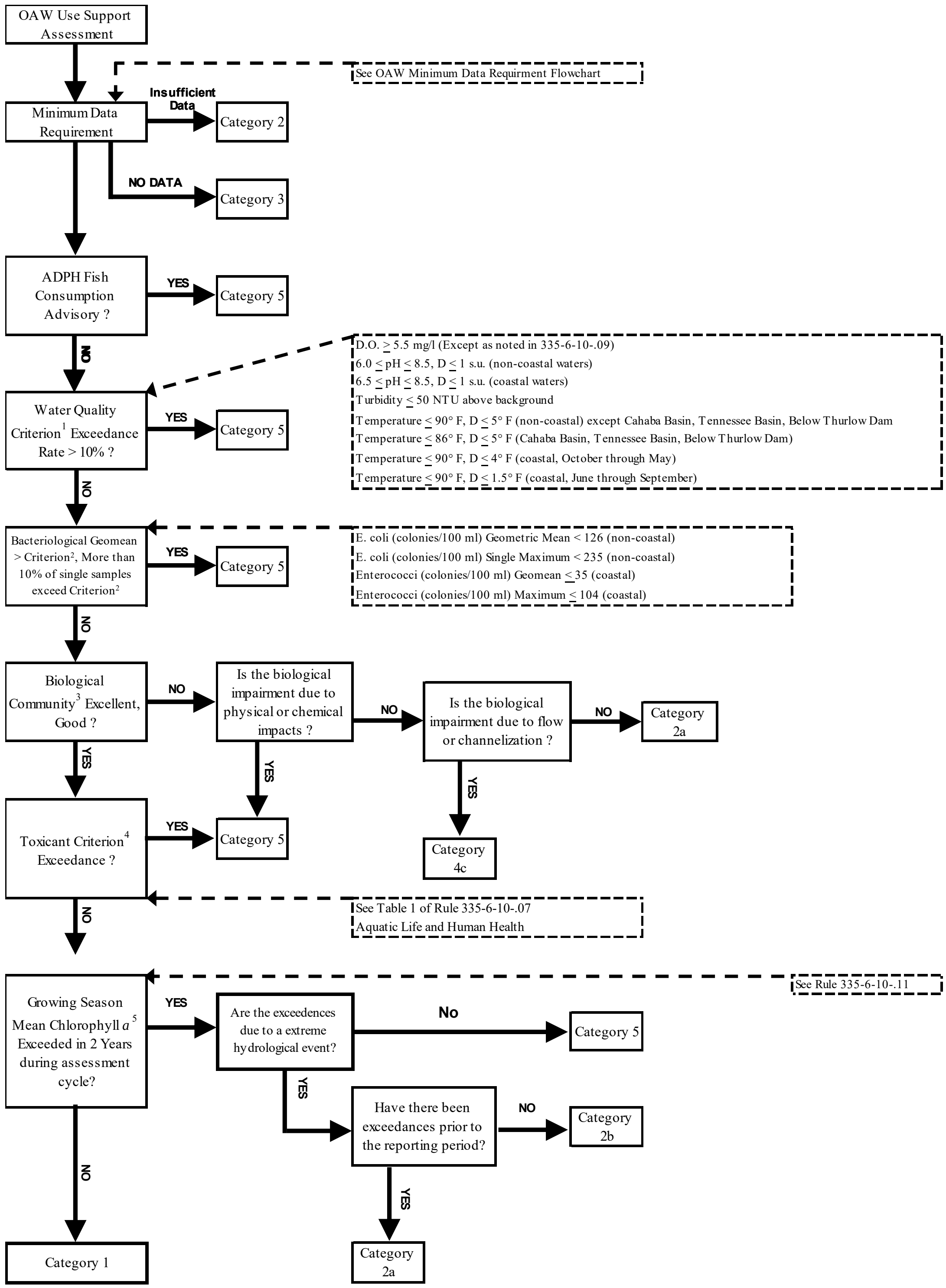
[4] As determined by the binomial distribution function and Table 17.

Table 3: OAW Category 5 Requirements

<table>
<tr><th colspan="2">The OAW waterbody can be placed in Category 5 if any of the following are true:</th></tr>
<tr><th>Issue</th><th>Condition</th></tr>
<tr><td>Consumption Advisories</td><td>A fish consumption advisory has been issued by the Alabama Department of Public Health.</td></tr>
<tr><td>Macroinvertebrate and Fish Assessments</td><td>Level IV WMB-I or fish IBI community assessment less than “good”.[5]</td></tr>
<tr><td>Chlorophyll <u>a</u> Data</td><td>Growing season mean chlorophyll <u>a</u> criterion has been exceeded where such a criterion has been established.[6]</td></tr>
<tr><td>Toxic Pollutants</td><td>More than two exceedances of a particular toxic pollutant criterion in previous six years or more than one in a 3-year period.</td></tr>
<tr><td>Conventional Parameters[7]</td><td>More than a 10% exceedance rate for any given parameter.[8]</td></tr>
<tr><td rowspan="2">Bacteriological Data</td><td><u>Non-Coastal Waters:</u>
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]</td></tr>
<tr><td><u>Coastal Waters:</u>
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]</td></tr>
</table>

[5] 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.
[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

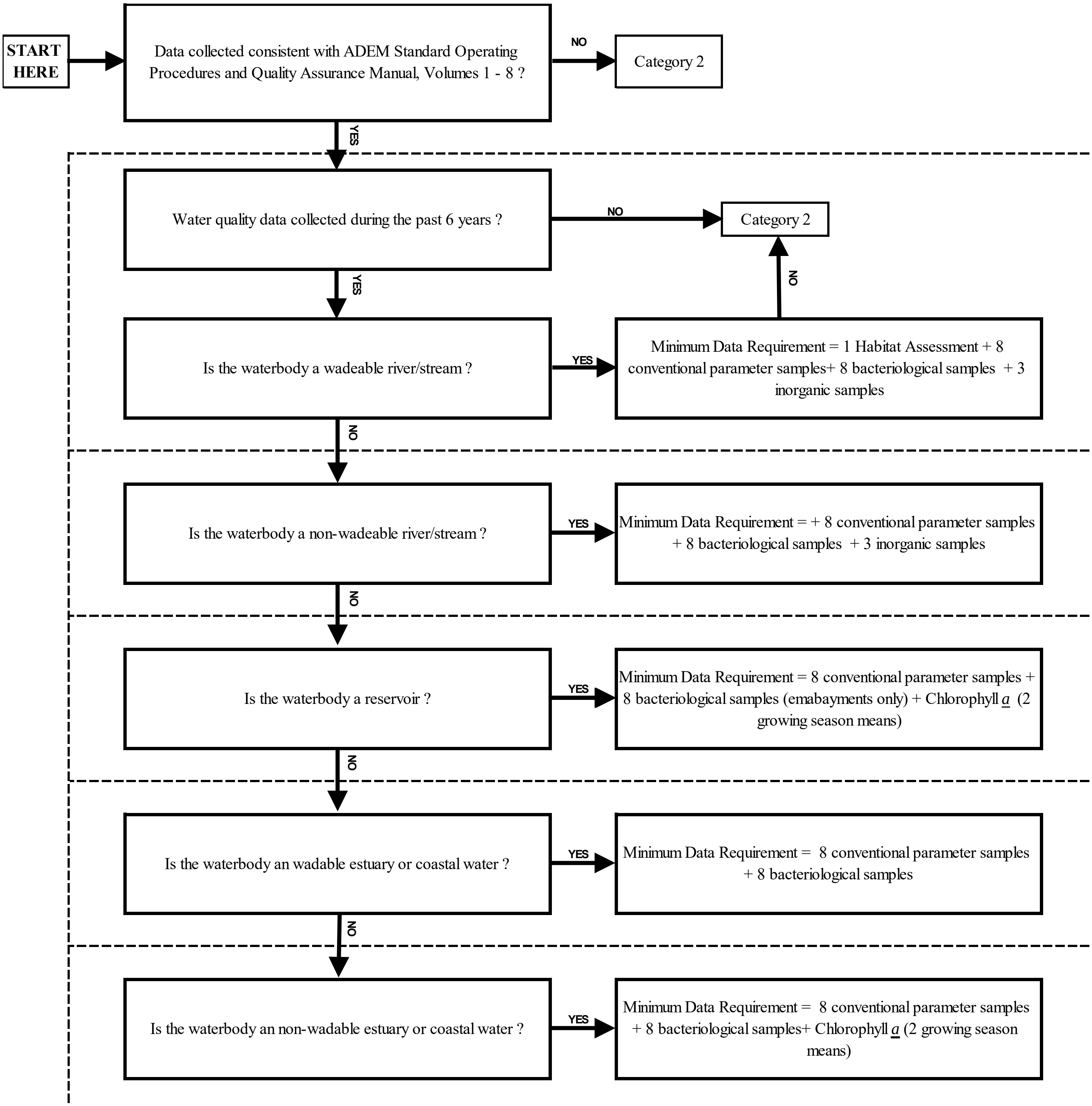
- Non-wadeable River or Stream
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

- 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 advisory issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I or fish IBI community assessment "fair", "good" or "excellent".[9]
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.

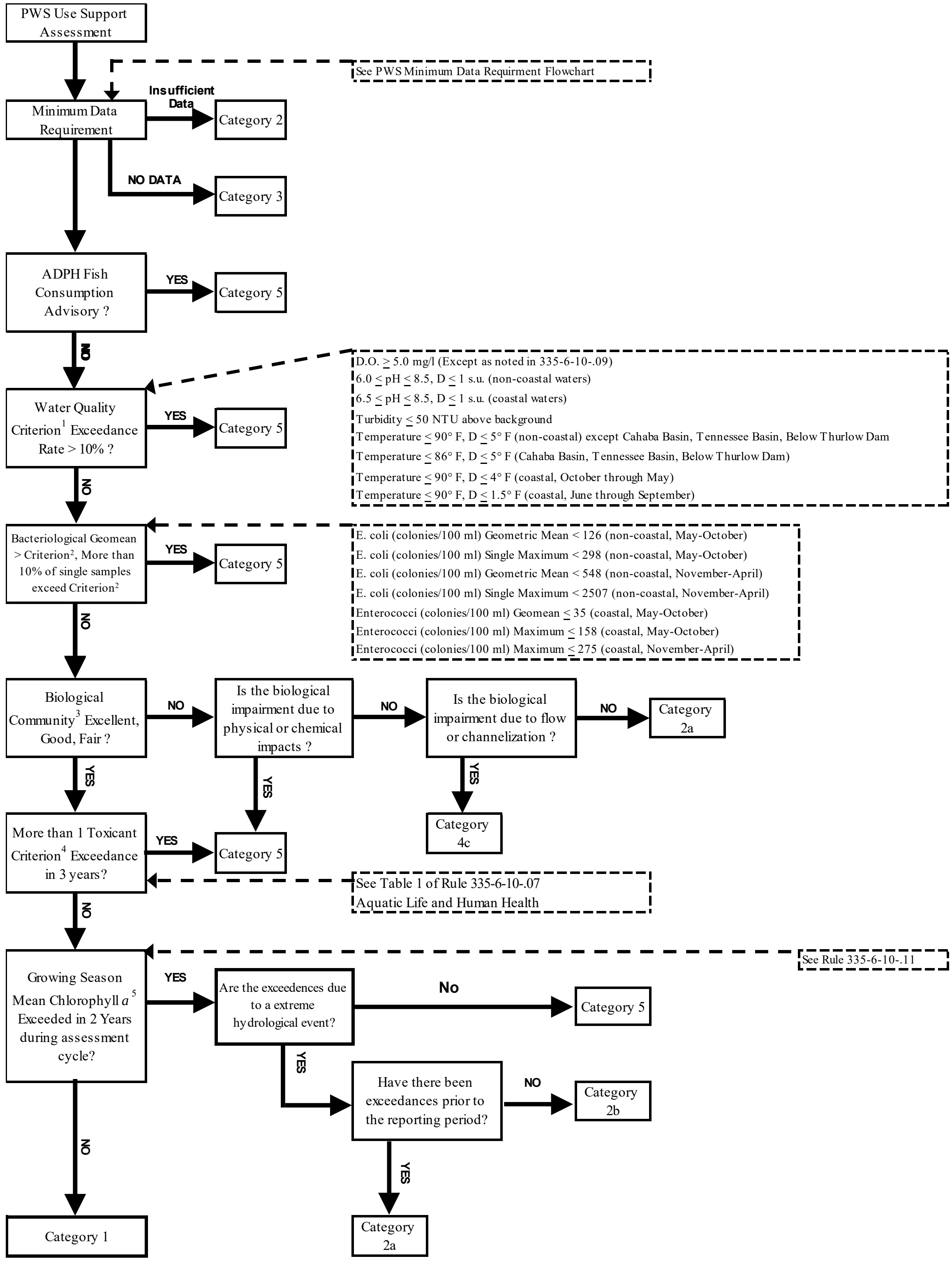
[12] As determined by the binomial distribution function and Table 17.

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	A fish consumption advisory has been issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I or fish IBI community assessment less than "fair".[13]
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

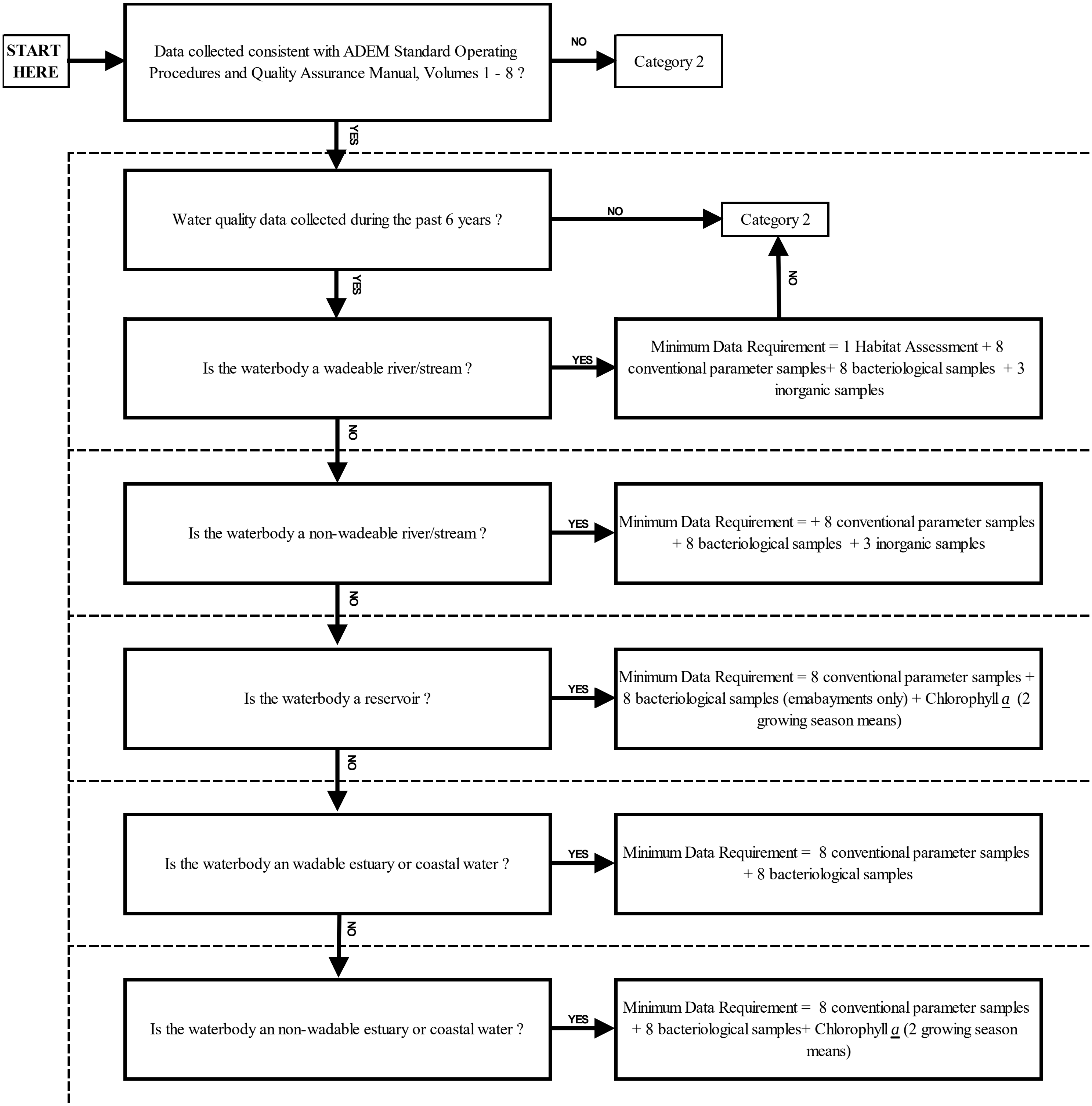
- Non-wadeable River or Stream
  - 8 conventional parameter samples
  - 8 bacteriological samples
  - 3 inorganic samples

- Reservoirs and Embayments
  - 7 conventional parameter samples
  - 4 bacteriological samples (embayments only)
  - Chlorophyll 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 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 or fish IBI community assessment "fair", "good" or "excellent".[17]
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.

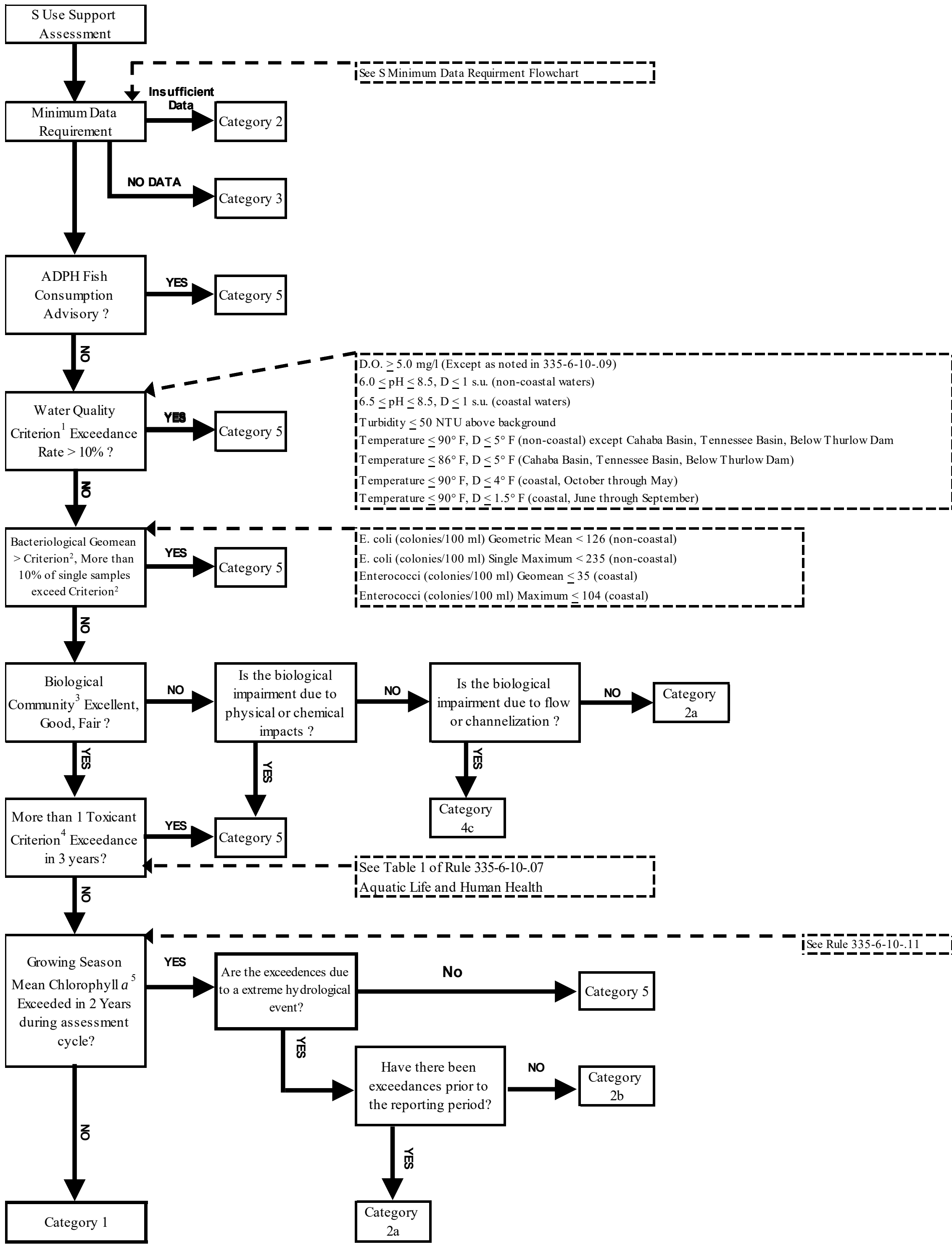
[20] As determined by the binomial distribution function and Table 17.

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	A fish consumption advisory has been issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I or fish IBI community assessment less than "fair".[21]
Chlorophyll <u>*a*</u> Data	Growing season mean chlorophyll <u>*a*</u> 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	**<u>Non-Coastal Waters:</u>** ***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]
	<u>Coastal Waters:</u> ***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 <u>*a*</u> 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

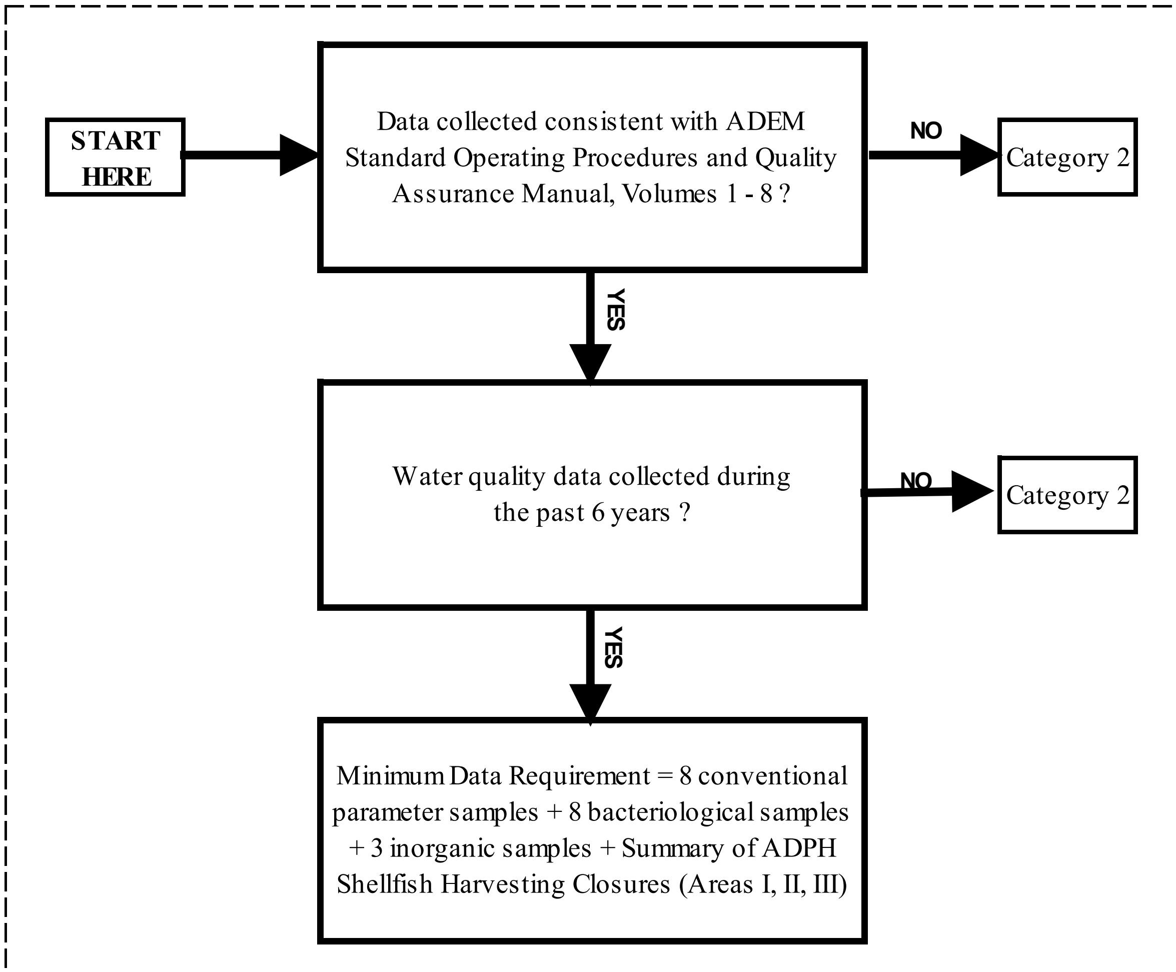


Table 8: SH Category 1 Requirements

The SH waterbody can be placed in Category 1 if all the following are true:	
Issue	**Condition**
Consumption Advisories	No fish/shellfish consumption 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 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]

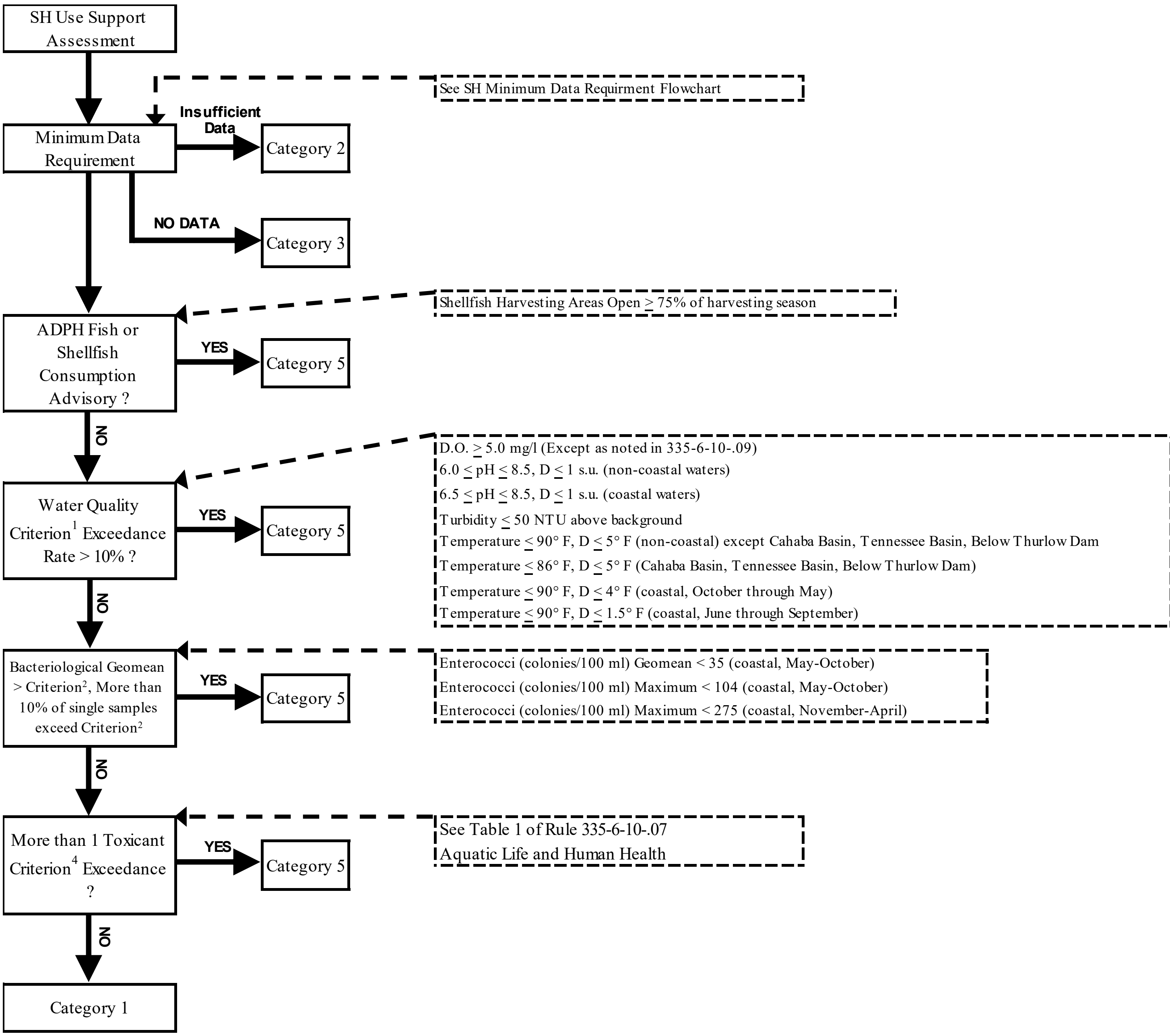
[25] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[26] As determined by the binomial distribution function and Table 17.

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	A fish consumption advisory has been 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 8: 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, and wildlife. 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.

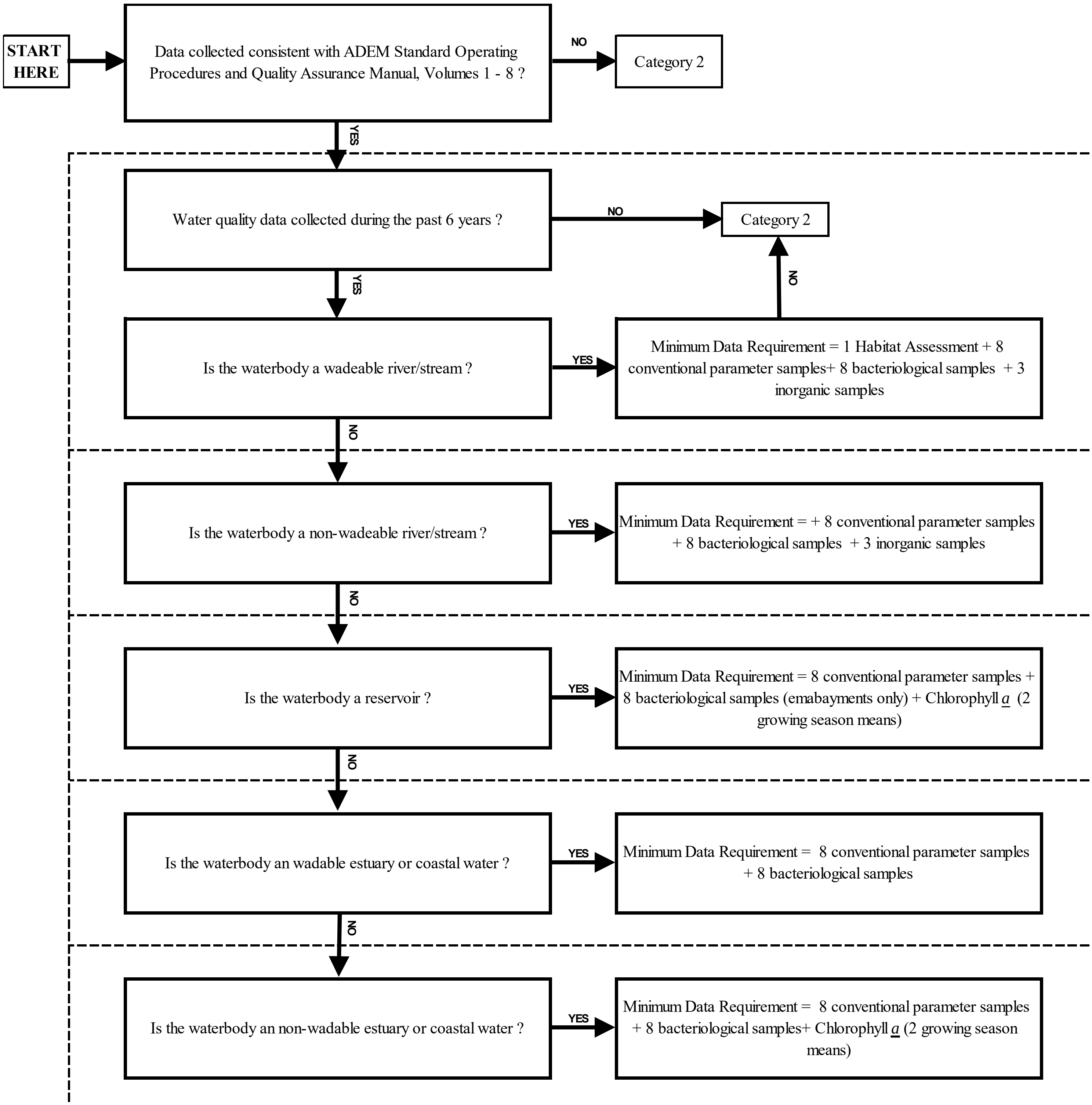
4.5.1 Minimum Data Requirements for F&W Waters

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 <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 9: 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 or fish IBI community assessment "fair", "good" or "excellent".[29]
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]

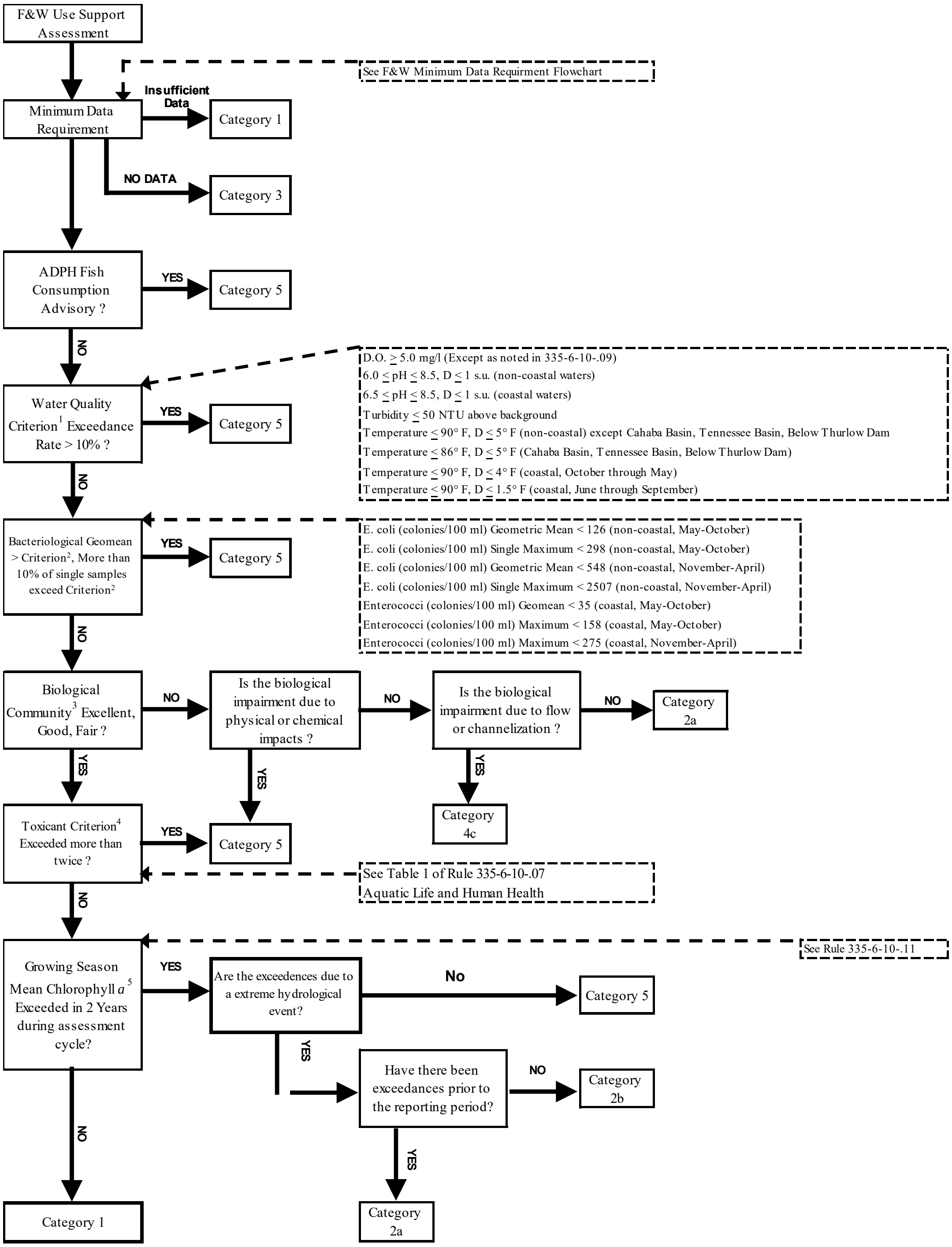
[29] Applicable to wadeable streams only.
[30] Chlorophyll *a* values in excess of the criterion, due to extreme hydrological events (i.e. drought, floods), will not be considered as an exceedance of the criterion. Extreme drought conditions are droughts with a drought intensity category of D2 or greater 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 75th 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	A fish consumption advisory has been issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	Level IV WMB-I or fish IBI community assessment less than "fair".[33]
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. 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.
[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 10: 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**.

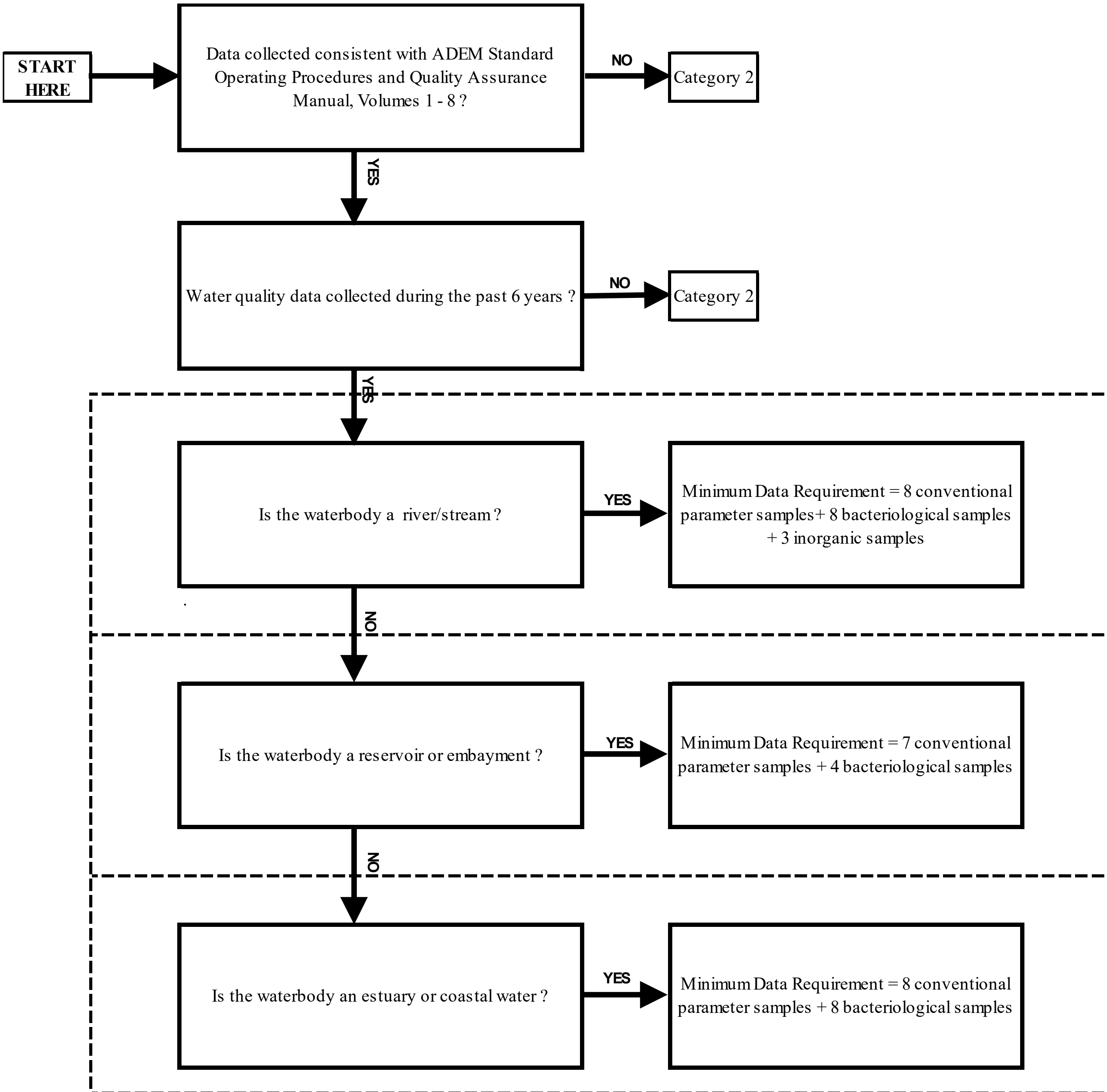
In addition, the data must have been collected within the last six years. Failure to satisfy this condition places the waterbody in Category 2. If this condition is met, the determination of the minimum data requirements is dependent upon the waterbody type. Waterbody types include rivers and streams, 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 11: 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]

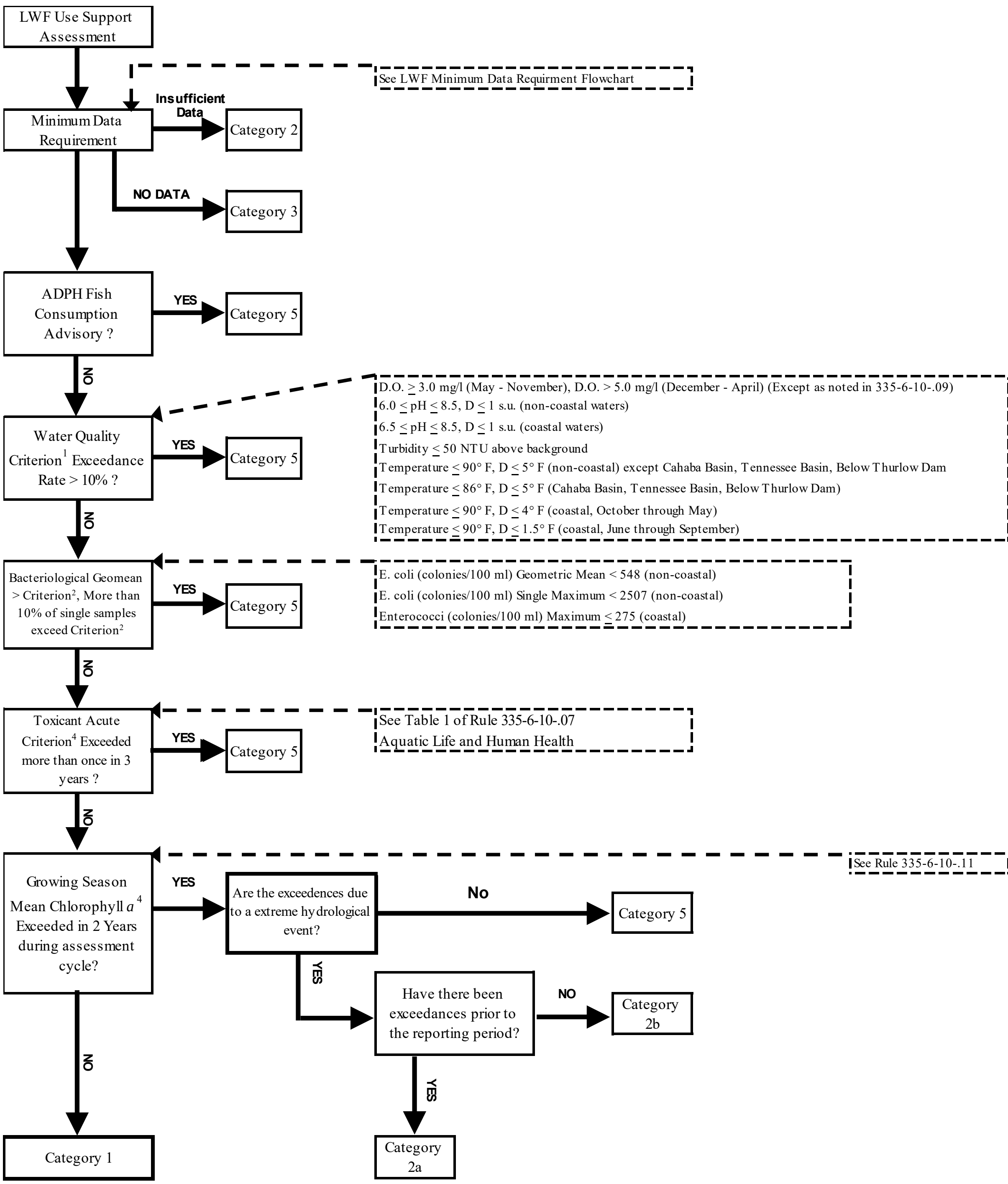
[37] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[38] As determined by the binomial distribution function in Table 17.

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	A fish consumption advisory has been 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 12: 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

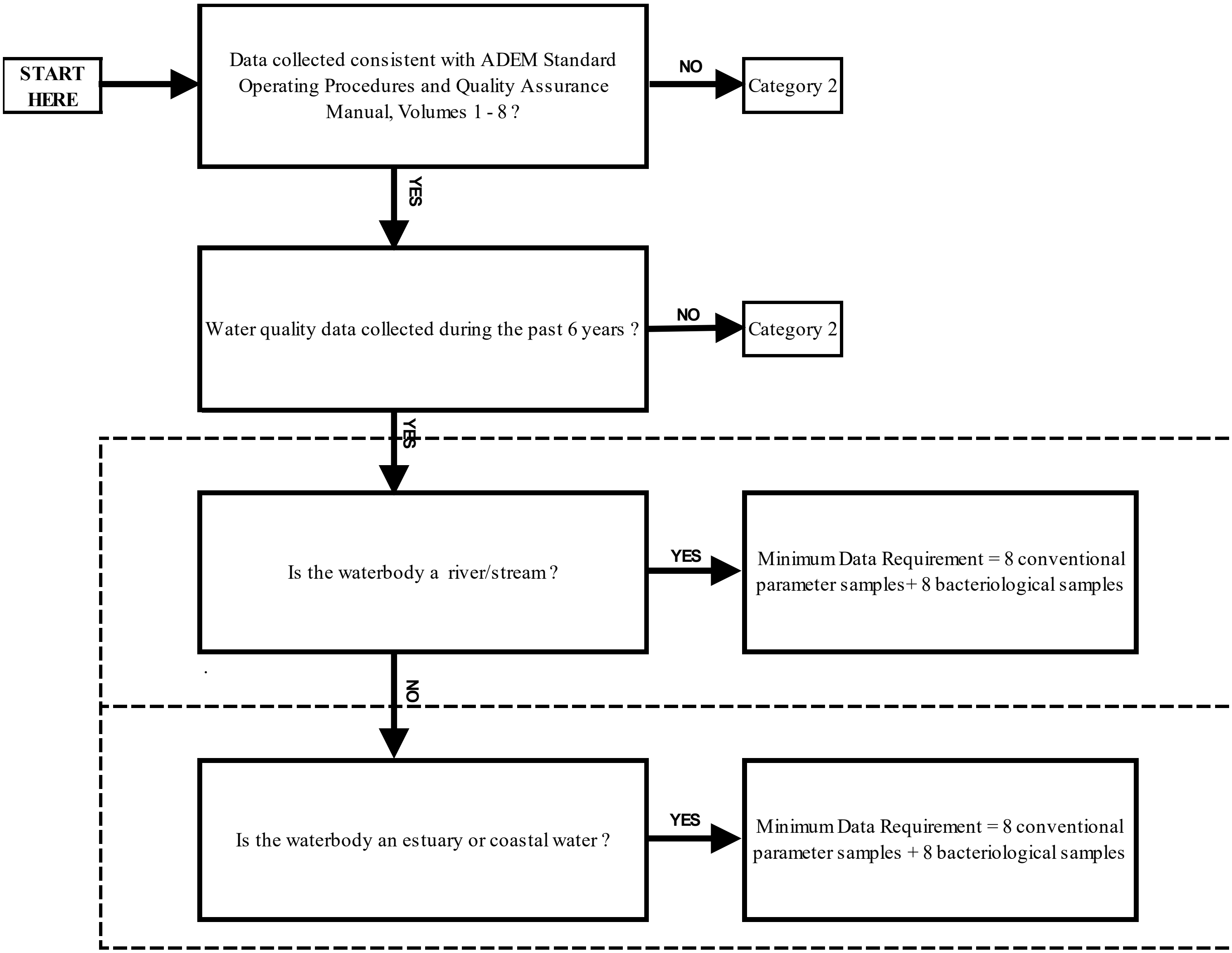
For waters with the A&I classification, the available data must have been collected consistent with the standard operating procedures manual listed in **Table 1**.

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 13: 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]

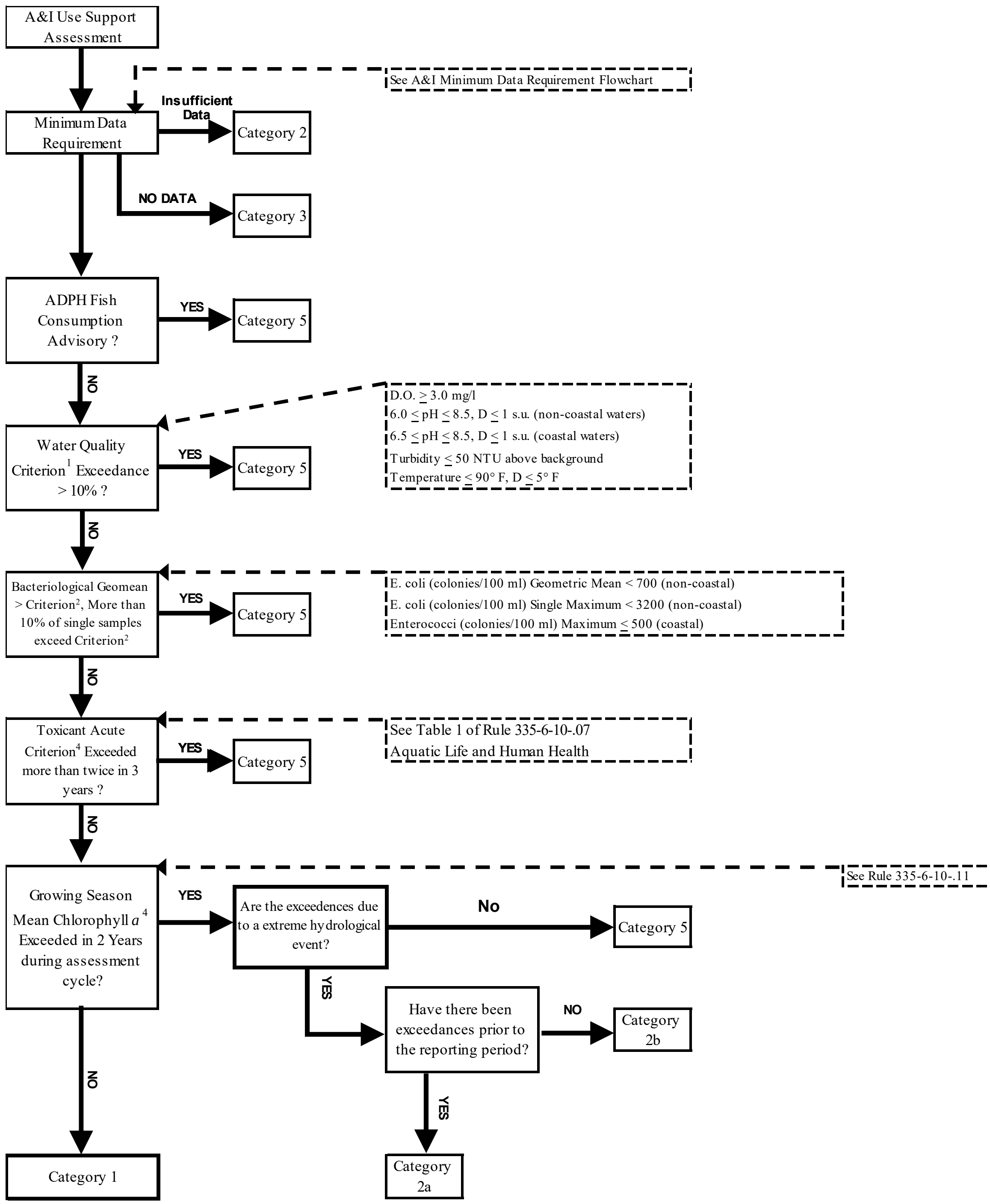
[41] Conventional parameters include DO, pH, temperature (where influenced by heated discharge), and turbidity.
[42] As determined by the binomial distribution function in Table 17.

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	A fish consumption advisory has been issued by the Alabama Department of Public Health.
Macroinvertebrate and Fish Assessments	NA
Chlorophyll <u>a</u> 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	**<u>Non-Coastal Waters:</u>** ***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]
	<u>Coastal Waters:</u> ***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 14: 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 it can be said for a given sample size with a given number of criterion exceedances, there exists a 90% confidence 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 <u>Use of Accurate Location Data</u>
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 <u>Use of Temporally Independent Samples</u>
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 <u>Data from Continuous Monitoring</u>
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://www.alabamapublichealth.gov/foodsafety/seafood-and-shellfish.html.

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

The objective of the Clean Water Act and water quality management programs is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters, where biological integrity is defined as the "capability of supporting and maintaining a balanced, integrated, and adaptive community of organisms having a composition and diversity comparable to that of natural habitat within a region". Biological assessments are an evaluation of the condition of a waterbody using surveys of the structure and function of a community of resident biota in comparison to conditions expected within a specific waterbody type and region. They directly measure the condition of aquatic communities, and are used to assess the waterbody's degree of aquatic life use support.

There are many other advantages to conducting biological assessments, such as:

1) They characterize biological condition of a waterbody relative to its water quality standards;
2) They can be used to identify high-quality waters, and waters of important ecological significance;
3) They show biological responses to habitat degradation, eutrophication and other non-toxic impacts, as well as the cumulative effects of different stressors from multiple sources;
4) They can detect long-term impacts to aquatic communities caused by short-term, episodic events;
5) They can detect aquatic life impairment from pollutants not routinely monitored and from pollutants without established numeric criteria; and,
6) They provide data on biotic responses to stressors to develop stressor-response models.

As recommended by the US EPA, biological monitoring is integrated into ADEM's standards, assessment, listing, NPDES, TMDL, and restoration programs. Biological assessments are used together with chemical-specific analyses, habitat surveys, and other parameters as needed to assess attainment of aquatic life use support, and to assist with stressor identification and causal analysis.

Several steps are taken to ensure that all management decisions are made with data of the highest quality:

1) Well-established multi-metric indices, calibrated to specific ecoregions, sampling periods, drainage area, and gradient are used to assess wadeable streams and rivers statewide.
2) All biological data are collected, processed, and analyzed using scientifically accepted methods with well-documented standard operating procedures.
3) QA/QC procedures are used to ensure that all methods and protocols are adhered to during the collection, processing, identification, and analysis of all data.
4) Study-specific reference reaches are identified and sampled for all waterbody and indicator types where reference conditions are not yet well-established.

Both macroinvertebrate and fish community bioassessments are used to assess aquatic life use support. In order to maximize the number of stations where biological assessments can be conducted, generally only one biological assessment is conducted at a location. The two communities are sensitive to different stressors, due to differences in life cycles and motility. The potential for different kinds of stress, presence of threatened and endangered species, watershed area, stream width and depth, as well as types of assessment previously conducted are all factors used to determine which assemblage is used to assess each site. Because the two communities are sensitive to different types of stress, it may be appropriate to place the waterbody in Category 5 when both communities are surveyed, but only one assessment indicates impairment. These decisions will be made and documented on a case-by-case basis in consultation with the biologist(s) responsible for conducting the assessment.

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
- EPA
- 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 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. **Table 16** summarizes Alabama's bacteria criteria for each designated use.

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)* May through October • Geometric Mean ≤ 126 • Single Sample Max ≤ 298 November through April • Geometric Mean ≤ 548 • Single Sample Max ≤ 2507	*Enterococci (colonies/100 ml)* May through October • Geometric Mean ≤ 35 • Single Sample Max ≤ 158 November through April • 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] May through October • Geometric Mean ≤ 35 • Single Sample Max ≤ 104 November through April Single Sample Max ≤ 275
Fish and Wildlife (F&W)	*E. coli (colonies/100 ml)* May through October • Geometric Mean ≤ 126 • Single Sample Max ≤ 298 November through April • Geometric Mean ≤ 548 • Single Sample Max ≤ 2507	*Enterococci (colonies/100 ml)* May through October • Geometric Mean ≤ 35 • Single Sample Max ≤ 158 November through April • 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.

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 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 determining appropriate or acceptable parameter levels to support Alabama's water designated uses, ADEM elected to use a "reference condition" approach to determine appropriate chemical, physical, and biological conditions consistent with protection of designated uses and being scientifically defensible in assessing and evaluating water quality influences or impacts. It is also used as the basis of natural condition determinations by documenting when expected reference conditions deviate from water quality criteria.

ADEM's reference condition is based on ambient water quality data from verified reference streams located in characteristically similar types of watersheds known as ecoregions. When comparing measured ambient water quality data to the ecoregional reference streams 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. An intensive investigation of waterbody status is conducted to verify and document that natural conditions are entirely responsible for the deviation from water quality criteria. Methods used to determine water quality issues caused by natural conditions may include, but are not limited to, reviewing watershed surveys; researching landuse coverage; inventorying point and nonpoint sources; conducting field reconnaissance; and collecting chemical, physical and biological 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.

4.11 Ecoregions, Ecoregional Reference Streams, and Ecoregional Reference Guidelines

4.11.1 Ecoregions

An ecoregion is described as a relatively homogeneous area defined by similar climate, landform, soil, potential natural vegetation, hydrology, and other ecologically relevant variables (EPA, 2000b). The EPA 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.

There are six Level III ecoregions in Alabama: Piedmont, Southeastern Plains, Ridge and Valley, Southwestern Appalachians, Interior Plateau, and the Southern Coastal Plain **(Figure 15)**. Within these Level III ecoregions, 29 Level IV ecoregions exist. A general description of each of the six Level III ecoregions is provided below. Griffith et al. (2001) describes each Level III and IV ecoregion in more detail.

The Piedmont region, otherwise known as Ecoregion 45, comprises a transitional area between the mostly mountainous ecoregions of the Appalachians to the northwest and relatively flat coastal plain to the southeast. The Southeastern Plains, otherwise known as Ecoregion 65, consists of broad inter-stream areas that have a variety of cropland, pasture, woodland, and forest. The Ridge and Valley region, otherwise known as Ecoregion 67, is a relatively low-lying region with springs and caves being relatively numerous. Land cover is mixed and present-day forests cover about 50% of the region. The Southwestern Appalachians, known as Ecoregion 68, consists of forest and woodland with some cropland and pasture and is mostly restricted to deeper ravines and escarpment slopes. Ecoregion 71, otherwise known as the Interior Plateau, is an important agricultural region in Alabama and the springs, lime sinks, and caves contribute to this region's distinctive faunal distribution. The tidally influenced Southern Coastal Plain, known as Ecoregion 75, consists of mostly flat plains but is a heterogeneous region that contains barrier islands, coastal lagoons, marshes, and swampy lowlands. This makes it one of the hardest ecoregions to sample and establish reference stations. (Griffith et al. 2001)

4.11.2 Ecoregional Reference Streams

"Reference streams" are defined as minimally- or least-impacted waterbodies monitored to represent the natural chemical, physical, and biological conditions of a particular stream type. These "reference streams" can be monitored over time to establish a baseline to which other waters can be compared. Reference streams are not necessarily pristine or undisturbed by humans, however they do represent waters within Alabama that are healthy and fully support their designated uses, to include protection of aquatic life.

ADEM has maintained an Ecoregional Reference Reach Monitoring Program since 1991 (ADEM 2001b) to develop baseline reference reach conditions for Alabama's 29 Level IV subecoregions. Data from these sites are used to classify waters with unique chemical, physical, and biological characteristics and to define expected or background conditions. They have been used as the basis to define regions characterized by similar communities of fish (ichthyoregions) and macroinvertebrates (bioregions). They are also used as the basis of natural condition determinations when expected reference conditions deviate from water quality criteria. To date, ADEM's ecoregional reference reach program has focused on establishing ecoregional reference reaches in wadeable, flowing stream systems throughout the state. High quality watersheds are also identified for use as study-specific reference reaches where ecoregional reference guidelines have not yet been established.

A specific multi-step process is used to establish ecoregional reference reaches in watersheds of the highest quality, and to use the highest quality reference reach data to define background conditions as accurately as possible. Since 2005, the ADEM has delineated 1,457 watersheds statewide to provide information for watershed conditions including ecoregion, drainage area, gradient, percent wetland area, and other factors. Land cover information from the National Land Cover Datasets is used to estimate percent land use.

Several measures of watershed condition are used to identify the highest quality watersheds within each ecoregion. ADEM's Watershed Disturbance Gradient (WDG) category (based on land use, population density, and road density) and a Preliminary Healthy Watersheds Initiative (PHWI) Assessment are calculated for each of ADEM's existing stations and are used as a measure of watershed disturbance and watershed health, respectively. Results of a PHWI completed at the HUC 12 scale in 2016 and a Healthy Watersheds Initiative (HWI) Assessment completed at the catchment scale in 2012 are also used to identify areas most likely to contain high quality watersheds.

An Ecoregional Reference Reach Evaluation Form to document the extent, severity, and proximity of watershed disturbances is completed in three phases:

1. *Desktop Screening*: Aerial photography and satellite imagery are used to screen for obvious impacts within the watersheds. Departmental databases are used to determine the number, type, and location of point source discharges within each watershed.
2. *Reach Reconnaissance*: In addition to the ecoregional reference reach form, a reconnaissance physical characterization form is completed. In situ field parameters and visual macroinvertebrate surveys are conducted to screen for obvious impacts to chemical and biological conditions. Substrate composition, gradient, canopy cover, sinuosity, and habitat quality and availability are also estimated to quickly evaluate stream condition and to ensure that the reach was typical of other streams in the subecoregion.
3. *Watershed Reconnaissance*: Ground-truth land use estimates further ensure that staff are aware of major disturbances within the watershed.

The compiled natural features of ADEM's established ecoregional reference reaches provide the user with some guidance as to what types of waterbodies the guidelines can be accurately applied, and when a study-specific reference reach should be located to ensure accurate assessment results. With the compiled land use information, the ADEM has defined "least-disturbed" conditions within each level IV sub-ecoregion to use as a rule-of-thumb when selecting reference reaches.
Watersheds that do not meet these standards may be considered for reference reach status if all available data from ADEM and other state, local, and federal agencies indicate the watershed to be in good or excellent condition, and fully supporting their designated uses. Sites of the highest quality within each ecoregion are selected for sampling as candidate reference reaches. At each candidate reference reach, monthly water quality sampling is conducted, March-October. A habitat/physical characterization form, a habitat survey, and at least one biological survey are

completed. Individual results from each candidate reference reach are reviewed to verify that all results are valid. Any result determined to be invalid is excluded from the reference dataset. The reason for excluding any data is documented.

4.11.3 Ecoregional Reference Guidelines

In determining appropriate or acceptable parameter levels to support designated uses of Alabama's waters, ADEM elected to use a "reference condition" approach to determine appropriate chemical, physical, and biological conditions that are consistent with protection of designated uses and are scientifically defensible in assessing and evaluating water quality influences or impacts. ADEM's reference condition is based on ambient water quality data from verified reference streams located in characteristically similar types of watersheds known as ecoregions. **Table 18** summarizes the 2015 Ecoregional Guidelines which define ADEM's "reference conditions", and provides a baseline for assessing and evaluating water quality conditions.

The reference streams selected for a particular analysis depends primarily on the available number of reference streams and associated data within a particular ecoregion. Therefore, the total number of reference sites selected and the aerial scale (i.e. Ecoregion Level III, Level IV) used to represent a reference condition will often vary on a case-by-case basis. The 90th percentile of the data distributions from the selected reference site(s) is used to establish guidelines on an ecoregional basis. The 90th percentile of the data distribution is considered an appropriate target since it falls within an acceptable range of "least-impacted" conditions (i.e. upper quartile).

The 2015 Ecoregional Reference Guidelines should be used by ADEM staff for purposes of implementing the various Clean Water Act programs such as 303(d) & 305(b) assessment, listing and reporting, total maximum daily loads (TMDLs), and waste load allocations (WLAs). Reference reach data will be reviewed and updated periodically, and as necessary for ecoregions and parameters where guidelines could not be calculated due to lack of sufficient data.

Figure 15: 2015 ADEM Ecoregional Reference Stations Location Map

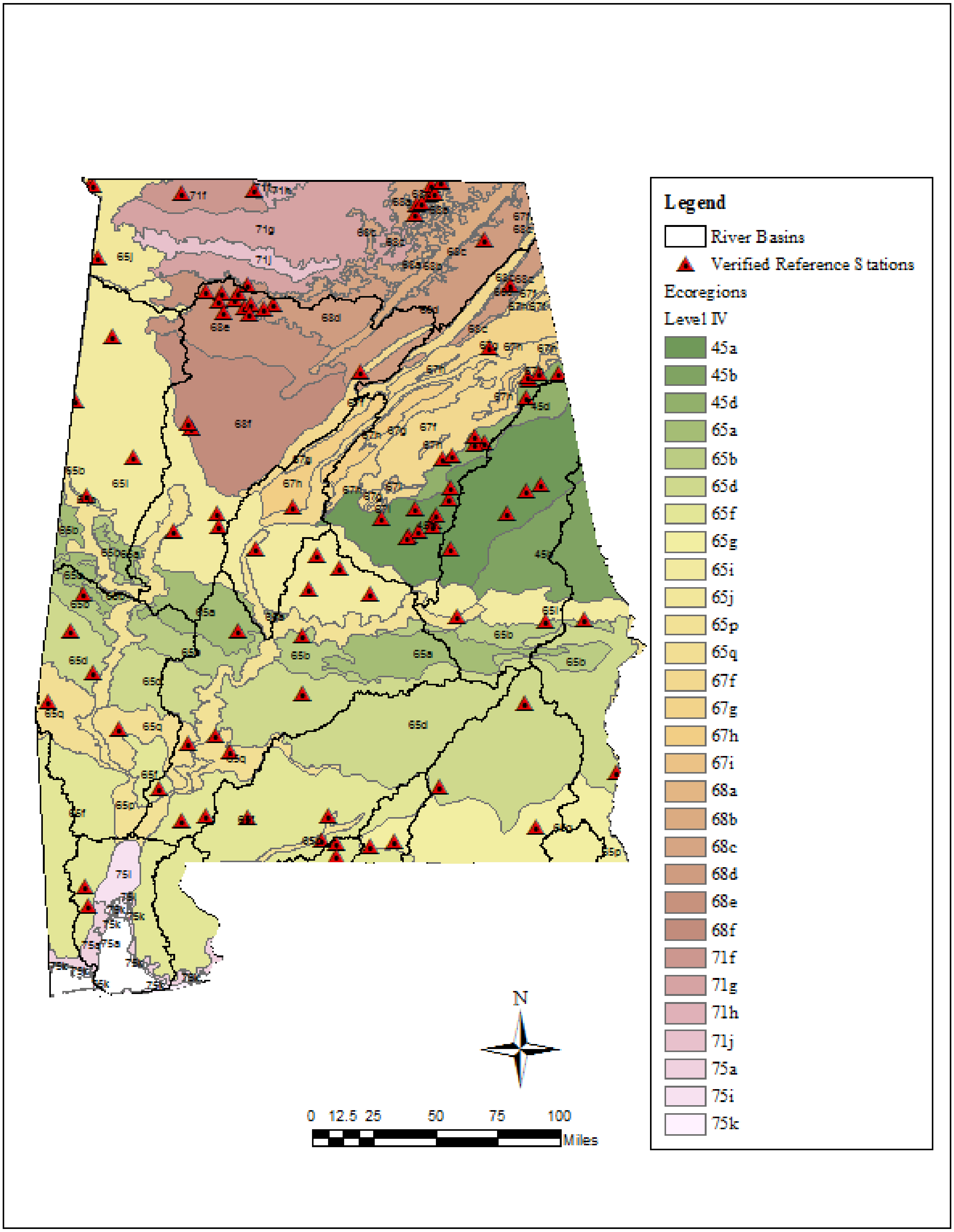


Table 18: Alabama's 2015 Ecoregional Reference Guidelines

		Level 4	Level 4	Level 3	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 3	Level 4	Level 4	Level 4	Level 3	Level 4	Level 4	Level 4	Level 3
Parameters	**Basis of comparison**	**45a**	**45d**	**45**	**65a**	**65b**	**65a/b**	**65d**	**65f**	**65g**	**65i**	**65j**	**65q**	**67f**	**67h**	**67**	**68c**	**68d**	**68e**	**68**	**71f**	**71g**	**71h**	**71**
Physical																								
Temperature (∘C)	90th %ile	26.0	25.0	26.0	28.5	27.9	28.5	24.5	25.0	25.7	25.0	23.4	26.8	23.2	24.0	24.0	23.6	24.9	24.0	24.0	23.2	23.0	22.8	22.9
Turbidity (NTU)	90th %ile	16.69	8.00	13.30	46.52	5.65	35.22	31.64	8.00	12.20	31.14	9.90	20.10	11.89	-	10.20	7.85	9.68	10.15	9.12	3.55	27.72	2.89	10.74
Total Dissolved Solids (mg/L)	90th %ile	68.5	86.2	71.2	174.5	-	165.0	104.8	66.0	101.0	58.0	51.6	131.8	174.5	85.2	163.8	212.9	92.2	70.9	187.0	-	-	78.6	123.4
Total Suspended Solids (mg/L)	90th %ile	15.0	13.2	15.0	44.1	-	36.3	46.6	10.0	17.8	33.4	18.4	29.4	13.2	9.0	12.6	6.0	26.6	10.0	11.0	-	15.4	4.0	8.4
Specific Conductance (µmhos)	Median	39.7	37.2	39.3	210.3	137.0	187.2	76.8	24.2	57.5	21.0	23.9	86.1	209.1	26.3	196.0	311.0	49.0	40.0	52.0	97.3	249.0	100.0	107.0
Hardness (mg/L)	Median	11.1	11.0	11.1	82.1	56.8	75.2	30.8	5.7	24.1	6.0	7.5	42.0	103.0	-	79.3	161.5	14.1	10.0	15.2	-	137.0	-	51.5
Total Alkalinity (mg/L)	90th %ile	23.91	21.62	23.40	94.44	76.96	87.18	37.50	12.00	75.26	13.96	11.75	48.22	121.33	8.20	120.08	165.80	20.88	37.87	144.00	-	-	49.60	101.20
Chemical																								
Dissolved Oxygen (mg/L)	10th %ile	7.24	7.61	7.31	5.86	6.19	5.90	7.30	6.32	4.63	6.65	6.76	6.69	7.98	8.14	8.03	6.40	6.70	7.30	6.90	8.18	7.02	8.97	7.83
pH (SU)	10th %ile	6.5	6.8	6.6	7.0	7.1	7.0	6.6	4.7	4.8	5.8	6.0	6.5	7.0	6.8	6.9	7.5	6.5	6.7	6.7	7.1	7.3	7.6	7.2
pH (SU)	90th %ile	7.6	7.7	7.7	8.4	8.2	8.4	7.6	6.8	7.5	7.2	7.0	7.7	8.3	8.3	8.3	8.0	7.7	7.8	7.9	7.7	7.9	8.4	8.3
Ammonia Nitrogen (mg/L)	90th %ile	0.0075	0.0105	0.0075	0.0521	0.0382	0.0512	0.0270	0.0485	0.0227	0.0663	0.0220	0.0619	0.0305	0.0167	0.0302	0.0264	0.1091	0.5000	0.1676	-	0.0075	0.0156	0.0180
Nitrate + Nitrite Nitrogen (mg/L)	90th %ile	0.1444	0.0770	0.1190	0.1696	0.1854	0.1810	0.4448	0.3470	0.2166	0.2467	0.2184	0.0739	0.2435	0.0590	0.2256	0.2998	1.0751	0.4244	0.5780	-	1.0565	1.6164	1.4694
Total Kjeldahl Nitrogen (mg/L)	90th %ile	0.3783	0.2544	0.3137	0.9846	0.3526	0.7401	0.5527	0.4700	0.5849	0.5350	0.3020	0.5596	0.3504	0.3389	0.3490	0.3428	0.8216	0.4668	0.4850	-	0.2660	0.2410	0.2475
Total Nitrogen (mg/L)	90th %ile	0.4774	0.2868	0.4135	1.1498	0.4340	0.9126	0.7444	0.7822	0.7590	0.6165	0.4170	0.5925	0.4726	0.3479	0.4585	0.5220	1.5698	0.6242	0.8786	-	1.2320	1.6428	1.5820
Dissolved Reactive Phosphorous (mg/L)	90th %ile	0.0205	0.0270	0.0230	0.0680	-	0.0598	0.0167	0.0208	0.0170	0.0204	0.0876	0.0180	0.0152	0.0088	0.0150	0.0216	0.0130	0.0136	0.0170	-	-	0.0150	0.0150
Total Phosphorous (mg/L)	90th %ile	0.0671	0.0535	0.0610	0.1537	0.0462	0.1348	0.0609	0.0310	0.0536	0.0590	0.0154	0.0597	0.0474	0.0400	0.0452	0.0190	0.0512	0.0500	0.0500	-	0.0355	0.0234	0.0354
CBOD-5 mg/L	90th %ile	2.80	2.40	2.51	2.40	-	2.22	1.81	1.99	1.84	2.10	1.30	2.30	1.72	-	2.06	1.00	1.50	1.25	1.43	-	-	1.04	1.27
Chlorides (mg/L)	90th %ile	4.79	4.06	4.60	14.08	6.93	13.90	4.99	6.00	4.97	4.52	6.28	5.65	2.48	-	3.61	11.47	5.72	2.07	4.13	-	-	2.52	2.54
Total Metals																								
Total Alumnium (µg/L)	90th %ile	186.80	118.00	187.40	2290.00	-	1160.00	1039.60	501.00	463.80	991.20	-	550.00	373.90	-	379.00	313.00	-	491.40	330.50	-	-	-	69.80
Total Iron (µg/L)	90th %ile	1045.80	616.00	985.50	2564.00	-	1820.00	2290.00	1337.00	3184.00	4398.00	-	3263.00	522.00	-	445.80	229.20	1304.00	809.00	809.00	-	-	-	430.80
Total Manganese (µg/L)	90th %ile	82.00	68.60	82.00	281.00	-	143.30	143.40	50.70	455.60	530.20	-	253.40	25.70	-	26.80	46.50	129.10	109.00	82.20	-	-	-	25.00
Dissolved Metals																								
Dissolved Alumnium (µg/L)	90th %ile	106.30	54.50	54.50	114.00	-	100.00	111.40	308.00	269.40	100.00	-	180.00	100.00	-	100.00	38.00	-	100.00	100.00	-	-	-	79.25
Dissolved Antimony (µg/L)	90th %ile	1.00	1.00	1.00	-	-	1.82	1.31	3.75	1.00	1.82	-	3.75	5.00	-	1.82	3.00	-	5.00	5.00	-	-	-	5.00
Dissolved Arsenic (µg/L)	90th %ile	-	-	-	-	-	1.96	-	2.50	-	1.40	-	2.50	9.80	-	5.00	0.39	0.50	0.50	0.50	-	-	-	-
Dissolved Cadmium (µg/L)	90th %ile	2.5000	2.5000	2.5000	-	-	2.5000	0.1555	0.1555	2.5000	2.5000	-	0.1250	-	-	2.5000	-	-	0.2000	0.2000	-	-	-	-
Dissolved Chromium (µg/L)	90th %ile	39.5000	39.5000	39.5000	-	-	19.7000	16.0000	39.5000	39.5000	39.5000	-	7.5000	25.0000	-	25.0000	3.5000	-	25.0000	25.0000	-	-	-	25.0000
Dissolved Copper (µg/L)	90th %ile	2.5000	2.5000	2.5000	-	-	-	2.5000	2.5000	-	-	-	-	-	-	-	-	-	15.5000	15.5000	-	-	-	-
Dissolved Iron (µg/L)	90th %ile	373.90	247.50	367.50	387.00	-	339.80	624.20	634.00	709.40	504.60	-	1214.00	162.00	-	151.60	57.10	-	519.20	432.80	-	-	-	149.00
Dissolved Lead (µg/L)	90th %ile	1.00	1.00	1.00	1.00	-	1.00	1.60	2.50	1.00	1.00	-	2.50	1.00	-	1.00	0.75	-	1.00	1.00	-	-	-	-
Dissolved Manganese (µg/L)	90th %ile	46.00	23.50	29.80	-	-	32.60	65.60	47.00	388.80	319.80	-	131.20	25.00	-	25.00	27.40	-	83.00	50.00	-	-	-	25.00
Dissolved Mercury (µg/L)	90th %ile	0.15	0.15	0.15	0.15	-	0.15	-	0.25	-	0.34	-	0.25	0.20	-	0.20	-	-	0.07	0.20	-	-	-	0.15
Dissolved Nickel (µg/L)	90th %ile	3.0000	9.5000	9.5000	-	-	21.0000	21.6000	8.4000	13.0000	25.0000	-	21.0000	25.0000	-	25.0000	4.0000	-	25.0000	25.0000	-	-	-	25.0000
Dissolved Selenium (µg/L)	90th %ile	5.00	5.00	5.00	5.00	-	5.00	5.00	4.13	5.00	5.00	-	5.00	5.00	-	5.00	0.72	5.00	5.00	1.00	-	-	-	-
Dissolved Silver (µg/L)	90th %ile	1.5000	1.5000	1.5000	-	-	1.5000	1.5000	1.5000	1.5000	1.5000	-	1.5000	-	-	-	1.0600	-	2.5000	2.5000	-	-	-	-
Dissolved Thallium (µg/L)	90th %ile	0.5	0.50	0.50	-	-	0.54	0.55	0.50	0.50	0.68	-	0.60	0.68	-	0.68	0.20	-	0.50	0.50	-	-	-	-
Dissolved Zinc (µg/L)	90th %ile	34.5000	34.5000	34.5000	34.5000	-	34.5000	8.5000	34.5000	34.5000	34.5000	-	16.6000	34.5000	-	34.5000	30.0000	-	33.5500	34.5000	-	-	-	25.0000
Biological																								
Chlorophyll a (µg/L)	90th %ile	5.34	2.14	3.20	3.28	-	3.20	3.20	3.24	5.79	3.82	1.67	3.20	2.17	2.14	2.14	1.34	1.98	1.12	1.60	-	-	5.05	4.76
E Coli (mpn/100 ml)	10th %ile	-	-	24.25	-	-	45.84	66.12	8.60	-	143.02	-	-	-	-	-	38.73	-	24.60	28.32	-	-	-	-

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 19 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 19: 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 preferred 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. As stated in section 4.10 Minimum Sample Size and Allowable Number of Water Quality Criterion Exceedances, 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 and the decision will be documented.

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 Ranking and Prioritizing Impaired Waters

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

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Appendix B

Categorization of Alabama Waters

Categorization of Alabama's 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 Reservoir)	Alabama	F&W	Autauga Creek	Its source	1	5271.33	acres
AL03150201-0311-111	Catoma Creek (Woodruff Reservoir)	Alabama	F&W	Alabama River	end of embayment	1	368.99	acres
AL03150201-0501-100	Alabama River (Woodruff Reservoir)	Alabama	F&W	Pintlala Creek	Autauga Creek	1	1053.22	acres
AL03150201-0603-111	Swift Creek (Woodruff Reservoir)	Alabama	S/F&W	Alabama River	end of embayment	1	295.69	acres
AL03150201-0701-111	Cypress Creek (Woodruff Reservoir)	Alabama	S/F&W	Alabama River	end of embayment	1	87.87	acres
AL03150201-0706-100	Alabama River (Woodruff Reservoir)	Alabama	S/F&W	Robert F. Henry Lock and Dam	Pintlala Creek	1	4786.34	acres
AL03150201-1101-102	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 Reservoir)	Alabama	S/F&W	Alabama River	end of embayment	1	763.19	acres
AL03150203-0606-111	Beaver Creek (Claiborne Lake)	Alabama	PWS	Alabama River	end of embayment	1	9.18	acres
AL03150203-0701-100	Alabama River (Dannelly Reservoir)	Alabama	S/F&W	Millers Ferry Lock and Dam	Bogue Chitto Creek	1	8620.60	acres
AL03150203-0703-101	Alabama River (Claiborne Lake)	Alabama	PWS	Beaver Creek	Rockwest Creek	1	310.63	acres
AL03150203-0805-102	Alabama River (Claiborne Lake)	Alabama	S/F&W	Bear Creek	Frisco Railroad Crossing	1	304.23	acres
AL03150203-0805-103	Alabama River (Claiborne Lake)	Alabama	F&W	Frisco Railroad Crossing	Pursley Creek	1	474.72	acres
AL03150203-0805-104	Alabama River (Claiborne Lake)	Alabama	F&W	Pursley Creek	River Mile 131	1	524.33	acres
AL03150203-0805-105	Alabama River (Claiborne Lake)	Alabama	PWS	River Mile 131	Beaver Creek	1	109.31	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 (Lewis 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 (Lewis Smith Lake)	Black Warrior	S/F&W	White Oak Creek	end of embayment	1	843.72	acres
AL03160110-0407-100	Crooked Creek (Lewis 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 (Lewis 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	3 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
AL03160112-0306-100	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 & 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
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 (Demopolis Lake)	Black Warrior	PWS/S/F&W	five miles upstream from Big Prarie Creek	eight miles upstream from Big Prarie Creek	1	131.02	acres
AL03160113-0804-103	Black Warrior River (Demopolis Lake)	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 (Demopolis Lake)	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
AL03130002-0808-111	Chattahoochee River (West Point Lake)	Chattahoochee	S/F&W	West Point Dam	West Point Lake Limits in Alabama	1	1947.18	acres
AL03130002-1108-111	Halawakee Creek (Lake Harding)	Chattahoochee	PWS/S/F&W	Chatahoochee River	end of embayment	1	1525.46	acres
AL03130002-1109-102	Chattahoochee River (Lake Harding)	Chattahoochee	F&W	Osanippa Creek	Johnson Island	1	200.89	acres

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03130002-1109-112	Chattahoochee River (Lake Harding)	Chattahoochee	PWS/S/F&W	Halawakee Creek	Osanippa Creek	1	164.91	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	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 Reservoir)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	1	247.47	acres
AL03130003-0905-100	Chattahoochee River (Walter F George Reservoir)	Chattahoochee	F&W	Cowikee Creek	Cliatt Branch	1	2021.86	acres
AL03150106-0501-104	Shoal Creek Lake	Coosa	OAW/S/F&W	Highrock Lake dam	extent of reservoir	1	13.95	acres
AL03150106-0501-106	Shoal Creek Lake	Coosa	OAW/PWS/S/F&W	Sweetwater Lake dam	extent of reservoir	1	54.97	acres
AL03150106-0501-112	Shoal Creek (Whiteside 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	Lake Hillabee	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
AL03150107-0102-102	Tallaseehatchee Ck (Lake Howard)	Coosa	PWS/F&W	Howard dam	extent of reservoir	1	135.97	acres
AL03150107-0102-104	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
AL03150108-0404-103	Cahulga Creek (Cahulga Reservoir)	Tallapoosa	PWS/F&W	Cahulga Reservoir dam	extent of reservoir	1	82.04	acres
AL03150108-0904-111	Wedowee Creek (R L Harris Reservoir)	Tallapoosa	S/F&W	Little Tallapoosa River	end of embayment	1	294.40	acres
AL03150108-0905-102	Little Tallapoosa River (R L Harris Reservoir)	Tallapoosa	PWS/S/F&W	US Highway 431	Wolf Creek	1	173.72	acres
AL03150108-0906-100	Little Tallapoosa River (R L Harris Reservoir)	Tallapoosa	S/F&W	Tallapoosa River	US Highway 431	1	2746.88	acres
AL03150108-1005-111	Mad Indian Creek (R L Harris Reservoir)	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
AL03150109-0301-502	Jones Creek (Crystal Lake)	Tallapoosa	PWS	Crystal Lake dam	extent of reservoir	1	54.26	acres
AL03150109-0406-111	Hillabee Creek (Martin Lake)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	1	57.75	acres
AL03150109-0504-111	Sandy Creek (Martin Lake)	Tallapoosa	S/F&W	Tallapoosa River	end of embayment	1	2390.93	acres
AL03150109-0602-111	Blue Creek (Martin Lake)	Tallapoosa	S/F&W	Tallapoosa River	Its source	1	5495.14	acres
AL03150109-0702-111	Oakachoy Creek (Martin Lake)	Tallapoosa	S/F&W	Kowaliga Creek	end of embayment	1	4455.93	acres
AL03150109-0703-201	Little Kowaliga Creek (Martin Lake)	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 (Martin Lake)	Tallapoosa	PWS/S/F&W	US Highway 280	Hillabee Creek	1	1973.85	acres
AL03150109-0802-104	Tallapoosa River (Martin Lake)	Tallapoosa	S/F&W	Hillabee Creek	Irwin Shoals	1	343.41	acres
AL03150109-0804-201	Manoy Creek (Martin Lake)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	1	618.88	acres
AL03150109-0805-100	Tallapoosa River (Martin Lake)	Tallapoosa	S/F&W	Martin Dam	US Highway 280	1	15867.11	acres
AL06030001-0205-102	Guntersville Lake	Tennessee	PWS/S/F&W	Pump Spring Branch	Alabama-Tennessee state line	1	2400.28	acres
AL06030001-0403-111	Coon Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	844.36	acres
AL06030001-0405-111	Mud Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	2276.16	acres
AL06030001-0505-111	South Sauty Creek (Guntersville Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	2627.60	acres
AL06030001-0603-111	Roseberry Creek (Guntersville Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	2251.14	acres
AL06030001-0605-100	North Sauty Creek (Guntersville Lake)	Tennessee	PWS	Tennessee River	end of embayment	1	2999.46	acres
AL06030001-0606-103	Guntersville Lake	Tennessee	PWS/S/F&W	Roseberry Creek	Pump Spring Branch	1	8633.81	acres
AL06030001-0807-111	Short Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	418.23	acres
AL06030001-0901-102	Guntersville Lake	Tennessee	S/F&W	upper end of Buck Island	Roseberry Creek	1	20440.33	acres
AL06030001-0903-111	Big Spring Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	2010.65	acres
AL06030001-0906-100	Guntersville Lake	Tennessee	PWS/S/F&W	Guntersville Dam	upper end of Buck Island	1	10176.81	acres

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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 Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	204.52	acres
AL06030002-0505-111	Indian Creek (Wheeler Lake)	Tennessee	PWS/F&W	Tennessee River	end of embayment	1	257.28	acres
AL06030002-0606-111	Cotaco Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	492.48	acres
AL06030002-1101-111	Swan Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	772.38	acres
AL06030002-1102-311	Dry Branch (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	1	84.15	acres
AL06030002-1201-111	Spring Creek (Wheeler Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	1111.87	acres
AL06030002-1204-101	Second Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	First bridge upstream from US Highway 72	1	610.22	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 Reservoir)	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)	Tennessee	S/F&W	Tennessee River	Indiancamp Creek	1	1169.76	acres
AL06030005-0808-103	Pickwick Lake	Tennessee	F&W	lower end of Seven Mile Island	Sheffield water intake	1	2424.33	acres
AL06030005-0808-104	Pickwick Lake	Tennessee	PWS/F&W	Sheffield water intake	Wilson Dam	1	1112.21	acres
AL06030005-0902-111	Second Creek (Pickwick Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	1	677.22	acres
AL06030005-1004-200	Pickwick Lake	Tennessee	PWS/S/F&W	River Mile 232	lower end of Seven Mile Island	1	9485.38	acres
AL06030005-1203-101	Pickwick Lake	Tennessee	PWS/S/F&W	Alabama-Tennessee state line	River Mile 228.5	1	7364.26	acres
AL03160106-0408-111	Lubbub Creek (Gainesville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	26.64	acres
AL03160106-0603-100	Tombigbee River (Gainesville Lake)	Tombigbee	S/F&W	River Mile 268	Bevill Lock and Dam	1	4572.56	acres
AL03160106-0606-111	Trussells Creek (Demopolis Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	4.57	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
AL03160201-0704-111	Bashi Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	1	12.91	acres
AL03160201-0807-111	Okatuppa Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	86.63	acres
AL03160201-0906-111	Tallawampa Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	95.78	acres
AL03160201-0908-111	Turkey Creek (Coffeeville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	1	508.88	acres
Category 1 Rivers and Streams								
AL03150201-0101-100	Bouldin Tailrace Canal	Alabama	F&W	Coosa River	Bouldin Dam	1	4.74	miles
AL03150201-0103-100	Mortar Creek	Alabama	F&W	Alabama River	Its source	1	23.99	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
AL03150201-0603-110	Swift Creek	Alabama	S/F&W	Woodruff Lake	Autauga County Road 24	1	27.99	miles
AL03150201-0807-100	Big Swamp Creek	Alabama	S/F&W	Alabama River	Its source	1	56.41	miles
AL03150201-0903-100	Little Mulberry Creek	Alabama	F&W	Alabama River	Its source	1	38.51	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
AL03150201-1101-103	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
AL03150201-1207-101	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
AL03150203-0104-100	Brush Creek	Alabama	F&W	Mud Creek	Its source	1	15.47	miles
AL03150203-0105-100	Mud Creek	Alabama	F&W	Bogue Chitto Creek	Its source	1	20.87	miles
AL03150203-0106-110	Chaney Creek	Alabama	F&W	Bogue Chitto Creek	Its source	1	17.12	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150203-0203-100	Wolf Creek	Alabama	F&W	Cedar Creek	Its source	1	21.98	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	Tallatchee Creek embayment	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
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
AL03150204-0603-300	Little Reedy Creek	Alabama	F&W	Sizemore Creek	Its source	1	7.52	miles
AL03150204-0705-111	Alabama River	Alabama	F&W	Mobile River	River Mile 55	1	63.58	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
AL03160109-0206-110	Mulberry Fork	Black Warrior	F&W	Sipsey Fork	Blount County Road 17	1	14.28	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
AL03160109-0405-132	Lost Creek	Black Warrior	F&W	Indian Creek	Alabama Highway 69 at Oakman	1	11.61	miles
AL03160109-0503-100	Wolf Creek	Black Warrior	S/F&W	Lost Creek	Alabama Highway 102	1	38.40	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	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	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	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	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	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	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	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	Parker Branch	Black Warrior	F&W	Parker Branch	Their source	1	3.35	miles
AL03160110-0102-115	Sipsey Fork	Black Warrior	F&W	Sipsey Fork	Their source	1	9.69	miles

Categorization of Alabama's Waters

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	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	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	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	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	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	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	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	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	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	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	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	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	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	Quillan Creek	Black Warrior	F&W	Quillan Creek	Their source	1	6.68	miles
AL03160110-0103-105	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
AL03160110-0103-205	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	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	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	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	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	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	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	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160110-0203-102	Brushy Creek	Black Warrior	PWS/F&W	Sipsey Fork (Lewis Smith Lake)	US Highway 278	1	1.13	miles
AL03160110-0203-103	Brushy Creek	Black Warrior	F&W	US Highway 278	Its source	1	29.85	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
AL03160110-0507-112	Sipsey Fork	Black Warrior	PWS/F&W	Wilson Branch	Lewis Smith Dam	1	5.83	miles
AL03160111-0103-100	Clear Creek	Black Warrior	F&W	Locust Fork	Its source	1	16.40	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 Little Warrior River	Black Warrior	PWS/S	Inland Lake	Highland Lake dam	1	3.33	miles
AL03160111-0204-104	Blackburn Fork Little Warrior River	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 U.S. Highway 231	1	13.36	miles
AL03160111-0206-102	Calvert Prong	Black Warrior	PWS	Calvert Prong dam above U.S. 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 Little Warrior River	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
AL03160111-0304-202	Self Creek	Black Warrior	PWS	AL Highway 79	Its source	1	4.14	miles
AL03160111-0405-101	Newfound Creek	Black Warrior	F&W	Fivemile Creek	Newfound Creek Lake dam	1	2.84	miles
AL03160111-0410-100	Locust Fork	Black Warrior	F&W	Village Creek	Jefferson County Road 77	1	23.26	miles
AL03160111-0411-100	Short Creek	Black Warrior	F&W	Locust Fork	Its source	1	9.34	miles
AL03160112-0101-102	Valley Creek	Black Warrior	LWF	Opossum Creek	Its source	1	13.53	miles
AL03160112-0102-100	Valley Creek	Black Warrior	LWF	Blue Creek	19th Street North (Bessemer)	1	10.80	miles
AL03160112-0201-102	Big Yellow Creek	Black Warrior	S/F&W	Bankhead Lake	Its source	1	14.59	miles
AL03160112-0201-500	Little Yellow Creek	Black Warrior	F&W	Big Yellow Creek	Its source	1	10.65	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
AL03160112-0304-110	Pegues Creek	Black Warrior	F&W	Holt Lake	Its source	1	4.23	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
AL03160113-0102-100	Bear Creek	Black Warrior	F&W	Big Sandy Creek	its source	1	11.32	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
AL03160113-0402-100	Fivemile Creek	Black Warrior	F&W	Warrior Lake	Payne Lake dam	1	32.16	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
AL03150202-0203-103	Buck Creek	Cahaba	F&W	Shelby County Road 44	Its source	1	8.35	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
AL03150202-0404-110	Sixmile Creek	Cahaba	S	Little Cahaba River	Its source	1	27.27	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03150202-0902-101	Cahaba River	Cahaba	OAW/S	Alabama River	Waters Creek	1	40.45	miles
AL03130002-0806-102	Wehadkee Creek	Chattahoochee	F&W	AL-GA 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 Co. water supply intake	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
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 of 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	Omussee Creek	Ross Clark Circle	1	2.13	miles
AL03130004-0701-100	Cedar Creek	Chattahoochee	F&W	Chattahoochee River	Its source	1	11.51	miles
AL03130012-0103-110	Double Bridges Creek	Chipola	F&W	Big Creek	Its source	1	9.22	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
AL03140201-0504-100	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
AL03140202-0401-103	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	White Water 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
AL03150105-0206-600	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	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	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

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150105-0702-305	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	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	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
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	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	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	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	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	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	Gilbert Branch	Coosa	PWS/S/F&W	Gilbert Branch	Their source	1	1.66	miles
AL03150105-0705-405	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	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	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	Straight Creek	Coosa	PWS/S/F&W	Straight Creek	Their source	1	4.54	miles
AL03150105-0802-115	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	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	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	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	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
AL03150105-0804-105	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	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	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	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	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	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
AL03150105-0906-103	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03150106-0307-102	Beaver Creek	Coosa	F&W	St. Clair County Road 26	Its source	1	16.60	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
AL03150106-0506-100	Coldwater Spring Branch	Coosa	F&W	Choccolocco Creek	Its source	1	10.39	miles
AL03150106-0506-200	Coldwater Spring Branch	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
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
AL03150107-0701-300	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
AL03150107-0708-100	Chipco Creek	Coosa	F&W	Hatchet Creek	its source	1	10.61	miles
AL03150107-0708-300	Jones Creek	Coosa	F&W	Hatchet Creek	Its source	1	5.22	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
AL03140301-0404-103	Conecuh River	Escambia	F&W	Hornet Creek	Broadhead Creek	1	35.36	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
AL03140304-0505-800	Maye Creek	Escambia	F&W	Conecuh River	Its source	1	3.81	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03170009-0103-200	West Fowl River	Escatawpa	S/F&W	Fowl River Bay	Its source	1	5.84	miles
AL03160204-0106-302	Tensaw River	Mobile	OAW/F&W	Junction of Briar Lake	Junction of Tensaw Lake	1	2.93	miles
AL03160204-0106-303	Tensaw River	Mobile	F&W	Junction of Tensaw Lake	Mobile River	1	10.98	miles
AL03160204-0201-100	Rains Creek	Mobile	F&W	Tensaw River	Its source	1	8.67	miles
AL03160204-0304-104	Eightmile Creek	Mobile	F&W	Highpoint Boulevard	Its source	1	2.56	miles
AL03160204-0402-101	Bayou Sara	Mobile	S/F&W	Mobile River	Gunnison Creek	1	4.51	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
AL03160204-0505-800	Joes Branch	Mobile	F&W	D'Olive Creek	Its source	1	1.57	miles
AL03160205-0104-210	East Fowl River	Mobile	S/F&W	Fowl River	Its source	1	5.38	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
AL03160205-0202-510	Baker Branch	Mobile	F&W	Polecat Creek	Its source	1	6.15	miles
AL03160205-0203-120	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 R	Its Source	1	23.10	miles
AL03140106-0701-102	Perdido River	Perdido	F&W	Jacks Branch	Its source	1	43.48	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
AL03150108-1004-115	Tallapoosa River	Tallapoosa	F&W	Cleburne County Road 19	Cane Creek	1	5.85	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
AL03150109-0301-203	Jones Creek	Tallapoosa	PWS	Roanoke City Lake	High Pine Creek Lake #4 dam	1	5.54	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
AL03150109-0309-900	Tallapoosa River	Tallapoosa	F&W	UT to Tallapoosa	its source	1	3.27	miles
AL03150109-0405-200	Town Creek	Tallapoosa	F&W	Hillabee Creek	Its source	1	14.06	miles
AL03150109-0501-102	Little Sandy Creek	Tallapoosa	PWS/F&W	Central of Georgia RR	Its source	1	2.09	miles
AL03150109-0504-102	Sandy Creek	Tallapoosa	F&W	Lake Martin	Its source	1	29.62	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
AL03150109-0802-105	Tallapoosa River	Tallapoosa	F&W	Irwin Shoals	Alabama Highway 77	1	36.94	miles
AL03150109-0803-302	Sugar Creek	Tallapoosa	F&W	Lake Martin	Its source	1	4.64	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150110-0101-300	Little Loblockee Creek	Tallapoosa	F&W	Loblockee Creek	Its source	1	9.94	miles
AL03150110-0101-400	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
AL03150110-0301-100	Choctafaula Creek	Tallapoosa	F&W	Uphapee Creek	Its source	1	17.48	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
AL03150110-0604-100	Cubahatchee Creek	Tallapoosa	S/F&W	Tallapoosa River	Coon Hop Creek	1	22.07	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
AL03150110-0904-102	Tallapoosa River	Tallapoosa	PWS/F&W	Jenkins Creek	Thurlow Dam	1	30.00	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	Guntersville Lake	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
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 Cfeek	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	Guntersville Lake	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	Tennessee River	Scarham Creek	1	0.84	miles
AL06030002-0102-100	Larkin Fork	Tennessee	F&W	Paint Rock River	Its source	1	10.95	miles
AL06030002-0103-200	Estill Fork	Tennessee	OAW/F&W	Paint Rock River	Alabama-Tennessee state line	1	8.00	miles
AL06030002-0204-110	Paint Rock River	Tennessee	F&W	Tennessee River (Wheeler Lake)	Cole Spring Branch	1	26.63	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	Tennessee River	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

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030005-0304-100	Town Creek	Tennessee	F&W	Tennessee River	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
AL06030005-0509-102	Shoal Creek	Tennessee	F&W	Indiancamp Creek	Alabama-Tennessee state line	1	10.79	miles
AL06030005-0603-200	Lindsey Creek	Tennessee	F&W	Cypress Creek	Its source	1	12.29	miles
AL06030005-0605-101	Cypress Creek	Tennessee	F&W	Pickwick Lake	City of Florence Water Treatment Plant	1	7.22	miles
AL06030005-0605-102	Cypress Creek	Tennessee	PWS/F&W	City of Florence Water Treatment Plant	Little Cypress Creek	1	1.94	miles
AL06030005-0605-103	Cypress Creek	Tennessee	F&W	Little Cypress Creek	Alabama-Tennessee state line	1	17.06	miles
AL06030005-0806-100	Sinking Creek	Tennessee	F&W	Tennessee River	Its source	1	16.38	miles
AL06030005-0901-100	Bumpass Creek	Tennessee	F&W	Second Creek	Alabama-Tennessee state line	1	6.78	miles
AL06030005-0902-100	Second Creek	Tennessee	F&W	Pickwick Lake	Alabama-Tennessee state line	1	7.64	miles
AL06030005-1002-100	Colbert Creek	Tennessee	F&W	Pickwick Lake	Its source	1	5.52	miles
AL06030005-1202-800	Panther Creek	Tennessee	F&W	Pickwick Lake	Its source	1	0.79	miles
AL06030005-1202-810	South Fork Panther Creek	Tennessee	F&W	Panther Creek	its source	1	2.58	miles
AL06030006-0103-103	Bear Creek	Tennessee	S/F&W	Mill Creek	Upper Bear Creek Dam	1	3.00	miles
AL06030006-0105-100	Bear Creek	Tennessee	F&W	Alabama-Mississippi state line	Bear Creek Lake dam	1	18.64	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
AL06030006-0207-100	Cedar Creek	Tennessee	F&W	Alabama-Mississippi state line	Cedar Creek Lake Dam	1	18.75	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
AL03160103-0104-100	Camp Creek	Tombigbee	F&W	Buttahatchee River	Its source	1	10.64	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
AL03160103-0401-200	Boardtree Creek	Tombigbee	F&W	Sipsey Creek	Its source	1	10.87	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
AL03160106-0606-102	Trussells Creek	Tombigbee	F&W	Demopolis Lake	Its source	1	28.48	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
AL03160107-0303-102	Sipsey River	Tombigbee	F&W	Tuscaloosa county line	US Highway 43	1	74.42	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
AL03160201-0109-100	Chickasaw Bogue	Tombigbee	F&W	Coffeeville Lake	Its source	1	41.19	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160201-0201-100	Little Kinterbish Creek	Tombigbee	F&W	Kinterbish Creek	Its source	1	8.54	miles
AL03160201-0403-100	Cotohaga Creek	Tombigbee	F&W	Tombigbee River (Coffeeville Lake)	its source	1	29.98	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
AL03140103-0203-400	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 an 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
AL03140107-0204-301	Perdido Bay	Perdido	SH/S/F&W	Gulf of Mexico	Suarez Point	1	11.85	square miles
AL03140107-0204-400	Arnica Bay	Perdido	SH/S/F&W	Perdido Bay	Bay la Launch	1	1.27	square miles
AL03140107-0204-500	Bayou La Launch	Perdido	SH/S/F&W	Arnica Bay	Wolf Bay	1	1.48	square miles
AL03140107-0204-600	Wolf Bay	Perdido	OAW/SH/S/F&W	Bay la Launch	Moccasin Bayou	1	4.65	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 Reservoir)	Alabama	F&W	Alabama River	end of embayment	2A	546.56	acres
AL03160110-0305-202	Clear Creek (Lewis 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
AL03150109-0301-202	Jones Creek (Roanoke City Lake)	Tallapoosa	PWS	Roanoke City Lake dam	extent of reservoir	2A	39.79	acres
AL03150110-0102-102	Sougahatchee Creek (Sougahatchee Lake)	Tallapoosa	PWS/F&W	Sougahatchee Lake Dam	extent of reservoir	2A	346.36	acres
AL03160201-0604-111	Horse Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	2A	8.15	acres
AL03150201-0407-111	Pintlala Creek (Woodruff Reservoir)	Alabama	S/F&W	Alabama River	end of embayment	2B	34.10	acres
AL03150203-0505-111	Chilatchee Creek (Dannelly Lake)	Alabama	S/F&W	Alabama River	end of embayment	2B	612.57	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
AL03160109-0102-110	Duck River (Duck River Reservoir)	Black Warrior	PWS/F&W	Duck River Reservoir Dam	extent of reservoir	2B	548.71	acres

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160110-0504-500	Simpson Creek (Lewis Smith Lake)	Black Warrior	S/F&W	Ryan Creek	end of embayment	2B	1319.43	acres
AL03160112-0302-300	Rockcastle Creek (Ski Lake)	Black Warrior	F&W	Ski Lake dam	extent of reservoir	2B	106.72	acres
AL03160112-0302-400	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
AL03130003-0606-200	Chattahoochee River (Walter F George Reservoir)	Chattahoochee	F&W	Ihagee Creek	14th Street Bridge between Columbus and Phenix City	2B	1295.48	acres
AL03130003-0903-103	Chattahoochee River (Walter F George Reservoir)	Chattahoochee	F&W	Cliatt Branch	Snake Creek	2B	223.02	acres
AL06030005-0103-402	Turkey Creek	Tennessee	PWS/F&W	Moulton City Lake dam	extent of reservoir	2B	72.73	acres
Category 2 Rivers and Streams								
AL03150201-0107-200	Pine Creek	Alabama	F&W	Alabama River (Woodruff Reservoir)	Its source	2A	9.58	miles
AL03150201-0309-300	Whites Slough	Alabama	F&W	Catoma Creek	Its source	2A	8.22	miles
AL03150201-0403-100	Pinchony Creek	Alabama	F&W	Pintlala Creek	Its source	2A	18.46	miles
AL03150201-0801-200	Lake Creek	Alabama	F&W	Fort Deposit Creek	Its source	2A	8.79	miles
AL03150203-0109-200	Tatum Creek	Alabama	F&W	Bogue Chitto Creek	Its source	2A	11.92	miles
AL03150203-0206-100	Dry Cedar Creek	Alabama	F&W	Cedar Creek	Its source	2A	28.26	miles
AL03150203-0301-100	Big Swamp Creek	Alabama	F&W	Alabama River	Its source	2A	18.67	miles
AL03150203-0606-200	Red Creek	Alabama	F&W	Beaver Creek	Its source	2A	21.96	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
AL03160109-0307-300	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
AL03160109-0502-102	Wolf Creek	Black Warrior	S/F&W	Alabama Highway 102	Its source	2A	5.28	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
AL03160111-0408-900	Village Creek	Black Warrior	F&W	Village Creek	its source	2A	3.43	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
AL03160112-0101-101	Valley Creek	Black Warrior	LWF	19th Street Nort (Bessemer)	Opossum Creek	2A	0.90	miles
AL03160112-0101-200	Opossum Creek	Black Warrior	A&I	Valley Creek	Its source	2A	7.45	miles
AL03160112-0104-100	Valley Creek	Black Warrior	F&W	Rock Creek	Blue Creek	2A	11.78	miles
AL03160112-0106-101	Valley Creek	Black Warrior	F&W	Black Warrior River (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
AL03160112-0301-400	Jock Creek	Black Warrior	F&W	Blue Creek	Its source	2A	2.21	miles
AL03160113-0202-300	Tater Hill Creek	Black Warrior	F&W	Warrior Lake	Its source	2A	4.58	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
AL03150202-0303-800	Little Shades Creek	Cahaba	F&W	Shades Creek	Its source	2A	8.99	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
AL03150202-0507-100	Blue Girth Creek	Cahaba	S	Cahaba River	Its source	2A	15.08	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03130003-1101-100	Hurtsboro Creek	Chattahoochee	F&W	North Fork of Cowikee Creek	Its source	2A	19.41	miles
AL03130004-0607-100	Omusee Creek	Chattahoochee	F&W	Chattahoochee River	Its source	2A	28.05	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
AL03140201-0502-500	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
AL03140201-1102-550	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
AL03140201-1106-110	Double Bridges Creek	Choctawhatchee	F&W	Choctawhatchee River	Coffee County Road 655	2A	23.10	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
AL03140202-0301-102	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
AL03140202-0904-102	Pea River	Choctawhatchee	S/F&W	Alabama-Florida state line	Flat Creek	2A	10.42	miles
AL03150105-0908-200	Mill Creek	Coosa	F&W	Terrapin Creek	Its source	2A	8.79	miles
AL03150106-0201-100	Ballplay Creek	Coosa	F&W	Neely Henry Lake	Its source	2A	23.27	miles
AL03150106-0402-200	Tallasseehatchee Creek	Coosa	F&W	Tallasseehatchee Creek	Its source	2A	5.97	miles
AL03150106-0406-110	Ohatchee Creek	Coosa	S/F&W	Logan Martin Lake	Tallasseehatchee Creek	2A	3.55	miles
AL03150106-0804-100	Shoal Creek	Coosa	F&W	Kelly Creek	Its source	2A	20.33	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
AL03140303-0204-101	Persimmon Creek	Escambia	F&W	Sepulga River	Panther Creek	2A	11.43	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
AL03140304-0505-700	Mayo Mill Creek	Escambia	F&W	Conecuh River	Its source	2A	5.81	miles
AL03140304-0602-100	Narrow Gap Creek	Escambia	F&W	Little Escambia Creek	Its source	2A	10.25	miles
AL03160204-0401-200	Steele Creek	Mobile	S/F&W	Gunnison Creek	Its source	2A	3.45	miles
AL03160204-0402-104	Bayou Sara	Mobile	F&W	US Highway 43	Its source	2A	14.95	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
AL03160205-0204-510	Waterhole Branch	Mobile	F&W	Fish River	Its source	2A	7.22	miles
AL03140106-0302-102	Brushy Creek	Perdido	F&W	Boggy Branch	Its source	2A	9.12	miles
AL03140106-0601-100	Negro Creek	Perdido	F&W	Blackwater River	Its source	2A	11.77	miles
AL03140106-0603-102	Blackwater River	Perdido	F&W	Narrow Gap Creek	Its source	2A	27.30	miles
AL03140107-0104-500	Peterson Branch	Perdido	F&W	Perdido Bay	Its source	2A	3.98	miles
AL03150109-0301-104	High Pine Creek	Tallapoosa	PWS	High Pine Creek Lake #2	High Pine Creek Lake #1 dam	2A	3.98	miles
AL03150109-0301-501	Jones Creek	Tallapoosa	PWS	Jones Creek	Crystal Lake dam	2A	1.95	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL06030001-0904-300	Mink Creek	Tennessee	F&W	Browns Creek (Lake Guntersville)	its source	2A	6.97	miles
AL06030002-0901-100	Shoal Creek	Tennessee	F&W	Wheeler Lake	Its source	2A	14.38	miles
AL06030002-0905-100	Beaverdam Creek	Tennessee	F&W	Limestone Creek (Wheeler Lake)	its source	2A	5.15	miles
AL06030002-1012-102	West Flint Creek	Tennessee	F&W	McDaniel Creek	Its source	2A	24.32	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
AL06030005-0703-102	Spring Creek	Tennessee	F&W	Pickwick Lake	Its source	2A	30.66	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
AL03160106-0506-110	Blubber Creek	Tombigbee	F&W	Lubbub Creek	Its source	2A	20.12	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
AL03160201-0203-100	Kinterbish Creek	Tombigbee	S/F&W	Tombigbee River	Alabama-Mississippi state line	2A	52.74	miles
AL03160201-0302-110	Beaver Creek	Tombigbee	S/F&W	Tombigbee River	US Highway 43	2A	32.10	miles
AL03160201-0504-100	Yantley Creek	Tombigbee	F&W	Tuckabum Creek	Alabama-Mississippi state line	2A	37.28	miles
AL03160201-0704-110	Bashi Creek	Tombigbee	S/F&W	Coffeeville Lake	Tallahatta Creek	2A	7.37	miles
AL03160201-0904-102	Wahalak Creek	Tombigbee	F&W	Spear Creek	Its source	2A	11.42	miles
AL03140103-0301-200	Mulberry Creek	Yellow	F&W	Indian Creek	its source	2A	5.67	miles
AL03140103-0303-110	Clear Creek	Yellow	F&W	Yellow River	Its source	2A	13.99	miles
AL03150201-0105-500	Pierce Creek	Alabama	F&W	Mill Creek	Its source	2B	3.42	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
AL03150201-0501-200	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
AL03150201-1002-200	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
AL03150203-0206-300	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
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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
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
AL03150204-0604-400	Shomo Creek	Alabama	F&W	Alabama River	Its source	2B	11.04	miles
AL03160109-0102-111	Duck River	Black Warrior	F&W	Duck River Reservoir	Its source	2B	1.47	miles
AL03160109-0103-101	Duck River	Black Warrior	F&W	Mulberry Fork	Duck River Reservoir Dam	2B	11.50	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	AL 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
AL03160109-0402-104	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
AL03160111-0106-110	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
AL03160111-0307-100	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
AL03160111-0408-800	Village Creek	Black Warrior	F&W	Village Creek	its source	2B	1.66	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
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	Tater Hill Creek	Black Warrior	F&W	Tater Hill Creek	Its source	2B	2.20	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160113-0203-110	Cypress Creek	Black Warrior	F&W	Warrior Lake	Its source	2B	14.63	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 Prarie 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
AL03150202-0403-600	Spring Creek	Cahaba	F&W	Shoal Creek	Its source	2B	9.38	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
AL03150202-0601-200	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
AL03150202-0603-300	Mill Creek	Cahaba	F&W	Cahaba River	Its source	2B	11.35	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
AL03150202-0902-501	Dry Creek	Cahaba	F&W	Cahaba River	Dallas County Road 201	2B	4.50	miles
AL03130003-0101-200	Holland Creek	Chattahoochee	F&W	Mill Creek	Its source	2B	5.18	miles
AL03130003-0104-102	Chattahoochee River	Chattahoochee	PWS/S/F&W	14th St Bridge between Columbus and Phoenix 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
AL03130004-0801-200	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
AL03130012-0201-210	Mill Creek	Chipola	F&W	Cowarts Creek	Its source	2B	9.43	miles
AL03130012-0202-310	Little Rocky Creek	Chipola	F&W	Rocky Creek	Its source	2B	5.14	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
AL03140201-0502-110	Bear Creek	Choctawhatchee	F&W	Little Choctawhatchee River	Its source	2B	11.41	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

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03140202-0401-101	Walnut Creek	Choctawhatchee	F&W	Whitewater Creek	Pike County Road 3304	2B	3.58	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
AL03140202-0803-400	Eightmile Creek	Choctawhatchee	F&W	Flat Creek	Alabama-Florida state line	2B	8.61	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
AL03150107-0104-300	Darby Branch	Coosa	F&W	Shirtee Creek	its source	2B	4.26	miles
AL03140301-0102-100	Flat Creek	Escambia	F&W	Conecuh River	Its source	2B	11.74	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
AL03140303-0102-100	Persimmon Creek	Escambia	F&W	Hawkins Creek	Its source	2B	18.37	miles
AL03140303-0201-102	Rocky Creek	Escambia	F&W	County road north of Chapman	Its source	2B	12.64	miles
AL03140303-0302-100	Long Creek	Escambia	F&W	Duck Creek	Its source	2B	21.93	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
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
AL03160204-0102-100	Cedar Creek	Mobile	F&W	Mobile River	Its source	2B	24.27	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
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
AL03160205-0206-701	Bon Secour River	Mobile	F&W	Bon Secour River	Baldwin County Road 65	2B	0.61	miles
AL03140106-0504-100	Styx River	Perdido	S/F&W	Hollinger Creek	Its source	2B	22.72	miles
AL03150108-0904-100	Wedowee Creek	Tallapoosa	F&W	R L Harris Lake	Its source	2B	26.46	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
AL03150110-0202-900	Chewacla Creek	Tallapoosa	F&W	Chewacla Creek	Its source	2B	5.28	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
AL06030001-0204-102	Widows Creek	Tennessee	S/F&W	Alabama Highway 277	Its source	2B	5.48	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL06030002-0302-100	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	Tennessee River	Guyer Branch	2B	11.76	miles
AL06030002-1010-400	Gillespie Creek	Tennessee	F&W	West Flint Creek	Its source	2B	3.67	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
AL06030005-0103-303	Sinking Creek	Tennessee	PWS/F&W	Sinking Creek Lake	Its source	2B	2.09	miles
AL06030005-0801-202	McKiernan Creek	Tennessee	F&W	Tennessee River (Wilson Lake)	Its source	2B	3.71	miles
AL06030006-0101-102	Little Bear Creek	Tennessee	PWS/S/F&W	Bear Creek (Upper Bear Creek reservoir)	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
AL06030006-0305-100	Buzzard Roost Creek	Tennessee	F&W	Bear Creek (Pickwick Lake)	Its source	2B	21.80	miles
AL03160103-0101-100	West Branch Buttahatchee River	Tombigbee	F&W	Buttahatchee River	Its source	2B	10.98	miles
AL03160103-0101-600	Moore Creek	Tombigbee	F&W	West Branch Buttahatchee River	Its source	2B	3.47	miles
AL03160103-0103-100	Barn Creek	Tombigbee	F&W	Buttahatchee River	Its source	2B	11.80	miles
AL03160103-0106-100	Williams Creek	Tombigbee	F&W	Buttahatchee River	Its source	2B	13.11	miles
AL03160103-0106-200	Stevens Creek	Tombigbee	F&W	Williams Creek	Its source	2B	4.01	miles
AL03160105-0201-102	Luxapallila Creek	Tombigbee	PWS/F&W	Fayette County Road 37	County road crossing 6 miles upstream from Alabama	2B	8.19	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
AL03160201-0601-100	Mill Creek	Tombigbee	F&W	Horse Creek	Its source	2B	14.15	miles
AL03160202-0502-102	Toomsuba Creek	Tombigbee	PWS/F&W	AT&N Railroad	AL-MS state line	2B	9.90	miles
AL03140103-0203-200	Pond Creek	Yellow	F&W	Five Runs Creek	Its source	2B	4.71	miles
AL03140103-0302-400	Yellow River	Yellow	F&W	Yellow River	Its source	2B	5.44	miles
AL03140103-0304-300	Prices Creek	Yellow	F&W	Yellow River	its source	2B	6.89	miles
AL03140103-0305-102	Yellow River	Yellow	F&W	North Creek	Its source	2B	35.05	miles
Category 2 Estuary and Ocean								
AL03140107-0203-201	Hammock Creek	Perdido	S/F&W	Wolf Bay	limit of tidal effects	2A	0.63	square miles
AL03140107-0203-102	Wolf Bay	Perdido	SH/S/F&W	Moccasin Bayou	Its source	2B	0.22	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 Reservoir)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	3	232.32	acres
AL03140201-0703-100	Claybank Creek (Tholocco Lake)	Choctawhatchee	S/F&W	Lake Tholocco dam	extent of reservoir	3	679.39	acres
AL03150106-0101-402	Allen Branch (Fort Payne Lake)	Coosa	PWS/F&W	Fort Payne public water supply dam	Its source	3	53.63	acres
AL03150106-0701-202	Mump Creek Lake	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL06030005-0103-302	Sinking Creek (Sinking Creek Lake)	Tennessee	PWS/F&W	Sinking Creek Lake dam	extent of reservoir	3	147.26	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	Toomsuba Creek (Lake Louise)	Tombigbee	PWS	Lake Louise	NULL	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
AL03150203-0603-100	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	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
AL03150204-0304-100	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
AL03160109-0405-102	Lost Creek	Black Warrior	PWS/F&W	2 miles upstream of 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
AL03160109-0603-101	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
AL03160111-0107-101	Little Cove Creek	Black Warrior	F&W	Locust Fork	its source	3	8.03	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
AL03160113-0504-200	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140104-0301-100	Sweetwater Creek	Blackwater	F&W	Alabama-Florida state line	Its source	3	4.23	miles
AL03140104-0303-100	Big Juniper 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	Cahaba Valley Creek	Cahaba	F&W	Cahaba Valley Creek	Its source	3	2.31	miles
AL03150202-0403-110	Shoal Creek	Cahaba	F&W	Little Cahaba River	Its source	3	19.09	miles
AL03130002-0602-100	Town Creek	Chattahoochee	F&W	Alabama-Georgia state line	its source	3	2.12	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
AL03130002-0908-200	Chattahoochee River	Chattahoochee	F&W	Chattahoochee River	its source	3	2.49	miles
AL03130003-0905-300	Cool Branch	Chattahoochee	F&W	Wylaunee Creek	its source	3	5.40	miles
AL03130003-1310-100	Cheneyhatchee Creek	Chattahoochee	S/F&W	Walter F George Lake	Its source	3	8.18	miles
AL03130004-0206-200	Barnett Branch	Chattahoochee	F&W	Chattahoochee River	its source	3	2.53	miles
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
AL03130012-0104-100	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
AL03130012-0203-200	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
AL03140201-0501-100	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	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
AL03140202-0207-102	Pea River	Choctawhatchee	F&W	Connors Creek	Its source	3	31.65	miles
AL03140202-0207-200	Connors Creek	Choctawhatchee	F&W	Pea River	Its source	3	4.35	miles

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Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
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
AL03140202-0610-200	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
AL03140202-0901-200	Gin Creek	Choctawhatchee	F&W	Pea River	its source	3	6.56	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
AL03150106-0101-401	Allen Branch	Coosa	F&W	Big Wills Creek	Ft. Payne public water supply dam	3	0.31	miles
AL03150106-0204-120	Coosa River (Neely Henry Lake)	Coosa	F&W	Neely Henry Lake	Its source	3	1.89	miles
AL03150106-0204-900	Coosa River (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
AL03150106-0407-200	Cave Creek	Coosa	F&W	Cane Creek	Its source	3	6.23	miles
AL03150106-0507-200	Snows Branch	Coosa	F&W	Choccolocco Creek	Its source	3	2.76	miles
AL03150106-0510-200	Kelly Creek	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
AL03150106-0701-201	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
AL03150106-0810-200	Locust Creek	Coosa	F&W	Lay Lake	Its source	3	3.11	miles

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Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150107-0104-600	Tar Water Branch	Coosa	F&W	Darby Branch	its source	3	2.34	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	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	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	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
AL03170009-0103-500	Bayou Como	Escatawpa	F&W	Mississippi Sound	its source	3	2.03	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
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
AL03160205-0202-410	Pensacola Branch	Mobile	F&W	Fish River	Its source	3	4.28	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

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Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03140107-0203-202	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
AL03150108-1004-112	Tallapoosa River	Tallapoosa	F&W	4 miles upstream of Randolph County Road 88	dam at Cleburne County Road 36	3	5.77	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
AL03150109-0301-205	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
AL03150109-0301-503	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
AL03150109-0406-300	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
AL03150109-0406-800	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
AL03150109-0502-100	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
AL03150109-0802-300	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
AL06020001-1101-110	West Fork Lookout Creek	Tennessee	F&W	Lookout Creek	its source	3	9.30	miles
AL06020001-1101-120	East Fork Lookout Creek	Tennessee	F&W	Lookout Creek	its source	3	7.41	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
AL06030001-0806-900	East Fork Drum Creek	Tennessee	F&W	Drum Creek	Its source	3	3.08	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
AL06030002-0502-500	Normal Branch	Tennessee	F&W	Pinhook Creek	its source	3	4.39	miles
AL06030002-0502-610	West Fork Pinhook Creek	Tennessee	F&W	Pinhook Creek	its source	3	2.70	miles
AL06030002-0502-620	East Fork Pinhook Creek	Tennessee	F&W	Pinhook Creek	its source	3	3.21	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL06030005-0509-300	Brush Creek	Tennessee	F&W	Wilson Lake	Its source	3	4.59	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
AL06030005-0801-300	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
AL06030005-1202-900	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
AL06030006-0201-200	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	Its source	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
AL03160105-0204-101	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
AL03160201-0902-400	Vaughn Creek	Tombigbee	F&W	Sucarbowa Creek	Its source	3	9.41	miles
AL03160201-0904-200	Tishlarka Creek	Tombigbee	F&W	Wahalak Creek	Its source	3	11.58	miles
AL03160202-0502-101	Toomsuba Creek	Tombigbee	F&W	Alamuchee Creek	AT&N Railroad	3	1.14	miles
AL03160202-0502-201	Toomsuba Creek	Tombigbee	PWS	Toomsuba Creek	Lake Louise dam	3	1.91	miles
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
AL03160203-0403-100	Jackson Creek	Tombigbee	F&W	Tombigbee River	Its source	3	23.33	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160203-0702-700	Miles Creek	Tombigbee	F&W	Bassetts Creek	Its source	3	5.21	miles
AL03160203-0705-110	Bassetts Creek	Tombigbee	S/F&W	Tombigbee River	Washington County Road 12	3	23.79	miles
AL03160203-0802-100	Lewis Creek	Tombigbee	S/F&W	Tombigbee River	Its source	3	12.28	miles
AL03160203-1001-100	Bates Creek	Tombigbee	S/F&W	Bilbo Creek	Its source	3	25.30	miles
AL03140103-0102-103	Lightwood Knot Creek	Yellow	F&W	end of embayment	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
AL03140103-0402-300	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								
AL03150203-0802-111	Pursley Creek (Claiborne Lake)	Alabama	S/F&W	Alabama River	end of embayment	4A	6.64	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
AL03160112-0203-100	Black Warrior River (Bankhead Lake)	Black Warrior	PWS/S/F&W	Bankhead Lock and Dam	Its source	4A	3645.57	acres
AL03150105-0206-311	Mud Creek (Weiss Reservoir)	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
AL03150105-0605-101	Chattooga River (Weiss Lake)	Coosa	S/F&W	Coosa River	end of embayment	4A	1755.50	acres
AL03150105-0807-111	Little River (Weiss Lake)	Coosa	PWS/S/F&W	Chattooga River	end of embayment	4A	761.03	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	Ball Play 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 (Henry Neely)	Coosa	S/F&W	Coosa River	end of embayment	4A	397.23	acres
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
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
AL03160201-0904-111	Wahalak Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	4A	4.92	acres
Category 4A Rivers and Streams								
AL03150201-0304-200	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
AL03150201-1002-100	Little Mulberry Creek	Alabama	F&W	Mulberry Creek	Its source	4A	4.92	miles
AL03150201-1006-101	Mulberry Creek	Alabama	S/F&W	Alabama River	Harris Branch	4A	22.20	miles
AL03150201-1006-102	Mulberry Creek	Alabama	F&W	Harris Branch	Its source	4A	23.91	miles
AL03150203-0802-100	Pursley Creek	Alabama	F&W	Claiborne Lake	Its source	4A	24.75	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03150203-0802-400	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
AL03160110-0401-100	Blevens Creek	Black Warrior	F&W	Rock Creek	Its source	4A	19.14	miles
AL03160110-0403-102	Rock Creek	Black Warrior	F&W	Lake Lewis Smith	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	Lewis Smith Lake	Its source	4A	16.12	miles
AL03160111-0202-200	Graves Creek	Black Warrior	F&W	Locust Fk	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
AL03160111-0307-400	Black Creek	Black Warrior	F&W	Cunningham Creek	Its source	4A	6.36	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
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 Co. Rd. 201	Its Source	4A	4.98	miles
AL03130003-1204-100	South Fork Cowikee Creek	Chattahoochee	S/F&W	Walter F George Lake	Its source	4A	30.39	miles
AL03130012-0106-201	Boggy Creek	Chipola	F&W	Buck Creek	Cottondale WWTP	4A	3.48	miles
AL03140201-0406-100	West Fork Choctawhatchee River	Choctawhatchee	S/F&W	Judy Creek	Its source	4A	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	4A	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	4A	1.79	miles
AL03140201-0601-100	Hurricane Creek	Choctawhatchee	F&W	Choctawhatchee River	Its Source	4A	9.39	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140202-0505-100	Pea River	Choctawhatchee	S/F&W	Halls Creek	US Highway 231	4A	10.85	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
AL03150107-0405-100	Buxahatchee Creek	Coosa	F&W	Waxahatchee Creek	Its source	4A	14.00	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 Reservoir	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 Hwy. 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 Hwy. 45	Highpoint Boulevard	4A	3.32	miles
AL03160204-0304-200	Gum Tree Branch	Mobile	F&W	Eightmile Creek	Its Source	4A	2.27	miles
AL03160204-0504-101	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
AL03160205-0206-702	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
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	Cleburne Co Rd 36	1/2 mi upstream of Cleburne Co Rd 36	4A	0.44	miles
AL03150110-0102-700	Pepperell Branch	Tallapoosa	F&W	Sougahatchee Creek	Its Source	4A	6.67	miles
AL03150110-0102-710	Pepperell Branch	Tallapoosa	F&W	Pepperell Branch	its source	4A	3.38	miles
AL03150110-0202-200	Parkerson Mill Creek	Tallapoosa	F&W	Chewacla Creek	Its source	4A	6.85	miles
AL03150110-0603-102	Cubahatchee Creek	Tallapoosa	S/F&W	Coon Hop Creek	Its source	4A	22.37	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
AL06030002-0106-101	Guess Creek	Tennessee	F&W	Paint Rock River	Bee Branch	4A	11.08	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
AL06030002-0802-201	French Mill Creek	Tennessee	F&W	Piney Creek	UT 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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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	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
AL06030002-1011-100	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	AL Highway 36	4A	4.16	miles
AL06030002-1013-100	West Flint Creek	Tennessee	F&W	Flint Creek	McDaniel Creek	4A	23.12	miles
AL06030002-1014-104	Flint Creek	Tennessee	LWF	AL 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
AL06030002-1204-103	Second Creek	Tennessee	F&W	Lauderdale Co. Rd. 76	AL/TN State Line	4A	13.00	miles
AL06030004-0401-100	Shoal Creek	Tennessee	F&W	Elk River	Alabama-Tennessee state line	4A	7.47	miles
AL03160105-0101-102	Luxapallila Creek	Tombigbee	PWS/F&W	US Highway 78	Its source	4A	9.53	miles
AL03160105-0101-200	East Branch Luxapallila Creek	Tombigbee	PWS/F&W	Luxapallila Creek	Its source	4A	11.18	miles
AL03160105-0201-103	Luxapallila Creek	Tombigbee	F&W	County road crossing approximately 6 miles upstream from Alabama Highway 18	U.S. Highway 78	4A	10.52	miles
AL03160105-0204-102	Luxapallila Creek	Tombigbee	F&W	Alabama-Mississippi state line	Fayette County Road 37	4A	25.25	miles
AL03160201-0904-101	Wahalak Creek	Tombigbee	F&W	Coffeeville Lake	Spear Creek	4A	14.27	miles
AL03160203-0205-100	Salitpa Creek	Tombigbee	S/F&W	Tombigbee River	Its source	4A	43.34	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 form Mullet Point to Ragged		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								
AL03160111-0407-102	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	Tennessee River	Martin Rd (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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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								
AL03150203-0805-101	Alabama River (Claiborne Lake)	Alabama	S/F&W	McCalls Creek	Bear Creek	5	714.80	acres
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
AL03160109-0104-102	Eightmile Creek (Lake Catoma)	Black Warrior	PWS	Lake Catoma dam	Moody Branch	5	527.25	acres
AL03160110-0305-201	Clear Creek (Lewis 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 (Lewis Smith Lake)	Black Warrior	S/F&W	Sipsey Fork	end of embayment	5	119.74	acres
AL03160110-0408-110	Rock Creek (Lewis Smith Lake)	Black Warrior	S/F&W	Sipsey Fork	White Oak Creek	5	1946.62	acres
AL03160110-0505-103	Ryan Creek (Lewis 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 Tuscaloosa)	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
AL03130002-0805-111	Chattahoochee River (West Point Lake)	Chattahoochee	S/F&W	Alabama-Georgia state line	Approximately 1/2 mile upstream of Stroud Creek and Veasey Creek confluence	5	254.25	acres
AL03130002-1105-111	Osanippa Creek (Lake Harding)	Chattahoochee	PWS/S/F&W	Chatahoochee River	end of embayment	5	122.60	acres
AL03130002-1109-111	Chattahoochee River (Lake Harding)	Chattahoochee	PWS/S/F&W	Bartletts Ferry Dam	Halawakee Creek	5	514.22	acres
AL03130003-0505-111	Uchee Creek (Walter F George Reservoir)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	5	105.15	acres
AL03130003-0606-100	Chattahoochee River (Walter F George Reservoir)	Chattahoochee	F&W	Snake Creek	Ihagee Creek	5	165.36	acres
AL03130003-1205-100	Cowikee Creek (Walter F George Reservoir)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	5	1739.13	acres
AL03130003-1307-111	Barbour Creek (Walter F George Reservoir)	Chattahoochee	F&W	Chattahoochee River	end of embayment	5	656.59	acres
AL03130003-1310-111	Cheneyhatchee Creek (Walter F George Reservoir)	Chattahoochee	S/F&W	Chattahoochee River	end of embayment	5	284.82	acres
AL03130003-1312-100	White Oak Creek (Walter F George Reservoir)	Chattahoochee	F&W	Chattahoochee River (Walter F George Lake)	end of embayment	5	300.44	acres
AL03130003-1600-100	Chattahoochee River (Walter F George Reservoir)	Chattahoochee	S/F&W	Walter F. George Lock and Dam	Cowikee Creek	5	9797.21	acres
AL03130003-1600-400	Thomas Mill Creek (Walter F George Reservoir)	Chattahoochee	F&W	Chattahoochee River (Walter F George Lake)	end of embayment	5	168.08	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
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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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	1817.43	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	2724.87	acres
AL03170008-0502-211	Hamilton Creek (Big Creek Lake)	Escatawpa	PWS/F&W	Big Creek	end of embayment	5	583.14	acres
AL03140107-0204-201	Shelby Lake (Shelby Lakes)	Perdido	S/F&W	Within Gulf State Park		5	570.49	acres
AL03140107-0204-202	Middle Lake (Shelby Lakes)	Perdido	S/F&W	Within Gulf State Park		5	194.84	acres
AL03140107-0204-203	Little Lake (Shelby Lakes)	Perdido	S/F&W	Within Gulf State Park		5	36.10	acres
AL03150109-0105-102	Tallapoosa River (Harris Reservoir)	Tallapoosa	S/F&W	R. L. Harris Dam	Little Tallapoosa River	5	5356.95	acres
AL03150109-0802-311	Coley Creek (Martin Lake)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	5	54.29	acres
AL03150109-0803-111	Elkahatchee Creek (Martin Lake)	Tallapoosa	S/F&W	Tallapoosa River	end of embayment	5	511.41	acres
AL03150109-0803-301	Sugar Creek (Martin Lake)	Tallapoosa	S/F&W	Elkahatchee Creek	end of embayment	5	58.93	acres
AL03150110-0104-101	Sougahatchee Creek (Yates Reservoir)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	5	203.78	acres
AL03150110-0402-101	Channahatchee Creek (Yates Reservoir)	Tallapoosa	PWS/S/F&W	Tallapoosa River	end of embayment	5	62.63	acres
AL03150110-0406-102	Tallapoosa River (Thurlow Reservoir)	Tallapoosa	PWS/S/F&W	Thurlow dam	Yates dam	5	538.60	acres
AL03150110-0406-103	Tallapoosa River (Yates Reservoir)	Tallapoosa	PWS/S/F&W	Yates dam	Martin dam	5	1595.89	acres
AL06030001-0203-101	Long Island Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	210.43	acres
AL06030001-0204-111	Widows Creek (Guntersville Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	97.65	acres
AL06030001-0307-111	Crow Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	1399.82	acres
AL06030001-0705-111	Town Creek (Guntersville Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	1584.07	acres
AL06030001-0904-101	Browns Creek (Guntersville Lake)	Tennessee	PWS/S/F&W	Tennessee River	end of embayment	5	5915.66	acres
AL06030002-0902-100	Wheeler Lake	Tennessee	S/F&W	Flint River	Guntersville Dam	5	1345.77	acres
AL06030002-0904-100	Wheeler Lake	Tennessee	PWS/F&W	Indian Creek	Flint River	5	2779.95	acres
AL06030002-0906-102	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
AL06030002-1014-102	Flint Creek (Wheeler Lake)	Tennessee	F&W	AL Highway 67	L&N Railroad	5	732.66	acres
AL06030002-1102-102	Wheeler Lake	Tennessee	PWS/S/F&W	US Highway 31	Flint Creek	5	2587.33	acres
AL06030002-1102-103	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
AL06030002-1103-111	Round Island Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River	end of embayment	5	408.15	acres
AL06030002-1104-100	Fox Creek (Wheeler Lake)	Tennessee	S/F&W	Tennessee River (Wheeler Lake)	end of embayment	5	516.48	acres
AL06030002-1107-103	Wheeler Lake	Tennessee	S/F&W	Five miles upstream of Elk River (RM 289.3)	US Highway 31	5	18704.81	acres
AL06030002-1205-100	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	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 (Wilson Lake)	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
AL06030005-1004-100	Pickwick Lake	Tennessee	PWS/S/F&W	River Mile 228.5	River Mile 232	5	2520.69	acres
AL06030006-0102-102	Bear Creek	Tennessee	PWS/S/F&W	Pretty Branch	Alabama Highway 243	5	249.44	acres

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030006-0103-104	Bear Creek	Tennessee	PWS/S/F&W	Upper Bear Creek Lake Dam	Pretty Branch	5	1462.58	acres
AL06030006-0104-101	Bear Creek Reservoir	Tennessee	PWS/S/F&W	Bear Creek Lake Dam	Alabama Highway 187	5	653.54	acres
AL06030006-0203-101	Cedar Creek Reservoir	Tennessee	PWS/S/F&W	Cedar Creek Lake Dam	extent of reservoir	5	4063.07	acres
AL06030006-0205-111	Little Bear Creek Reservoir	Tennessee	PWS/S/F&W	Little Bear Creek Dam	Scott Branch	5	1435.05	acres
AL06030006-0307-111	Bear Creek (Pickwick Reservoir)	Tennessee	S/F&W	Tennessee River	end of embayment	5	5811.82	acres
AL03160106-0504-111	Bogue Chitto (Gainesville Lake)	Tombigbee	S/F&W	Tombigbee River	end of embayment	5	5.42	acres
AL03160106-0607-111	Brush Creek (Demopolis Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	5	5.17	acres
AL03160106-0609-103	Tombigbee River (Gainesville Lake)	Tombigbee	S/F&W	Heflin Lock and Dam	River Mile 268	5	189.11	acres
AL03160107-0306-101	Sipsey River (Gainesville Lake)	Tombigbee	F&W	Tombigbee River	extent of reservoir	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
AL03160201-0401-103	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	Sucarnoochee River	Demopolis Lock and Dam	5	668.76	acres
AL03160201-0408-102	Tombigbee River (Coffeeville Lake)	Tombigbee	PWS/F&W	1/2 mile downstream of Alabama Highway 114	3 miles upstream of Alabama Highway 114	5	196.10	acres
AL03160201-0408-104	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	3 miles upstream from Alabama Highway 114	Sucarnoochee River	5	1418.11	acres
AL03160201-0506-111	Tuckabum Creek (Coffeeville Lake)	Tombigbee	F&W	Tombigbee River	end of embayment	5	11.53	acres
AL03160201-0907-102	Tombigbee River (Coffeeville Lake)	Tombigbee	F&W	Beach Bluff (RM 141)	1/2 mile downstream from Alabama Highway 114	5	2088.71	acres
AL03160201-0909-100	Tombigbee River (Coffeeville Lake)	Tombigbee	S/F&W	Coffeeville Lock and Dam	Beach Bluff (RM 141)	5	1989.31	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	All of Olin Basin		5	85.73	acres
AL03140103-0102-102	Lightwood Knot Creek (W F Jackson Lake)	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
AL03150201-0407-100	Pintlala Creek	Alabama	S/F&W	Woodruff Lake	Pinchony Creek	5	23.65	miles
AL03150201-0601-100	Swift Creek	Alabama	S/F&W	Autauga County Road 24	Its source	5	10.55	miles
AL03150201-1203-100	Soapstone Creek	Alabama	F&W	Alabama River	Its source	5	17.52	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
AL03150203-0209-100	Cedar Creek	Alabama	S/F&W	Alabama River	Its source	5	64.46	miles
AL03150204-0303-110	Double Bridges Creek	Alabama	F&W	Limestone Creek	Its source	5	7.37	miles
AL03150204-0405-103	Alabama River	Alabama	F&W	River Mile 55	River Mile 75	5	17.50	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
AL03160109-0205-100	Mulberry Fork	Black Warrior	F&W	Blount County Road 17	Marriott Creek	5	9.06	miles
AL03160109-0306-100	Spring Creek	Black Warrior	F&W	Blackwater Creek	Its source	5	7.90	miles
AL03160109-0601-102	Cane Creek	Black Warrior	F&W	Town Creek	Its source	5	10.34	miles
AL03160109-0601-902	Town Creek	Black Warrior	F&W	100 yards upstream of Southern Railway crossing	Its source	5	6.27	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
AL03160110-0203-110	Inman Creek	Black Warrior	F&W	Brushy Creek	Its source	5	5.79	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160110-0507-111	Sipsey Fork	Black Warrior	PWS/F&W	Mulberry Fork	Wilson Branch	5	8.07	miles
AL03160111-0106-100	Slab Creek	Black Warrior	F&W	Locust Fork	Its source	5	24.98	miles
AL03160111-0204-200	Brasher Creek	Black Warrior	F&W	Blackburn Fork (Highland Lake)	Its source	5	5.09	miles
AL03160111-0204-300	Sand Creek	Black Warrior	F&W	Blackburn Fork (Highland Lake)	Its source	5	4.14	miles
AL03160111-0407-101	Fivemile Creek	Black Warrior	S/F&W	Locust Fork	Old Jasper Highway	5	7.54	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
AL03160112-0105-101	Mud Creek	Black Warrior	F&W	Valley Creek	Big Branch	5	14.12	miles
AL03160112-0105-102	Mud Creek	Black Warrior	F&W	Big Branch	Its source	5	7.70	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
AL03150202-0505-100	Affonee Creek	Cahaba	S	Cahaba River	Its source	5	18.51	miles
AL03150202-0506-100	Cahaba River	Cahaba	OAW/S	Blue Girth Creek	Alabama Highway 82	5	21.76	miles
AL03150202-0506-200	Walton Creek	Cahaba	F&W	Cahaba River	Its source	5	5.45	miles
AL03150202-0602-200	Old Town Creek	Cahaba	S	Cahaba River	Its source	5	12.66	miles
AL03150202-0701-100	Rice Creek	Cahaba	F&W	Cahaba River	Its source	5	14.87	miles
AL03150202-0702-100	Cahaba River	Cahaba	OAW/S	Waters Creek	Blue Girth Creek	5	27.25	miles
AL03150202-0702-210	Waters Creek	Cahaba	S	Cahaba River	Its source	5	9.93	miles
AL03150202-0805-100	Oakmulgee Creek	Cahaba	S	Cahaba River	Its source	5	56.67	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	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
AL03130003-0505-101	Uchee Creek	Chattahoochee	S/F&W	Walter F George Lake	County Road 39	5	8.96	miles
AL03130003-0505-102	Uchee Creek	Chattahoochee	PWS/S/F&W	Russell 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
AL03130003-0903-200	Cliatt Branch	Chattahoochee	F&W	Chattahoochee River (Walter F George Lake)	its source	5	6.27	miles
AL03130003-1301-100	Chewalla Creek	Chattahoochee	S/F&W	Walter F George Lake	Its source	5	13.50	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
AL03140201-0405-100	Bear Creek	Chattahoochee	F&W	West Fork Choctawhatchee River	Its source	5	11.98	miles
AL03130012-0101-100	Limestone Creek	Chipola	F&W	Big Creek	Its source	5	10.80	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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
AL03130012-0201-310	Webb Creek	Chipola	F&W	Cowarts Creek	Its source	5	10.22	miles
AL03130012-0201-410	Cooper Creek	Chipola	F&W	Cowarts Creek	Its source	5	3.13	miles
AL03130012-0202-100	Rocky Creek	Chipola	F&W	Cowarts Creek	Its source	5	11.70	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
AL03140201-0403-110	Sikes Creek	Choctawhatchee	F&W	West Fork Choctawhatchee River	Its source	5	13.07	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
AL03140201-0501-202	Beaver Creek	Choctawhatchee	F&W	Dothan WWTP	Its source	5	4.54	miles
AL03140201-0602-200	Killebrew Factory Creek	Choctawhatchee	F&W	Choctawhatchee River	Its source	5	3.52	miles
AL03140201-0701-101	Little Claybank Creek	Choctawhatchee	F&W	Claybank Creek	Its source	5	8.54	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
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
AL03140201-1104-100	Double Bridges Creek	Choctawhatchee	F&W	Coffee County Road 655	Its source	5	15.14	miles
AL03140201-1201-100	Wilkerson Branch	Choctawhatchee	F&W	Choctawhatchee River	its source	5	9.29	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
AL03140202-0401-102	Walnut Creek	Choctawhatchee	F&W	Pike County Road 3304	US Highway 231	5	3.30	miles
AL03140202-0504-200	Huckleberry Creek	Choctawhatchee	F&W	Pea River	Its source	5	3.47	miles
AL03140202-0505-200	Halls Creek	Choctawhatchee	F&W	Pea River	Its source	5	5.54	miles
AL03140202-0506-100	Pea River	Choctawhatchee	F&W	Red Oak Creek	Halls Creek	5	8.08	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
AL03140202-0608-100	Holley Mill Creek	Choctawhatchee	F&W	Pea River	Its source	5	4.66	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
AL03140202-0906-102	Pea River	Choctawhatchee	S/F&W	Laddon Creek	Alabama-Florida state line	5	7.36	miles
AL03140203-0105-100	Choctawhatchee River	Choctawhatchee	S/F&W	Alabama-Florida state line	Pea River	5	4.45	miles

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03140203-0201-100	Wrights Creek	Choctawhatchee	F&W	Alabama-Florida state line	Its source	5	8.96	miles
AL03150105-0901-200	Marys Creek	Coosa	F&W	South Fork Terrapin Creek	its source	5	5.91	miles
AL03150105-0906-102	Terrapin Creek	Coosa	PWS/F&W	US Highway 278	Calhoun County Road 70	5	3.58	miles
AL03150105-0906-200	Ladiga Creek	Coosa	PWS	Terrapin Creek	Terrapin Creek	5	2.91	miles
AL03150105-0908-102	Terrapin Creek	Coosa	F&W	Cherokee County Road 8	US Highway 278	5	2.92	miles
AL03150105-0909-101	Terrapin Creek	Coosa	S/F&W	Coosa River	Cherokee County Road 8	5	20.65	miles
AL03150106-0102-100	Jacks Creek	Coosa	F&W	Big Wills Creek	its source	5	7.02	miles
AL03150106-0102-200	Little Wills Valley Branch	Coosa	F&W	Big Wills Creek	its source	5	3.80	miles
AL03150106-0102-400	Little Sand Valley Creek	Coosa	F&W	Big Wills Creek	its source	5	8.71	miles
AL03150106-0102-500	Mush Creek	Coosa	F&W	Big Wills Creek	its source	5	6.31	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
AL03150106-0307-101	Beaver Creek	Coosa	F&W	Beaver Creek (Neely Henry Lake)	St. Clair County Road 26	5	9.98	miles
AL03150106-0405-100	Ohatchee Creek	Coosa	S/F&W	Tallasseehatchee Creek	Its source	5	23.09	miles
AL03150106-0408-100	Cane Creek	Coosa	F&W	Logan Martin Lake	Its source	5	30.68	miles
AL03150106-0504-101	Choccolocco Creek	Coosa	PWS/F&W	Hillabee Creek	Egoniaga Creek	5	8.18	miles
AL03150106-0504-102	Choccolocco Creek	Coosa	F&W	Egoniaga Creek	Its source	5	29.96	miles
AL03150106-0505-100	Choccolocco Creek	Coosa	F&W	Choccolocco Creek	its source	5	5.59	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
AL03150106-0611-100	Eastaboga Creek	Coosa	F&W	Choccolocco Creek	Its source	5	6.85	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	Dry Branch	Coosa	F&W	Dry Branch	Its source	5	1.58	miles
AL03150107-0603-110	Weogufka Creek	Coosa	S/F&W	Mitchell Lake	Its source	5	45.16	miles
AL03150107-0706-102	Hatchet Creek	Coosa	OAW/PWS/S/F&W	Wildcat Creek	Its source	5	18.87	miles
AL03150107-0709-100	Hatchet Creek	Coosa	OAW/S/F&W	Mitchell Lake	Wildcat Creek	5	35.47	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
AL03150107-0907-500	Fourmile Creek	Coosa	F&W	Taylor Creek	Its source	5	5.67	miles
AL03140301-0403-100	Feagin Creek	Escambia	F&W	Gantt Lake	Its source	5	7.76	miles
AL03140302-0303-100	Little Patsaliga Creek	Escambia	S/F&W	Patsaliga Creek	Its source	5	32.00	miles
AL03140302-0506-102	Patsaliga Creek	Escambia	F&W	Buck Creek	Its source	5	83.17	miles
AL03140303-0204-102	Persimmon Creek	Escambia	F&W	Panther Creek	Hawkins Creek	5	25.17	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
AL03140305-0302-100	Big Escambia Creek	Escambia	F&W	Alabama-Florida state line	Big Spring Creek	5	17.03	miles
AL03170008-0205-101	Puppy Creek	Escatawpa	F&W	Escatawpa River	Alabama Highway 217	5	5.68	miles
AL03170008-0402-110	Escatawpa River	Escatawpa	S/F&W	AL-MS Stateline	Its source	5	70.66	miles
AL03170008-0502-600	Boggy Branch	Escatawpa	F&W	Big Creek Lake	Its source	5	3.62	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03170008-0502-800	Collins Creek	Escatawpa	F&W	Big Creek	Its Source	5	5.15	miles
AL03170009-0102-200	Carls Creek	Escatawpa	F&W	Bayou la Batre	Its source	5	2.93	miles
AL03170009-0103-600	Bayou Coden	Escatawpa	F&W	Portersville Bay	Its source	5	2.30	miles
AL03160204-0103-100	Mobile River	Mobile	F&W	Tensaw River	Its source	5	5.72	miles
AL03160204-0104-100	Halls Creek	Mobile	F&W	Tensaw Lake	Its source	5	11.93	miles
AL03160204-0105-111	Cold Creek	Mobile	F&W	Mobile River	Dam 1.5 miles west of US Hwy 43	5	4.21	miles
AL03160204-0106-103	Mobile River	Mobile	PWS/F&W	Barry Steam Plant	Tensaw River	5	10.29	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
AL03160204-0203-200	Negro Slough	Mobile	F&W	Tensaw River	its source	5	3.17	miles
AL03160204-0203-900	Martin Branch	Mobile	F&W	Red Hill Creek	Its source	5	5.52	miles
AL03160204-0303-100	Chickasaw Creek	Mobile	S/F&W	Mobile College	Its source	5	26.82	miles
AL03160204-0304-102	Eightmile Creek	Mobile	PWS/F&W	City of Prichard's water supply intake	US Highway 45	5	1.73	miles
AL03160204-0305-101	Chickasaw Creek	Mobile	LWF	Mobile R	US Hwy 43 (limit of tidal effects)	5	4.43	miles
AL03160204-0305-102	Chickasaw Creek	Mobile	F&W	US Hwy 43	Mobile College	5	6.64	miles
AL03160204-0305-300	Hog Bayou	Mobile	F&W	Chickasaw Creek	Its source	5	0.85	miles
AL03160204-0401-100	Gunnison Creek	Mobile	S/F&W	Bayou Sara	Its source	5	7.62	miles
AL03160204-0402-102	Bayou Sara	Mobile	S/F&W	Gunnison Creek	Norton Creek	5	2.76	miles
AL03160204-0402-103	Bayou Sara	Mobile	S/F&W	Norton Creek	US Highway 43	5	1.26	miles
AL03160204-0402-501	Norton Creek	Mobile	F&W	Bayou Sara	Saraland WWTP	5	0.95	miles
AL03160204-0402-502	Norton Creek	Mobile	F&W	Saraland WWTP	Its source	5	3.74	miles
AL03160204-0402-600	Black Creek	Mobile	F&W	Bayou Sara	its source	5	3.19	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	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
AL03160204-0505-900	Tiawasee Creek	Mobile	F&W	D'Olive Creek	Its source	5	3.54	miles
AL03160204-0505-905	Tiawasee Creek	Mobile	F&W	Tiawasee Creek	Its source	5	1.87	miles
AL03160205-0101-102	Dog River	Mobile	F&W	Moore Creek	Its source	5	5.50	miles
AL03160205-0102-111	Halls Mill Creek	Mobile	F&W	Dog River	4 miles upstream of Dog River	5	4.69	miles
AL03160205-0102-112	Halls Mill Creek	Mobile	F&W	4 miles upstream of Dog River	Its source	5	6.62	miles
AL03160205-0103-401	Rabbit Creek	Mobile	F&W	Halls Mill Creek	Alabama Highway 193	5	2.28	miles
AL03160205-0103-402	Rabbit Creek	Mobile	F&W	Alabama Highway 193	Its source	5	8.20	miles
AL03160205-0104-111	Fowl River	Mobile	S/F&W	Mobile Bay	10 feet above MSL	5	10.69	miles
AL03160205-0104-112	Fowl River	Mobile	S/F&W	10 feet above MSL	Its source	5	9.86	miles
AL03160205-0105-100	Middle Fork 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
AL03160205-0202-310	Silver Creek	Mobile	F&W	Polecat Creek	Its source	5	4.07	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
AL03160205-0204-401	Turkey Branch	Mobile	S/F&W	Fish River	Baldwin County Road 181	5	1.53	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

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
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 mi upstream of first bridge above its mouth	5	9.12	miles
AL03160205-0206-102	Bon Secour River	Mobile	S/F&W	One mi upstream of first bridge above 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	Al/Fla. 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
AL03140107-0201-100	Wolf Creek	Perdido	F&W	Wolf Bay	Its source	5	8.91	miles
AL03140107-0201-210	Sandy Creek	Perdido	S/F&W	Wolf Creek	10 feet above MSL	5	2.41	miles
AL03140107-0201-220	Sandy Creek	Perdido	S/F&W	10 feet above MSL	Its source	5	5.16	miles
AL03140107-0202-101	Miflin Creek	Perdido	S/F&W	Wolf Bay	limit of tidal effects	5	3.39	miles
AL03140107-0202-102	Miflin Creek	Perdido	F&W	limit of tidal effects	Its source	5	4.98	miles
AL03150108-0405-102	Tallapoosa River	Tallapoosa	OAW/F&W	Cane Creek	Alabama-Georgia state line	5	31.60	miles
AL03150108-0803-200	Knokes Creek	Tallapoosa	F&W	Little Tallapoosa River	Its source	5	12.60	miles
AL03150109-0203-200	Pigeonroost Creek	Tallapoosa	F&W	Allen Creek	its source	5	6.18	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
AL03150109-0405-102	Hillabee Creek	Tallapoosa	F&W	County Road bridge 3 miles east of Hackneyville	Its source	5	1.48	miles
AL03150109-0405-500	Hackney Creek	Tallapoosa	PWS/F&W	Town Creek	Its source	5	6.92	miles
AL03150109-0602-100	Blue Creek	Tallapoosa	F&W	Lake Martin	Its source	5	10.21	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
AL03150110-0702-100	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
AL03150110-0905-101	Tallapoosa River	Tallapoosa	F&W	Alabama River	US Highway 231	5	6.47	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
AL06030001-0806-600	Drum Creek	Tennessee	F&W	Short Creek	Its source	5	7.71	miles
AL06030001-0904-102	Browns Creek	Tennessee	F&W	Tennessee River (Lake Guntersville)	Its source	5	11.86	miles
AL06030002-0101-100	Hurricane Creek	Tennessee	OAW/F&W	Paint Rock River	Alabama-Tennessee state line	5	10.89	miles
AL06030002-0201-100	Clear Creek	Tennessee	F&W	Paint Rock River	Its source	5	6.43	miles
AL06030002-0203-100	Paint Rock River	Tennessee	F&W	Cole Spring Branch	Its source	5	27.09	miles
AL06030002-0203-401	Cole Spring Branch	Tennessee	F&W	Paint Rock River	Bridge at Jones farm	5	0.99	miles
AL06030002-0203-402	Cole Spring Branch	Tennessee	F&W	Bridge at Jones farm	Jeep trail crossing	5	1.80	miles
AL06030002-0203-403	Cole Spring Branch	Tennessee	F&W	Jeep trail crossing	Its source	5	3.29	miles
AL06030002-0305-100	Beaverdam Creek	Tennessee	F&W	Brier Fork	Its Source	5	22.14	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL06030002-0306-110	Brier Fork Flint River	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	AL Hwy.67	Frost Creek	5	8.12	miles
AL06030002-0603-600	Mill Pond Creek	Tennessee	F&W	Cotaco Creek	Its source	5	1.29	miles
AL06030002-0703-102	Limestone Creek	Tennessee	F&W	US Highway 72	Leslie Branch	5	10.79	miles
AL06030002-1009-112	Elam Creek	Tennessee	F&W	Rocky Branch	Its source	5	12.08	miles
AL06030002-1013-900	Flat Creek	Tennessee	F&W	West Flint Creek	Its Source	5	7.78	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 (Wheeler Lake)	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
AL06030005-0509-800	Indiancamp Creek	Tennessee	F&W	Shoal Creek	Its source	5	5.98	miles
AL06030005-0802-100	Pond Creek	Tennessee	A&I	Tennessee River	Its source	5	12.43	miles
AL06030005-0803-400	Sweetwater Creek	Tennessee	F&W	Tennessee River (Florence Canal)	Its source	5	4.41	miles
AL06030005-0805-100	Little Bear Creek	Tennessee	S/F&W	Pickwick Lake	Its source	5	11.06	miles
AL06030005-0807-100	Cane Creek	Tennessee	S/F&W	Pickwick Lake	Its source	5	15.41	miles
AL06030005-1001-100	Bluff Creek	Tennessee	F&W	Pickwick Lake	Its source	5	9.30	miles
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
AL06030006-0201-300	Payne Creek	Tennessee	F&W	Mud Creek	Sloss Lake	5	1.61	miles
AL06030006-0201-900	Harris Creek	Tennessee	F&W	Mud Creek	Its source	5	5.99	miles
AL06030006-0206-101	Little Bear Creek	Tennessee	S/F&W	Cedar Creek	Little Bear Creek Dam	5	11.88	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
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	5	41.85	miles
AL03160105-0502-100	Magby Creek	Tombigbee	F&W	Alabama-Mississippi state line	Its source	5	14.57	miles
AL03160106-0203-100	Coal Fire Creek	Tombigbee	S/F&W	Aliceville Lake	Its source	5	43.31	miles
AL03160106-0504-100	Bogue Chitto	Tombigbee	F&W	Tombigbee River	Alabama-Mississippi state line	5	5.42	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
AL03160201-0105-100	Powell Creek	Tombigbee	F&W	Chickasaw Bogue	Its source	5	18.92	miles
AL03160201-0301-100	Beaver Creek	Tombigbee	S/F&W	US Highway 43	Its source	5	9.76	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
AL03160201-0703-100	Bashi Creek	Tombigbee	S/F&W	Tallahatta Creek	Its source	5	26.57	miles
AL03160202-0404-101	Sucarnoochee River	Tombigbee	PWS/S/F&W	US Highway 11	Miuka Creek	5	6.07	miles
AL03160202-0404-102	Sucarnoochee River	Tombigbee	F&W	Miuka Creek	Alabama-Mississippi state line	5	19.44	miles

Categorization of Alabama's Waters

Assessment Unit ID	Waterbody Name	River Basin	Classification	Downstream	Upstream	Cat.	Size	Type
AL03160203-0701-100	Little Bassetts Creek	Tombigbee	F&W	Bassetts Creek	Its source	5	13.54	miles
AL03160203-0704-100	Bassetts Creek	Tombigbee	S/F&W	Washington County Road 12	Its source	5	19.43	miles
AL03160203-0901-112	Tombigbee River	Tombigbee	PWS/S/F&W	1/2 mile downstream of Southern Railway Crossing	Smiths Creek	5	8.83	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
AL03160203-1103-103	Tombigbee River	Tombigbee	F&W	Olin Basin canal	Bassetts Creek	5	21.37	miles
AL03160203-1103-700	Bilbo Creek	Tombigbee	S/F&W	Tombigbee River	Its source	5	30.74	miles
AL03140103-0102-700	Lightwood Knot Cr (3-C) (Lake Frank Jackson)	Yellow	F&W	Lake Frank Jackson	Its source	5	1.05	miles
AL03140103-0102-800	Lightwood Knot Cr (2-S) (Lake Frank Jackson)	Yellow	F&W	Lake Frank Jackson	Its source	5	1.77	miles
AL03140103-0202-110	Hog Foot Creek	Yellow	F&W	Five Runs Creek	Its source	5	10.23	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	AL-FL 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
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 2022 § 303(d) List Fact Sheet

Alabama's 2022 §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 2022 §303(d) List

Alabama's 2022 §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 2022 §303(d) List also appeared on Alabama's 2020 §303(d) List as submitted to EPA in May 2020. 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 2022 §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: https://adem.alabama.gov/programs/water/wquality/2022WAM.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 2020 §303(d) List

A number of differences exist between the 2022 §303(d) List and the 2020 §303(d) List. Some of the changes were to correct errors or omissions in the 2020 List and to provide additional or updated information about waterbodies on the list. Other significant changes since 2020 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 2022 §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 2022 §303(d) List and the final 2022 §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 2022 §303(d) List was public noticed.

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

Table 1
Alabama's 2022 §303(d) List
New Waterbody/Pollutant Combinations Appearing on the 2022 List

The waterbody/pollutant combinations listed in the following table are proposed for addition to Alabama's 2022 §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
AL03150201-0407-100	Pintlala Creek	Alabama	Lowndes Montgomery	Pathogens (E. coli)	Records at ADEM station PNTM-5 from 2016 and 2020 show that the E. coli criterion was exceeded in 8 out of 11 samples.	ADEM 2016, 2020
AL03150201-1203-100	Soapstone Creek	Alabama	Dallas	Pathogens (E. coli)	Records at ADEM station SPD-1 from 2016 and 2020 show that the E. coli criterion was exceeded in 3 out of 16 samples.	ADEM 2016, 2020
AL03150203-0209-100	Cedar Creek	Alabama	Butler Dallas Wilcox	Pathogens (E. coli)	Records at ADEM station CEDD-1 from 2018 and 2020 show that the E. coli criterion was exceeded in 8 out of 16 samples.	ADEM 2018, 2020
AL03150204-0303-110	Double Bridges Creek	Alabama	Monroe	Pathogens (E. coli)	Records at ADEM station ULMM-1 from 2020 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2020
AL03160109-0104-102	Eightmile Creek (Lake Catoma)	Black Warrior	Cullman	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station CTMC-1.	ADEM 2021
AL03160109-0602-601	Old Town Creek	Black Warrior	Walker	Pathogens (E. coli)	Records at ADEM station OTC-1 from 2018 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2018
AL03160110-0507-111	Sipsey Fork	Black Warrior	Walker	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station SF-5.	ADEM 2021
AL03160111-0407-101	Fivemile Creek	Black Warrior	Jefferson	Pathogens (E. coli)	Records at ADEM station FMCJ-6 from 2015-2019 show that the E. coli criterion was exceeded in 3 out of 15 samples.	ADEM 2015-2019

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150202-0602-200	Old Town Creek	Cahaba	Perry	Pathogens (E. coli)	Records at ADEM station OTCP-1 from 2018-2019 show that the E. coli criterion was exceeded in 5 out of 11 samples.	ADEM 2018, 2019
AL03150202-0701-100	Rice Creek	Cahaba	Perry	Pathogens (E. coli)	Records at ADEM station RICP-1 from 2019 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2019
AL03150202-0702-210	Waters Creek	Cahaba	Perry	Pathogens (E. coli)	Records at ADEM station WATP-1A from 2019 show that the E. coli criterion was exceeded in 3 out of 7 samples.	ADEM 2019
AL03150202-0805-100	Oakmulgee Creek	Cahaba	Bibb Chilton Dallas Perry	Pathogens (E. coli)	Records at ADEM station OKGD-3 from 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03130002-0805-111	Chattahoochee River (West Point Lake)	Chattahoochee	Chambers	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station WESC-2.	ADEM 2021
AL03130002-1105-111	Osanippa Creek (Lake Harding)	Chattahoochee	Lee	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station HARL-3.	ADEM 2021
AL03130002-1109-111	Chattahoochee River (Lake Harding)	Chattahoochee	Lee	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station HARL-1.	ADEM 2021
AL03130003-0606-100	Chattahoochee River (Walter F George Lake)	Chattahoochee	Russell	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GEOH-29.	ADEM 2021
AL03130003-0903-200	Cliatt Branch	Chattahoochee	Russell	Pathogens (E. coli)	Records at ADEM station CLTR-1 from 2019 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2019
AL03130003-1301-100	Chewalla Creek	Chattahoochee	Barbour	Pathogens (E. coli)	Records at ADEM station CHWB-1 from 2016 and 2019 show that the E. coli criterion was exceeded in 8 out of 10 samples.	ADEM 2016, 2019
AL03130003-1310-111	Cheneyhatchee Creek (Walter F George Lake)	Chattahoochee	Barbour	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GEOH-13.	ADEM 2021

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03130003-1312-100	White Oak Creek (Walter F George Lake)	Chattahoochee	Barbour Henry	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GEOH-14.	ADEM 2021
AL03130003-1600-400	Thomas Mill Creek (Walter F George Lake)	Chattahoochee	Henry	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GEOH-15.	ADEM 2021
AL03130012-0106-202	Boggy Creek	Chipola	Houston	Pathogens (E. coli)	Records at ADEM station CH-101 from 2015 and 2019 show that the E. coli criterion was exceeded in 5 out of 12 samples.	ADEM 2015, 2019
AL03140201-0405-100	Bear Creek	Choctawhatchee	Barbour Dale	Pathogens (E. coli)	Records at ADEM station BERD-2 from 2020 show that the E. coli criterion was exceeded in 3 out of 15 samples.	ADEM 2020
AL03140201-0501-201	Beaver Creek	Choctawhatchee	Houston	Pathogens (E. coli)	Records at ADEM station BVC-2 from 2018 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2018
AL03140201-0501-202	Beaver Creek	Choctawhatchee	Houston	Pathogens (E. coli)	Records at ADEM station BVC-3 in 2018 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2018
AL03140201-0701-101	Little Claybank Creek	Choctawhatchee	Dale	Pathogens (E. coli)	Records at ADEM station LTCD-1 from 2016 show that the E. coli criterion was exceeded in 5 out of 10 samples.	ADEM 2016
AL03140201-1102-500	Blanket Creek	Choctawhatchee	Coffee	Pathogens (E. coli)	Records at ADEM station BKCC-1 from 2018 show the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2018
AL03140201-1201-100	Wilkerson Creek	Choctawhatchee	Coffee Geneva	Pathogens (E. coli)	Records at ADEM station WLKG-1 from 2019 show the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2019
AL03140202-0401-102	Walnut Creek	Choctawhatchee	Pike	Metals (Thallium)	Records at ADEM station WCP-1A from 2017 and 2019 show that the thallium criterion was exceeded in 12 out of 14 samples.	ADEM 2017, 2019
AL03140202-0608-100	Holley Mill Creek	Choctawhatchee	Coffee Geneva	Pathogens (E. coli)	Records at ADEM station HLMC-1 from 2019 show that the E. coli criterion was exceeded in 4 out of 8 samples.	ADEM 2019
AL03150106-0102-100	Jacks Creek	Coosa	DeKalb	Pathogens (E. coli)	Records at ADEM station JACD-1 from 2019 show that the E. coli criterion was exceeded in 7 out of 12 samples.	ADEM 2019

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150106-0102-200	Little Wills Valley Branch	Coosa	DeKalb	Pathogens (E. coli)	Records at ADEM station LWBD-1 from 2019 show that the E. coli criterion was exceeded in 3 out of 12 samples.	ADEM 2019
AL03150106-0102-400	Little Sand Valley Creek	Coosa	DeKalb	Pathogens (E. coli)	Records at ADEM station LSCD-1 from 2019 show that the E. coli criterion was exceeded in 5 out of 12 samples.	ADEM 2019
AL03150106-0102-500	Mush Creek	Coosa	DeKalb	Pathogens (E. coli)	Records at ADEM station MUSD-2 from 2019 show that the E. coli criterion was exceeded in 4 out of 12 samples.	ADEM 2019
AL03150106-0507-102	Choccolocco Creek	Coosa	Calhoun	Pathogens (E. coli)	Records at ADEM station CHOC-10 from 2015-2020 show that the E. coli criterion was exceeded in 3 out of 15 samples.	ADEM 2015-2020
AL03150107-0907-500	Fourmile Creek	Coosa	Elmore	Pathogens (E. coli)	Records at ADEM station QFMC-1 from 2016 and 2019 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2016, 2019
AL03140302-0506-102	Patsaliga Creek	Escambia	Crenshaw Covington Montgomery	Pathogens (E. coli)	Records at ADEM station PALC-2 from 2015-2019 show that the E. coli criterion was exceeded in 3 out of 15 samples.	ADEM 2015-2019
AL03170008-0502-600	Boggy Branch	Escatawpa	Mobile	Pathogens (E. coli)	Records at ADEM station BGYM-1 from 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03170009-0102-200	Carls Creek	Escatawpa	Mobile	Pathogens (Enterococcus)	Records at ADEM station CRLM-1 from 2019 show that the enterococcus criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03170009-0103-600	Bayou Coden	Escatawpa	Mobile	Pathogens (Enterococcus)	Records at ADEM station BCDM-1 from 2019 show that the enterococcus criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03160204-0203-200	Negro Slough	Mobile	Baldwin	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station NGRB-1.	ADEM 2021
AL03160204-0203-900	Martin Branch	Mobile	Baldwin	Pathogens (E. coli)	Records at ADEM station MRTB-1 from 2020 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2020
AL03160204-0303-100	Chickasaw Creek	Mobile	Mobile	Pathogens (E. coli)	Records from 2019 at ADEM station CHIM-1 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2019

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03160204-0304-102	Eightmile Creek	Mobile	Mobile	Pathogens (Enterococcus)	Records at ADEM station EMCM-1 from 2019 show that the enterococcus criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03160204-0305-300	Hog Bayou	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station HB-1.	ADEM 2021
AL03160204-0401-100	Gunnison Creek	Mobile	Mobile	Pathogens (E. coli)	Records at ADEM station GNNM-1 from 2016 and 2019 show that the E. coli criterion was exceeded in 4 out of 12 samples.	ADEM 2016, 2019
AL03160204-0402-502	Norton Creek	Mobile	Mobile	Pathogens (Enterococcus)	Records at ADEM station BYSM-7 from 2019 show that the enterococcus criterion was exceeded in 3 out of 8 samples.	ADEM 2019
AL03160204-0402-600	Black Creek	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station BLKM-1.	ADEM 2021
AL03160205-0101-102	Dog River	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station DOGM-1.	ADEM 2021
AL03160205-0102-111	Halls Mill Creek	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station HMCM-1.	ADEM 2021
AL03160205-0102-112	Halls Mill Creek	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station HMCM-1.	ADEM 2021
AL03160205-0103-401	Rabbit Creek	Mobile	Mobile	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station RBBM-1.	ADEM 2021
AL03140107-0204-201	Shelby Lake (Shelby Lakes)	Perdido	Baldwin	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station SHLB-1.	ADEM 2021
AL03140107-0204-202	Middle Lake (Shelby Lakes)	Perdido	Baldwin	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station SHLB-1.	ADEM 2021
AL03140107-0204-203	Little Lake (Shelby Lakes)	Perdido	Baldwin	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station SHLB-1.	ADEM 2021

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03150109-0203-200	Pigeonroost Creek	Tallapoosa	Chambers	Pathogens (E. coli)	Records at ADEM station PGRC-1 from 2019 show that E. coli criterion was exceeded in 3 out of 7 samples.	ADEM 2019
AL03150109-0405-102	Hillabee Creek	Tallapoosa	Tallapoosa	Pathogens (E. coli)	Records at ADEM station HILT-2 from 2017-2020 show that the E. coli criterion was exceeded in 4 out of 18 samples.	ADEM 2017-2020
AL03150109-0602-100	Blue Creek	Tallapoosa	Tallapoosa	Pathogens (E. coli)	Records at ADEM station BLCT-1 from 2020 show that the E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2020
AL03150109-0802-311	Coley Creek (Lake Martin)	Tallapoosa	Tallapoosa	Nutrients	Historical data collected by ADEM at Station MARE-7 indicates nutrient overenrichment is occurring within the Coley Creek embayment of Lake Martin. Nitrogen, phosphorus, and chlorophyll-a concentrations are well above similar embayments within Lake Martin. In 2018 and 2020, comparable nutrient analysis of growing season averages of Coley Creek embayment (Station MARE-7) to the Hillabee Creek embayment (Station MARE-6), total phosphorus and total nitrogen concentrations were 2.5 times higher and chlorophyll-a levels were almost 6 times higher in Coley Creek versus Hillabee Creek. Within that same period of record, maximum monthly chlorophyll-a concentrations of 29.4 ug/L versus 9.79 ug/L were reported at Coley Creek and Hillabee Creek embayments respectively.	ADEM 2015, 2018, 2020
AL03150109-0803-111	Elkahatchee Creek (Lake Martin)	Tallapoosa	Tallapoosa	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station MARE-8.	ADEM 2021
AL03150110-0202-300	Moores Mill Creek	Tallapoosa	Lee	Pathogens (E. coli)	Records at ADEM station MMLT-1A from 2020 show that E. coli criterion was exceeded in 4 out of 8 samples. Records at ADEM station MMLT-1C from 2020 show that E. coli criterion was exceeded in 3 out of 8 samples.	ADEM 2020

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL06030001-0203-101	Long Island Creek (Lake Guntersville)	Tennessee	Jackson	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GUNM-11.	ADEM 2021
AL06030001-0307-111	Crow Creek (Guntersville Lake)	Tennessee	Jackson	Organic enrichment (BOD)	Records at ADEM station GUNM-1 from 2015-2020 show that the dissolved oxygen criterion was exceeded in 7 out of 18 samples.	ADEM 2015-2020
AL06030002-0101-100	Hurricane Creek	Tennessee	Jackson	Pathogens (E. coli)	Records at ADEM station HURR-1 from 2015-2020 show that the E. coli criterion was exceeded in 15 out of 36 samples.	ADEM 2015-2020
AL06030002-0703-102	Limestone Creek	Tennessee	Limestone	Pathogens (E. coli)	Records at ADEM station LIML-300 from 2015-2019 show that the E. coli criterion was exceeded in 3 out of 15 samples.	ADEM 2015-2019
AL06030002-0906-102	Tennessee River (Wheeler Lake)	Tennessee	Madison Morgan	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station TENR-320.	ADEM 2021
AL06030002-1009-112	Elam Creek	Tennessee	Lawrence	Pathogens (E. coli)	Records at ADEM station ELML-1A from 2019 show that the E. coli criterion was exceeded in 2 out of 7 samples.	ADEM 2019
AL06030002-1013-900	Flat Creek	Tennessee	Lawrence	Pathogens (E. coli)	Records at ADEM station FLTL-1 from 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL06030002-1014-101	Flint Creek (Wheeler Lake)	Tennessee	Morgan	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station WHEL-6.	ADEM 2021
AL06030002-1014-102	Flint Creek (Wheeler Lake)	Tennessee	Morgan	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station WHEL-6.	ADEM 2021
AL06030002-1104-100	Fox Creek (Wheeler Lake)	Tennessee	Lawrence Morgan	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station WHEL-14.	ADEM 2021
AL06030005-0703-111	Spring Creek (Pickwick Lake)	Tennessee	Colbert	Pathogens (E. coli)	Records at ADEM station PICL-2 from 2015-2020 show that the E. coli criterion was exceeded in 2 out of 11 samples.	ADEM 2015-2020
AL06030005-0805-100	Little Bear Creek	Tennessee	Colbert	Pathogens (E. coli)	Records at ADEM station SBCC-1 from 2018 show that the E. coli criterion was exceeded in 2 out of 6 samples.	ADEM 2018

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL06030005-0807-100	Cane Creek	Tennessee	Colbert	Pathogens (E. coli)	Records at ADEM station CNEC-1 from 2020 show that the E. coli criterion was exceeded in 2 out of 7 samples.	ADEM 2020
AL06030005-0807-111	Cane Creek (Pickwick Lake)	Tennessee	Colbert	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station PICL-3.	ADEM 2021
AL06030005-1001-100	Bluff Creek	Tennessee	Lauderdale	Pathogens (E. coli)	Records at ADEM station BLFL-1 from 2020 show that the E. coli criterion was exceeded in 7 out of 8 samples.	ADEM 2020
AL06030005-1004-100	Tennessee River (Pickwick Lake)	Tennessee	Colbert Lauderdale	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station TENR-230.	ADEM 2021
AL06030006-0307-111	Bear Creek (Pickwick Lake)	Tennessee	Colbert	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station PICL-5.	ADEM 2021
AL03160103-0306-101	Buttahatchee River	Tombigbee	Lamar Marion	Pathogens (E. coli)	Records at ADEM station BUTL-2A from 2016-2019 show that the E. coli criterion was exceeded 6 out of 19 samples.	ADEM 2016-2019
AL03160105-0502-100	Magby Creek	Tombigbee	Pickens	Pathogens (E. coli)	Records at ADEM station MGBP-1A from 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2019
AL03160106-0203-100	Coal Fire Creek	Tombigbee	Fayette Lamar Pickens	Pathogens (E. coli)	Records at ADEM station CLFP-13 from 2019 show the E. coli criterion was exceeded in 5 out of 8 samples.	ADEM 2019
AL03160106-0607-111	Brush Creek (Demopolis Lake)	Tombigbee	Sumter	Pathogens (E. coli)	Records at ADEM station DEMS-6 from 2016 and 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016, 2019
AL03160106-0609-103	Tombigbee River (Gainesville Lake)	Tombigbee	Greene Sumter	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station GAIG-1.	ADEM 2021
AL03160201-0105-100	Powell Creek	Tombigbee	Marengo	Pathogens (E. coli)	Records at ADEM station PWLM-32 from 2019 show that the E. coli criterion was exceeded in 3 out of 13 samples. The E. coli geomean criterion was also exceeded in 2019.	ADEM 2019

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Addition to the List	Source / Date of Data
AL03160201-0408-102	Tombigbee River (Coffeeville Lake)	Tombigbee	Choctaw Marengo	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station COFC-15.	ADEM 2021
AL03160201-0408-104	Tombigbee River (Coffeeville Lake)	Tombigbee	Choctaw Marengo Sumter	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station COFC-15.	ADEM 2021
AL03160201-0506-111	Tuckabum Creek (Coffeeville Lake)	Tombigbee	Choctaw	Pathogens (E. coli)	Records at ADEM station COFC-6 from 2016 and 2019 show the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2016, 2019
AL03160201-0907-102	Tombigbee River (Coffeeville Lake)	Tombigbee	Choctaw Clarke Marengo	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station COFC-15.	ADEM 2021
AL03160201-0909-100	Tombigbee River (Coffeeville Lake)	Tombigbee	Choctaw Clarke	Metals (Mercury)	A fish consumption advisory issued by the Alabama Department of Public Health in 2021 based on records from ADEM station COFC-1.	ADEM 2021
AL03140103-0202-110	Hog Foot Creek	Yellow	Covington	Pathogens (E. coli)	Records at ADEM station HGFC-1 from 2019 show that the E. coli criterion was exceeded in 2 out of 8 samples.	ADEM 2019

Table 2
Alabama's 2022 §303(d) List
Waterbody/Pollutants Removed from the 2020 List

The waterbody/pollutant combinations in the following table are currently listed on Alabama's 2020 §303(d) List and are proposed for removal from Alabama's 2022 §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 2022 Integrated Water Quality Report.

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
AL03150201-1006-101	Mulberry Creek	Alabama	Autauga Dallas	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/2021.
AL03160109-0503-100	Wolf Creek	Black Warrior	Fayette Walker	Siltation	Available data for Wolf Creek indicates that impairment for Siltation 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).
AL03160110-0401-100	Blevens Creek	Black Warrior	Cullman Winston	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03150202-0503-102	Cahaba River	Cahaba	Bibb Perry	Pathogens (E. coli)	Available data for the Cahaba River indicates that impairment for Pathogens (E. coli) 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).
AL03130003-1204-100	South Fork Cowikee Creek	Chattahoochee	Barbour Bullock	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03140201-0406-100	West Fork Choctawhatchee River	Choctawhatchee	Barbour Dale	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03140201-0407-101	West Fork Choctawhatchee River	Choctawhatchee	Dale	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03140201-0407-102	West Fork Choctawhatchee River	Choctawhatchee	Dale	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03140202-0505-100	Pea River	Choctawhatchee	Coffee Dale	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
AL03150107-0405-100	Buxahatchee Creek	Coosa	Chilton Shelby	Pathogens (E. coli)	TMDL Approved by EPA on 08/11/20.
AL03170008-0502-600	Boggy Branch	Escatawpa	Mobile	Metals (Lead)	Available data for Boggy Branch indicates that impairment for Metals (Lead) 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).
AL03170008-0502-600	Boggy Branch	Escatawpa	Mobile	Metals (Iron)	Available data for Boggy Branch indicates that impairment for Metals (Iron) 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).
AL03150110-0603-102	Cubahatchee Creek	Tallapoosa	Bullock Macon	Siltation	Available data for Cubahatchee Creek indicates that impairment for Siltation 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).
AL03150110-0604-100	Cubahatchee Creek	Tallapoosa	Macon	Siltation	Available data for Cubahatchee Creek indicates that impairment for Siltation 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).
AL06030001-0205-102	Tennessee River (Lake Guntersville)	Tennessee	Jackson	Metals (Mercury)	Based on data from ADEM station TENR-408, 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 2021.
AL06030002-0505-111	Indian Creek (Wheeler Lake)	Tennessee	Madison	Nutrients	Indian Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-0606-111	Cotaco Creek (Wheeler Lake)	Tennessee	Morgan	Nutrients	Cotaco Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.

Appendix C

Assessment Unit	Waterbody Name	River Basin	County	Cause (Pollutant)	Good Cause Justification for Removal
AL06030002-1014-101	Flint Creek (Wheeler Lake)	Tennessee	Morgan	Nutrients	Flint Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1101-111	Swan Creek (Wheeler Lake)	Tennessee	Limestone	Nutrients	Swan Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1102-211	Bakers Creek (Wheeler Lake)	Tennessee	Limestone	Nutrients	Bakers Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1102-311	Dry Branch (Wheeler Lake)	Tennessee	Limestone	Nutrients	Dry Branch (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1103-111	Round Island Creek (Wheeler Lake)	Tennessee	Limestone	Nutrients	Round Island Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1201-111	Spring Creek (Wheeler Lake)	Tennessee	Lawrence	Nutrients	Spring Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL06030002-1204-101	Second Creek (Wheeler Lake)	Tennessee	Lauderdale	Nutrients	Second Creek (Wheeler Lake) was inadvertently added to the 2016 list for nutrients after it was split from the mainstem reservoir as part of the Reservoir Embayment Project.
AL03160105-0101-102	Luxapallila Creek	Tombigbee	Marion	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03160105-0201-103	Luxapallila Creek	Tombigbee	Fayette Marion	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03160105-0204-102	Luxapallila Creek	Tombigbee	Fayette Lamar	Pathogens (E. coli)	TMDL Approved by EPA on 08/23/21.
AL03160203-0205-100	Salitpa Creek	Tombigbee	Clarke	Pathogens (E. coli)	TMDL Approved by EPA on 08/11/20.

Table 3
List of Other Changes Appearing on Alabama's 2022 §303(d) List

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03160110-0507-111	Sipsey Fork	Black Warrior	Walker	Assessment Units AL03160110-0507-111 and AL03160110-0507-112 were created from a split of Assessment Unit AL03160110-0507-101.
AL03160112-0503-100	Cottondale Creek	Black Warrior	Tuscaloosa	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03130002-0805-111	Chattahoochee River (West Point Lake)	Chattahoochee	Chambers	Assessment Units AL03130002-0805-111 and AL03130002-0808-111 were created from a split of Assessment Unit AL03130002-0808-101.
AL03130002-1109-111	Chattahoochee River (Lake Harding)	Chattahoochee	Lee	Assessment Units AL03130002-1109-111 and AL03130002-1109-112 were created from a split of Assessment Unit AL03130002-1109-101.
AL03130003-0605-100	Ihagee Creek	Chattahoochee	Russell	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03130003-0606-100	Chattahoochee River (Walter F George Lake)	Chattahoochee	Russell	Assessment Units AL03130003-0903-103, AL03130003-0606-100, and AL03130003-0606-200 were created from a split of Assessment Unit AL03130003-0903-102.
AL03130003-1312-100	White Oak Creek (Walter F George Lake)	Chattahoochee	Barbour Henry	Assessment Unit was created and assessed based on a fish consumption advisory issued by the Alabama Department of Public Health at ADEM station GEOH-14.
AL03130003-1600-400	Thomas Mill Creek (Walter F George Lake)	Chattahoochee	Henry	Assessment Unit was created and assessed based on a fish consumption advisory issued by the Alabama Department of Public Health at ADEM station GEOH-15.
AL03130004-0206-100	Bennett Mill Creek	Chattahoochee	Henry	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03130012-0203-110	Cowarts Creek	Chipola	Houston	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03140202-0702-110	Flat Creek	Choctawhatchee	Coffee Covington Geneva	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03140203-0201-100	Wrights Creek	Choctawhatchee	Geneva	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03150106-0103-100	Big Wills Creek	Coosa	DeKalb Etowah	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03150106-0107-111	Black Creek (Neely Henry Lake)	Coosa	Etowah	The priority ranking for Nutrients on this Assessment Unit has been changed to Medium.

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03150106-0108-102	Big Wills Creek	Coosa	Etowah	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03150106-0108-111	Big Wills Creek (Neely Henry Lake)	Coosa	Etowah	The priority ranking for Nutrients on this Assessment Unit has been changed to Medium.
AL03150107-0104-100	Shirtee Creek	Coosa	Talladega	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03150107-0106-100	Tallaseehatchee Creek	Coosa	Talladega	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03150107-0203-100	Weewoka Creek	Coosa	Talladega	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03160204-0203-200	Negro Slough	Mobile	Baldwin	Assessment Unit was created and assessed based on a fish consumption advisory issued by the Alabama Department of Public Health at ADEM station NGRB-1.
AL03160204-0402-600	Black Creek	Mobile	Mobile	Assessment Unit was created and assessed based on a fish consumption advisory issued by the Alabama Department of Public Health at ADEM station BLKM-1.
AL03160204-0505-501	D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation on this Assessment Unit has been changed to Low.
AL03160204-0505-502	D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation on this Assessment Unit has been changed to Low.
AL03160204-0505-505	UT to D'Olive Creek	Mobile	Baldwin	The priority ranking for Siltation on this Assessment Unit has been changed to Low.
AL03160204-0505-900	Tiawasee Creek	Mobile	Baldwin	The priority ranking for Siltation on this Assessment Unit has been changed to Low.
AL03160204-0505-905	UT to Tiawasee Creek	Mobile	Baldwin	The priority ranking for Siltation on this Assessment Unit has been changed to Low.
AL03160205-0102-111	Halls Mill Creek	Mobile	Mobile	Assessment Units AL03160205-0102-111 and AL03160205-0102-112 were created from a split of Assessment Unit AL03160205-0102-110.
AL03160205-0102-112	Halls Mill Creek	Mobile	Mobile	Assessment Units AL03160205-0102-111 and AL03160205-0102-112 were created from a split of Assessment Unit AL03160205-0102-110.
AL03140106-0302-202	Boggy Branch	Perdido	Escambia	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03140106-0302-203	Boggy Branch	Perdido	Escambia	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL03140107-0204-201	Shelby Lake (Shelby Lakes)	Perdido	Baldwin	Assessment Units AL03140107-0204-201, AL03140107-0204-202, and AL03140107-0204-203 were created from a split of Assessment Unit AL03140107-0204-200.

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03140107-0204-202	Middle Lake (Shelby Lakes)	Perdido	Baldwin	Assessment Units AL03140107-0204-201, AL03140107-0204-202, and AL03140107-0204-203 were created from a split of Assessment Unit AL03140107-0204-200.
AL03140107-0204-203	Little Lake (Shelby Lakes)	Perdido	Baldwin	Assessment Units AL03140107-0204-201, AL03140107-0204-202, and AL03140107-0204-203 were created from a split of Assessment Unit AL03140107-0204-200.
AL06030002-0201-100	Clear Creek	Tennessee	Jackson	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL06030002-0403-302	Chase Creek	Tennessee	Madison	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL06030002-0501-110	Indian Creek	Tennessee	Madison	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL06030002-0505-102	Indian Creek	Tennessee	Madison	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to High.
AL06030002-0902-100	Tennessee River (Wheeler Lake)	Tennessee	Madison Marshall	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-0904-100	Tennessee River (Wheeler Lake)	Tennessee	Madison Marshall Morgan	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-0906-102	Tennessee River (Wheeler Lake)	Tennessee	Madison Marshall	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-1102-102	Tennessee River (Wheeler Lake)	Tennessee	Limestone Morgan	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-1102-103	Tennessee River (Wheeler Lake)	Tennessee	Limestone Madison Morgan	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-1104-100	Fox Creek (Wheeler Lake)	Tennessee	Lawrence Morgan	Assessment Units AL06030002-1104-100 and AL06030002-1107-103 were created from a split of Assessment Unit AL06030002-1107-102.
AL06030002-1107-103	Tennessee River (Wheeler Lake)	Tennessee	Lawrence Limestone Morgan	Assessment Units AL06030002-1104-100 and AL06030002-1107-103 were created from a split of Assessment Unit AL06030002-1107-102.
AL06030002-1107-103	Tennessee River (Wheeler Lake)	Tennessee	Lawrence Limestone Morgan	The priority ranking for Nutrients on this Assessment Unit has been changed to High.
AL06030002-1205-100	Tennessee River (Wheeler Lake)	Tennessee	Lawrence Lauderdale Limestone	The priority ranking for Nutrients on this Assessment Unit has been changed to High.

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL06030005-1004-100	Tennessee River (Pickwick Lake)	Tennessee	Colbert Lauderdale	Assessment Units AL06030005-1004-100, AL06030005-1004-200, and AL06030005-1203-101 were created from a split of Assessment Unit AL06030005-1203-100.
AL03160106-0504-100	Bogue Chitto	Tombigbee	Pickens	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03160106-0609-103	Tombigbee River (Gainesville Lake)	Tombigbee	Greene Sumter	Assessment Units AL03160106-0609-103 and AL03160106-0603-100 were created from a split of Assessment Unit AL03160106-0609-102.
AL03160108-1005-100	Bodka Creek	Tombigbee	Sumter	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03160108-1102-100	Noxubee River	Tombigbee	Sumter	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03160201-0504-200	Clear Creek	Tombigbee	Choctaw	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.
AL03160201-0604-100	Horse Creek	Tombigbee	Marengo Clarke	The priority ranking for Pathogens (E. coli) on this Assessment Unit has been changed to Medium.

Table 4
Additional Revisions made between the Draft 2022 §303(d) List and the Final 2022 §303(d) List

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03150201-1203-100	Soapstone Creek	Alabama	Dallas Lowndes	The county was updated to include Lowndes.
AL03150204-0405-102	Alabama River	Alabama	Clarke Monroe	This Assessment Unit was replaced with AU AL03150204-0405-103 and inadvertently listed on the 2022 draft 303(d) list.
AL03150204-0405-103	Alabama River	Alabama	Clarke Monroe	Upstream location changed from “River Mile 75” to “Claiborne Lock and Dam,” and the size was changed from 20.00 miles to 17.50 miles.
AL03160110-0505-103	Ryan Creek (Smith Lake)	Black Warrior	Cullman	Upstream location was incorrectly listed on the 2022 draft 303(d) list as “Coon Creek / Rock Creek.” It has been changed to “Coon Creek / end of embayment.”
AL03150202-0103-103	Little Cahaba River	Cahaba	Jefferson St. Clair	The county was updated to include St. Clair.
AL03140201-0501-201	Beaver Creek	Choctawhatchee	Houston	The source for the Pathogen (E. coli) impairment was updated to include Urban runoff/storm sewer.
AL03140201-0501-202	Beaver Creek	Choctawhatchee	Houston	The source for the Pathogen (E. coli) impairment was updated to include Urban runoff/storm sewer.
AL03140202-0301-200	Buckhorn Creek	Choctawhatchee	Bullock Pike	The county was updated to include Bullock.
AL03150106-0307-101	Beaver Creek	Coosa	St. Clair	Downstream and upstream locations were incorrectly listed on the 2022 draft 303(d) list as “St. Clair County Road 26 / Beaver Creek (Neely Henry Lake).” It has been changed to “Beaver Creek (Neely Henry Lake) / St. Clair County Road 26.”
AL03150106-0405-100	Ohatchee Creek	Coosa	Calhoun Etowah	The county was updated to include Etowah.
AL03150107-0603-110	Weogufka Creek	Coosa	Clay Coosa Talladega	The county was updated to include Talladega.
AL03140302-0506-102	Patsaliga Creek	Escambia	Crenshaw Covington Montgomery Pike	The county was updated to include Pike.

Assessment Unit ID	Waterbody Name	River Basin	County	Revision
AL03140303-0704-100	Sepulga River	Escambia	Conecuh Escambia	The county was updated to include Escambia.
AL03170008-0402-110	Escatawpa River	Escatawpa	Mobile Washington	The county was updated to include Washington.
AL03160204-0303-100	Chickasaw Creek	Mobile	Mobile	The source for the Pathogen (E. coli) impairment was updated to include Urban runoff/storm sewer.
AL03160205-0300-102	Mobile Bay	Mobile	Baldwin Mobile	The county was updated to include Baldwin.
AL03150109-0105-102	Tallapoosa River (R L Harris Lake)	Tallapoosa	Clay Randolph	The county was updated to include Clay.
AL03150109-0802-311	Coley Creek (Lake Martin)	Tallapoosa	Tallapoosa	The source for the Pathogen (E. coli) impairment was updated to include Urban runoff/storm sewer.
AL03150110-0202-300	Moores Mill Creek	Tallapoosa	Lee	The source for the Pathogen (E. coli) impairment was updated to include Urban runoff/storm sewer.
AL06030001-0801-100	Cross Creek	Tennessee	DeKalb Marshall	The county was updated to include Marshall.
AL06030001-0904-102	Browns Creek	Tennessee	Blount Marshall	The county was updated to include Blount.
AL06030005-1001-100	Bluff Creek	Tennessee	Lauderdale	The source for the Pathogen (E. coli) impairment was changed from “Agriculture” to “Pasture grazing.”
AL03160106-0607-111	Brush Creek (Demopolis Lake)	Tombigbee	Greene	The county was changed from “Sumter” to “Greene.”
AL03160201-0504-200	Clear Creek	Tombigbee	Choctaw Sumter	The county was updated to include Sumter.

Table 5
Assessment Units listed in Category 4a

Assessment Unit ID	Waterbody Name	River Basin	County	Action
AL03150201-1002-100	Little Mulberry Creek	Alabama	Chilton	The impairment for Pathogens (E. coli) is already addressed in the Mulberry Creek Pathogens TMDL.
AL03150201-1006-102	Mulberry Creek	Alabama	Autauga Dallas Chilton	The impairment for Pathogens (E. coli) is already addressed in the Mulberry Creek Pathogens TMDL.
AL03150203-0802-111	Pursley Creek (Claiborne Lake)	Alabama	Wilcox	The impairment for Pathogens (E. coli) is already addressed in the Pursley Creek pathogens TMDL.
AL03150202-0203-111	Buck Creek	Cahaba	Shelby	The impairment for Pathogens (E. coli) is already addressed in the Buck Creek pathogens TMDL.
AL03150105-0605-101	Chattooga River (Weiss Lake)	Coosa	Cherokee	The impairment for Nutrients is already addressed in the Weiss Lake Nutrients TMDL.
AL03150110-0102-710	UT to Pepperell Branch	Tallapoosa	Lee	The impairment for Pathogens (E. coli) is already addressed in the Pepperell Branch pathogens TMDL.
AL03160201-0904-111	Wahalak Creek (Coffeeville Lake)	Tombigbee	Choctaw	The impairment for Pathogens (E. coli) is already addressed in the Wahalak Creek pathogens TMDL.

Appendix A
Public Notice

Public Notice – 214

Alabama Department of Environmental Management

Notice of Availability of the Proposed Section 303(d) List of Impaired Waters for 2022

State of Alabama

Section 303(d) of the Clean Water Act requires that each state identify those waters within its boundaries for which controls of pollutant sources are not stringent enough to implement water quality standards applicable to such waters. In addition, each State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. For each waterbody identified on the list, the state is required to establish a total maximum daily load (TMDL) for each pollutant at a level necessary to implement applicable water quality standards.

The Alabama Department of Environmental Management (ADEM) has developed the Draft 2022 Section 303(d) List and is now making it available for public review and comment. Electronic copies of the Draft List and Fact Sheet are available on the ADEM web site at the following address: http://adem.alabama.gov/newsEvents/publicNotices.cnt. Copies of the Draft List and Fact Sheet may also be obtained by contacting ADEM at the address or e-mail address below.

Written submissions and new information regarding the Draft 2022 Section 303(d) List should be directed 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) or by email at jtr@adem.alabama.gov. **Comments must be received by the Department prior to 5:00 P.M. on March 1, 2022.**

This notice is hereby given this **30th day of January 2022** by authority of ADEM.

Original signed by
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 2022 §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	M
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
AL03150201-0407-100	Pintlala Creek	R	Alabama	Lowndes Montgomery	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	23.65	miles	Woodruff Lake / Pinchony Creek	2022	L
AL03150201-0601-100	Swift Creek	R	Alabama	Autauga Chilton	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.55	miles	Autauga County Road 24 / Its source	2020	L
AL03150201-1203-100	Soapstone Creek	R	Alabama	Dallas Lowndes	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	17.52	miles	Alabama River / Its source	2022	L
AL03150201-1207-301	Sixmile Creek	R	Alabama	Dallas	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1.23	miles	Alabama River / Fourmile Creek	2012	L
AL03150203-0101-100	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
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	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
AL03150203-0110-100	Bogue Chitto Creek	R	Alabama	Dallas Perry	Fish & Wildlife	Siltation	Agriculture Pasture grazing	60.49	miles	Dannelly Lake / Its source	2010	L
AL03150203-0209-100	Cedar Creek	R	Alabama	Butler Dallas Wilcox	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	64.46	miles	Alabama River / Its source	2022	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
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
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
AL03150204-0303-110	Double Bridges Creek	R	Alabama	Monroe	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Collection system failure	7.37	miles	Limestone Creek / Its source	2022	L
AL03150204-0405-103	Alabama River	R	Alabama	Clarke Monroe	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	17.50	miles	River Mile 55 / Claiborne Lock and Dam	2020	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
AL03160109-0104-102	Eightmile Creek (Lake Catoma)	L	Black Warrior	Cullman	Public Water Supply	Metals (Mercury)	Atmospheric deposition	527.25	acres	Lake Catoma Dam / Moody Branch	2022	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
AL03160109-0203-101	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
AL03160109-0205-100	Mulberry Fork	R	Black Warrior	Blount Cullman	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	9.06	miles	Blount County Road 17 / Marriott Creek	2020	L
AL03160109-0306-100	Spring Creek	R	Black Warrior	Walker	Fish & Wildlife	Total Dissolved Solids	Surface mining Surface mining-abandoned	7.90	miles	Blackwater Creek / Its source	2020	L
AL03160109-0601-102	Cane Creek	R	Black Warrior	Walker	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.34	miles	Town Creek / Its source	2020	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160109-0601-902	Town Creek	R	Black Warrior	Walker	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewer	6.27	miles	100 yards upstream of Southern Railway crossing / Its source	2020	L
AL03160109-0602-601	Old Town Creek	R	Black Warrior	Walker	Fish & Wildlife	Pathogens (E. coli)	Pasture Grazing	2.71	miles	Mulberry Fork / Pinhook Creek	2022	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
AL03160110-0203-110	Inman Creek	R	Black Warrior	Winston	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.79	miles	Brushy Creek / Its source	2020	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 / end of embayment	2010	L
AL03160110-0507-111	Sipsey Fork	R	Black Warrior	Walker	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.07	miles	Mulberry Fork / Wilson Branch	2022	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
AL03160111-0204-200	Brasher Creek	R	Black Warrior	Blount	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	5.09	miles	Blackburn Fork (Highland Lake) / Its source	2020	L
AL03160111-0204-200	Brasher Creek	R	Black Warrior	Blount	Fish & Wildlife	Total Dissolved Solids	Surface mining-abandoned	5.09	miles	Blackburn Fork (Highland Lake) / Its source	2020	L
AL03160111-0204-300	Sand Creek	R	Black Warrior	Blount	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	4.14	miles	Blackburn Fork (Highland Lake) / Its source	2020	L
AL03160111-0407-101	Fivemile Creek	R	Black Warrior	Jefferson	Swimming Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	7.54	miles	Locust Fork / Old Jasper Highway	2022	L
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
AL03160112-0105-101	Mud Creek	R	Black Warrior	Jefferson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	14.12	miles	Valley Creek / Big Branch	2020	L
AL03160112-0105-102	Mud Creek	R	Black Warrior	Jefferson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	7.70	miles	Big Branch / Its source	2020	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	M
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
AL03160112-0410-111	Binion Creek (Lake Tuscaloosa)	L	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	305.18	acres	North River / end of embayment	2010	L
AL03160112-0411-101	North River (Lake Tuscaloosa)	L	Black Warrior	Tuscaloosa	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	968.62	acres	Binion Creek / extent of reservoir	2010	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
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
AL03160112-0503-100	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	H
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	Nutrients	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	Organic enrichment (BOD)	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	Siltation	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
AL03150202-0103-102	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
AL03150202-0103-103	Little Cahaba River	R	Cahaba	Jefferson St. Clair	Fish & Wildlife	Total dissolved solids	Industrial	13.75	miles	Lake Purdy / Its source	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
AL03150202-0503-102	Cahaba River	R	Cahaba	Bibb	Outstanding Alabama Water Swimming	Metals (Mercury)	Atmospheric deposition	10.58	miles	Alabama Highway 82 / lower Little Cahaba River	2020	L
AL03150202-0505-100	Affonee Creek	R	Cahaba	Bibb	Swimming	Pathogens (E. coli)	Pasture grazing	18.51	miles	Cahaba River / Its source	2018	L
AL03150202-0506-100	Cahaba River	R	Cahaba	Bibb Perry	Outstanding Alabama Water Swimming	Metals (Mercury)	Atmospheric deposition	21.76	miles	Blue Girth Creek / Alabama Highway 82	2020	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
AL03150202-0602-200	Old Town Creek	R	Cahaba	Perry	Swimming	Pathogens (E. coli)	Pasture grazing	12.66	miles	Cahaba River / Its source	2022	L
AL03150202-0701-100	Rice Creek	R	Cahaba	Perry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	14.87	miles	Cahaba River / Its source	2022	L
AL03150202-0702-100	Cahaba River	R	Cahaba	Perry	Outstanding Alabama Water Swimming	Metals (Mercury)	Atmospheric deposition	27.25	miles	Waters Creek / Blue Girth Creek	2020	L
AL03150202-0702-210	Waters Creek	R	Cahaba	Perry	Swimming	Pathogens (E. coli)	Pasture grazing	9.93	miles	Cahaba River / Its source	2022	L
AL03150202-0805-100	Oakmulgee Creek	R	Cahaba	Bibb Chilton Dallas Perry	Swimming	Pathogens (E. coli)	Pasture grazing	56.67	miles	Cahaba River / Its source	2022	L
AL03150202-0901-100	Childers Creek	R	Cahaba	Dallas	Fish & Wildlife	Siltation	Pasture grazing	18.79	miles	Cahaba River / Its source	2006	L
AL03130002-0805-111	Chattahoochee River (West Point Lake)	L	Chattahoochee	Chambers	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	254.25	acres	Alabama-Georgia state line / Approximately 1/2 mile upstream of Stroud Creek and Veasey Creek confluence	2022	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
AL03130002-0907-100	Moores Creek	R	Chattahoochee	Chambers	Fish & Wildlife	Siltation	Land development	11.40	miles	Chattahoochee River / Its source	2012	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

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AL03130002-1105-111	Osanippa Creek (Lake Harding)	L	Chattahoochee	Lee	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	122.60	acres	Chattahoochee River / end of embayment	2022	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
AL03130002-1109-111	Chattahoochee River (Lake Harding)	L	Chattahoochee	Lee	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	514.22	acres	Bartletts Ferry Dam / Halawakee Creek	2022	L
AL03130003-0505-101	Uchee Creek	R	Chattahoochee	Russell	Swimming Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	8.96	miles	Chattahoochee River (Walter F. George Lake) / Russell County Road 39	2020	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	Russell 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	Pathogens (E. coli)	Collection system failure On-site wastewater systems Pasture grazing	15.73	miles	Chattahoochee River / Its source	2016	H
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
AL03130003-0606-100	Chattahoochee River (Walter F George Lake)	R	Chattahoochee	Russell	Fish & Wildlife	Metals (Mercury)	Atmospheric Deposition	165.36	acres	Snake Creek / Ihagee Creek	2022	L
AL03130003-0903-200	Cliatt Branch	R	Chattahoochee	Russell	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	6.27	miles	Chattahoochee River (Walter F George Lake) / Its source	2022	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
AL03130003-1301-100	Chewalla Creek	R	Chattahoochee	Barbour	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	13.50	miles	Walter F George Lake / Its source	2022	L
AL03130003-1307-100	Barbour Creek	R	Chattahoochee	Barbour	Fish & Wildlife	Siltation	Agriculture	18.77	miles	Walter F George Lake / Its source	1998	L
AL03130003-1307-111	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
AL03130003-1310-111	Cheneyhatchee Creek (Walter F George Lake)	L	Chattahoochee	Barbour	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	284.82	acres	Chattahoochee River / end of embayment	2022	L
AL03130003-1312-100	White Oak Creek (Walter F George Lake)	L	Chattahoochee	Barbour Henry	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	300.44	acres	Chattahoochee River (Walter F George Lake) / end of embayment	2022	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
AL03130003-1600-400	Thomas Mill Creek (Walter F George Lake)	L	Chattahoochee	Henry	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	168.08	acres	Chattahoochee River (Walter F George Lake) / end of embayment	2022	L
AL03130004-0206-100	Bennett Mill Creek	R	Chattahoochee	Henry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.88	miles	Chattahoochee River / Its source	2016	H
AL03130004-0403-110	Peterman Creek	R	Chattahoochee	Henry	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	12.43	miles	Abbie Creek / Its source	2016	L
AL03130004-0405-100	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
AL03130004-0602-500	Cedar Creek	R	Chattahoochee	Henry Houston	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.04	miles	Omusee Creek / Its source	2008	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
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

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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
AL03130012-0106-202	Boggy Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.72	miles	Cottondale WWTP / Its source	2022	L
AL03130012-0201-310	Webb Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	10.22	miles	Cowarts Creek / Its source	2020	L
AL03130012-0201-410	Cooper Creek	R	Chipola	Houston	Fish & Wildlife	Nutrients	Animal feeding operations Pasture grazing	3.13	miles	Cowarts Creek / Its source	2020	L
AL03130012-0201-410	Cooper Creek	R	Chipola	Houston	Fish & Wildlife	Organic enrichment (BOD)	Animal feeding operations Pasture grazing	3.13	miles	Cowarts Creek / Its source	2020	L
AL03130012-0201-410	Cooper Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	3.13	miles	Cowarts Creek / Its source	2020	L
AL03130012-0202-100	Rocky Creek	R	Chipola	Houston	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	11.70	miles	Cowarts Creek / Its source	2020	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	H
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
AL03140201-0304-110	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
AL03140201-0401-100	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
AL03140201-0403-110	Sikes Creek	R	Choctawhatchee	Barbour Dale	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	13.07	miles	West Fork Choctawhatchee River / Its source	2020	L
AL03140201-0405-100	Bear Creek	R	Choctawhatchee	Barbour Dale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Animal Holding/Management Areas	11.98	miles	West Fork Choctawhatchee River / Its source	2022	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
AL03140201-0501-201	Beaver Creek	R	Choctawhatchee	Houston	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewer	2.09	miles	Newton Creek / Dothan WWTP	2022	L
AL03140201-0501-202	Beaver Creek	R	Choctawhatchee	Houston	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewer	4.54	miles	Dothan WWTP / Its source	2022	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
AL03140201-0701-101	Little Claybank Creek	R	Choctawhatchee	Dale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	8.54	miles	Claybank Creek / Its source	2022	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
AL03140201-0901-100	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
AL03140201-1001-300	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

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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
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
AL03140201-1102-500	Blanket Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.71	miles	Double Bridges Creek / Its source	2022	L
AL03140201-1104-100	Double Bridges Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	15.14	miles	Coffee County Road 655 / Its source	2020	L
AL03140201-1201-100	Wilkerson Creek	R	Choctawhatchee	Coffee Geneva	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	9.29	miles	Choctawhatchee River / Its source	2022	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
AL03140201-1203-101	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
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
AL03140202-0301-200	Buckhorn Creek	R	Choctawhatchee	Bullock Pike	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	15.97	miles	Pea River / Its source	2016	L
AL03140202-0401-102	Walnut Creek	R	Choctawhatchee	Pike	Fish & Wildlife	Metals (Thallium)	Industrial	3.30	miles	Pike County Road 3304 / US Highway 231	2022	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
AL03140202-0505-200	Halls Creek	R	Choctawhatchee	Coffee	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	5.54	miles	Pea River / Its source	2018	L
AL03140202-0506-100	Pea River	R	Choctawhatchee	Coffee	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.08	miles	Red Oak Creek / Halls Creek	2020	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
AL03140202-0603-101	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
AL03140202-0608-100	Holley Mill Creek	R	Choctawhatchee	Coffee Geneva	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Animal feeding operations	4.66	miles	Pea River / Its source	2022	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	H
AL03140202-0906-101	Pea River	R	Choctawhatchee	Geneva	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	3.87	miles	Choctawhatchee River / Laddon Creek	2010	L
AL03140202-0906-102	Pea River	R	Choctawhatchee	Geneva	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	7.36	miles	Laddon Creek / AL-FL state line	2020	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	H
AL03150105-0901-200	Marys Creek	R	Coosa	Cleburne	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.91	miles	South Fork Terrapin Creek / Its source	2020	L
AL03150105-0906-102	Terrapin Creek	R	Coosa	Calhoun	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Pasture Grazing	3.58	miles	US Hwy 278 / Calhoun County Road 70	2020	L
AL03150105-0906-200	Ladiga Creek	R	Coosa	Calhoun	Public Water Supply	Pathogens (E. coli)	Pasture grazing	2.91	miles	Terrapin Creek / Terrapin Creek	2020	L
AL03150105-0908-102	Terrapin Creek	R	Coosa	Calhoun Cherokee	Fish & Wildlife	Pathogens (E. coli)	Pasture Grazing	2.92	miles	Cherokee County Road 8 / US Highway 278	2020	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03150105-0909-101	Terrapin Creek	R	Coosa	Cherokee	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	20.65	miles	Coosa River / Cherokee County Road 8	2020	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
AL03150106-0102-100	Jacks Creek	R	Coosa	DeKalb	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.02	miles	Big Wills Creek / Its source	2022	L
AL03150106-0102-200	Little Wills Valley Branch	R	Coosa	DeKalb	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.80	miles	Big Wills Creek / Its source	2022	L
AL03150106-0102-400	Little Sand Valley Creek	R	Coosa	DeKalb	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	8.71	miles	Big Wills Creek / Its source	2022	L
AL03150106-0102-500	Mush Creek	R	Coosa	DeKalb	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.31	miles	Big Wills Creek / Its source	2022	L
AL03150106-0103-100	Big Wills Creek	R	Coosa	DeKalb Etowah	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	M
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	M
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	M
AL03150106-0108-111	Big Wills Creek (Neely Henry Lake)	L	Coosa	Etowah	Fish & Wildlife	Nutrients	Agriculture Industrial Municipal	514.85	acres	US Highway 411 / end of embayment	2018	M
AL03150106-0307-101	Beaver Creek	R	Coosa	St. Clair	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	9.98	miles	Beaver Creek (Neely Henry Lake) / St. Clair County Road 26	2020	L
AL03150106-0405-100	Ohatchee Creek	R	Coosa	Calhoun Etowah	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	23.09	miles	Tallasseehatchee Creek / Its source	2020	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
AL03150106-0408-111	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	*
AL03150106-0504-101	Choccolocco Creek	R	Coosa	Calhoun	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	8.18	miles	Hillabee Creek / Egoniaga Creek	2020	L
AL03150106-0504-102	Choccolocco Creek	R	Coosa	Calhoun Cleburne	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	29.96	miles	Egoniaga Creek / Its source	2020	L
AL03150106-0505-100	UT to Choccolocco Creek	R	Coosa	Calhoun	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewer	5.59	miles	Choccolocco Creek / Its source	2020	L
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	Pathogens (E. coli)	Pasture grazing	2.37	miles	UT from Boiling Spring / Hillabee Creek	2022	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	*
AL03150106-0514-100	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	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	Priority organics (PCBs)	Contaminated sediments	33.03	miles	Logan Martin Lake / UT from Boiling Spring	1996	*
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	*
AL03150106-0602-100	Broken Arrow Creek	R	Coosa	St. Clair	Fish & Wildlife	Siltation	Agriculture Pasture grazing	21.37	miles	Coosa River / Its source	2010	L
AL03150106-0603-111	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	*
AL03150106-0604-111	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	*
AL03150106-0605-211	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	*

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03150106-0611-100	Eastaboga Creek	R	Coosa	Calhoun Talladega	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewer	6.85	miles	Choccolocco Creek / Its source	2020	L
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
AL03150106-0703-111	Talladega Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Priority organics (PCBs)	Contaminated sediments	60.66	acres	Coosa River / end of embayment	1996	*
AL03150106-0802-111	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	*
AL03150106-0803-100	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	*
AL03150106-0803-311	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	*
AL03150106-0806-100	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
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
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	*
AL03150106-0810-102	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
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	*
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	M
AL03150107-0104-100	Shirtee Creek	R	Coosa	Talladega	Fish & Wildlife	Total dissolved solids	Industrial Municipal	4.67	miles	Tallaseehatchee Creek / Its source	2010	H
AL03150107-0106-100	Tallaseehatchee Creek	R	Coosa	Talladega	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	16.74	miles	Lay Lake / Howard dam	2018	M
AL03150107-0106-100	Tallaseehatchee Creek	R	Coosa	Talladega	Fish & Wildlife	Total dissolved solids	Industrial Municipal	16.74	miles	Lay Lake / Howard dam	2010	H
AL03150107-0106-111	Tallaseehatchee Creek (Lay Lake)	L	Coosa	Talladega	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	13.46	acres	Coosa River / end of embayment	2010	L
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	*
AL03150107-0203-100	Weewoka Creek	R	Coosa	Talladega	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	18.32	miles	Tallaseehatchee Creek / Its source	2018	M
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	*
AL03150107-0301-102	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
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	*
AL03150107-0304-111	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	*
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
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	*

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
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	*
AL03150107-0603-110	Weogufka Creek	R	Coosa	Clay Coosa Talladega	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	45.16	miles	Hatchet Creek (Mitchell Lake) / Its source	2020	L
AL03150107-0706-102	Hatchet Creek	R	Coosa	Clay Coosa	Outstanding Alabama Water Public Water Supply Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	18.87	miles	Wildcat Creek / Its source	2020	L
AL03150107-0709-100	Hatchet Creek	R	Coosa	Coosa	Outstanding Alabama Water Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	35.47	miles	Coosa River (Mitchell Lake) / Wildcat Creek	2020	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
AL03150107-0907-500	Fourmile Creek	R	Coosa	Elmore	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.67	miles	Taylor Creek / Its source	2022	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
AL03140302-0303-100	Little Patsaliga Creek	R	Escambia	Crenshaw	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	32.00	miles	Patsaliga Creek / Its source	2020	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
AL03140302-0506-102	Patsaliga Creek	R	Escambia	Crenshaw Covington Montgomery Pike	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	83.17	miles	Buck Creek / Its source	2022	L
AL03140303-0204-102	Persimmon Creek	R	Escambia	Butler	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	25.17	miles	Panther Creek / Hawkins Creek	2020	L
AL03140303-0704-100	Sepulga River	R	Escambia	Conecuh Escambia	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
AL03140304-0305-101	Burnt Corn Creek	R	Escambia	Escambia	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.03	miles	Murder Creek / Sevenmile Creek	2010	L
AL03140304-0404-101	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
AL03140304-0506-100	Conecuh River	R	Escambia	Escambia	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	12.70	miles	AL-FL state line / Mantle Branch	2004	L
AL03140304-0506-300	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
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
AL03170008-0205-101	Puppy Creek	R	Escatawpa	Mobile	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.68	miles	Escatawpa River / Alabama Highway 217	2020	L
AL03170008-0402-110	Escatawpa River	R	Escatawpa	Mobile Washington	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

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
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	Pathogens (E. coli)	Pasture grazing	3.62	miles	Big Creek Lake / Its source	2022	L
AL03170008-0502-800	Collins Creek	R	Escatawpa	Mobile	Fish & Wildlife	Metals (Arsenic)	Unknown source	5.15	miles	Big Creek / Its source	2006	L
AL03170009-0102-200	Carls Creek	R	Escatawpa	Mobile	Fish & Wildlife	Pathogens (Enterococcus)	Pasture grazing	2.93	miles	Bayou la Batre / Its source	2022	L
AL03170009-0103-600	Bayou Coden	R	Escatawpa	Mobile	Fish & Wildlife	Pathogens (Enterococcus)	Pasture grazing	2.30	miles	Portersville Bay / Its source	2022	L
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
AL03160204-0103-100	Mobile River	R	Mobile	Baldwin Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.72	miles	Tensaw River / Its source	2014	L
AL03160204-0104-100	Halls Creek	R	Mobile	Baldwin	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	11.93	miles	Tensaw Lake / Its source	2020	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
AL03160204-0106-103	Mobile River	R	Mobile	Mobile	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	10.29	miles	Barry Steam Plant/ Tensaw River	2020	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
AL03160204-0202-200	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
AL03160204-0203-200	Negro Slough	R	Mobile	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	3.17	miles	Tensaw River / Its source	2022	L
AL03160204-0203-900	Martin Branch	R	Mobile	Baldwin	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	5.52	miles	Red Hill Creek / Its source	2022	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
AL03160204-0303-100	Chickasaw Creek	R	Mobile	Mobile	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Urban runoff/storm sewer	26.82	miles	Mobile College / Its source	2022	L
AL03160204-0304-102	Eightmile Creek	R	Mobile	Mobile	Public Water Supply Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure	1.73	miles	City of Prichard's water supply intake / US Highway 45	2022	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
AL03160204-0305-300	Hog Bayou	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	0.85	miles	Chickasaw Creek / Its source	2022	L
AL03160204-0401-100	Gunnison Creek	R	Mobile	Mobile	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	7.62	miles	Bayou Sara / Its source	2022	L
AL03160204-0402-102	Bayou Sara	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.76	miles	Gunnison Creek / Norton Creek	2020	L
AL03160204-0402-103	Bayou Sara	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1.26	miles	Norton Creek / US Highway 43	2020	L
AL03160204-0402-501	Norton Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	0.95	miles	Bayou Sara / Saraland WWTP	2020	L
AL03160204-0402-502	Norton Creek	R	Mobile	Mobile	Fish & Wildlife	Pathogens (Enterococcus)	Pasture grazing	3.74	miles	Saraland WWTP / Its source	2022	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160204-0402-600	Black Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	3.19	miles	Bayou Sara / Its source	2022	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
AL03160204-0503-102	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	L
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
AL03160204-0505-502	D'Olive Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	4.57	miles	Lake Forest dam / Its source	2008	L
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	L
AL03160204-0505-900	Tiawasee Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	3.54	miles	D'Olive Creek / Its source	2008	L
AL03160204-0505-905	UT to Tiawasee Creek	R	Mobile	Baldwin	Fish & Wildlife	Siltation	Land development	1.87	miles	Tiawasee Creek / Its source	2008	L
AL03160205-0101-102	Dog River	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.50	miles	Moore Creek / Its source	2022	L
AL03160205-0102-111	Halls Mill Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.69	miles	Dog River / 4 miles upstream of Dog River	2022	L
AL03160205-0102-111	Halls Mill Creek	R	Mobile	Mobile	Fish & Wildlife	Siltation	Land development	4.69	miles	Dog River / 4 miles upstream of Dog River	2012	L
AL03160205-0102-112	Halls Mill Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	6.62	miles	4 miles upstream of Dog River / Its source	2022	L
AL03160205-0102-112	Halls Mill Creek	R	Mobile	Mobile	Fish & Wildlife	Siltation	Land development	6.62	miles	4 miles upstream of Dog River / Its source	2012	L
AL03160205-0103-401	Rabbit Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.28	miles	Halls Mill Creek / Alabama Highway 193	2022	L
AL03160205-0103-402	Rabbit Creek	R	Mobile	Mobile	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.20	miles	Alabama Highway 193 / Its source	2020	L
AL03160205-0104-111	Fowl River	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	10.69	miles	Mobile Bay / 10 feet above MSL	2000	L
AL03160205-0104-111	Fowl River	R	Mobile	Mobile	Swimming Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure	10.69	miles	Mobile Bay / 10 feet above MSL	2020	L
AL03160205-0104-112	Fowl River	R	Mobile	Mobile	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	9.86	miles	10 feet above MSL / its source	2000	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
AL03160205-0202-210	Polecat Creek	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	7.89	miles	Fish River / Its source	2006	L
AL03160205-0202-310	Silver Creek	R	Mobile	Baldwin	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing Urban runoff/storm sewers	4.07	miles	Polecat Creek / Its source	2020	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
AL03160205-0204-112	Fish River	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	30.01	miles	Weeks Bay / Its source	1998	L
AL03160205-0204-401	Turkey Branch	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1.53	miles	Fish River / Baldwin County Road 181	2020	L
AL03160205-0204-402	Turkey Branch	R	Mobile	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.16	miles	Baldwin County Road 181 / Its source	2020	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL03160205-0204-402	Turkey Branch	R	Mobile	Baldwin	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.16	miles	Baldwin County Road 181 / Its source	2018	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
AL03160205-0300-102	Mobile Bay	E	Mobile	Baldwin 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
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	M
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	H
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	M
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	H
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
AL03140107-0103-100	Perdido Bay	E	Perdido	Baldwin	Shellfish Harvesting Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	4.21	square miles	Lillian Bridge / Its source	2016	L
AL03140107-0201-100	Wolf Creek	R	Perdido	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.91	miles	Wolf Bay / Its source	2020	L

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AL03140107-0201-210	Sandy Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.41	miles	Wolf Creek / 10 feet above MSL	2020	L
AL03140107-0201-210	Sandy Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure Pasture grazing	2.41	miles	Wolf Creek / 10 feet above MSL	2020	L
AL03140107-0201-220	Sandy Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.16	miles	10 feet above MSL / Its source	2020	L
AL03140107-0201-220	Sandy Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure Pasture grazing	5.16	miles	10 feet above MSL / Its source	2020	L
AL03140107-0202-101	Miflin Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2.96	miles	Wolf Bay / 10 feet above MSL	2020	L
AL03140107-0202-101	Miflin Creek	R	Perdido	Baldwin	Swimming Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure Pasture grazing	2.96	miles	Wolf Bay / 10 feet above MSL	2020	L
AL03140107-0202-102	Miflin Creek	R	Perdido	Baldwin	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5.41	miles	10 feet above MSL / Its source	2020	L
AL03140107-0202-102	Miflin Creek	R	Perdido	Baldwin	Fish & Wildlife	Pathogens (Enterococcus)	Collection system failure Pasture grazing	5.41	miles	10 feet above MSL / Its source	2020	L
AL03140107-0204-201	Shelby Lake (Shelby Lakes)	L	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	570.49	acres	Within Gulf State Park	2022	L
AL03140107-0204-202	Middle Lake (Shelby Lakes)	L	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	194.84	acres	Within Gulf State Park	2022	L
AL03140107-0204-203	Little Lake (Shelby Lakes)	L	Perdido	Baldwin	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	36.10	acres	Within Gulf State Park	2022	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
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	Clay Randolph	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5,356.95	acres	R L Harris dam / Little Tallapoosa River	2018	L
AL03150109-0203-200	Pigeonroost Creek	R	Tallapoosa	Chambers	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.18	miles	Allen Creek/ Its source	2022	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
AL03150109-0405-102	Hillabee Creek	R	Tallapoosa	Tallapoosa	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	1.48	miles	County Road bridge 3 miles east of Hackneyville / Its source	2022	L
AL03150109-0602-100	Blue Creek	R	Tallapoosa	Tallapoosa	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.21	miles	Lake Martin / Its source	2022	L
AL03150109-0802-311	Coley Creek (Lake Martin)	L	Tallapoosa	Tallapoosa	Public Water Supply Swimming Fish & Wildlife	Nutrients	Municipal Urban runoff/storm sewer	54.29	acres	Tallapoosa River / end of embayment	2022	L
AL03150109-0803-111	Elkahatchee Creek (Lake Martin)	L	Tallapoosa	Tallapoosa	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	511.41	acres	Tallapoosa River / end of embayment	2022	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
AL03150110-0104-101	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
AL03150110-0104-104	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
AL03150110-0202-300	Moores Mill Creek	R	Tallapoosa	Lee	Swimming Fish & Wildlife	Pathogens (E. coli)	Collection system failure Urban runoff/storm sewer	10.51	miles	Chewacla Creek / Its source	2022	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
AL03150110-0402-101	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

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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	Pathogens (E. coli)	Pasture grazing	9.16	miles	Tallapoosa River / Its source	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
AL03150110-0504-101	Calebee Creek	R	Tallapoosa	Macon	Fish & Wildlife	Siltation	Agriculture Surface mining	10.26	miles	Tallapoosa River / Macon County Road 9	1998	H
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	H
AL03150110-0804-102	Line Creek	R	Tallapoosa	Macon Montgomery	Fish & Wildlife	Siltation	Agriculture Surface mining	5.51	miles	Johnsons Creek / Panther Creek	1998	H
AL03150110-0904-300	Jenkins Creek	R	Tallapoosa	Montgomery	Fish & Wildlife	Siltation	Urban development	13.48	miles	Tallapoosa River / Its source	2010	L
AL03150110-0905-101	Tallapoosa River	R	Tallapoosa	Elmore Montgomery	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	6.47	miles	Alabama River / US Highway 231	2020	L
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
AL03150108-0803-200	Knokes Creek	R	Tallapoosa	Cleburne Randolph	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	12.60	miles	Little Tallapoosa River / Its source	2020	L
AL03150109-0405-500	Hackney Creek	R	Tallapoosa	Tallapoosa	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.92	miles	Town Creek / Its source	2020	L
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
AL06030001-0203-101	Long Island Creek (Lake Guntersville)	L	Tennessee	Jackson	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	210.43	acres	Tennessee River / end of embayment	2022	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
AL06030001-0204-111	Widows Creek (Lake Guntersville)	L	Tennessee	Jackson	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	97.65	acres	Tennessee River / end of embayment	2012	L
AL06030001-0306-100	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
AL06030001-0307-111	Crow Creek (Guntersville Lake)	L	Tennessee	Jackson	Public Water Supply Swimming Fish & Wildlife	Organic enrichment (BOD)	Unknown Source	1,399.82	acres	Tennessee River / end of embayment	2022	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 Marshall	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	7.53	miles	Short Creek / Its source	2018	L
AL06030001-0806-600	Drum Creek	R	Tennessee	Marshall	Fish & Wildlife	Organic enrichment (BOD)	Agriculture Pasture grazing Urban runoff	7.71	miles	Short Creek / Its source	2020	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	Blount Marshall	Fish & Wildlife	Nutrients	Agriculture Mining	11.86	miles	Lake Guntersville / Its source	2012	L
AL06030001-0904-102	Browns Creek	R	Tennessee	Blount Marshall	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.86	miles	Lake Guntersville / Its source	2018	L
AL06030002-0101-100	Hurricane Creek	R	Tennessee	Jackson	Outstanding Alabama Water Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.89	miles	Paint Rock River / Alabama-Tennessee state line	2022	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	H
AL06030002-0203-100	Paint Rock River	R	Tennessee	Jackson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	27.09	miles	Cole Spring Branch / Its source	2020	L
AL06030002-0203-401	Cole Spring Branch	R	Tennessee	Jackson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	0.99	miles	Paint Rock River / Bridge at Jones Farm	2020	L

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AL06030002-0203-402	Cole Spring Branch	R	Tennessee	Jackson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	1.80	miles	Bridge at Jones Farm / Jeep trail crossing	2020	L
AL06030002-0203-403	Cole Spring Branch	R	Tennessee	Jackson	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	3.29	miles	Jeep trail crossing / Its source	2020	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	M
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	M
AL06030002-0403-112	Flint River	R	Tennessee	Madison	Fish & Wildlife	Turbidity	Agriculture Land development	15.32	miles	Alabama Highway 72 / Mountain Fork	2006	M
AL06030002-0403-302	Chase Creek	R	Tennessee	Madison	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	2.14	miles	Acuff Spring / Alabama Highway 72	2018	H
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	H
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
AL06030002-0505-102	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	H
AL06030002-0601-300	Hughes Creek	R	Tennessee	Marshall Morgan	Fish & Wildlife	Siltation	Agriculture	2.87	miles	Cotaco 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	L
AL06030002-0603-600	Mill Pond Creek	R	Tennessee	Marshall	Fish & Wildlife	Siltation	Agriculture	1.29	miles	Hog Jaw Creek / Its source	1998	L
AL06030002-0703-102	Limestone Creek	R	Tennessee	Limestone	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing Collection system failure	10.79	miles	US Highway 72 / Leslie Branch	2022	L
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	H
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	H
AL06030002-0906-102	Tennessee River (Wheeler Lake)	L	Tennessee	Madison Marshall	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	334.49	acres	Cotaco Creek / Indian Creek	2022	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	H
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
AL06030002-1009-112	Elam Creek	R	Tennessee	Lawrence	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	12.08	miles	Rocky Branch / Its source	2022	L
AL06030002-1013-900	Flat Creek	R	Tennessee	Lawrence	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	7.78	miles	West Flint Creek / Its source	2022	L
AL06030002-1014-101	Flint Creek (Wheeler Lake)	L	Tennessee	Morgan	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	851.41	acres	Tennessee River / Alabama Highway 67	2022	L
AL06030002-1014-102	Flint Creek (Wheeler Lake)	L	Tennessee	Morgan	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	732.66	acres	Alabama Highway 67 / L&N Railroad	2022	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
AL06030002-1101-101	Swan Creek	R	Tennessee	Limestone	Fish & Wildlife	Nutrients	Agriculture Municipal Urban runoff/storm sewers	5.03	miles	Wheeler Lake / Huntsville Brownsferry Road	2008	L
AL06030002-1102-102	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	H
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	H
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
AL06030002-1103-111	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

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL06030002-1104-100	Fox Creek (Wheeler Lake)	L	Tennessee	Lawrence Morgan	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	516.48	acres	Tennessee River (Wheeler Lake) / end of embayment	2022	L
AL06030002-1104-100	Fox Creek (Wheeler Lake)	L	Tennessee	Lawrence Morgan	Swimming Fish & Wildlife	PFOS	Industrial	516.48	acres	Tennessee River (Wheeler Lake) / end of embayment	2014	L
AL06030002-1107-103	Tennessee River (Wheeler Lake)	L	Tennessee	Lawrence Limestone Morgan	Swimming Fish & Wildlife	Nutrients	Agriculture	18,704.81	acres	five miles upstream of Elk River / US Highway 31	2014	H
AL06030002-1107-103	Tennessee River (Wheeler Lake)	L	Tennessee	Lawrence Limestone Morgan	Swimming Fish & Wildlife	PFOS	Industrial	18,704.81	acres	five miles upstream of Elk River / US Highway 31	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
AL06030002-1205-100	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	H
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	Nutrients	Crop production (non-irrigated) Pasture grazing	1,569.21	acres	Tennessee River / Anderson Creek	2004	H
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
AL06030005-0105-100	Big Nance Creek	R	Tennessee	Lawrence	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	24.75	miles	Wilson Lake / Its source	2012	L
AL06030005-0105-111	Big Nance Creek (Wilson Lake)	L	Tennessee	Lawrence	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	44.57	acres	Tennessee River / end of embayment	2016	L
AL06030005-0301-200	Chandelower Creek	R	Tennessee	Colbert	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.95	miles	Rock Creek / Its source	2018	L
AL06030005-0509-800	Indiancamp Creek	R	Tennessee	Lauderdale	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	5.98	miles	Shoal Creek / Its source	2020	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
AL06030005-0703-111	Spring Creek (Pickwick Lake)	L	Tennessee	Colbert	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	18.34	acres	Tennessee River / end of embayment	2022	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
AL06030005-0801-201	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
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
AL06030005-0802-100	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
AL06030005-0803-400	Sweetwater Creek	R	Tennessee	Lauderdale	Fish & Wildlife	Habitat alterations	Channelization Streambank modification	4.41	miles	Tennessee River (Florence Canal) / its source	2016	L
AL06030005-0805-100	Little Bear Creek	R	Tennessee	Colbert	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	11.06	miles	Tennessee River (Pickwick Lake) / Its source	2020	L
AL06030005-0805-100	Little Bear Creek	R	Tennessee	Colbert	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	11.06	miles	Tennessee River (Pickwick Lake) / Its source	2022	L

Assessment Unit ID	Waterbody Name	Type	River Basin	County	Uses	Causes	Sources	Size	Unit Type	Downstream / Upstream Locations	Year Listed	Priority
AL06030005-0807-100	Cane Creek	R	Tennessee	Colbert	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	15.41	miles	Pickwick Lake / Its source	2022	L
AL06030005-0807-111	Cane Creek (Pickwick Lake)	L	Tennessee	Colbert	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	41.43	acres	Tennessee River / end of embayment	2022	L
AL06030005-1001-100	Bluff Creek	R	Tennessee	Lauderdale	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	9.30	miles	Pickwick Lake / Its source	2022	L
AL06030005-1004-100	Tennessee River (Pickwick Lake)	L	Tennessee	Colbert Lauderdale	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,520.69	acres	River Mile 228.5 / River Mile 232	2022	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 Highway 243	2016	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
AL06030006-0103-104	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
AL06030006-0104-101	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
AL06030006-0201-300	Payne Creek	R	Tennessee	Franklin	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	1.61	miles	Mud Creek / Sloss Lake	2020	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
AL06030006-0206-101	Little Bear Creek	R	Tennessee	Franklin	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Pasture grazing	11.88	miles	Cedar Creek / Little Bear Creek Dam	2020	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
AL06030006-0307-111	Bear Creek (Pickwick Lake)	L	Tennessee	Colbert	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	5,811.82	acres	Tennessee River / end of embayment	2022	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
AL03160103-0201-102	Beaver Creek	R	Tombigbee	Marion	Public Water Supply Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.91	miles	US Highway 78 / Its source	2018	L
AL03160103-0306-101	Buttahatchee River	R	Tombigbee	Lamar Marion	Fish & Wildlife	Pathogens (E. coli)	Collection system failure Pasture grazing	41.85	miles	Alabama-Mississippi state line / U.S. Highway 278 one mile east of junction of U.S. Highways 43 and 78 in Hamilton	2022	L
AL03160105-0502-100	Magby Creek	R	Tombigbee	Pickens	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	14.57	miles	Alabama-Mississippi state line / Its source	2022	L
AL03160106-0203-100	Coal Fire Creek	R	Tombigbee	Fayette Lamar Pickens	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	43.31	miles	Aliceville Lake / Its source	2022	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	M
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

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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
AL03160106-0607-111	Brush Creek (Demopolis Lake)	L	Tombigbee	Greene	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	5.17	acres	Tombigbee River / end of embayment	2022	L
AL03160106-0609-103	Tombigbee River (Gainesville Lake)	L	Tombigbee	Greene Sumter	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	189.11	acres	Heflin Lock and Dam / River Mile 268	2022	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	M
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	M
AL03160201-0105-100	Powell Creek	R	Tombigbee	Marengo	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	18.92	miles	Chickasaw Bogue / Its source	2022	L
AL03160201-0301-100	Beaver Creek	R	Tombigbee	Marengo	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	9.76	miles	US Highway 43 / Its source	2020	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
AL03160201-0408-102	Tombigbee River (Coffeeville Lake)	L	Tombigbee	Choctaw Marengo	Public Water Supply Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	196.10	acres	1/2 mile downstream from Alabama Highway 114 / 3 miles upstream from Alabama Highway 114	2022	L
AL03160201-0408-104	Tombigbee River (Coffeeville Lake)	L	Tombigbee	Choctaw Marengo Sumter	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,418.11	acres	3 miles upstream from Alabama Highway 114 / Sucarnoochee River	2022	L
AL03160201-0504-200	Clear Creek	R	Tombigbee	Choctaw Sumter	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	17.25	miles	Yantley Creek / Its source	2018	M
AL03160201-0506-111	Tuckabum Creek (Coffeeville Lake)	L	Tombigbee	Choctaw	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	11.53	acres	Tombigbee River / end of embayment	2022	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	M
AL03160201-0703-100	Bashi Creek	R	Tombigbee	Clarke	Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	26.57	miles	Tallahatta Creek / Its source	2020	L
AL03160201-0907-102	Tombigbee River (Coffeeville Lake)	L	Tombigbee	Choctaw Clarke Marengo	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	2,088.71	acres	Beach Bluff (RM 141) / 1/2 mile downstream from Alabama Highway 114	2022	L
AL03160201-0909-100	Tombigbee River (Coffeeville Lake)	L	Tombigbee	Choctaw Clarke	Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	1,989.31	acres	Coffeeville Lock and Dam / Beach Bluff (RM 141)	2022	L
AL03160202-0404-101	Sucarnoochee River	R	Tombigbee	Sumter	Public Water Supply Swimming Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	6.07	miles	US Highway 11 / Miuka Creek	2020	L
AL03160202-0404-102	Sucarnoochee River	R	Tombigbee	Sumter	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	19.44	miles	Miuka Creek / AL-MS state line	2020	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
AL03160203-0701-100	Little Bassetts Creek	R	Tombigbee	Washington	Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	13.54	miles	Bassetts Creek / Its source	2020	L
AL03160203-0704-100	Bassetts Creek	R	Tombigbee	Washington	Swimming Fish & Wildlife	Pathogens (E. coli)	Animal feeding operations Collection system failure Pasture grazing	19.43	miles	Washington County Road 12 / Its source	2020	L
AL03160203-0901-112	Tombigbee River	R	Tombigbee	Clarke Washington	Public Water Supply Swimming Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	8.83	miles	1/2 mile downstream of Southern Railway Crossing / Smiths Creek	2020	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

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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
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
AL03160203-1103-103	Tombigbee River	R	Tombigbee	Clarke Washington	Fish & Wildlife	Metals (Mercury)	Atmospheric deposition	21.37	miles	Olin Basin canal / Bassetts Creek	2020	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
AL03160203-1103-700	Bilbo Creek	R	Tombigbee	Washington	Swimming Fish & Wildlife	Organic enrichment (BOD)	Unknown source	30.74	miles	Tombigbee River / Its source	2004	L
AL03160203-1103-800	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
AL03140103-0202-110	Hog Foot Creek	R	Yellow	Covington	Fish & Wildlife	Pathogens (E. coli)	Pasture grazing	10.23	miles	Five Runs Creek / Its source	2022	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

2022 Summary of Alabama's Active Trend Stations (Ambient Monitoring)

Ambient Trend Stations

Currently, there are 89 active stations in ADEM's ambient trend station network. Stations BKRE-1, BWCE-1, C-2, CAHD-1A, CNRC-2, CONE-2, CONE-3, LOSW-7, FMCJ-1B, LFKJ-6, PDBB-0, RCKC-1, VC-5, and VLGJ-5 are no longer sampled as trend stations, but the datasets are included in this report. Sampling frequency occurs eight times per year during the months of March - October. Selected sites are sampled more frequently at 12 times per year (January – December).

River Basin Information (Pages 2-6)

This section includes information about each of the 16 river basins: Area, Major Land Uses, Major Tributaries, Physiography, and Sampling Stations.

Ambient Trend Station Information (Pages 7-10)

The Ambient Trend Station Chart includes information about each trend station, including the Station ID, Waterbody, River Basin, County, Latitude and Longitude, Sampling Protocol, and Use Classification.

Trend Station Network Map (Page 11)

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

River Basin Maps (Pages 12-26)

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 Trend Data Summaries (Pages 27-44) & Graphs (Pages 45-323)

The data summaries now include nine parameters: Temperature, pH, Dissolved Oxygen, Specific Conductance, Turbidity, Total Suspended Solids, Total Nitrogen, Total Phosphorus, and Chlorophyll a (added in 2022). The time frame varies for each trend station, but each dataset contains the entire life of the station. Older stations include data from 1978, and most stations include data through 2021. 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 the nine parameters, each data point represents the yearly median. The initial graph for each station displays chlorophyll a, temperature, pH, dissolved oxygen, and specific conductance. It is followed by individual graphs of the remaining 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, BKRE-1A

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, PDBB-0

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

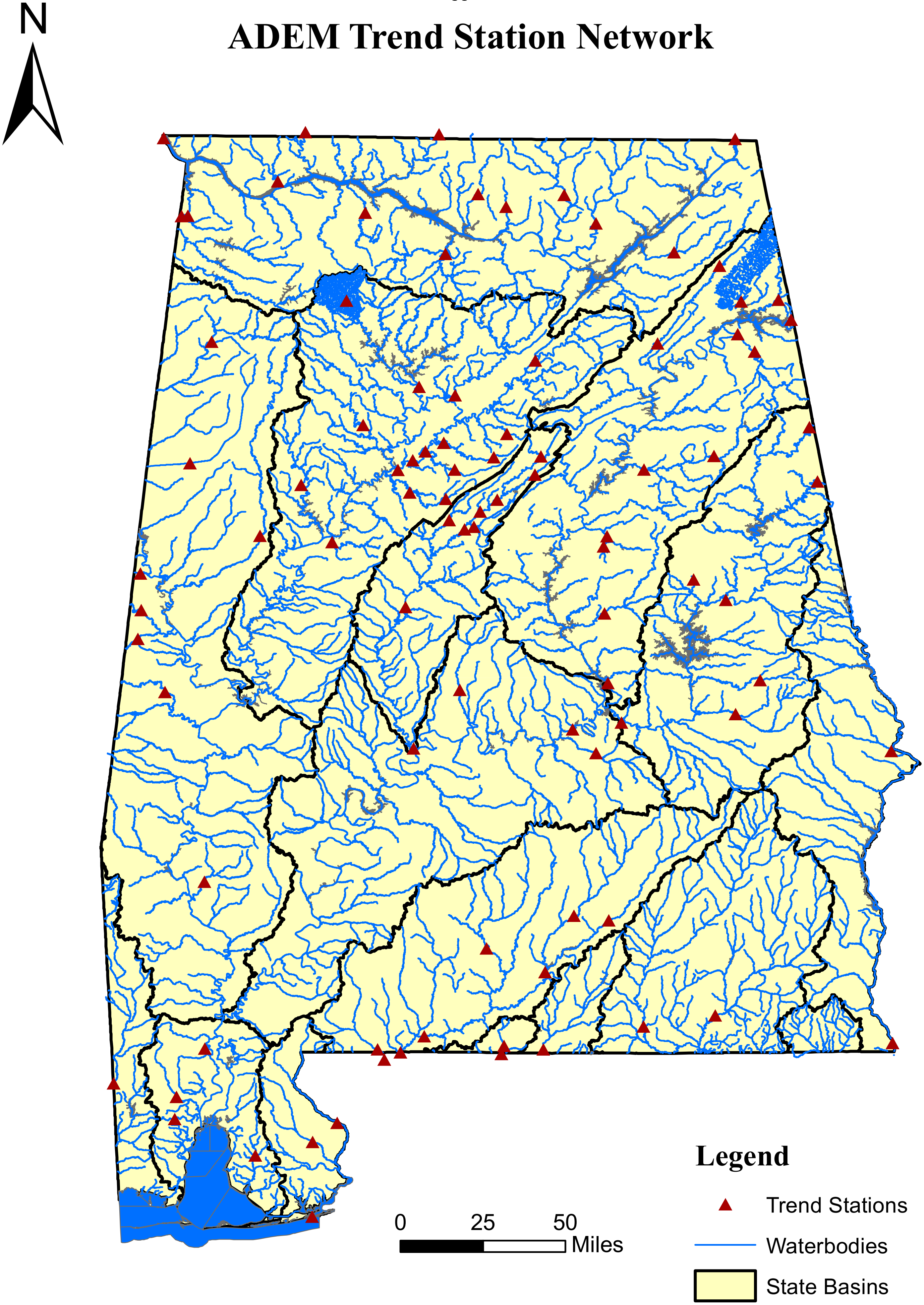
Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
CATM-3	Catoma Creek	Alabama R	Montgomery	32.3073	-87.3074	Wadeable-Bioassessments	F&W
MULD-1	Mulberry Creek	Alabama R	Dallas	32.58278	-86.90361	Wadeable-Bioassessments	S/F&W
WDFA-2A	Woodruff Reservoir	Alabama R	Elmore	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	Fivemile Creek	Black Warrior R	Jefferson	33.60191	-86.75527	Wadeable-Bioassessments	F&W
FMCJ-6	Fivemile 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
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
BKRE-1A	Blackwater River	Black Water R	Okaloosa (FL)	30.989529	-86.720308	Wadeable-Bioassessments	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

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
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
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
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

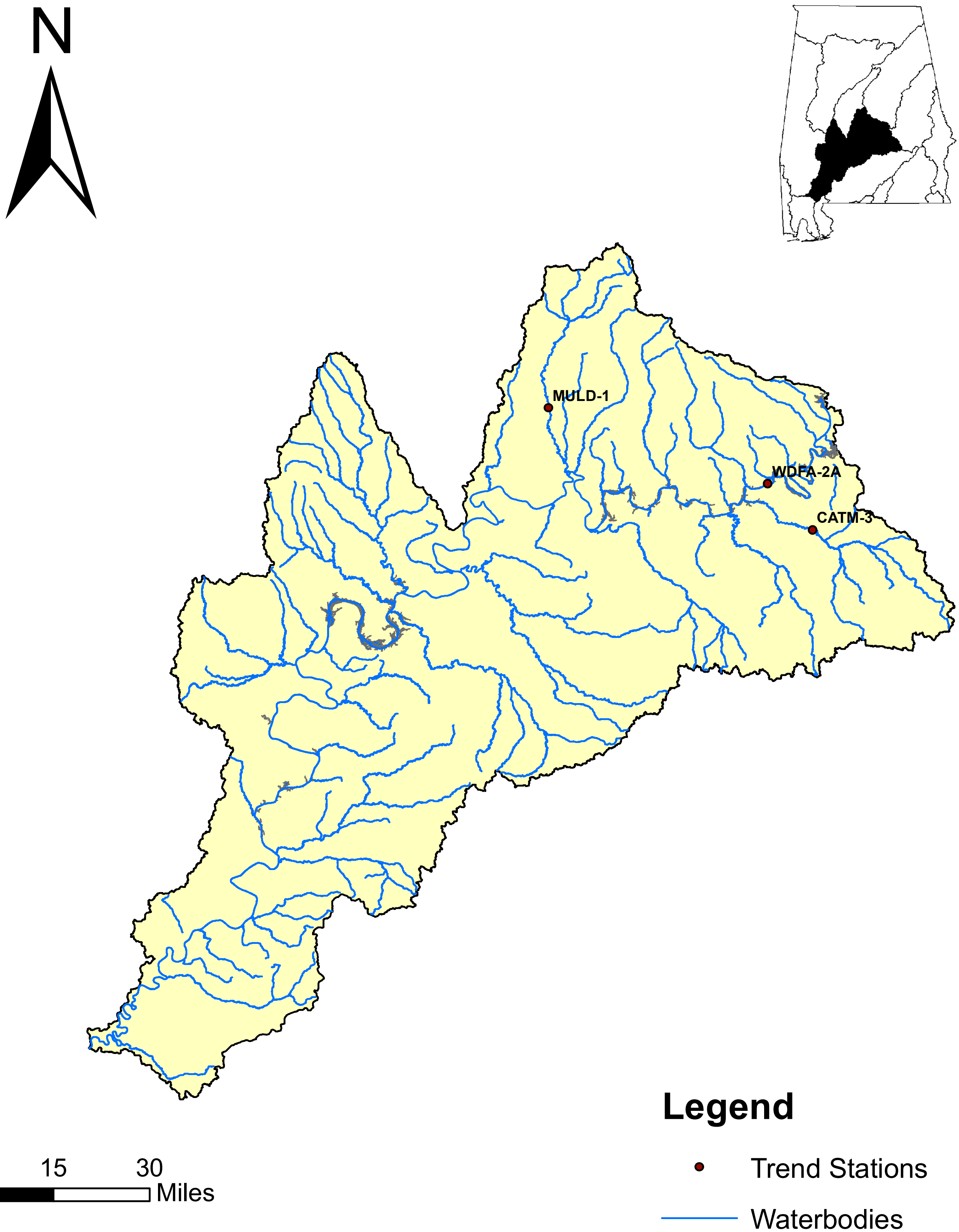
Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
CONC-3	Conecuh River	Escambia R	Crenshaw	31.57519705	-86.25226423	NonWadeable Grab-Shallow	F&W
CONE-1	Conecuh River	Escambia R	Escambia	30.99865457	-87.163	NonEWADABLE Boat	F&W
CONE-2	Conecuh River	Escambia R	Escambia	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
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

Station ID	Waterbody	River Basin	County	Latitude	Longitude	Sampling Protocol	Use Class
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
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	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
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

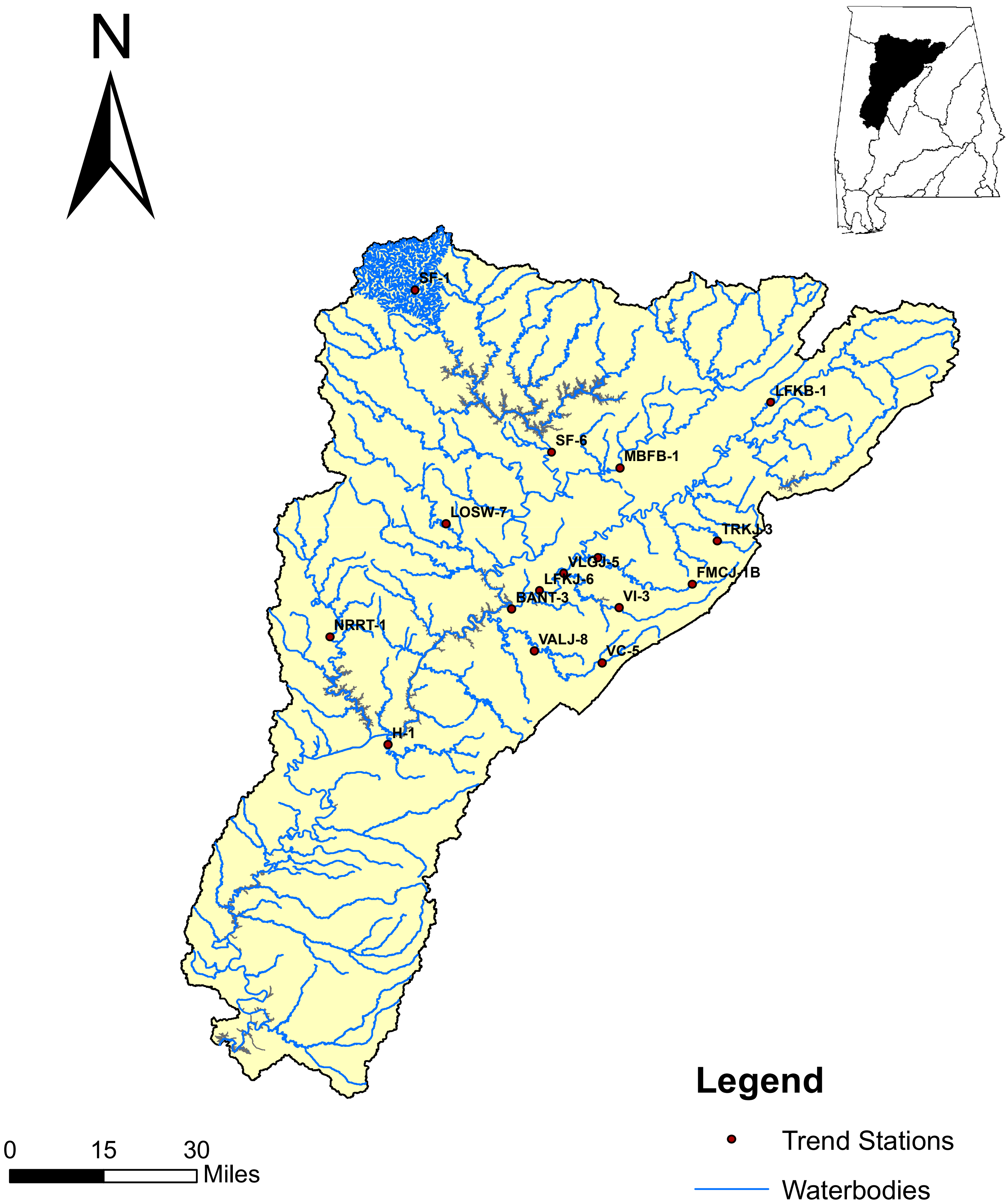
ADEM Trend Station Network



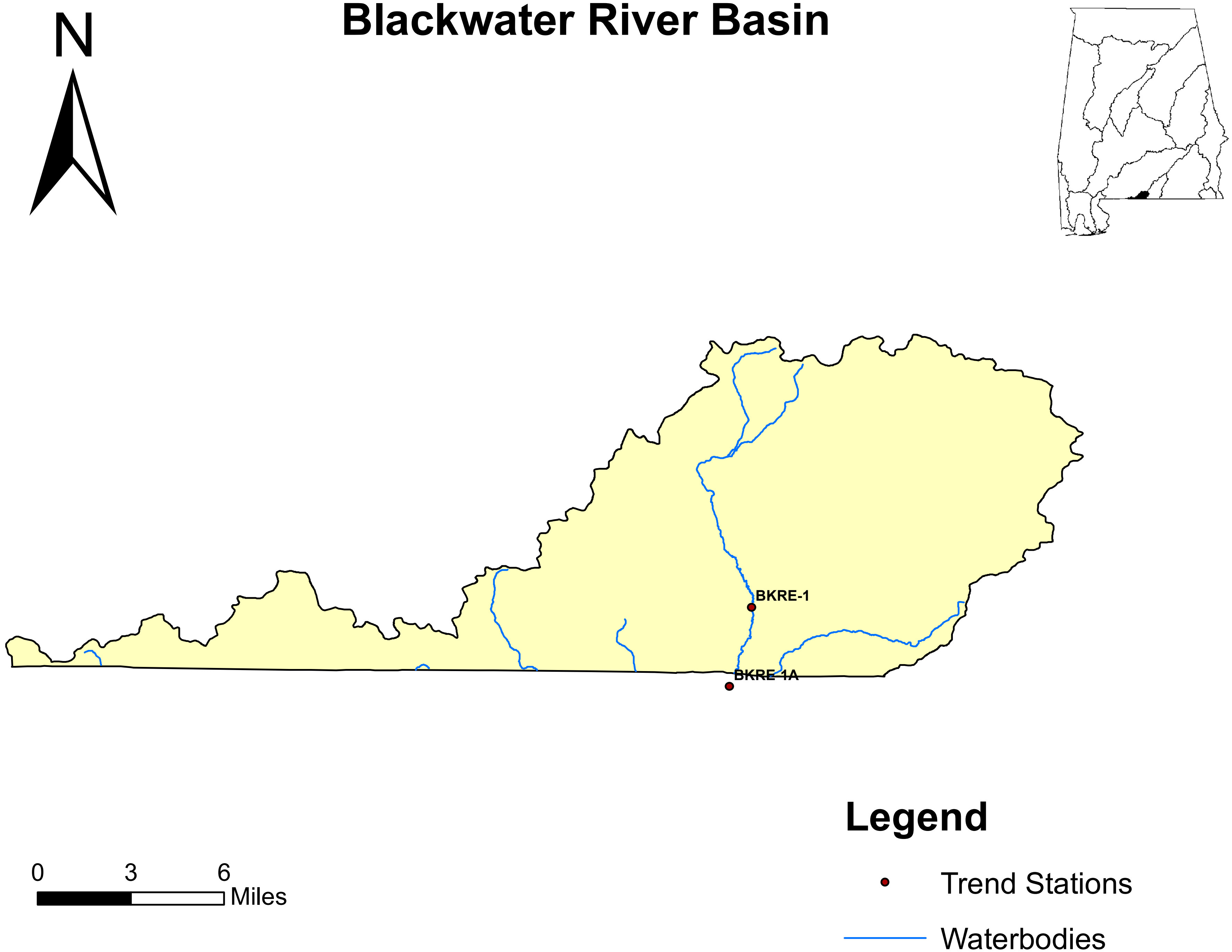
Alabama River Basin



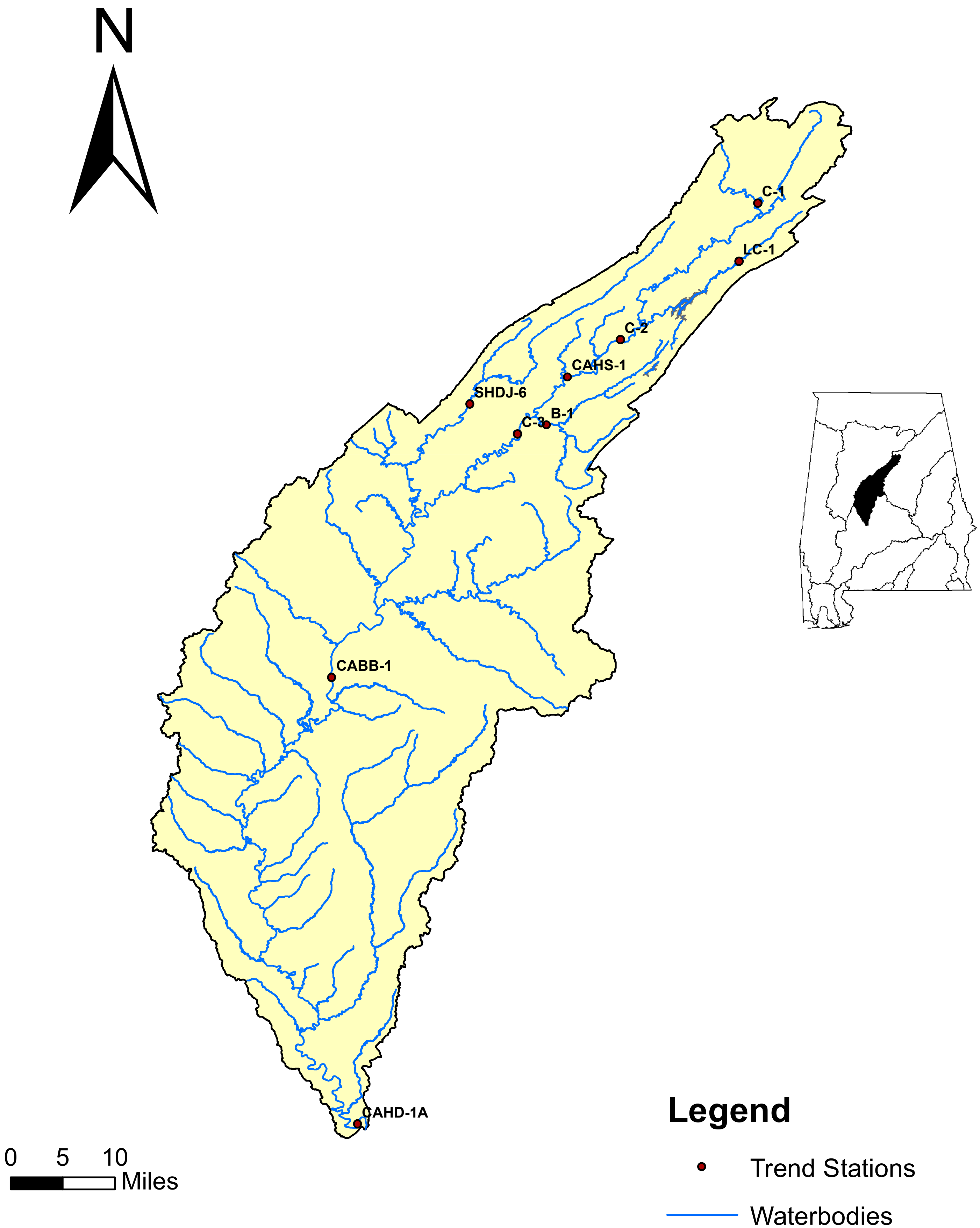
Black Warrior River Basin



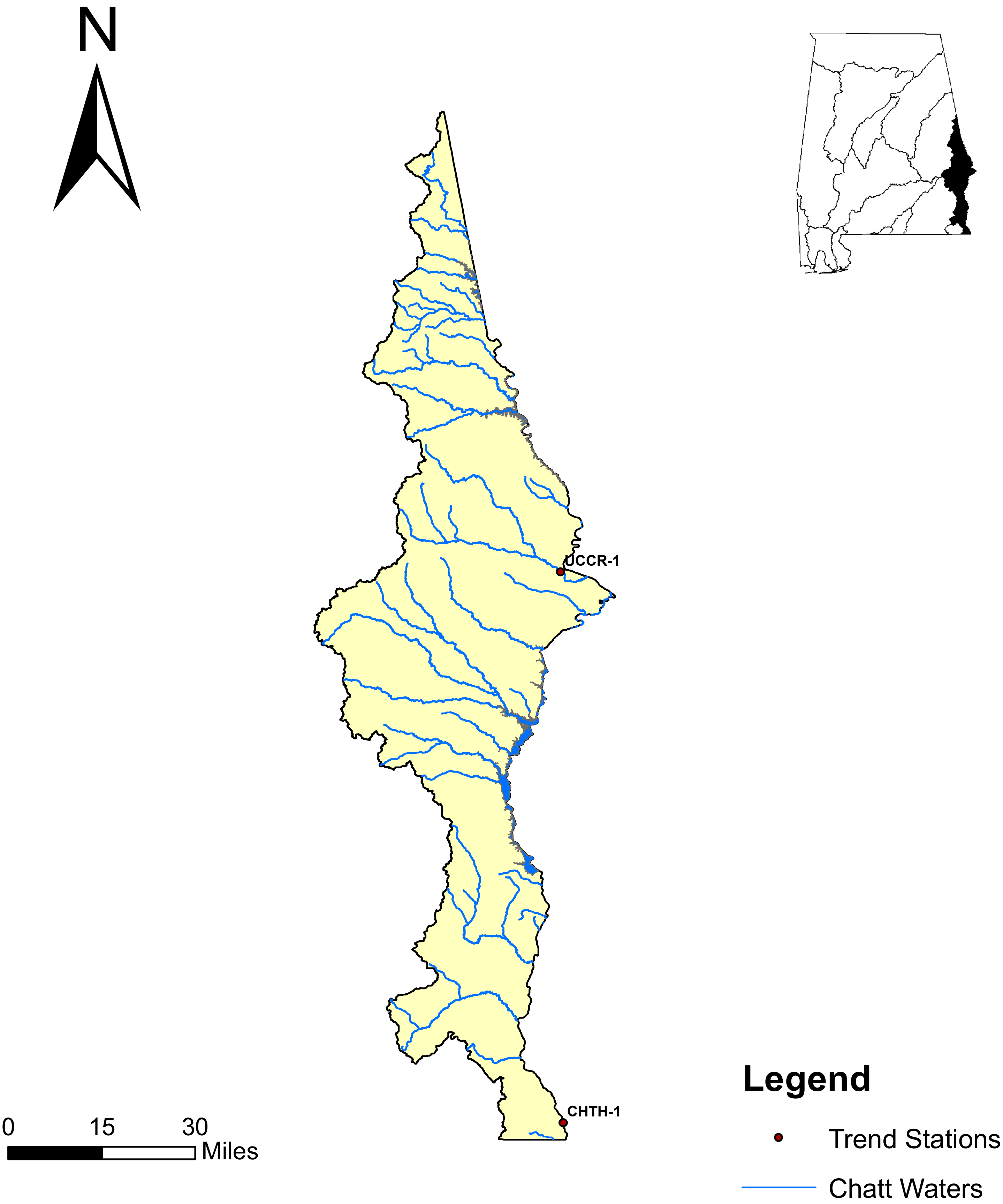
Blackwater River Basin



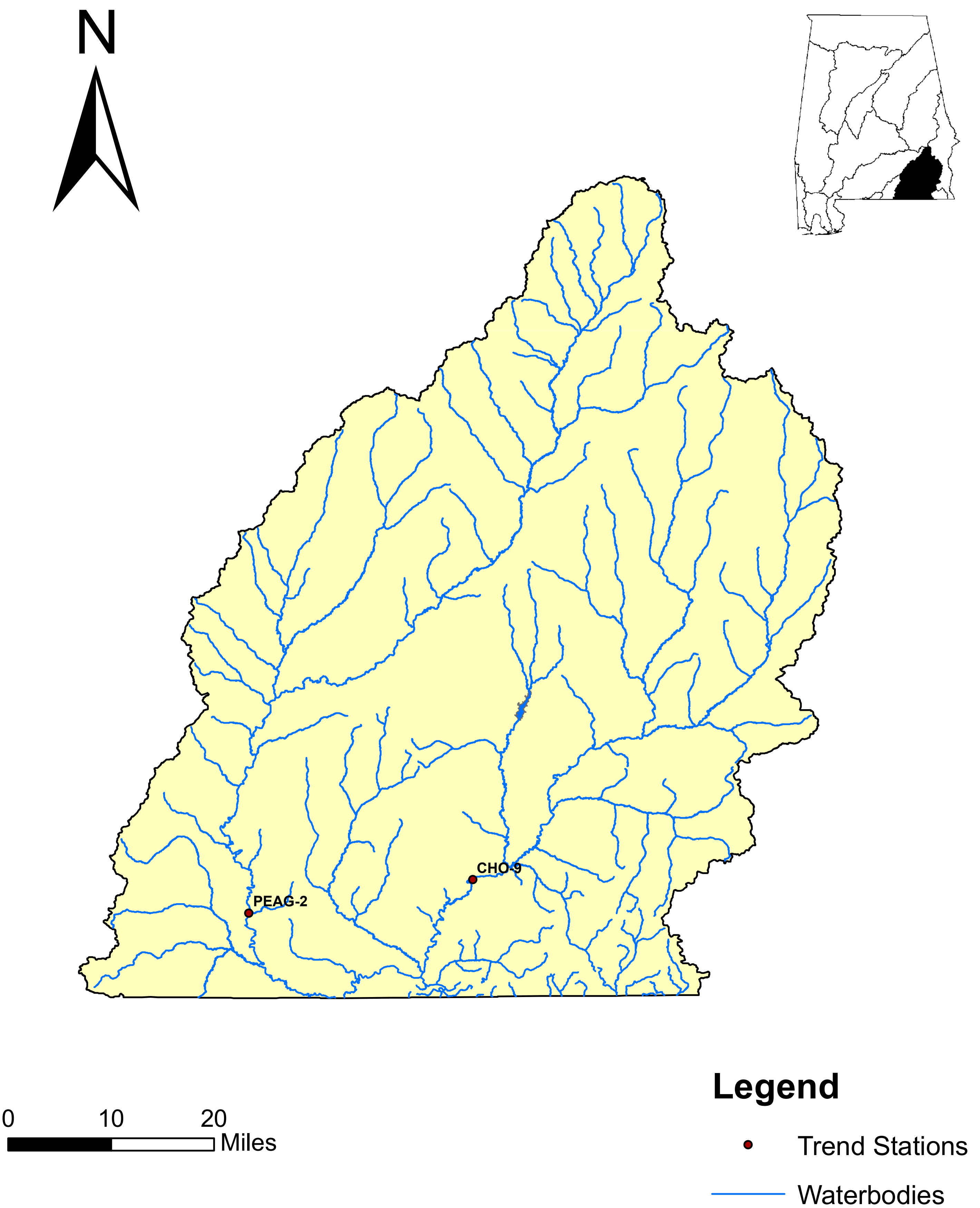
Cahaba River Basin



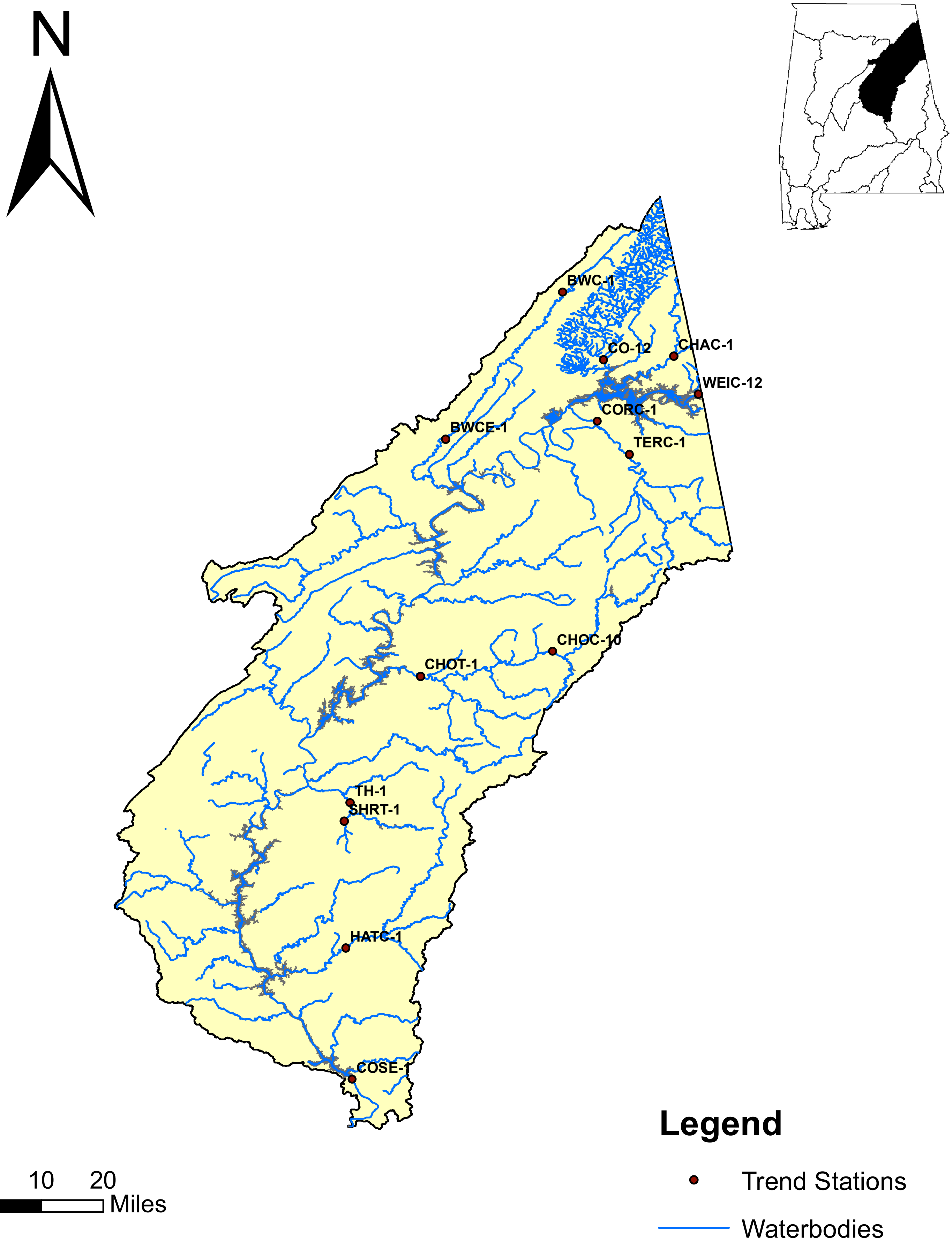
Chattahoochee River Basin



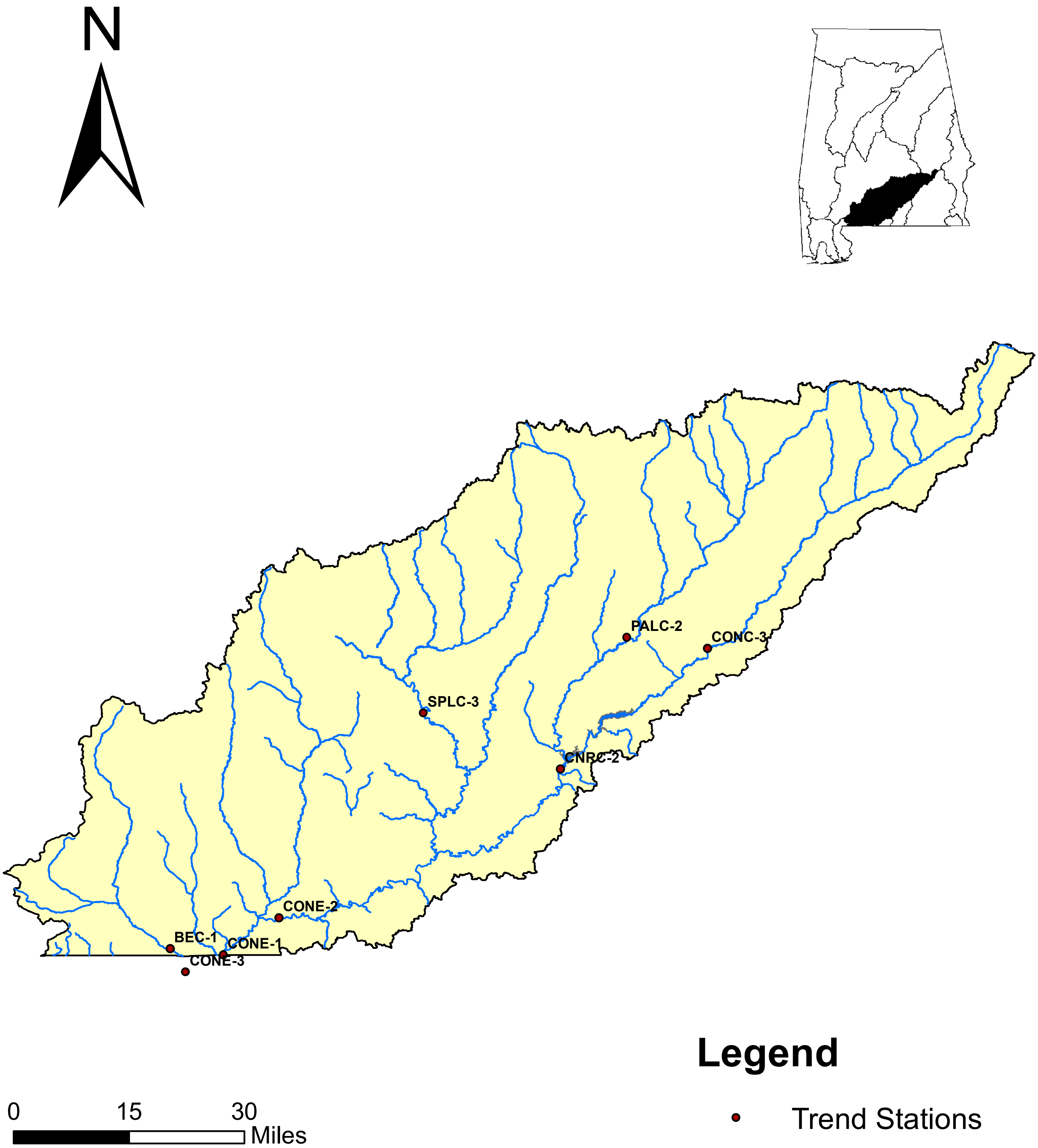
Choctawhatchee River Basin



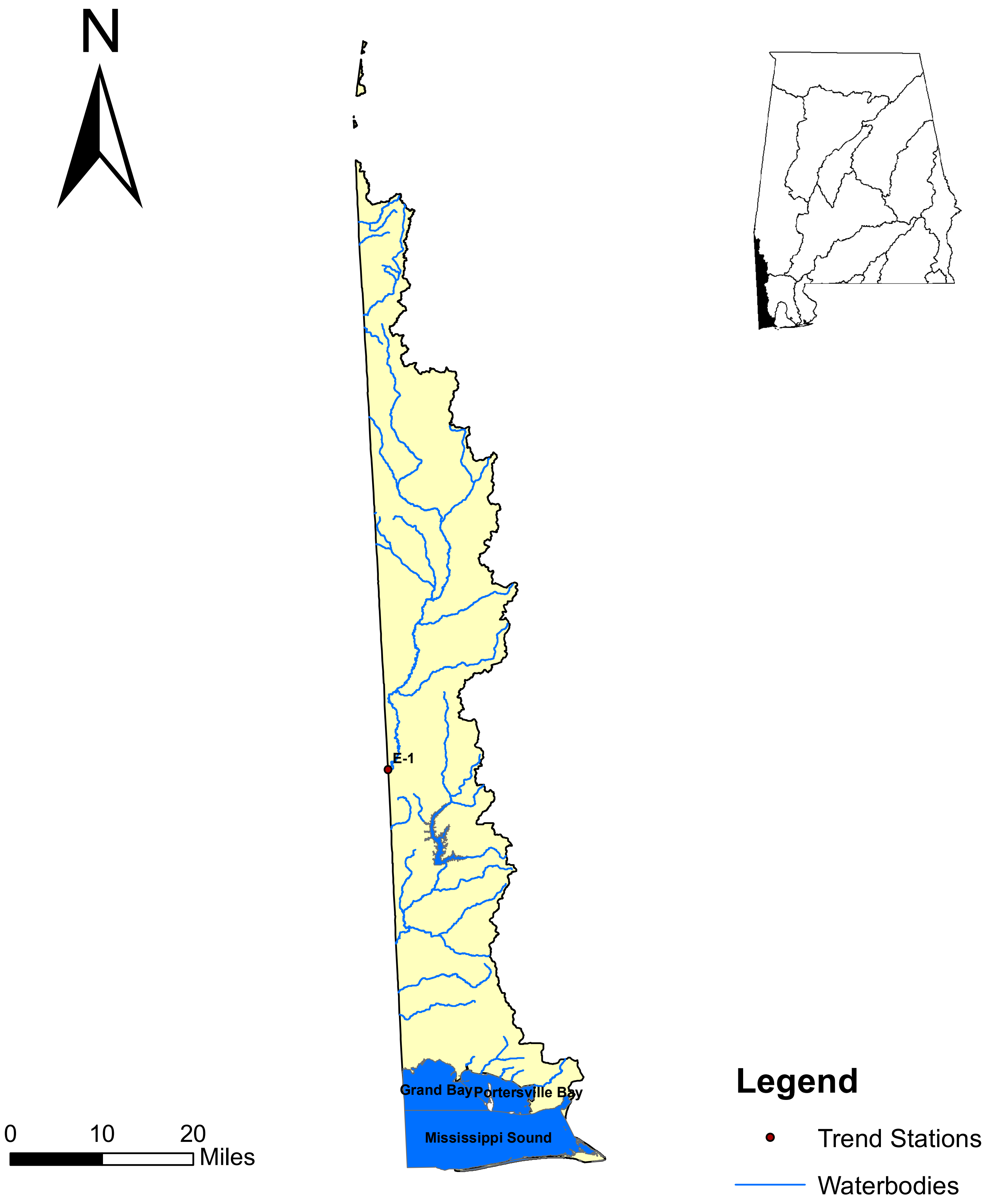
Coosa River Basin



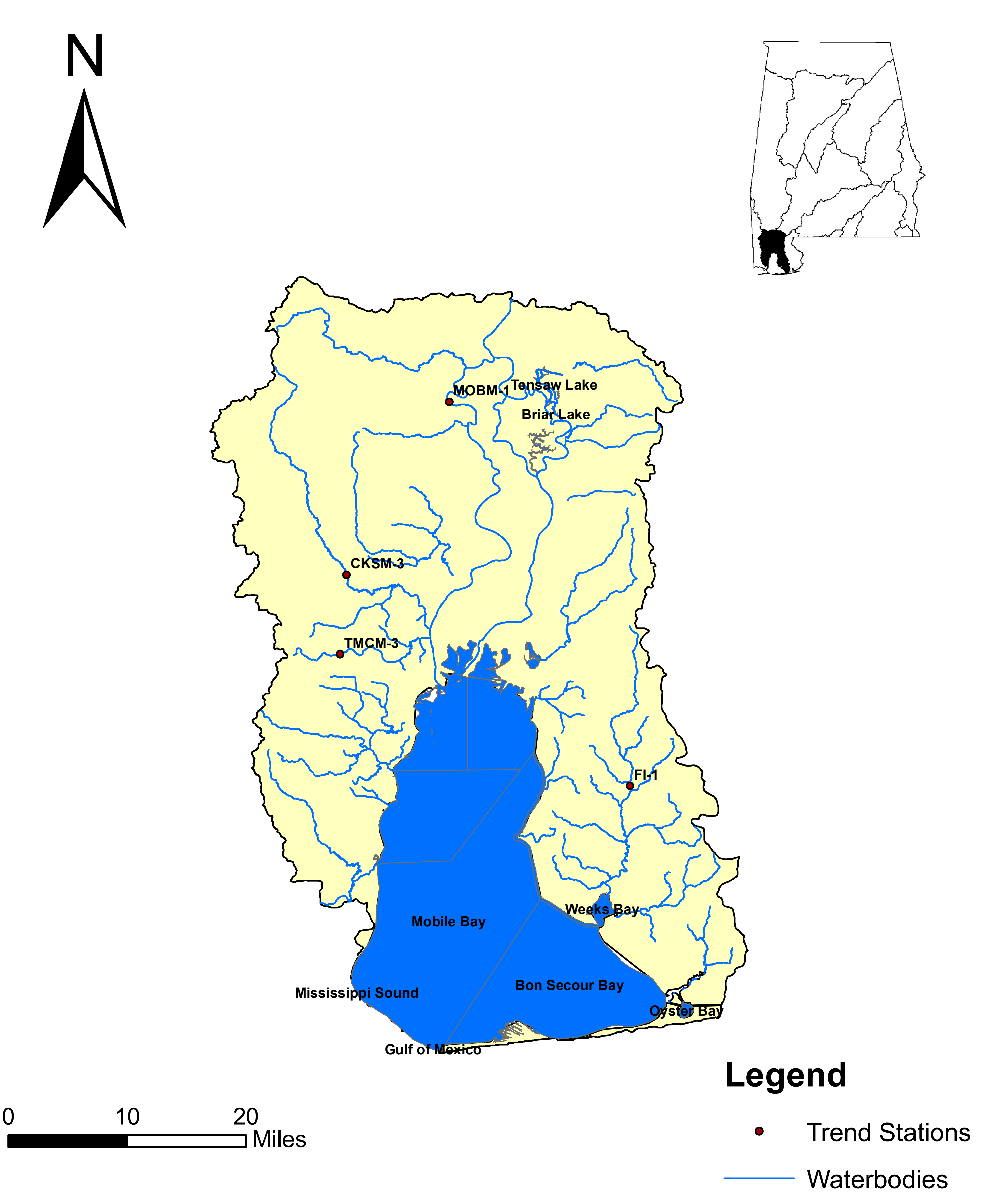
Escambia River Basin



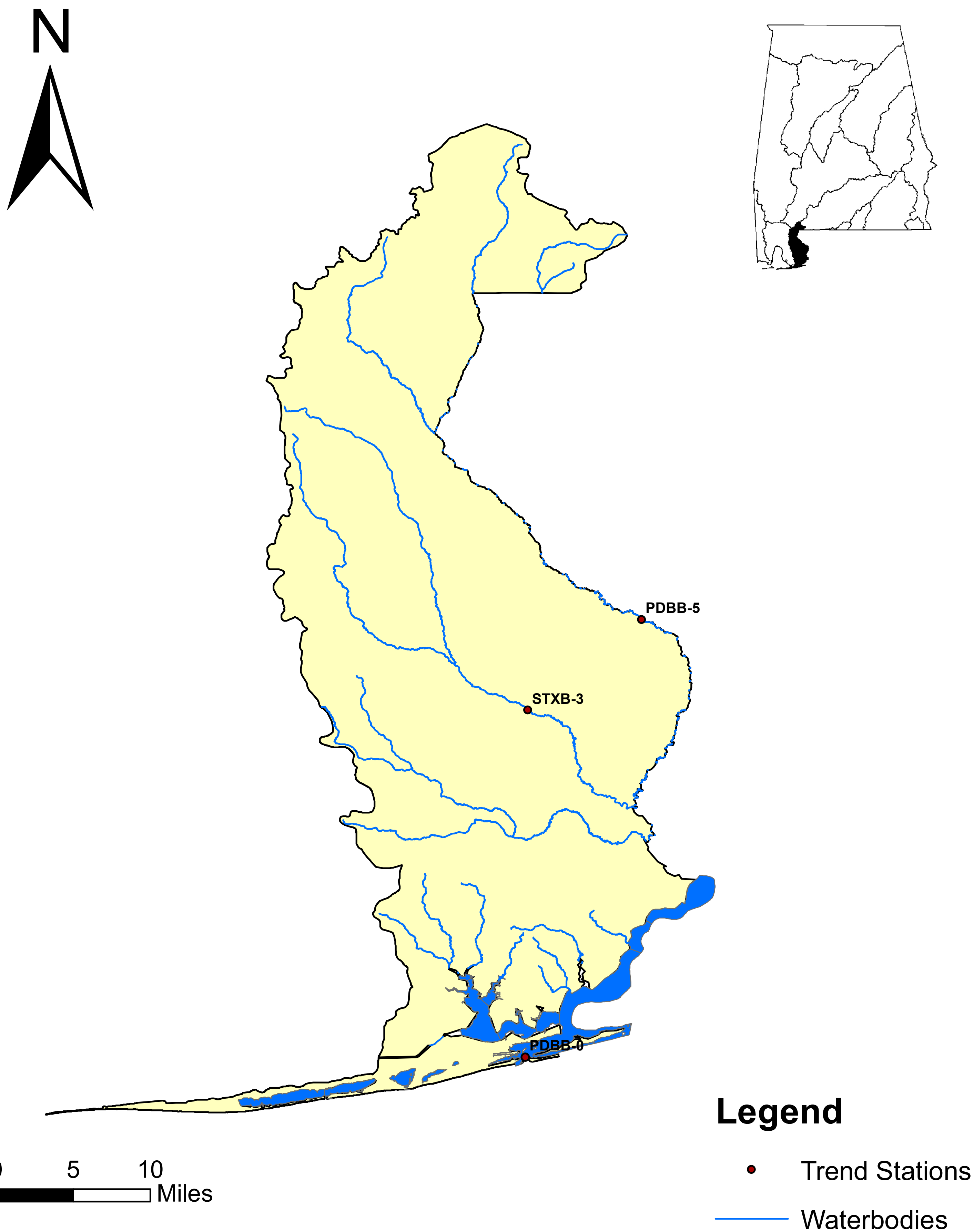
Escatawpa River Basin



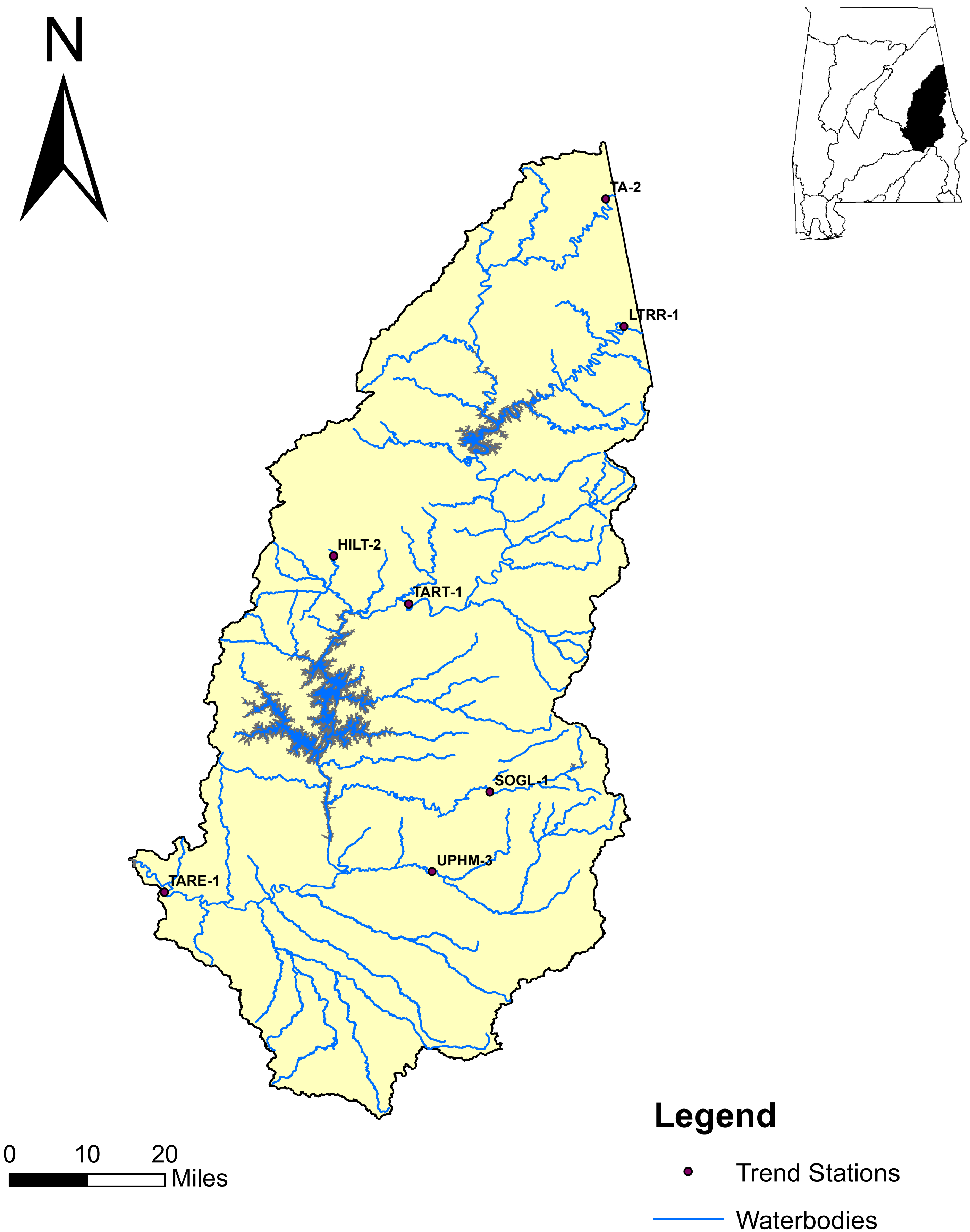
Mobile River Basin



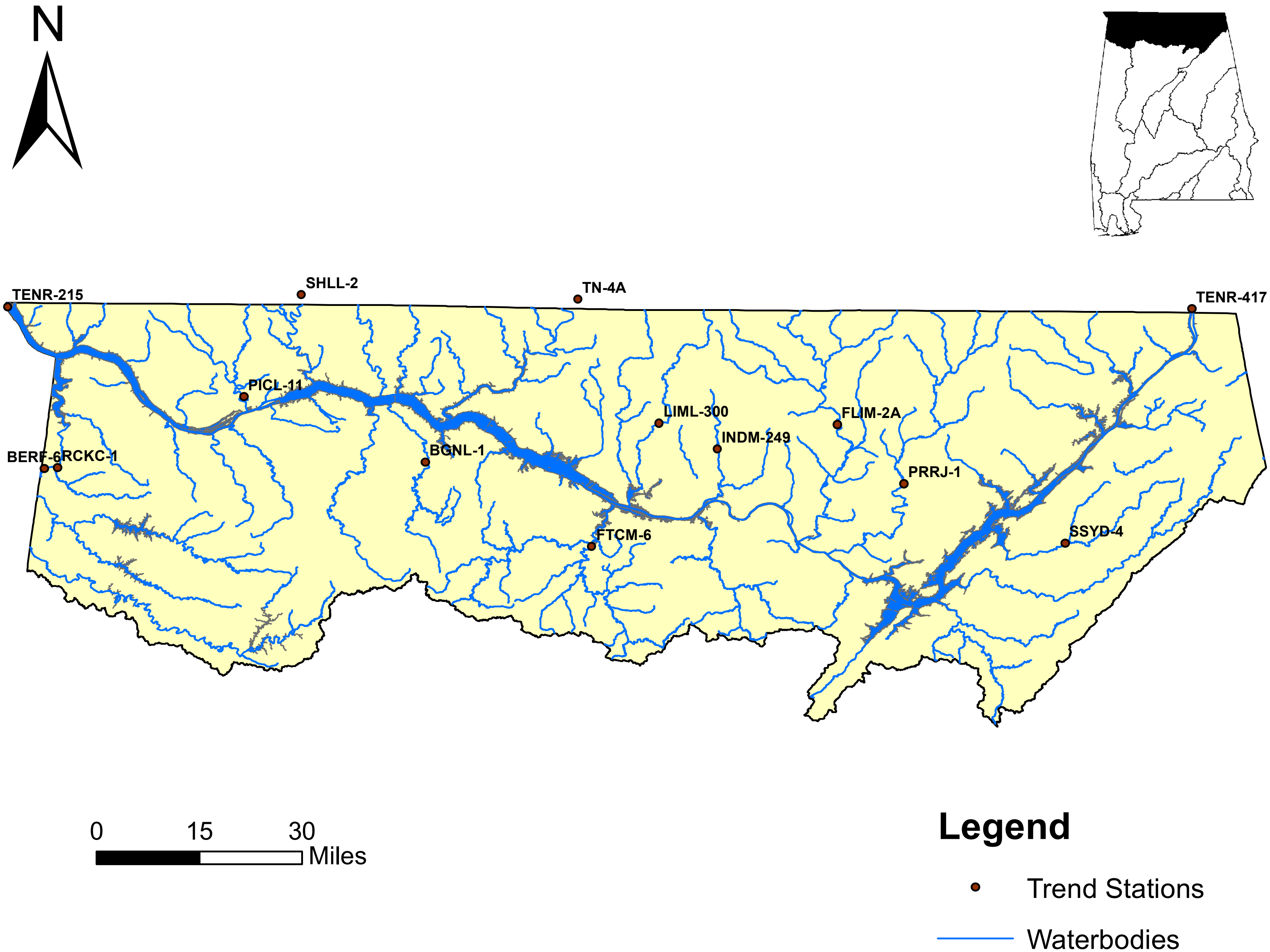
Perdido River Basin



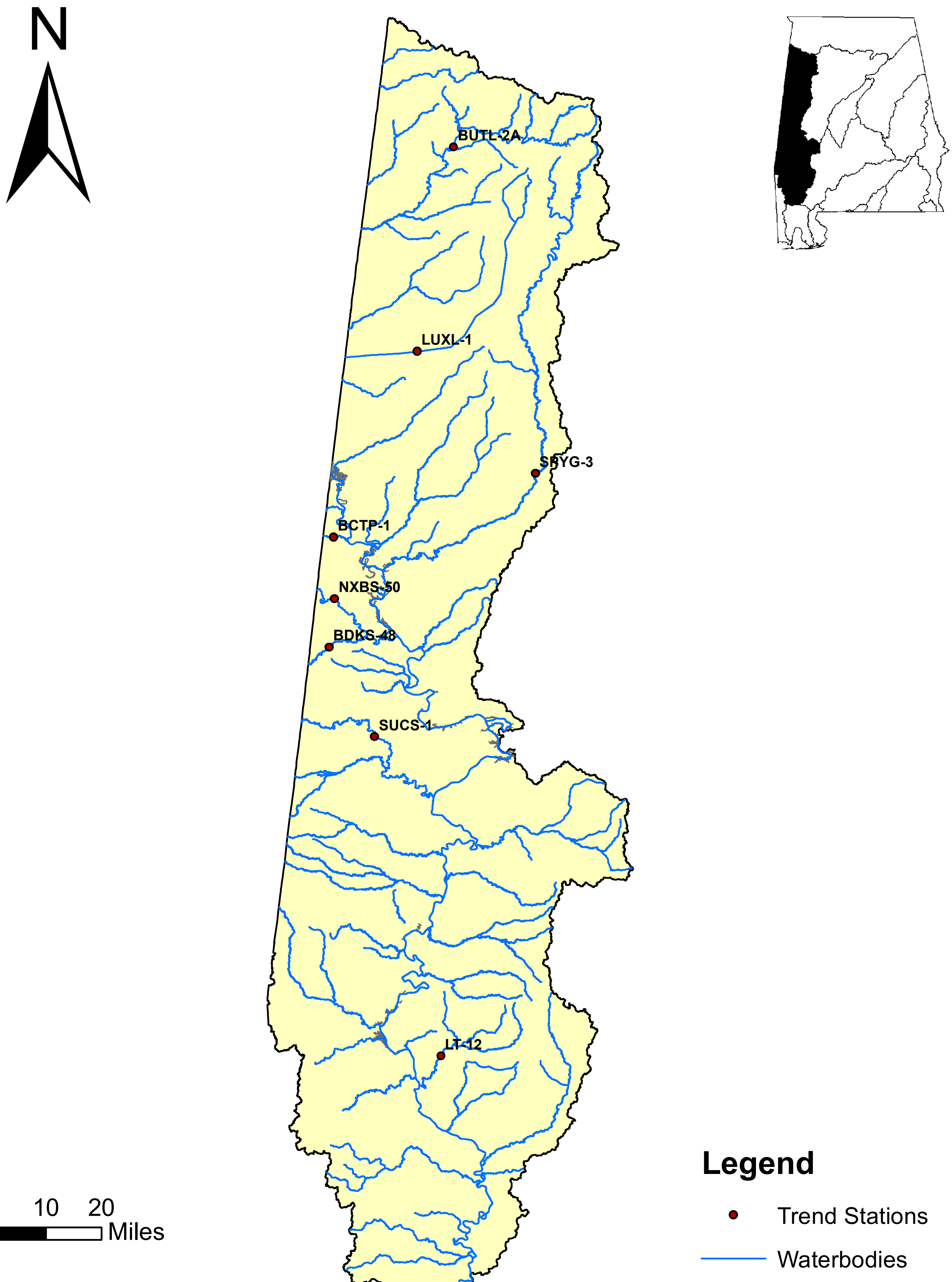
Tallapoosa River Basin



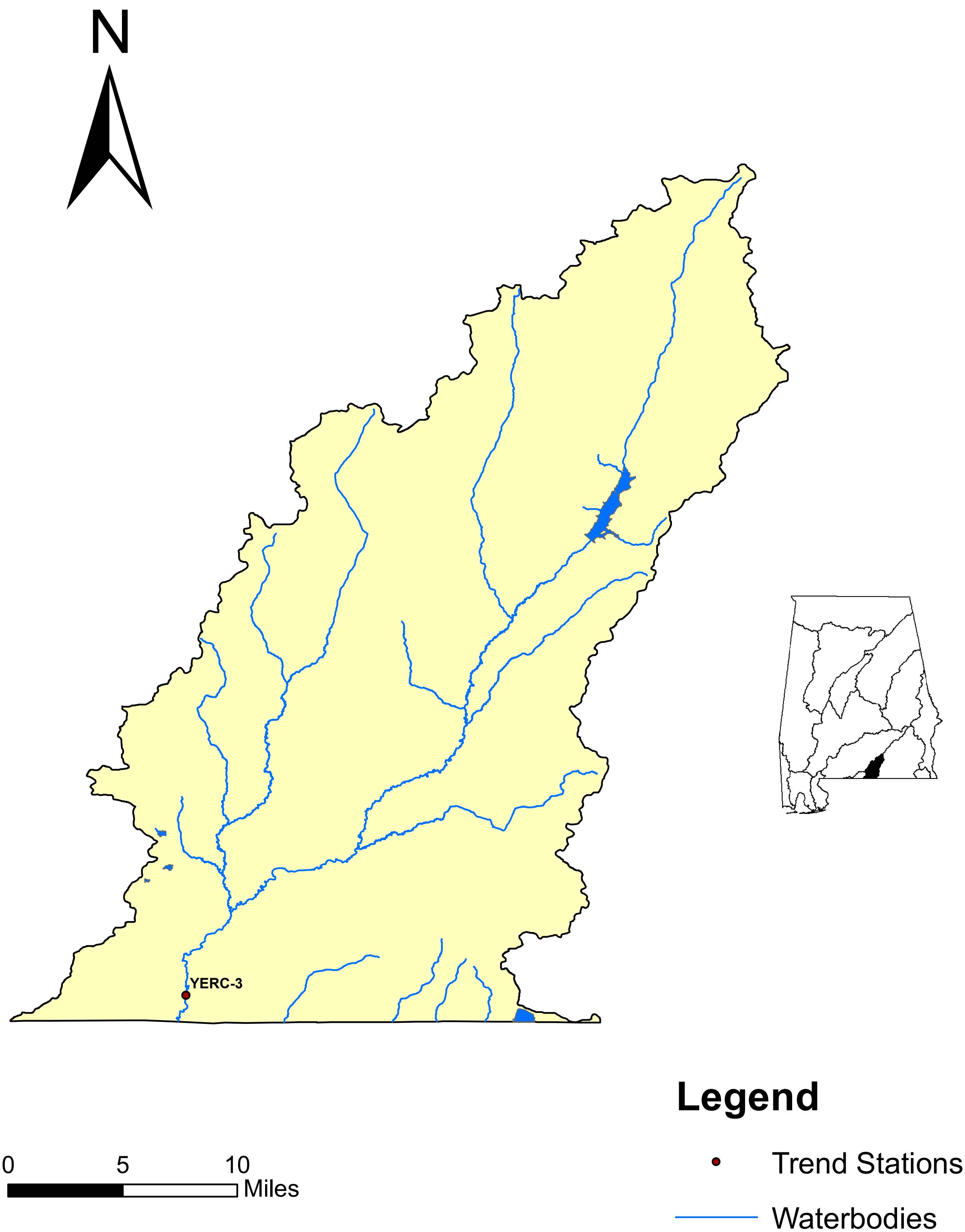
Tennessee River Basin



Tombigbee River Basin



Yellow River Basin



Ambient Trend Data Summaries

B-1	N	Min	Max	Med	Avg	SD
Temperature (°C)	317	6.0	30.0	20.9	19.4	5.4
pH (SU)	317	6.0	9.1	7.9	7.8	0.3
Dissolved Oxygen (mg/L)	317	4.8	14.0	9.3	9.6	1.5
Specific Conductance (μmhos/cm)	317	5.0	683.0	352.4	352.2	104.1
Turbidity (NTU)	318	0.2	376.0	8.0	20.6	43.2
Total Suspended Solids (mg/L)	288	< 0.2	572.0	7.0	16.9	45.8
Total Phosphorus (mg/L)	256	< 0.012	1.980	0.120	0.270	0.358
Total Nitrogen (mg/L)	239	< 0.360	16.855	1.920	2.578	2.155
Chlorophyll a (mg/m³)	200	< 0.50	37.40	0.50	1.46	3.59
BANT-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	82	15.7	33.0	26.7	25.7	4.3
pH (SU)	82	6.6	9.0	7.7	7.8	0.6
Dissolved Oxygen (mg/L)	82	0.0	14.4	8.2	8.4	2.3
Specific Conductance (μmhos/cm)	82	137.2	675.4	396.3	387.3	124.1
Turbidity (NTU)	82	1.0	102.0	7.9	11.3	13.5
Total Suspended Solids (mg/L)	82	< 0.5	59.0	9.0	10.4	9.7
Total Phosphorus (mg/L)	82	< 0.012	0.116	0.040	0.043	0.022
Total Nitrogen (mg/L)	82	< 0.320	16.213	1.162	1.388	1.728
Chlorophyll a (mg/m³)	84	1.60	57.32	17.76	21.34	14.33
BCTP-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	45	13.1	36.5	27.3	26.6	6.2
pH (SU)	45	6.9	9.0	8.3	8.3	0.4
Dissolved Oxygen (mg/L)	44	5.6	17.0	11.1	11.1	2.6
Specific Conductance (μmhos/cm)	45	114.8	606.0	392.1	378.7	100.4
Turbidity (NTU)	45	2.3	957.0	12.1	65.6	186.1
Total Suspended Solids (mg/L)	41	1.0	2470.0	10.0	111.7	400.8
Total Phosphorus (mg/L)	38	< 0.003	0.793	0.057	0.123	0.190
Total Nitrogen (mg/L)	38	< 0.152	19.130	1.844	3.117	3.681
Chlorophyll a (mg/m³)	35	< 0.36	79.03	4.49	11.90	16.38
BDKS-48	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	53	11.1	31.2	24.7	23.4	5.0
pH (SU)	53	6.9	8.1	7.6	7.6	0.3
Dissolved Oxygen (mg/L)	53	3.6	10.6	6.6	6.9	1.7
Specific Conductance (μmhos/cm)	53	107.9	555.0	272.3	271.4	94.5
Turbidity (NTU)	55	1.4	252.0	8.0	24.1	49.6
Total Suspended Solids (mg/L)	50	< 0.5	235.0	9.0	22.0	40.2
Total Phosphorus (mg/L)	47	< 0.027	0.245	0.068	0.082	0.044
Total Nitrogen (mg/L)	47	< 0.093	2.820	0.736	0.856	0.622
Chlorophyll a (mg/m³)	47	< 0.05	30.90	2.14	4.22	5.73
BEC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	132	7.8	29.0	20.3	19.5	5.4
pH (SU)	132	5.1	7.8	6.1	6.1	0.4
Dissolved Oxygen (mg/L)	132	6.4	12.6	8.9	9.1	1.1
Specific Conductance (μmhos/cm)	132	4.0	42.8	31.0	30.4	4.2
Turbidity (NTU)	136	1.0	90.5	6.4	10.6	13.2
Total Suspended Solids (mg/L)	136	< 0.5	123.0	5.0	10.2	16.5
Total Phosphorus (mg/L)	138	< 0.002	0.055	0.014	0.016	0.008
Total Nitrogen (mg/L)	137	< 0.026	1.819	0.630	0.679	0.265
Chlorophyll a (mg/m³)	132	< 0.05	14.24	1.07	1.46	1.85

BERF-6	N	Min	Max	Med	Avg	SD
Temperature (°C)	20	11.9	26.9	23.7	22.7	3.8
pH (SU)	20	6.9	7.8	7.4	7.3	0.2
Dissolved Oxygen (mg/L)	20	5.8	10.2	7.4	7.6	1.0
Specific Conductance (μmhos/cm)	20	73.9	201.0	116.2	120.9	31.6
Turbidity (NTU)	20	2.6	33.9	11.0	12.7	7.8
Total Suspended Solids (mg/L)	19	1.0	36.0	11.0	14.0	8.8
Total Phosphorus (mg/L)	19	< 0.009	0.096	0.029	0.033	0.022
Total Nitrogen (mg/L)	19	0.365	1.129	0.600	0.648	0.219
Chlorophyll a (mg/m³)	19	< 0.50	5.87	1.07	1.33	1.35
BGNL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	57	12.9	37.4	21.6	21.2	3.6
pH (SU)	57	6.6	9.3	7.4	7.4	0.4
Dissolved Oxygen (mg/L)	57	3.3	10.5	6.1	6.2	1.3
Specific Conductance (μmhos/cm)	57	89.0	398.0	311.0	292.1	77.6
Turbidity (NTU)	57	0.8	393.0	4.2	20.4	59.7
Total Suspended Solids (mg/L)	56	< 0.2	145.0	4.0	12.6	27.5
Total Phosphorus (mg/L)	44	< 0.003	0.500	0.052	0.083	0.106
Total Nitrogen (mg/L)	44	< 0.824	5.610	2.336	2.372	0.868
Chlorophyll a (mg/m³)	56	< 0.50	13.60	0.50	1.42	2.01
BKRE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	63	10.4	25.0	21.6	20.5	3.7
pH (SU)	63	4.0	5.7	4.6	4.7	0.5
Dissolved Oxygen (mg/L)	63	6.1	10.2	8.0	8.2	0.9
Specific Conductance (μmhos/cm)	63	15.6	46.7	23.8	25.3	6.2
Turbidity (NTU)	97	1.1	18.5	2.7	3.4	2.5
Total Suspended Solids (mg/L)	97	< 0.5	35.0	2.0	3.4	5.1
Total Phosphorus (mg/L)	96	0.005	0.064	0.009	0.014	0.011
Total Nitrogen (mg/L)	97	< 0.096	1.432	0.469	0.488	0.206
Chlorophyll a (mg/m³)	97	< 0.05	9.61	0.50	0.90	1.62
BKRE-1A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	39	8.9	24.9	17.8	18.2	5.3
pH (SU)	38	4.1	5.8	4.7	4.8	0.4
Dissolved Oxygen (mg/L)	39	6.7	11.0	8.6	8.8	1.1
Specific Conductance (μmhos/cm)	39	19.8	35.6	23.3	23.4	3.3
Turbidity (NTU)	44	1.4	13.7	2.6	3.7	2.7
Total Suspended Solids (mg/L)	43	< 0.5	24.0	3.0	3.8	4.4
Total Phosphorus (mg/L)	43	0.005	0.030	0.008	0.009	0.005
Total Nitrogen (mg/L)	41	< 0.178	1.218	0.416	0.466	0.207
Chlorophyll a (mg/m³)	43	< 0.05	11.70	0.50	0.93	1.77
BUTL-2A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	55	9.6	31.2	23.4	22.5	4.7
pH (SU)	56	5.9	8.6	7.1	7.2	0.5
Dissolved Oxygen (mg/L)	56	6.7	11.3	8.7	8.7	0.9
Specific Conductance (μmhos/cm)	52	26.6	67.0	36.8	37.2	6.2
Turbidity (NTU)	53	2.8	38.0	6.3	8.4	6.6
Total Suspended Solids (mg/L)	50	< 0.5	53.0	5.0	7.1	8.9
Total Phosphorus (mg/L)	49	< 0.003	0.073	0.017	0.022	0.015
Total Nitrogen (mg/L)	49	< 0.180	2.010	0.489	0.548	0.306
Chlorophyll a (mg/m³)	48	< 0.05	5.34	1.07	1.40	1.28
BWC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	70	6.5	27.0	16.8	16.6	5.2

pH (SU)	71	7.4	8.6	7.9	7.9	0.2
Dissolved Oxygen (mg/L)	71	6.7	11.9	8.9	8.9	1.4
Specific Conductance (µmhos/cm)	71	175.1	346.0	281.9	279.8	31.5
Turbidity (NTU)	79	0.0	6708.6	9.4	100.7	753.4
Total Suspended Solids (mg/L)	72	< 0.5	85.0	6.5	10.2	12.3
Total Phosphorus (mg/L)	71	0.006	0.092	0.019	0.023	0.016
Total Nitrogen (mg/L)	72	< 0.372	1.965	0.646	0.721	0.270
Chlorophyll a (mg/m³)	72	< 0.05	17.10	0.98	1.65	2.83
BWCE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	105	6.3	26.8	18.5	18.1	5.4
pH (SU)	106	7.2	8.6	7.8	7.8	0.2
Dissolved Oxygen (mg/L)	106	5.7	13.2	8.2	8.6	1.6
Specific Conductance (µmhos/cm)	105	30.8	582.0	297.9	291.9	93.2
Turbidity (NTU)	116	4.3	881.8	22.0	39.3	86.6
Total Suspended Solids (mg/L)	109	1.0	220.0	20.0	27.5	31.2
Total Phosphorus (mg/L)	106	0.047	1.490	0.448	0.506	0.332
Total Nitrogen (mg/L)	106	< 0.594	3.231	1.295	1.414	0.530
Chlorophyll a (mg/m³)	102	< 0.05	26.70	0.89	1.68	3.16
C-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	296	2.6	31.1	19.0	18.3	6.8
pH (SU)	296	3.8	9.0	8.0	7.9	0.5
Dissolved Oxygen (mg/L)	295	5.0	16.7	9.9	10.2	2.0
Specific Conductance (µmhos/cm)	297	95.0	1852.0	216.2	232.8	131.3
Turbidity (NTU)	298	0.5	440.0	6.2	15.5	39.9
Total Suspended Solids (mg/L)	291	< 0.2	295.0	5.0	10.1	24.9
Total Phosphorus (mg/L)	260	< 0.001	5.950	0.071	0.216	0.444
Total Nitrogen (mg/L)	191	< 0.388	7.505	1.228	1.602	1.170
Chlorophyll a (mg/m³)	200	< 0.50	9.61	0.50	1.50	1.73
C-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	245	3.4	31.0	22.0	20.3	7.0
pH (SU)	244	6.5	8.7	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	244	5.7	15.9	8.6	9.1	1.8
Specific Conductance (µmhos/cm)	246	75.0	484.0	230.0	241.9	76.1
Turbidity (NTU)	245	1.7	225.0	6.8	13.1	20.0
Total Suspended Solids (mg/L)	222	< 0.2	220.0	6.0	9.8	18.7
Total Phosphorus (mg/L)	192	< 0.002	1.640	0.100	0.256	0.357
Total Nitrogen (mg/L)	174	< 0.300	48.930	0.986	1.917	3.856
Chlorophyll a (mg/m³)	143	< 0.50	31.51	3.20	5.09	5.66
C-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	338	4.2	30.6	21.4	19.8	6.5
pH (SU)	338	6.0	9.8	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	339	3.9	15.6	8.7	9.1	1.9
Specific Conductance (µmhos/cm)	340	79.7	556.0	268.0	275.4	84.2
Turbidity (NTU)	346	1.0	376.0	8.9	25.7	48.7
Total Suspended Solids (mg/L)	301	< 0.2	1540.0	8.0	27.3	98.3
Total Phosphorus (mg/L)	270	< 0.009	1.160	0.108	0.191	0.226
Total Nitrogen (mg/L)	253	< 0.056	6.402	1.501	1.832	1.110
Chlorophyll a (mg/m³)	210	< 0.50	26.70	1.60	2.40	2.75
CABB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	146	4.8	29.2	21.0	20.4	6.8
pH (SU)	146	6.5	8.8	8.0	8.0	0.4
Dissolved Oxygen (mg/L)	146	6.2	15.3	9.3	9.6	1.7

Specific Conductance (μmhos/cm)	145	108.6	345.0	246.0	239.9	58.5
Turbidity (NTU)	144	2.3	378.0	6.7	21.4	44.7
Total Suspended Solids (mg/L)	135	< 0.2	269.0	7.0	21.3	43.2
Total Phosphorus (mg/L)	105	< 0.001	0.371	0.024	0.040	0.046
Total Nitrogen (mg/L)	104	< 0.179	3.277	0.565	0.672	0.464
Chlorophyll a (mg/m³)	127	< 0.05	30.44	1.87	2.94	3.85
CAHD-1A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	27	17.8	30.9	27.5	26.5	3.5
pH (SU)	28	6.3	8.1	7.7	7.6	0.4
Dissolved Oxygen (mg/L)	28	6.3	9.4	7.6	7.7	0.8
Specific Conductance (μmhos/cm)	28	0.1	229.0	190.8	174.4	51.7
Turbidity (NTU)	30	10.4	432.0	18.1	38.9	75.1
Total Suspended Solids (mg/L)	29	8.0	303.0	18.0	33.5	54.4
Total Phosphorus (mg/L)	29	0.013	0.088	0.022	0.027	0.017
Total Nitrogen (mg/L)	28	< 0.191	0.900	0.470	0.497	0.190
Chlorophyll a (mg/m³)	29	< 0.05	17.40	7.48	8.28	4.96
CAHS-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	256	3.6	29.2	21.6	19.7	6.6
pH (SU)	255	6.0	8.8	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	256	1.3	14.7	8.4	8.9	2.0
Specific Conductance (μmhos/cm)	255	69.9	528.0	244.7	264.2	89.9
Turbidity (NTU)	260	1.9	400.0	7.2	20.1	40.0
Total Suspended Solids (mg/L)	218	< 0.2	398.0	7.0	19.7	40.9
Total Phosphorus (mg/L)	187	< 0.007	1.900	0.051	0.187	0.314
Total Nitrogen (mg/L)	186	< 0.412	7.925	1.291	1.624	1.192
Chlorophyll a (mg/m³)	210	< 0.50	29.20	1.60	2.34	3.20
CATM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	30	6.0	30.0	25.1	23.8	5.0
pH (SU)	30	6.8	7.9	7.5	7.4	0.3
Dissolved Oxygen (mg/L)	29	3.5	12.0	6.4	6.5	1.8
Specific Conductance (μmhos/cm)	30	120.0	356.1	212.0	215.0	56.8
Turbidity (NTU)	27	1.8	89.3	18.0	27.7	23.9
Total Suspended Solids (mg/L)	23	< 0.5	128.0	16.0	29.5	32.2
Total Phosphorus (mg/L)	24	0.036	0.273	0.120	0.123	0.058
Total Nitrogen (mg/L)	24	< 0.218	1.232	0.520	0.570	0.297
Chlorophyll a (mg/m³)	20	< 0.05	17.80	2.58	3.63	4.44
CHAC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	182	4.8	28.3	16.4	16.9	6.1
pH (SU)	183	6.5	8.7	7.8	7.8	0.3
Dissolved Oxygen (mg/L)	184	4.9	14.3	8.9	9.0	1.7
Specific Conductance (μmhos/cm)	182	34.8	877.9	340.1	374.9	174.6
Turbidity (NTU)	206	1.7	297.0	9.2	16.6	31.7
Total Suspended Solids (mg/L)	189	< 0.2	103.0	10.0	13.1	13.4
Total Phosphorus (mg/L)	183	< 0.003	0.797	0.167	0.218	0.148
Total Nitrogen (mg/L)	183	< 0.130	2.700	0.950	1.000	0.380
Chlorophyll a (mg/m³)	189	< 0.05	49.10	2.00	3.21	5.19
CHO-9	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	41	13.4	29.6	25.4	24.7	3.9
pH (SU)	41	5.4	8.2	7.1	7.1	0.5
Dissolved Oxygen (mg/L)	41	0.3	9.7	7.3	7.4	1.4
Specific Conductance (μmhos/cm)	41	40.9	127.8	80.7	82.5	19.1
Turbidity (NTU)	53	5.6	79.9	15.6	19.0	12.7

	N	Min	Max	Med	Avg	SD
Total Suspended Solids (mg/L)	48	< 0.5	193.0	12.0	20.8	33.0
Total Phosphorus (mg/L)	51	0.017	0.135	0.051	0.056	0.022
Total Nitrogen (mg/L)	51	< 0.375	1.773	0.937	0.971	0.289
Chlorophyll a (mg/m³)	48	< 0.05	18.16	1.07	1.67	2.74
CHOC-10	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	46	14.9	28.3	23.8	22.7	3.6
pH (SU)	46	6.9	8.4	7.6	7.6	0.3
Dissolved Oxygen (mg/L)	46	6.0	10.0	8.0	8.0	1.0
Specific Conductance (μmhos/cm)	46	64.7	198.4	133.8	132.1	34.3
Turbidity (NTU)	49	4.0	120.0	9.2	13.1	16.7
Total Suspended Solids (mg/L)	48	< 0.5	93.0	9.0	13.2	14.6
Total Phosphorus (mg/L)	45	< 0.002	0.137	0.031	0.038	0.024
Total Nitrogen (mg/L)	45	< 0.086	0.914	0.350	0.384	0.174
Chlorophyll a (mg/m³)	48	< 0.05	22.96	1.20	2.11	3.48
CHOT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	64	14.5	27.8	24.0	22.6	3.7
pH (SU)	64	6.3	8.4	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	64	6.6	10.2	8.5	8.5	0.8
Specific Conductance (μmhos/cm)	64	102.5	320.0	207.6	204.3	47.1
Turbidity (NTU)	65	3.8	45.6	9.8	11.5	7.8
Total Suspended Solids (mg/L)	65	< 0.5	31.0	8.0	9.8	6.2
Total Phosphorus (mg/L)	60	< 0.026	0.206	0.072	0.083	0.038
Total Nitrogen (mg/L)	62	< 0.485	6.401	0.926	1.057	0.791
Chlorophyll a (mg/m³)	59	< 0.05	23.20	1.07	1.76	3.09
CHTH-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	100	9.5	30.5	22.6	21.8	6.4
pH (SU)	100	6.3	7.9	7.0	6.9	0.3
Dissolved Oxygen (mg/L)	100	3.3	12.1	8.6	8.7	1.7
Specific Conductance (μmhos/cm)	100	58.8	164.6	102.7	104.9	23.7
Turbidity (NTU)	101	2.0	37.2	6.3	8.9	7.2
Total Suspended Solids (mg/L)	102	< 0.0	39.0	5.0	6.2	5.6
Total Phosphorus (mg/L)	102	0.012	0.074	0.025	0.029	0.013
Total Nitrogen (mg/L)	102	< 0.256	2.276	0.803	0.863	0.322
Chlorophyll a (mg/m³)	101	< 0.05	69.40	3.05	4.64	7.43
CKSM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	52	15.0	28.0	24.0	23.0	3.2
pH (SU)	52	4.6	7.2	5.7	5.8	0.5
Dissolved Oxygen (mg/L)	52	5.4	10.2	7.8	8.0	0.8
Specific Conductance (μmhos/cm)	52	24.6	67.2	30.6	31.0	5.8
Turbidity (NTU)	52	1.9	29.0	5.2	6.5	5.0
Total Suspended Solids (mg/L)	51	< 0.5	45.0	6.0	7.9	8.0
Total Phosphorus (mg/L)	50	< 0.002	0.038	0.016	0.018	0.008
Total Nitrogen (mg/L)	50	< 0.101	0.904	0.408	0.436	0.187
Chlorophyll a (mg/m³)	50	< 0.50	1.40	0.50	0.59	0.24
CNRC-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	42	5.9	30.6	24.6	22.0	7.1
pH (SU)	41	6.5	7.8	7.0	7.0	0.3
Dissolved Oxygen (mg/L)	43	4.8	12.3	7.0	7.7	2.0
Specific Conductance (μmhos/cm)	43	41.2	93.1	79.6	75.5	14.1
Turbidity (NTU)	53	2.5	49.6	10.3	13.4	9.8
Total Suspended Solids (mg/L)	52	< 0.5	30.0	4.5	5.4	5.8
Total Phosphorus (mg/L)	53	0.008	0.054	0.021	0.024	0.010

	N	Min	Max	Med	Avg	SD
Total Nitrogen (mg/L)	53	< 0.135	1.247	0.550	0.572	0.237
Chlorophyll a (mg/m³)	53	< 0.05	27.77	1.53	2.86	4.97
CO-12	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	138	3.8	30.9	18.5	17.7	7.6
pH (SU)	138	4.8	8.6	7.1	7.2	0.6
Dissolved Oxygen (mg/L)	138	6.2	12.8	9.2	9.5	1.6
Specific Conductance (μmhos/cm)	138	22.6	82.0	37.2	38.3	9.6
Turbidity (NTU)	133	0.3	37.3	1.4	2.7	4.8
Total Suspended Solids (mg/L)	132	< 0.2	42.0	1.0	2.5	4.7
Total Phosphorus (mg/L)	126	< 0.001	0.232	0.007	0.014	0.026
Total Nitrogen (mg/L)	129	< 0.049	4.790	0.309	0.396	0.458
Chlorophyll a (mg/m³)	132	< 0.05	7.48	0.53	0.86	0.98
CONC-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	36	11.3	28.0	24.9	23.7	3.6
pH (SU)	36	6.3	7.8	7.2	7.1	0.4
Dissolved Oxygen (mg/L)	36	5.3	10.2	7.3	7.4	0.8
Specific Conductance (μmhos/cm)	36	44.0	191.6	103.4	104.2	39.7
Turbidity (NTU)	40	3.4	63.9	18.4	23.0	15.8
Total Suspended Solids (mg/L)	39	< 0.5	57.0	11.0	16.4	16.3
Total Phosphorus (mg/L)	39	0.012	0.090	0.029	0.032	0.018
Total Nitrogen (mg/L)	39	< 0.227	1.448	0.705	0.710	0.250
Chlorophyll a (mg/m³)	39	< 0.05	53.00	1.07	3.27	9.19
CONE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	94	5.7	30.3	22.3	21.4	6.6
pH (SU)	98	4.4	7.6	7.0	6.9	0.4
Dissolved Oxygen (mg/L)	99	2.9	13.0	7.5	8.0	1.6
Specific Conductance (μmhos/cm)	99	0.1	281.2	107.7	121.8	52.4
Turbidity (NTU)	111	3.2	73.7	16.8	19.8	14.5
Total Suspended Solids (mg/L)	109	< 0.5	73.0	14.0	17.0	14.0
Total Phosphorus (mg/L)	110	0.027	0.151	0.048	0.054	0.021
Total Nitrogen (mg/L)	110	< 0.176	1.465	0.660	0.677	0.270
Chlorophyll a (mg/m³)	109	< 0.05	15.00	1.78	2.36	2.55
CONE-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	115	5.5	31.5	21.7	21.0	6.9
pH (SU)	117	4.4	8.9	6.1	7.0	0.5
Dissolved Oxygen (mg/L)	120	4.5	12.0	8.2	8.5	1.4
Specific Conductance (μmhos/cm)	120	0.1	607.3	84.6	87.2	53.1
Turbidity (NTU)	143	2.3	79.5	15.1	18.5	15.2
Total Suspended Solids (mg/L)	141	< 0.5	57.0	12.0	14.8	13.9
Total Phosphorus (mg/L)	141	0.007	0.123	0.022	0.025	0.015
Total Nitrogen (mg/L)	142	< 0.076	1.406	0.528	0.544	0.237
Chlorophyll a (mg/m³)	142	< 0.05	6.41	0.98	1.31	1.30
CONE-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	41	9.3	29.7	21.3	20.6	6.4
pH (SU)	45	4.4	7.2	6.7	6.6	0.5
Dissolved Oxygen (mg/L)	46	5.2	11.3	7.7	8.1	1.4
Specific Conductance (μmhos/cm)	46	0.1	164.5	90.8	88.3	33.9
Turbidity (NTU)	47	6.3	61.4	20.0	22.8	13.9
Total Suspended Solids (mg/L)	47	4.0	76.0	16.0	19.3	14.5
Total Phosphorus (mg/L)	47	0.024	0.299	0.038	0.045	0.039
Total Nitrogen (mg/L)	47	< 0.344	1.898	0.636	0.710	0.308
Chlorophyll a (mg/m³)	47	< 0.05	10.70	1.78	2.27	2.37

CORC-1	N	Min	Max	Med	Avg	SD
Temperature (°C)	40	9.6	33.3	24.2	23.2	6.5
pH (SU)	41	6.9	8.9	7.6	7.7	0.5
Dissolved Oxygen (mg/L)	41	5.3	11.7	8.4	8.6	1.8
Specific Conductance (μmhos/cm)	41	84.1	275.9	143.7	147.6	43.8
Turbidity (NTU)	51	7.5	143.9	16.2	22.7	22.0
Total Suspended Solids (mg/L)	41	4.0	73.0	13.0	19.2	12.8
Total Phosphorus (mg/L)	41	0.023	0.090	0.039	0.042	0.014
Total Nitrogen (mg/L)	41	< 0.164	1.821	0.584	0.666	0.425
Chlorophyll a (mg/m³)	40	1.07	41.70	19.40	19.15	10.99
COSE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	180	5.6	31.5	21.4	20.5	7.2
pH (SU)	181	6.7	8.3	7.3	7.3	0.3
Dissolved Oxygen (mg/L)	182	4.6	12.4	8.0	8.3	2.0
Specific Conductance (μmhos/cm)	181	82.1	259.9	140.3	148.3	38.7
Turbidity (NTU)	198	0.0	94.6	4.2	6.8	9.4
Total Suspended Solids (mg/L)	184	< 0.5	16.0	3.0	3.7	2.9
Total Phosphorus (mg/L)	184	< 0.002	0.104	0.031	0.032	0.013
Total Nitrogen (mg/L)	184	< 0.149	2.138	0.488	0.527	0.238
Chlorophyll a (mg/m³)	184	< 0.05	39.70	3.74	4.79	4.92
E-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	321	3.0	31.0	21.0	20.1	5.9
pH (SU)	323	3.2	8.3	5.2	5.3	0.8
Dissolved Oxygen (mg/L)	320	3.9	13.0	8.0	8.2	1.3
Specific Conductance (μmhos/cm)	320	3.0	8900.0	31.0	78.0	537.7
Turbidity (NTU)	332	1.6	65.0	7.4	10.0	9.2
Total Suspended Solids (mg/L)	329	< 0.5	163.0	9.0	13.3	16.3
Total Phosphorus (mg/L)	337	< 0.000	0.380	0.025	0.034	0.038
Total Nitrogen (mg/L)	97	< 0.211	2.176	0.554	0.641	0.337
Chlorophyll a (mg/m³)	85	< 0.50	7.60	0.50	1.10	1.07
FI-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	226	11.7	25.0	21.0	19.9	3.3
pH (SU)	226	5.1	7.8	6.0	6.0	0.5
Dissolved Oxygen (mg/L)	225	5.8	12.6	8.1	8.2	0.8
Specific Conductance (μmhos/cm)	225	32.0	3540.0	56.9	79.9	237.6
Turbidity (NTU)	216	1.0	159.0	5.4	11.0	18.4
Total Suspended Solids (mg/L)	199	< 0.5	92.0	6.0	9.8	12.8
Total Phosphorus (mg/L)	202	< 0.002	0.355	0.071	0.079	0.059
Total Nitrogen (mg/L)	201	< 0.210	3.800	1.770	1.736	0.515
Chlorophyll a (mg/m³)	114	< 0.50	8.10	0.50	0.93	1.03
FLIM-2A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	144	2.7	28.4	18.7	17.9	6.0
pH (SU)	144	6.8	8.7	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	143	6.6	13.3	9.0	9.2	1.5
Specific Conductance (μmhos/cm)	144	74.0	231.0	177.4	172.6	27.4
Turbidity (NTU)	144	0.9	421.0	5.7	14.0	38.7
Total Suspended Solids (mg/L)	141	< 0.2	225.0	6.0	12.1	25.3
Total Phosphorus (mg/L)	112	< 0.001	0.395	0.046	0.060	0.067
Total Nitrogen (mg/L)	112	< 0.143	5.356	1.966	2.075	0.720
Chlorophyll a (mg/m³)	141	< 0.05	12.80	0.50	1.33	1.83
FMCJ-1B	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	36	16.8	25.2	21.1	21.4	2.2

pH (SU)	36	7.6	8.8	8.2	8.2	0.2
Dissolved Oxygen (mg/L)	36	6.9	12.6	10.0	9.1	1.1
Specific Conductance (µmhos/cm)	36	250.0	383.0	357.0	352.2	26.4
Turbidity (NTU)	36	1.0	20.1	1.9	2.9	3.6
Total Suspended Solids (mg/L)	36	< 0.2	12.0	2.0	2.4	2.1
Total Phosphorus (mg/L)	27	< 0.001	0.061	0.010	0.018	0.018
Total Nitrogen (mg/L)	27	< 0.555	2.026	1.125	1.129	0.320
Chlorophyll a (mg/m³)	36	< 0.50	5.34	0.50	0.83	0.89
FMCJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	26	14.4	28.6	24.3	22.4	4.4
pH (SU)	26	7.6	8.8	8.1	8.1	0.2
Dissolved Oxygen (mg/L)	26	7.9	12.7	9.1	9.5	1.3
Specific Conductance (µmhos/cm)	26	283.0	609.0	465.0	457.3	87.5
Turbidity (NTU)	25	2.3	141.0	7.9	14.8	27.2
Total Suspended Solids (mg/L)	26	< 0.5	148.0	7.5	13.8	28.1
Total Phosphorus (mg/L)	26	0.011	0.640	0.146	0.160	0.134
Total Nitrogen (mg/L)	26	< 0.444	6.107	2.231	2.564	1.448
Chlorophyll a (mg/m³)	26	< 0.50	20.30	1.07	2.80	4.98
FTCM-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	124	4.9	28.4	17.4	17.5	6.8
pH (SU)	124	6.8	8.0	7.5	7.5	0.2
Dissolved Oxygen (mg/L)	123	2.0	11.7	6.5	6.7	2.5
Specific Conductance (µmhos/cm)	124	89.0	318.0	222.5	222.5	38.8
Turbidity (NTU)	125	5.3	41.1	11.3	13.6	7.7
Total Suspended Solids (mg/L)	124	< 0.2	114.0	11.0	13.1	12.1
Total Phosphorus (mg/L)	106	0.021	0.309	0.050	0.068	0.053
Total Nitrogen (mg/L)	105	< 0.181	4.140	0.962	1.095	0.610
Chlorophyll a (mg/m³)	125	< 0.36	32.00	2.14	6.60	8.00
H-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	188	2.0	32.0	20.6	19.8	7.2
pH (SU)	188	4.5	8.9	7.5	7.4	0.6
Dissolved Oxygen (mg/L)	188	0.2	24.8	9.2	9.6	2.1
Specific Conductance (µmhos/cm)	189	21.2	1218.0	283.0	345.9	209.5
Turbidity (NTU)	191	0.9	258.0	7.0	22.4	37.4
Total Suspended Solids (mg/L)	186	< 0.2	1133.0	4.0	28.9	105.1
Total Phosphorus (mg/L)	173	< 0.001	0.790	0.016	0.047	0.107
Total Nitrogen (mg/L)	159	< 0.072	2.853	0.380	0.513	0.444
Chlorophyll a (mg/m³)	115	< 0.05	20.03	0.50	1.17	2.19
HATC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	200	4.4	31.3	18.7	18.0	7.0
pH (SU)	200	5.0	8.6	7.1	7.1	0.4
Dissolved Oxygen (mg/L)	200	6.6	13.5	9.4	9.4	1.6
Specific Conductance (µmhos/cm)	199	0.1	237.0	40.0	40.1	16.7
Turbidity (NTU)	207	1.6	185.0	5.1	12.4	25.4
Total Suspended Solids (mg/L)	200	< 0.5	197.0	2.0	10.0	26.2
Total Phosphorus (mg/L)	194	< 0.002	0.107	0.014	0.021	0.019
Total Nitrogen (mg/L)	200	< 0.022	3.060	0.171	0.256	0.329
Chlorophyll a (mg/m³)	194	< 0.05	11.70	0.50	0.94	1.56
HILT-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	55	14.4	29.4	23.5	22.7	3.7
pH (SU)	55	5.8	7.6	6.8	6.7	0.4
Dissolved Oxygen (mg/L)	55	5.4	9.7	7.8	7.7	0.9

Specific Conductance (μmhos/cm)	55	19.4	49.5	36.0	35.6	5.0
Turbidity (NTU)	57	4.7	272.0	8.6	19.6	38.6
Total Suspended Solids (mg/L)	53	< 0.5	152.0	6.0	12.2	23.5
Total Phosphorus (mg/L)	53	< 0.011	0.170	0.017	0.025	0.026
Total Nitrogen (mg/L)	53	< 0.072	0.973	0.323	0.350	0.214
Chlorophyll a (mg/m³)	53	< 0.05	23.50	1.07	1.99	3.82
INDM-249	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	99	11.5	27.8	22.3	21.1	4.0
pH (SU)	99	7.0	8.7	7.7	7.7	0.2
Dissolved Oxygen (mg/L)	99	4.4	12.6	7.8	7.8	1.6
Specific Conductance (μmhos/cm)	99	104.7	307.0	247.5	241.4	36.3
Turbidity (NTU)	103	1.4	76.0	6.4	10.6	13.3
Total Suspended Solids (mg/L)	68	< 0.2	129.0	6.0	10.1	17.6
Total Phosphorus (mg/L)	62	< 0.003	0.202	0.041	0.048	0.036
Total Nitrogen (mg/L)	62	< 0.241	4.090	1.274	1.341	0.558
Chlorophyll a (mg/m³)	69	< 0.05	16.00	0.50	1.27	2.14
LC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	293	7.6	30.3	18.4	18.0	4.7
pH (SU)	292	6.3	8.9	7.7	7.7	0.3
Dissolved Oxygen (mg/L)	294	5.6	14.8	8.4	8.8	1.6
Specific Conductance (μmhos/cm)	292	40.0	1185.0	386.0	377.9	84.7
Turbidity (NTU)	291	1.1	152.0	4.2	10.0	18.6
Total Suspended Solids (mg/L)	281	< 0.2	173.0	4.0	7.2	15.5
Total Phosphorus (mg/L)	253	< 0.002	8.000	0.074	0.131	0.506
Total Nitrogen (mg/L)	182	< 0.521	5.835	2.094	2.350	1.088
Chlorophyll a (mg/m³)	200	< 0.27	8.28	0.50	0.87	1.02
LFKB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	53	8.4	29.9	25.0	22.9	5.6
pH (SU)	53	6.8	8.8	7.9	7.9	0.5
Dissolved Oxygen (mg/L)	53	6.5	11.8	8.6	8.9	1.4
Specific Conductance (μmhos/cm)	53	91.0	584.0	206.0	242.4	134.2
Turbidity (NTU)	55	1.3	76.0	3.4	7.0	11.6
Total Suspended Solids (mg/L)	43	< 0.5	45.0	3.0	6.7	9.6
Total Phosphorus (mg/L)	43	0.045	5.930	0.398	0.723	1.096
Total Nitrogen (mg/L)	42	< 1.332	16.918	2.558	4.107	3.537
Chlorophyll a (mg/m³)	34	< 0.05	1.60	0.50	0.59	0.29
LFKJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	146	5.2	34.0	21.8	20.8	7.5
pH (SU)	146	6.4	9.5	7.8	7.9	0.6
Dissolved Oxygen (mg/L)	146	4.4	18.8	9.2	9.4	2.6
Specific Conductance (μmhos/cm)	147	102.0	864.0	344.0	355.8	148.4
Turbidity (NTU)	148	3.9	92.4	8.1	14.2	15.6
Total Suspended Solids (mg/L)	149	< 0.5	64.0	8.0	11.0	10.8
Total Phosphorus (mg/L)	140	< 0.002	0.670	0.052	0.073	0.074
Total Nitrogen (mg/L)	122	< 0.456	3.019	1.416	1.504	0.486
Chlorophyll a (mg/m³)	105	< 0.05	98.70	5.87	13.58	16.32
LIML-300	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	64	12.6	29.3	22.1	22.1	3.8
pH (SU)	64	6.7	8.1	7.5	7.5	0.3
Dissolved Oxygen (mg/L)	64	6.7	10.2	8.1	8.1	0.8
Specific Conductance (μmhos/cm)	64	86.0	156.0	133.6	129.2	17.0
Turbidity (NTU)	68	1.7	61.5	4.5	7.1	8.1

Total Suspended Solids (mg/L)	56	< 0.2	80.0	5.0	7.3	11.8
Total Phosphorus (mg/L)	49	< 0.002	0.159	0.047	0.056	0.032
Total Nitrogen (mg/L)	49	< 0.444	4.110	1.287	1.339	0.498
Chlorophyll a (mg/m³)	53	< 0.05	17.09	0.50	1.22	2.43
LOSW-7	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	81	5.5	28.6	19.5	18.4	6.4
pH (SU)	81	6.6	14.3	8.1	8.1	0.8
Dissolved Oxygen (mg/L)	80	5.2	13.1	8.3	8.7	1.8
Specific Conductance (µmhos/cm)	81	155.0	2351.0	935.0	960.6	483.8
Turbidity (NTU)	88	1.7	320.0	5.3	17.7	39.2
Total Suspended Solids (mg/L)	87	< 0.5	507.0	6.0	23.6	66.9
Total Phosphorus (mg/L)	81	< 0.002	0.644	0.013	0.025	0.071
Total Nitrogen (mg/L)	81	< 0.030	4.119	0.372	0.469	0.501
Chlorophyll a (mg/m³)	87	< 0.05	9.61	0.50	0.99	1.19
LT-12	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	65	13.3	28.0	24.5	23.4	3.3
pH (SU)	65	6.3	7.8	7.1	7.1	0.3
Dissolved Oxygen (mg/L)	65	6.3	12.2	7.4	7.7	0.9
Specific Conductance (µmhos/cm)	65	46.2	175.6	134.0	125.9	33.6
Turbidity (NTU)	65	5.0	113.2	12.2	21.8	25.0
Total Suspended Solids (mg/L)	53	< 0.5	120.0	9.0	15.6	21.7
Total Phosphorus (mg/L)	54	< 0.010	0.115	0.026	0.035	0.027
Total Nitrogen (mg/L)	54	< 0.074	2.690	0.418	0.541	0.467
Chlorophyll a (mg/m³)	49	< 0.05	11.00	0.50	1.05	1.73
LTRR-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	84	7.1	28.6	23.8	22.1	4.7
pH (SU)	84	5.7	8.1	6.9	6.9	0.4
Dissolved Oxygen (mg/L)	84	5.1	11.1	7.1	7.3	1.3
Specific Conductance (µmhos/cm)	84	41.3	120.0	65.4	67.7	15.0
Turbidity (NTU)	87	9.3	425.0	17.5	34.2	62.2
Total Suspended Solids (mg/L)	67	< 0.5	231.0	11.0	29.3	49.5
Total Phosphorus (mg/L)	62	< 0.032	0.381	0.050	0.071	0.055
Total Nitrogen (mg/L)	64	< 0.438	1.542	0.738	0.793	0.241
Chlorophyll a (mg/m³)	62	< 0.05	25.60	1.60	2.52	3.49
LUXL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	74	6.2	29.6	23.0	21.9	4.6
pH (SU)	74	5.7	8.6	6.6	6.6	0.5
Dissolved Oxygen (mg/L)	74	6.6	11.9	8.3	8.5	1.0
Specific Conductance (µmhos/cm)	74	10.6	152.6	39.2	41.3	16.1
Turbidity (NTU)	74	2.0	500.0	12.2	25.7	65.4
Total Suspended Solids (mg/L)	59	< 0.5	236.0	10.0	16.6	31.5
Total Phosphorus (mg/L)	61	< 0.001	0.218	0.021	0.028	0.032
Total Nitrogen (mg/L)	61	< 0.167	3.110	0.515	0.590	0.459
Chlorophyll a (mg/m³)	51	< 0.05	45.39	1.07	2.31	6.35
MBFB-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	112	5.8	31.6	23.6	22.2	6.8
pH (SU)	112	6.6	9.1	7.6	7.6	0.4
Dissolved Oxygen (mg/L)	112	5.0	13.2	7.9	8.3	1.8
Specific Conductance (µmhos/cm)	112	69.3	393.0	160.5	176.2	70.5
Turbidity (NTU)	114	2.9	419.0	11.0	22.0	45.4
Total Suspended Solids (mg/L)	107	< 0.5	430.0	11.0	28.0	55.9
Total Phosphorus (mg/L)	98	< 0.008	1.050	0.154	0.213	0.181

	N	Min	Max	Med	Avg	SD
Total Nitrogen (mg/L)	97	< 0.082	7.683	1.867	2.081	1.141
Chlorophyll a (mg/m³)	101	< 0.05	270.00	3.20	8.57	28.58
MOBM-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	197	5.5	34.1	23.2	22.2	7.4
pH (SU)	196	5.2	8.2	7.1	6.1	0.5
Dissolved Oxygen (mg/L)	197	4.6	12.8	7.9	8.2	1.8
Specific Conductance (µmhos/cm)	188	0.3	8393.2	175.0	281.5	765.4
Turbidity (NTU)	212	3.0	198.0	23.0	31.2	26.1
Total Suspended Solids (mg/L)	212	1.0	227.0	18.0	26.9	27.8
Total Phosphorus (mg/L)	212	< 0.014	0.653	0.068	0.080	0.059
Total Nitrogen (mg/L)	205	< 0.100	4.462	0.759	0.809	0.404
Chlorophyll a (mg/m³)	208	< 0.50	27.00	2.60	4.88	5.57
MULD-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	62	13.0	36.4	24.0	23.5	4.6
pH (SU)	62	5.8	7.5	6.8	6.8	0.4
Dissolved Oxygen (mg/L)	62	5.9	10.7	8.4	8.5	0.8
Specific Conductance (µmhos/cm)	60	0.0	526.0	36.7	45.1	63.5
Turbidity (NTU)	65	3.1	274.0	12.9	28.2	45.7
Total Suspended Solids (mg/L)	54	< 0.5	276.0	14.0	29.6	49.8
Total Phosphorus (mg/L)	54	< 0.006	0.080	0.020	0.024	0.016
Total Nitrogen (mg/L)	52	< 0.069	0.756	0.294	0.316	0.140
Chlorophyll a (mg/m³)	54	< 0.05	16.00	1.69	2.12	2.56
NRRT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	98	5.8	31.0	23.6	21.2	6.8
pH (SU)	99	6.4	9.3	7.8	7.8	0.6
Dissolved Oxygen (mg/L)	99	5.8	13.4	8.5	8.8	1.8
Specific Conductance (µmhos/cm)	99	53.7	4595.0	162.0	595.4	992.1
Turbidity (NTU)	98	1.9	15740.0	5.8	177.2	1588.8
Total Suspended Solids (mg/L)	93	< 0.5	308.0	4.0	15.6	42.6
Total Phosphorus (mg/L)	92	< 0.003	0.210	0.019	0.029	0.028
Total Nitrogen (mg/L)	92	< 0.054	1.801	0.394	0.529	0.408
Chlorophyll a (mg/m³)	85	< 0.05	24.56	1.07	2.89	4.79
NXBS-50	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	43	11.9	32.0	26.4	25.1	5.0
pH (SU)	43	6.7	8.6	7.8	7.8	0.4
Dissolved Oxygen (mg/L)	42	4.2	10.0	7.1	7.2	1.1
Specific Conductance (µmhos/cm)	43	55.1	205.8	146.1	147.8	28.0
Turbidity (NTU)	46	13.6	548.0	38.0	73.6	107.3
Total Suspended Solids (mg/L)	46	< 0.5	410.0	33.0	69.4	95.8
Total Phosphorus (mg/L)	43	< 0.049	0.441	0.084	0.112	0.086
Total Nitrogen (mg/L)	43	< 0.233	3.543	0.811	1.024	0.694
Chlorophyll a (mg/m³)	46	< 0.05	62.70	7.74	10.98	11.37
PALC-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	50	8.8	30.0	24.7	23.8	3.9
pH (SU)	50	6.1	8.2	7.4	7.3	0.4
Dissolved Oxygen (mg/L)	50	5.8	10.7	7.4	7.6	0.8
Specific Conductance (µmhos/cm)	50	38.5	219.8	119.6	116.3	43.4
Turbidity (NTU)	52	2.8	74.1	11.5	17.4	14.4
Total Suspended Solids (mg/L)	48	< 0.5	36.0	5.0	9.7	10.2
Total Phosphorus (mg/L)	51	< 0.002	0.061	0.025	0.027	0.013
Total Nitrogen (mg/L)	51	< 0.086	1.373	0.487	0.523	0.239
Chlorophyll a (mg/m³)	48	< 0.00	9.61	1.07	1.30	1.45

PDBB-0	N	Min	Max	Med	Avg	SD
Temperature (°C)	50	15.5	31.1	26.4	25.5	4.2
pH (SU)	50	6.2	8.1	8.0	7.9	0.3
Dissolved Oxygen (mg/L)	48	5.5	9.3	6.9	7.1	0.9
Specific Conductance (μmhos/cm)	50	13255.6	55090.7	47184.0	45270.1	8375.3
Turbidity (NTU)	51	0.0	11.0	1.3	1.8	1.7
Total Suspended Solids (mg/L)	54	4.0	117.0	14.0	22.0	22.5
Total Phosphorus (mg/L)	54	< 0.002	0.121	0.020	0.027	0.027
Total Nitrogen (mg/L)	54	< 0.029	2.102	0.284	0.571	0.603
Chlorophyll a (mg/m³)	54	< 0.50	12.00	0.50	1.38	1.80
PDBB-5	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	60	12.9	27.0	22.9	22.6	2.8
pH (SU)	60	3.4	6.5	5.1	5.2	0.6
Dissolved Oxygen (mg/L)	60	6.5	10.5	8.0	8.1	0.7
Specific Conductance (μmhos/cm)	59	20.7	39.0	25.7	25.9	2.9
Turbidity (NTU)	70	1.5	20.3	3.4	4.7	3.3
Total Suspended Solids (mg/L)	67	< 1.0	17.0	4.0	4.8	3.2
Total Phosphorus (mg/L)	66	< 0.008	0.064	0.020	0.023	0.012
Total Nitrogen (mg/L)	67	< 0.207	1.605	0.576	0.627	0.261
Chlorophyll a (mg/m³)	67	< 0.50	3.80	0.50	0.68	0.54
PEAG-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	44	13.2	30.0	25.5	25.1	3.5
pH (SU)	44	6.3	9.1	7.2	7.3	0.5
Dissolved Oxygen (mg/L)	44	6.7	9.9	7.6	7.8	0.7
Specific Conductance (μmhos/cm)	44	42.7	187.7	104.0	108.8	32.7
Turbidity (NTU)	48	1.8	245.0	11.8	24.6	41.0
Total Suspended Solids (mg/L)	48	< 0.5	127.0	7.5	20.2	25.6
Total Phosphorus (mg/L)	48	0.007	0.133	0.033	0.041	0.030
Total Nitrogen (mg/L)	48	< 0.276	1.740	0.919	0.918	0.300
Chlorophyll a (mg/m³)	48	< 0.05	16.00	1.69	2.75	3.40
PICL-11	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	23	13.8	26.5	23.2	22.2	3.5
pH (SU)	23	7.1	9.2	8.3	8.2	0.6
Dissolved Oxygen (mg/L)	23	8.1	13.2	11.2	11.0	1.4
Specific Conductance (μmhos/cm)	23	68.0	180.0	115.0	116.5	25.9
Turbidity (NTU)	23	1.8	12.7	3.2	4.3	3.2
Total Suspended Solids (mg/L)	22	1.0	15.0	4.0	5.0	3.7
Total Phosphorus (mg/L)	22	< 0.009	0.069	0.020	0.024	0.014
Total Nitrogen (mg/L)	22	< 0.042	1.190	0.765	0.720	0.222
Chlorophyll a (mg/m³)	22	< 0.50	1.60	0.50	0.59	0.26
PRRJ-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	51	12.1	27.3	23.0	21.9	3.4
pH (SU)	51	7.0	8.2	7.5	7.6	0.2
Dissolved Oxygen (mg/L)	51	4.5	9.5	6.6	6.5	1.1
Specific Conductance (μmhos/cm)	51	236.0	403.0	303.0	303.5	39.3
Turbidity (NTU)	51	1.3	69.3	6.6	9.7	11.6
Total Suspended Solids (mg/L)	48	1.0	40.0	6.0	8.4	7.4
Total Phosphorus (mg/L)	42	< 0.003	0.051	0.016	0.023	0.016
Total Nitrogen (mg/L)	42	< 0.262	3.255	0.812	0.928	0.564
Chlorophyll a (mg/m³)	48	< 0.05	29.70	1.51	2.69	4.64
RCKC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	36	7.0	26.8	22.5	20.9	4.7

	N	Min	Max	Med	Avg	SD
pH (SU)	36	3.9	8.8	7.0	6.9	0.8
Dissolved Oxygen (mg/L)	36	4.1	11.6	6.3	6.6	1.9
Specific Conductance (µmhos/cm)	36	66.0	166.0	102.5	104.0	21.0
Turbidity (NTU)	36	4.7	82.7	9.4	15.2	16.6
Total Suspended Solids (mg/L)	27	< 0.5	95.0	5.0	10.5	18.6
Total Phosphorus (mg/L)	27	0.008	0.045	0.017	0.019	0.008
Total Nitrogen (mg/L)	27	< 0.034	1.017	0.351	0.379	0.231
Chlorophyll a (mg/m³)	27	< 0.50	3.20	0.50	0.76	0.66
SF-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	109	0.2	28.6	20.6	18.8	5.8
pH (SU)	109	6.1	8.7	7.5	7.5	0.4
Dissolved Oxygen (mg/L)	109	6.8	14.5	8.8	9.0	1.4
Specific Conductance (µmhos/cm)	109	36.9	168.1	81.8	82.2	21.3
Turbidity (NTU)	114	1.0	67.7	2.9	4.3	6.6
Total Suspended Solids (mg/L)	92	< 0.5	124.0	2.0	4.3	13.2
Total Phosphorus (mg/L)	92	< 0.002	0.500	0.009	0.016	0.051
Total Nitrogen (mg/L)	92	< 0.019	1.320	0.169	0.235	0.216
Chlorophyll a (mg/m³)	92	< 0.05	11.70	0.50	0.71	1.31
SF-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	52	7.4	18.7	13.8	13.2	2.6
pH (SU)	52	5.4	9.5	7.7	7.6	0.9
Dissolved Oxygen (mg/L)	52	5.1	11.4	7.5	7.6	1.5
Specific Conductance (µmhos/cm)	52	43.6	320.8	60.0	77.8	55.5
Turbidity (NTU)	52	0.5	47.4	1.7	3.5	6.9
Total Suspended Solids (mg/L)	54	< 0.5	22.0	2.0	2.7	3.4
Total Phosphorus (mg/L)	54	< 0.002	0.044	0.006	0.008	0.008
Total Nitrogen (mg/L)	52	< 0.233	3.107	0.452	0.570	0.422
Chlorophyll a (mg/m³)	51	< 0.05	2.14	0.50	0.78	0.42
SHDJ-6	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	45	9.1	29.4	23.7	22.9	4.0
pH (SU)	45	7.2	8.2	7.6	7.6	0.3
Dissolved Oxygen (mg/L)	45	5.7	10.8	6.9	7.1	1.0
Specific Conductance (µmhos/cm)	45	133.0	378.0	270.0	264.9	57.7
Turbidity (NTU)	47	2.8	109.0	6.7	16.2	21.2
Total Suspended Solids (mg/L)	31	< 0.5	117.0	4.0	18.5	31.3
Total Phosphorus (mg/L)	31	< 0.010	0.069	0.024	0.028	0.015
Total Nitrogen (mg/L)	28	< 0.139	1.179	0.457	0.518	0.251
Chlorophyll a (mg/m³)	31	< 0.05	3.92	0.50	1.15	1.12
SHLL-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	78	5.2	28.8	16.9	17.3	6.8
pH (SU)	78	6.2	8.7	7.6	7.6	0.5
Dissolved Oxygen (mg/L)	78	5.8	14.4	10.4	10.4	1.8
Specific Conductance (µmhos/cm)	78	53.0	131900.0	127.9	1812.4	14920.8
Turbidity (NTU)	79	0.8	38.1	4.1	6.0	6.4
Total Suspended Solids (mg/L)	78	< 0.0	85.0	6.0	9.7	12.6
Total Phosphorus (mg/L)	79	< 0.002	0.110	0.024	0.031	0.022
Total Nitrogen (mg/L)	78	< 0.244	3.381	0.771	0.872	0.433
Chlorophyll a (mg/m³)	77	< 0.27	28.30	0.53	1.84	3.48
SHRT-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	98	5.0	27.0	22.4	21.6	3.9
pH (SU)	100	7.3	8.5	7.9	7.9	0.2
Dissolved Oxygen (mg/L)	100	5.7	12.8	8.1	8.2	1.1

Specific Conductance (µmhos/cm)	101	106.7	2260.0	391.2	650.5	472.7
Turbidity (NTU)	101	1.2	154.0	4.2	7.6	17.4
Total Suspended Solids (mg/L)	92	< 0.2	925.0	6.0	17.9	96.4
Total Phosphorus (mg/L)	89	0.037	15.400	0.478	1.634	2.662
Total Nitrogen (mg/L)	74	< 1.018	7.019	3.150	3.299	1.252
Chlorophyll a (mg/m³)	63	< 0.05	12.80	1.07	1.56	2.25
SOGL-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	93	5.8	31.0	22.6	21.3	5.0
pH (SU)	93	6.4	9.8	7.3	7.3	0.5
Dissolved Oxygen (mg/L)	92	0.0	10.9	7.4	7.5	1.4
Specific Conductance (µmhos/cm)	93	58.5	1376.0	194.5	266.9	232.8
Turbidity (NTU)	96	1.0	340.0	11.8	23.8	42.4
Total Suspended Solids (mg/L)	90	< 0.5	450.0	11.0	24.6	51.8
Total Phosphorus (mg/L)	86	0.004	1.870	0.165	0.345	0.418
Total Nitrogen (mg/L)	86	< 0.325	9.678	1.729	2.612	2.323
Chlorophyll a (mg/m³)	69	< 0.05	13.35	1.07	1.80	2.27
SPLC-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	40	16.0	32.0	24.8	24.1	3.4
pH (SU)	40	6.1	8.3	6.9	6.9	0.5
Dissolved Oxygen (mg/L)	40	5.5	8.8	7.1	7.2	0.7
Specific Conductance (µmhos/cm)	40	29.0	144.2	68.2	71.6	26.4
Turbidity (NTU)	50	1.6	146.0	14.0	22.0	24.9
Total Suspended Solids (mg/L)	47	< 0.5	105.0	5.0	16.4	25.1
Total Phosphorus (mg/L)	50	< 0.002	0.058	0.025	0.026	0.011
Total Nitrogen (mg/L)	50	< 0.076	1.222	0.449	0.484	0.240
Chlorophyll a (mg/m³)	47	< 0.05	8.54	0.53	1.20	1.68
SPYG-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	55	4.0	30.3	22.8	22.5	6.2
pH (SU)	55	6.0	8.0	7.0	7.0	0.4
Dissolved Oxygen (mg/L)	55	5.4	13.1	7.2	7.5	1.4
Specific Conductance (µmhos/cm)	53	48.7	182.0	112.0	112.6	34.1
Turbidity (NTU)	63	2.3	61.1	17.4	19.6	10.7
Total Suspended Solids (mg/L)	63	1.0	58.0	13.0	16.5	11.4
Total Phosphorus (mg/L)	62	< 0.002	0.080	0.030	0.033	0.018
Total Nitrogen (mg/L)	62	< 0.092	1.857	0.442	0.508	0.272
Chlorophyll a (mg/m³)	47	< 0.05	13.00	2.67	2.91	2.41
SSYD-4	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	20	14.8	31.7	23.2	23.9	4.7
pH (SU)	20	6.8	9.3	8.0	8.0	0.6
Dissolved Oxygen (mg/L)	20	6.8	10.7	9.1	9.0	0.8
Specific Conductance (µmhos/cm)	20	78.0	352.2	128.5	143.3	69.1
Turbidity (NTU)	20	1.2	11.8	1.7	2.9	3.0
Total Suspended Solids (mg/L)	17	< 0.5	14.0	2.0	3.3	3.6
Total Phosphorus (mg/L)	17	0.021	1.080	0.041	0.111	0.251
Total Nitrogen (mg/L)	17	< 0.477	3.792	1.398	1.549	0.856
Chlorophyll a (mg/m³)	17	< 0.27	12.30	0.50	1.56	2.83
STXB-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	60	12.6	27.0	23.0	22.4	2.6
pH (SU)	60	4.1	6.7	5.4	5.4	0.5
Dissolved Oxygen (mg/L)	60	5.9	10.6	8.4	8.5	0.8
Specific Conductance (µmhos/cm)	59	23.0	44.9	34.0	33.6	4.2
Turbidity (NTU)	66	2.1	45.4	5.5	9.4	10.1

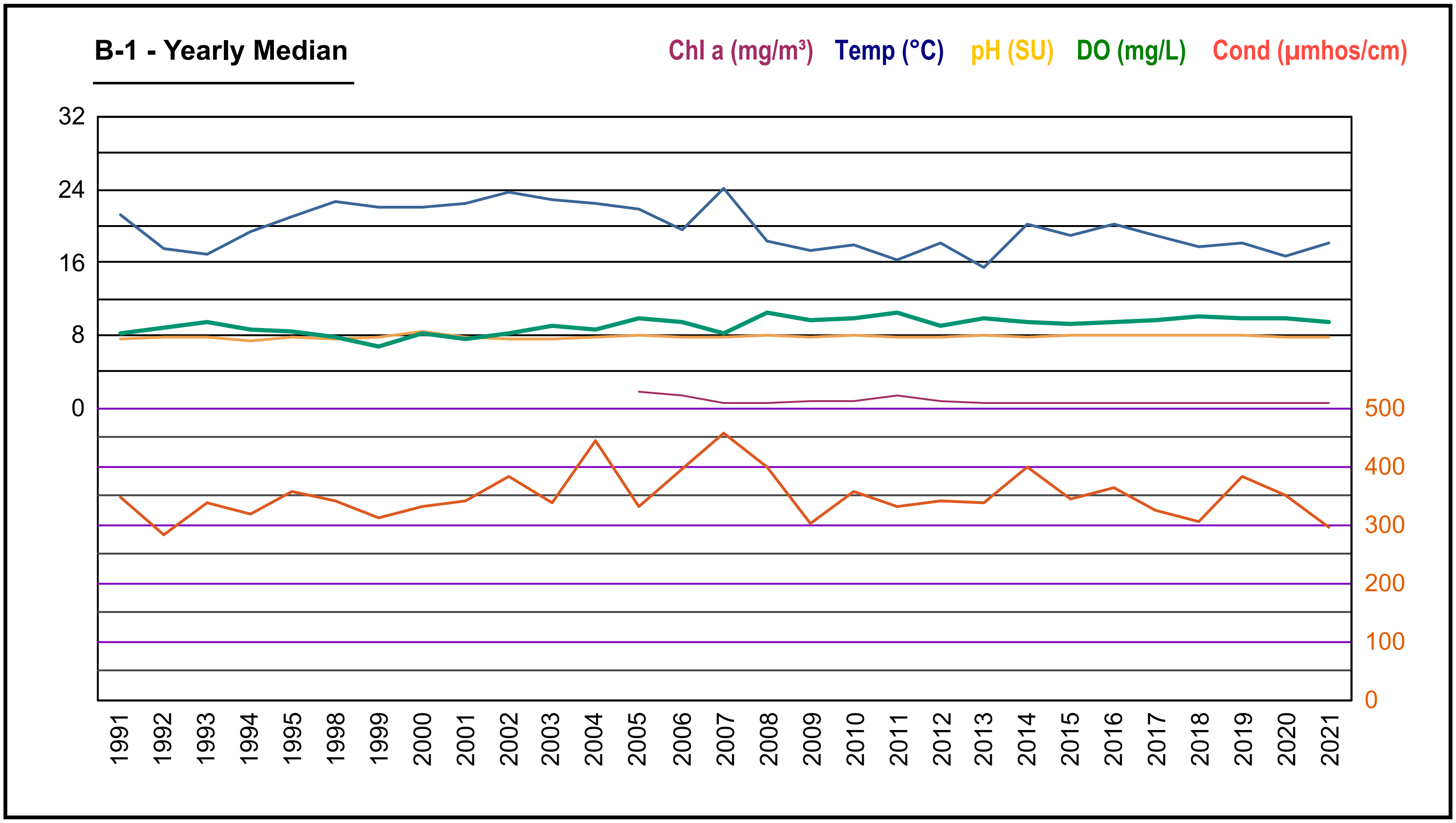
	N	Min	Max	Med	Avg	SD
Total Suspended Solids (mg/L)	62	< 2.0	53.0	6.0	9.4	10.6
Total Phosphorus (mg/L)	61	< 0.005	0.071	0.023	0.027	0.014
Total Nitrogen (mg/L)	62	< 0.328	1.670	0.834	0.877	0.290
Chlorophyll a (mg/m³)	62	< 0.50	15.00	0.50	0.96	1.89
SUCS-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	59	5.3	30.0	25.9	23.4	5.8
pH (SU)	59	5.7	8.2	7.2	7.1	0.5
Dissolved Oxygen (mg/L)	59	5.9	12.2	7.6	8.0	1.2
Specific Conductance (μmhos/cm)	59	45.4	128.0	61.7	65.8	16.7
Turbidity (NTU)	62	7.9	211.0	25.3	39.7	44.0
Total Suspended Solids (mg/L)	62	3.0	259.7	23.0	38.8	52.2
Total Phosphorus (mg/L)	59	< 0.001	0.144	0.046	0.053	0.033
Total Nitrogen (mg/L)	57	< 0.061	1.947	0.398	0.514	0.391
Chlorophyll a (mg/m³)	48	< 0.05	33.50	2.32	3.79	5.44
TA-2	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	204	-1.8	34.0	20.4	19.0	6.5
pH (SU)	205	4.6	8.7	7.0	6.9	0.5
Dissolved Oxygen (mg/L)	204	6.0	14.6	8.5	8.7	1.5
Specific Conductance (μmhos/cm)	205	0.1	111.0	43.9	44.3	11.5
Turbidity (NTU)	206	4.7	458.0	11.6	26.2	49.4
Total Suspended Solids (mg/L)	204	< 0.5	292.0	9.0	21.3	35.6
Total Phosphorus (mg/L)	196	< 0.002	2.210	0.036	0.061	0.166
Total Nitrogen (mg/L)	132	< 0.095	9.460	0.377	0.567	0.951
Chlorophyll a (mg/m³)	92	< 0.05	33.80	1.07	1.93	4.17
TARE-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	182	5.6	31.1	19.1	19.0	5.7
pH (SU)	183	5.6	10.0	7.0	6.9	0.4
Dissolved Oxygen (mg/L)	184	6.6	11.8	8.9	8.9	1.1
Specific Conductance (μmhos/cm)	184	24.0	85.5	49.0	50.3	8.0
Turbidity (NTU)	193	0.5	232.0	10.5	19.0	25.9
Total Suspended Solids (mg/L)	189	< 0.5	131.0	10.0	17.4	23.0
Total Phosphorus (mg/L)	187	< 0.002	0.176	0.019	0.028	0.027
Total Nitrogen (mg/L)	189	< 0.128	1.986	0.433	0.481	0.246
Chlorophyll a (mg/m³)	189	< 0.05	50.20	2.14	3.08	4.50
TART-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	92	6.3	32.5	21.1	20.2	7.2
pH (SU)	92	5.9	8.6	6.9	6.9	0.4
Dissolved Oxygen (mg/L)	92	6.3	12.5	8.2	8.5	1.5
Specific Conductance (μmhos/cm)	92	29.4	48.7	40.6	40.2	3.8
Turbidity (NTU)	98	2.6	102.0	7.2	12.1	15.5
Total Suspended Solids (mg/L)	96	< 0.5	122.0	4.5	9.8	19.2
Total Phosphorus (mg/L)	96	0.009	0.070	0.016	0.019	0.010
Total Nitrogen (mg/L)	96	< 0.102	1.216	0.391	0.435	0.231
Chlorophyll a (mg/m³)	96	< 0.05	12.50	0.71	1.48	1.95
TENR-215	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	79	5.8	31.5	18.6	19.6	8.0
pH (SU)	79	6.6	9.2	7.7	7.8	0.5
Dissolved Oxygen (mg/L)	79	4.4	15.7	9.9	9.5	2.1
Specific Conductance (μmhos/cm)	79	132.5	158900.0	169.0	2183.7	17858.0
Turbidity (NTU)	78	2.0	23.3	4.3	5.5	3.6
Total Suspended Solids (mg/L)	77	< 0.5	79.0	4.0	5.6	9.0
Total Phosphorus (mg/L)	79	0.015	0.253	0.043	0.045	0.027

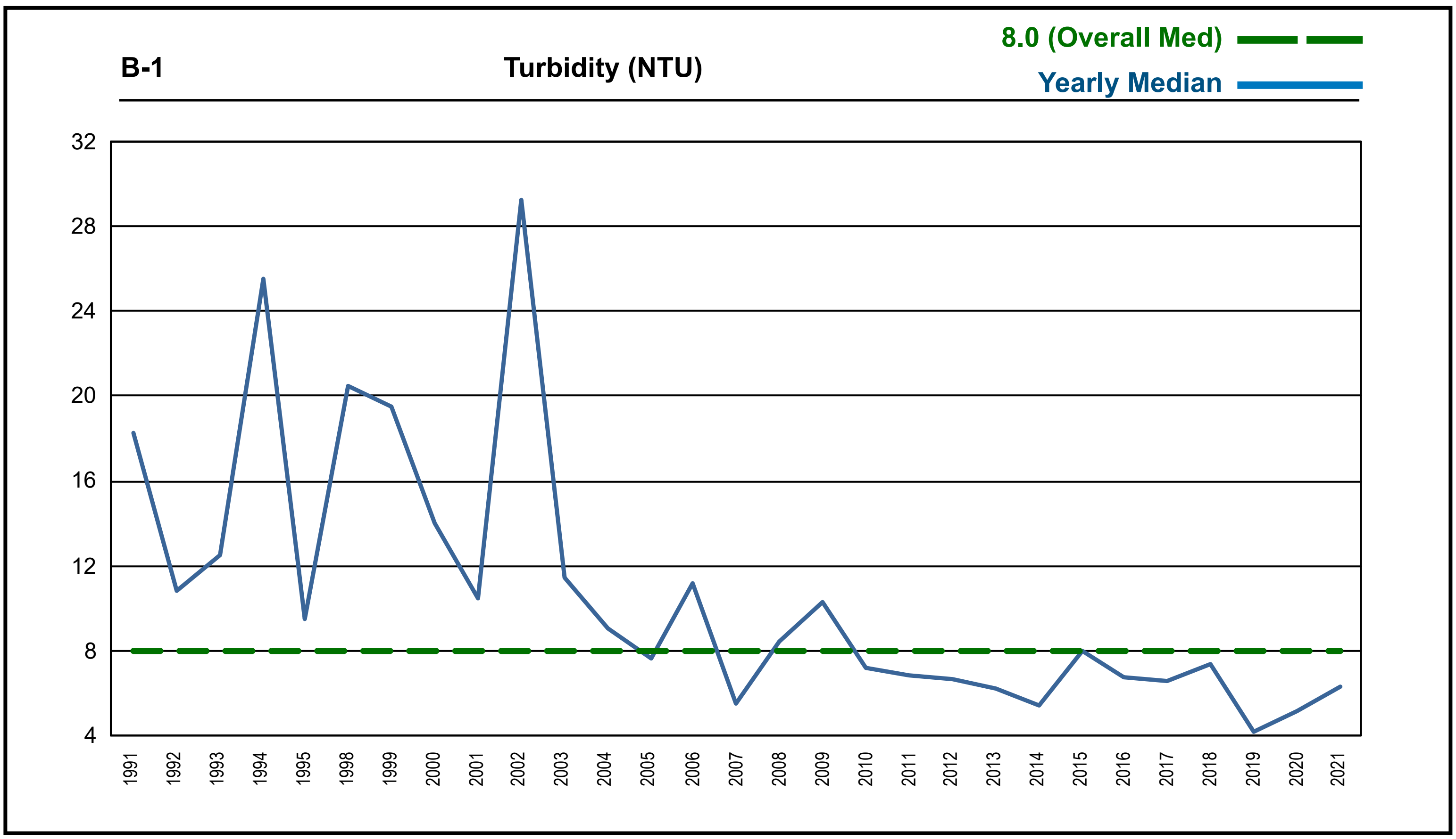
	N	Min	Max	Med	Avg	SD
Total Nitrogen (mg/L)	79	< 0.186	3.093	0.665	0.725	0.432
Chlorophyll a (mg/m³)	79	< 0.50	37.40	4.63	7.03	7.31
TENR-417	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	146	5.5	30.5	19.1	18.8	7.7
pH (SU)	146	6.6	8.9	7.6	7.6	0.3
Dissolved Oxygen (mg/L)	146	4.4	13.7	8.2	8.5	2.6
Specific Conductance (µmhos/cm)	146	127.0	145900.0	182.5	1180.4	12059.7
Turbidity (NTU)	145	1.8	44.9	4.9	6.8	5.7
Total Suspended Solids (mg/L)	143	< 0.2	44.0	4.0	5.4	5.4
Total Phosphorus (mg/L)	120	< 0.004	0.270	0.028	0.034	0.031
Total Nitrogen (mg/L)	120	< 0.248	3.119	0.596	0.668	0.376
Chlorophyll a (mg/m³)	144	< 0.05	15.00	1.60	2.24	2.06
TERC-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	60	13.0	27.8	23.4	22.1	3.8
pH (SU)	60	6.7	8.9	7.7	7.8	0.4
Dissolved Oxygen (mg/L)	60	6.2	10.4	8.0	8.0	0.8
Specific Conductance (µmhos/cm)	60	27.0	300.0	185.8	177.3	52.2
Turbidity (NTU)	60	1.2	208.1	4.6	11.1	31.4
Total Suspended Solids (mg/L)	56	< 0.5	165.0	3.0	8.7	23.5
Total Phosphorus (mg/L)	56	< 0.002	0.224	0.021	0.028	0.032
Total Nitrogen (mg/L)	56	< 0.163	1.005	0.459	0.474	0.178
Chlorophyll a (mg/m³)	50	< 0.05	7.47	0.50	0.93	1.27
TH-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	143	6.0	29.0	21.8	20.0	5.5
pH (SU)	145	6.4	8.6	7.7	7.6	0.4
Dissolved Oxygen (mg/L)	145	5.4	13.2	7.6	7.9	1.4
Specific Conductance (µmhos/cm)	145	40.1	2287.0	319.4	461.7	405.1
Turbidity (NTU)	145	1.6	65.6	7.0	10.2	10.2
Total Suspended Solids (mg/L)	140	< 0.5	293.0	8.0	15.5	31.6
Total Phosphorus (mg/L)	137	< 0.002	7.830	0.260	0.702	1.299
Total Nitrogen (mg/L)	121	< 0.197	5.728	1.412	1.730	1.171
Chlorophyll a (mg/m³)	58	< 0.05	6.94	0.53	1.15	1.37
TMCM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	104	10.0	33.0	26.2	24.1	5.9
pH (SU)	104	5.0	10.1	7.1	6.9	0.8
Dissolved Oxygen (mg/L)	103	6.7	12.8	8.1	8.5	1.3
Specific Conductance (µmhos/cm)	104	0.0	117.0	78.0	74.3	25.4
Turbidity (NTU)	106	1.0	96.0	3.9	8.4	12.9
Total Suspended Solids (mg/L)	102	< 1.0	19.0	2.5	3.6	3.0
Total Phosphorus (mg/L)	102	< 0.005	0.130	0.022	0.027	0.018
Total Nitrogen (mg/L)	102	< 0.099	1.859	0.504	0.542	0.292
Chlorophyll a (mg/m³)	100	< 0.50	21.00	1.10	1.87	2.71
TN-4A	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	117	0.9	30.2	15.1	17.0	7.1
pH (SU)	117	6.8	8.9	7.9	7.9	0.3
Dissolved Oxygen (mg/L)	116	3.8	13.1	9.1	9.2	1.7
Specific Conductance (µmhos/cm)	117	175.0	345.0	259.0	260.7	34.2
Turbidity (NTU)	188	0.5	271.0	13.6	19.5	24.0
Total Suspended Solids (mg/L)	183	1.0	206.0	16.0	25.9	29.2
Total Phosphorus (mg/L)	150	< 0.001	1.100	0.156	0.183	0.125
Total Nitrogen (mg/L)	150	< 0.147	4.510	1.254	1.330	0.609
Chlorophyll a (mg/m³)	183	< 0.50	94.50	2.14	4.23	8.80

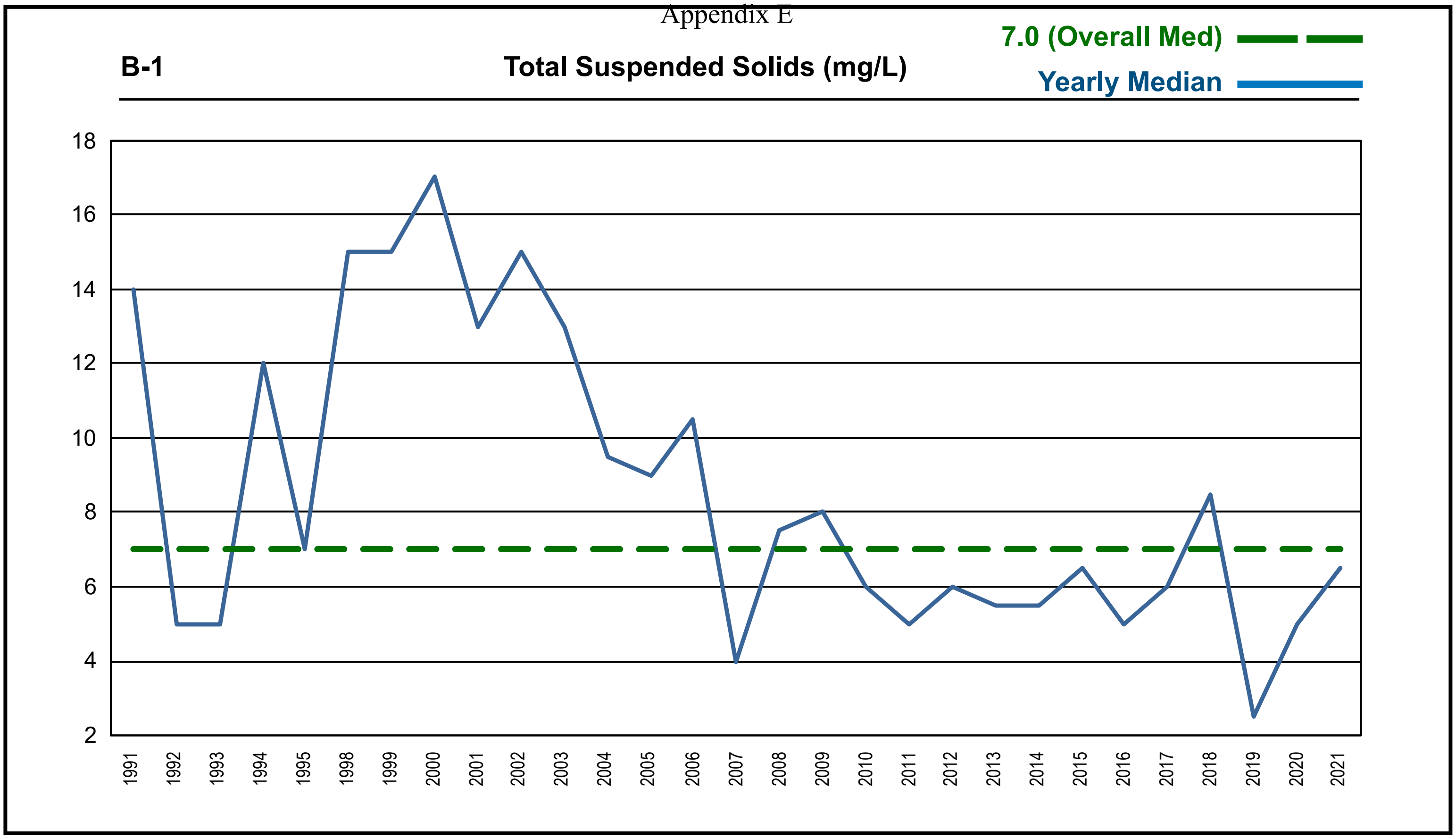
TRKJ-3	N	Min	Max	Med	Avg	SD
Temperature (°C)	43	11.3	24.8	20.2	19.6	3.3
pH (SU)	43	7.7	8.5	8.2	8.2	0.2
Dissolved Oxygen (mg/L)	43	8.7	11.1	9.4	9.5	0.6
Specific Conductance (μmhos/cm)	43	185.3	320.7	303.4	293.9	26.3
Turbidity (NTU)	44	1.5	64.4	2.5	4.5	9.6
Total Suspended Solids (mg/L)	40	< 0.5	59.0	2.0	4.1	9.3
Total Phosphorus (mg/L)	40	0.008	0.055	0.012	0.015	0.009
Total Nitrogen (mg/L)	40	< 0.508	1.283	0.605	0.665	0.165
Chlorophyll a (mg/m³)	33	< 0.05	8.81	0.71	1.28	1.83
UCCR-1	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	20	14.2	31.9	24.9	23.8	4.2
pH (SU)	20	6.3	8.6	7.0	7.1	0.6
Dissolved Oxygen (mg/L)	20	7.2	10.4	8.4	8.6	0.9
Specific Conductance (μmhos/cm)	20	39.2	82.4	48.8	52.1	10.8
Turbidity (NTU)	20	2.8	180.0	8.6	27.1	43.5
Total Suspended Solids (mg/L)	19	1.0	198.0	7.0	28.6	49.6
Total Phosphorus (mg/L)	19	0.014	0.129	0.022	0.032	0.026
Total Nitrogen (mg/L)	18	< 0.078	0.859	0.274	0.345	0.244
Chlorophyll a (mg/m³)	18	< 0.05	16.00	1.27	3.56	4.75
UPHM-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	58	11.1	31.7	24.6	24.0	4.4
pH (SU)	58	6.1	9.0	7.3	7.3	0.5
Dissolved Oxygen (mg/L)	57	6.7	13.0	8.0	8.3	1.2
Specific Conductance (μmhos/cm)	58	38.0	252.3	127.8	142.3	59.6
Turbidity (NTU)	59	0.6	204.0	8.8	22.3	38.4
Total Suspended Solids (mg/L)	56	< 0.5	266.0	6.5	23.5	46.7
Total Phosphorus (mg/L)	56	< 0.002	0.128	0.027	0.039	0.032
Total Nitrogen (mg/L)	56	< 0.366	2.017	0.774	0.912	0.421
Chlorophyll a (mg/m³)	56	< 0.05	9.15	1.07	1.82	2.01
VALJ-8	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	63	10.8	30.3	24.3	23.4	4.1
pH (SU)	63	7.4	8.9	8.2	8.2	0.2
Dissolved Oxygen (mg/L)	63	6.9	13.0	8.8	8.9	1.4
Specific Conductance (μmhos/cm)	63	266.0	1295.0	711.8	721.0	206.9
Turbidity (NTU)	64	1.2	149.0	4.0	10.6	21.4
Total Suspended Solids (mg/L)	63	< 0.2	185.0	4.0	10.5	25.2
Total Phosphorus (mg/L)	54	< 0.050	1.020	0.385	0.441	0.238
Total Nitrogen (mg/L)	52	< 0.808	8.727	4.211	4.445	1.999
Chlorophyll a (mg/m³)	63	< 0.05	40.90	1.07	2.05	5.37
VC-5	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	79	11.8	28.6	22.9	22.2	3.7
pH (SU)	79	6.2	8.4	7.9	7.8	0.4
Dissolved Oxygen (mg/L)	79	5.0	11.3	8.0	8.0	1.3
Specific Conductance (μmhos/cm)	78	131.0	695.7	419.3	398.1	93.3
Turbidity (NTU)	73	0.4	59.1	2.4	5.1	9.4
Total Suspended Solids (mg/L)	70	< 0.2	58.0	3.0	4.3	7.6
Total Phosphorus (mg/L)	63	< 0.002	0.158	0.032	0.038	0.030
Total Nitrogen (mg/L)	47	< 0.444	1.708	1.048	1.021	0.274
Chlorophyll a (mg/m³)	50	< 0.50	7.63	0.50	0.98	1.19
VI-3	**N**	**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	85	11.7	28.2	23.5	22.8	3.9

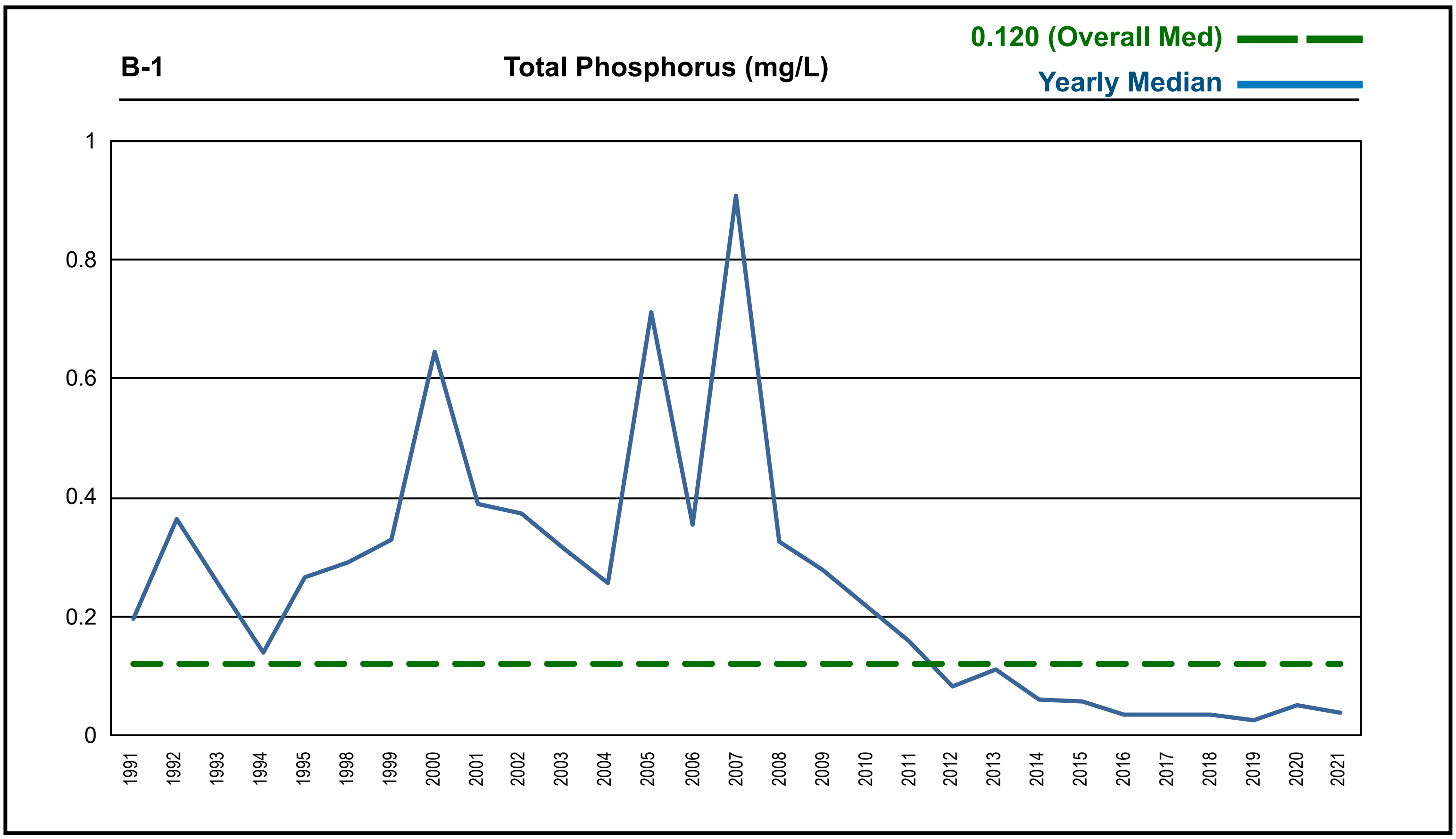
	N		Min	Max	Med	Avg	SD
pH (SU)	85		6.6	8.7	7.6	7.6	0.4
Dissolved Oxygen (mg/L)	85		0.0	11.0	7.4	7.2	1.7
Specific Conductance (µmhos/cm)	85		120.0	44000.0	434.3	921.7	4728.7
Turbidity (NTU)	84		1.0	225.0	4.0	11.8	30.4
Total Suspended Solids (mg/L)	86	<	0.5	583.0	5.0	20.2	69.3
Total Phosphorus (mg/L)	77		0.076	1.820	0.617	0.666	0.352
Total Nitrogen (mg/L)	64	<	0.546	14.218	5.470	5.858	2.502
Chlorophyll a (mg/m³)	66	<	0.05	8.01	0.90	1.45	1.51
VLGJ-5	**N**		**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	81		5.8	29.5	23.9	21.6	6.4
pH (SU)	81		7.3	9.4	8.2	8.3	0.4
Dissolved Oxygen (mg/L)	81		7.4	17.4	9.7	10.1	2.1
Specific Conductance (µmhos/cm)	81		314.0	989.0	575.0	576.6	119.5
Turbidity (NTU)	79		1.1	34.5	4.2	6.7	6.3
Total Suspended Solids (mg/L)	79	<	0.5	49.0	6.0	8.3	8.7
Total Phosphorus (mg/L)	70		0.019	0.517	0.167	0.185	0.115
Total Nitrogen (mg/L)	70	<	0.719	6.830	3.192	3.208	1.175
Chlorophyll a (mg/m³)	79	<	0.50	73.20	4.27	9.21	12.50
WDFA-2A	**N**		**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	192		6.8	32.3	21.7	20.9	7.2
pH (SU)	193		5.7	8.6	7.4	7.4	0.4
Dissolved Oxygen (mg/L)	194		6.5	12.6	9.0	9.1	1.3
Specific Conductance (µmhos/cm)	192		1.1	222.8	115.4	117.6	30.8
Turbidity (NTU)	199		3.6	44.3	7.7	11.1	7.7
Total Suspended Solids (mg/L)	194	<	0.5	62.0	8.0	9.7	8.3
Total Phosphorus (mg/L)	195	<	0.002	0.114	0.030	0.034	0.015
Total Nitrogen (mg/L)	194	<	0.080	1.990	0.552	0.570	0.254
Chlorophyll a (mg/m³)	195	<	0.05	33.80	9.08	9.65	6.13
WEIC-12	**N**		**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	323		5.4	33.7	20.8	20.2	7.5
pH (SU)	323		5.8	9.0	7.6	7.6	0.5
Dissolved Oxygen (mg/L)	324		4.2	12.8	8.4	8.6	1.7
Specific Conductance (µmhos/cm)	323		4.3	345.0	161.0	160.4	48.0
Turbidity (NTU)	323		2.4	237.0	13.7	21.0	23.9
Total Suspended Solids (mg/L)	312	<	0.5	213.0	11.0	17.6	22.5
Total Phosphorus (mg/L)	311	<	0.002	0.990	0.080	0.105	0.099
Total Nitrogen (mg/L)	262	<	0.065	2.011	0.763	0.796	0.282
Chlorophyll a (mg/m³)	198	<	0.05	74.76	5.79	10.11	11.07
YERC-3	**N**		**Min**	**Max**	**Med**	**Avg**	**SD**
Temperature (°C)	107		8.9	28.6	22.0	20.7	5.4
pH (SU)	106		5.9	7.8	7.2	7.1	0.4
Dissolved Oxygen (mg/L)	107		6.4	11.4	8.1	8.3	1.1
Specific Conductance (µmhos/cm)	107		39.7	164.1	85.4	88.5	28.5
Turbidity (NTU)	142		2.1	60.8	7.4	11.3	10.2
Total Suspended Solids (mg/L)	142	<	0.5	56.0	6.0	9.1	11.2
Total Phosphorus (mg/L)	141		0.007	0.092	0.021	0.024	0.014
Total Nitrogen (mg/L)	140	<	0.118	1.831	0.412	0.445	0.245
Chlorophyll a (mg/m³)	140	<	0.05	13.35	1.07	1.36	1.80

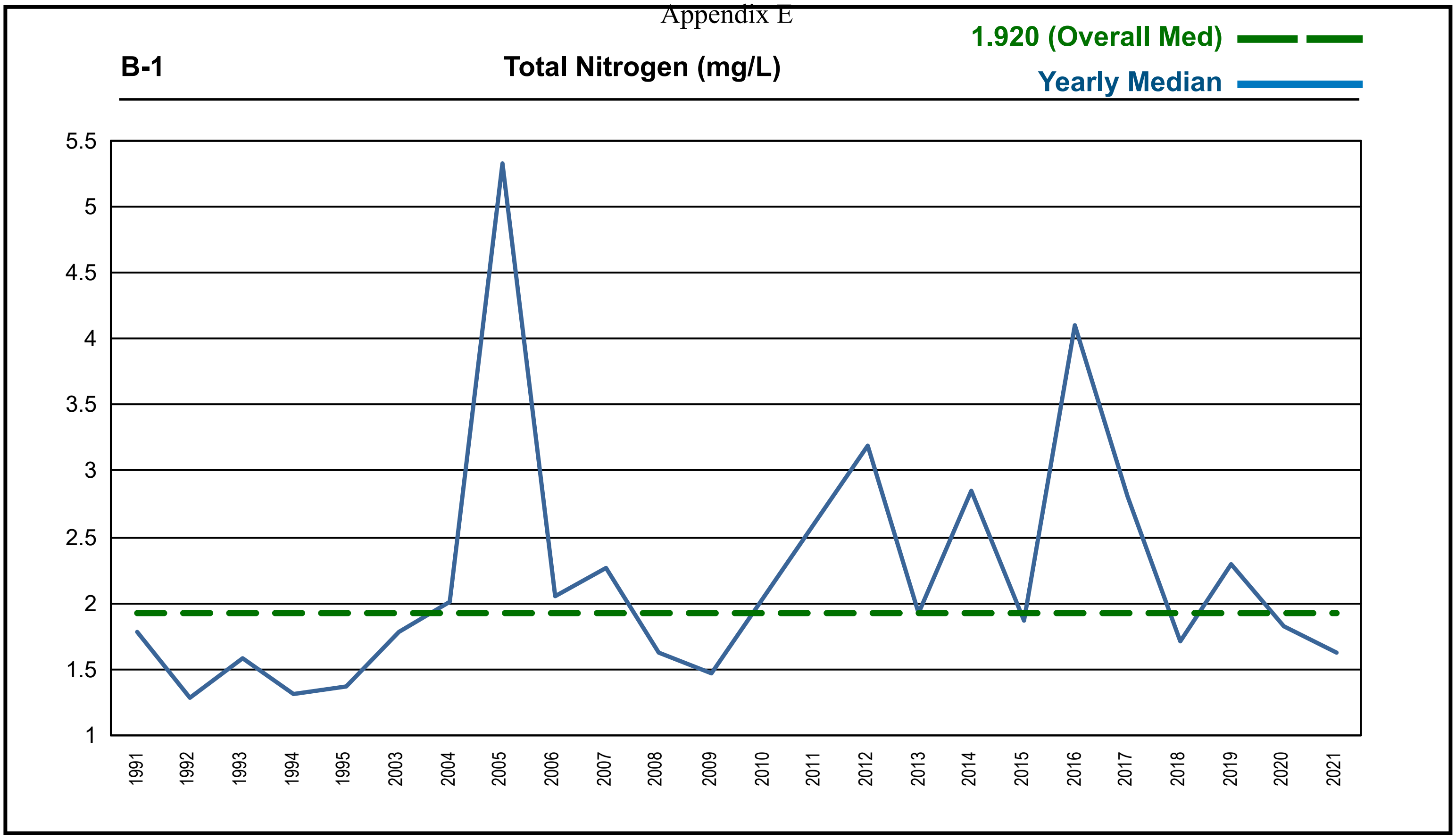
ADEM Ambient Trend Stations - Sampled 1978 - 2022

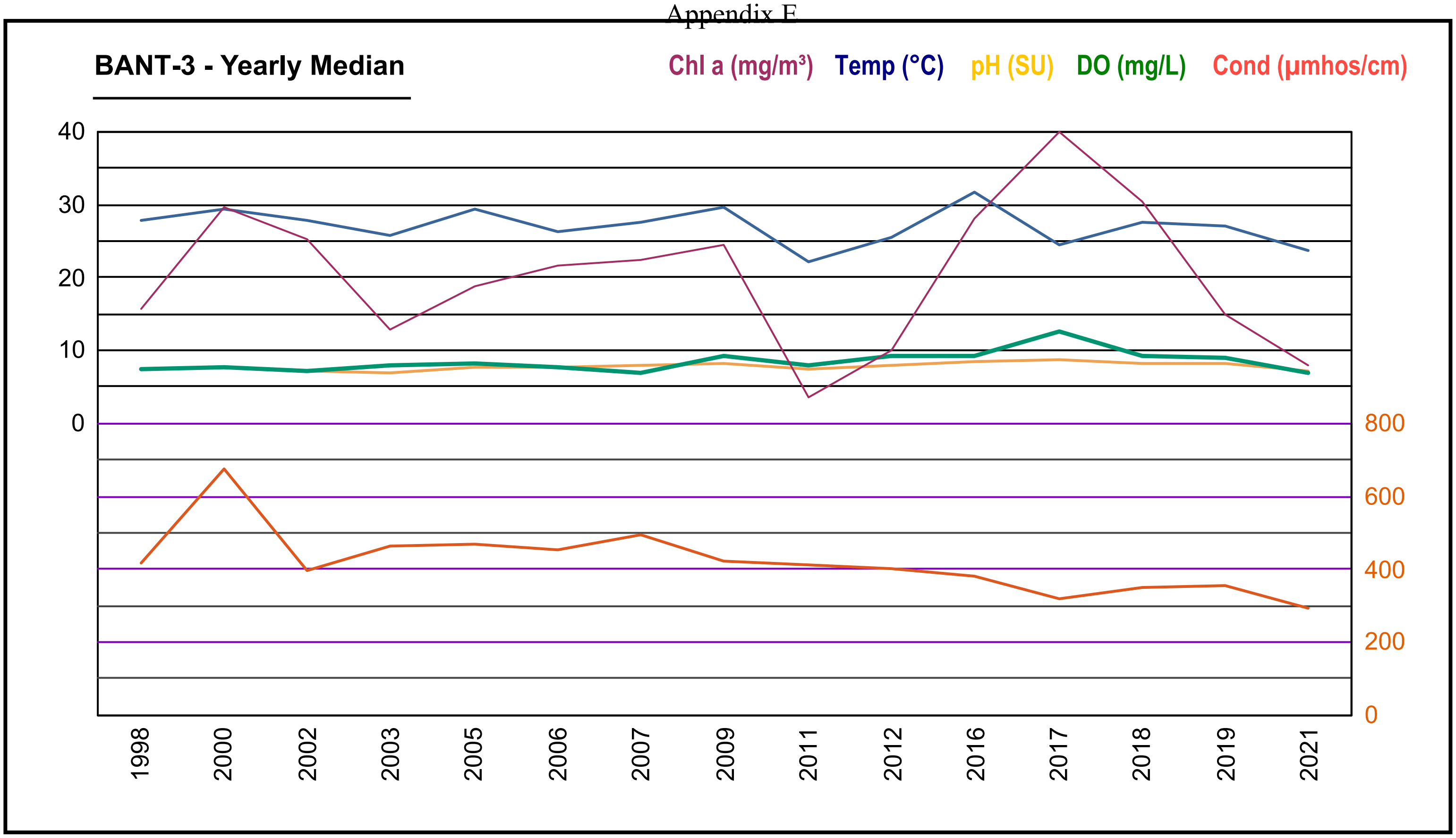


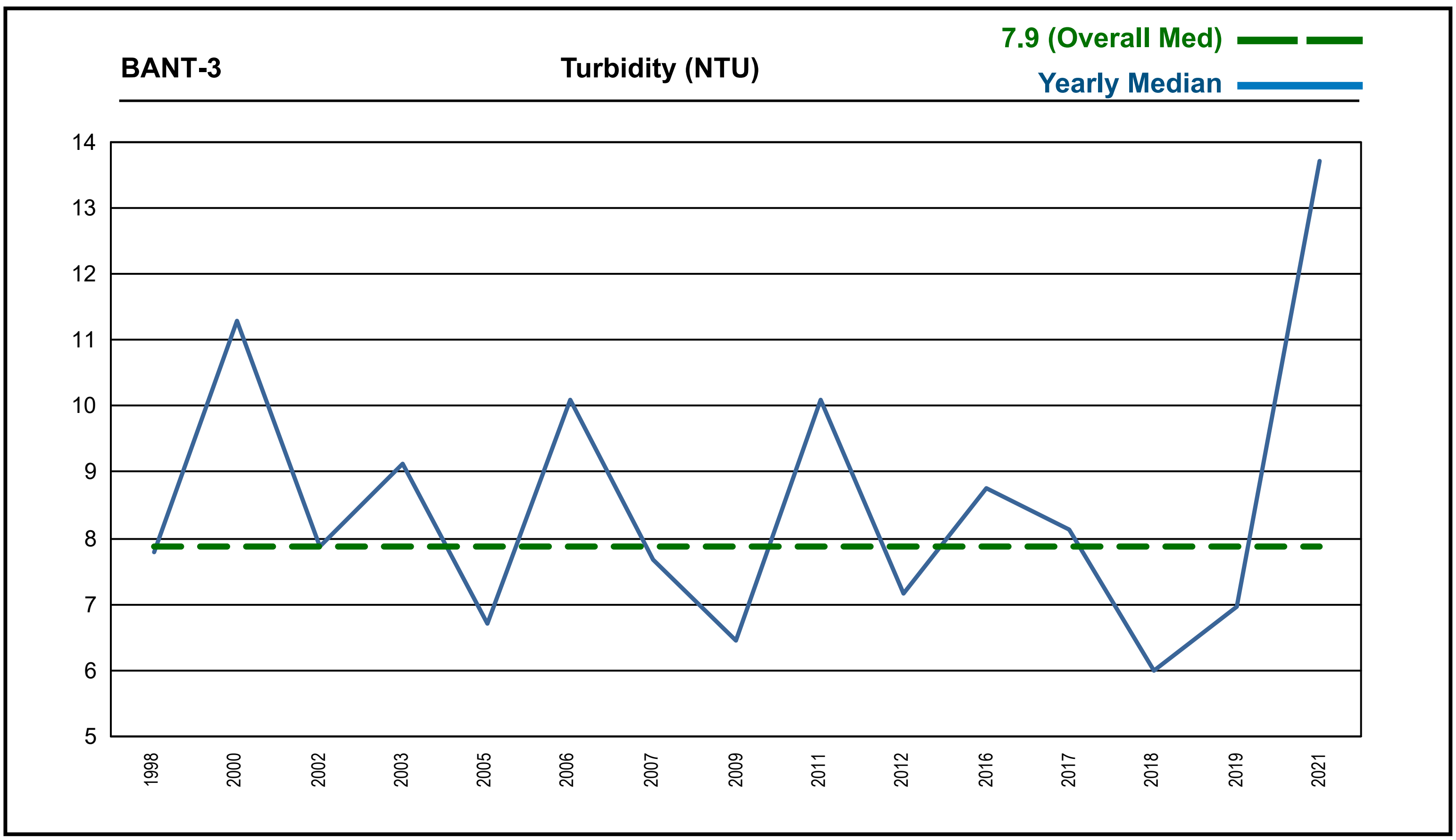


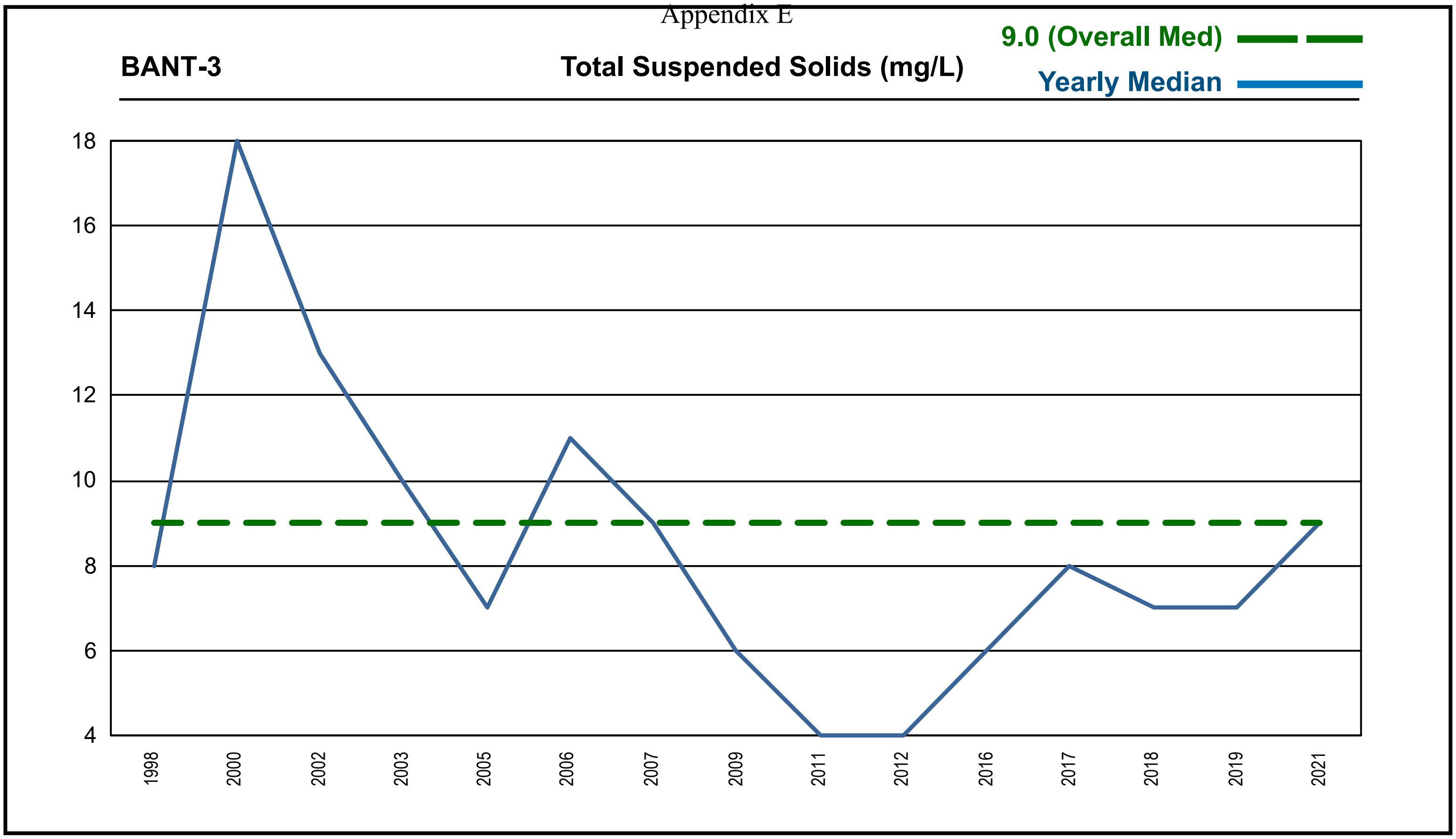

B-1
Total Suspended Solids (mg/L)
7.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

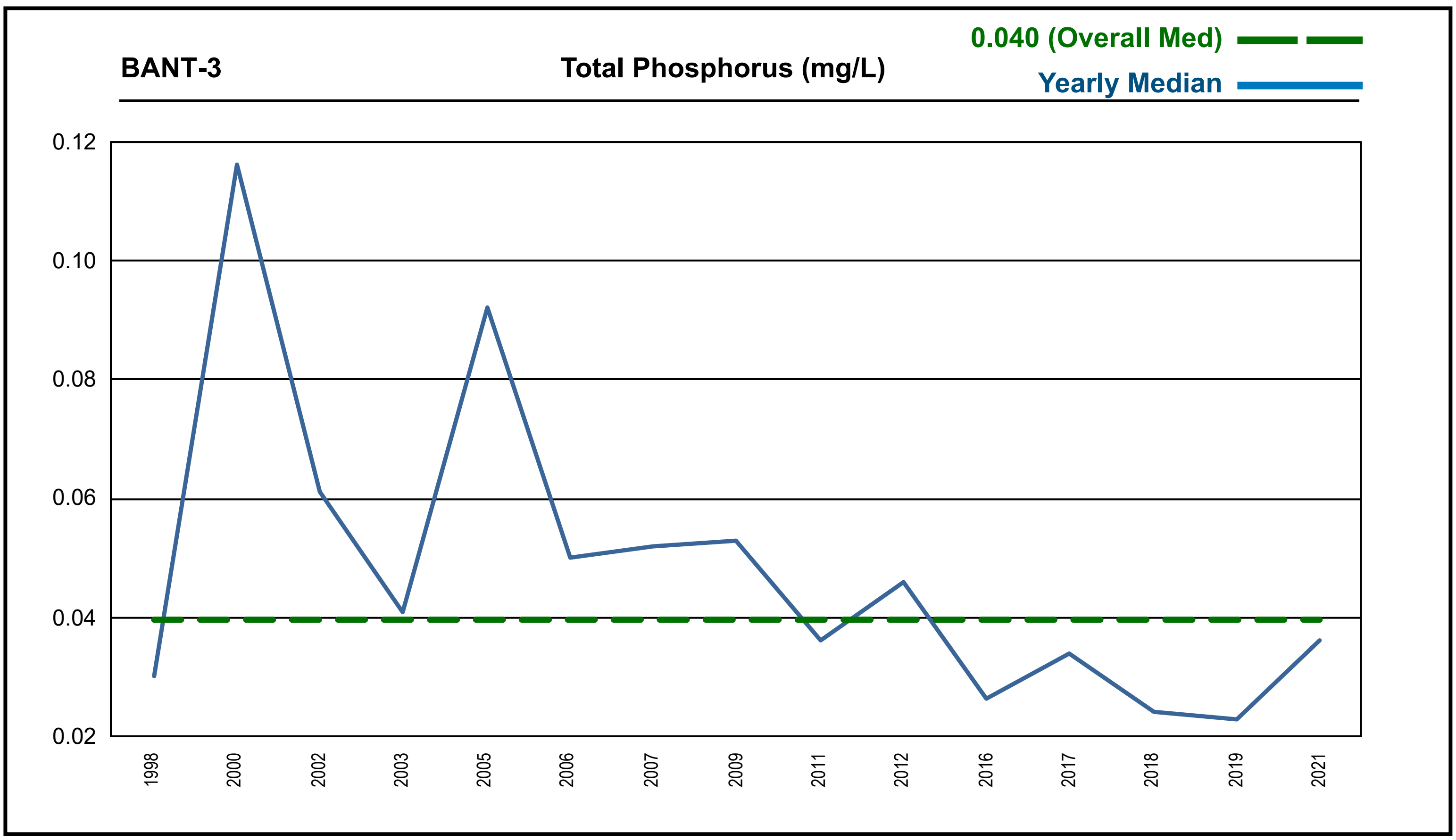

B-1
Total Phosphorus (mg/L)
0.120 (Overall Med)
Yearly Median
1
0.8
0.6
0.4
0.2
0
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

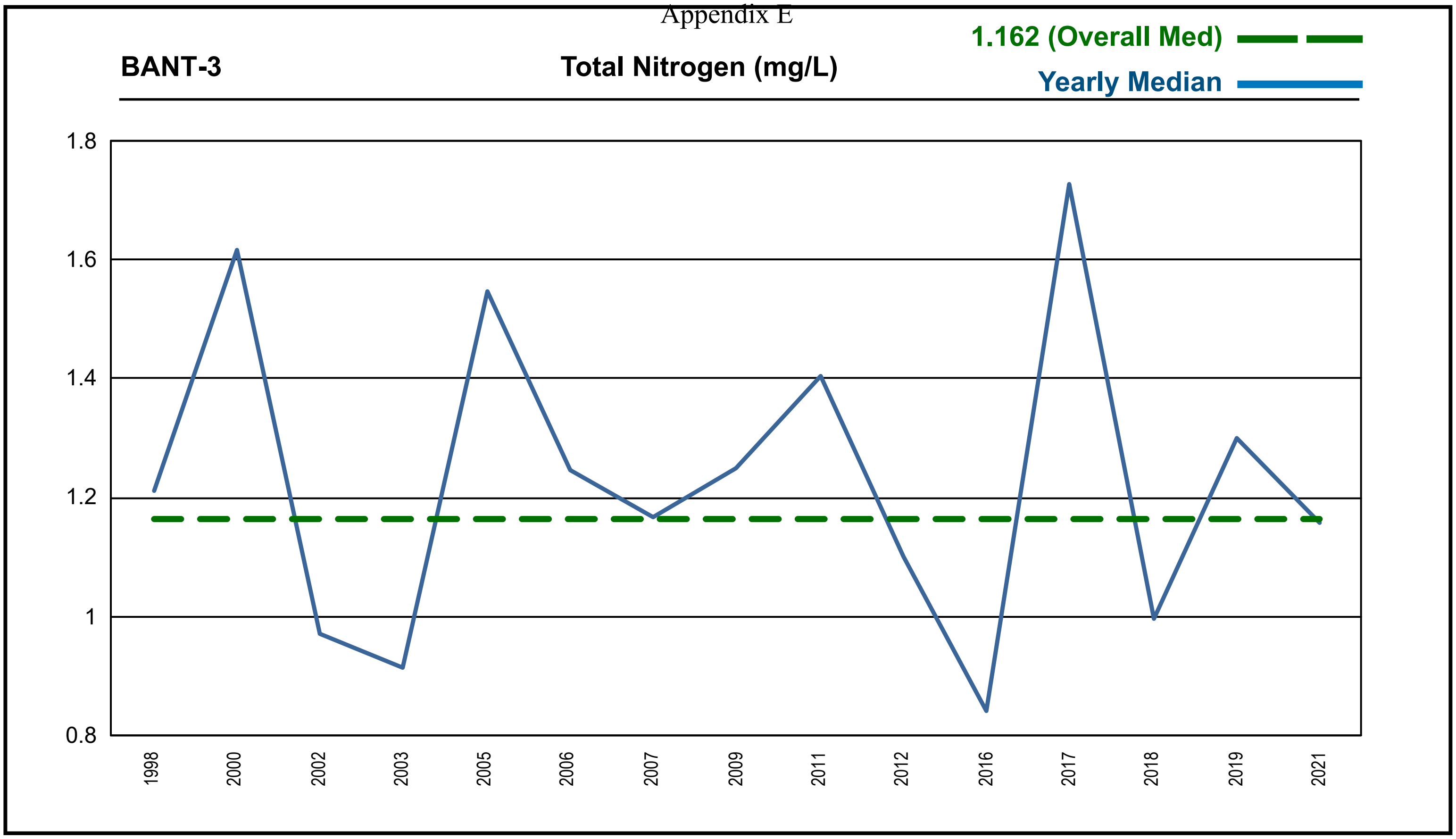

B-1
Total Nitrogen (mg/L)
1.920 (Overall Med)
Yearly Median
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
1991
1992
1993
1994
1995
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

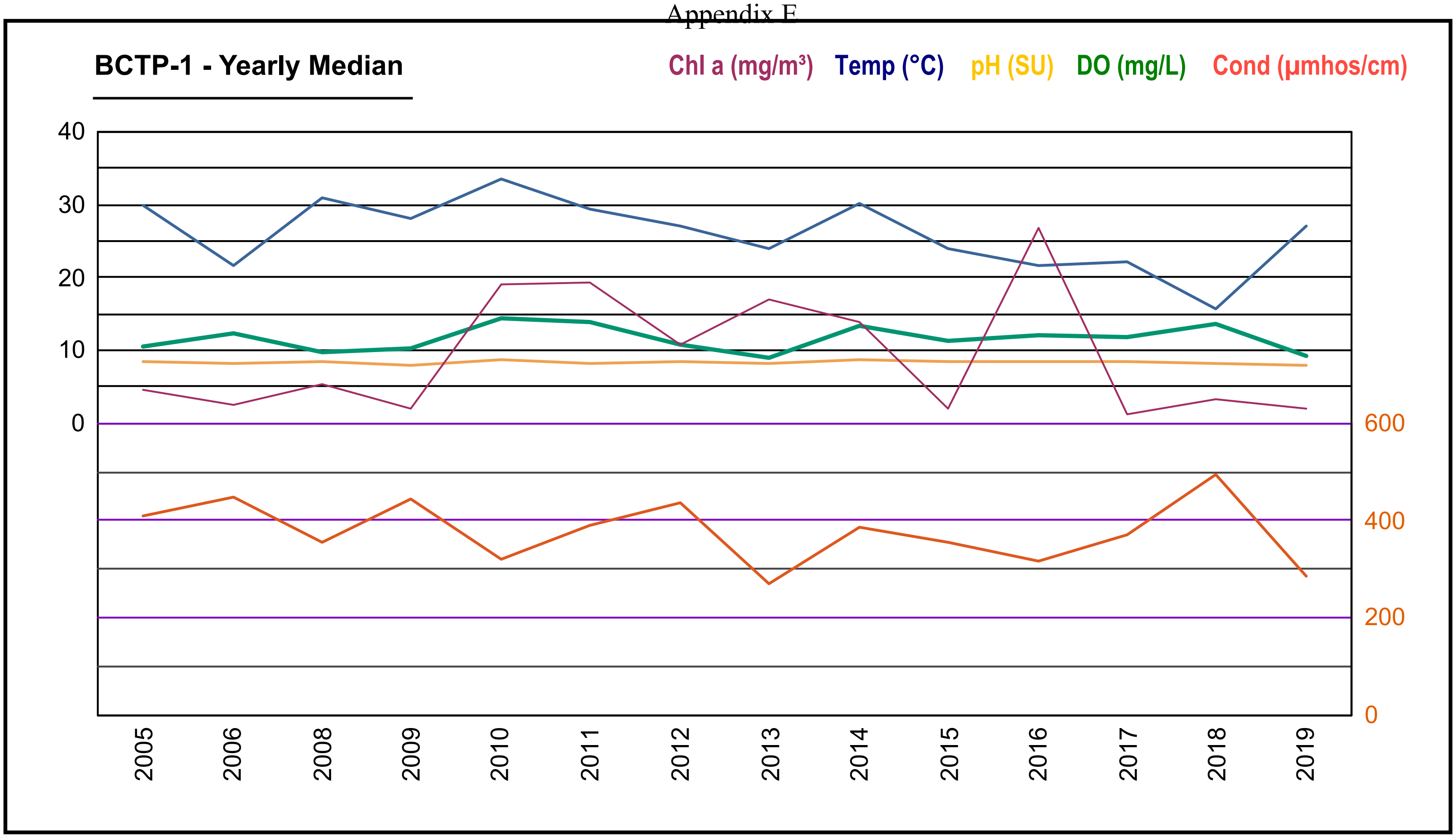

BANT-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
40
30
20
10
0
800
600
400
200
0
1998
2000
2002
2003
2005
2006
2007
2009
2011
2012
2016
2017
2018
2019
2021

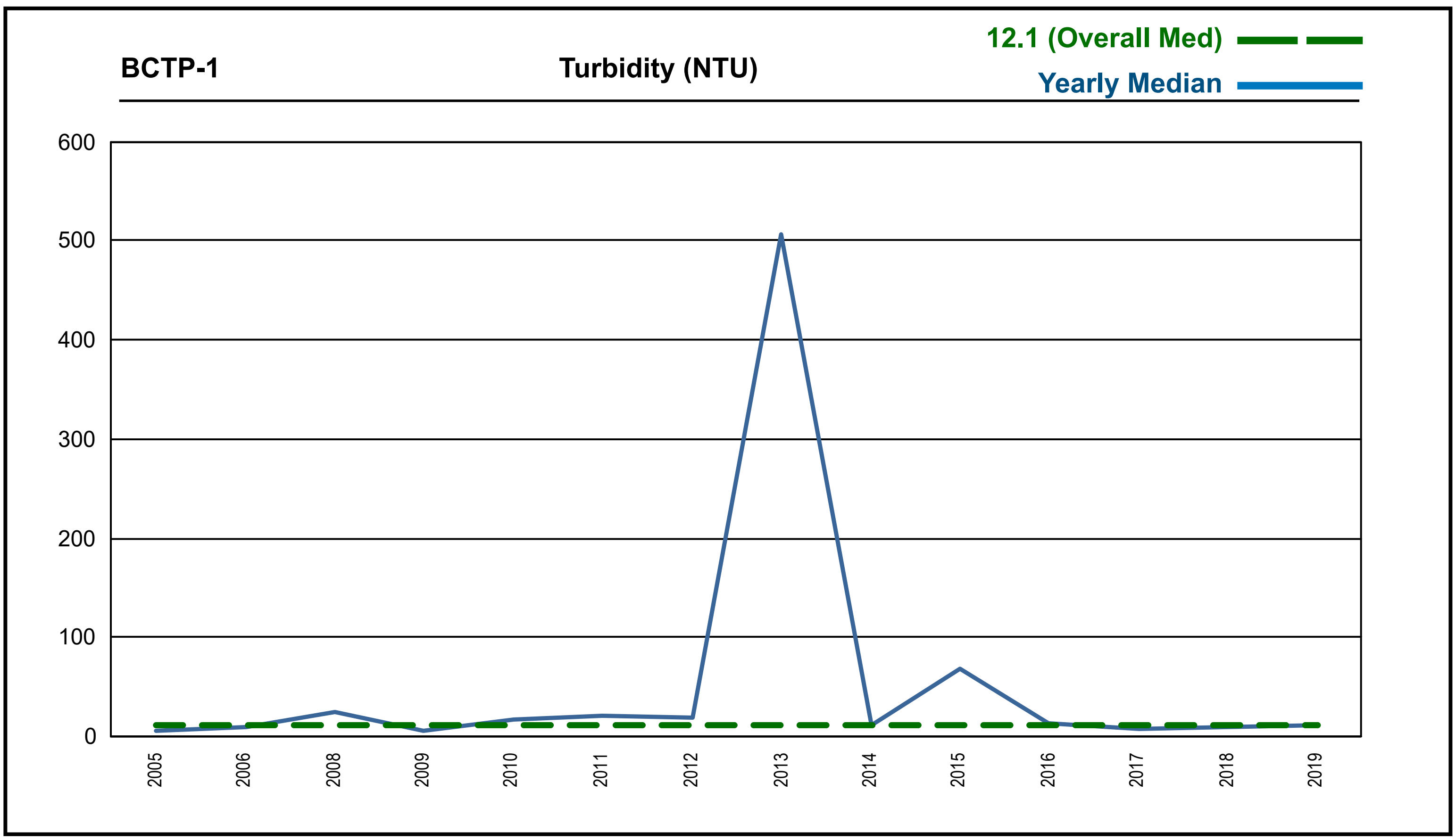

BANT-3
Turbidity (NTU)
7.9 (Overall Med)
Yearly Median
14
13
12
11
10
9
8
7
6
5
1998
2000
2002
2003
2005
2006
2007
2009
2011
2012
2016
2017
2018
2019
2021

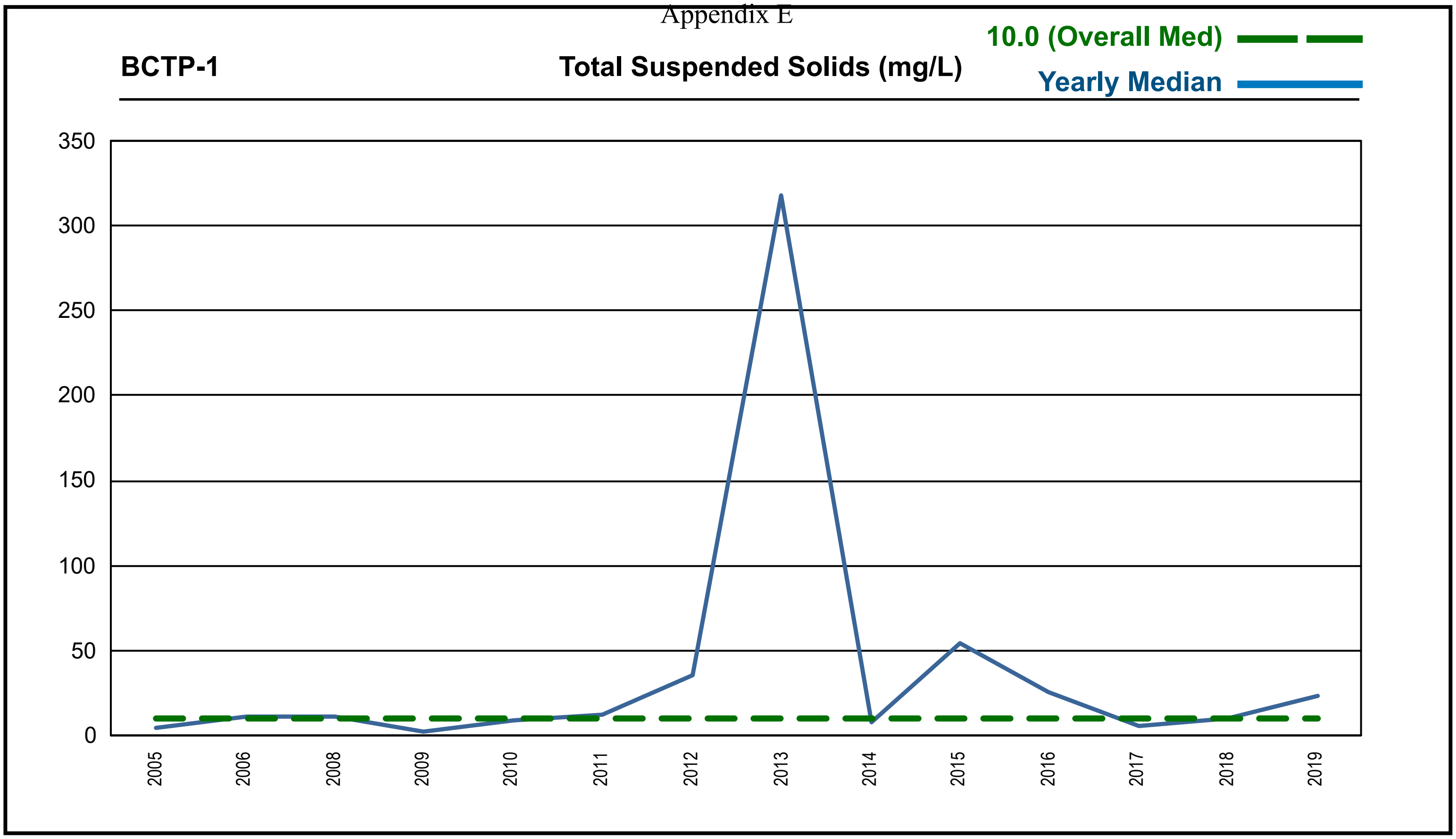

BANT-3
Total Suspended Solids (mg/L)
9.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
1998
2000
2002
2003
2005
2006
2007
2009
2011
2012
2016
2017
2018
2019
2021

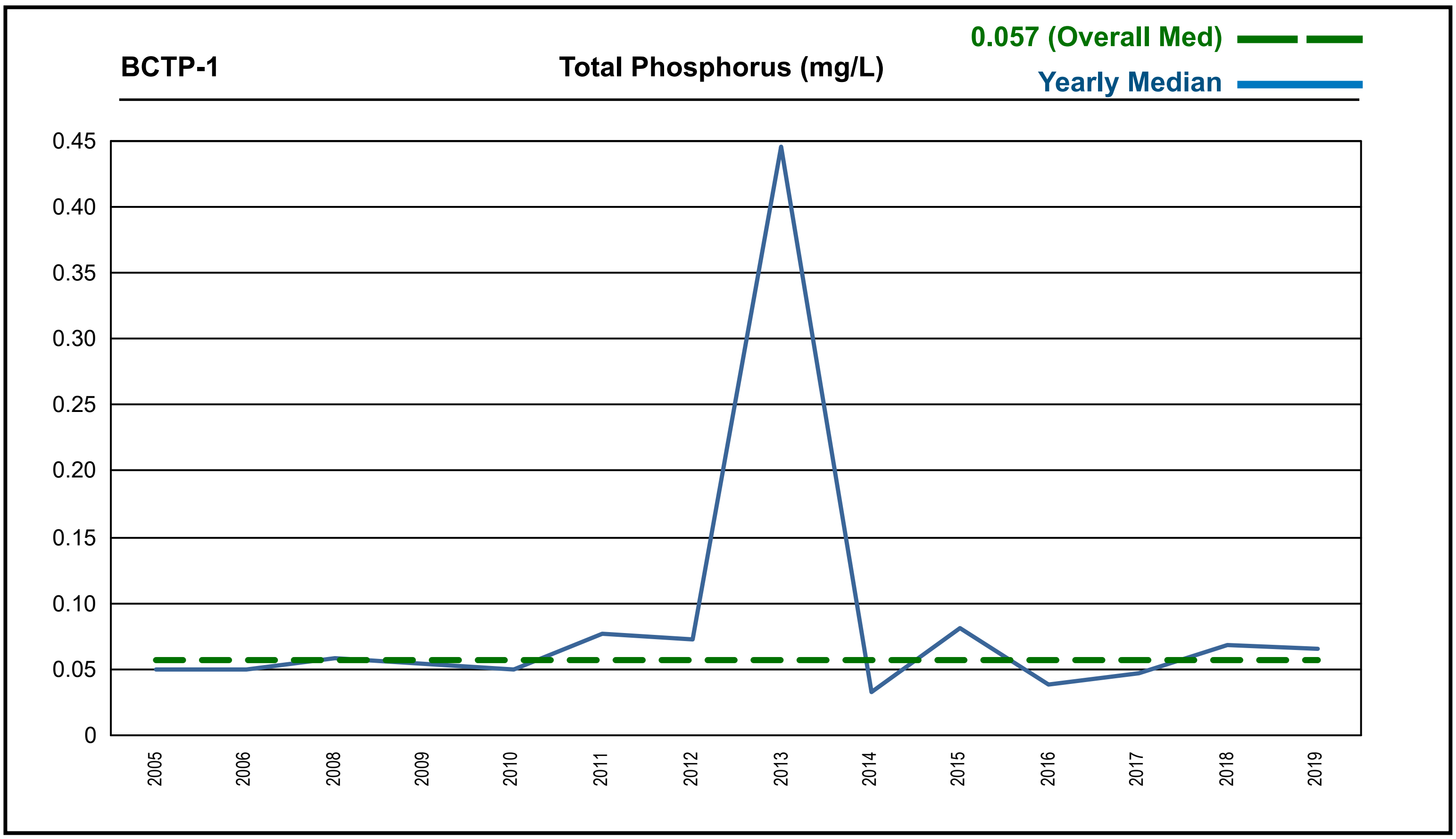

BANT-3
Total Phosphorus (mg/L)
0.040 (Overall Med)
Yearly Median
0.12
0.10
0.08
0.06
0.04
0.02
1998
2000
2002
2003
2005
2006
2007
2009
2011
2012
2016
2017
2018
2019
2021

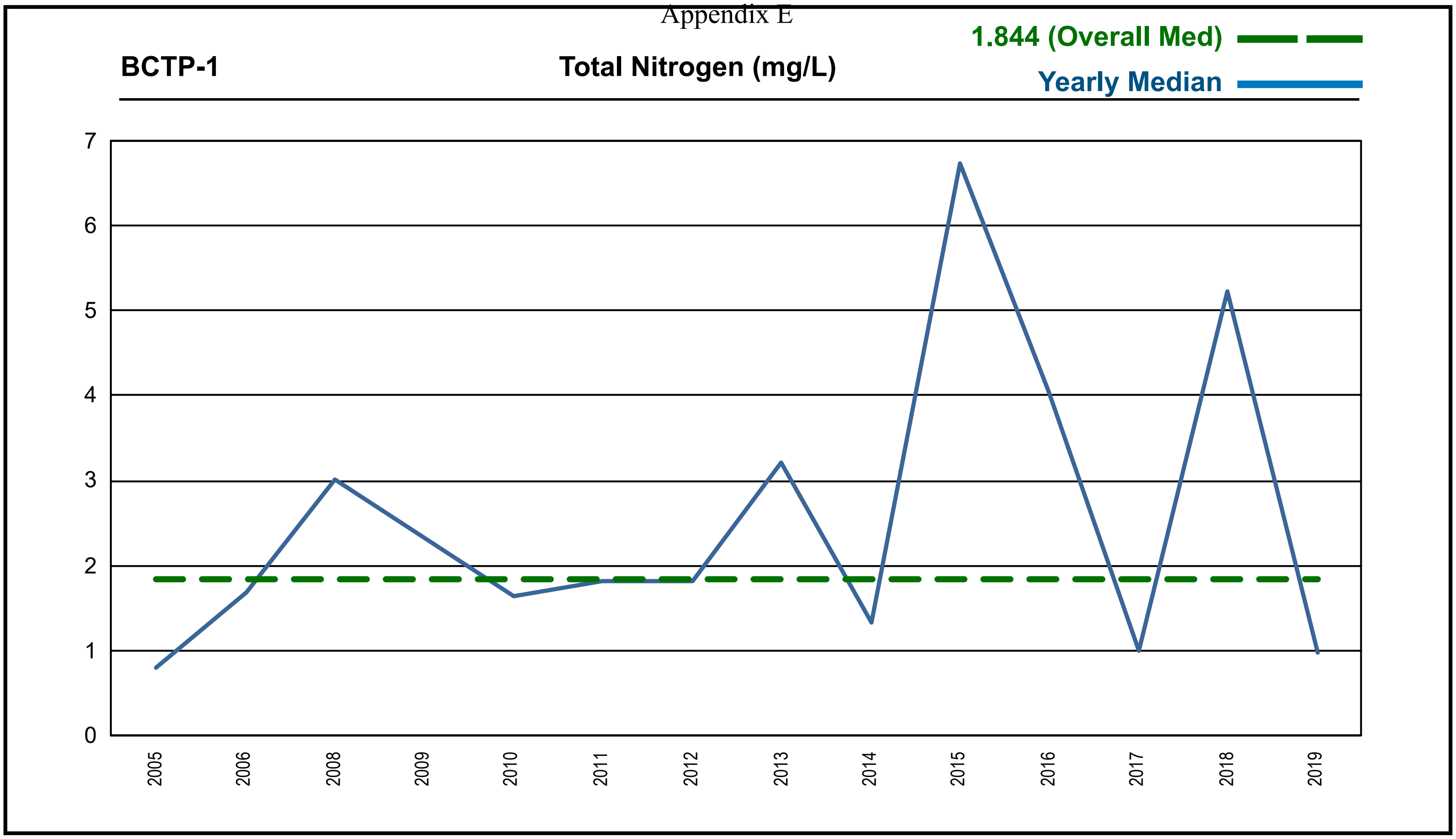

1.162 (Overall Med)
Yearly Median
BANT-3
Total Nitrogen (mg/L)
1.8
1.6
1.4
1.2
1
0.8
1998
2000
2002
2003
2005
2006
2007
2009
2011
2012
2016
2017
2018
2019
2021

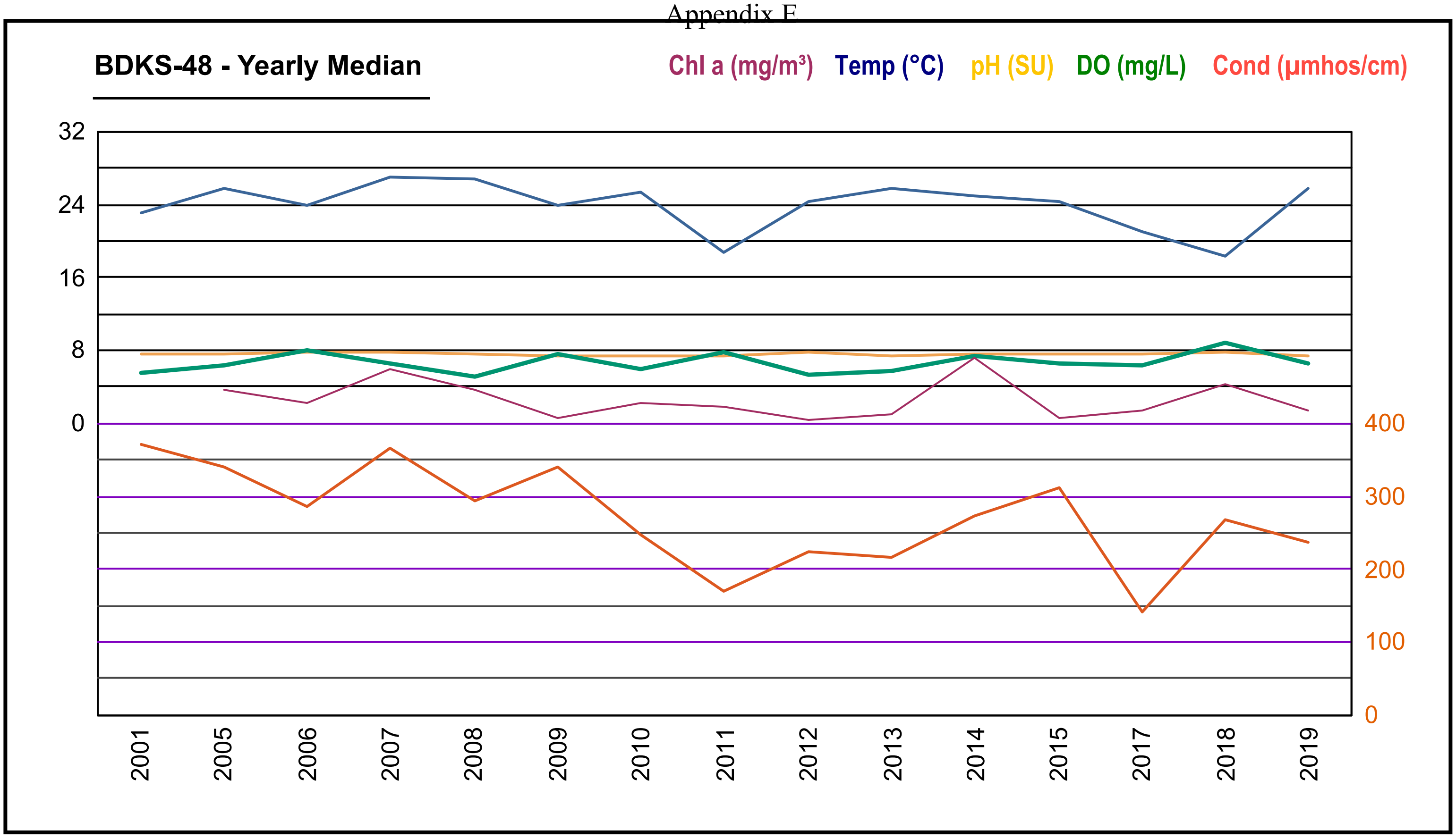

BCTP-1 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
40
30
20
10
0
600
400
200
0
2005
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

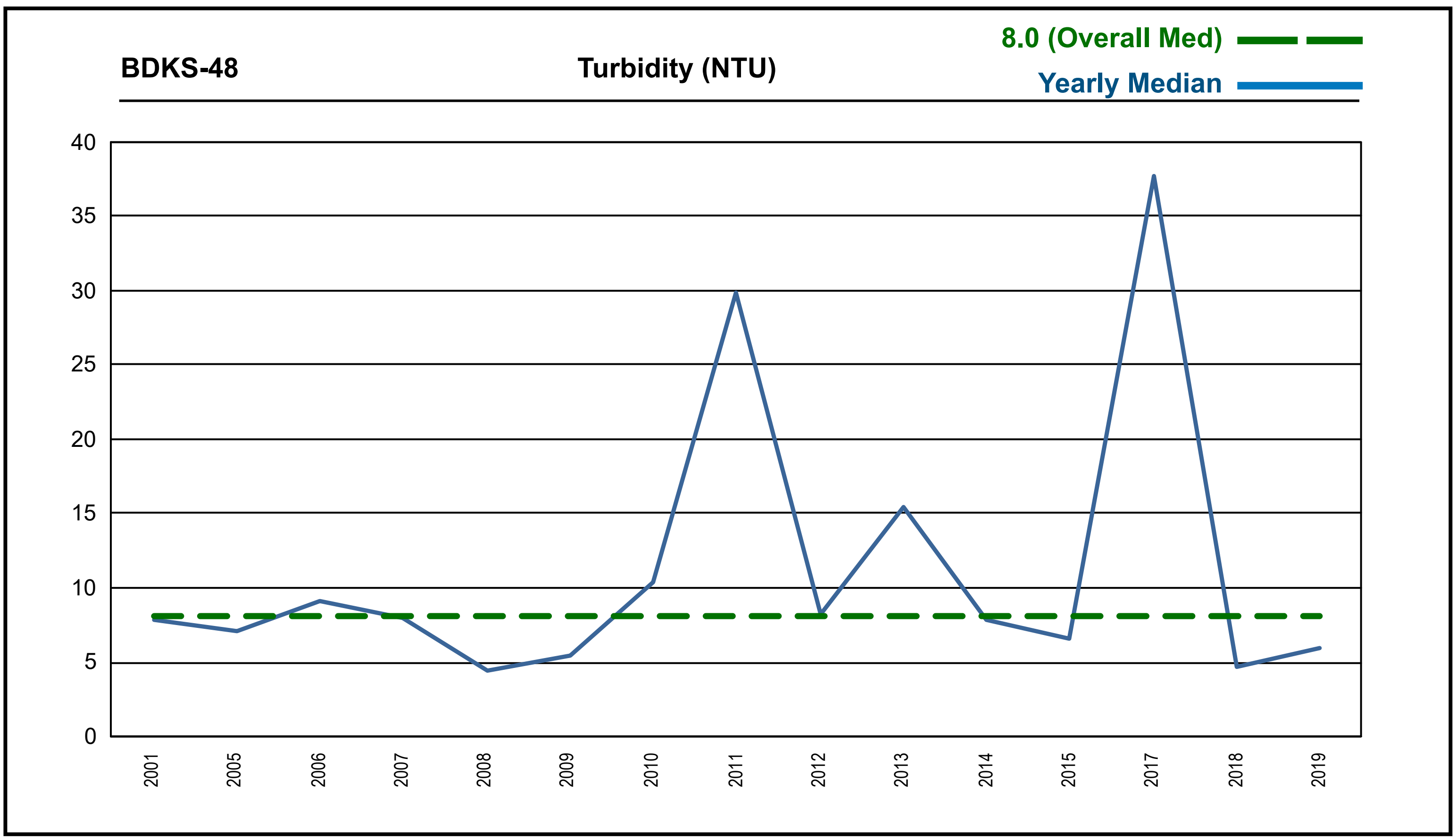

BCTP-1
Turbidity (NTU)
12.1 (Overall Med)
Yearly Median
600
500
400
300
200
100
0
2005
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

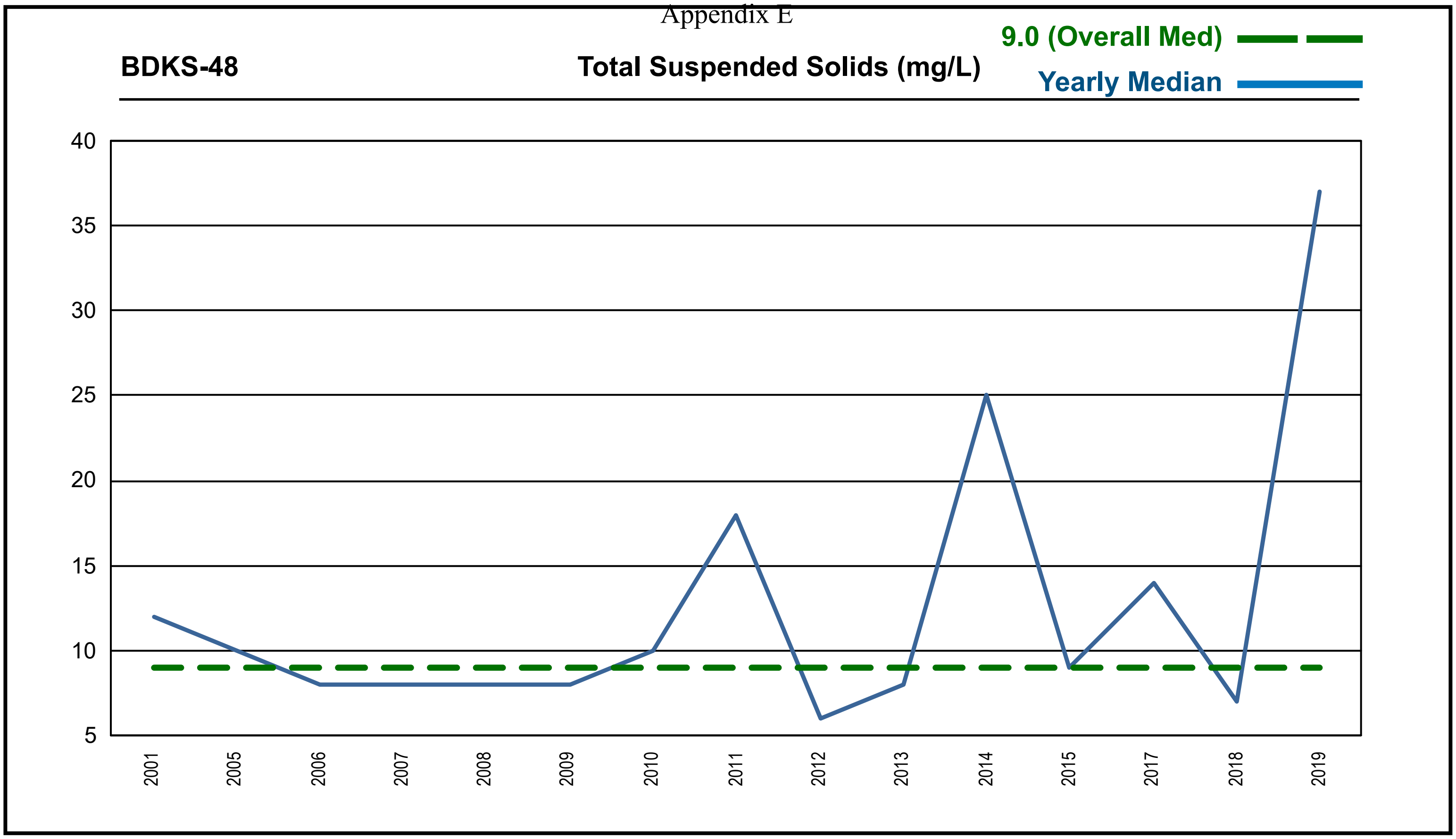

10.0 (Overall Med)
Yearly Median
BCTP-1
Total Suspended Solids (mg/L)
350
300
250
200
150
100
50
0
2005
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

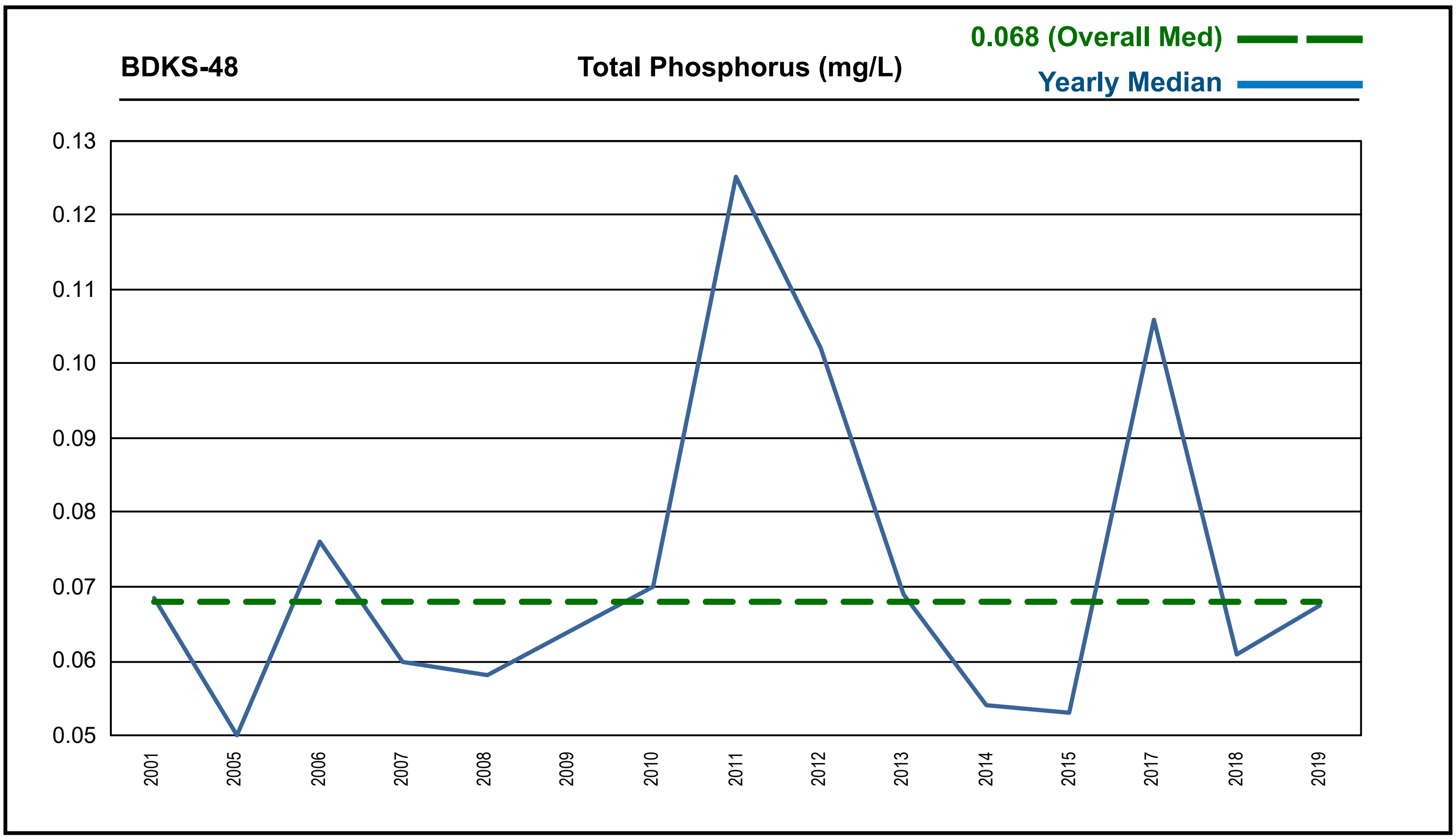

0.057 (Overall Med)
Yearly Median
BCTP-1
Total Phosphorus (mg/L)
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0
2005
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

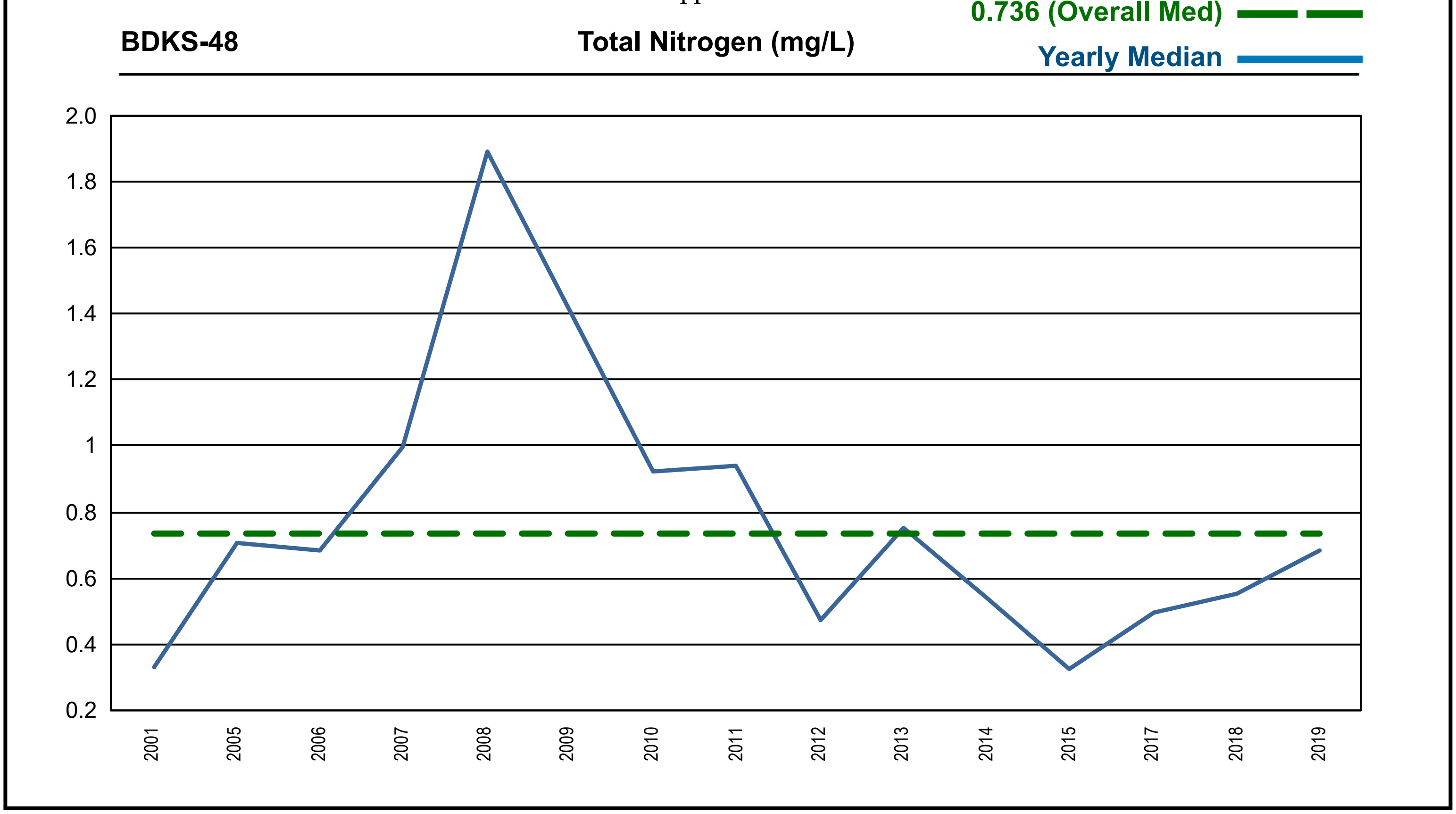

BCTP-1
Total Nitrogen (mg/L)
1.844 (Overall Med)
Yearly Median
7
6
5
4
3
2
1
0
2005
2006
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

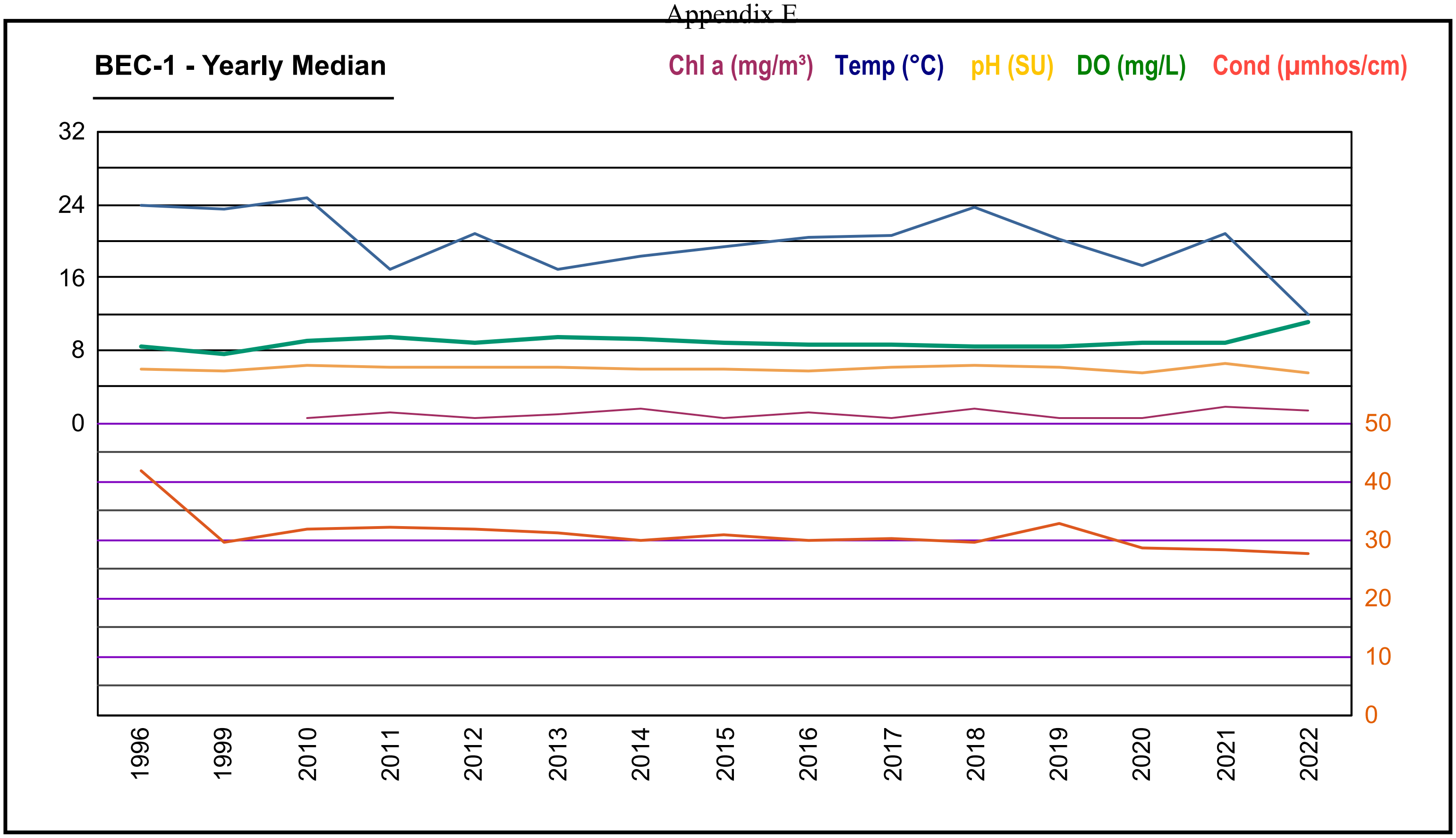

BDKS-48 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
2001
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2017
2018
2019

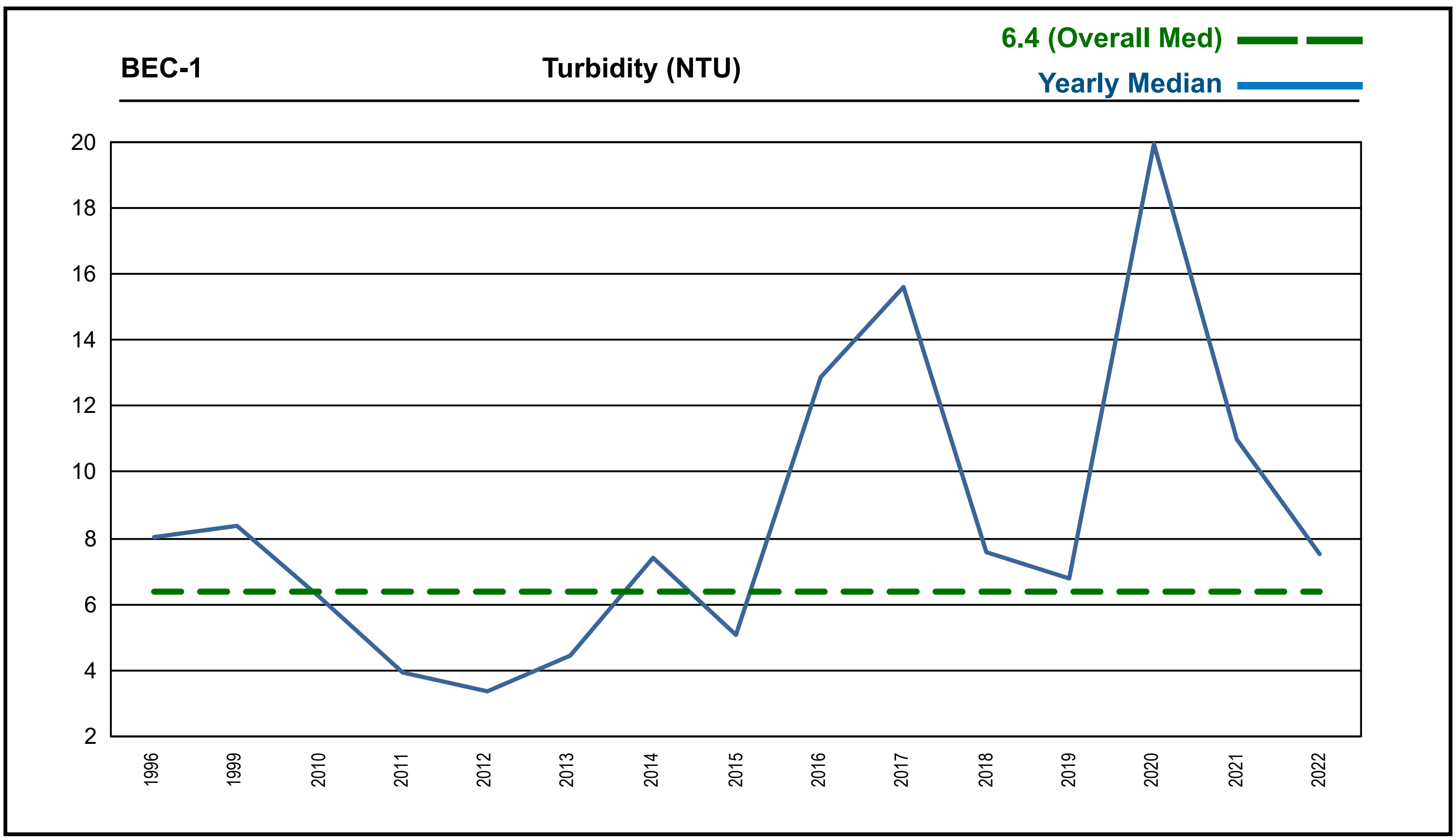

BDKS-48
Turbidity (NTU)
8.0 (Overall Med)
Yearly Median
40
35
30
25
20
15
10
5
0
2001
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2017
2018
2019

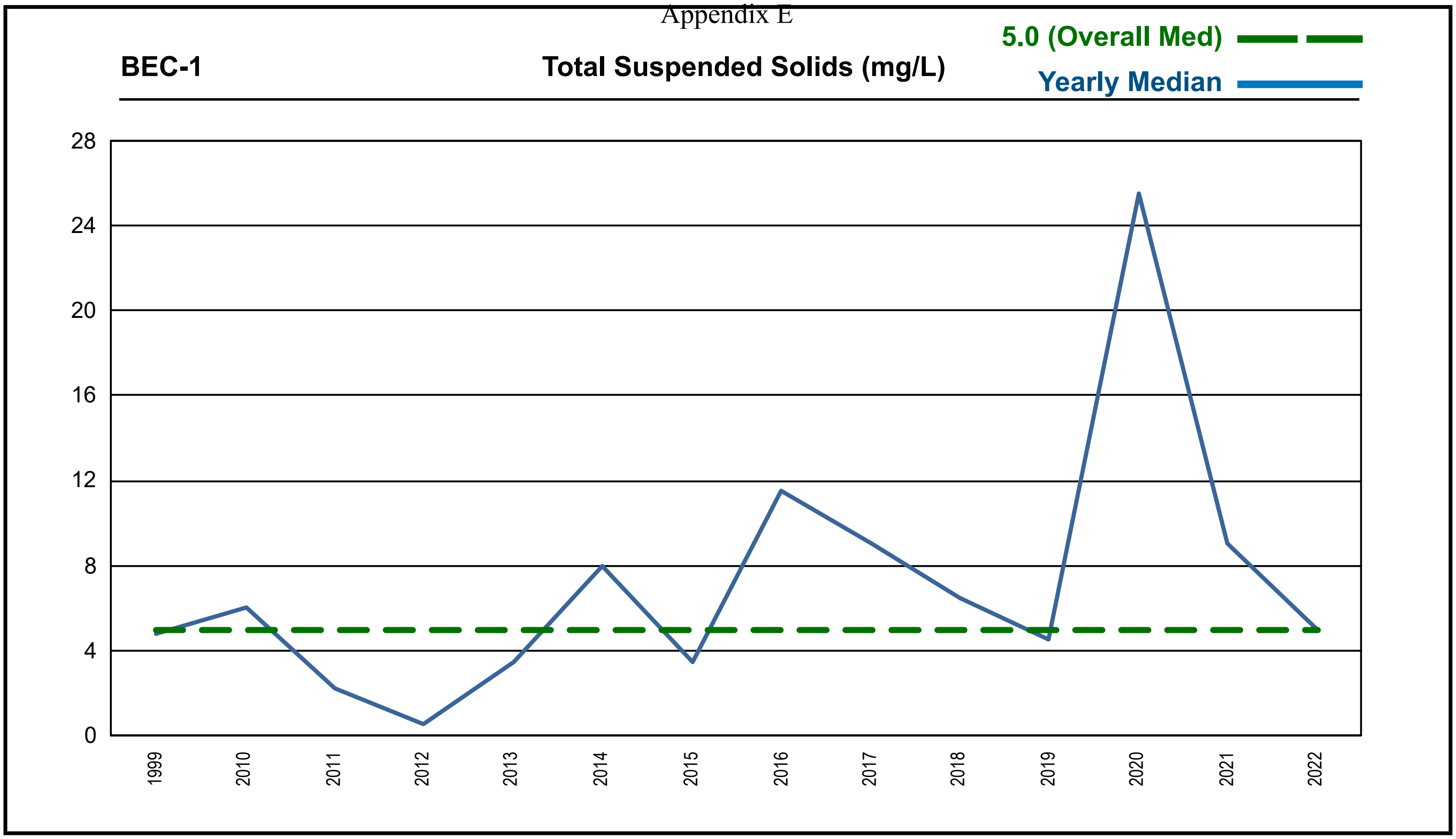

9.0 (Overall Med)
BDKS-48
Total Suspended Solids (mg/L)
Yearly Median
40
35
30
25
20
15
10
5
2001
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2017
2018
2019

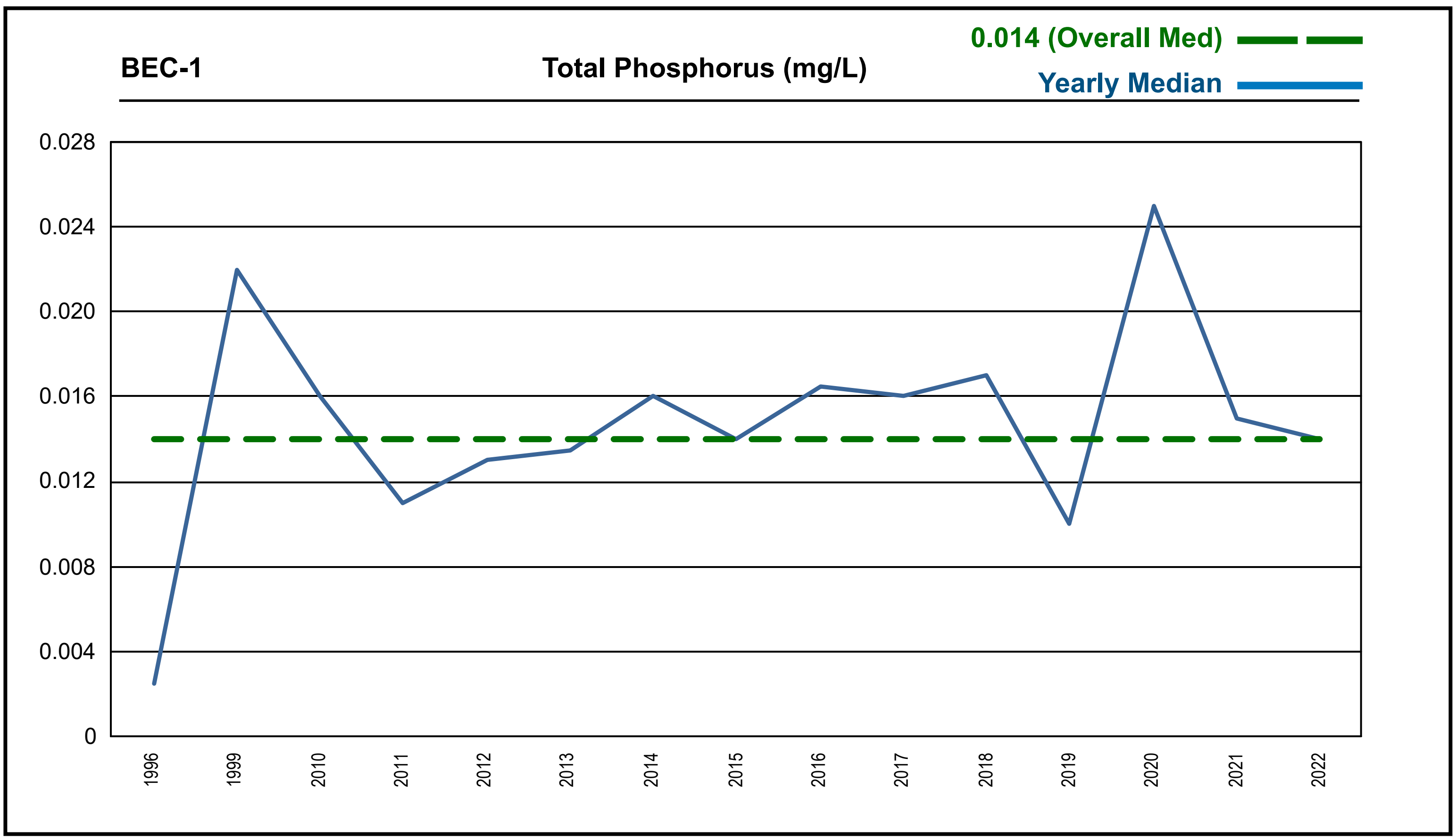

0.068 (Overall Med)
BDKS-48
Total Phosphorus (mg/L)
Yearly Median
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
2001
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2017
2018
2019

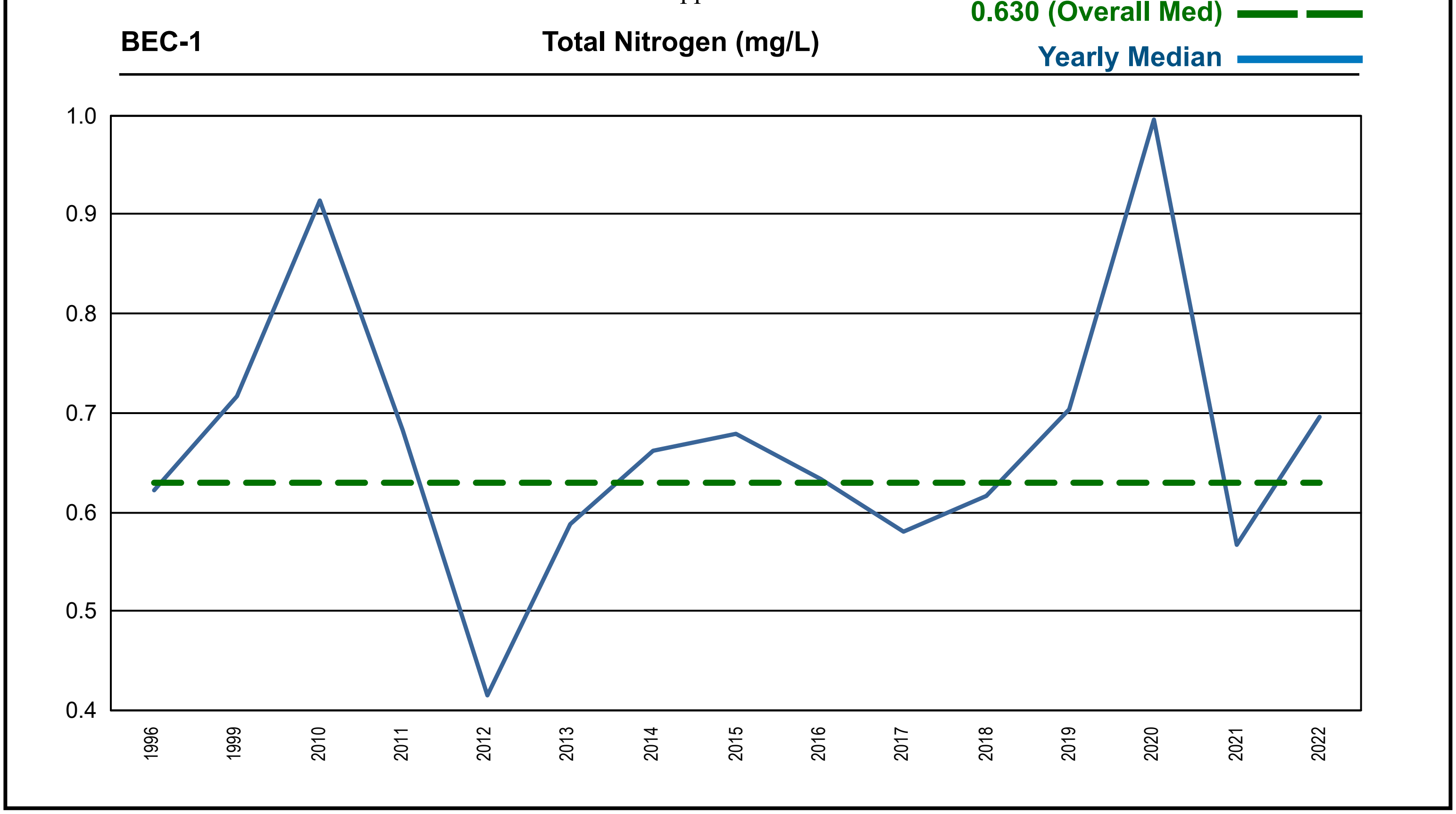

BDKS-48
Total Nitrogen (mg/L)
0.736 (Overall Med)
Yearly Median
2.0
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
2001
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2017
2018
2019


BEC-1 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
50
40
30
20
10
0
1996
1999
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

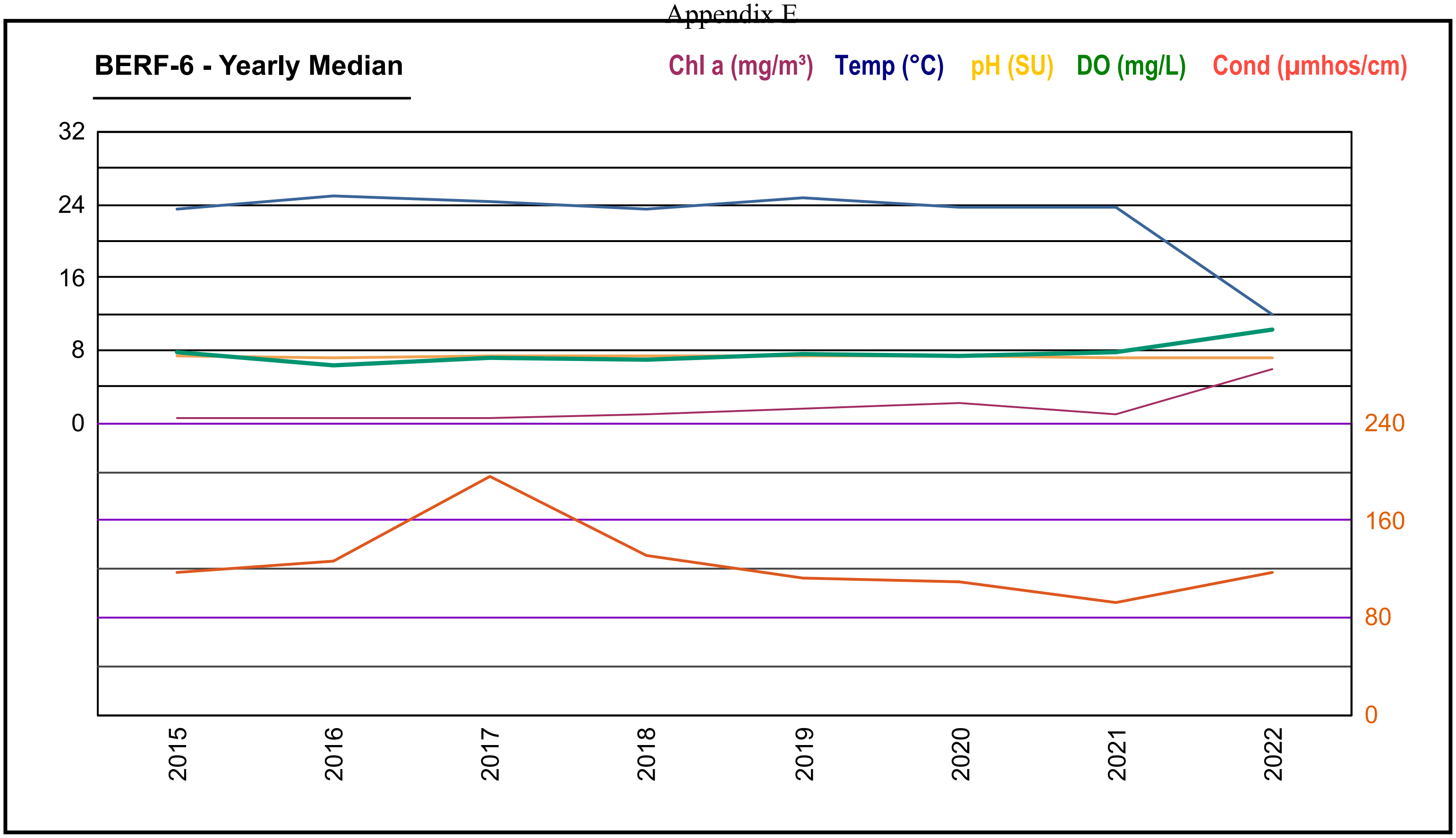

BEC-1
Turbidity (NTU)
6.4 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2
1996
1999
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

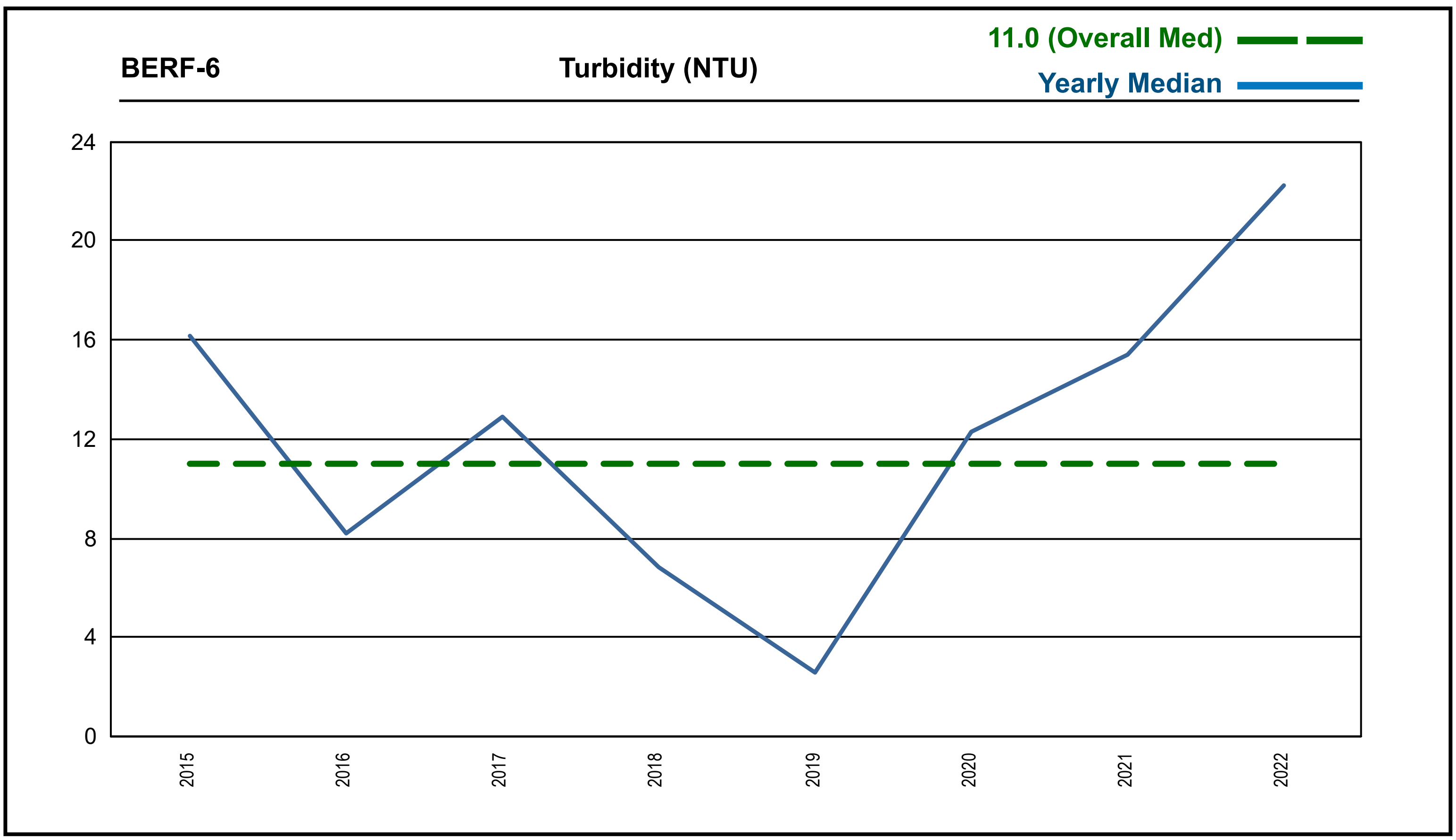

5.0 (Overall Med)
Yearly Median
BEC-1
Total Suspended Solids (mg/L)
28
24
20
16
12
8
4
0
1999
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


0.014 (Overall Med)
Yearly Median
BEC-1
Total Phosphorus (mg/L)
0.028
0.024
0.020
0.016
0.012
0.008
0.004
0
1996
1999
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022



BEC-1
Total Nitrogen (mg/L)
0.630 (Overall Med)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
1996
1999
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

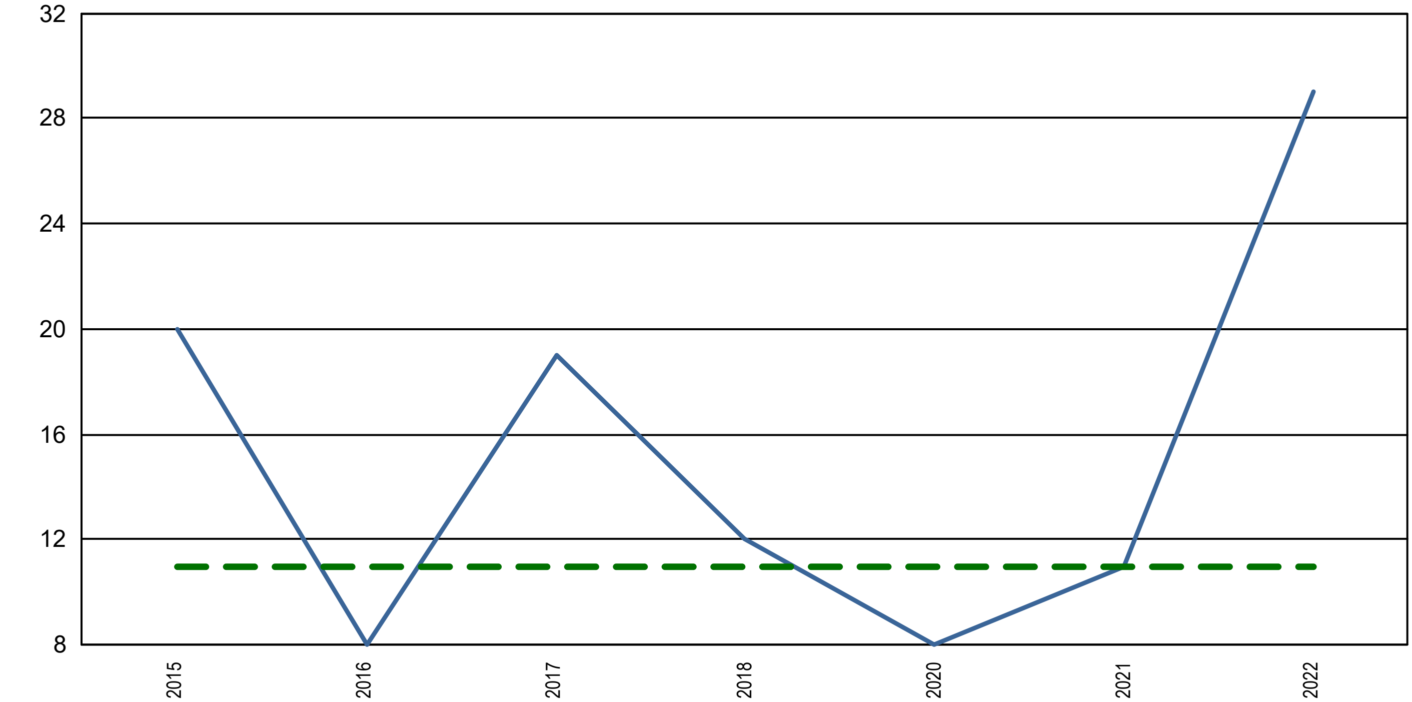

BERF-6 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2015
2016
2017
2018
2019
2020
2021
2022


BERF-6
Turbidity (NTU)
11.0 (Overall Med)
Yearly Median
24
20
16
12
8
4
0
2015
2016
2017
2018
2019
2020
2021
2022

11.0 (Overall Med)

BERF-6 Total Suspended Solids (mg/L)

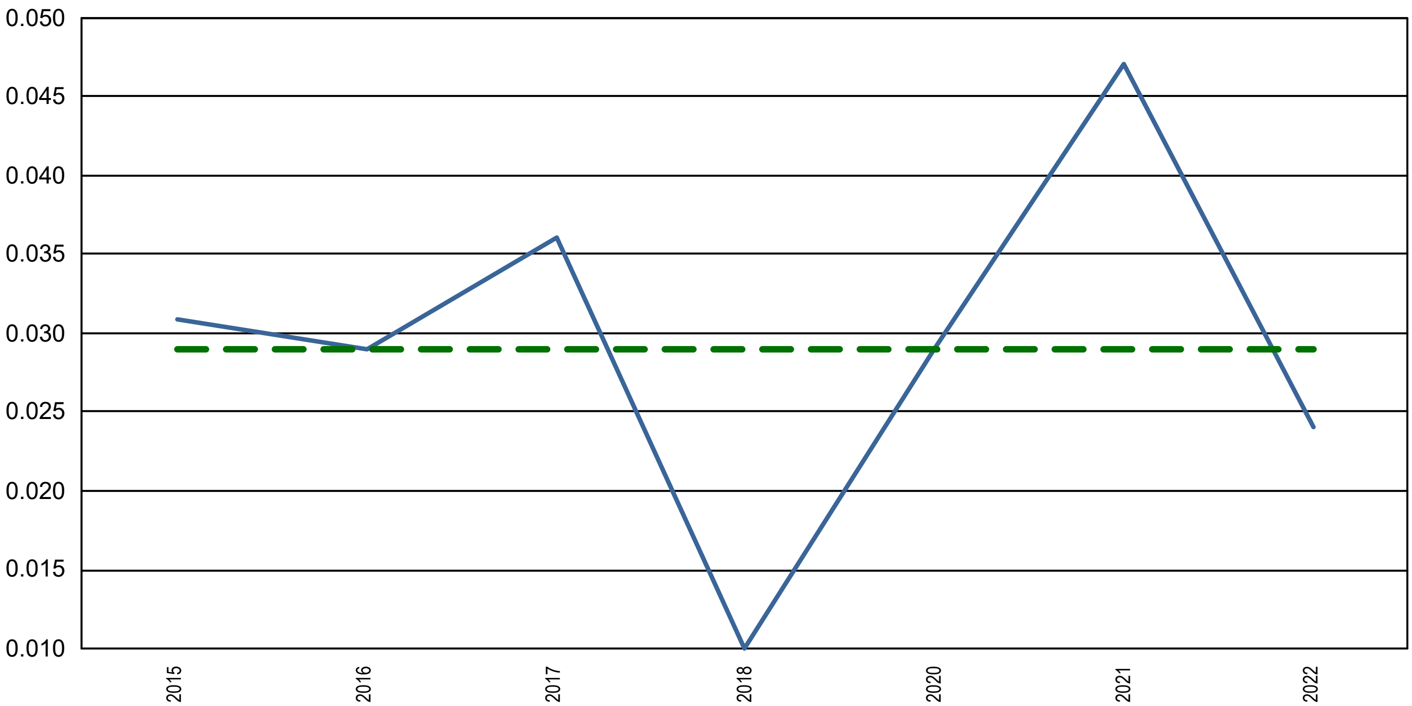
Yearly Median

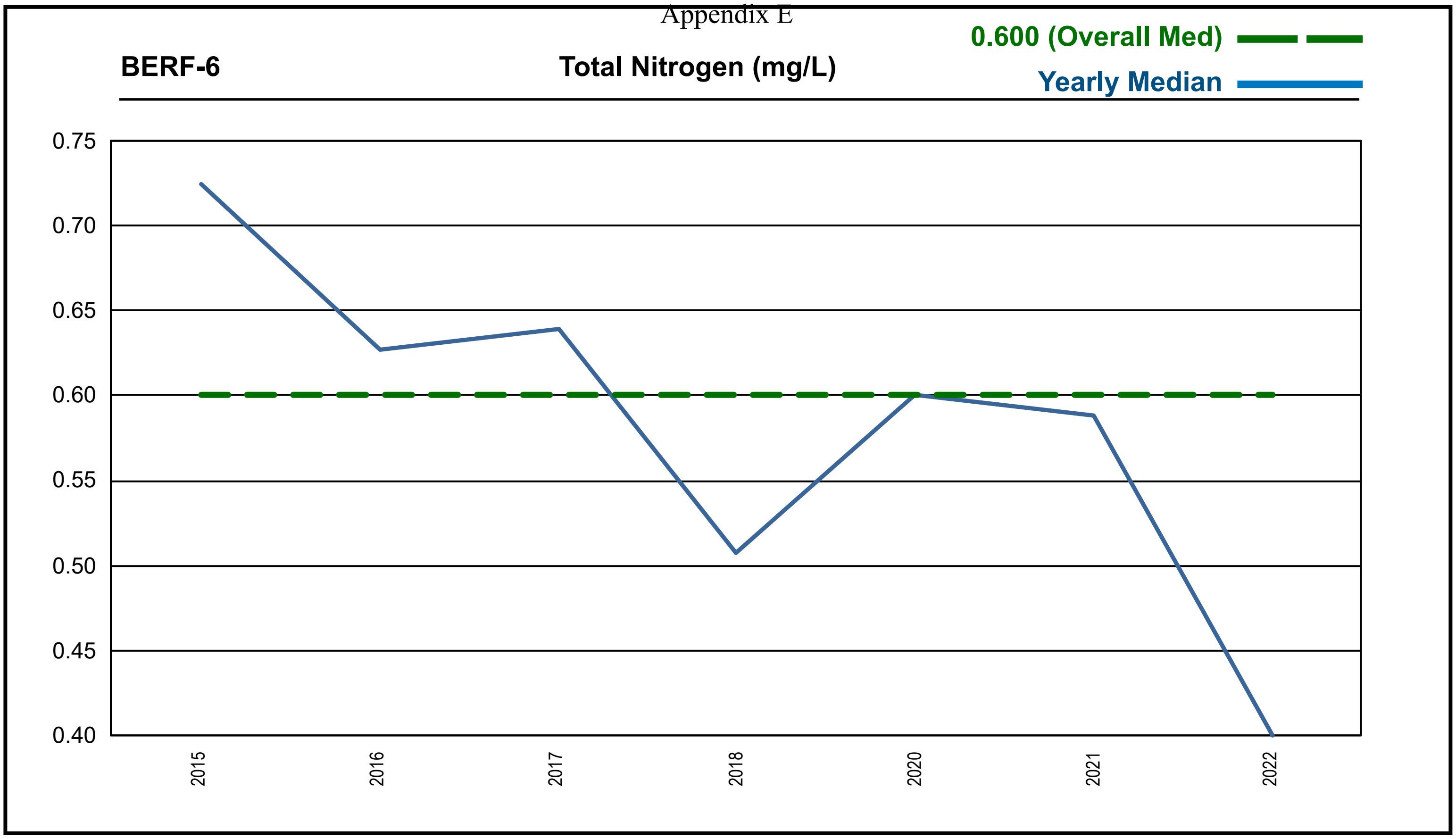


0.029 (Overall Med)

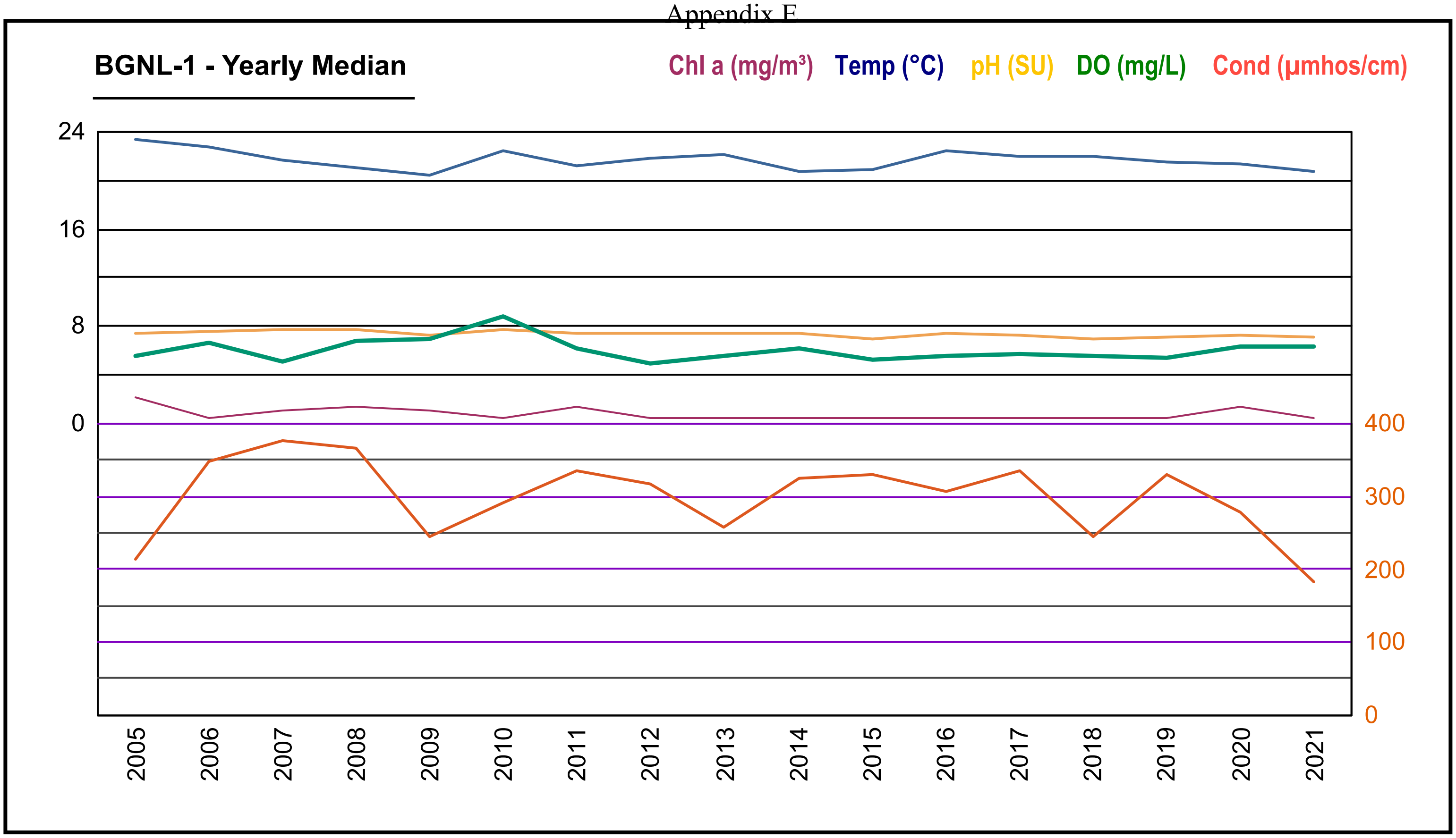
BERF-6 Total Phosphorus (mg/L)

Yearly Median

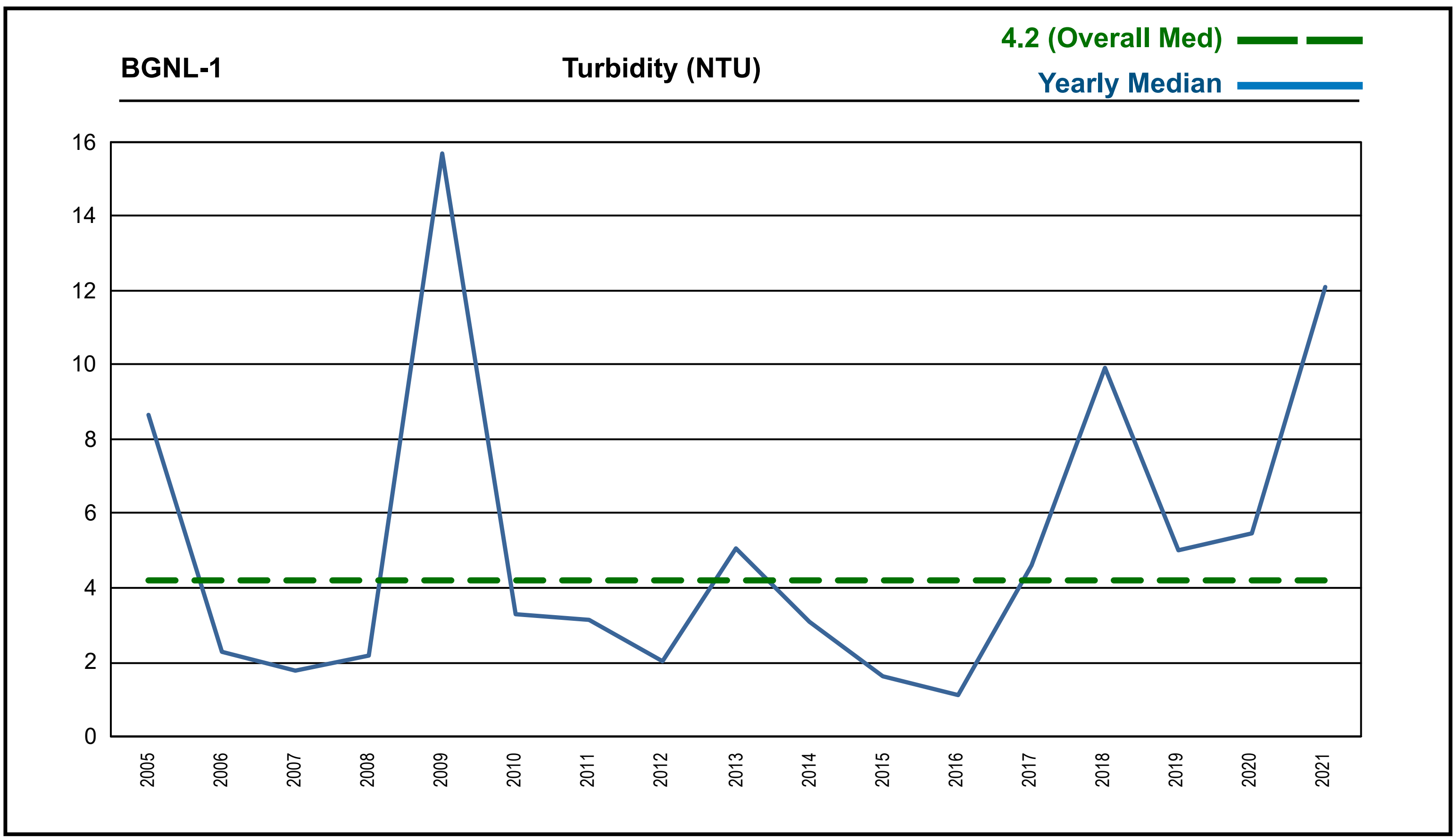




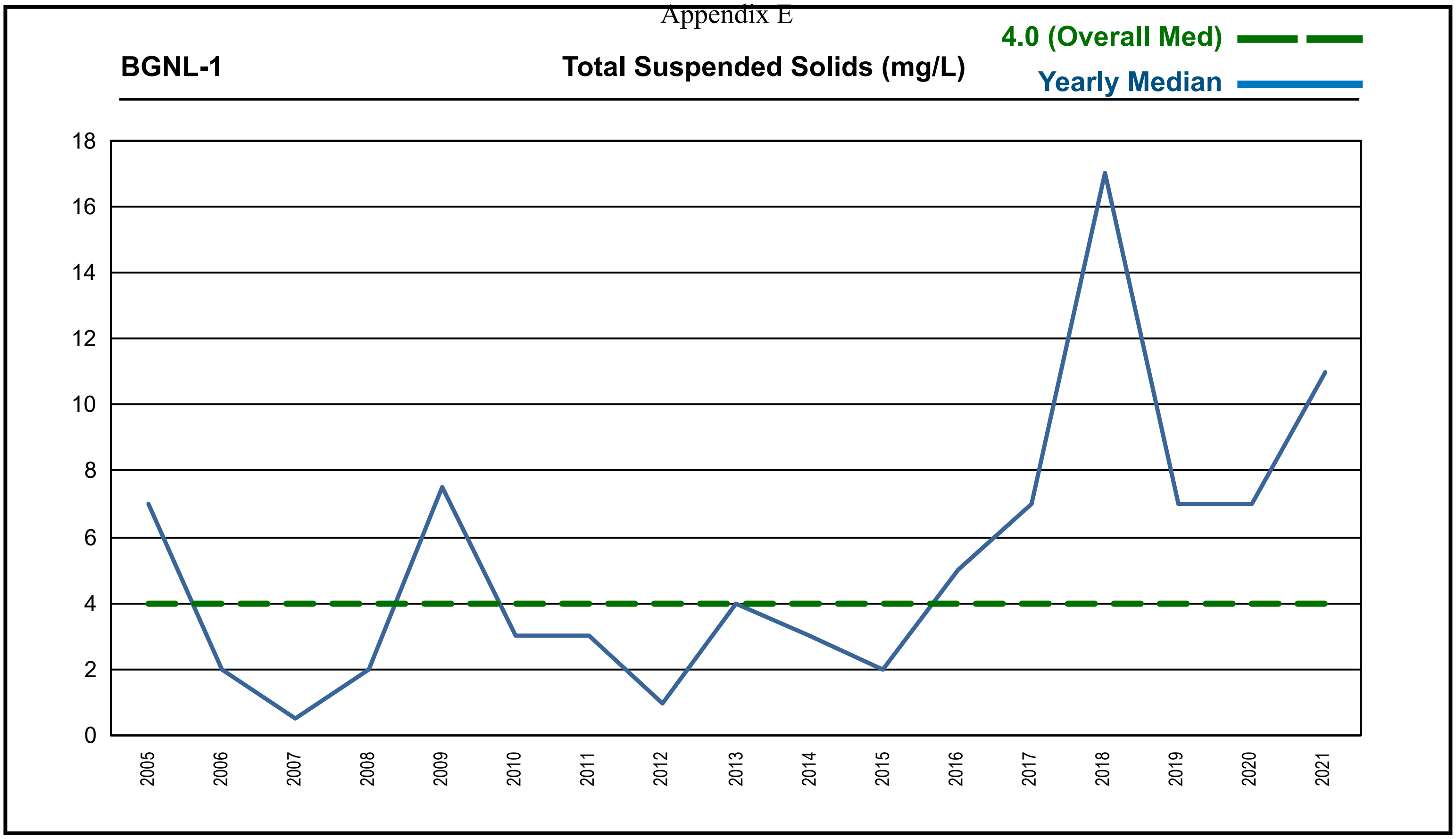
0.600 (Overall Med)
BERF-6
Total Nitrogen (mg/L)
Yearly Median
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
2015
2016
2017
2018
2020
2021
2022

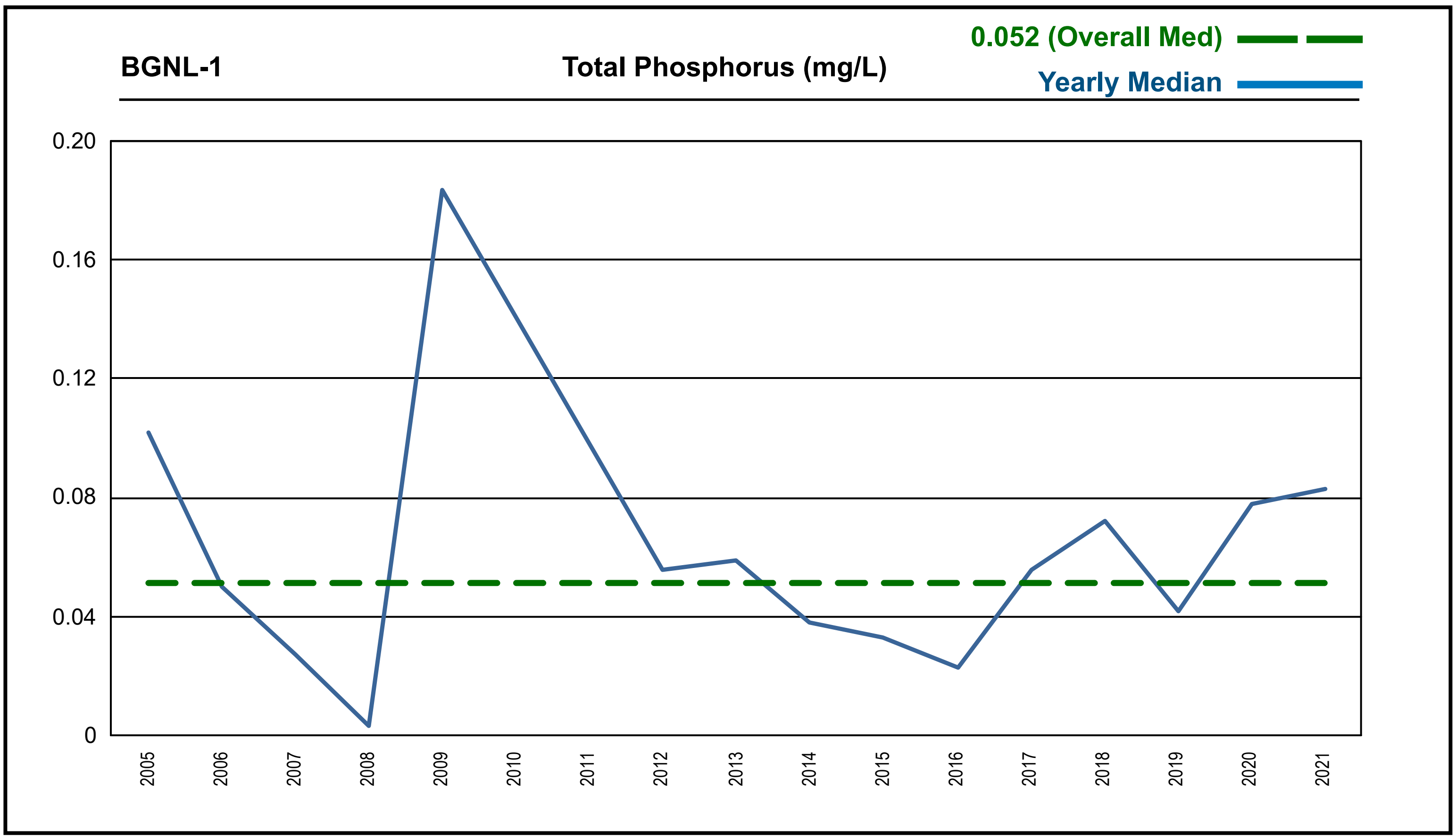


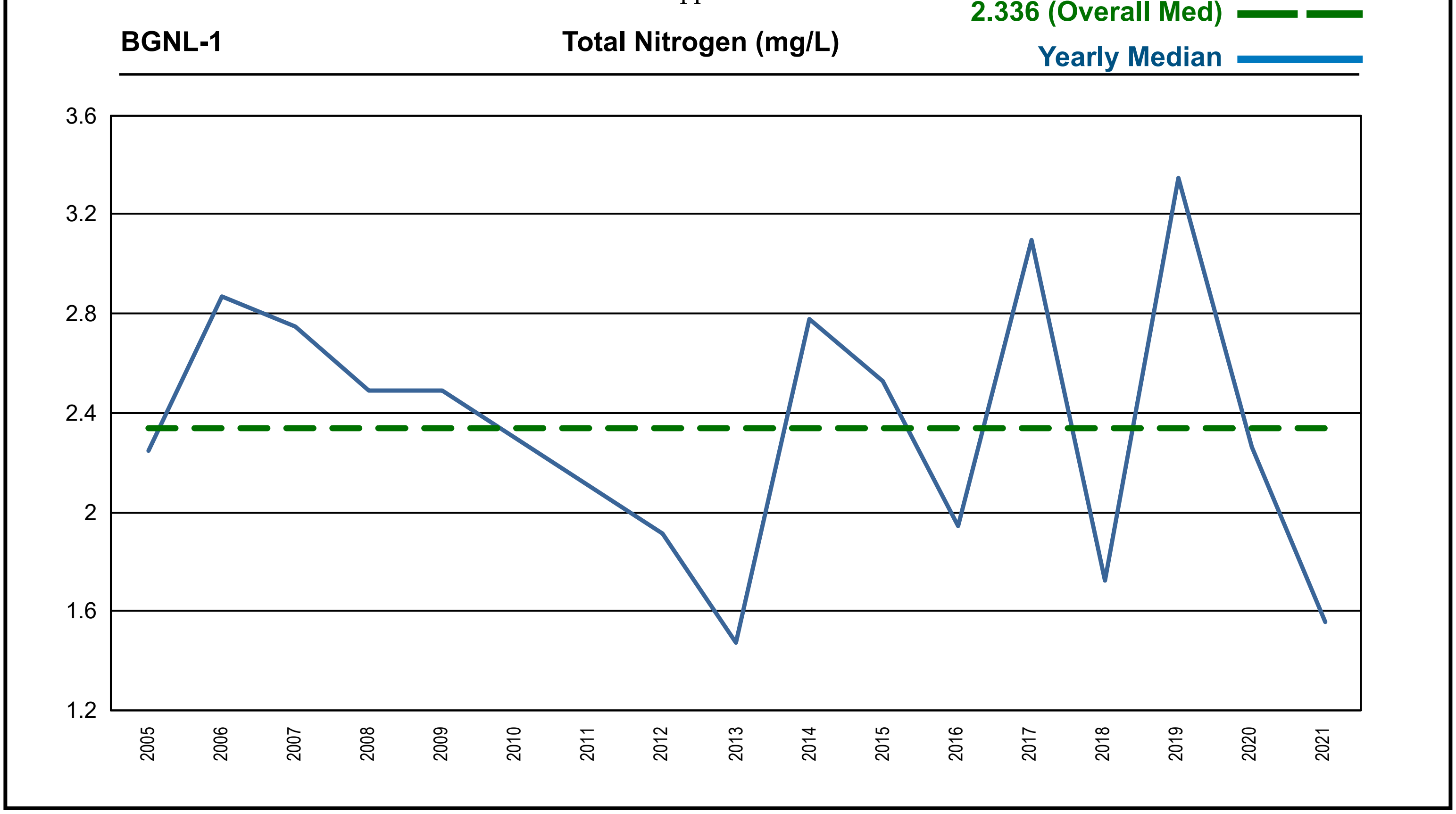
BGNL-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
400
300
200
100
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

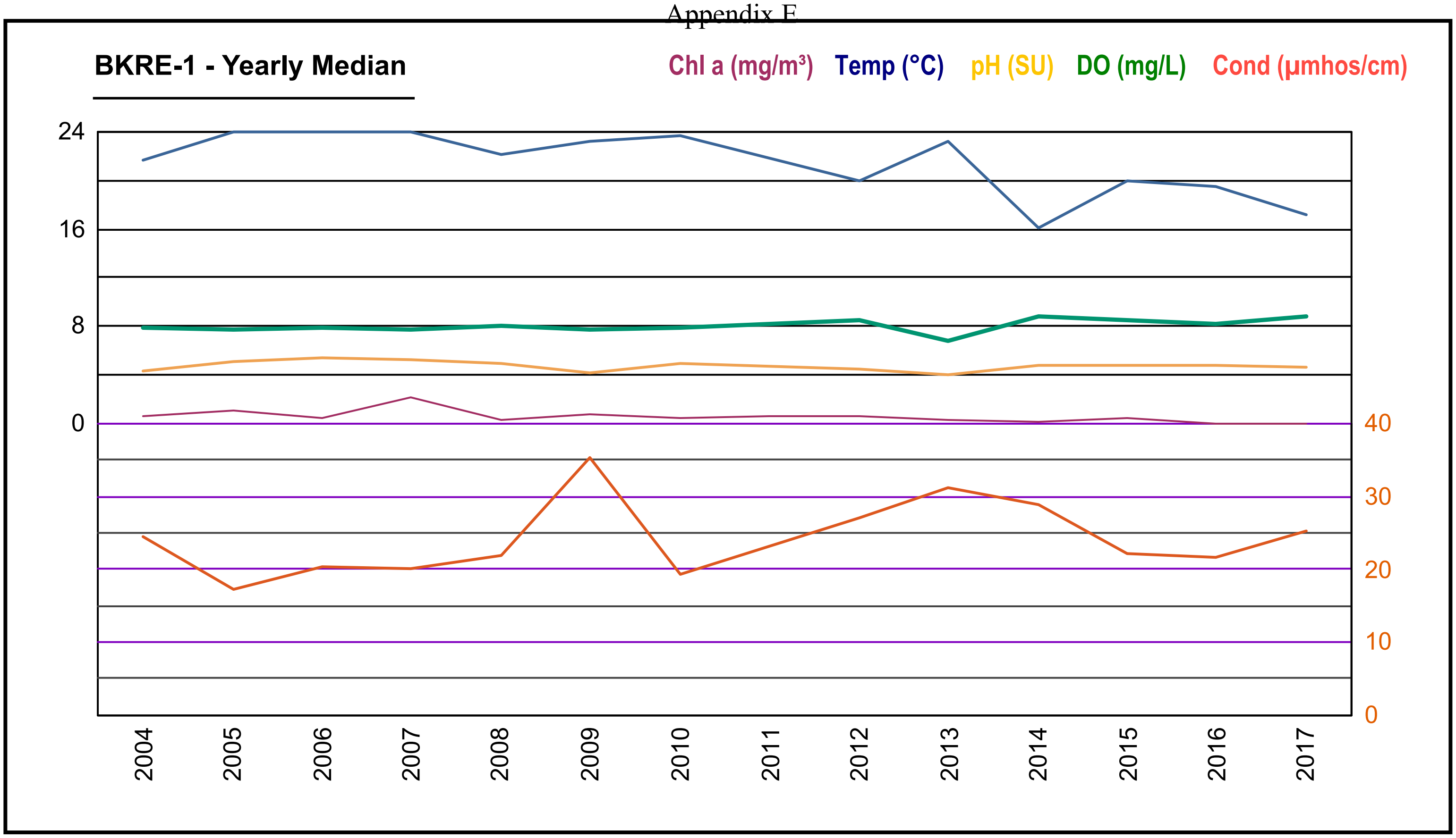


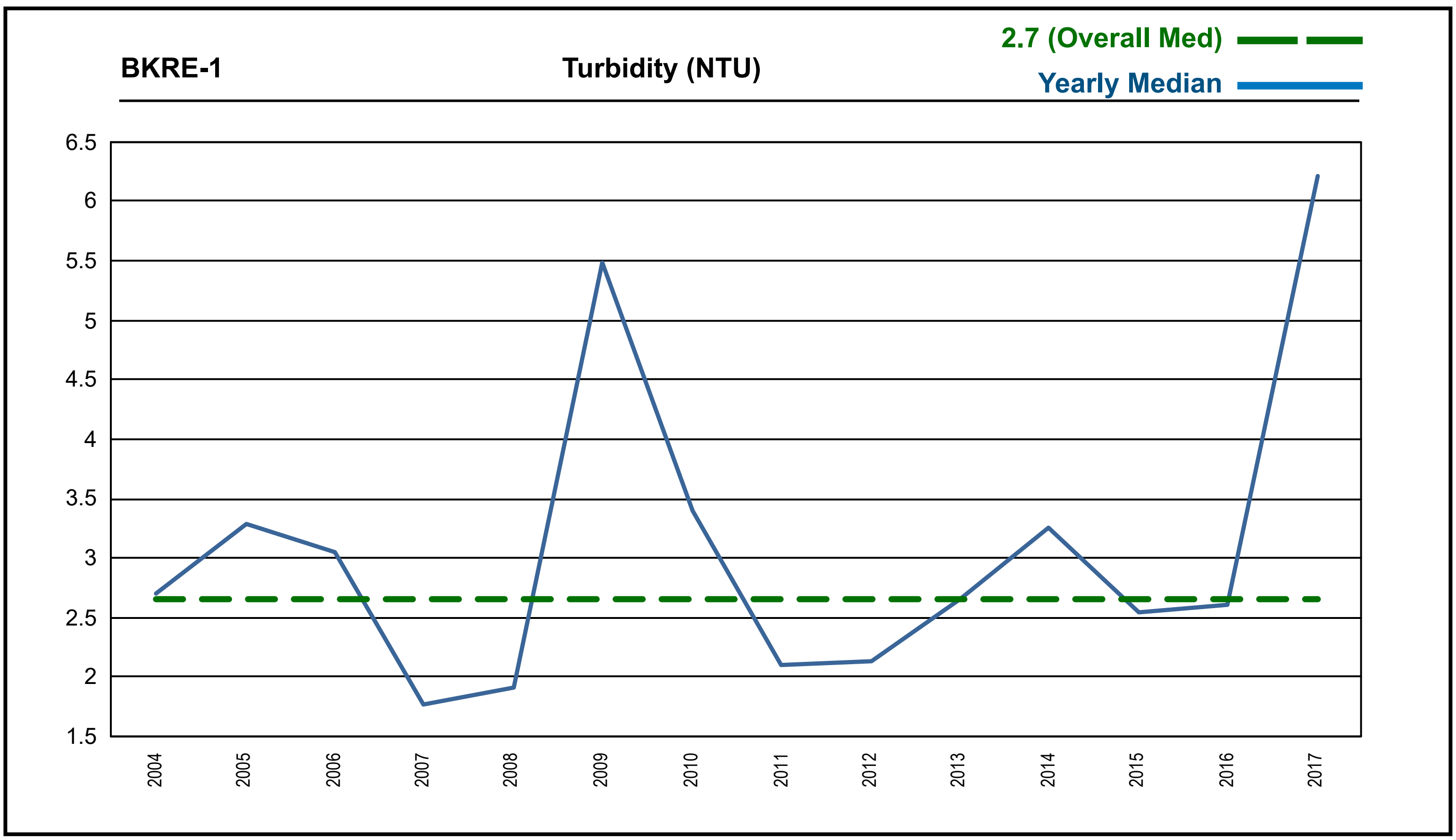
BGNL-1
Turbidity (NTU)
4.2 (Overall Med)
Yearly Median
16
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

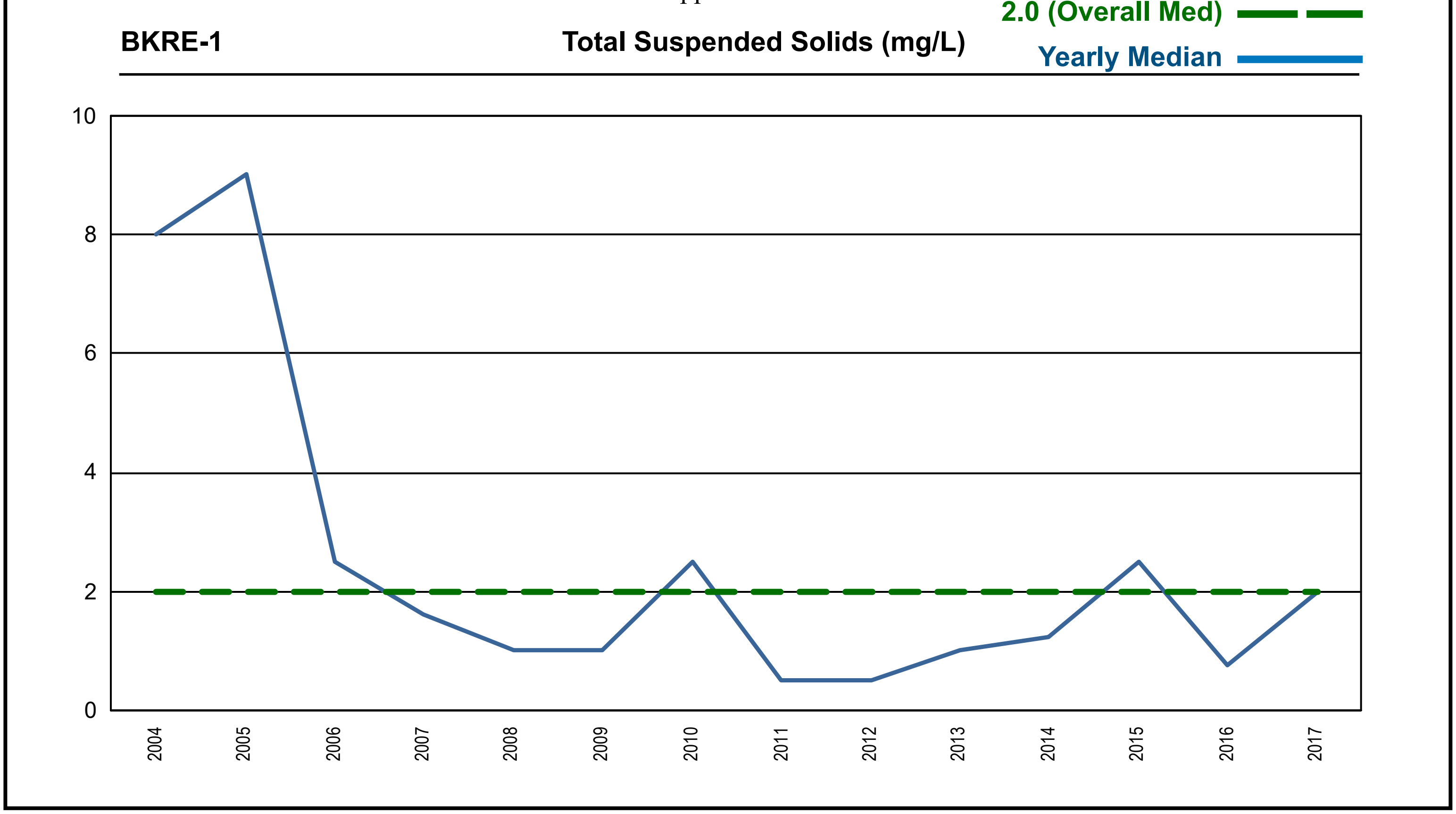

4.0 (Overall Med)
BGNL-1
Total Suspended Solids (mg/L)
Yearly Median
18
16
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

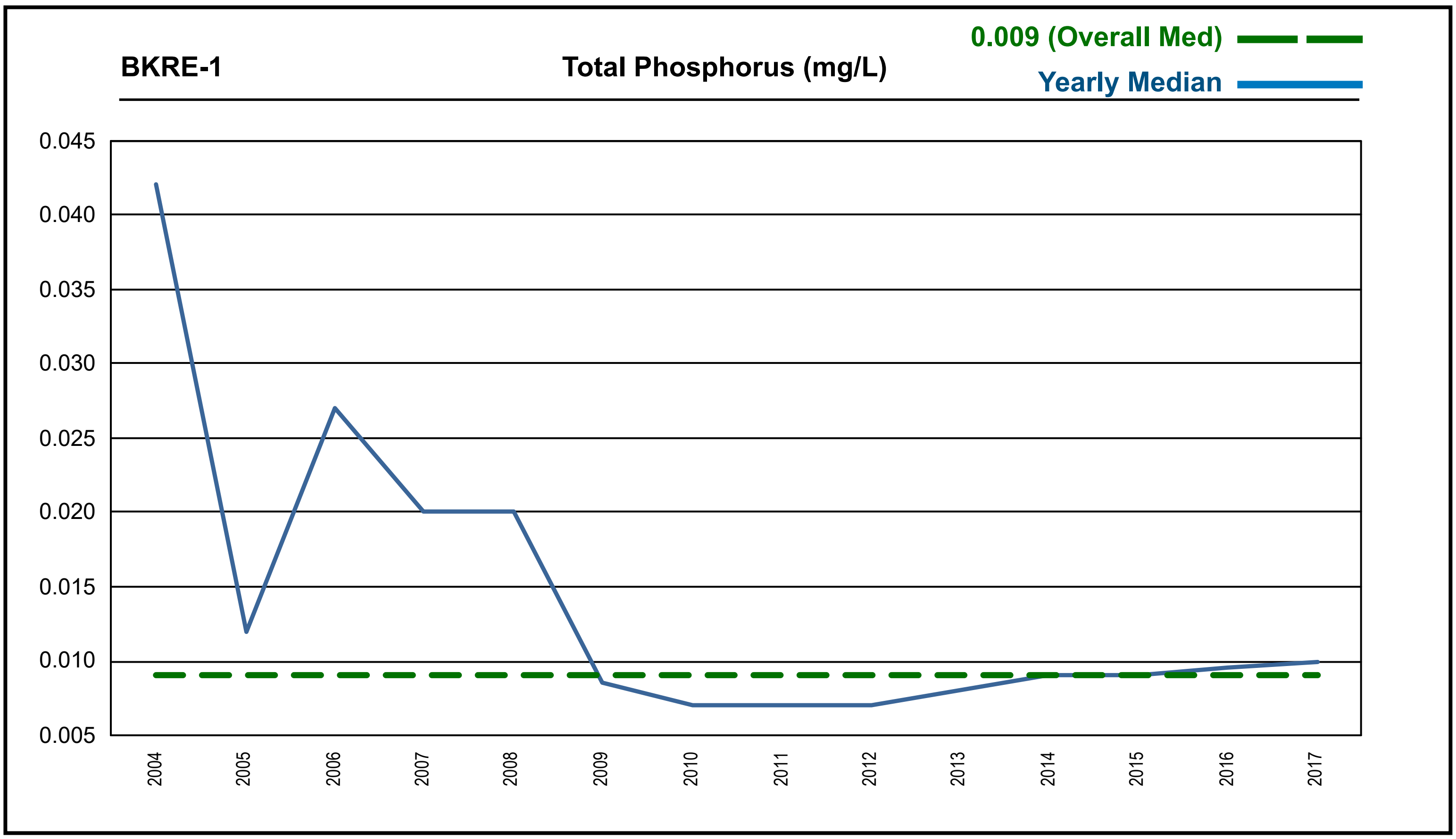

0.052 (Overall Med)
BGNL-1
Total Phosphorus (mg/L)
Yearly Median
0.20
0.16
0.12
0.08
0.04
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

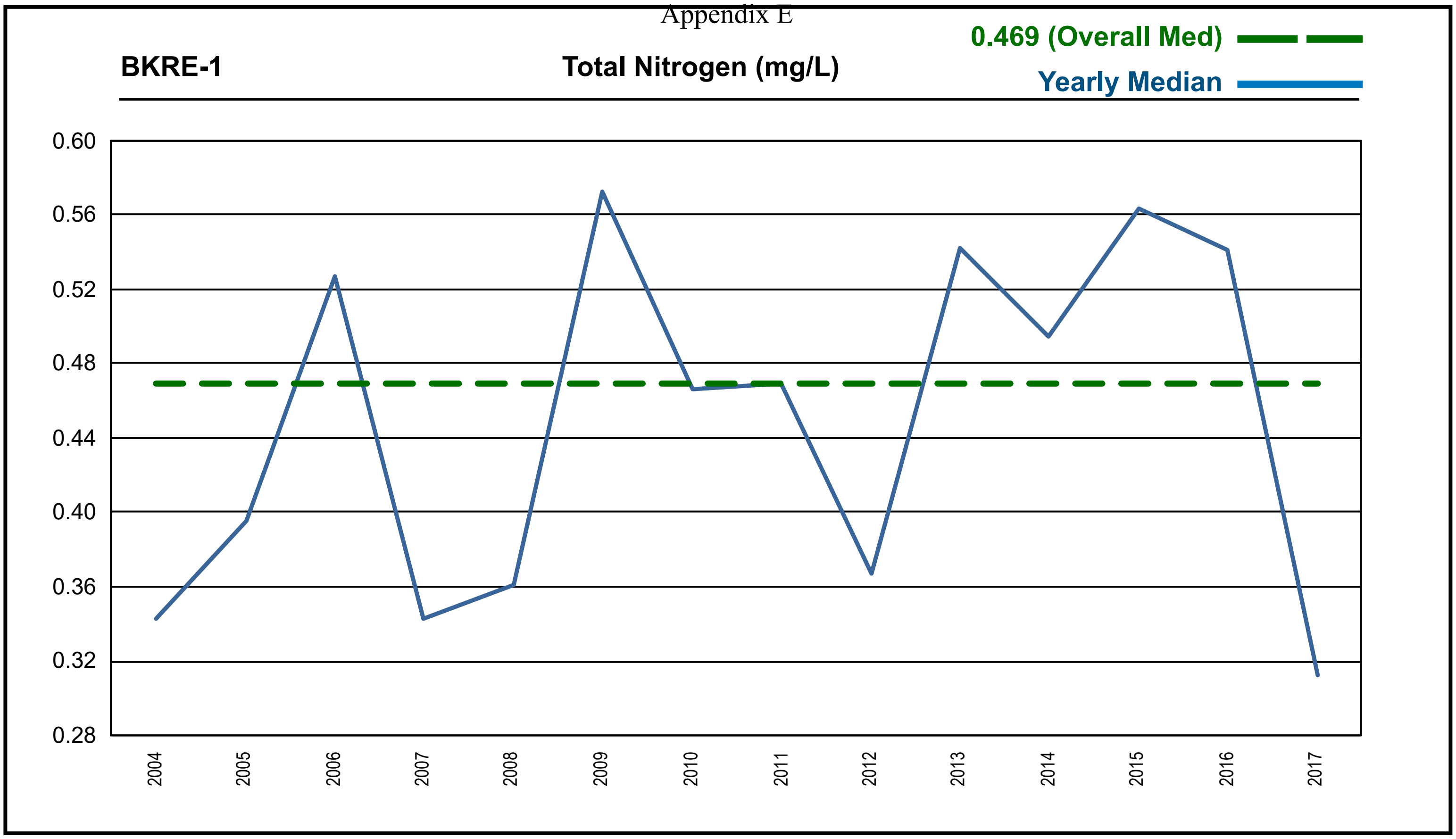

BGNL-1
Total Nitrogen (mg/L)
2.336 (Overall Med)
Yearly Median
3.6
3.2
2.8
2.4
2
1.6
1.2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

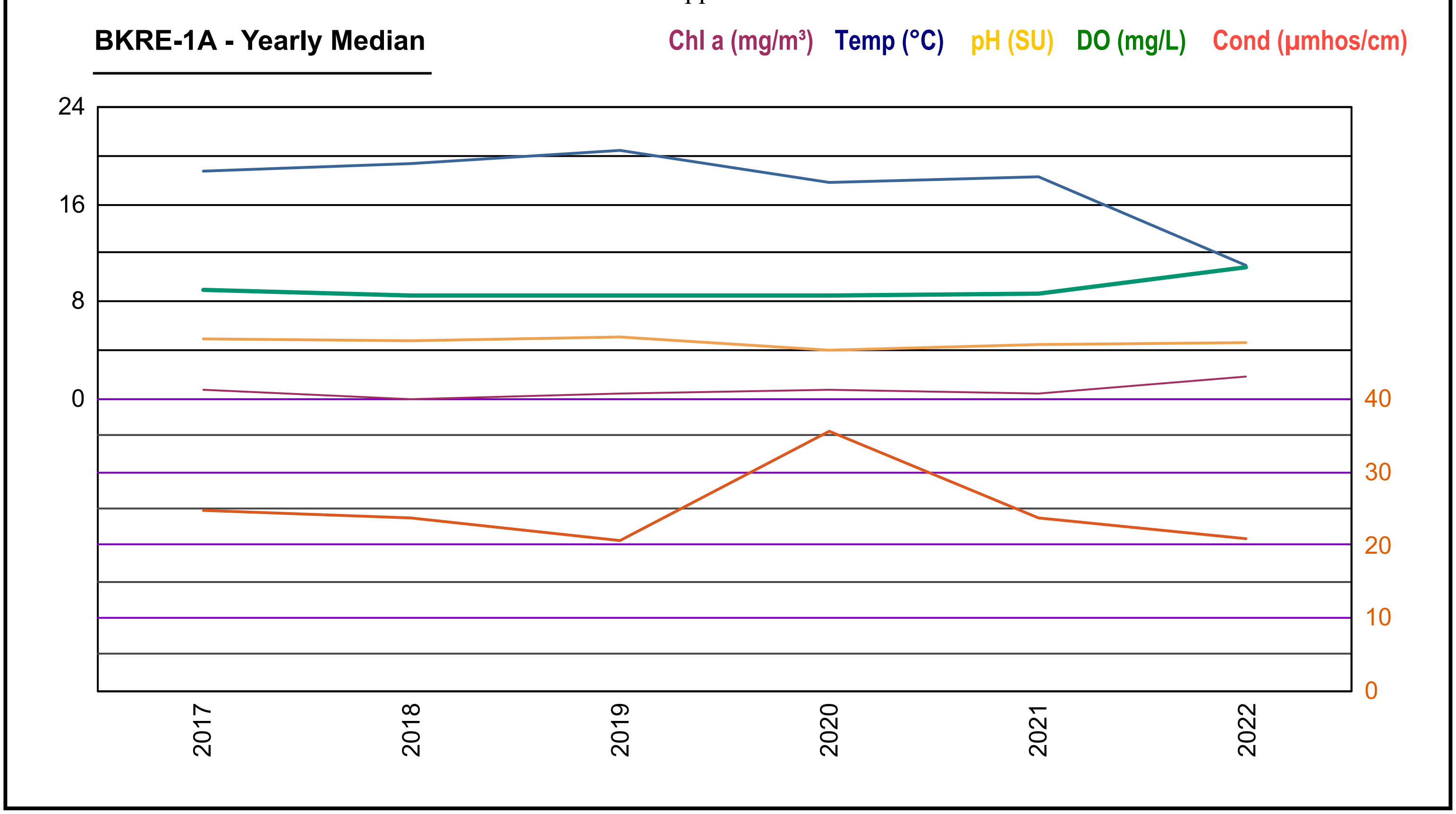

BKRE-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
40
30
20
10
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

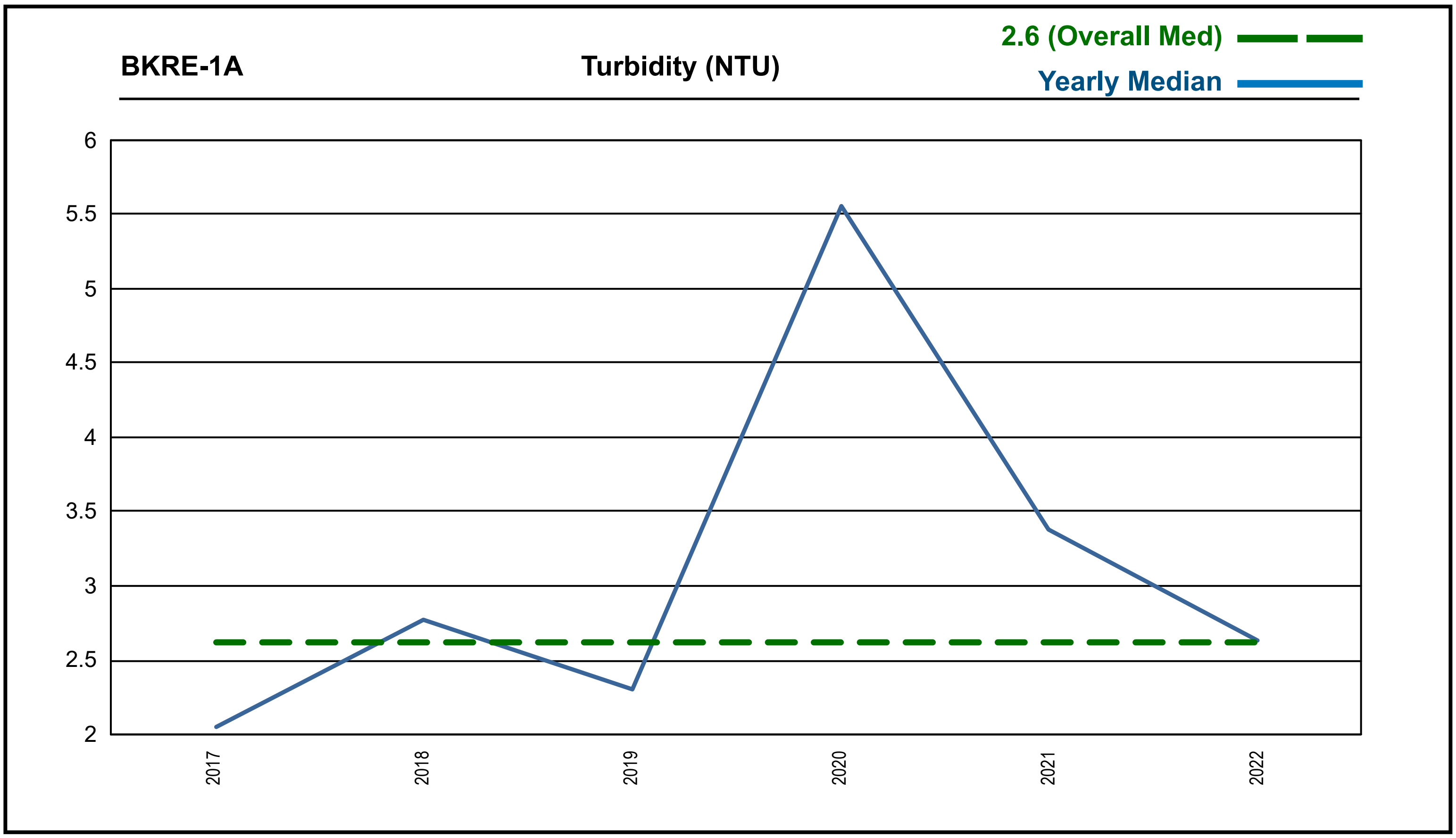

BKRE-1
Turbidity (NTU)
2.7 (Overall Med)
Yearly Median
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

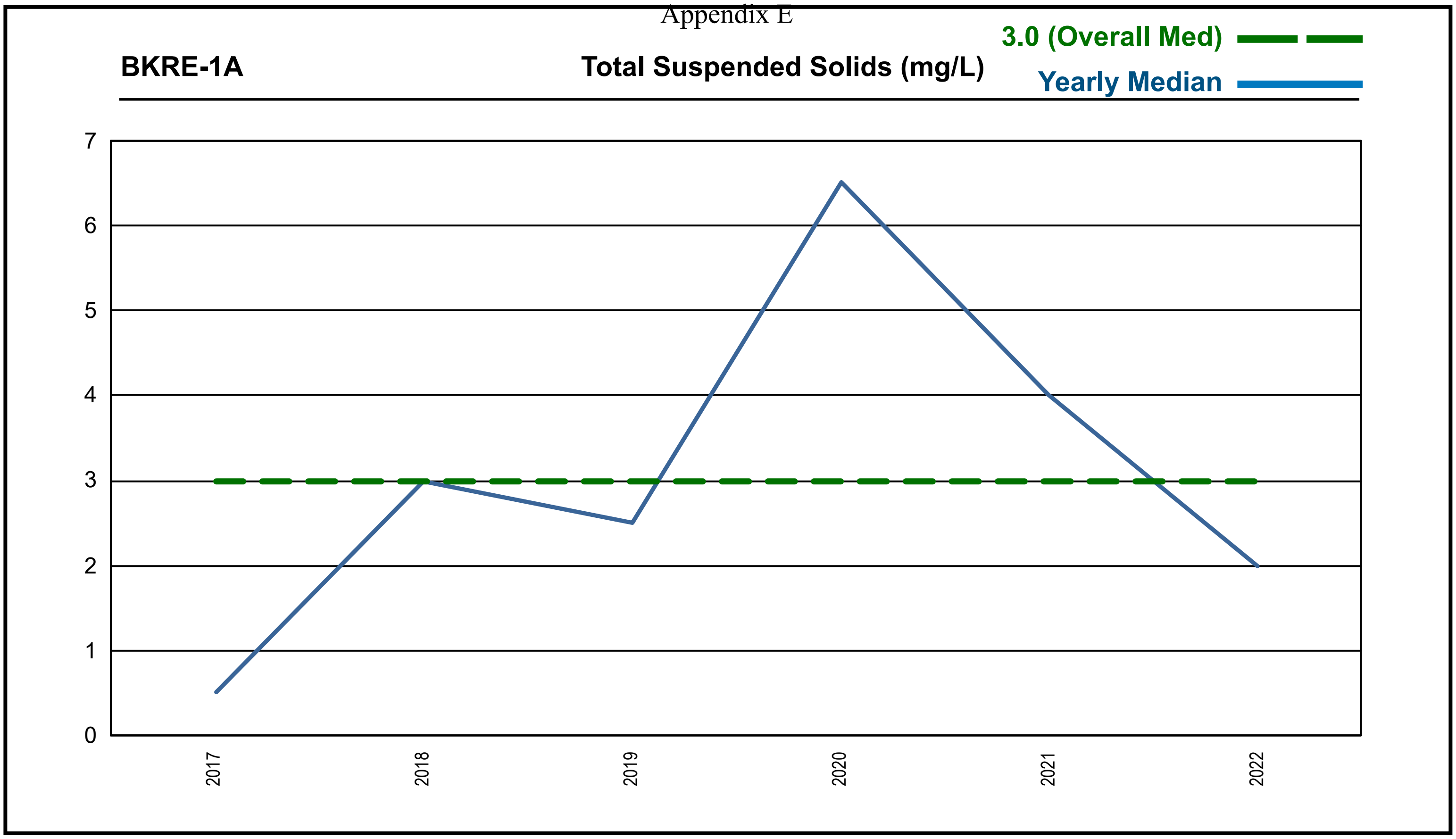

BKRE-1
Total Suspended Solids (mg/L)
2.0 (Overall Med)
Yearly Median
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017


BKRE-1
Total Phosphorus (mg/L)
0.009 (Overall Med)
Yearly Median
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

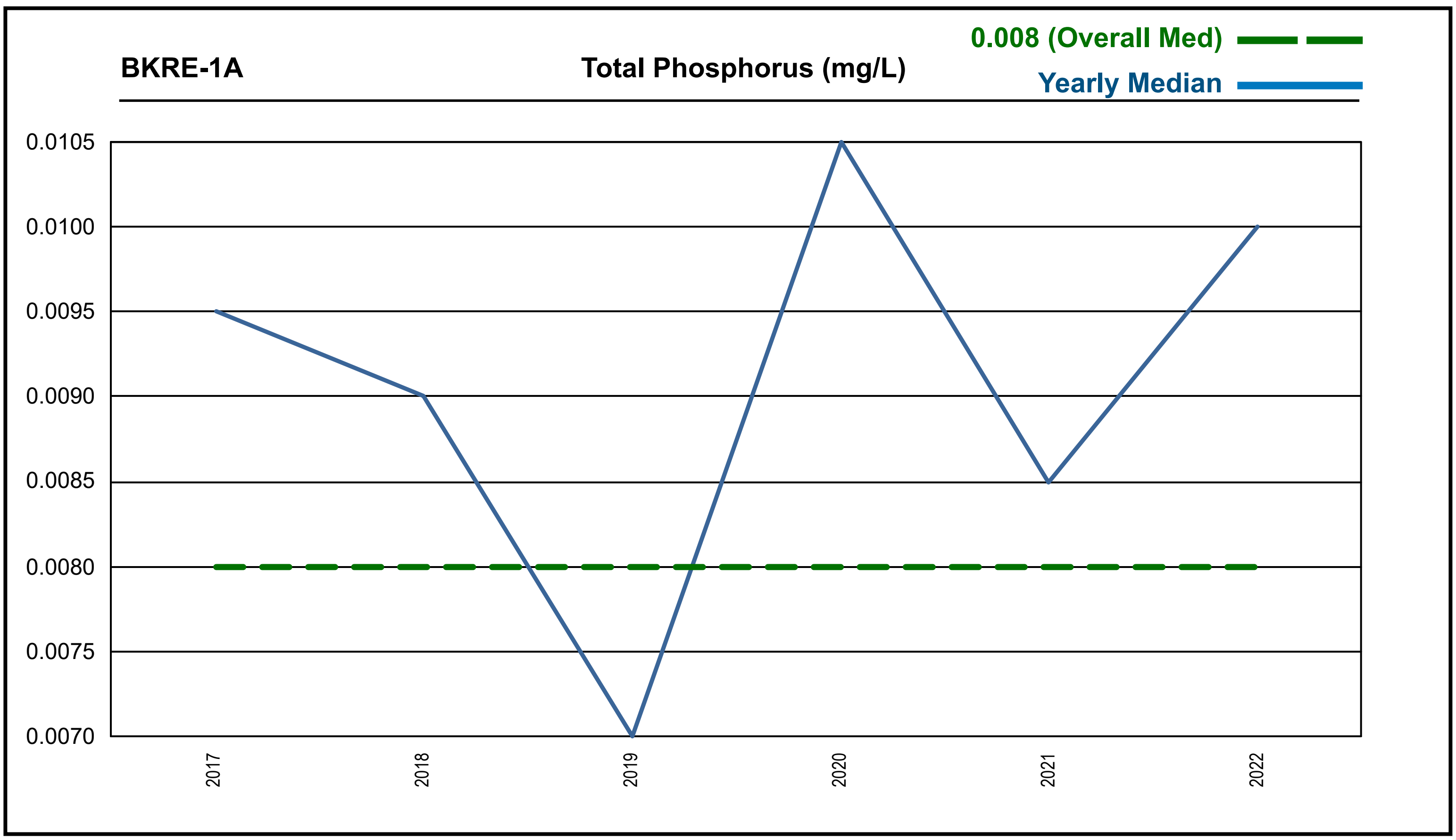

BKRE-1
Total Nitrogen (mg/L)
0.469 (Overall Med)
Yearly Median
0.60
0.56
0.52
0.48
0.44
0.40
0.36
0.32
0.28
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017


BKRE-1A - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
40
30
20
10
0
2017
2018
2019
2020
2021
2022

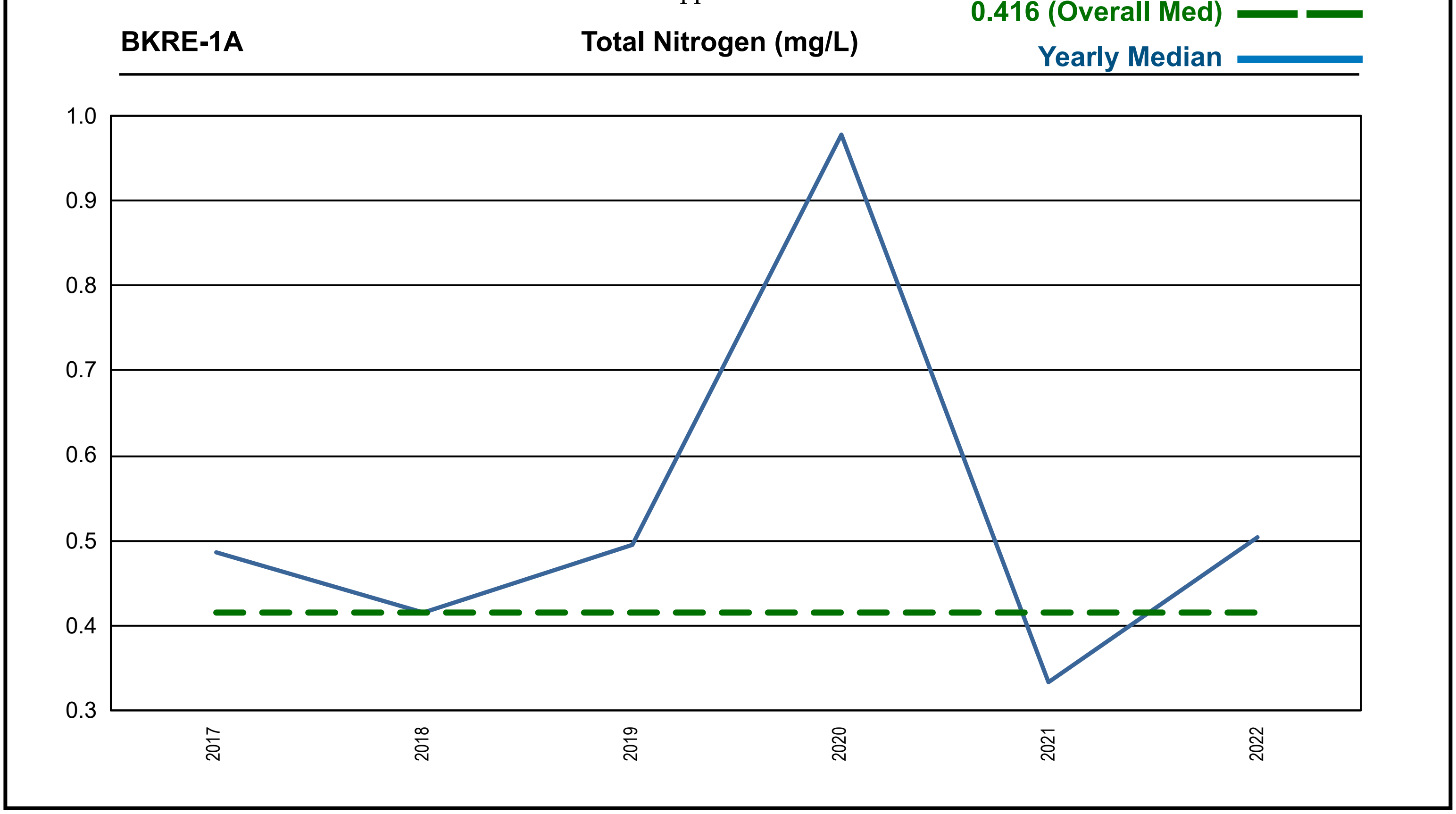

BKRE-1A
Turbidity (NTU)
2.6 (Overall Med)
Yearly Median
6
5.5
5
4.5
4
3.5
3
2.5
2
2017
2018
2019
2020
2021
2022

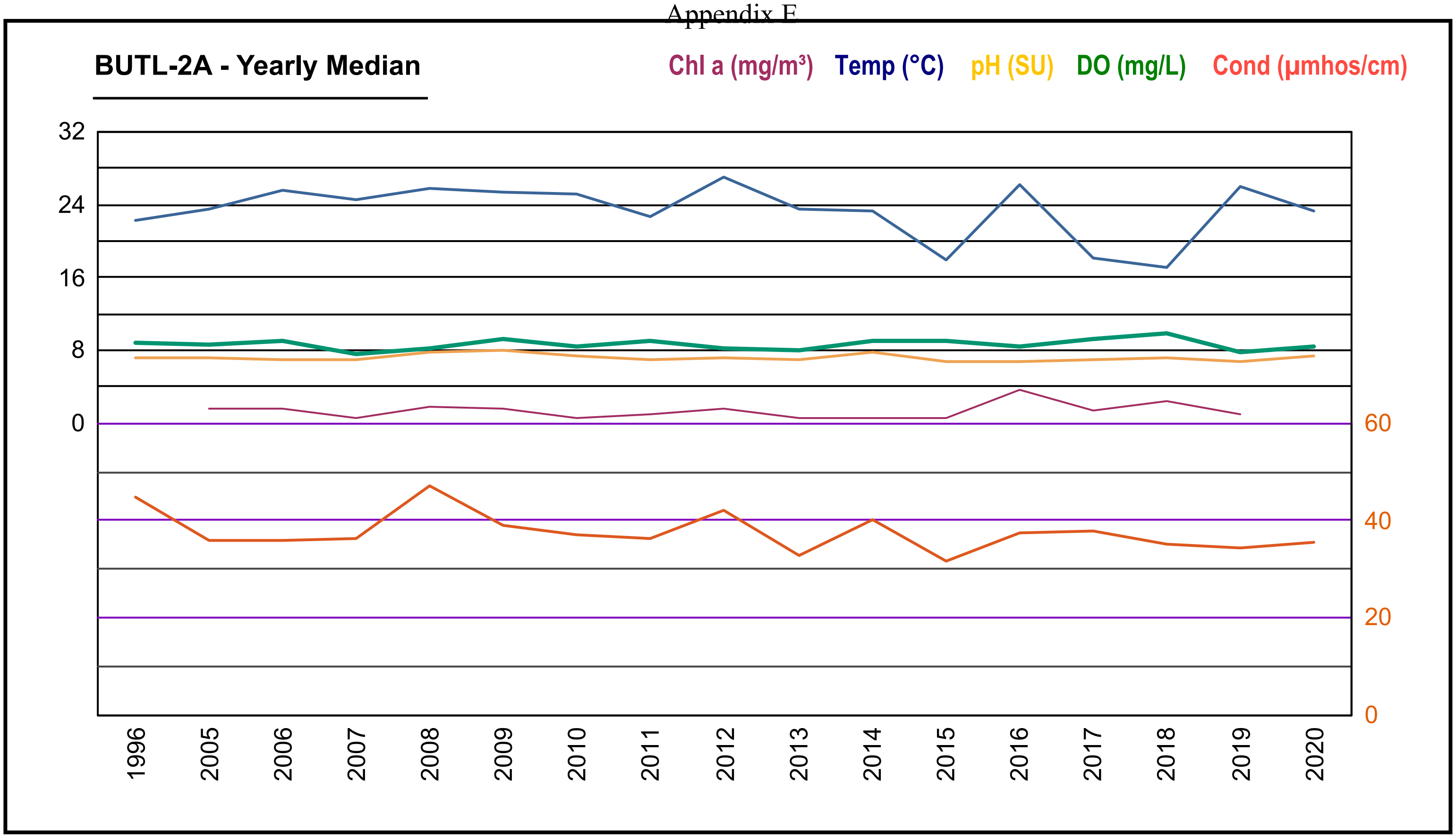


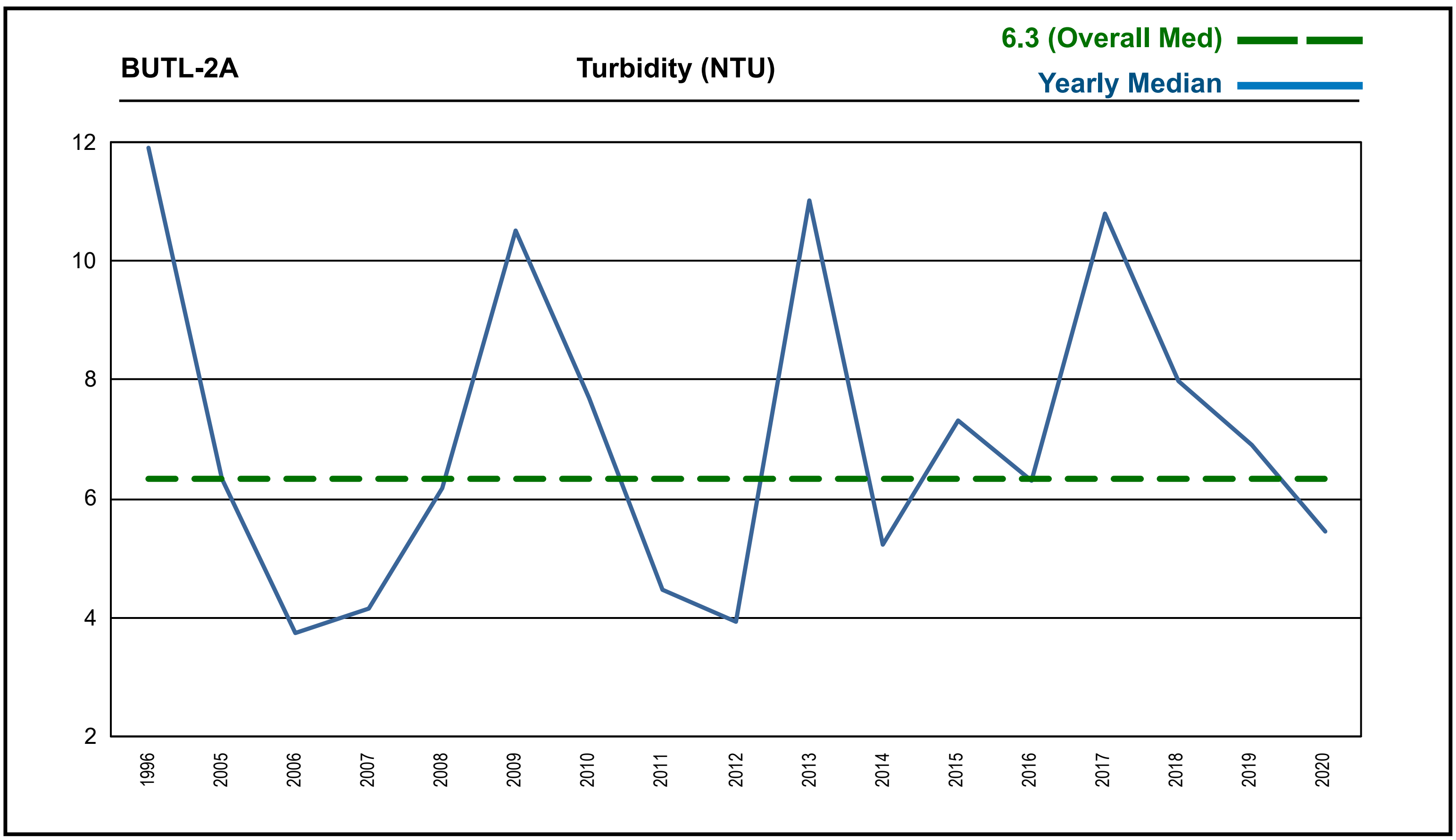
BKRE-1A
Total Suspended Solids (mg/L)
3.0 (Overall Med)
Yearly Median
7
6
5
4
3
2
1
0
2017
2018
2019
2020
2021
2022

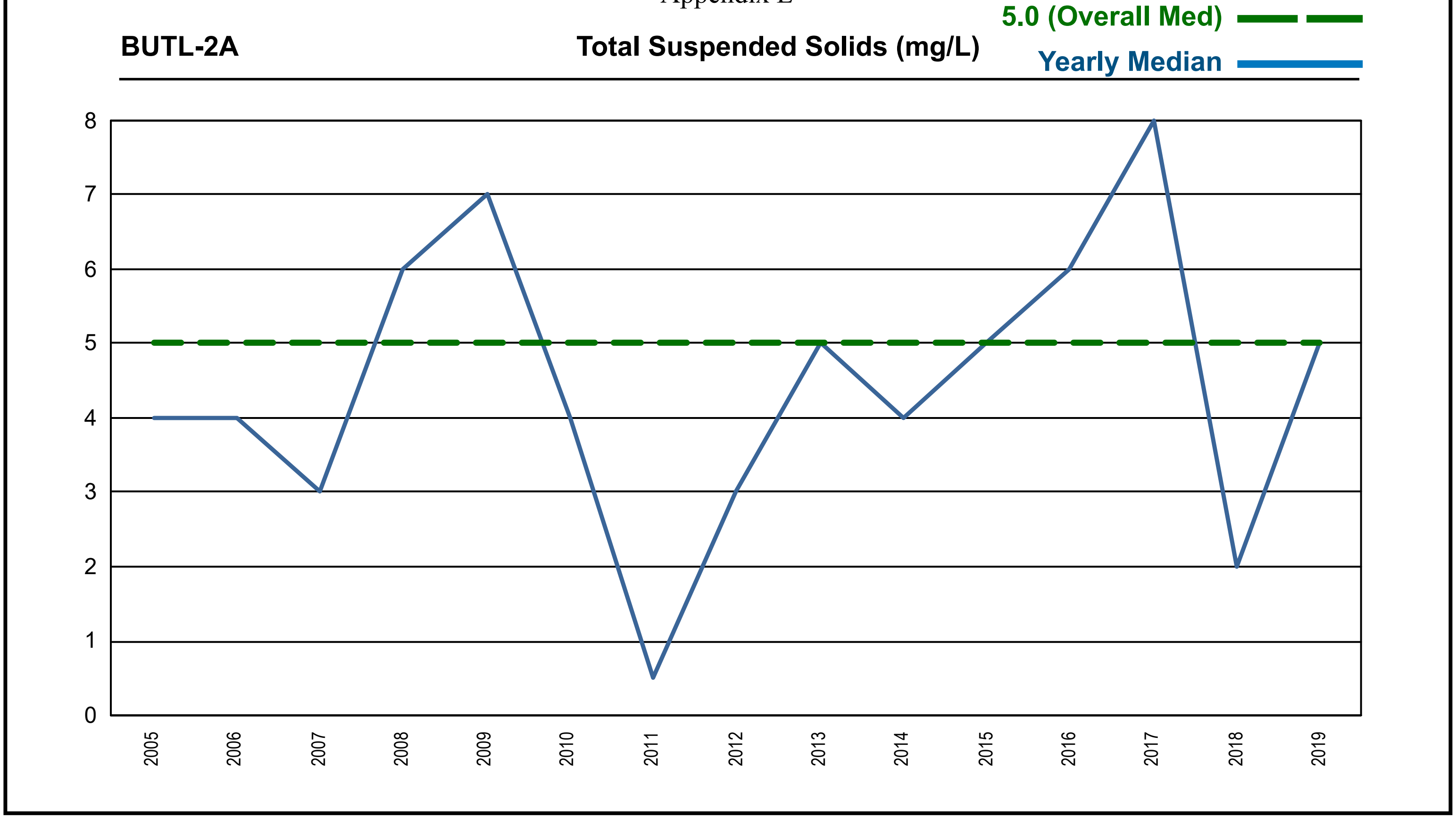


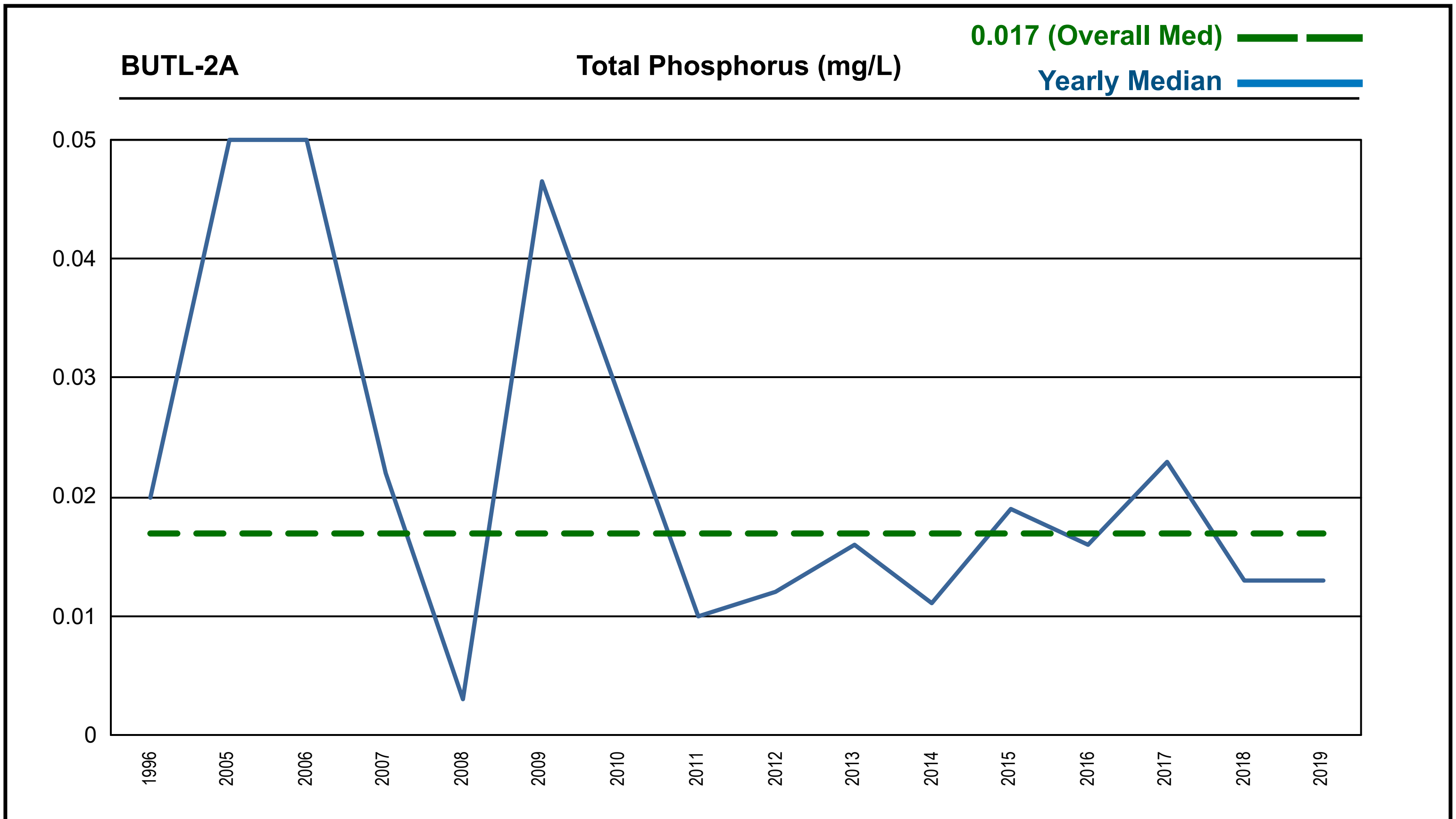
BKRE-1A
Total Phosphorus (mg/L)
0.008 (Overall Med)
Yearly Median
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
2017
2018
2019
2020
2021
2022

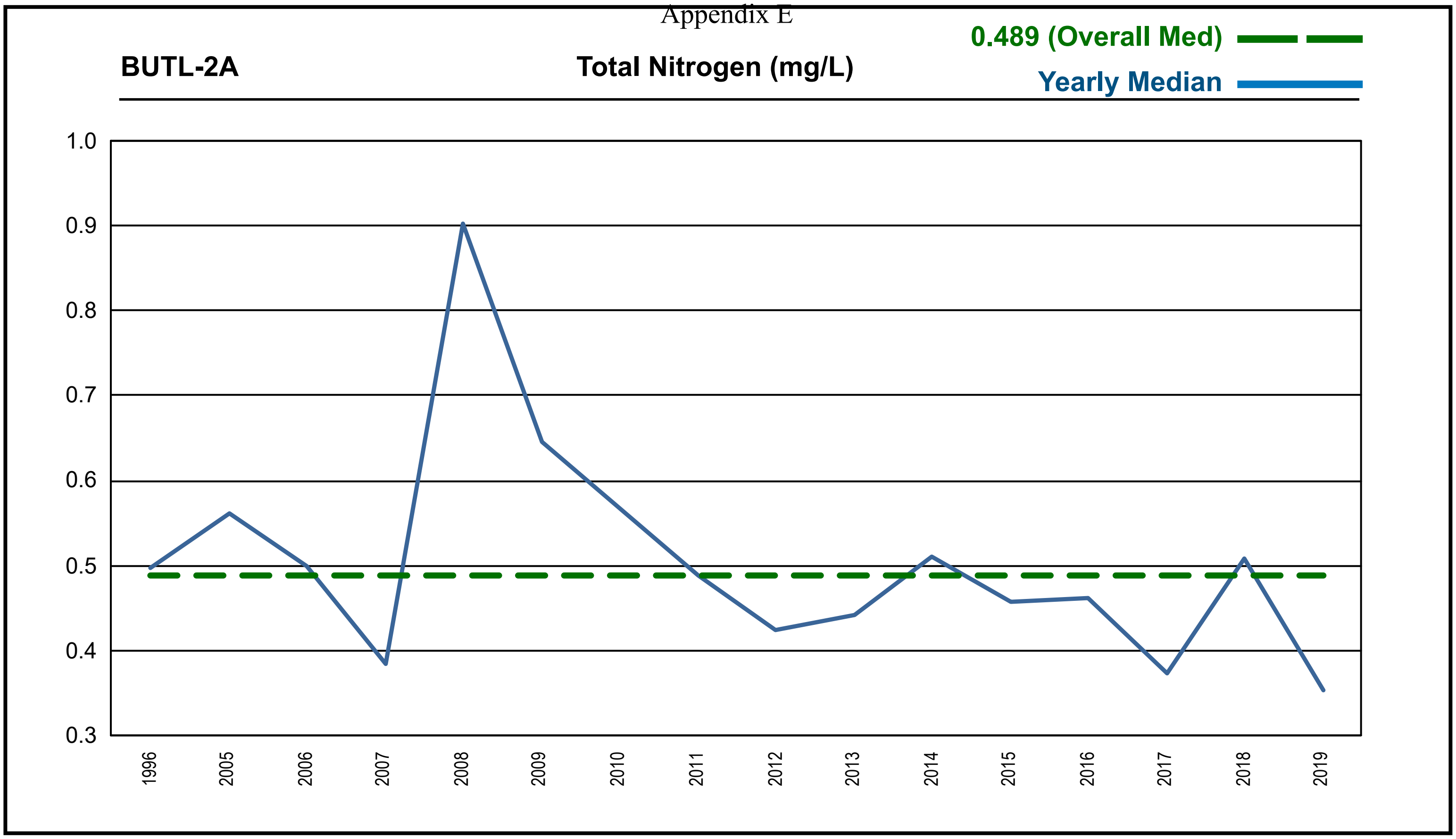

BKRE-1A
Total Nitrogen (mg/L)
0.416 (Overall Med)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
2017
2018
2019
2020
2021
2022


BUTL-2A - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
60
40
20
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020

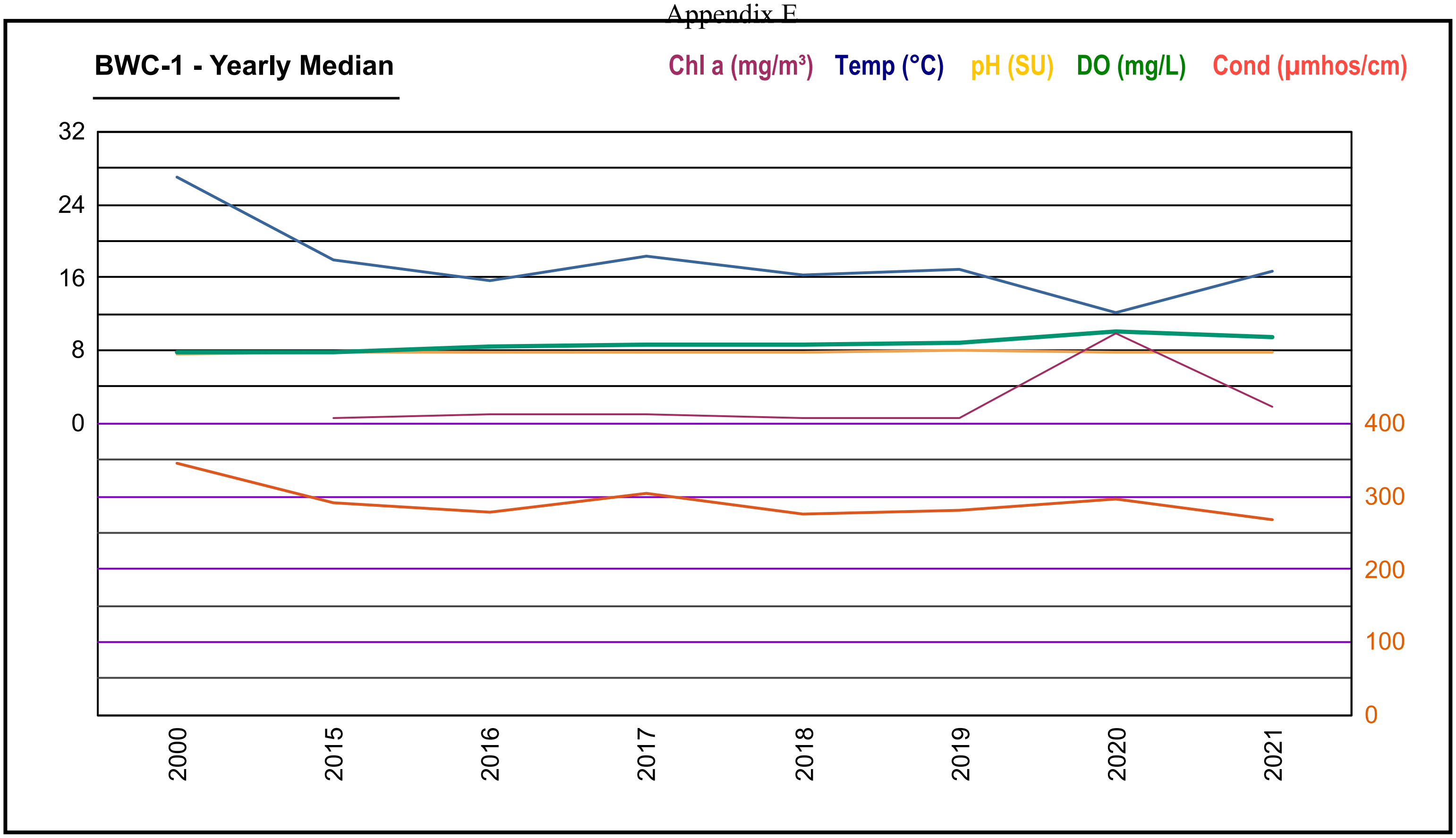

BUTL-2A
Turbidity (NTU)
6.3 (Overall Med)
Yearly Median
12
10
8
6
4
2
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020

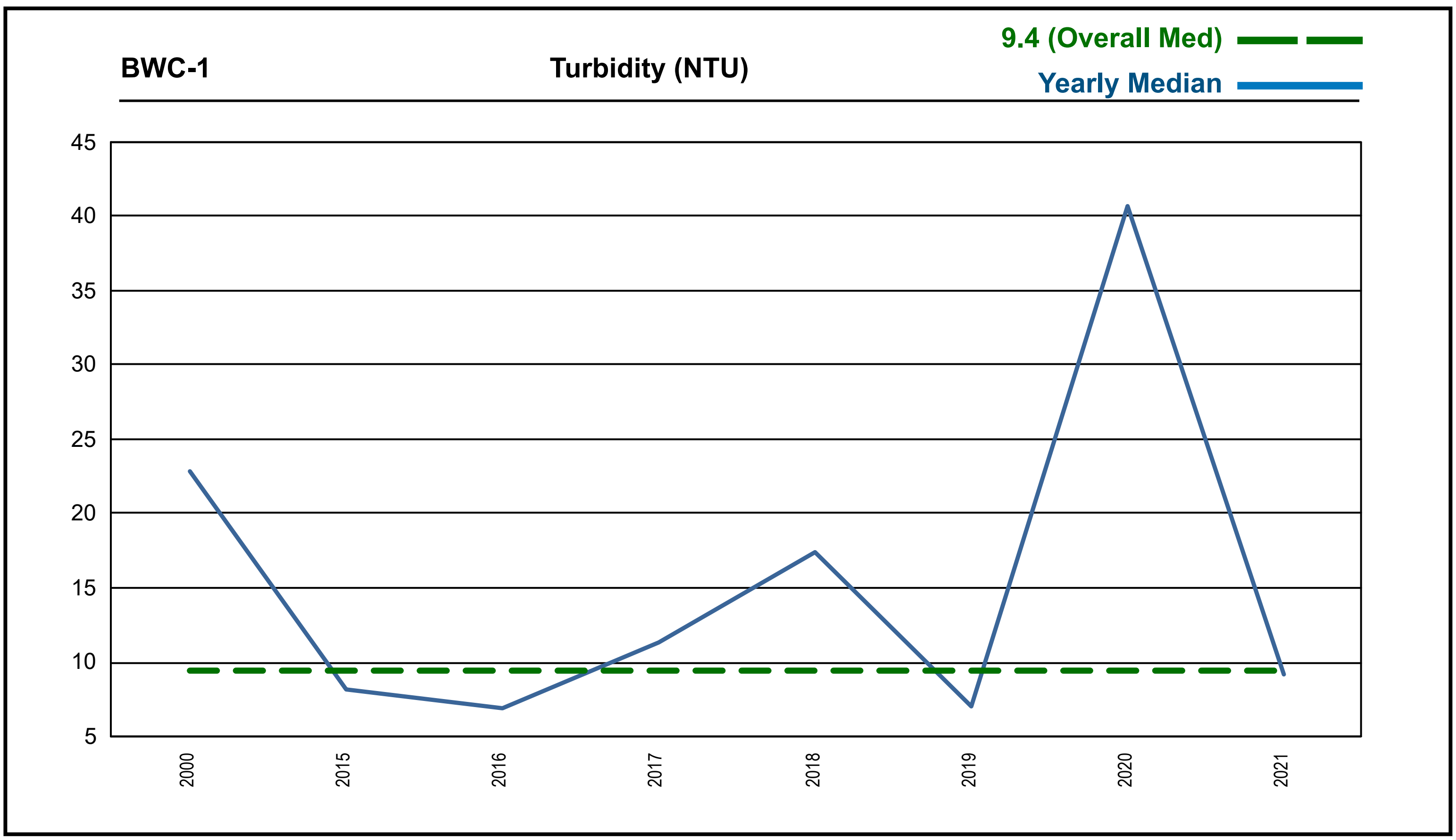

5.0 (Overall Med)
Yearly Median
BUTL-2A
Total Suspended Solids (mg/L)
8
7
6
5
4
3
2
1
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

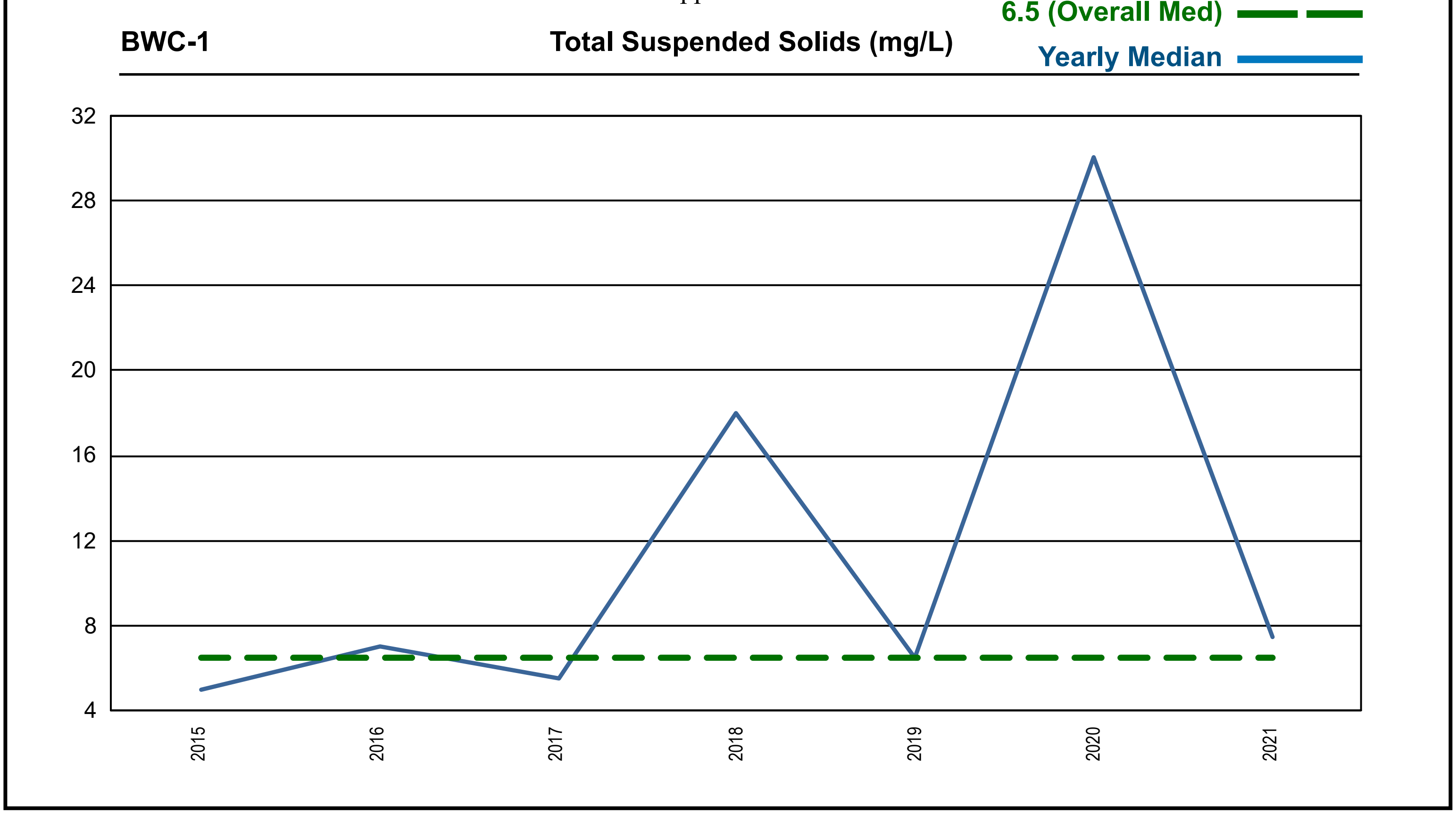

0.017 (Overall Med)
Yearly Median
BUTL-2A
Total Phosphorus (mg/L)
0.05
0.04
0.03
0.02
0.01
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

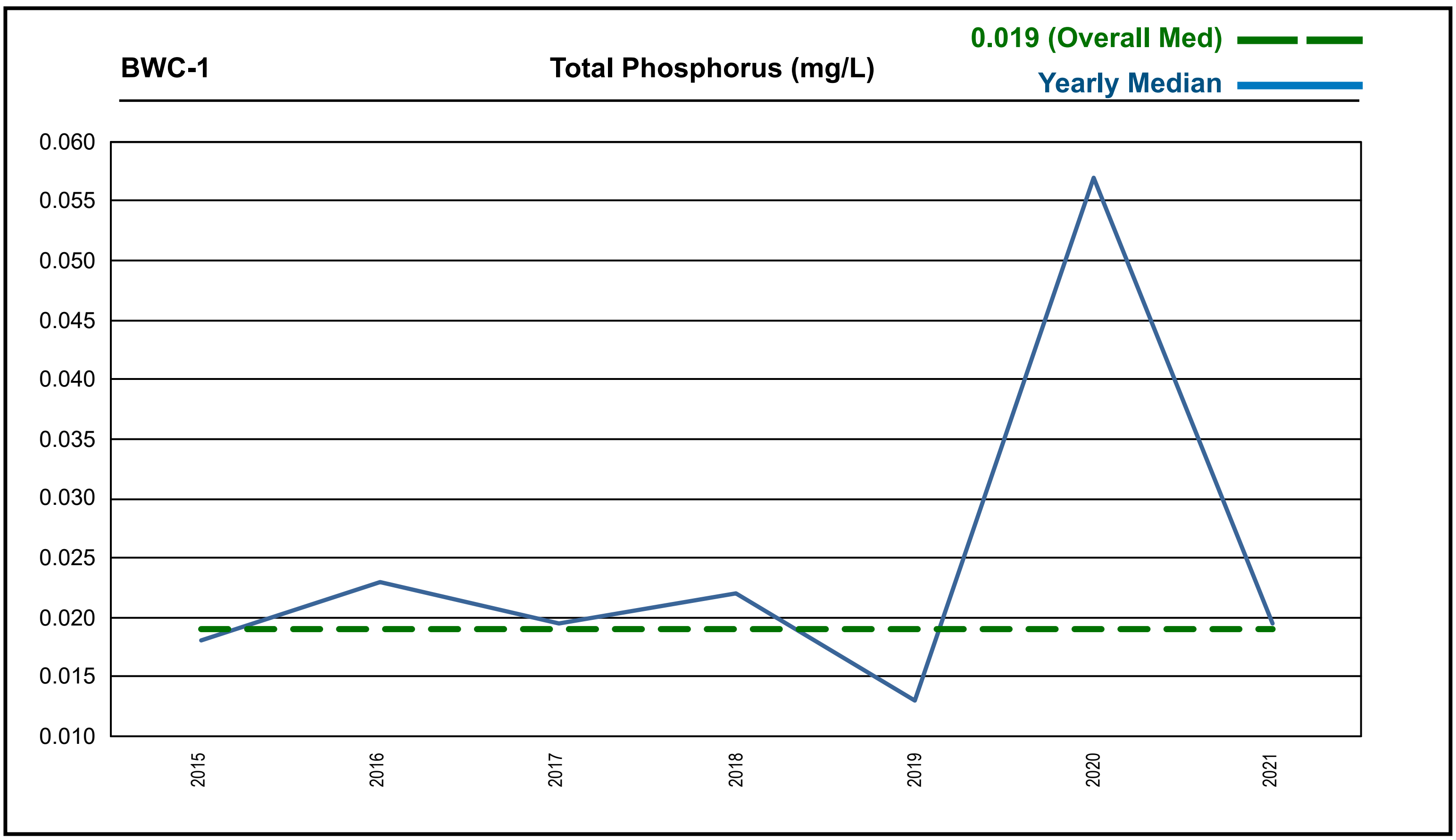


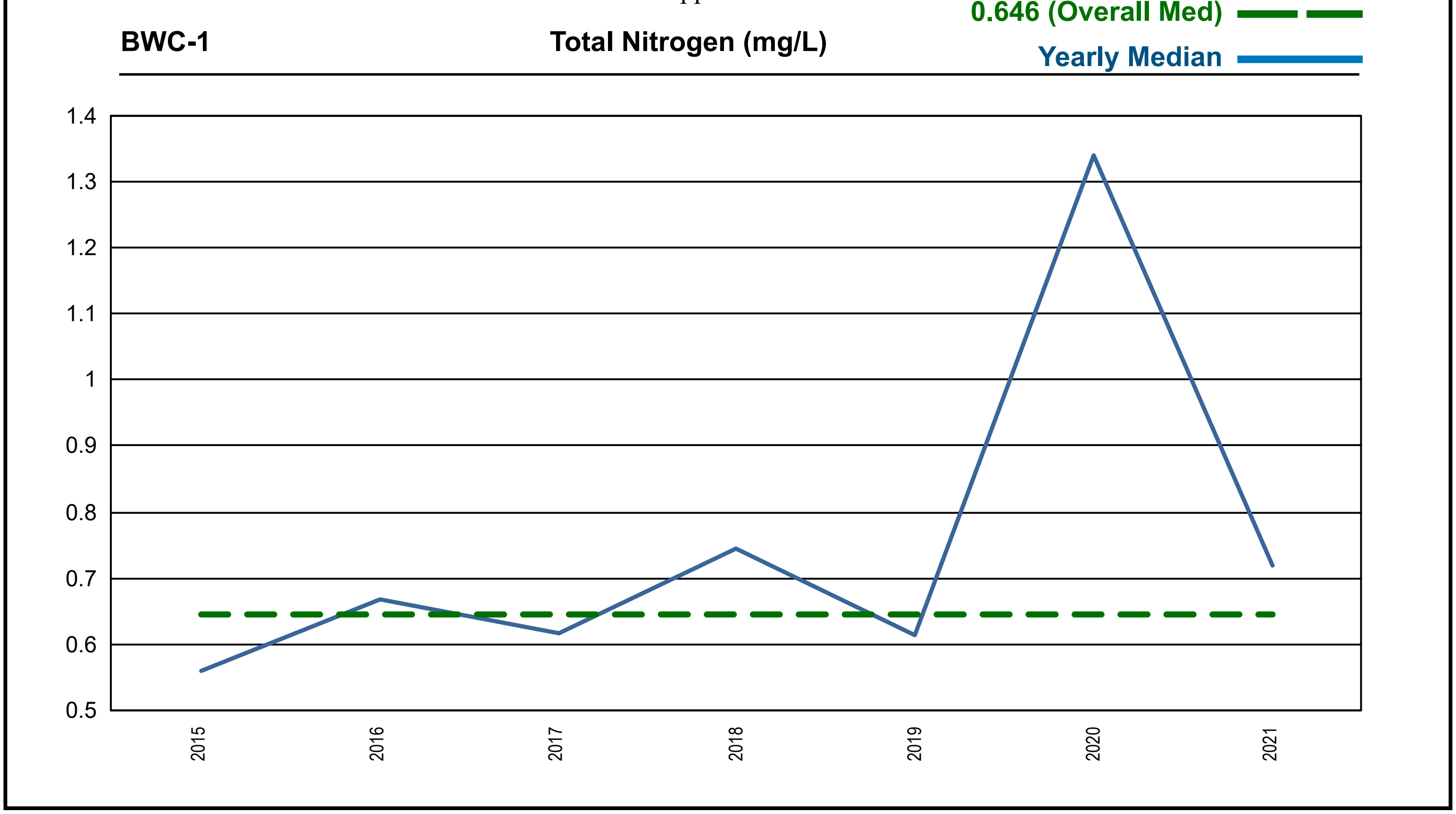
BUTL-2A
Total Nitrogen (mg/L)
0.489 (Overall Med)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

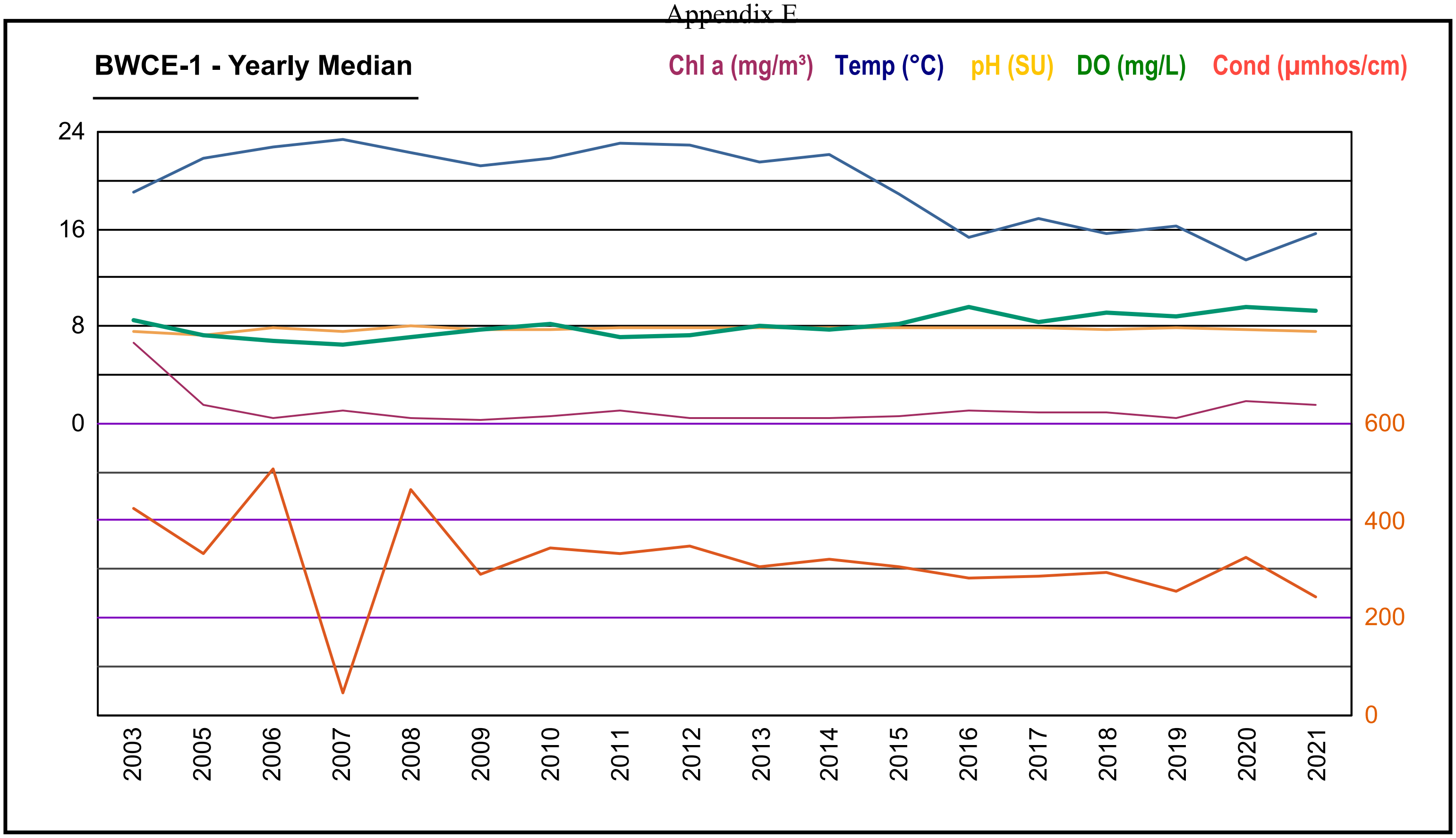

BWC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
2000
2015
2016
2017
2018
2019
2020
2021

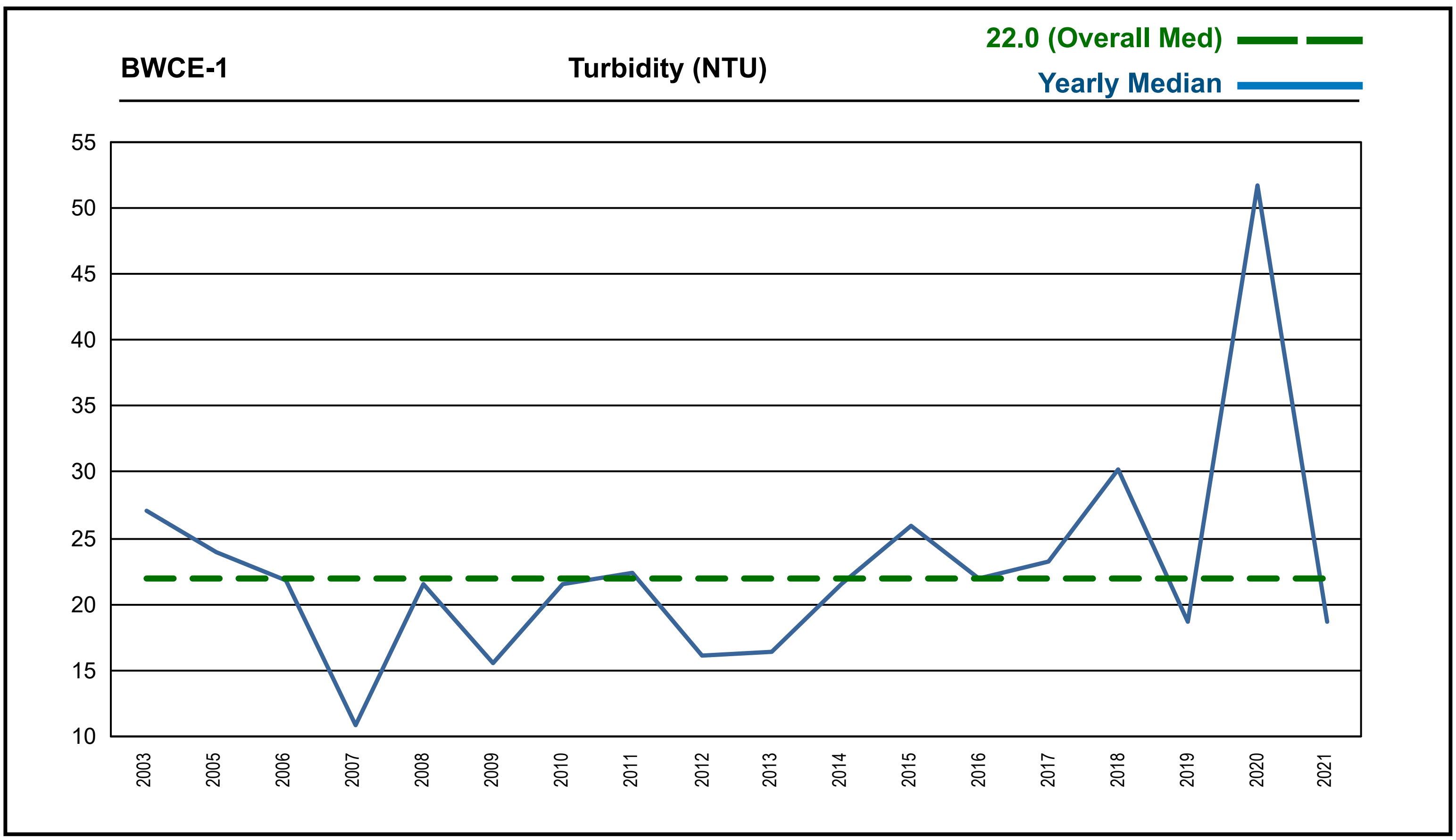

BWC-1
Turbidity (NTU)
9.4 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
2000
2015
2016
2017
2018
2019
2020
2021

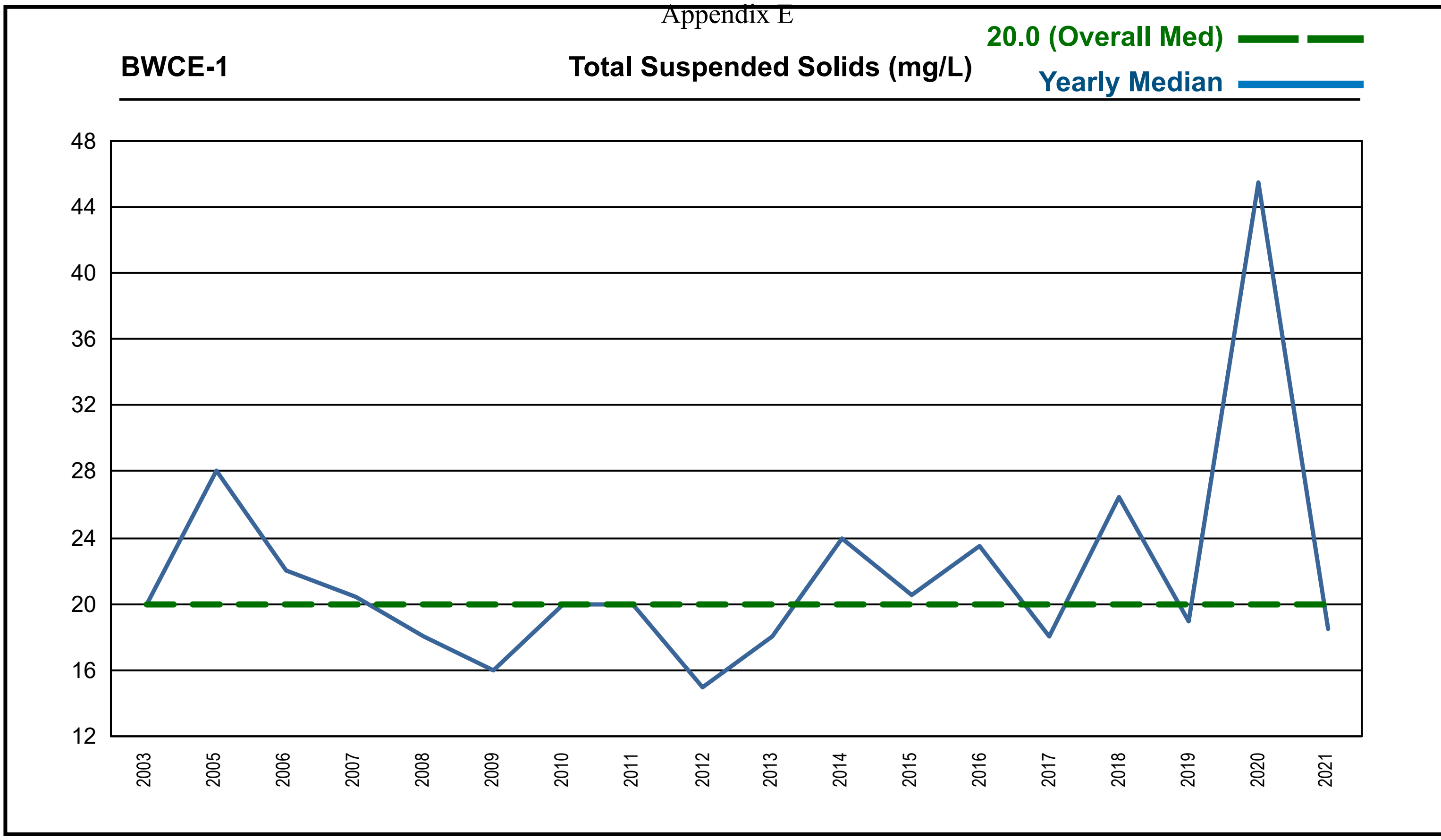

6.5 (Overall Med)
Yearly Median
BWC-1
Total Suspended Solids (mg/L)
32
28
24
20
16
12
8
4
2015
2016
2017
2018
2019
2020
2021

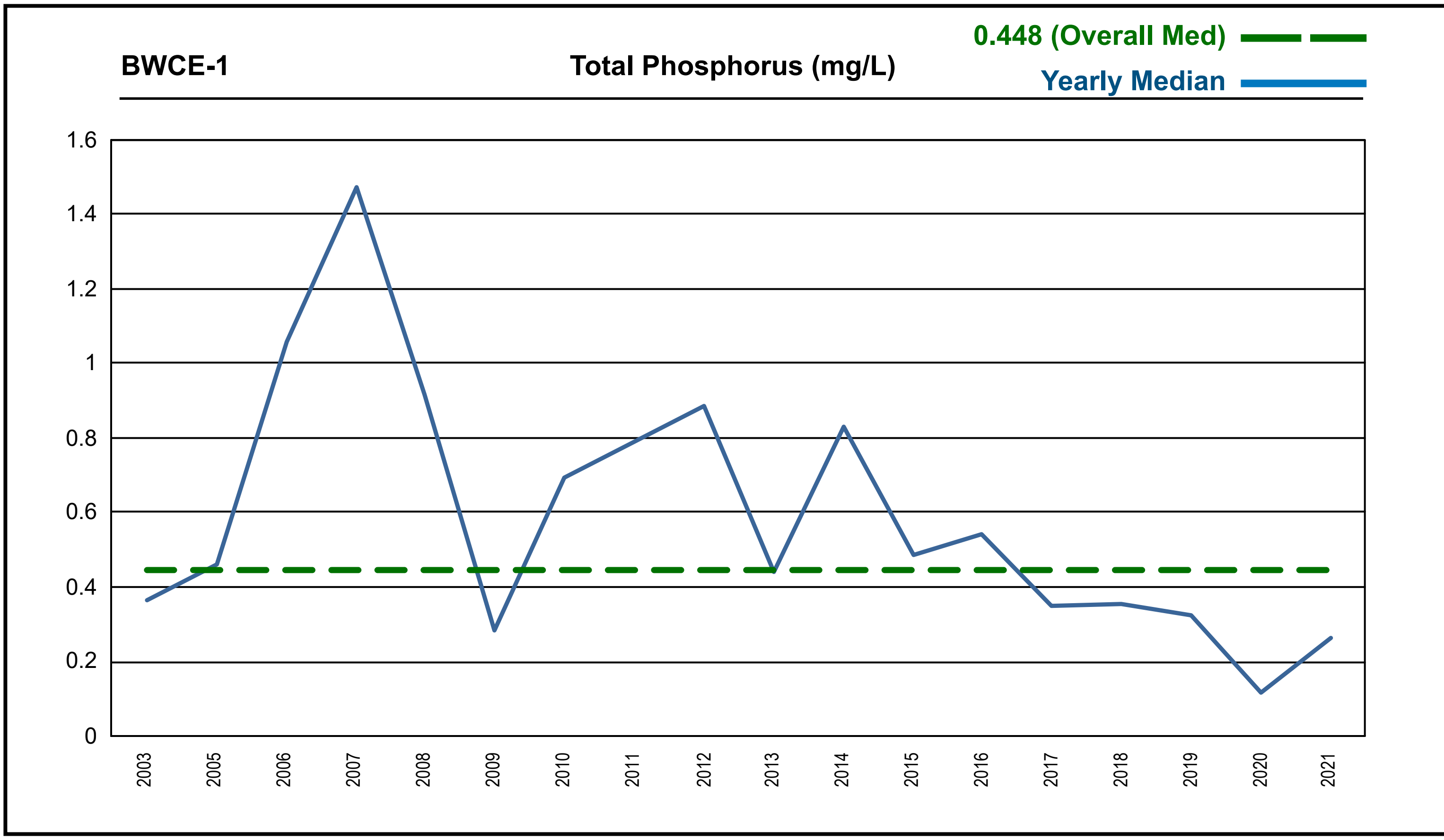

0.019 (Overall Med)
Yearly Median
BWC-1
Total Phosphorus (mg/L)
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2015
2016
2017
2018
2019
2020
2021

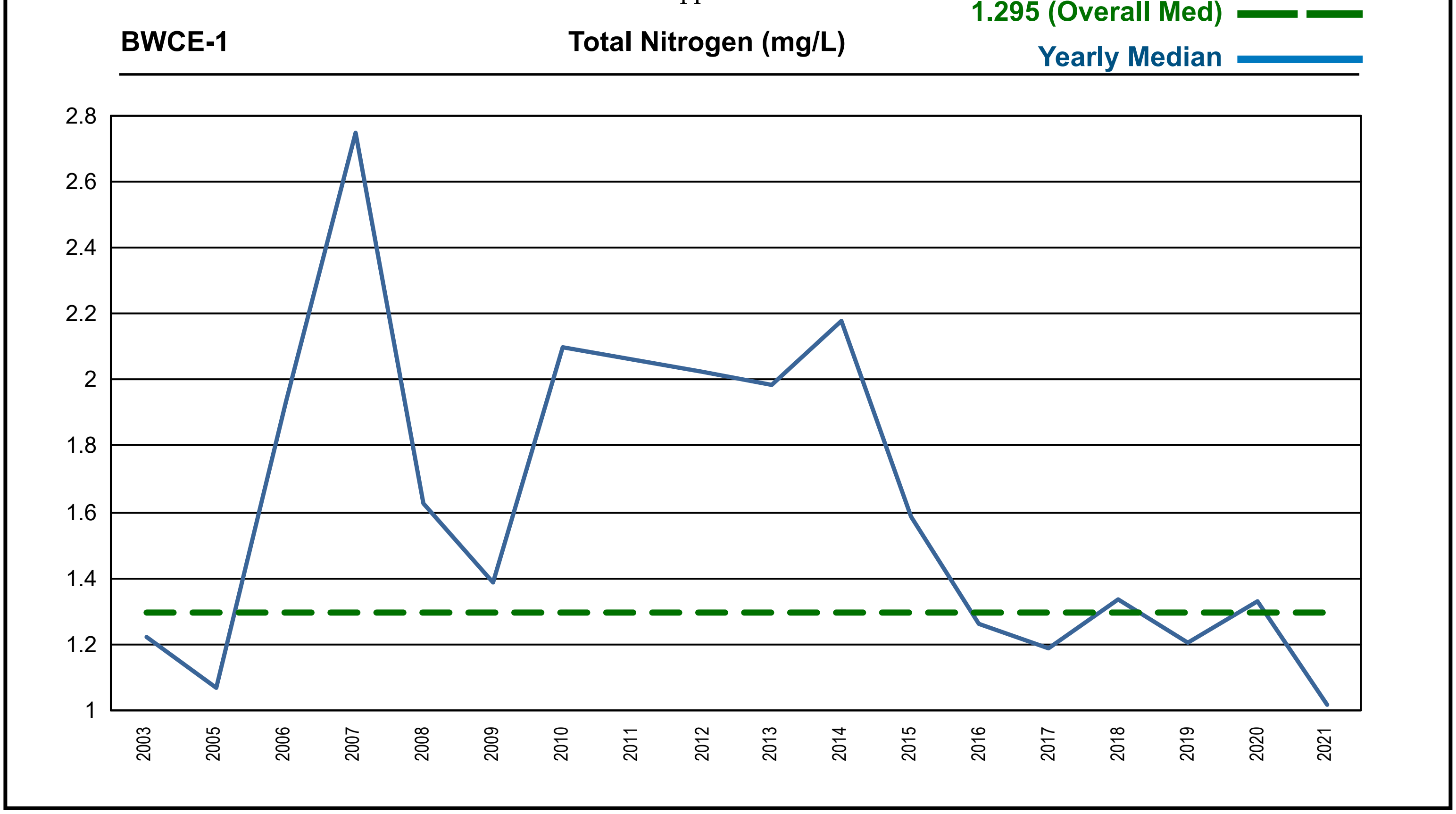

BWC-1
Total Nitrogen (mg/L)
0.646 (Overall Med)
Yearly Median
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
2015
2016
2017
2018
2019
2020
2021

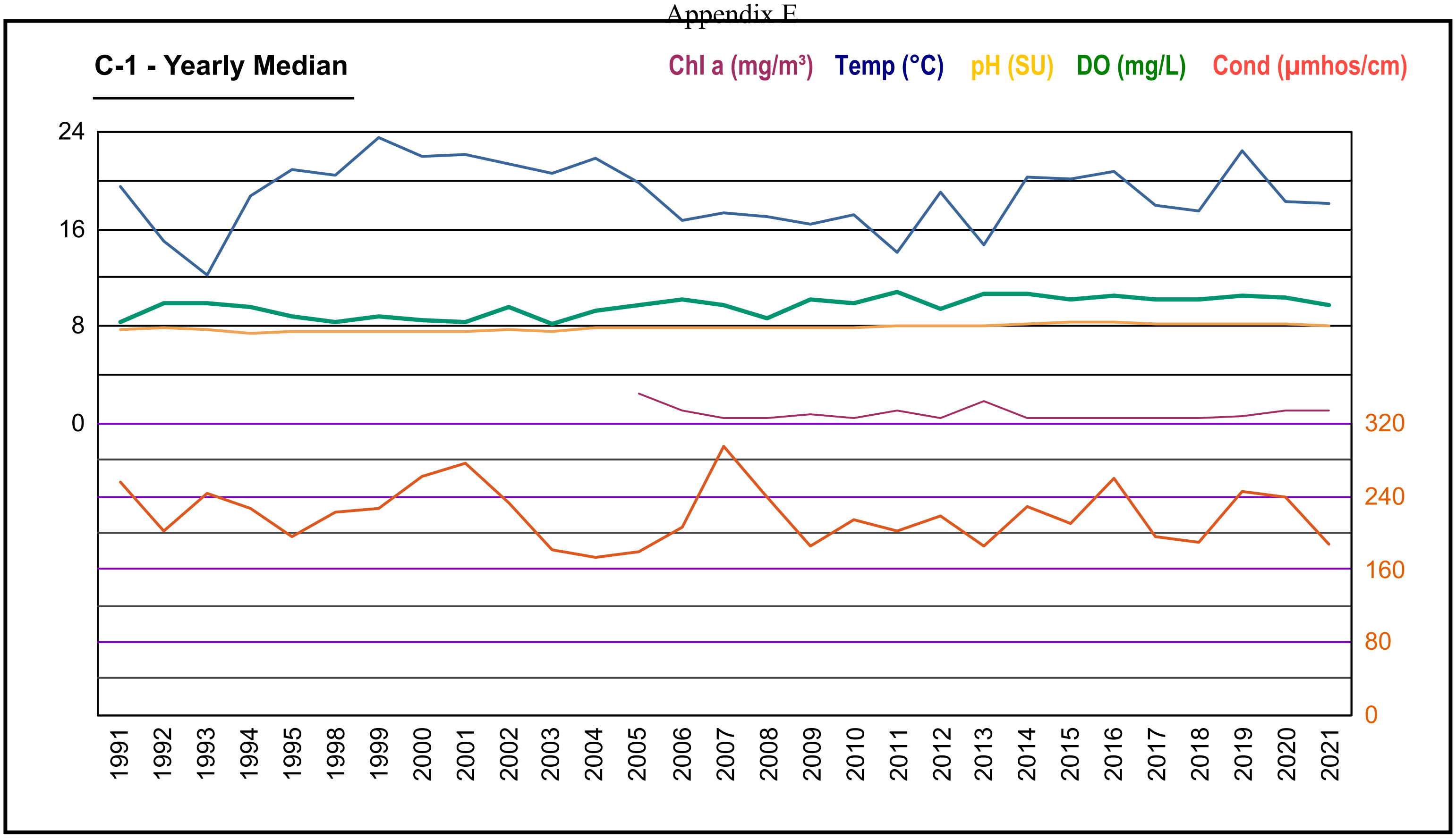

BWCE-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
600
400
200
0
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

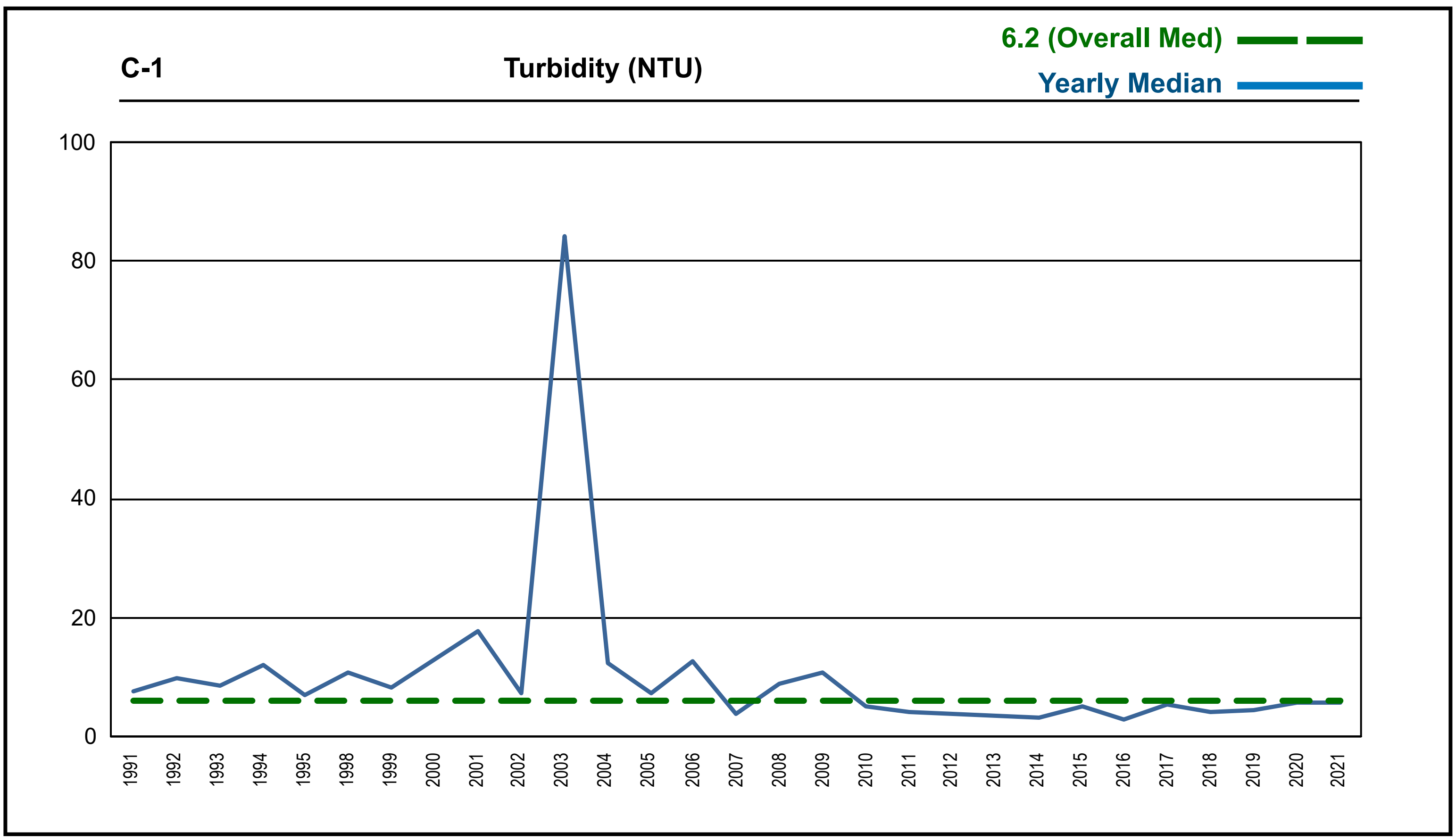

BWCE-1
Turbidity (NTU)
22.0 (Overall Med)
Yearly Median
55
50
45
40
35
30
25
20
15
10
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

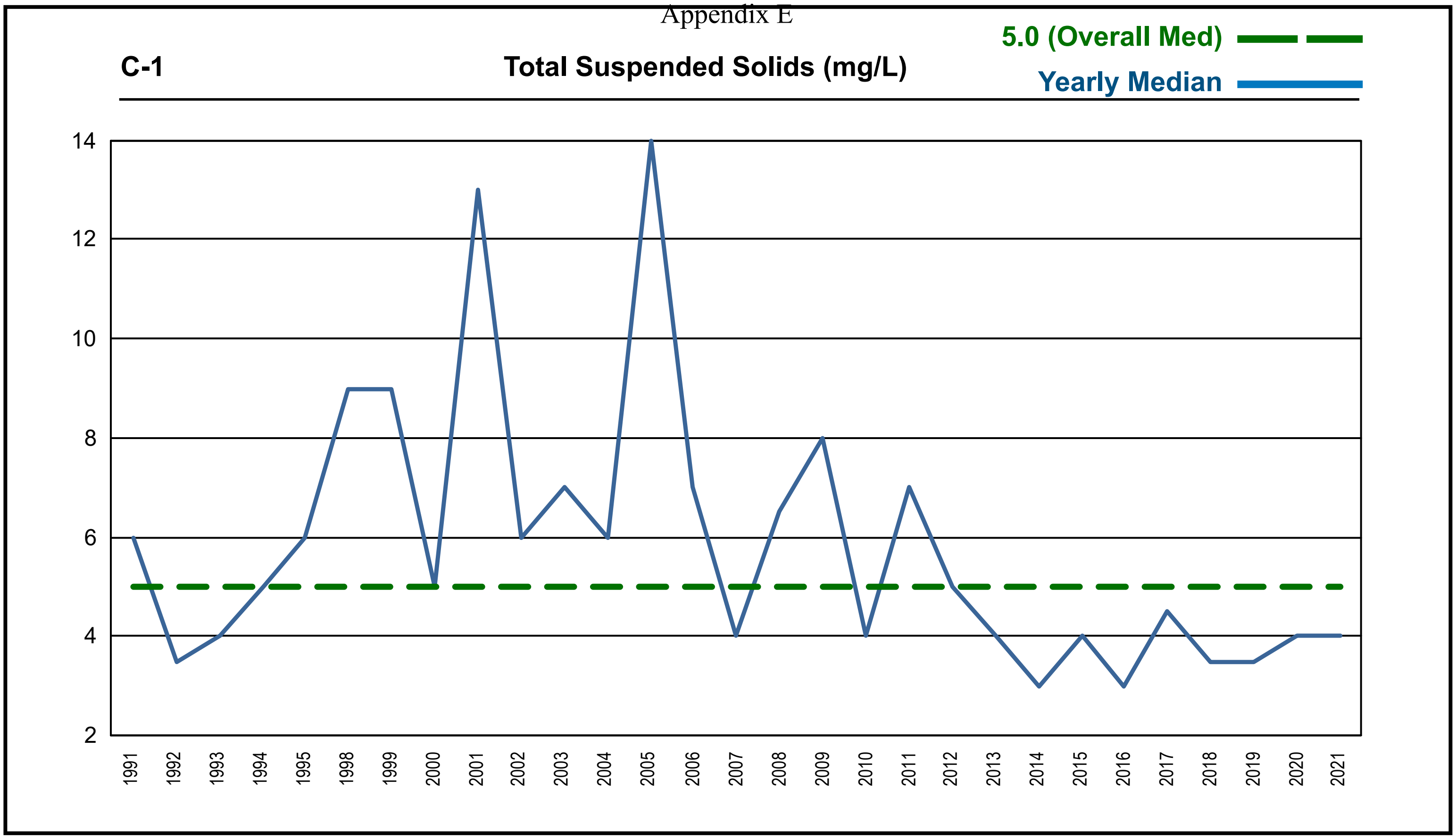

20.0 (Overall Med)
Yearly Median
BWCE-1
Total Suspended Solids (mg/L)
48
44
40
36
32
28
24
20
16
12
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


0.448 (Overall Med)
Yearly Median
BWCE-1
Total Phosphorus (mg/L)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

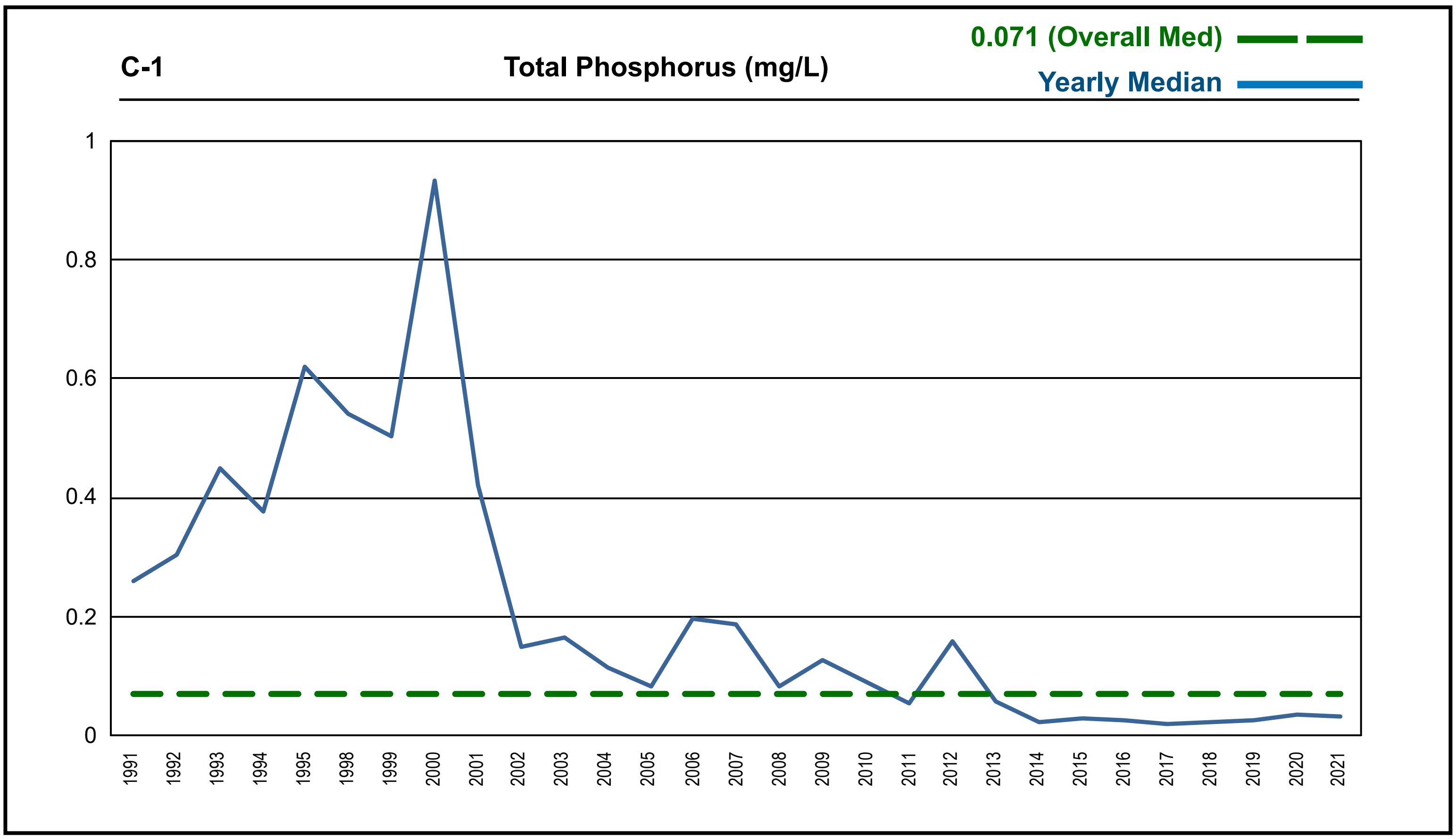

BWCE-1
Total Nitrogen (mg/L)
1.295 (Overall Med)
Yearly Median
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


C-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
320
240
160
80
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

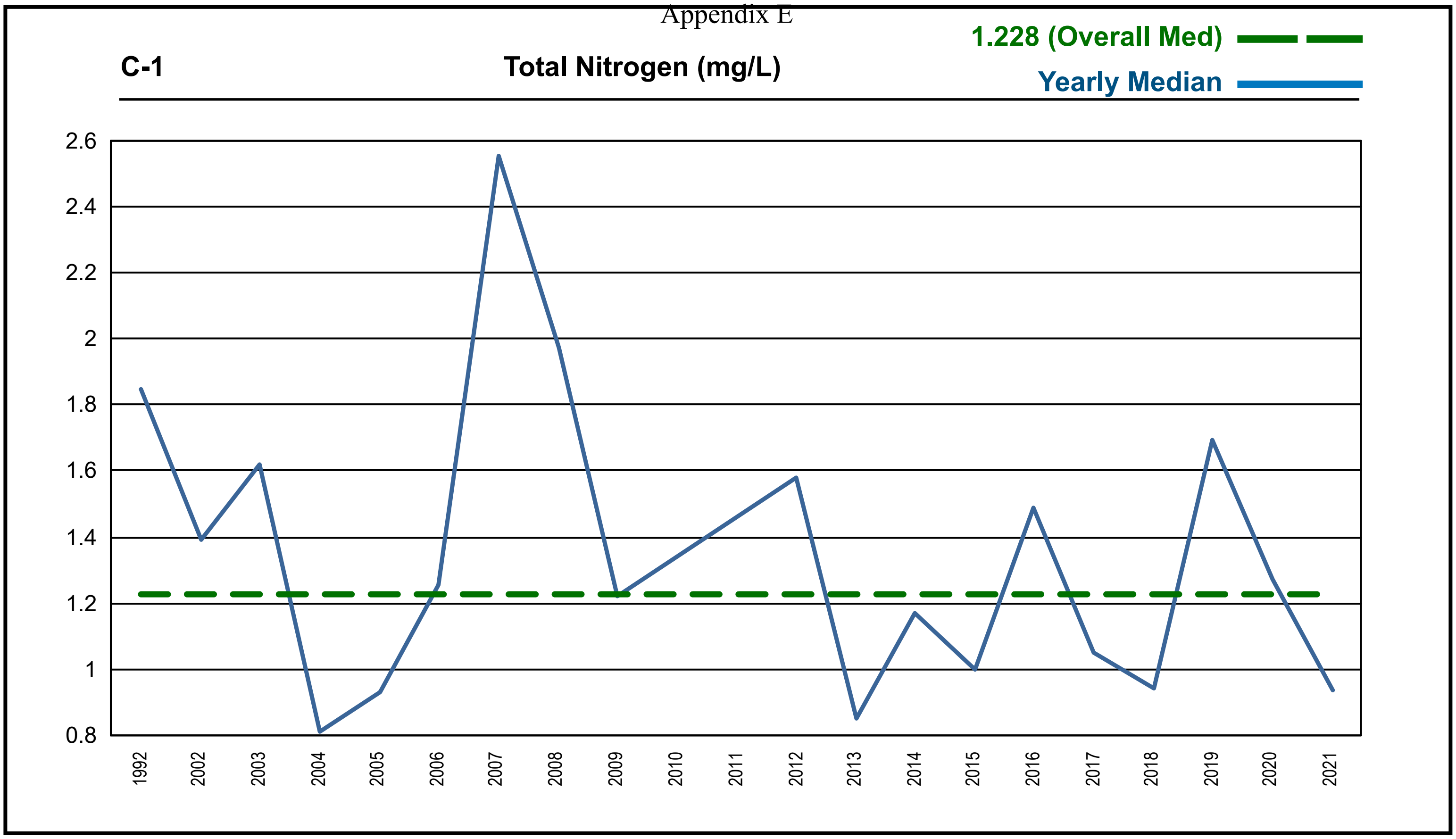

C-1
Turbidity (NTU)
6.2 (Overall Med)
Yearly Median
100
80
60
40
20
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

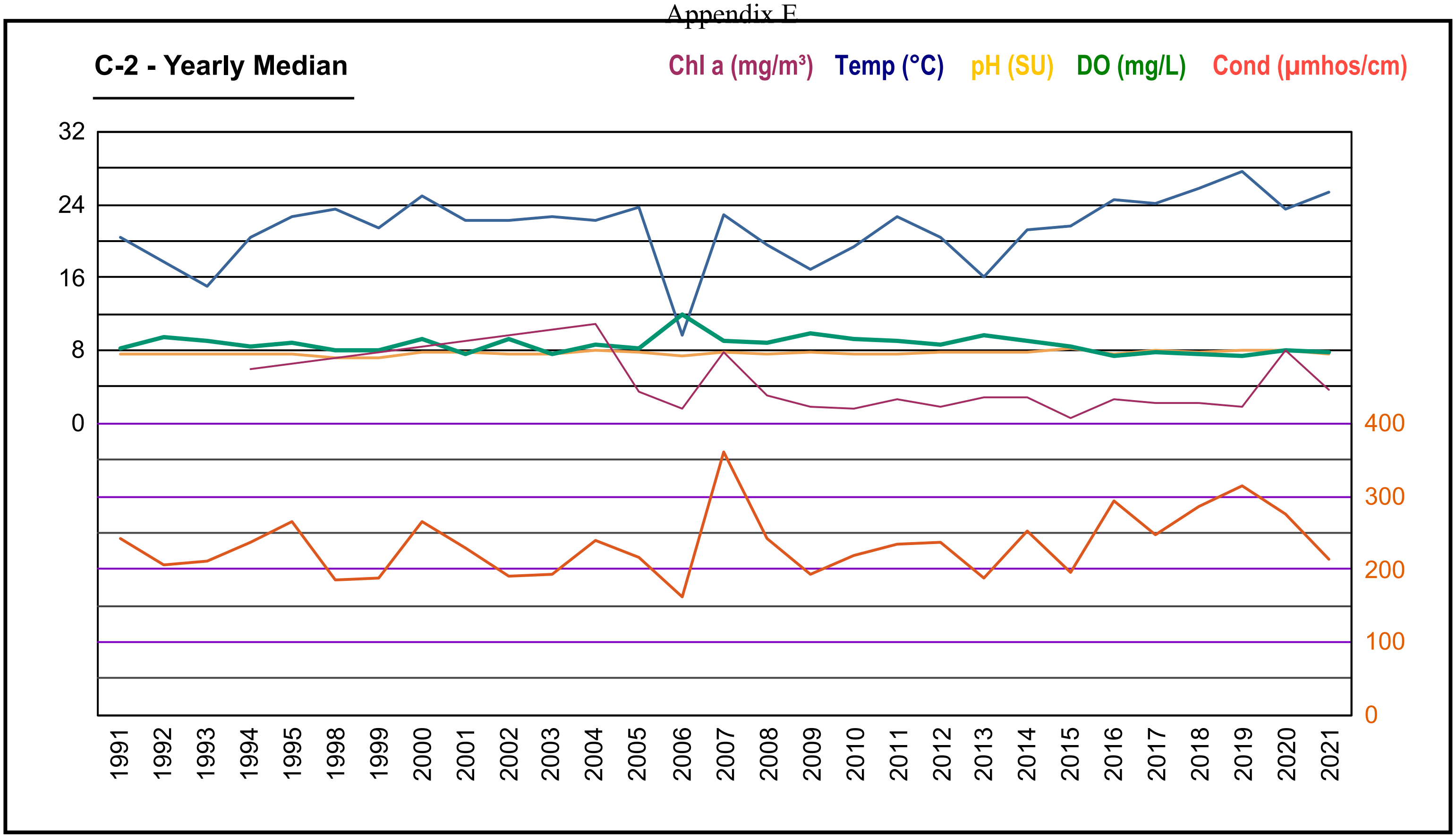


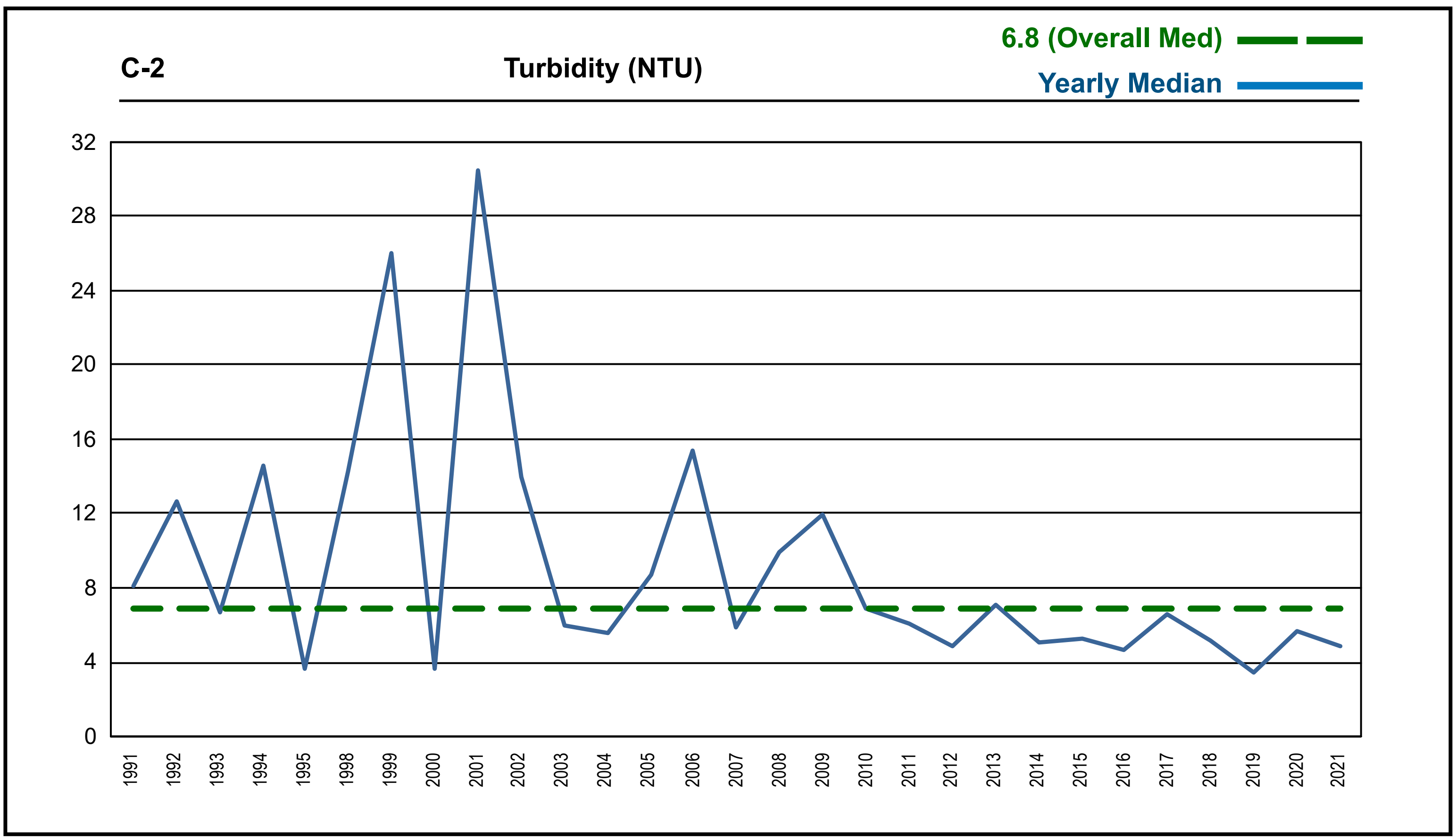
C-1
Total Suspended Solids (mg/L)
5.0 (Overall Med)
Yearly Median
14
12
10
8
6
4
2
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

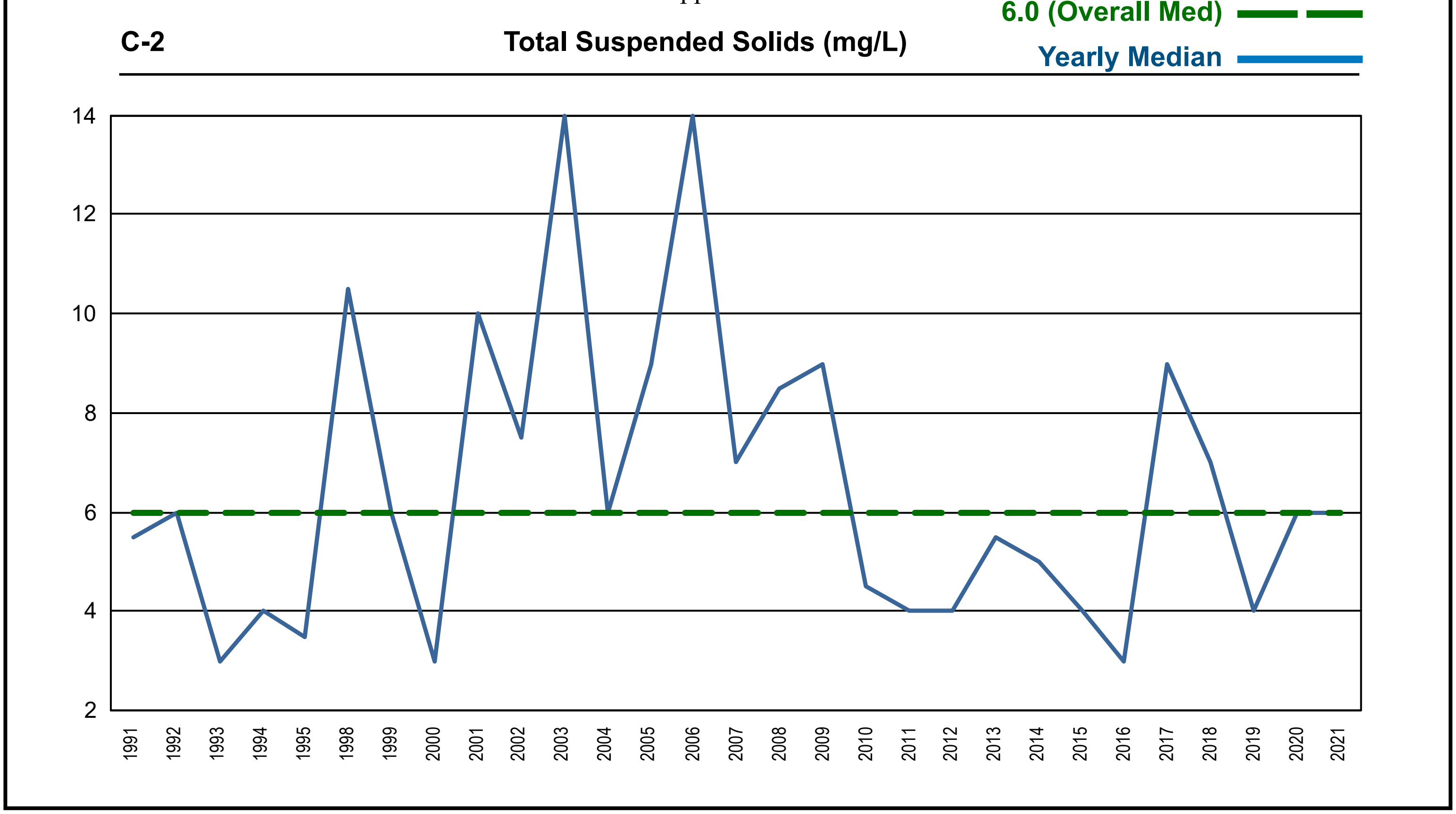


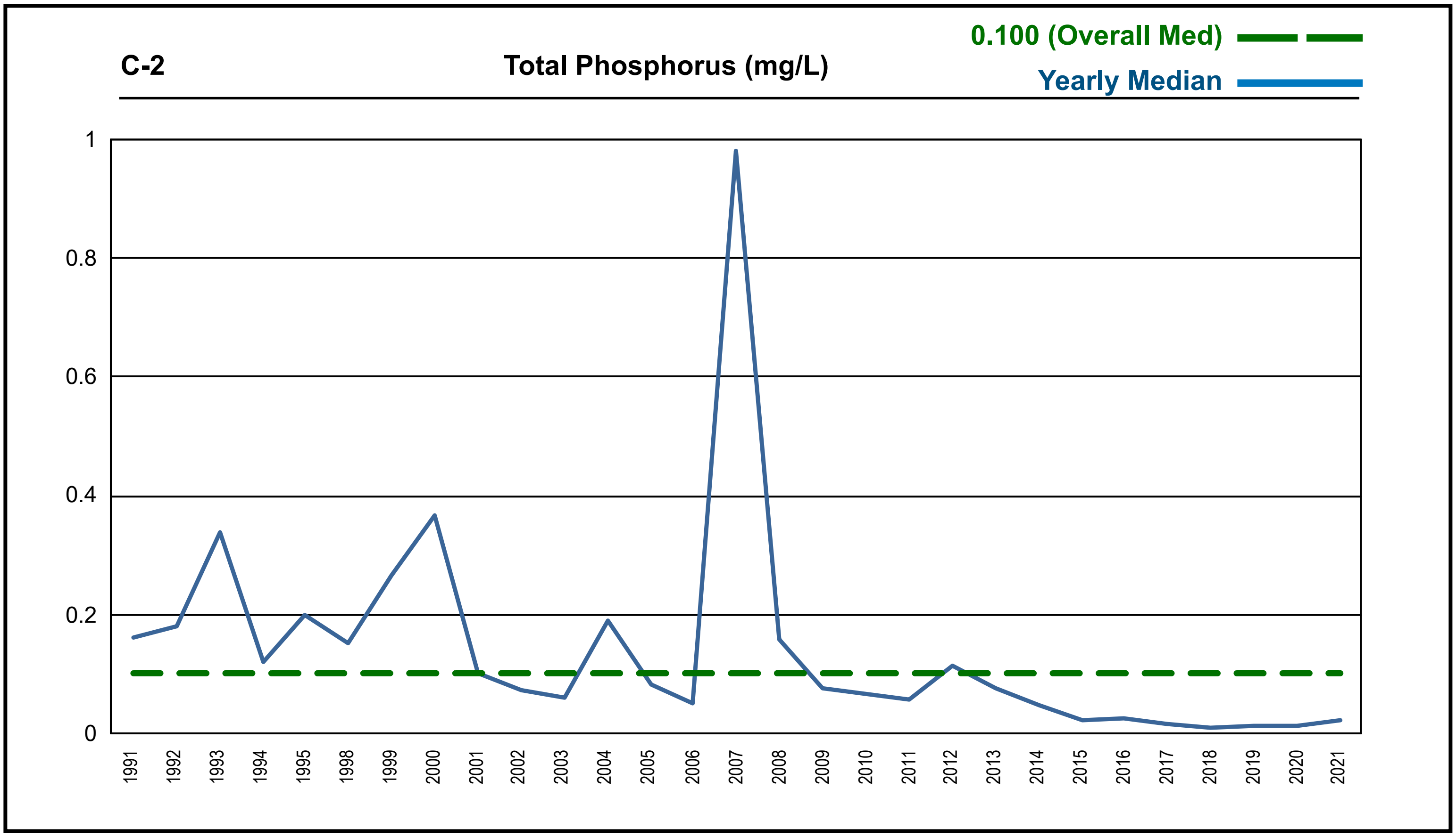
C-1
Total Phosphorus (mg/L)
0.071 (Overall Med)
Yearly Median
1
0.8
0.6
0.4
0.2
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

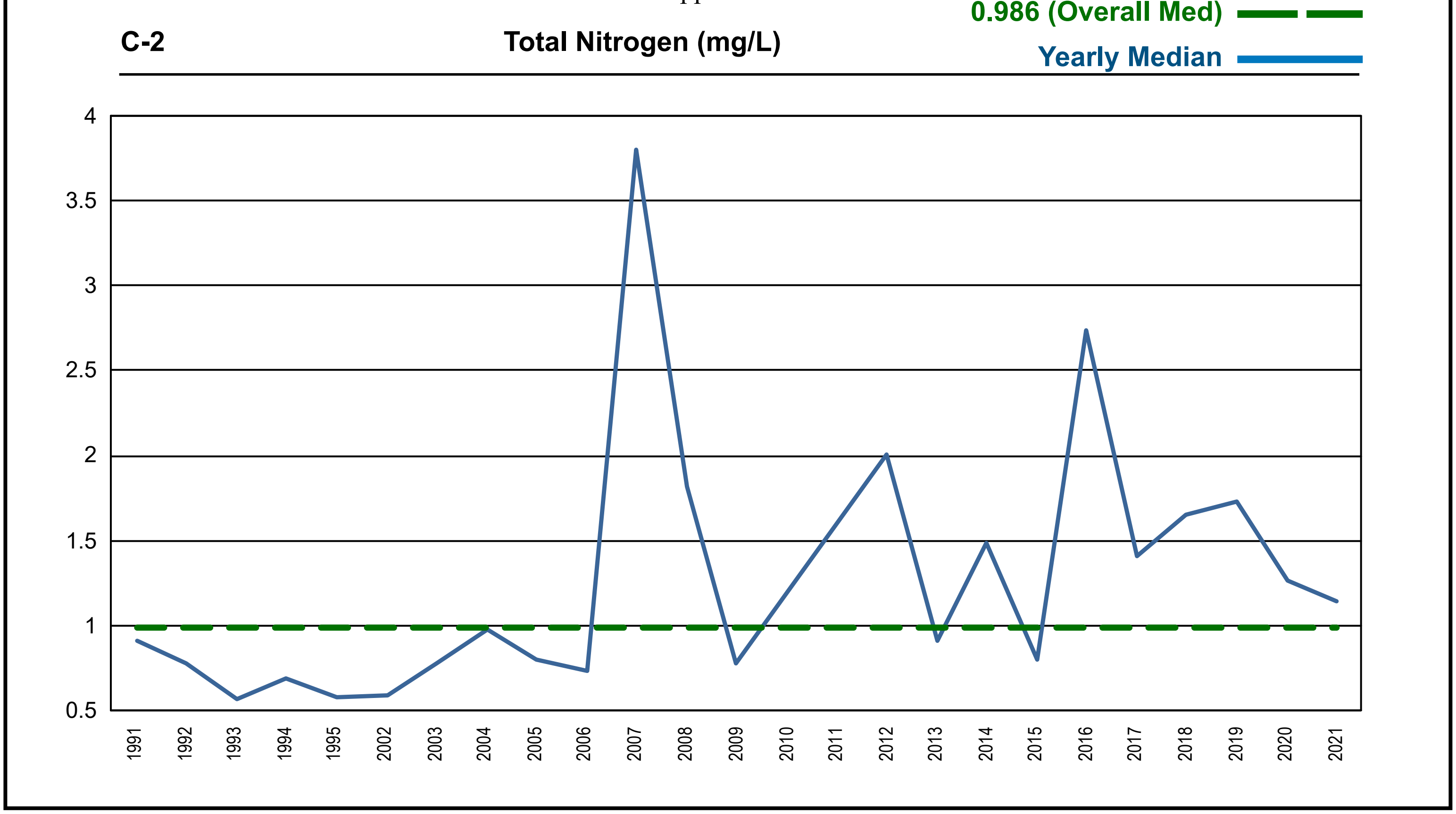

C-1
Total Nitrogen (mg/L)
1.228 (Overall Med)
Yearly Median
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
1992
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


C-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

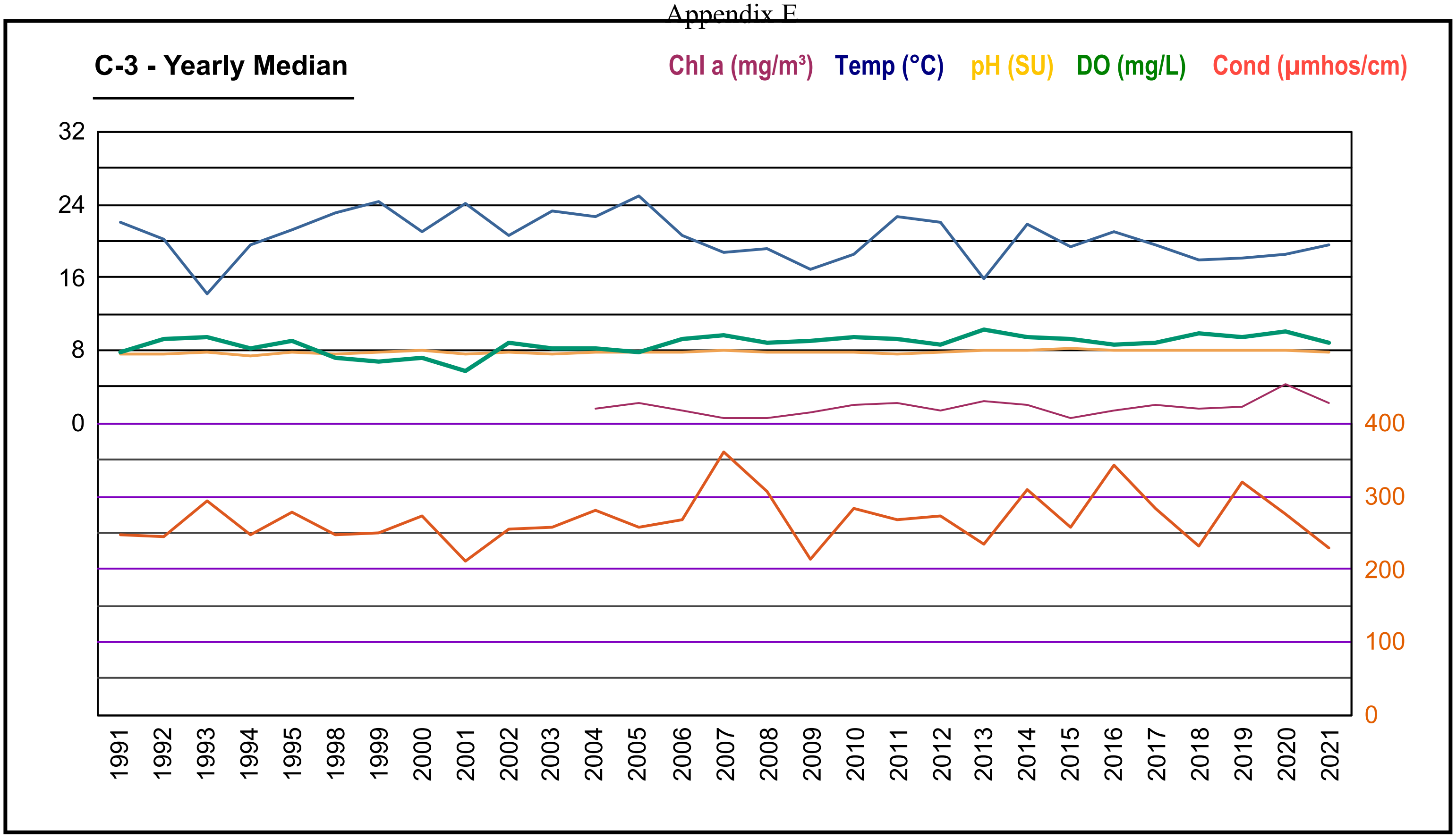

C-2
Turbidity (NTU)
6.8 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
4
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

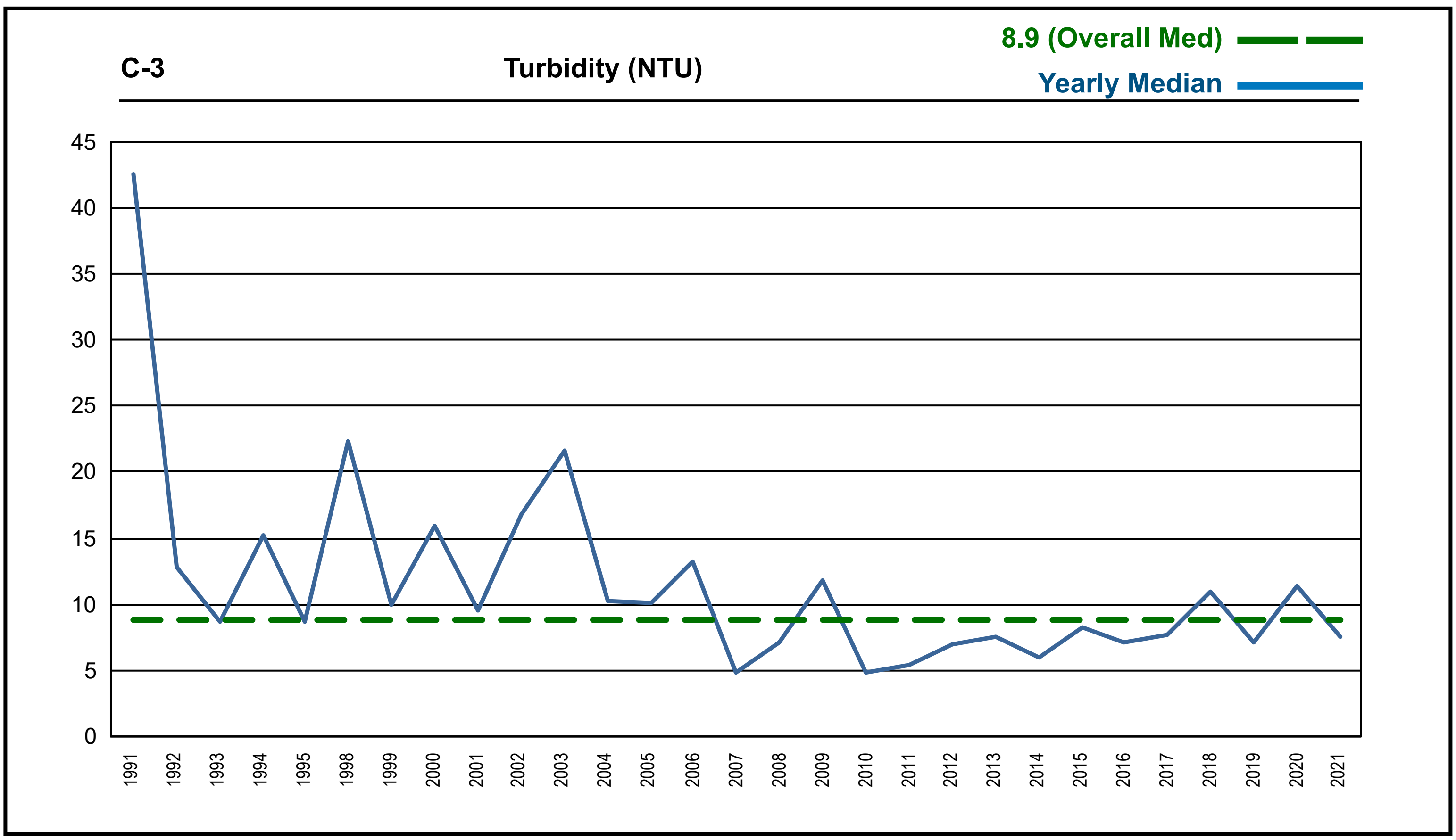

6.0 (Overall Med)
Yearly Median
C-2
Total Suspended Solids (mg/L)
14
12
10
8
6
4
2
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

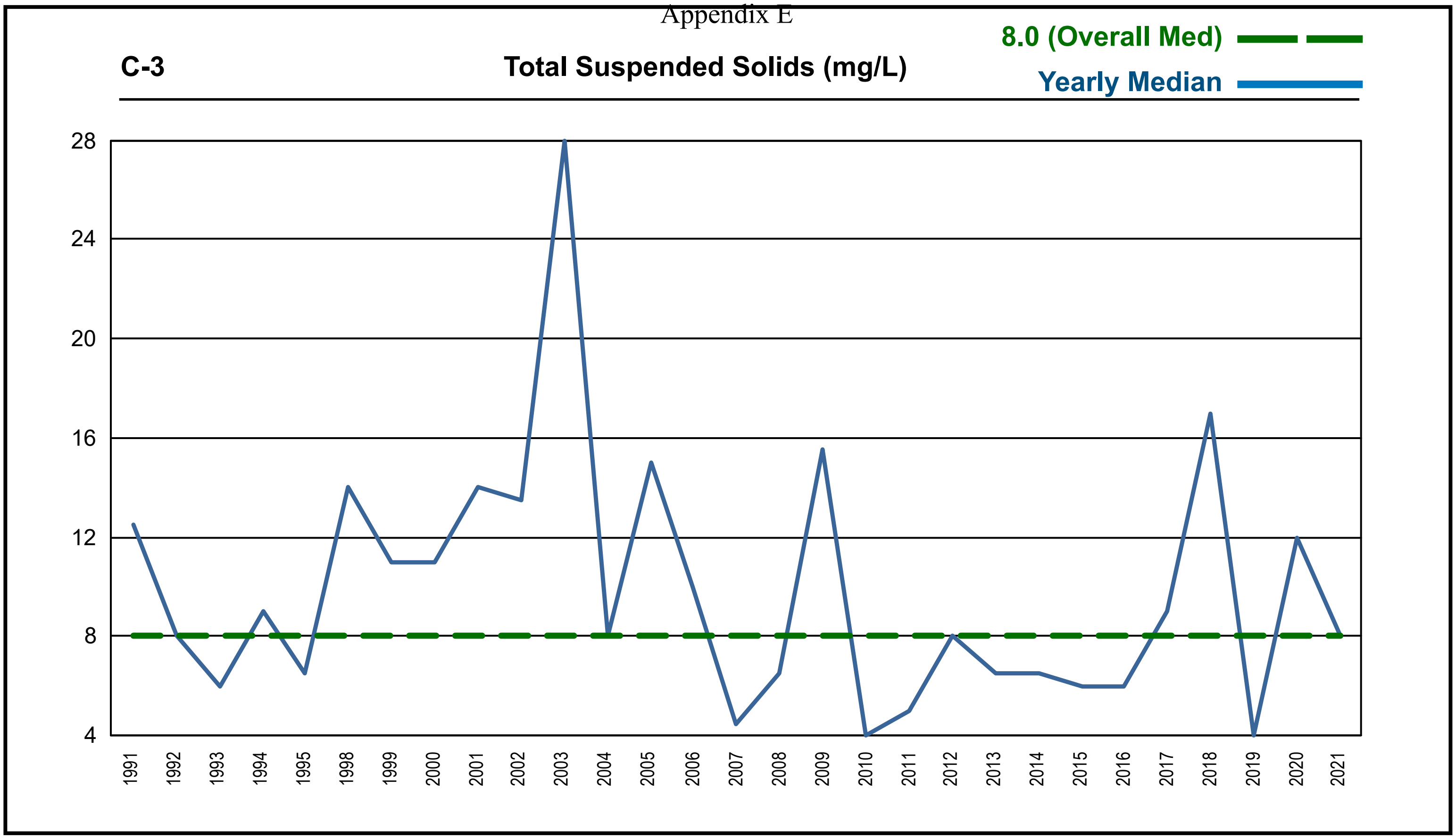

0.100 (Overall Med)
Yearly Median
C-2
Total Phosphorus (mg/L)
1
0.8
0.6
0.4
0.2
0
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

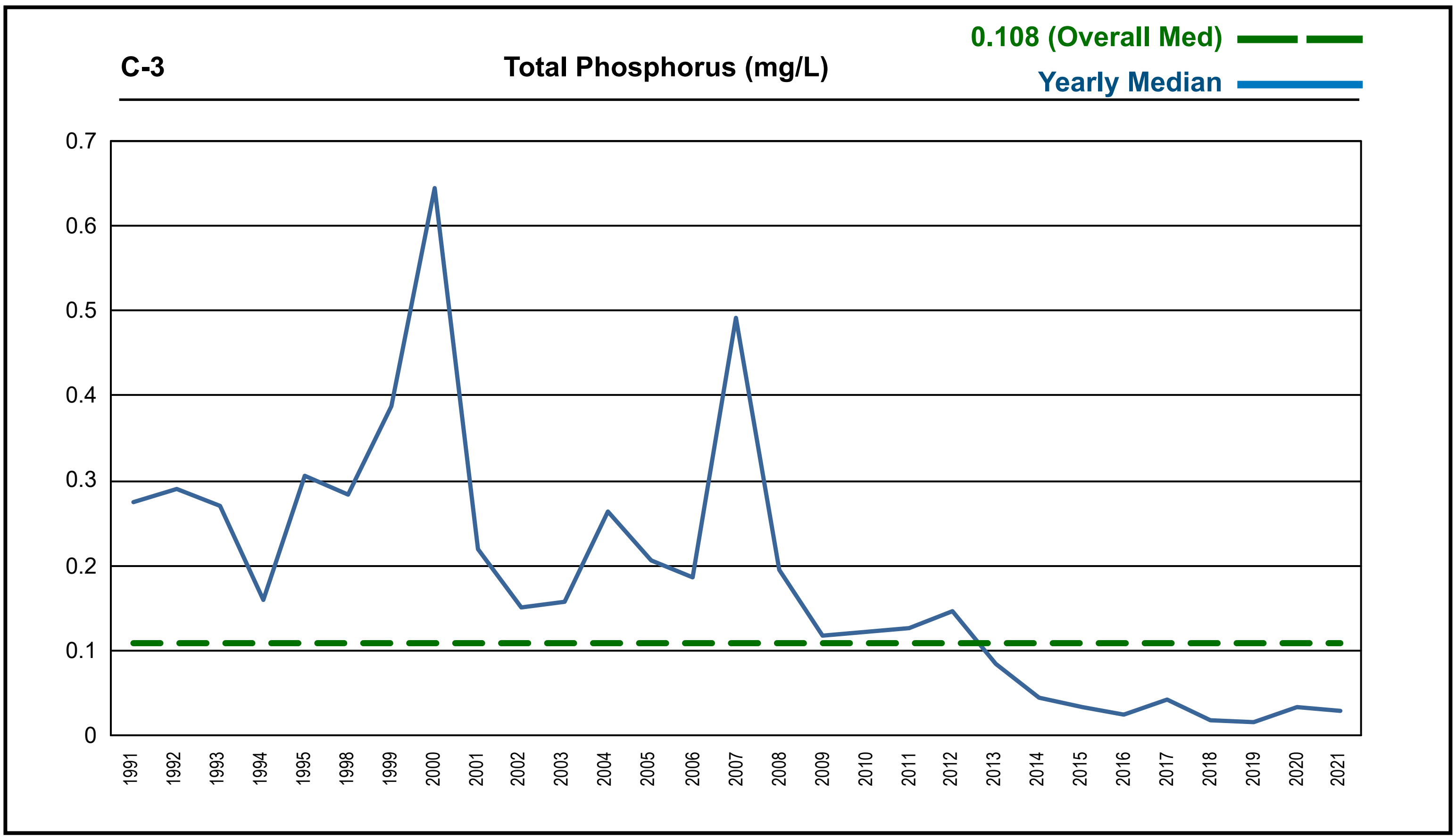


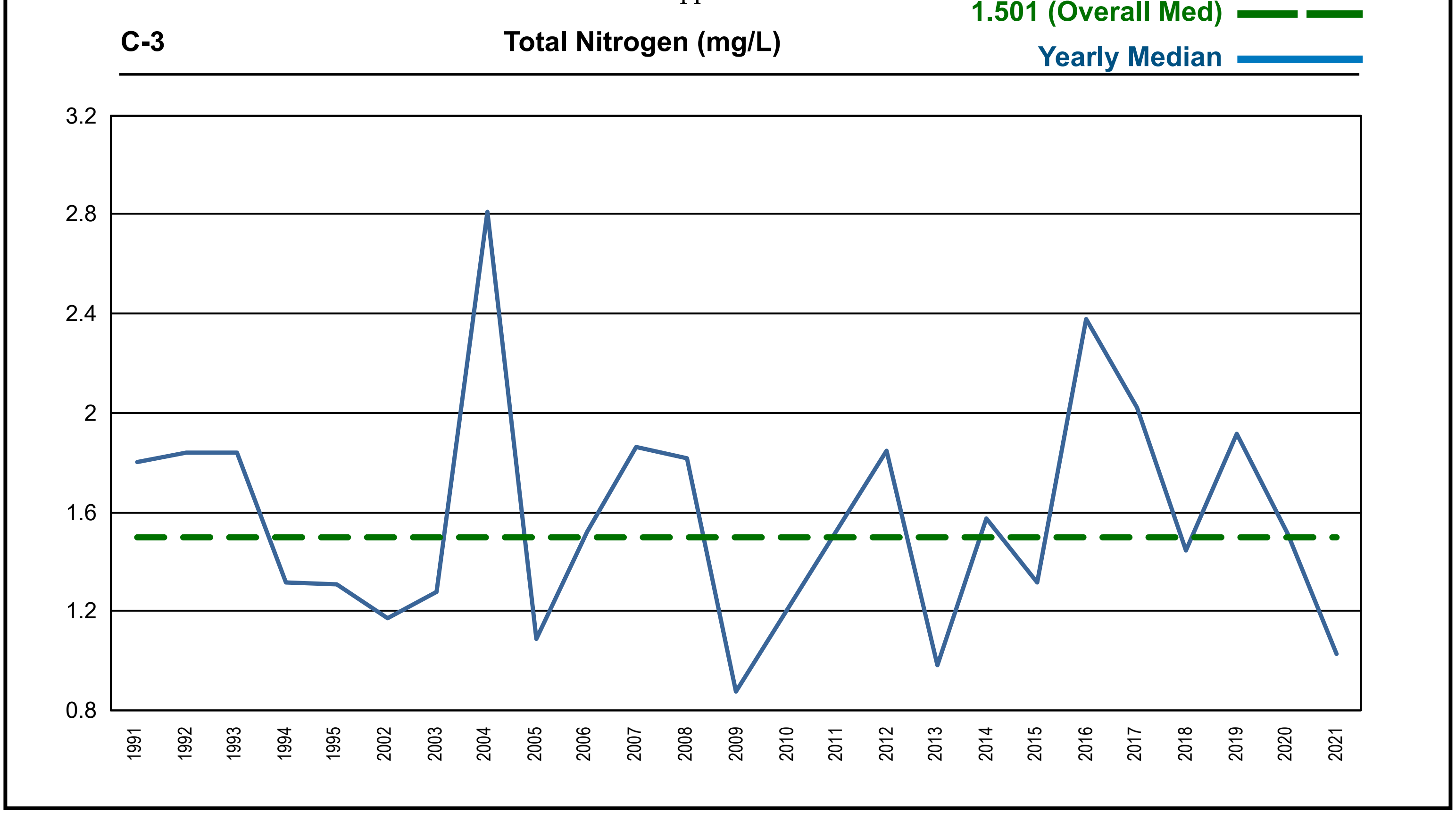
C-2
Total Nitrogen (mg/L)
0.986 (Overall Med)
Yearly Median
4
3.5
3
2.5
2
1.5
1
0.5
1991
1992
1993
1994
1995
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

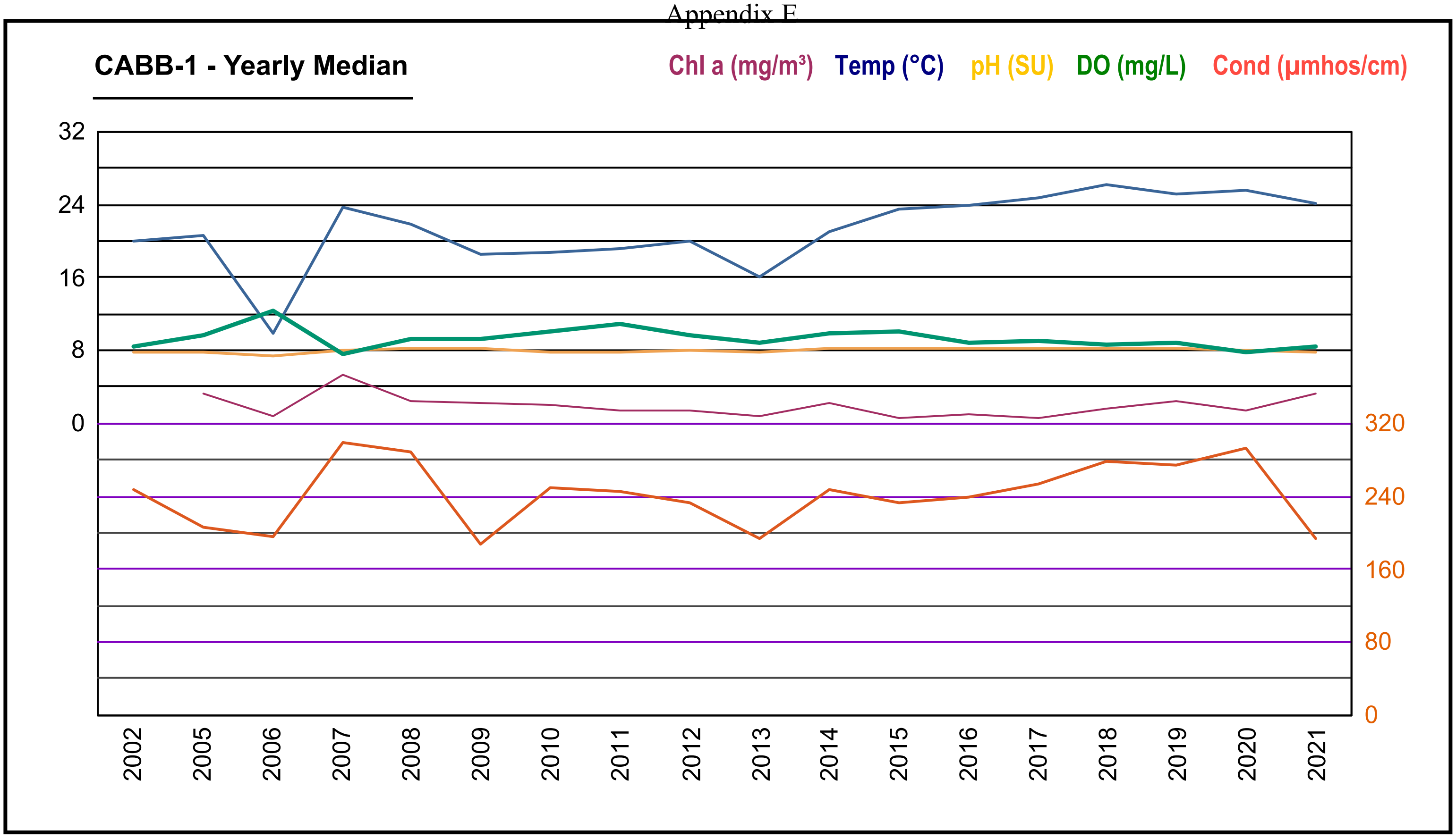

C-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

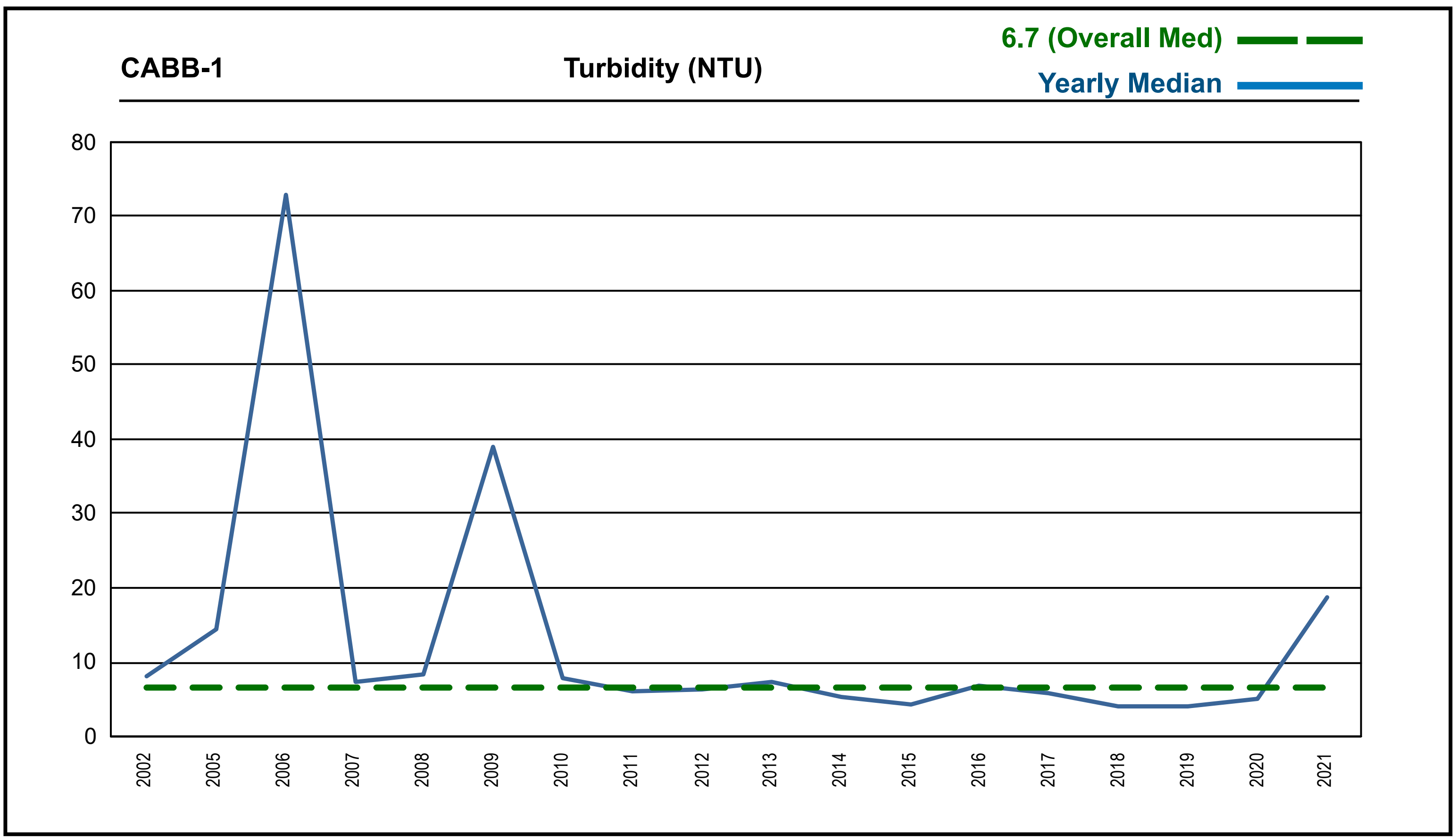

C-3
Turbidity (NTU)
8.9 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

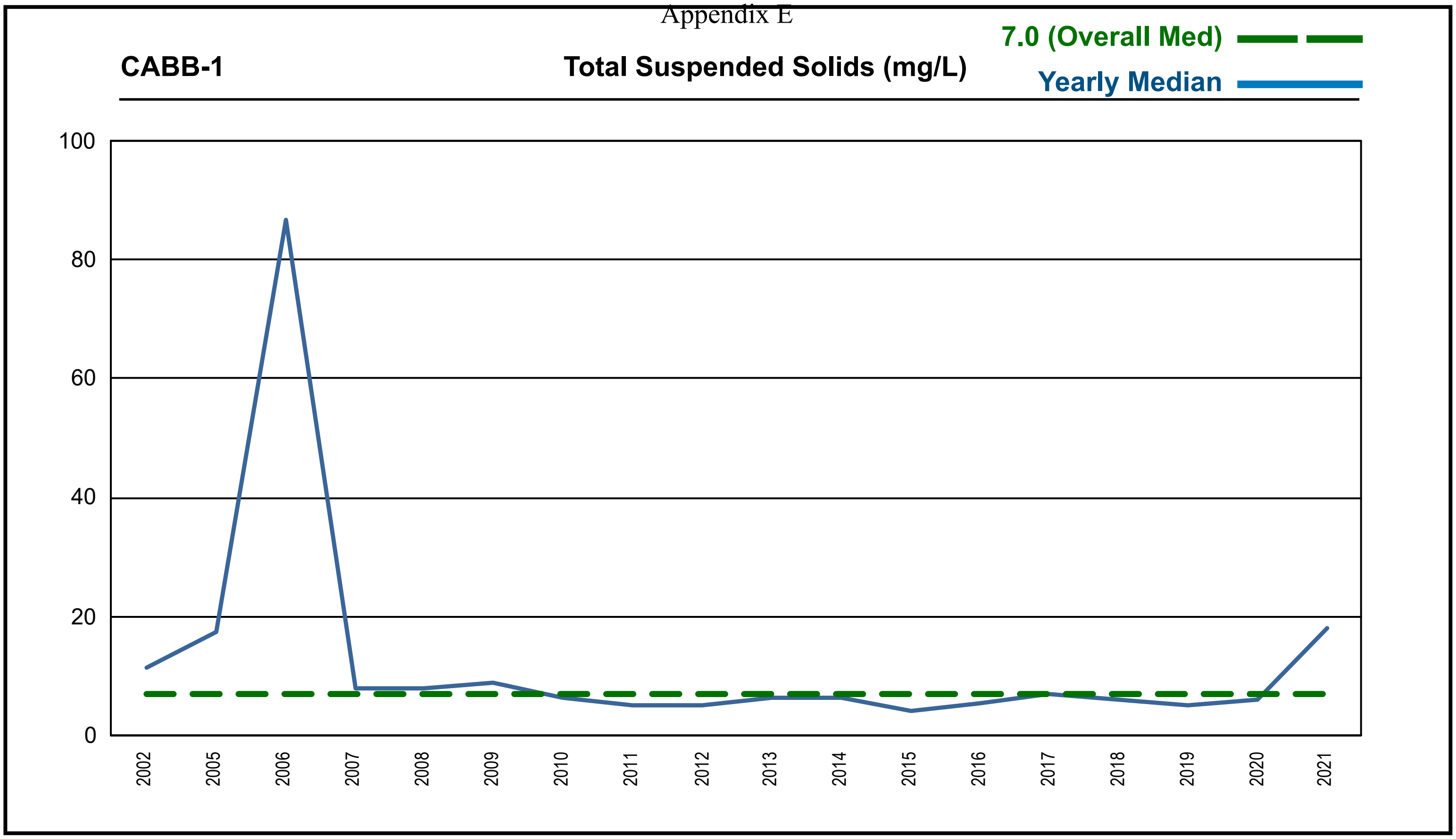

8.0 (Overall Med)
Yearly Median
C-3
Total Suspended Solids (mg/L)
28
24
20
16
12
8
4
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

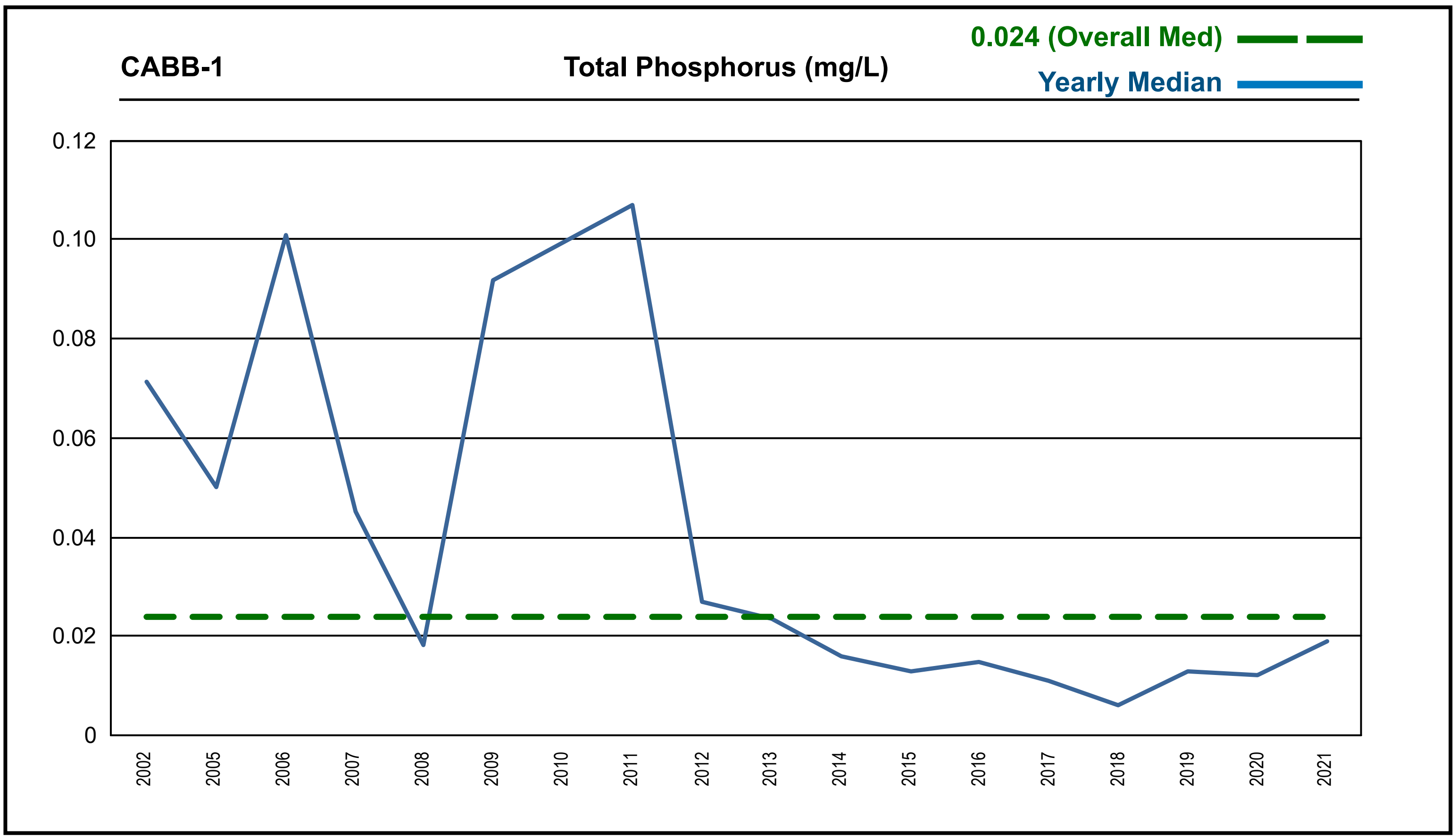

0.108 (Overall Med)
Yearly Median
C-3
Total Phosphorus (mg/L)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

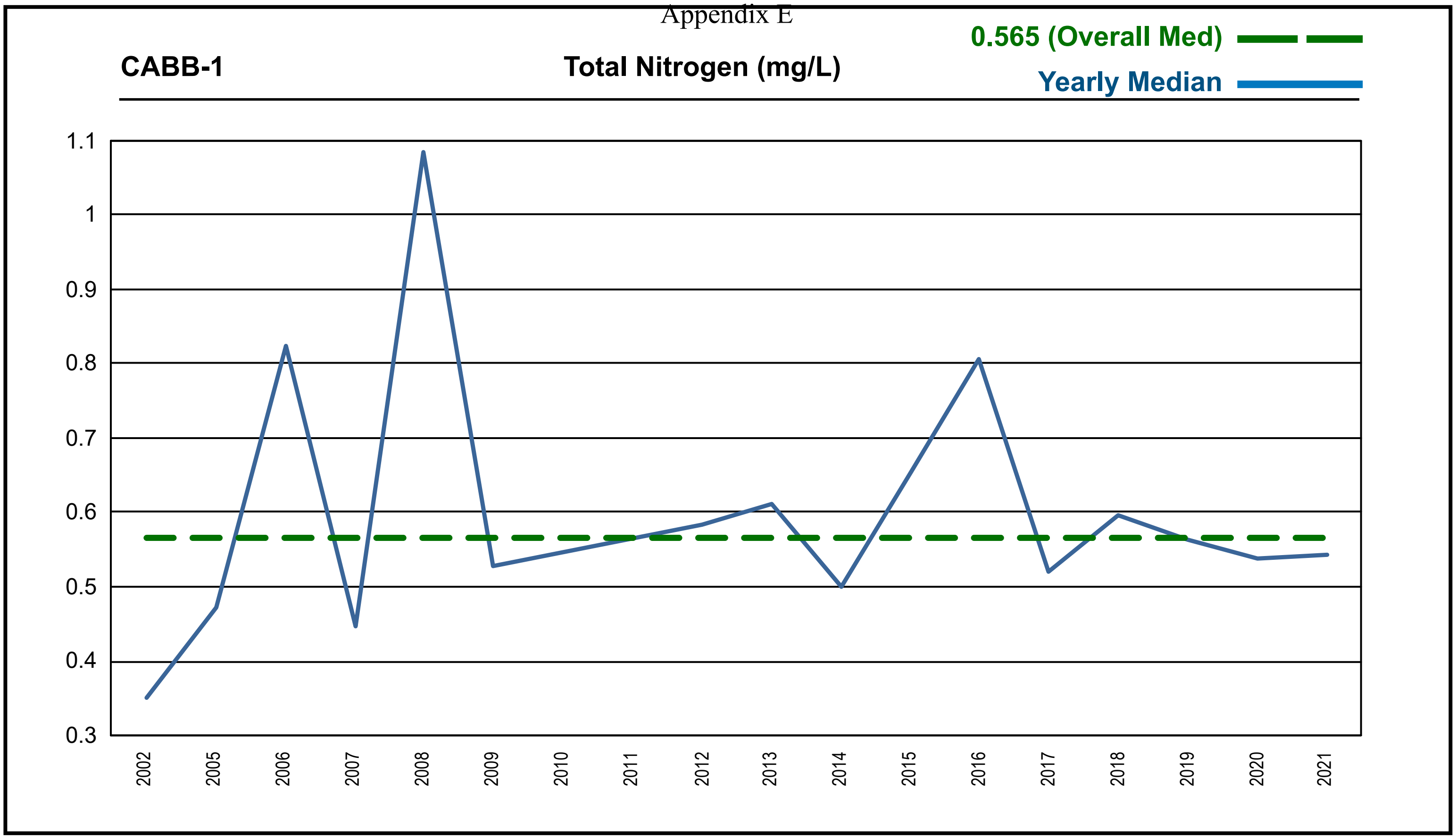

C-3
Total Nitrogen (mg/L)
1.501 (Overall Med)
Yearly Median
3.2
2.8
2.4
2
1.6
1.2
0.8
1991
1992
1993
1994
1995
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


CABB-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

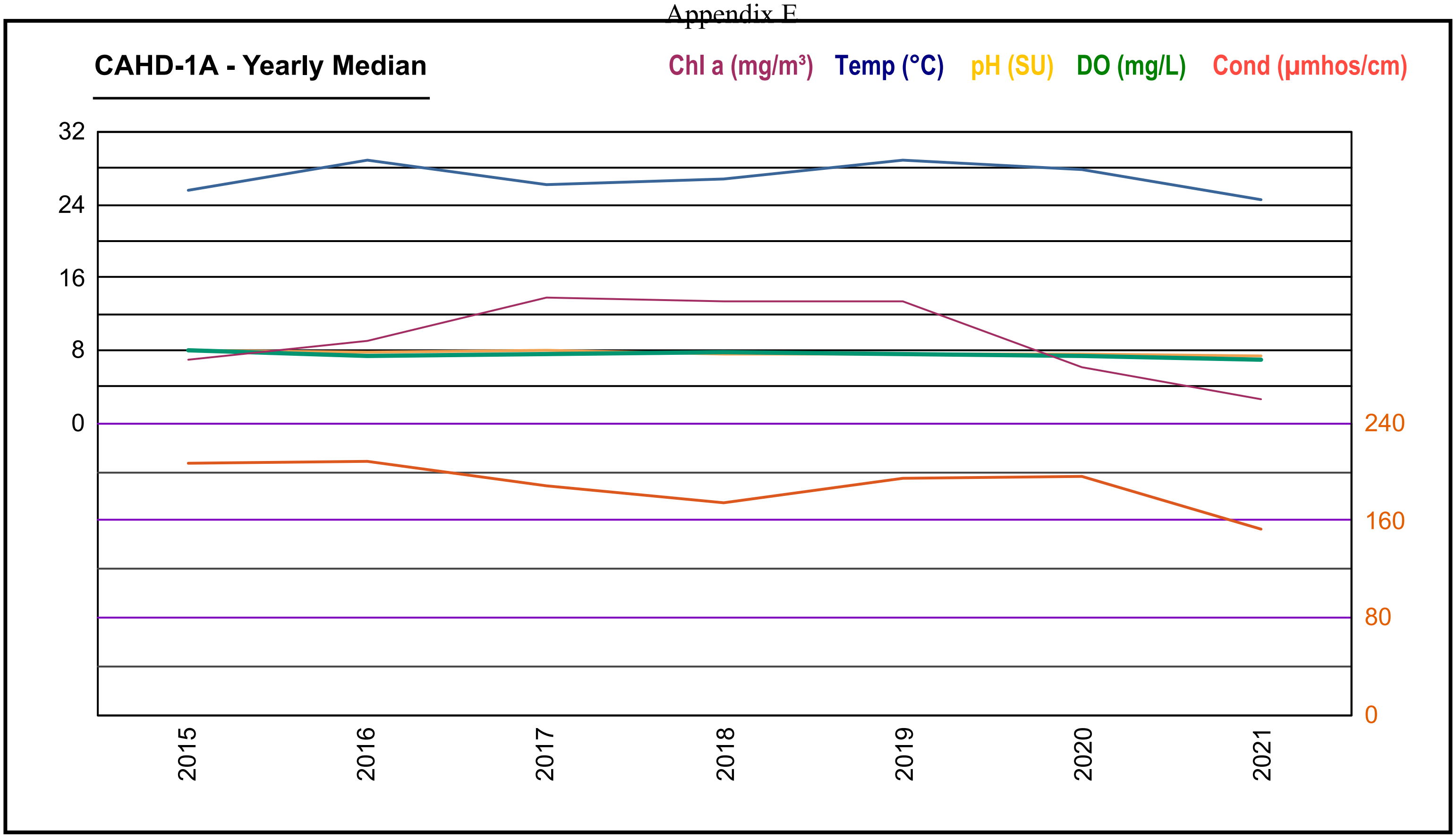

CABB-1
Turbidity (NTU)
6.7 (Overall Med)
Yearly Median
80
70
60
50
40
30
20
10
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

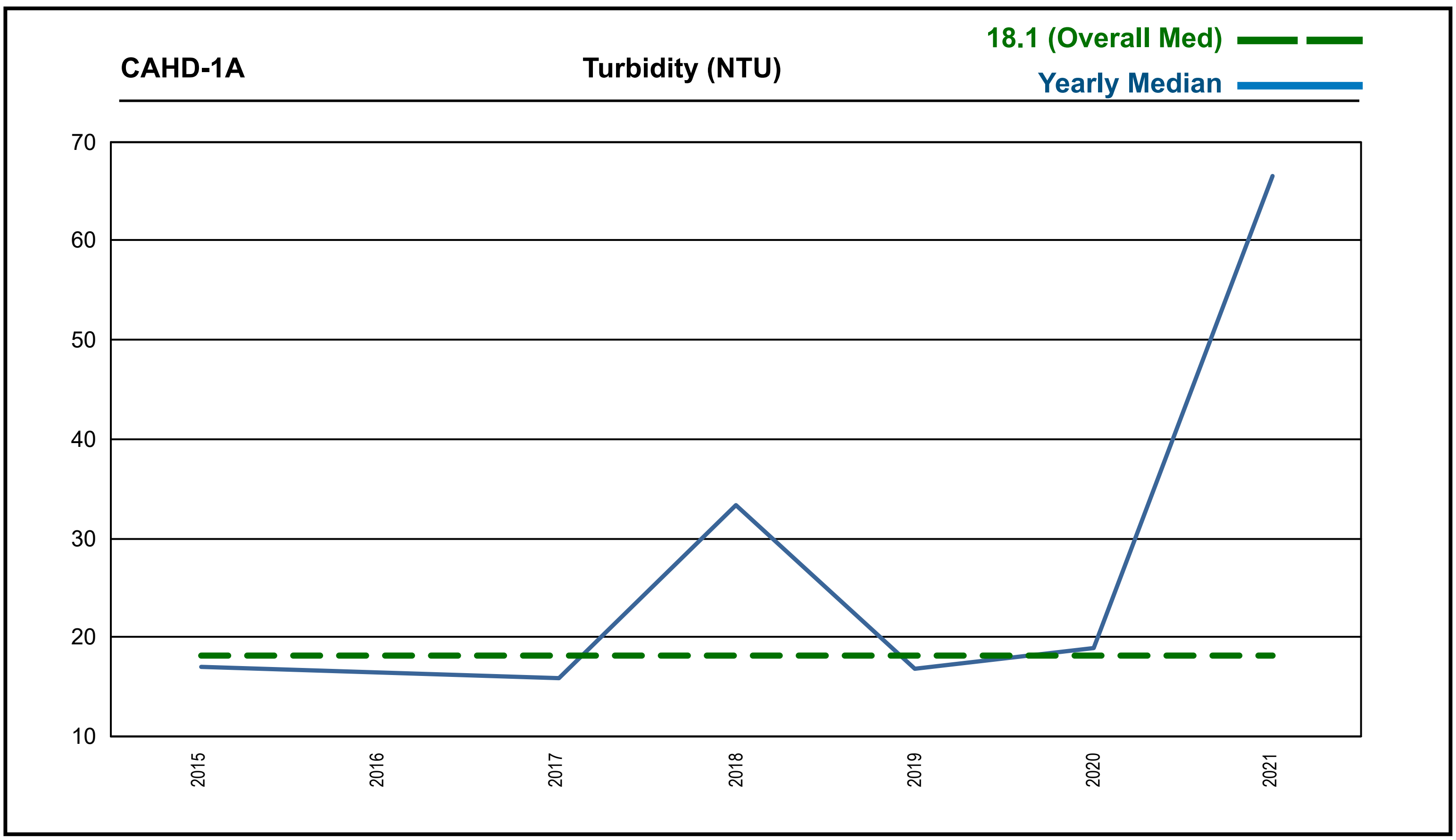

CABB-1
Total Suspended Solids (mg/L)
7.0 (Overall Med)
Yearly Median
100
80
60
40
20
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

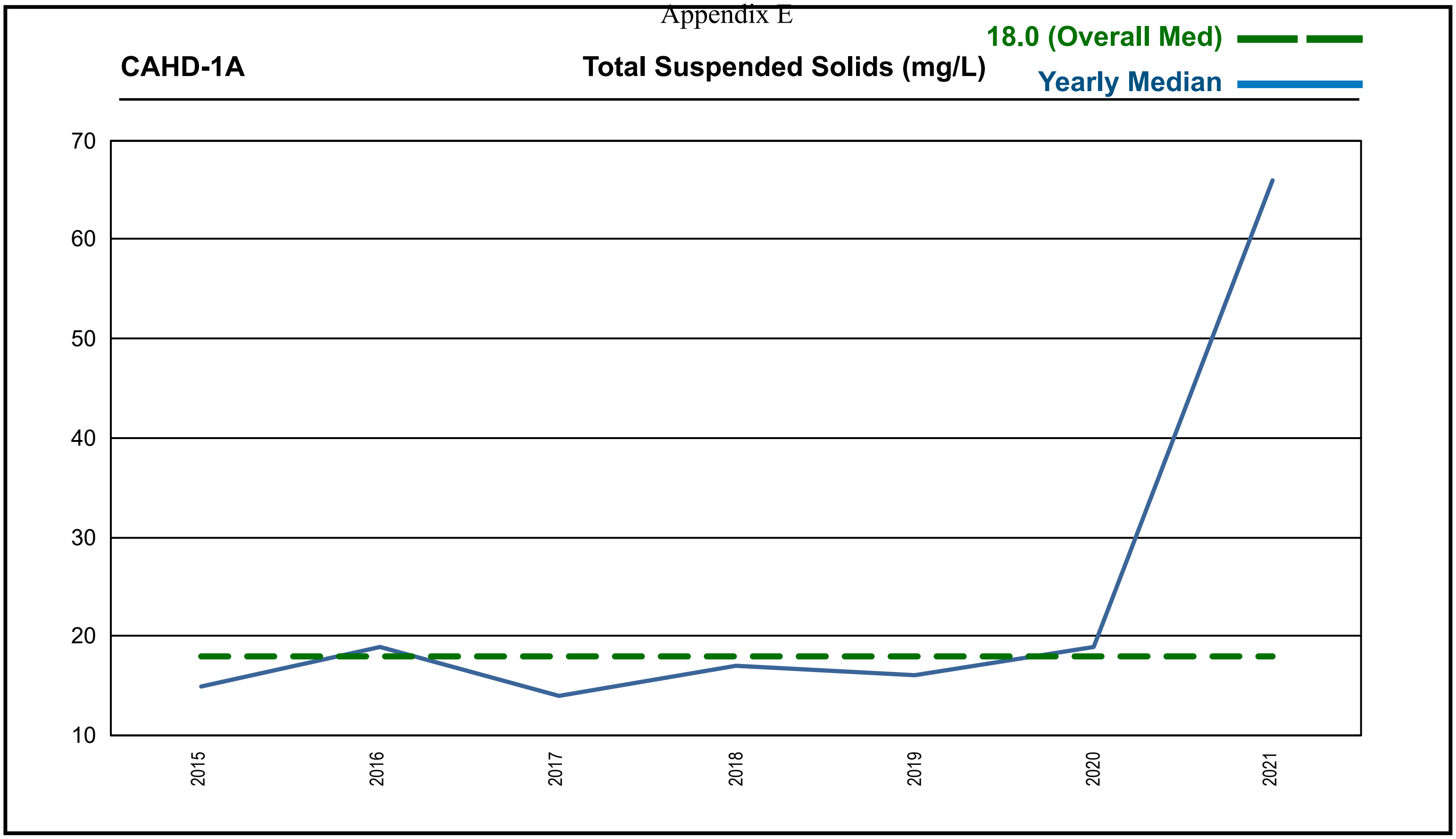

CABB-1
Total Phosphorus (mg/L)
0.024 (Overall Med)
Yearly Median
0.12
0.10
0.08
0.06
0.04
0.02
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

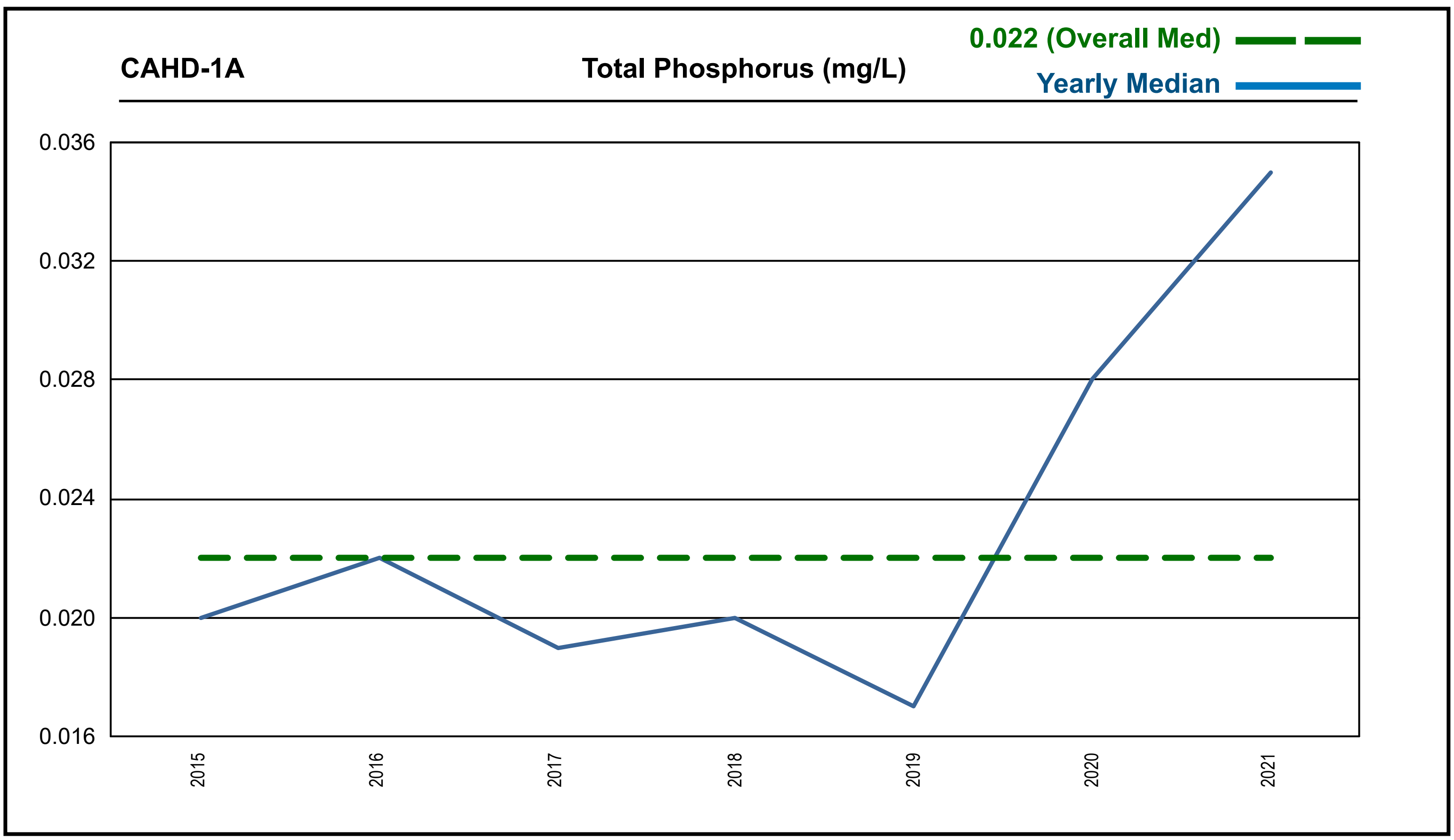


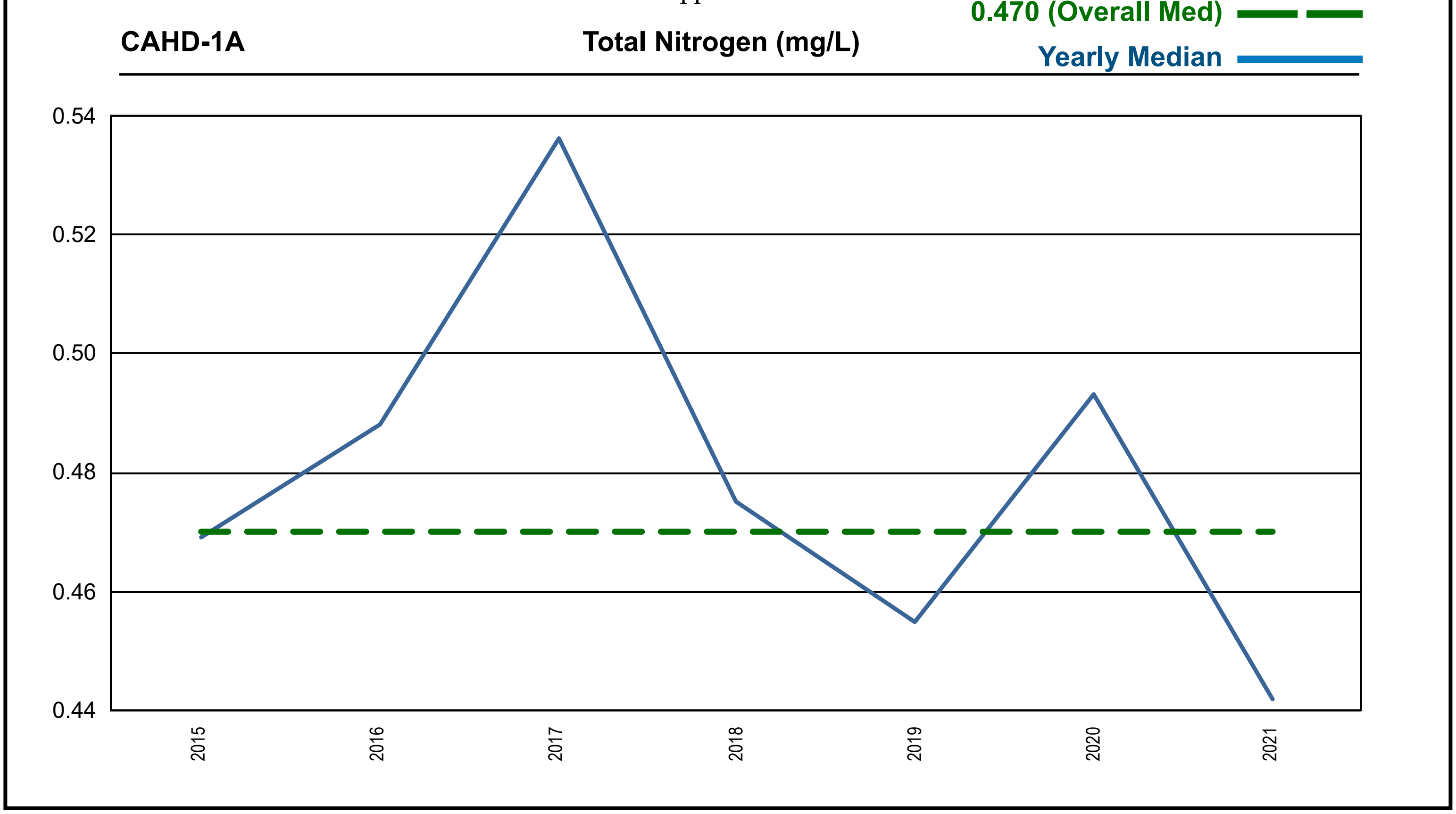
CABB-1
Total Nitrogen (mg/L)
0.565 (Overall Med)
Yearly Median
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


CAHD-1A - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2015
2016
2017
2018
2019
2020
2021

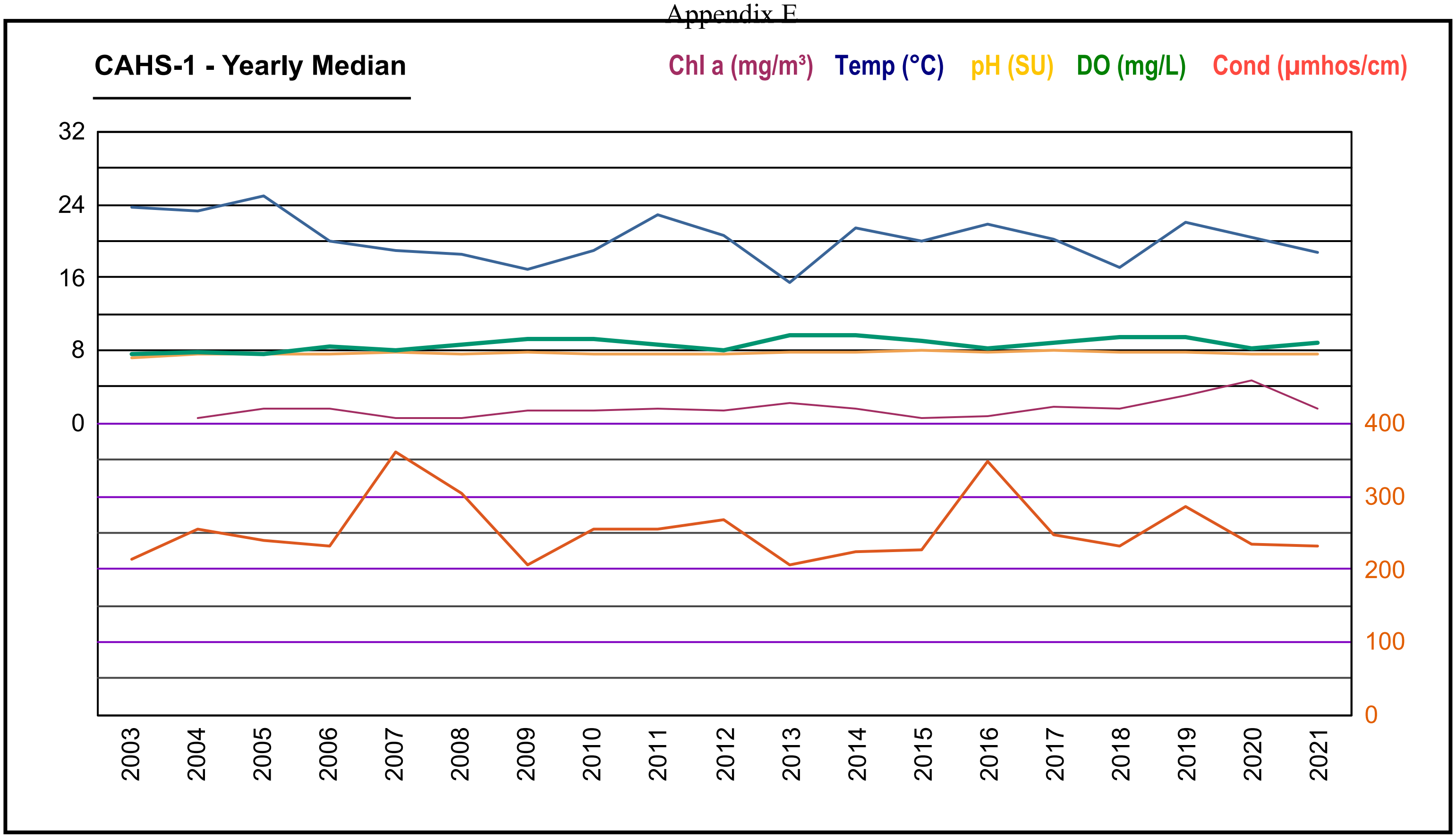

CAHD-1A
Turbidity (NTU)
18.1 (Overall Med)
Yearly Median
70
60
50
40
30
20
10
2015
2016
2017
2018
2019
2020
2021

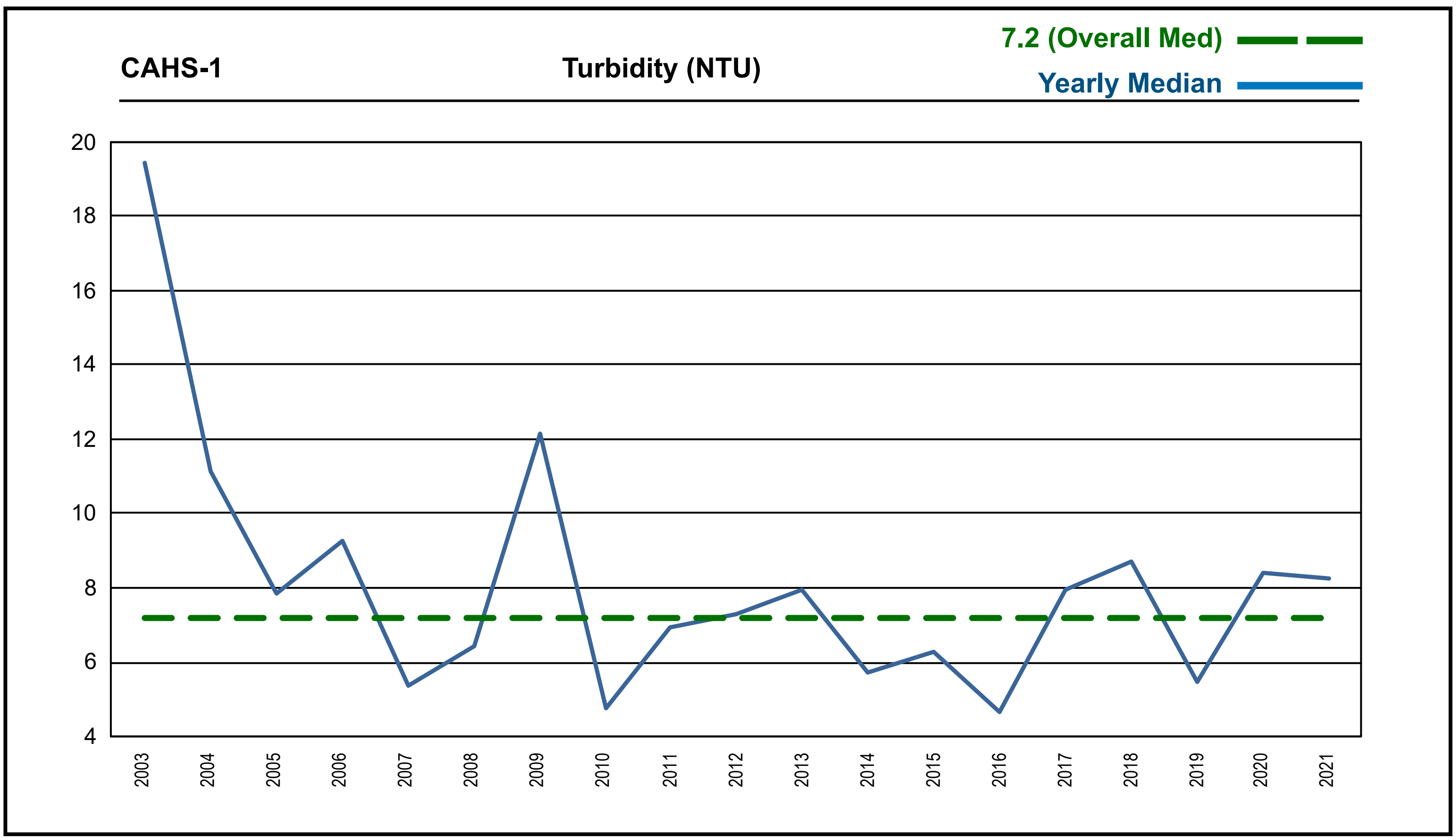

18.0 (Overall Med)
CAHD-1A
Total Suspended Solids (mg/L)
Yearly Median
70
60
50
40
30
20
10
2015
2016
2017
2018
2019
2020
2021

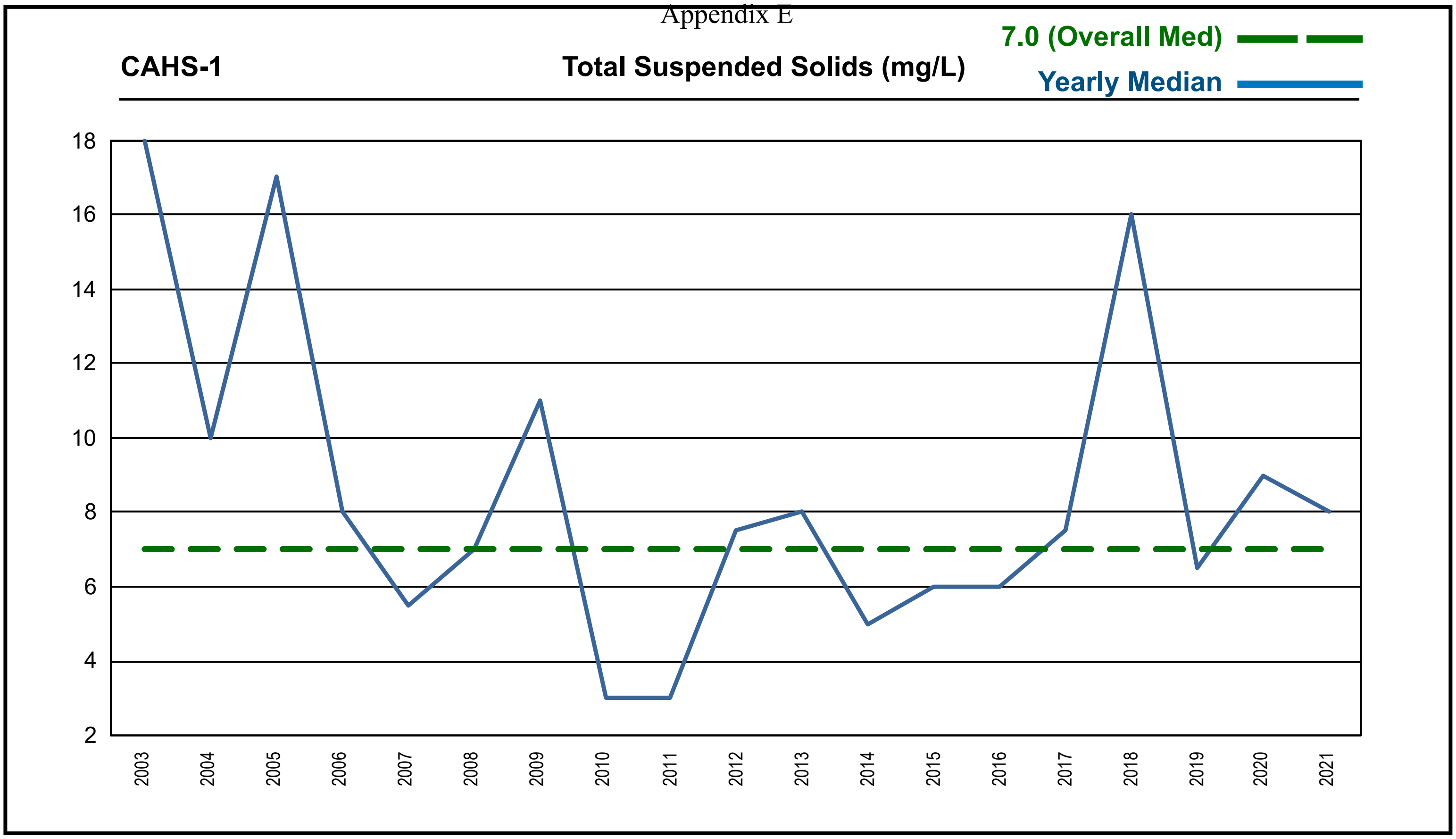

0.022 (Overall Med)
CAHD-1A
Total Phosphorus (mg/L)
Yearly Median
0.036
0.032
0.028
0.024
0.020
0.016
2015
2016
2017
2018
2019
2020
2021

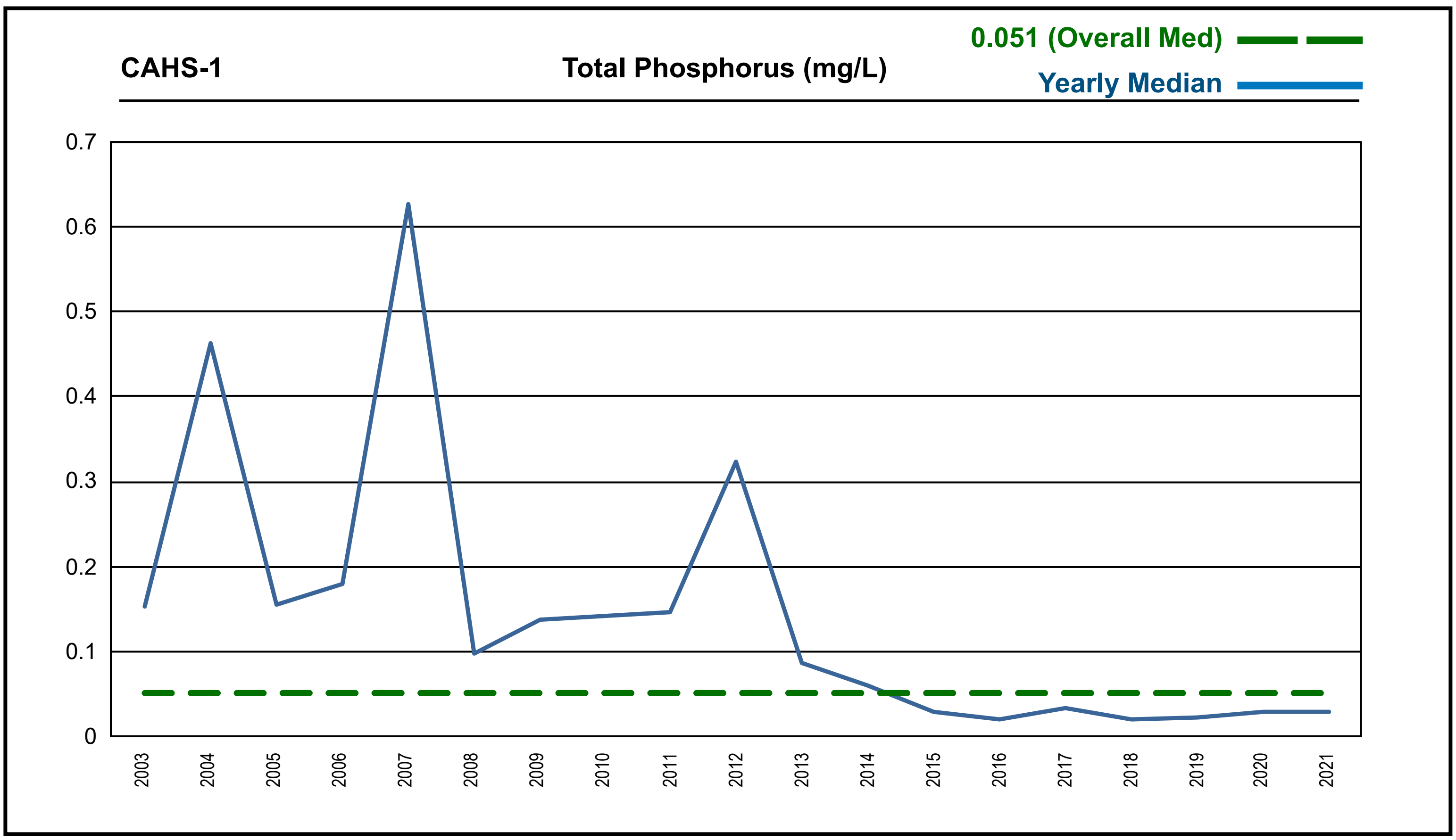


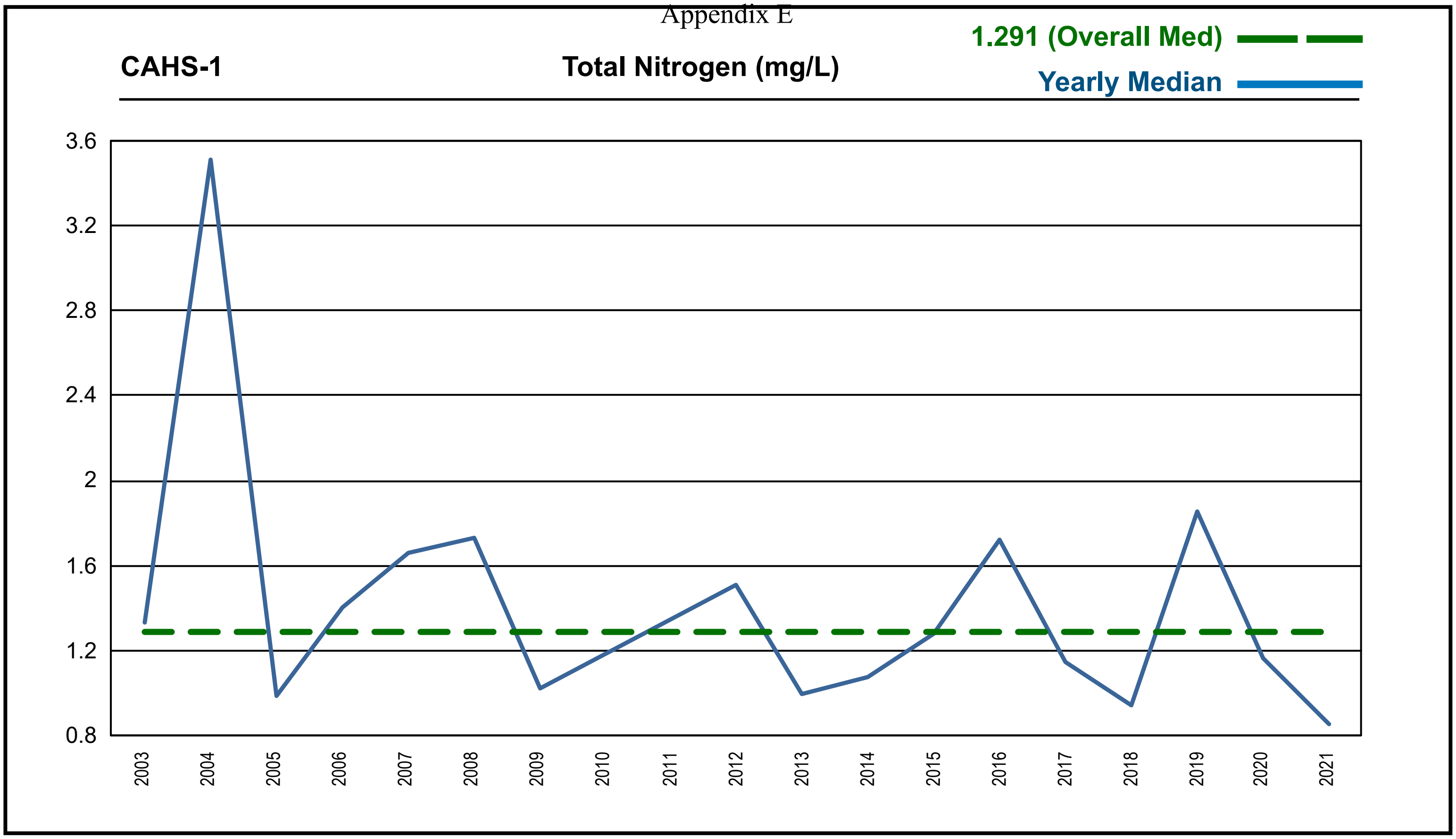
CAHD-1A
Total Nitrogen (mg/L)
0.470 (Overall Med)
Yearly Median
0.54
0.52
0.50
0.48
0.46
0.44
2015
2016
2017
2018
2019
2020
2021


CAHS-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

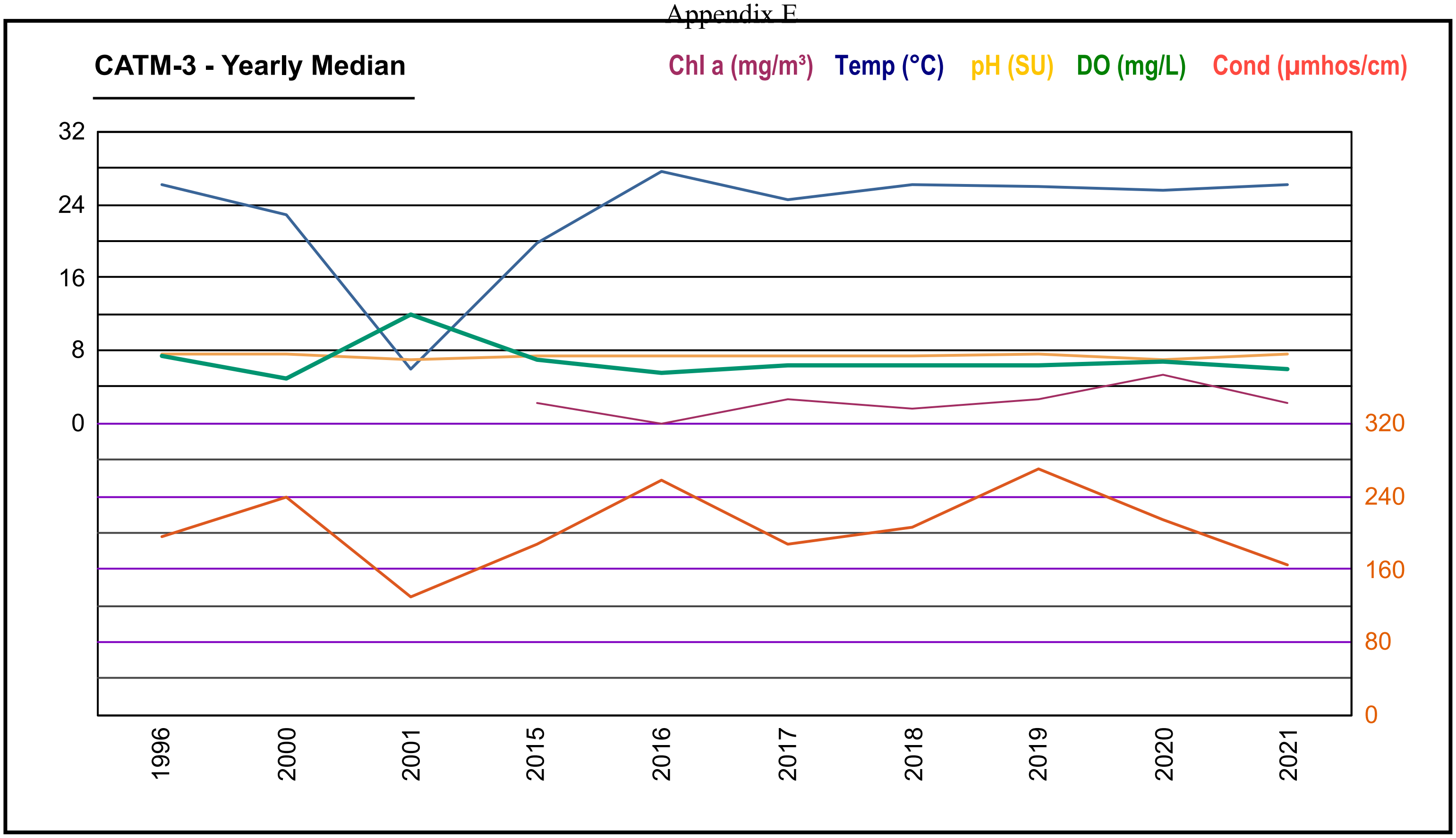

CAHS-1
Turbidity (NTU)
7.2 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

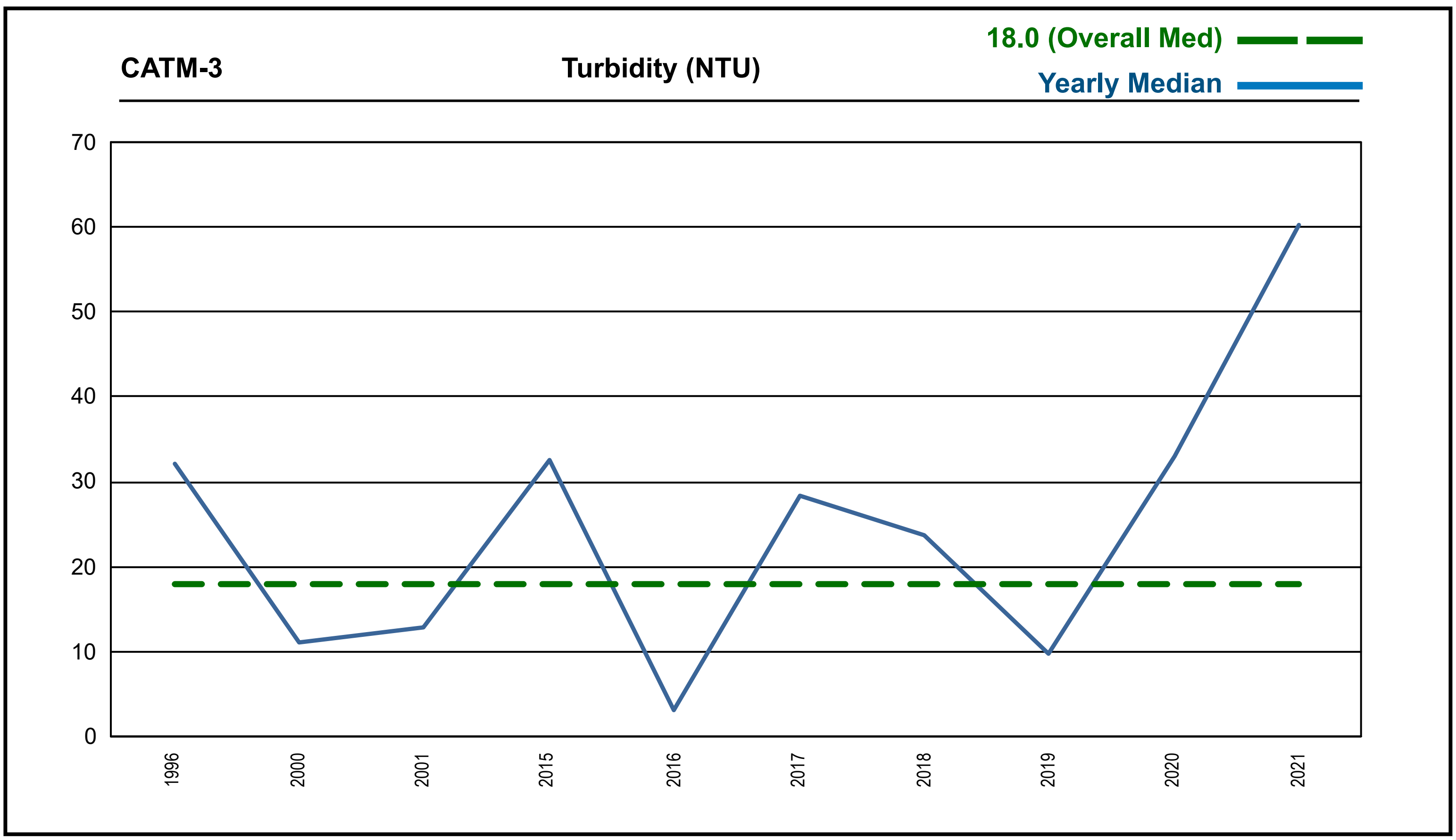

CAHS-1
Total Suspended Solids (mg/L)
7.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

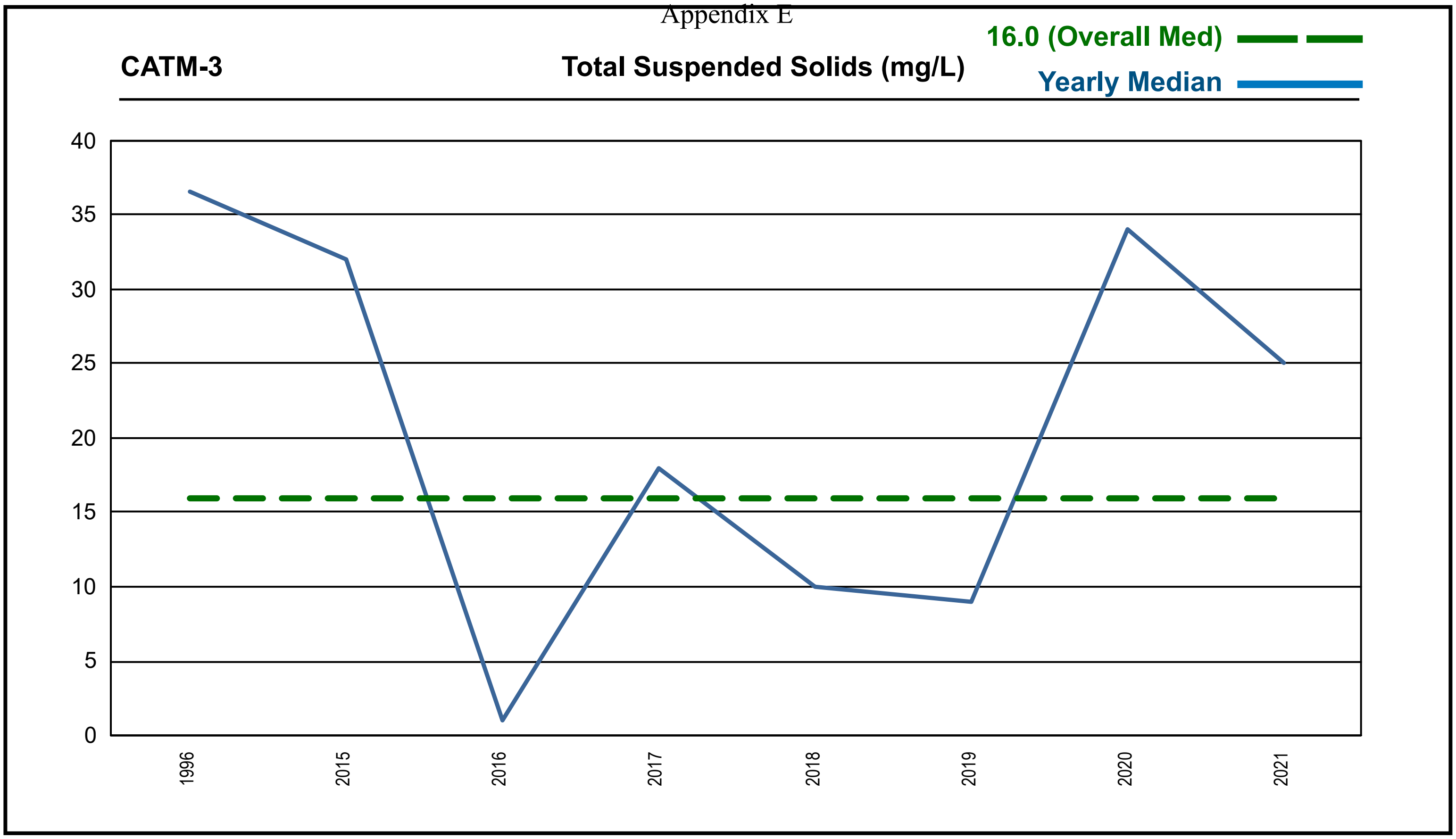

CAHS-1
Total Phosphorus (mg/L)
0.051 (Overall Med)
Yearly Median
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

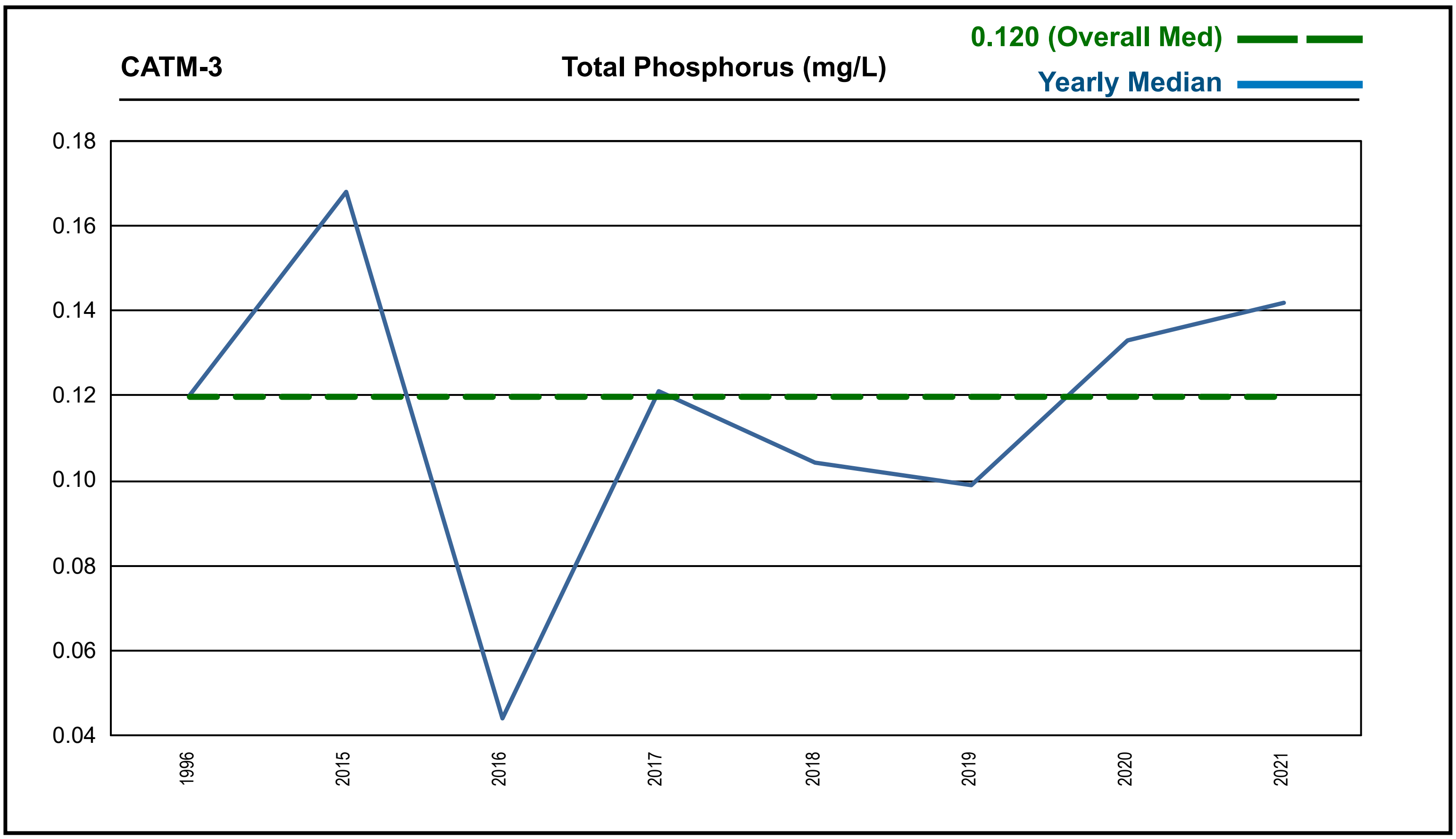


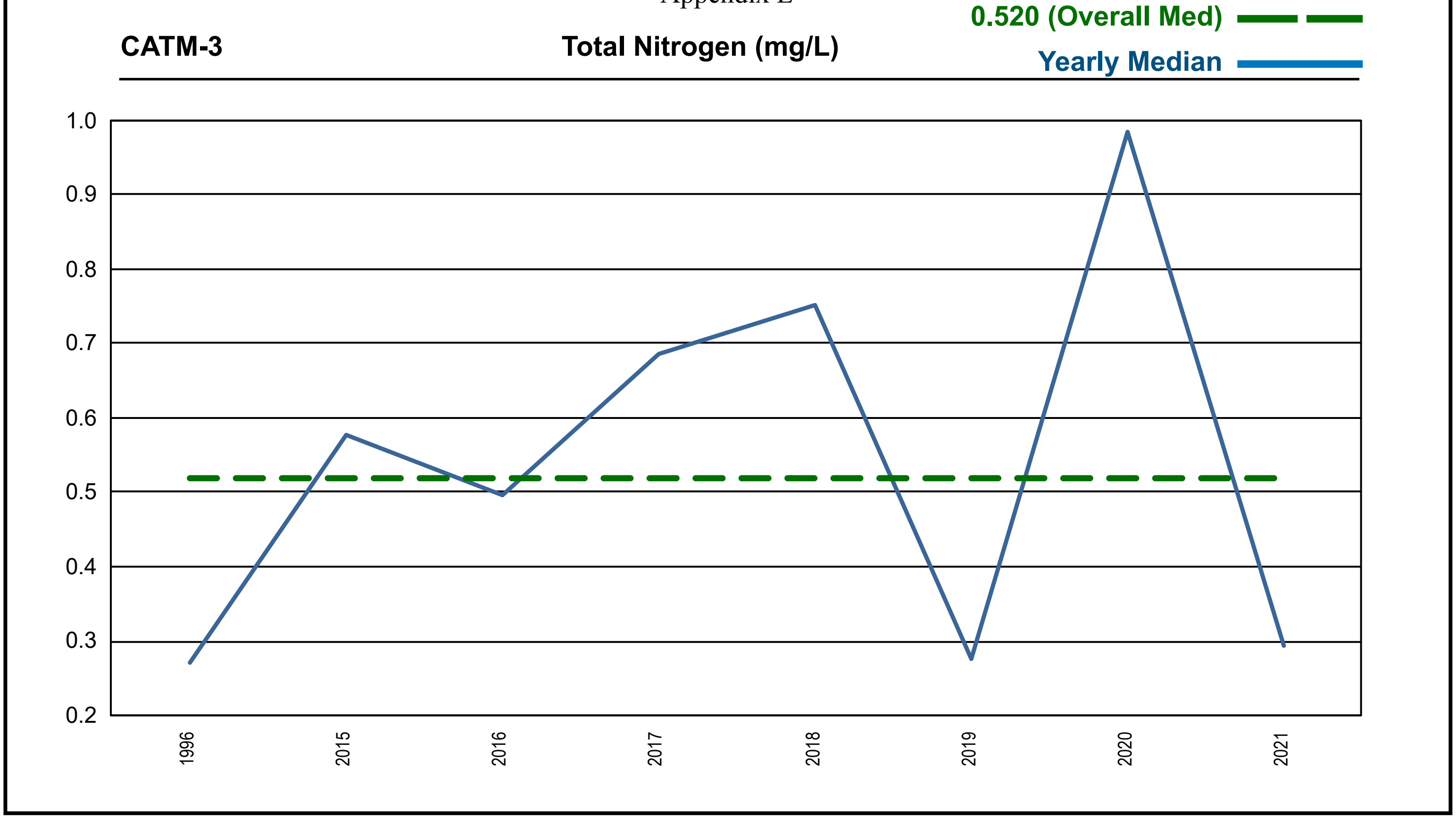
1.291 (Overall Med)
CAHS-1
Total Nitrogen (mg/L)
Yearly Median
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

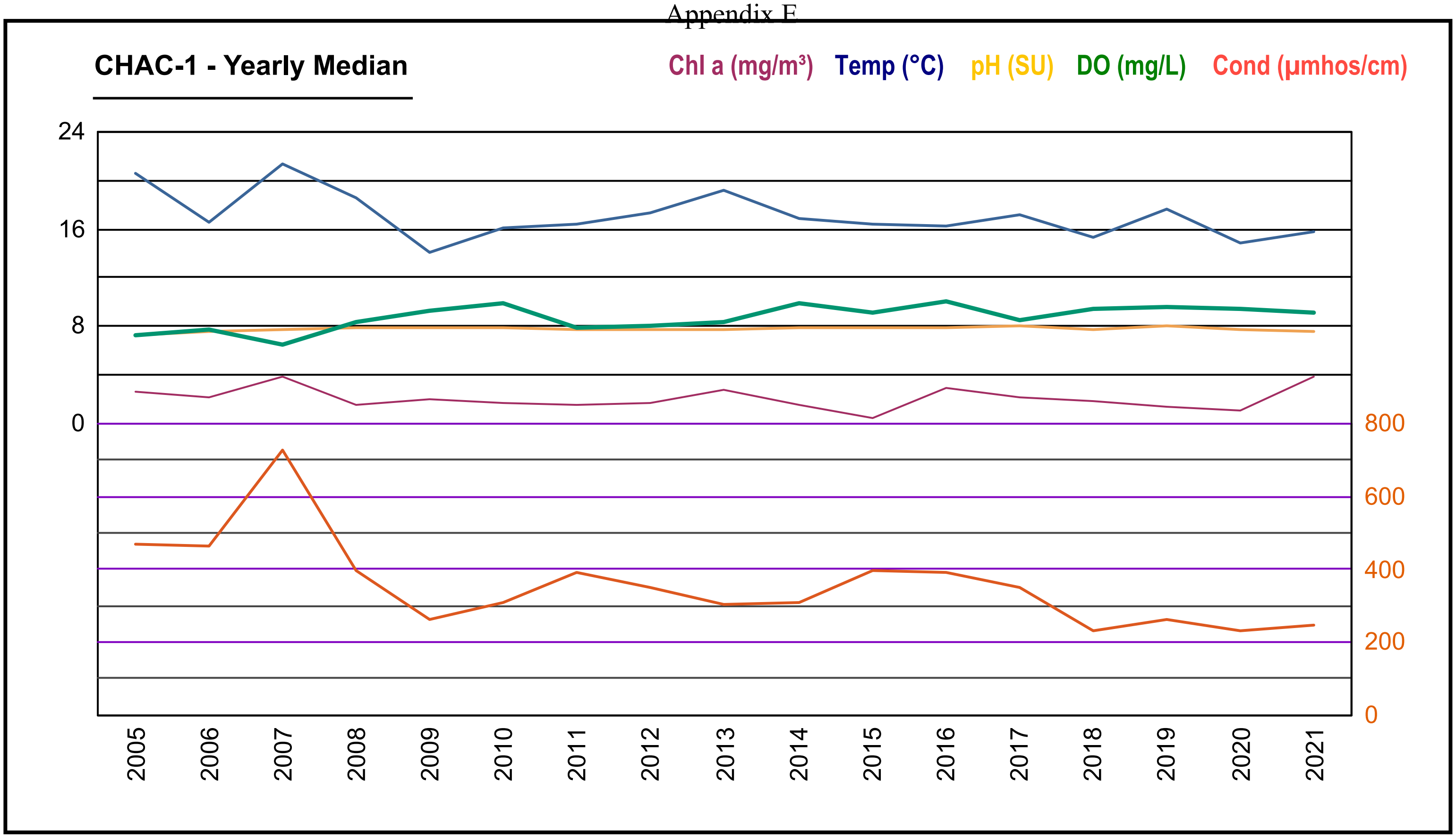

CATM-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
1996
2000
2001
2015
2016
2017
2018
2019
2020
2021

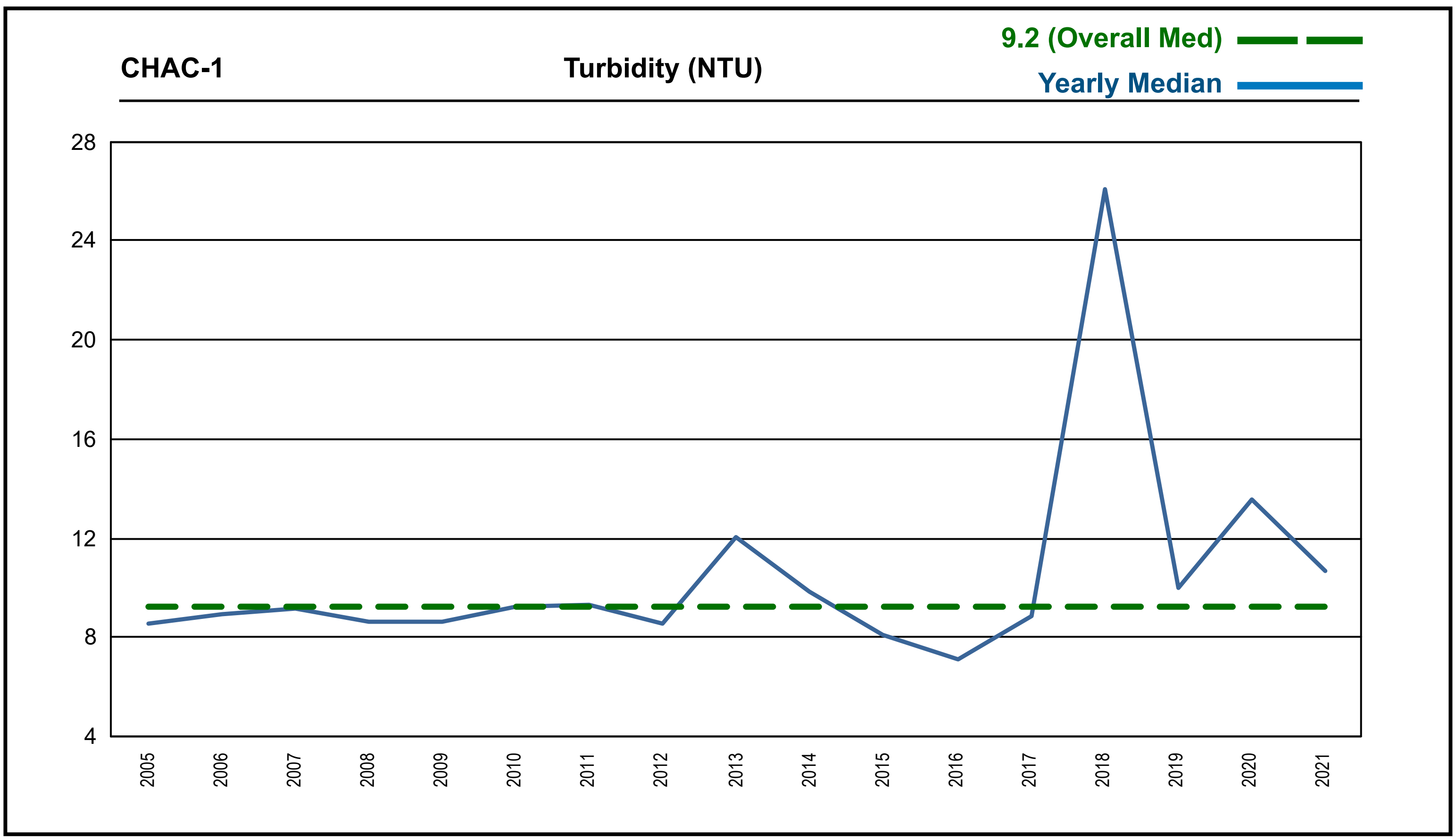

CATM-3
Turbidity (NTU)
18.0 (Overall Med)
Yearly Median
70
60
50
40
30
20
10
0
1996
2000
2001
2015
2016
2017
2018
2019
2020
2021

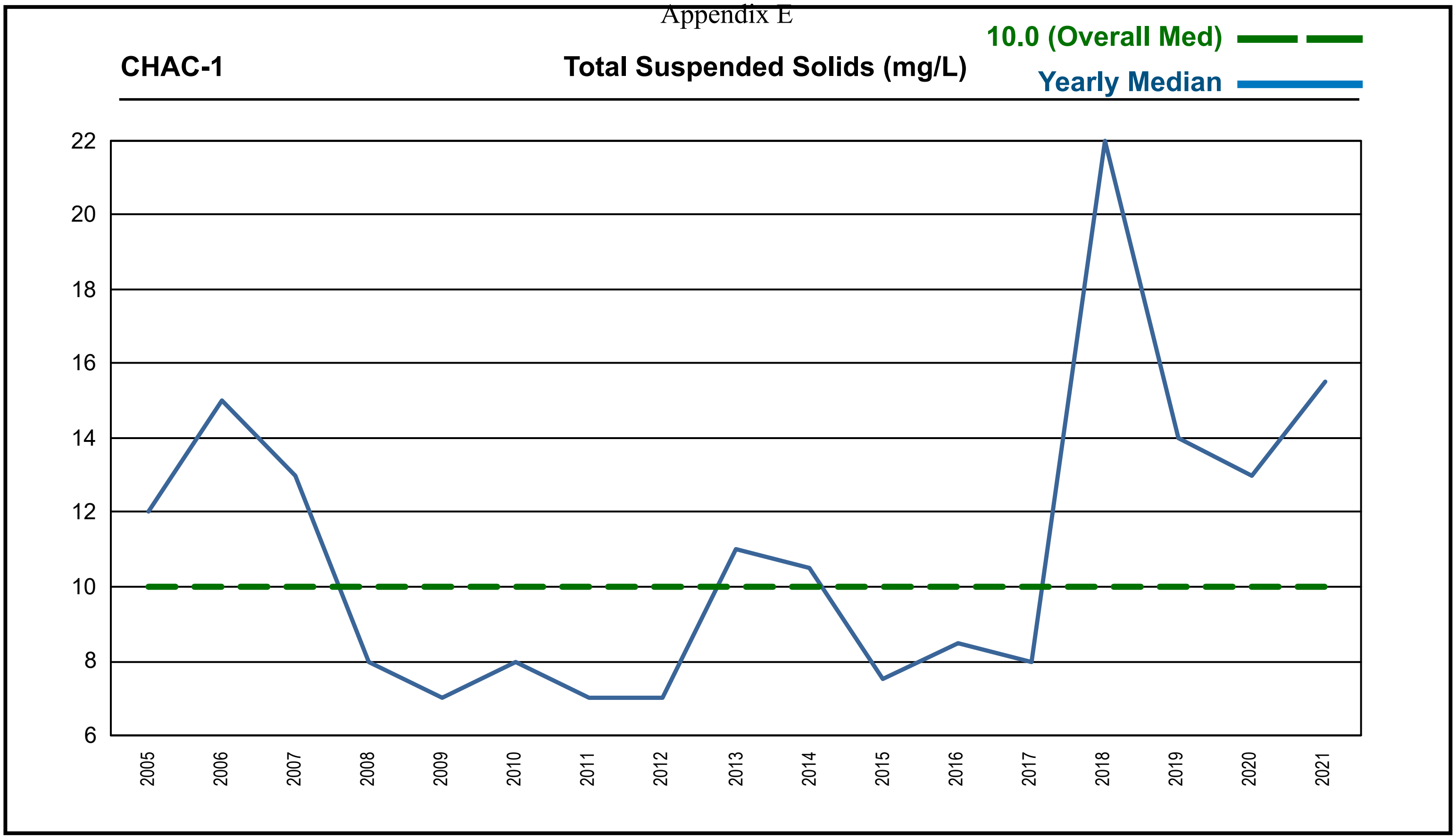

16.0 (Overall Med)
CATM-3
Total Suspended Solids (mg/L)
Yearly Median
40
35
30
25
20
15
10
5
0
1996
2015
2016
2017
2018
2019
2020
2021

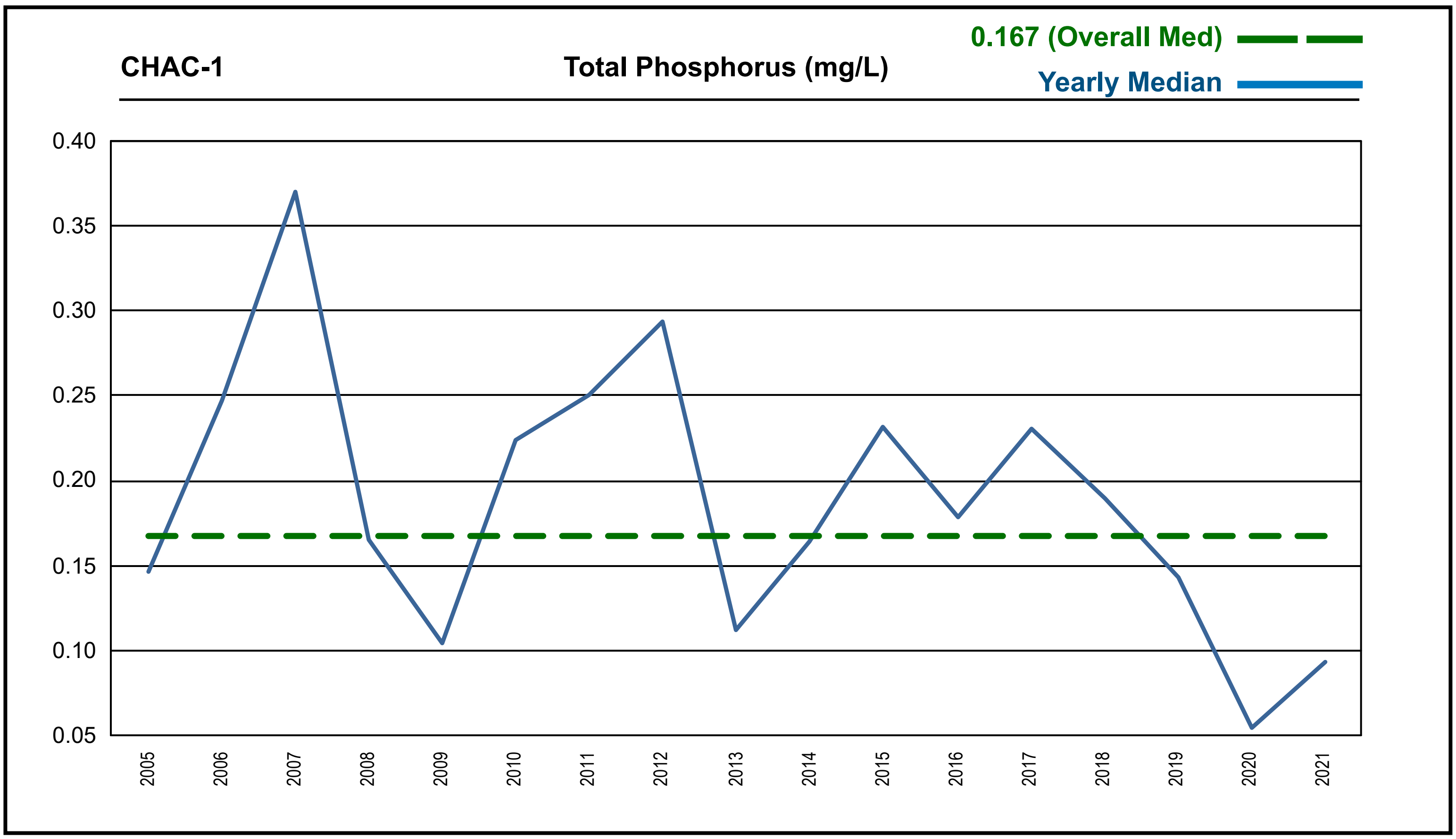

0.120 (Overall Med)
CATM-3
Total Phosphorus (mg/L)
Yearly Median
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
1996
2015
2016
2017
2018
2019
2020
2021

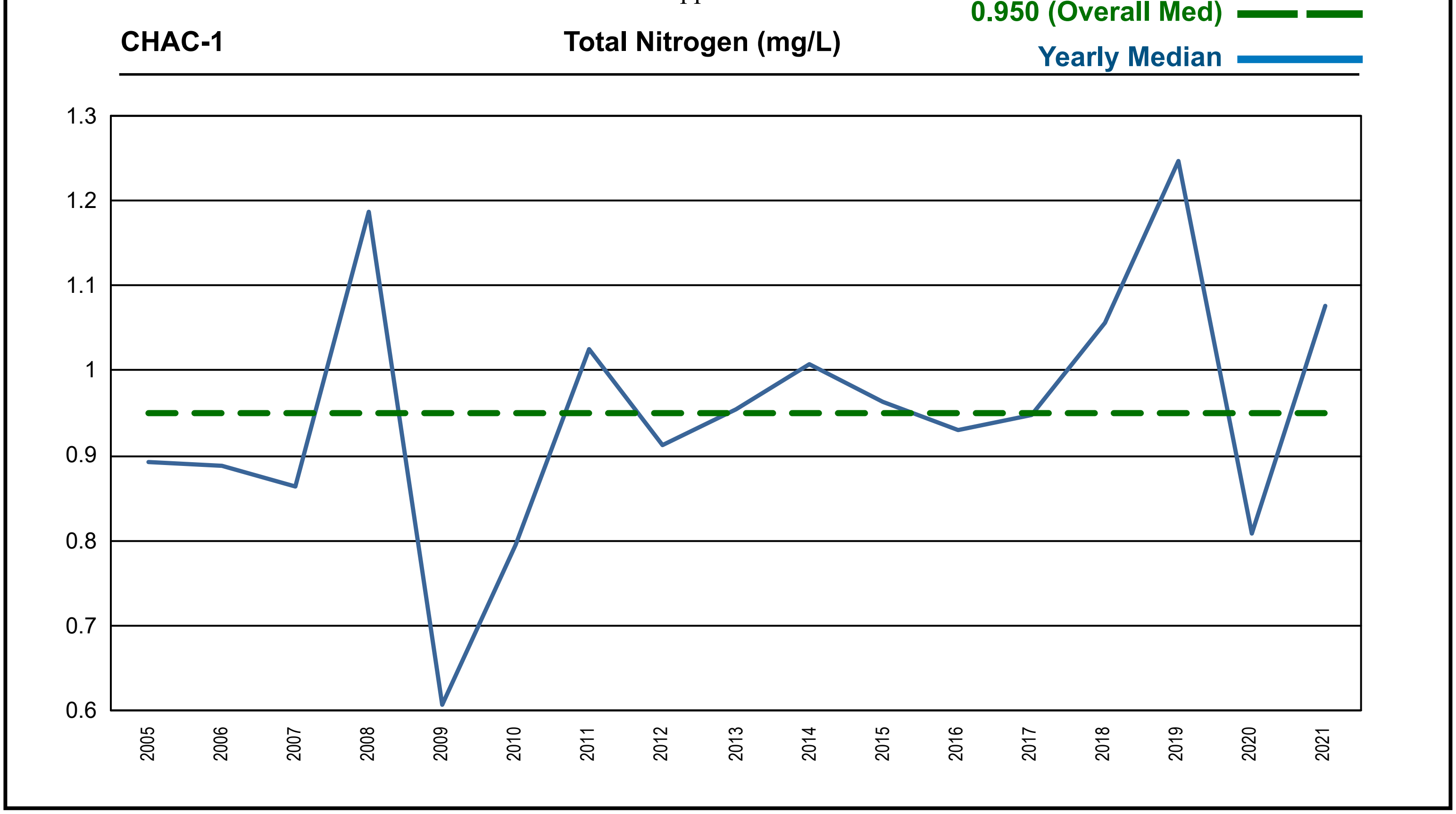

CATM-3
Total Nitrogen (mg/L)
0.520 (Overall Med)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
1996
2015
2016
2017
2018
2019
2020
2021

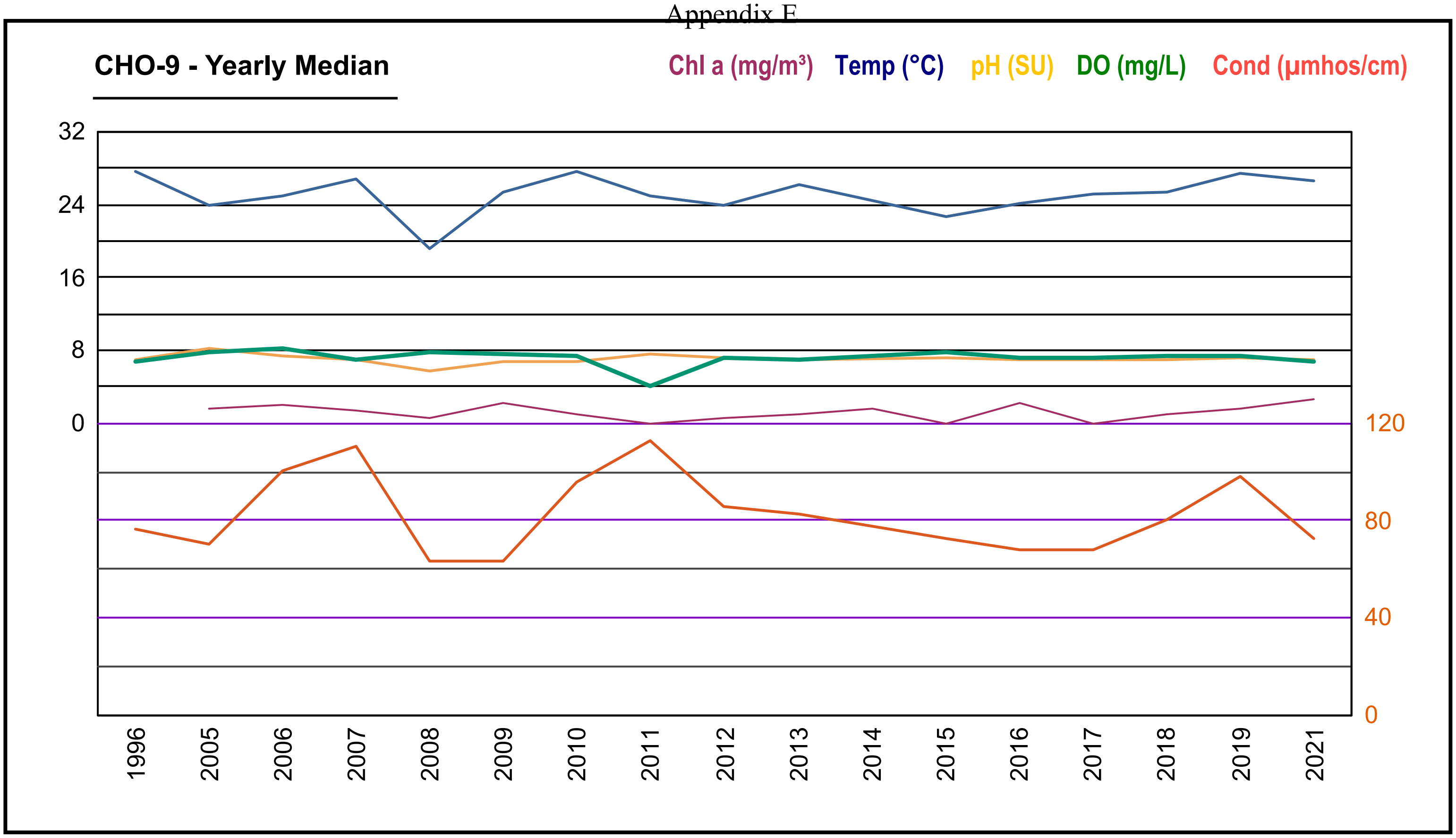

CHAC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
800
600
400
200
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

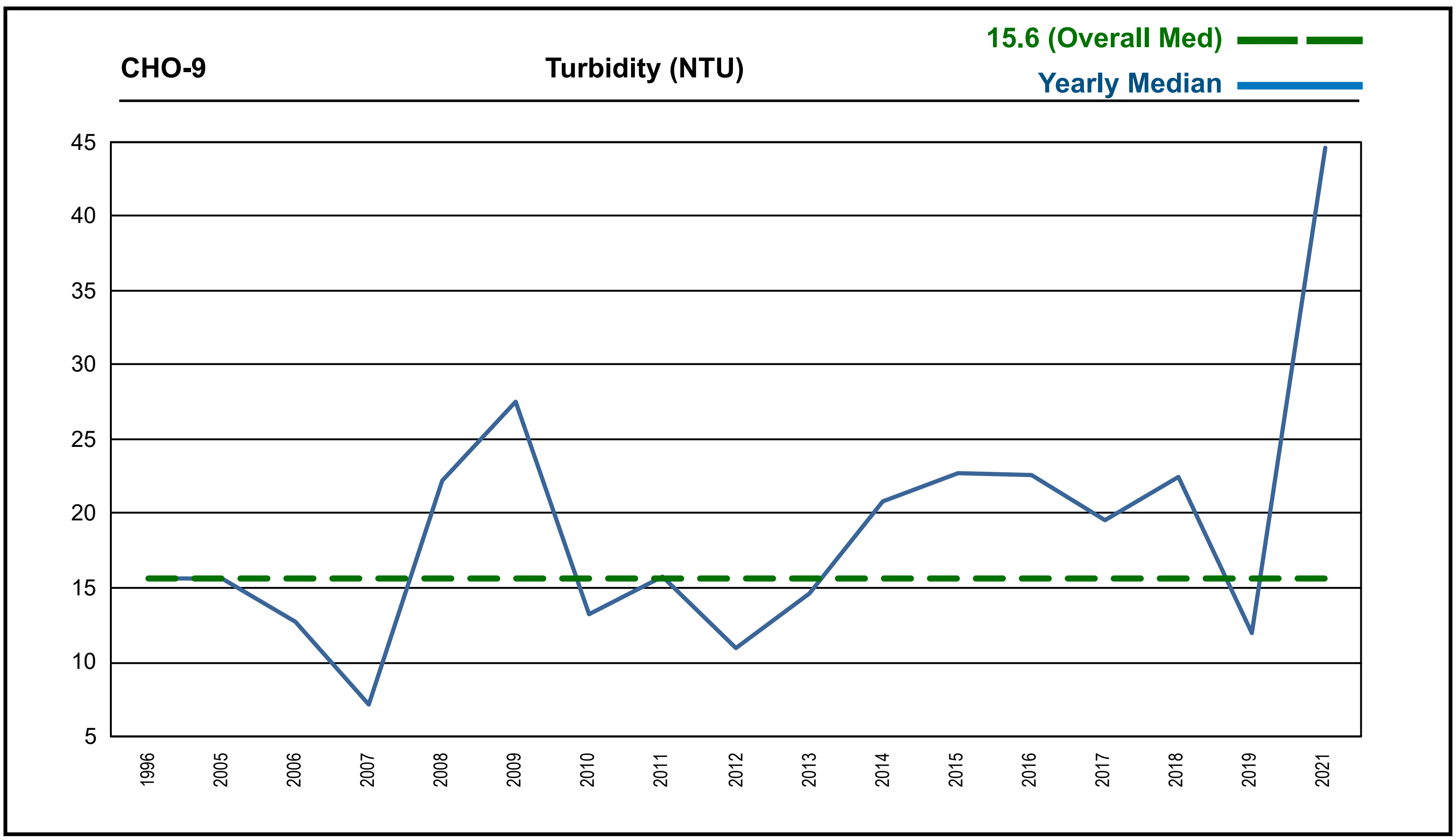

CHAC-1
Turbidity (NTU)
9.2 (Overall Med)
Yearly Median
28
24
20
16
12
8
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

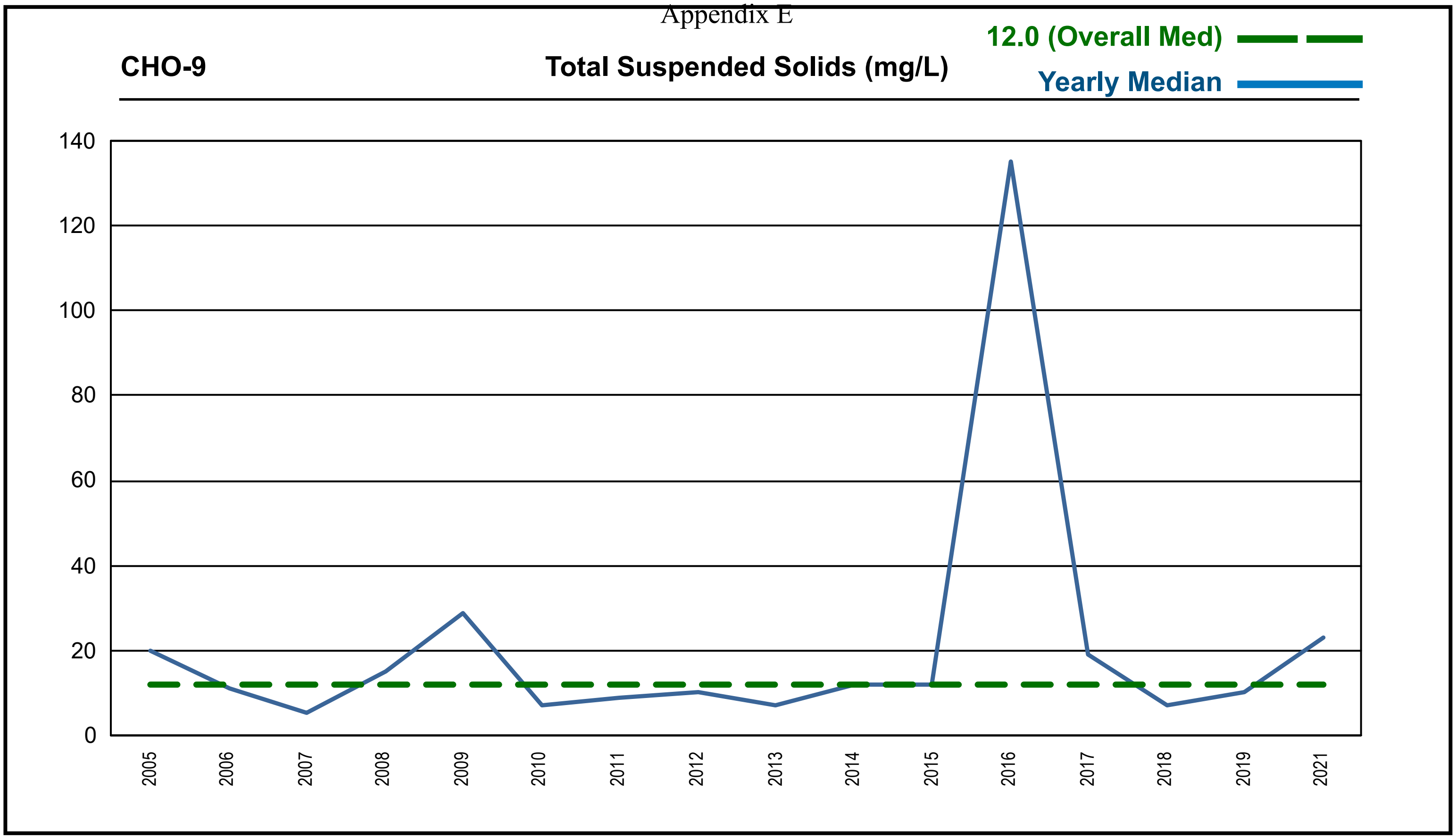

CHAC-1
Total Suspended Solids (mg/L)
10.0 (Overall Med)
Yearly Median
22
20
18
16
14
12
10
8
6
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

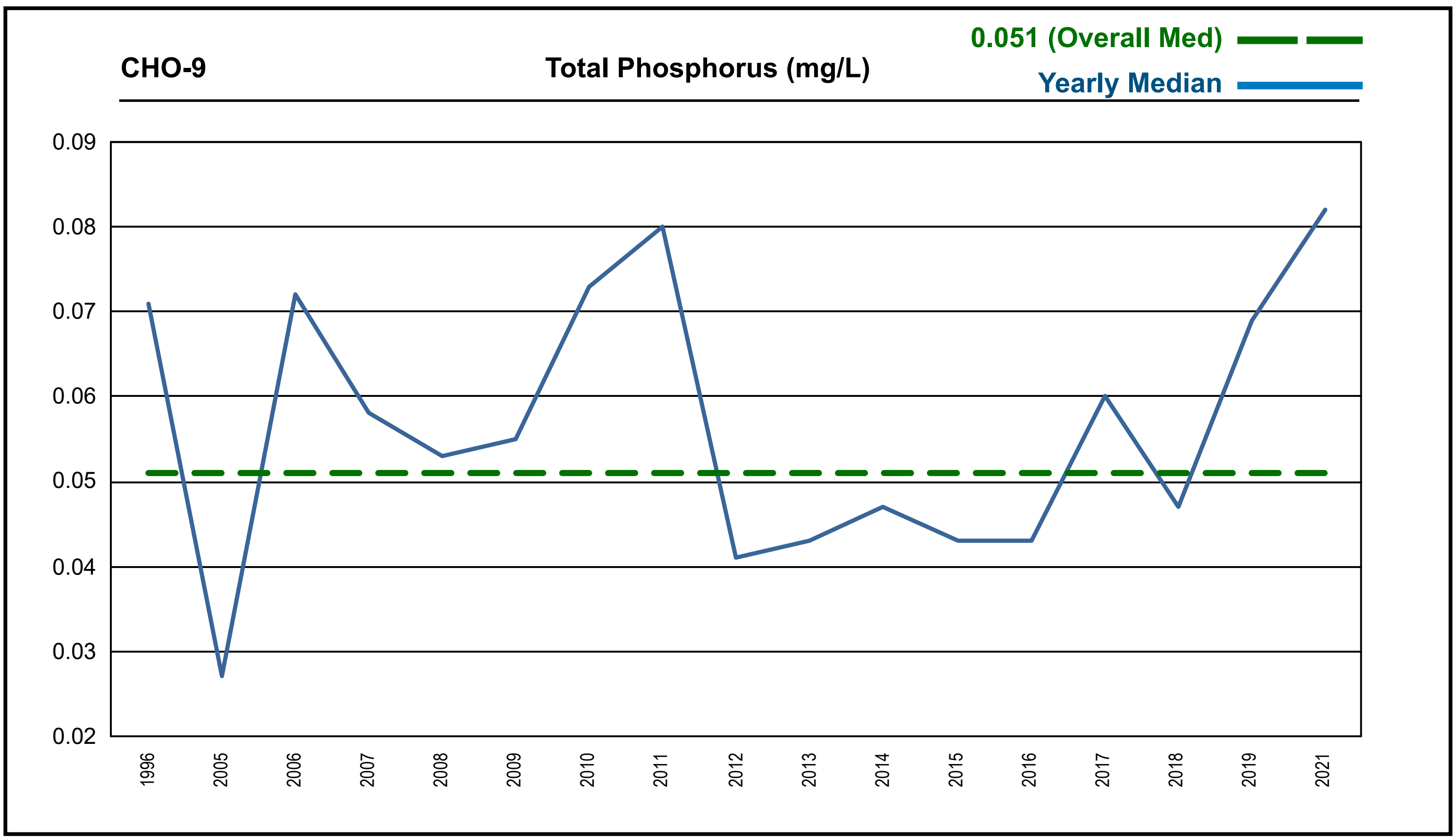

CHAC-1
Total Phosphorus (mg/L)
0.167 (Overall Med)
Yearly Median
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

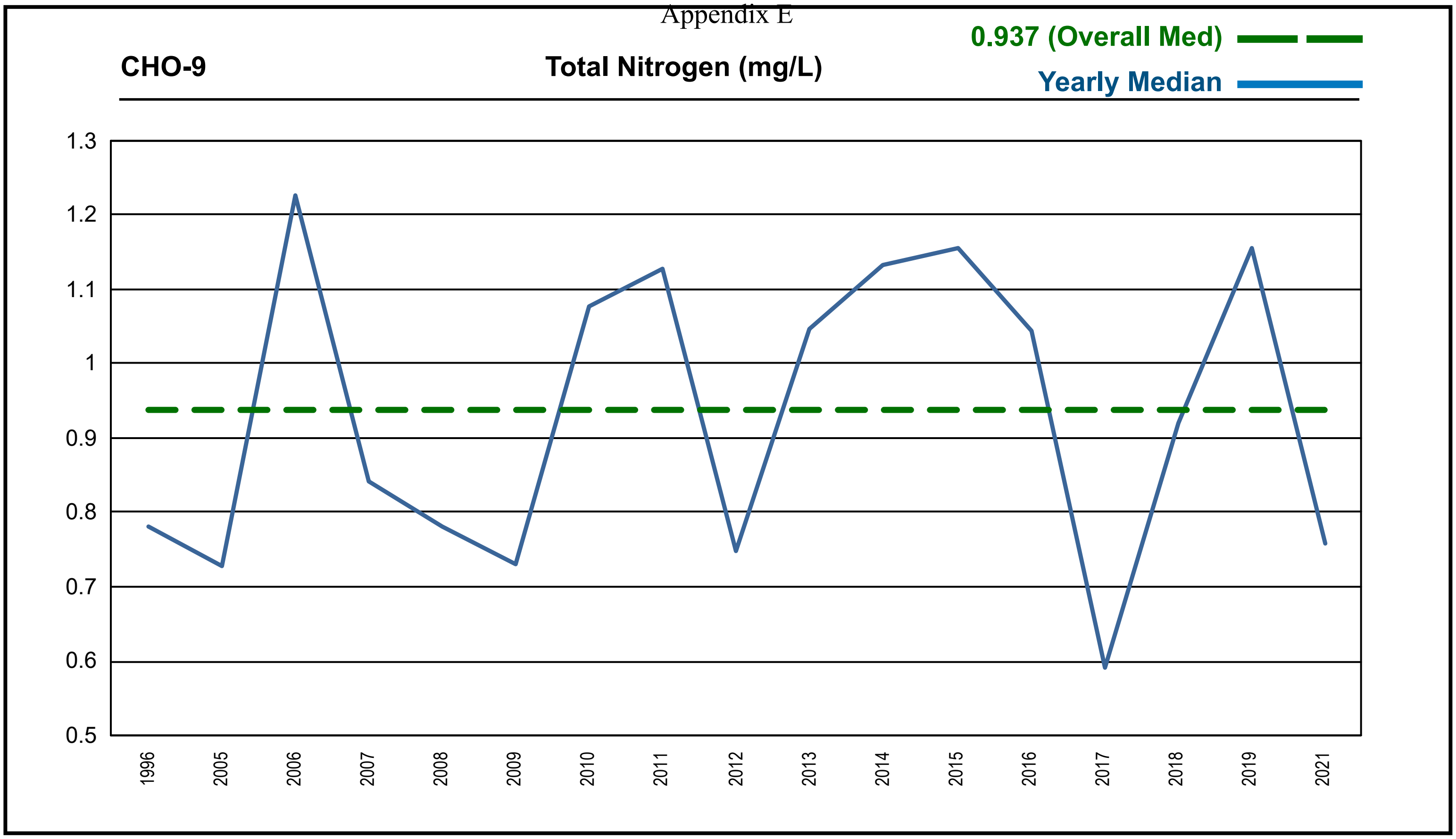

CHAC-1
Total Nitrogen (mg/L)
0.950 (Overall Med)
Yearly Median
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

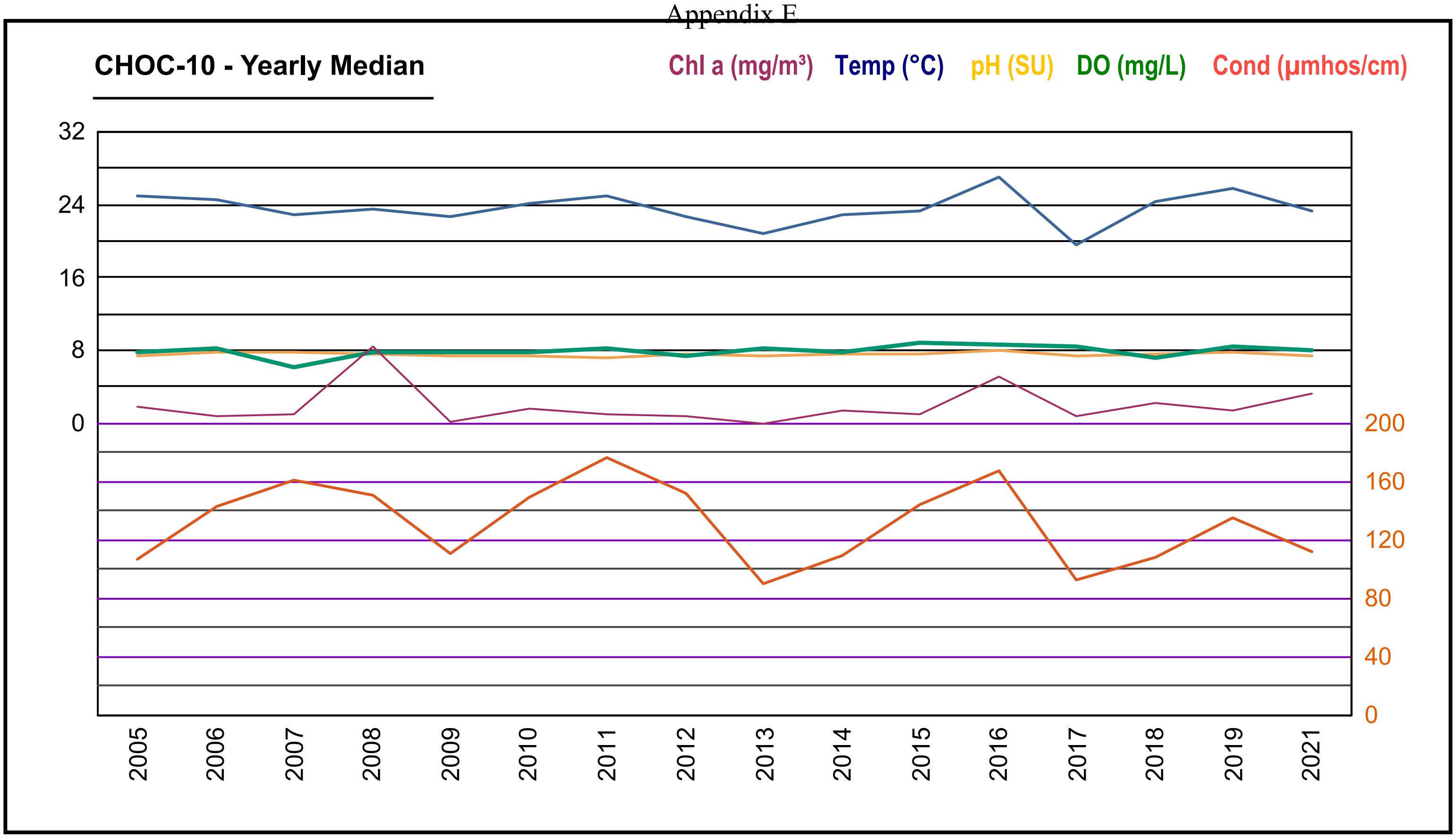

CHO-9 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

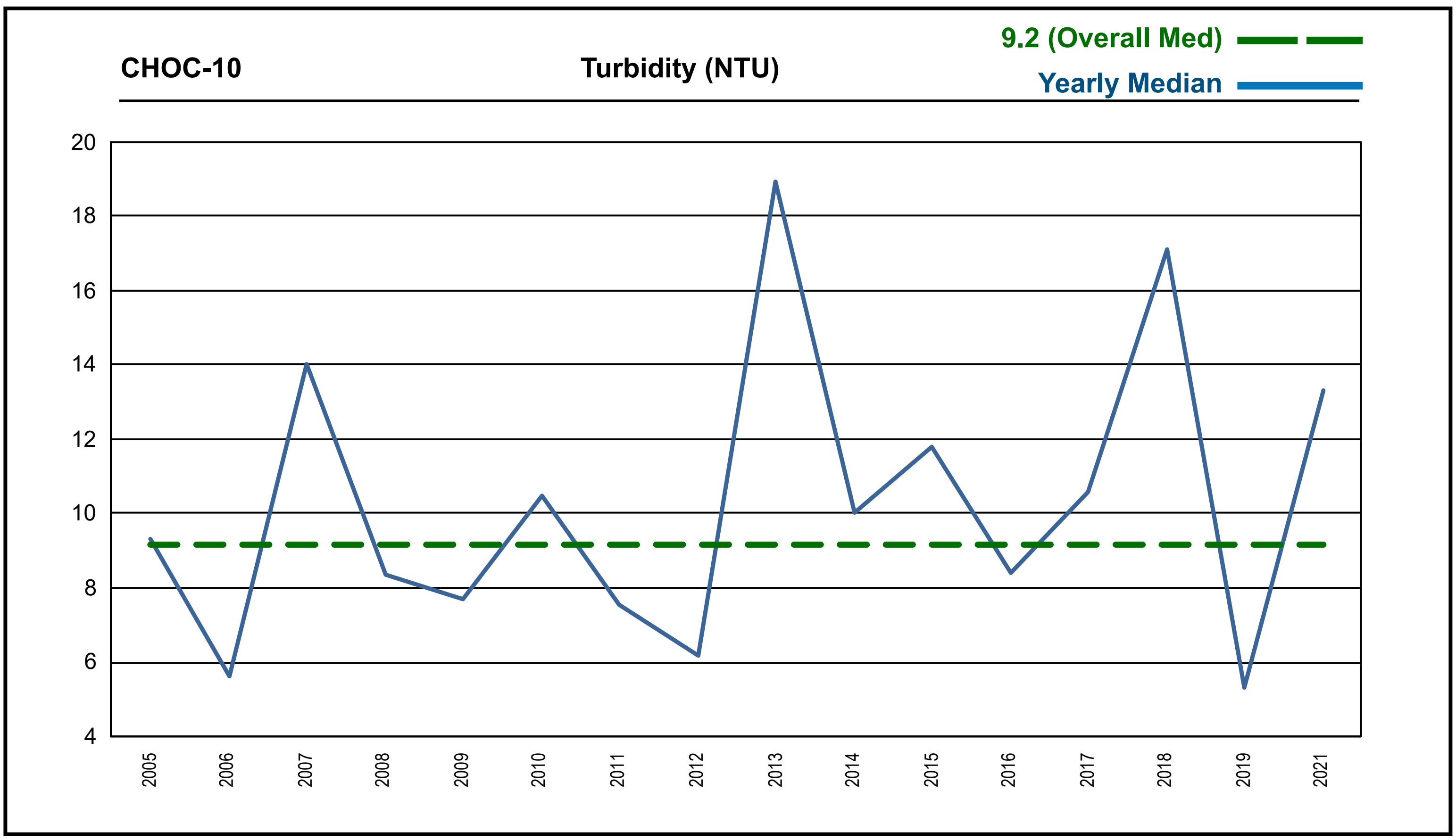

CHO-9
Turbidity (NTU)
15.6 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

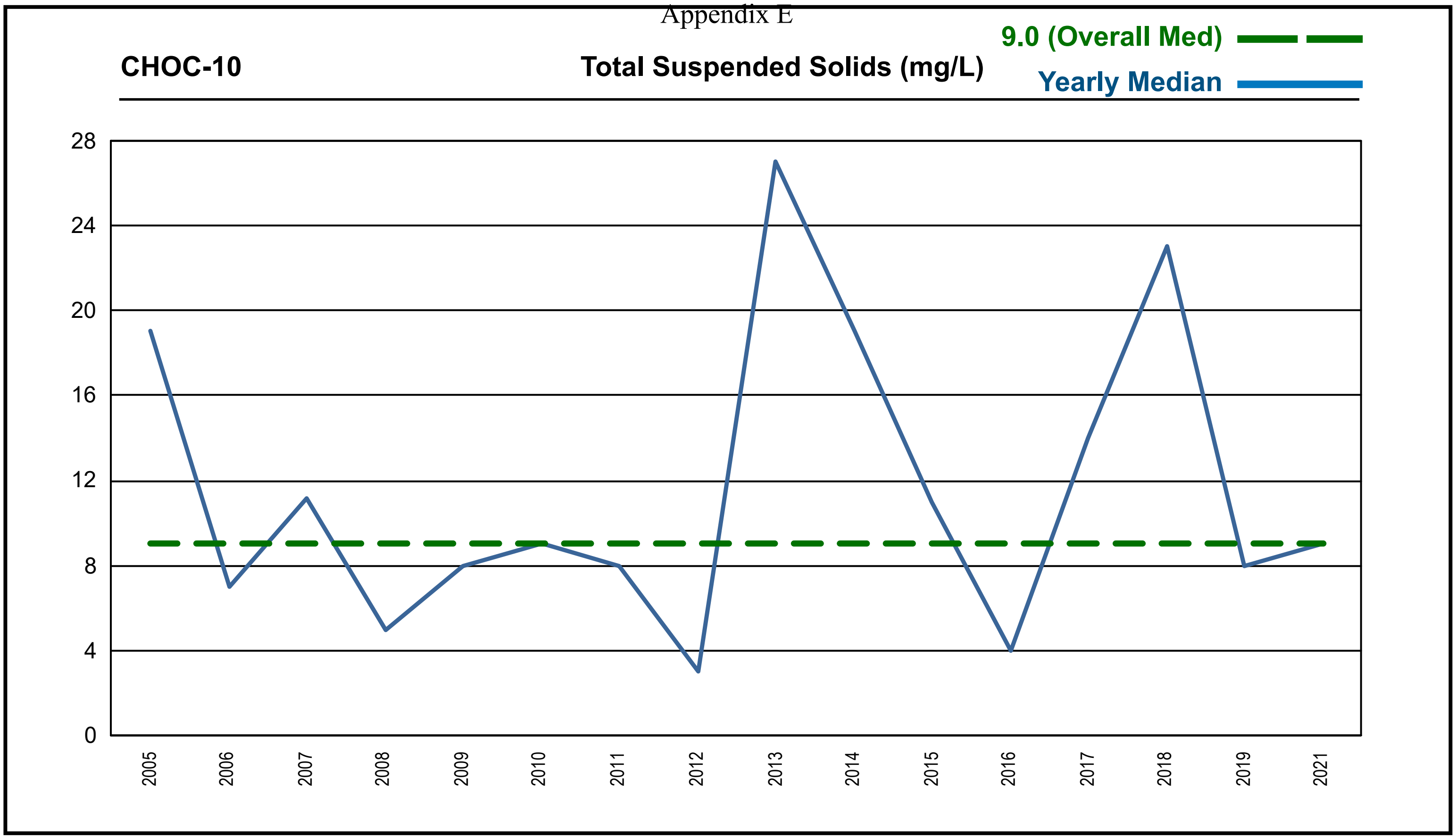

CHO-9
Total Suspended Solids (mg/L)
12.0 (Overall Med)
Yearly Median
0
20
40
60
80
100
120
140
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

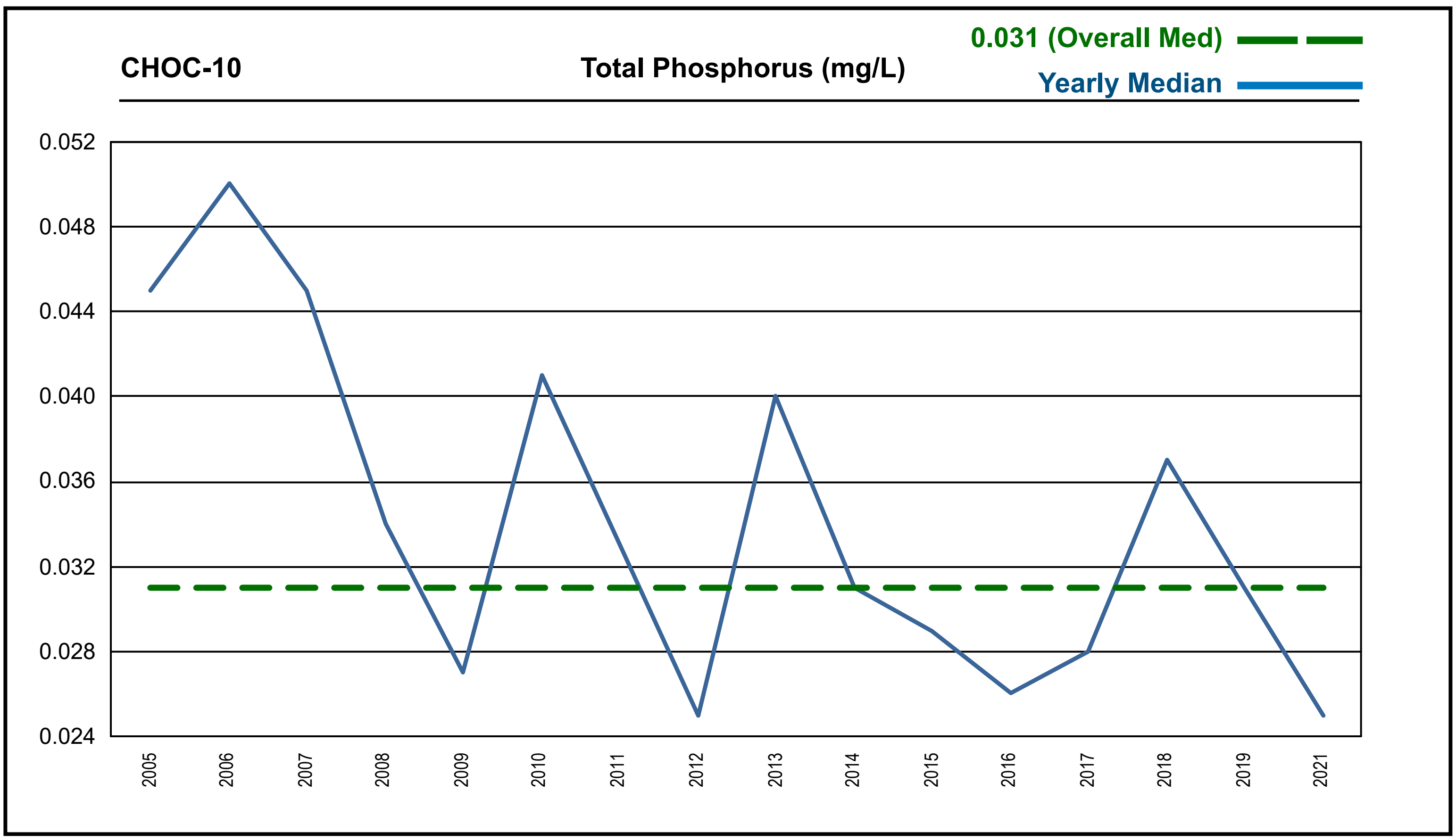

CHO-9
Total Phosphorus (mg/L)
0.051 (Overall Med)
Yearly Median
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

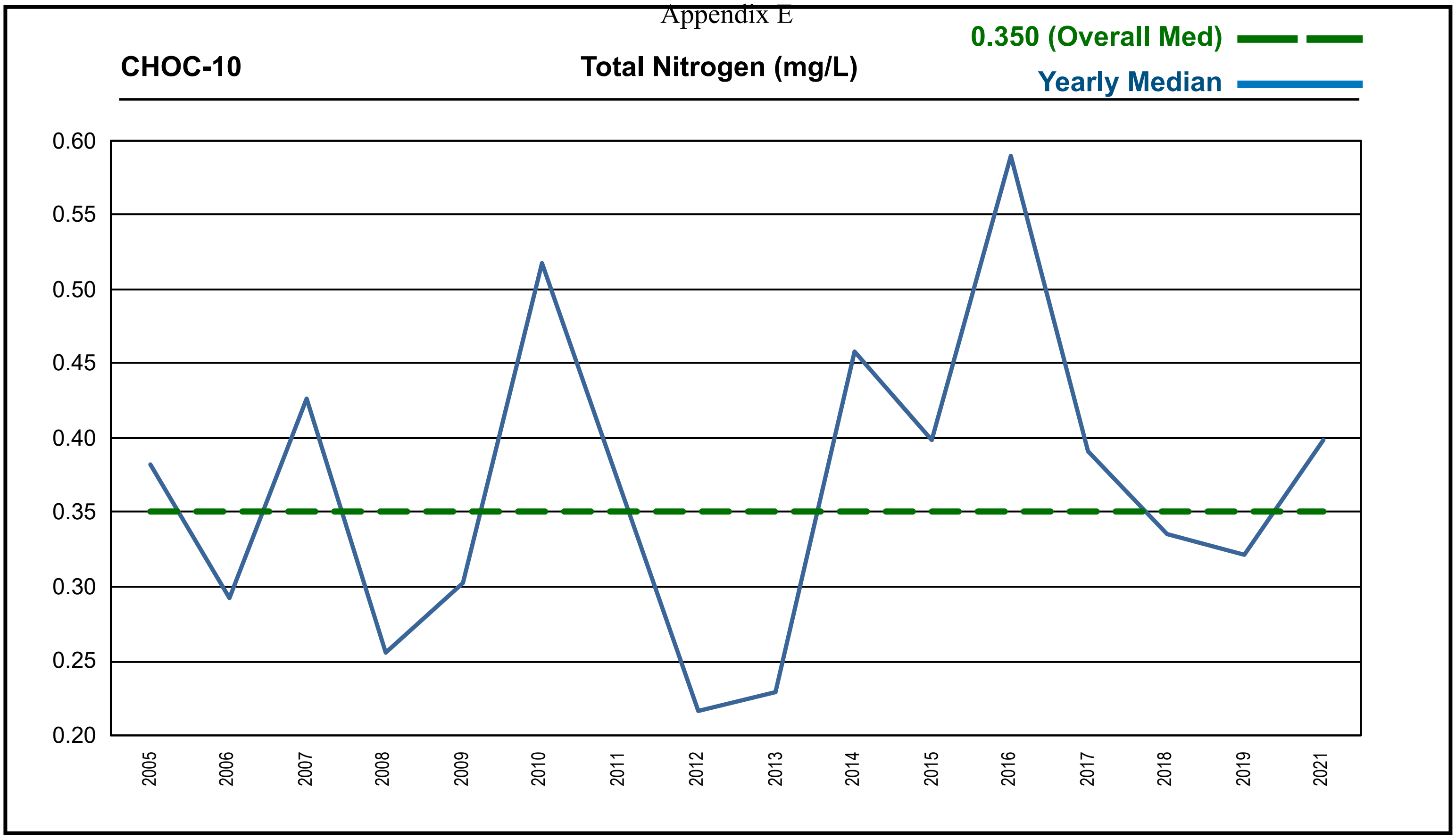

0.937 (Overall Med)
Yearly Median
CHO-9
Total Nitrogen (mg/L)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

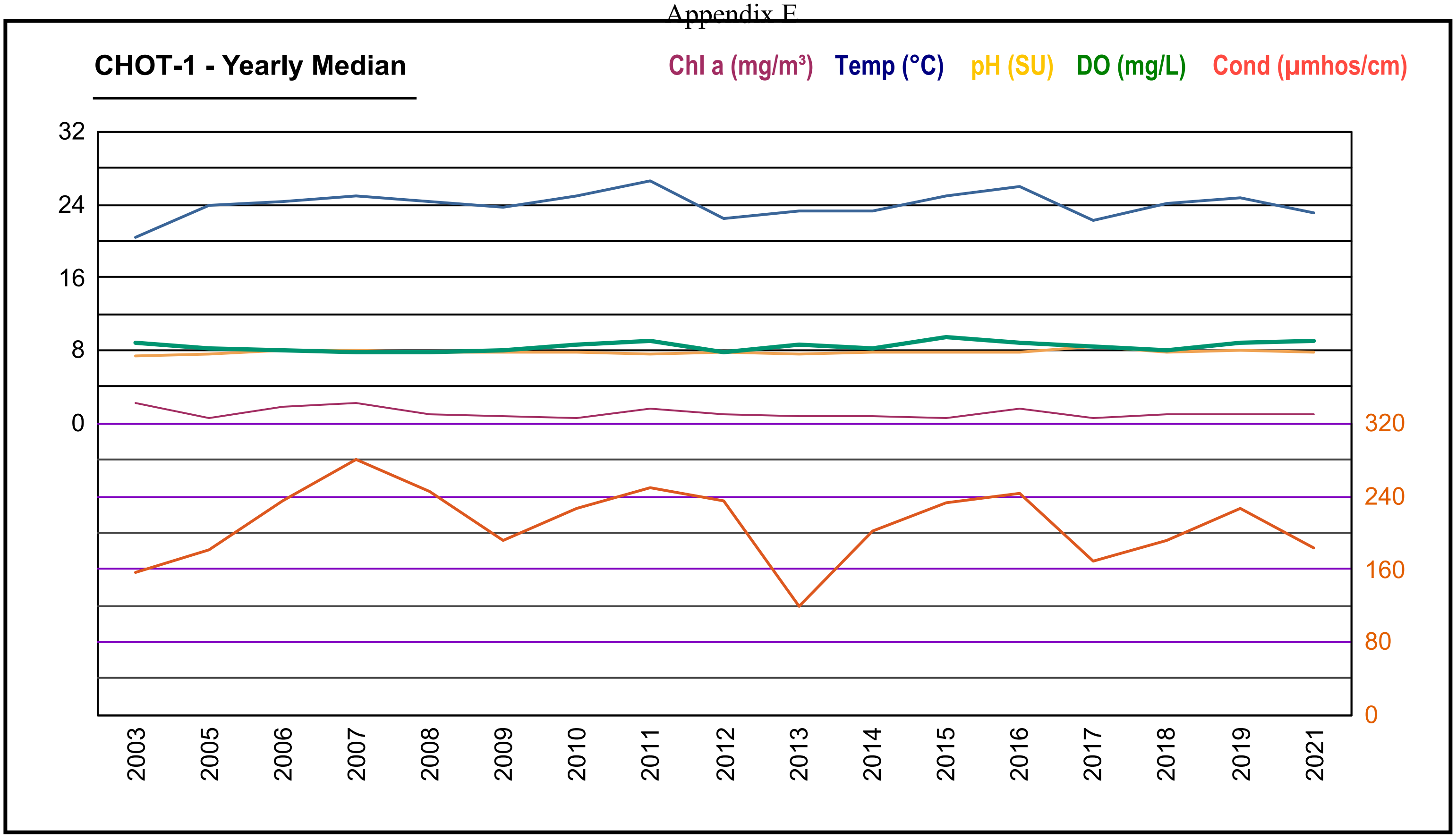

CHOC-10 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
200
160
120
80
40
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

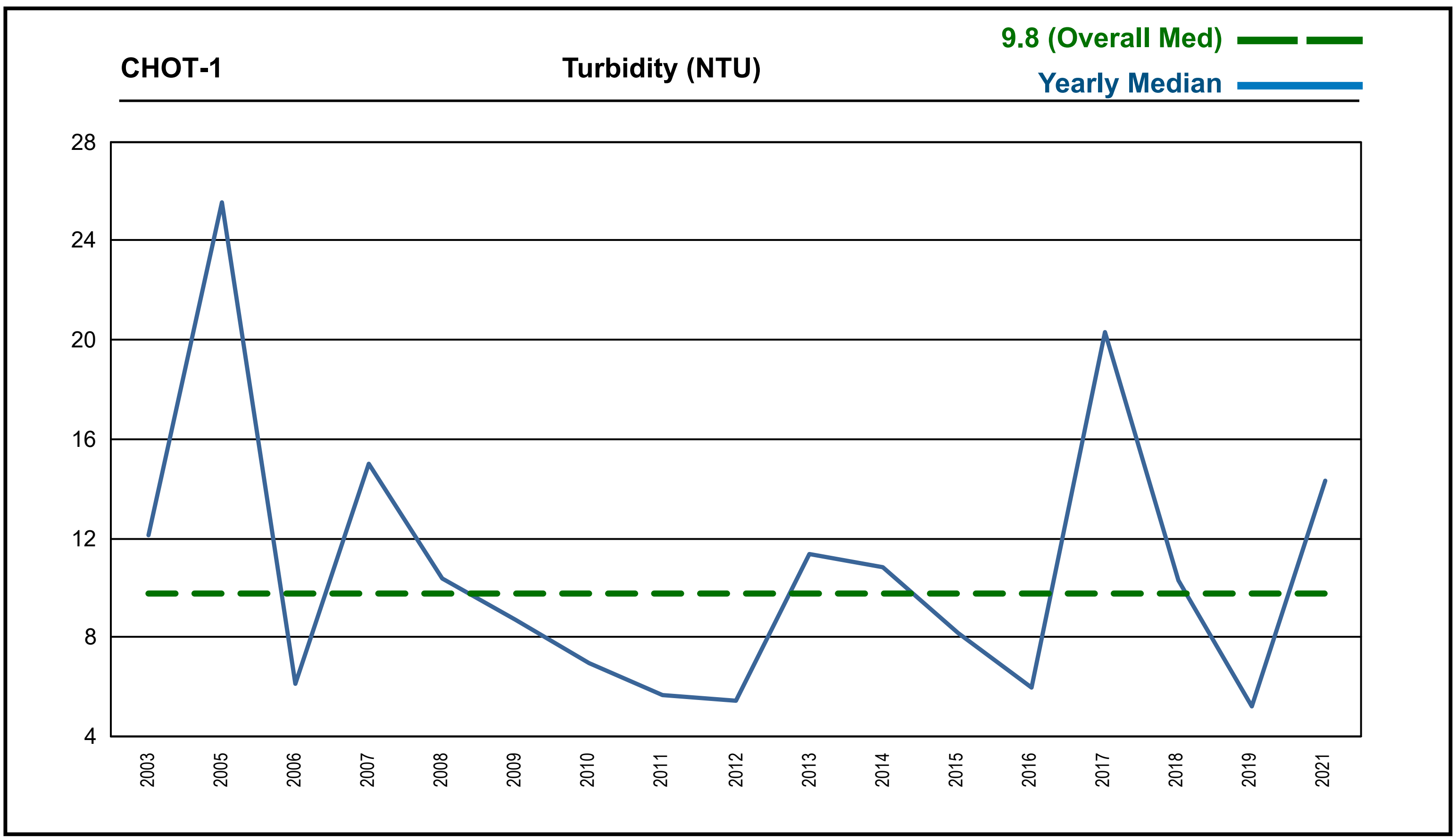

CHOC-10
Turbidity (NTU)
9.2 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

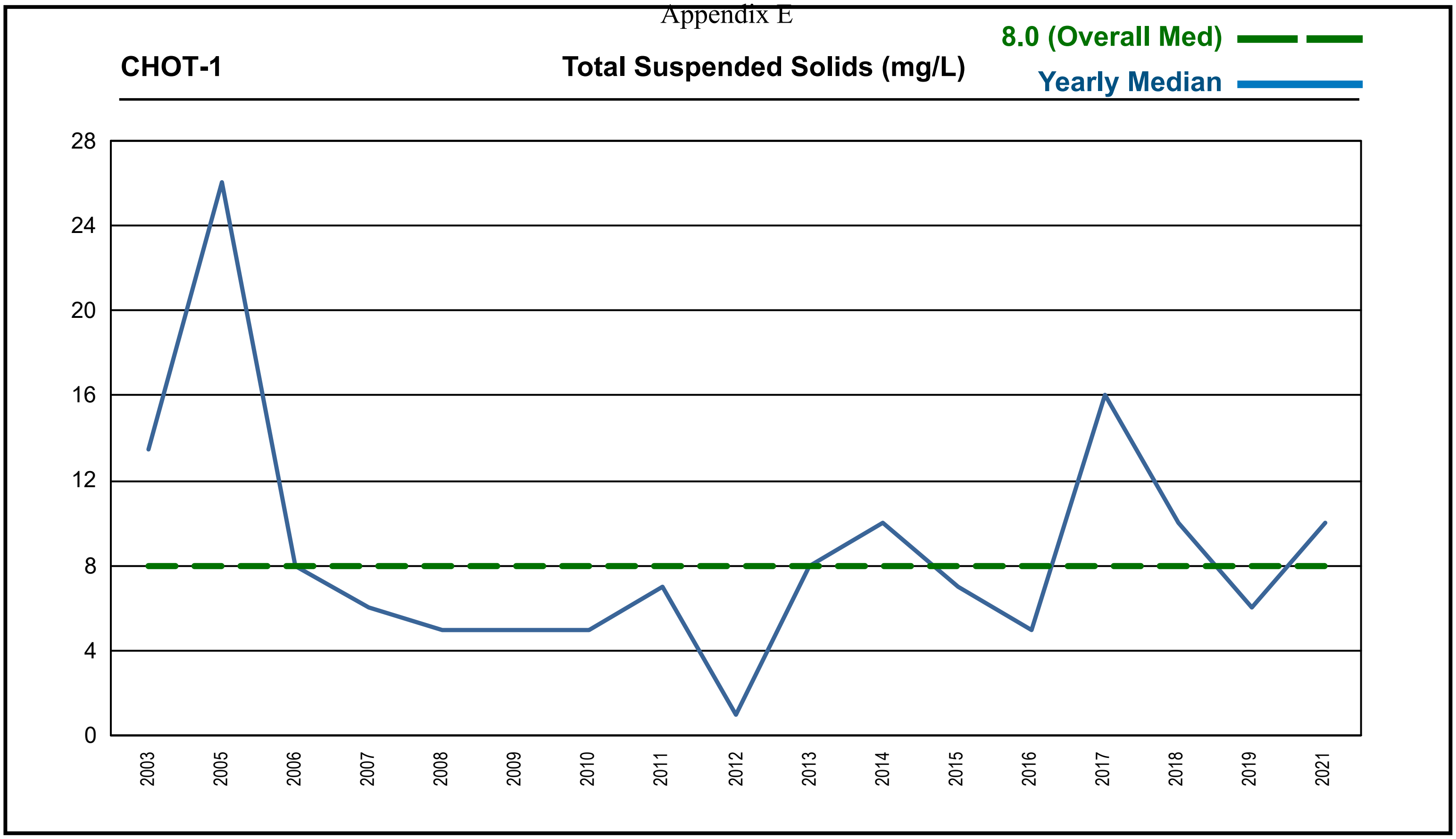

9.0 (Overall Med)
CHOC-10
Total Suspended Solids (mg/L)
Yearly Median
28
24
20
16
12
8
4
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

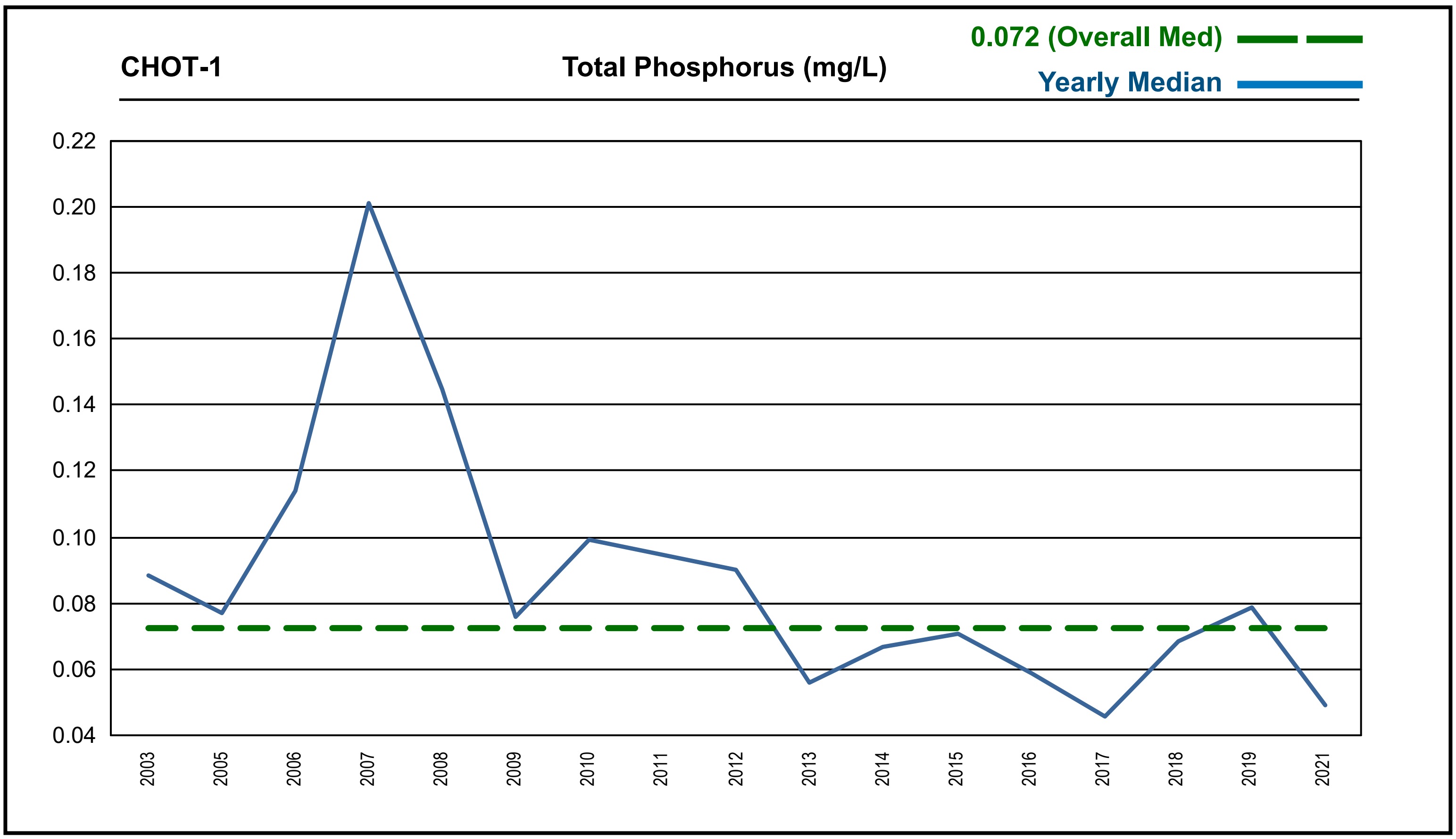

0.031 (Overall Med)
CHOC-10
Total Phosphorus (mg/L)
Yearly Median
0.052
0.048
0.044
0.040
0.036
0.032
0.028
0.024
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

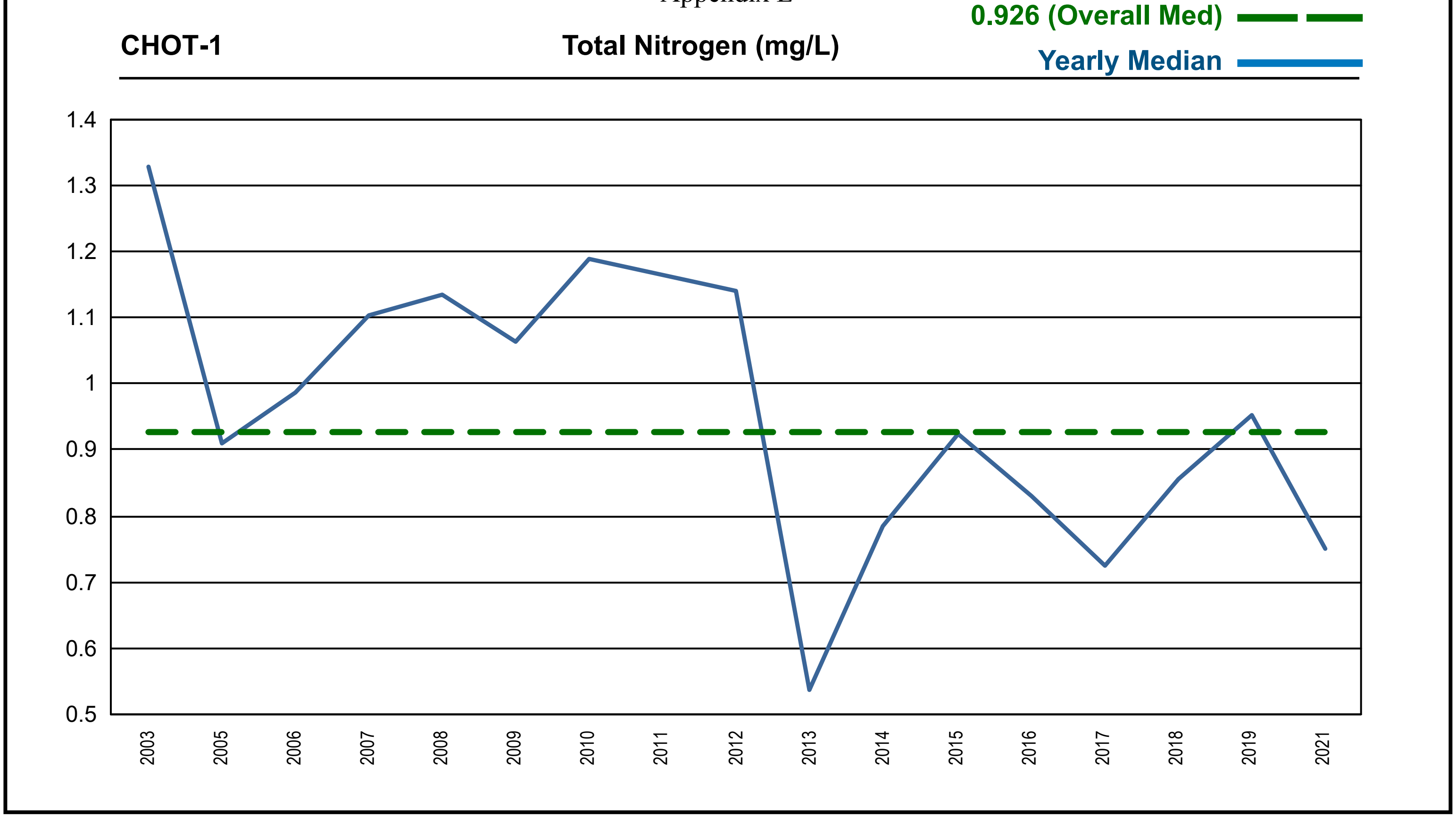

CHOC-10
Total Nitrogen (mg/L)
0.350 (Overall Med)
Yearly Median
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


CHOT-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

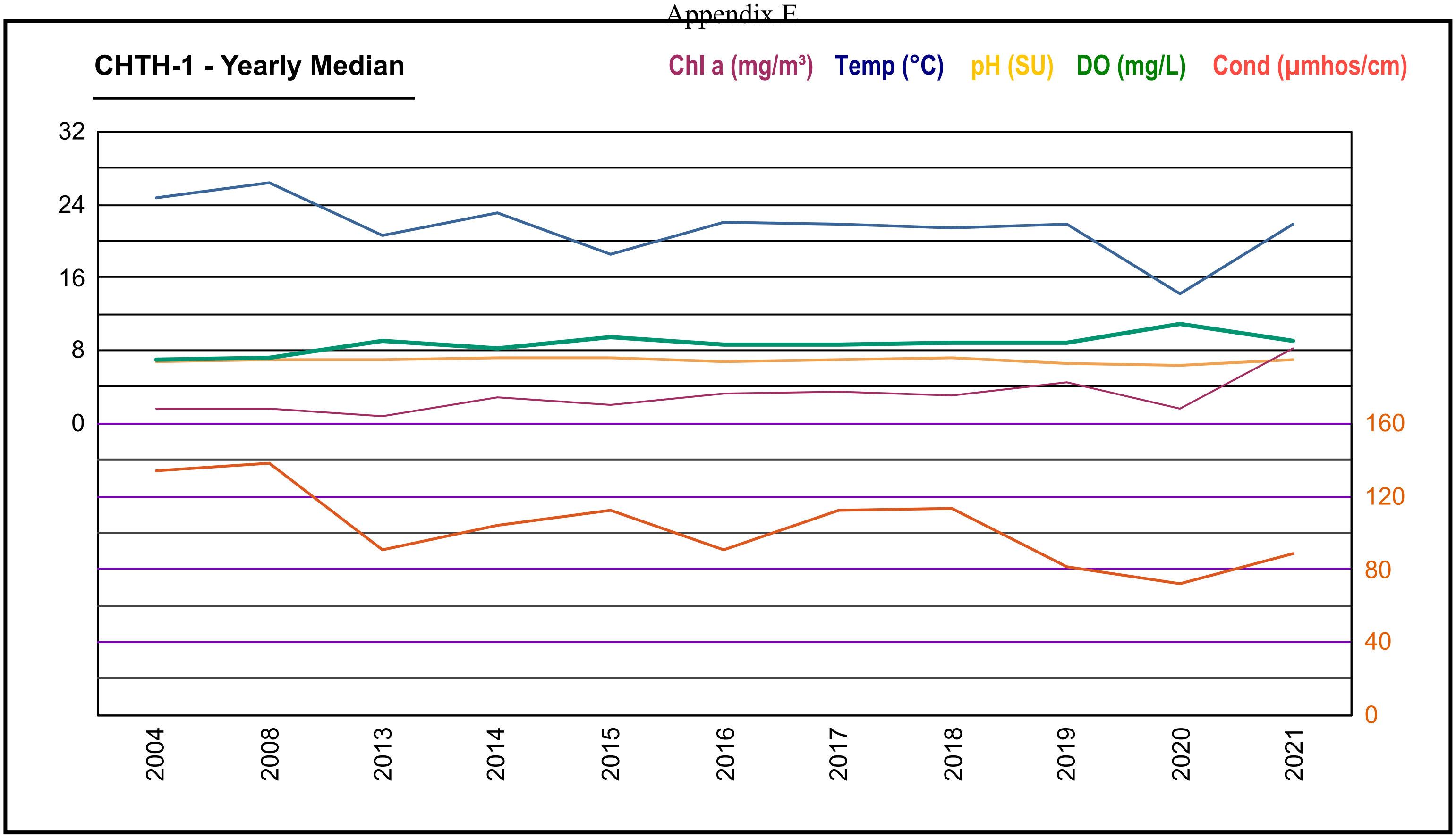

CHOT-1
Turbidity (NTU)
9.8 (Overall Med)
Yearly Median
28
24
20
16
12
8
4
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

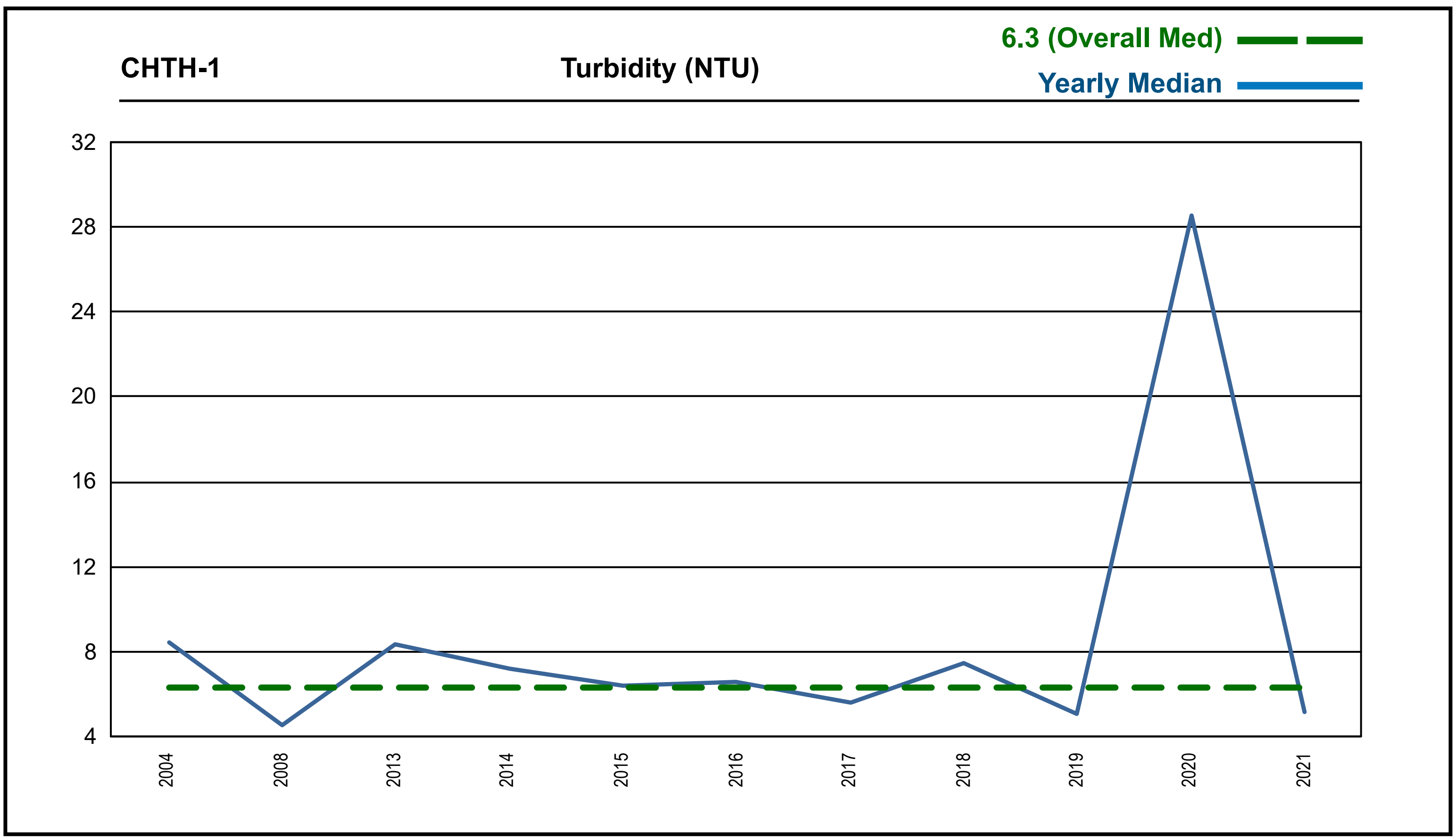

8.0 (Overall Med)
Yearly Median
CHOT-1
Total Suspended Solids (mg/L)
28
24
20
16
12
8
4
0
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

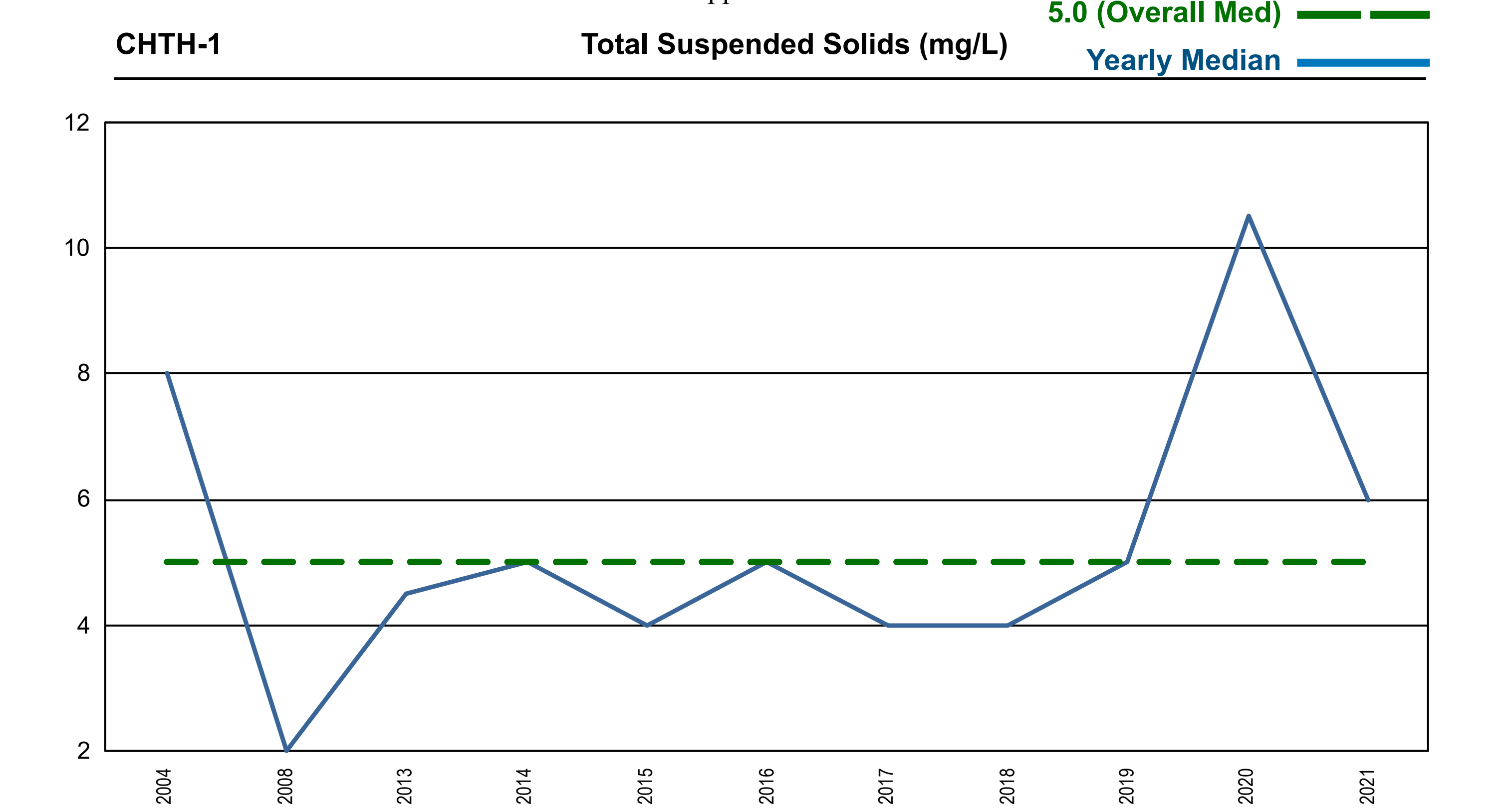

0.072 (Overall Med)
Yearly Median
CHOT-1
Total Phosphorus (mg/L)
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

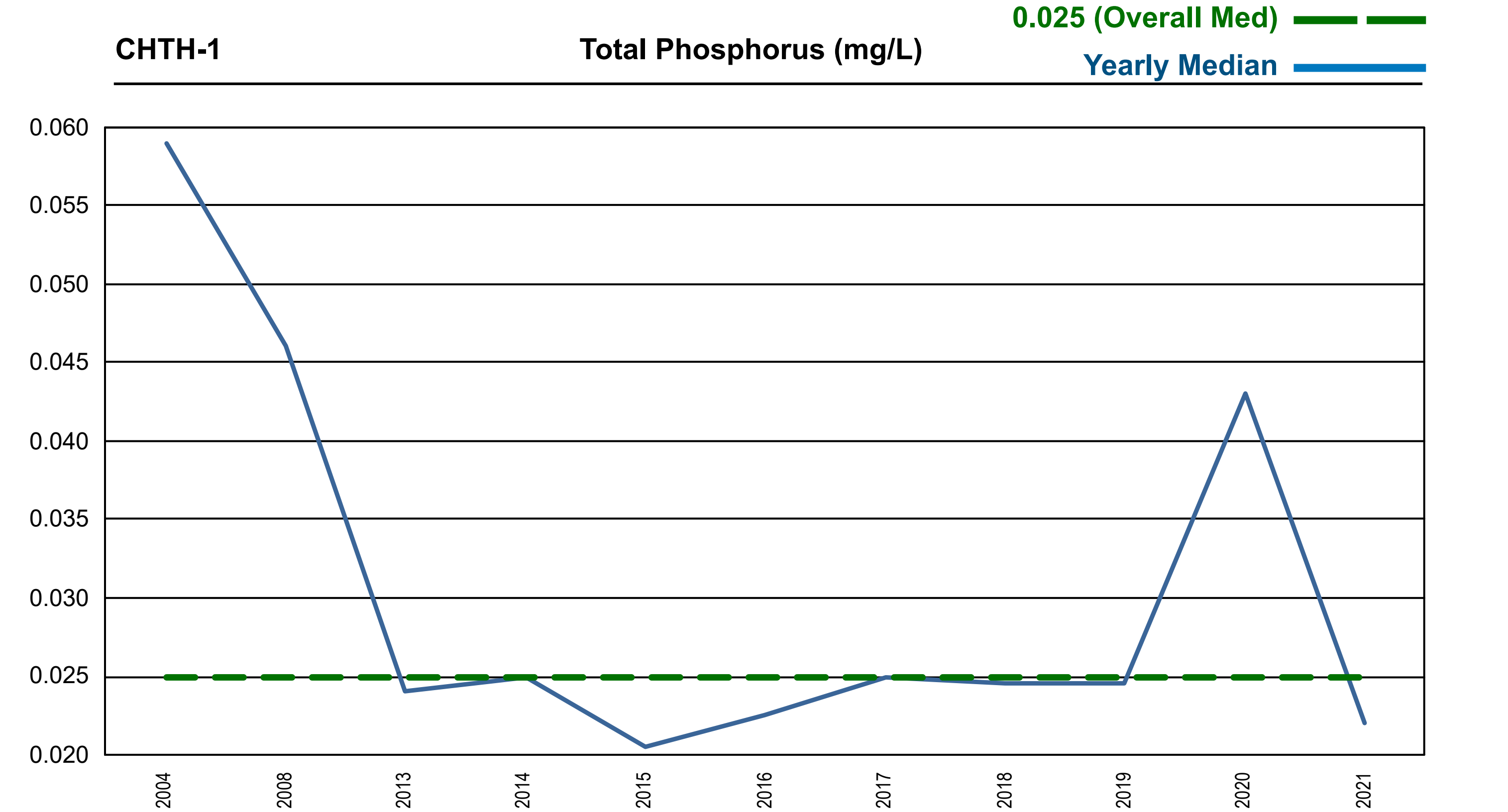


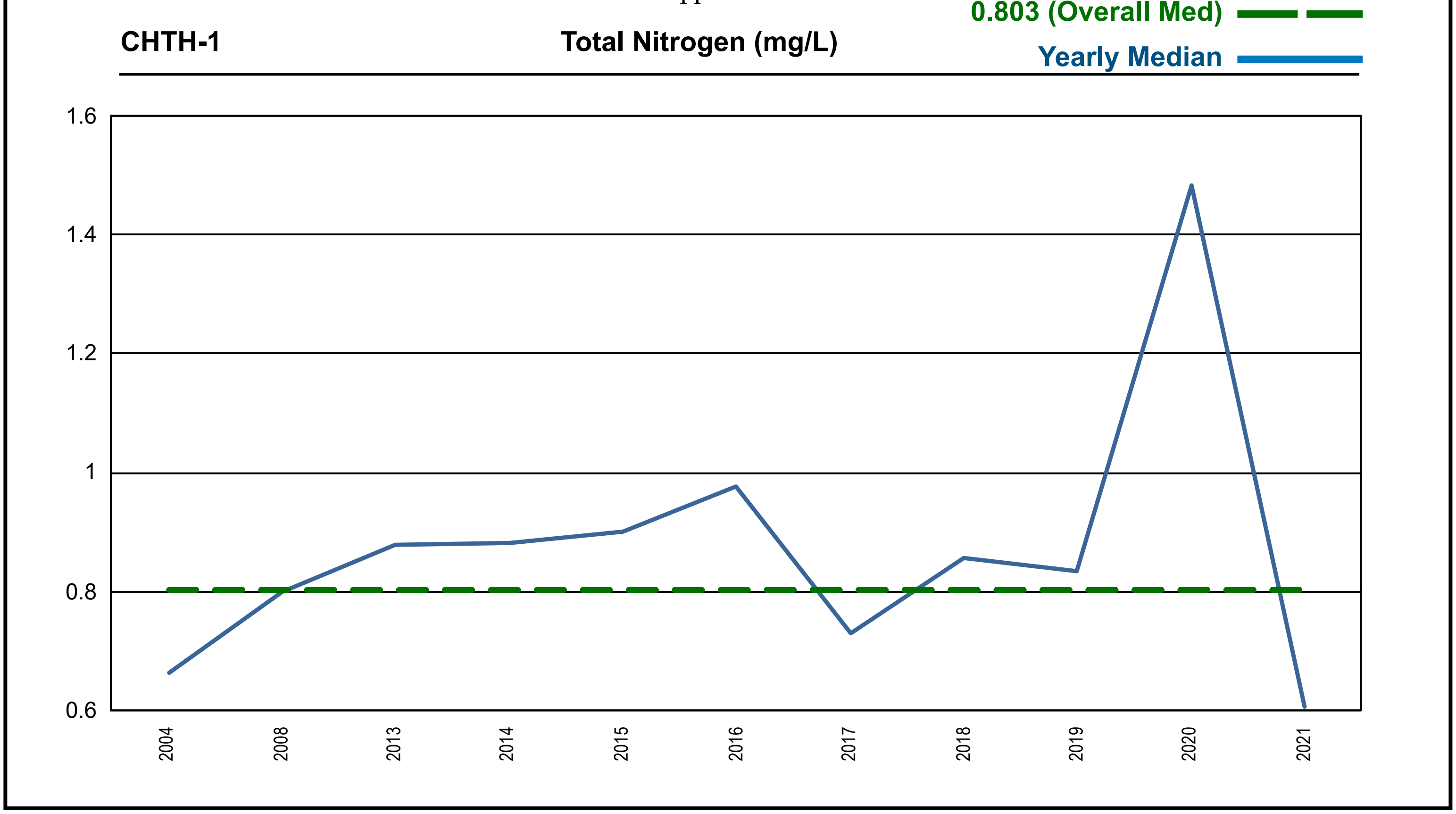
0.926 (Overall Med)
CHOT-1
Total Nitrogen (mg/L)
Yearly Median
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

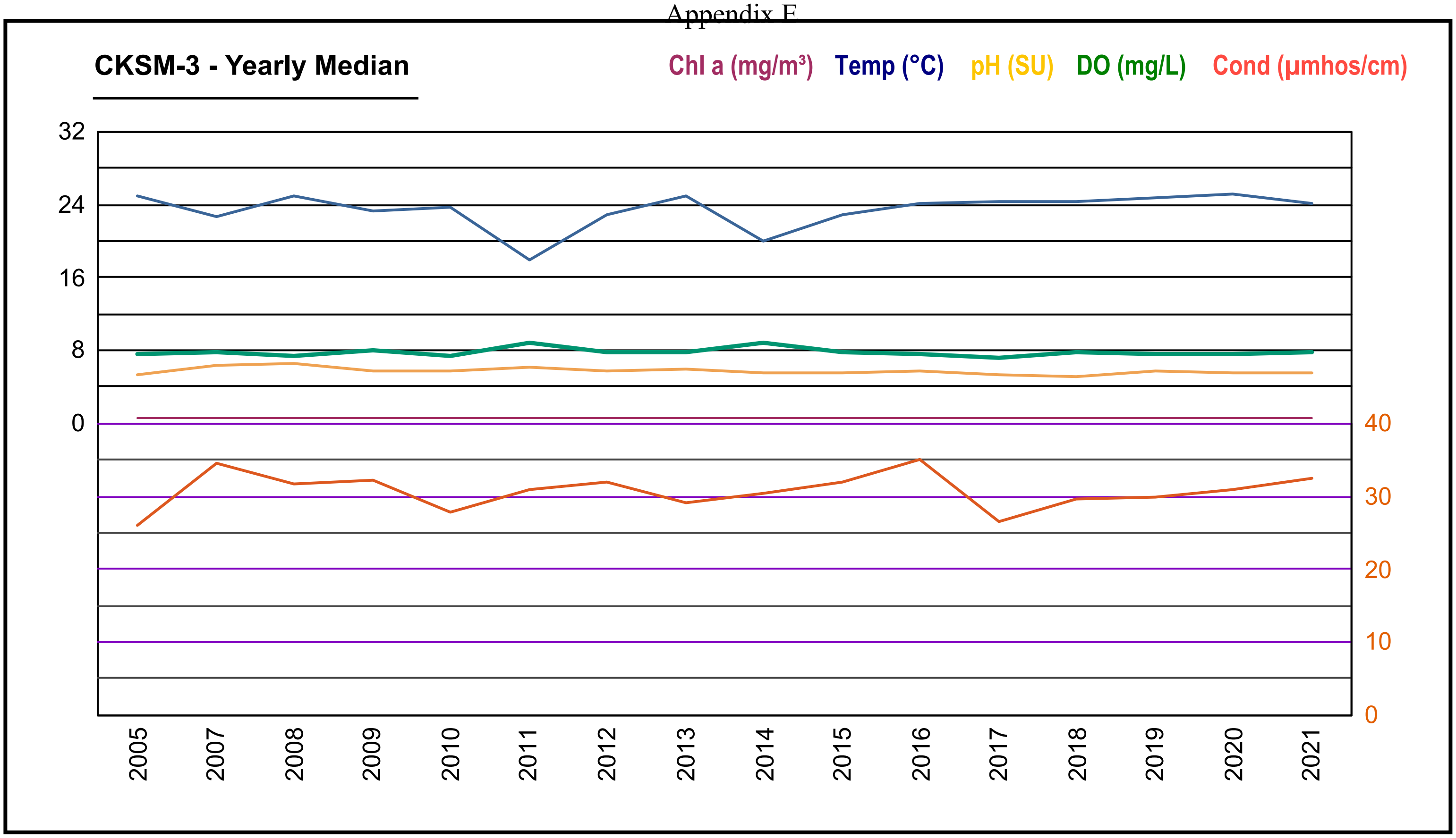

CHTH-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

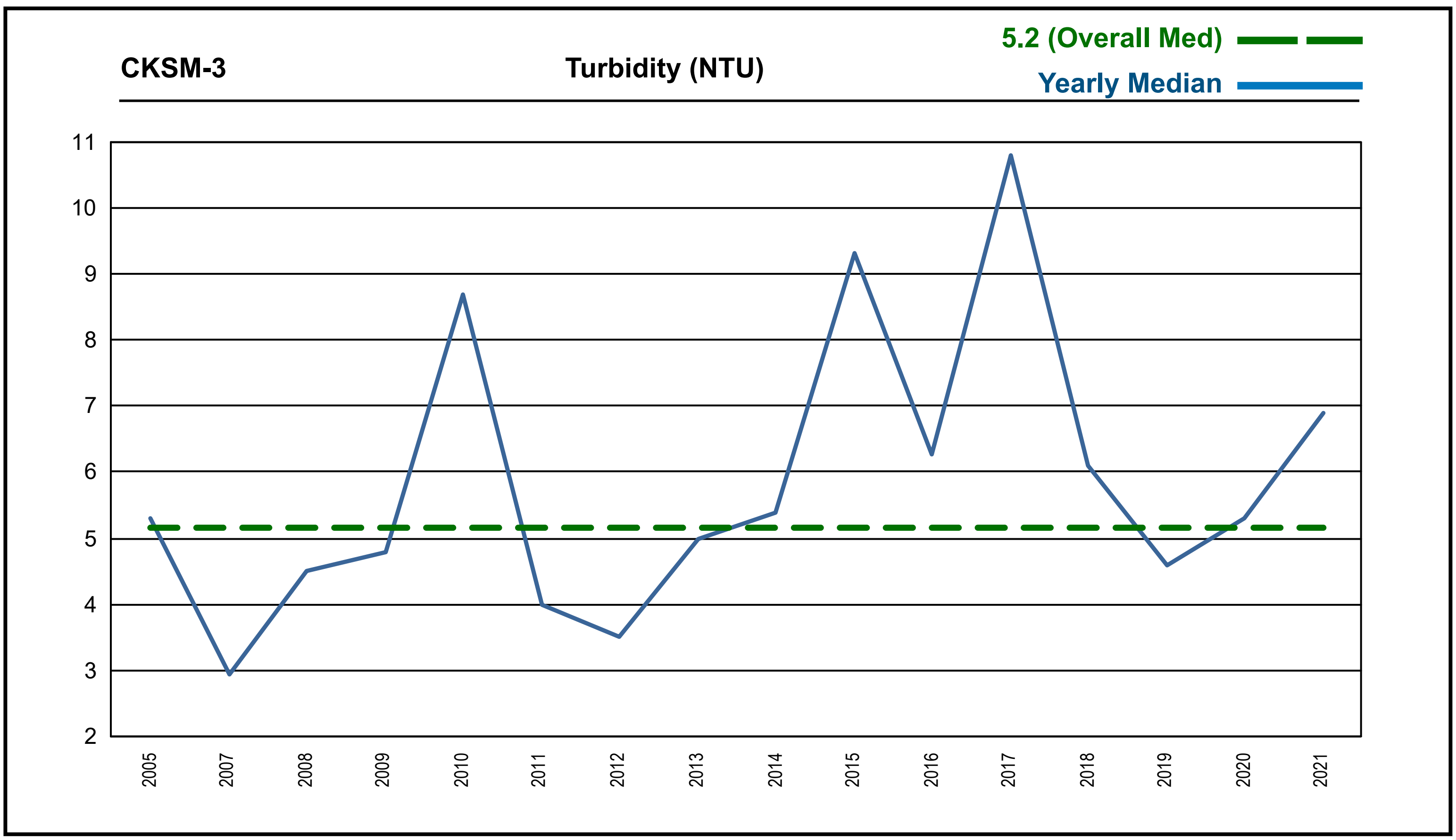

CHTH-1
Turbidity (NTU)
6.3 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
4
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

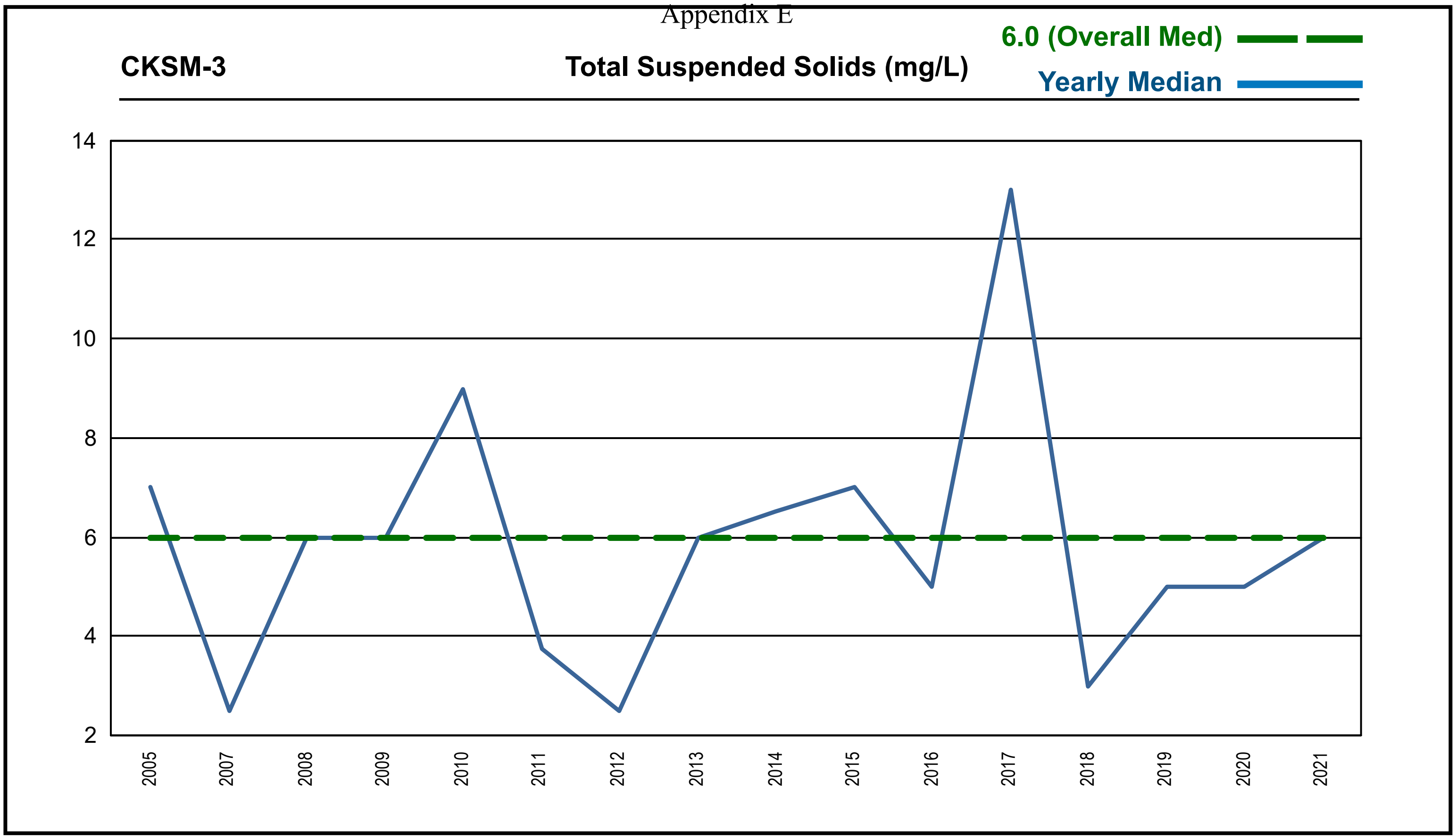

5.0 (Overall Med)
CHTH-1
Total Suspended Solids (mg/L)
Yearly Median
12
10
8
6
4
2
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021


0.025 (Overall Med)
CHTH-1
Total Phosphorus (mg/L)
Yearly Median
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

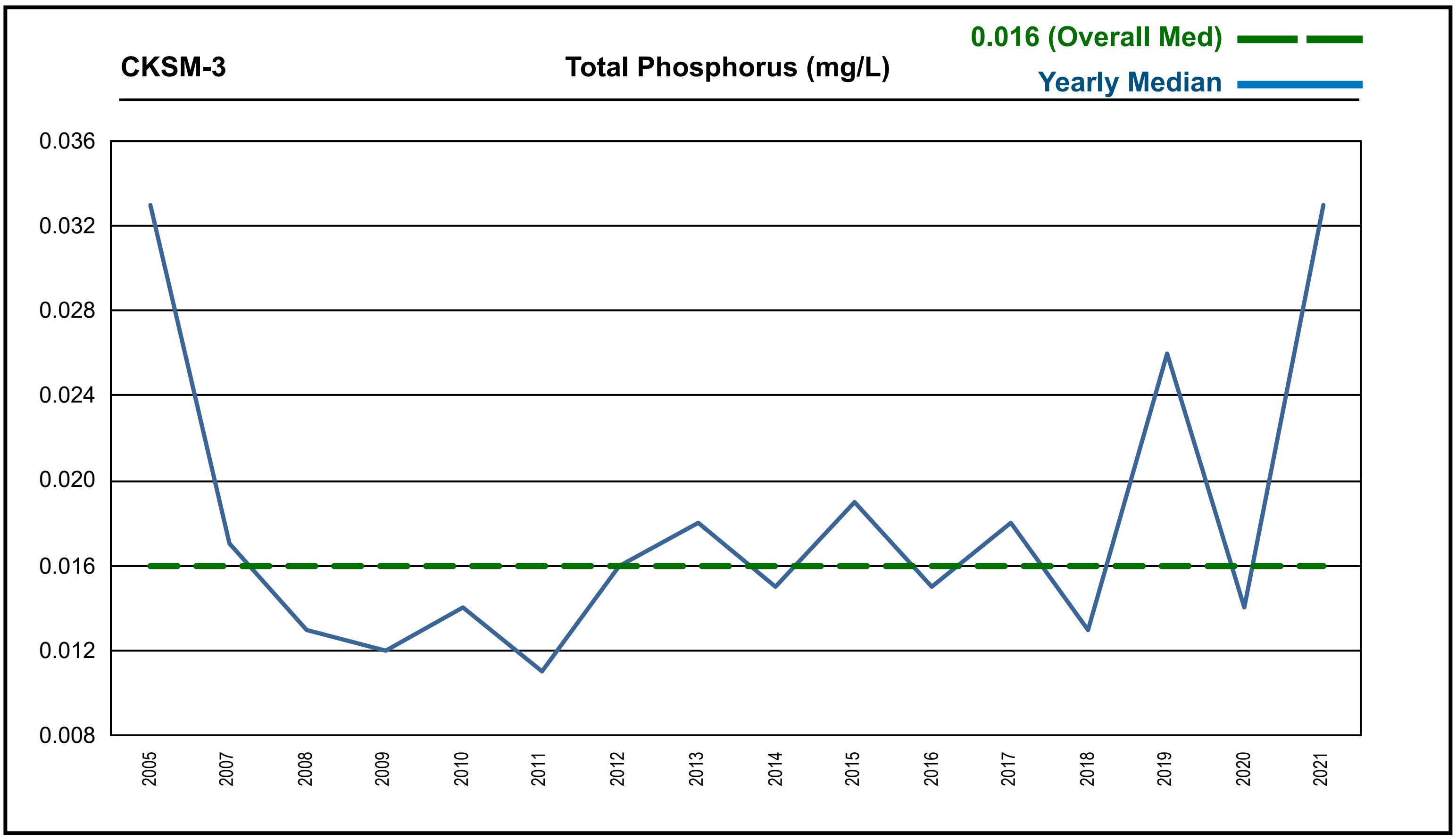

CHTH-1
Total Nitrogen (mg/L)
0.803 (Overall Med)
Yearly Median
1.6
1.4
1.2
1
0.8
0.6
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021


CKSM-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
40
30
20
10
0
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

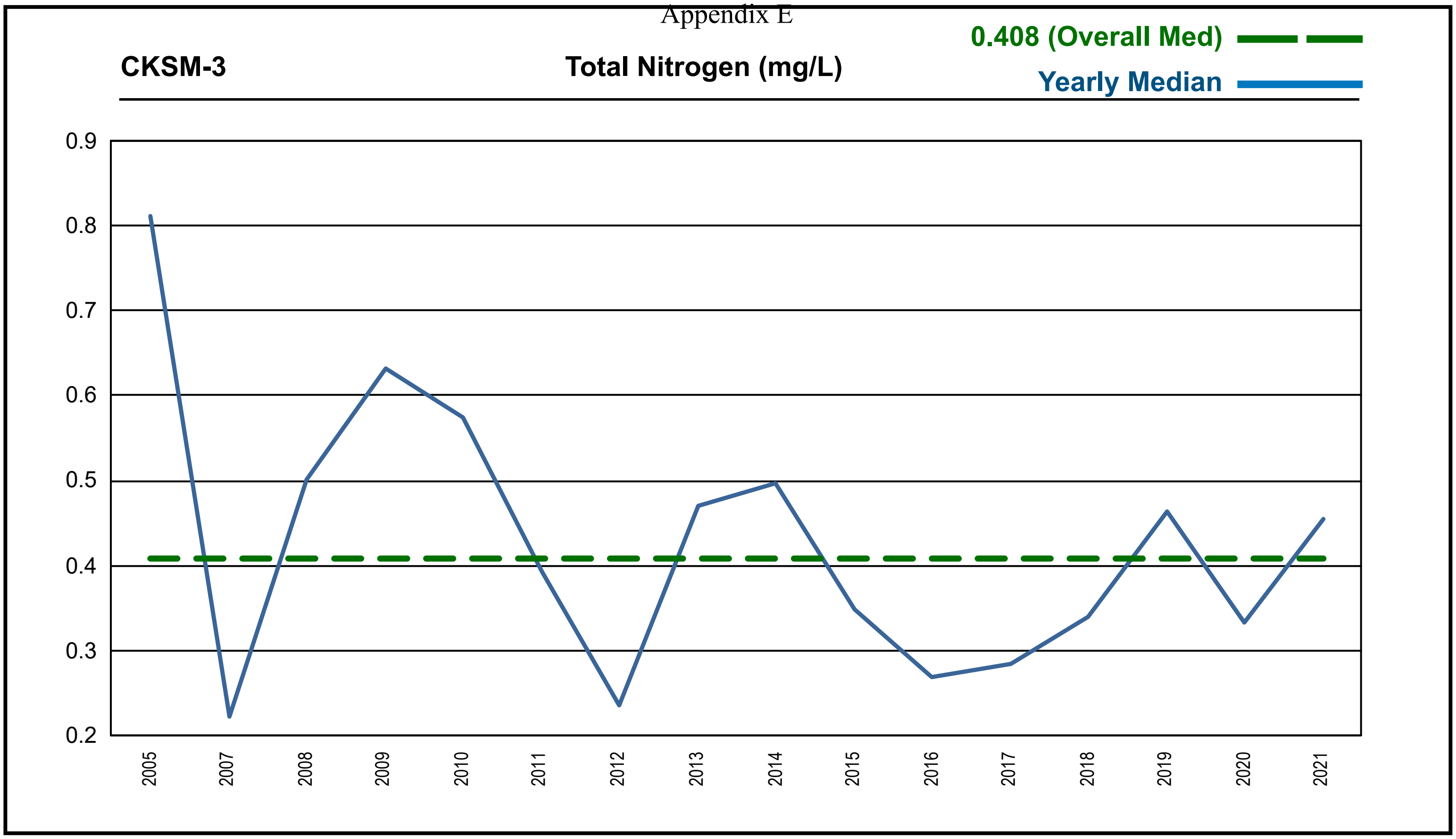

CKSM-3
Turbidity (NTU)
5.2 (Overall Med)
Yearly Median
11
10
9
8
7
6
5
4
3
2
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

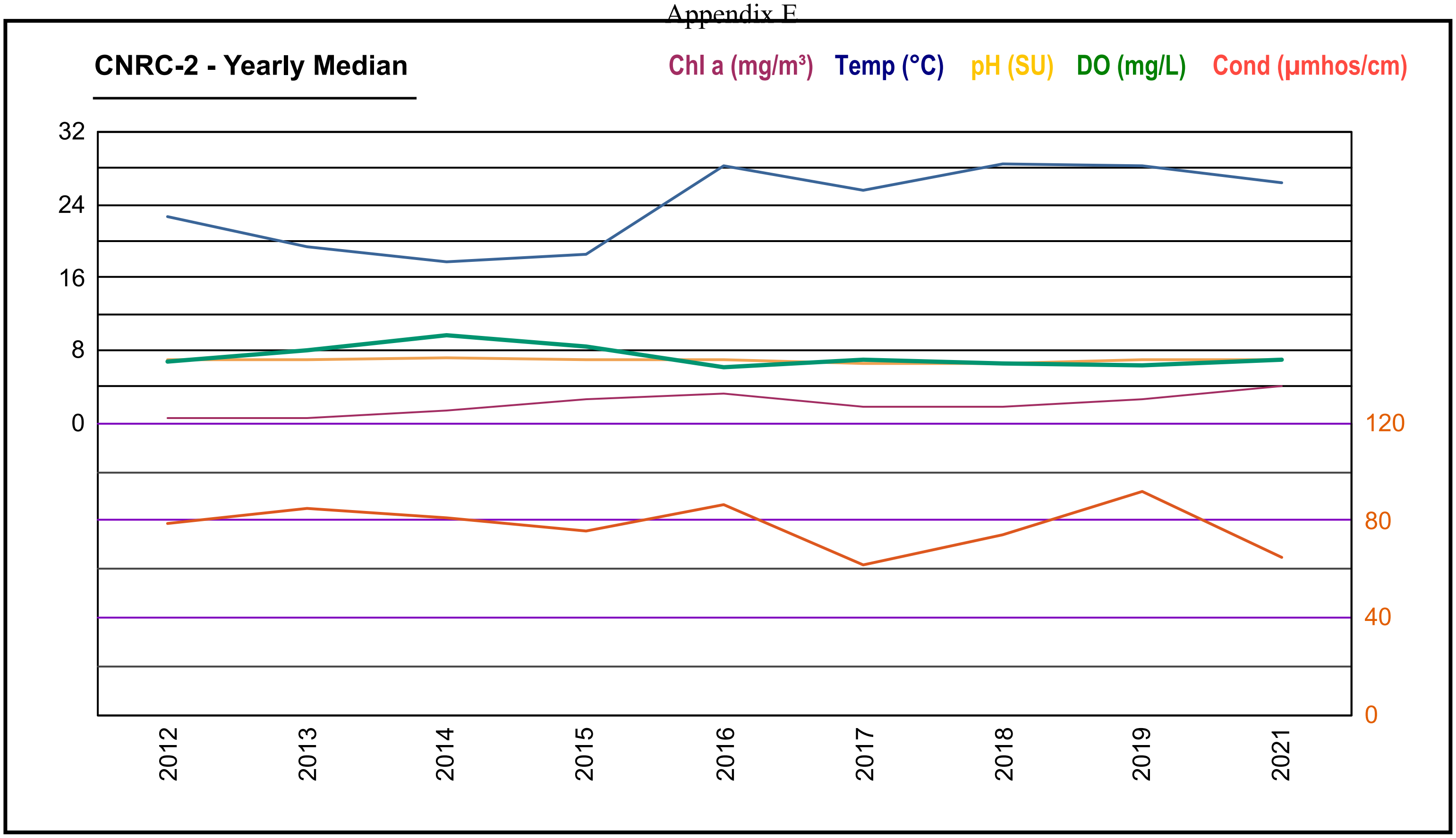


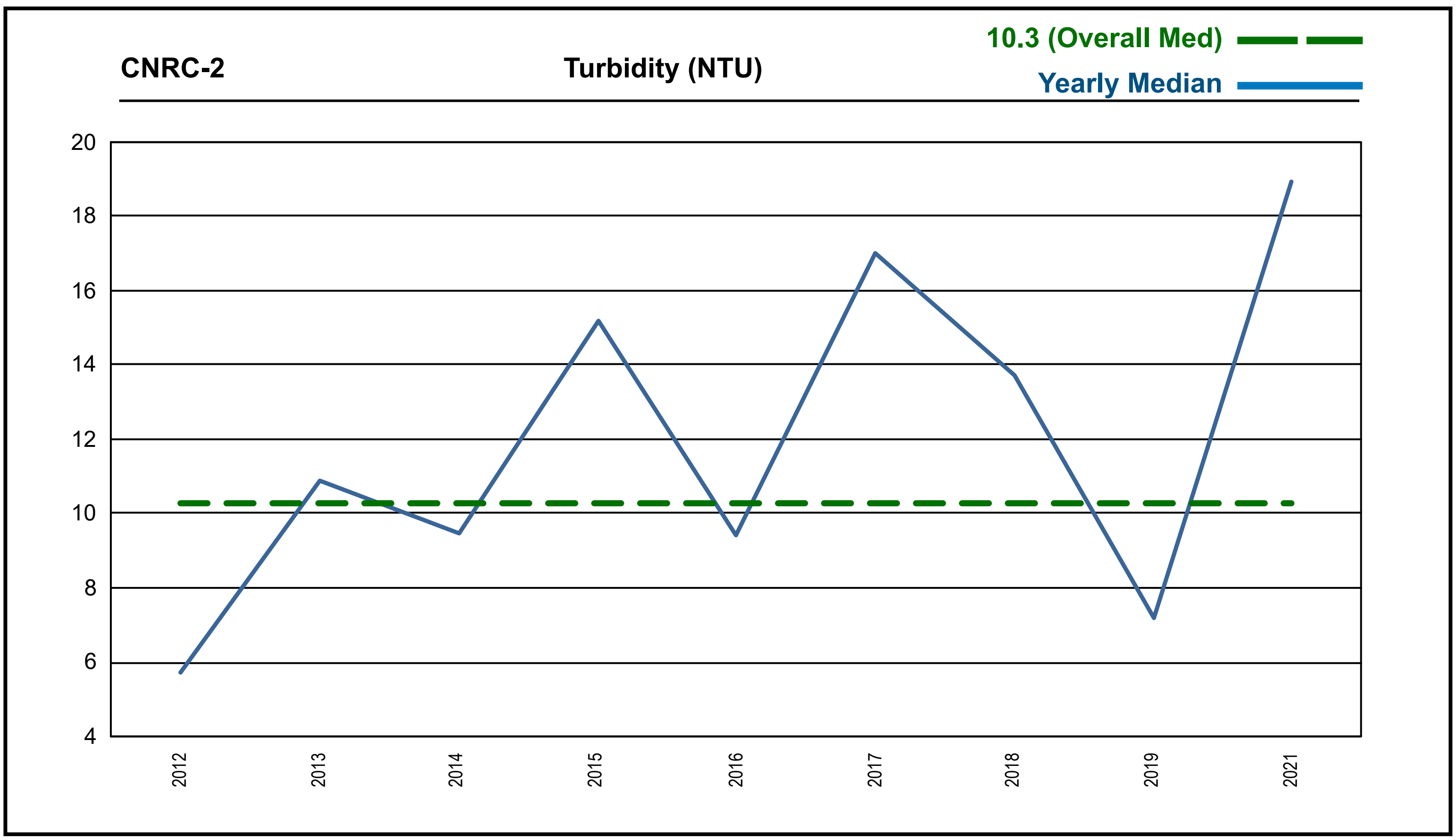
6.0 (Overall Med)
CKSM-3
Total Suspended Solids (mg/L)
Yearly Median
14
12
10
8
6
4
2
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

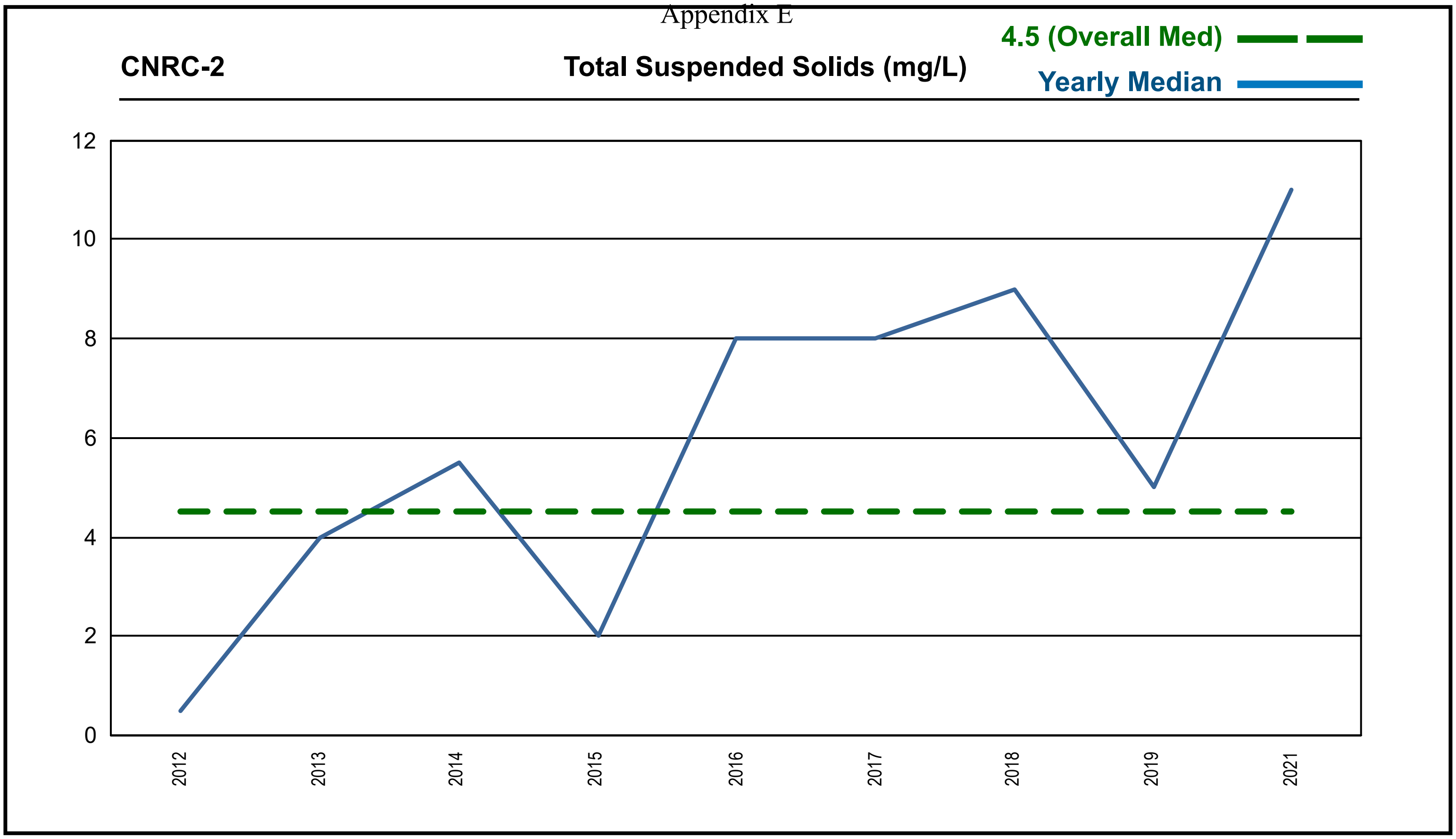


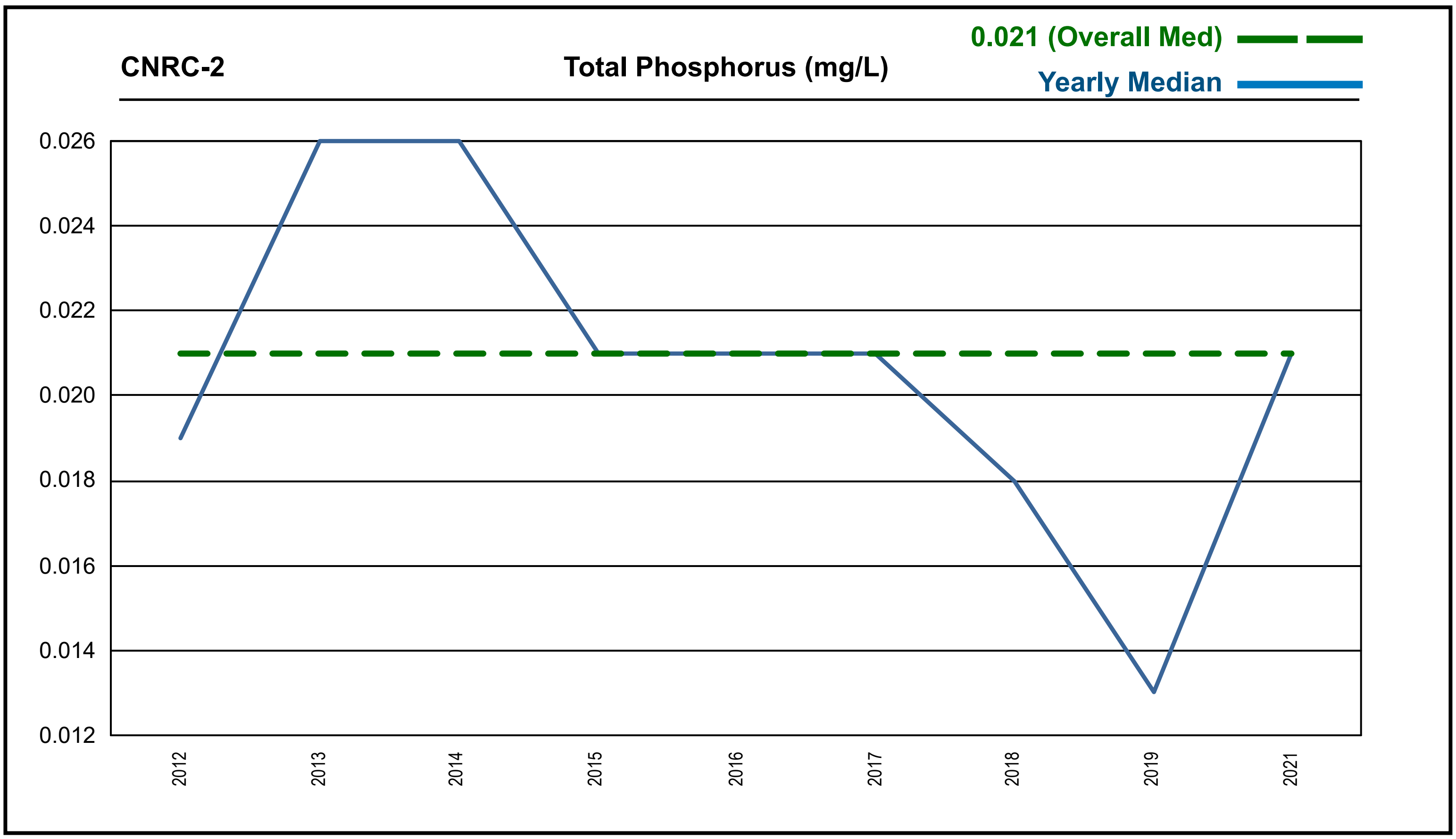
0.016 (Overall Med)
CKSM-3
Total Phosphorus (mg/L)
Yearly Median
0.036
0.032
0.028
0.024
0.020
0.016
0.012
0.008
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

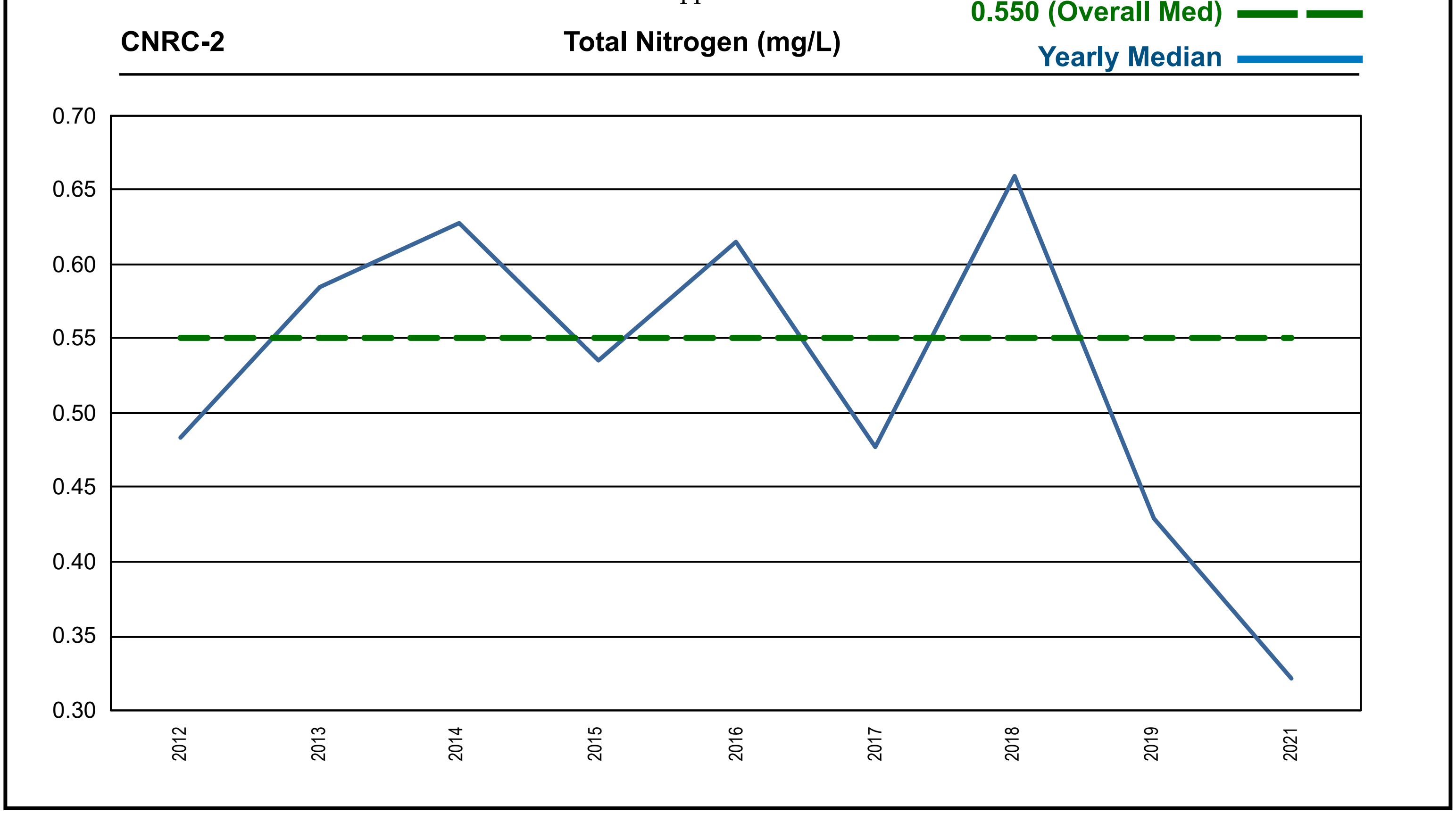

CKSM-3
Total Nitrogen (mg/L)
0.408 (Overall Med)
Yearly Median
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


CNRC-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
2012
2013
2014
2015
2016
2017
2018
2019
2021

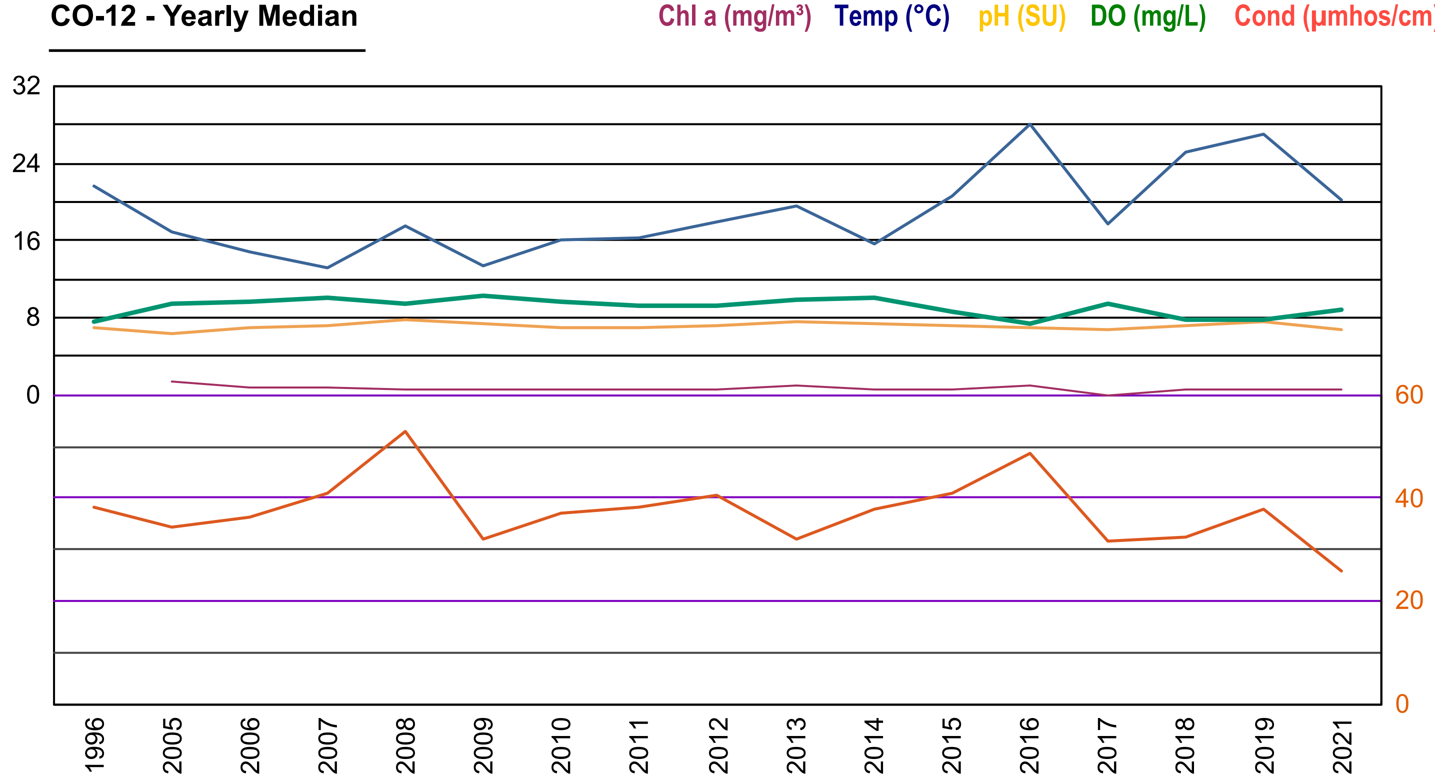

CNRC-2
Turbidity (NTU)
10.3 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2012
2013
2014
2015
2016
2017
2018
2019
2021


4.5 (Overall Med)
Yearly Median
CNRC-2
Total Suspended Solids (mg/L)
12
10
8
6
4
2
0
2012
2013
2014
2015
2016
2017
2018
2019
2021

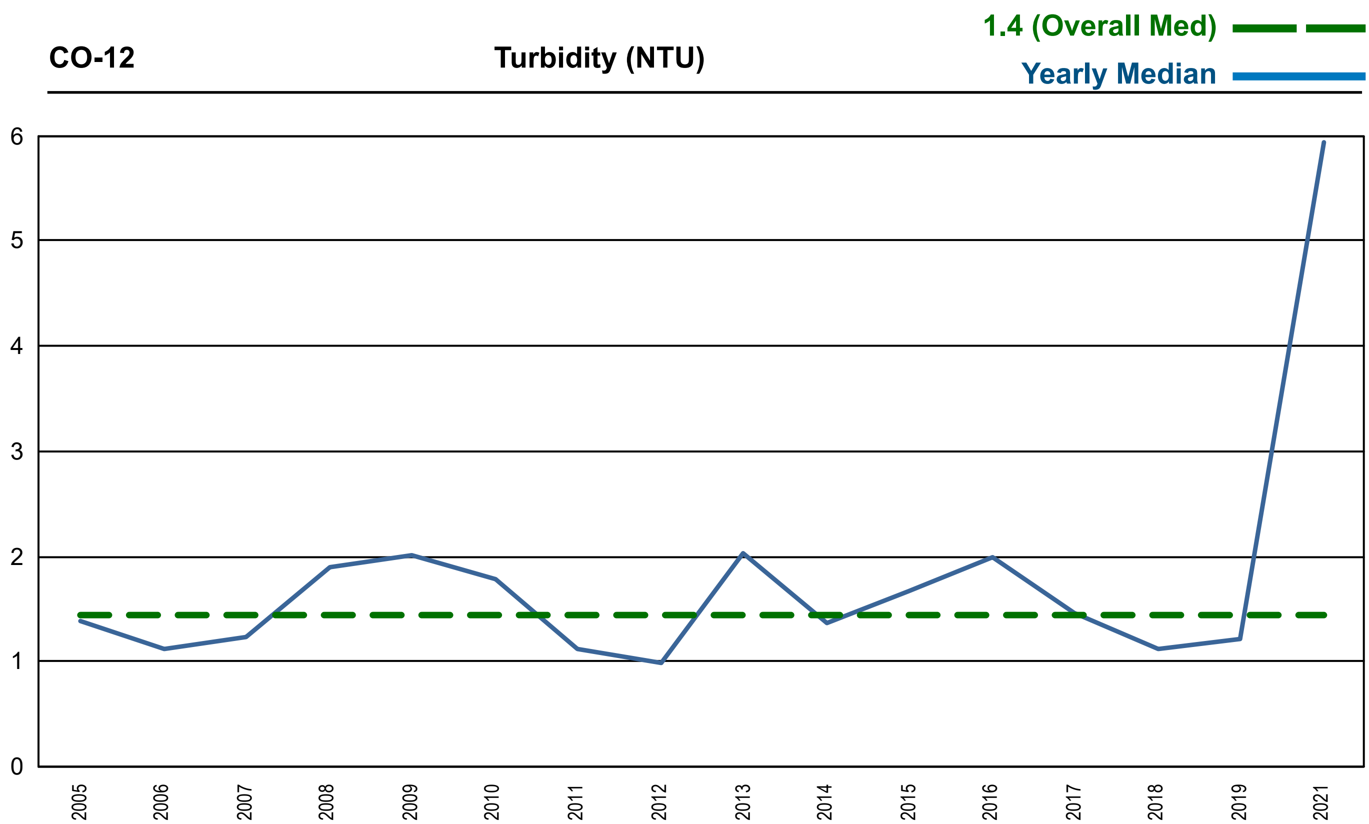

0.021 (Overall Med)
Yearly Median
CNRC-2
Total Phosphorus (mg/L)
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
2012
2013
2014
2015
2016
2017
2018
2019
2021

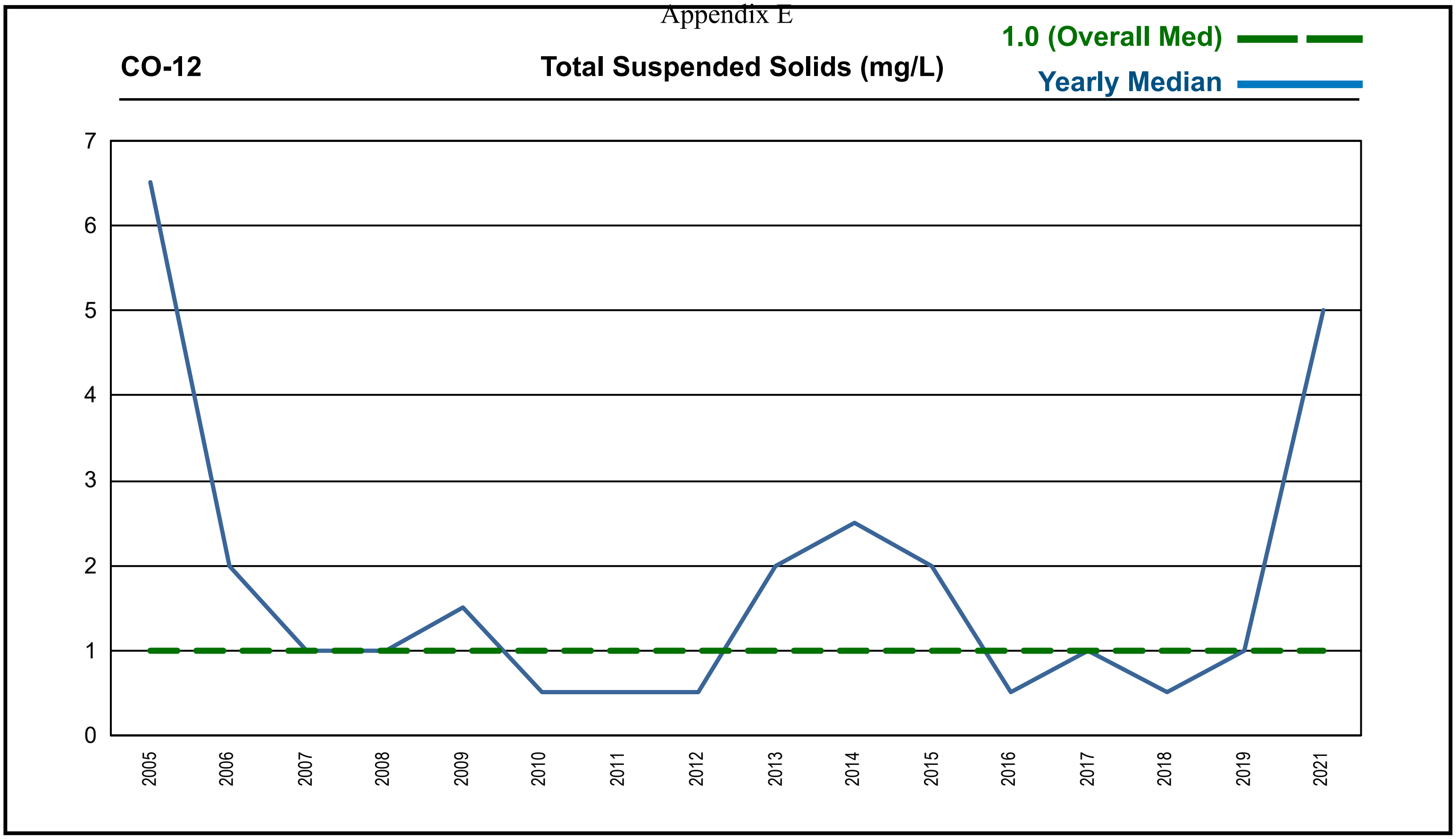

CNRC-2
Total Nitrogen (mg/L)
0.550 (Overall Med)
Yearly Median
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
2012
2013
2014
2015
2016
2017
2018
2019
2021

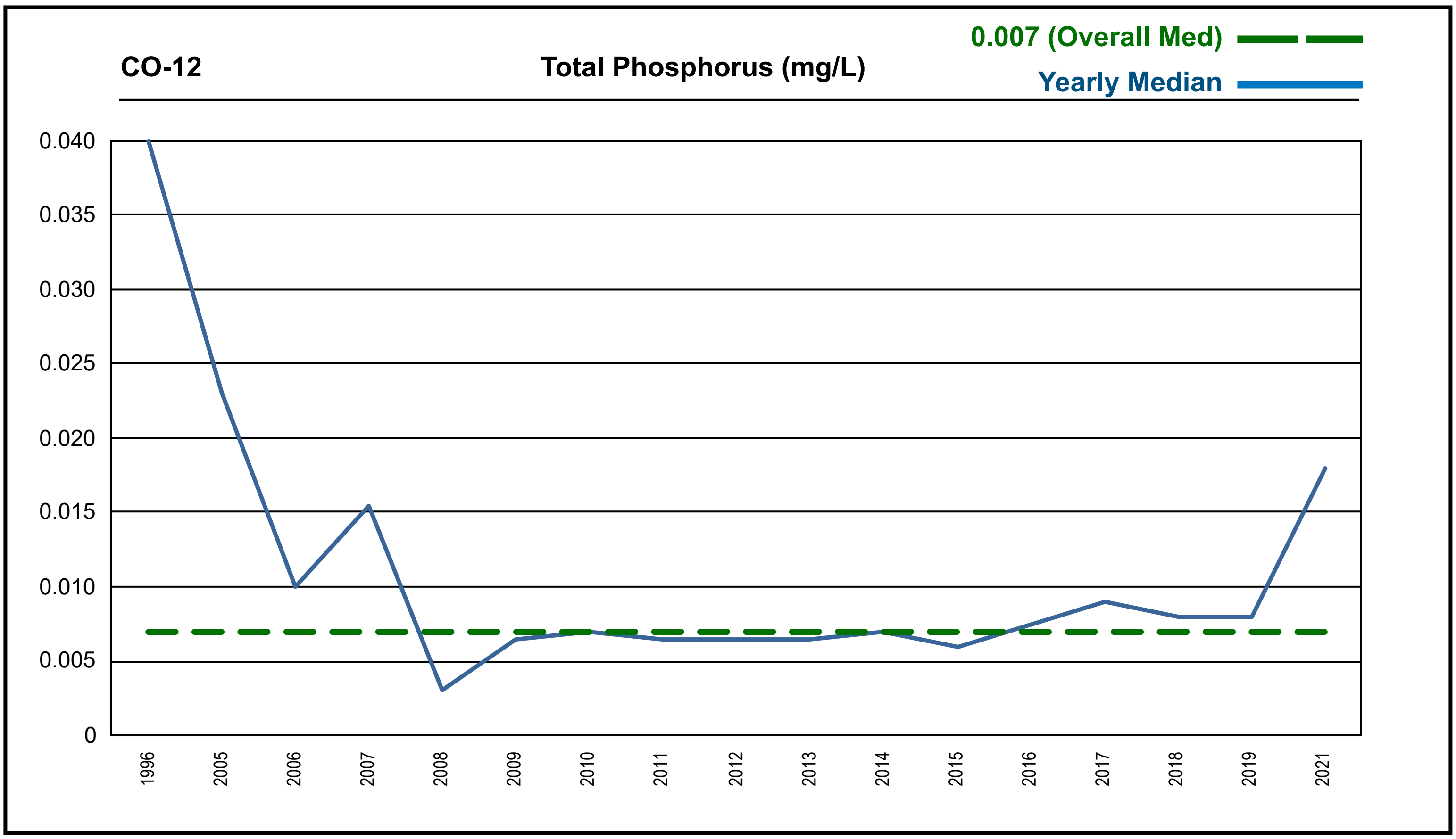
CO-12 - Yearly Median

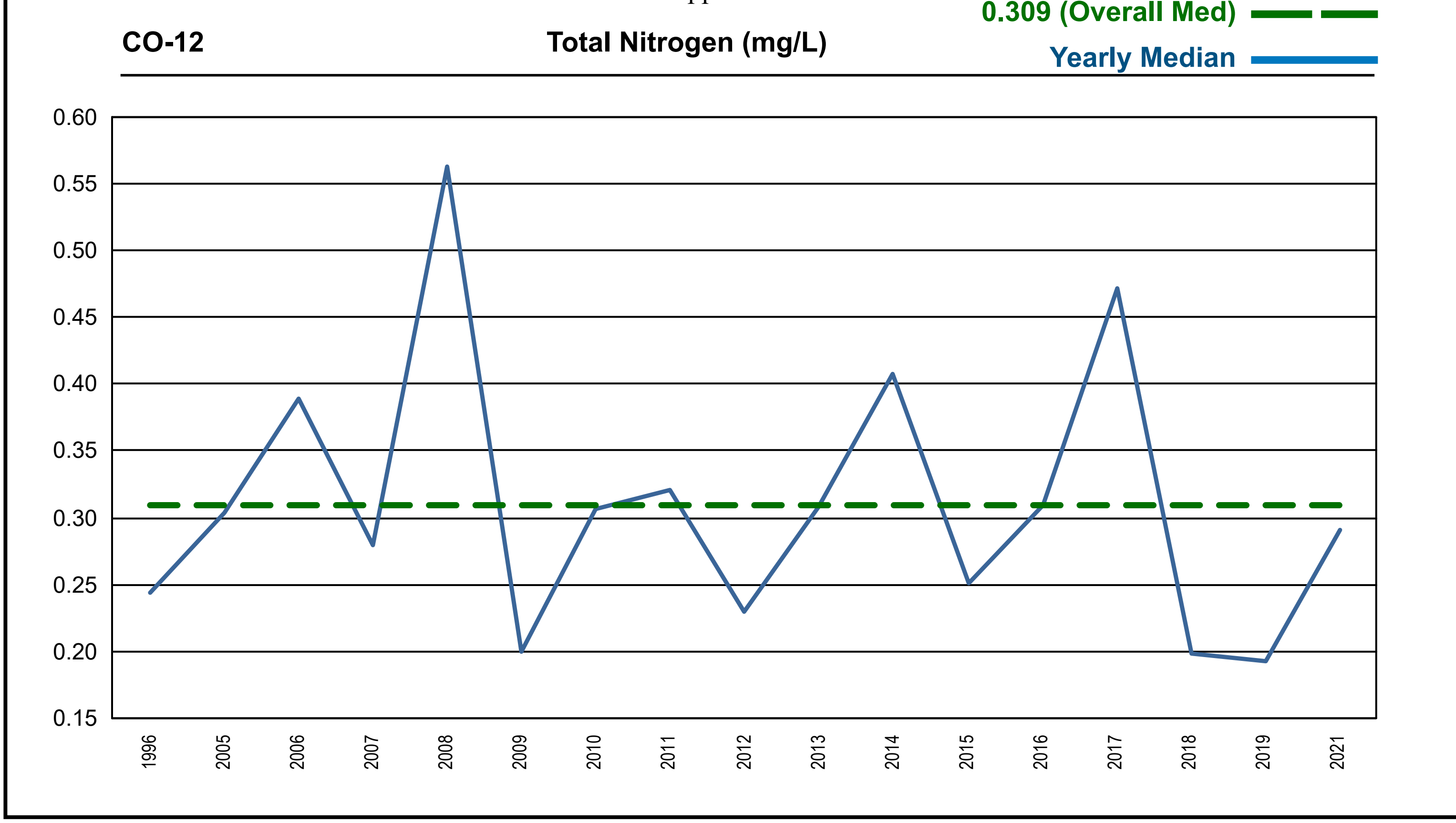


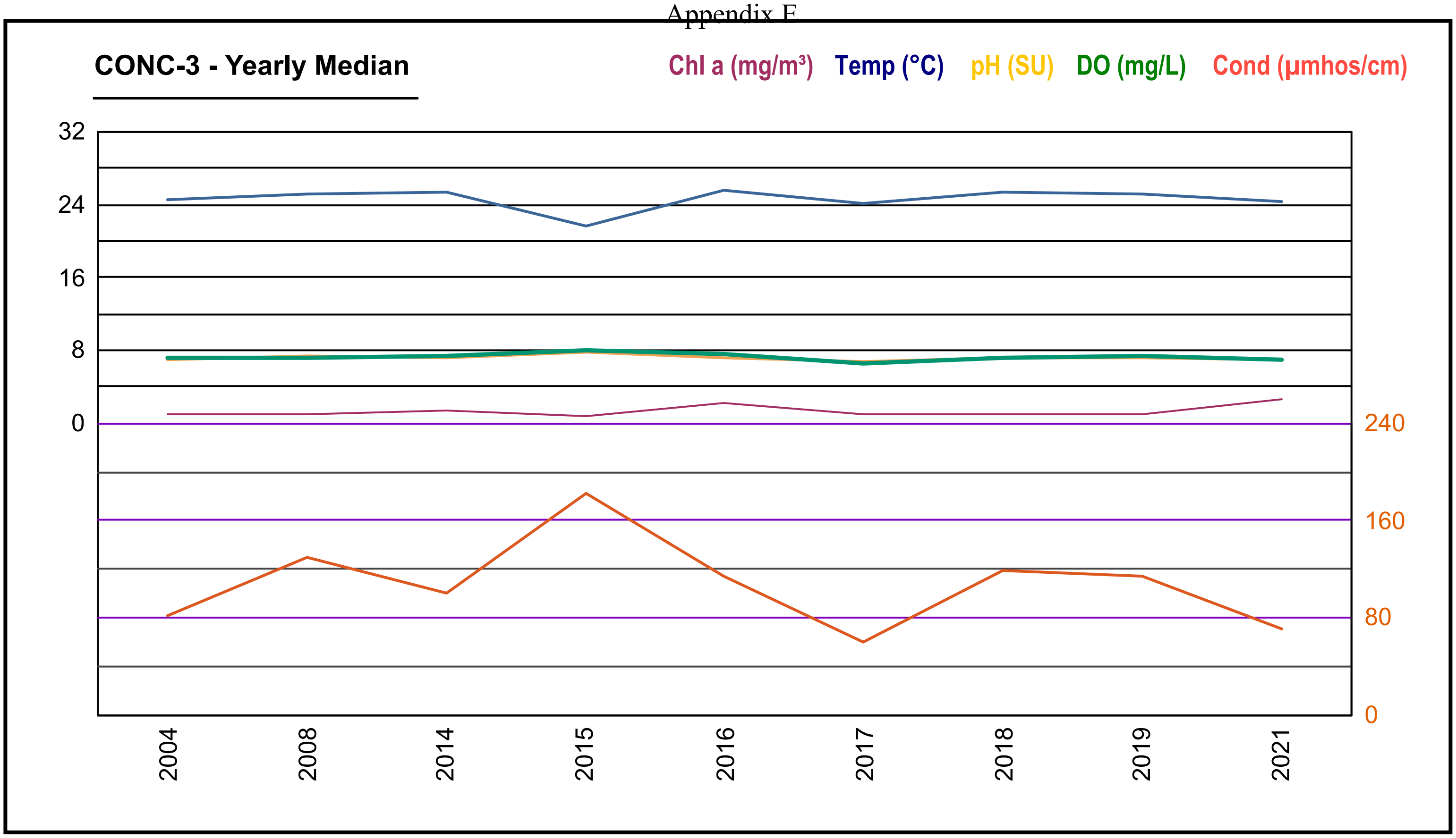
CO-12 **Turbidity (NTU)**

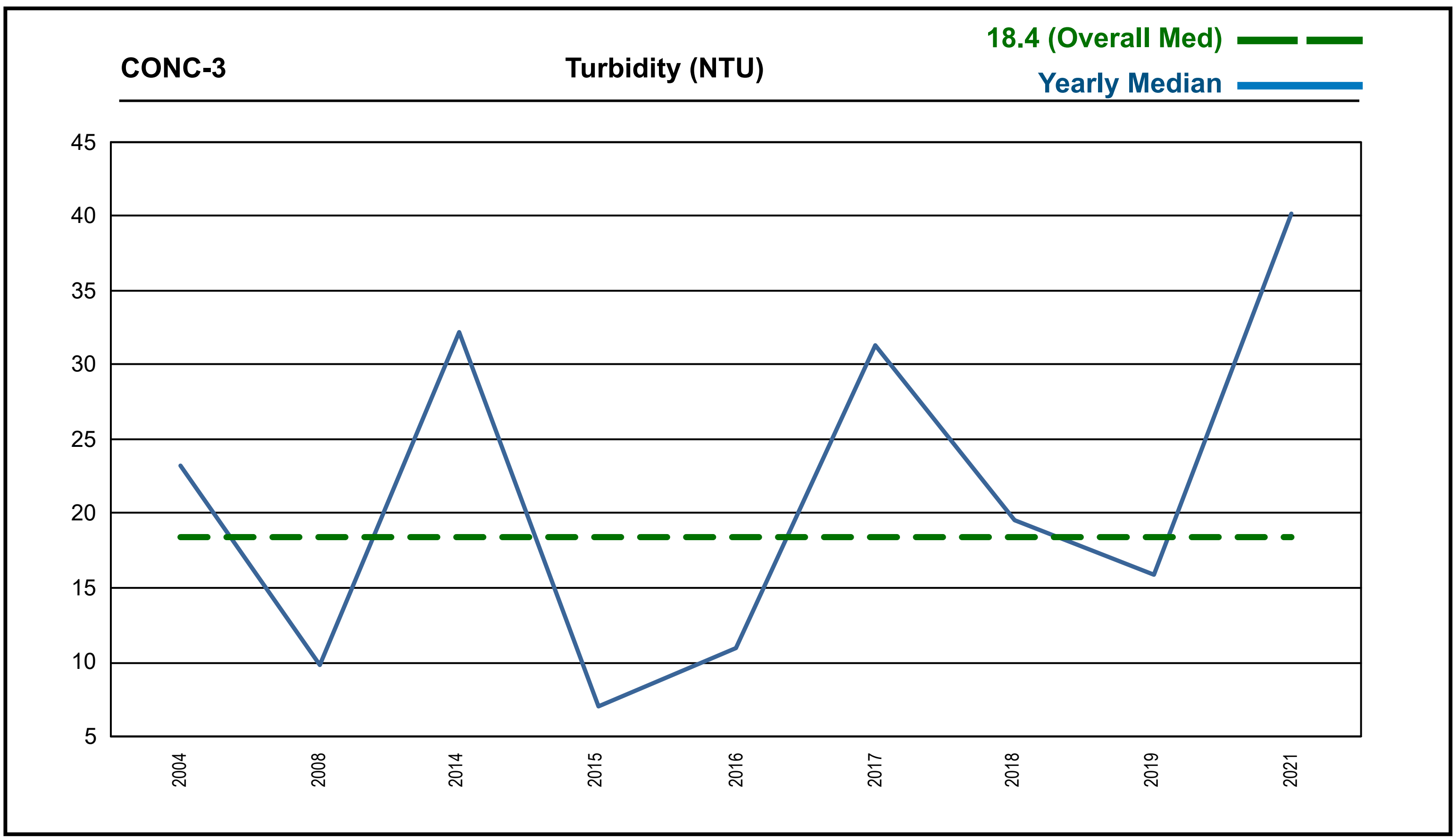


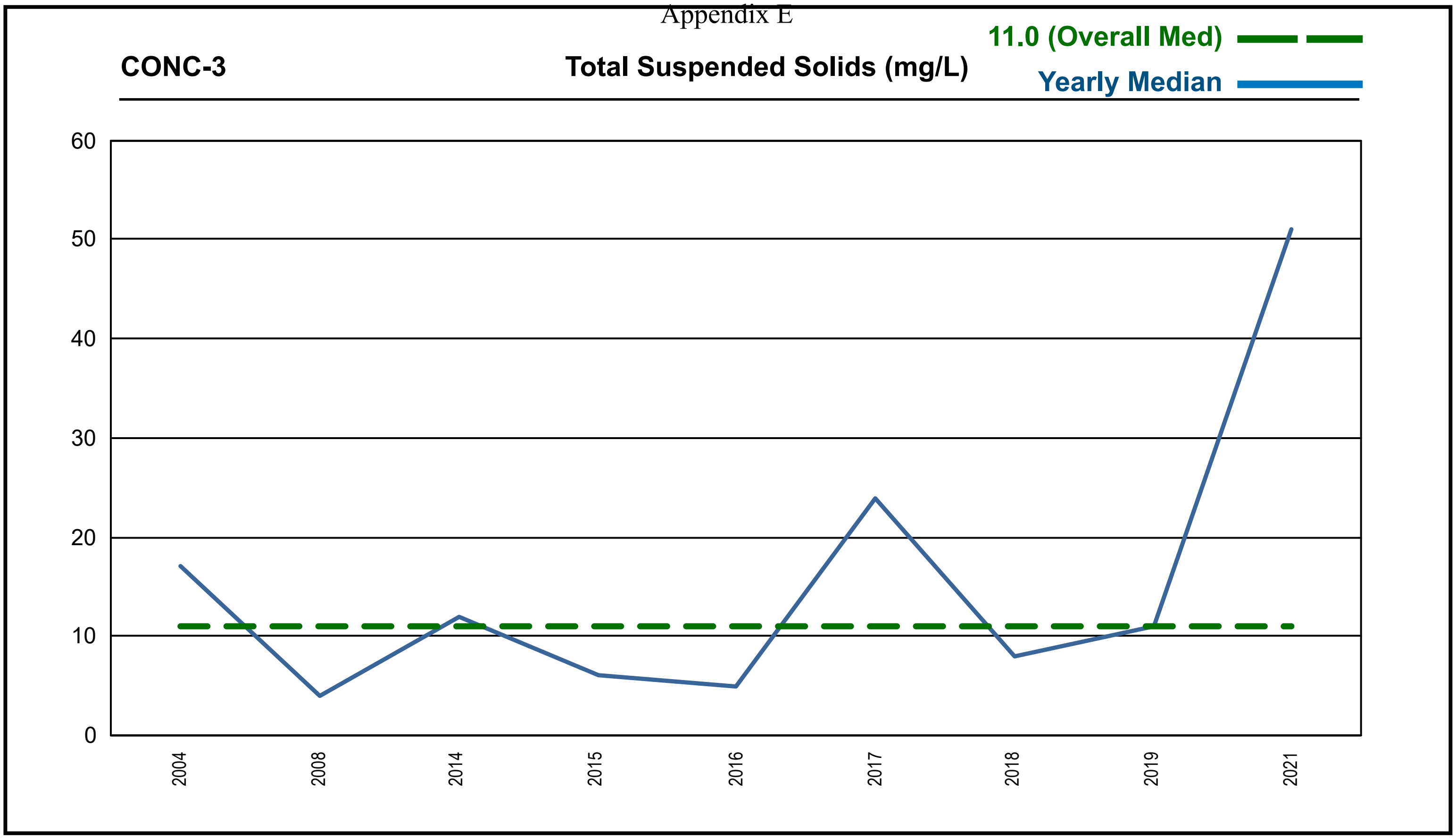

1.0 (Overall Med)
CO-12
Total Suspended Solids (mg/L)
Yearly Median
7
6
5
4
3
2
1
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

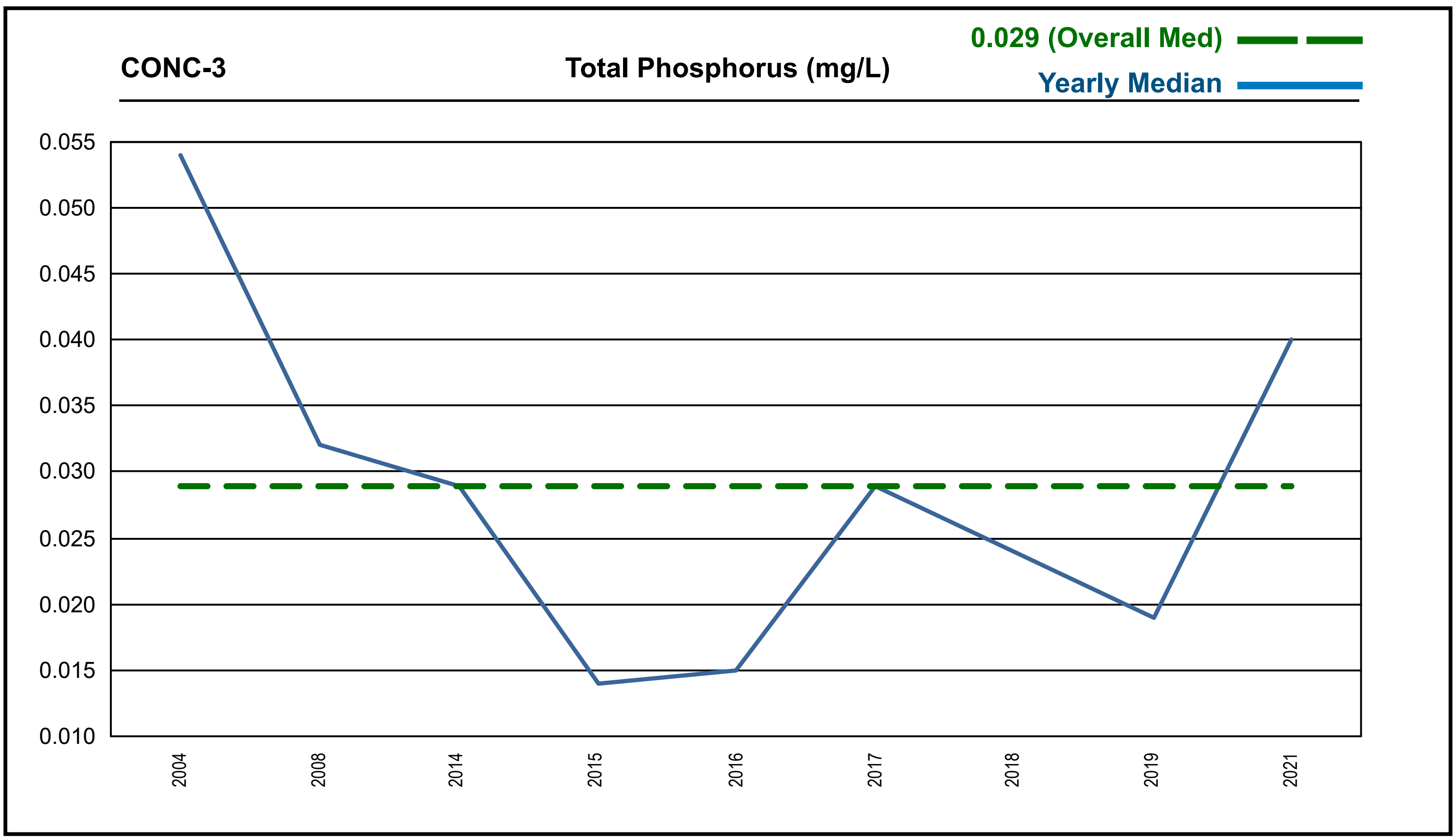

0.007 (Overall Med)
CO-12
Total Phosphorus (mg/L)
Yearly Median
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

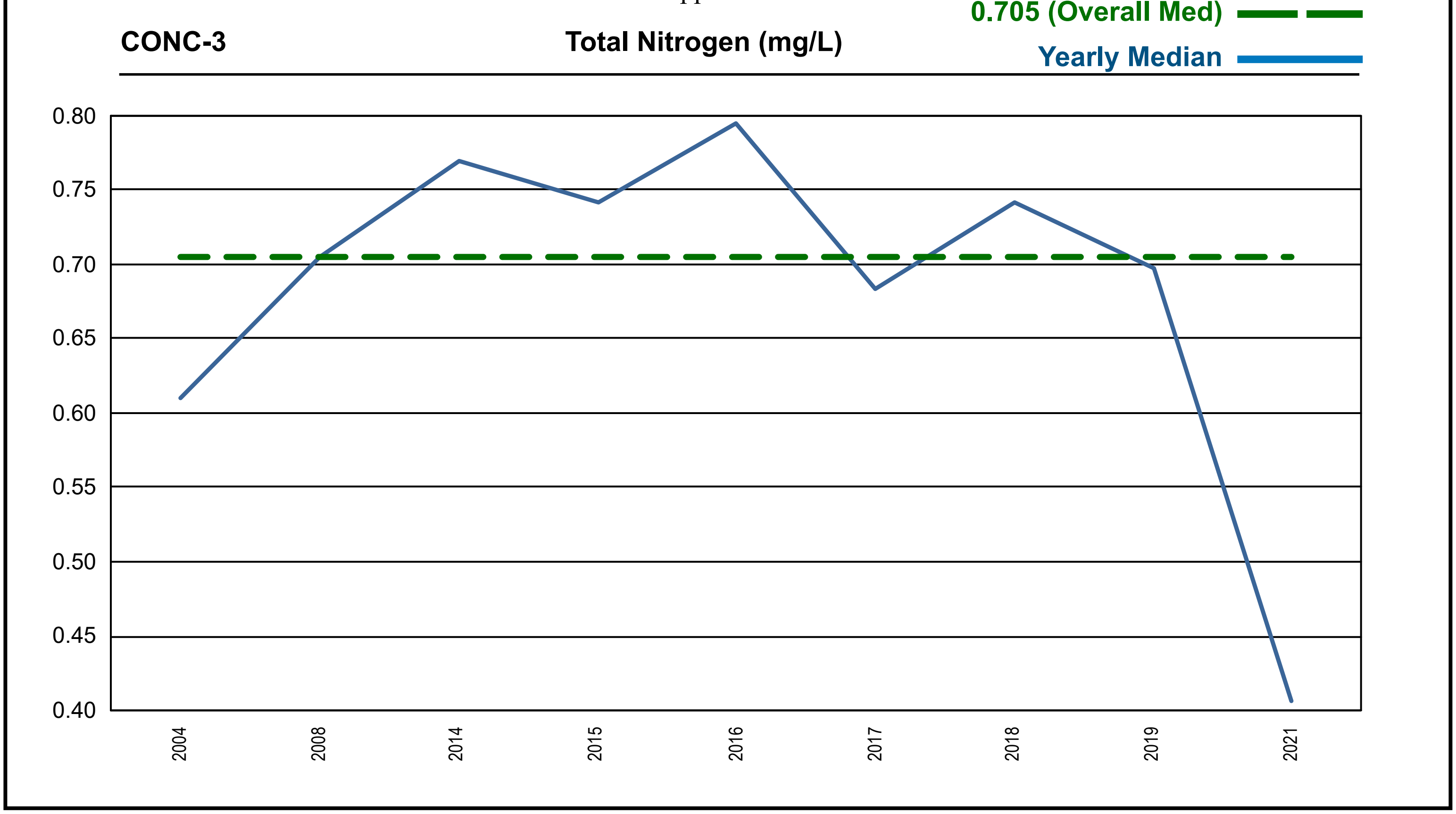

CO-12
Total Nitrogen (mg/L)
0.309 (Overall Med)
Yearly Median
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


CONC-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2004
2008
2014
2015
2016
2017
2018
2019
2021

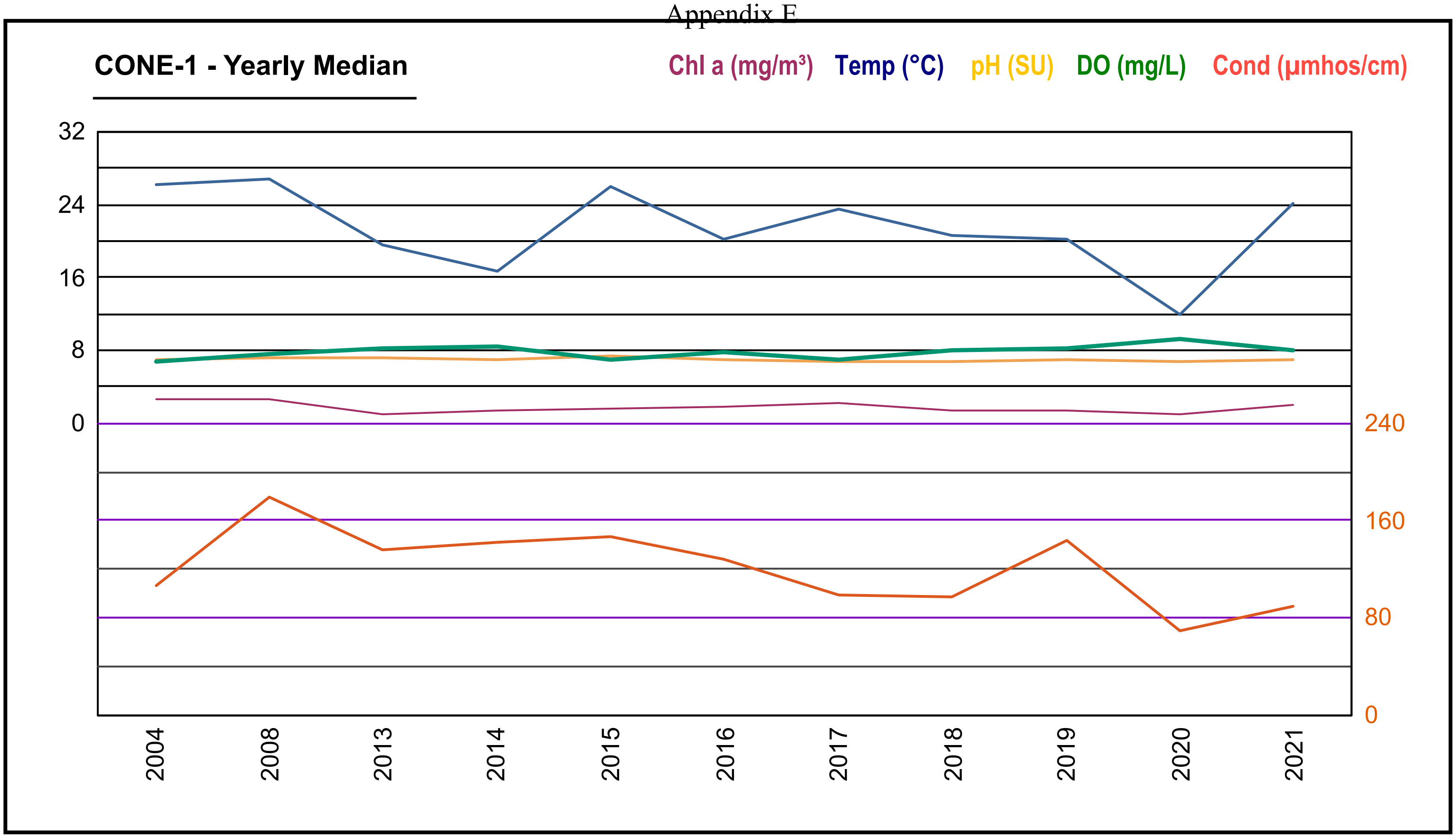

CONC-3
Turbidity (NTU)
18.4 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
2004
2008
2014
2015
2016
2017
2018
2019
2021

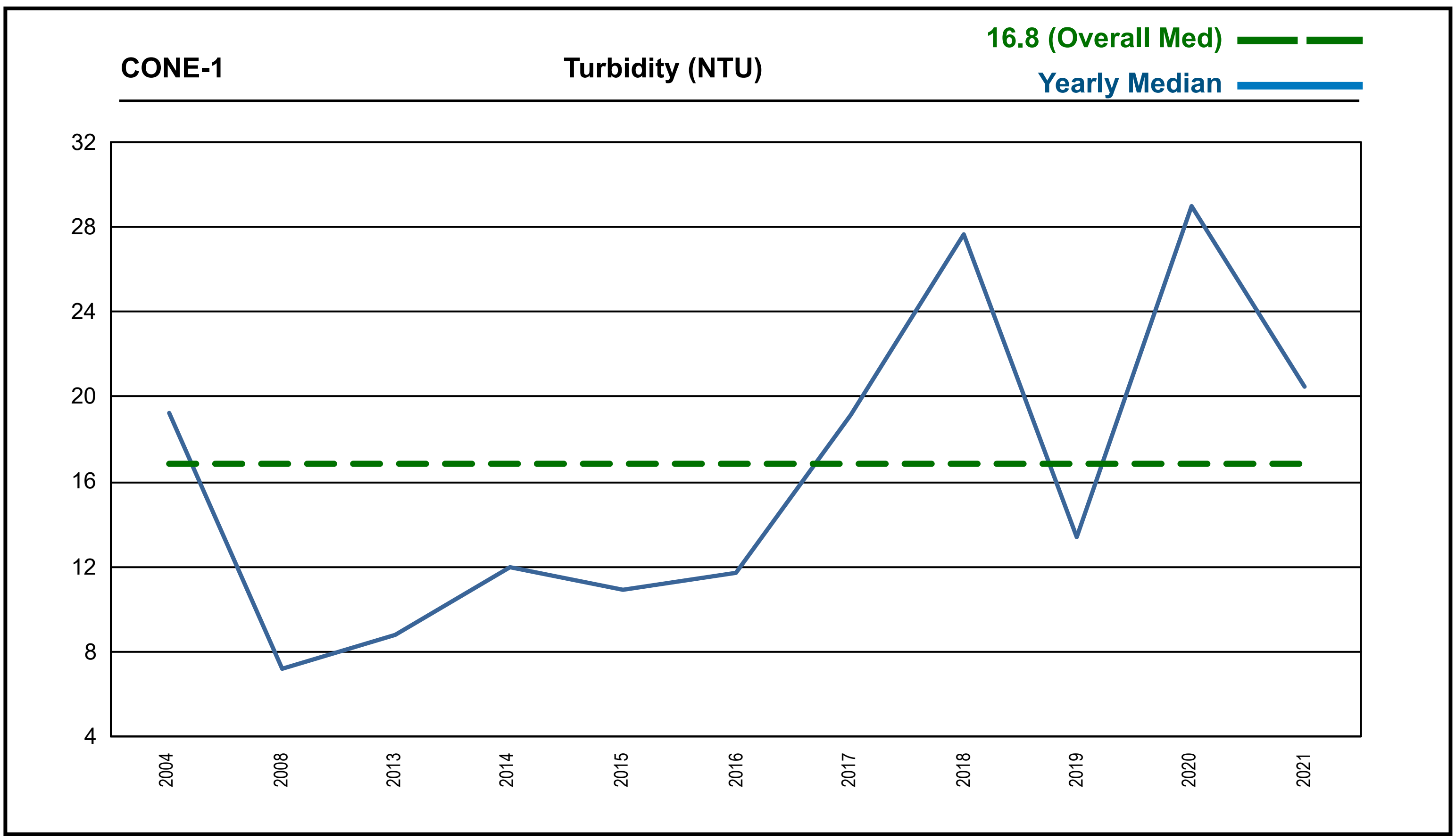

11.0 (Overall Med)
CONC-3
Total Suspended Solids (mg/L)
Yearly Median
60
50
40
30
20
10
0
2004
2008
2014
2015
2016
2017
2018
2019
2021

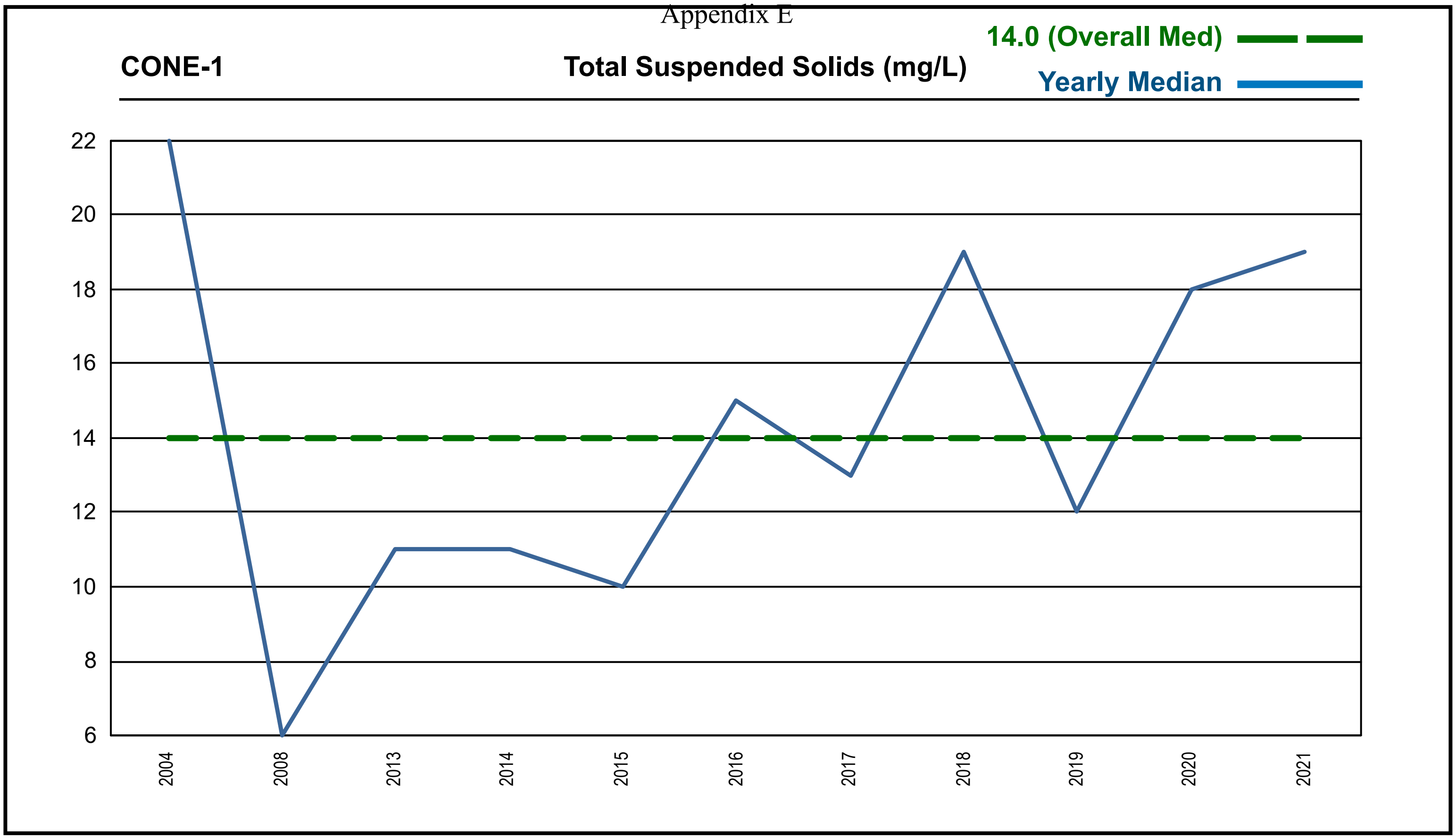

0.029 (Overall Med)
CONC-3
Total Phosphorus (mg/L)
Yearly Median
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2004
2008
2014
2015
2016
2017
2018
2019
2021

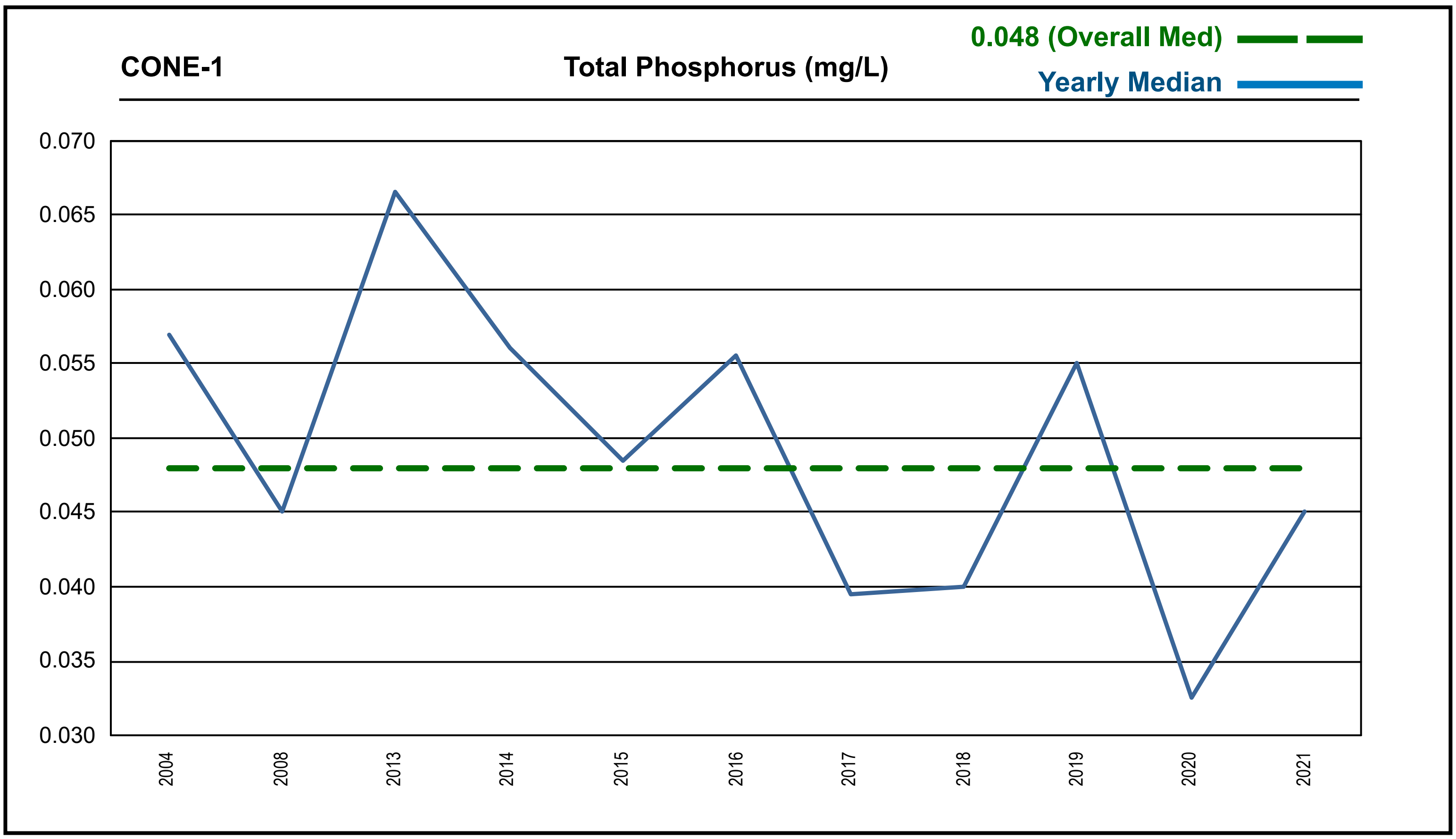


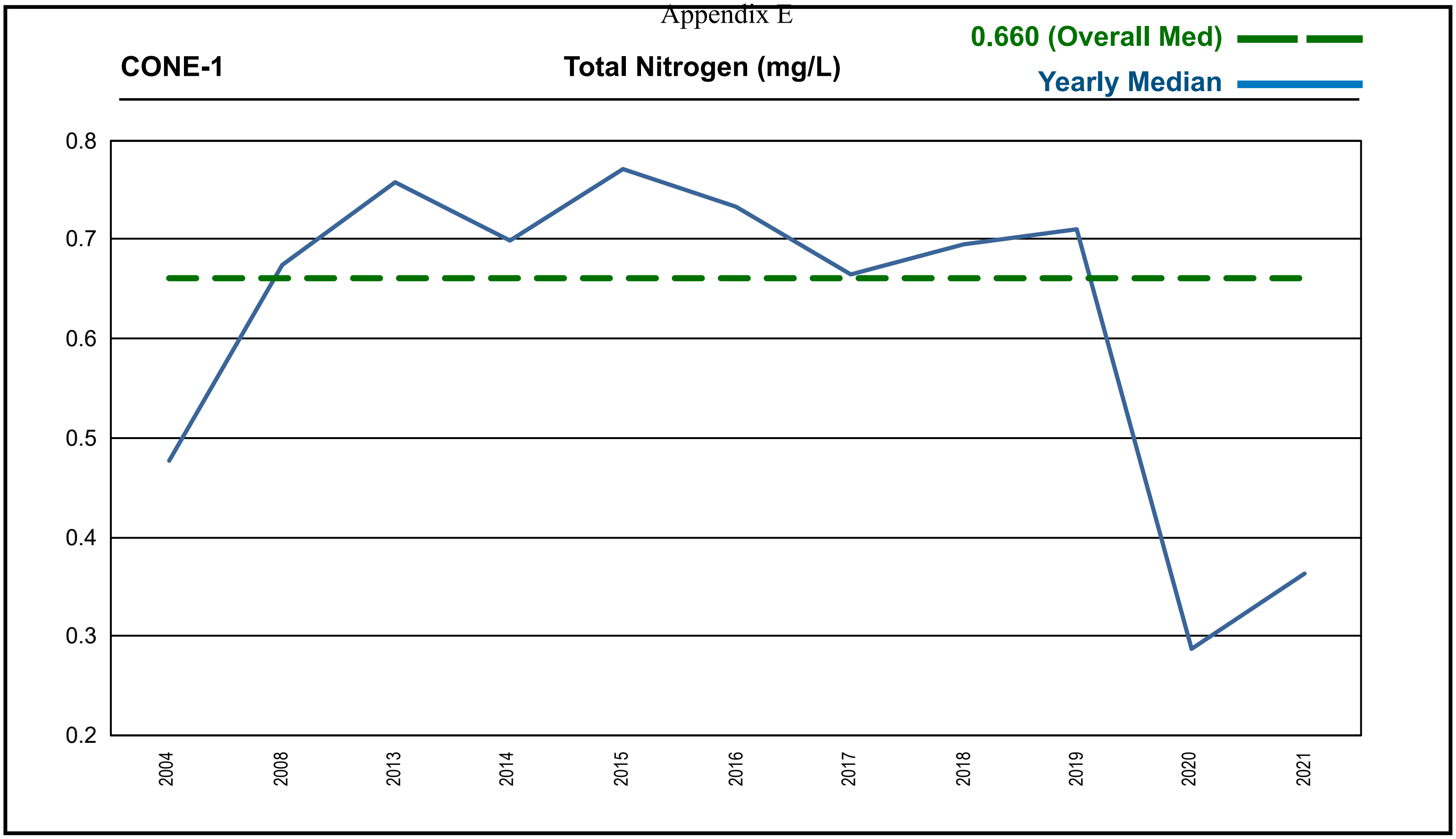
CONC-3
Total Nitrogen (mg/L)
0.705 (Overall Med)
Yearly Median
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
2004
2008
2014
2015
2016
2017
2018
2019
2021

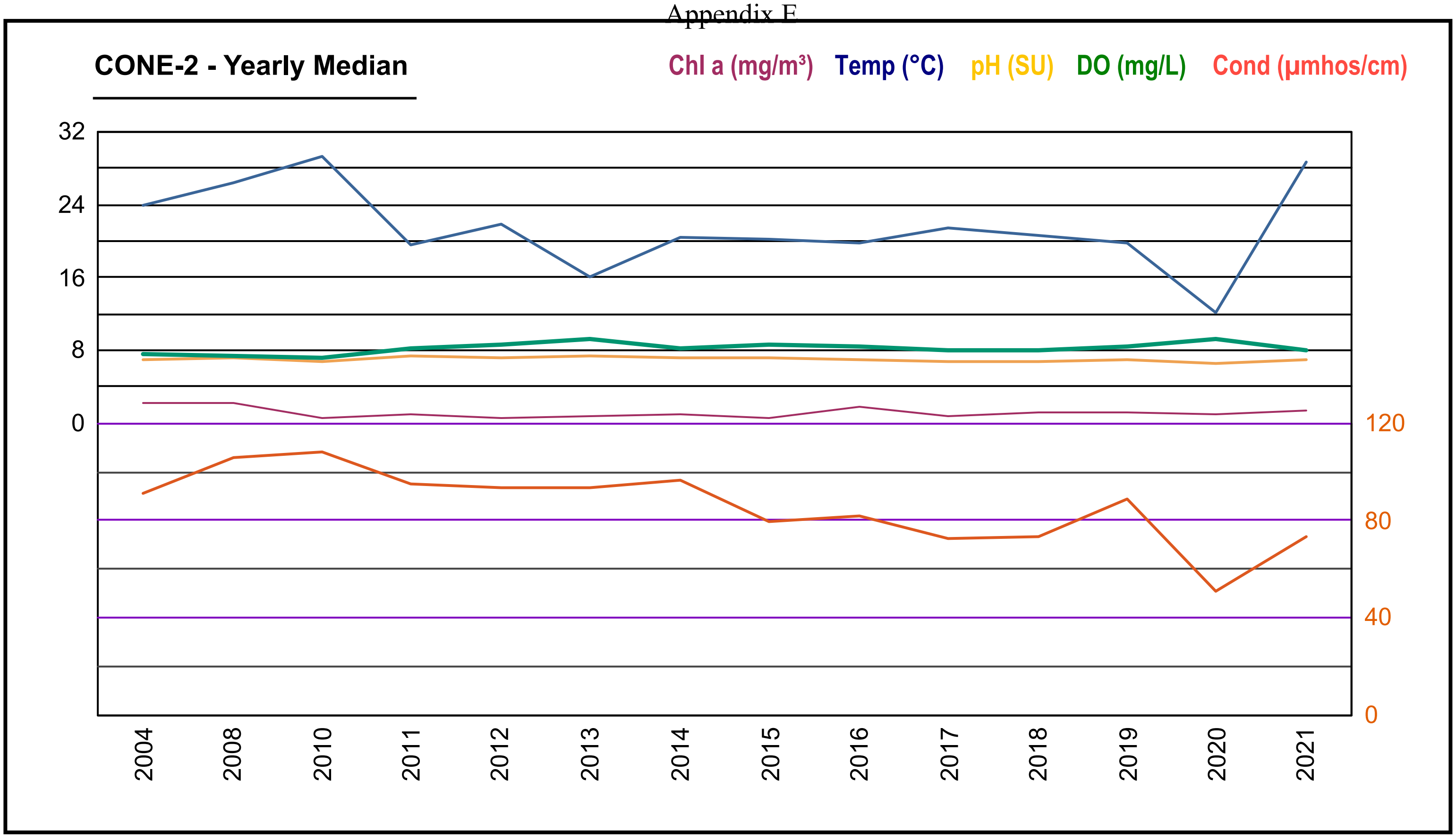

CONE-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

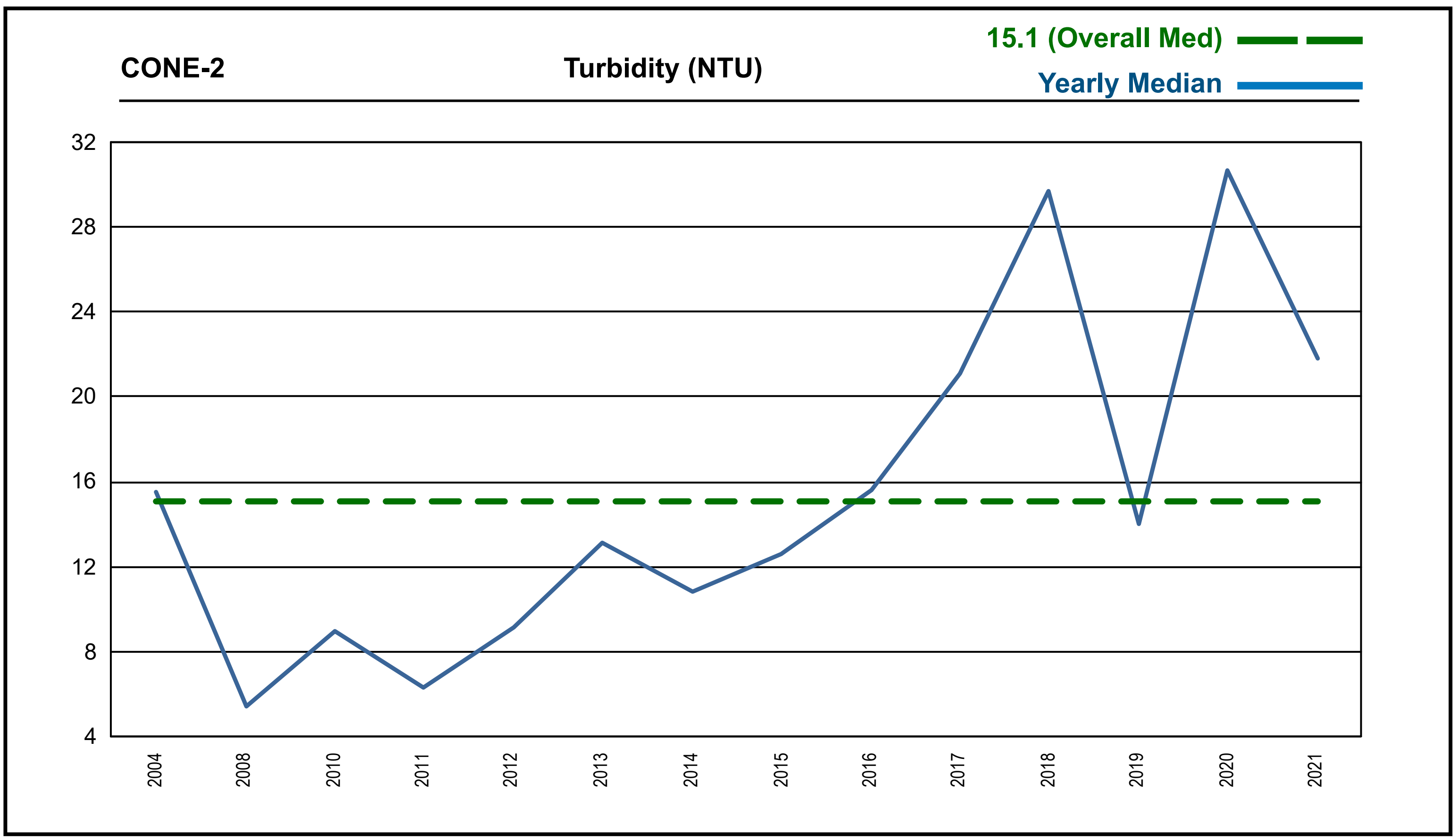

CONE-1
Turbidity (NTU)
16.8 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
4
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

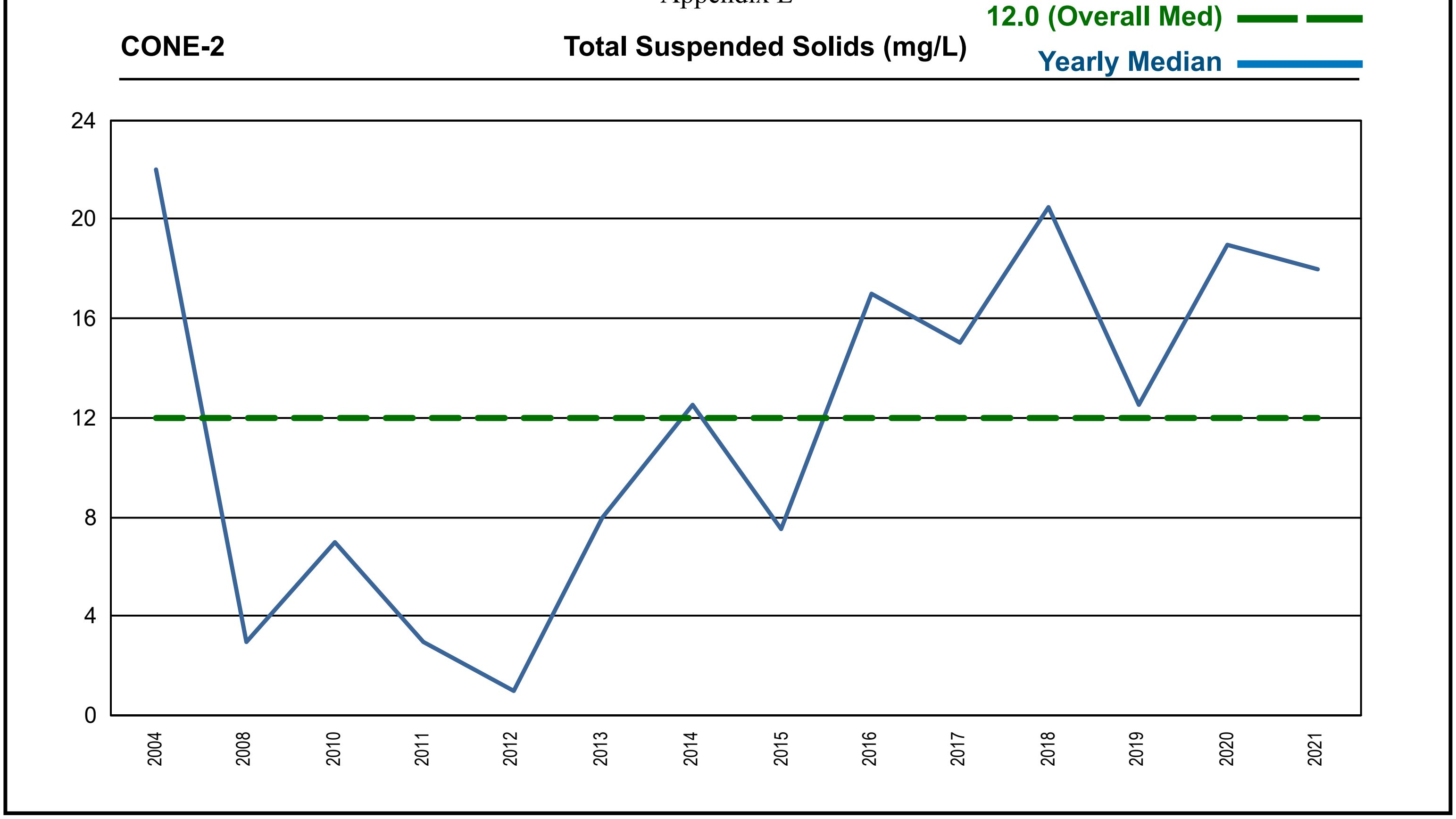

14.0 (Overall Med)
CONE-1
Total Suspended Solids (mg/L)
Yearly Median
22
20
18
16
14
12
10
8
6
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

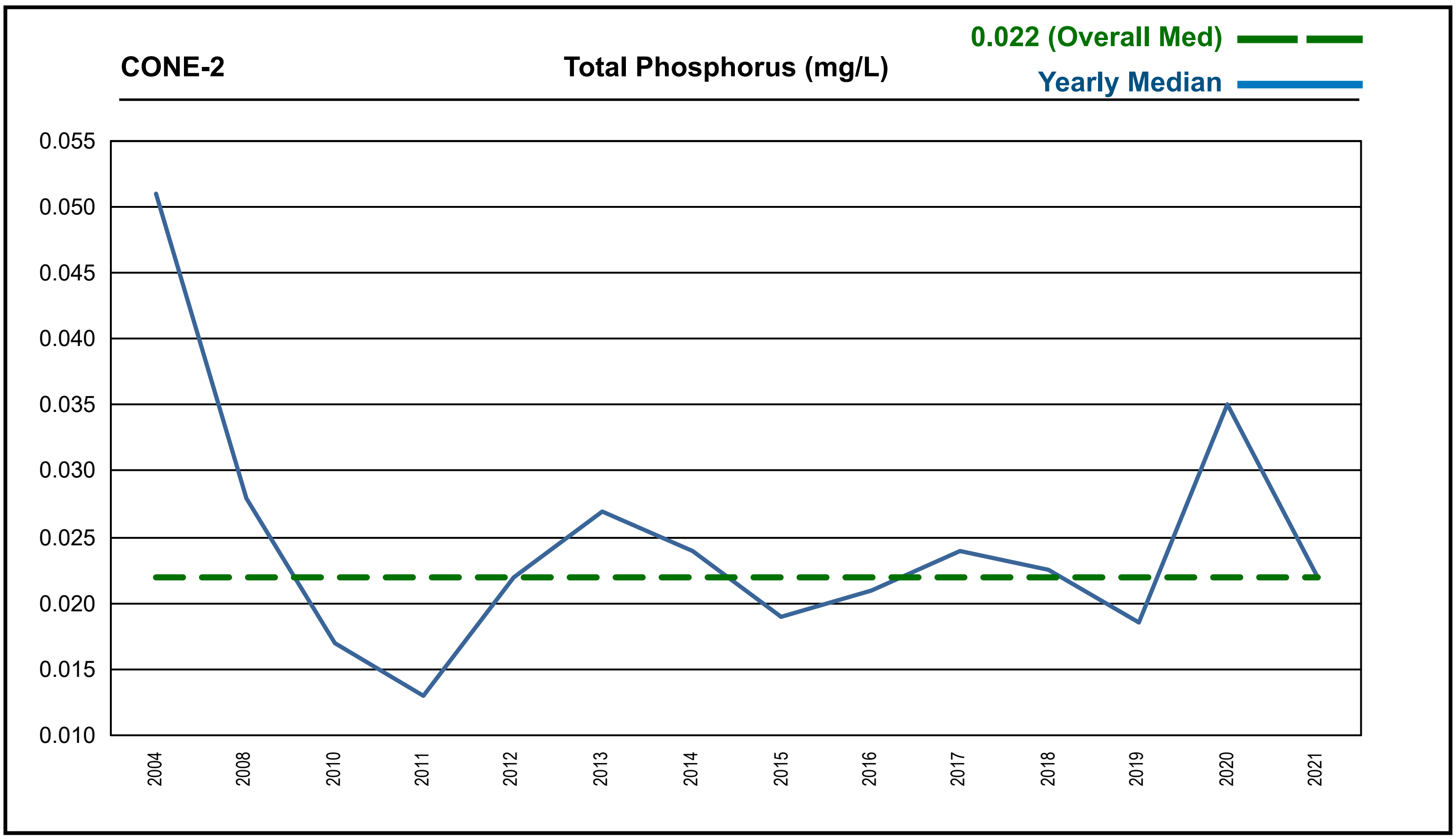

0.048 (Overall Med)
CONE-1
Total Phosphorus (mg/L)
Yearly Median
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

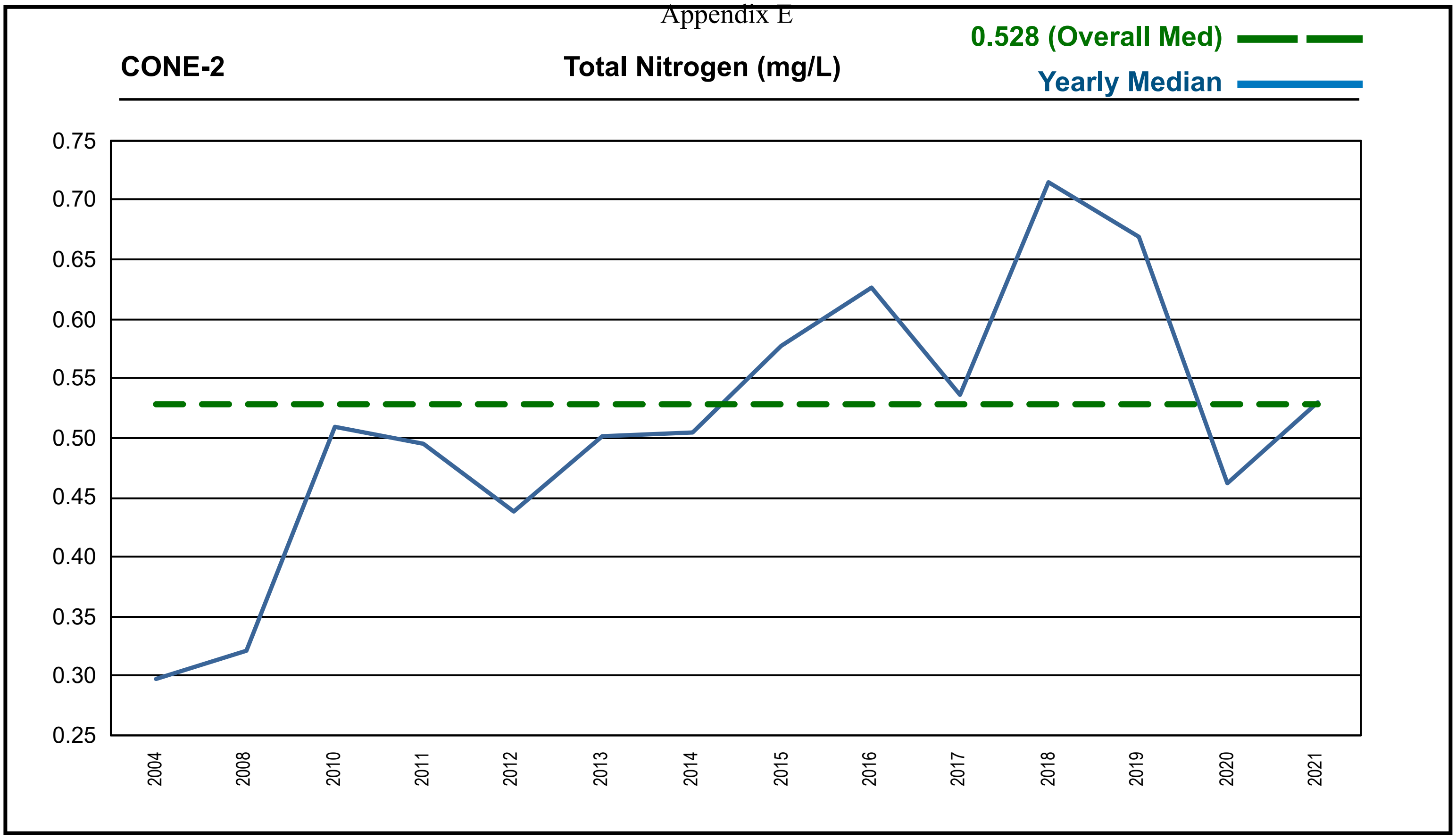

0.660 (Overall Med)
Yearly Median
CONE-1
Total Nitrogen (mg/L)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2004
2008
2013
2014
2015
2016
2017
2018
2019
2020
2021

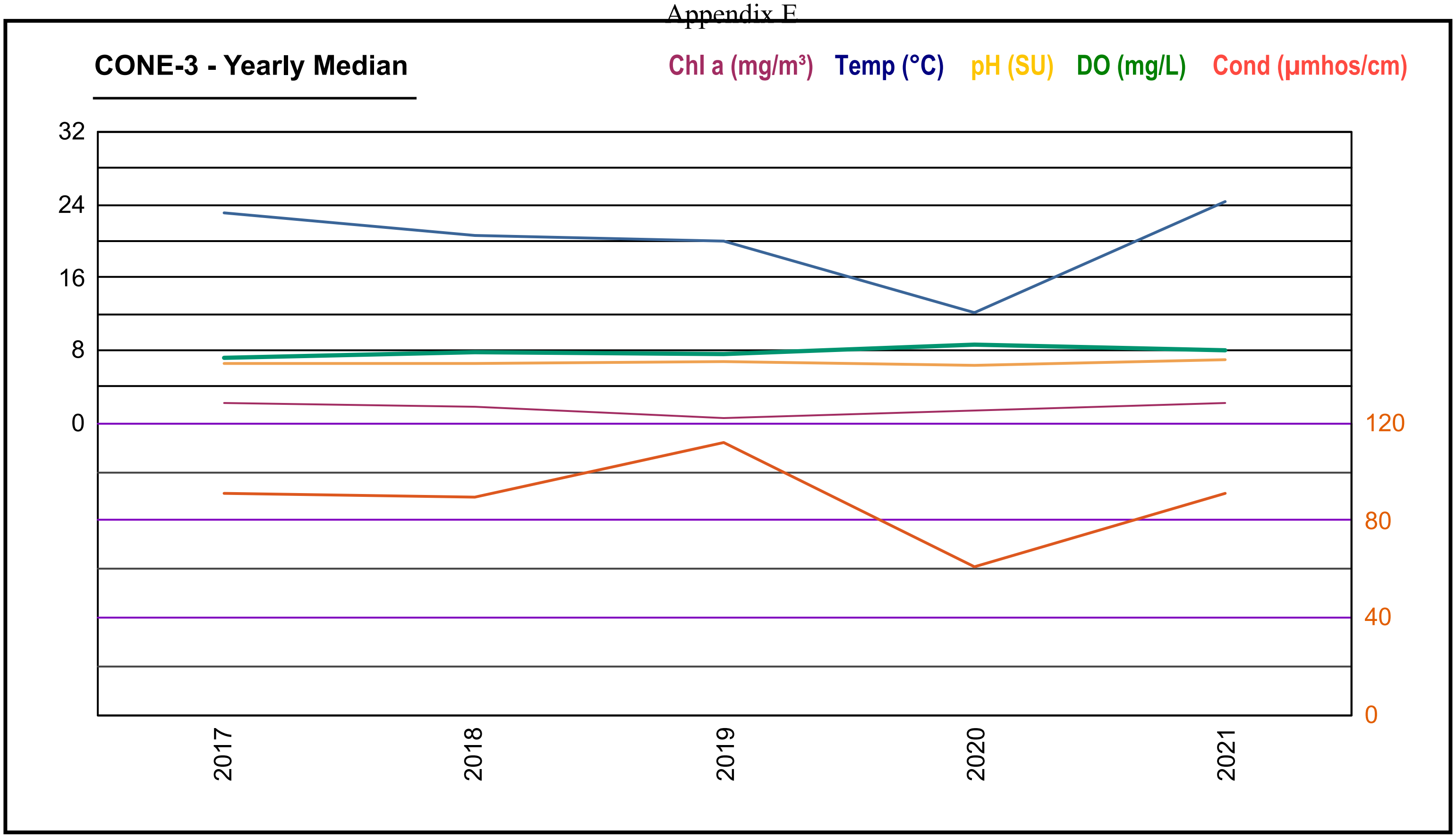

CONE-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

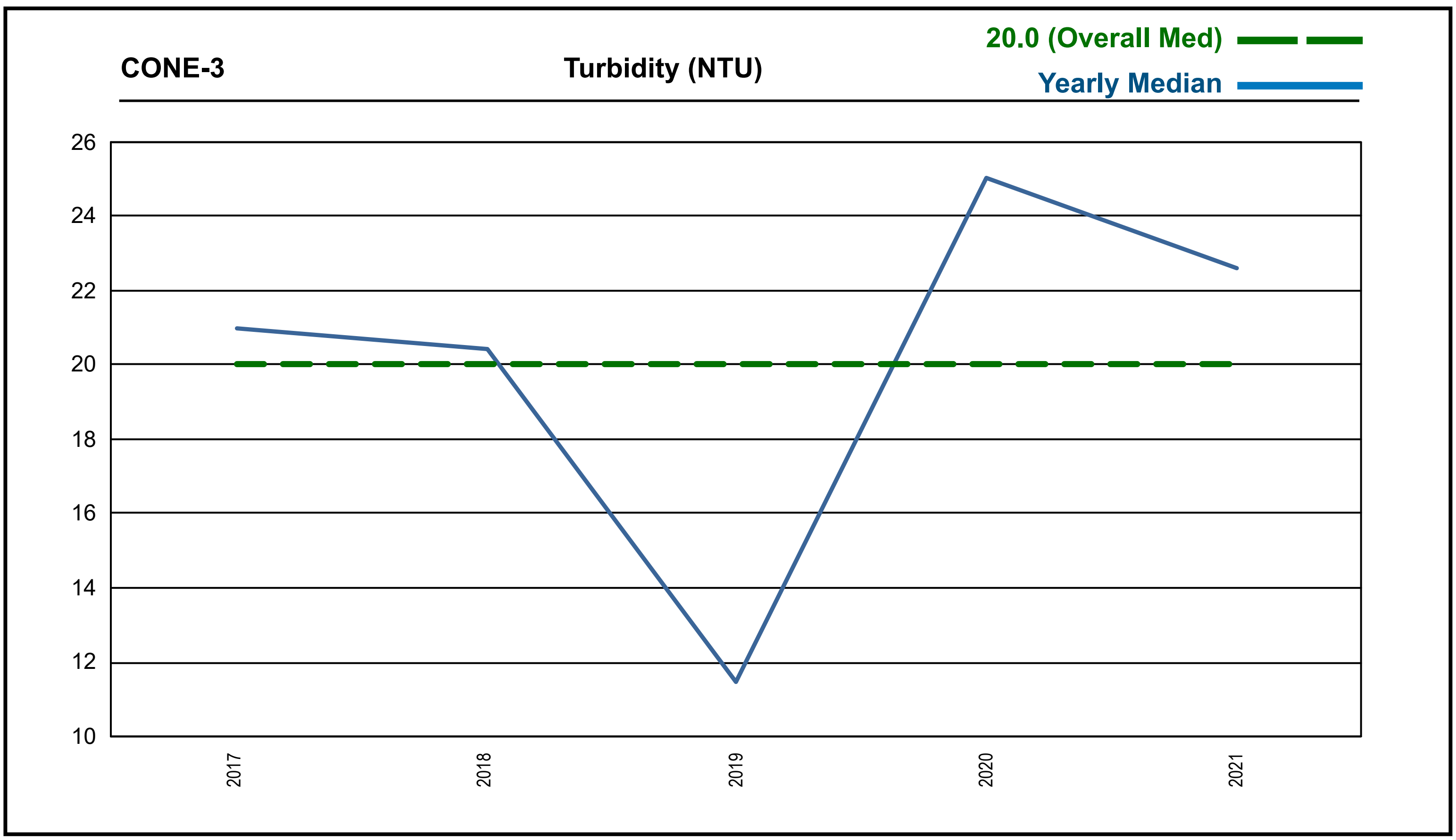

CONE-2
Turbidity (NTU)
15.1 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
4
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

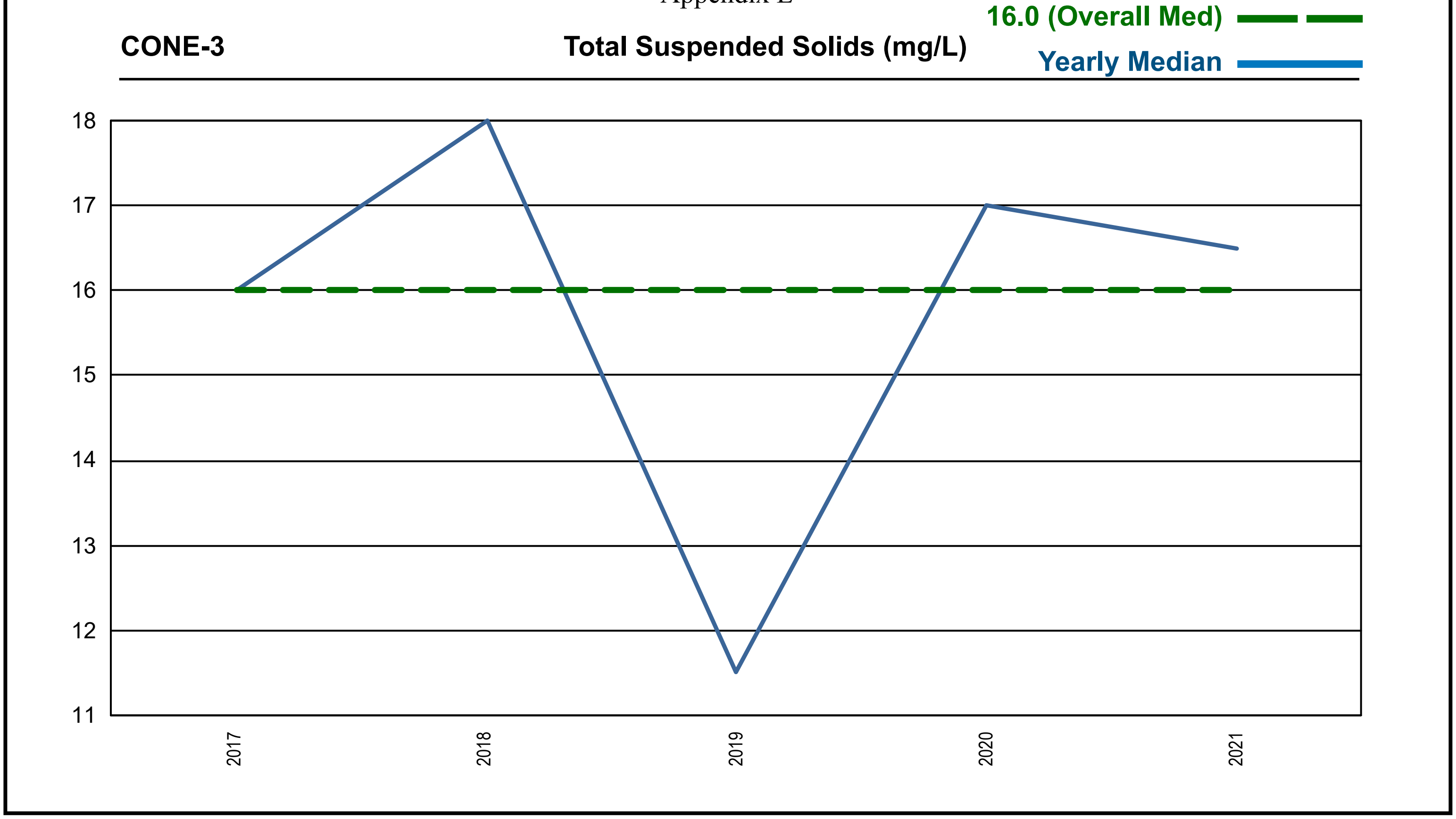

12.0 (Overall Med)
Yearly Median
CONE-2
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

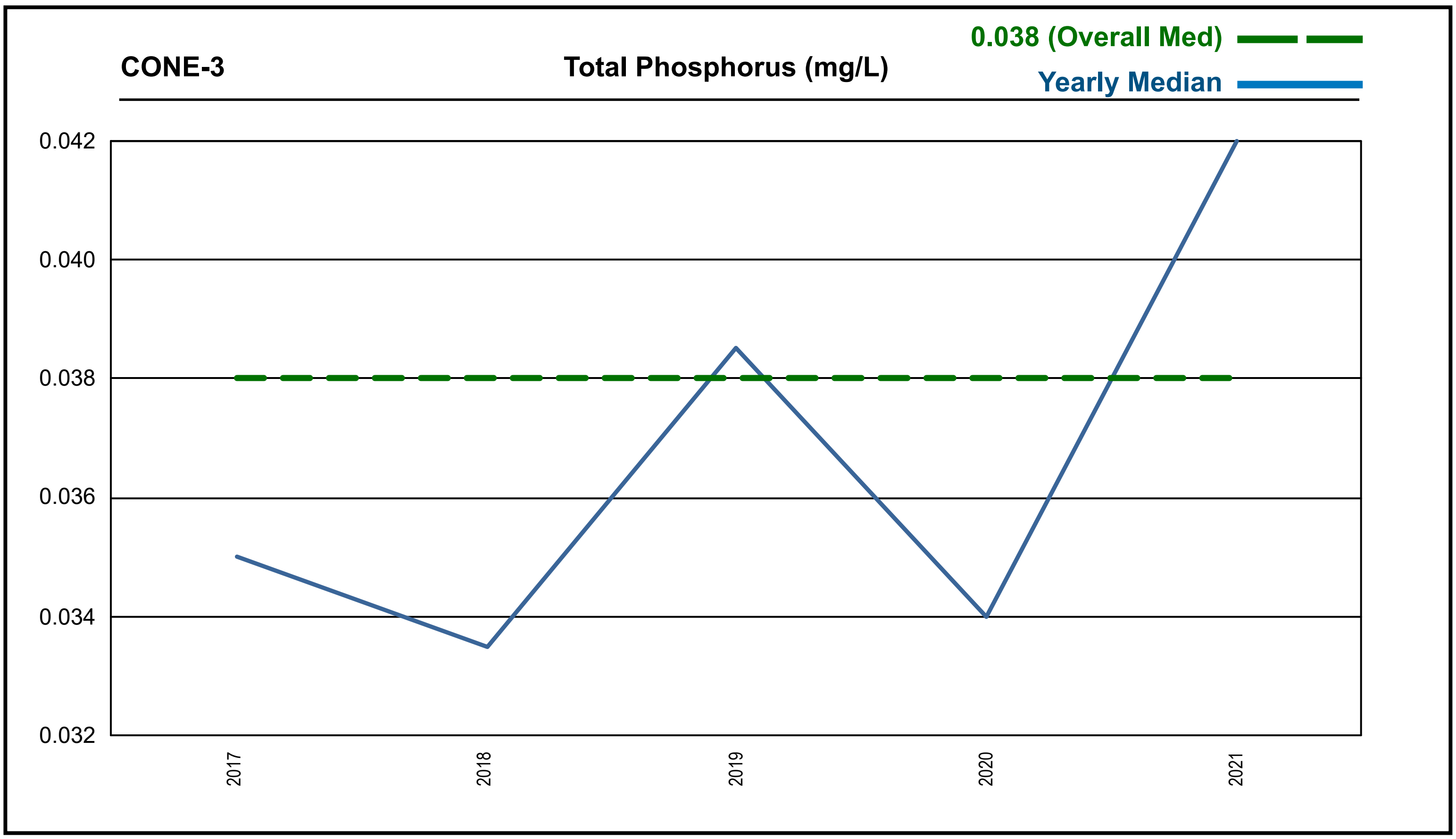

0.022 (Overall Med)
Yearly Median
CONE-2
Total Phosphorus (mg/L)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

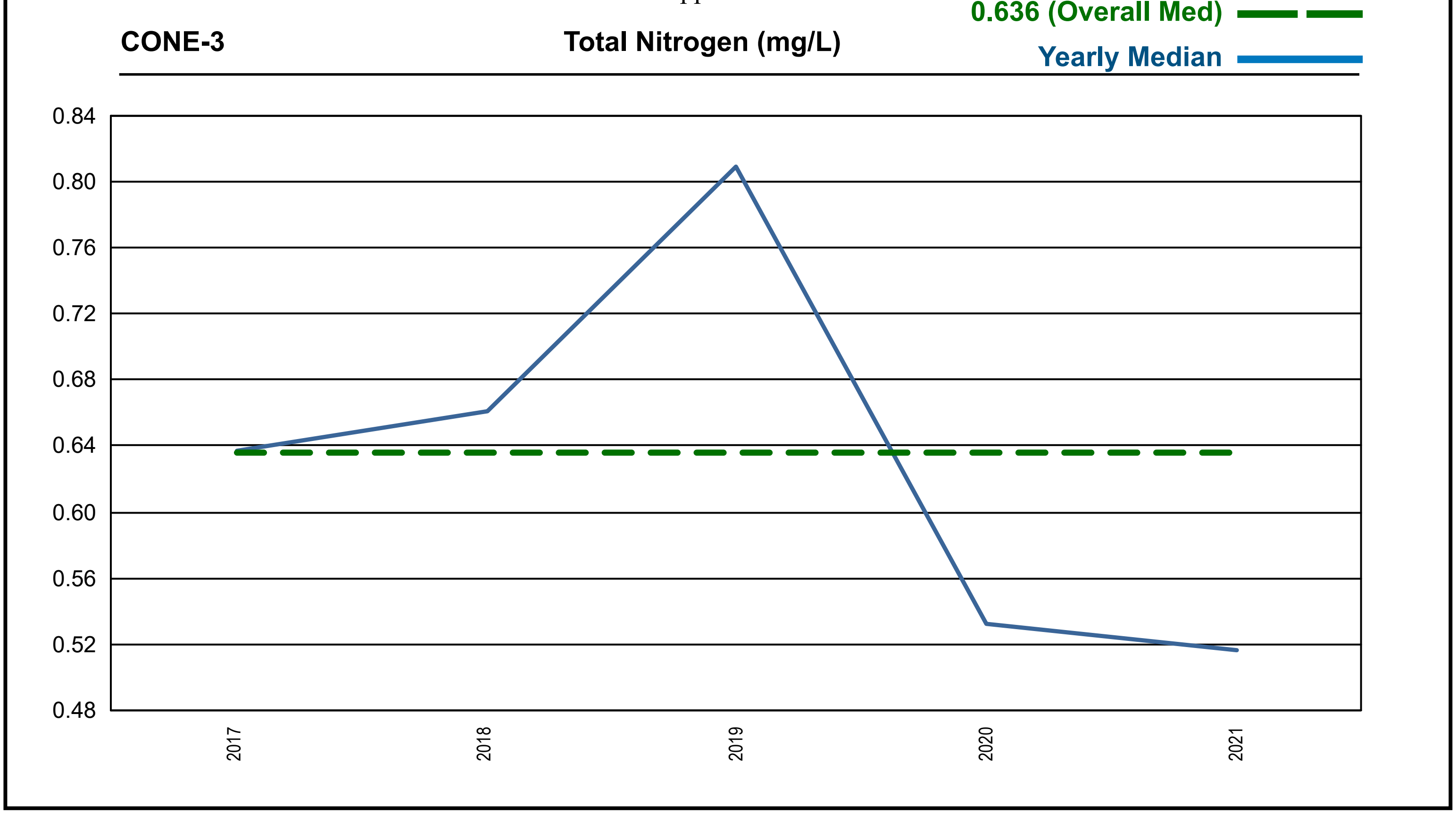

CONE-2
Total Nitrogen (mg/L)
0.528 (Overall Med)
Yearly Median
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

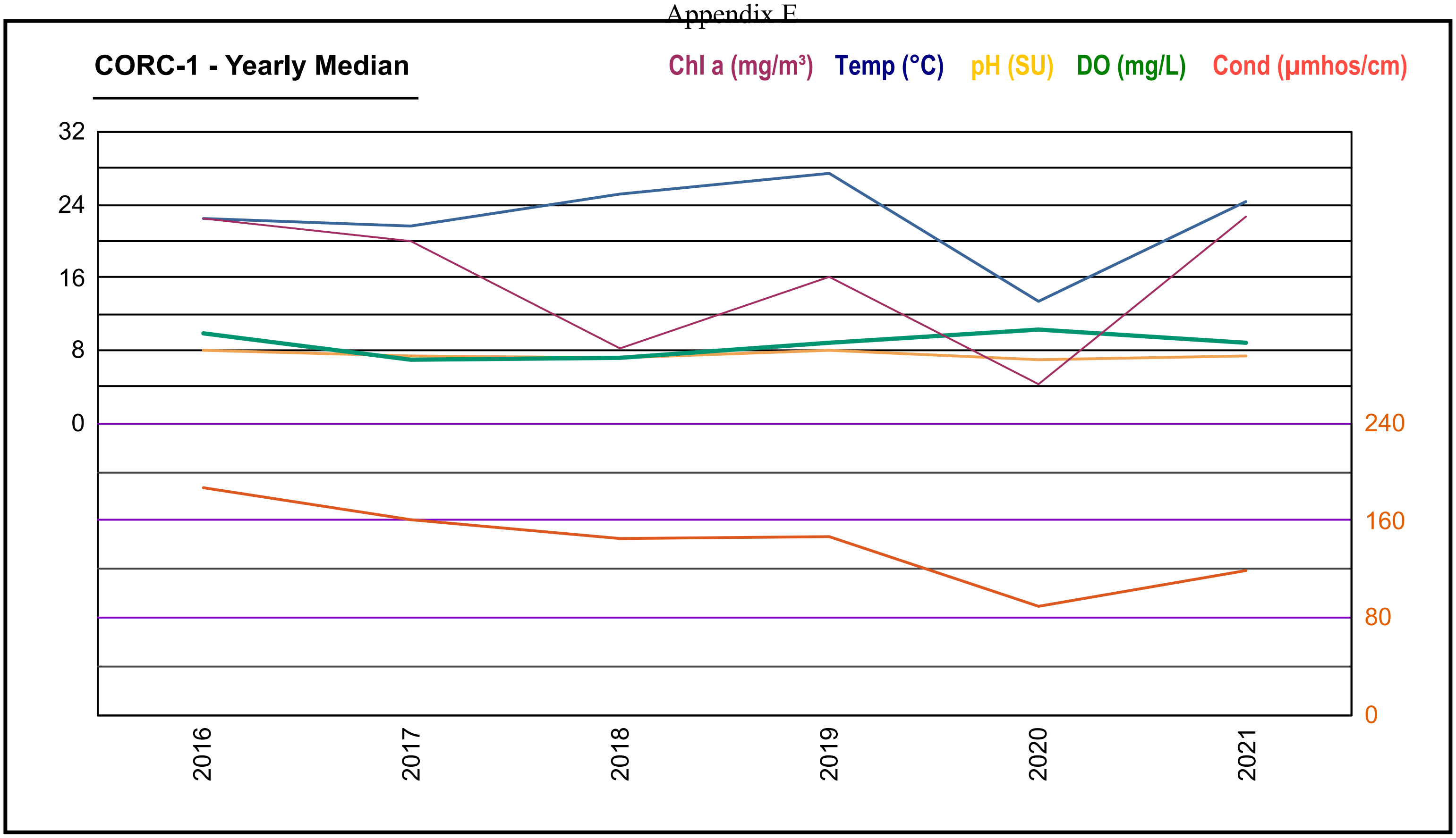

CONE-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
2017
2018
2019
2020
2021

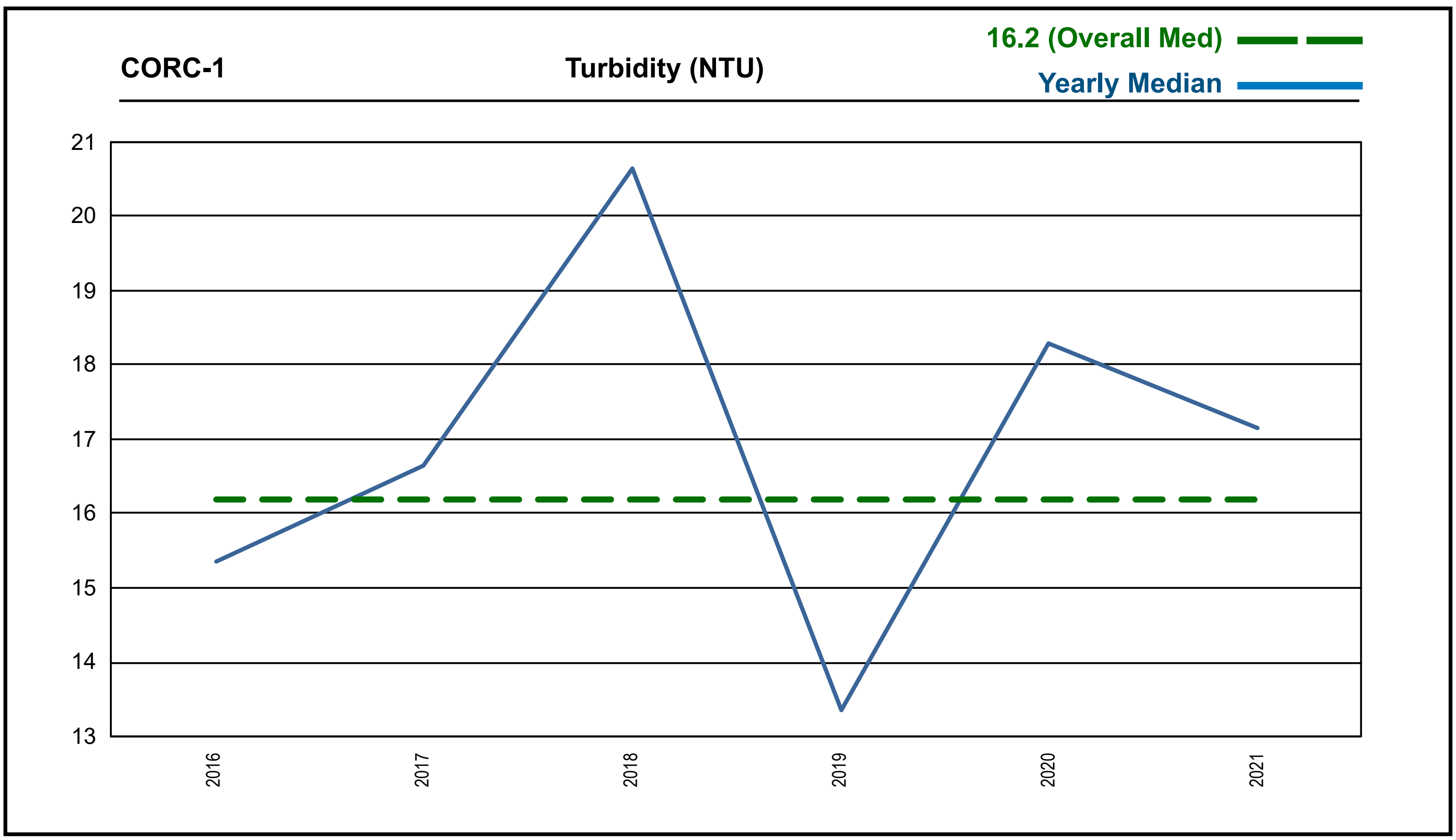

CONE-3
Turbidity (NTU)
20.0 (Overall Med)
Yearly Median
26
24
22
20
18
16
14
12
10
2017
2018
2019
2020
2021

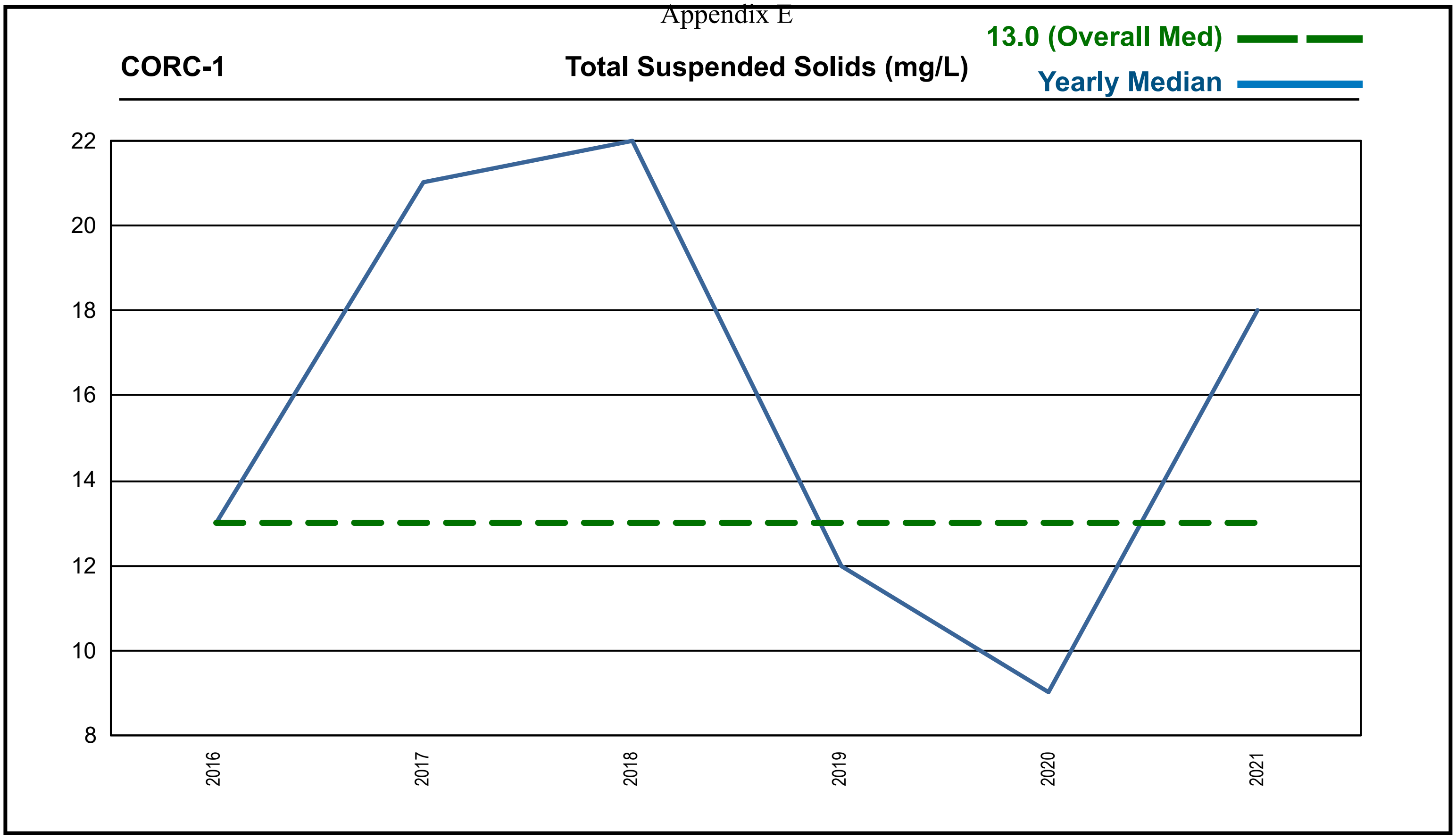

CONE-3
Total Suspended Solids (mg/L)
16.0 (Overall Med)
Yearly Median
18
17
16
15
14
13
12
11
2017
2018
2019
2020
2021

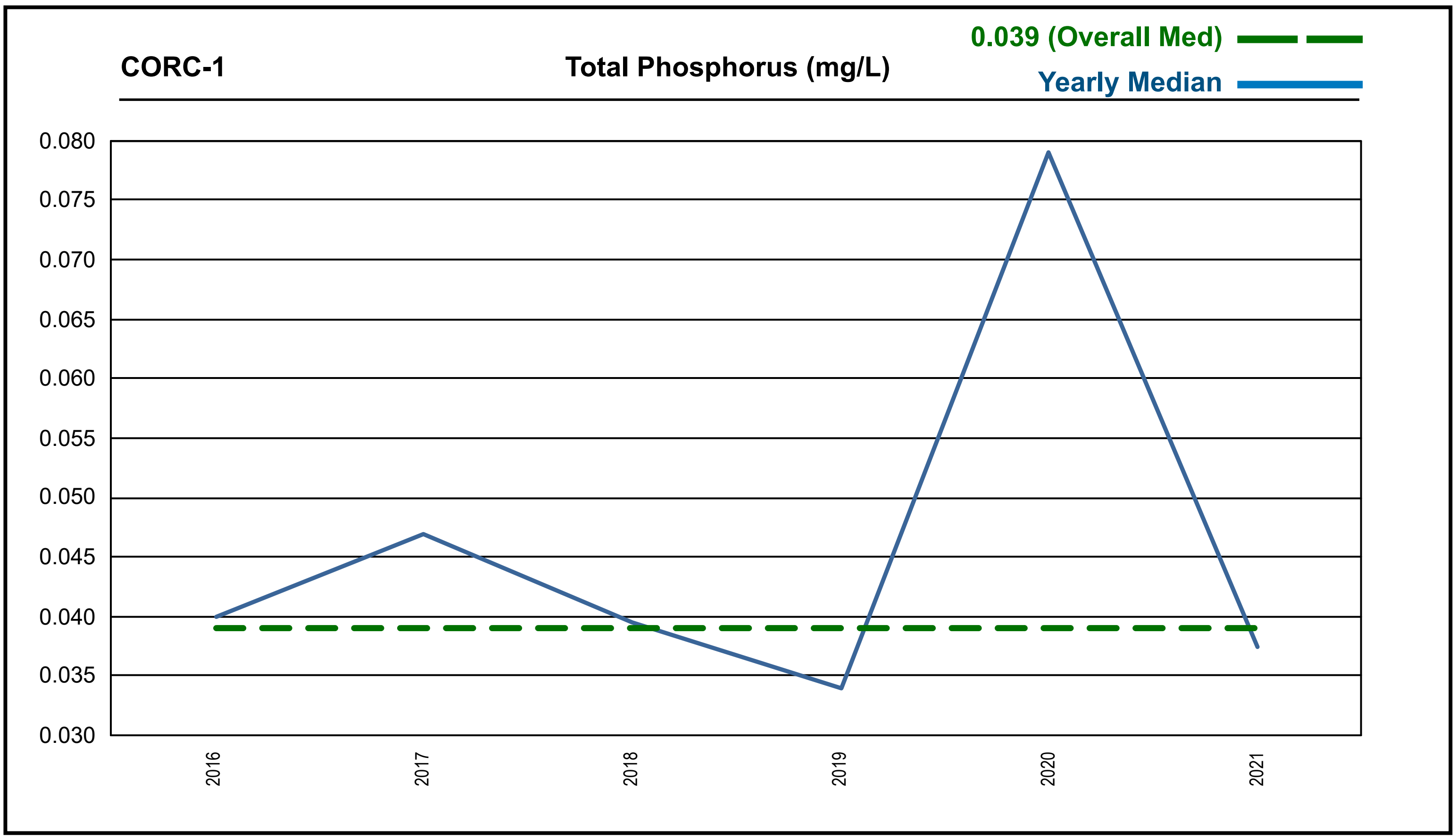

CONE-3
Total Phosphorus (mg/L)
0.038 (Overall Med)
Yearly Median
0.042
0.040
0.038
0.036
0.034
0.032
2017
2018
2019
2020
2021

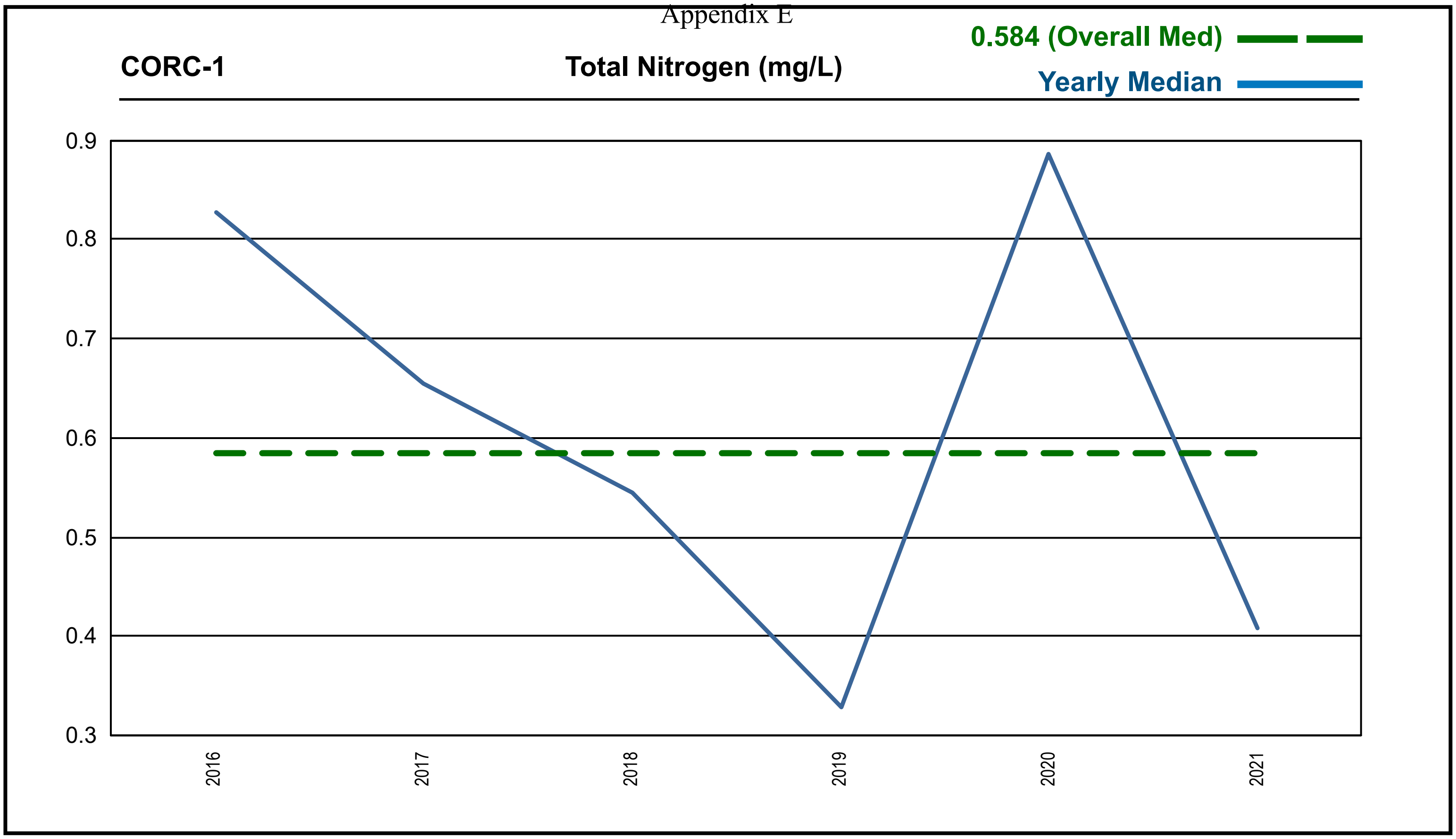

CONE-3
Total Nitrogen (mg/L)
0.636 (Overall Med)
Yearly Median
0.84
0.80
0.76
0.72
0.68
0.64
0.60
0.56
0.52
0.48
2017
2018
2019
2020
2021

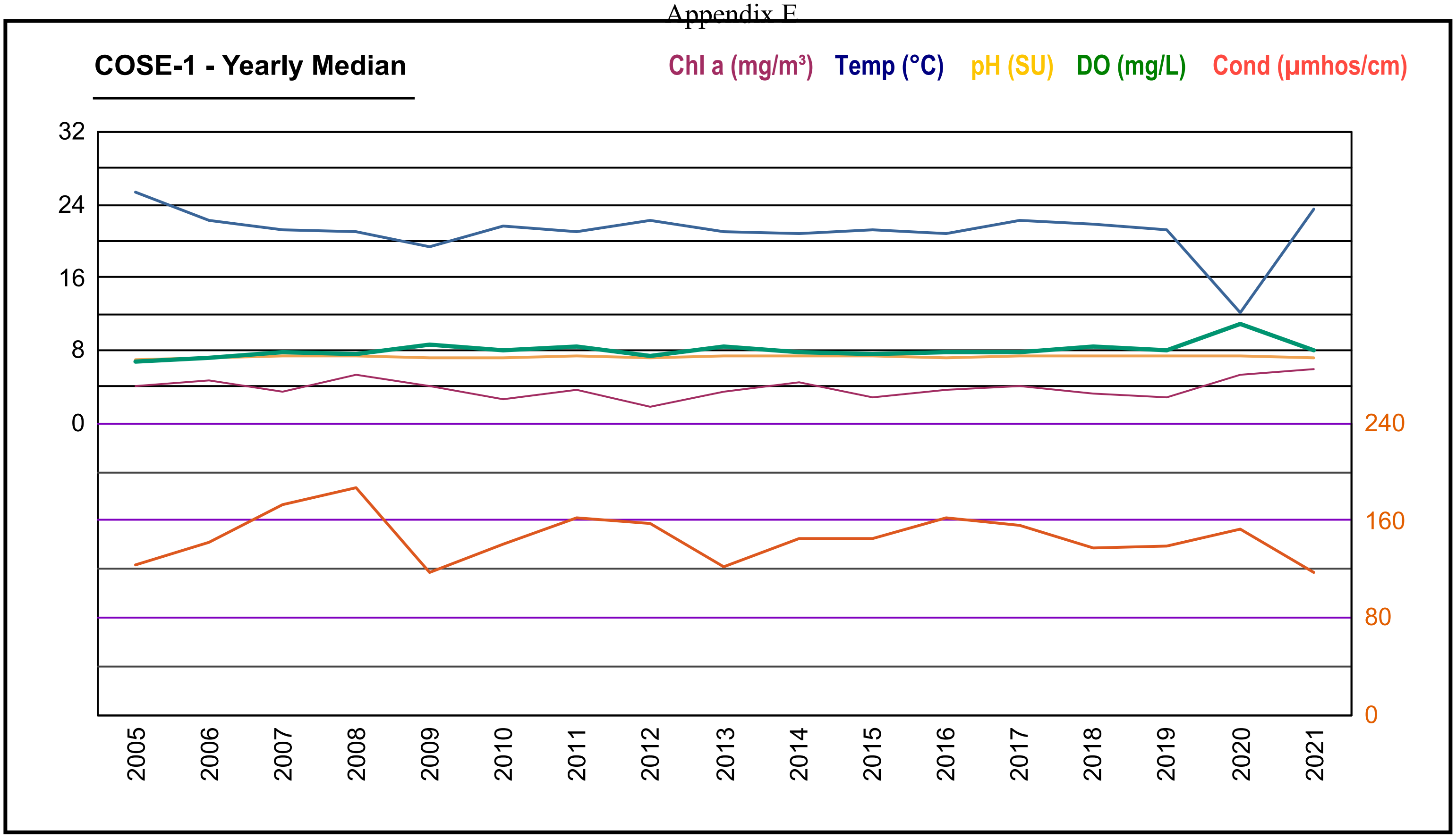

CORC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2016
2017
2018
2019
2020
2021

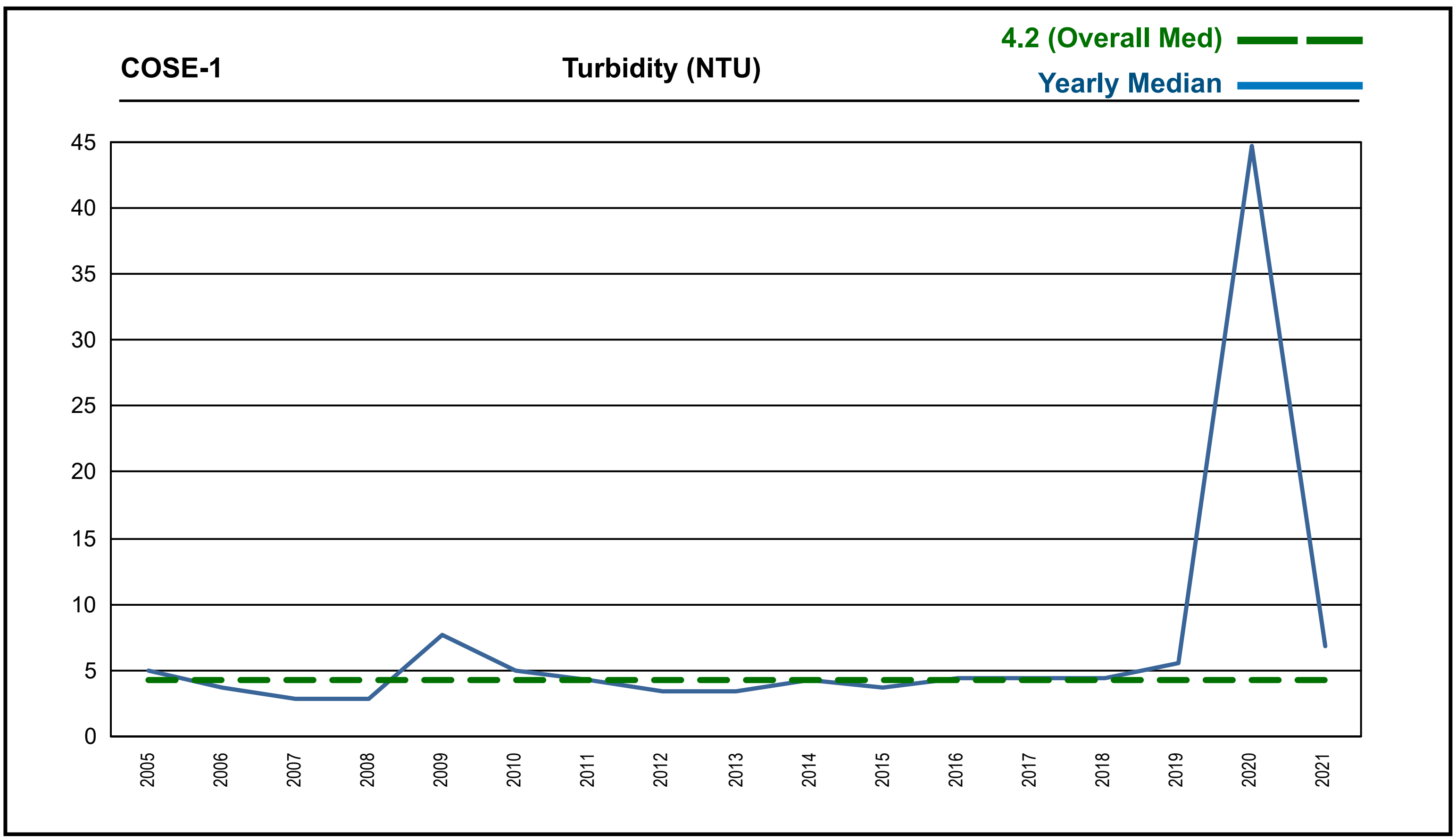

CORC-1
Turbidity (NTU)
16.2 (Overall Med)
Yearly Median
21
20
19
18
17
16
15
14
13
2016
2017
2018
2019
2020
2021

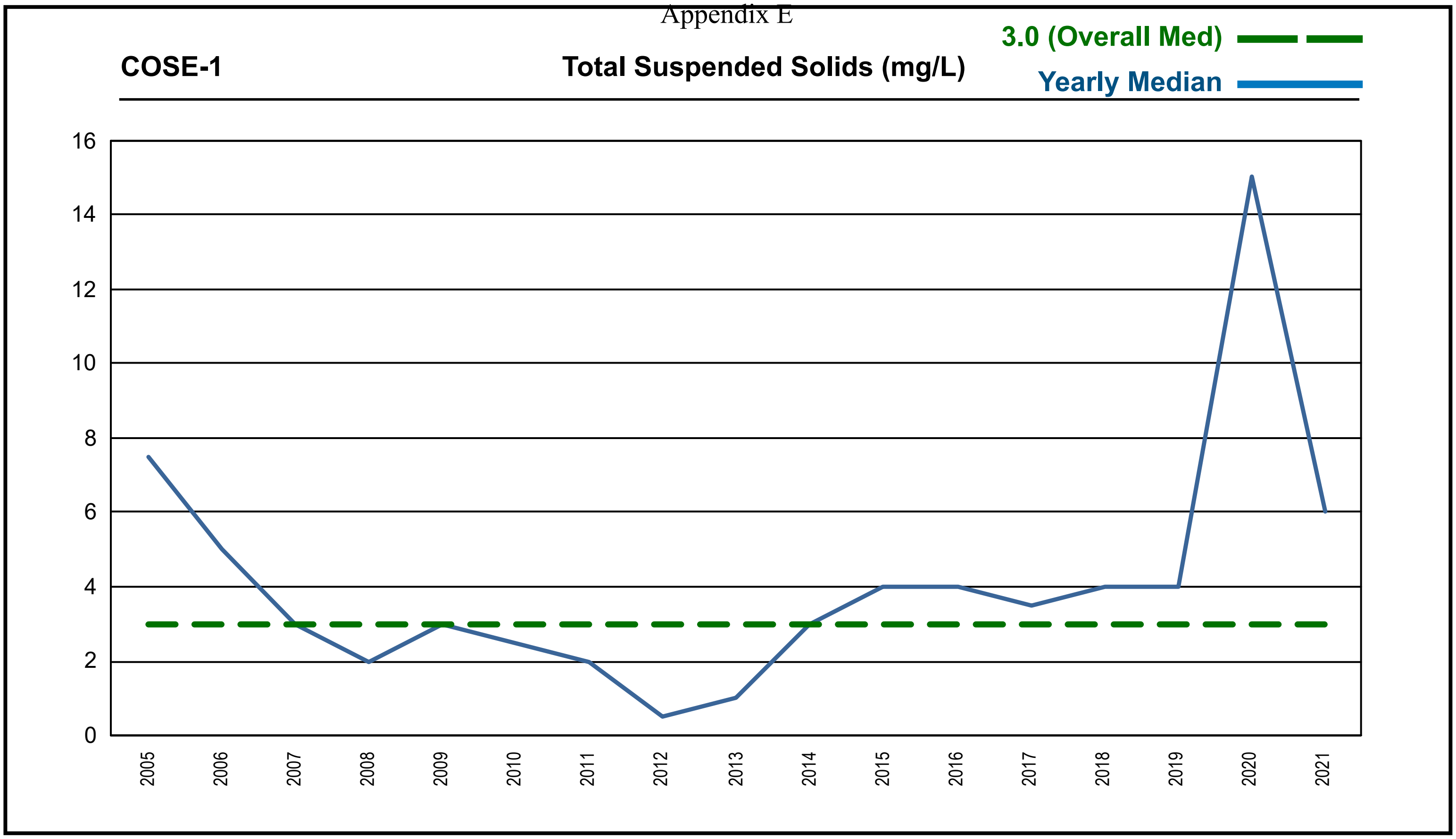

13.0 (Overall Med)
CORC-1
Total Suspended Solids (mg/L)
Yearly Median
22
20
18
16
14
12
10
8
2016
2017
2018
2019
2020
2021

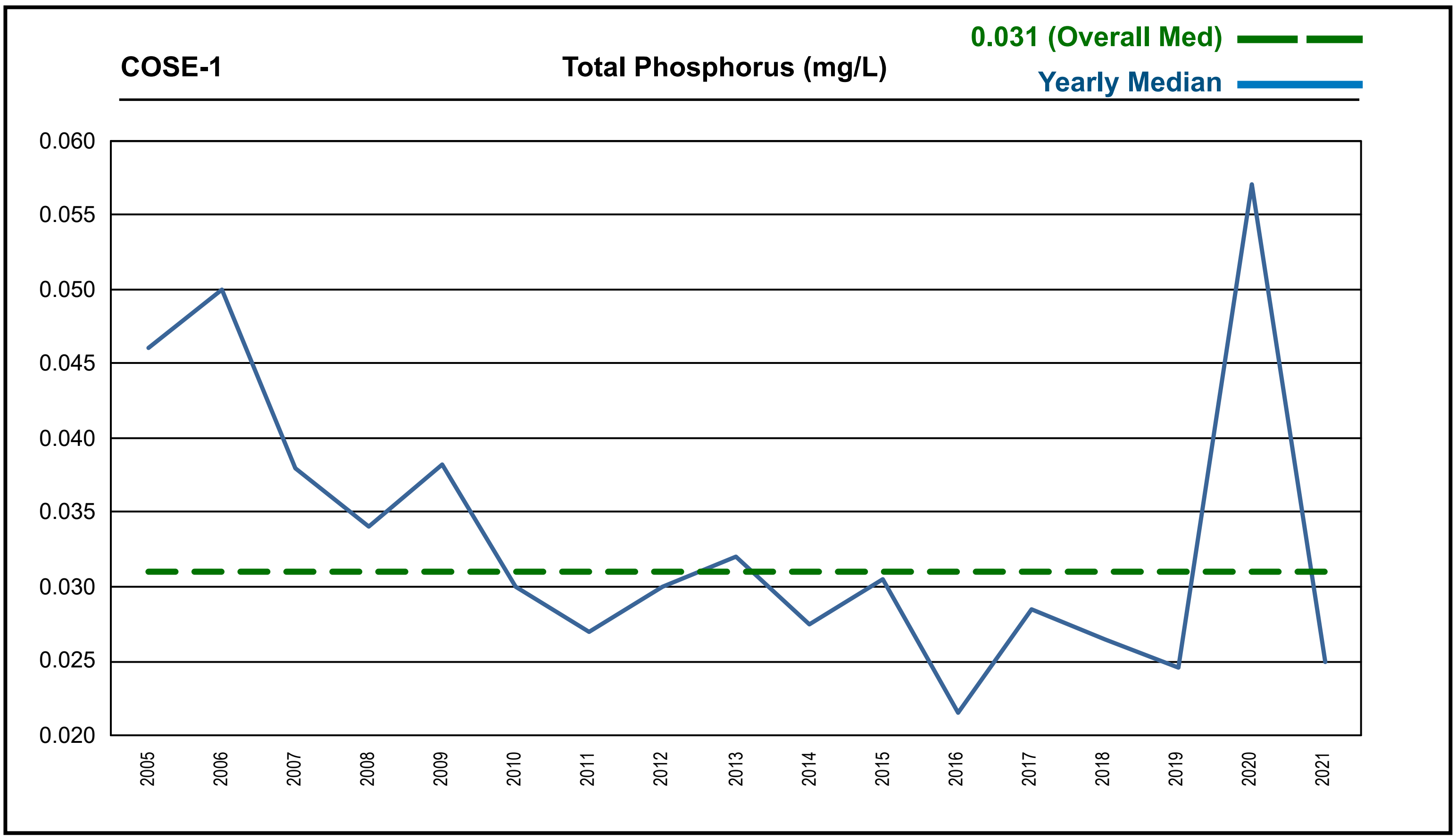

0.039 (Overall Med)
CORC-1
Total Phosphorus (mg/L)
Yearly Median
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
2016
2017
2018
2019
2020
2021

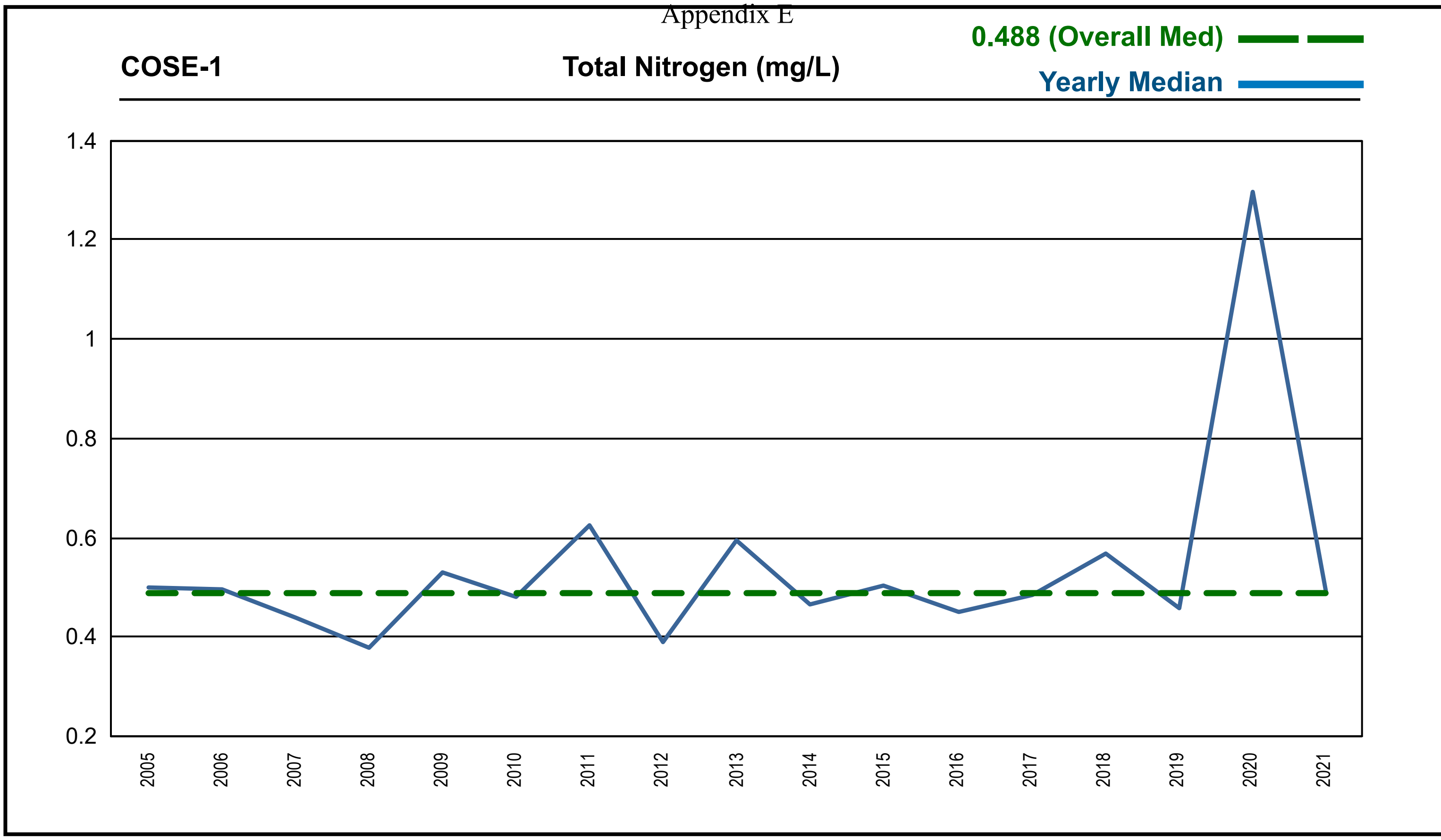

0.584 (Overall Med)
Yearly Median
CORC-1
Total Nitrogen (mg/L)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
2016
2017
2018
2019
2020
2021


COSE-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

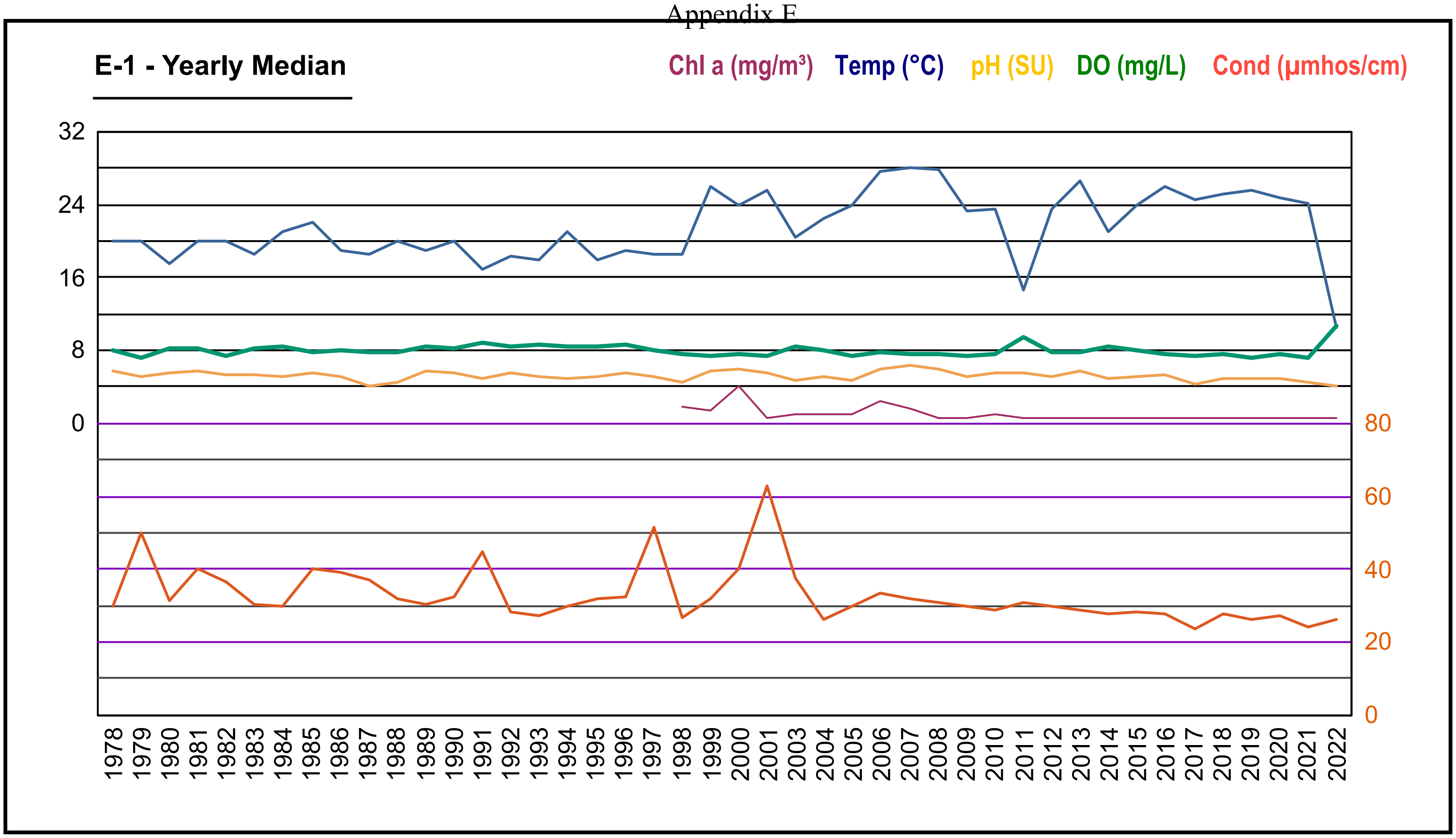

COSE-1
Turbidity (NTU)
4.2 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

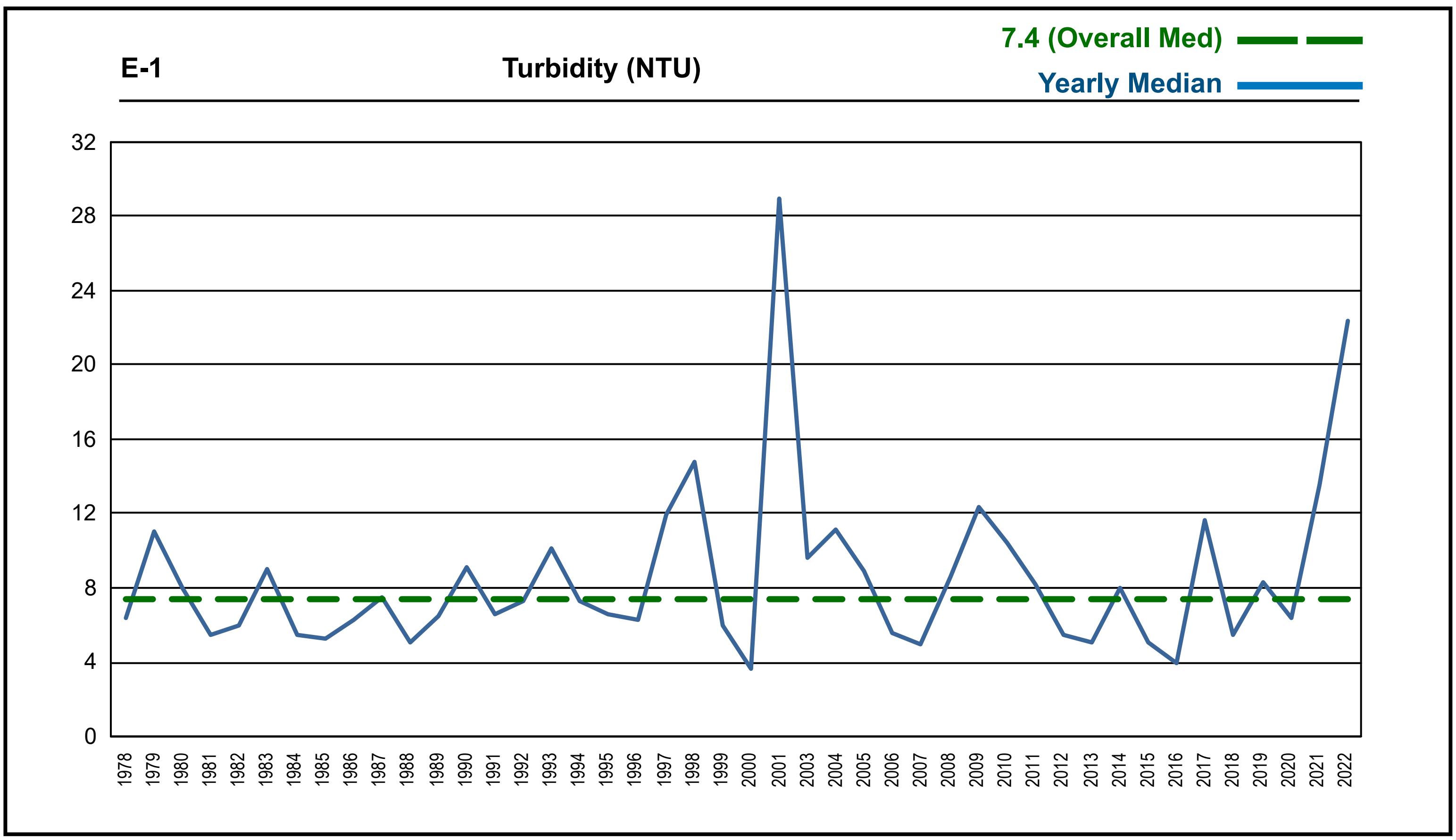

3.0 (Overall Med)
Yearly Median
COSE-1
Total Suspended Solids (mg/L)
16
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

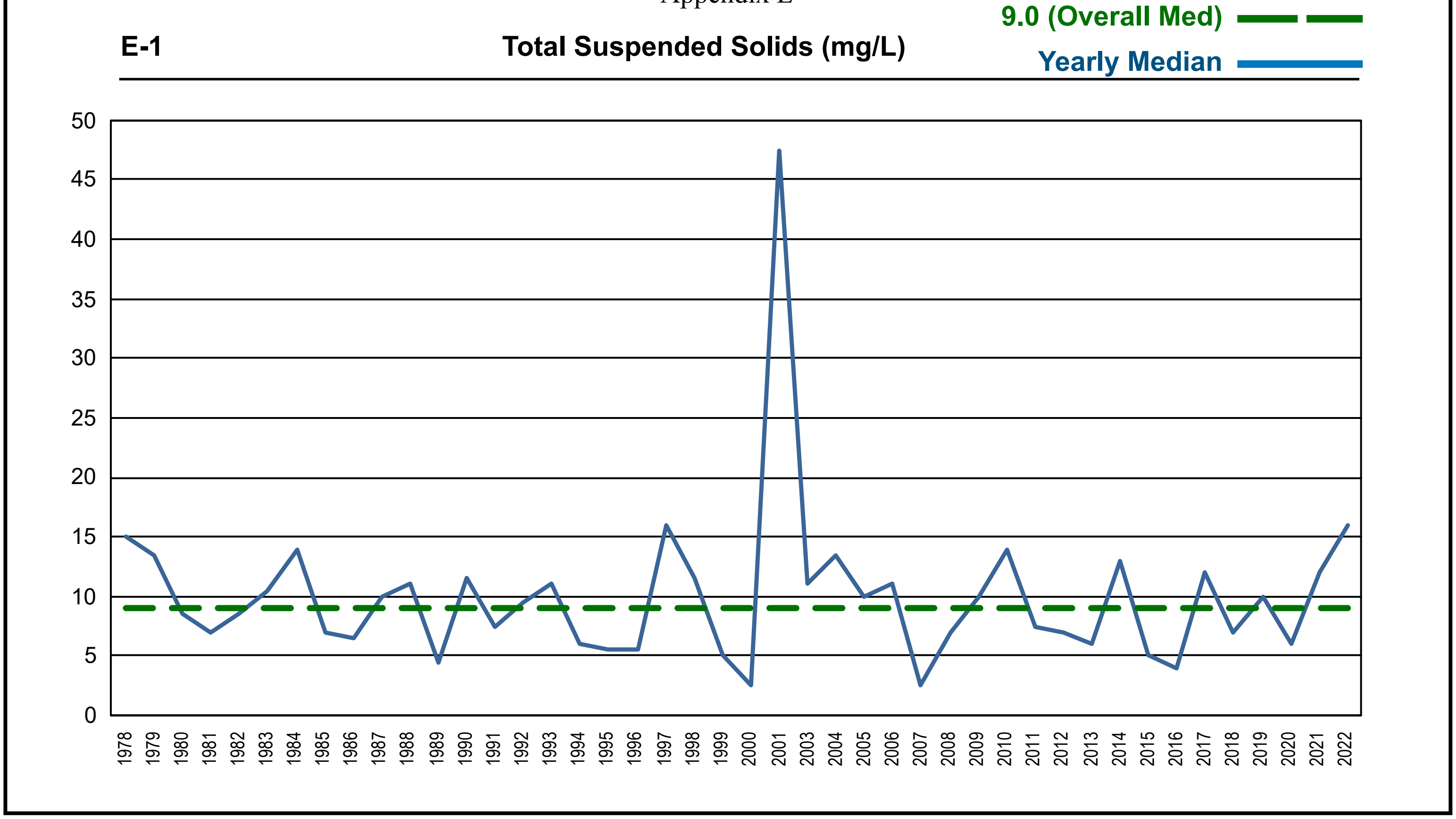

0.031 (Overall Med)
Yearly Median
COSE-1
Total Phosphorus (mg/L)
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

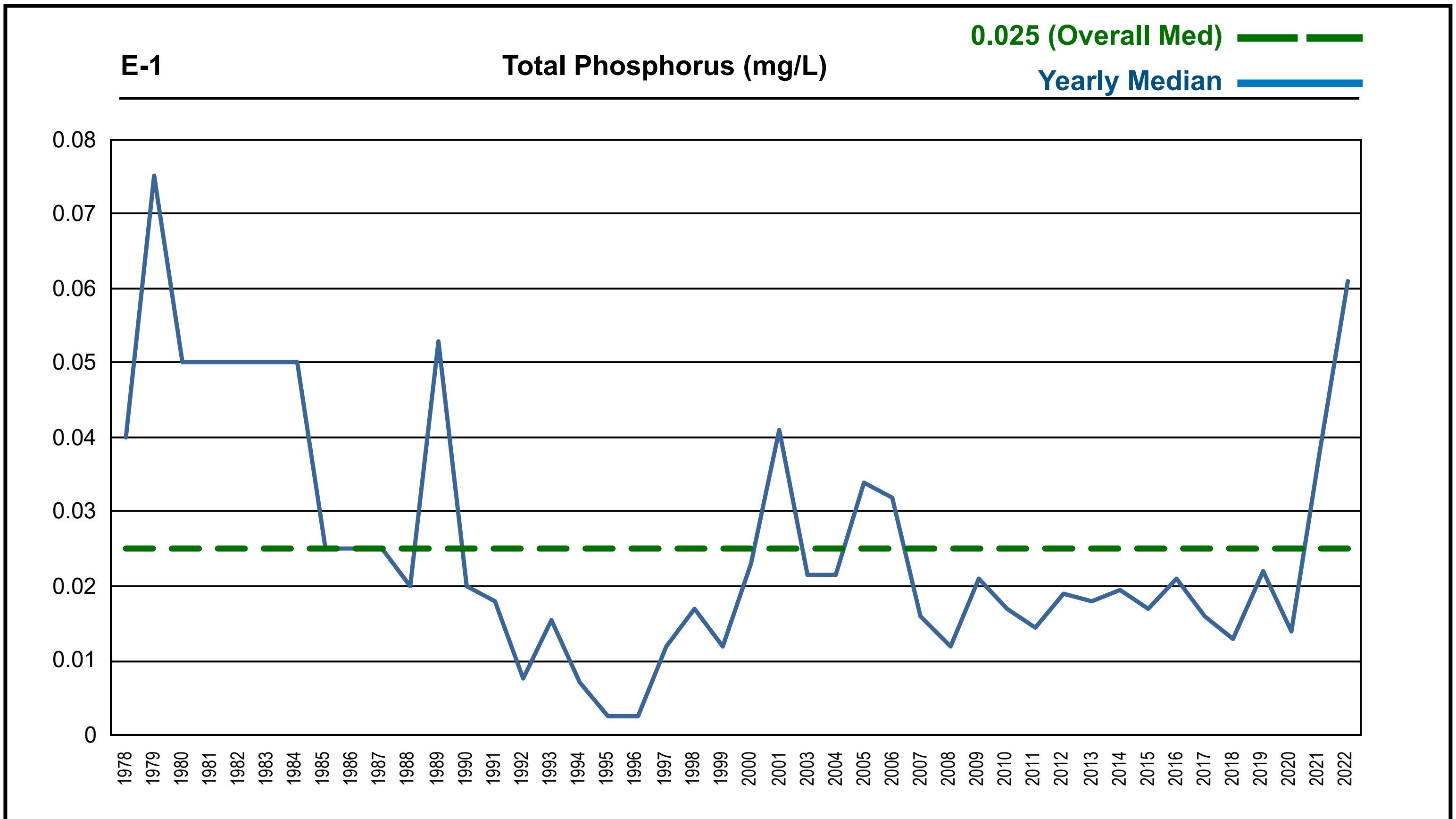


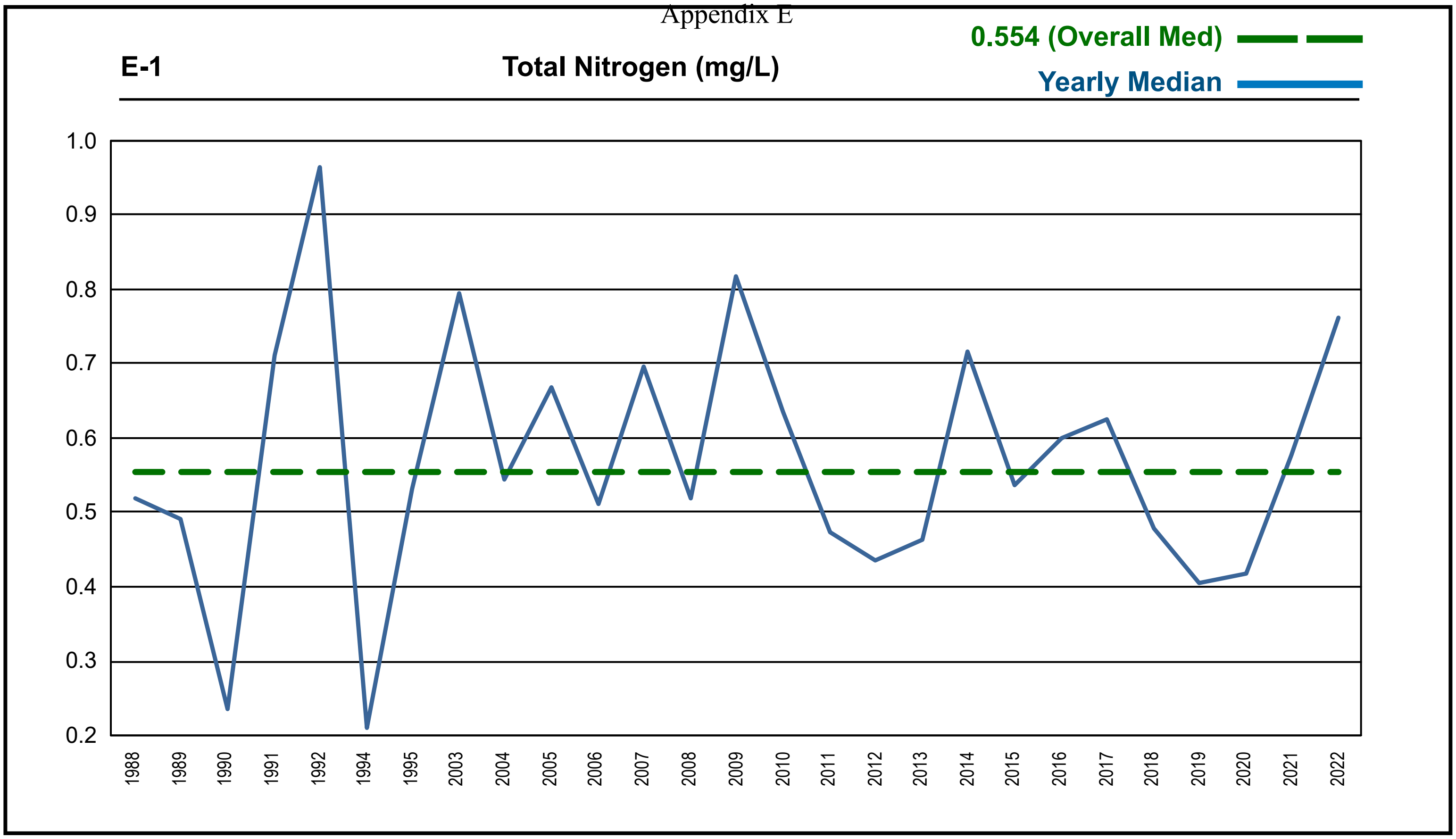
COSE-1
Total Nitrogen (mg/L)
0.488 (Overall Med)
Yearly Median
1.4
1.2
1
0.8
0.6
0.4
0.2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


E-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
80
60
40
20
0
1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

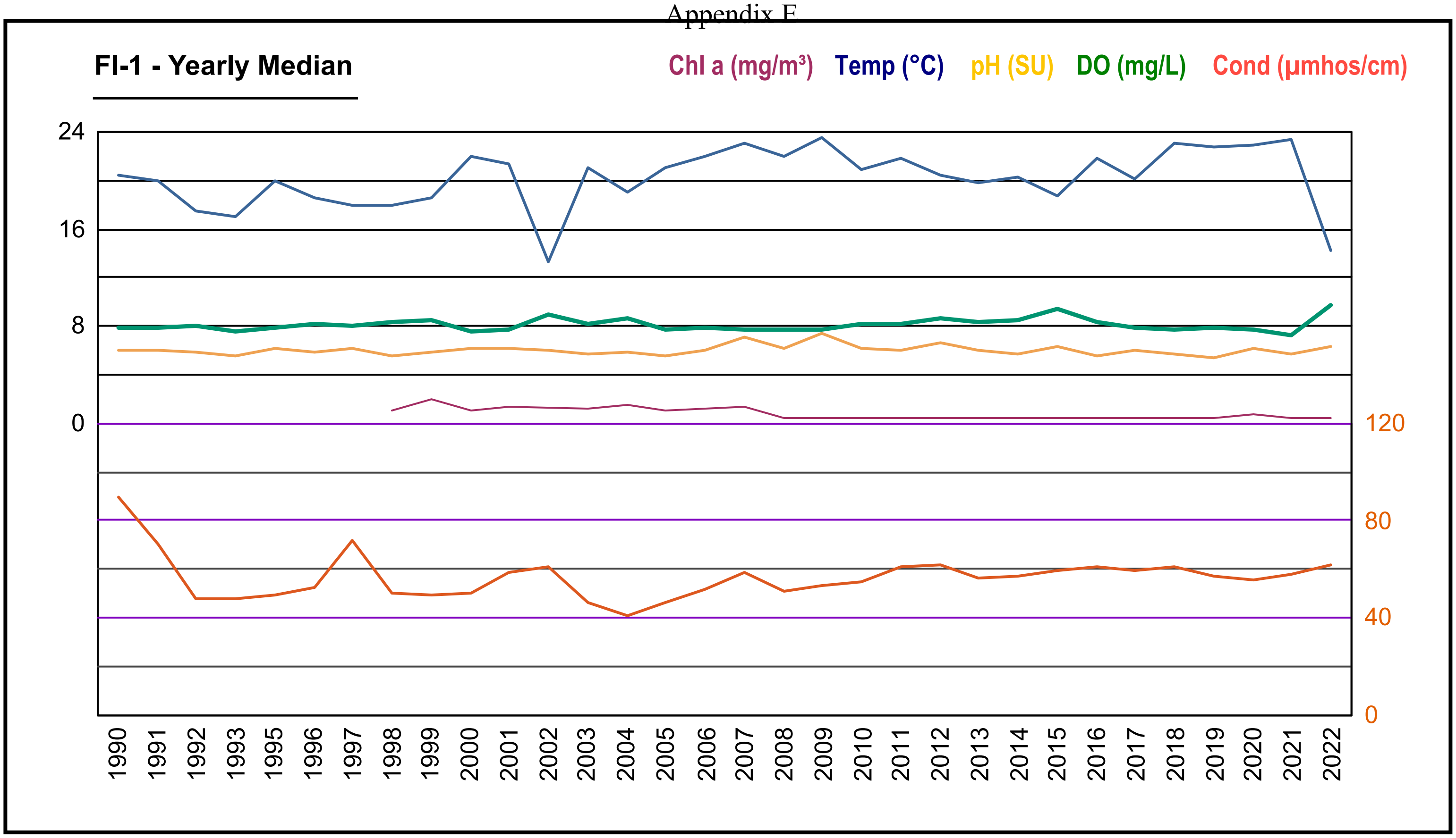

E-1
Turbidity (NTU)
7.4 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
4
0
1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

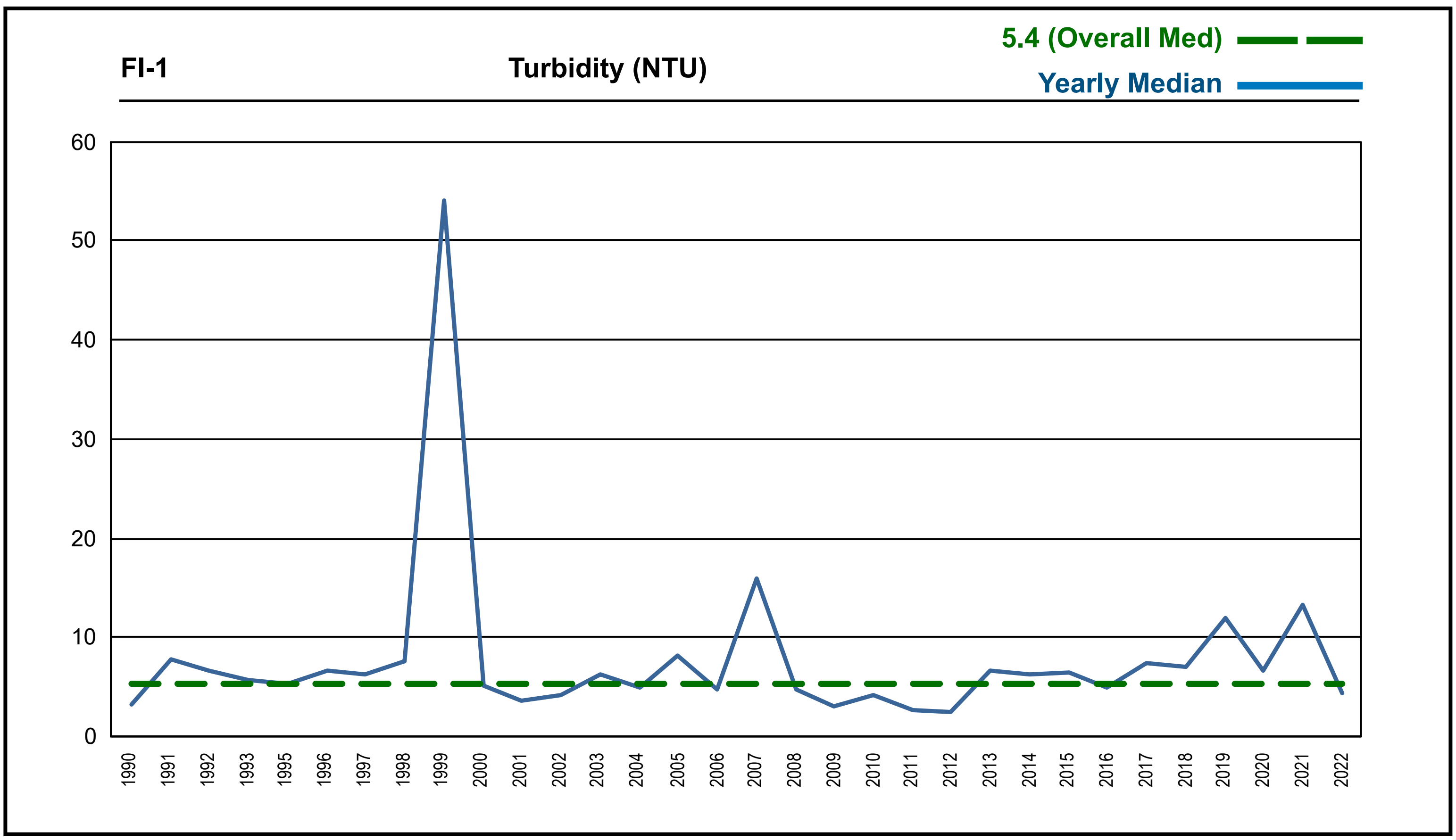

E-1
Total Suspended Solids (mg/L)
9.0 (Overall Med)
Yearly Median

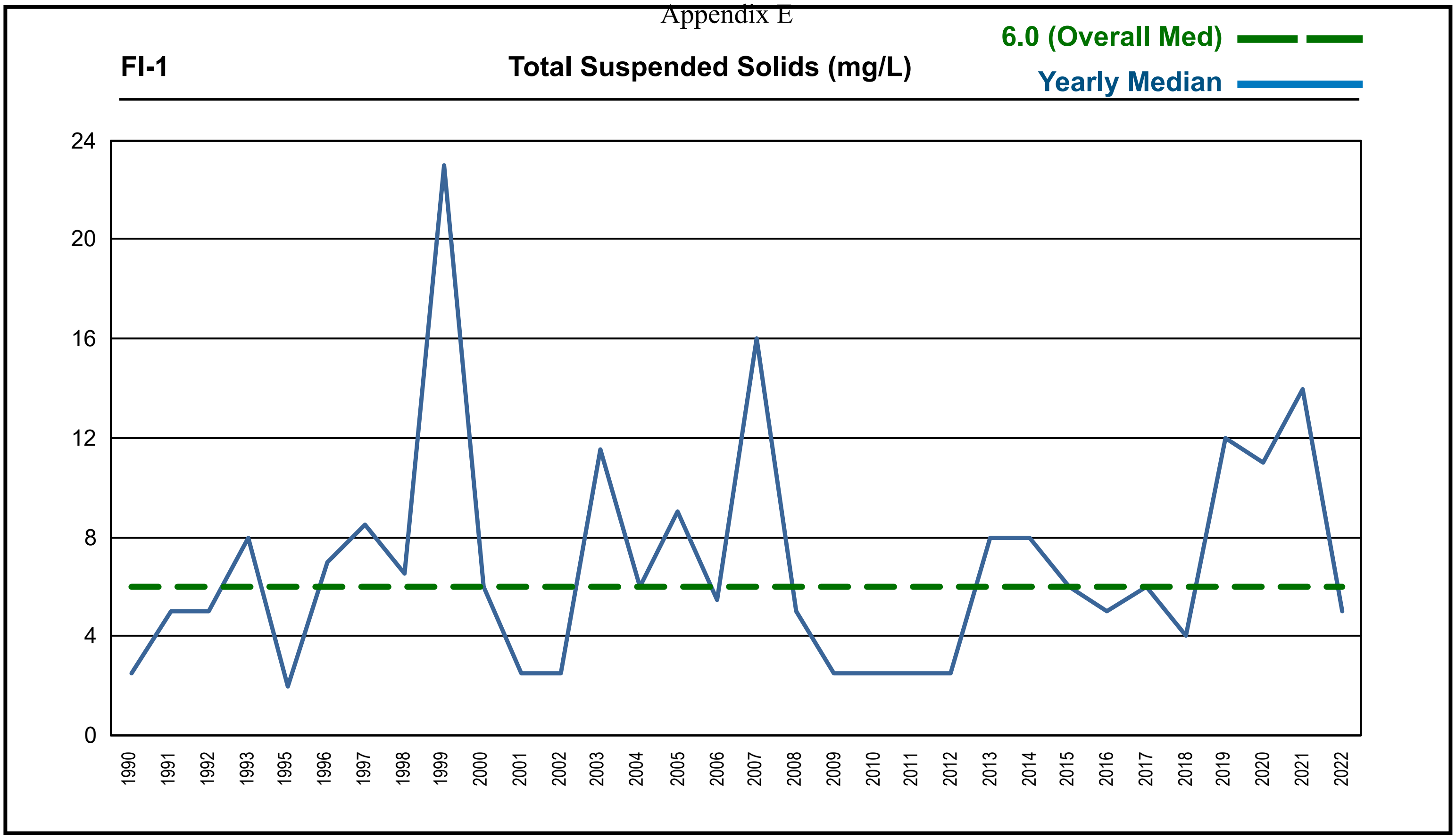

E-1
Total Phosphorus (mg/L)
0.025 (Overall Med)
Yearly Median

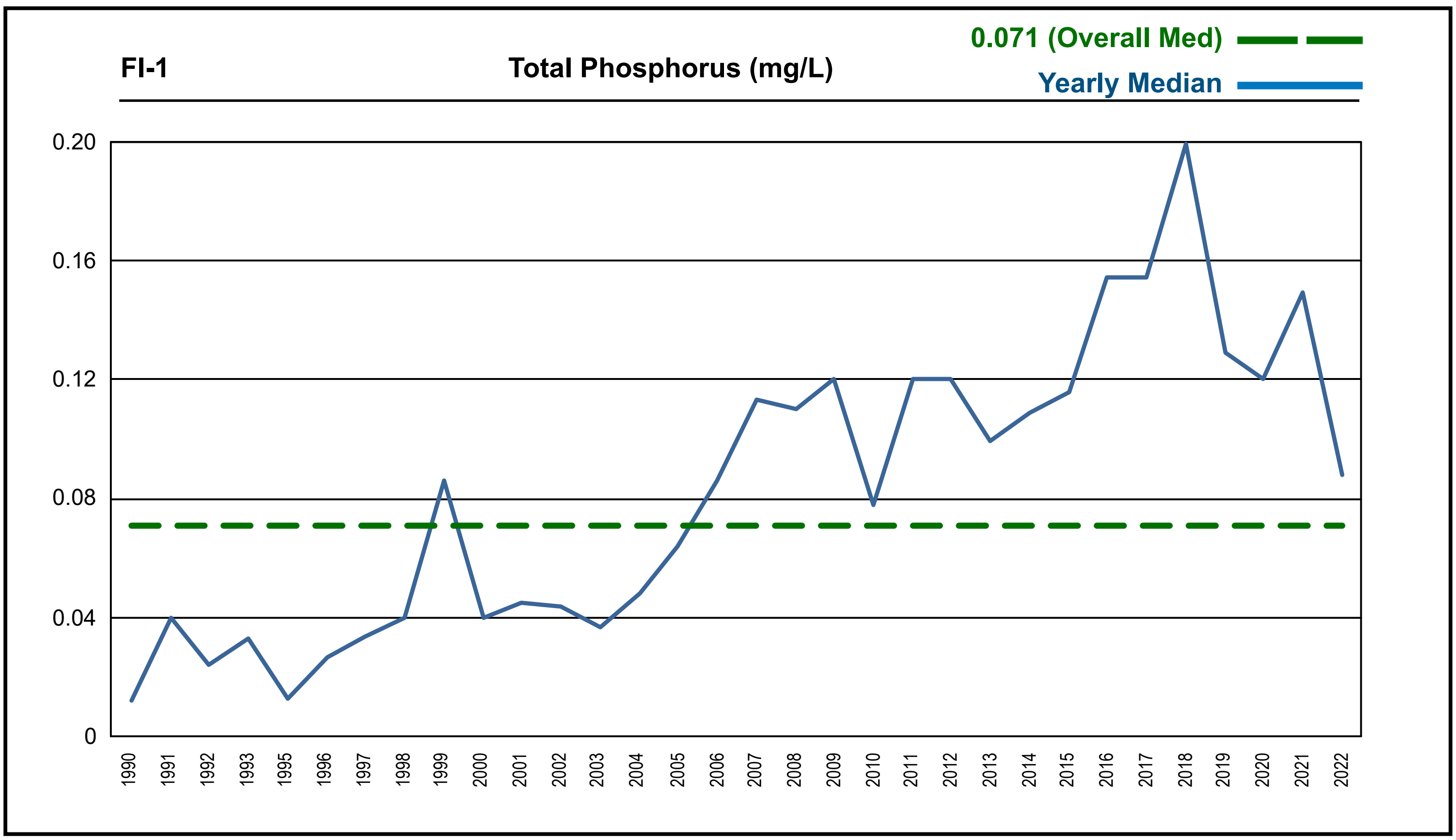


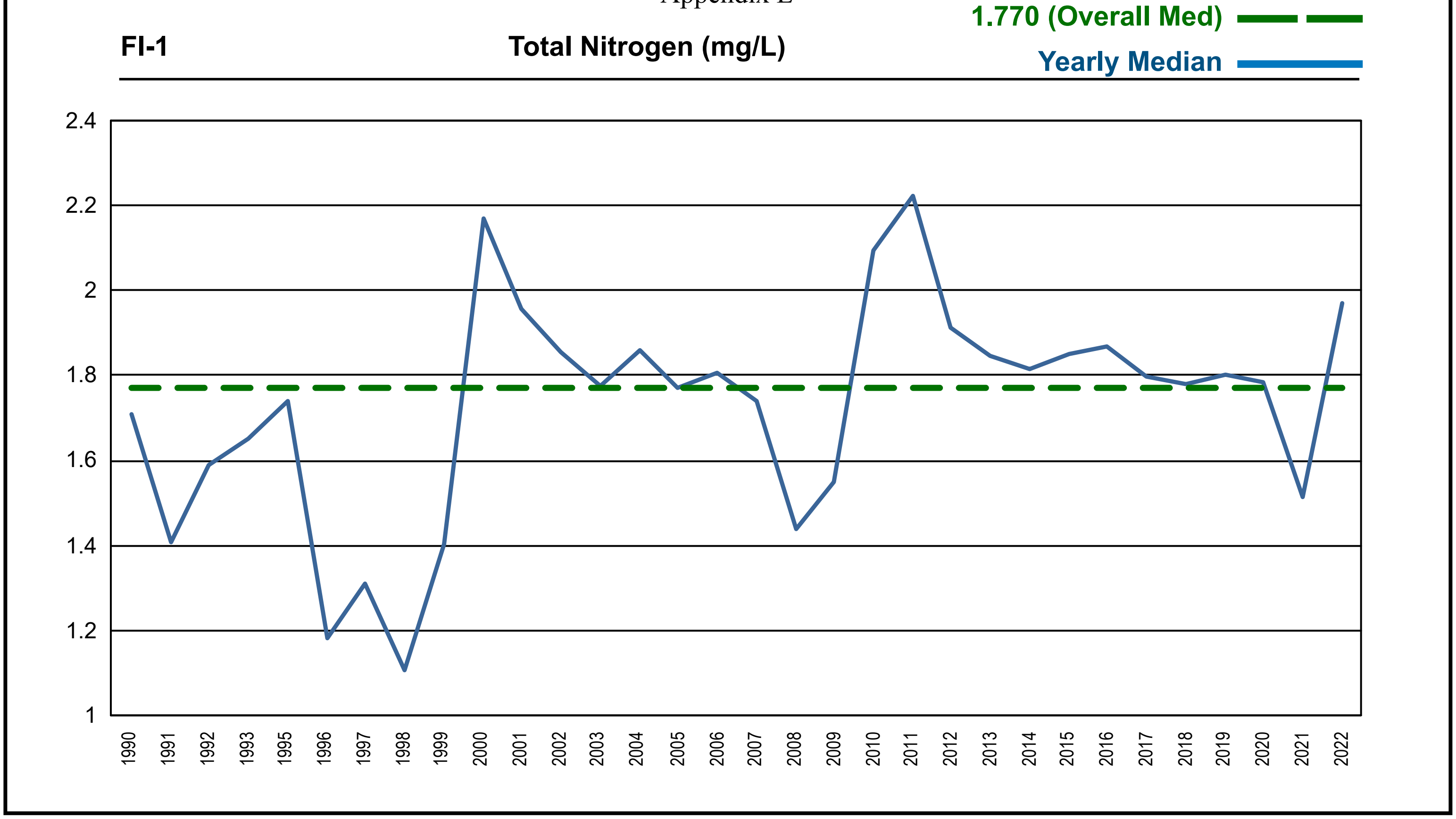
0.554 (Overall Med)
E-1
Total Nitrogen (mg/L)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
1988
1989
1990
1991
1992
1994
1995
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

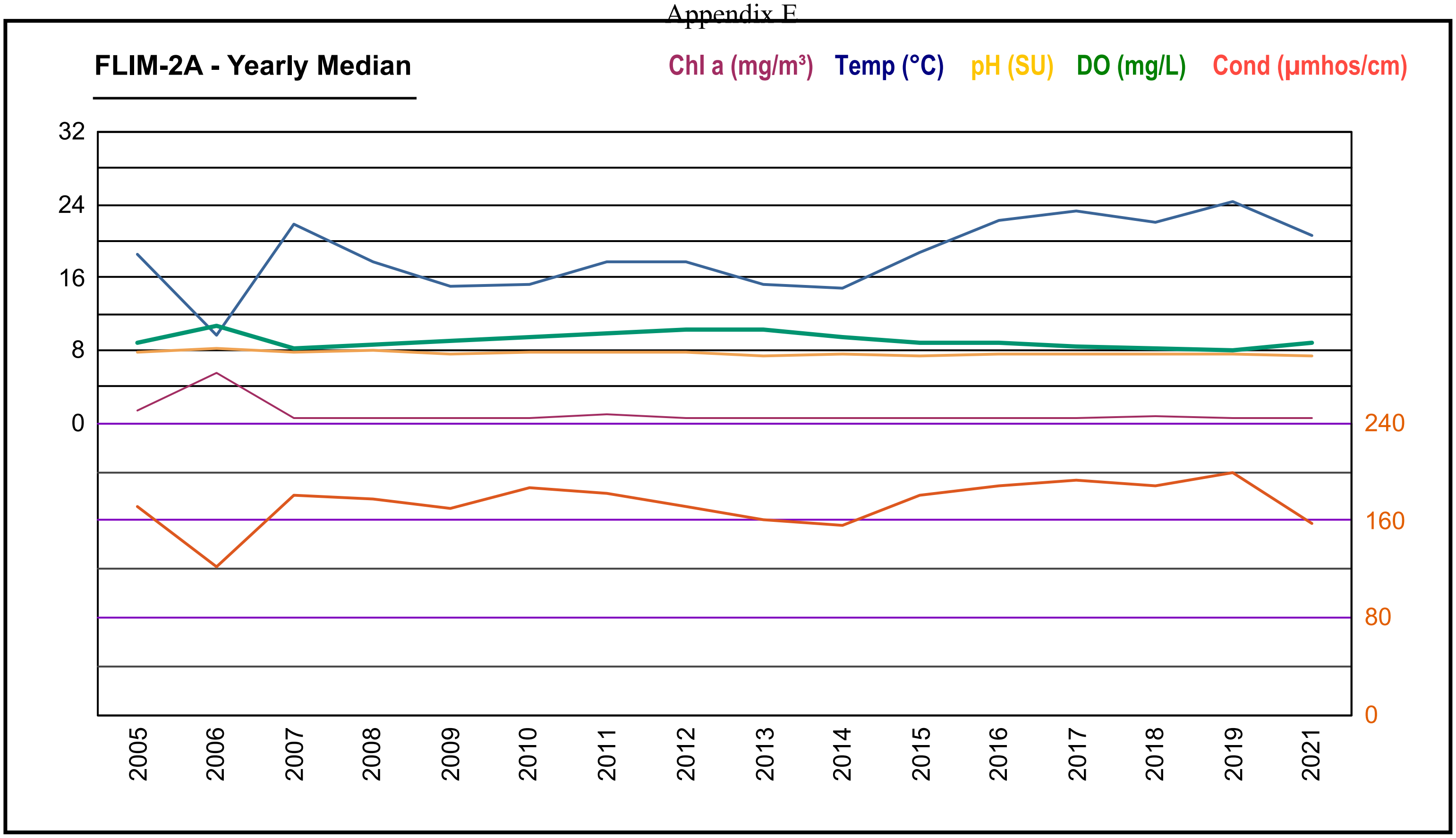

FI-1 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
24
16
8
0
120
80
40
0
1990 1991 1992 1993 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

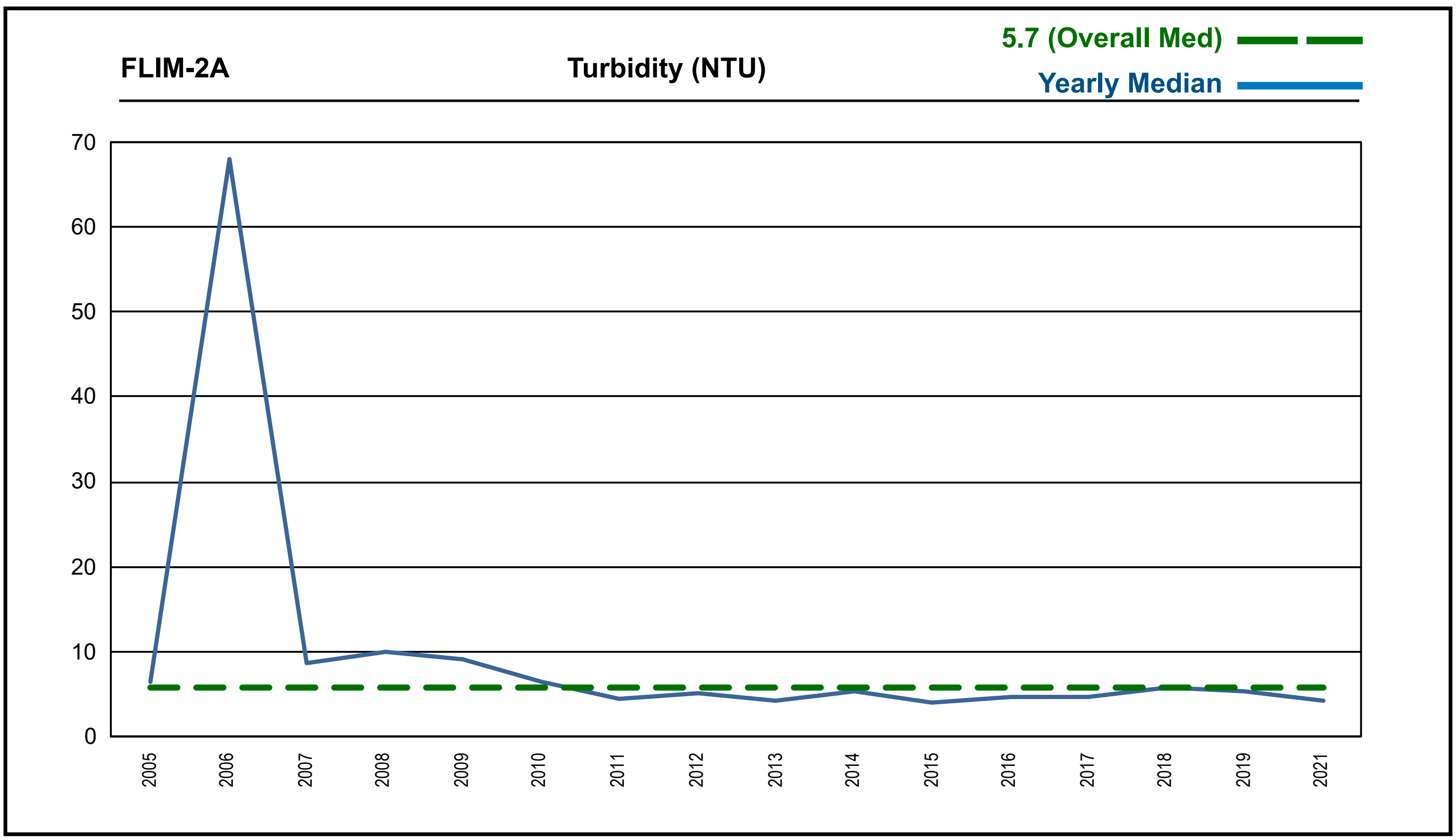

FI-1
Turbidity (NTU)
5.4 (Overall Med)
Yearly Median
60
50
40
30
20
10
0
1990 1991 1992 1993 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

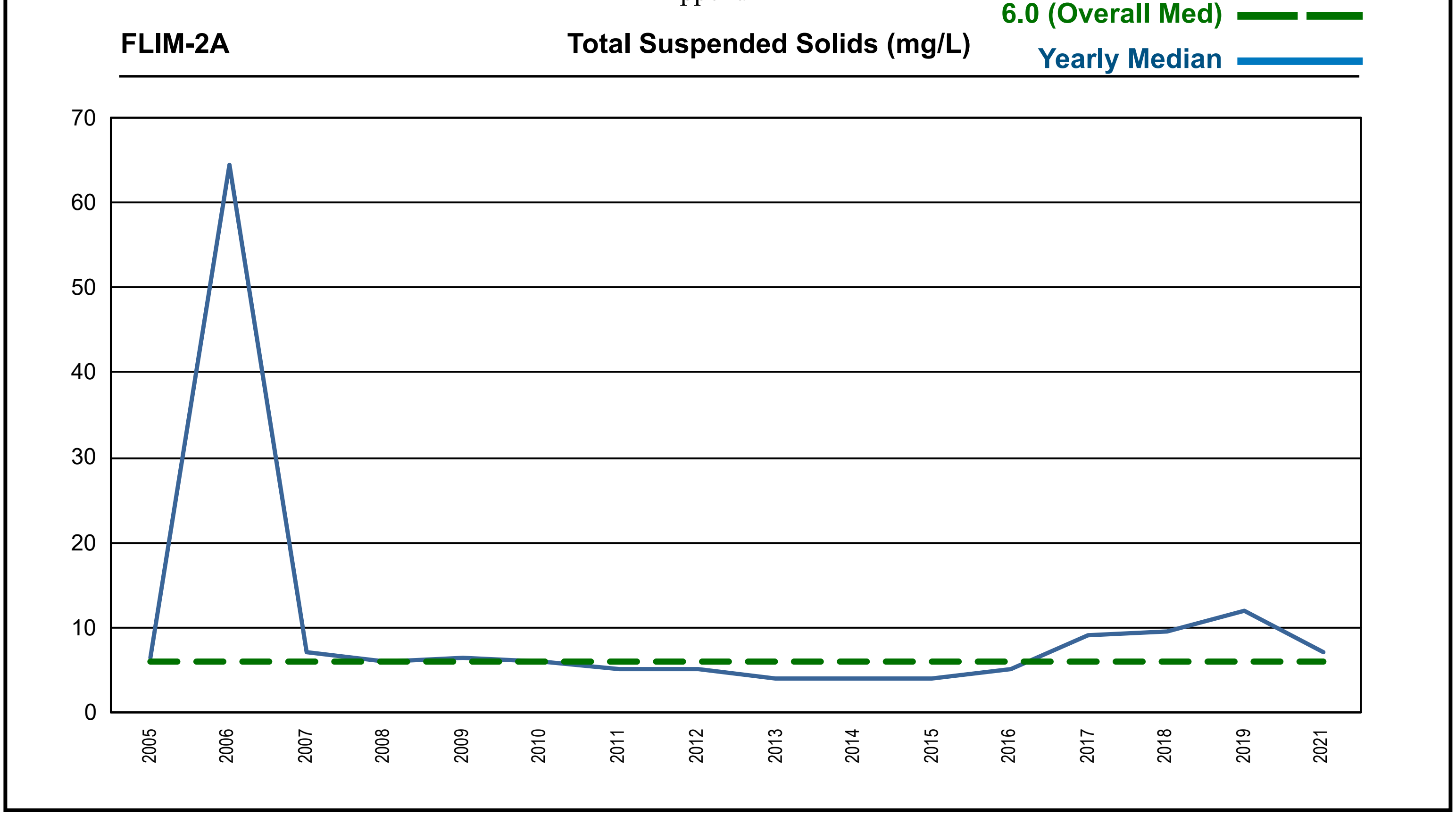

6.0 (Overall Med)
Yearly Median
FI-1
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
1990
1991
1992
1993
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

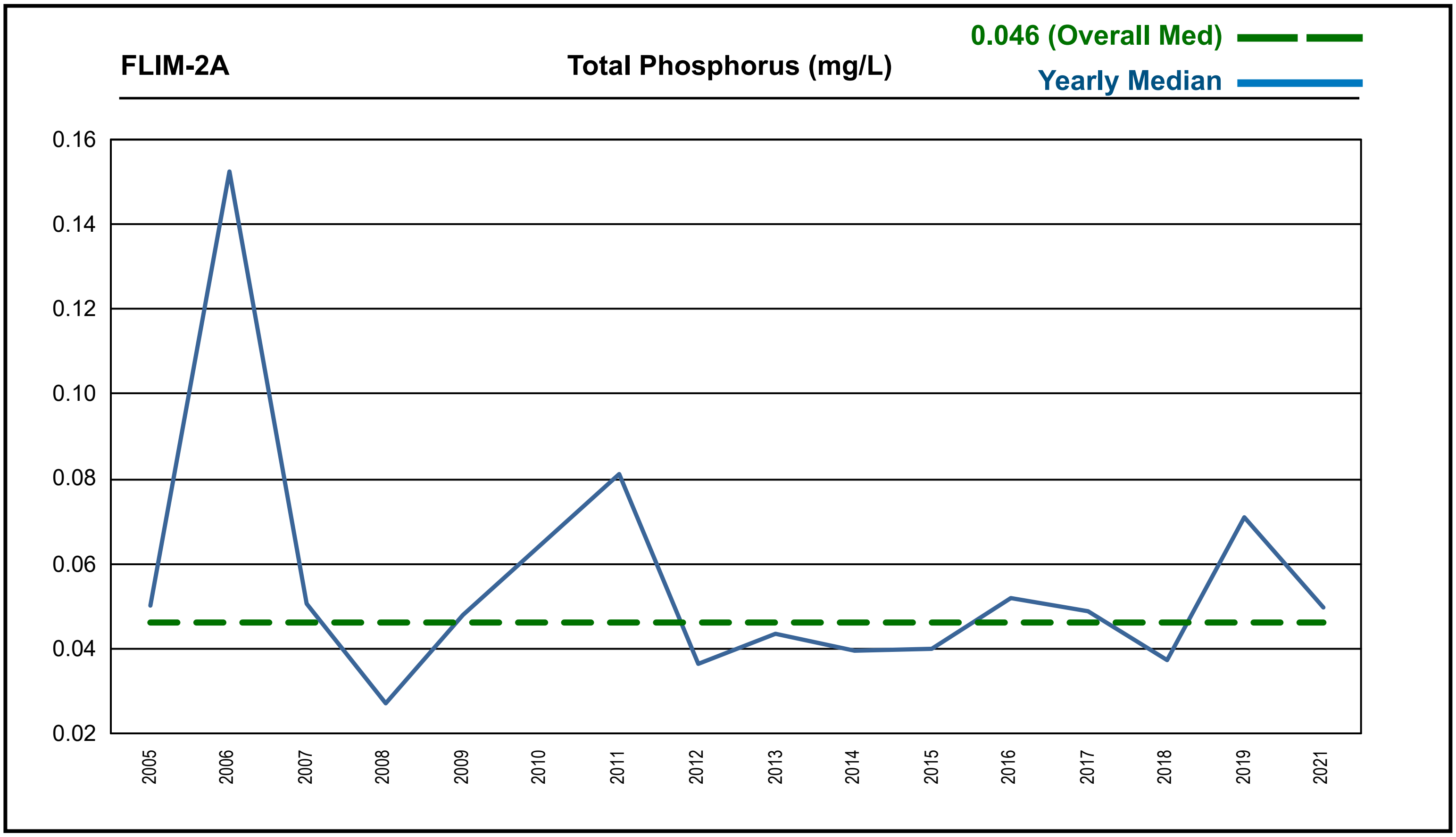

0.071 (Overall Med)
Yearly Median
FI-1
Total Phosphorus (mg/L)
0.20
0.16
0.12
0.08
0.04
0
1990
1991
1992
1993
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

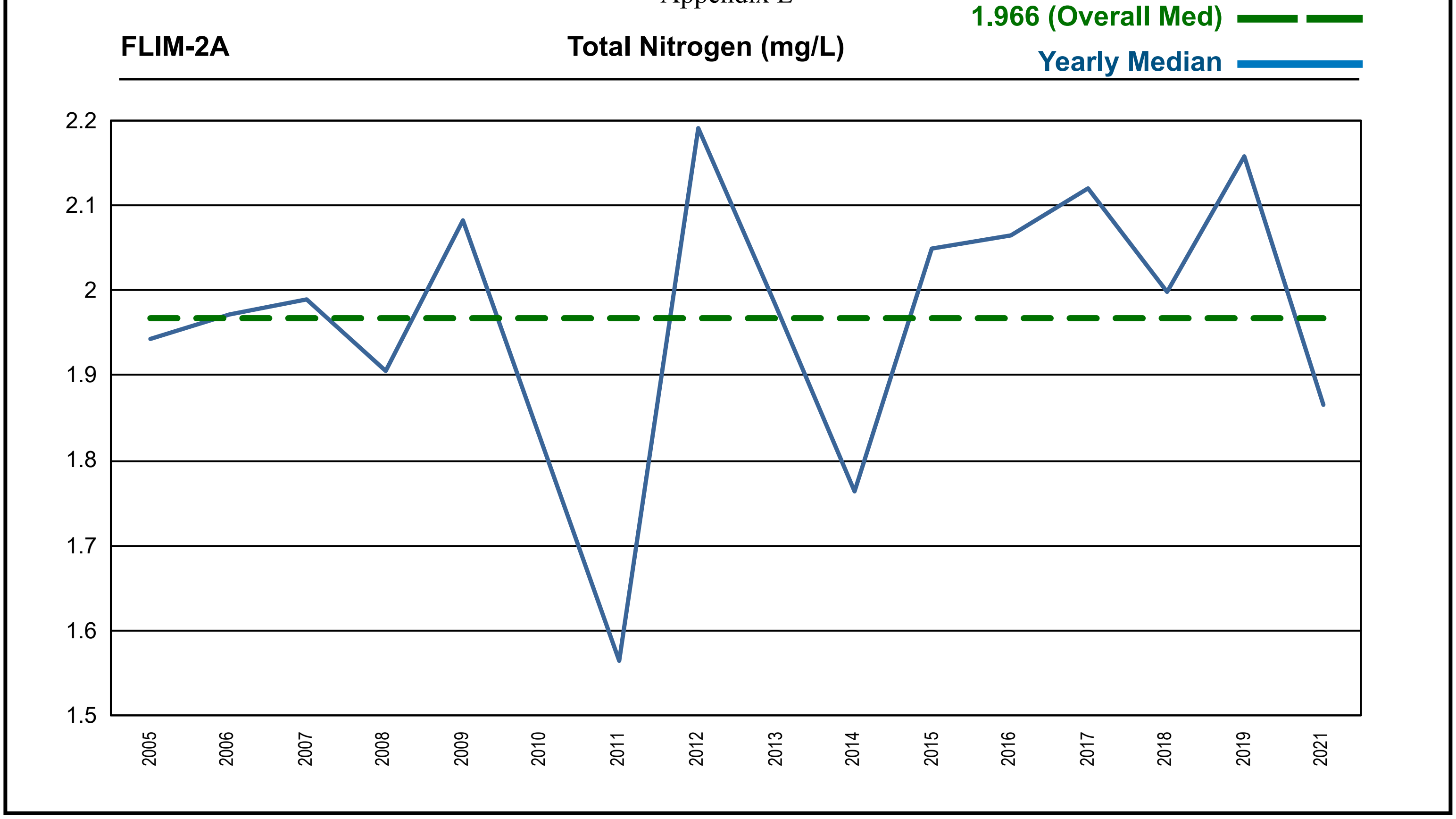

FI-1
Total Nitrogen (mg/L)
1.770 (Overall Med)
Yearly Median
2.4
2.2
2
1.8
1.6
1.4
1.2
1
1990
1991
1992
1993
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

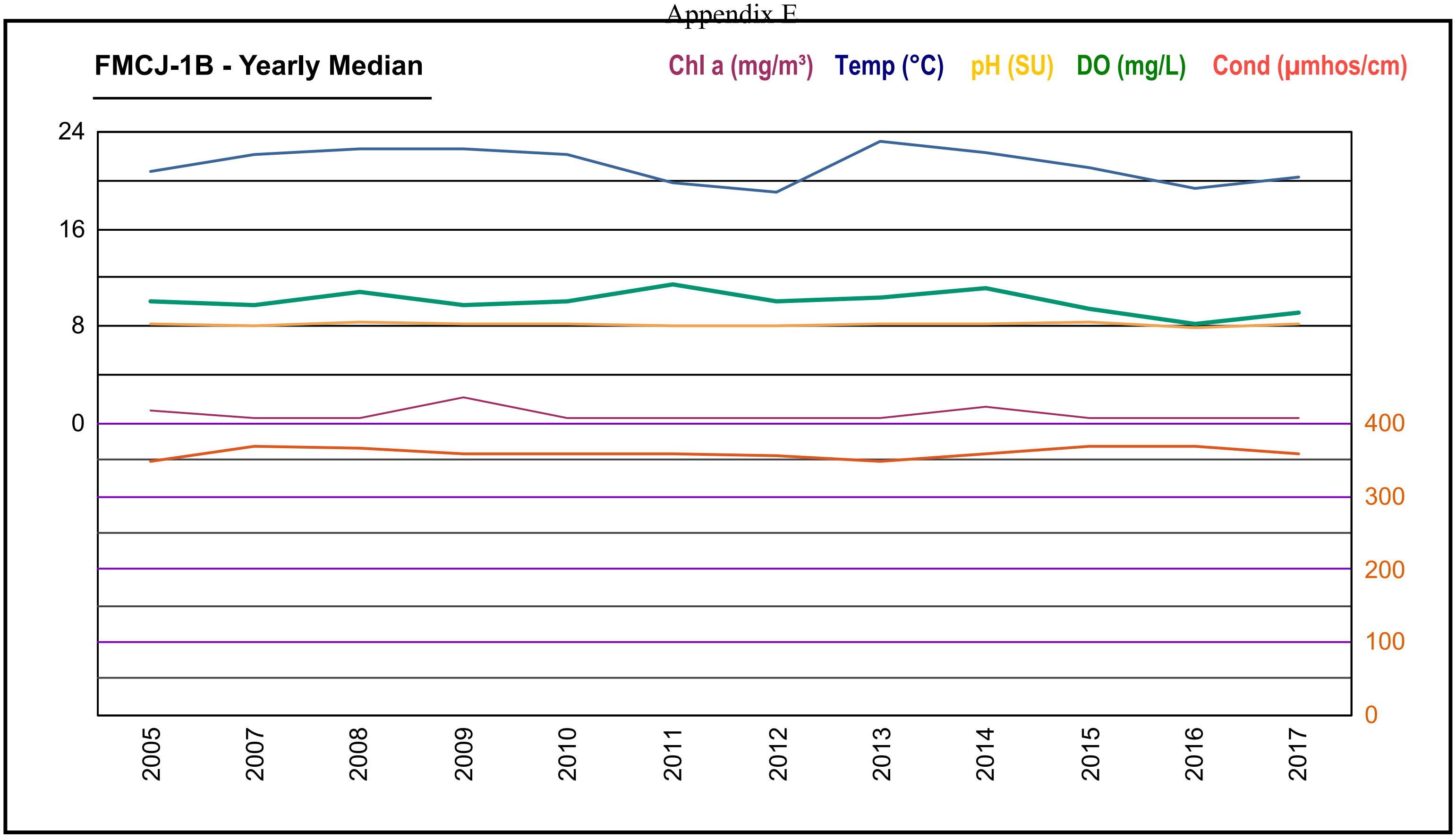

FLIM-2A - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

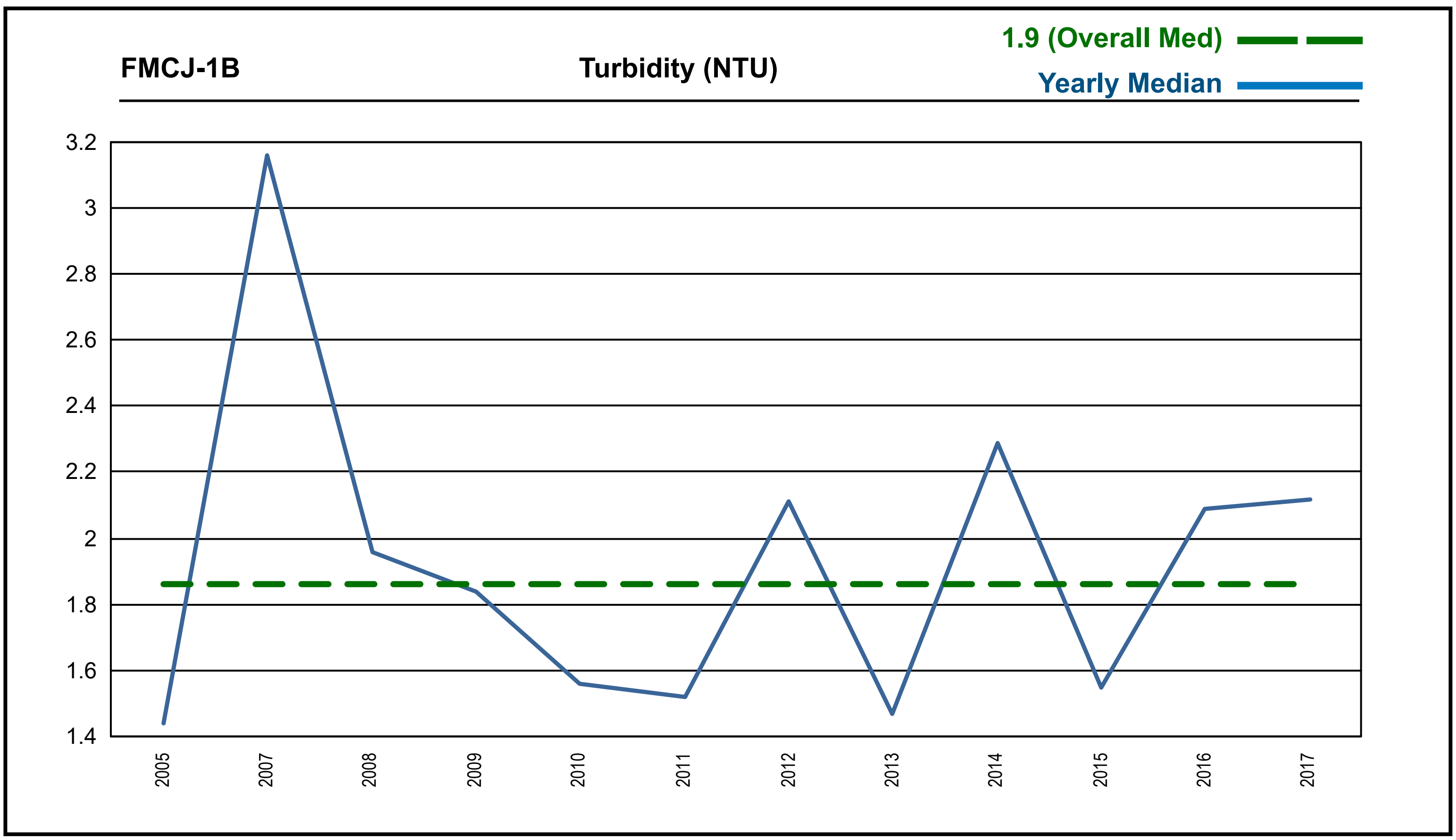

FLIM-2A
Turbidity (NTU)
5.7 (Overall Med)
Yearly Median
70
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

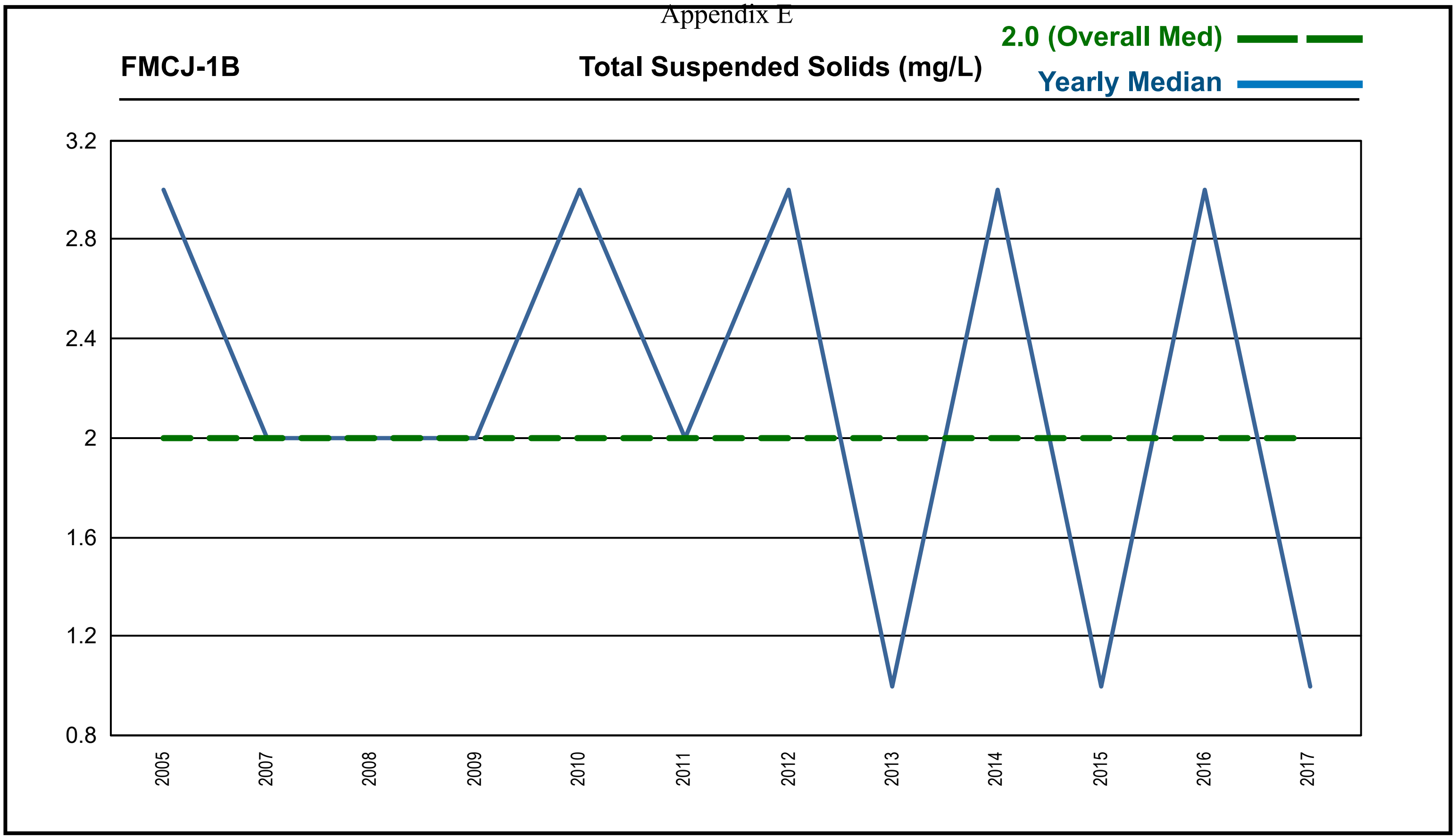

6.0 (Overall Med)
Yearly Median
FLIM-2A
Total Suspended Solids (mg/L)
70
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

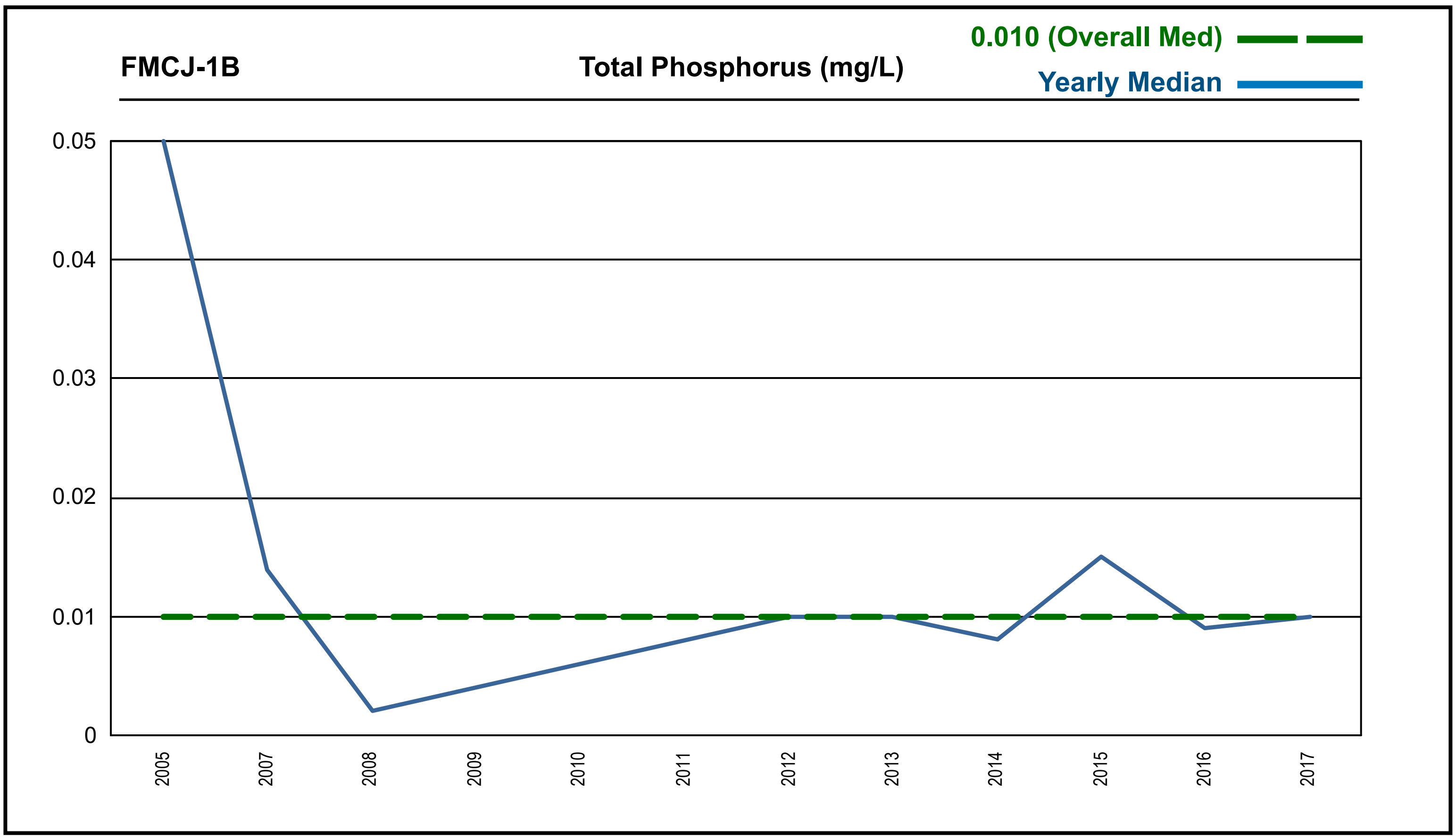

0.046 (Overall Med)
Yearly Median
FLIM-2A
Total Phosphorus (mg/L)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

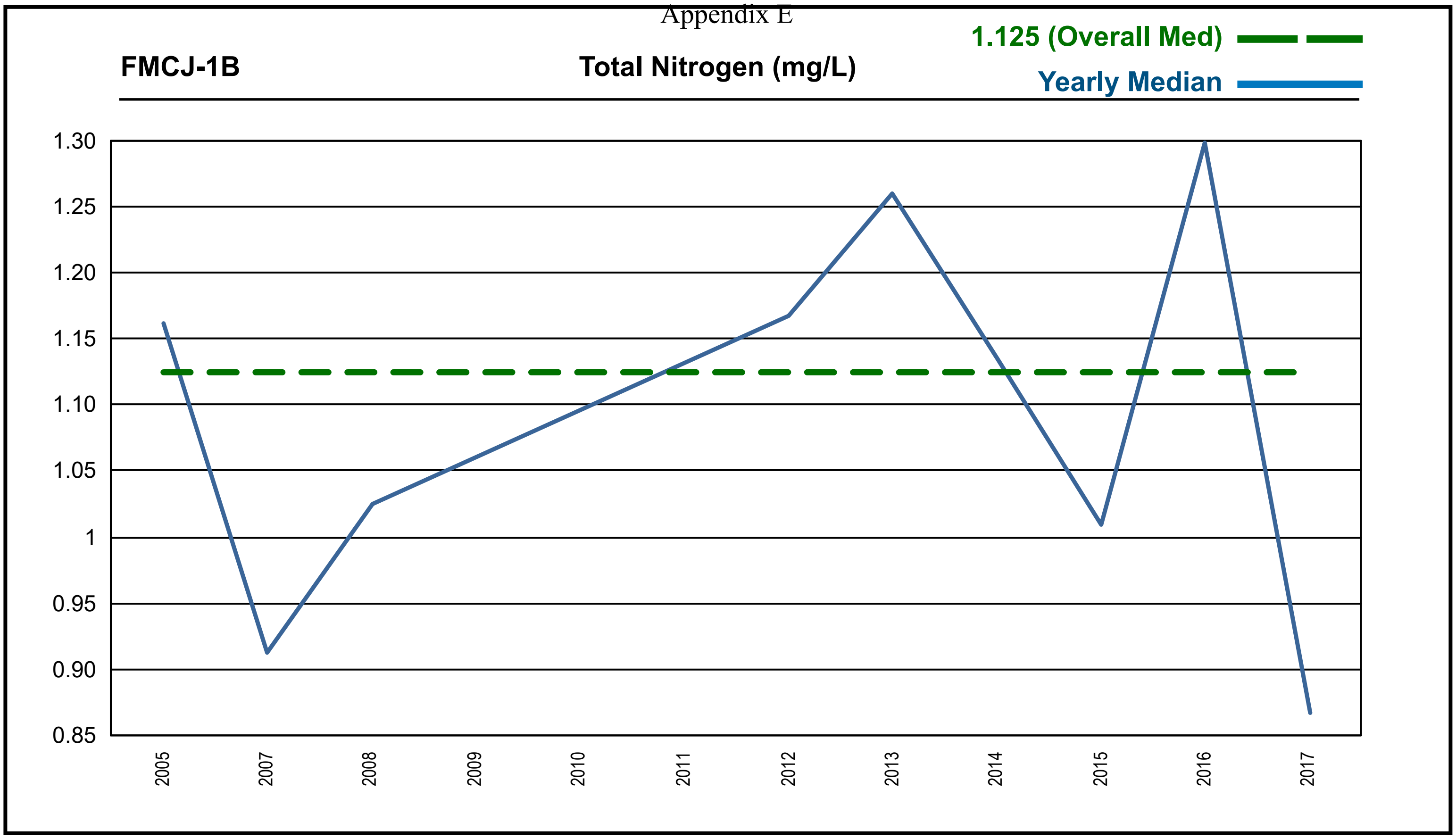

FLIM-2A
Total Nitrogen (mg/L)
1.966 (Overall Med)
Yearly Median
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

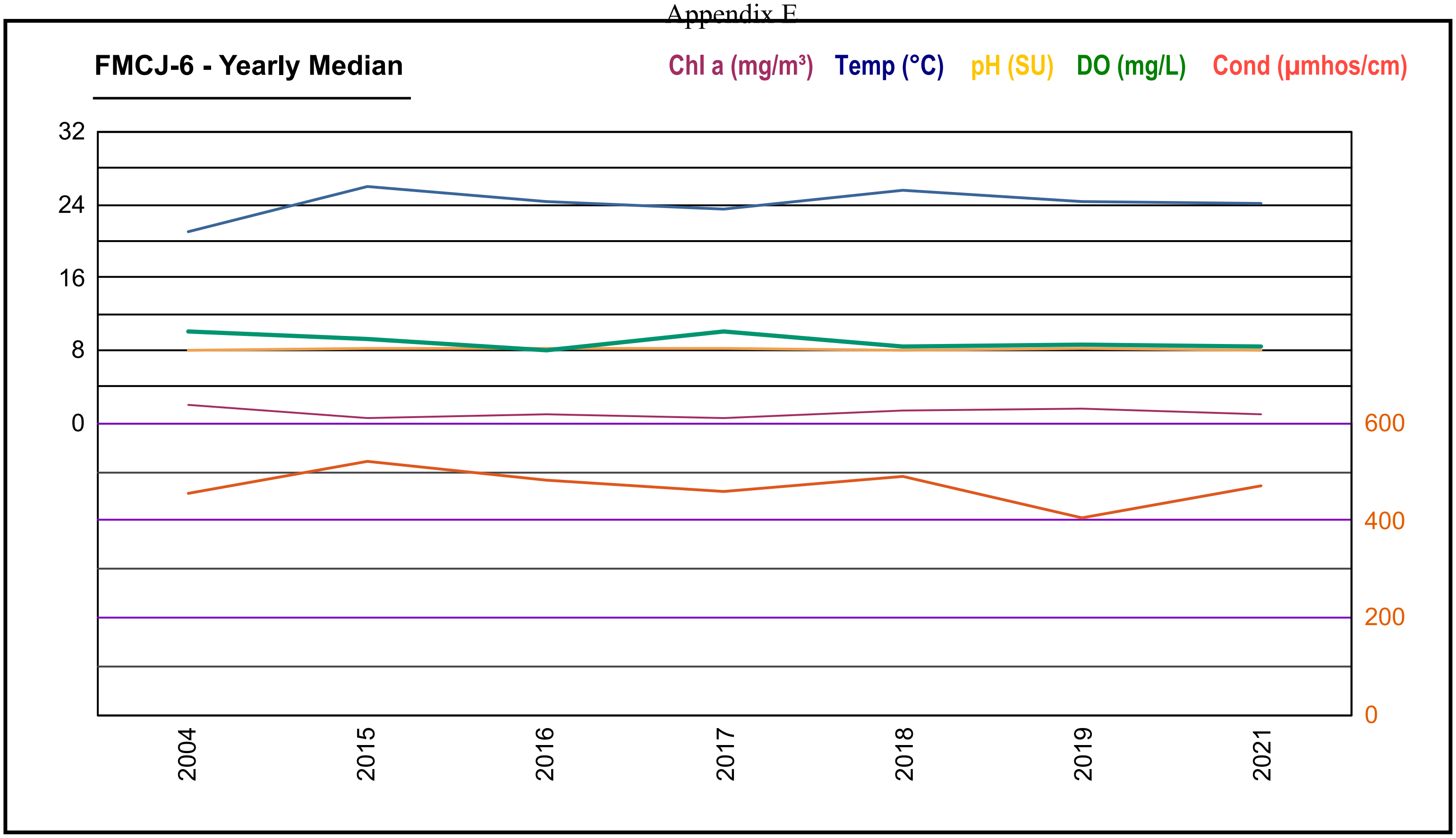

FMCJ-1B - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
400
300
200
100
0
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

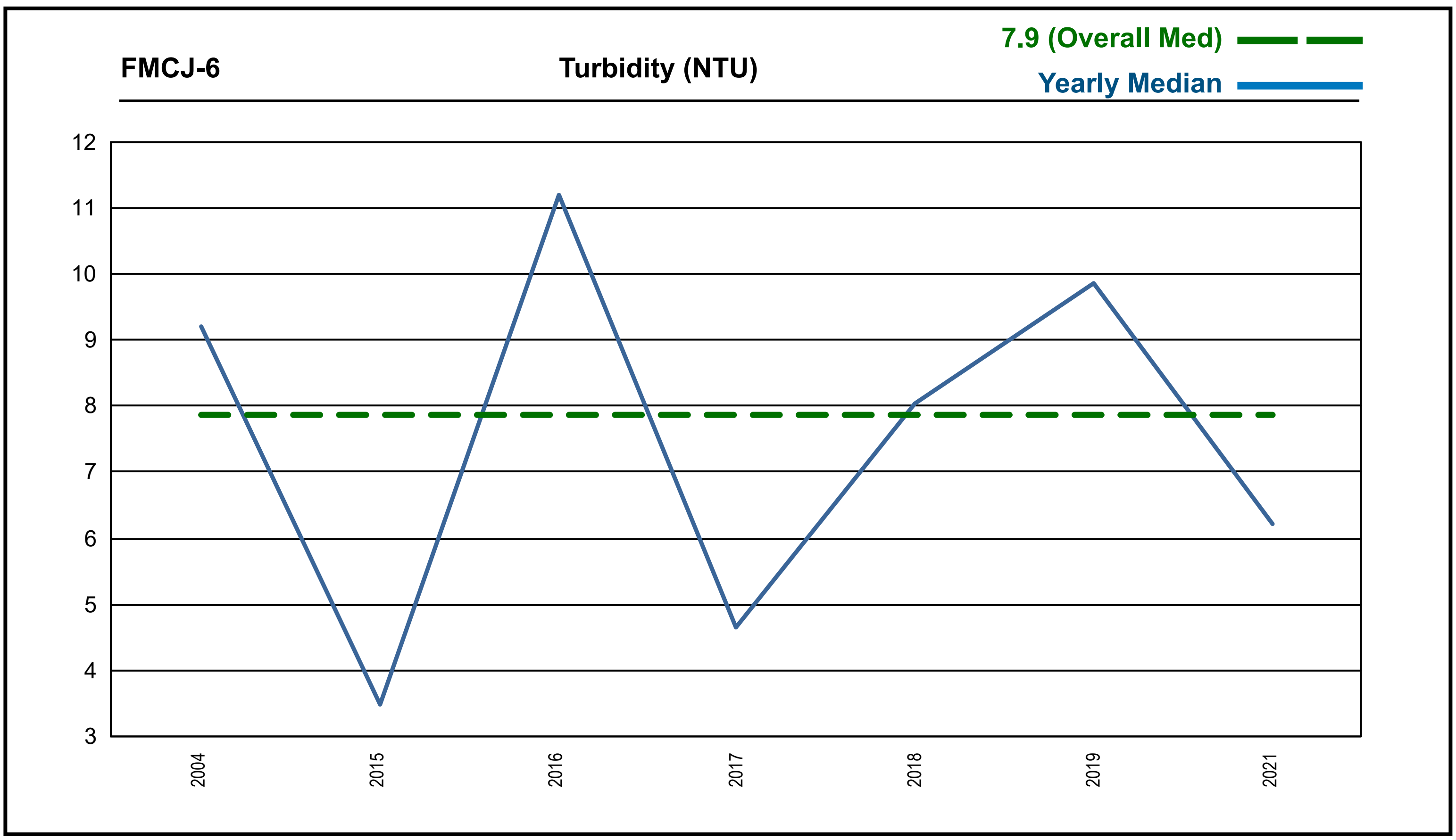

FMCJ-1B
Turbidity (NTU)
1.9 (Overall Med)
Yearly Median
3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

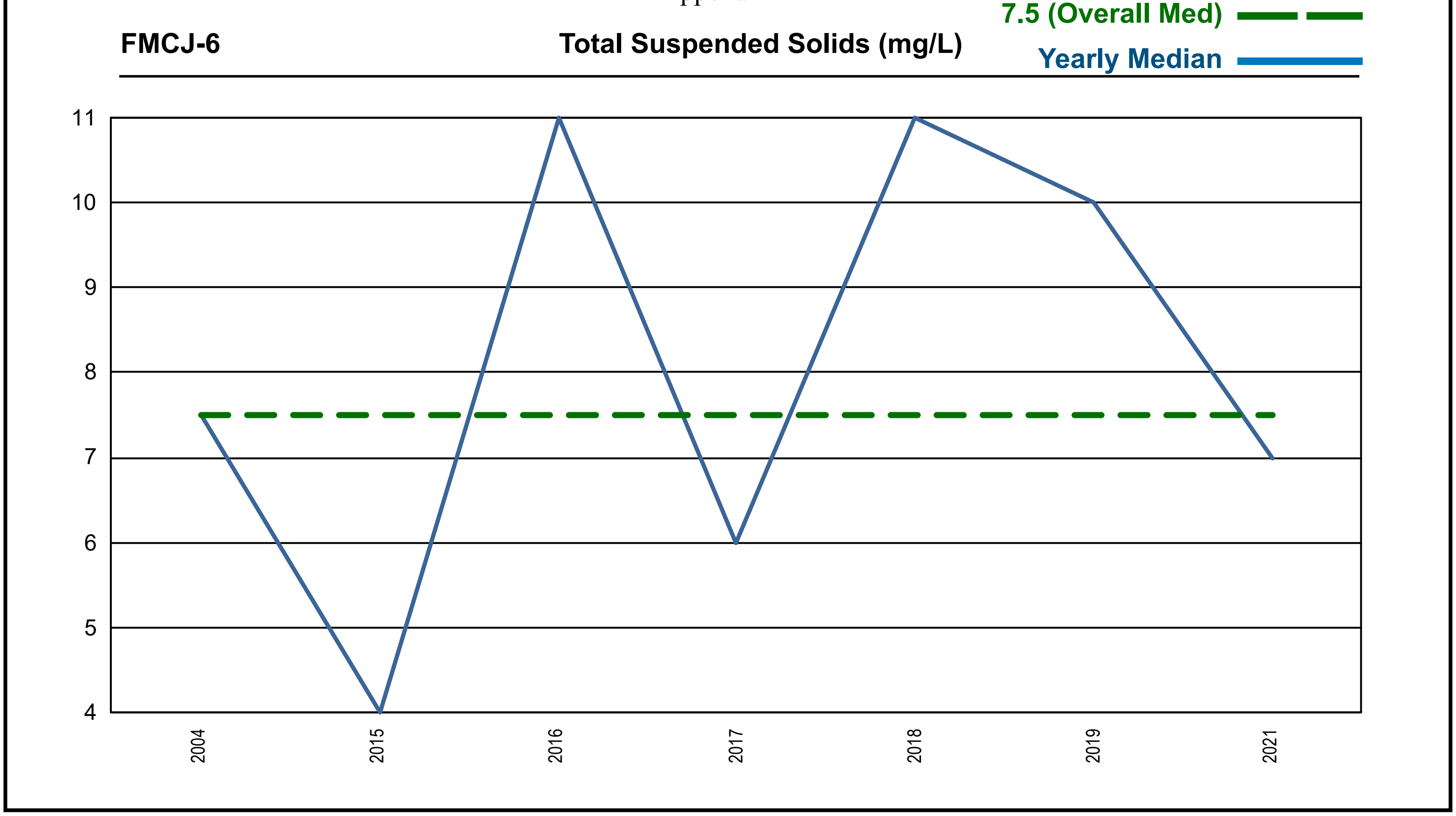

2.0 (Overall Med)
FMCJ-1B
Total Suspended Solids (mg/L)
Yearly Median
3.2
2.8
2.4
2
1.6
1.2
0.8
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

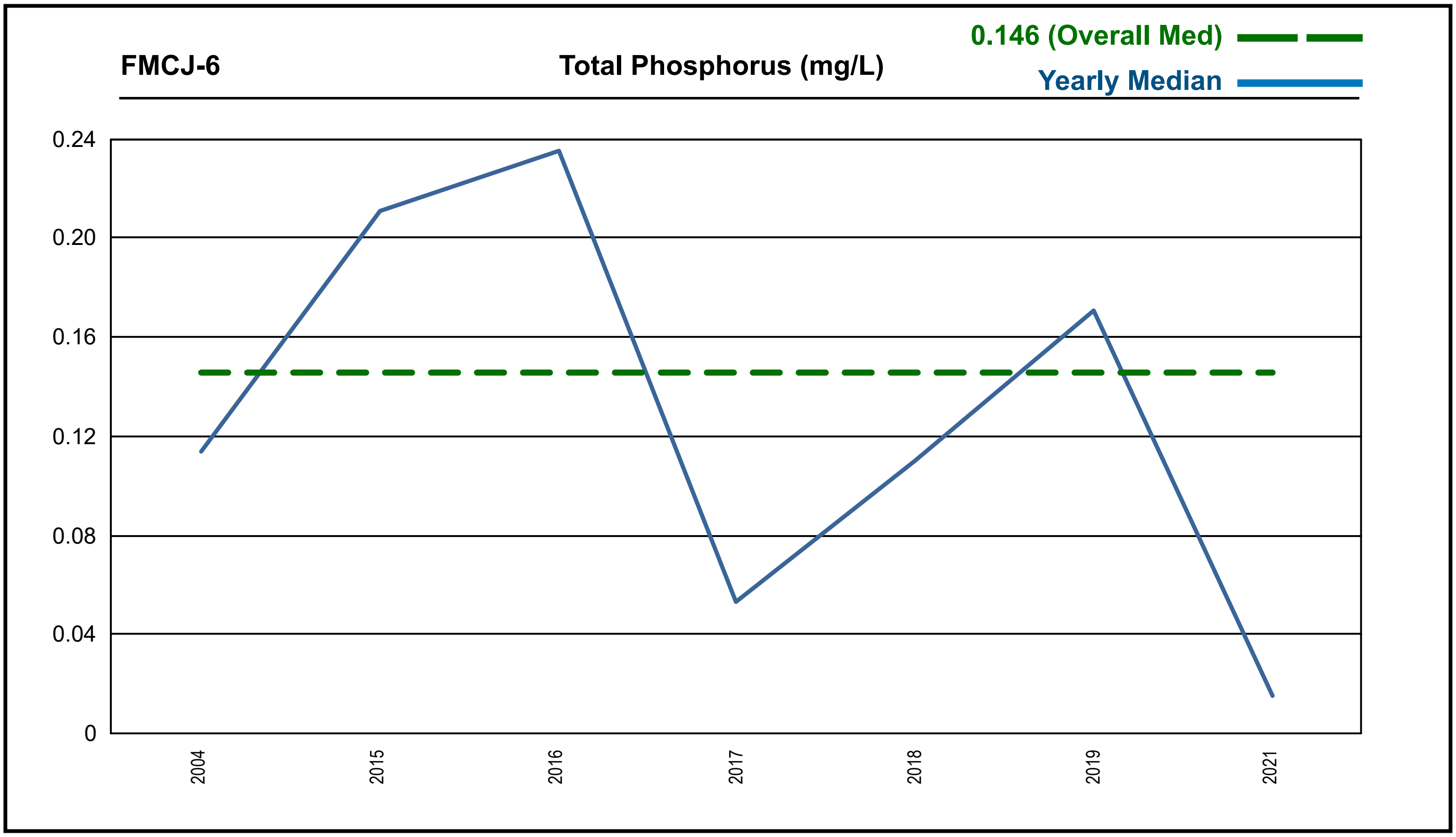

0.010 (Overall Med)
FMCJ-1B
Total Phosphorus (mg/L)
Yearly Median
0.05
0.04
0.03
0.02
0.01
0
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

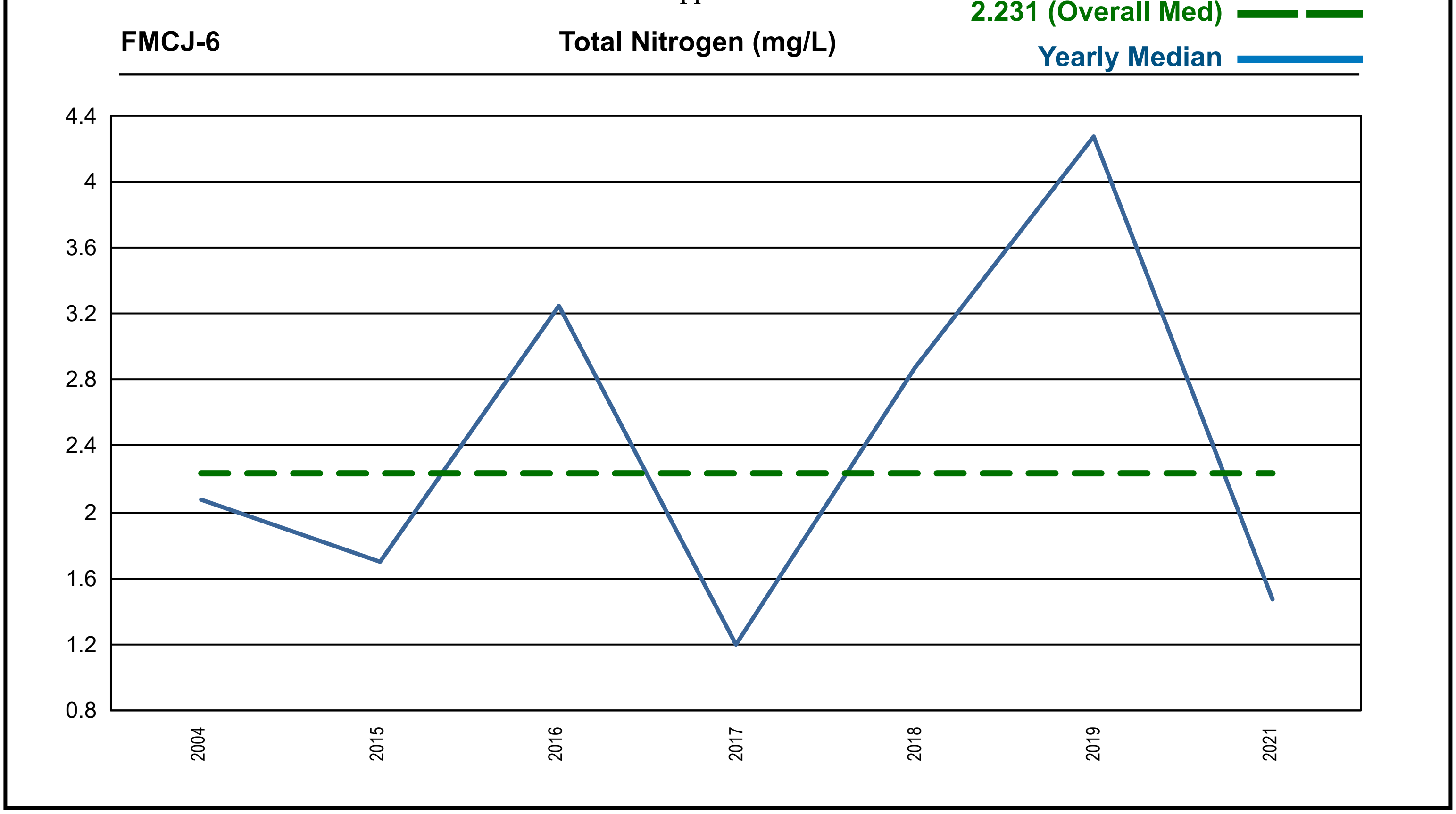

1.125 (Overall Med)
Yearly Median
FMCJ-1B
Total Nitrogen (mg/L)
1.30
1.25
1.20
1.15
1.10
1.05
1
0.95
0.90
0.85
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017


FMCJ-6 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
600
400
200
0
2004
2015
2016
2017
2018
2019
2021

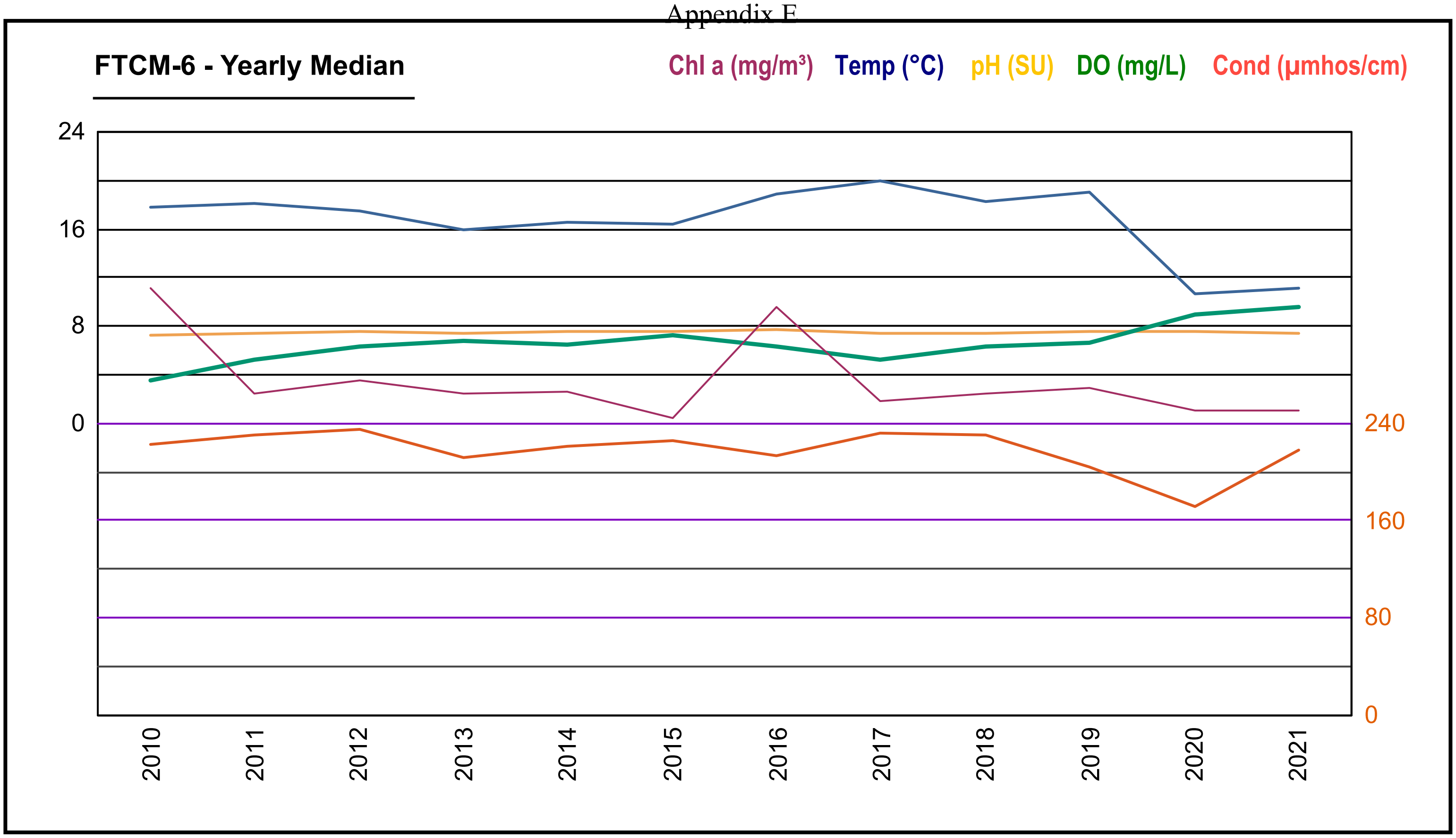

FMCJ-6
Turbidity (NTU)
7.9 (Overall Med)
Yearly Median
12
11
10
9
8
7
6
5
4
3
2004
2015
2016
2017
2018
2019
2021

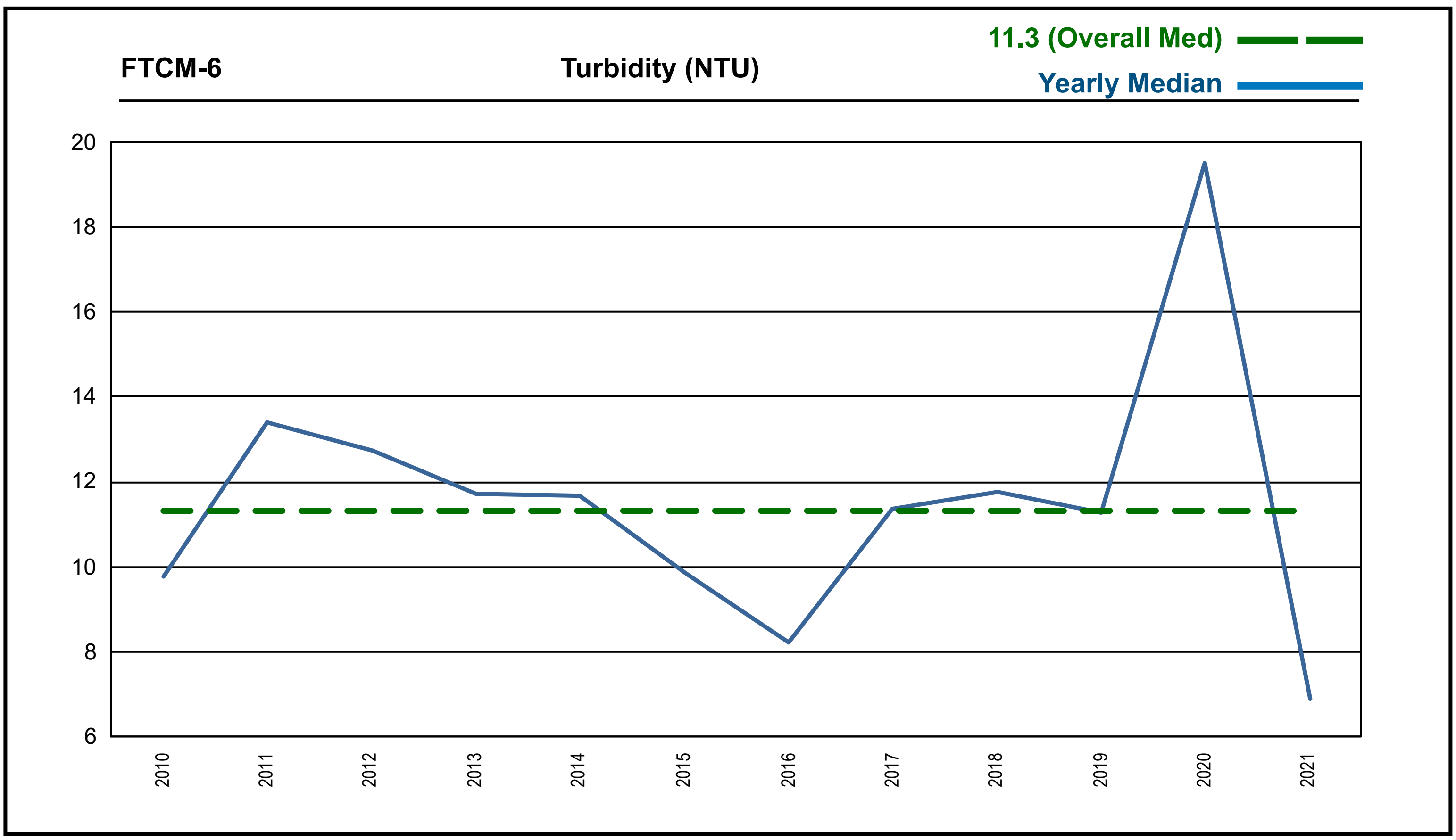

7.5 (Overall Med)
Yearly Median
FMCJ-6
Total Suspended Solids (mg/L)
11
10
9
8
7
6
5
4
2004
2015
2016
2017
2018
2019
2021

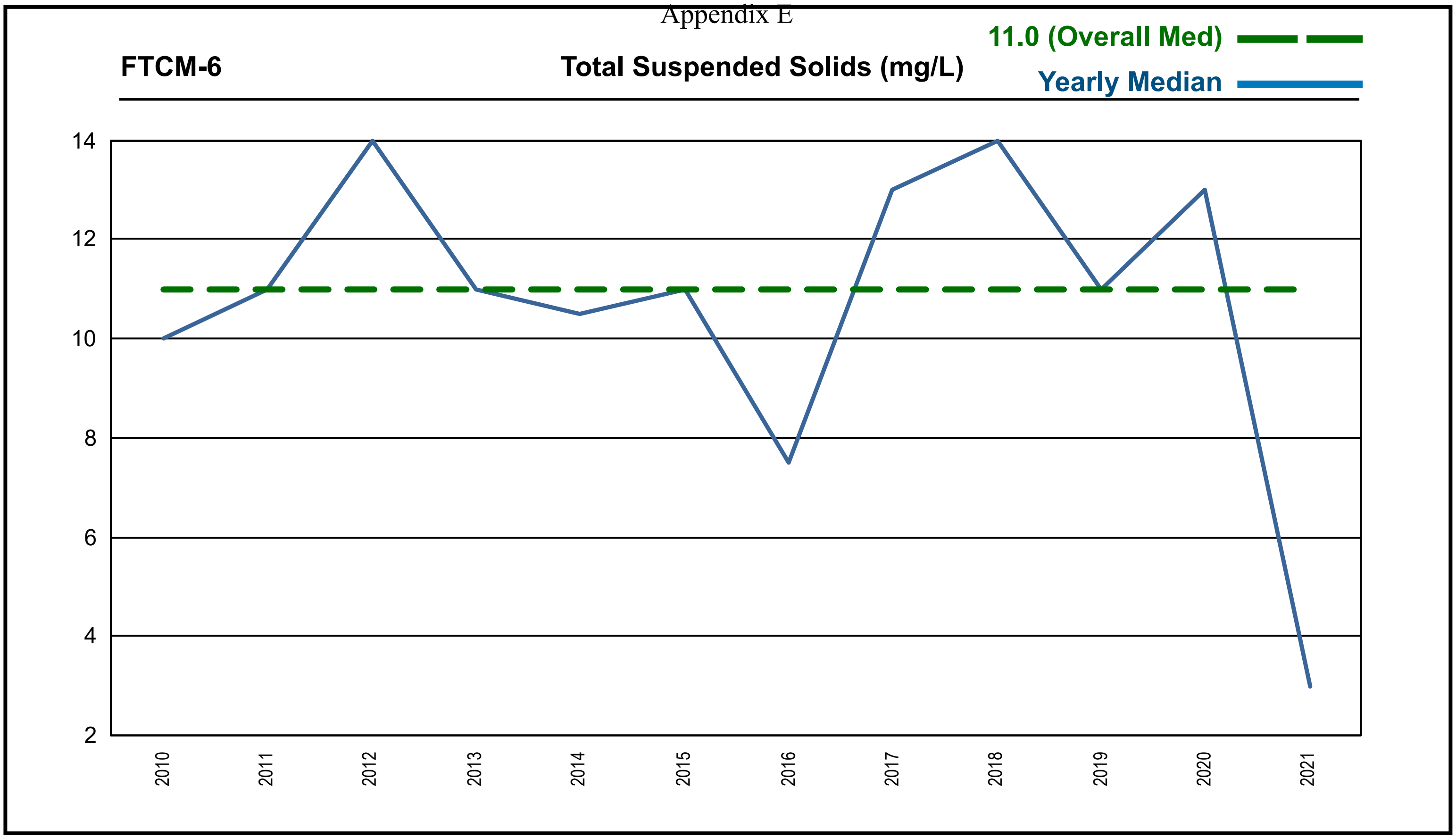

0.146 (Overall Med)
Yearly Median
FMCJ-6
Total Phosphorus (mg/L)
0.24
0.20
0.16
0.12
0.08
0.04
0
2004
2015
2016
2017
2018
2019
2021

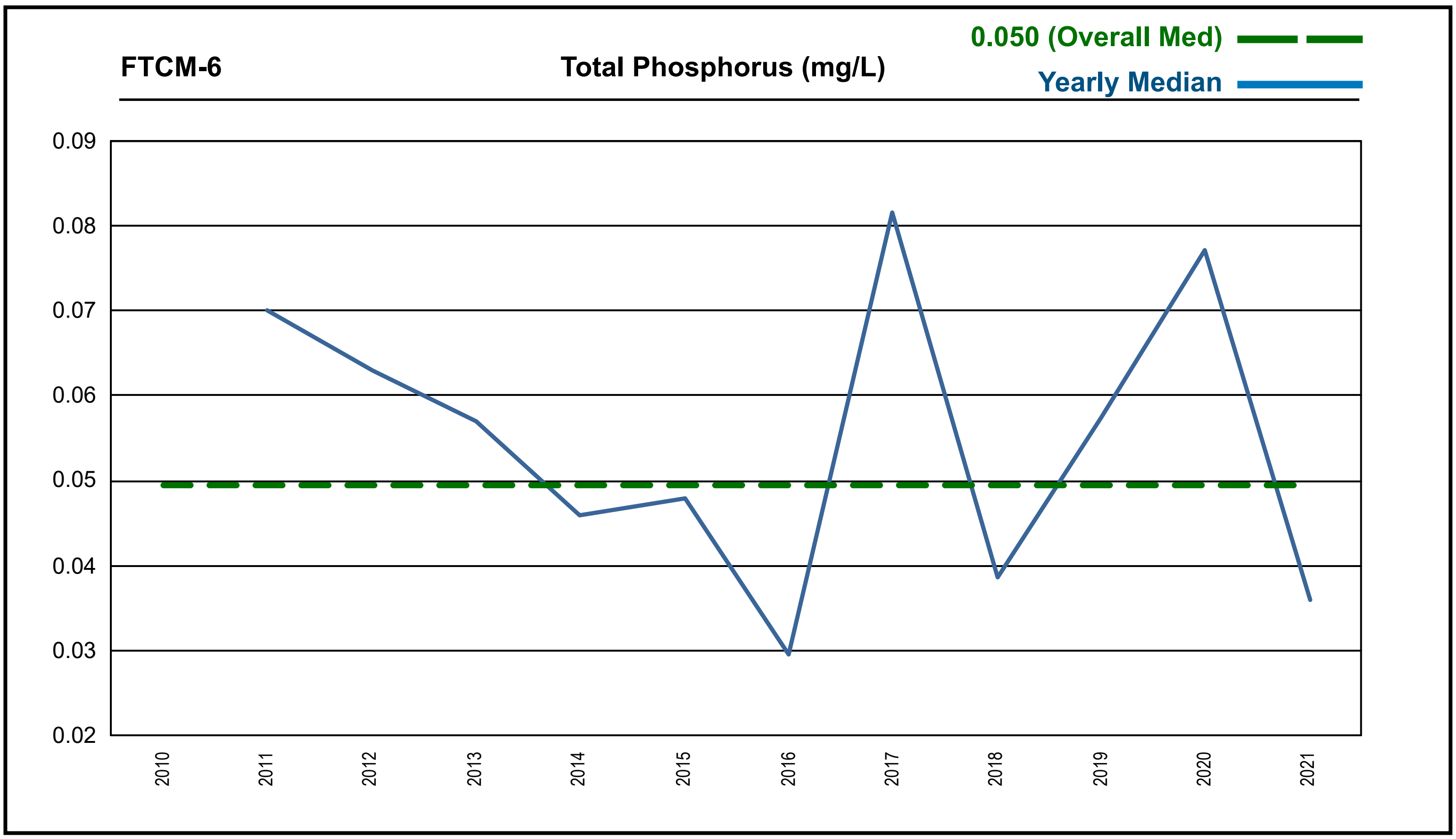


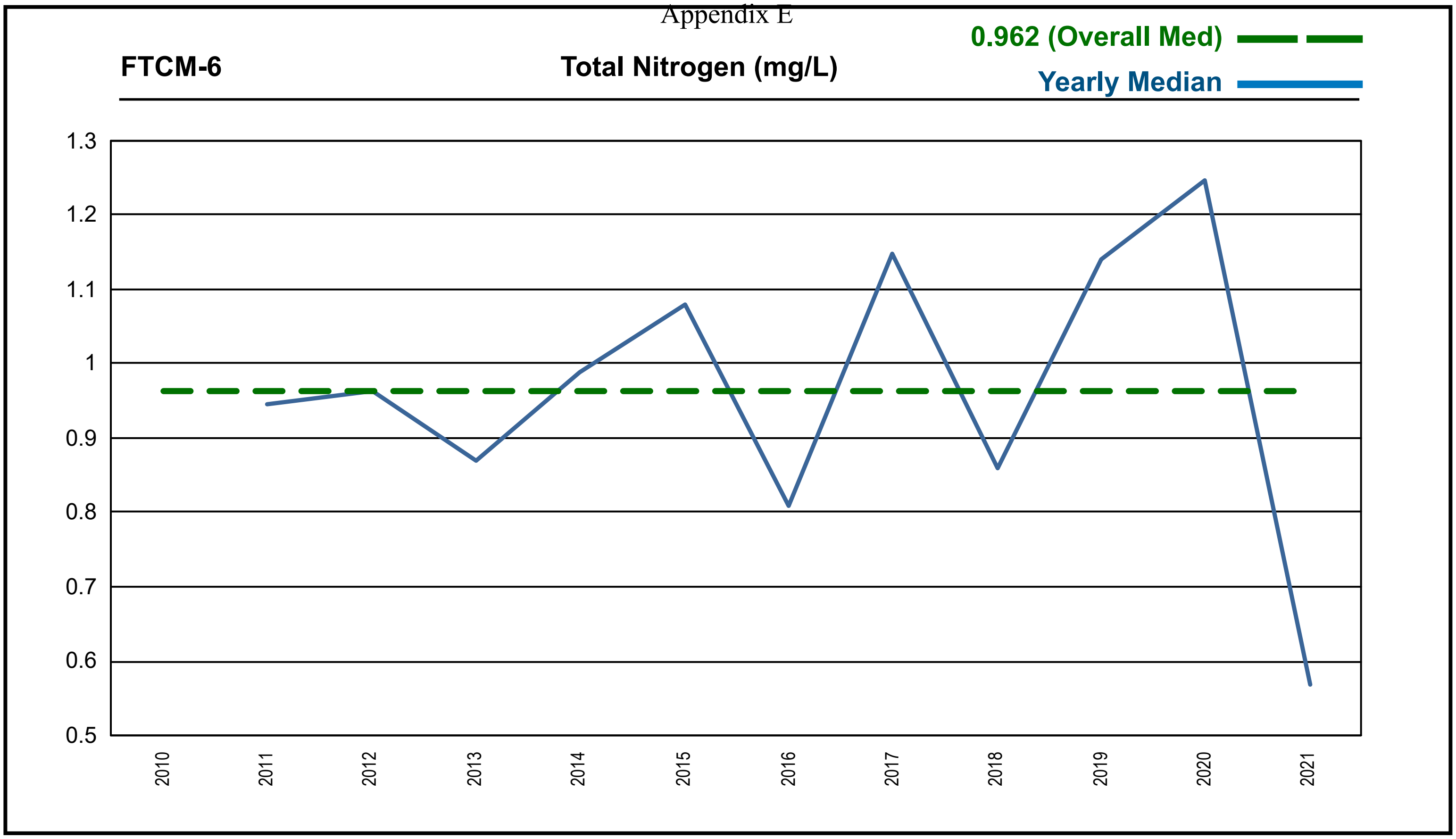
FMCJ-6
Total Nitrogen (mg/L)
2.231 (Overall Med)
Yearly Median
4.4
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
2004
2015
2016
2017
2018
2019
2021


FTCM-6 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
240
160
80
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

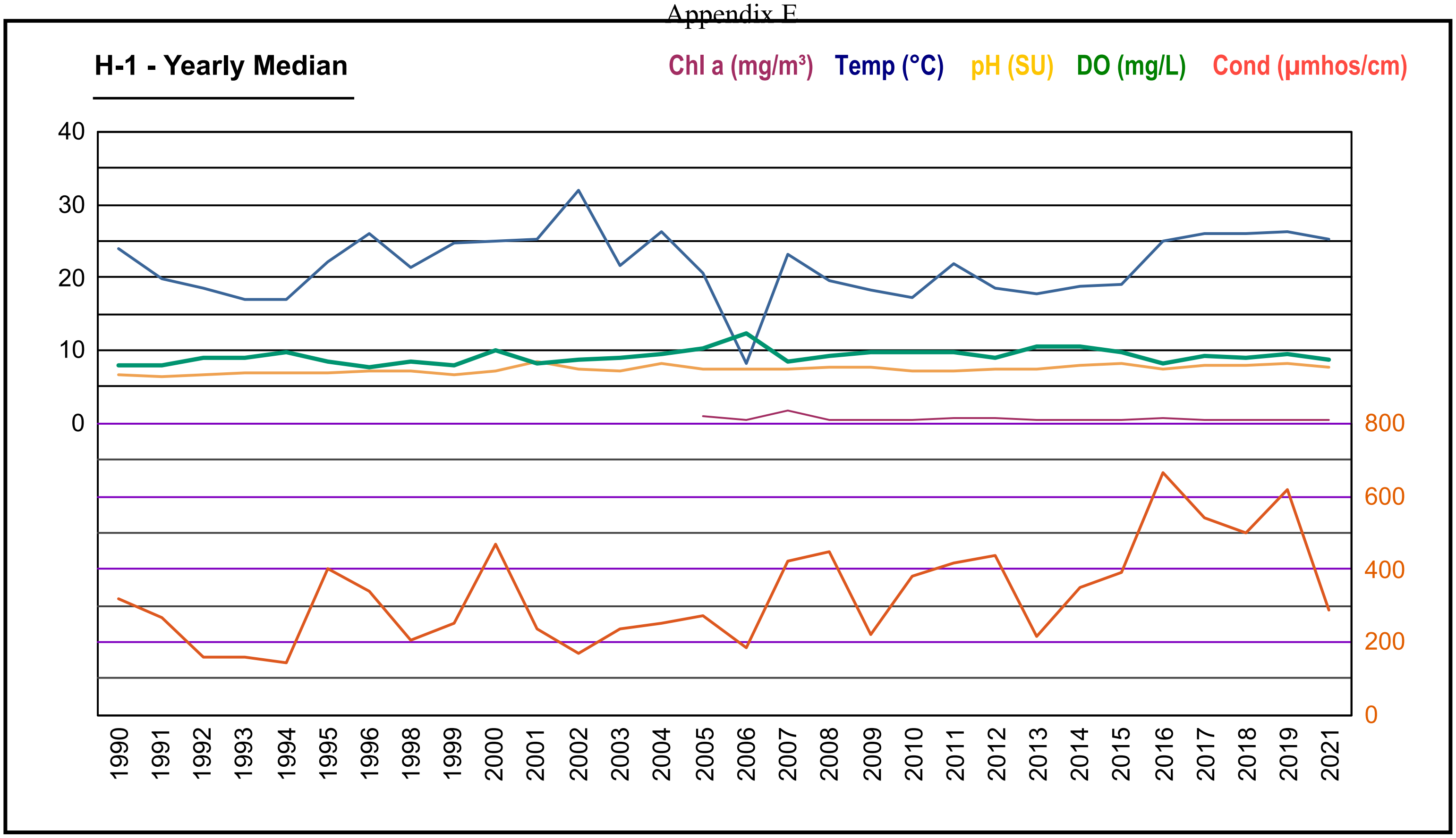

FTCM-6
Turbidity (NTU)
11.3 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

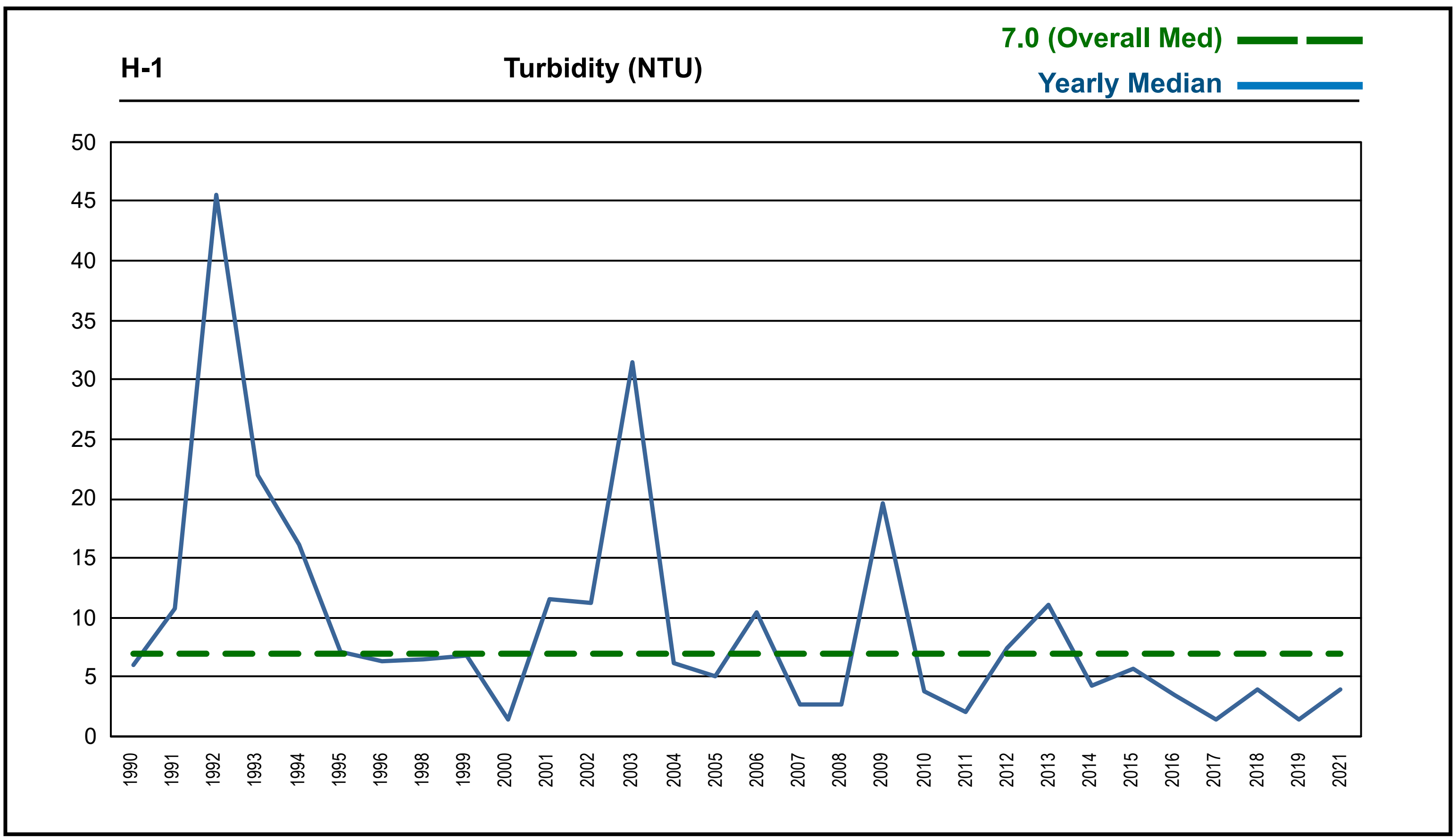

FTCM-6
Total Suspended Solids (mg/L)
11.0 (Overall Med)
Yearly Median
14
12
10
8
6
4
2
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

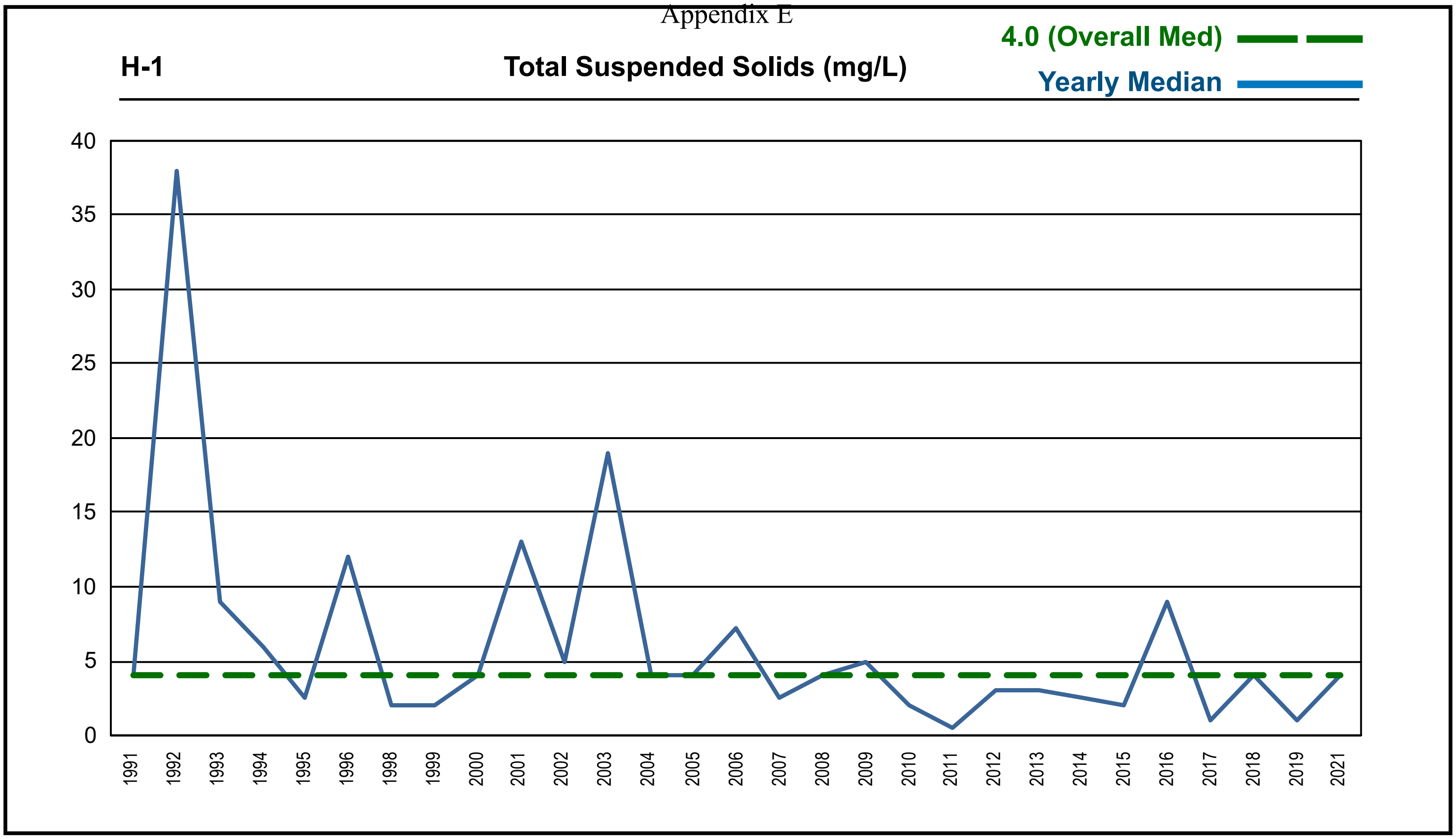

FTCM-6
Total Phosphorus (mg/L)
0.050 (Overall Med)
Yearly Median
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

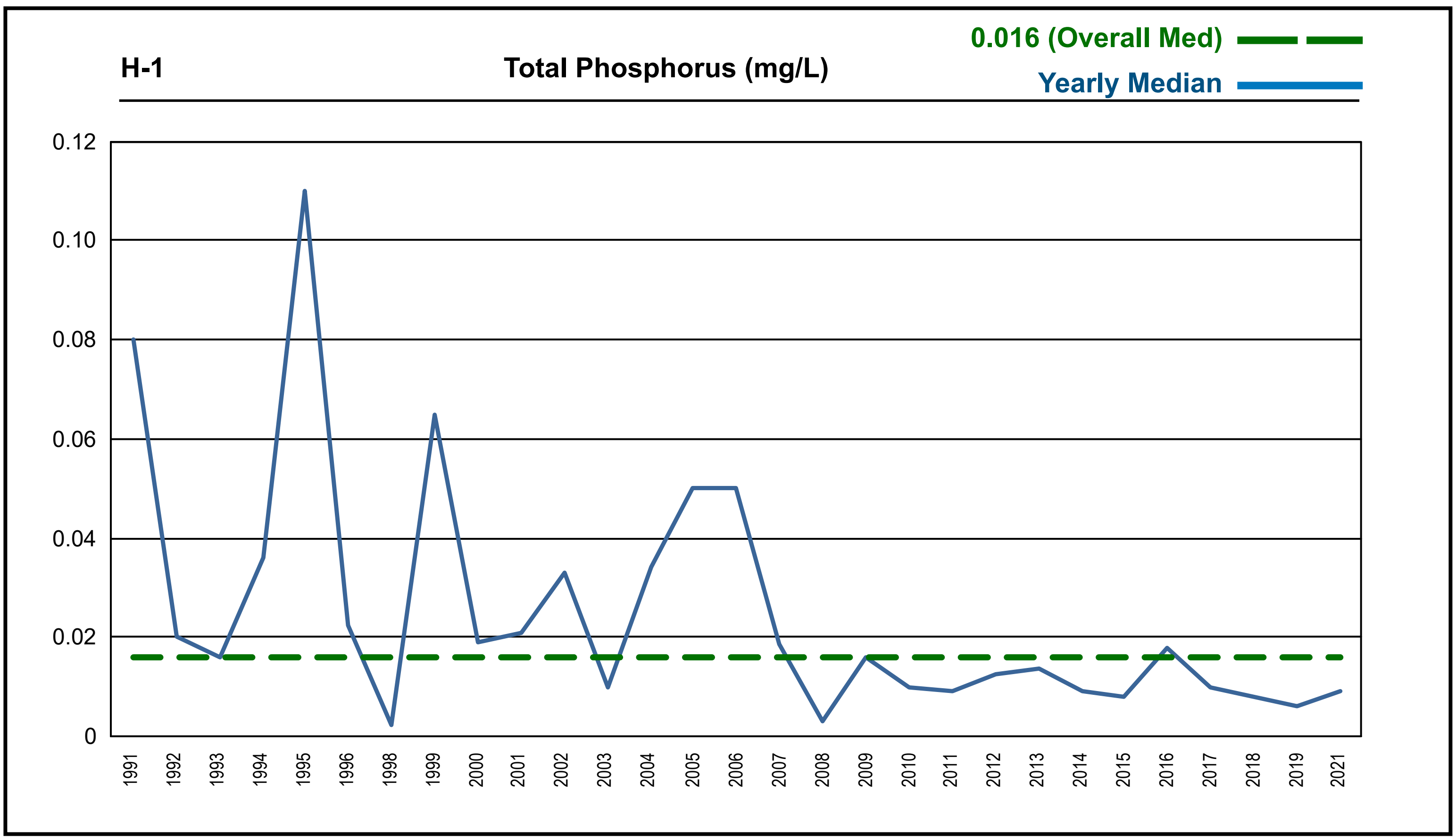


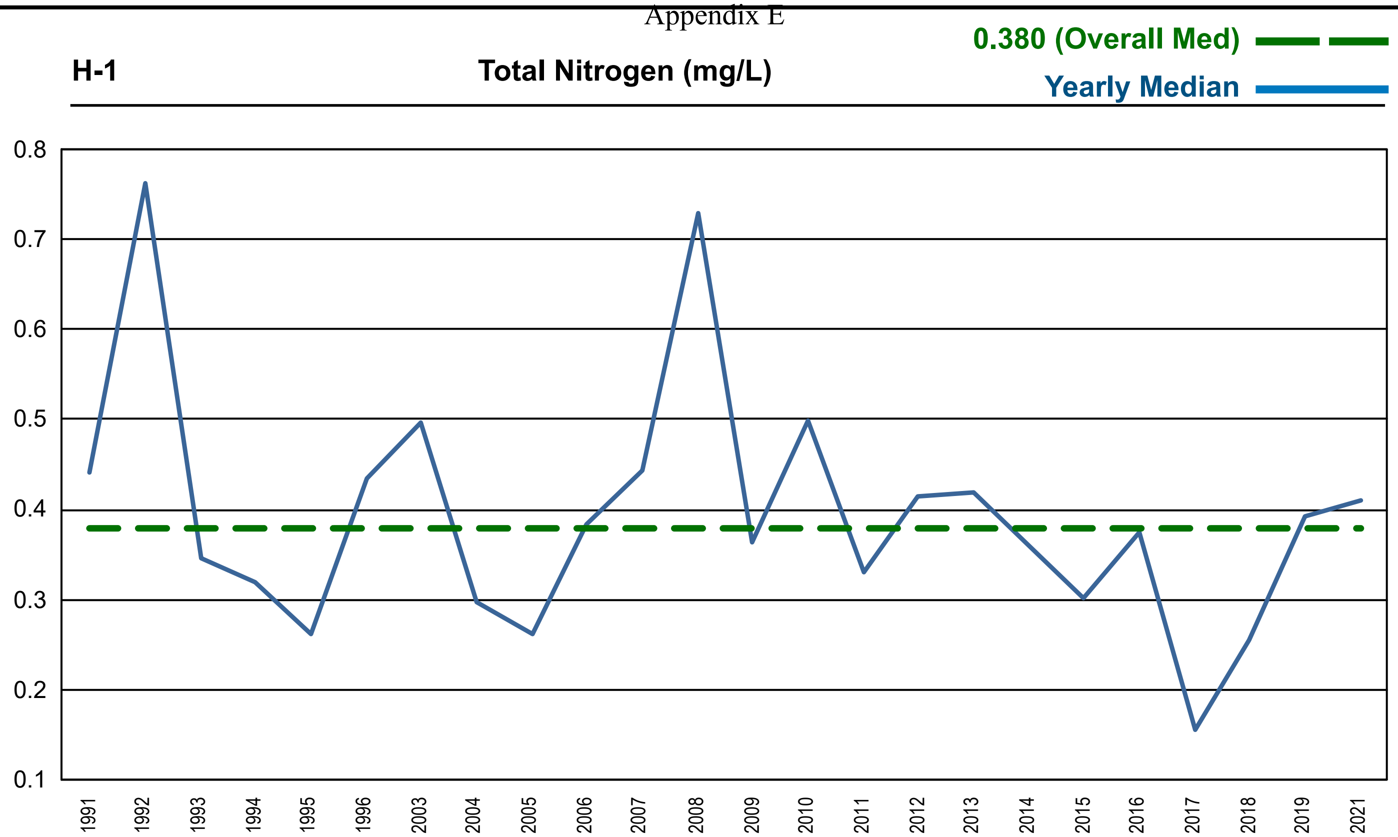
FTCM-6
Total Nitrogen (mg/L)
0.962 (Overall Med)
Yearly Median
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

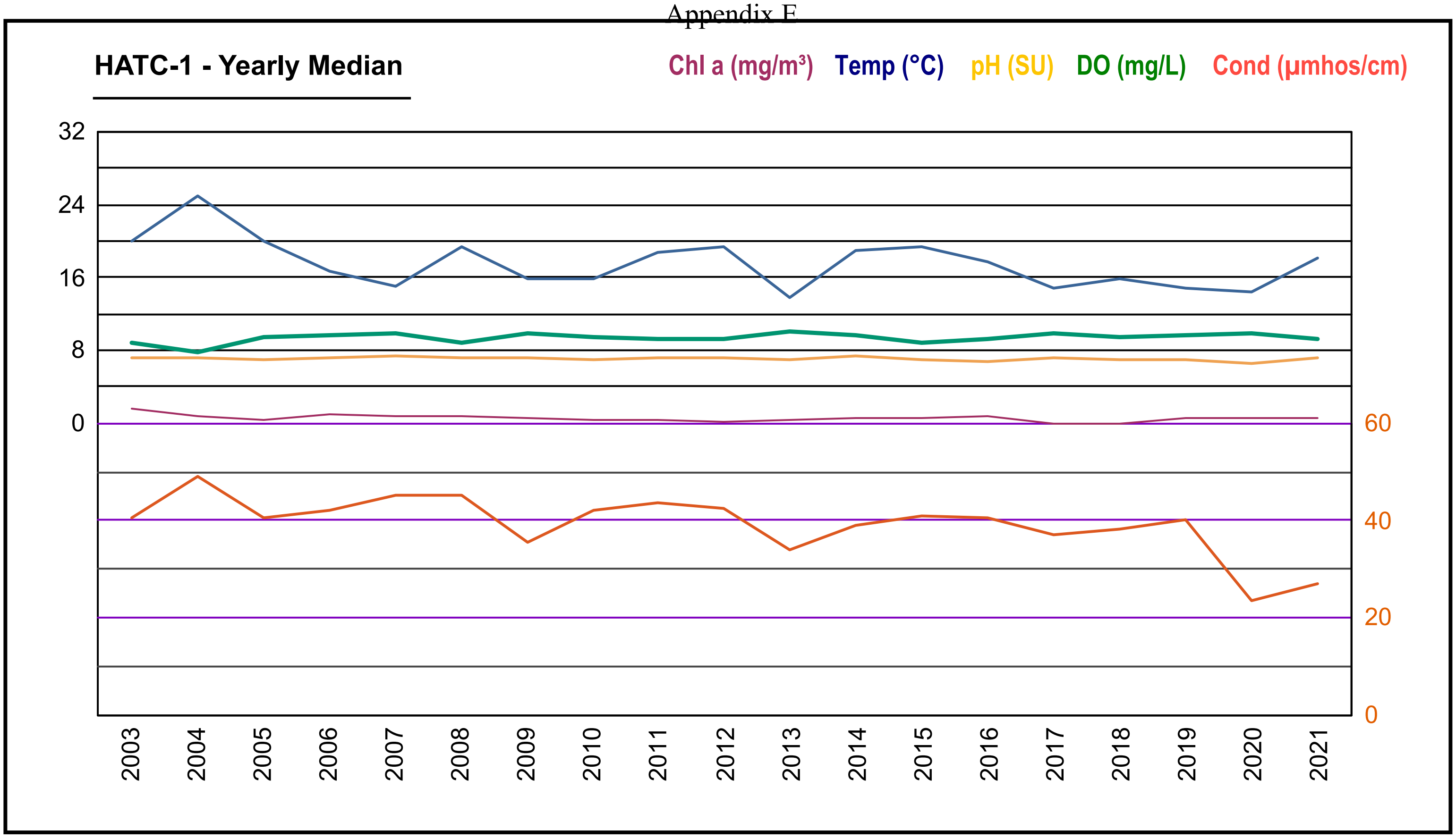

H-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
40
30
20
10
0
800
600
400
200
0
1990
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

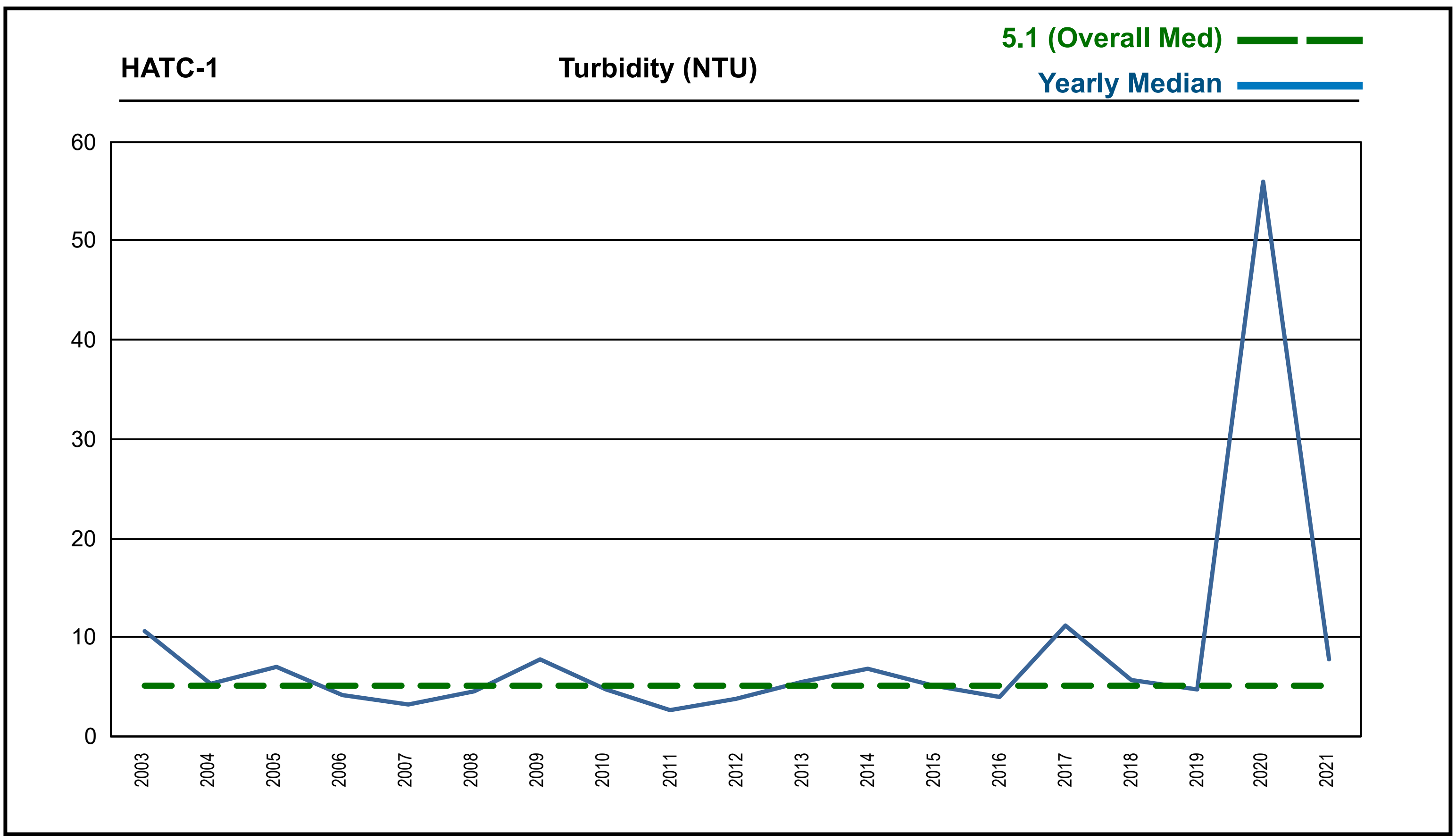

H-1
Turbidity (NTU)
7.0 (Overall Med)
Yearly Median
50
45
40
35
30
25
20
15
10
5
0
1990
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

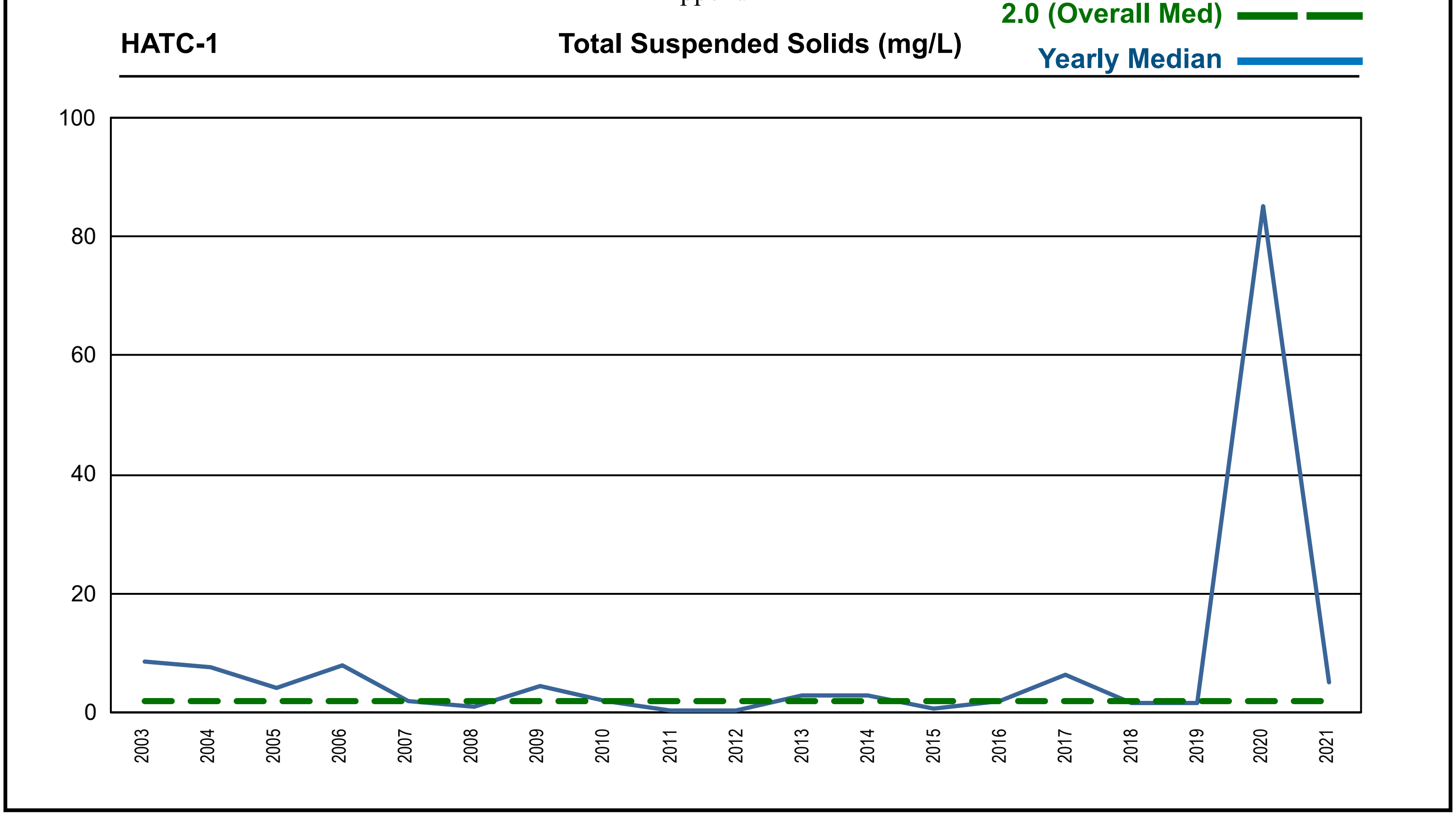

4.0 (Overall Med)
Yearly Median
H-1
Total Suspended Solids (mg/L)
40
35
30
25
20
15
10
5
0
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

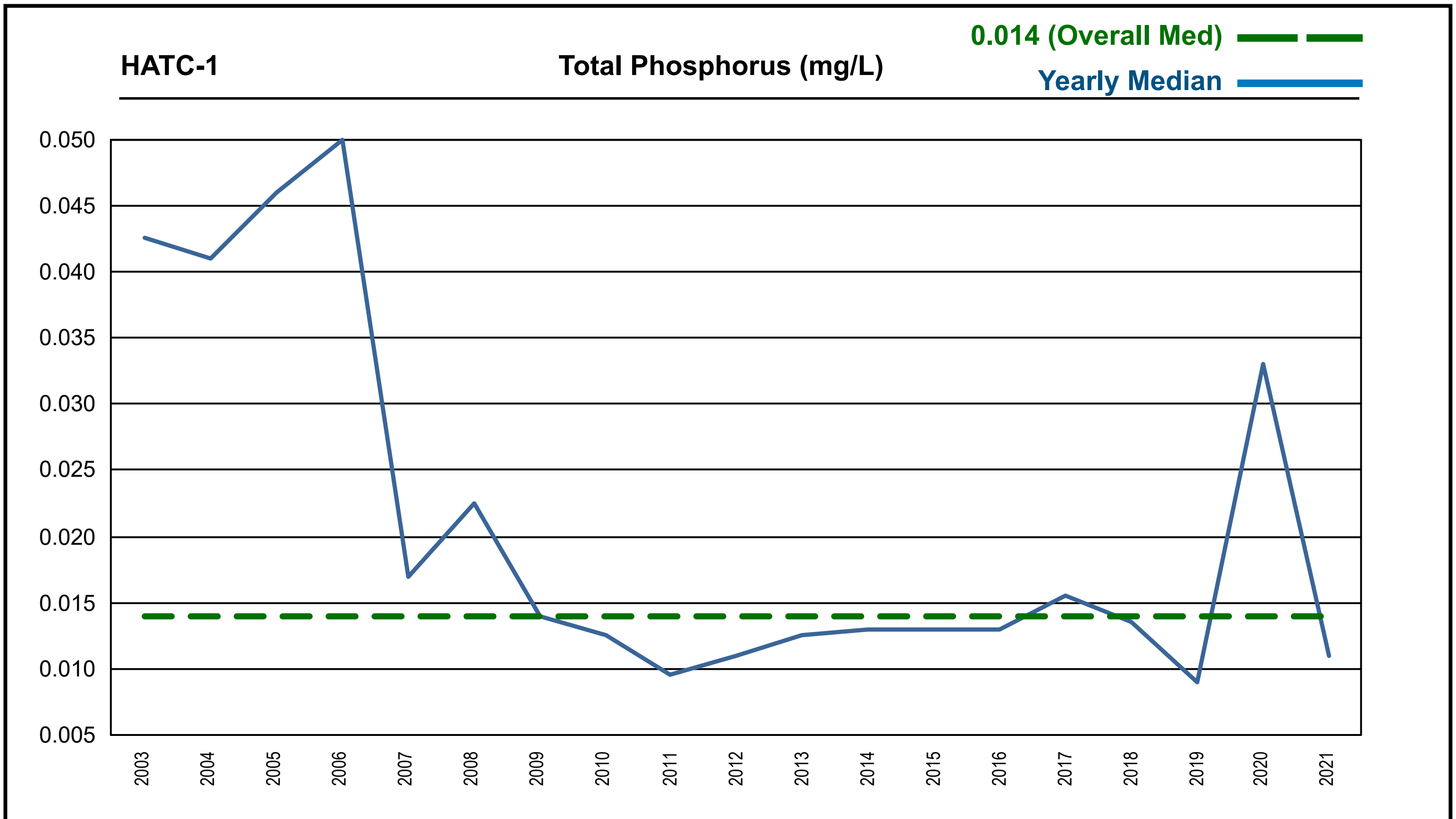

0.016 (Overall Med)
Yearly Median
H-1
Total Phosphorus (mg/L)
0.12
0.10
0.08
0.06
0.04
0.02
0
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

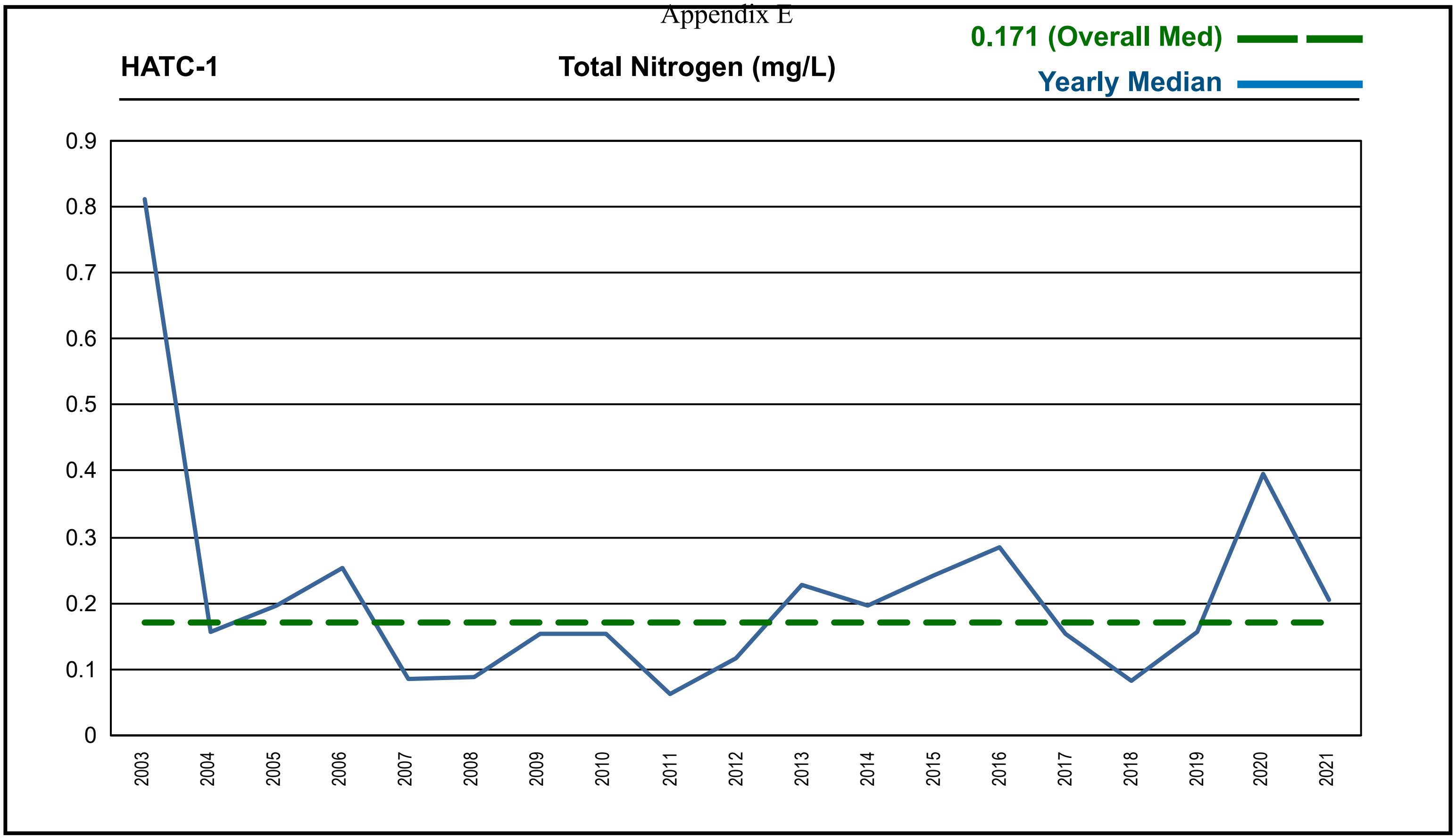

H-1
Total Nitrogen (mg/L)
0.380 (Overall Med)
Yearly Median
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
1991
1992
1993
1994
1995
1996
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

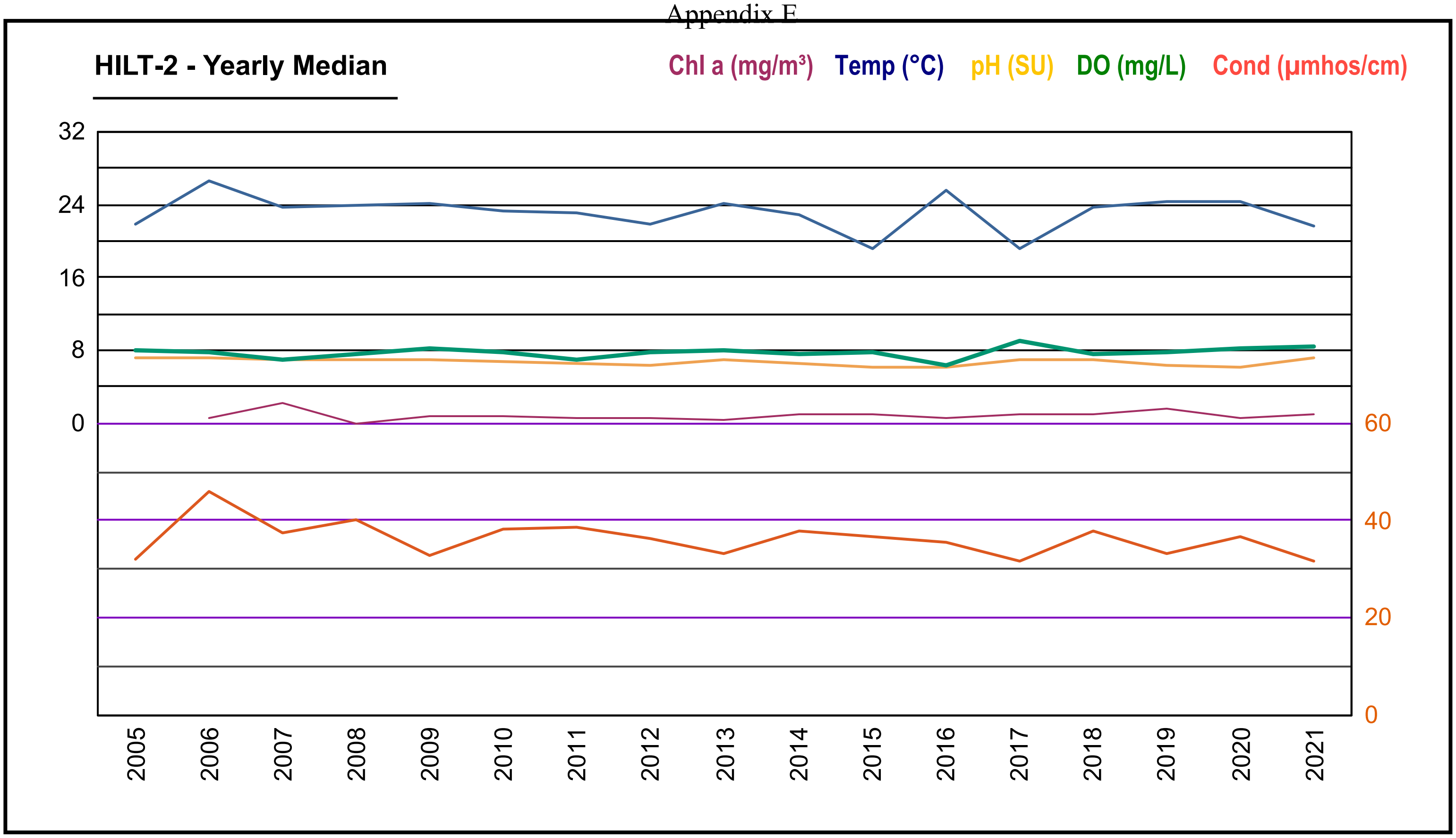

HATC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
60
40
20
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


HATC-1
Turbidity (NTU)
5.1 (Overall Med)
Yearly Median
60
50
40
30
20
10
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

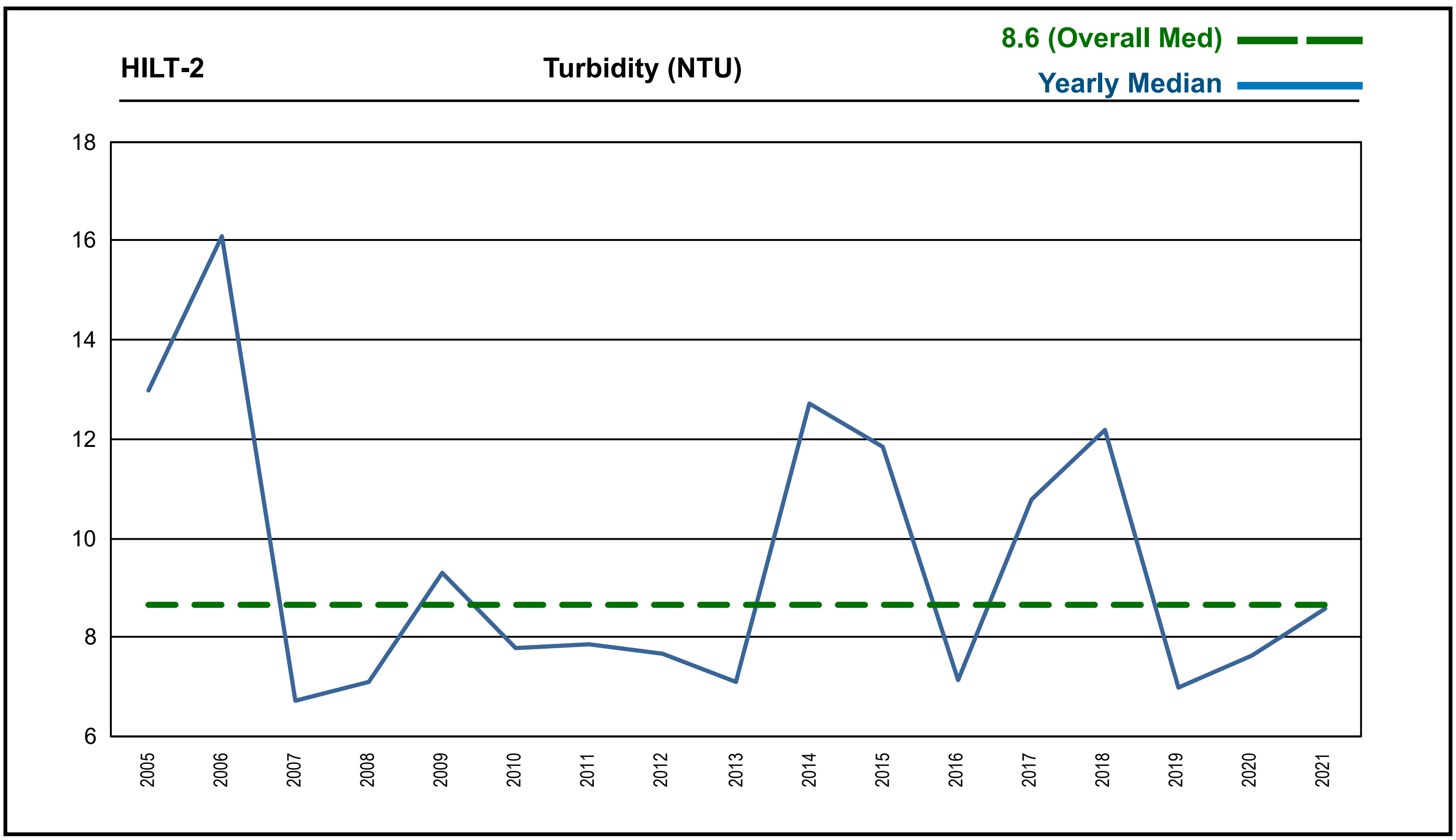

2.0 (Overall Med)
Yearly Median
HATC-1
Total Suspended Solids (mg/L)
100
80
60
40
20
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


0.014 (Overall Med)
Yearly Median
HATC-1
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

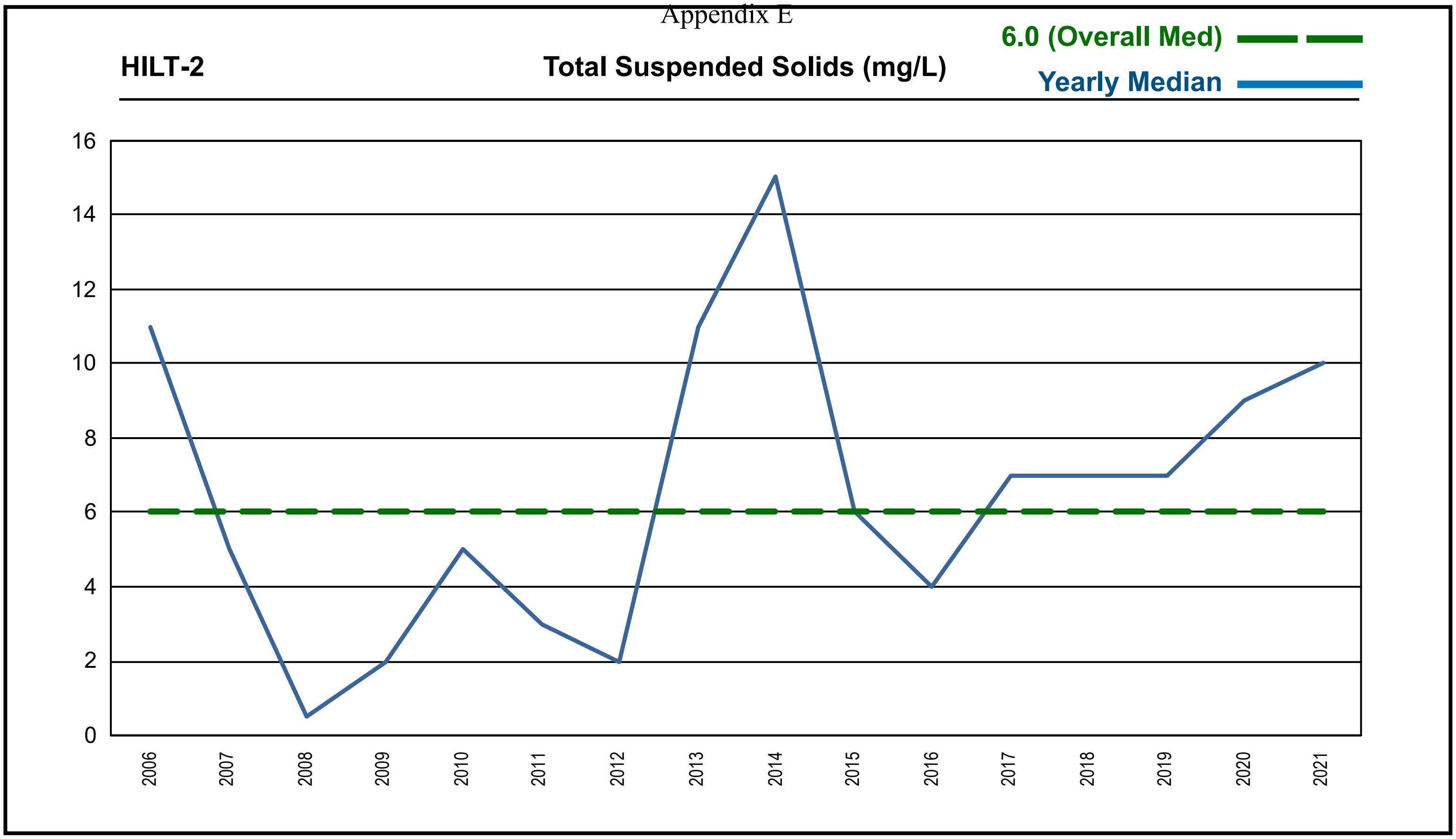

HATC-1
Total Nitrogen (mg/L)
0.171 (Overall Med)
Yearly Median
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

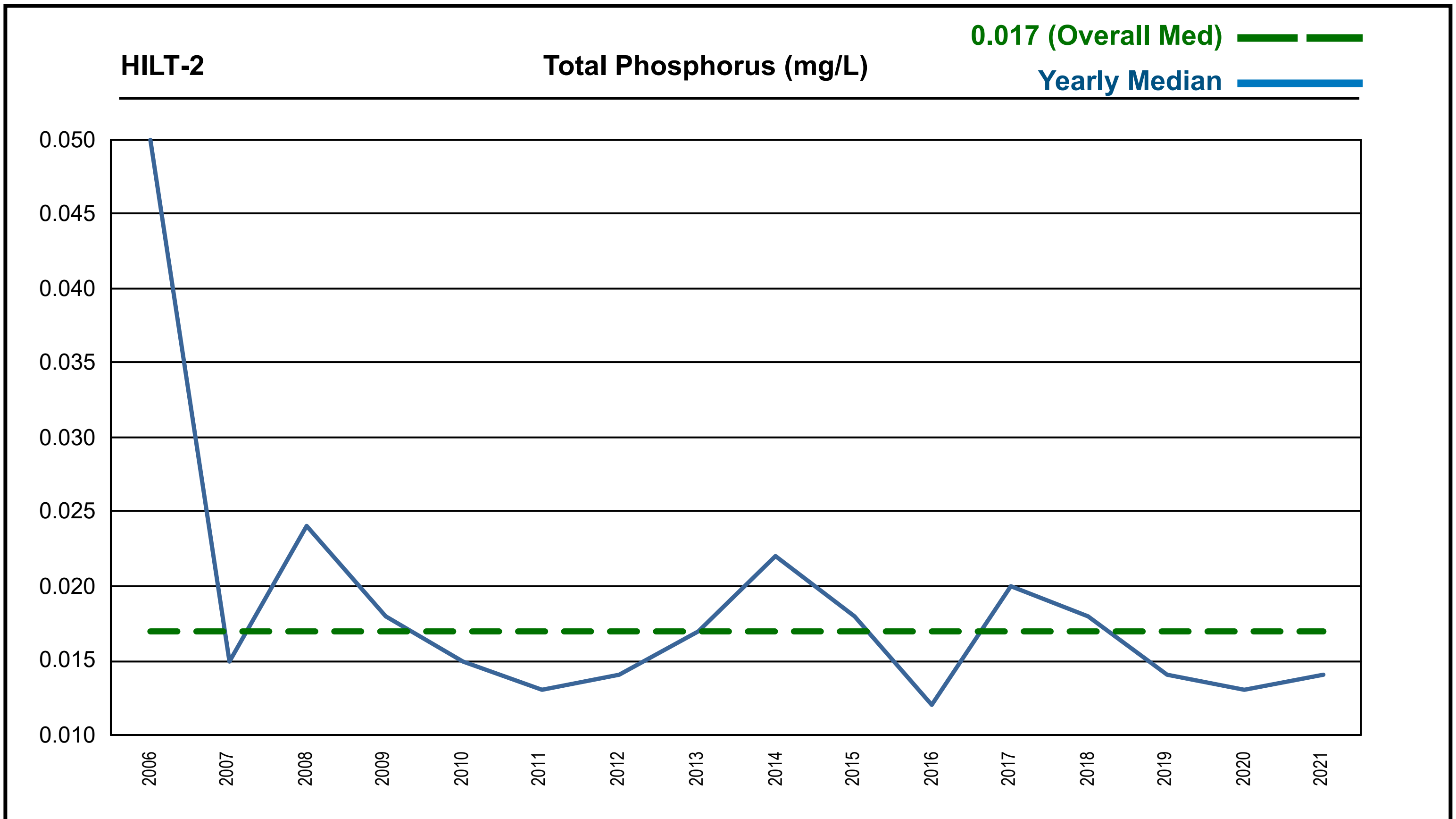


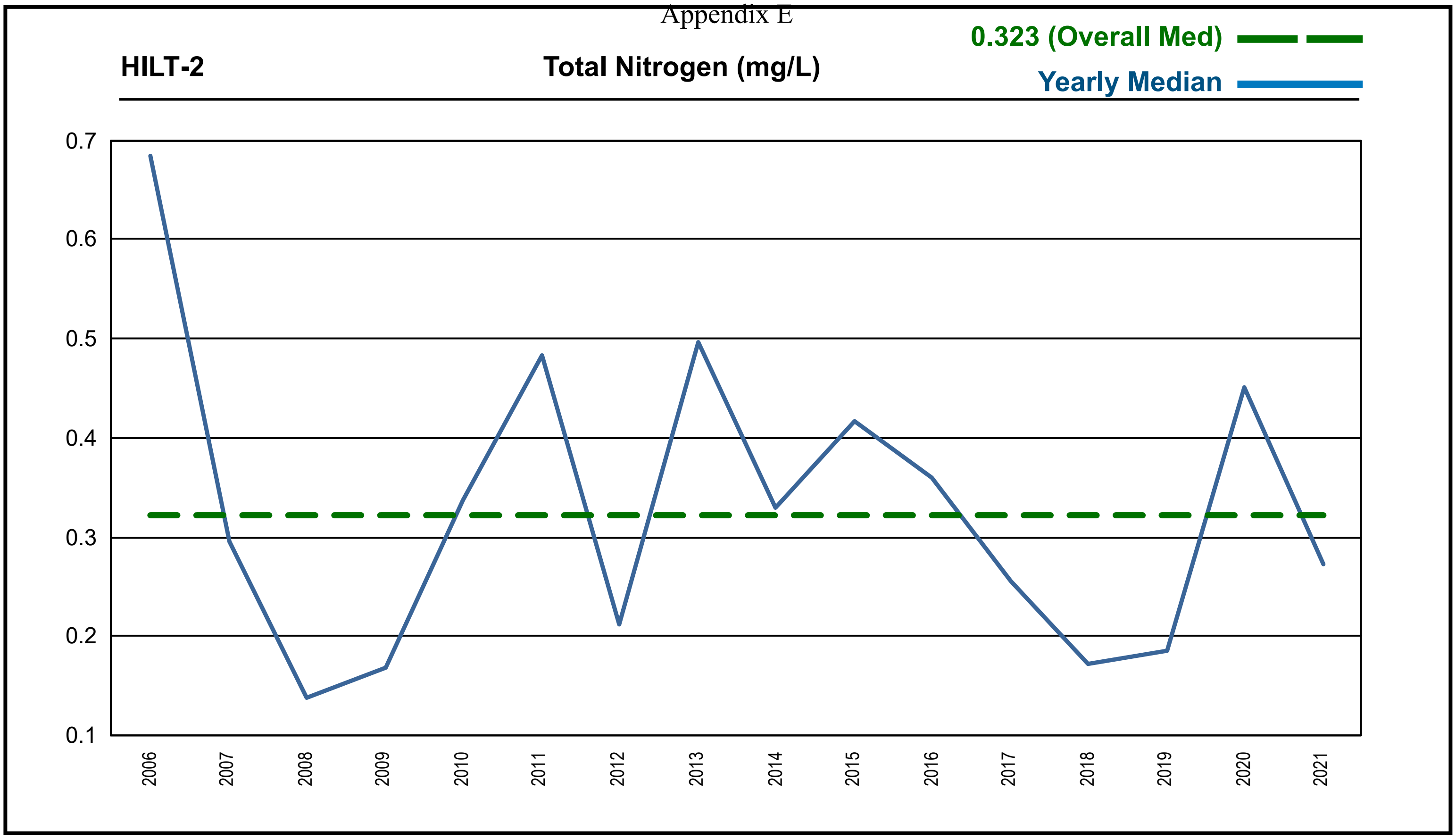
HILT-2 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
60
40
20
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

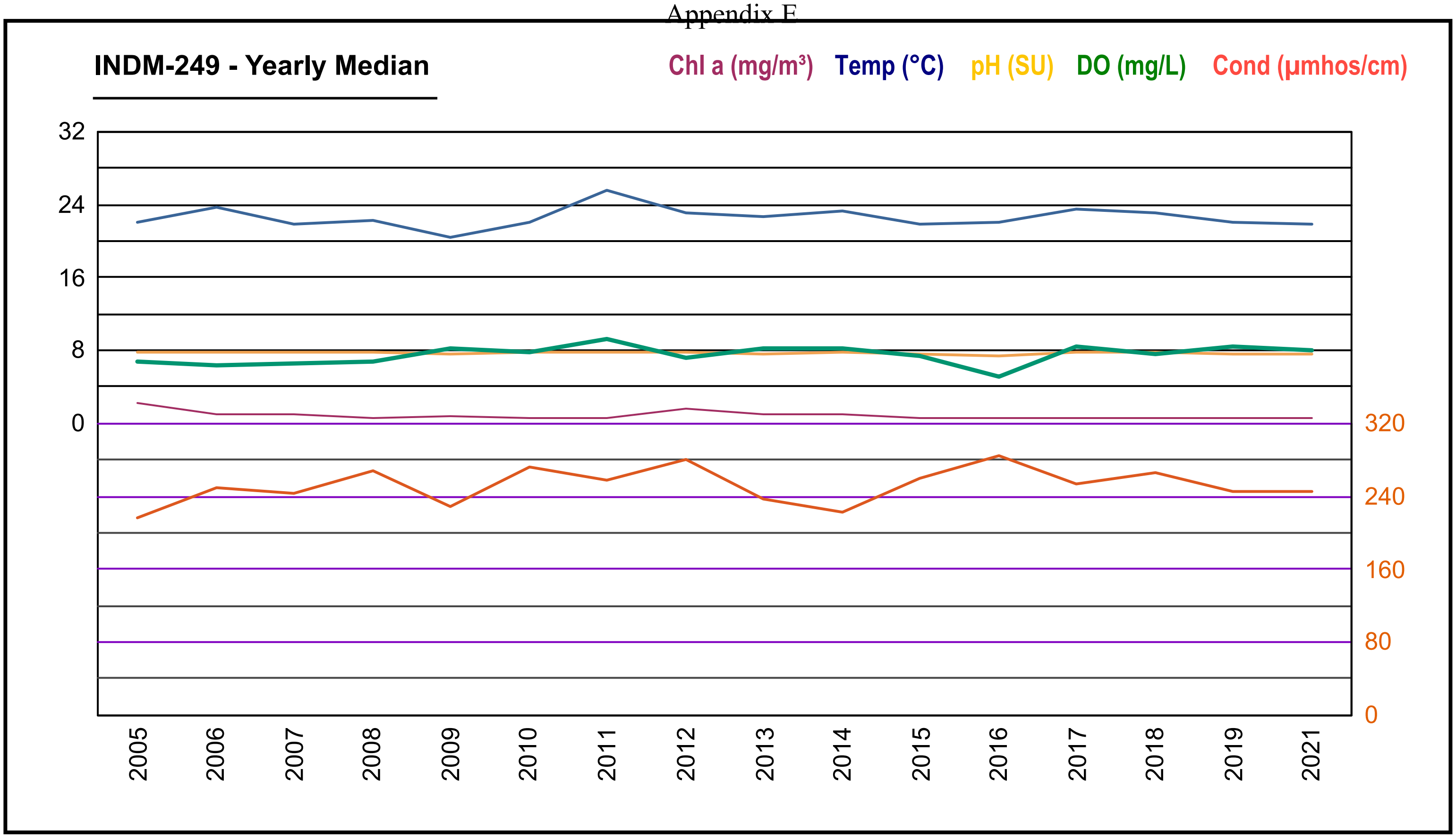


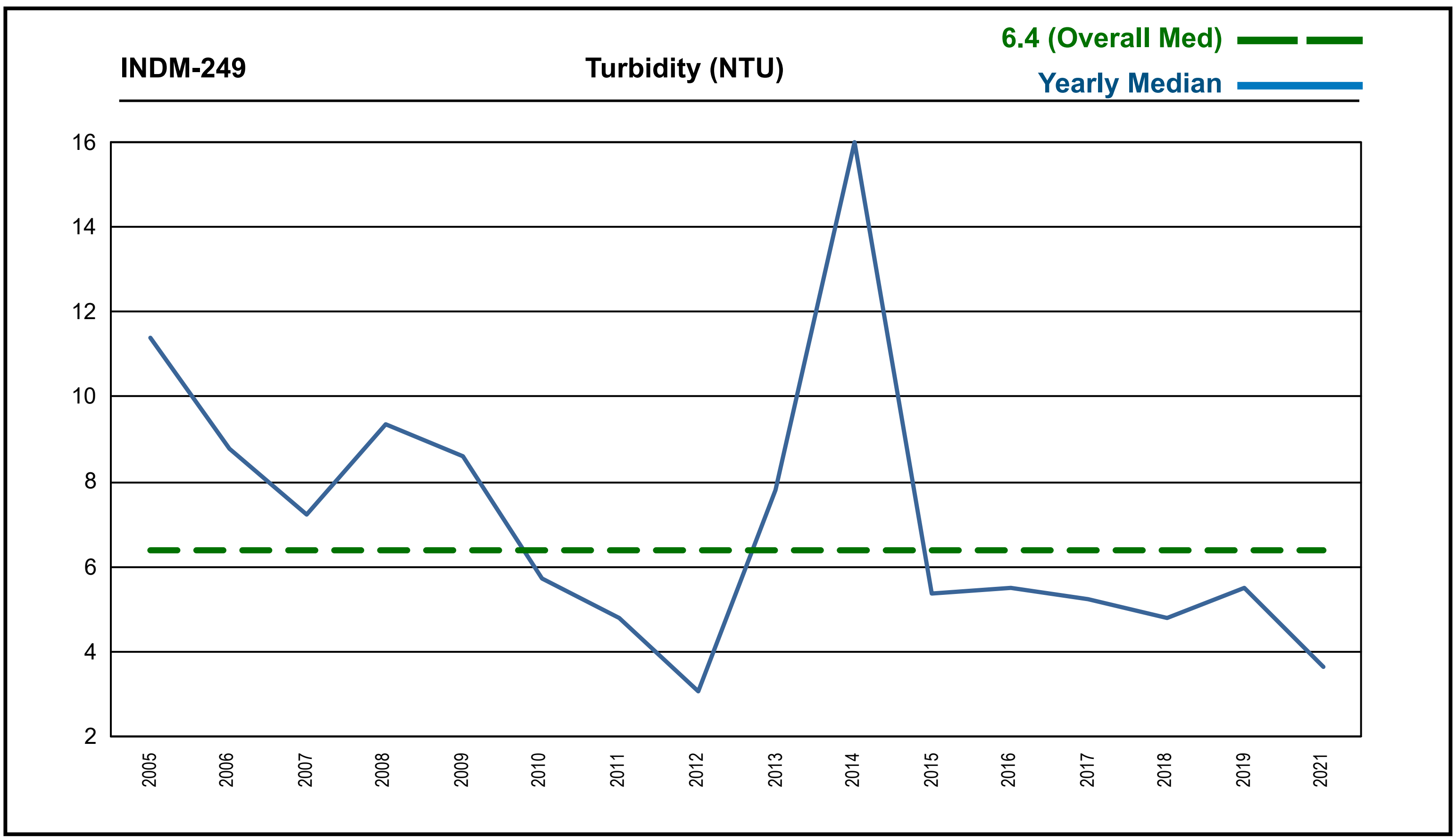
HILT-2
Turbidity (NTU)
8.6 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

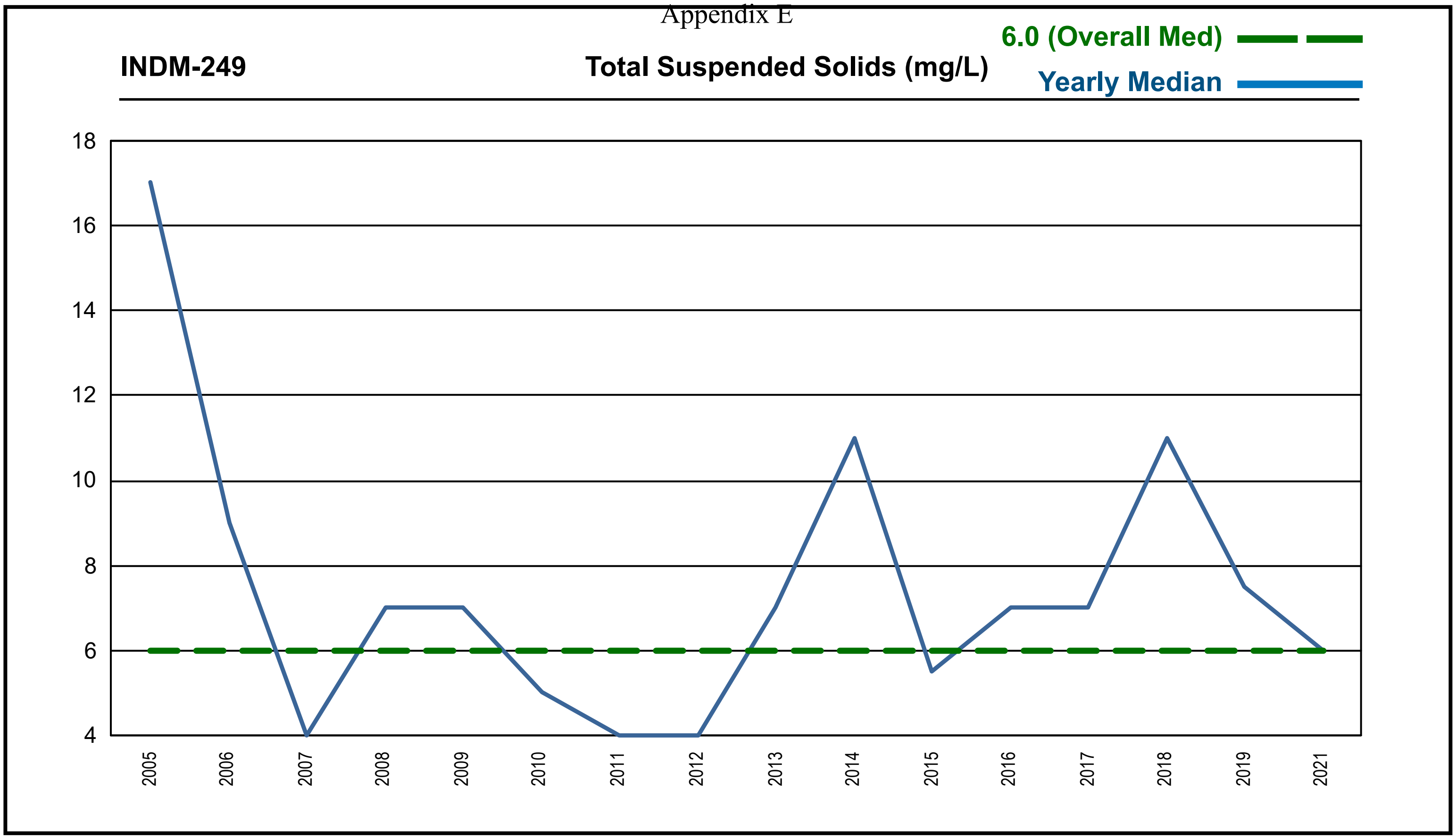

6.0 (Overall Med)
Yearly Median
HILT-2
Total Suspended Solids (mg/L)
16
14
12
10
8
6
4
2
0
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

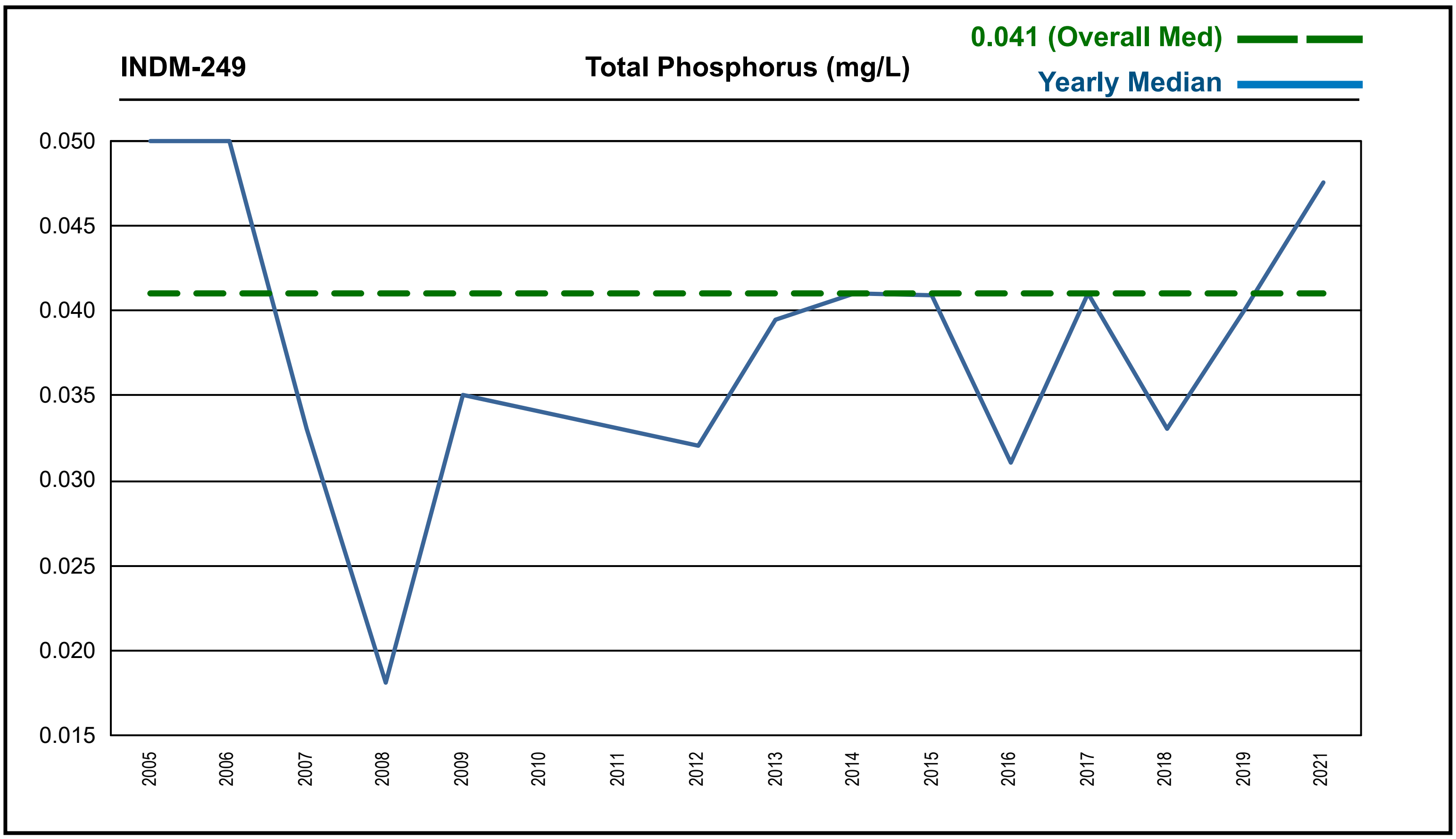

0.017 (Overall Med)
Yearly Median
HILT-2
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

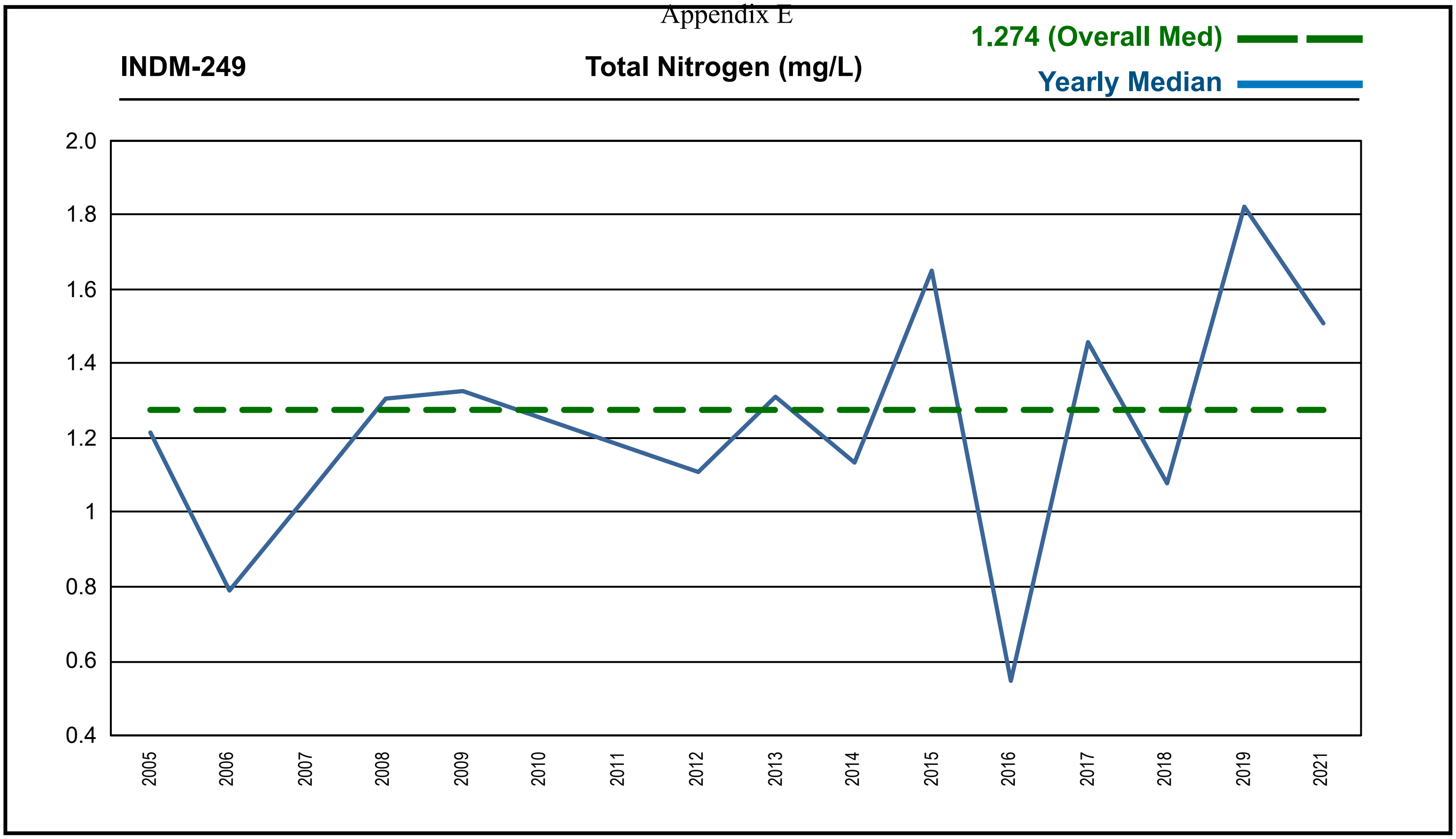

HILT-2
Total Nitrogen (mg/L)
0.323 (Overall Med)
Yearly Median
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

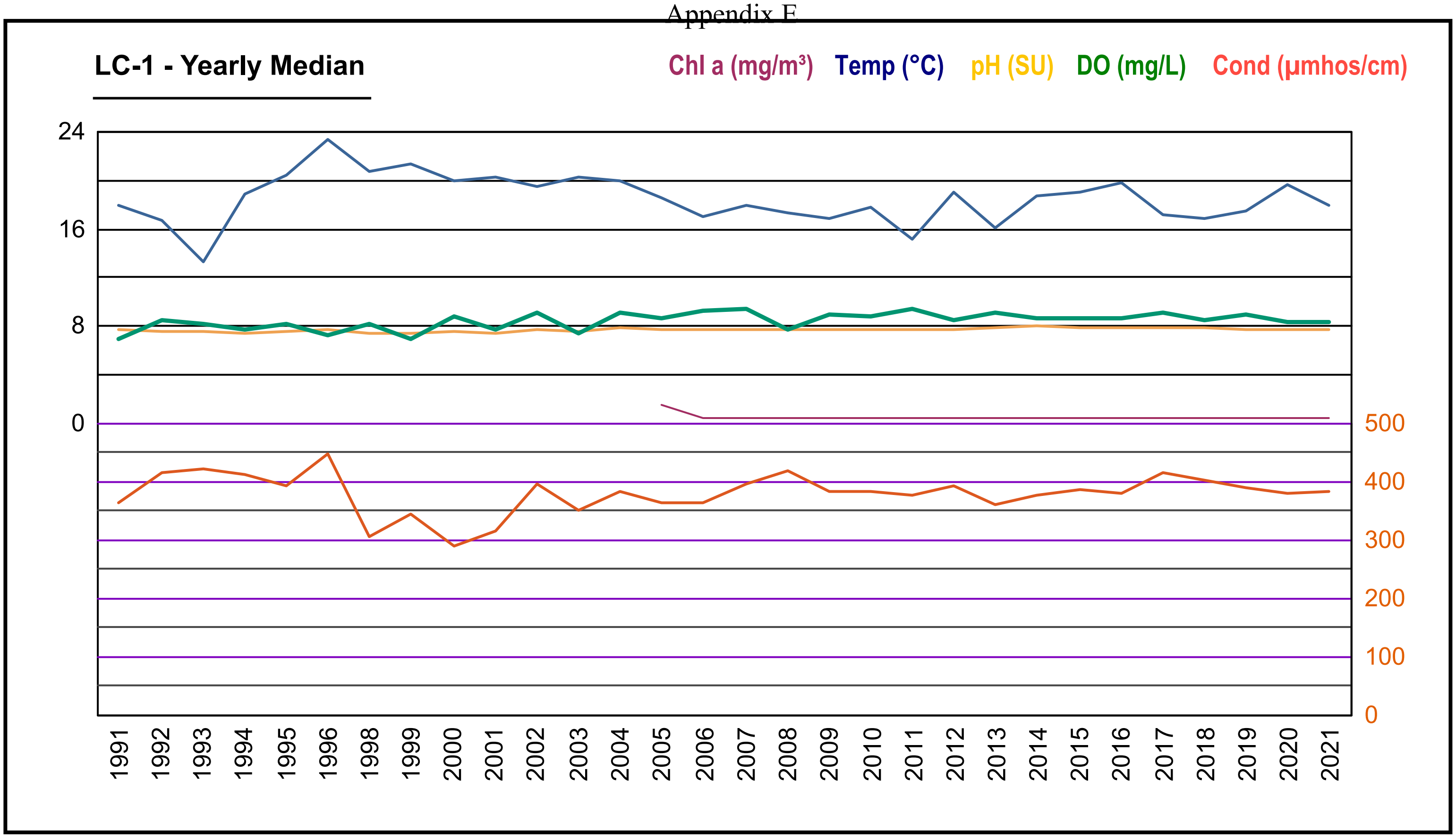

INDM-249 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

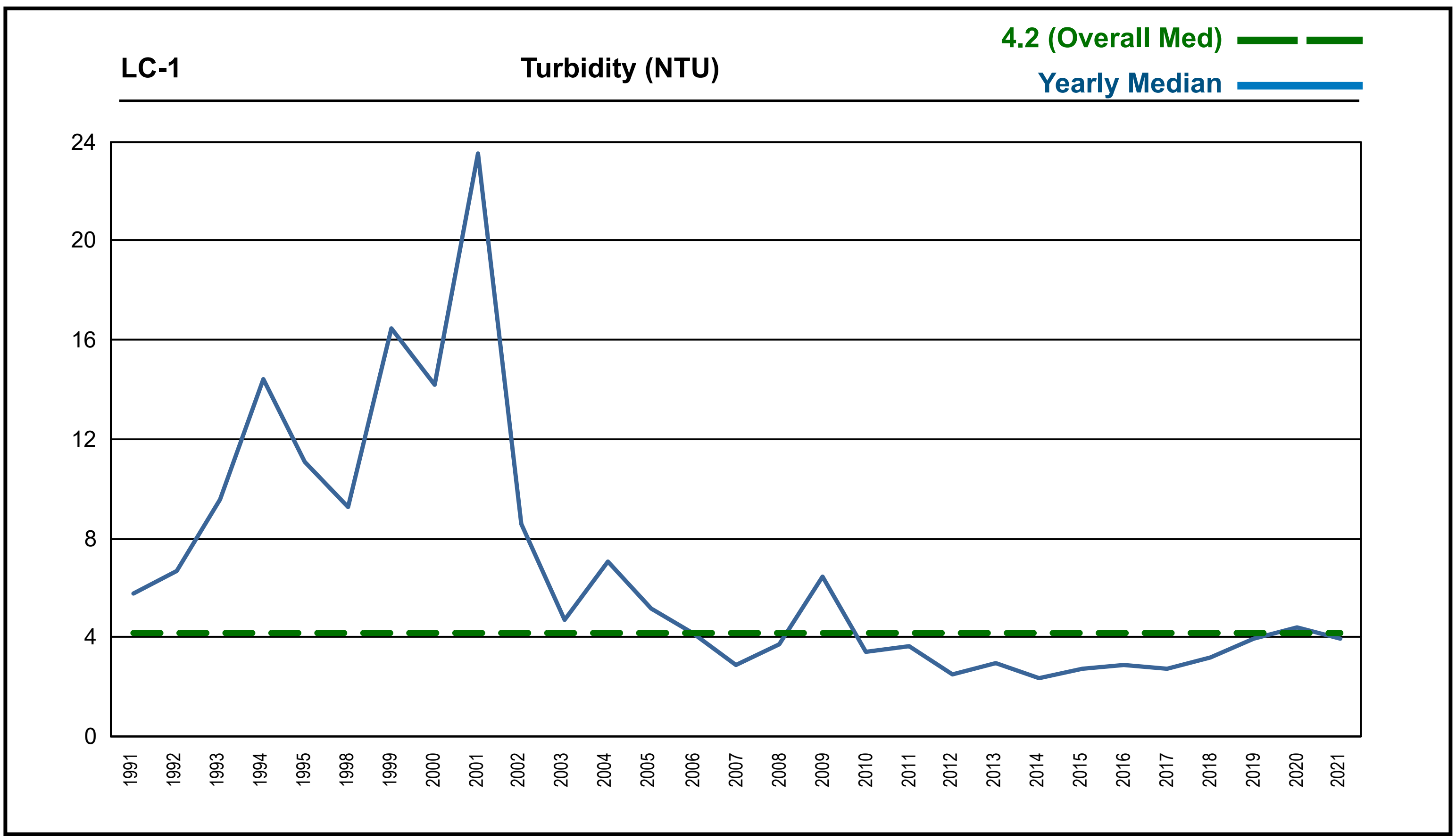

INDM-249
Turbidity (NTU)
6.4 (Overall Med)
Yearly Median
16
14
12
10
8
6
4
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

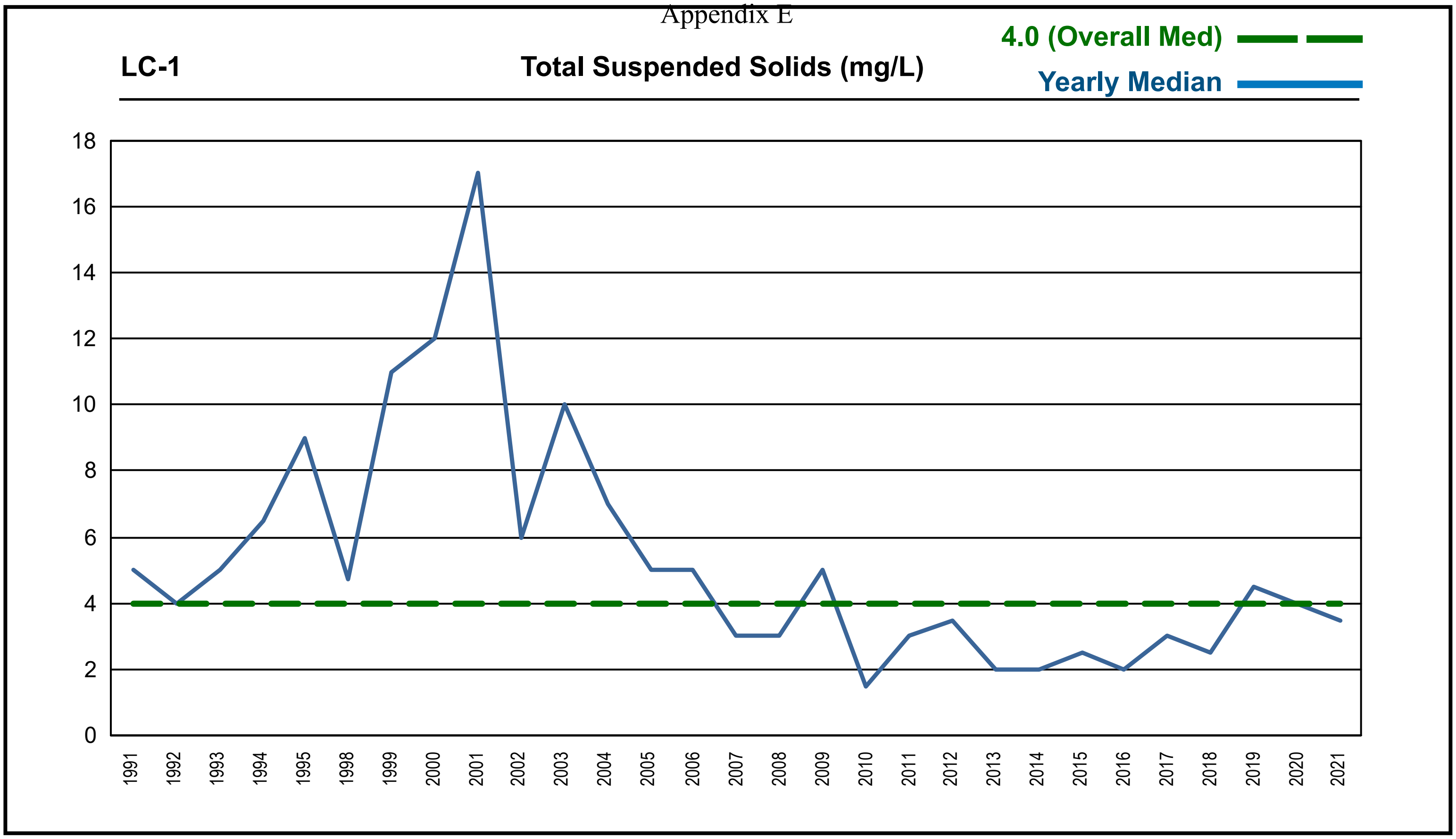

6.0 (Overall Med)
Yearly Median
INDM-249
Total Suspended Solids (mg/L)
18
16
14
12
10
8
6
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

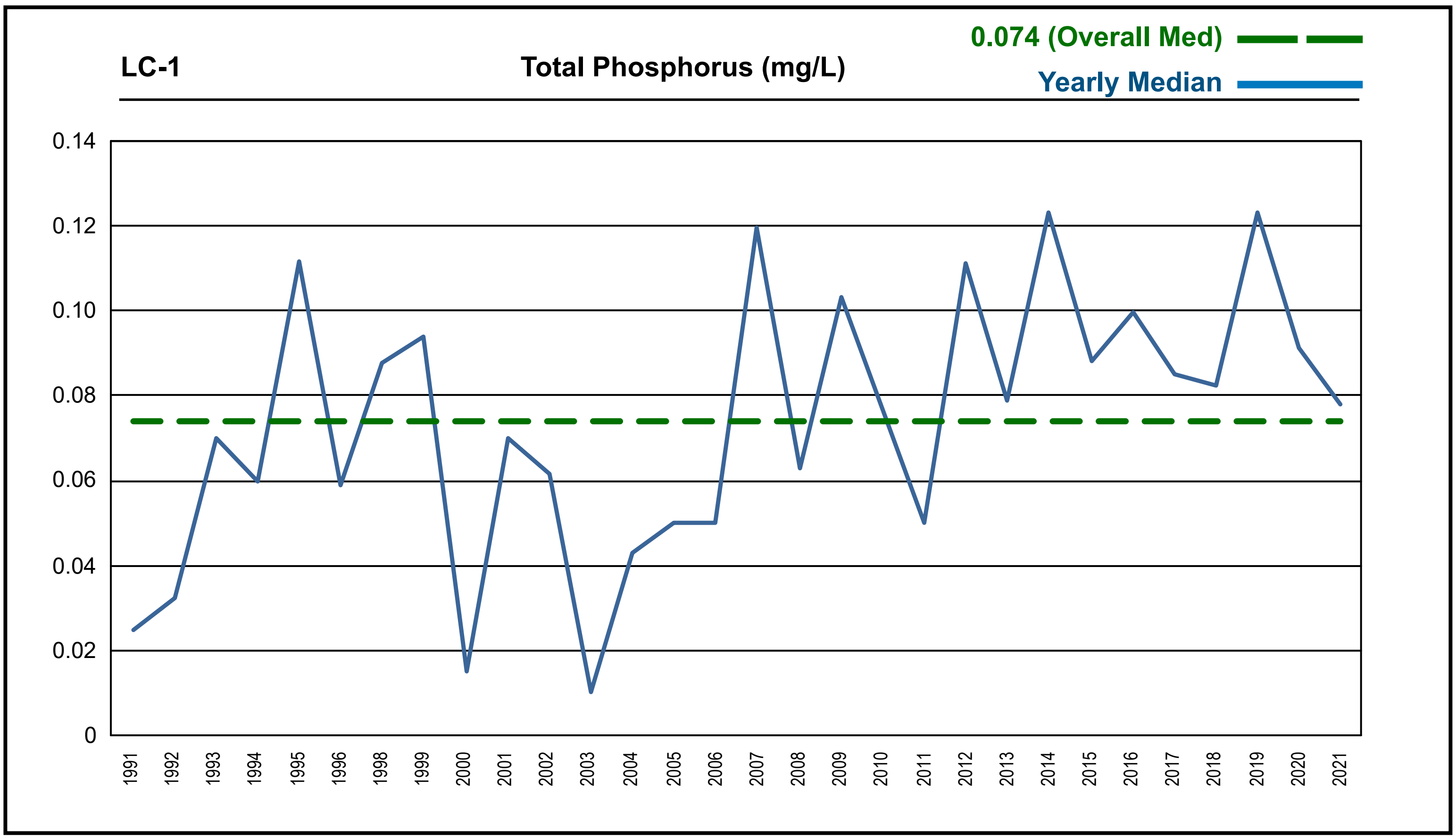

0.041 (Overall Med)
Yearly Median
INDM-249
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

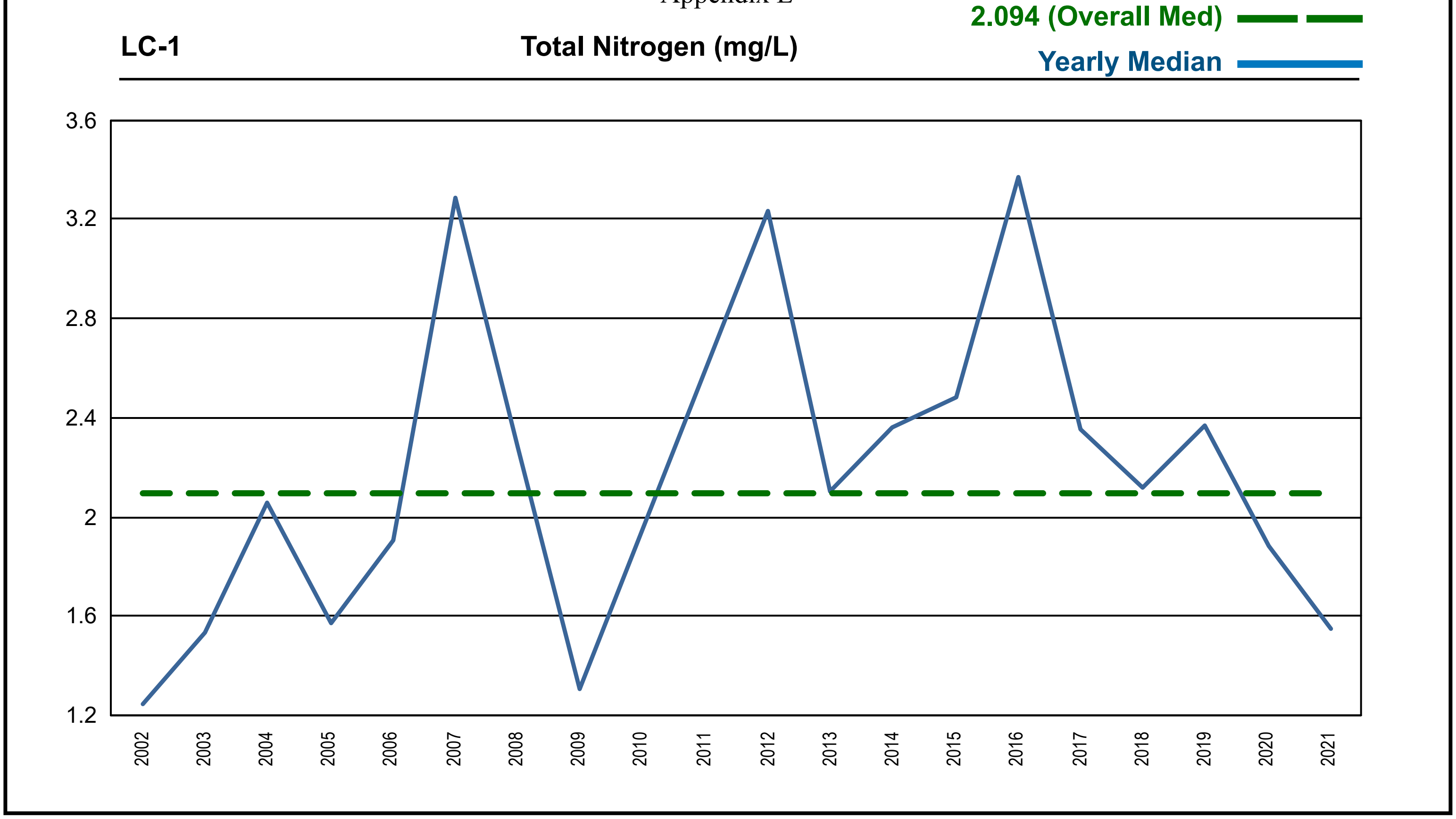

INDM-249
Total Nitrogen (mg/L)
1.274 (Overall Med)
Yearly Median
2.0
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

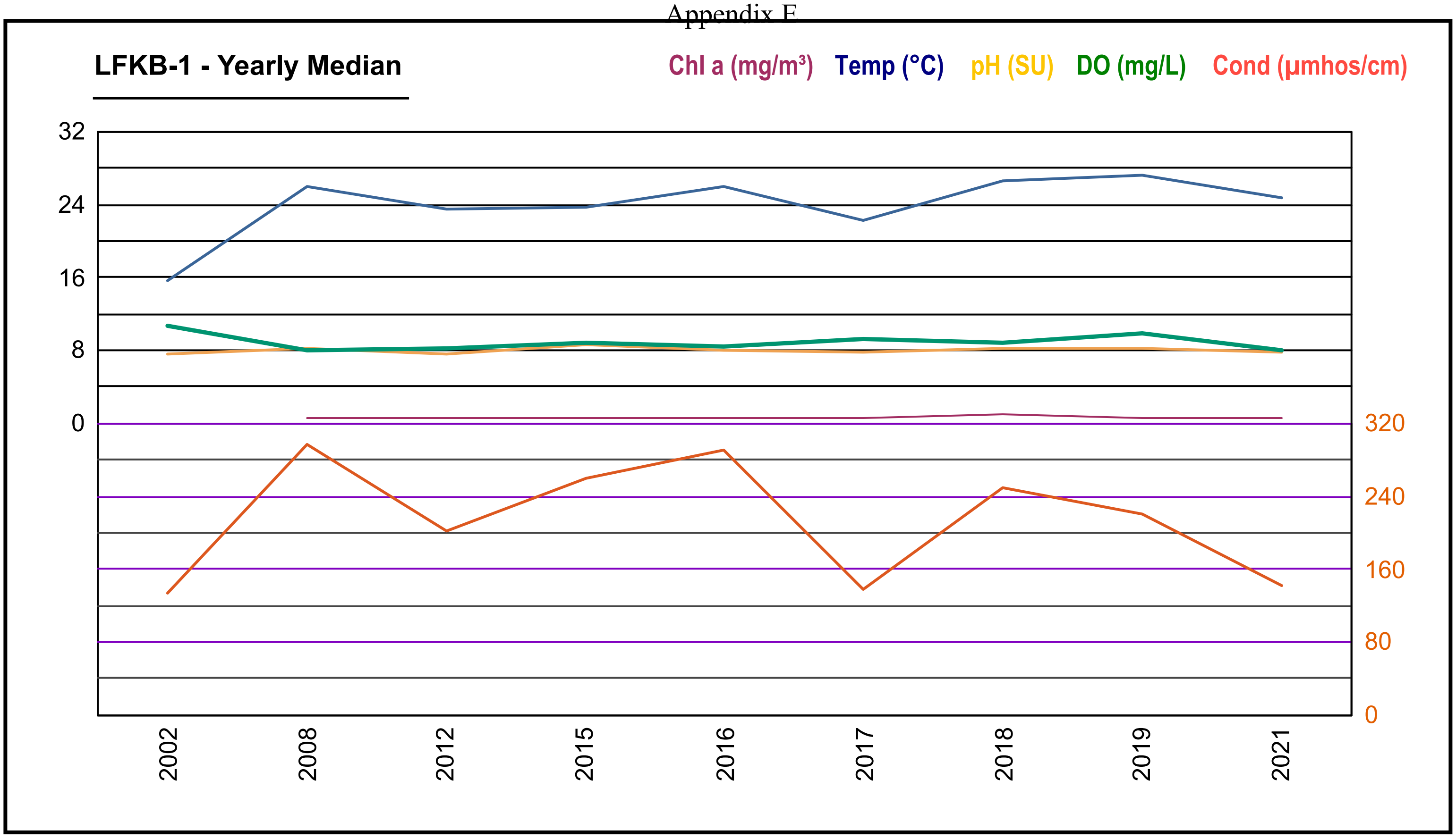

LC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
500
400
300
200
100
0
1991 1992 1993 1994 1995 1996 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

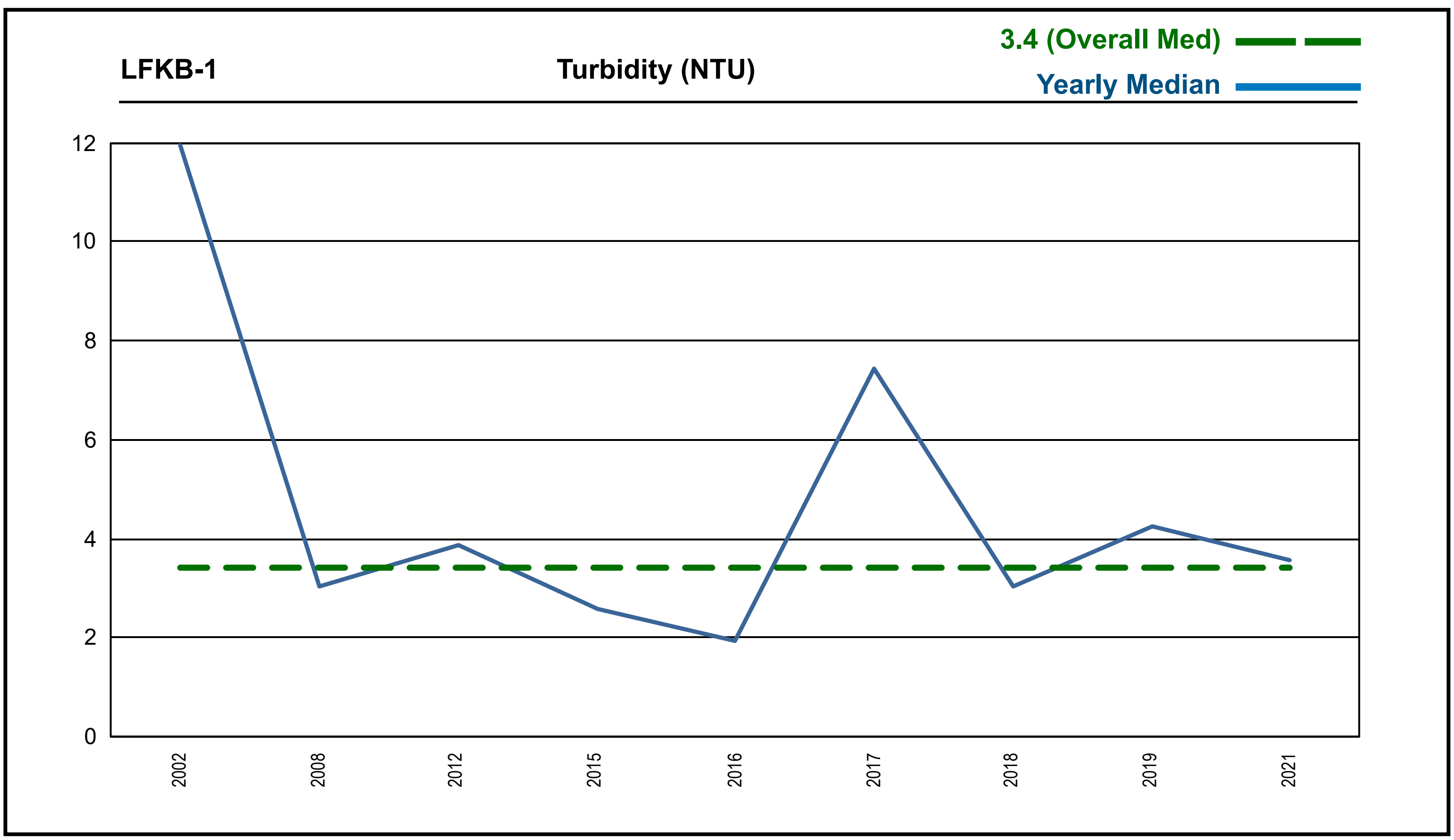

LC-1
Turbidity (NTU)
4.2 (Overall Med)
Yearly Median
24
20
16
12
8
4
0
1991 1992 1993 1994 1995 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

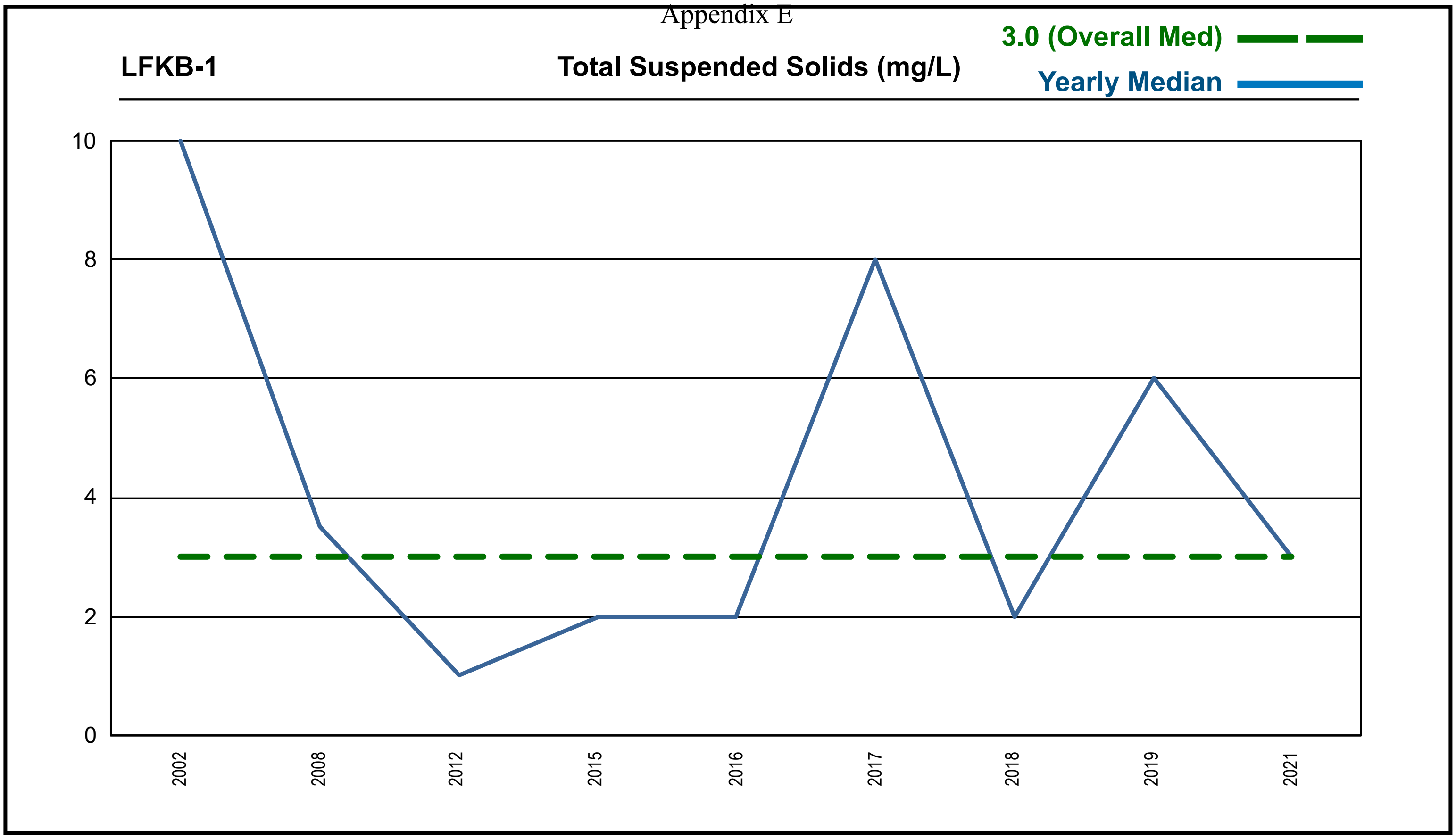

4.0 (Overall Med)
Yearly Median
LC-1
Total Suspended Solids (mg/L)
18
16
14
12
10
8
6
4
2
0
1991
1992
1993
1994
1995
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

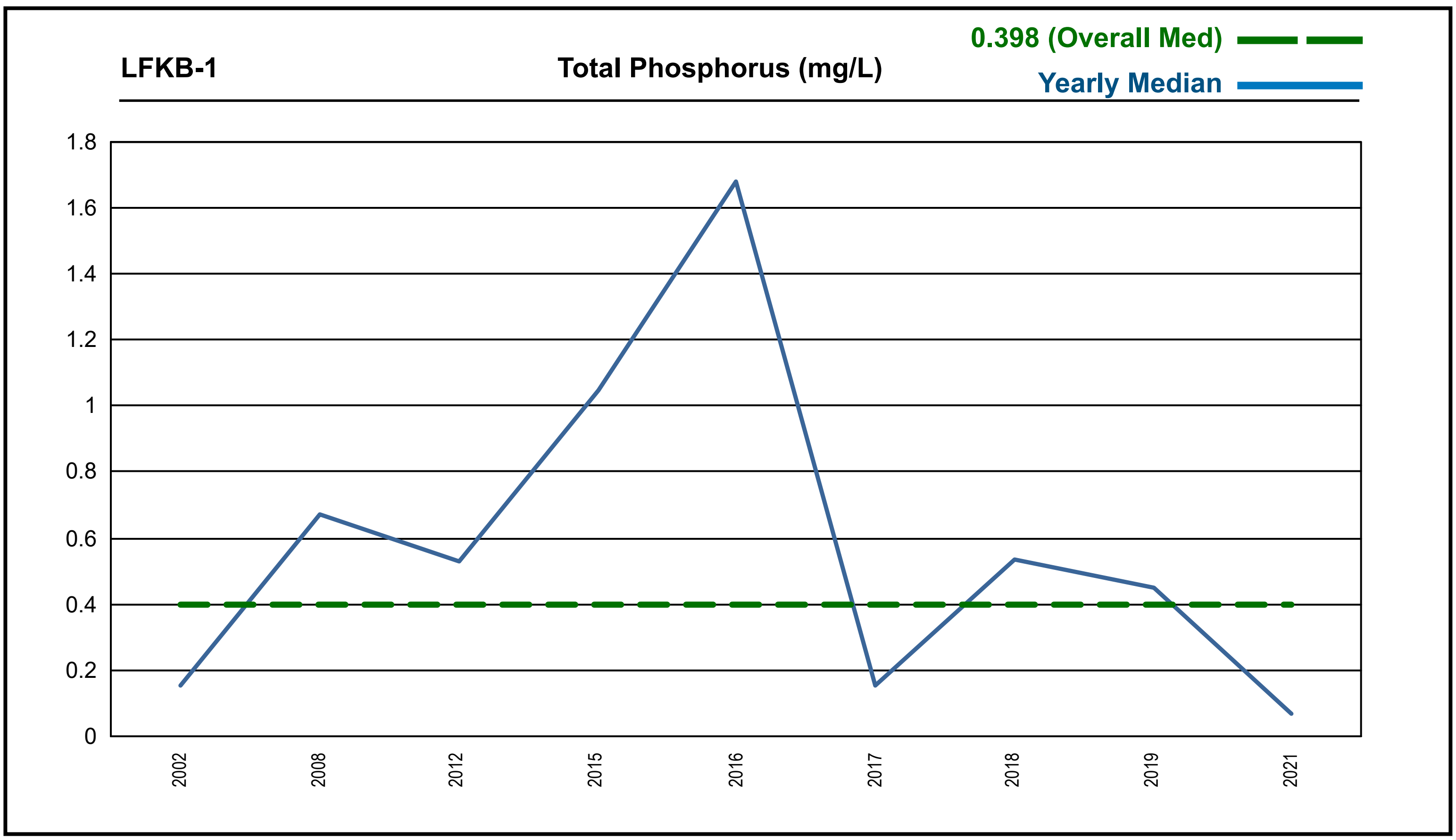

0.074 (Overall Med)
Yearly Median
LC-1
Total Phosphorus (mg/L)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

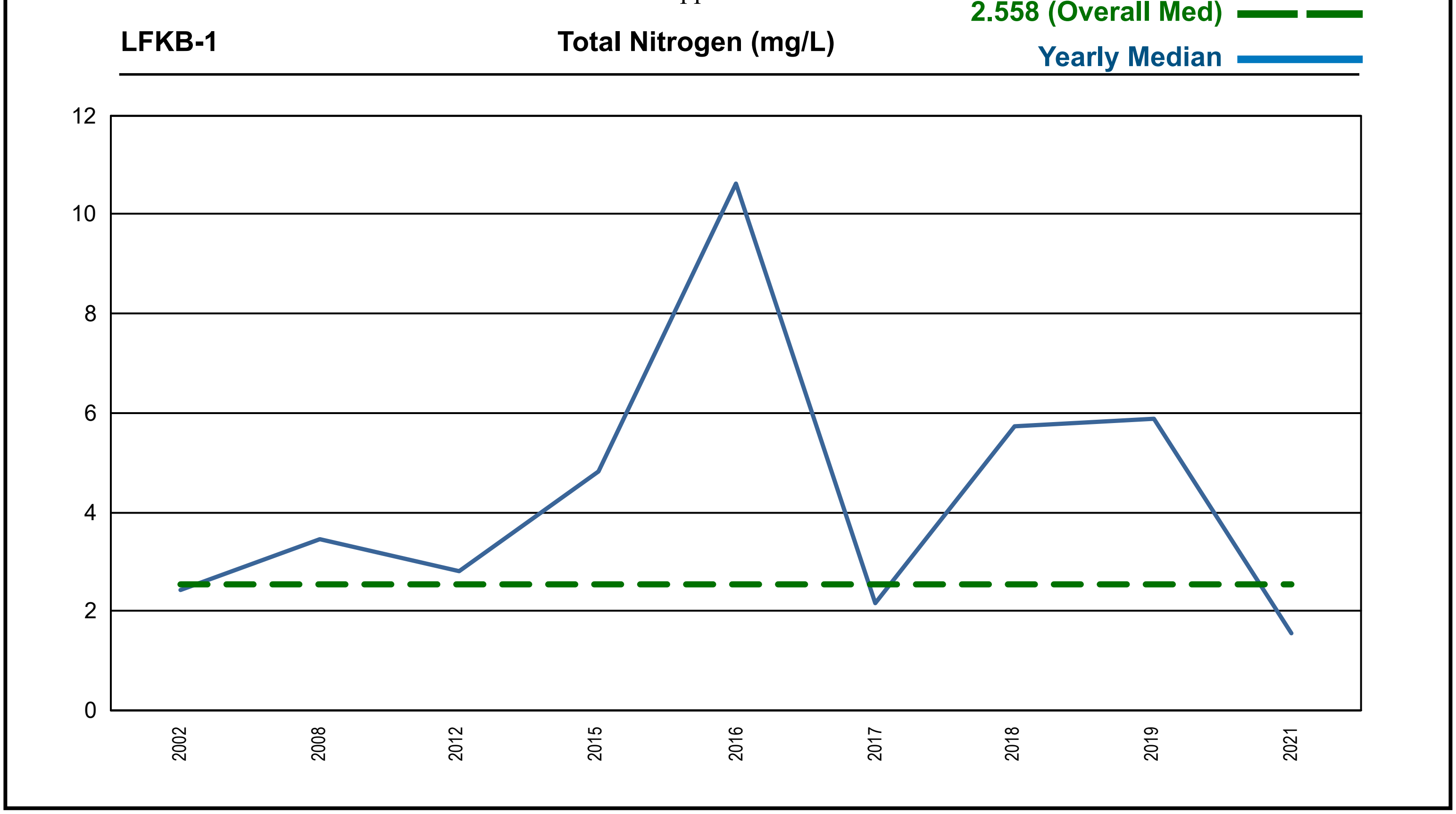

2.094 (Overall Med)
Yearly Median
LC-1
Total Nitrogen (mg/L)
3.6
3.2
2.8
2.4
2
1.6
1.2
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

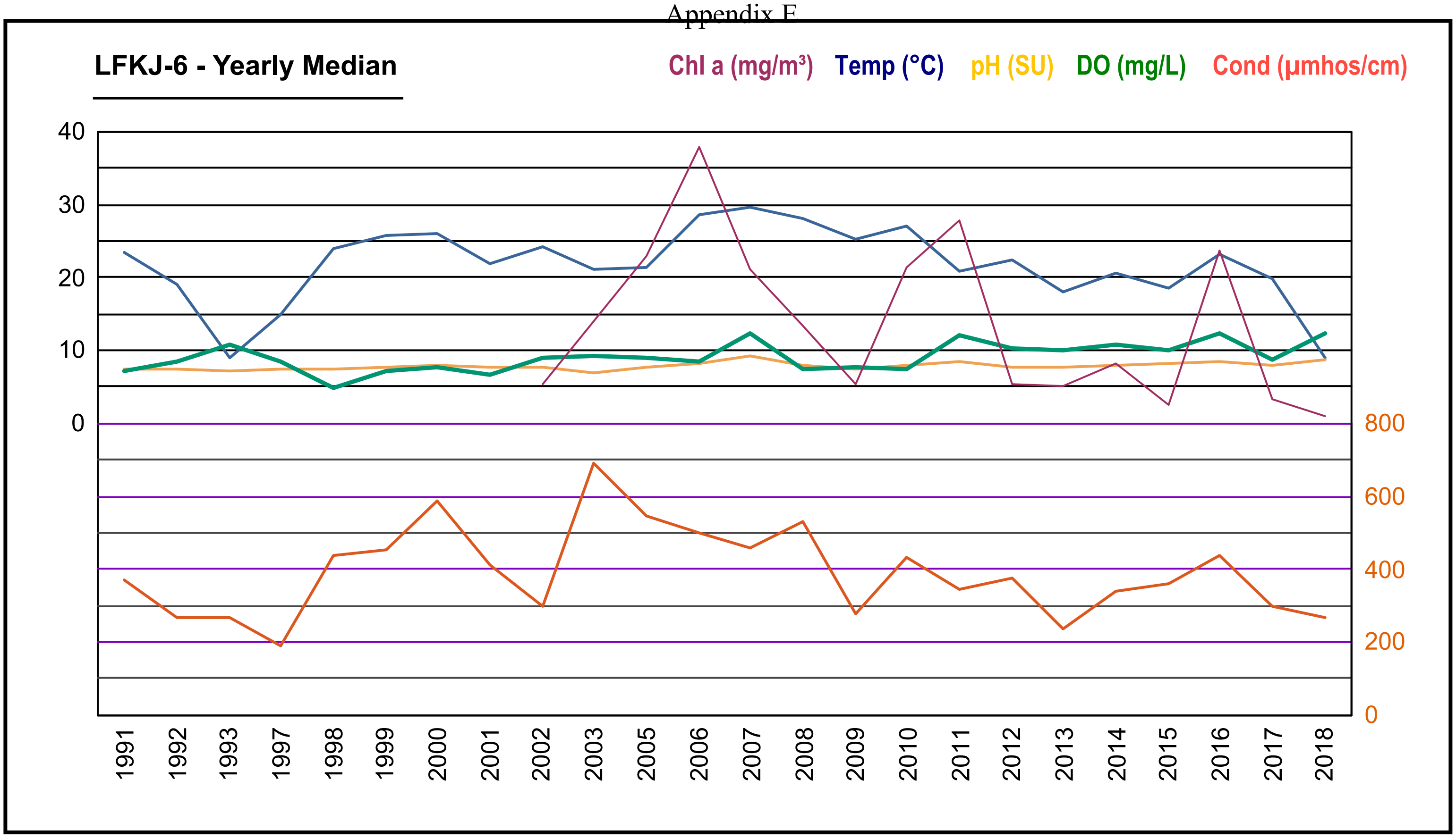

LFKB-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2002
2008
2012
2015
2016
2017
2018
2019
2021

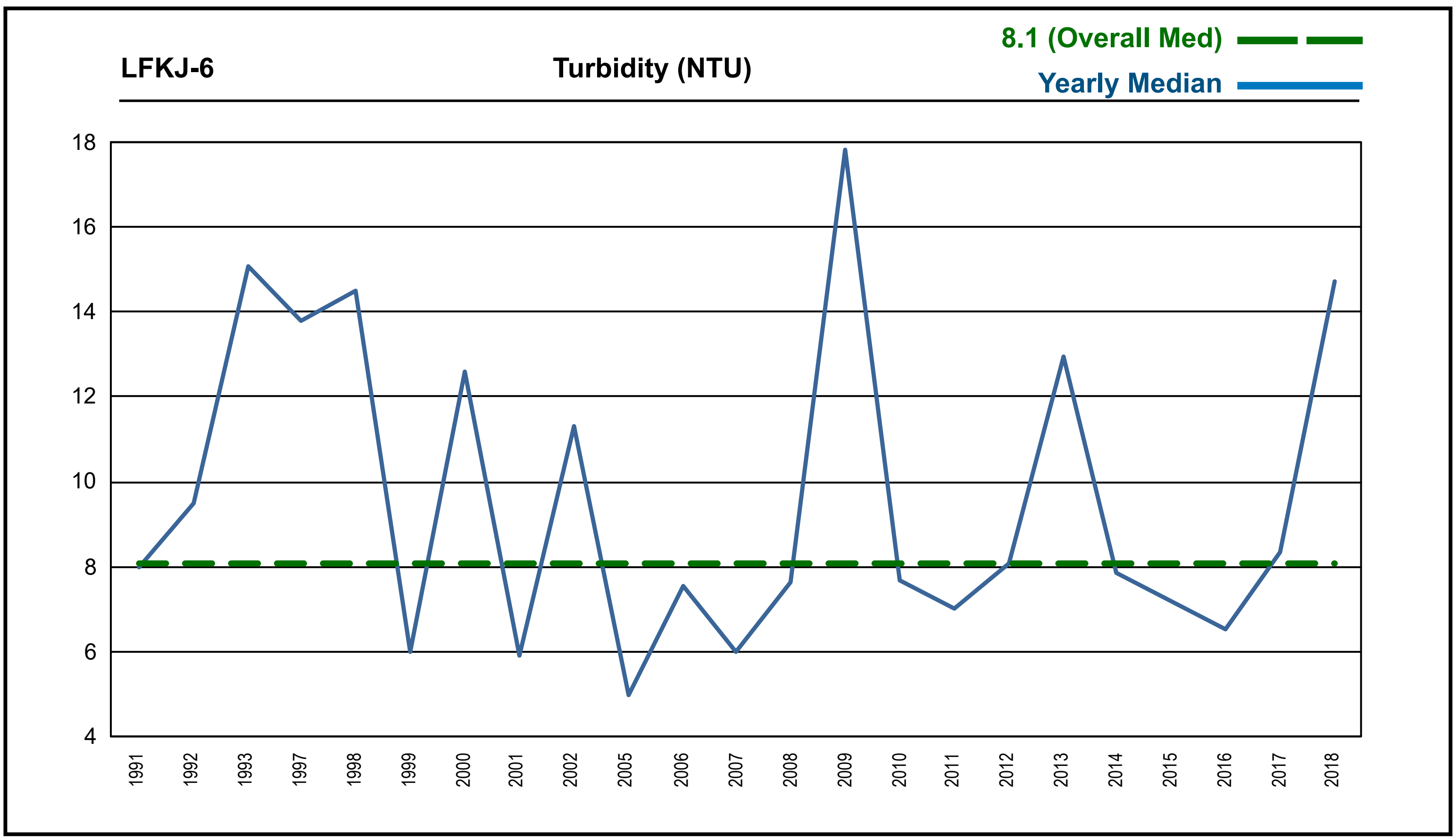

LFKB-1
Turbidity (NTU)
3.4 (Overall Med)
Yearly Median
12
10
8
6
4
2
0
2002
2008
2012
2015
2016
2017
2018
2019
2021

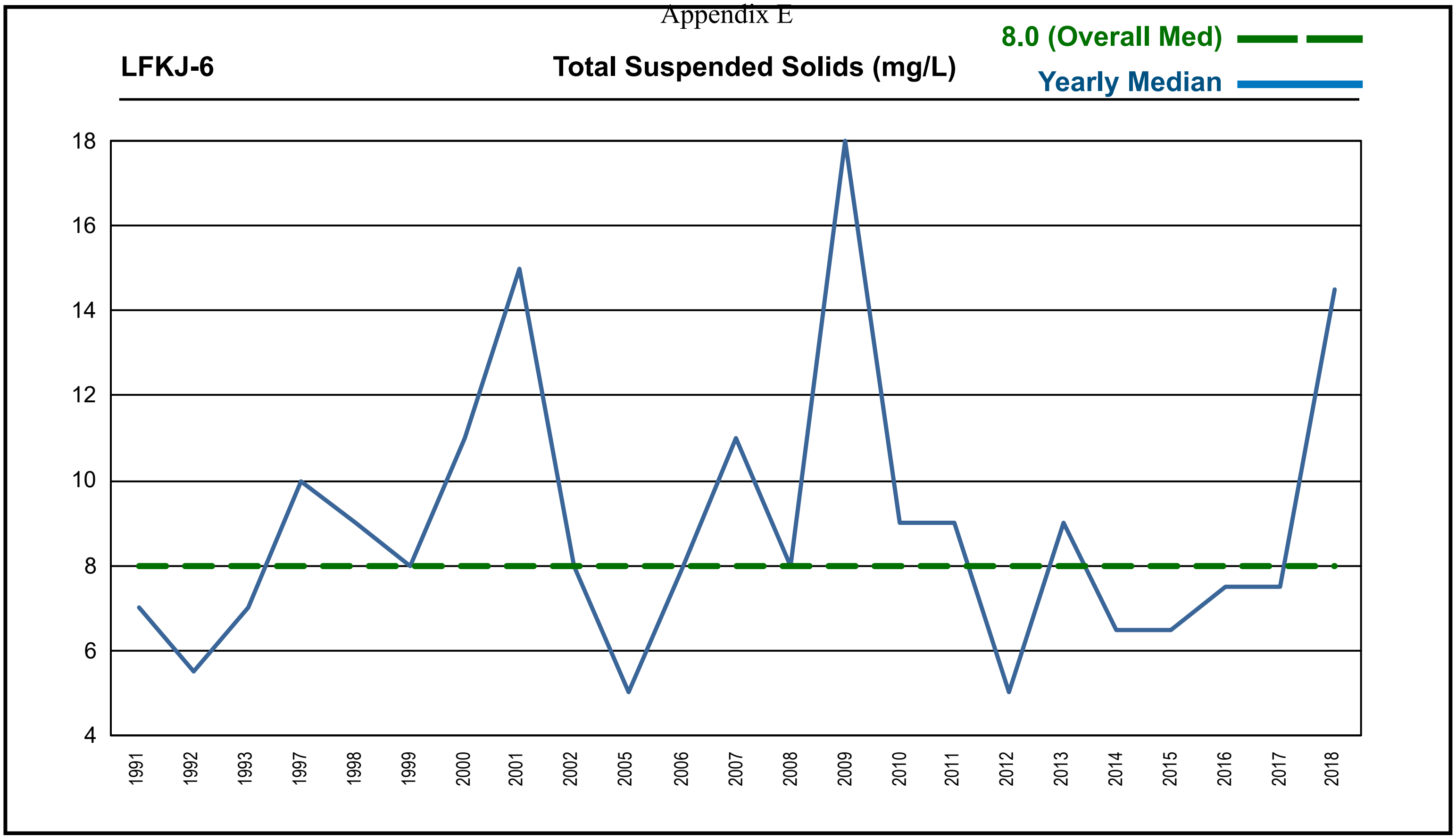

3.0 (Overall Med)
LFKB-1
Total Suspended Solids (mg/L)
Yearly Median
10
8
6
4
2
0
2002
2008
2012
2015
2016
2017
2018
2019
2021

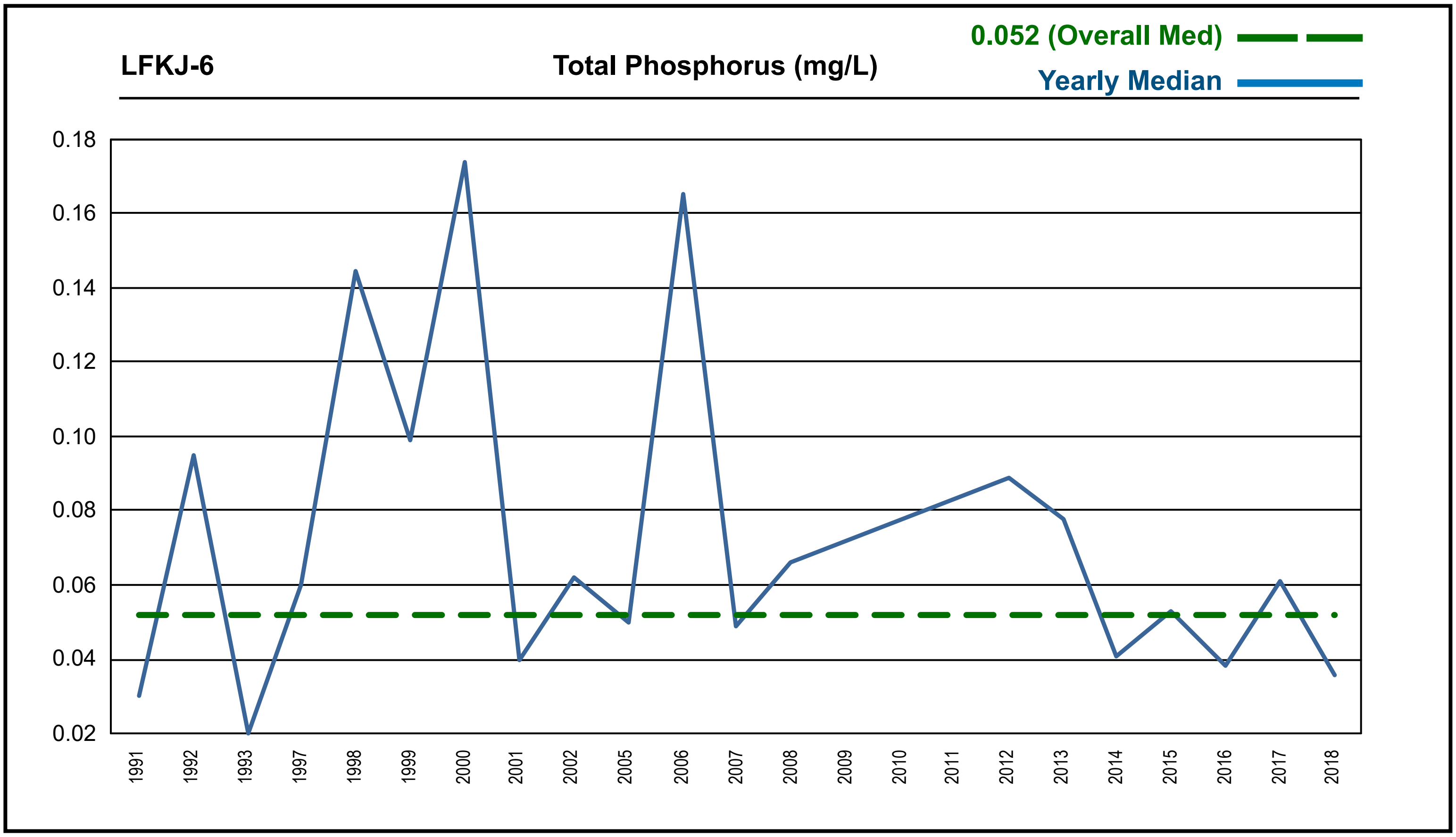

0.398 (Overall Med)
LFKB-1
Total Phosphorus (mg/L)
Yearly Median
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002
2008
2012
2015
2016
2017
2018
2019
2021

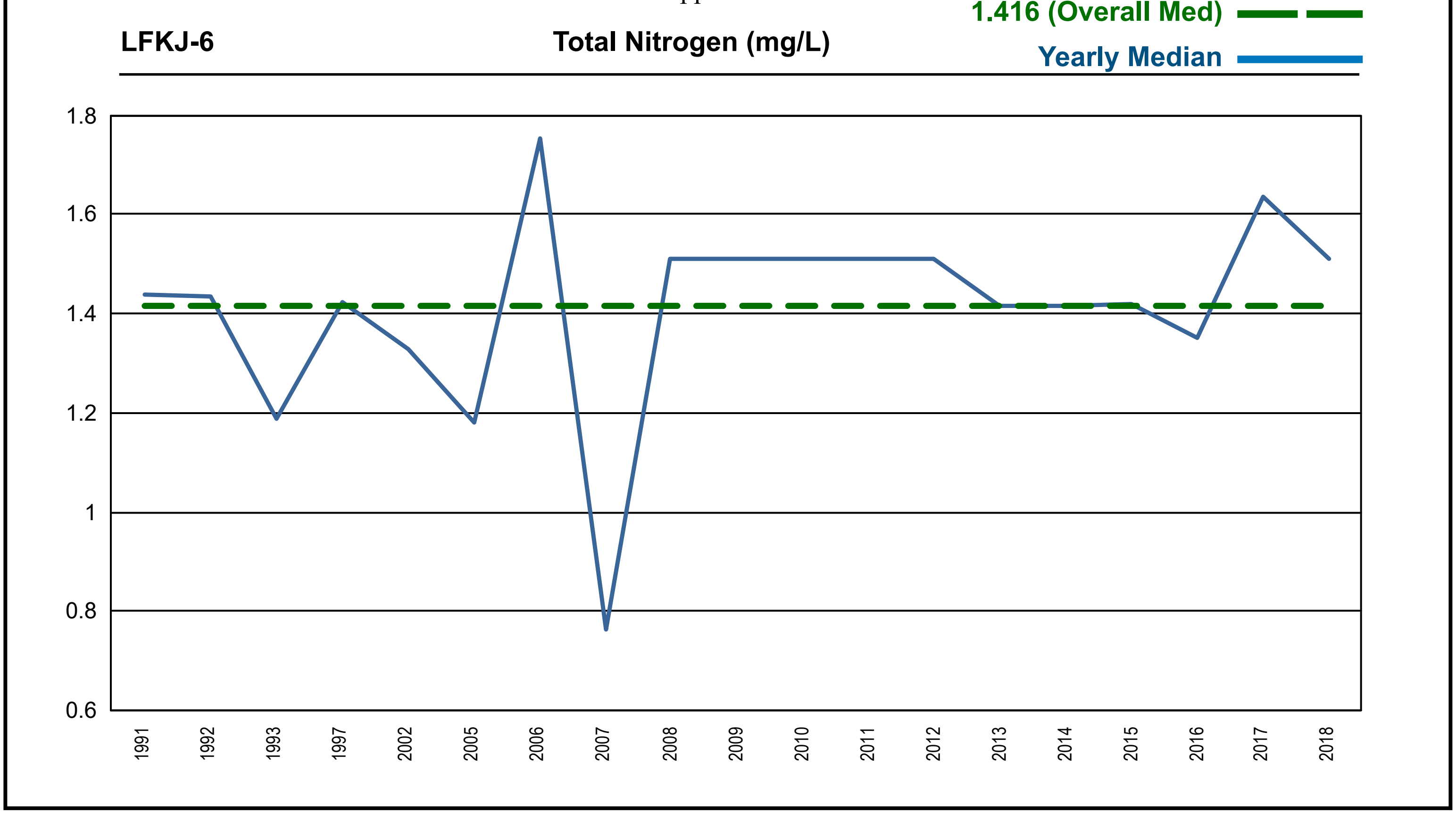

LFKB-1
Total Nitrogen (mg/L)
2.558 (Overall Med)
Yearly Median
12
10
8
6
4
2
0
2002
2008
2012
2015
2016
2017
2018
2019
2021

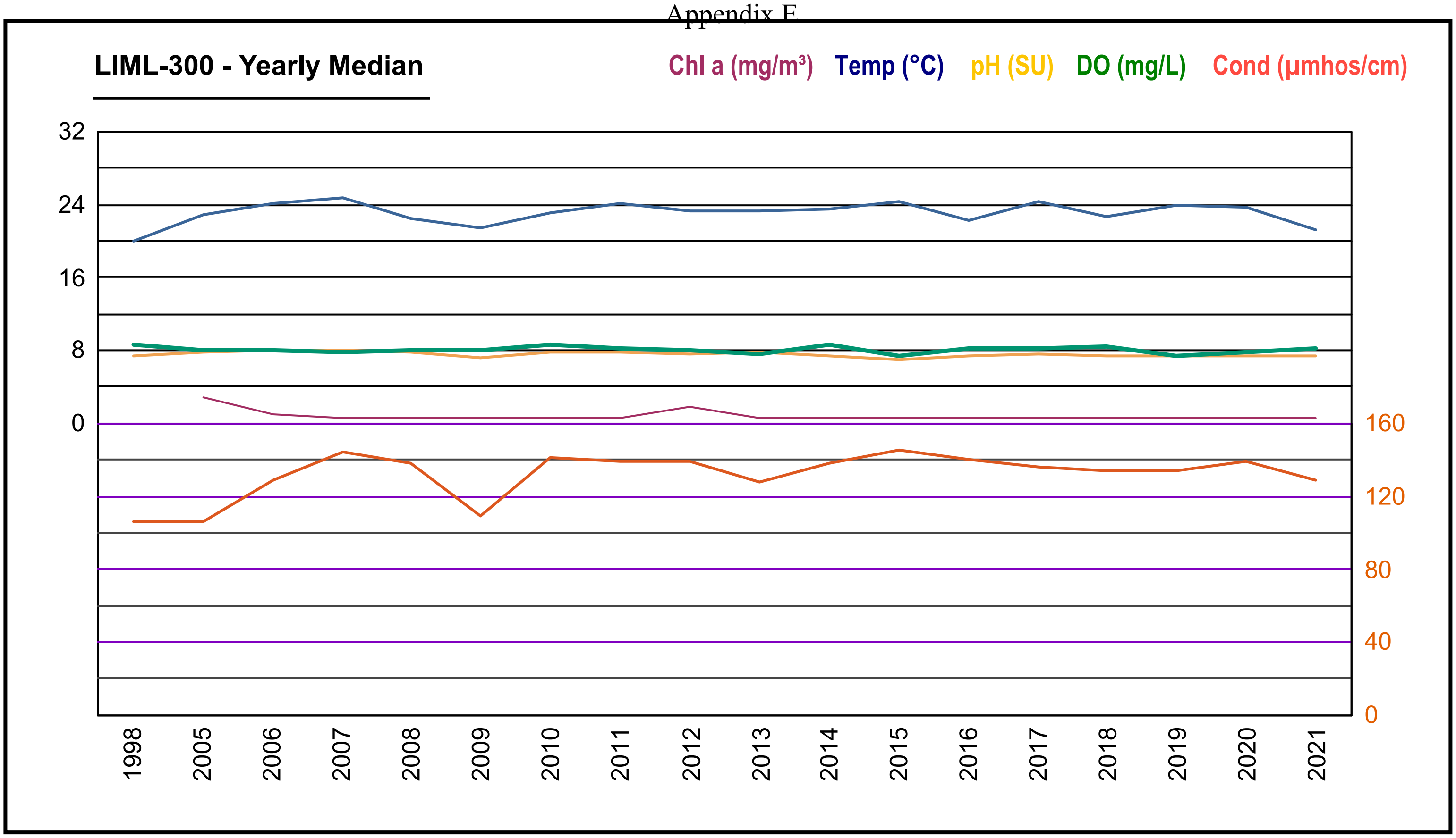

LFKJ-6 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
40
30
20
10
0
800
600
400
200
0
1991
1992
1993
1997
1998
1999
2000
2001
2002
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


8.1 (Overall Med)
LFKJ-6
Turbidity (NTU)
Yearly Median
18
16
14
12
10
8
6
4
1991
1992
1993
1997
1998
1999
2000
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

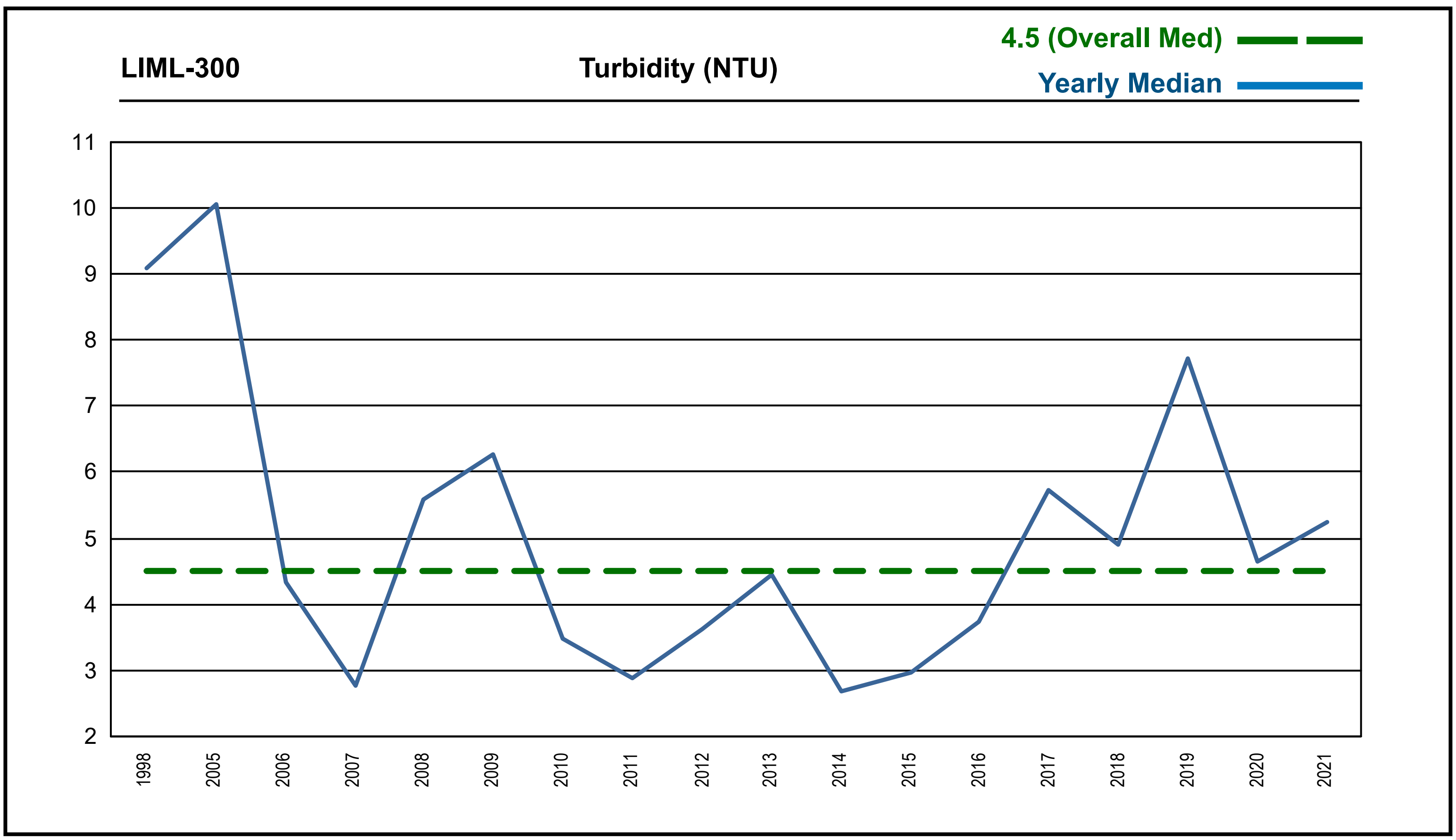

LFKJ-6
Total Suspended Solids (mg/L)
8.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
1991
1992
1993
1997
1998
1999
2000
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


LFKJ-6
Total Phosphorus (mg/L)
0.052 (Overall Med)
Yearly Median
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
1991
1992
1993
1997
1998
1999
2000
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

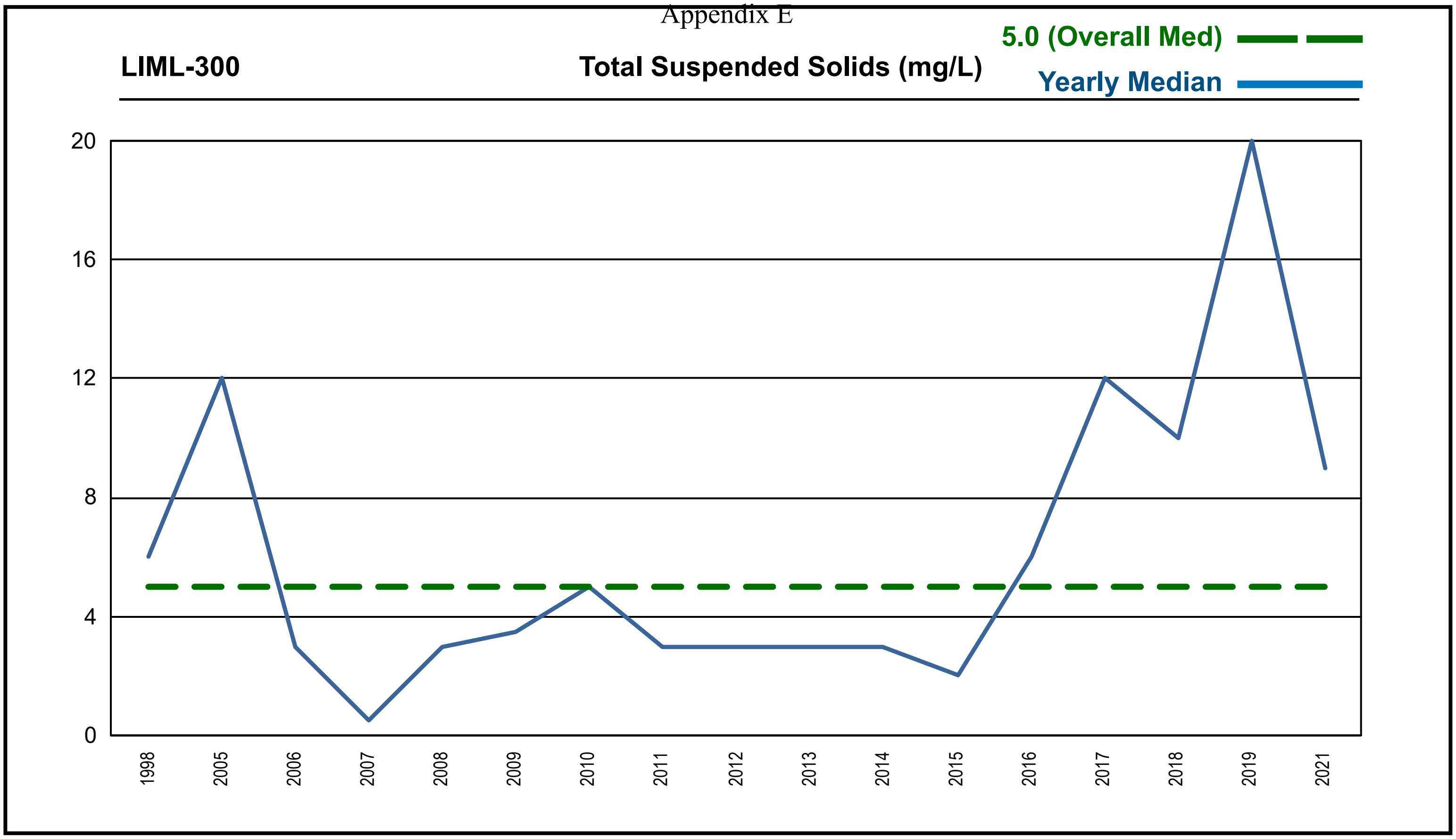

LFKJ-6
Total Nitrogen (mg/L)
1.416 (Overall Med)
Yearly Median
1.8
1.6
1.4
1.2
1
0.8
0.6
1991
1992
1993
1997
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

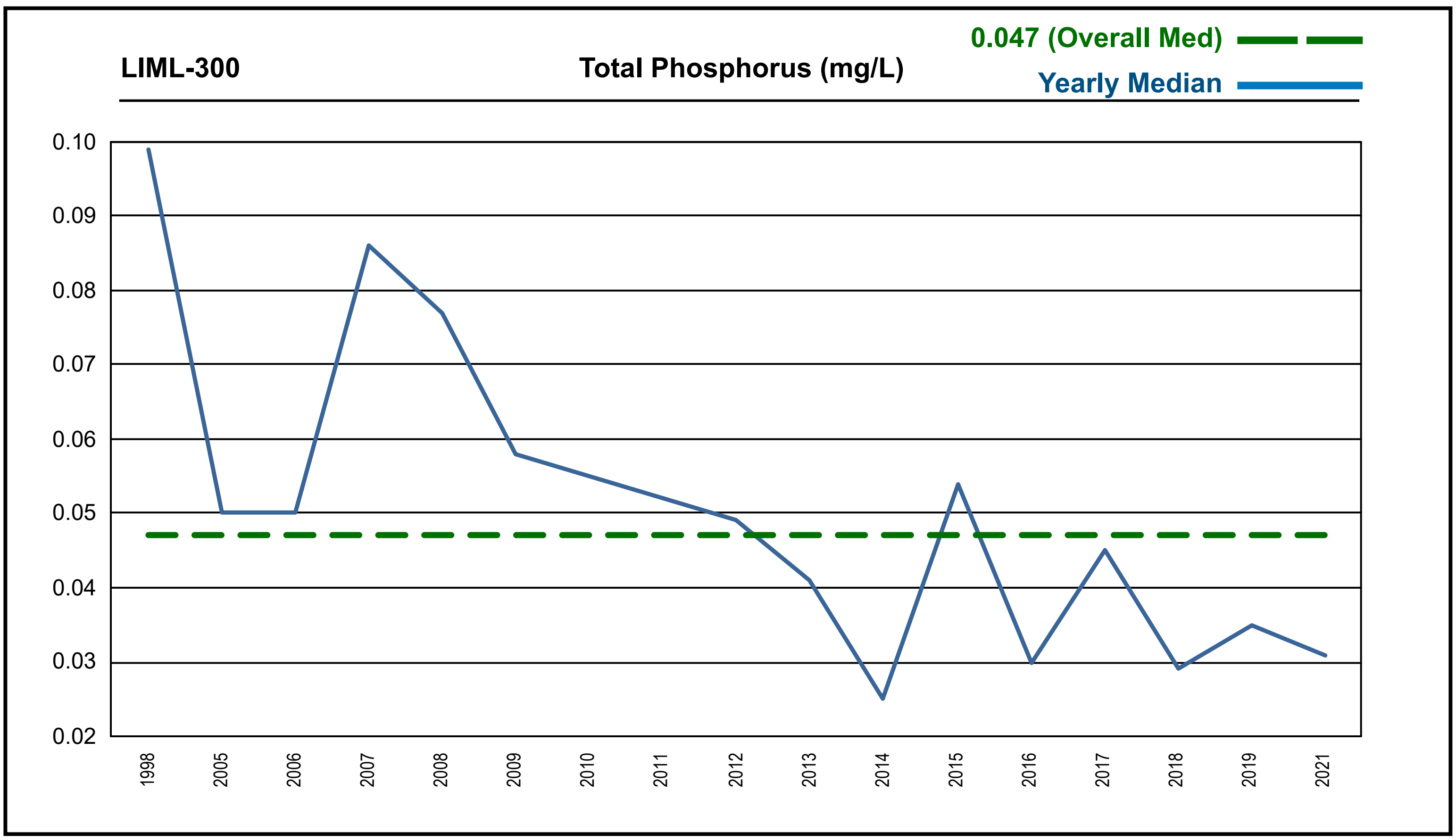


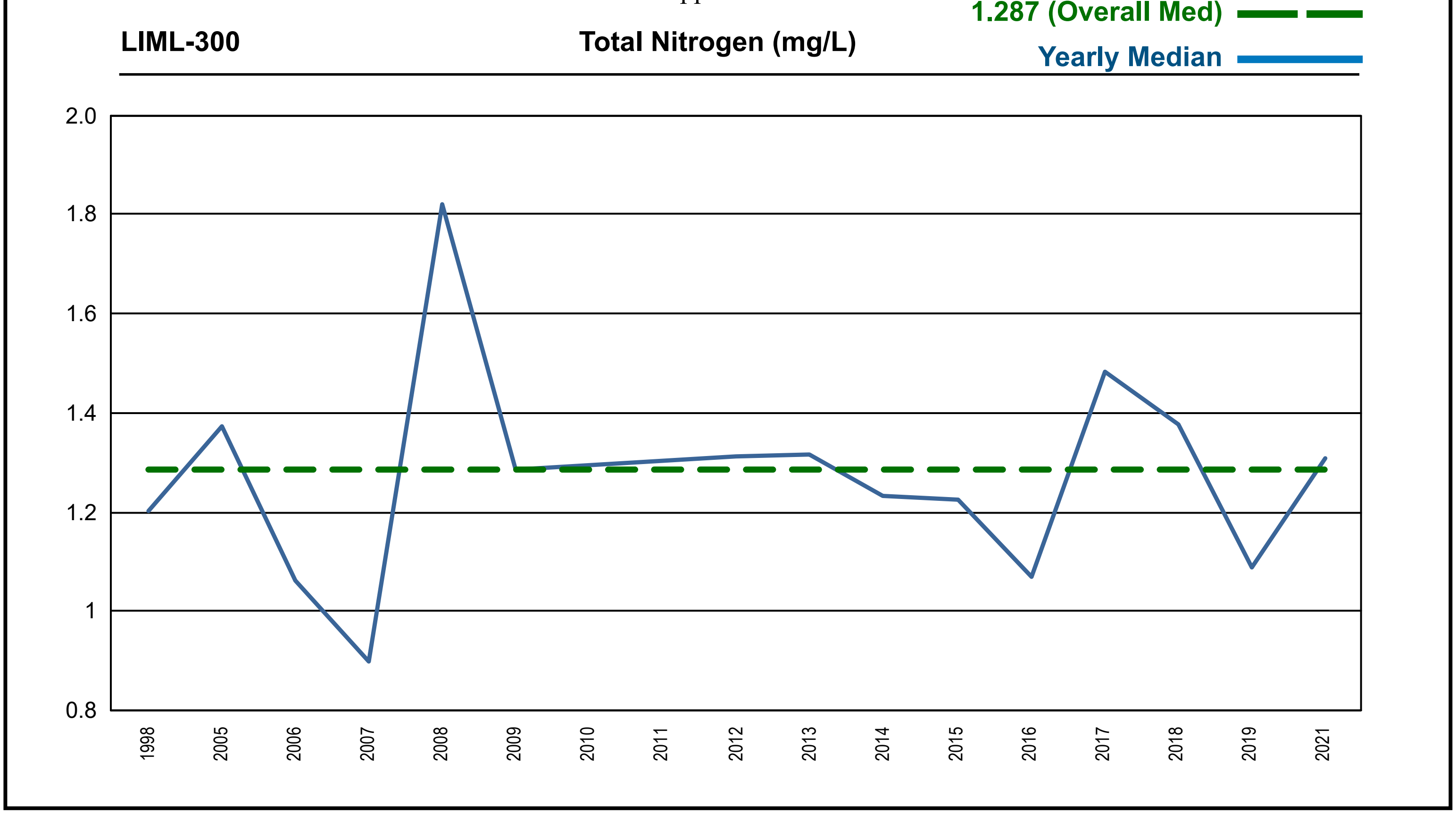
LIML-300 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
1998
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

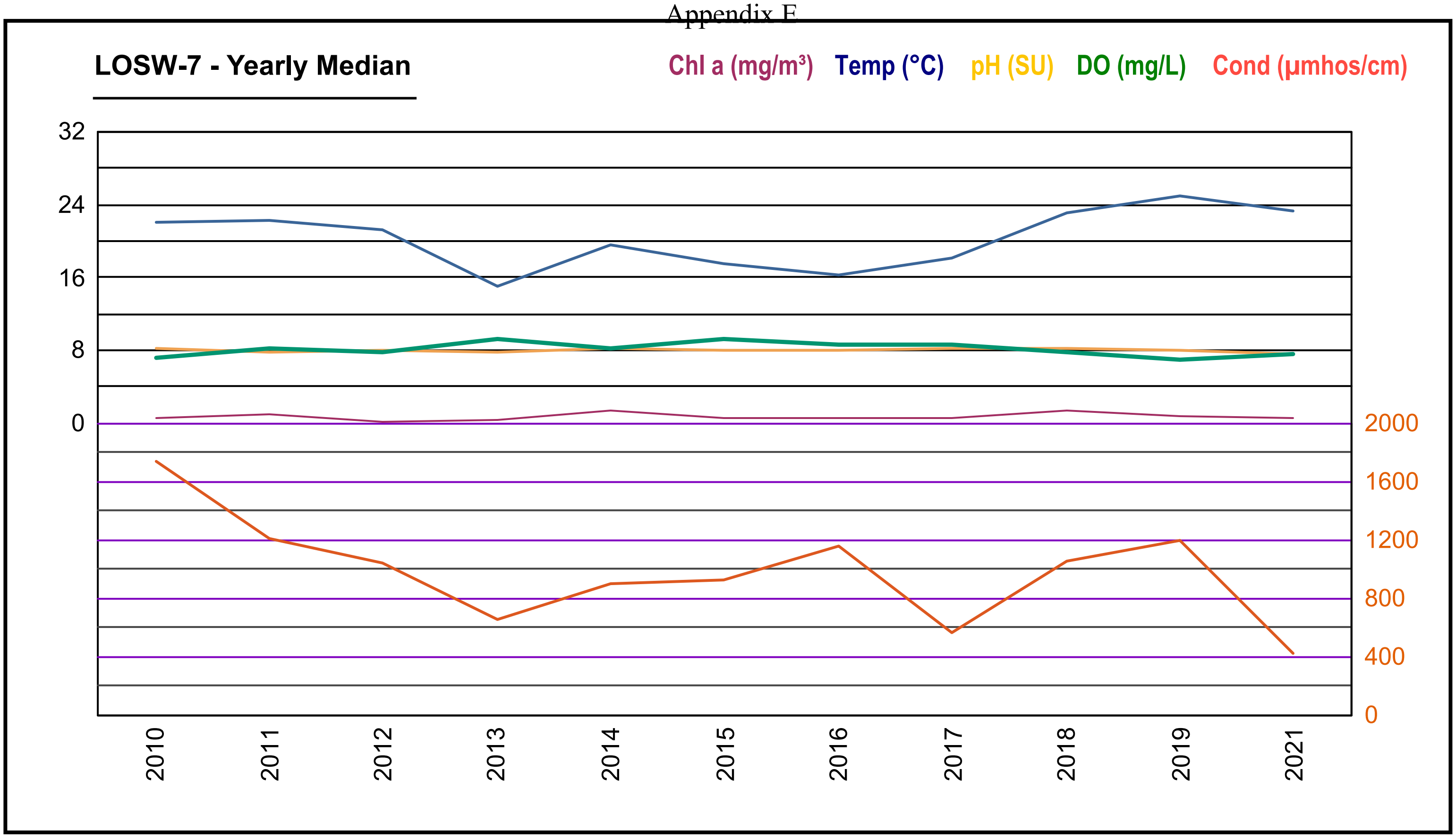


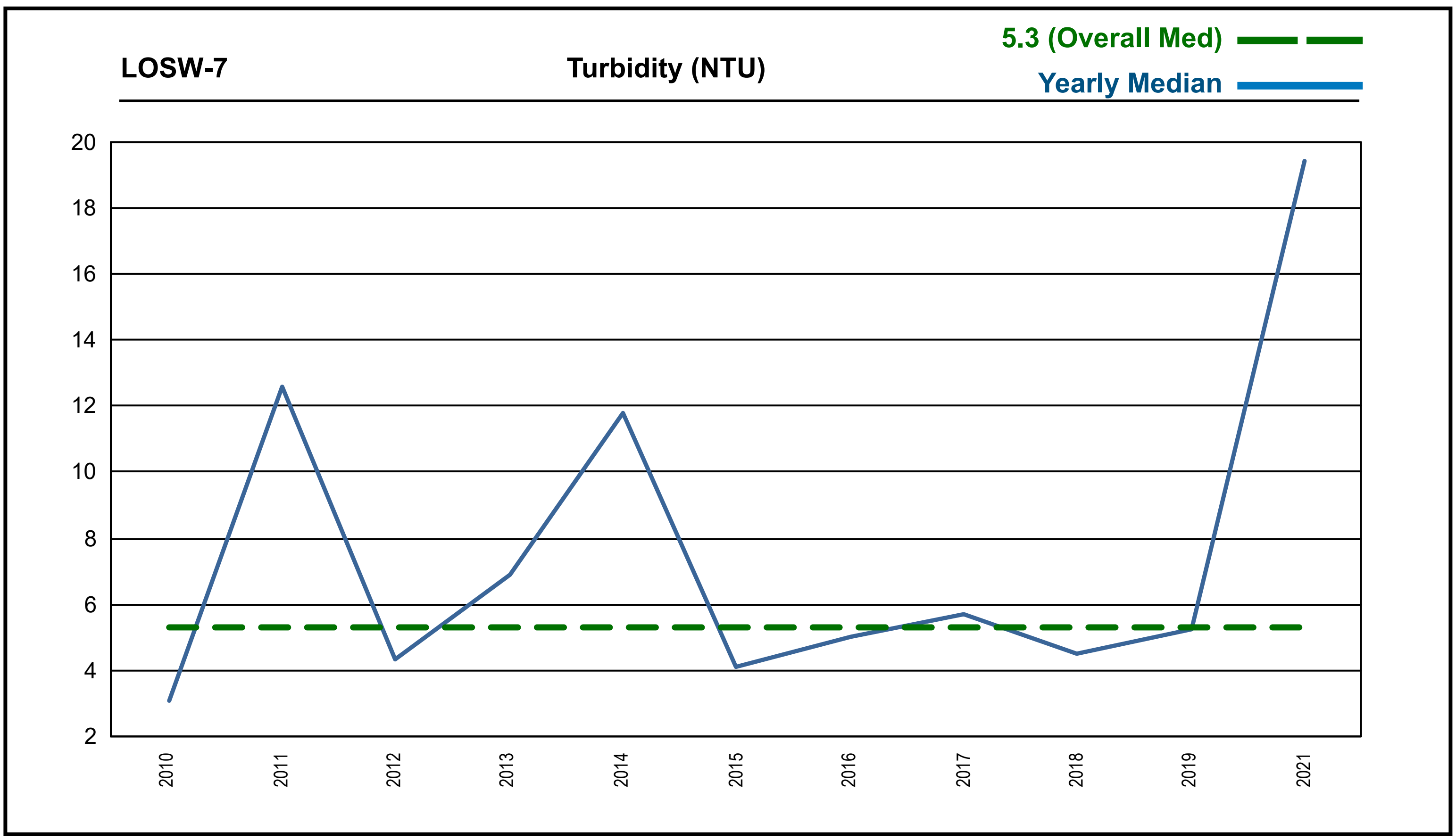
LIML-300
Turbidity (NTU)
4.5 (Overall Med)
Yearly Median
11
10
9
8
7
6
5
4
3
2
1998
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

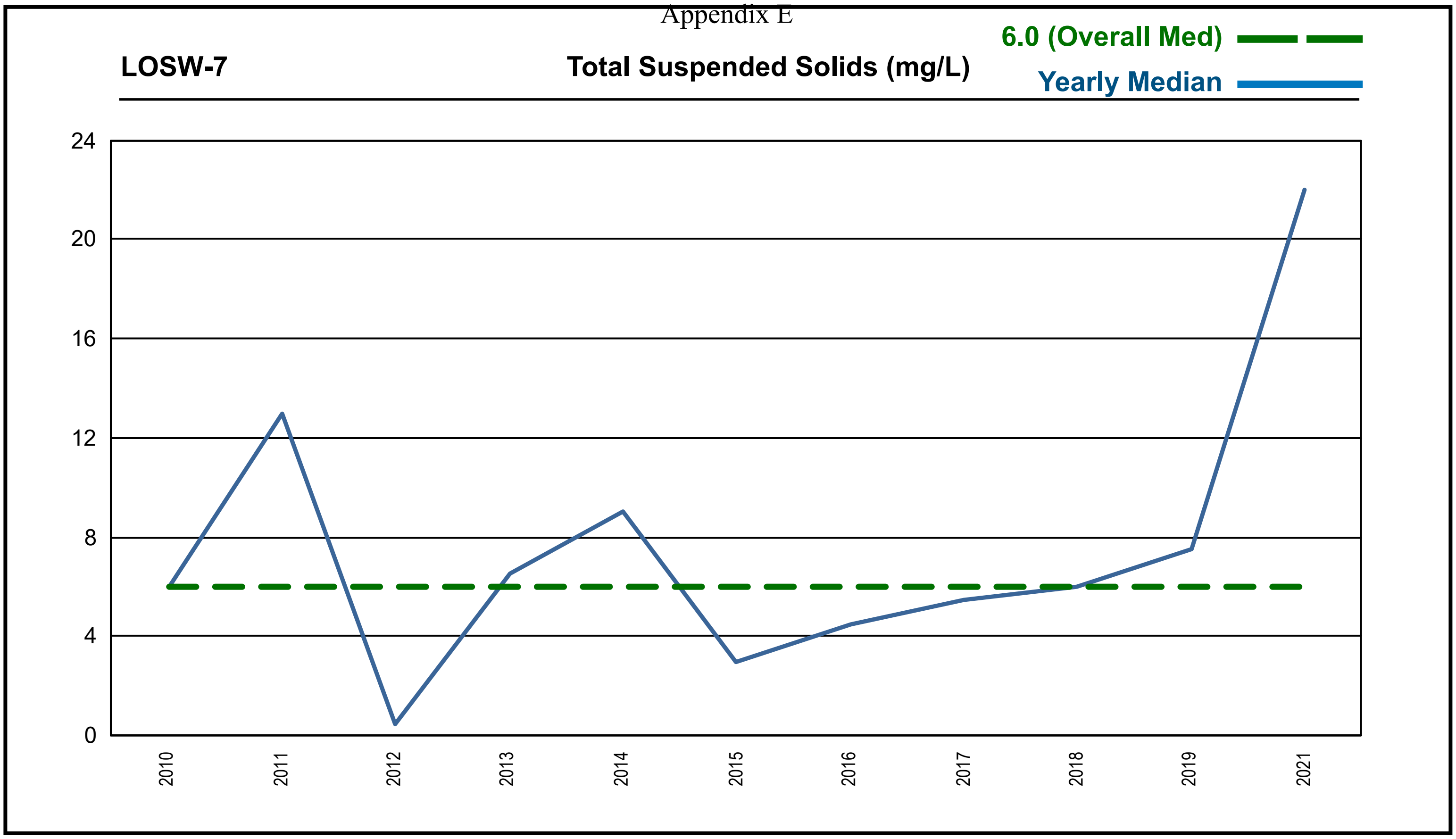

5.0 (Overall Med)
Yearly Median
LIML-300
Total Suspended Solids (mg/L)
20
16
12
8
4
0
1998
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


0.047 (Overall Med)
Yearly Median
LIML-300
Total Phosphorus (mg/L)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
1998
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

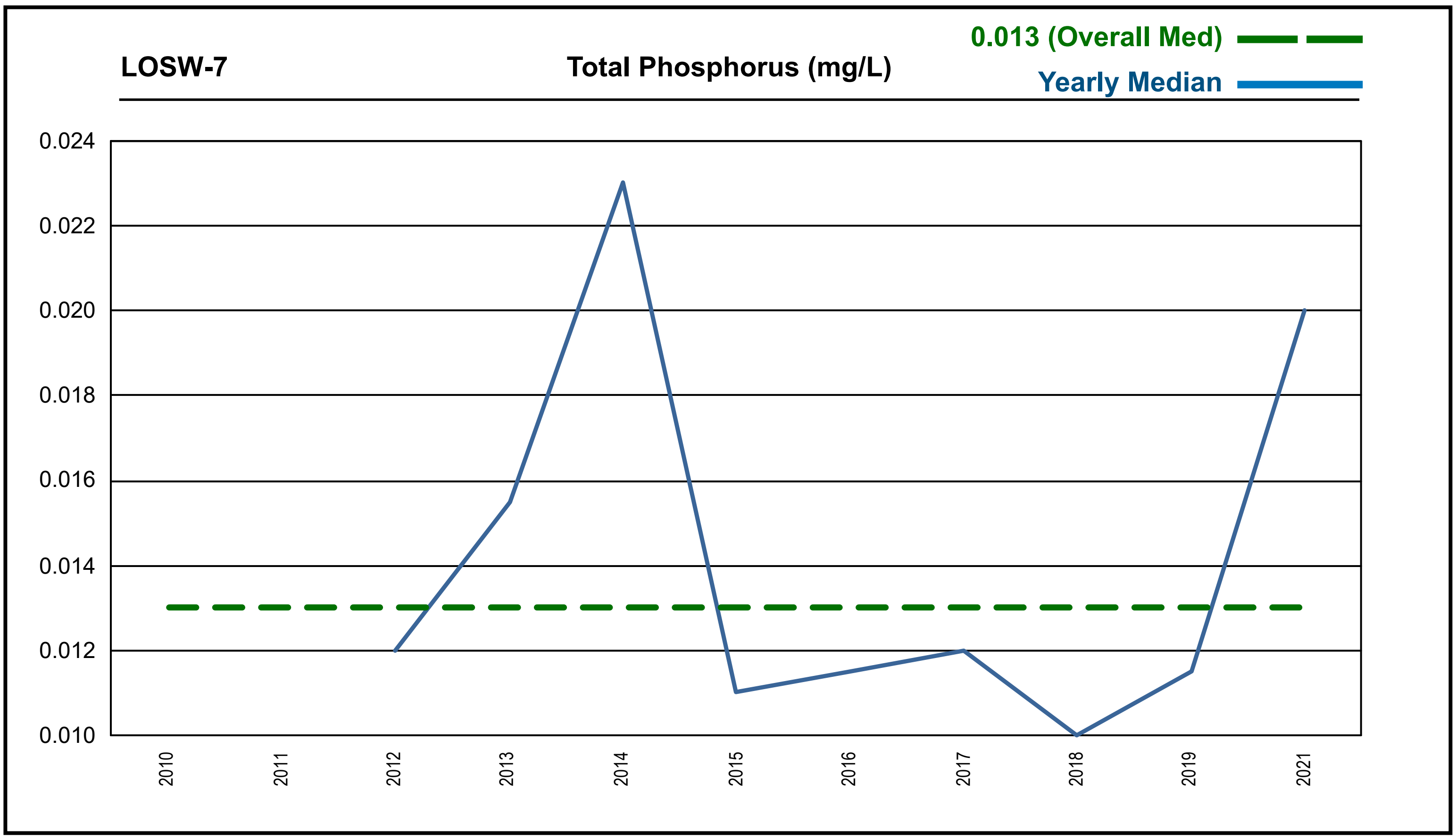

LIML-300
Total Nitrogen (mg/L)
1.287 (Overall Med)
Yearly Median
2.0
1.8
1.6
1.4
1.2
1
0.8
1998
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


LOSW-7 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
2000
1600
1200
800
400
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

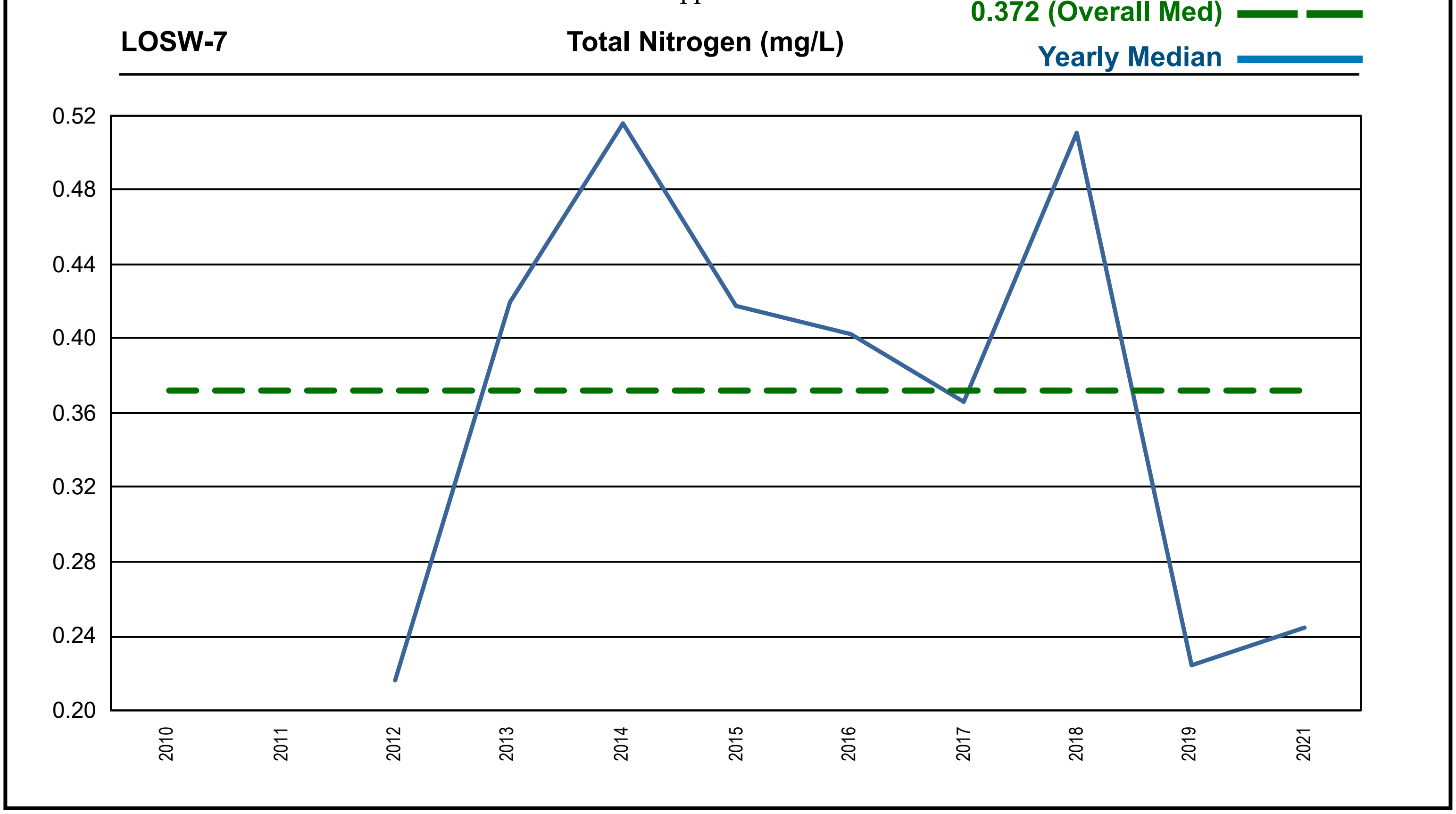

LOSW-7
Turbidity (NTU)
5.3 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

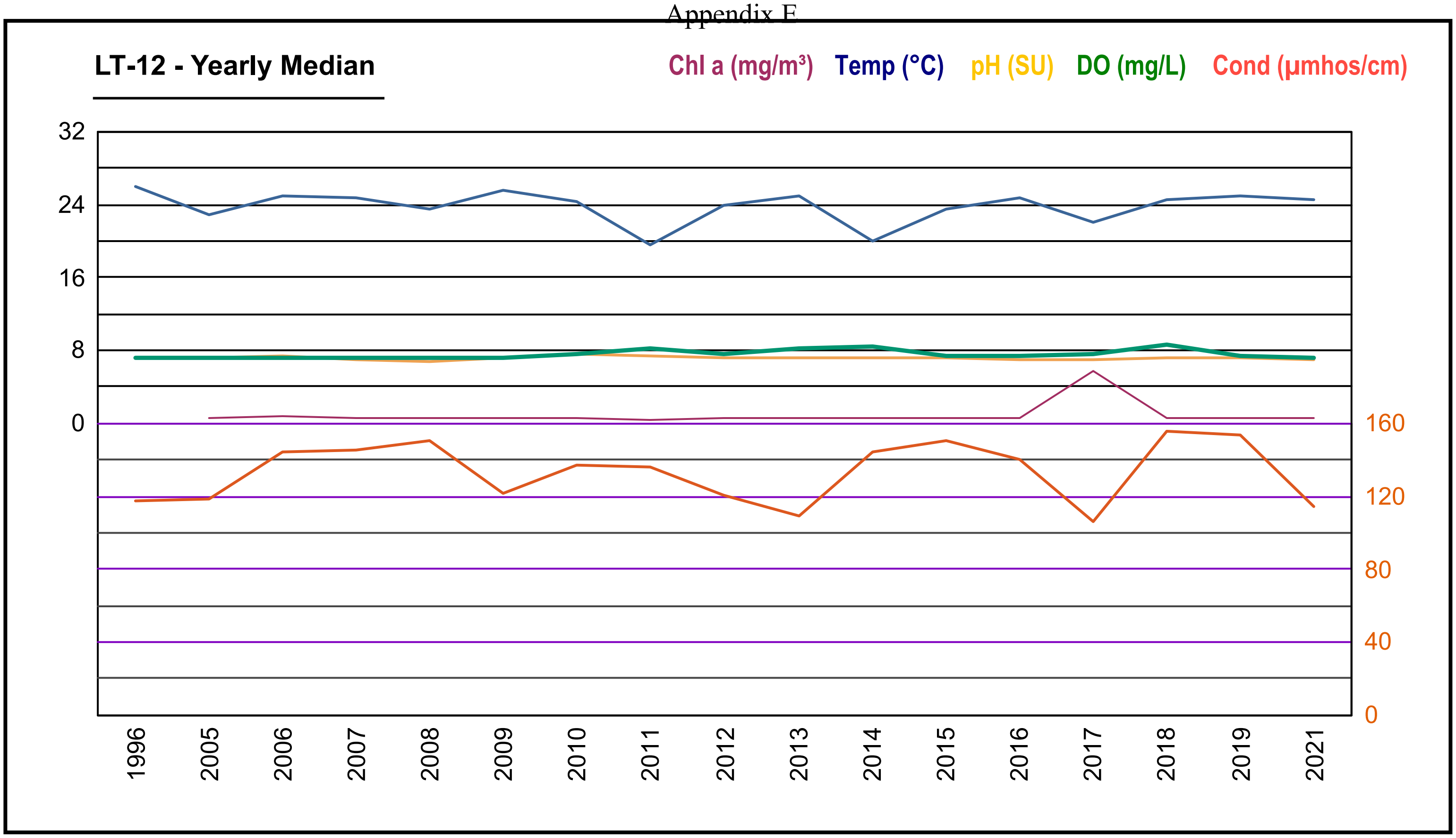


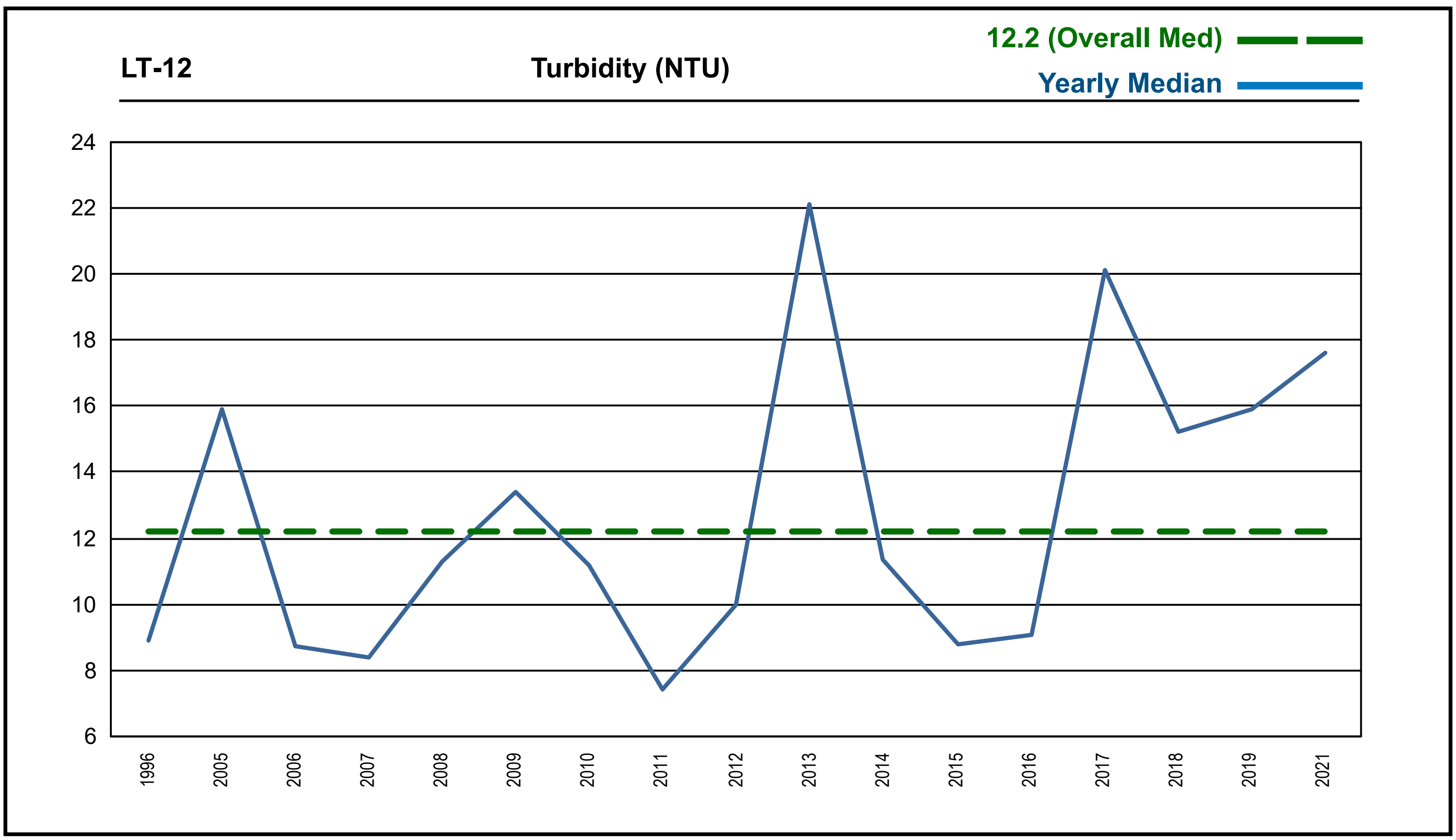
6.0 (Overall Med)
Yearly Median
LOSW-7
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

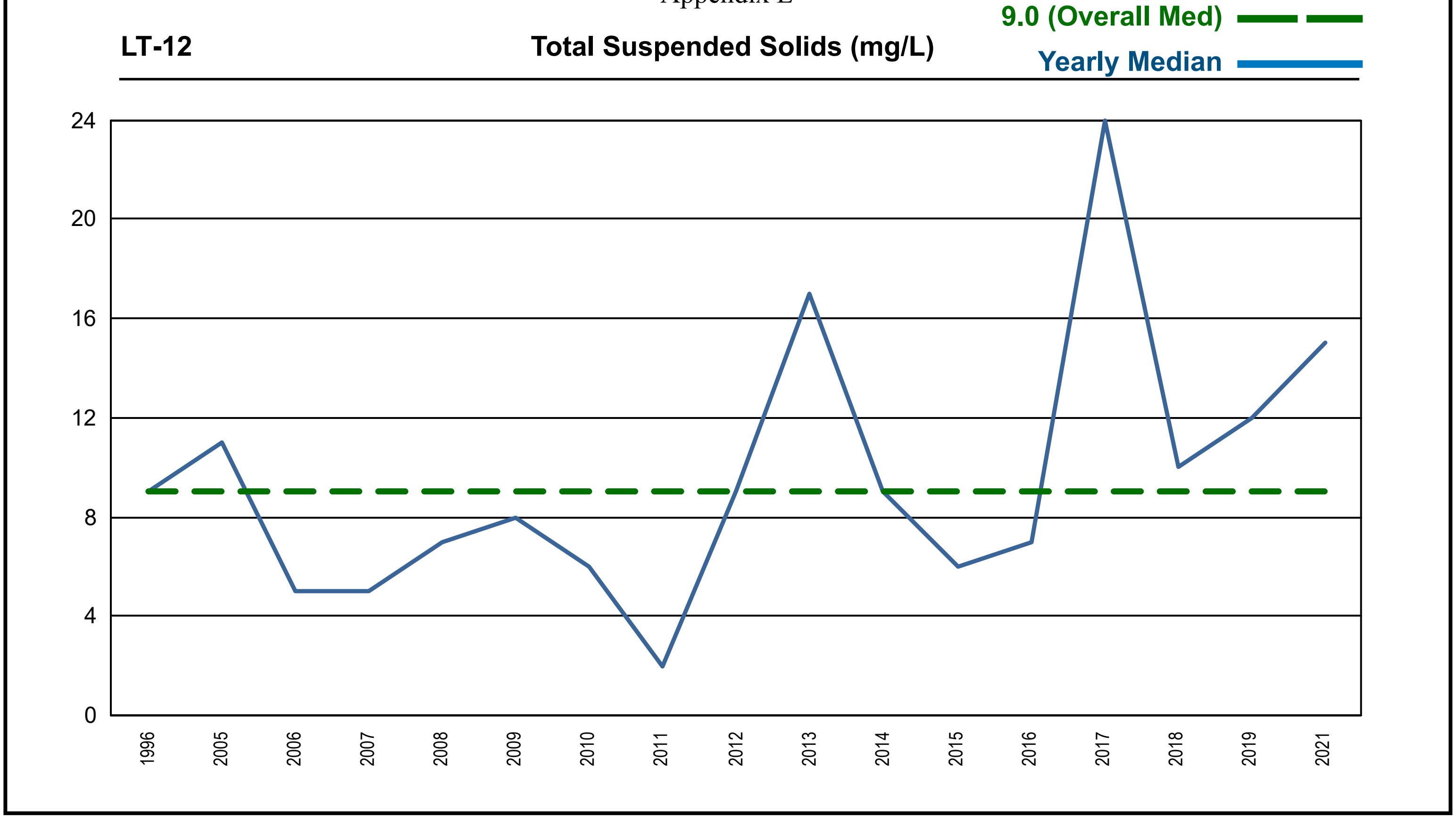


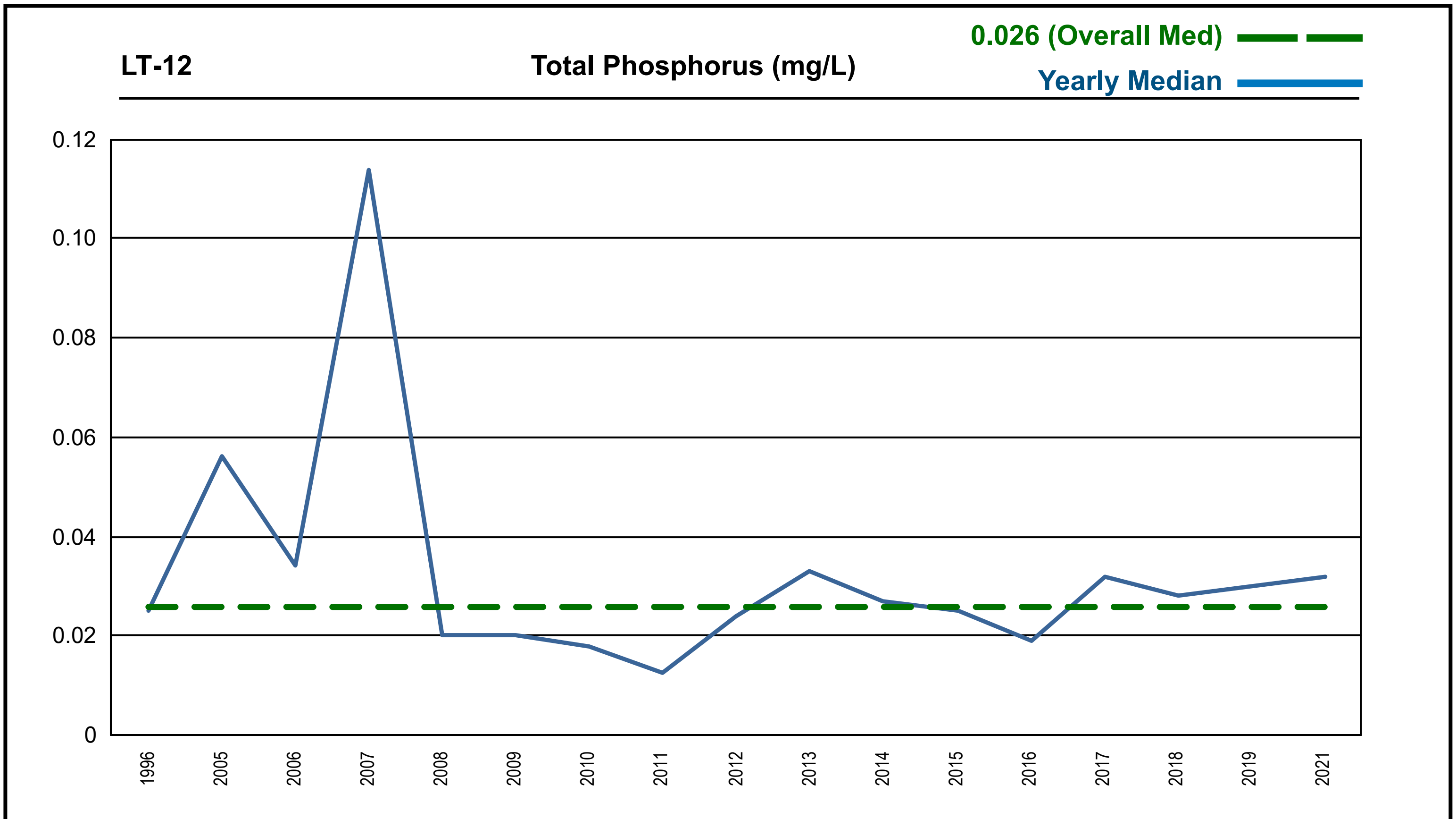
0.013 (Overall Med)
Yearly Median
LOSW-7
Total Phosphorus (mg/L)
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

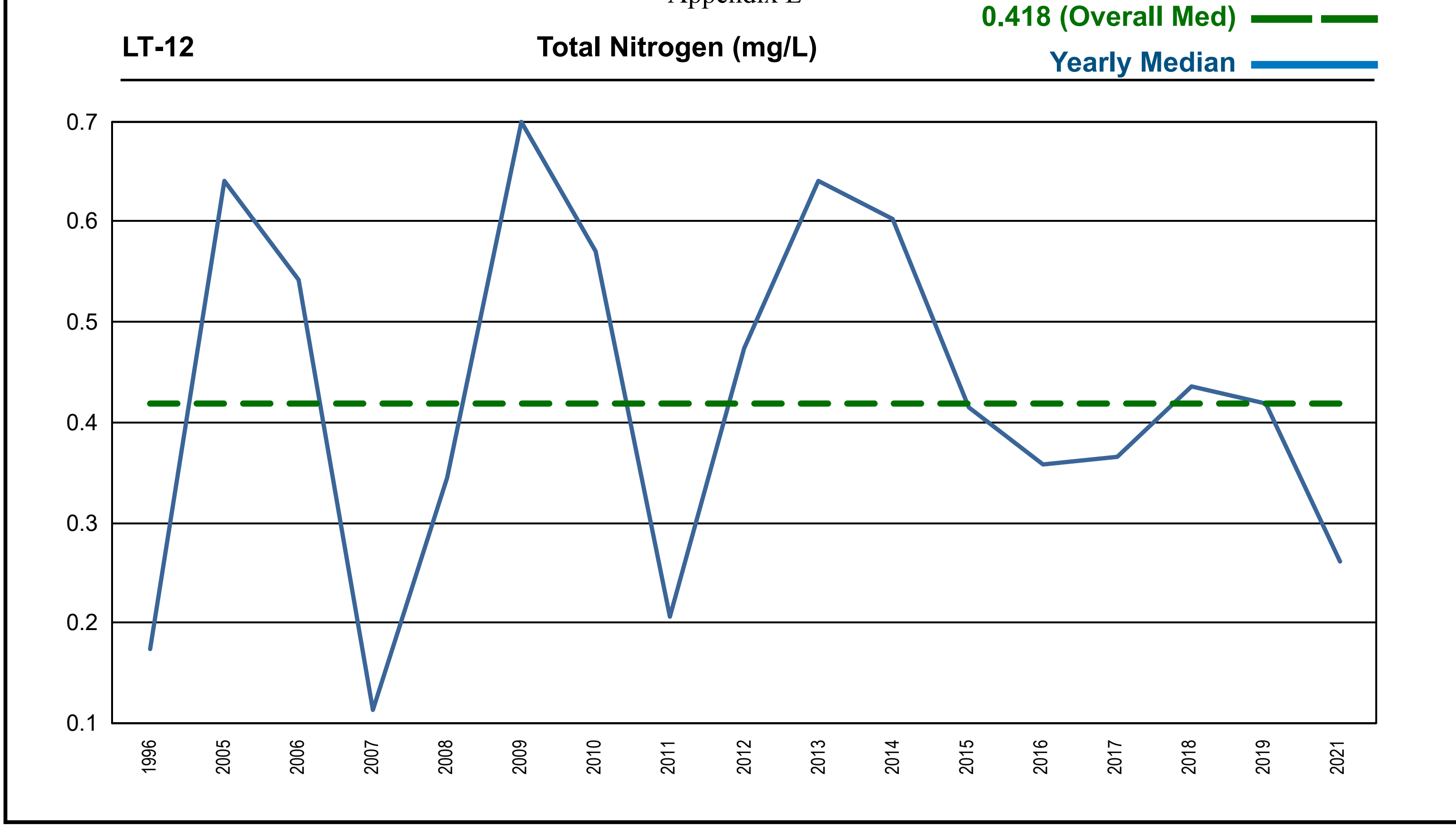

LOSW-7
Total Nitrogen (mg/L)
0.372 (Overall Med)
Yearly Median
0.52
0.48
0.44
0.40
0.36
0.32
0.28
0.24
0.20
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

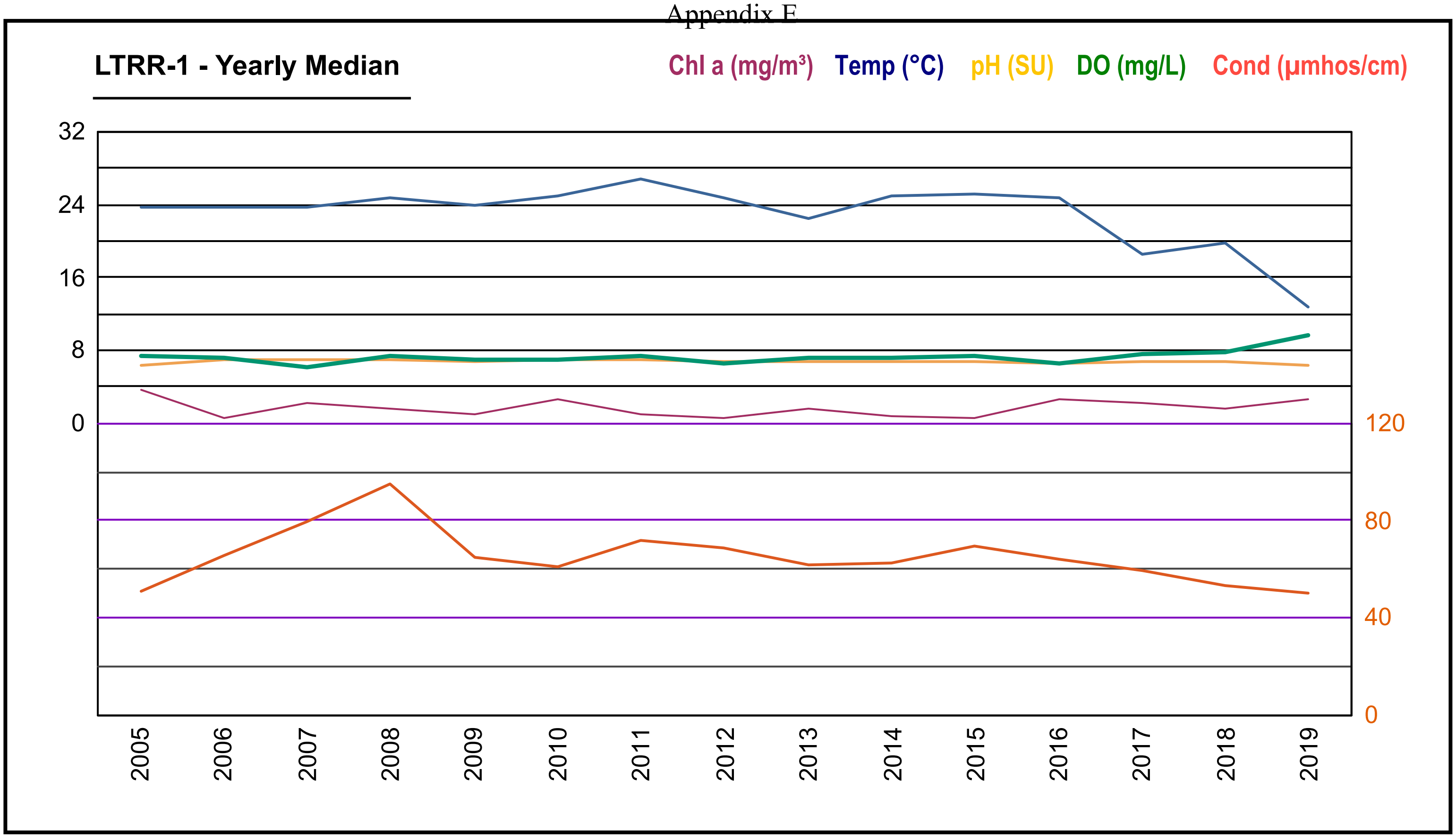

LT-12 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

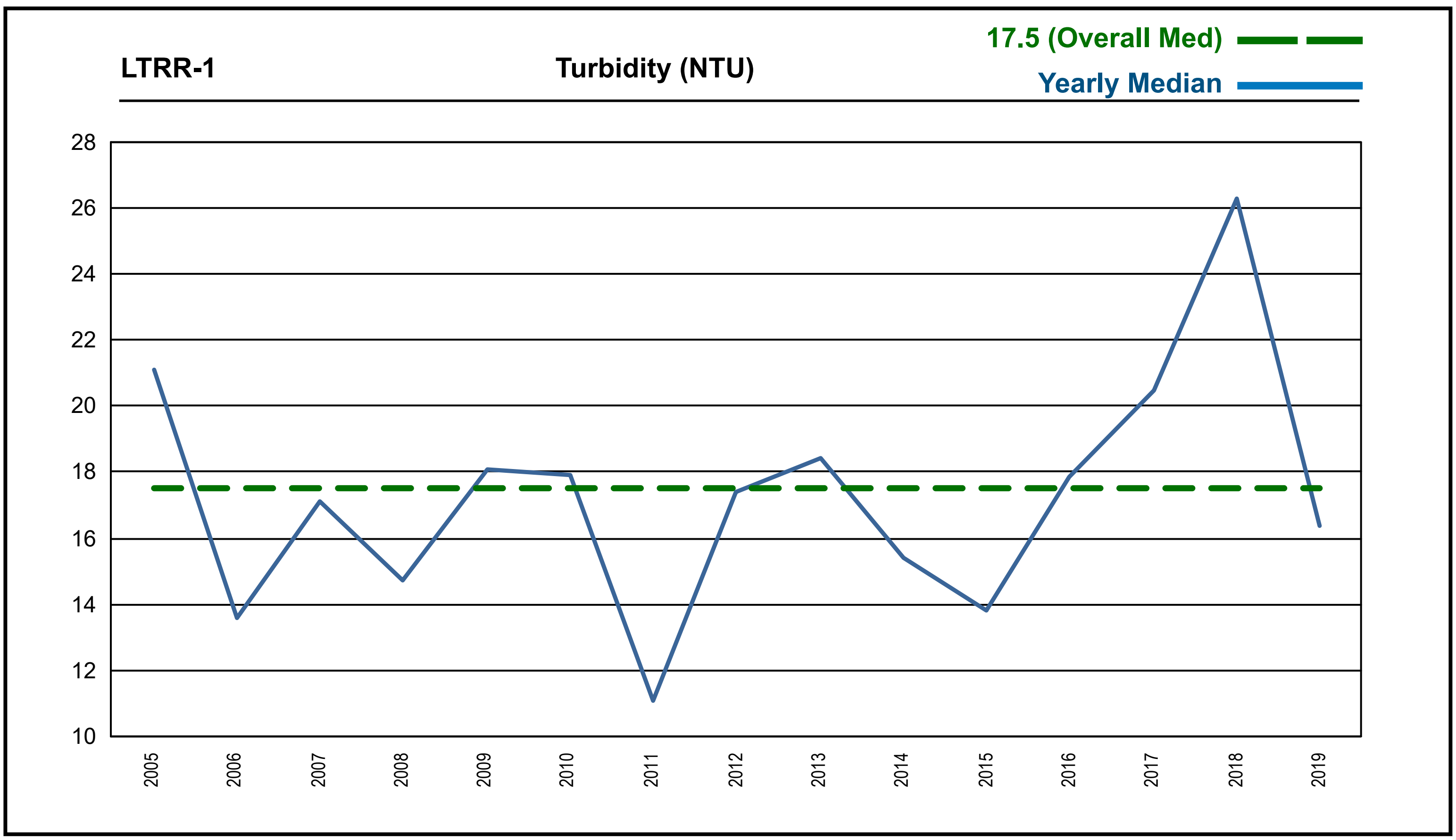

LT-12
Turbidity (NTU)
12.2 (Overall Med)
Yearly Median
24
22
20
18
16
14
12
10
8
6
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

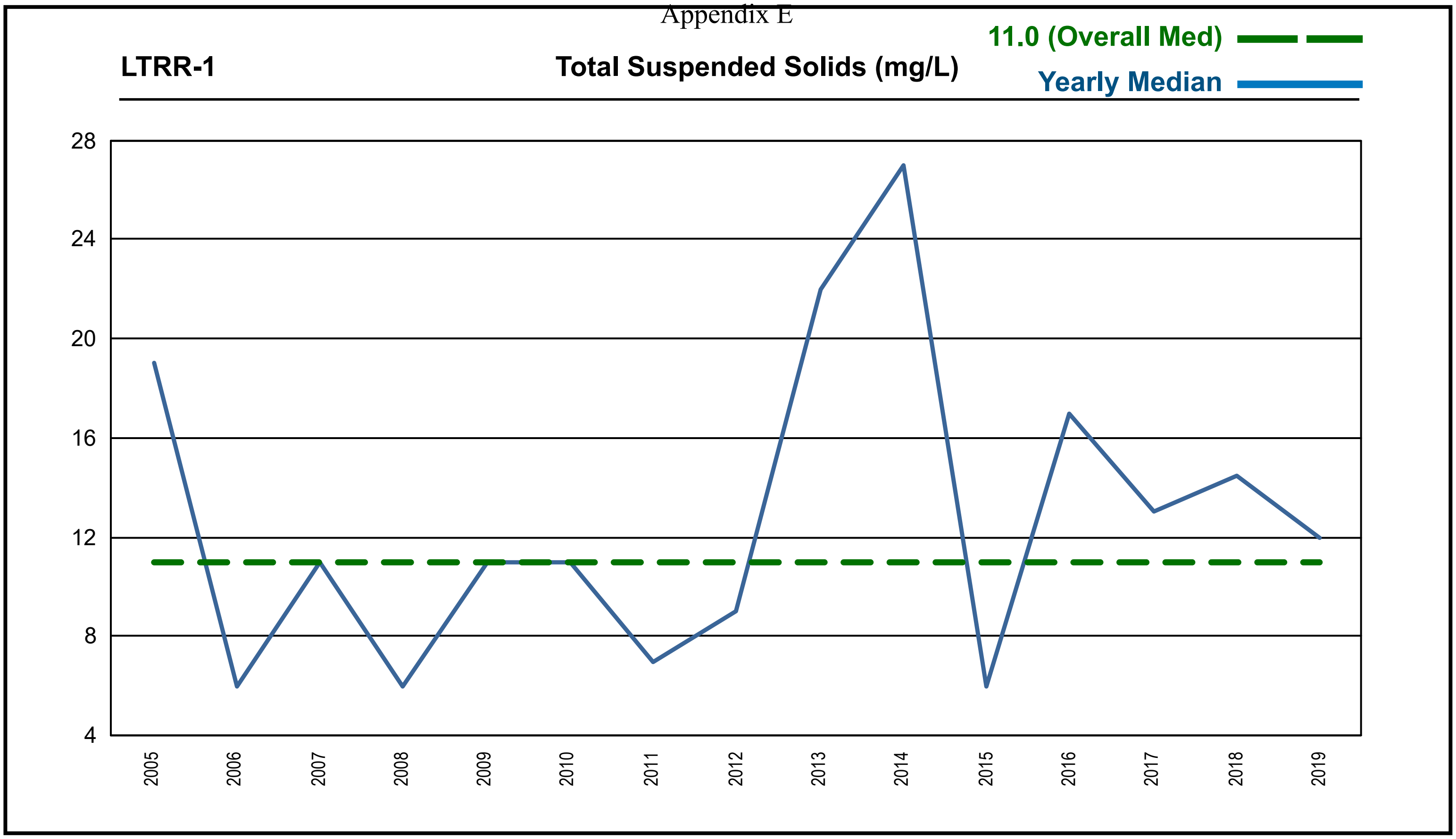

9.0 (Overall Med)
Yearly Median
LT-12
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

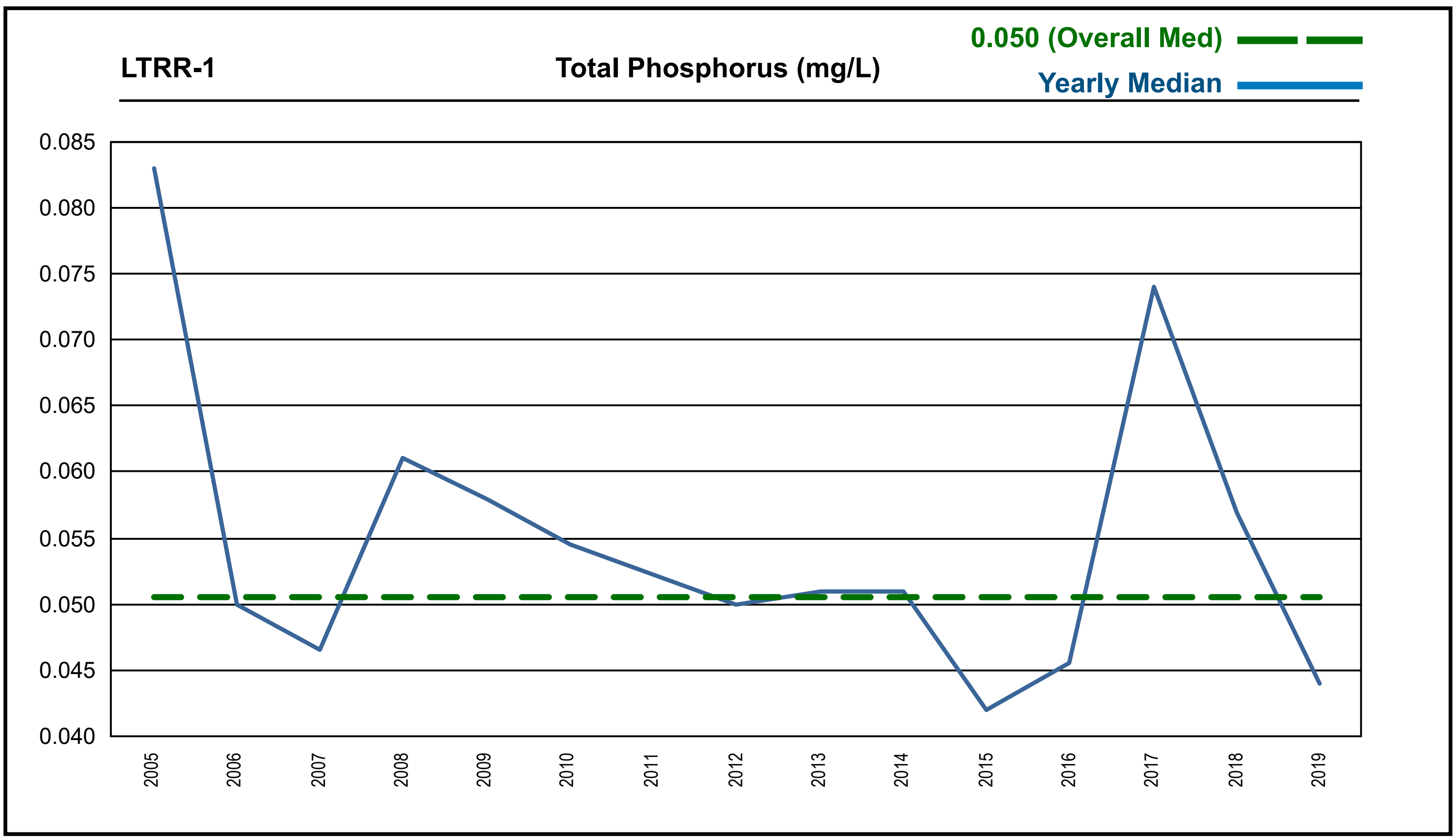

0.026 (Overall Med)
Yearly Median
LT-12
Total Phosphorus (mg/L)
0.12
0.10
0.08
0.06
0.04
0.02
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

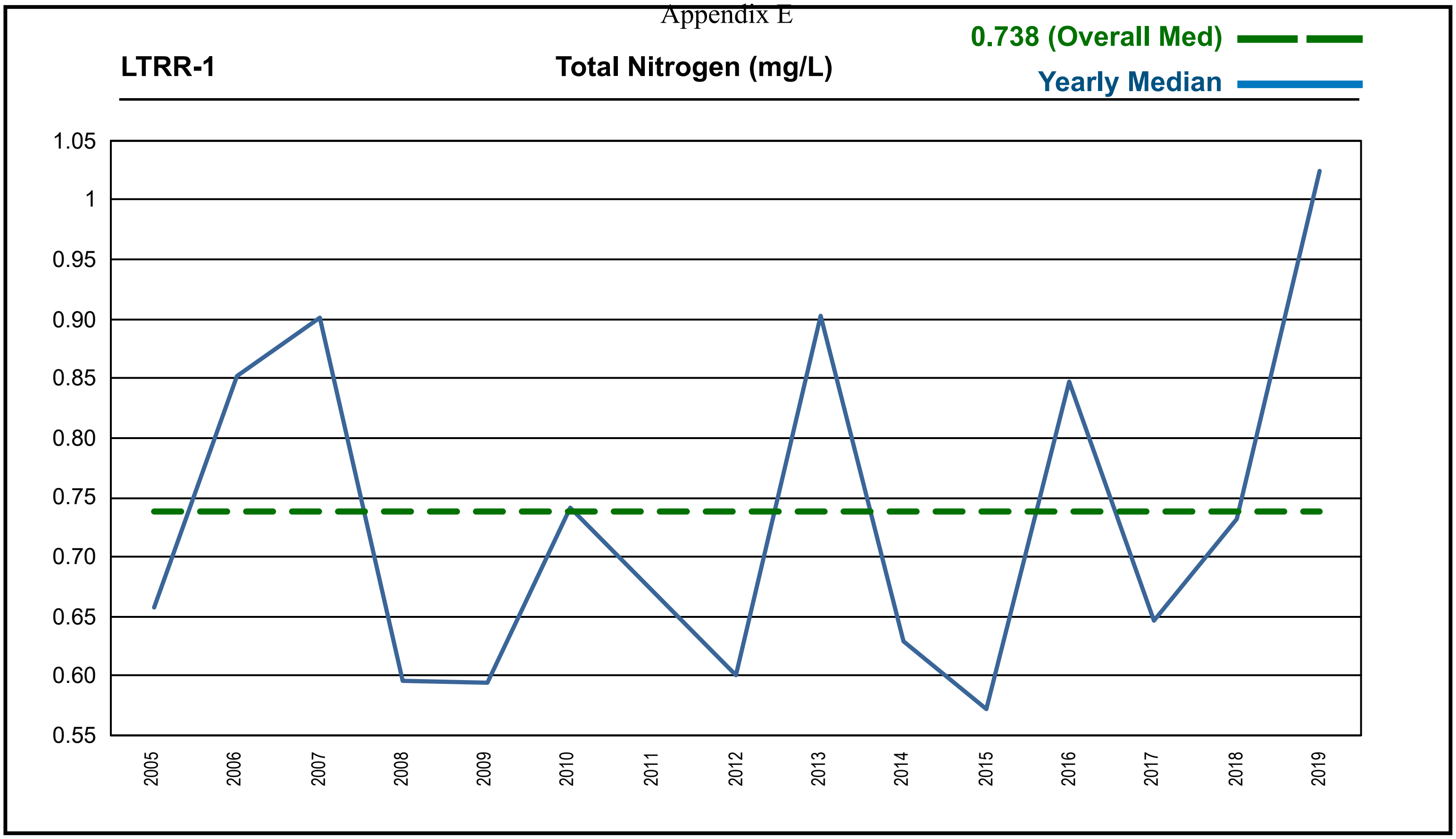

0.418 (Overall Med)
Yearly Median
LT-12
Total Nitrogen (mg/L)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


LTRR-1 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

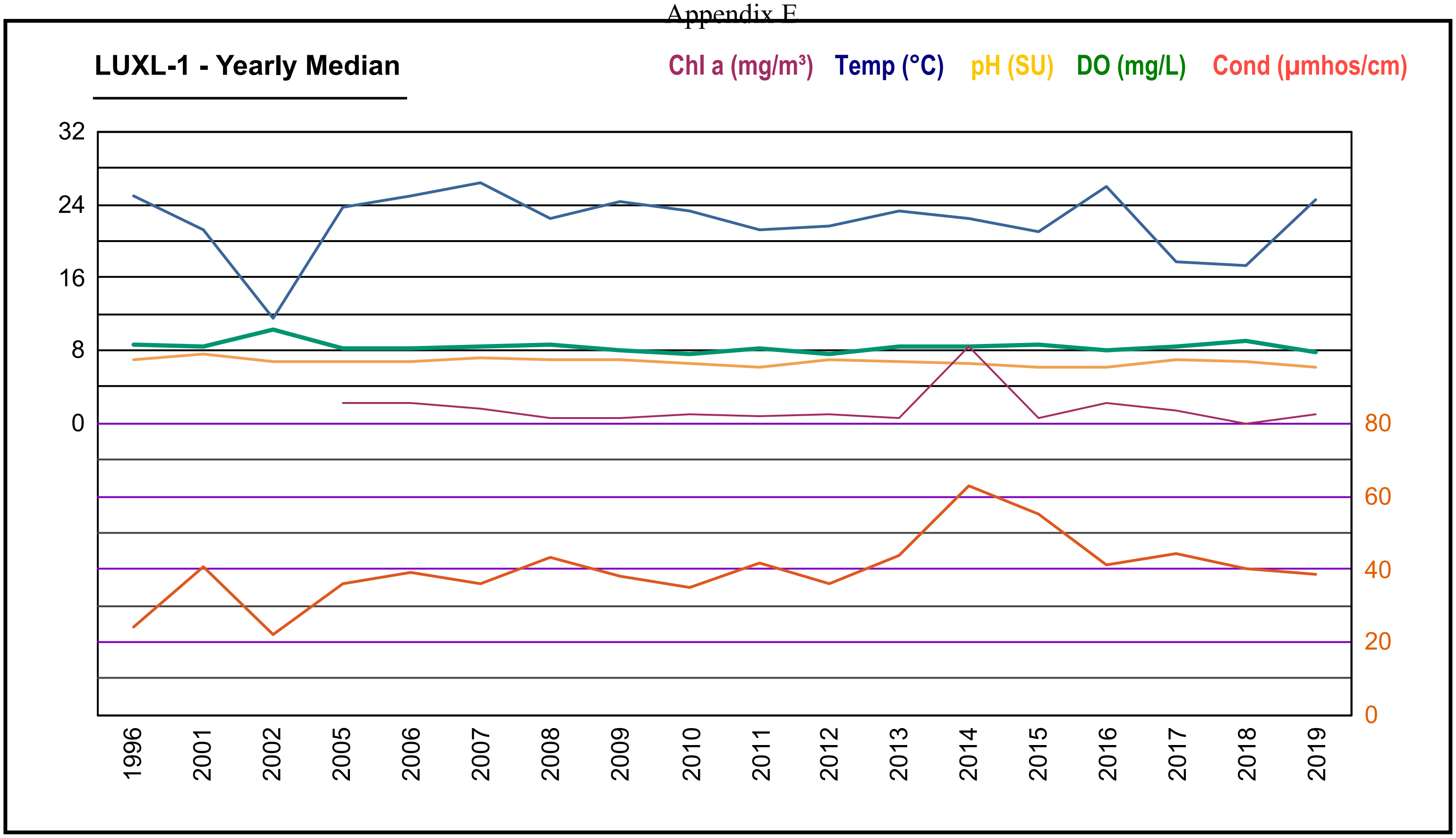

LTRR-1
Turbidity (NTU)
17.5 (Overall Med)
Yearly Median
28
26
24
22
20
18
16
14
12
10
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019


11.0 (Overall Med)
LTRR-1
Total Suspended Solids (mg/L)
Yearly Median
28
24
20
16
12
8
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

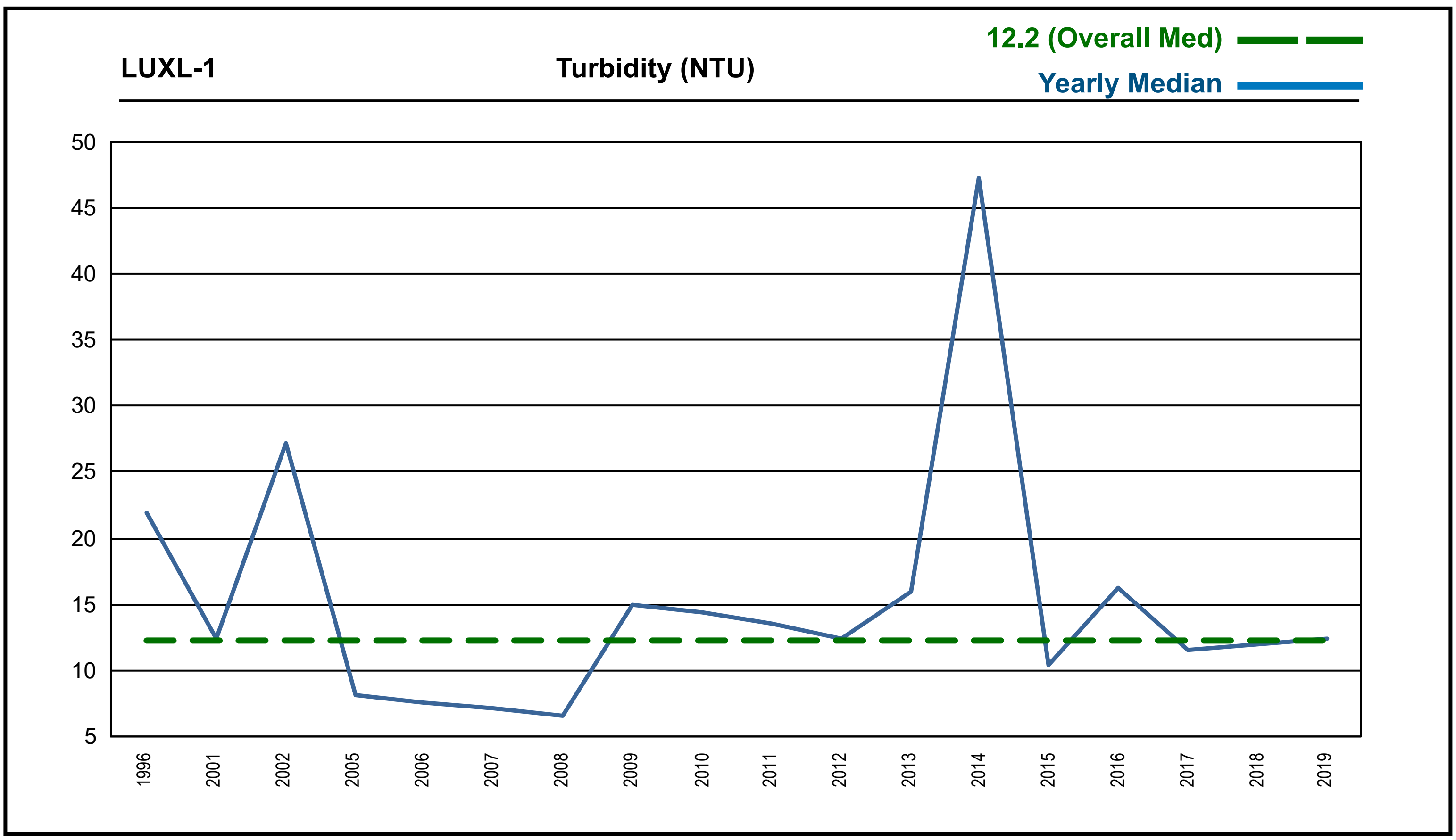

0.050 (Overall Med)
LTRR-1
Total Phosphorus (mg/L)
Yearly Median
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019



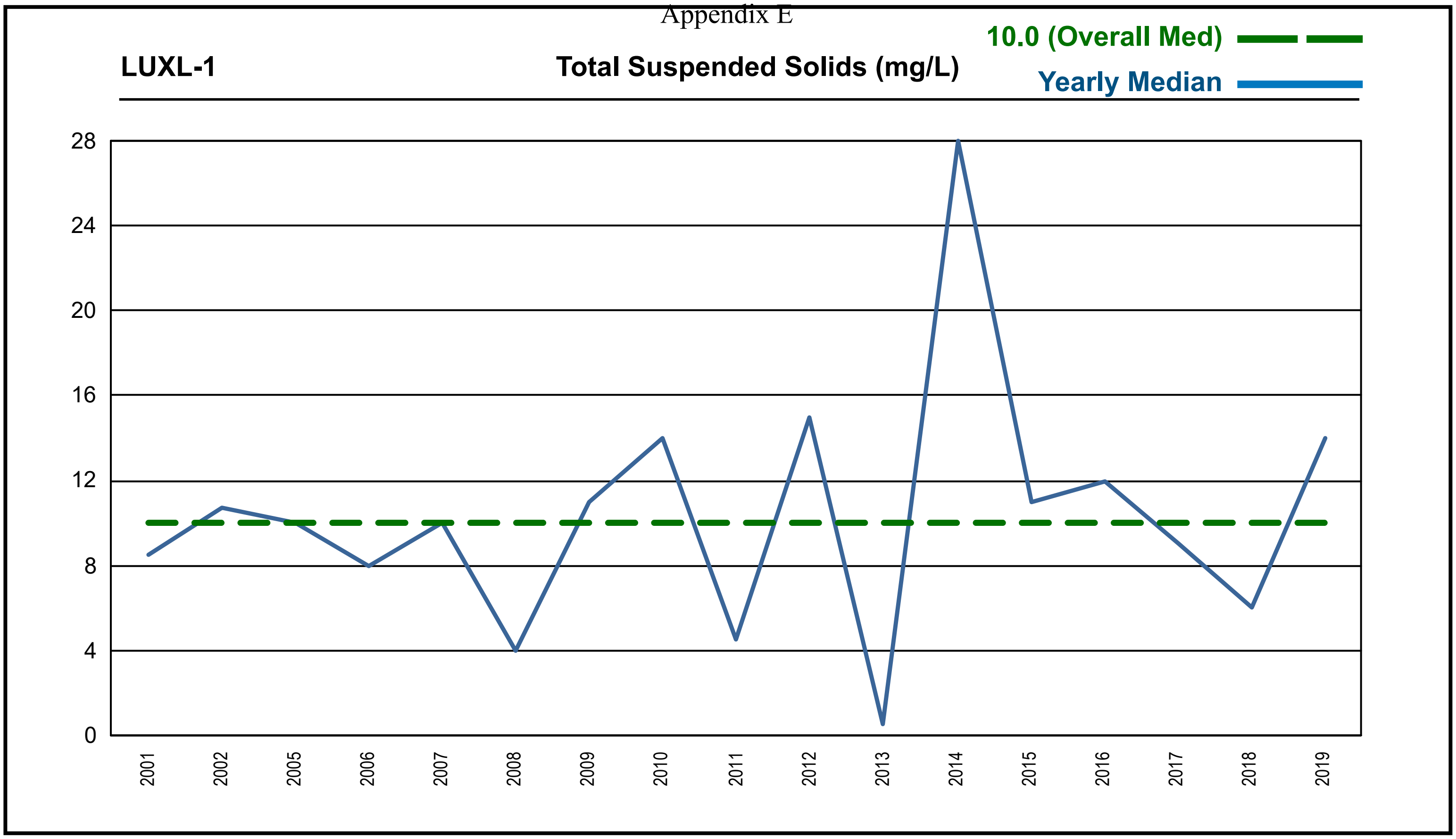
LTRR-1
Total Nitrogen (mg/L)
0.738 (Overall Med)
Yearly Median
1.05
1
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

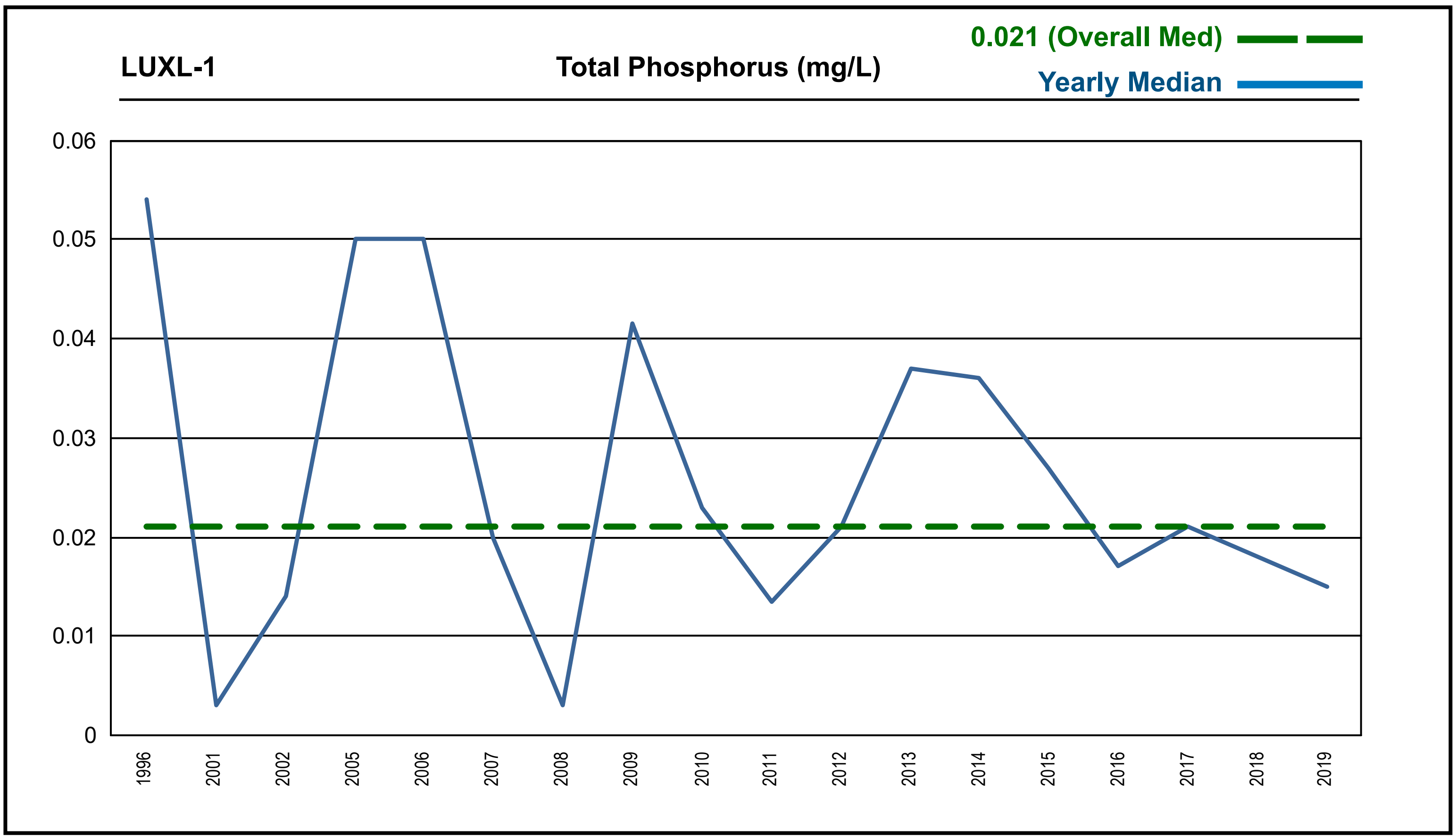


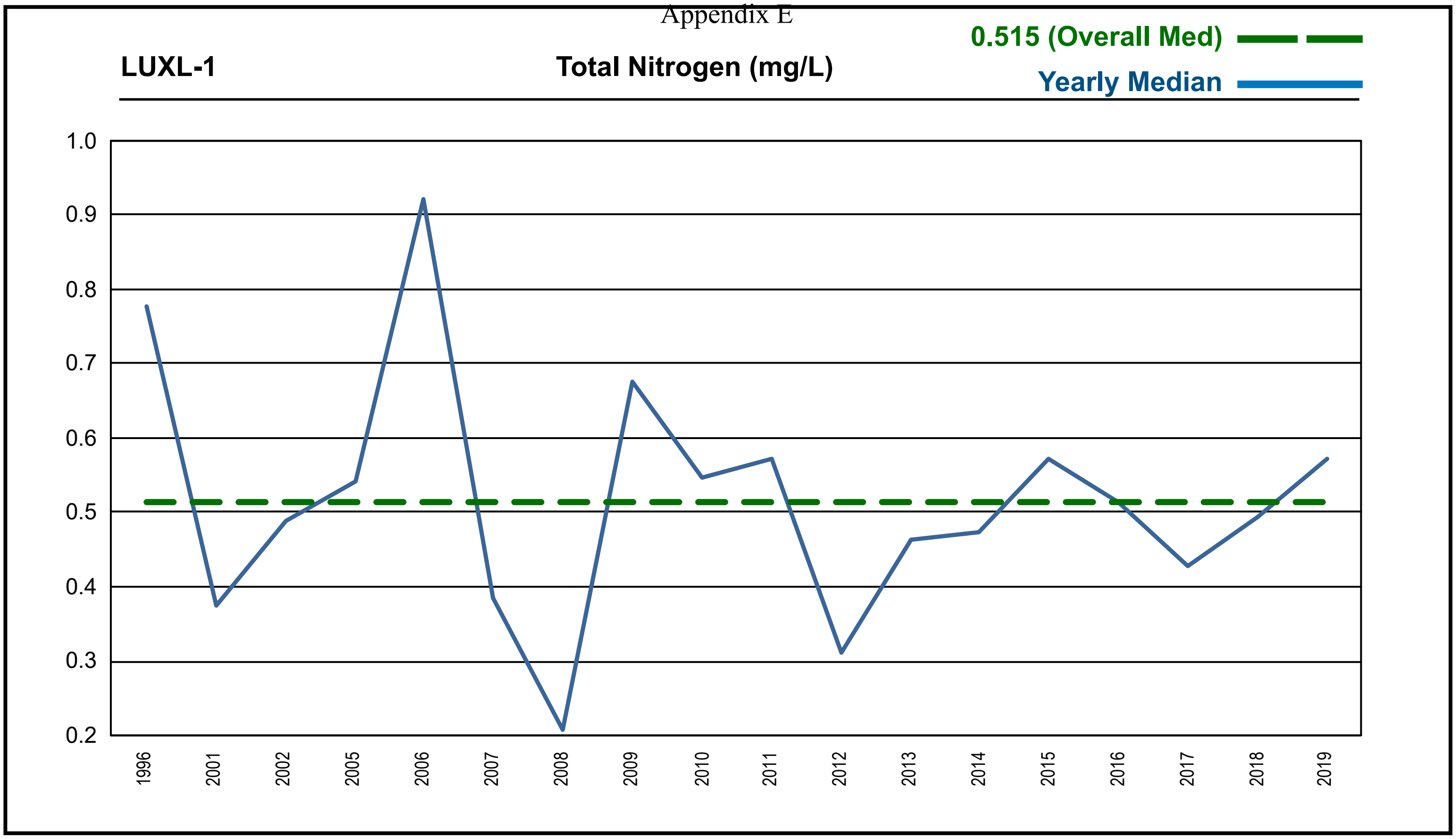
LUXL-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
80
60
40
20
0
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

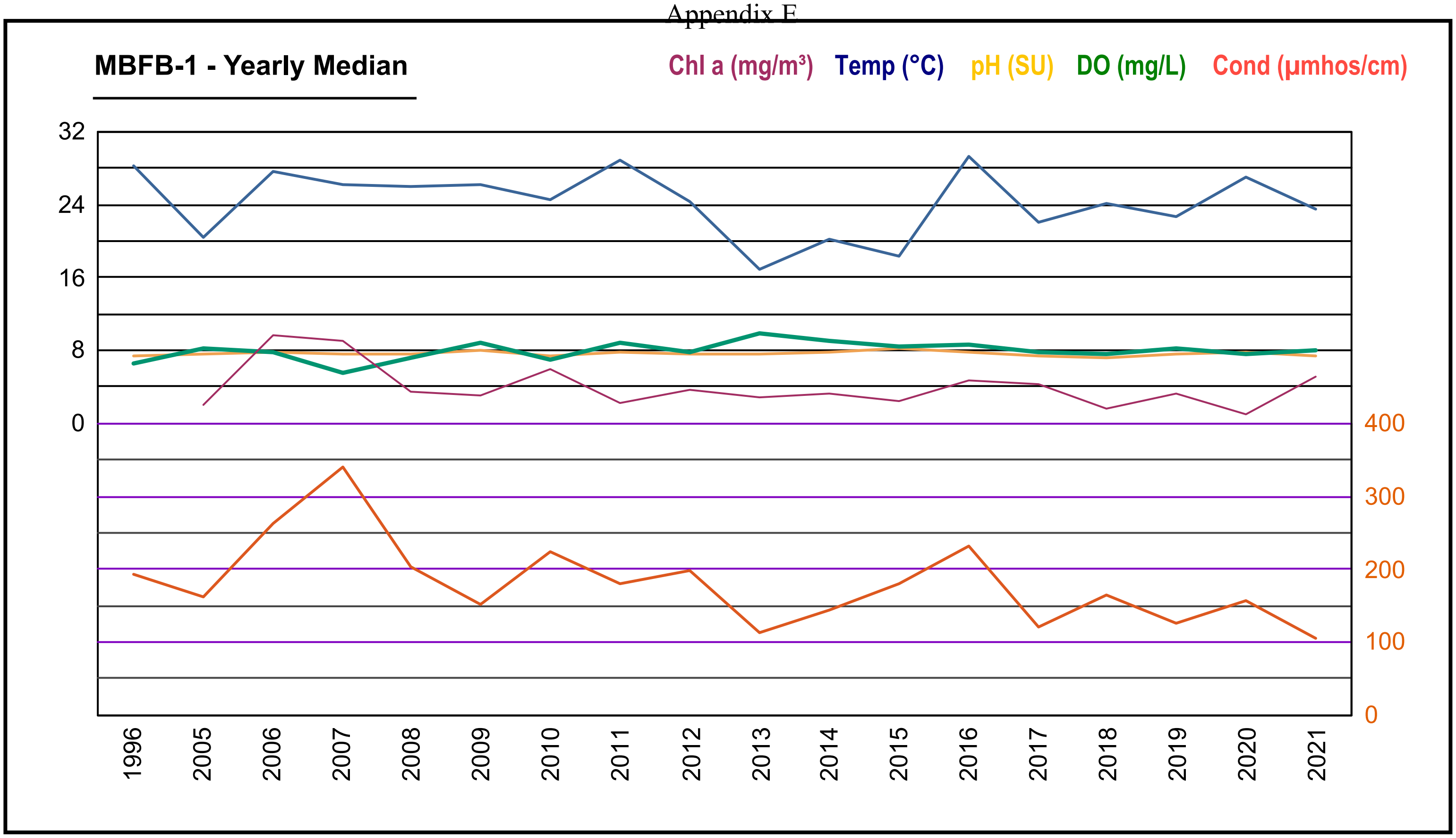


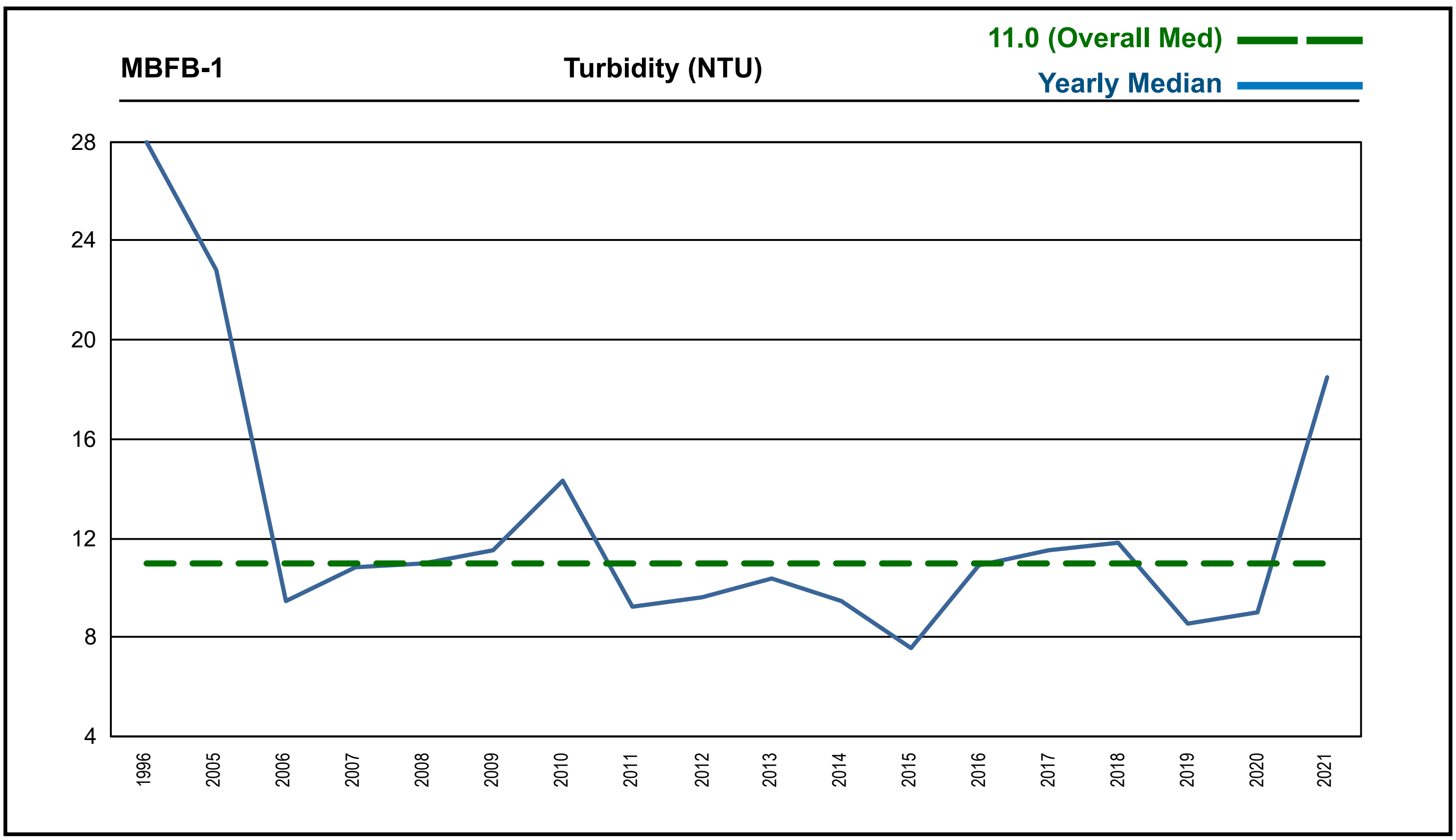
LUXL-1
Turbidity (NTU)
12.2 (Overall Med)
Yearly Median
50
45
40
35
30
25
20
15
10
5
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

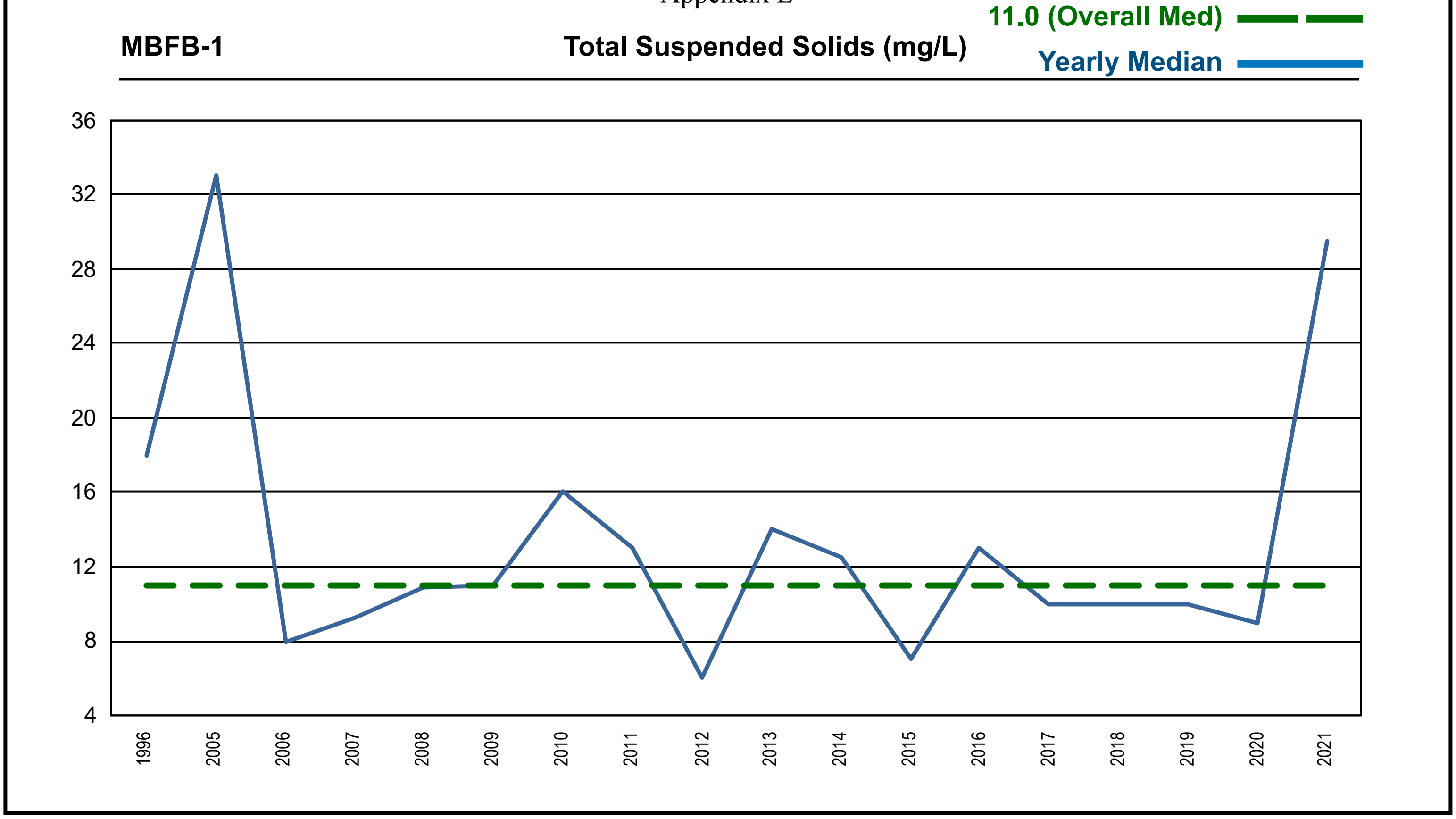

LUXL-1
Total Suspended Solids (mg/L)
10.0 (Overall Med)
Yearly Median
28
24
20
16
12
8
4
0
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

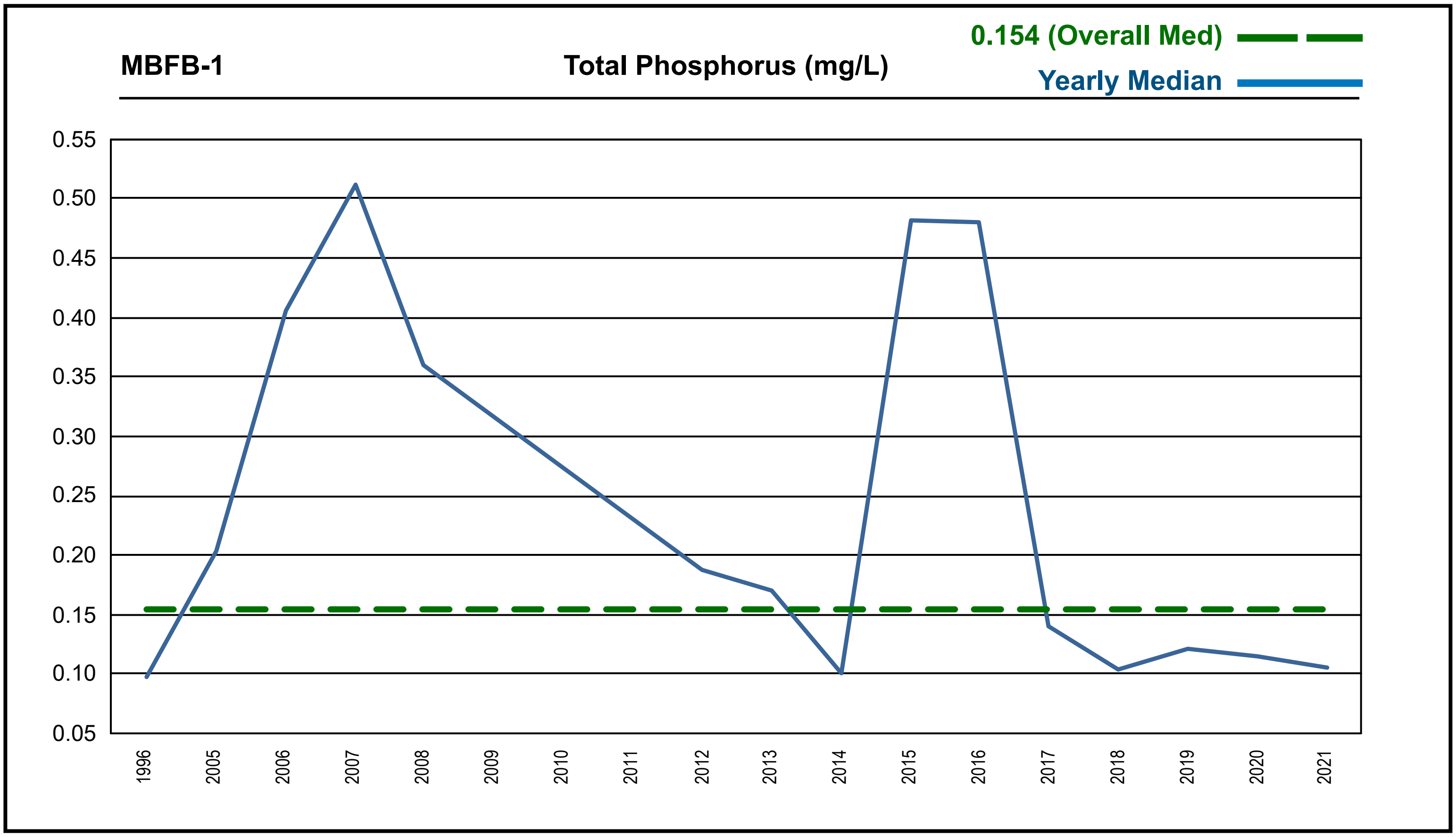

LUXL-1
Total Phosphorus (mg/L)
0.021 (Overall Med)
Yearly Median
0.06
0.05
0.04
0.03
0.02
0.01
0
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

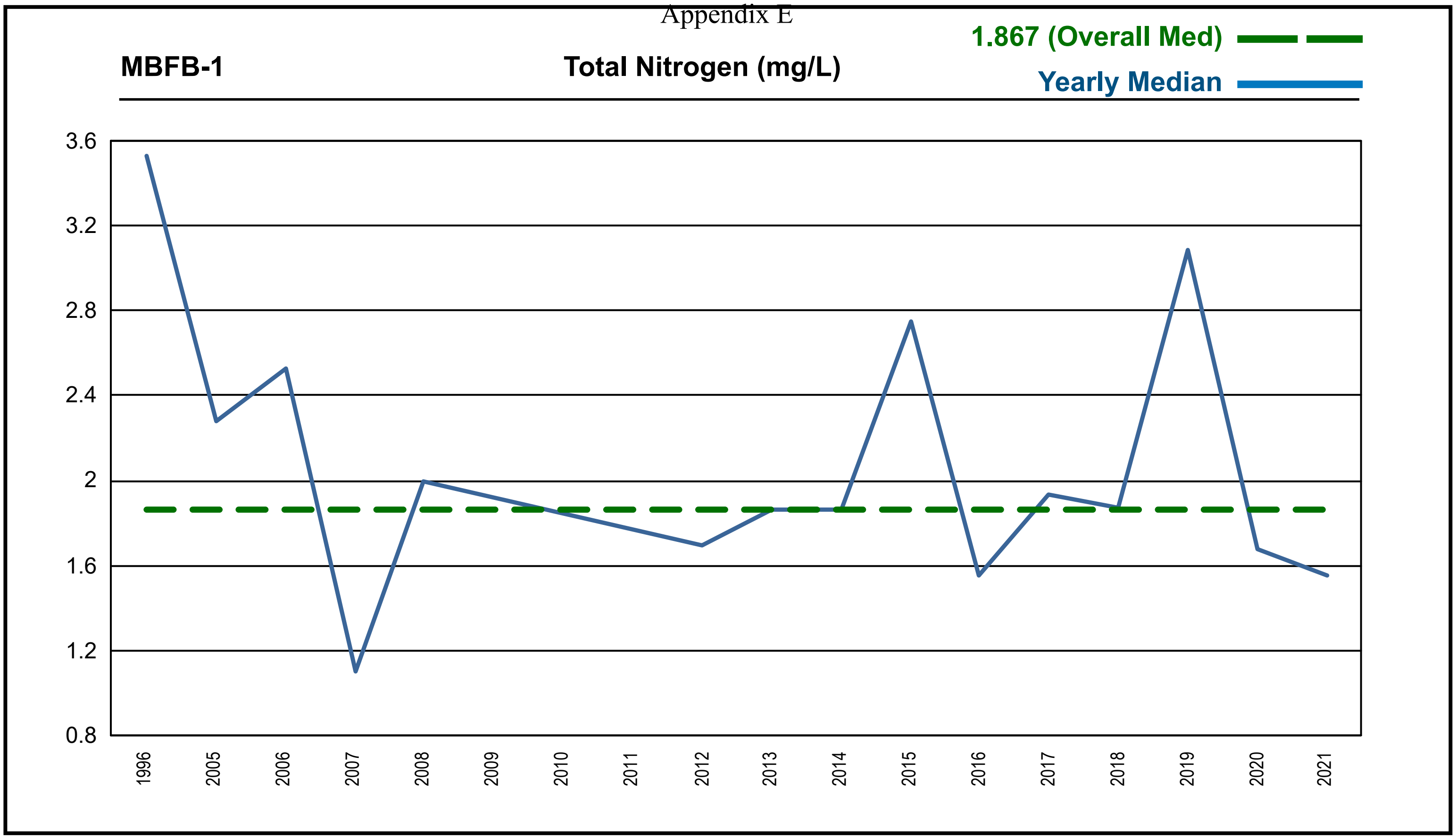

0.515 (Overall Med)
Yearly Median
LUXL-1
Total Nitrogen (mg/L)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

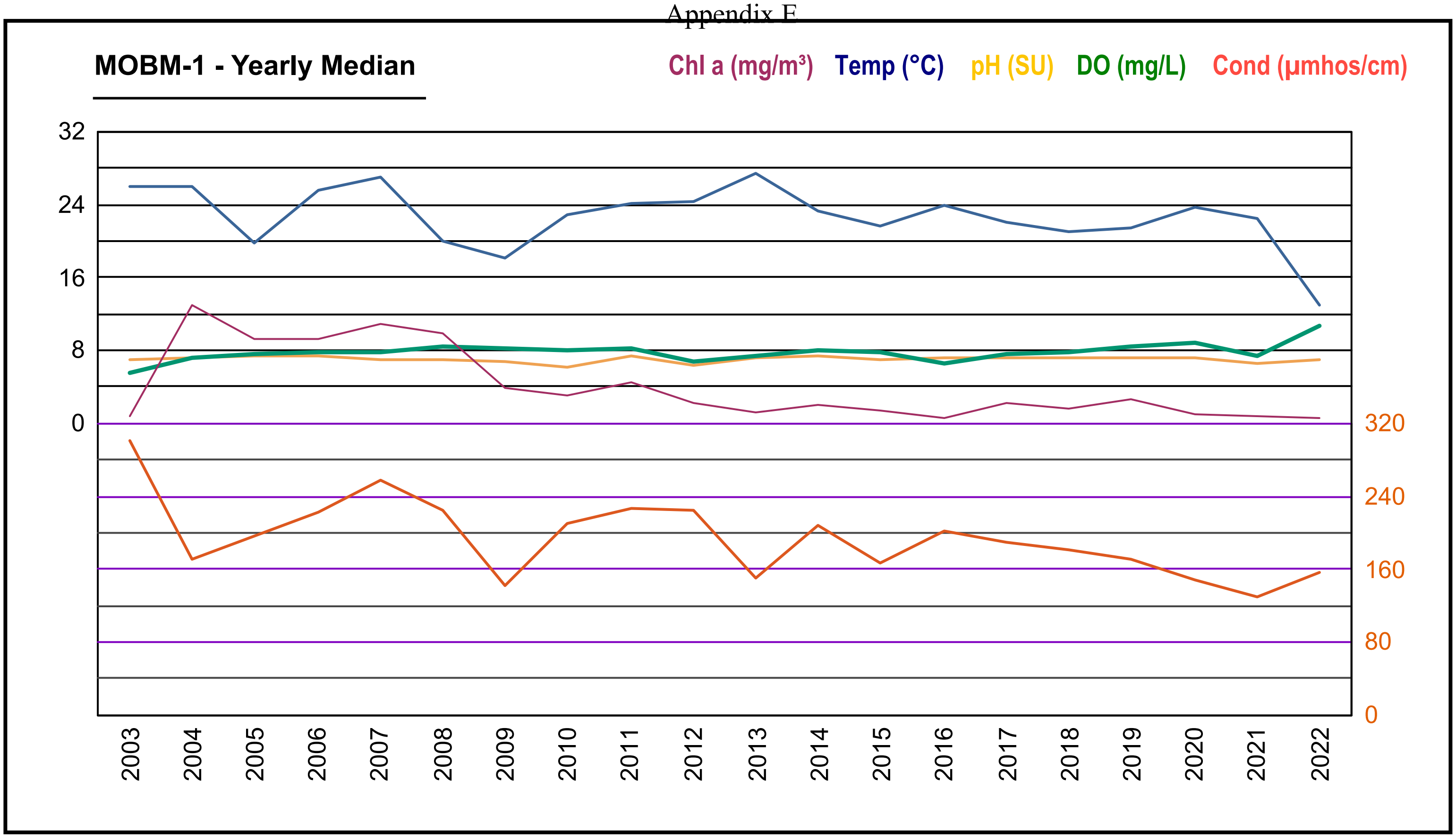

MBFB-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

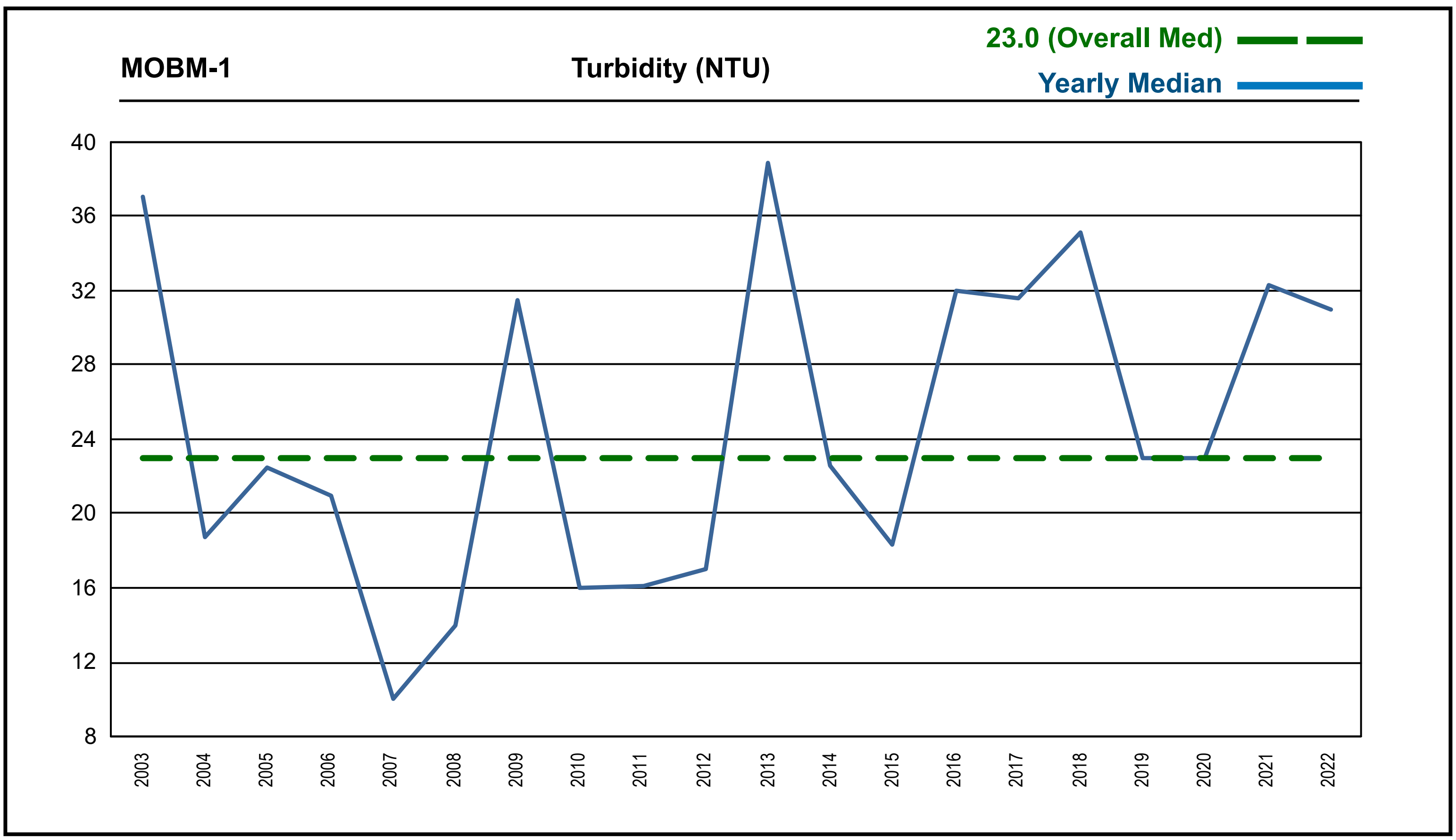

MBFB-1
Turbidity (NTU)
11.0 (Overall Med)
Yearly Median
28
24
20
16
12
8
4
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

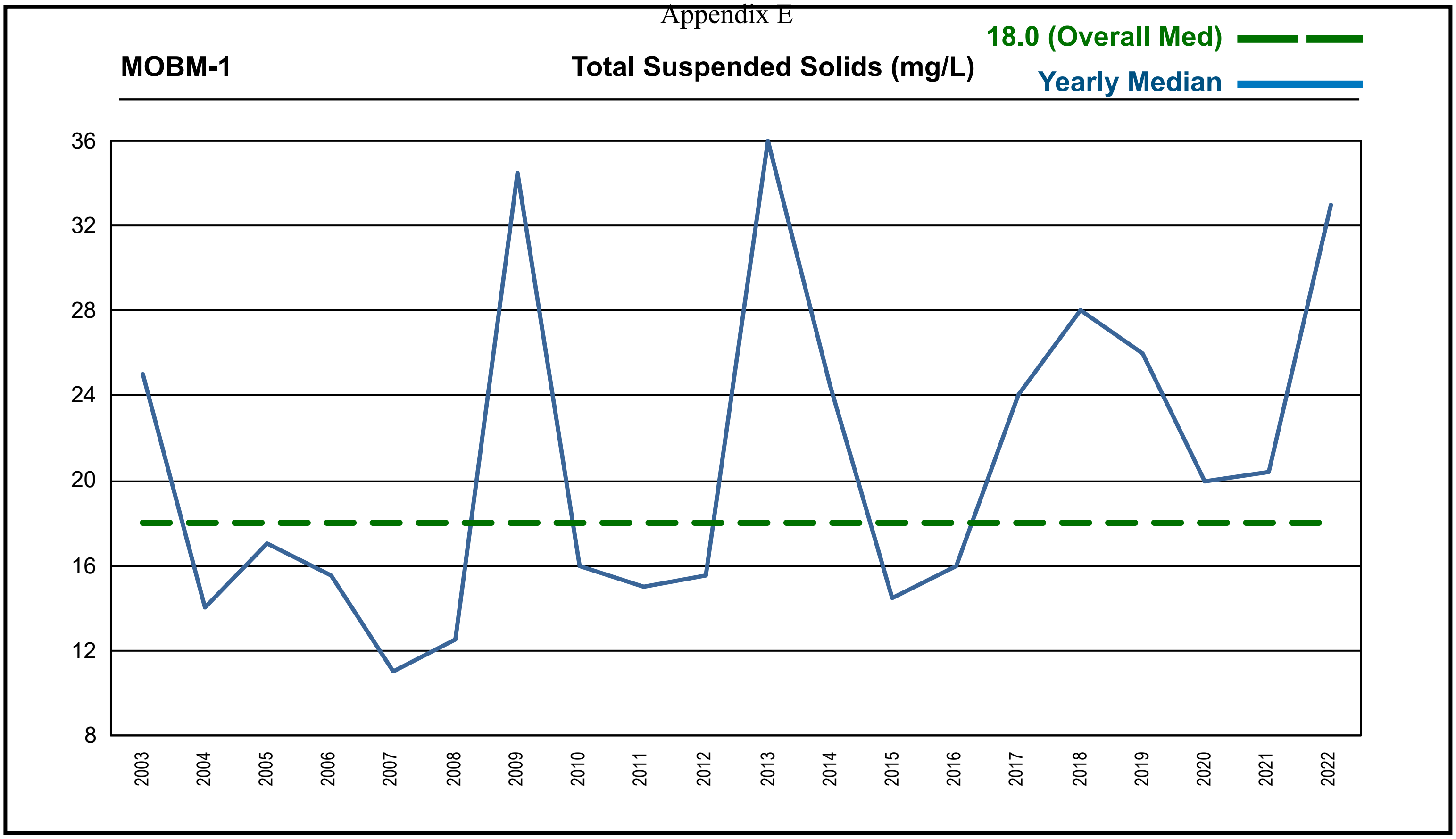

11.0 (Overall Med)
MBFB-1
Total Suspended Solids (mg/L)
Yearly Median
36
32
28
24
20
16
12
8
4
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

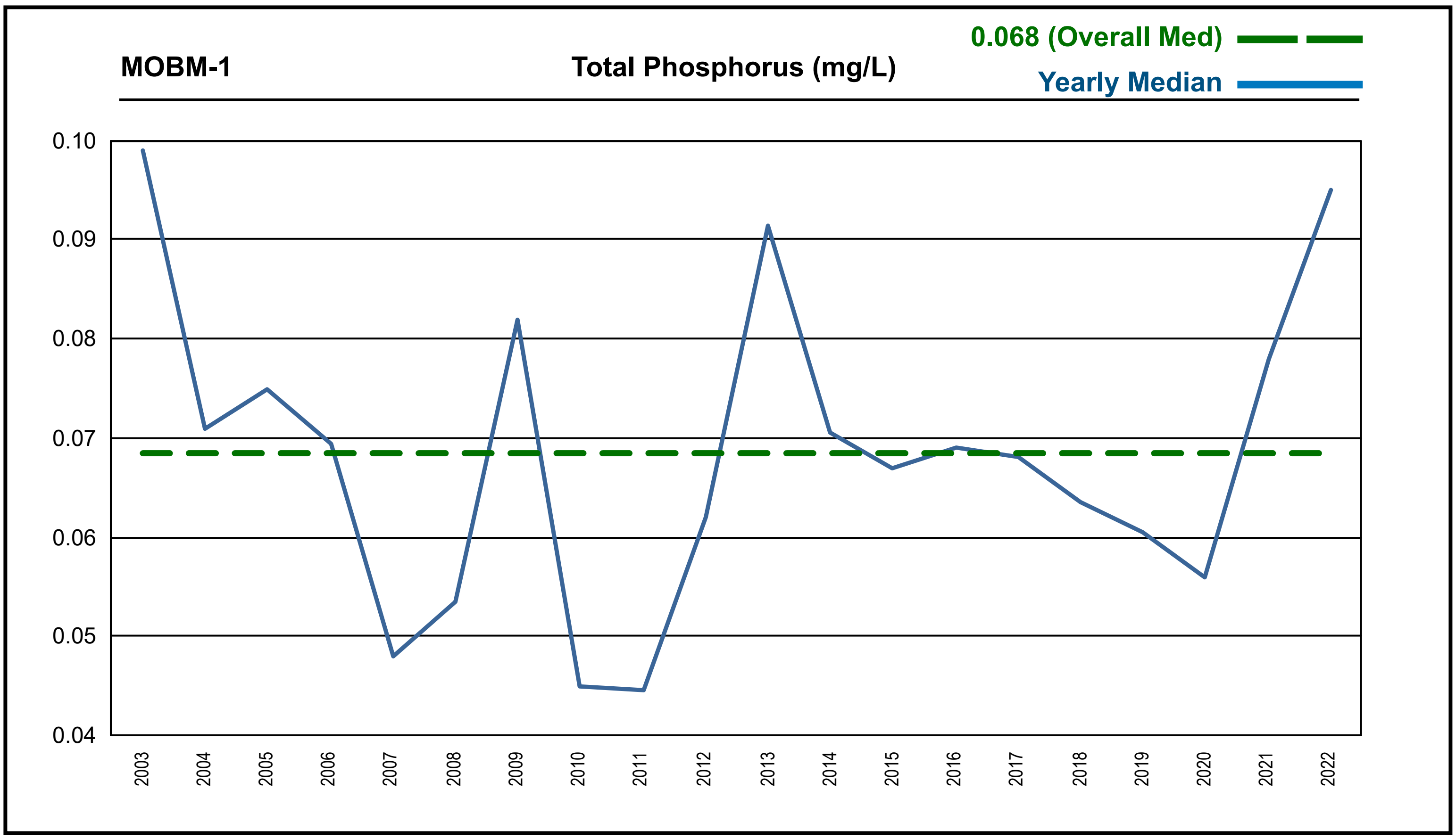

0.154 (Overall Med)
MBFB-1
Total Phosphorus (mg/L)
Yearly Median
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

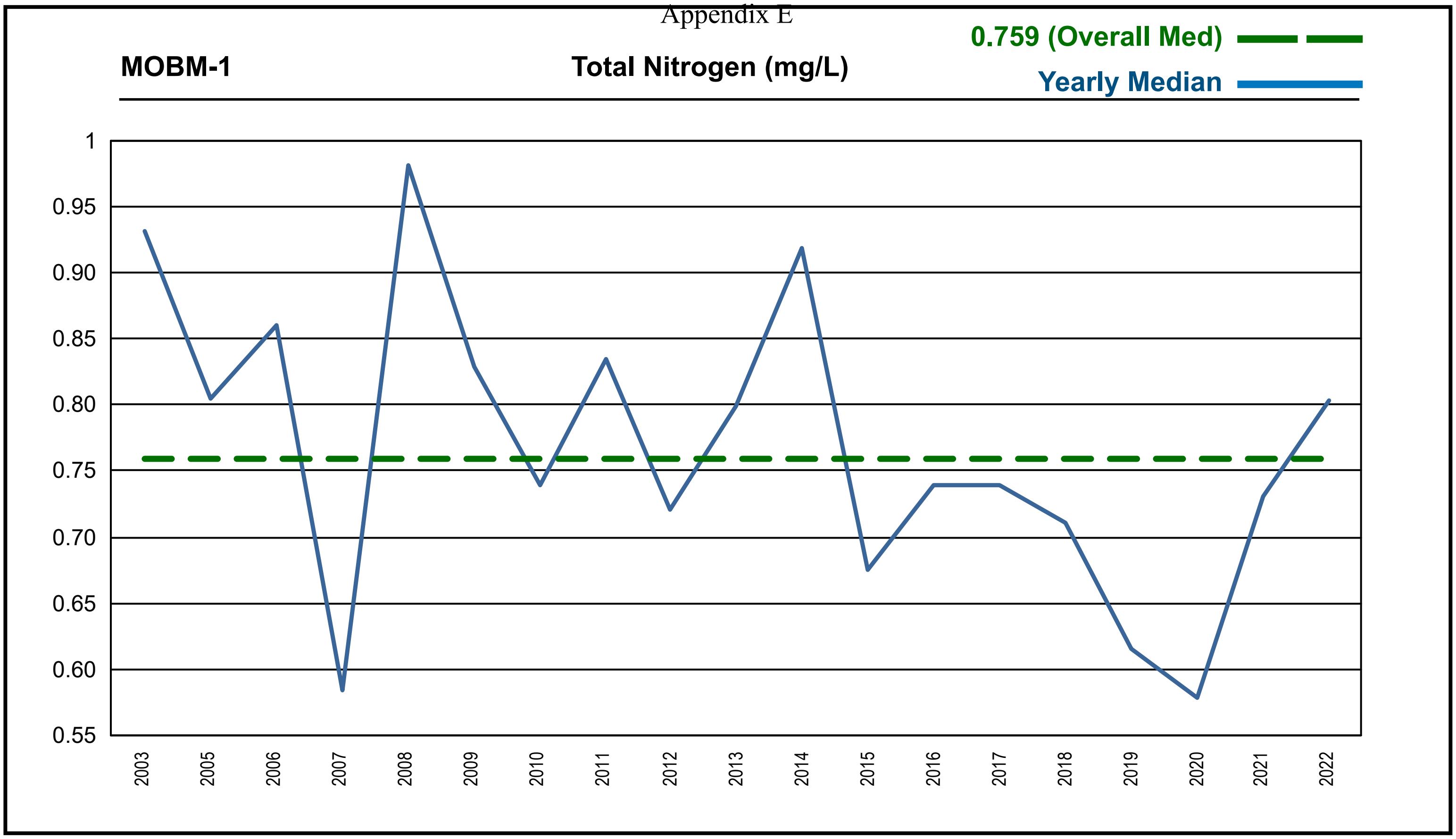

MBFB-1
Total Nitrogen (mg/L)
1.867 (Overall Med)
Yearly Median
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

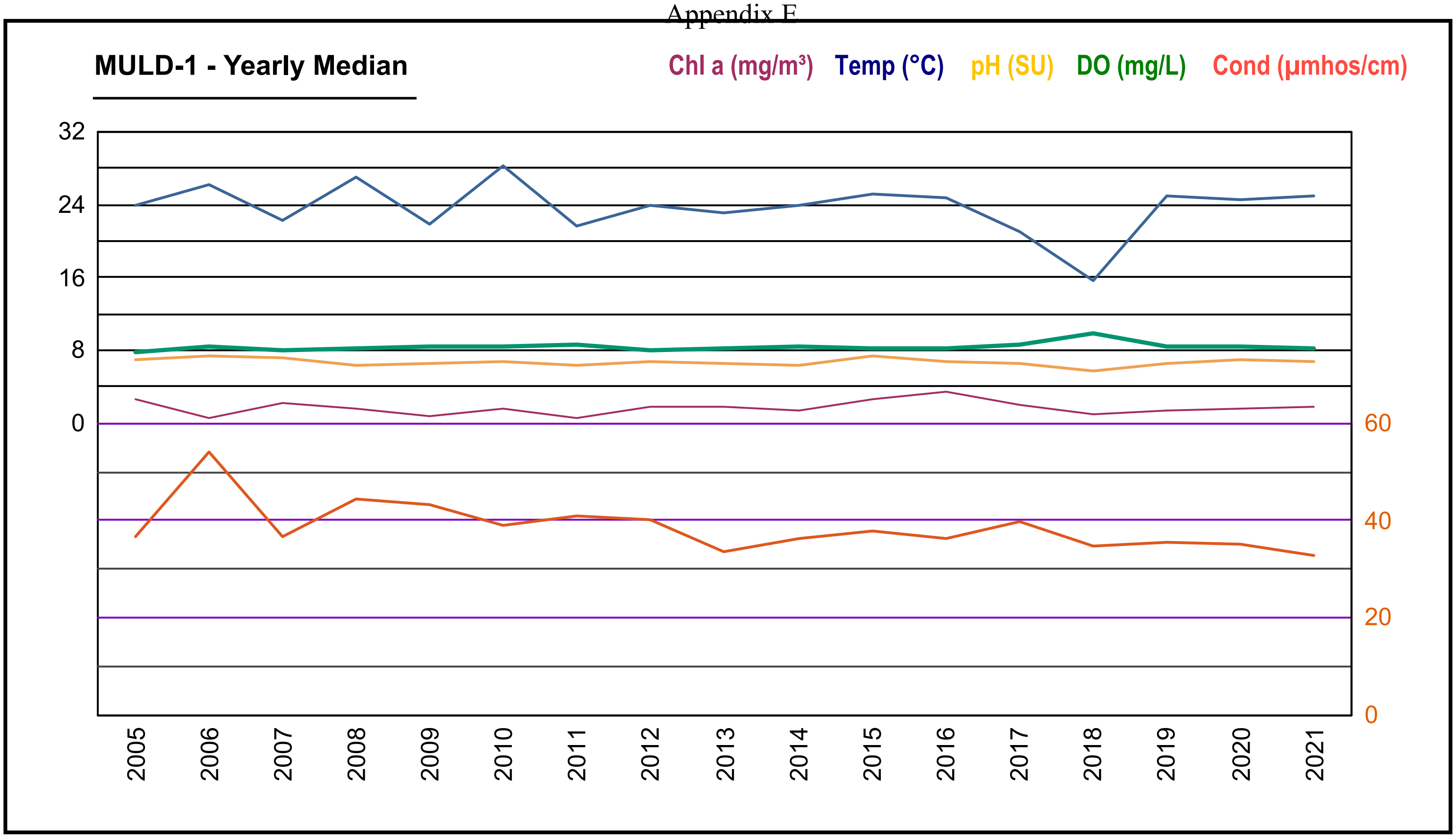

MOBM-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

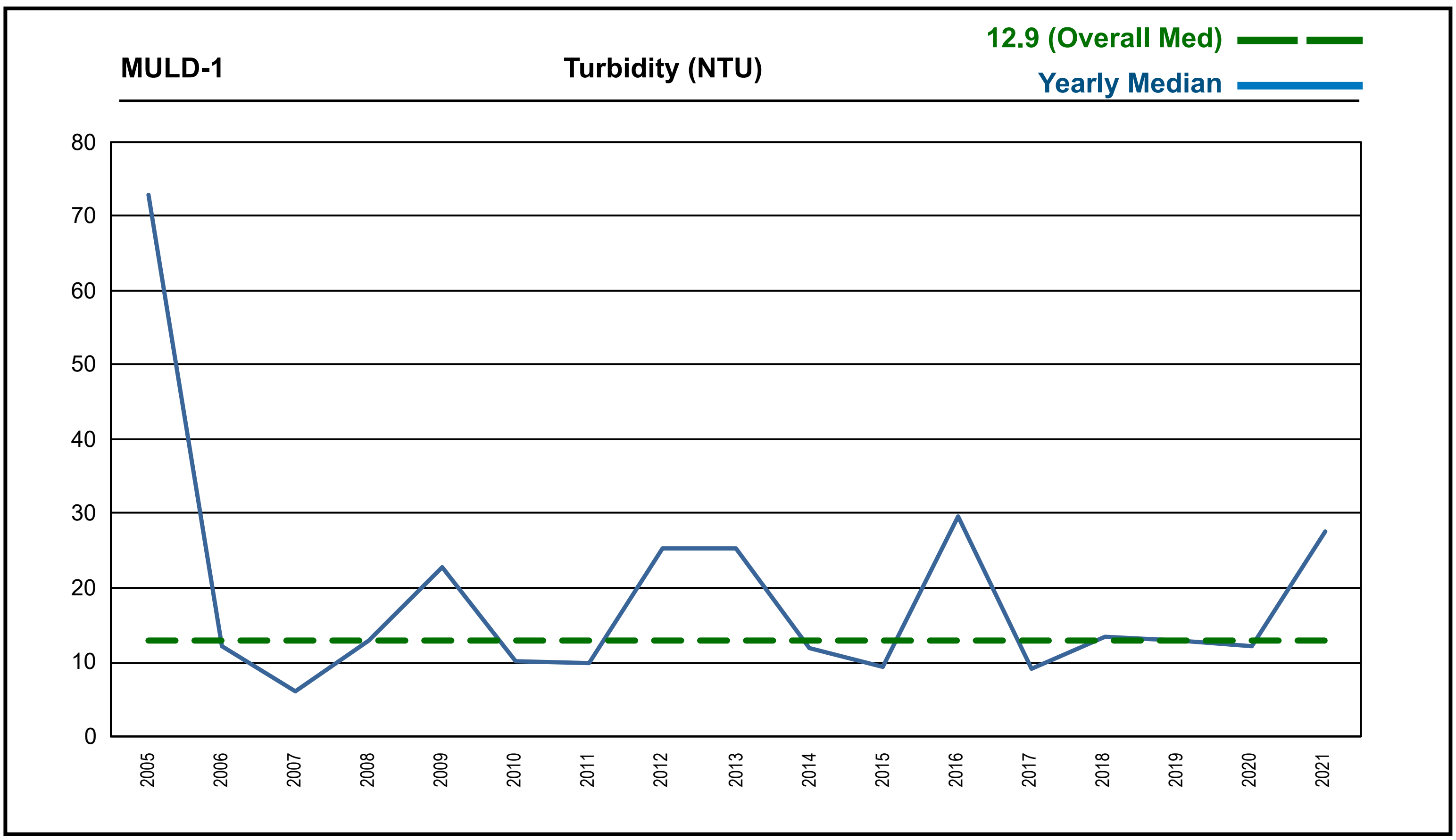

MOBM-1
Turbidity (NTU)
23.0 (Overall Med)
Yearly Median
40
36
32
28
24
20
16
12
8
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

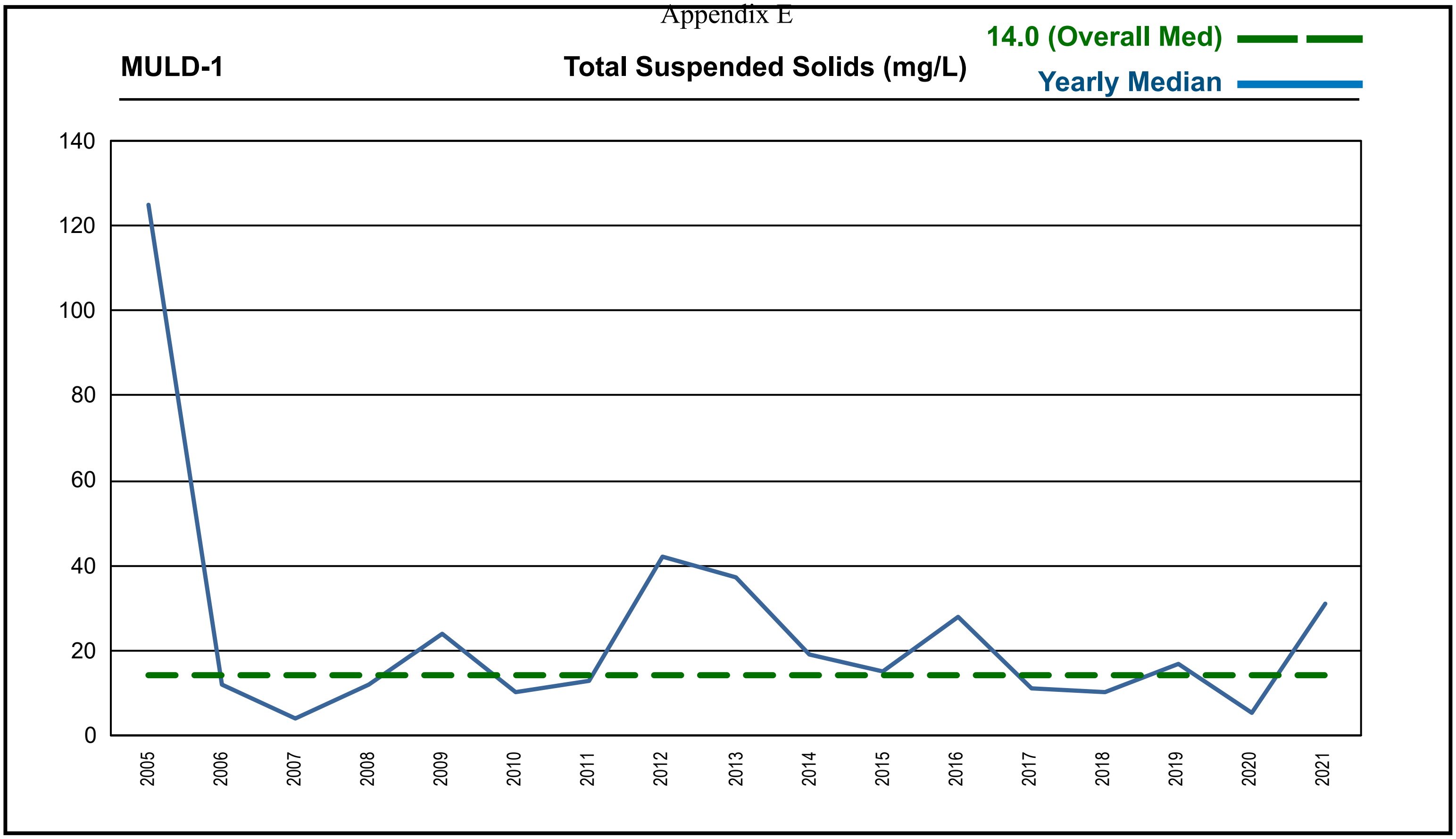

18.0 (Overall Med)
Yearly Median
MOBM-1
Total Suspended Solids (mg/L)
36
32
28
24
20
16
12
8
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

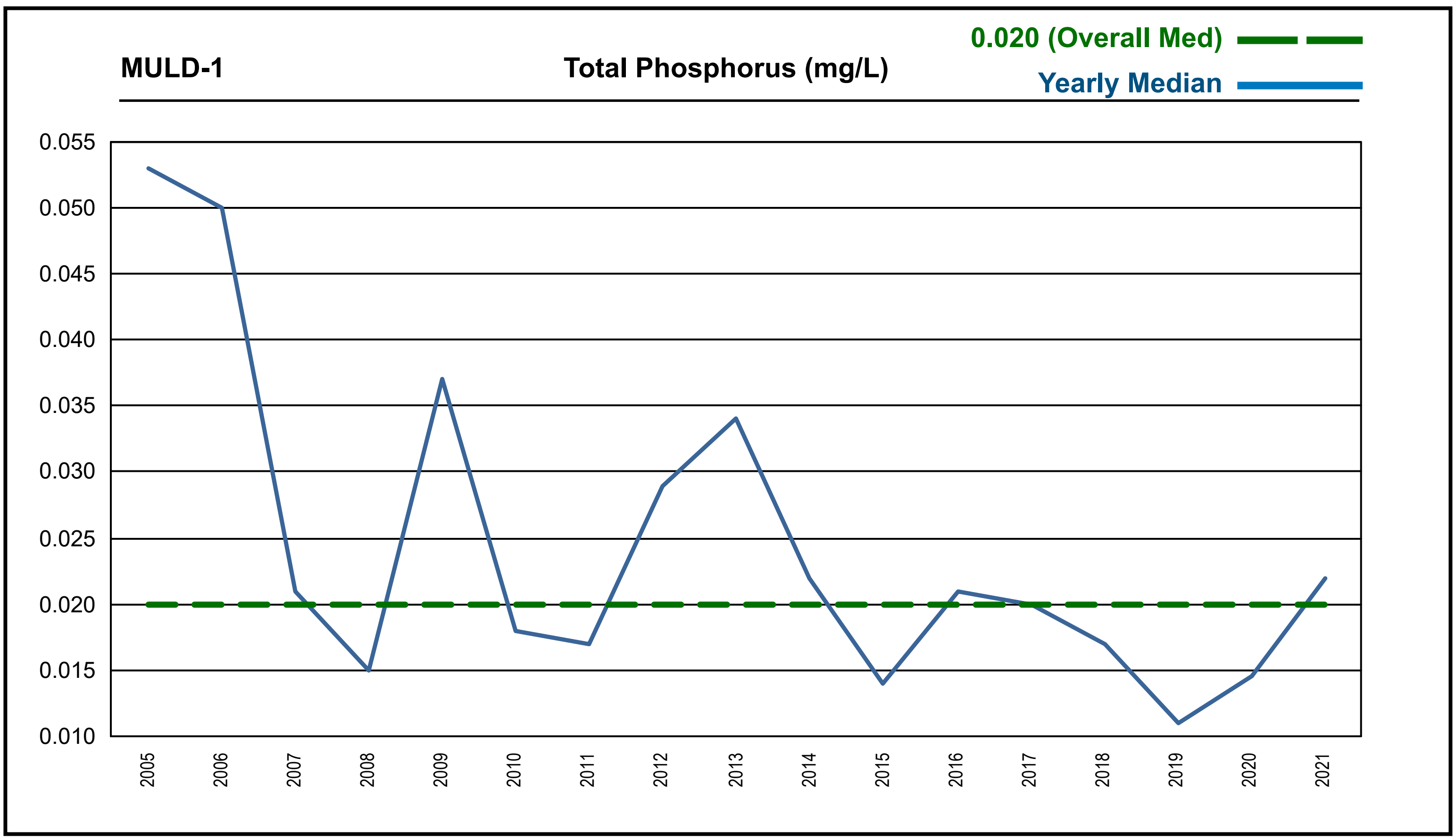

0.068 (Overall Med)
Yearly Median
MOBM-1
Total Phosphorus (mg/L)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

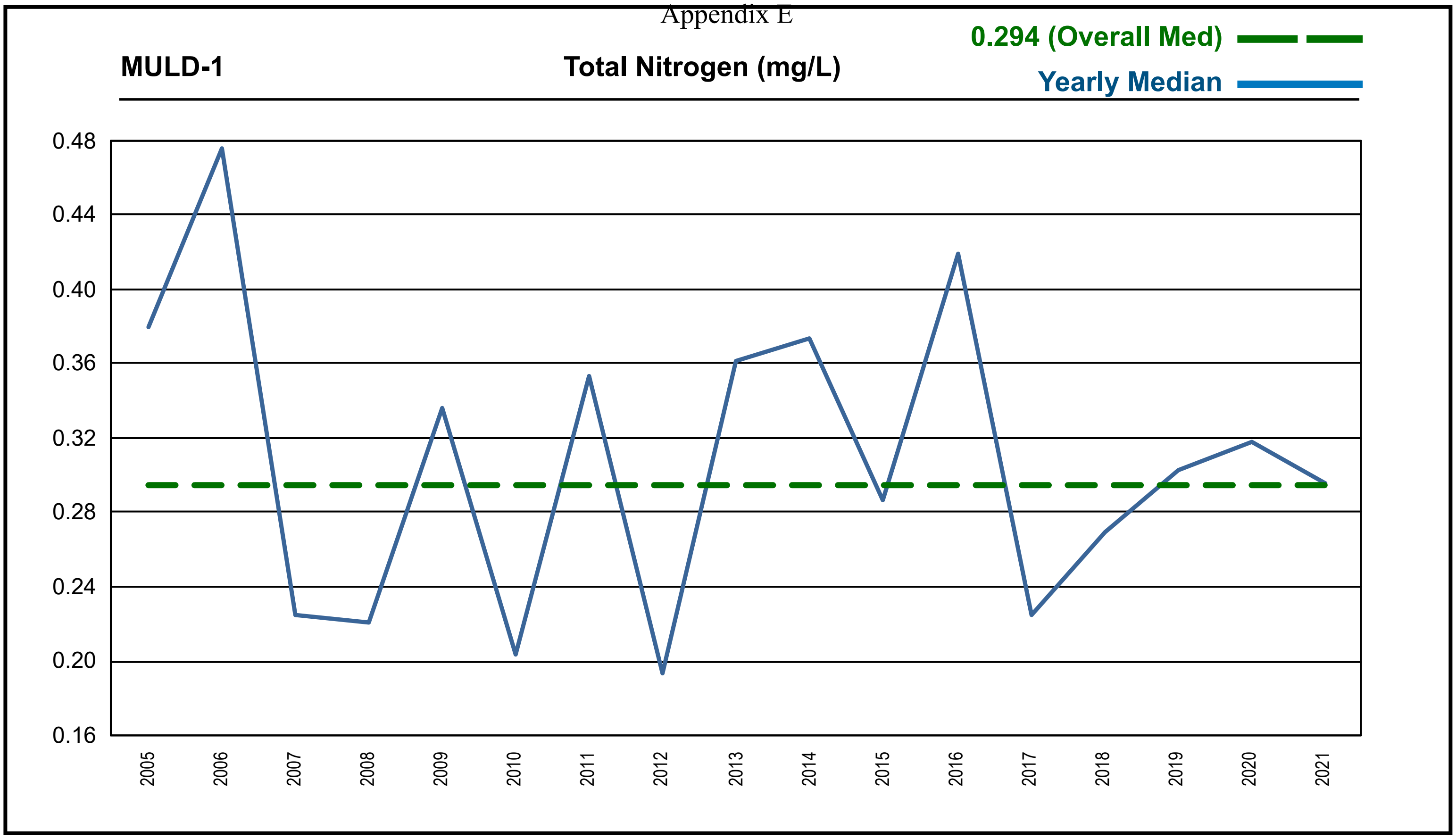

0.759 (Overall Med)
Yearly Median
MOBM-1
Total Nitrogen (mg/L)
1
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


MULD-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

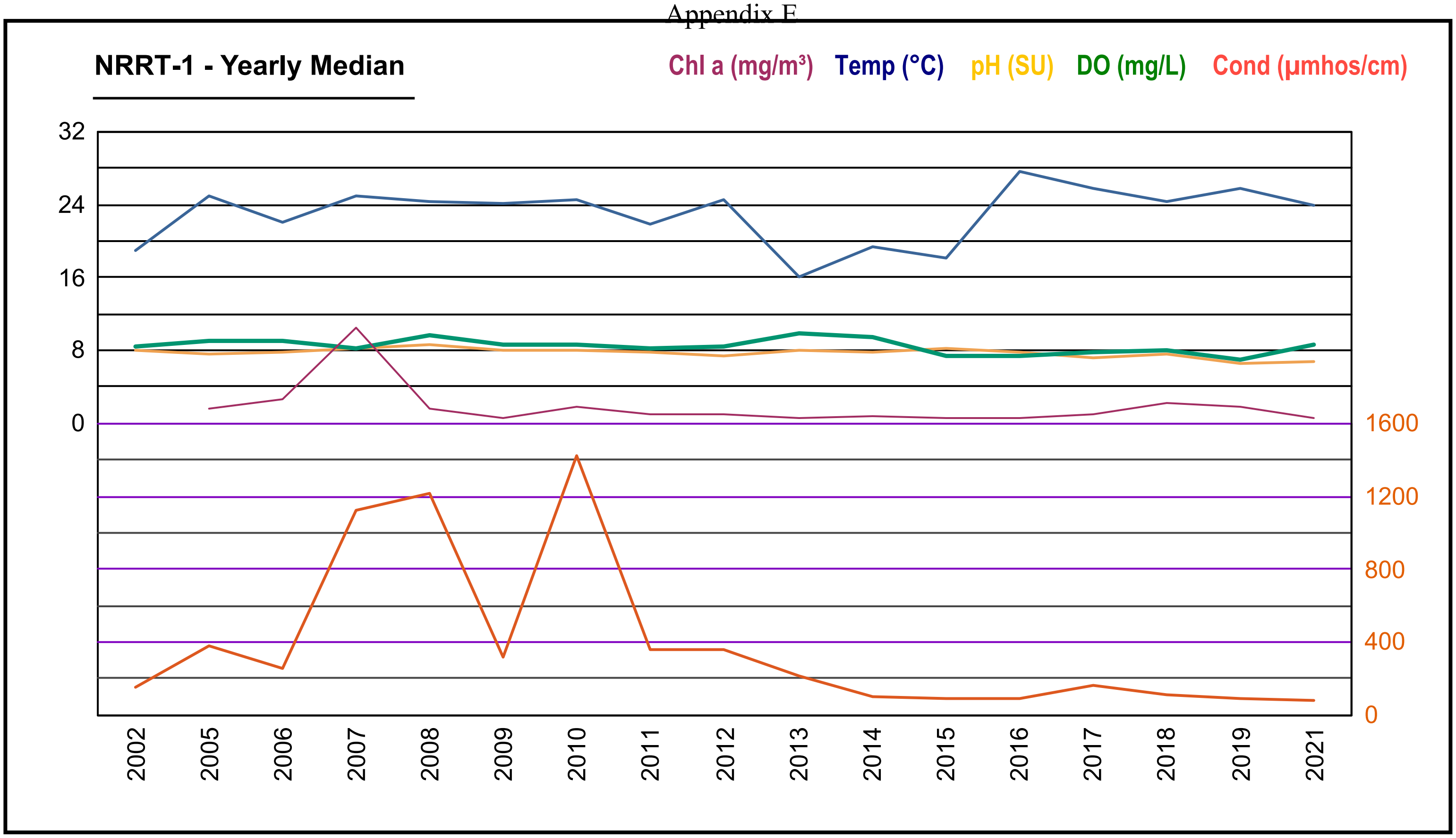

MULD-1
Turbidity (NTU)
12.9 (Overall Med)
Yearly Median
80
70
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

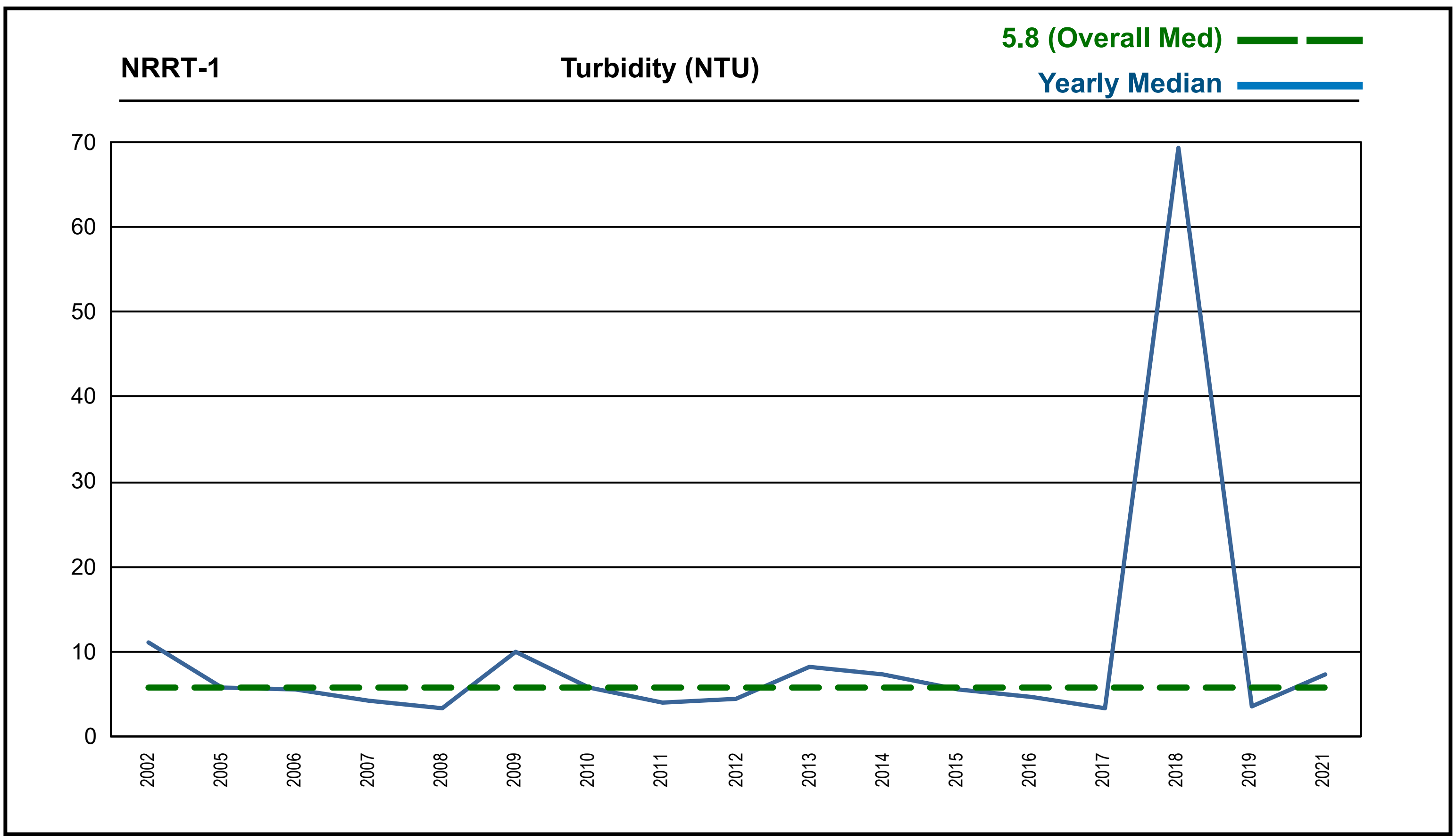

14.0 (Overall Med)
Yearly Median
MULD-1
Total Suspended Solids (mg/L)
140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

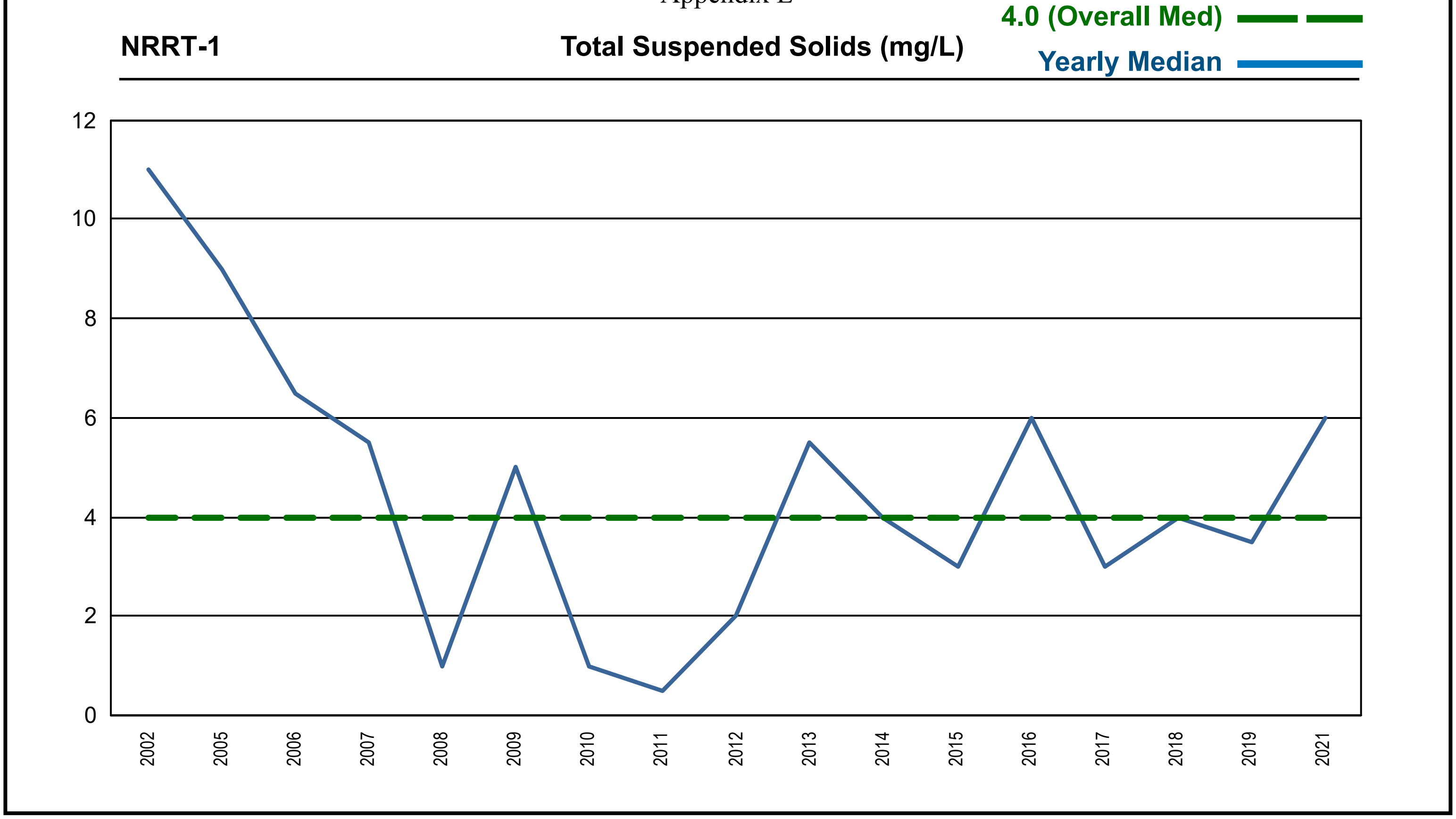

0.020 (Overall Med)
Yearly Median
MULD-1
Total Phosphorus (mg/L)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

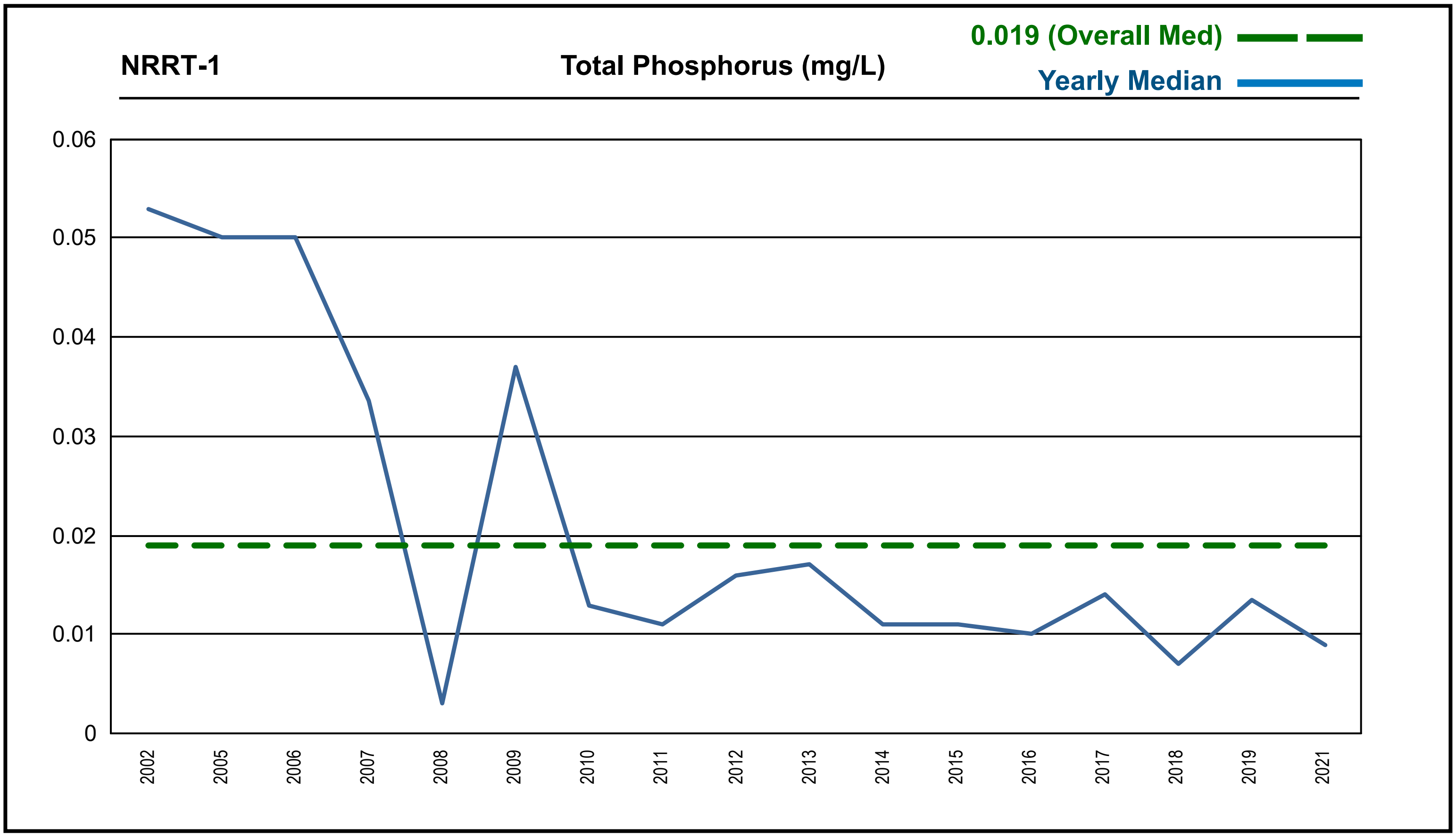


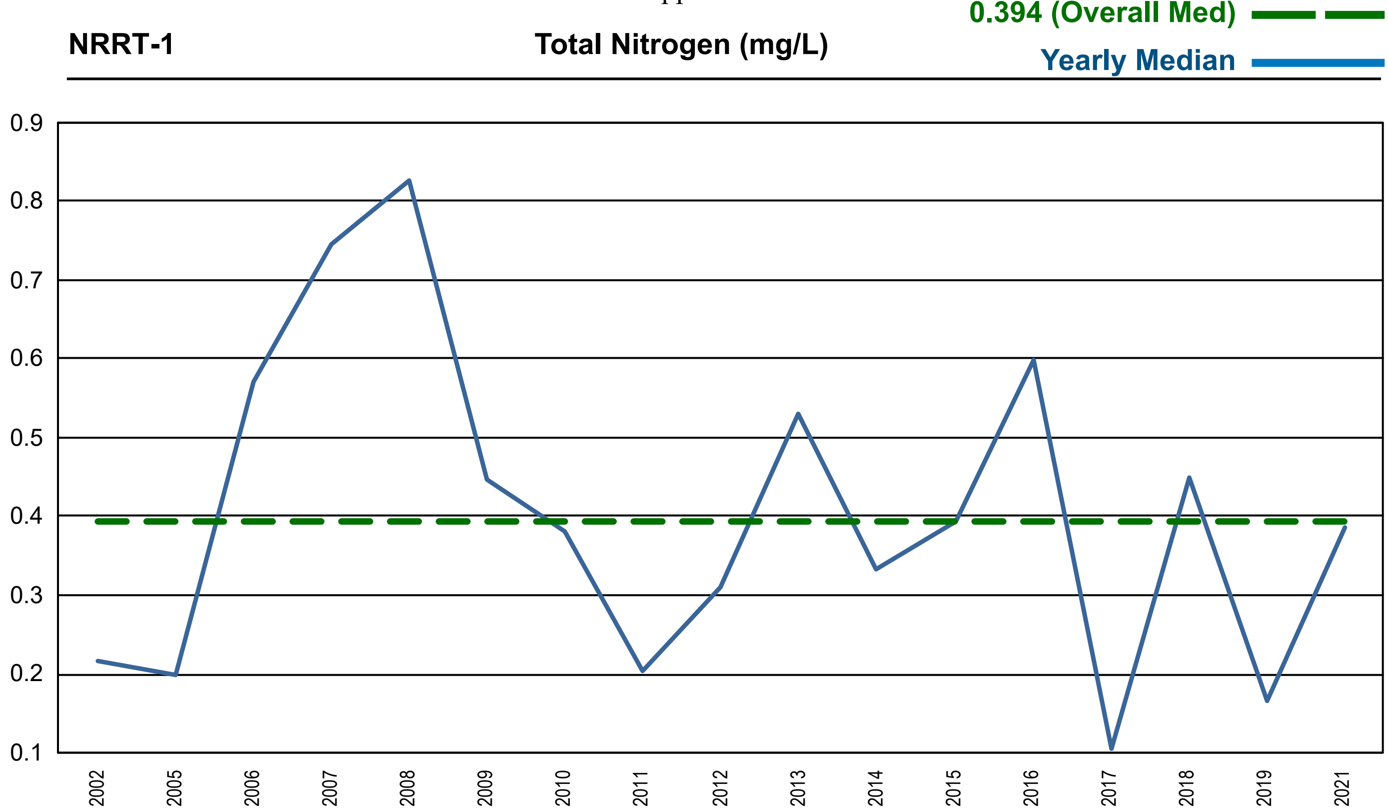
MULD-1
Total Nitrogen (mg/L)
0.294 (Overall Med)
Yearly Median
0.48
0.44
0.40
0.36
0.32
0.28
0.24
0.20
0.16
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

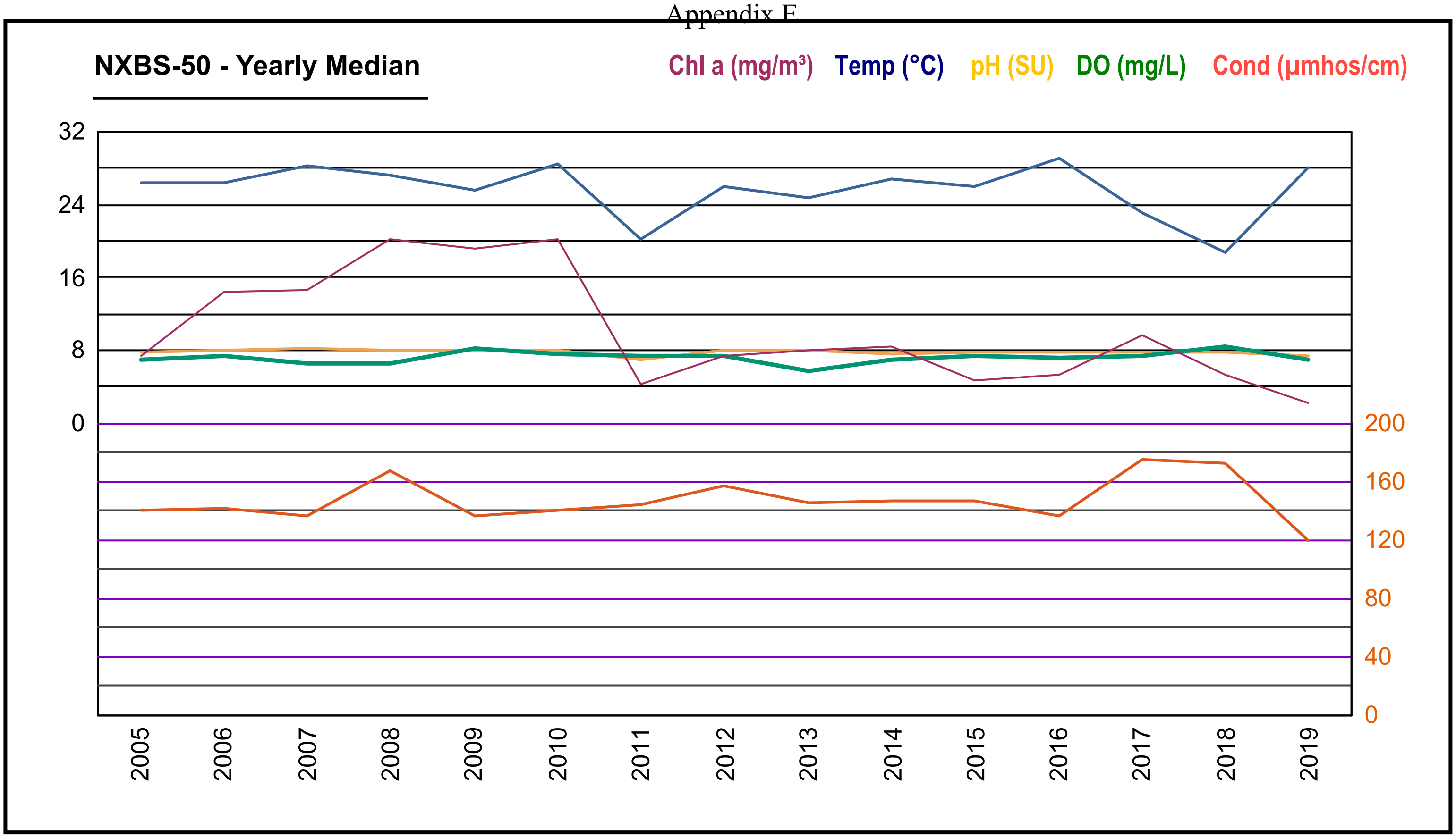

NRRT-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
1600
1200
800
400
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

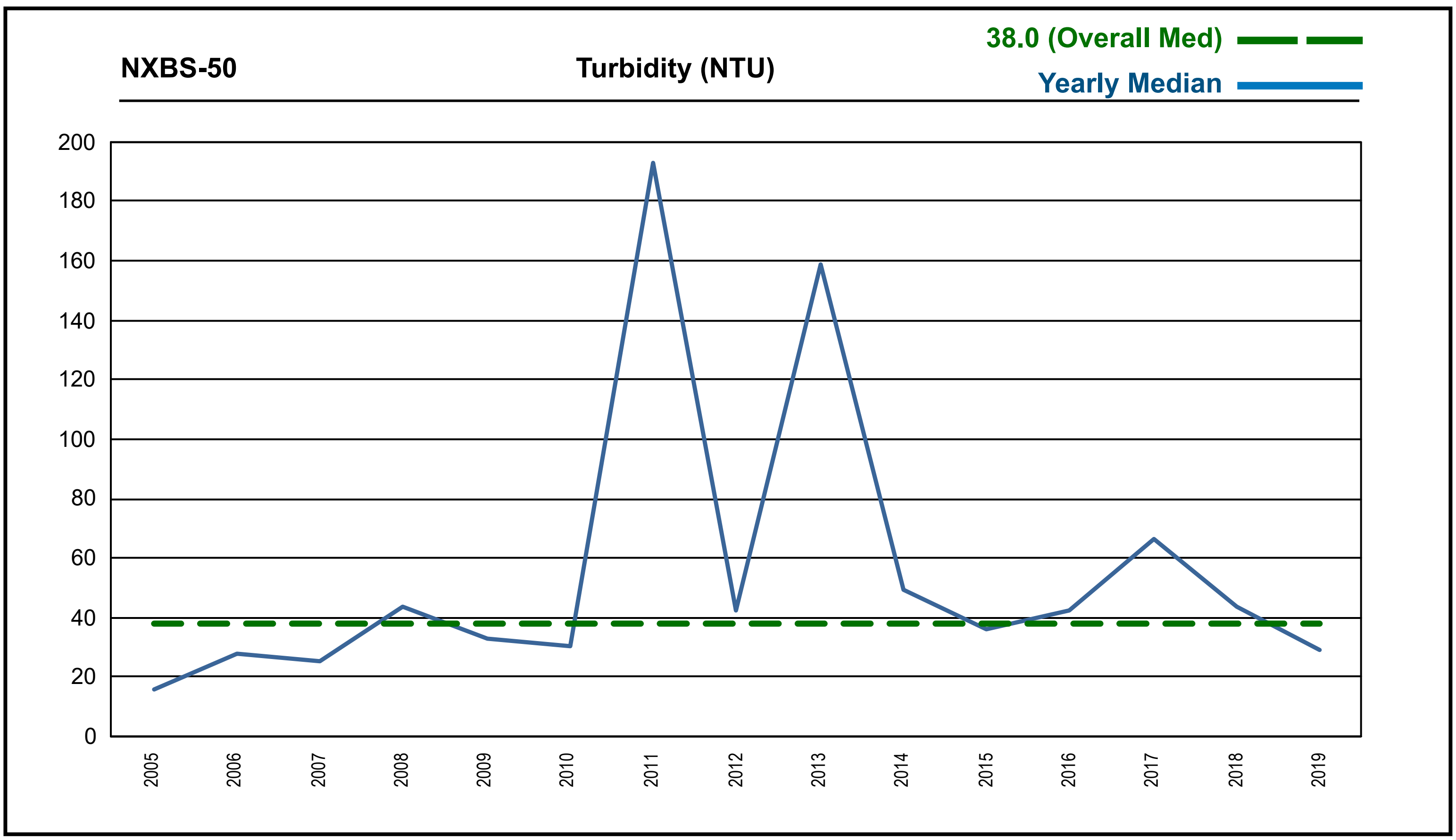

NRRT-1
Turbidity (NTU)
5.8 (Overall Med)
Yearly Median
70
60
50
40
30
20
10
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

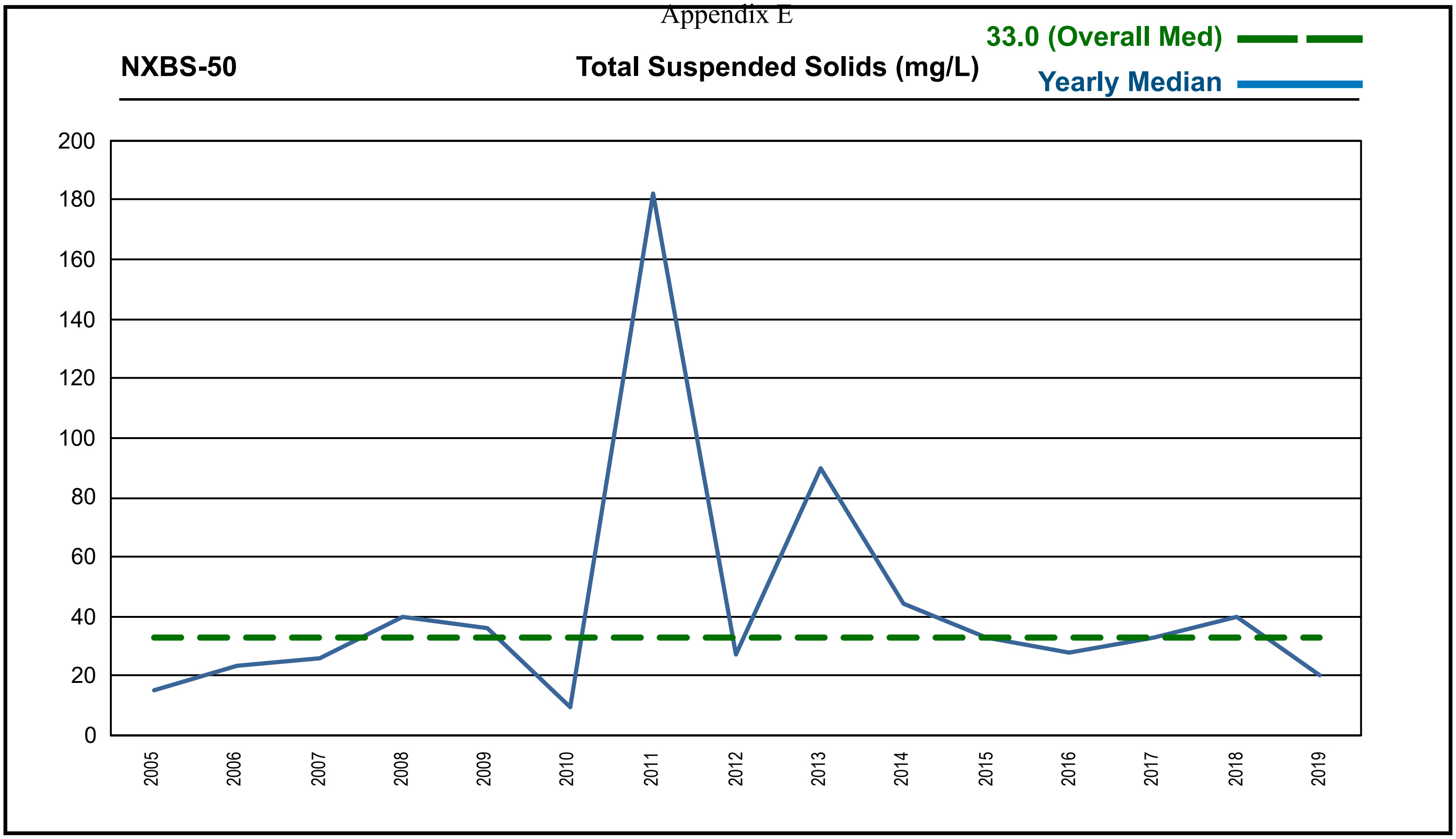

4.0 (Overall Med)
Yearly Median
NRRT-1
Total Suspended Solids (mg/L)
12
10
8
6
4
2
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

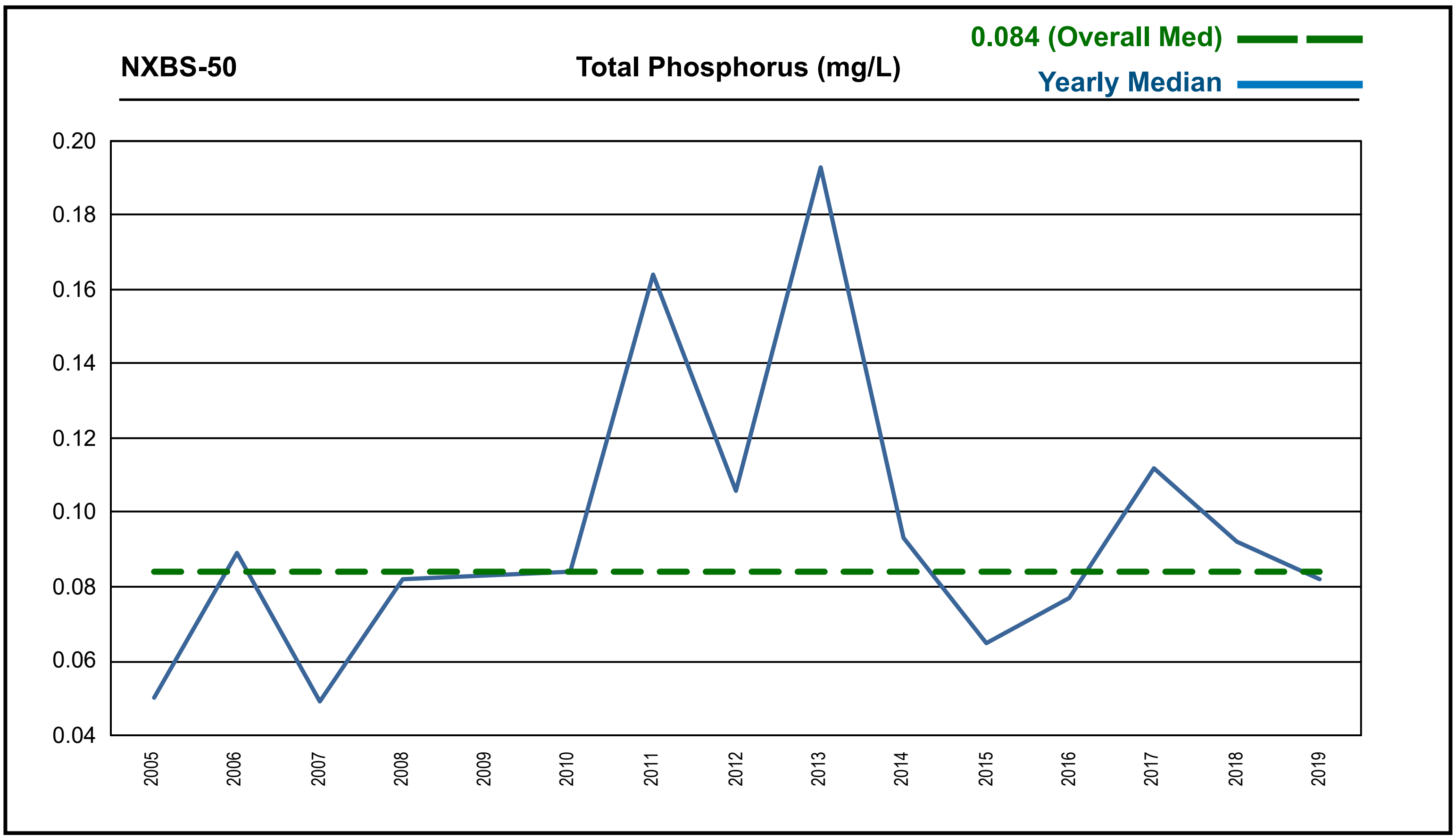

0.019 (Overall Med)
Yearly Median
NRRT-1
Total Phosphorus (mg/L)
0.06
0.05
0.04
0.03
0.02
0.01
0
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

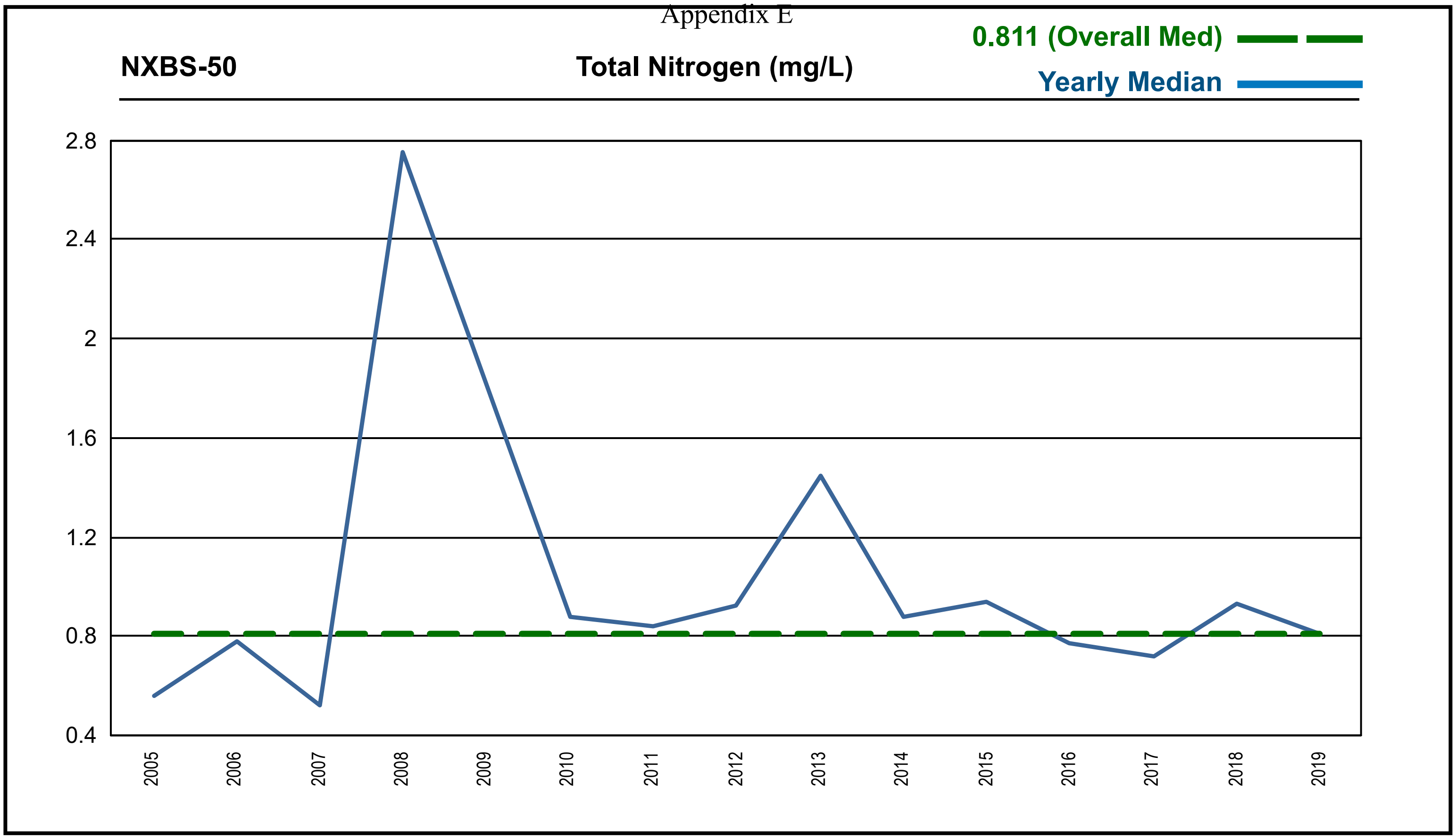

NRRT-1
Total Nitrogen (mg/L)
0.394 (Overall Med)
Yearly Median
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

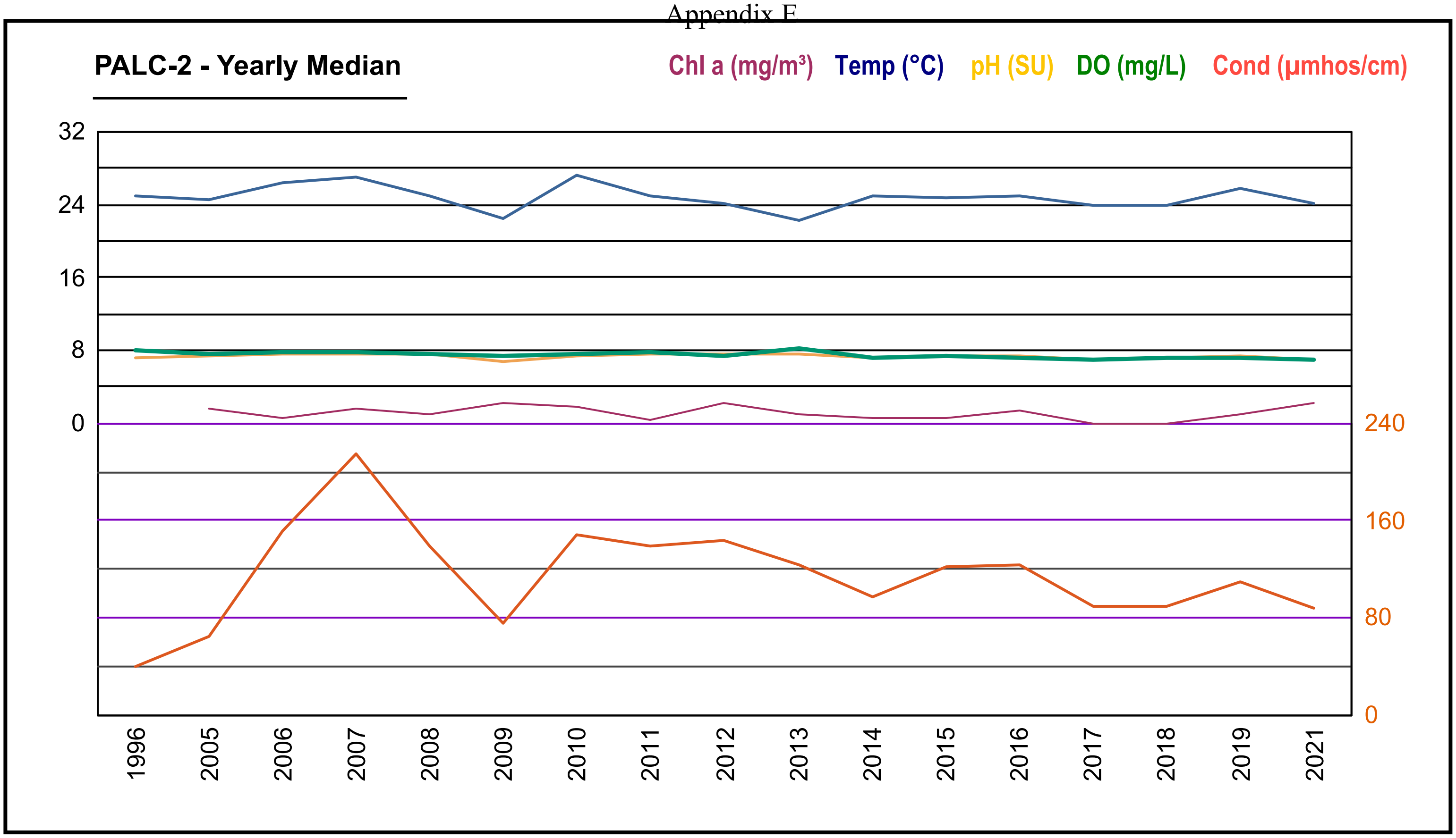

NXBS-50 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
200
160
120
80
40
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

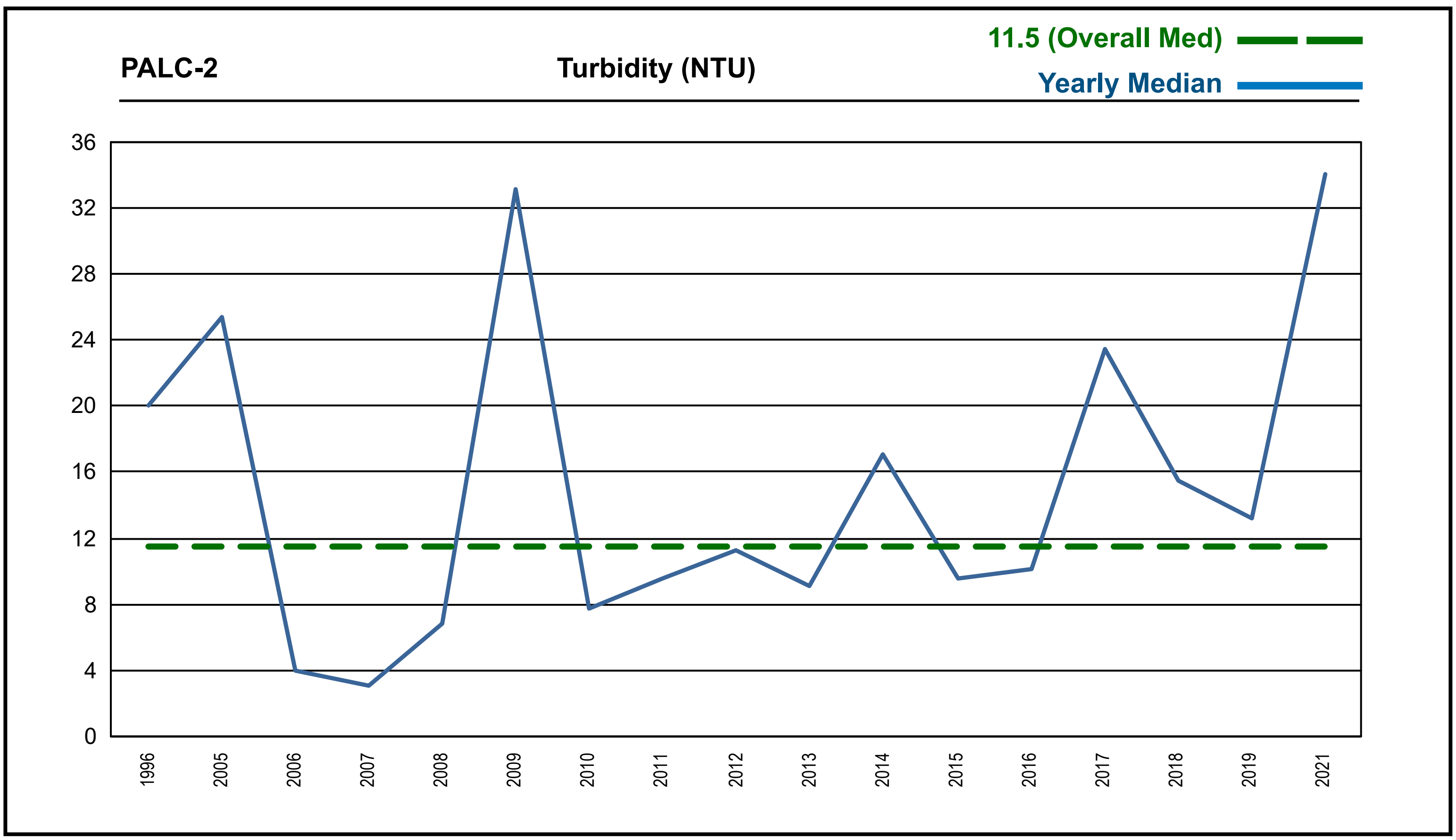

NXBS-50
Turbidity (NTU)
38.0 (Overall Med)
Yearly Median
200
180
160
140
120
100
80
60
40
20
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

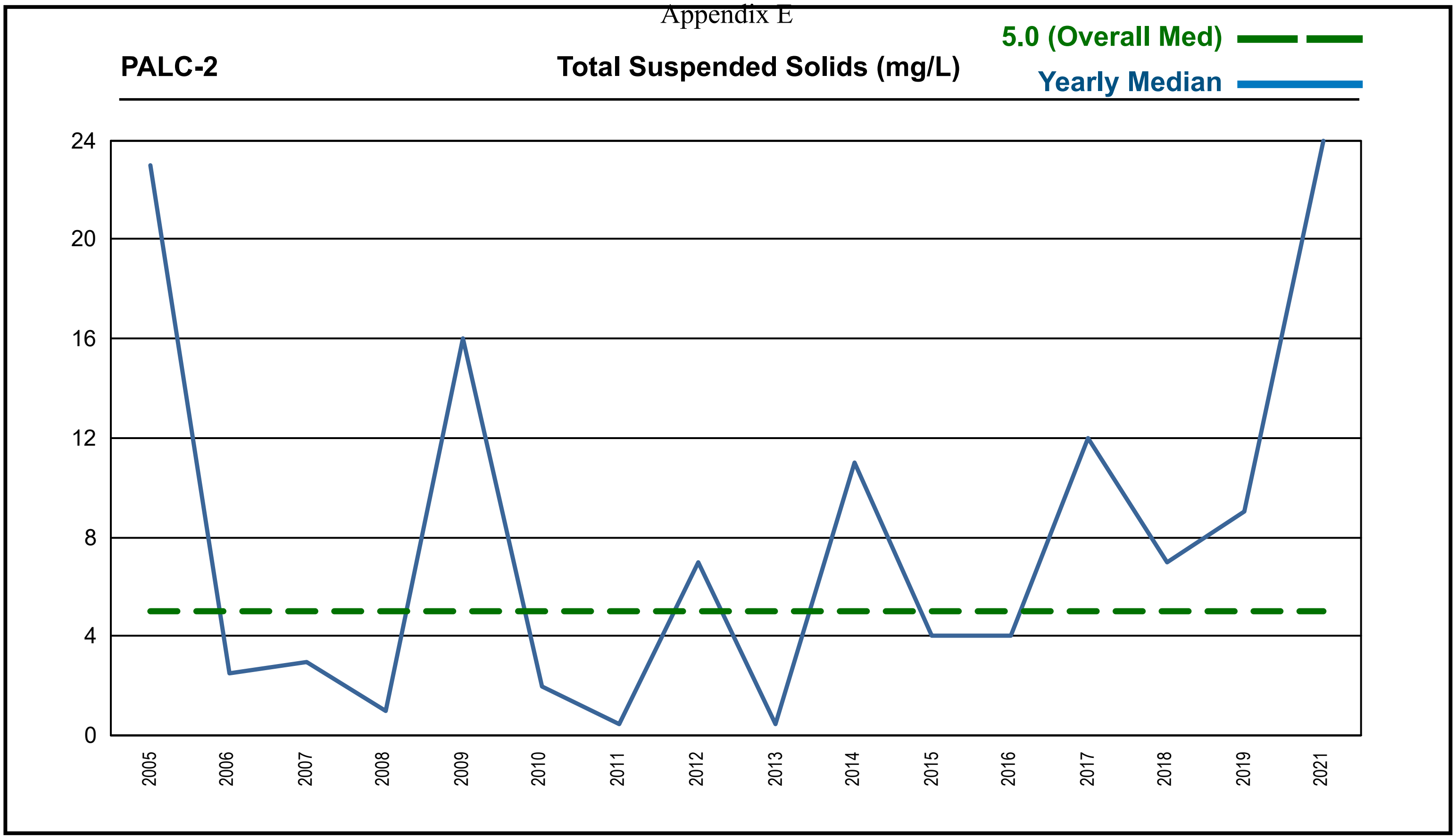

33.0 (Overall Med)
NXBS-50
Total Suspended Solids (mg/L)
Yearly Median
200
180
160
140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

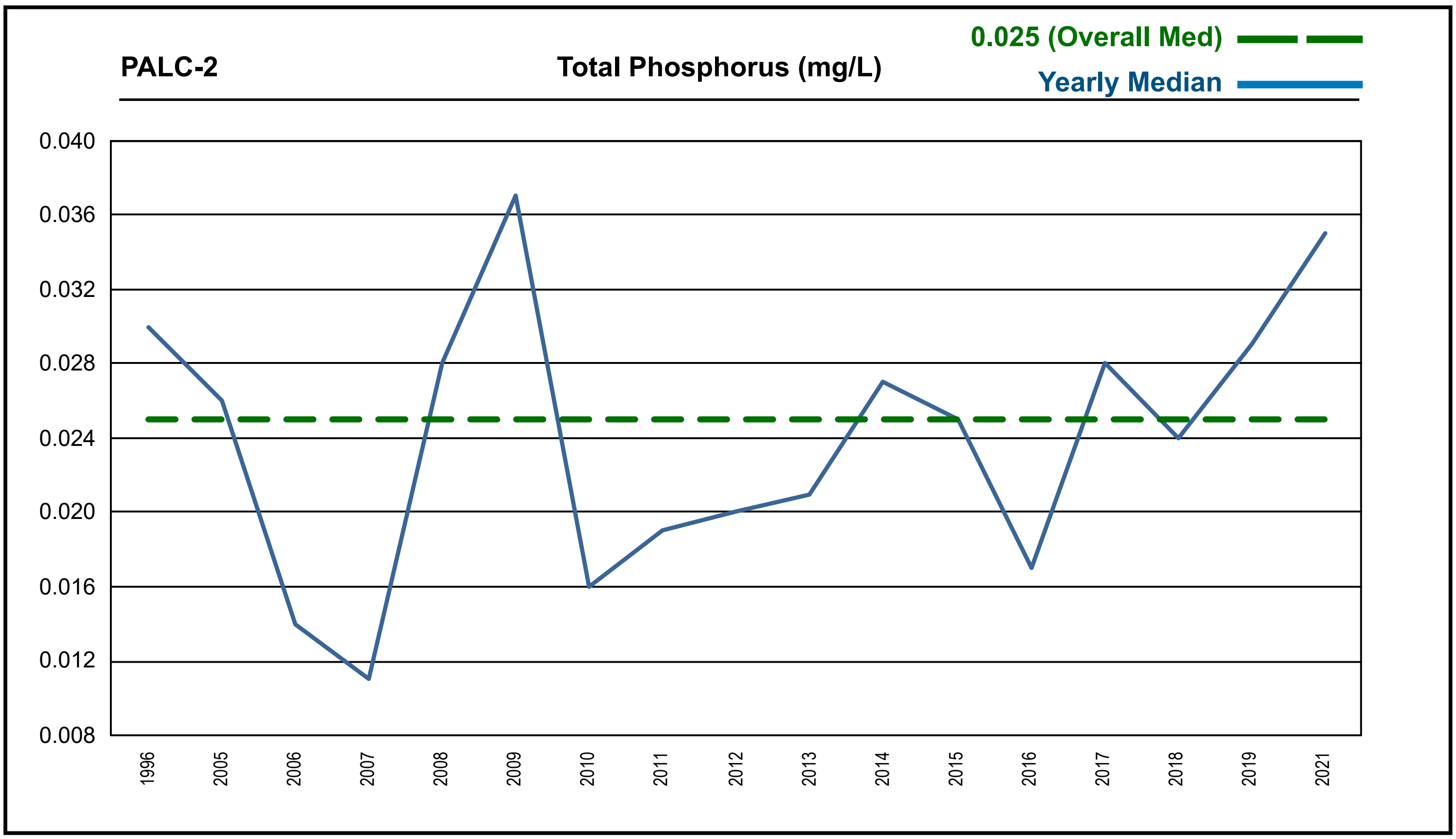

0.084 (Overall Med)
NXBS-50
Total Phosphorus (mg/L)
Yearly Median
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

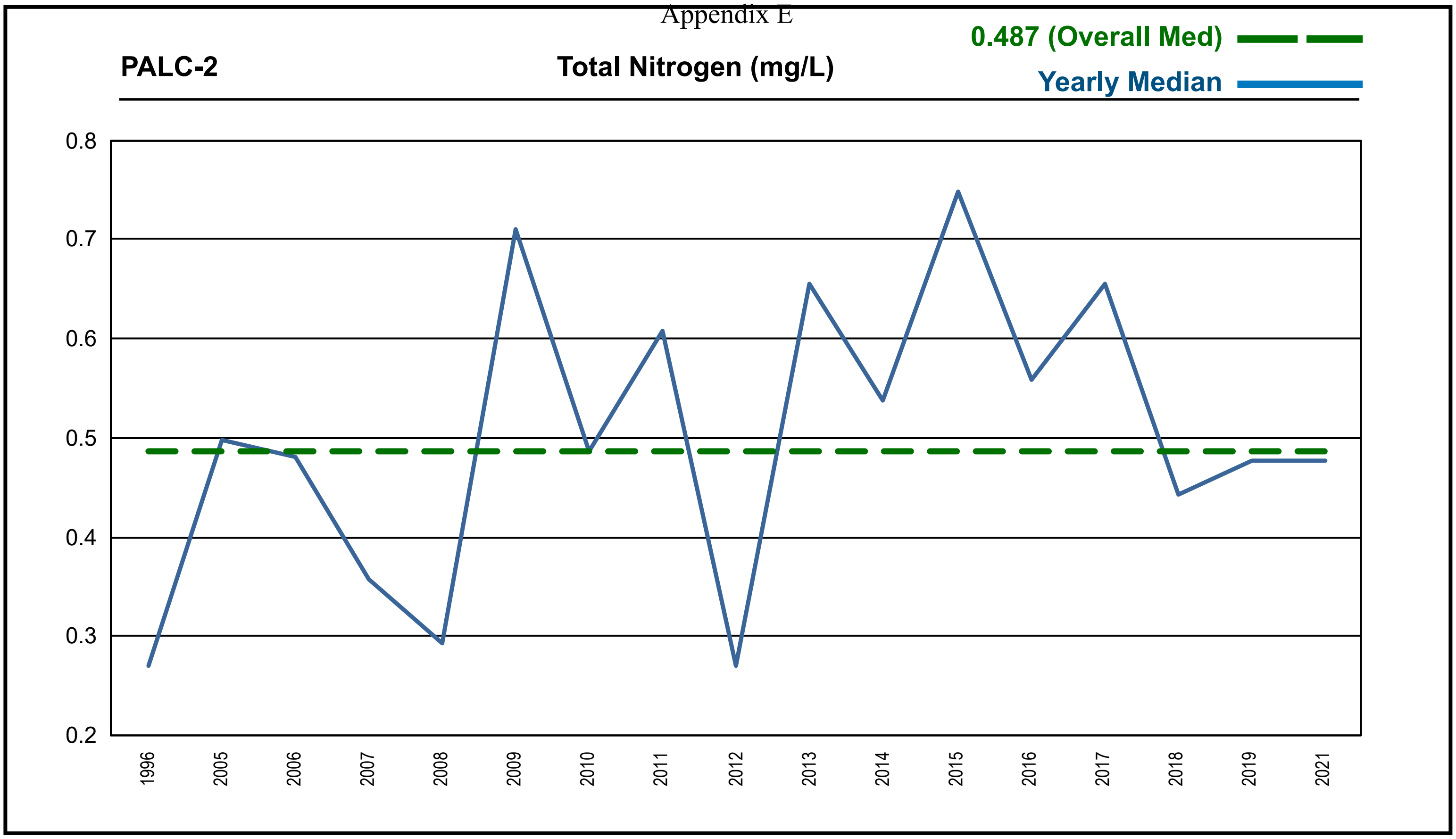

NXBS-50
Total Nitrogen (mg/L)
0.811 (Overall Med)
Yearly Median
2.8
2.4
2
1.6
1.2
0.8
0.4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

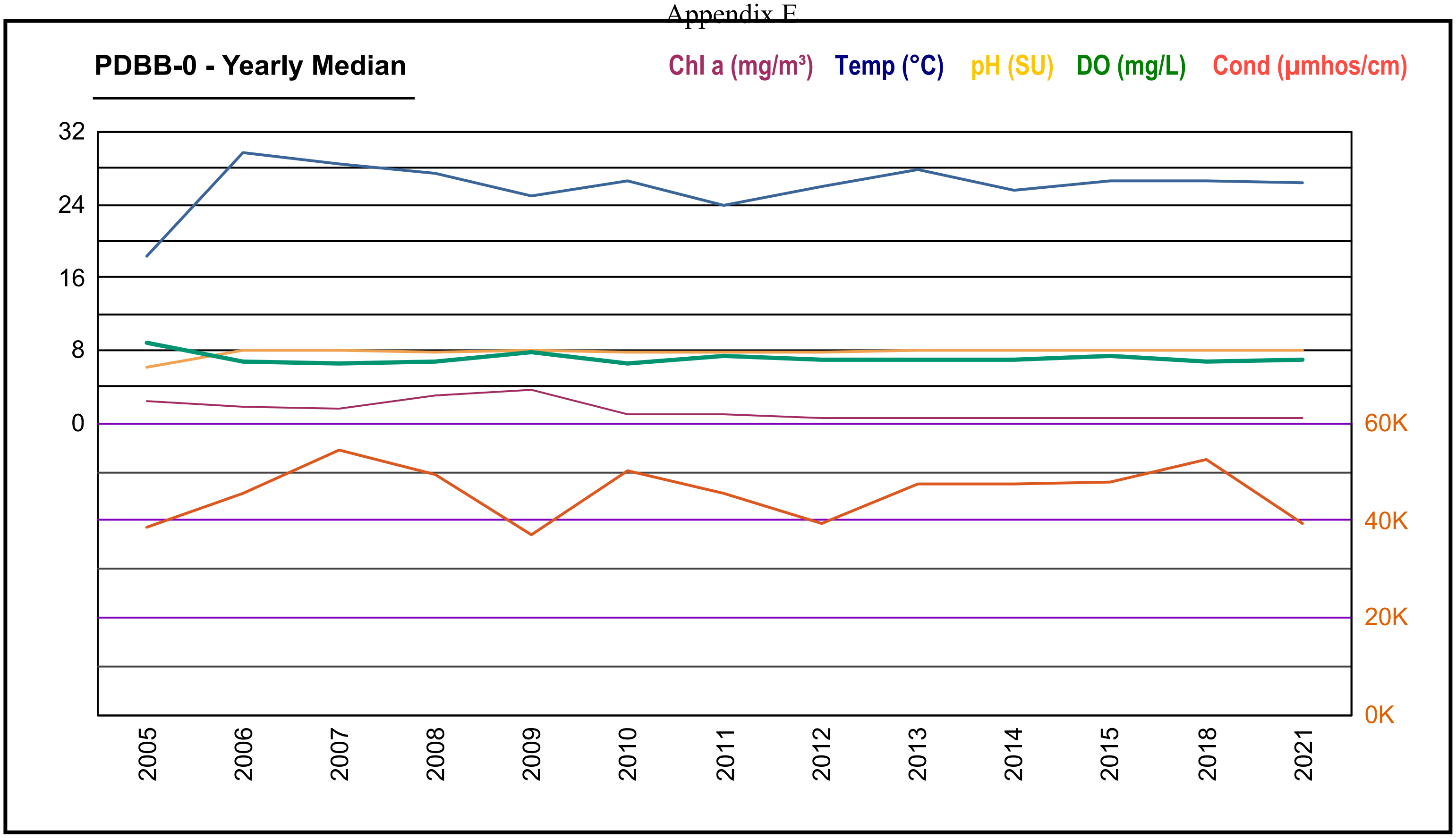

PALC-2 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

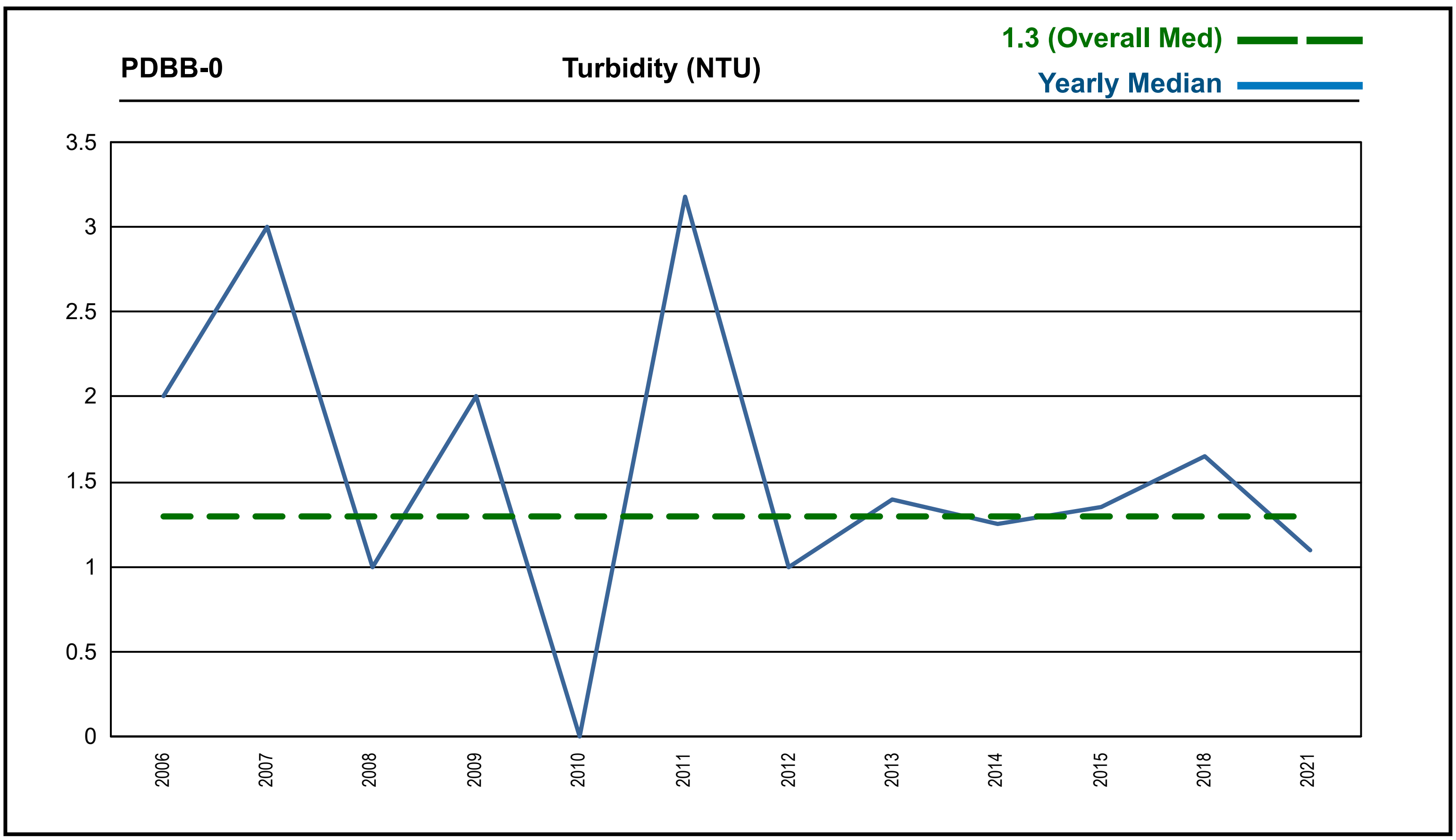

PALC-2
Turbidity (NTU)
11.5 (Overall Med)
Yearly Median
36
32
28
24
20
16
12
8
4
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

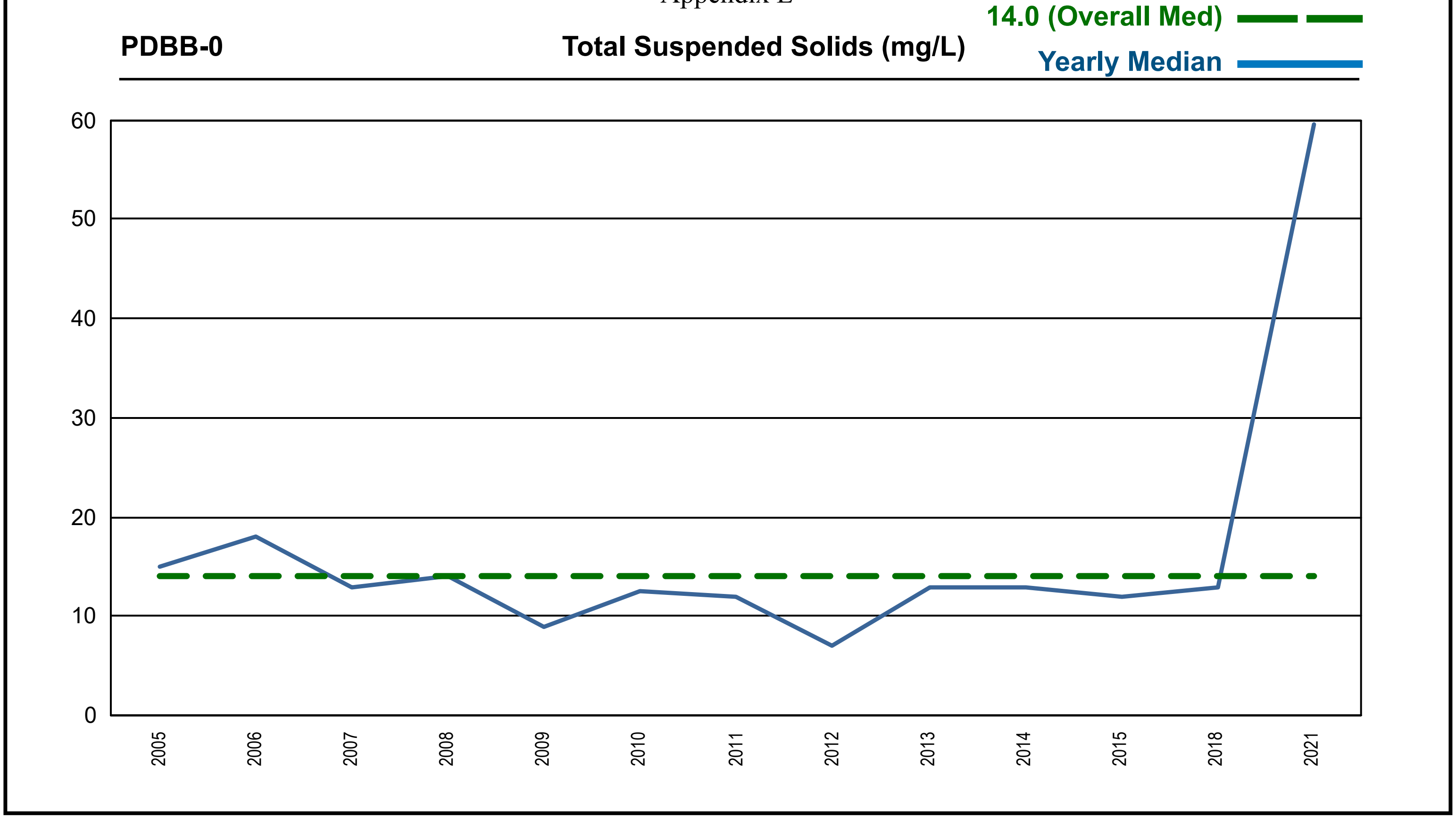

5.0 (Overall Med)
Yearly Median
PALC-2
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


0.025 (Overall Med)
Yearly Median
PALC-2
Total Phosphorus (mg/L)
0.040
0.036
0.032
0.028
0.024
0.020
0.016
0.012
0.008
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

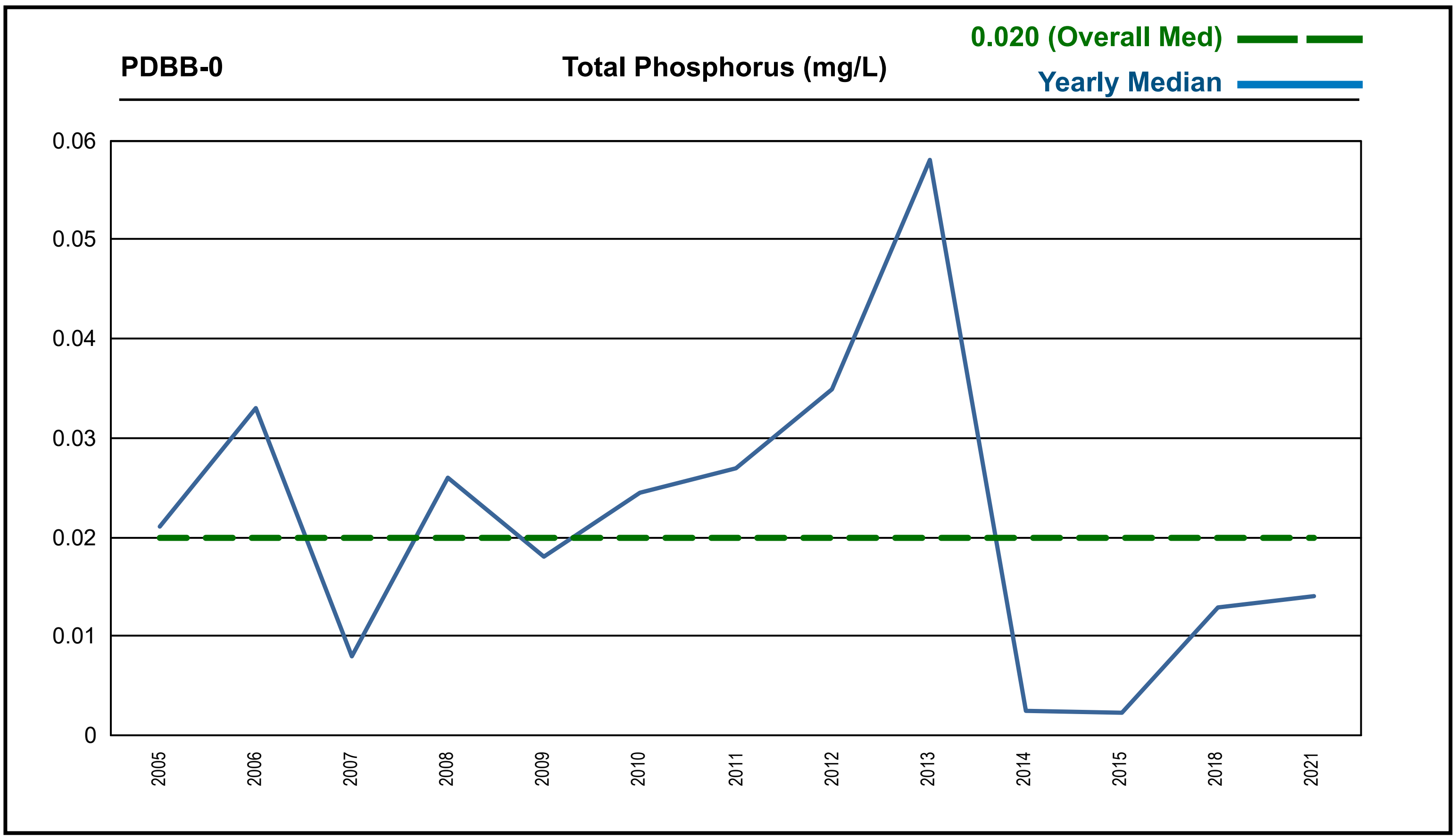

PALC-2
Total Nitrogen (mg/L)
0.487 (Overall Med)
Yearly Median
0.8
0.7
0.6
0.5
0.4
0.3
0.2
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


PDBB-0 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
60K
40K
20K
0K
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2018
2021

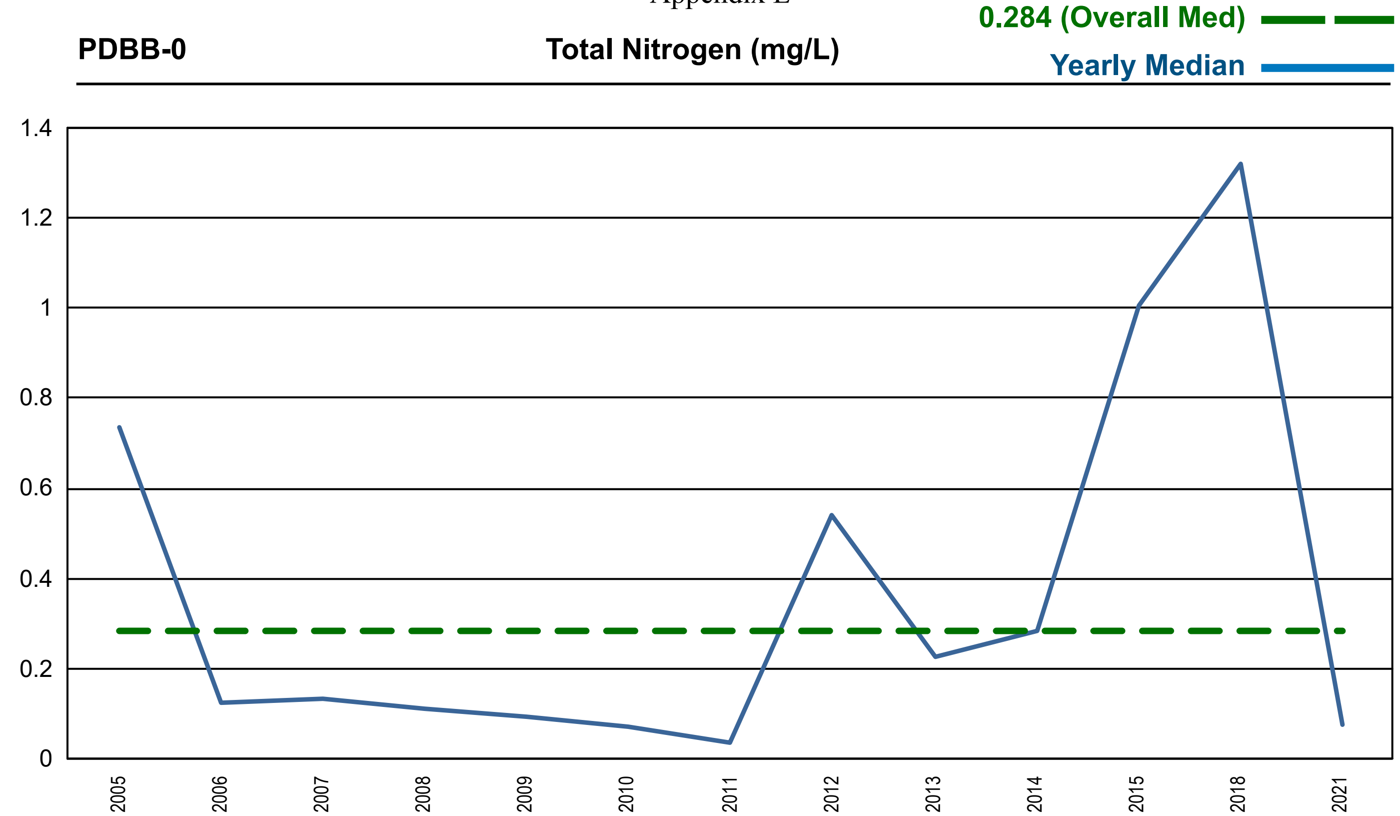

PDBB-0
Turbidity (NTU)
1.3 (Overall Med)
Yearly Median
3.5
3
2.5
2
1.5
1
0.5
0
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2018
2021

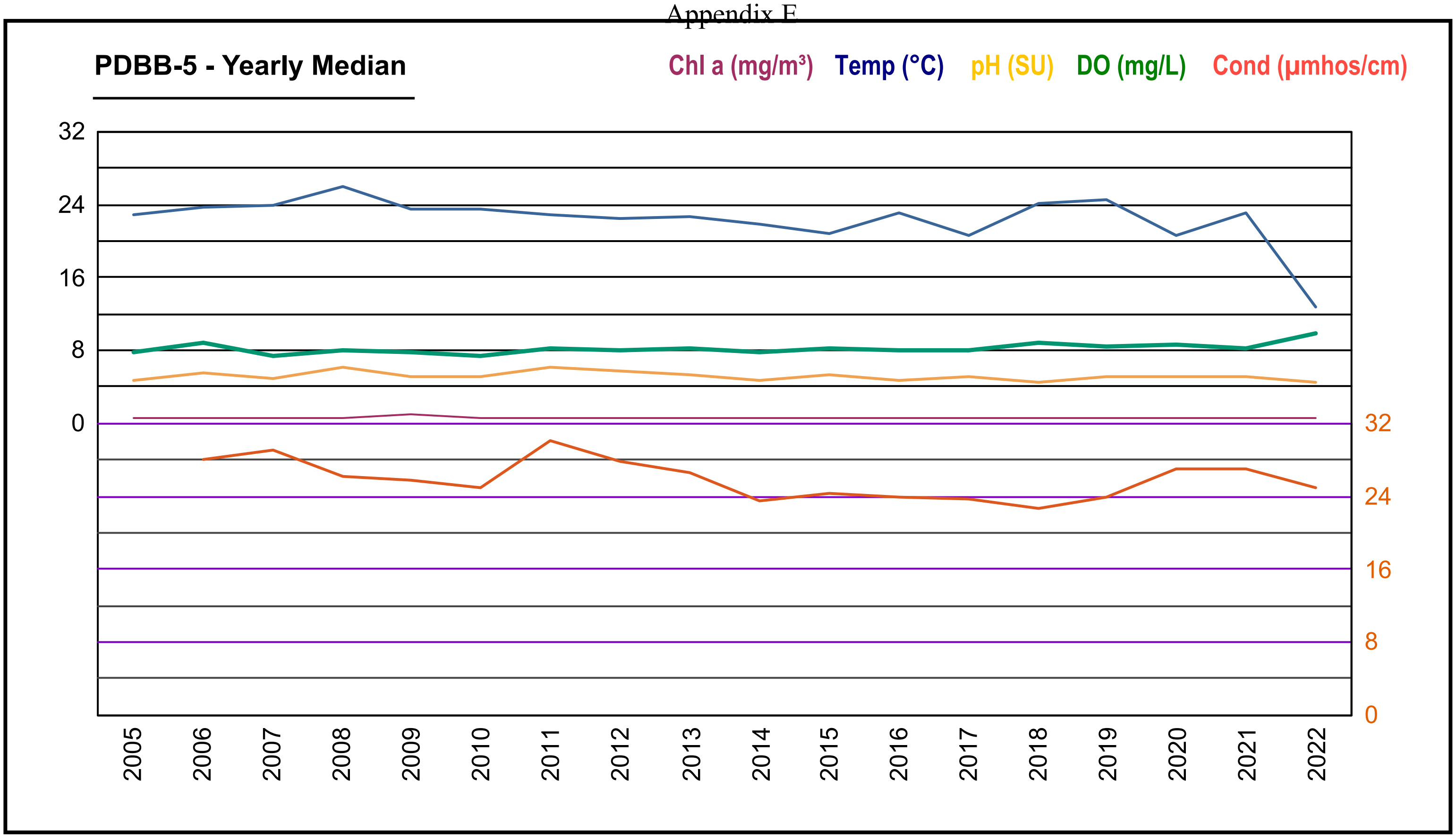


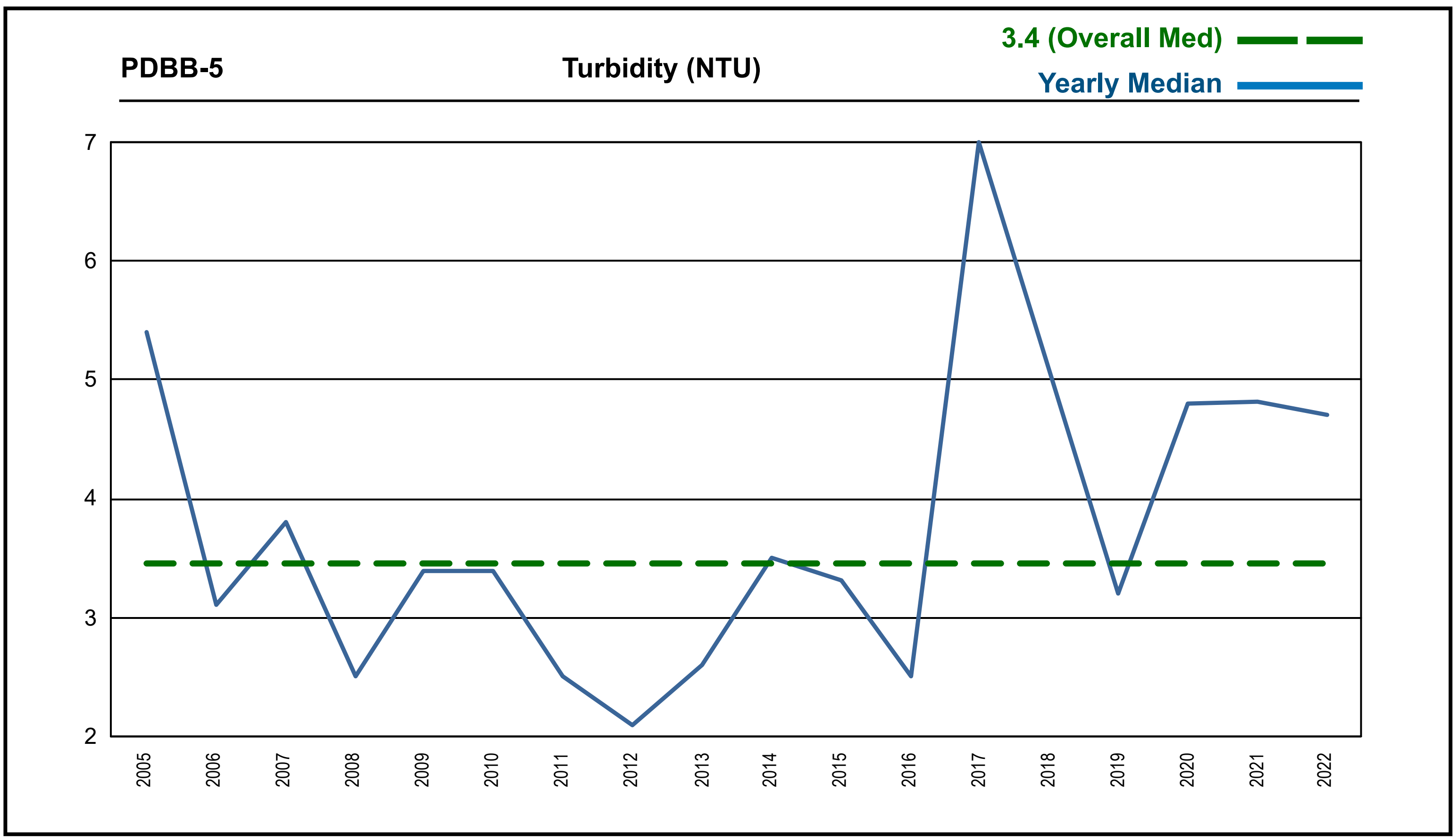
14.0 (Overall Med)
PDBB-0
Total Suspended Solids (mg/L)
Yearly Median
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2018
2021

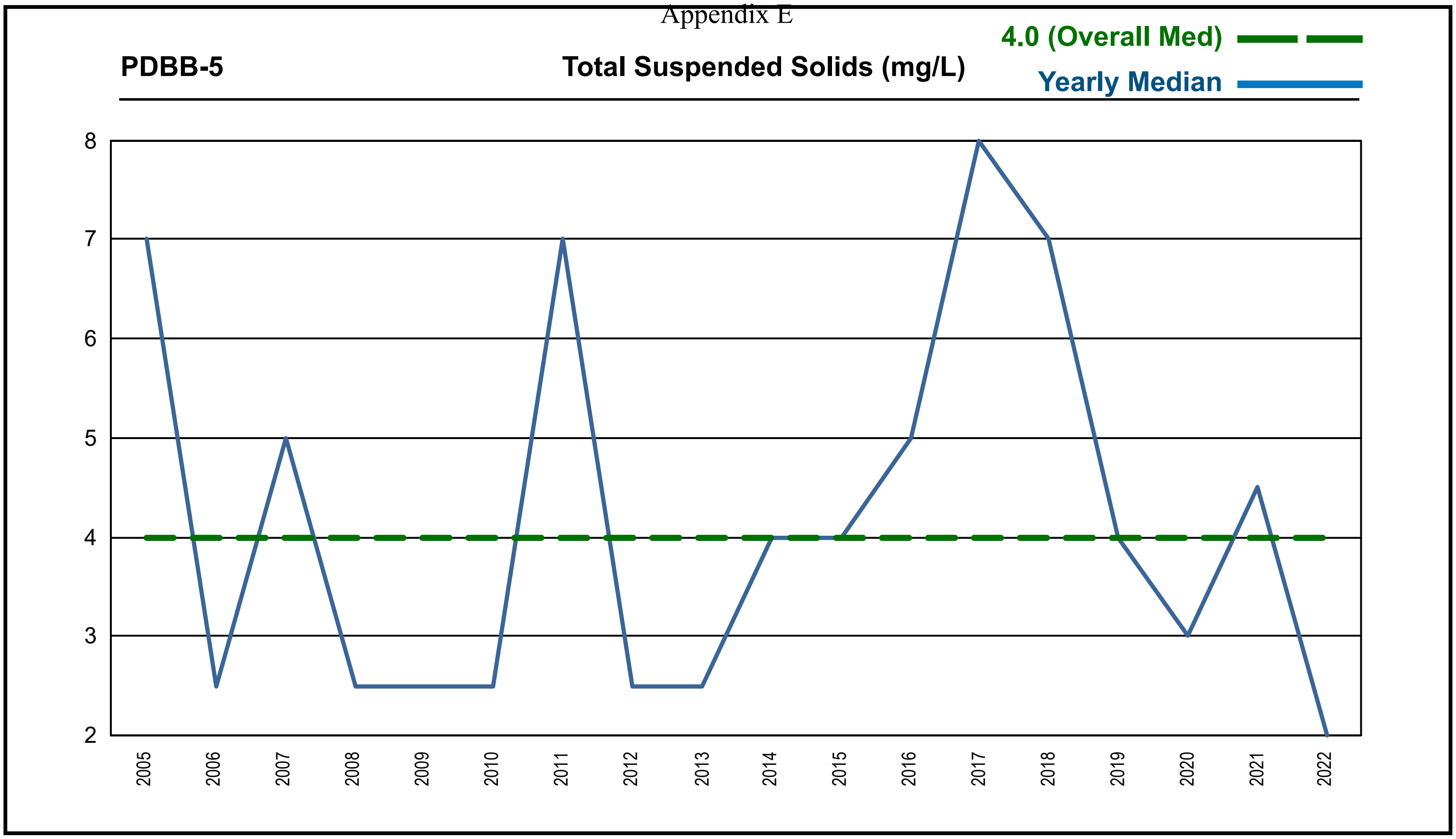


0.020 (Overall Med)
PDBB-0
Total Phosphorus (mg/L)
Yearly Median
0.06
0.05
0.04
0.03
0.02
0.01
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2018
2021

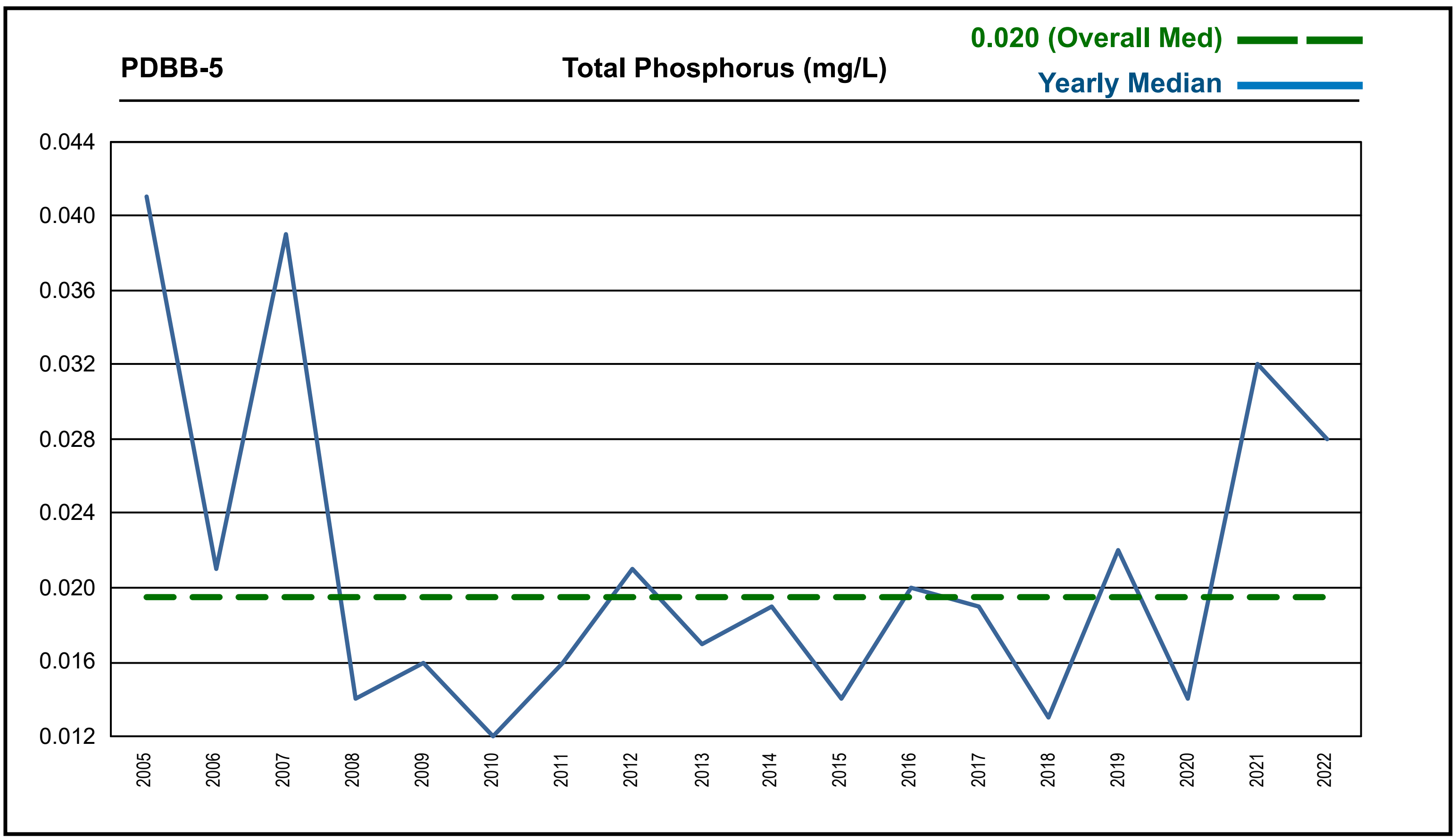

PDBB-0
Total Nitrogen (mg/L)
0.284 (Overall Med)
Yearly Median
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2018
2021


PDBB-5 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
32
24
16
8
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

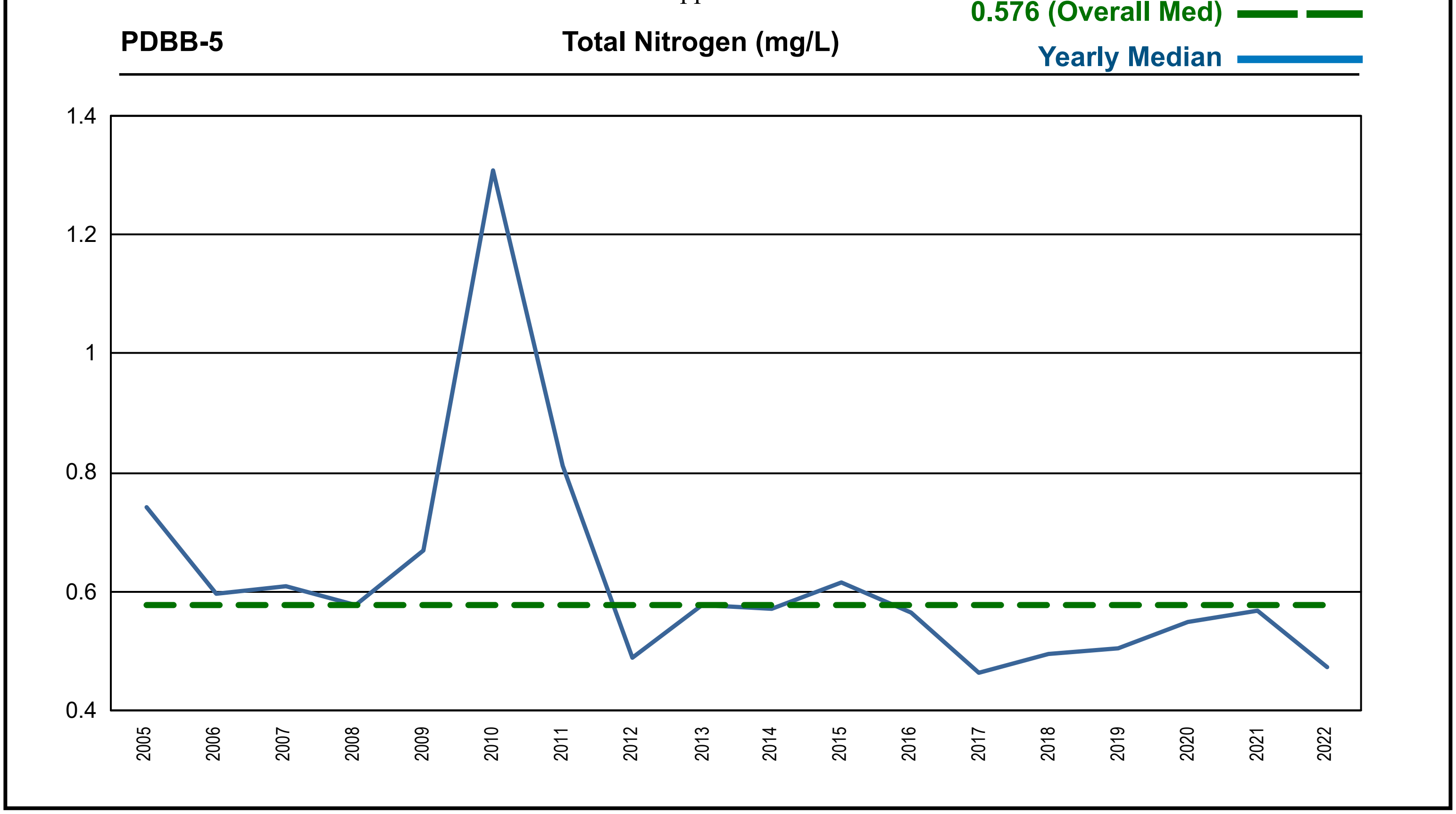

PDBB-5
Turbidity (NTU)
3.4 (Overall Med)
Yearly Median
7
6
5
4
3
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

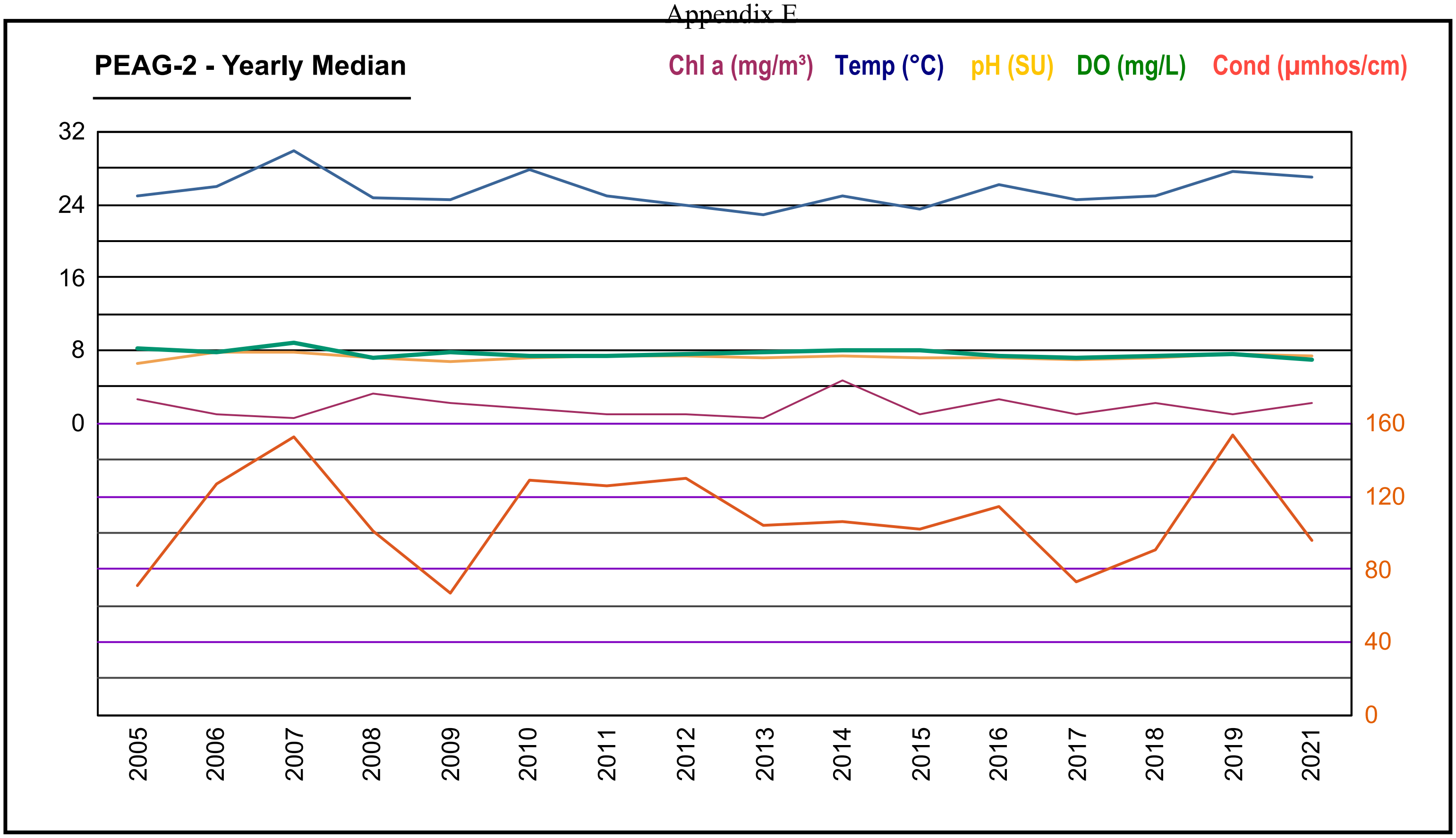


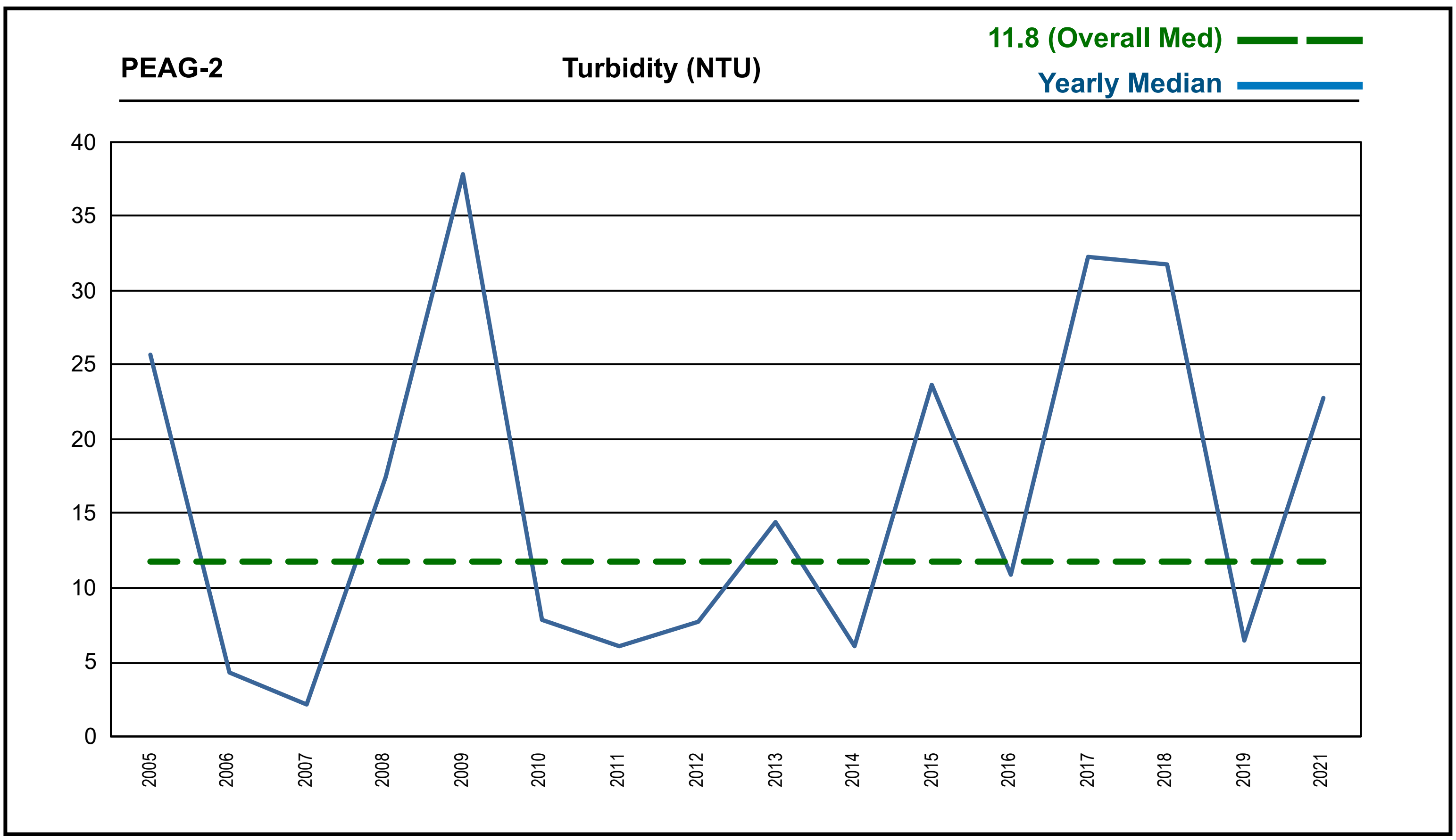
4.0 (Overall Med)
PDBB-5
Total Suspended Solids (mg/L)
Yearly Median
8
7
6
5
4
3
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

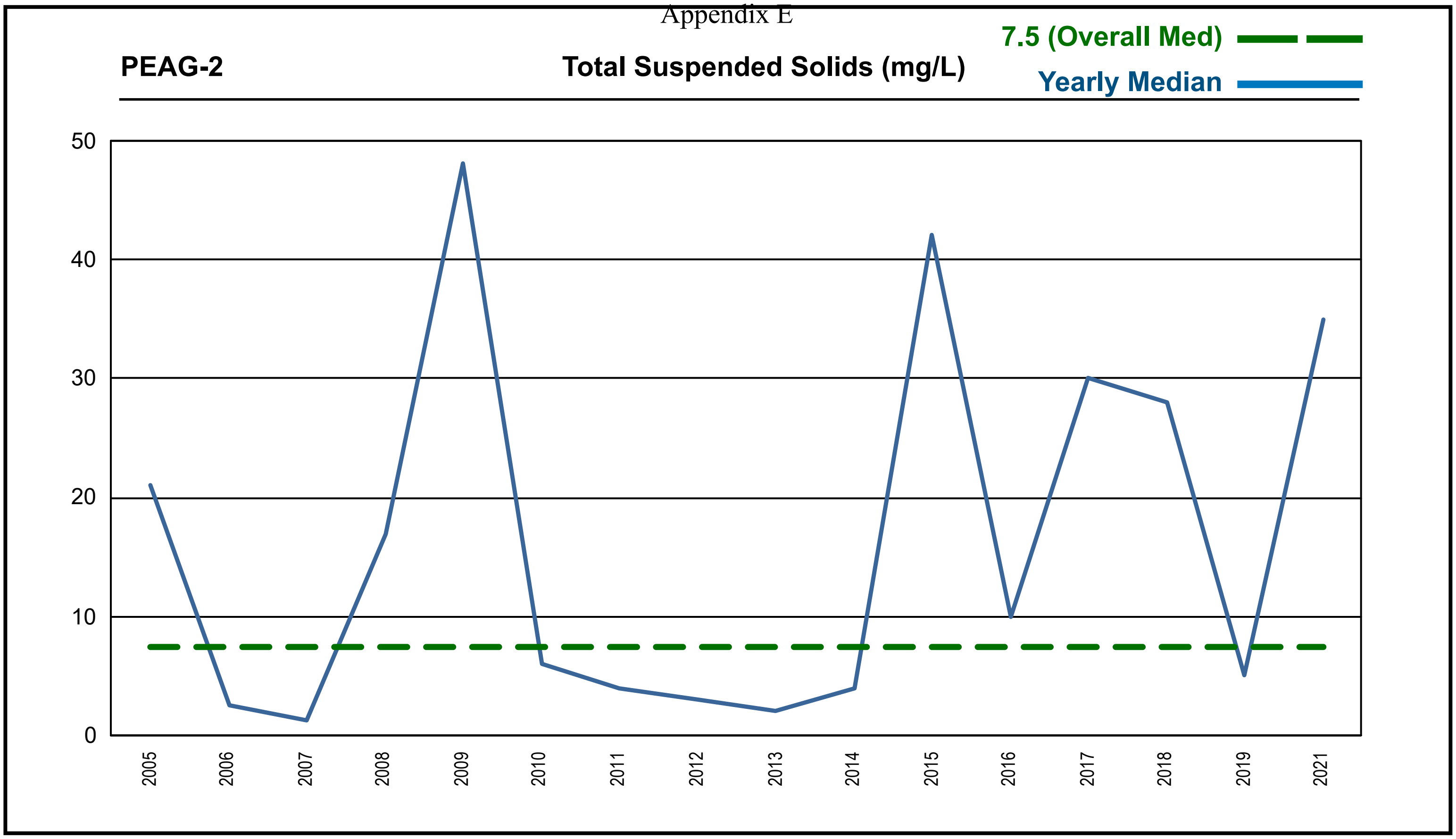


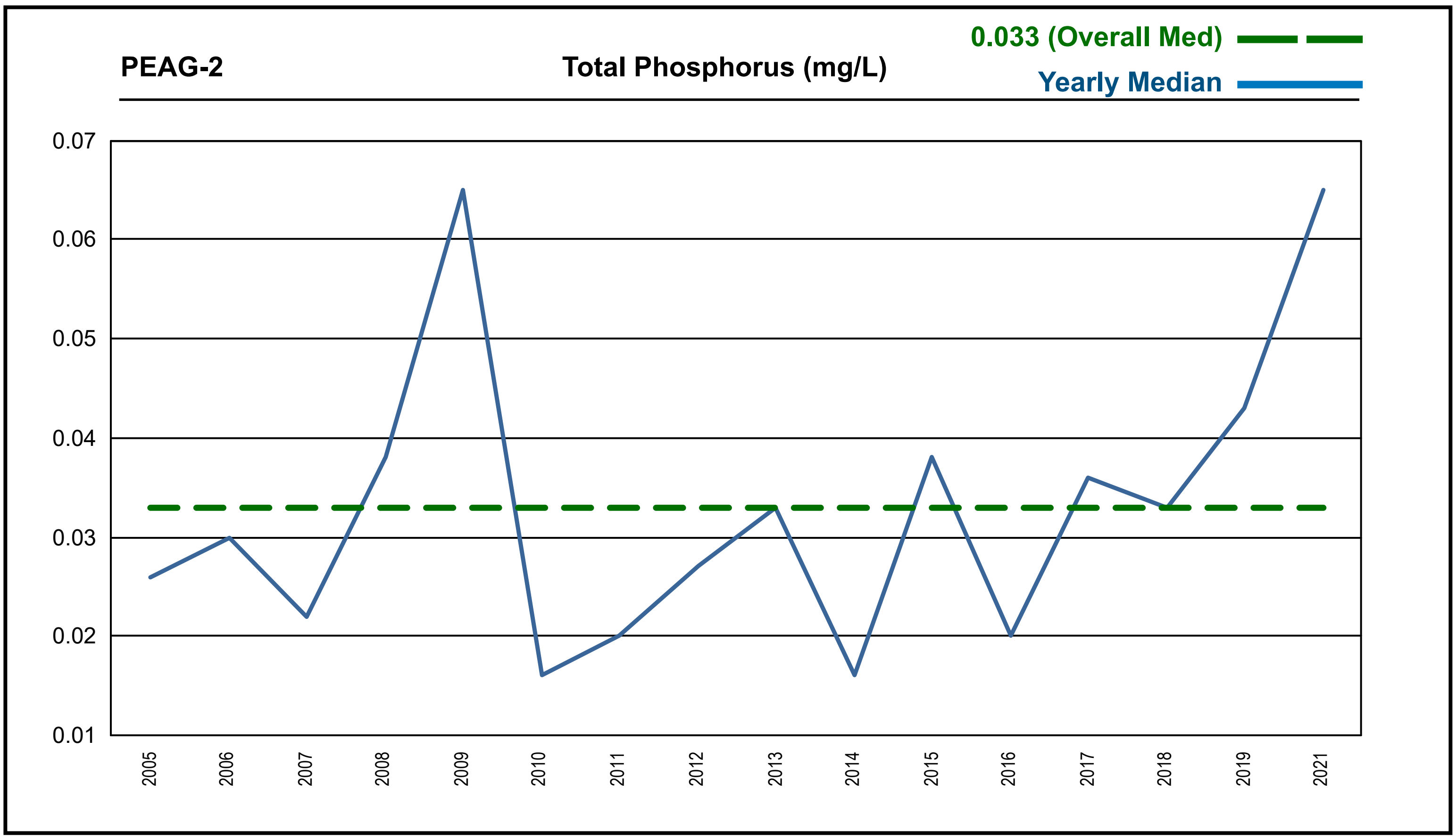
0.020 (Overall Med)
PDBB-5
Total Phosphorus (mg/L)
Yearly Median
0.044
0.040
0.036
0.032
0.028
0.024
0.020
0.016
0.012
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

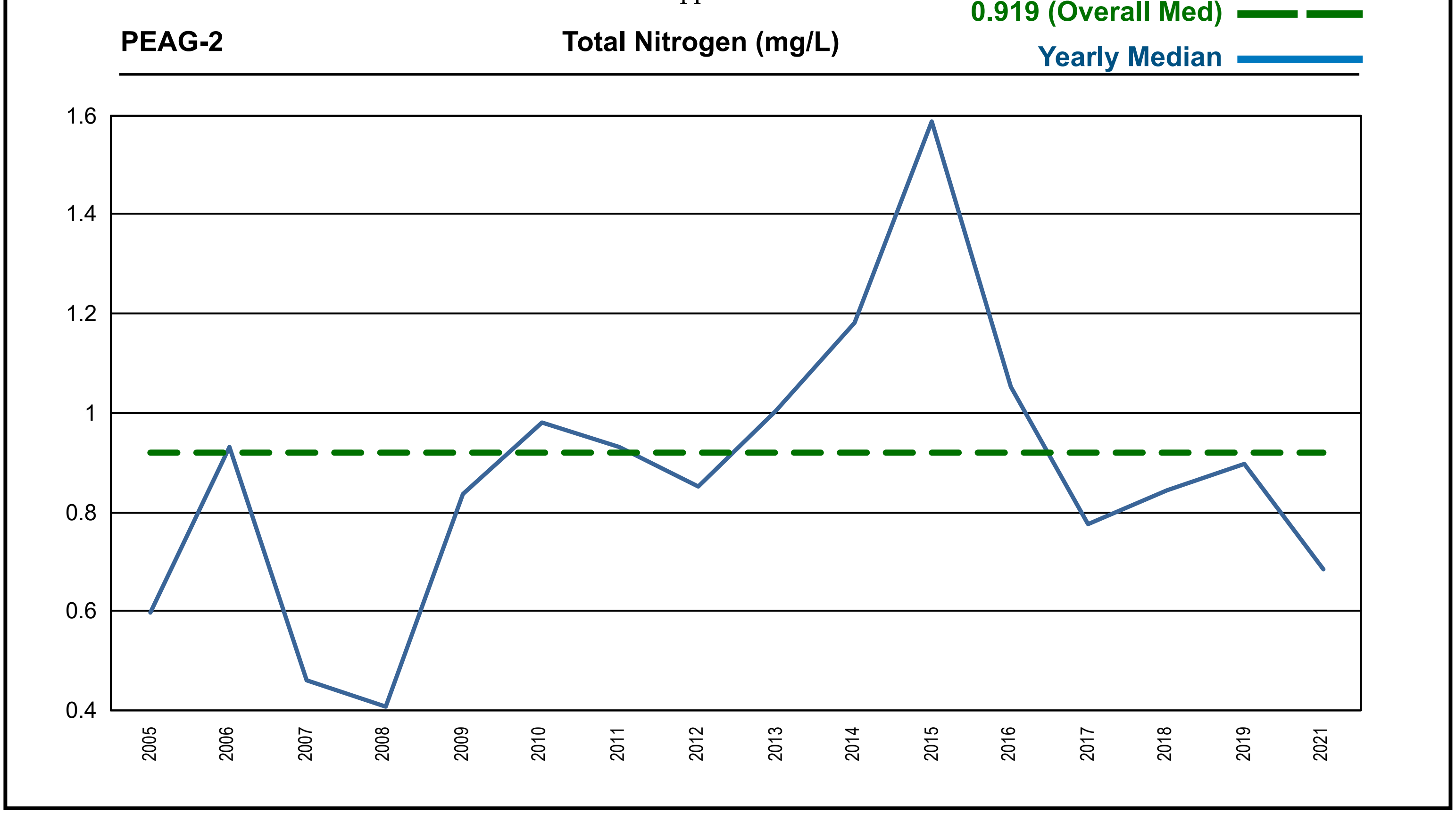

PDBB-5
Total Nitrogen (mg/L)
0.576 (Overall Med)
Yearly Median
1.4
1.2
1
0.8
0.6
0.4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


PEAG-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

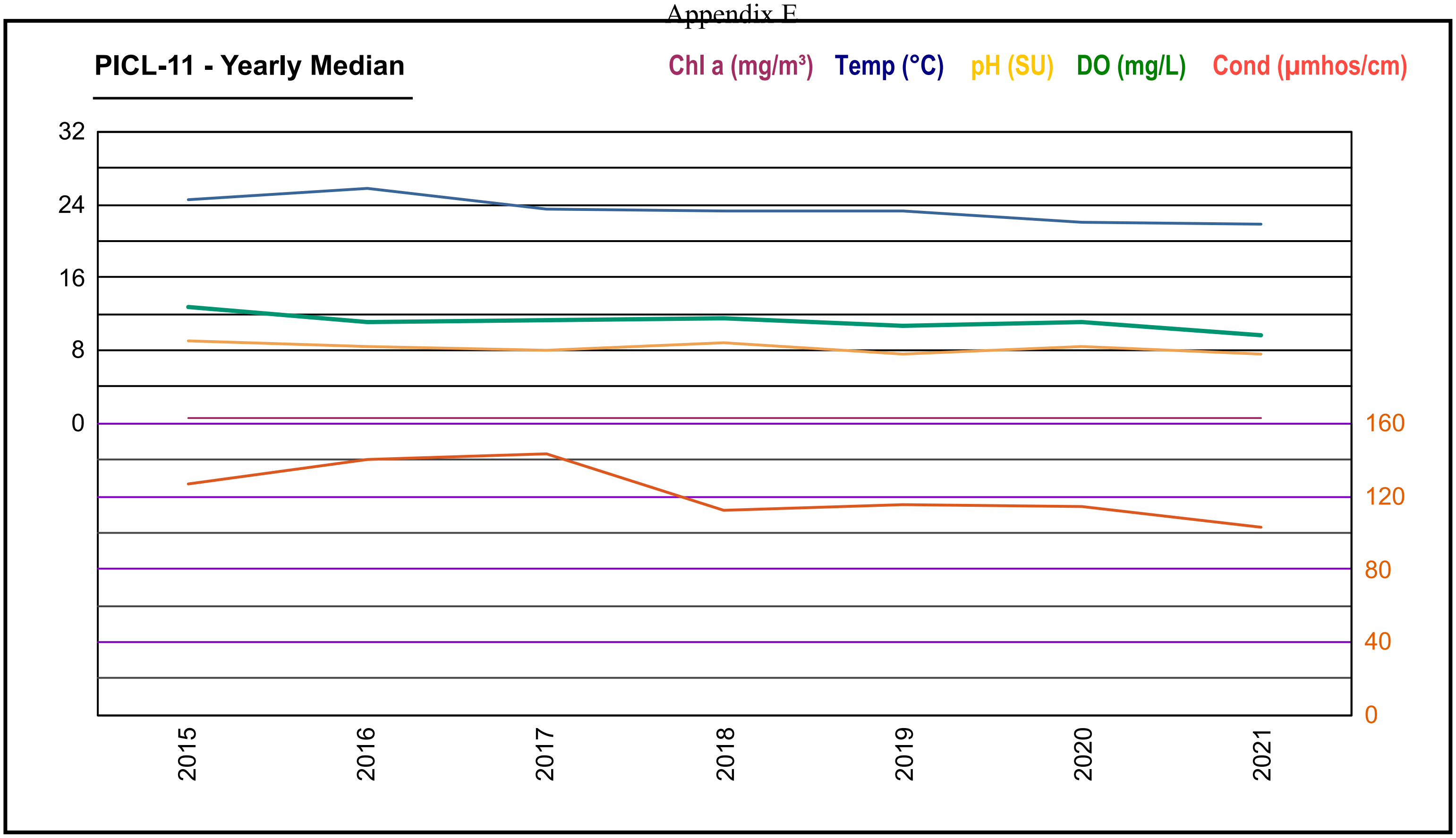

PEAG-2
Turbidity (NTU)
11.8 (Overall Med)
Yearly Median
40
35
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

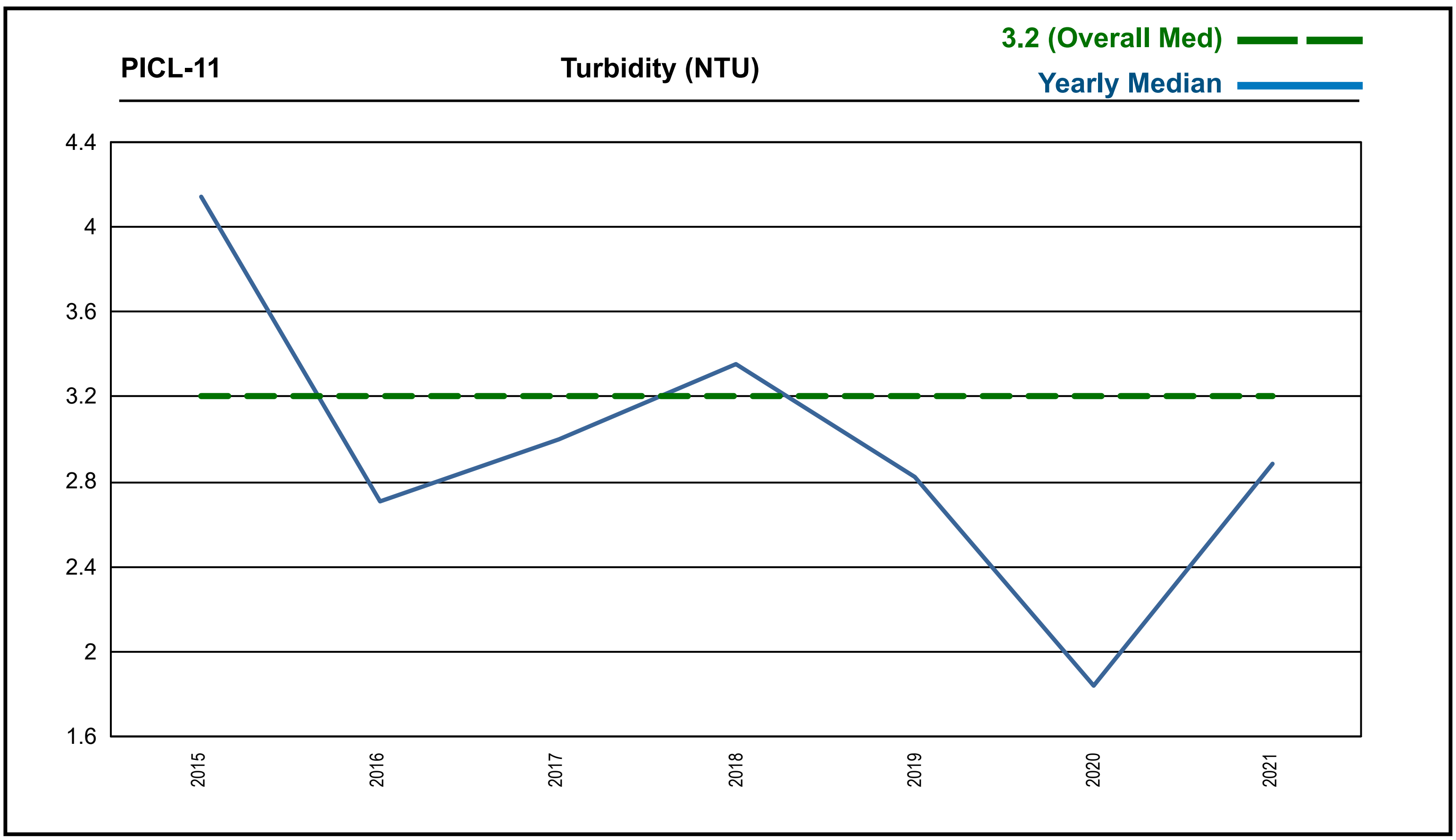

7.5 (Overall Med)
PEAG-2
Total Suspended Solids (mg/L)
Yearly Median
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

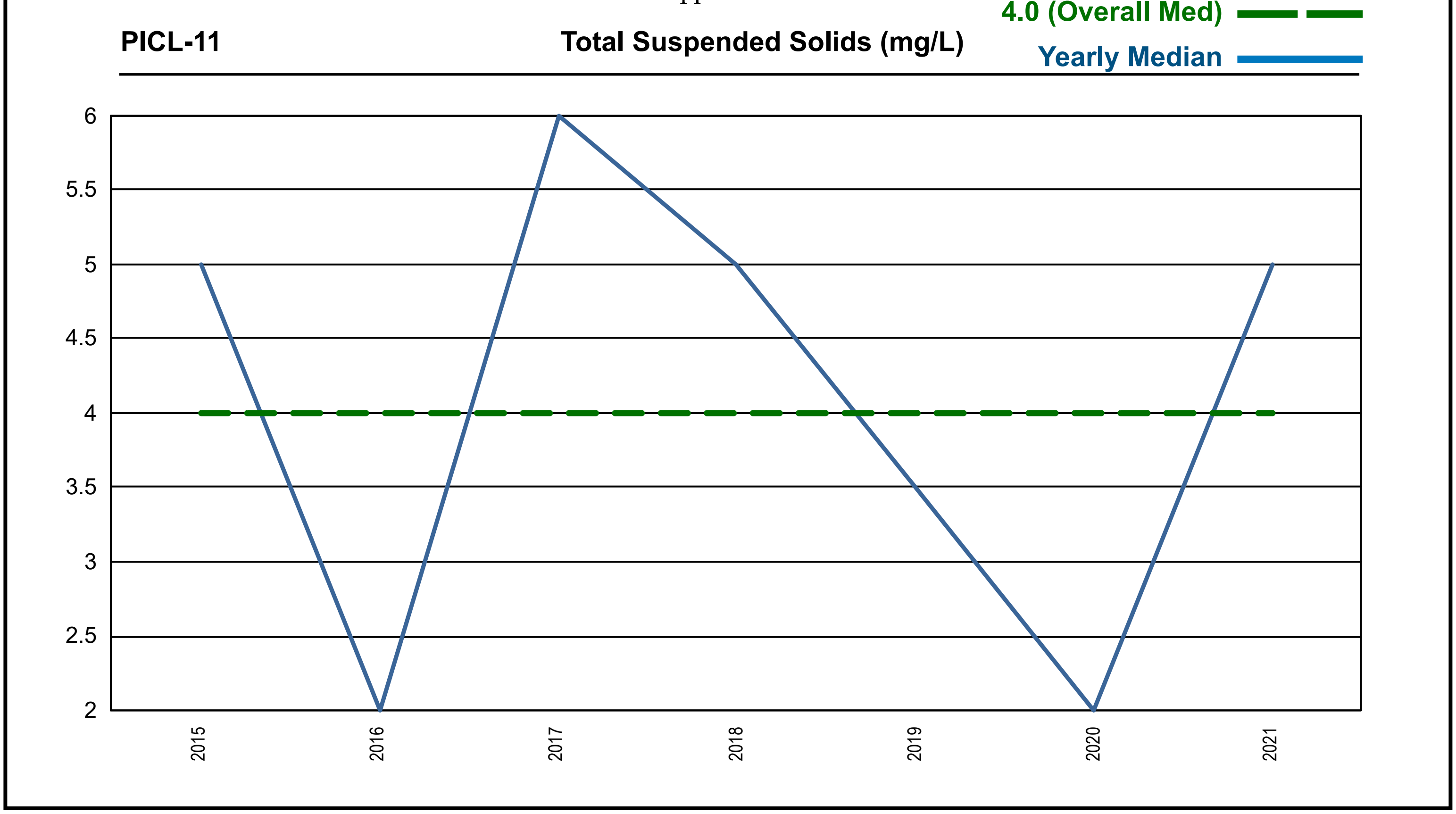

0.033 (Overall Med)
PEAG-2
Total Phosphorus (mg/L)
Yearly Median
0.07
0.06
0.05
0.04
0.03
0.02
0.01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021



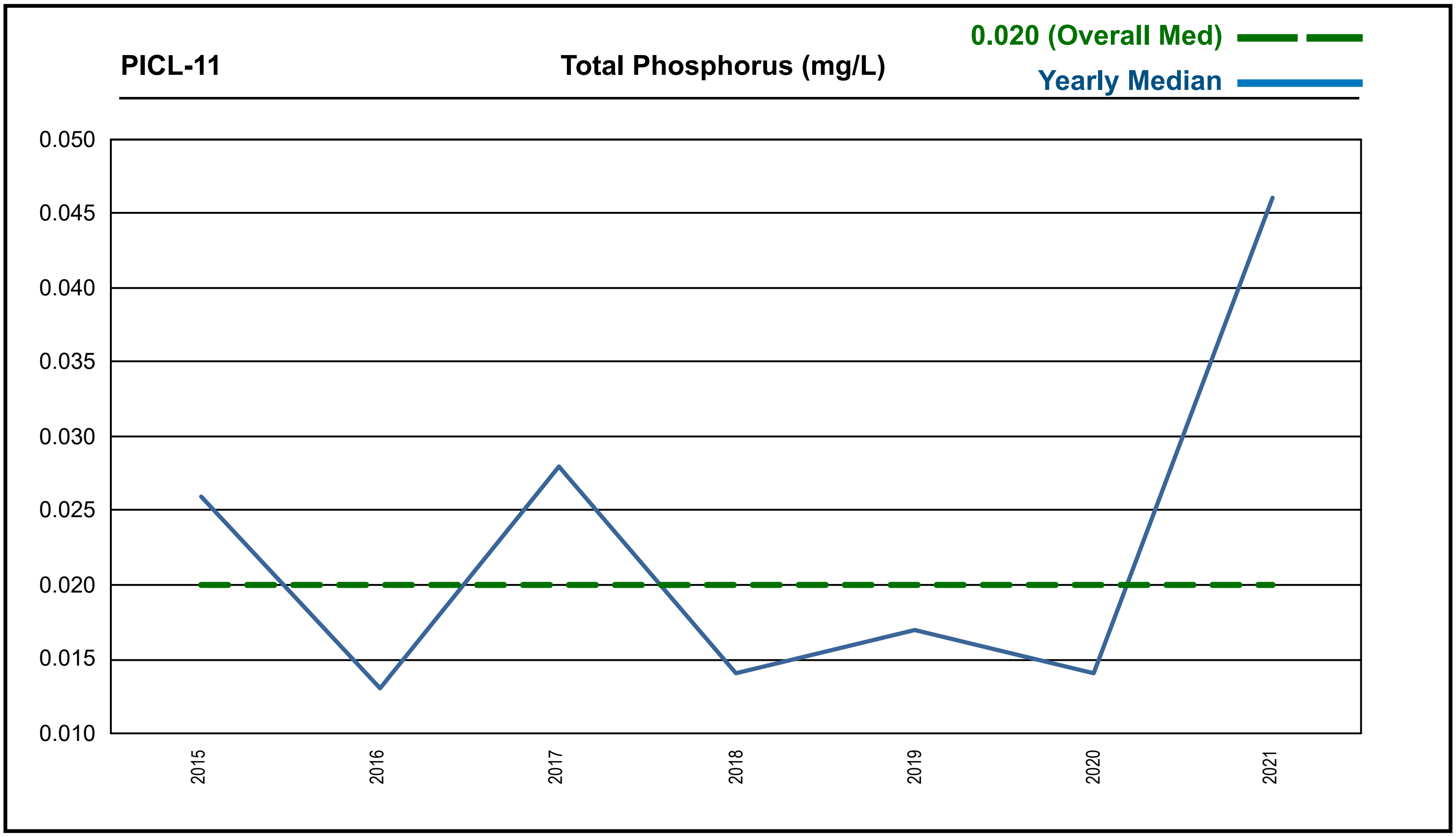
PEAG-2
Total Nitrogen (mg/L)
0.919 (Overall Med)
Yearly Median
1.6
1.4
1.2
1
0.8
0.6
0.4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


PICL-11 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2015
2016
2017
2018
2019
2020
2021

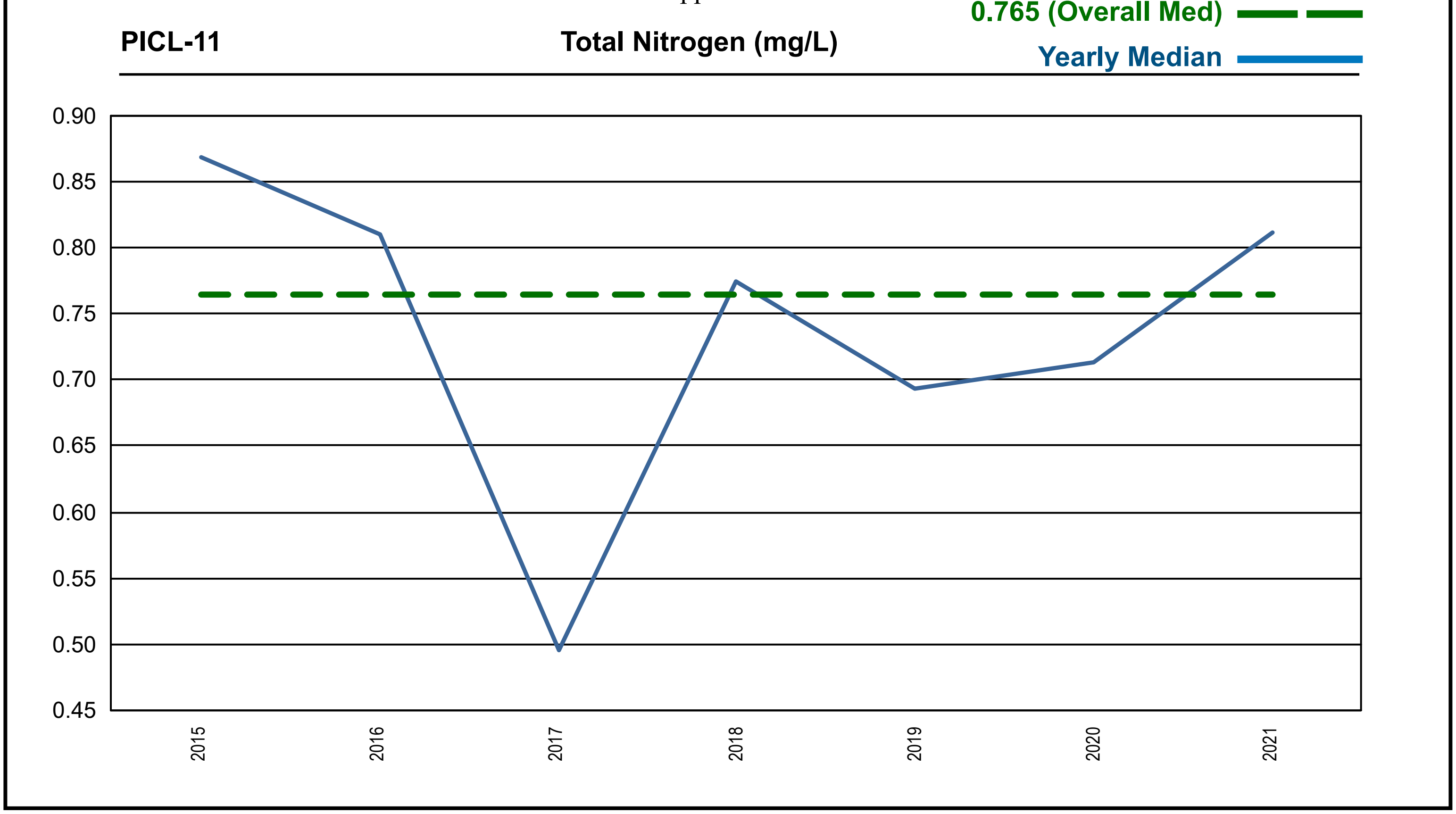

PICL-11
Turbidity (NTU)
3.2 (Overall Med)
Yearly Median
4.4
4
3.6
3.2
2.8
2.4
2
1.6
2015
2016
2017
2018
2019
2020
2021

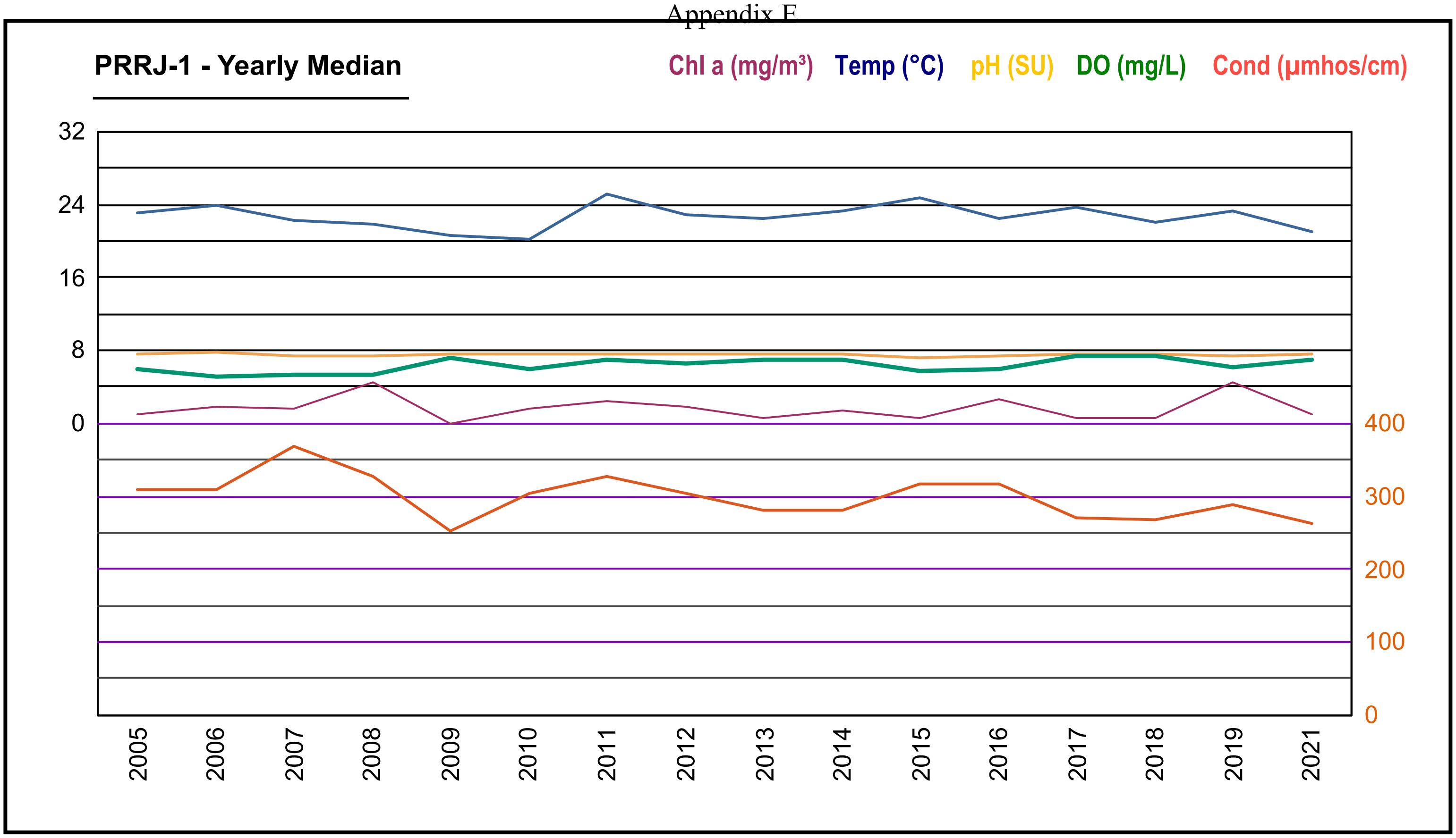


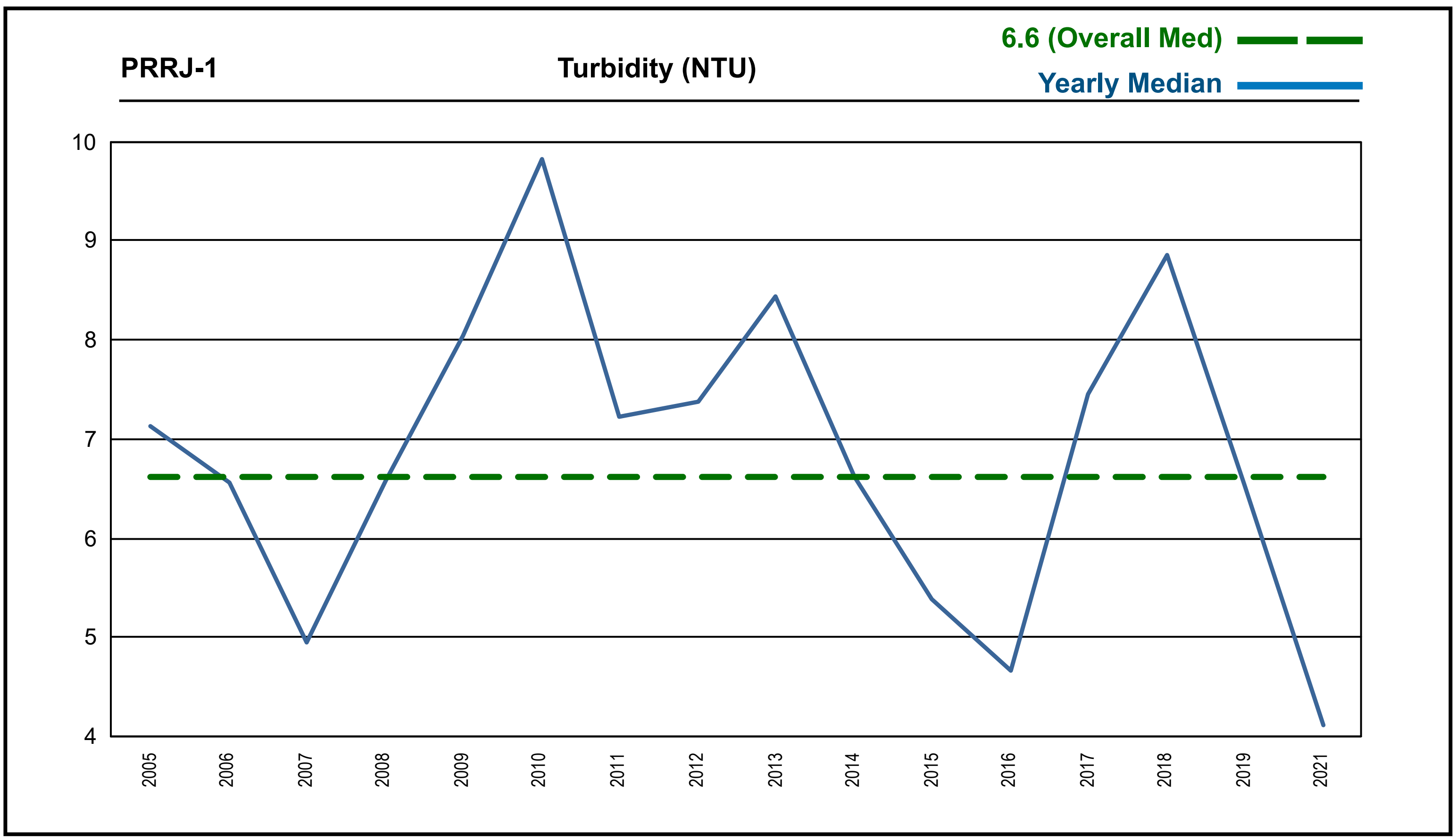
4.0 (Overall Med)
PICL-11
Total Suspended Solids (mg/L)
Yearly Median
6
5.5
5
4.5
4
3.5
3
2.5
2
2015
2016
2017
2018
2019
2020
2021

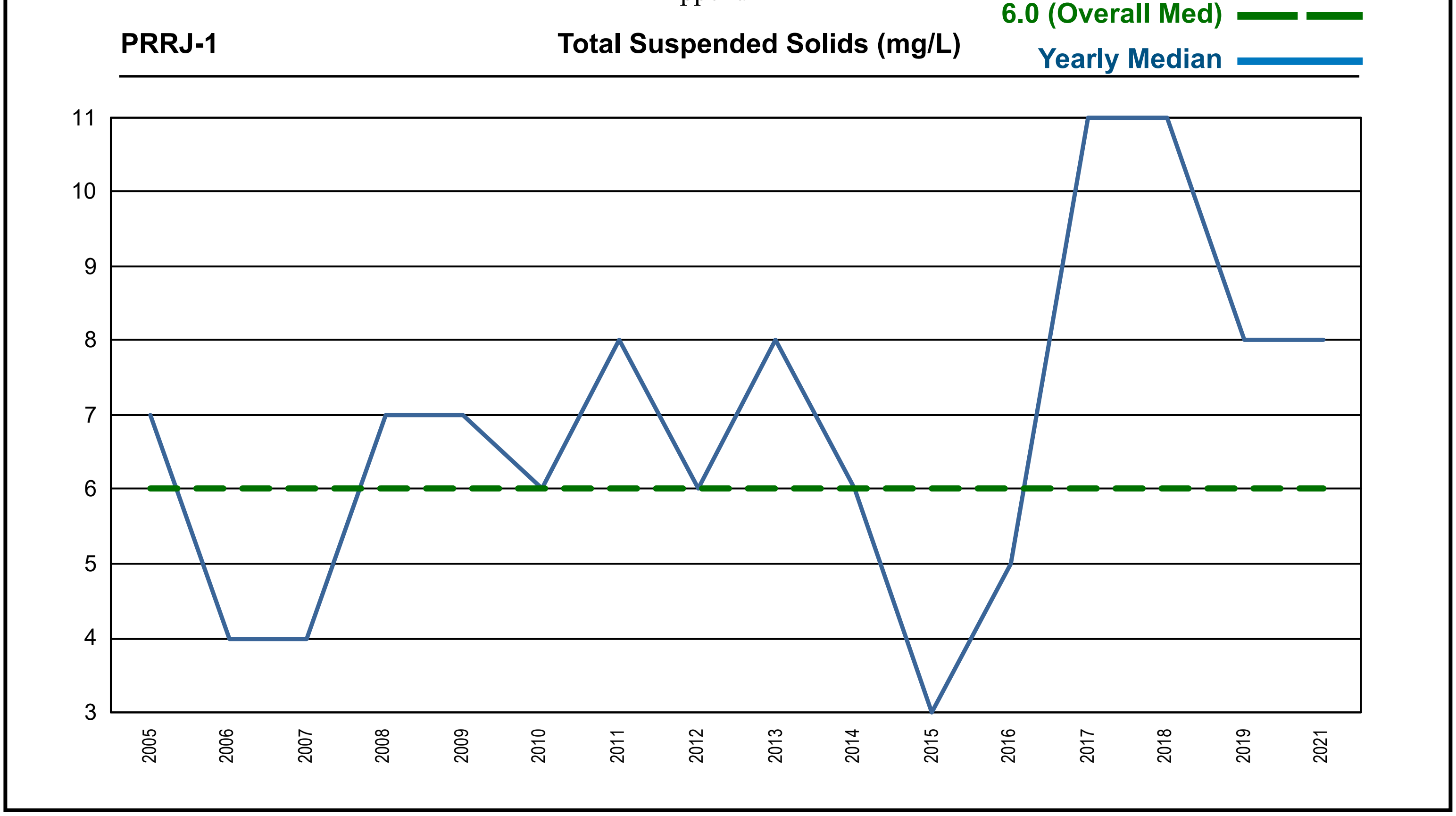


0.020 (Overall Med)
PICL-11
Total Phosphorus (mg/L)
Yearly Median
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2015
2016
2017
2018
2019
2020
2021

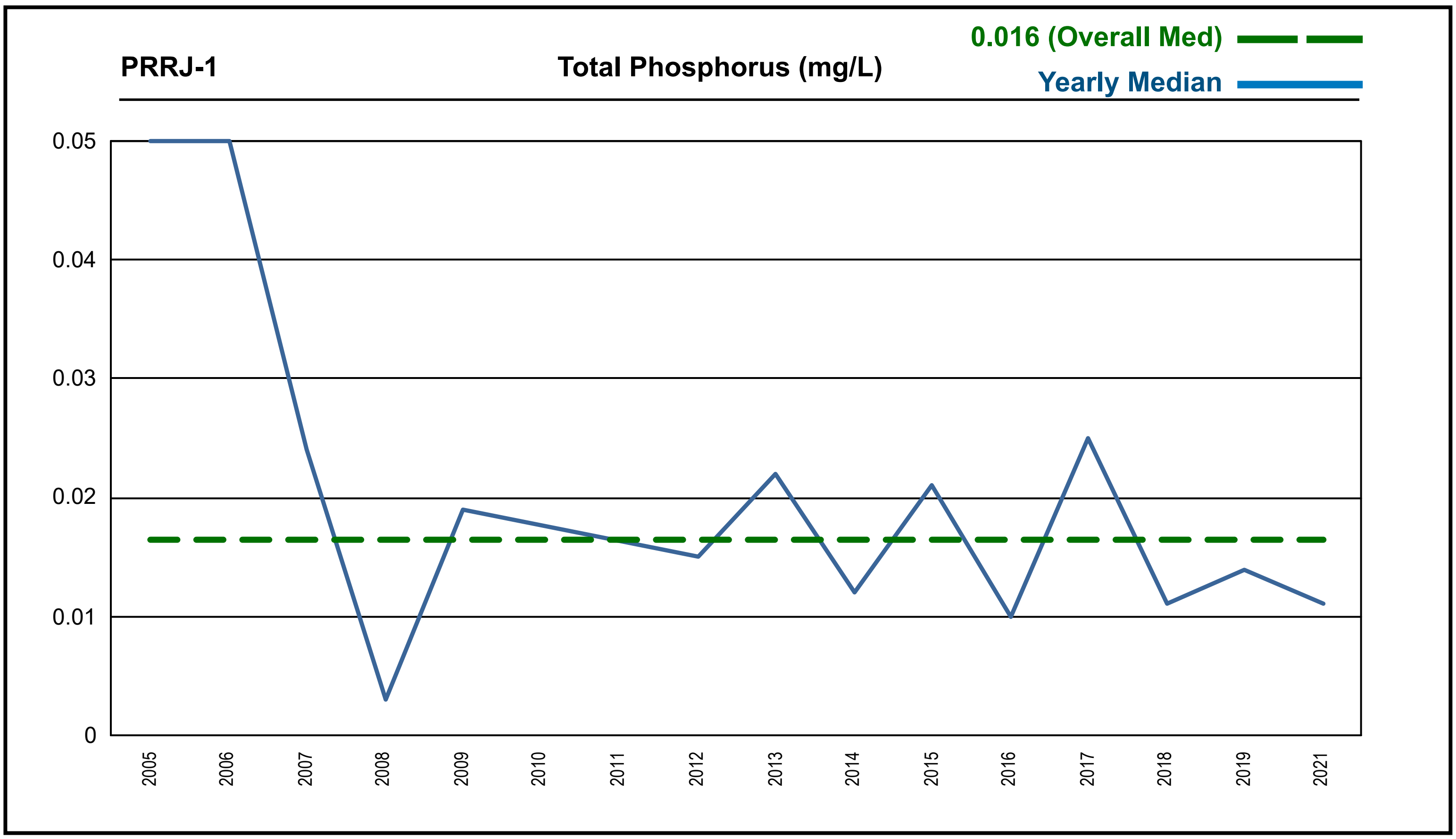

PICL-11
Total Nitrogen (mg/L)
0.765 (Overall Med)
Yearly Median
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
2015
2016
2017
2018
2019
2020
2021


PRRJ-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
400
300
200
100
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

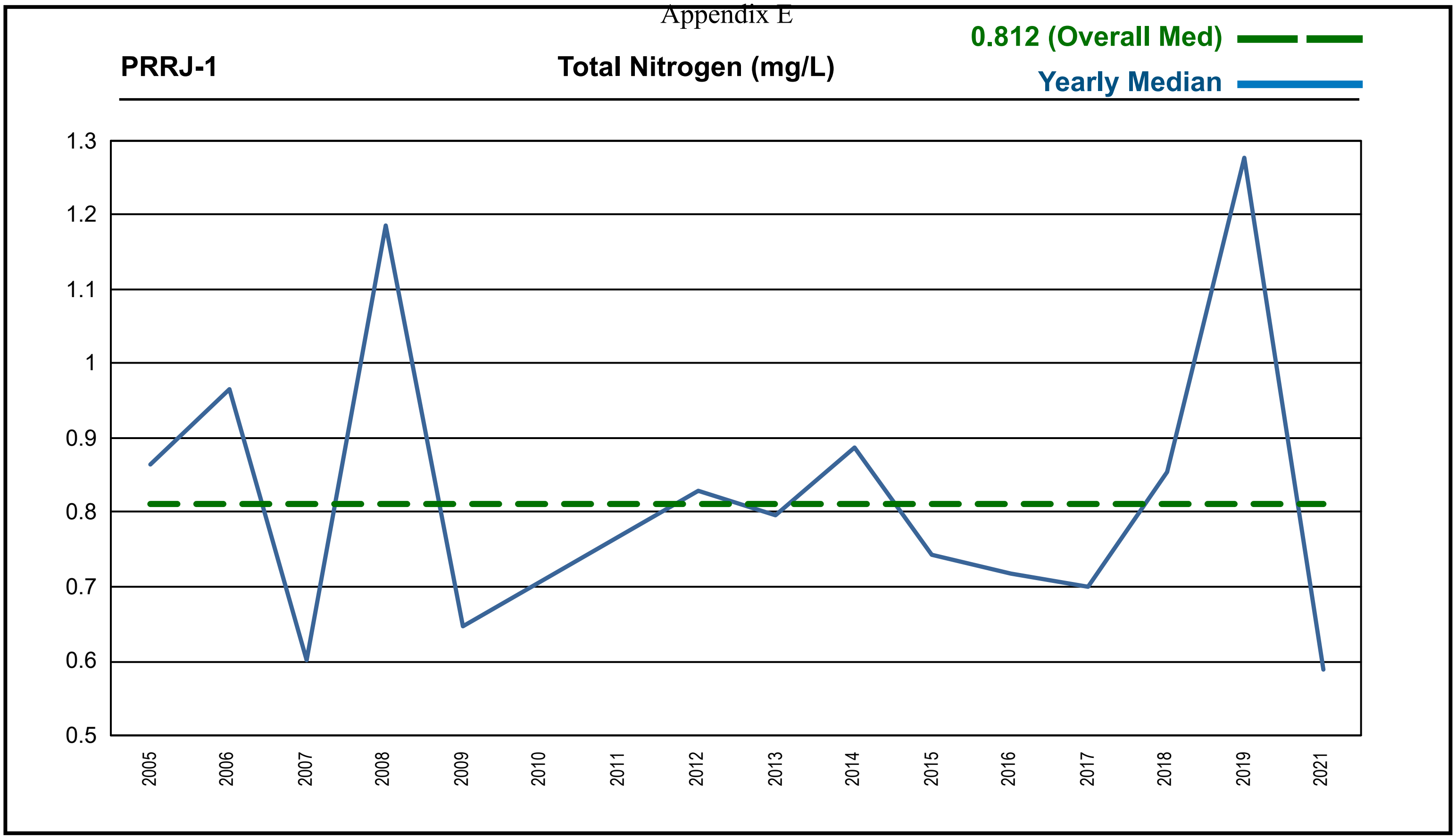

PRRJ-1
Turbidity (NTU)
6.6 (Overall Med)
Yearly Median
10
9
8
7
6
5
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

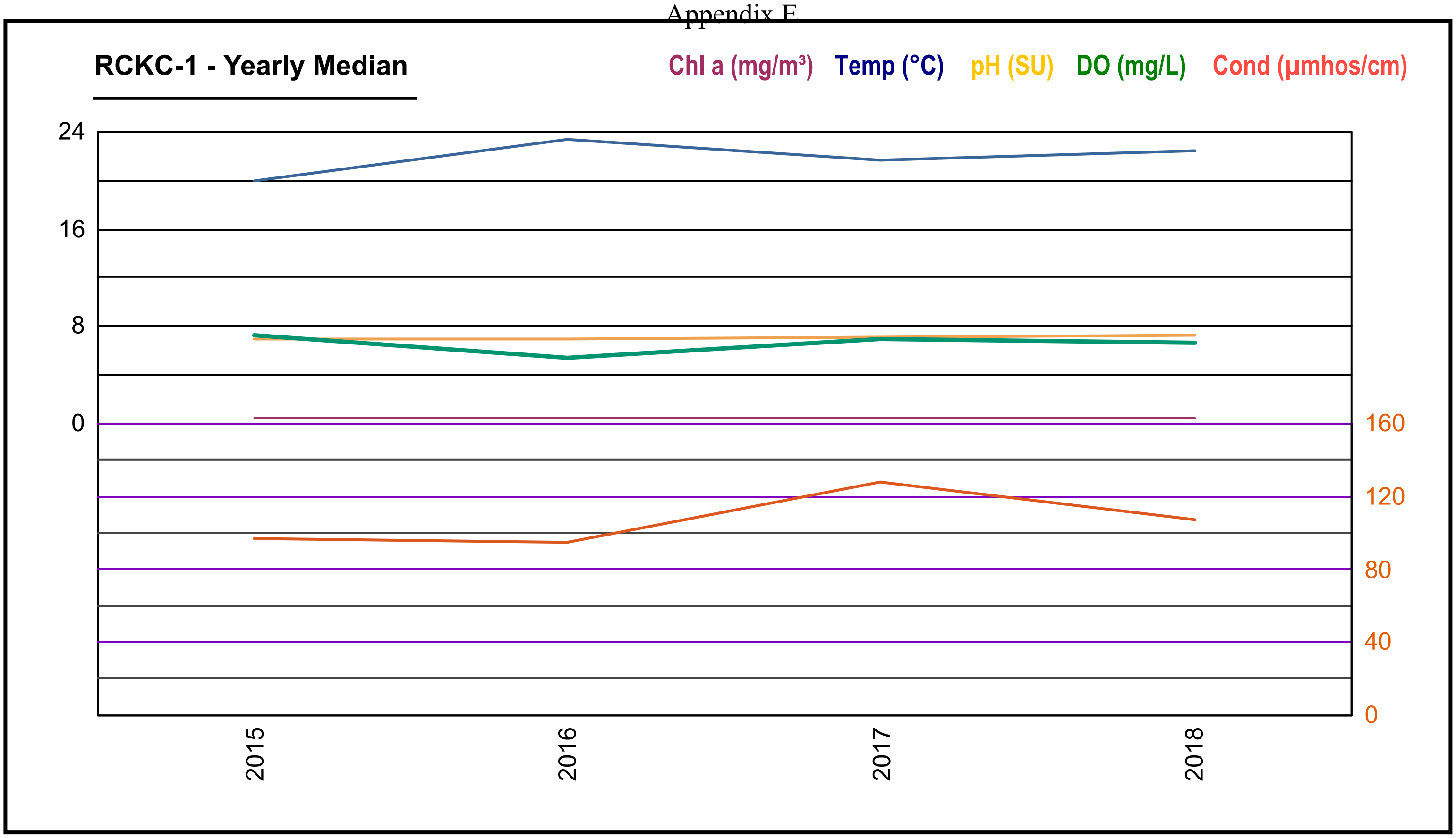


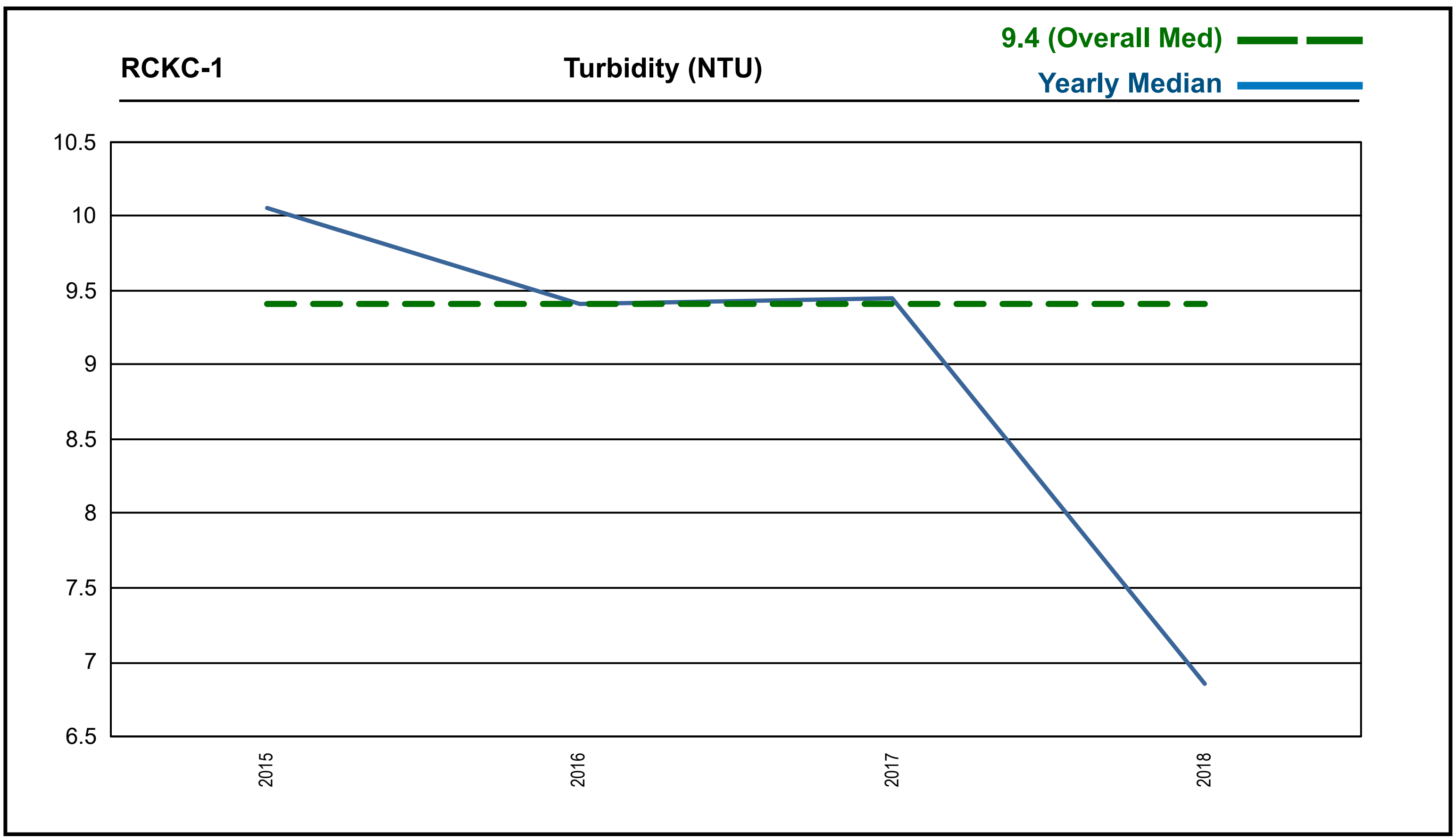
6.0 (Overall Med)
PRRJ-1
Total Suspended Solids (mg/L)
Yearly Median
11
10
9
8
7
6
5
4
3
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

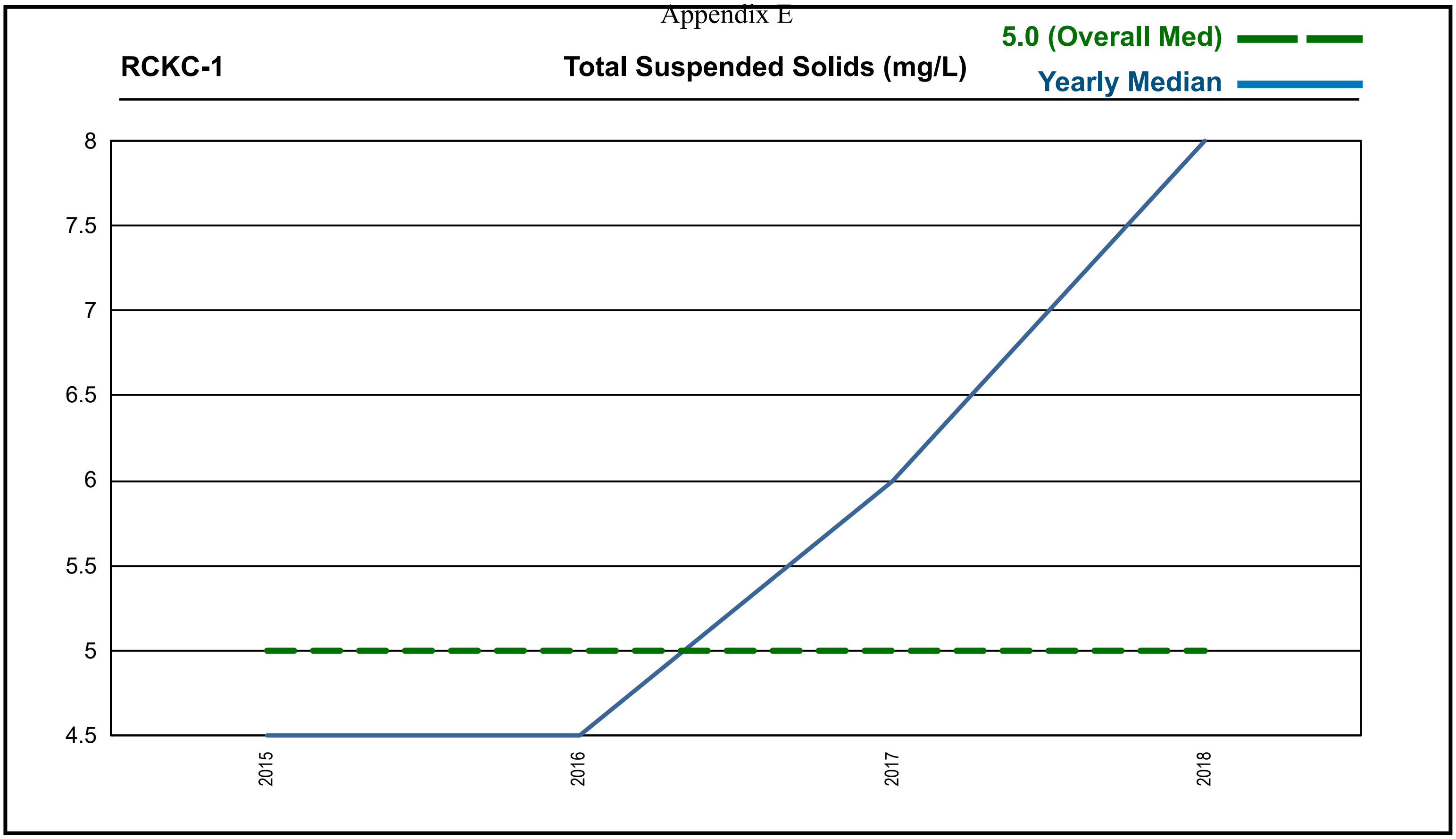


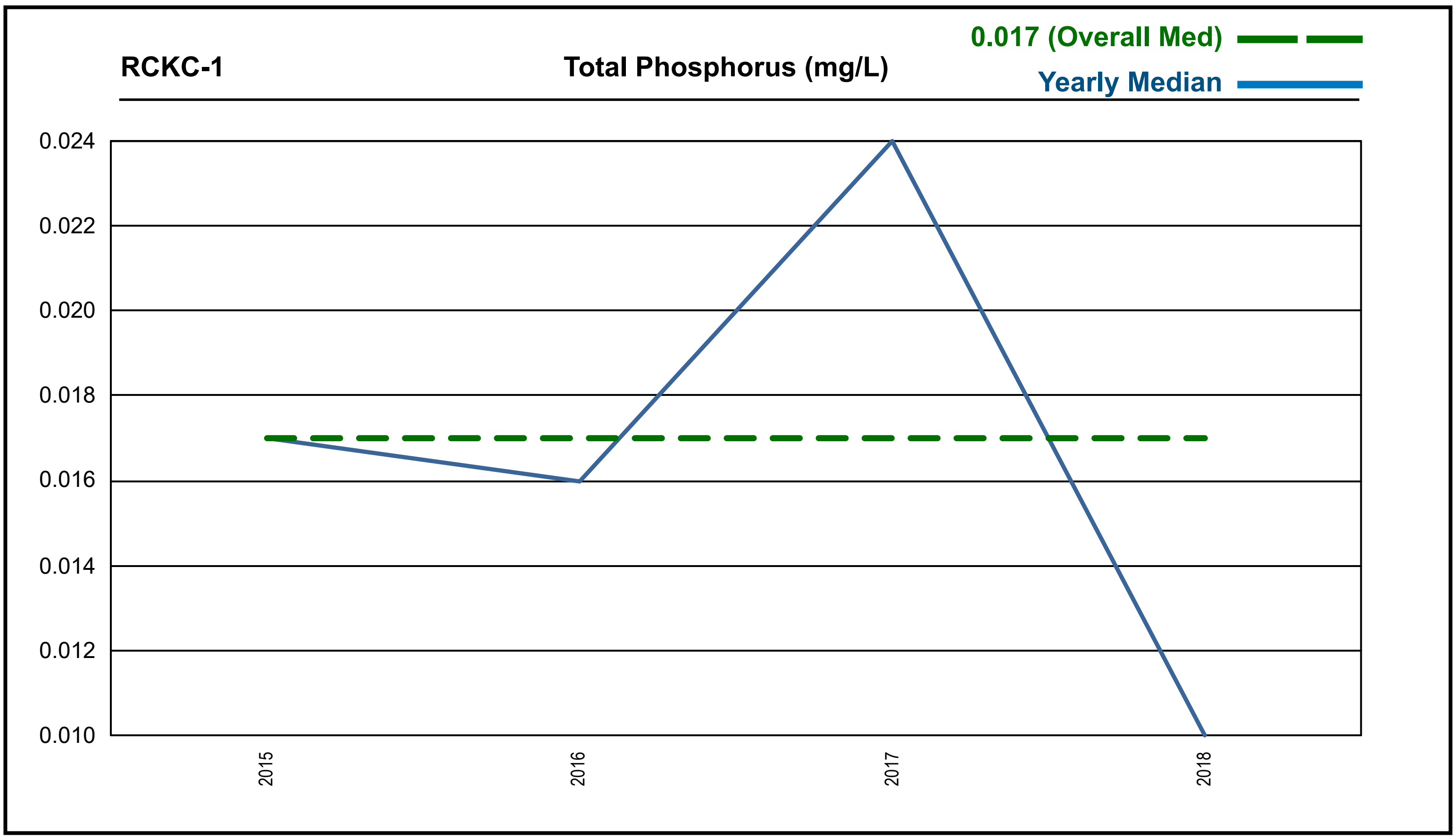
0.016 (Overall Med)
PRRJ-1
Total Phosphorus (mg/L)
Yearly Median
0.05
0.04
0.03
0.02
0.01
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

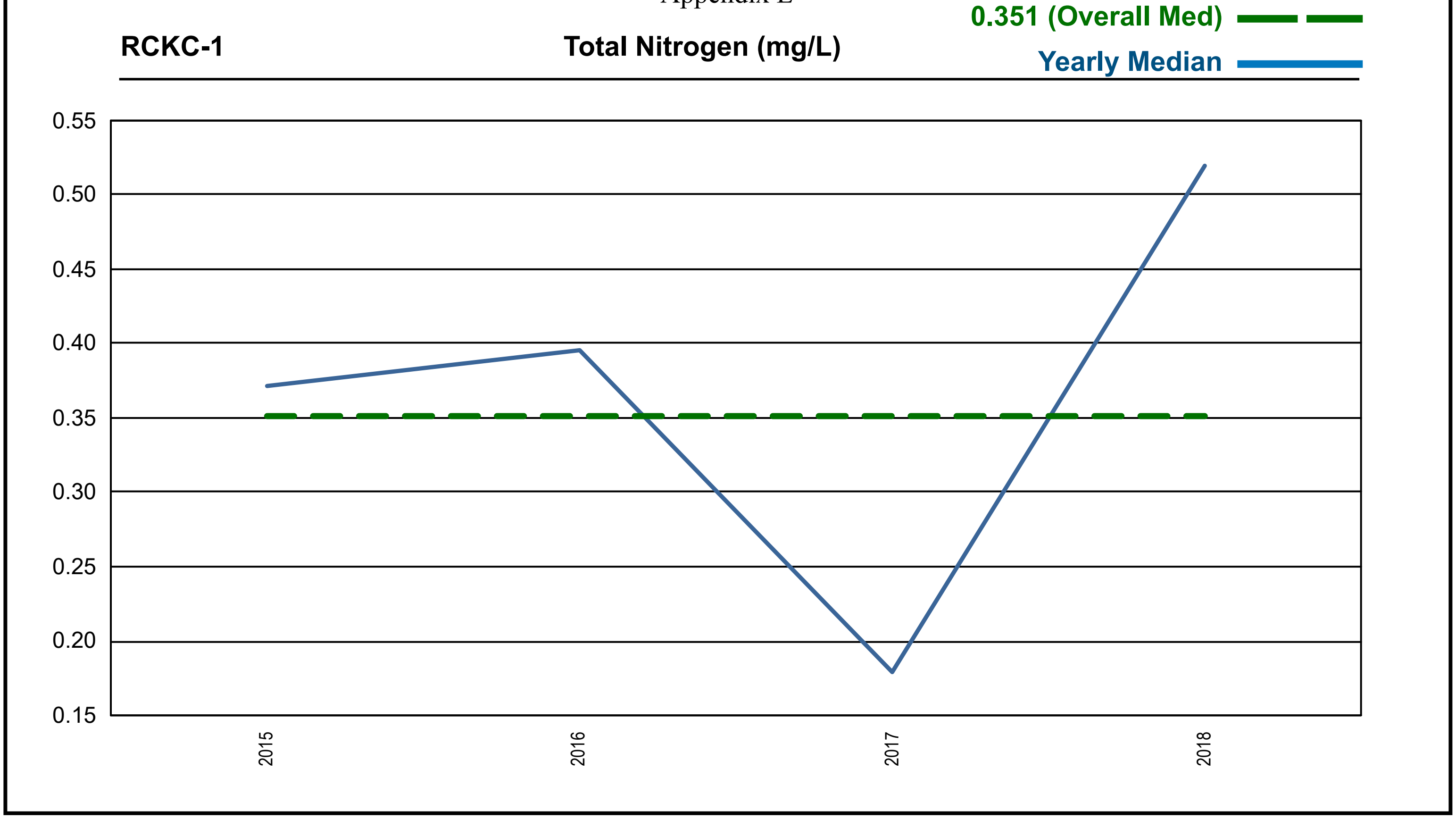

PRRJ-1
Total Nitrogen (mg/L)
0.812 (Overall Med)
Yearly Median
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

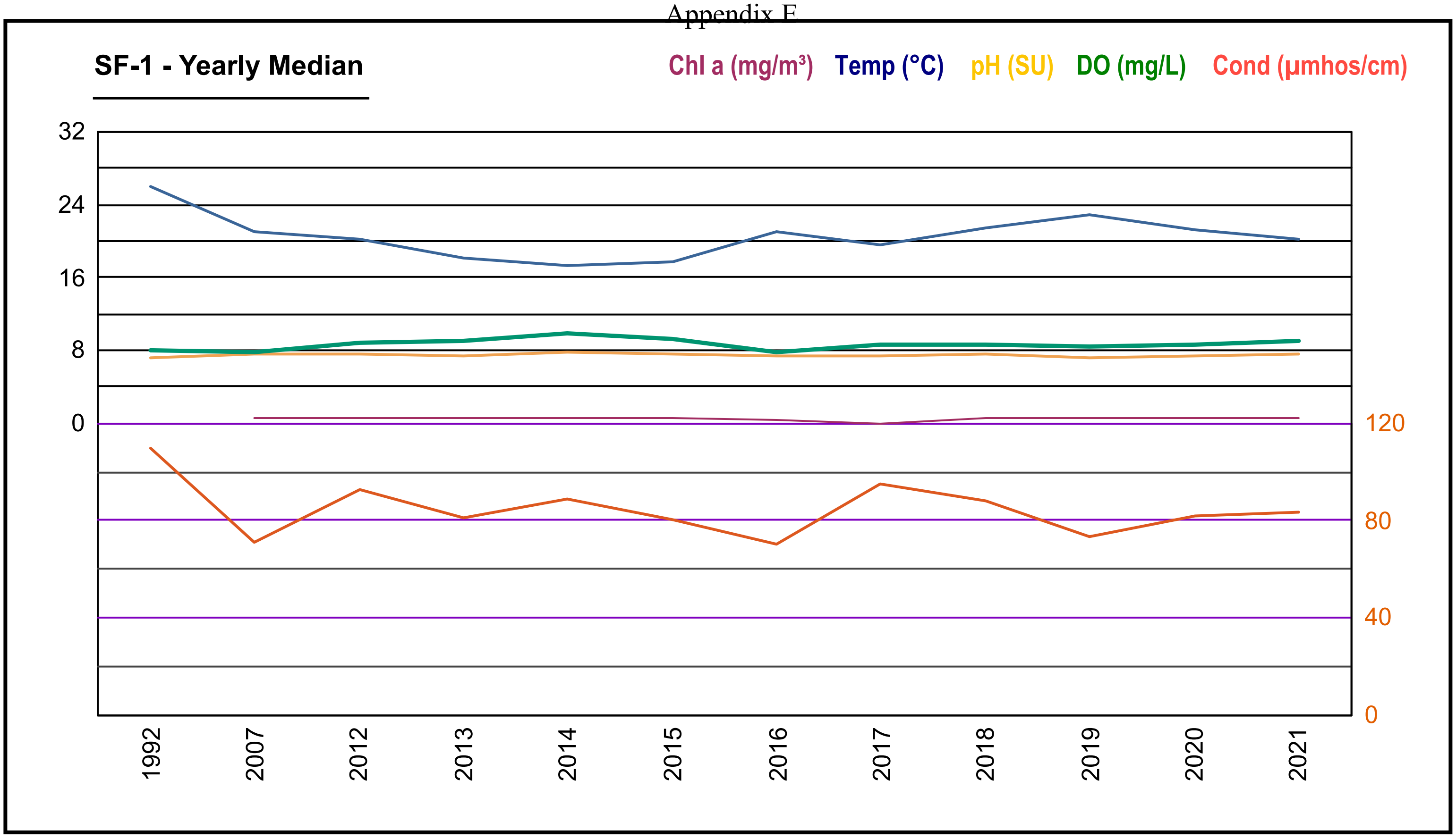

RCKC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
160
120
80
40
0
2015
2016
2017
2018

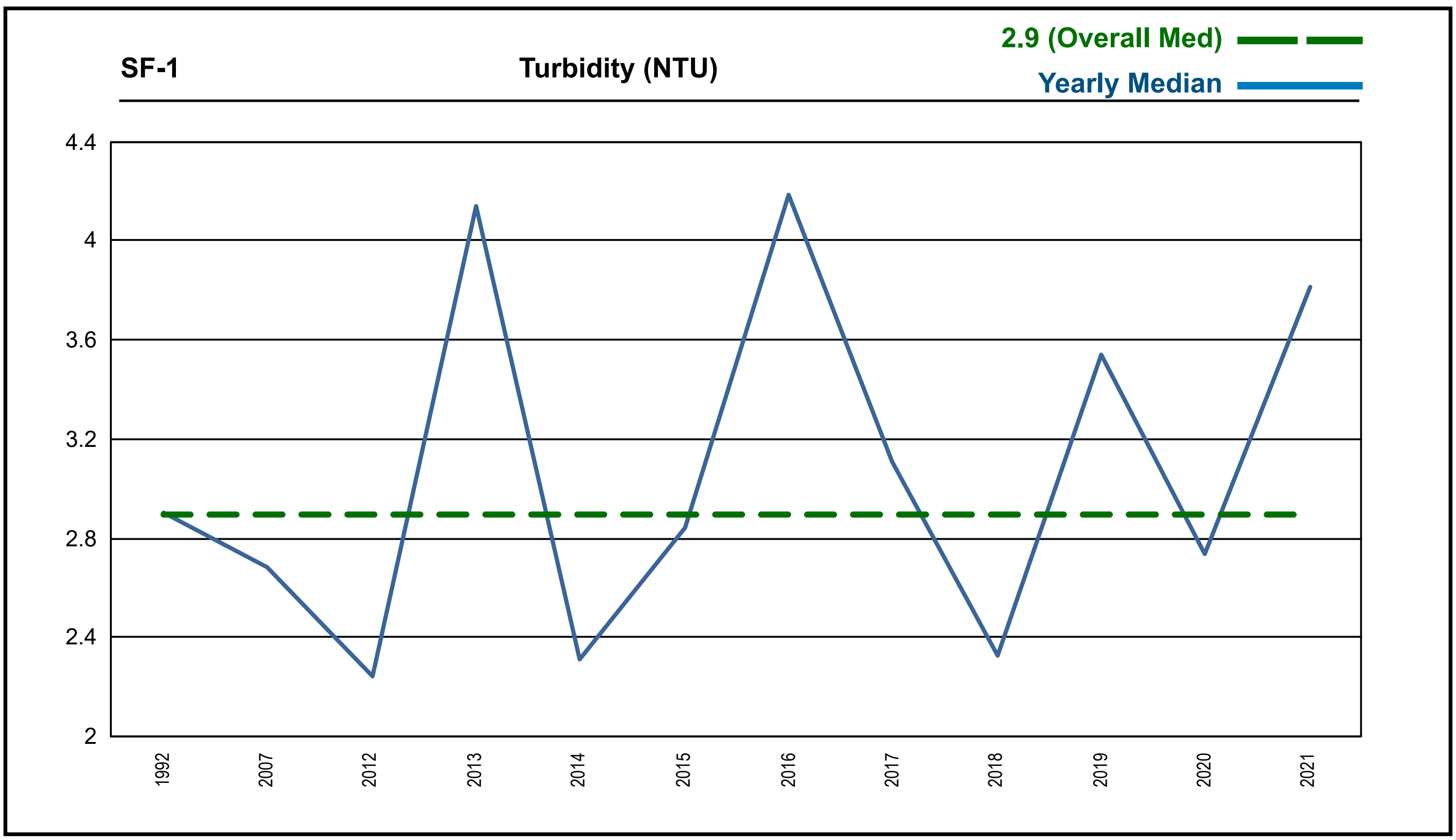

RCKC-1
Turbidity (NTU)
9.4 (Overall Med)
Yearly Median
10.5
10
9.5
9
8.5
8
7.5
7
6.5
2015
2016
2017
2018

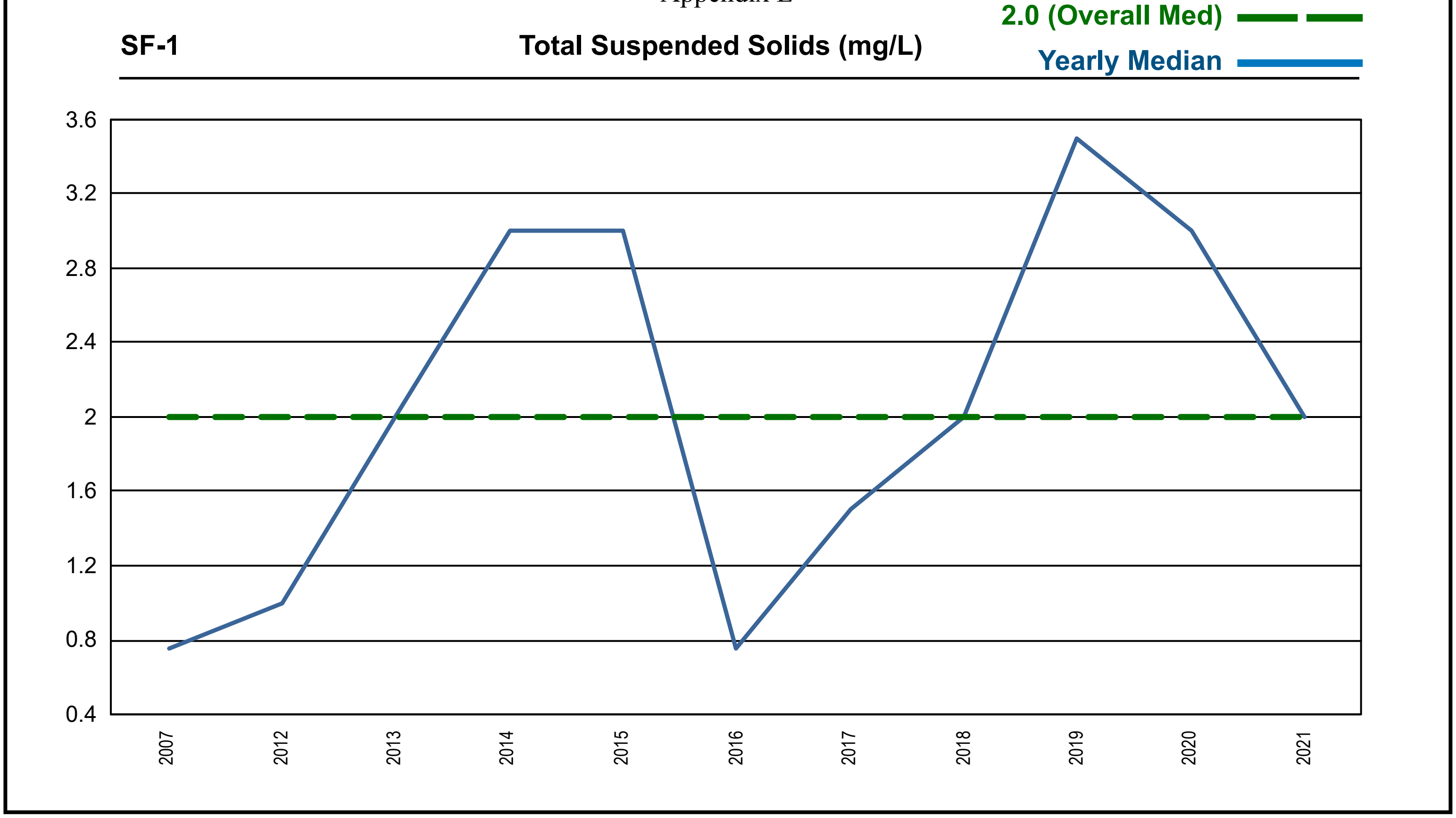

5.0 (Overall Med)
Yearly Median
RCKC-1
Total Suspended Solids (mg/L)
8
7.5
7
6.5
6
5.5
5
4.5
2015
2016
2017
2018

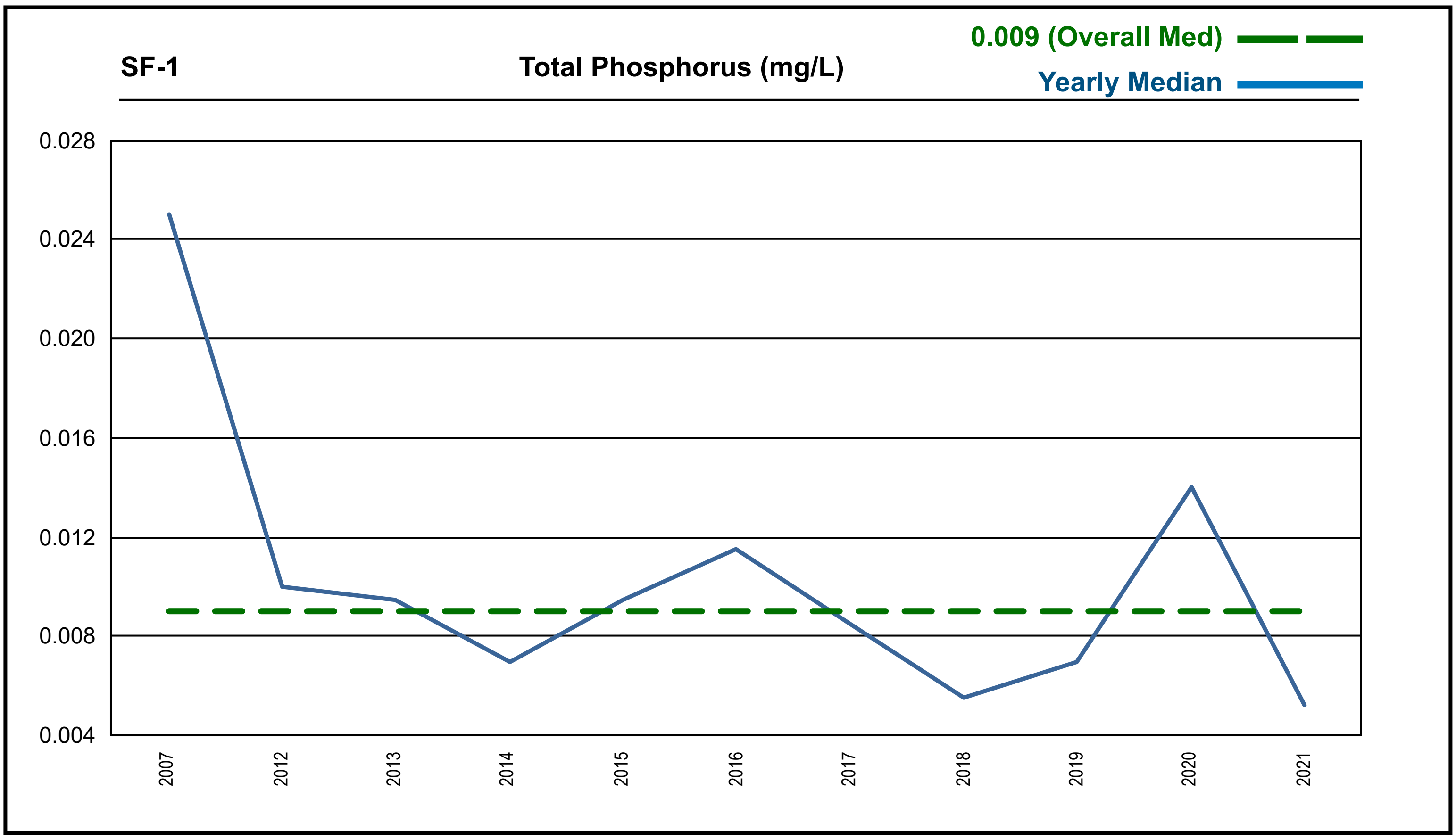

0.017 (Overall Med)
Yearly Median
RCKC-1
Total Phosphorus (mg/L)
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
2015
2016
2017
2018

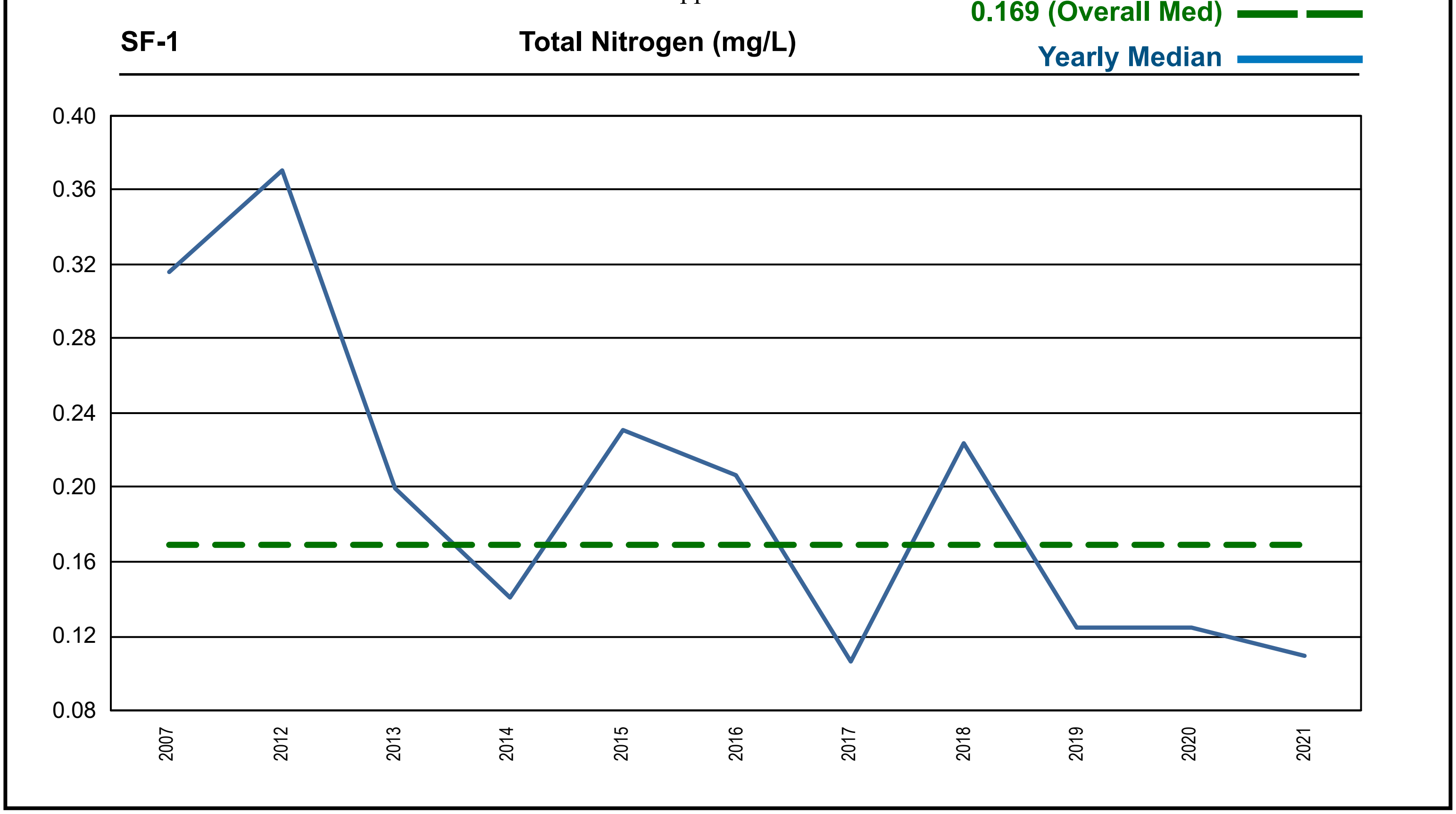

RCKC-1
Total Nitrogen (mg/L)
0.351 (Overall Med)
Yearly Median
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
2015
2016
2017
2018

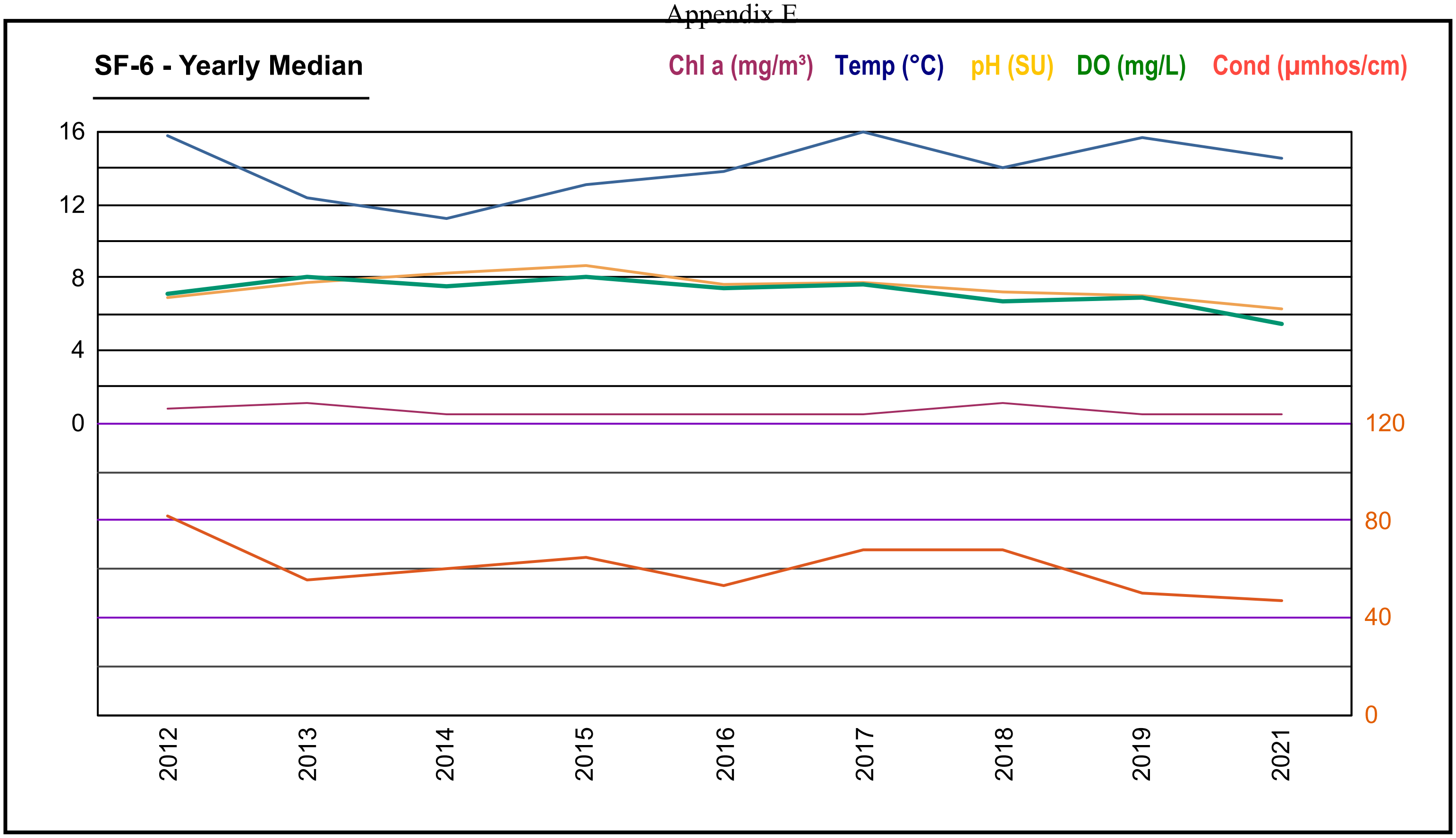

SF-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
1992
2007
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

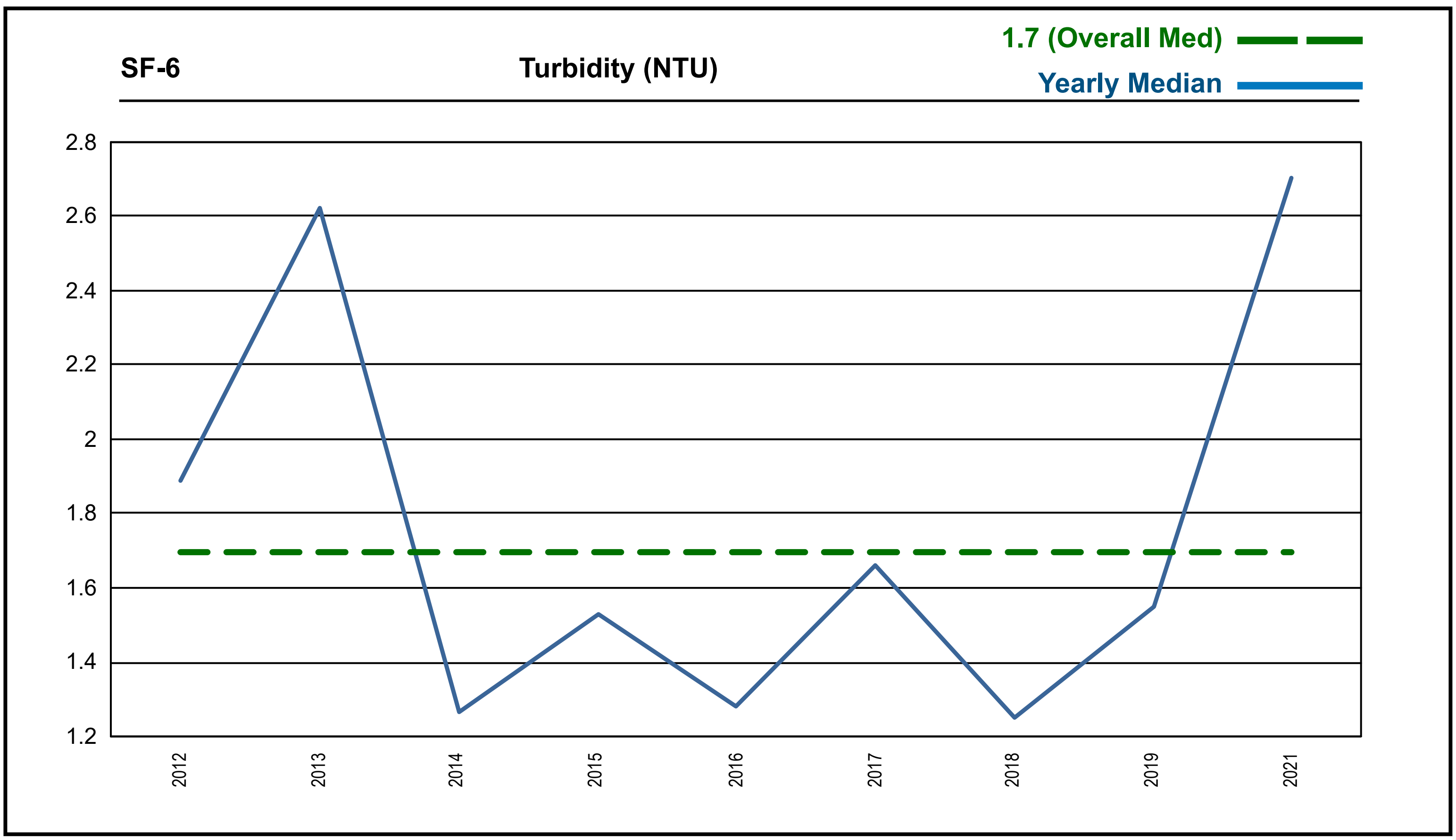

SF-1
Turbidity (NTU)
2.9 (Overall Med)
Yearly Median
4.4
4
3.6
3.2
2.8
2.4
2
1992
2007
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

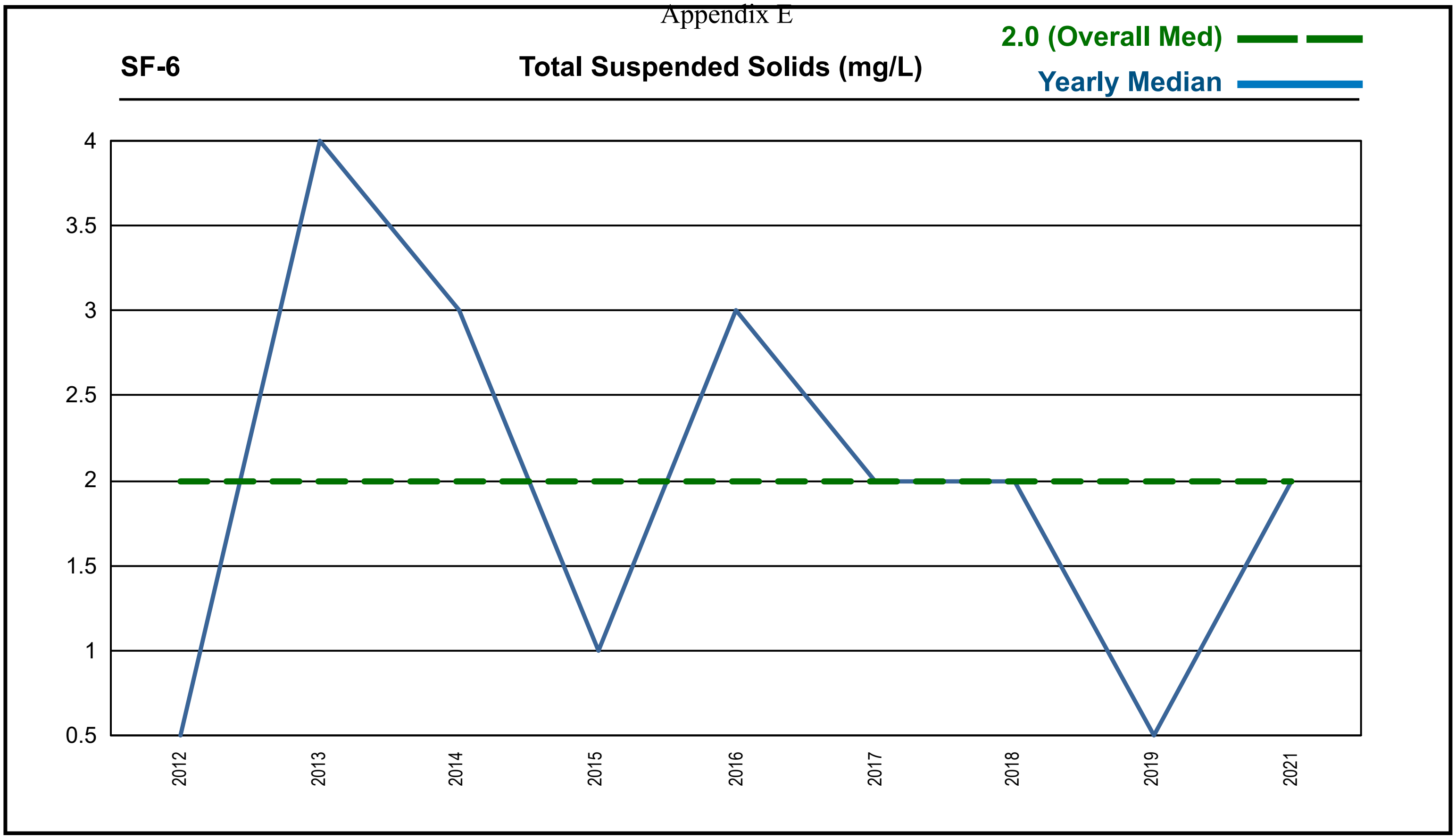

2.0 (Overall Med)
SF-1
Total Suspended Solids (mg/L)
Yearly Median
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
2007
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

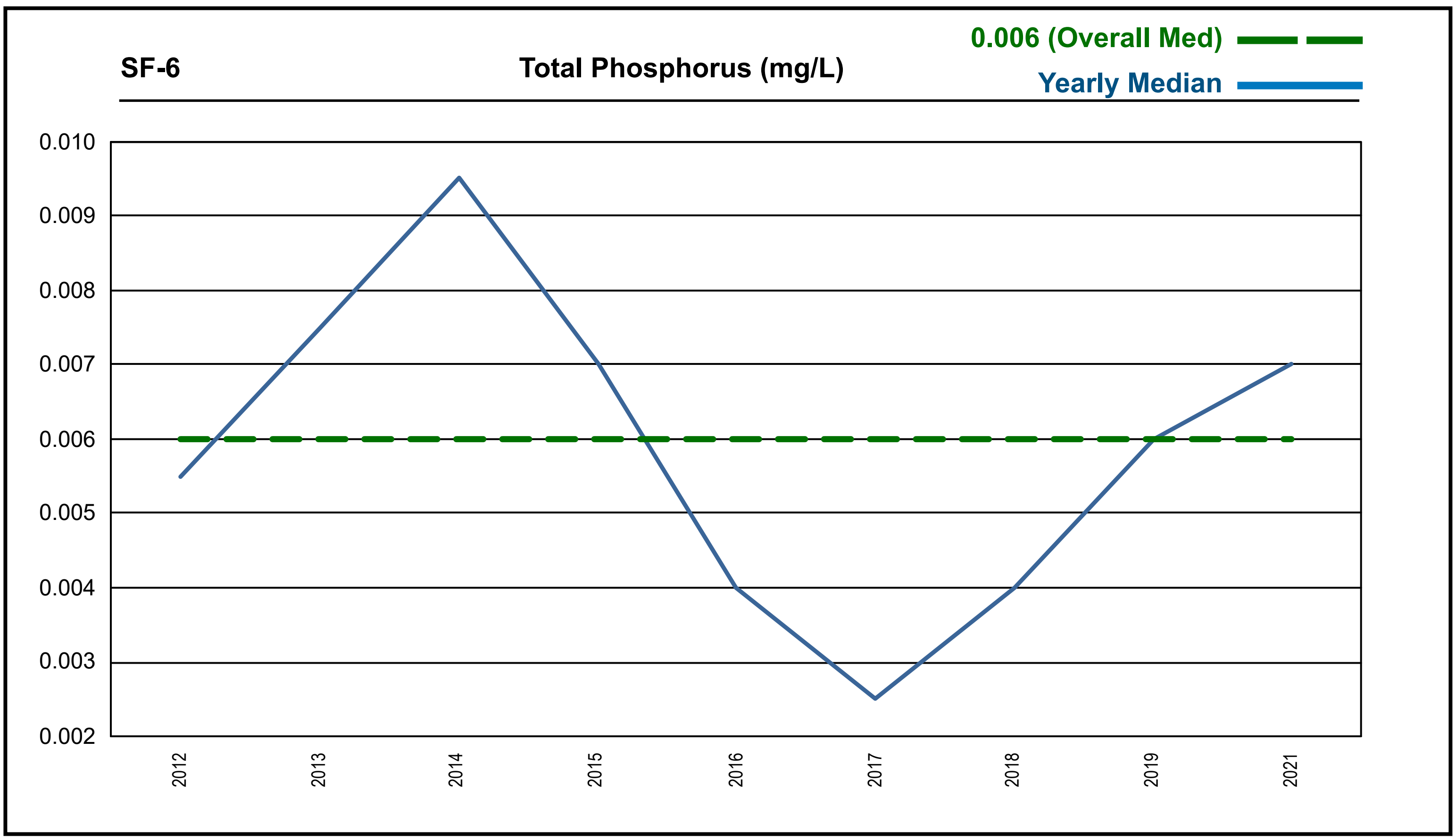

0.009 (Overall Med)
SF-1
Total Phosphorus (mg/L)
Yearly Median
0.028
0.024
0.020
0.016
0.012
0.008
0.004
2007
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

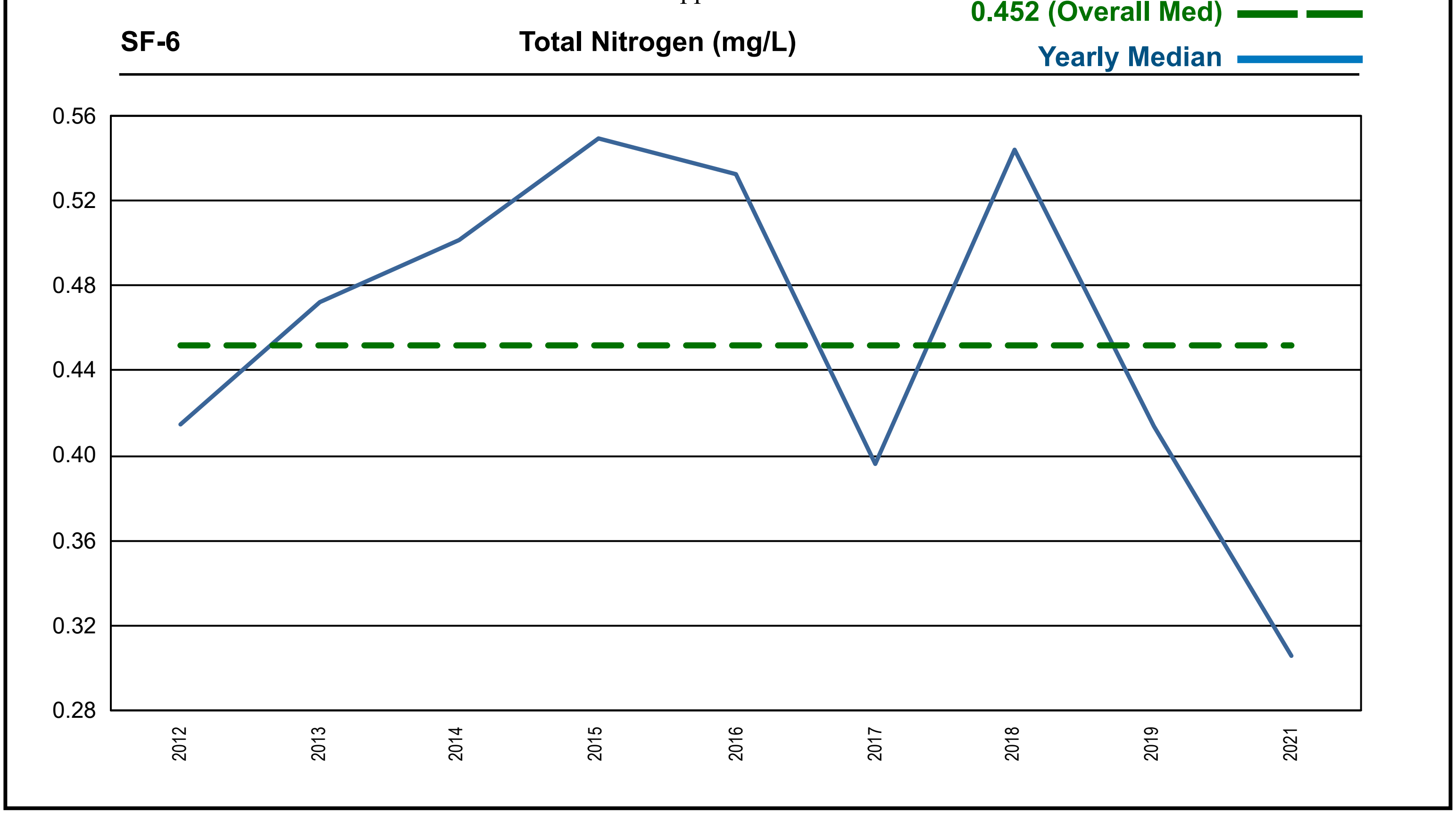

SF-1
Total Nitrogen (mg/L)
0.169 (Overall Med)
Yearly Median
0.40
0.36
0.32
0.28
0.24
0.20
0.16
0.12
0.08
2007
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

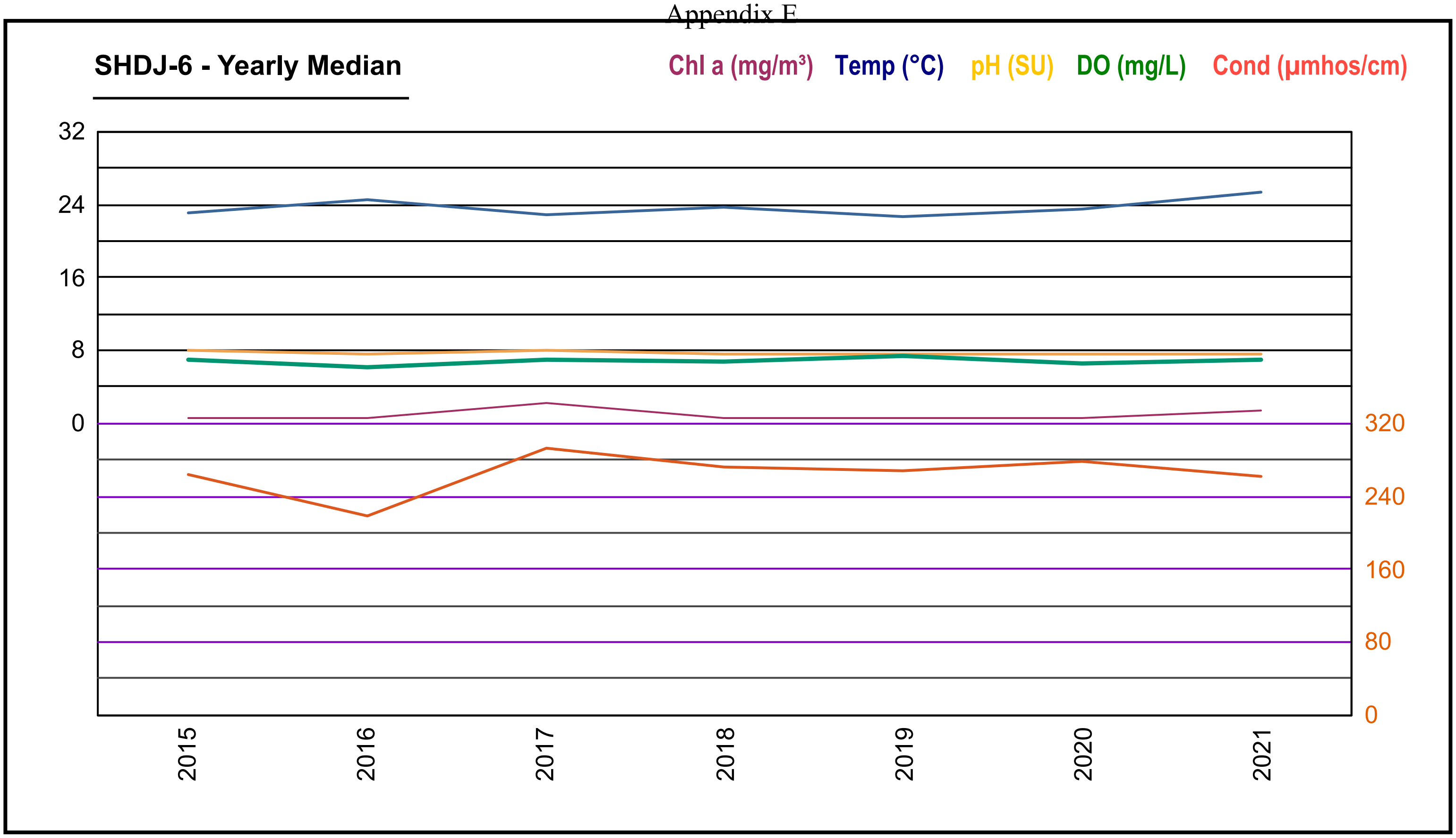

SF-6 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
16
12
8
4
0
120
80
40
0
2012
2013
2014
2015
2016
2017
2018
2019
2021

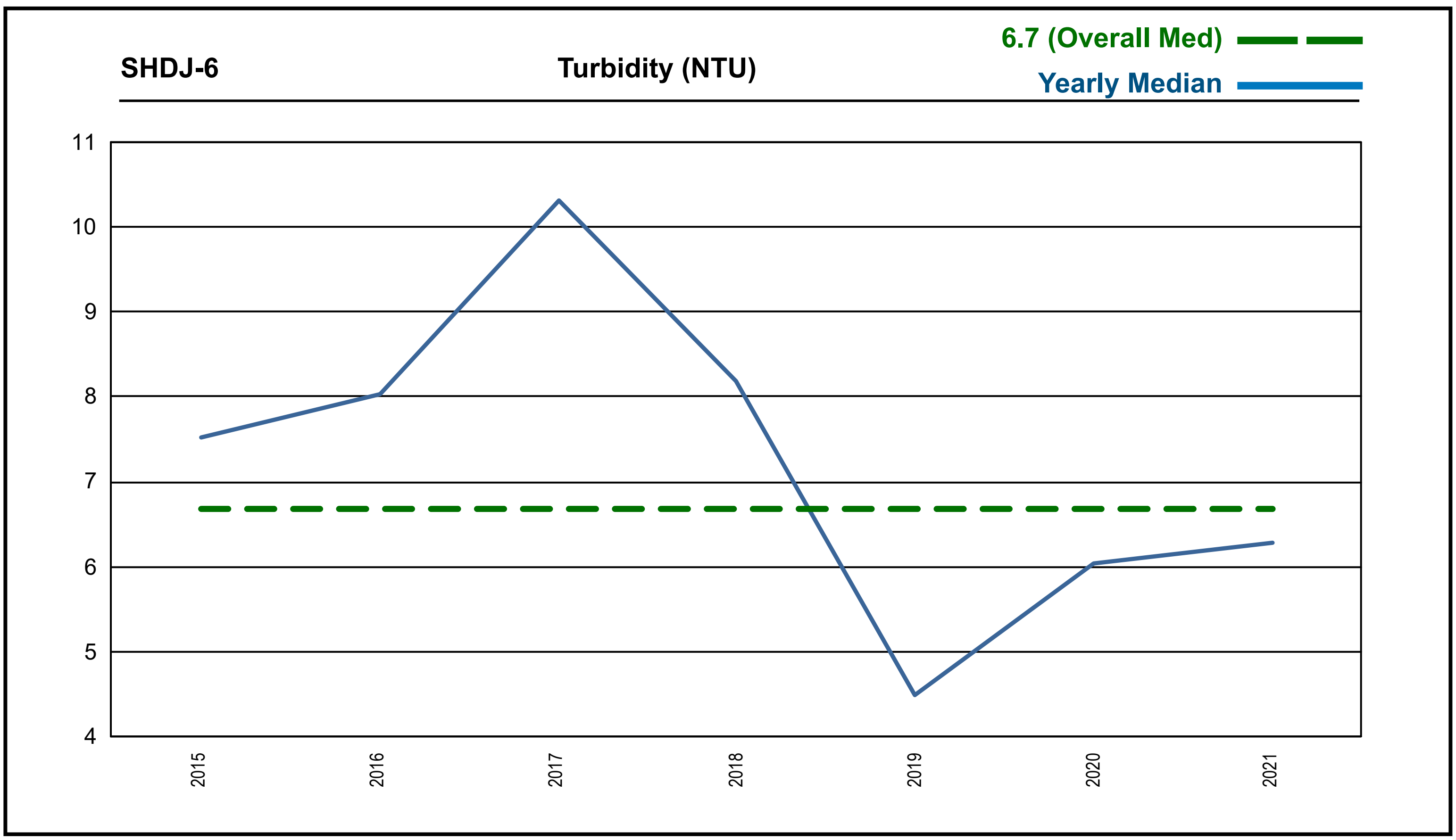

SF-6
Turbidity (NTU)
1.7 (Overall Med)
Yearly Median
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
2012
2013
2014
2015
2016
2017
2018
2019
2021

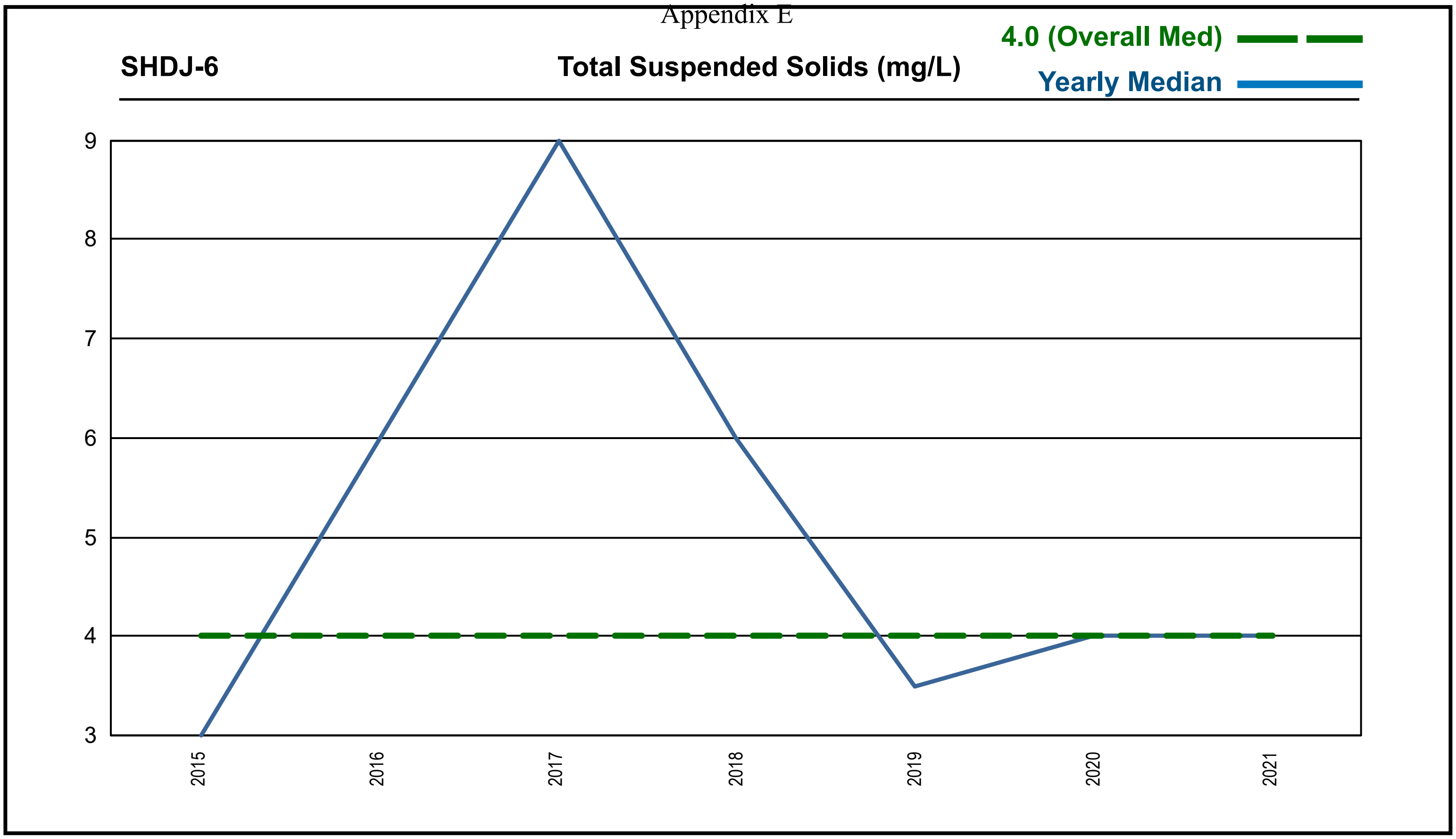

2.0 (Overall Med)
Yearly Median
SF-6
Total Suspended Solids (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
2012
2013
2014
2015
2016
2017
2018
2019
2021

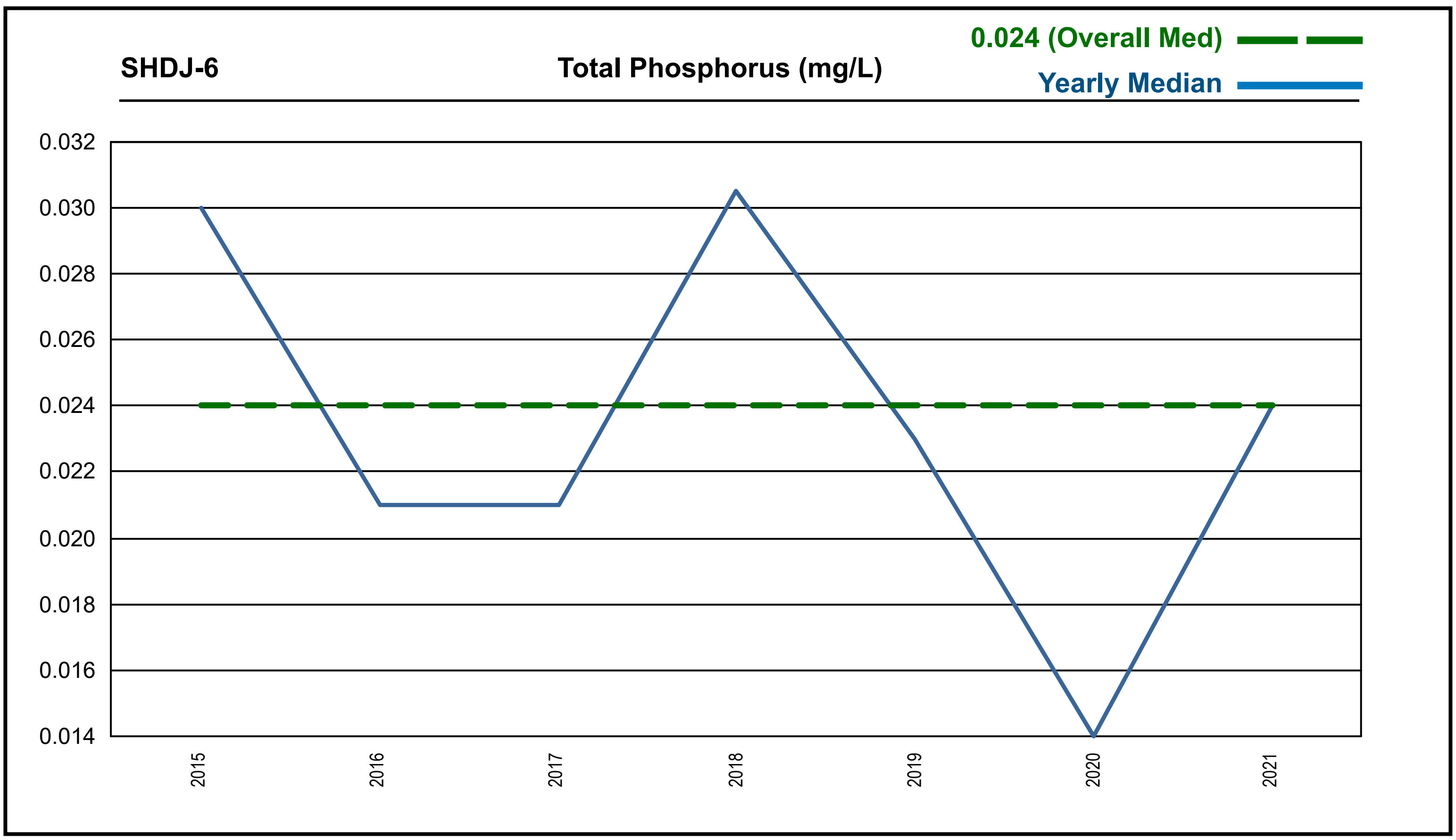

0.006 (Overall Med)
Yearly Median
SF-6
Total Phosphorus (mg/L)
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
2012
2013
2014
2015
2016
2017
2018
2019
2021

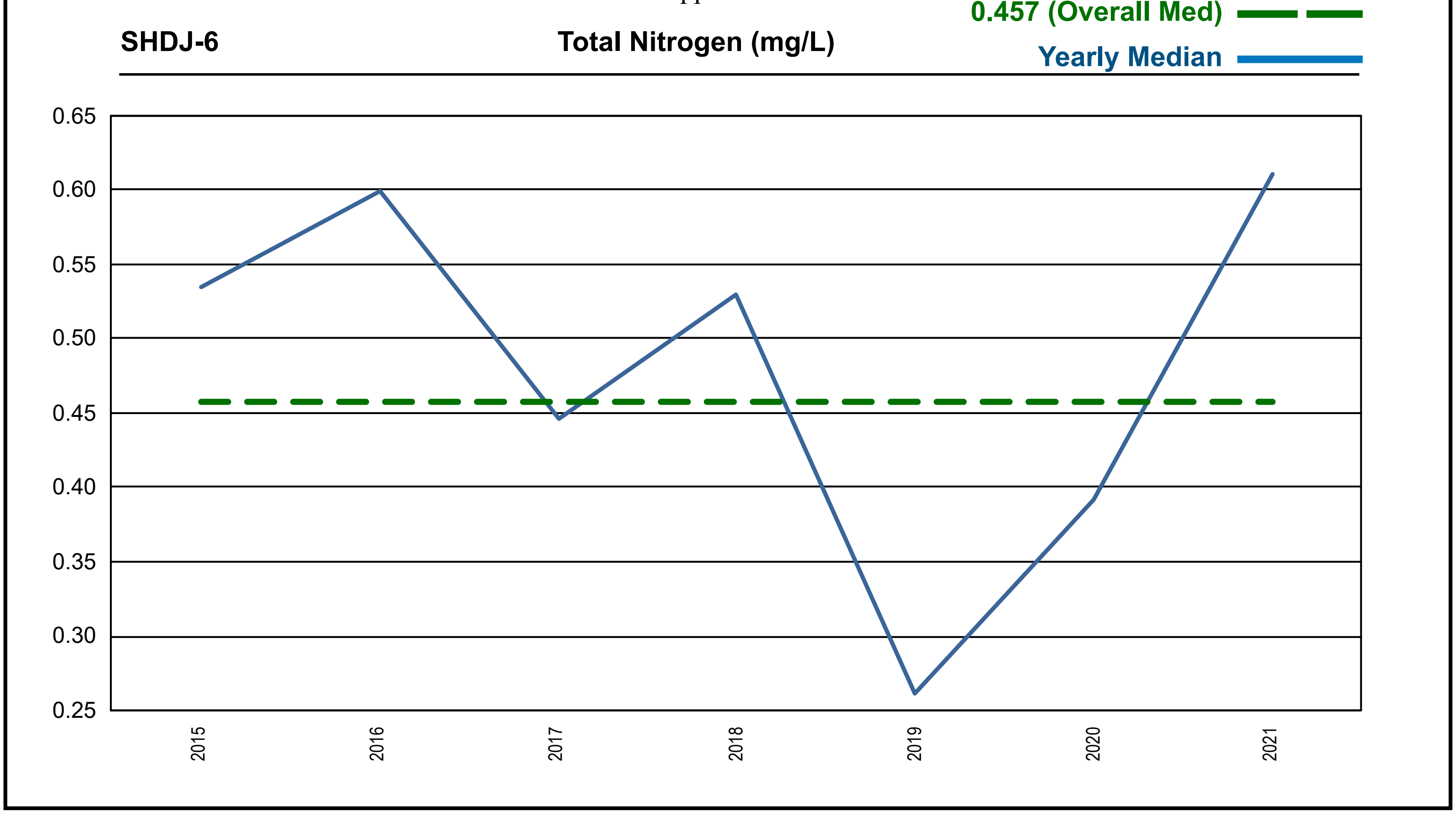

0.452 (Overall Med)
Yearly Median
SF-6
Total Nitrogen (mg/L)
0.56
0.52
0.48
0.44
0.40
0.36
0.32
0.28
2012
2013
2014
2015
2016
2017
2018
2019
2021

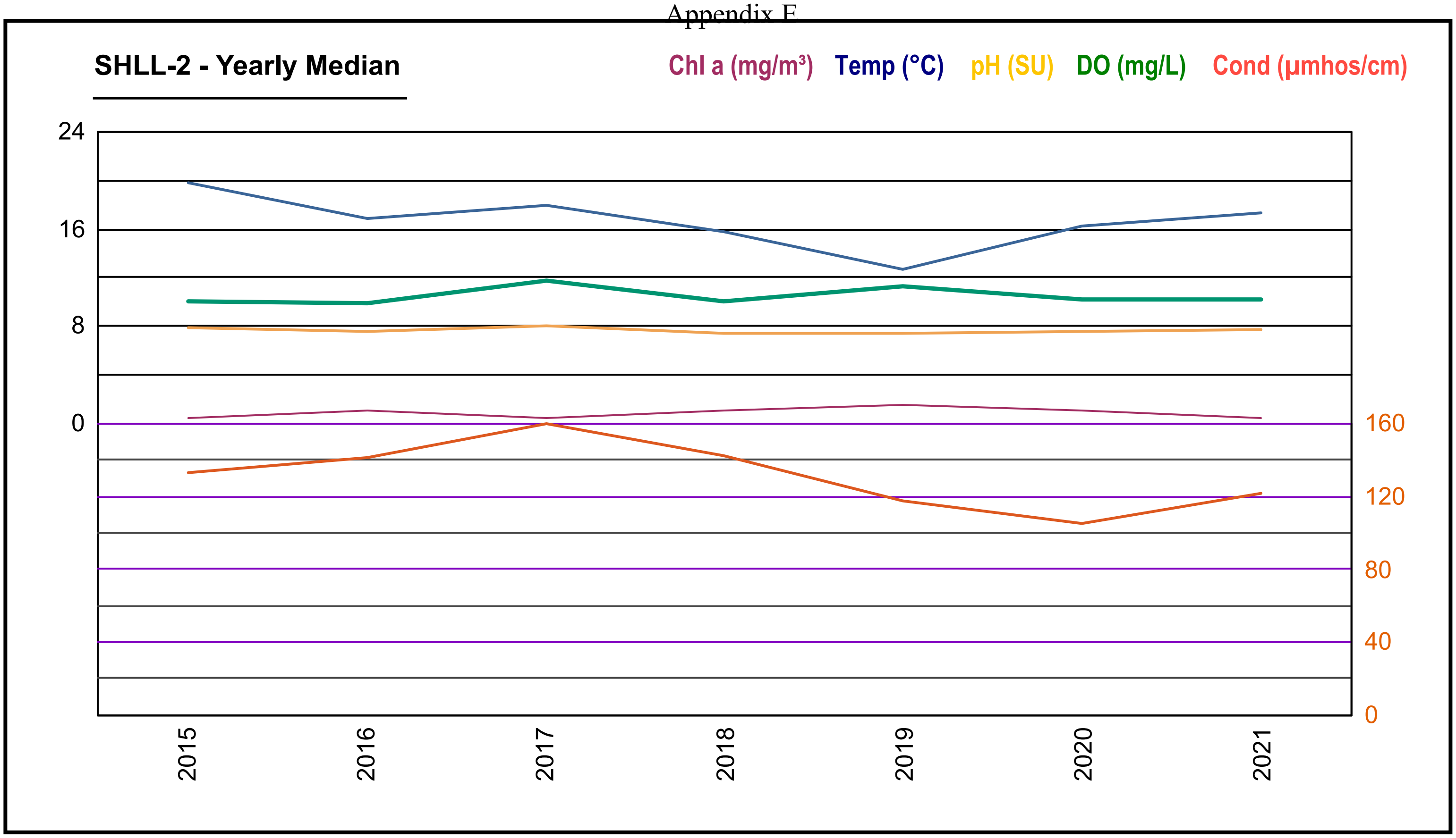

SHDJ-6 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
320
240
160
80
0
2015
2016
2017
2018
2019
2020
2021

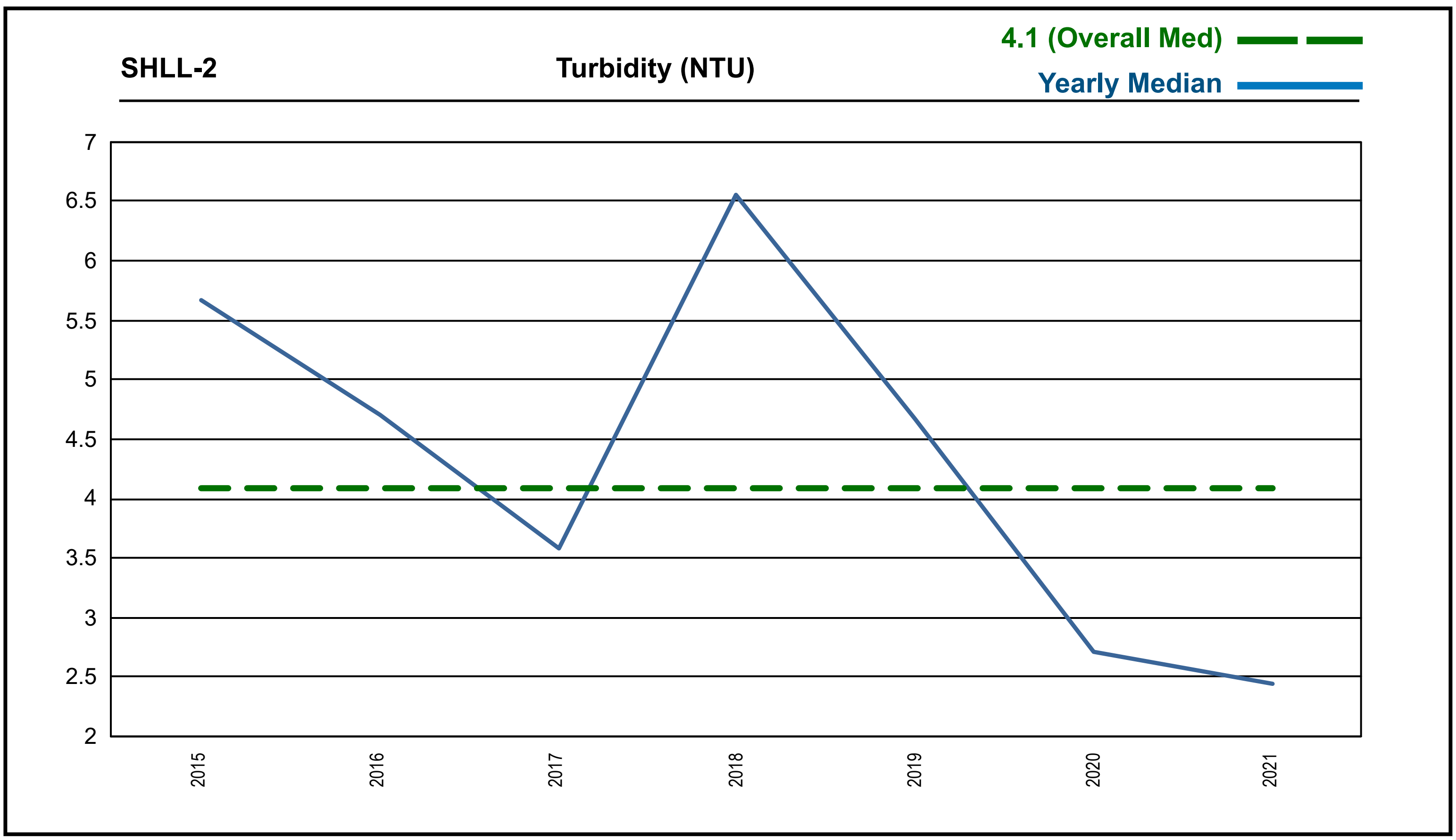

SHDJ-6
Turbidity (NTU)
6.7 (Overall Med)
Yearly Median
11
10
9
8
7
6
5
4
2015
2016
2017
2018
2019
2020
2021

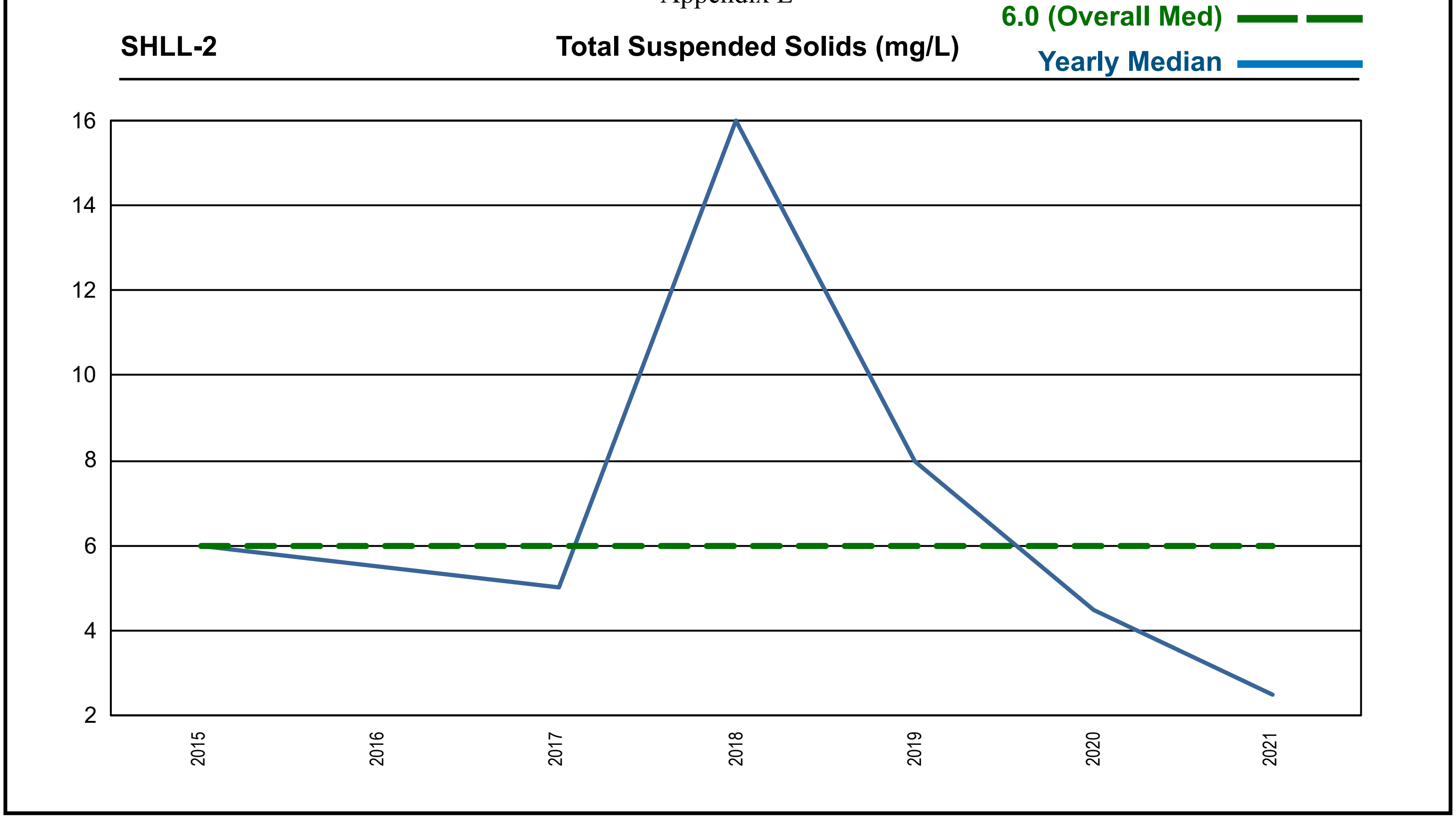

4.0 (Overall Med)
SHDJ-6
Total Suspended Solids (mg/L)
Yearly Median
9
8
7
6
5
4
3
2015
2016
2017
2018
2019
2020
2021

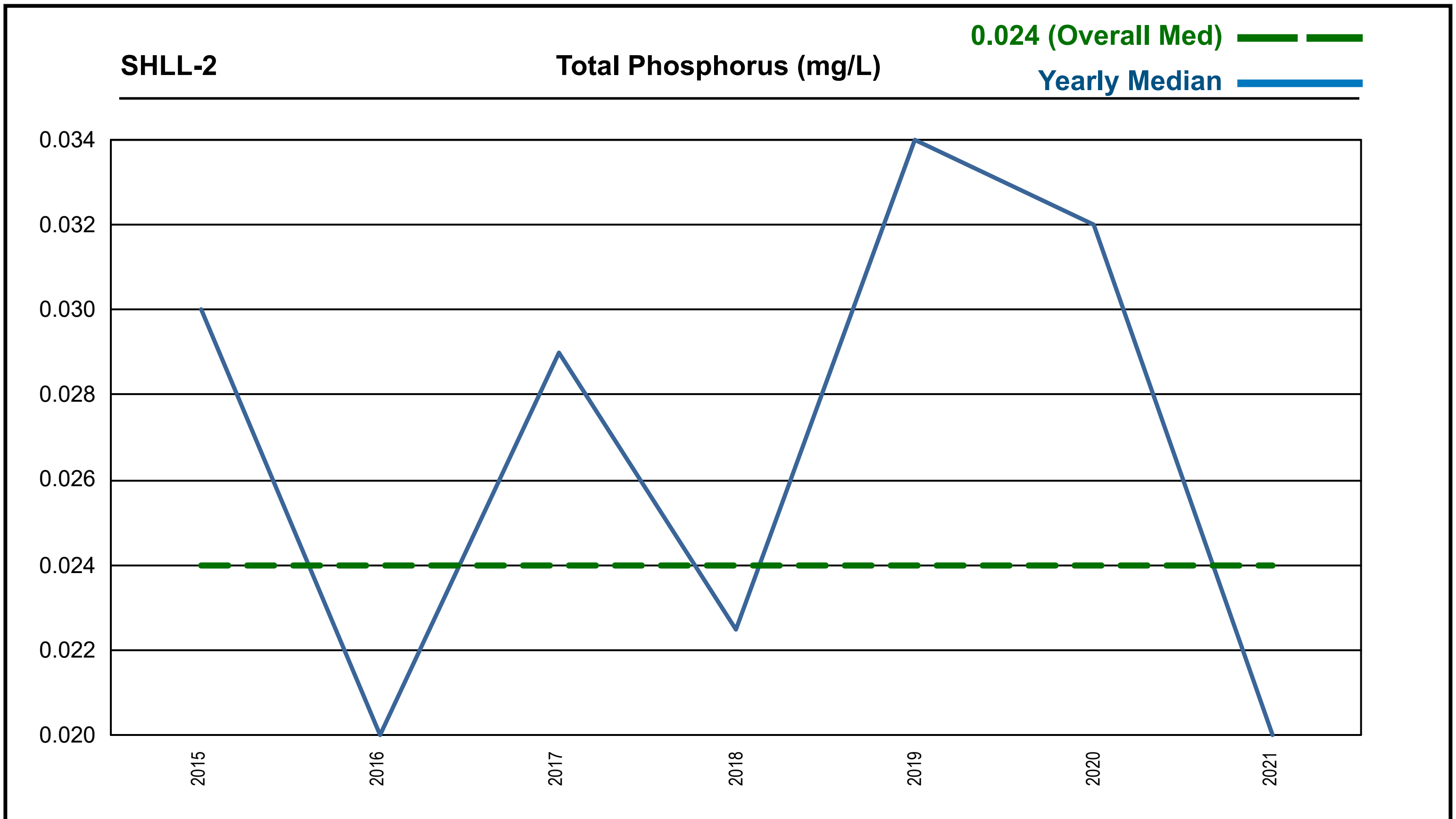

0.024 (Overall Med)
SHDJ-6
Total Phosphorus (mg/L)
Yearly Median
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
2015
2016
2017
2018
2019
2020
2021

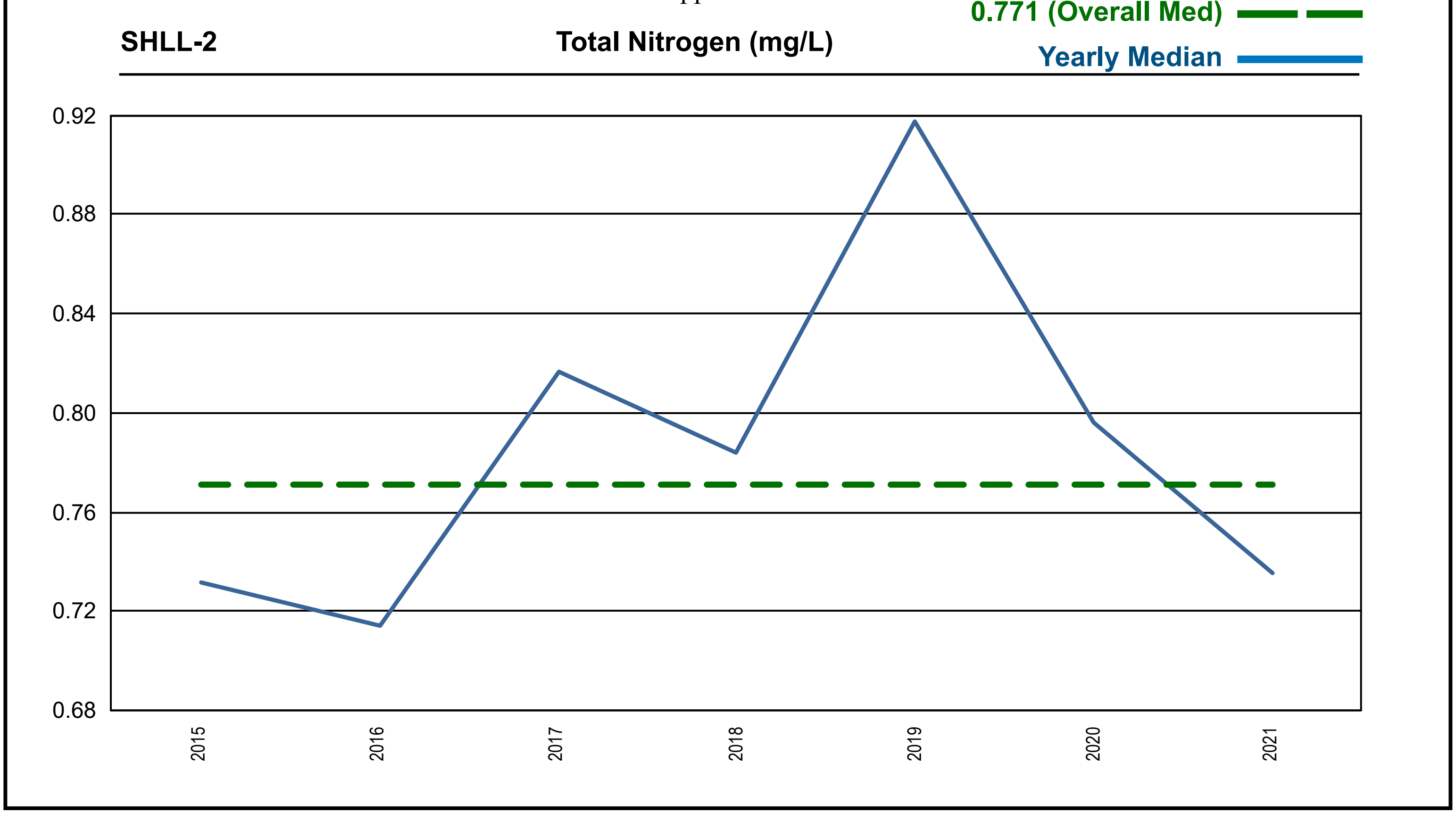

SHDJ-6
Total Nitrogen (mg/L)
0.457 (Overall Med)
Yearly Median
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
2015
2016
2017
2018
2019
2020
2021

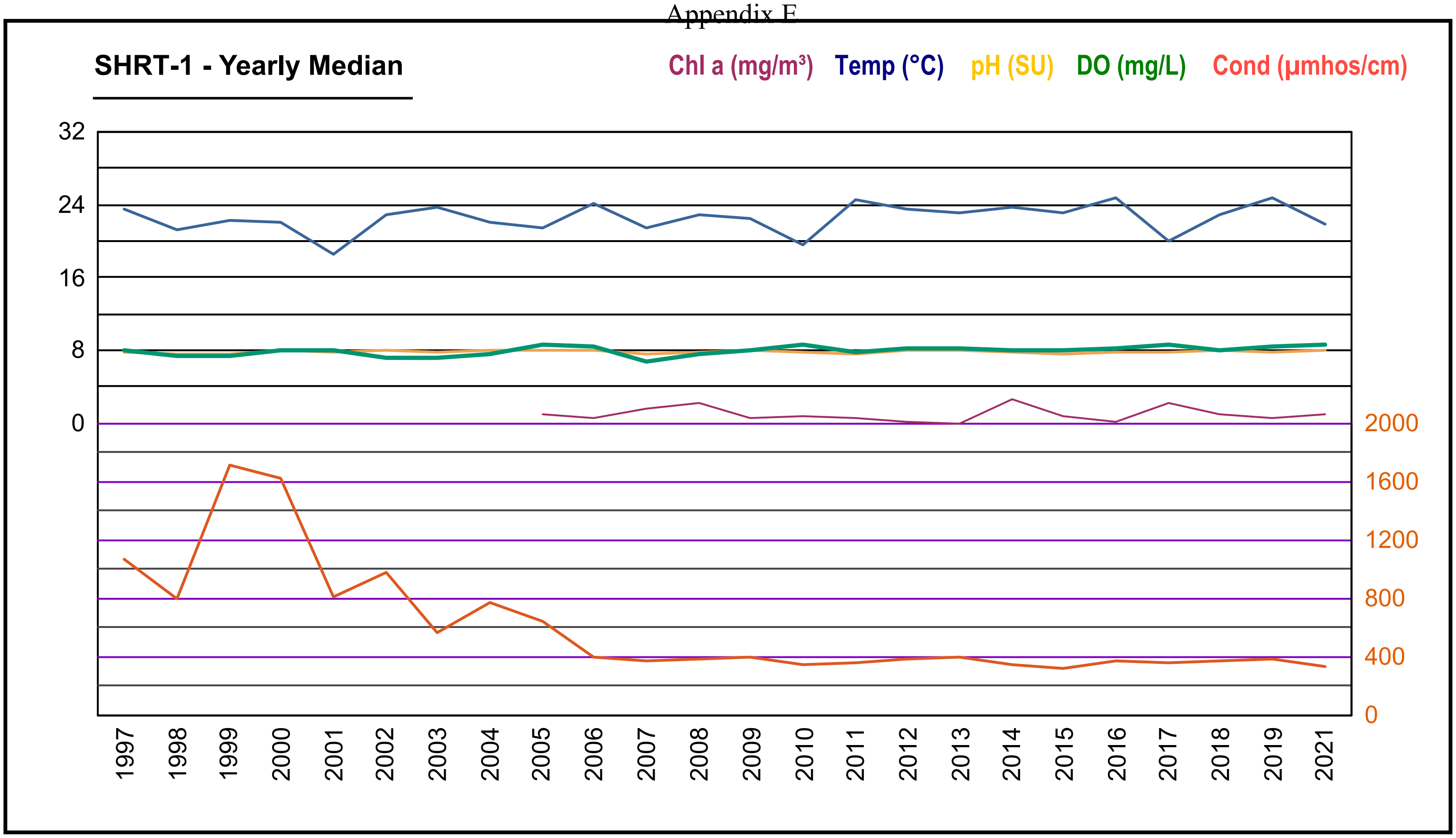

SHLL-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (μmhos/cm)
24
16
8
0
160
120
80
40
0
2015
2016
2017
2018
2019
2020
2021

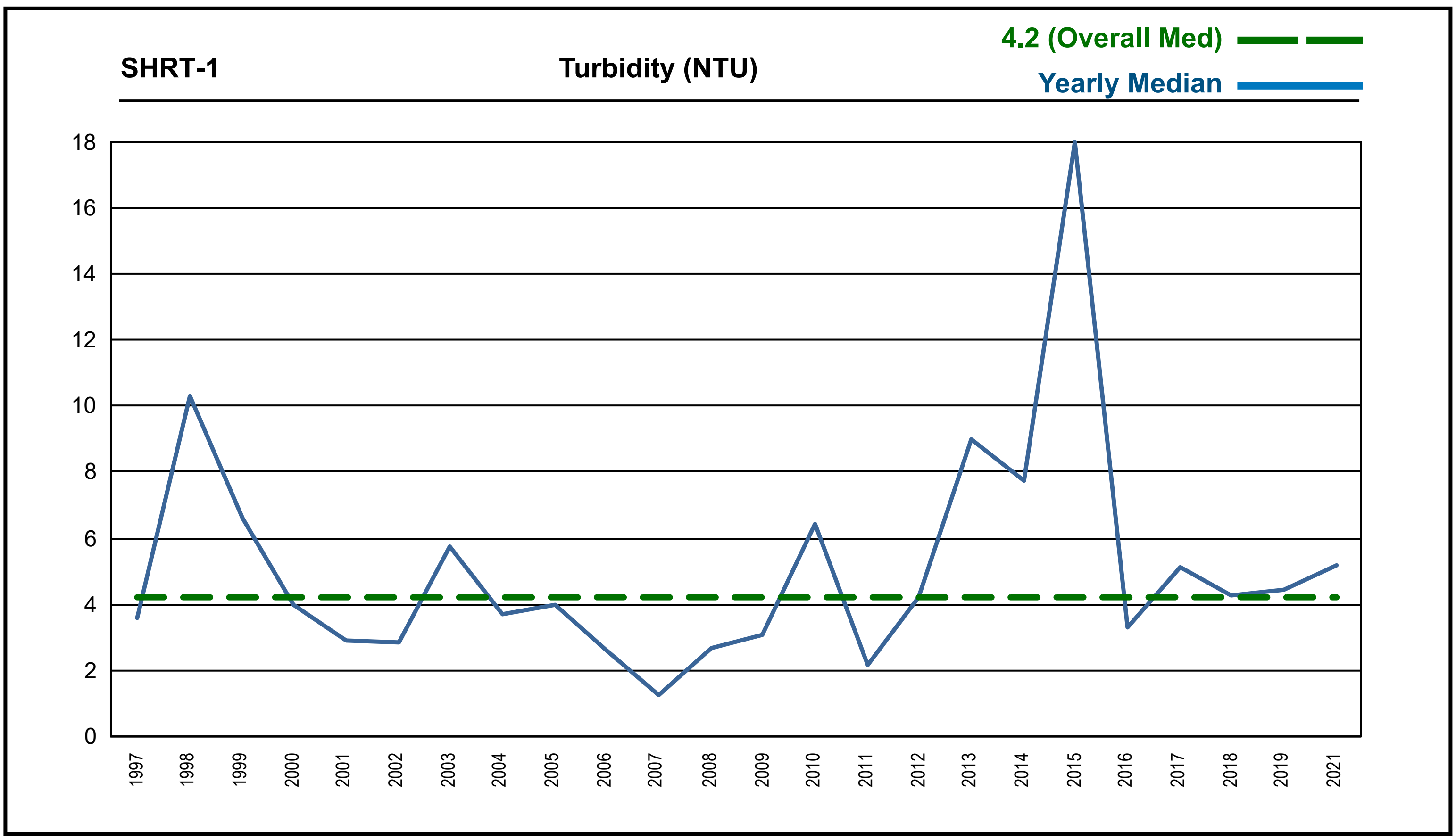

SHLL-2
Turbidity (NTU)
4.1 (Overall Med)
Yearly Median
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
2015
2016
2017
2018
2019
2020
2021

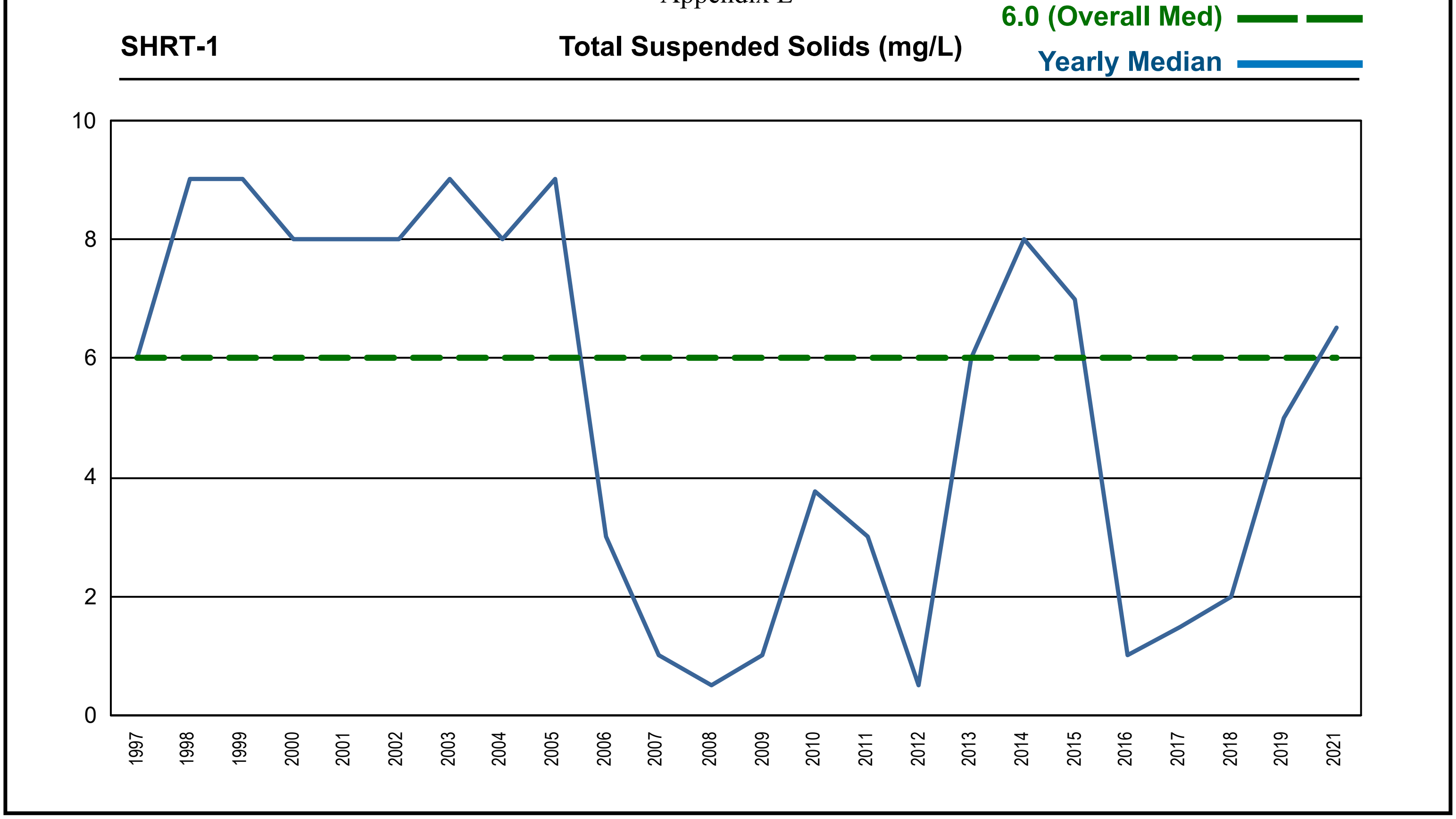

6.0 (Overall Med)
Yearly Median
SHLL-2
Total Suspended Solids (mg/L)
16
14
12
10
8
6
4
2
2015
2016
2017
2018
2019
2020
2021

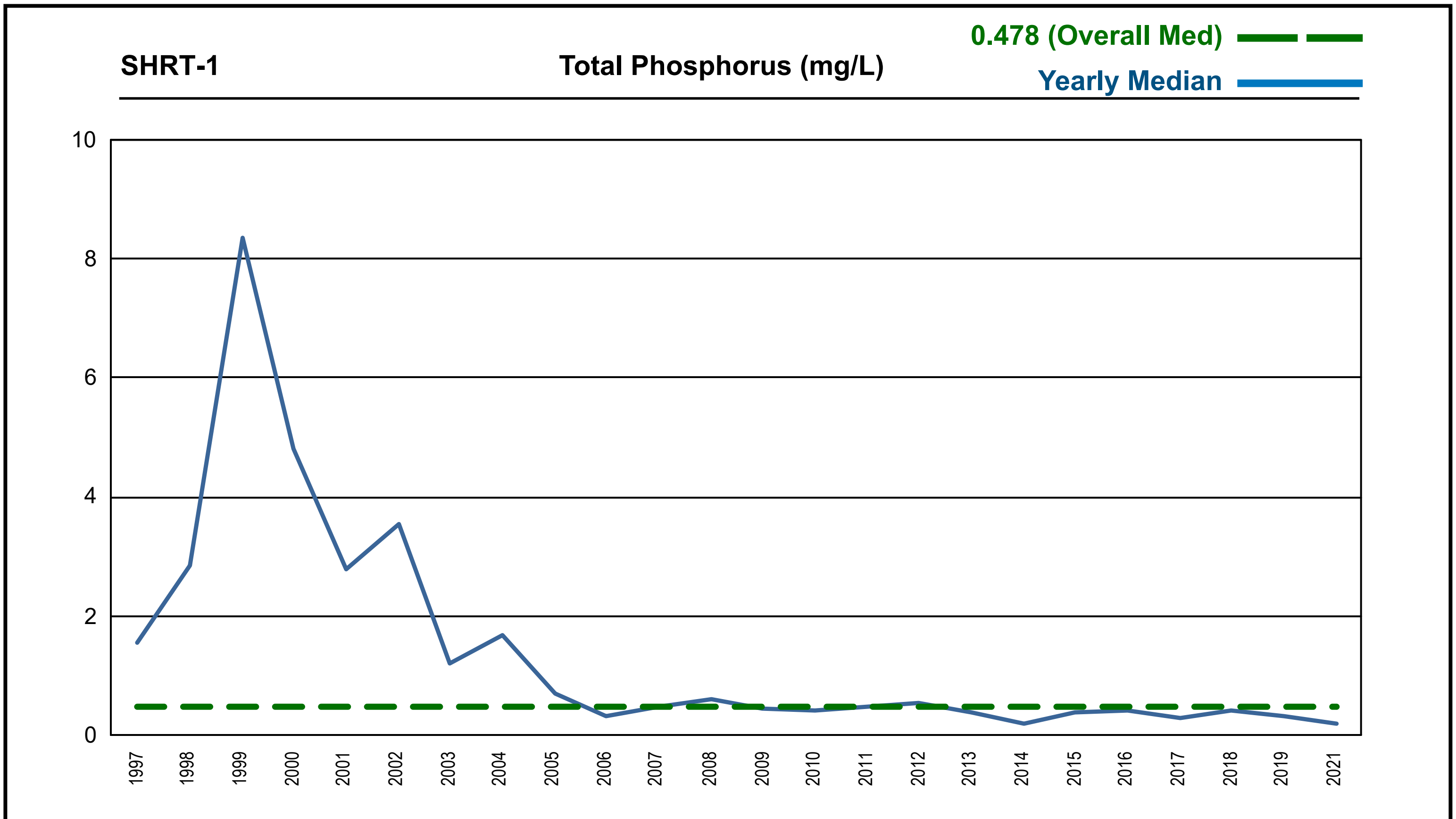

0.024 (Overall Med)
Yearly Median
SHLL-2
Total Phosphorus (mg/L)
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
2015
2016
2017
2018
2019
2020
2021

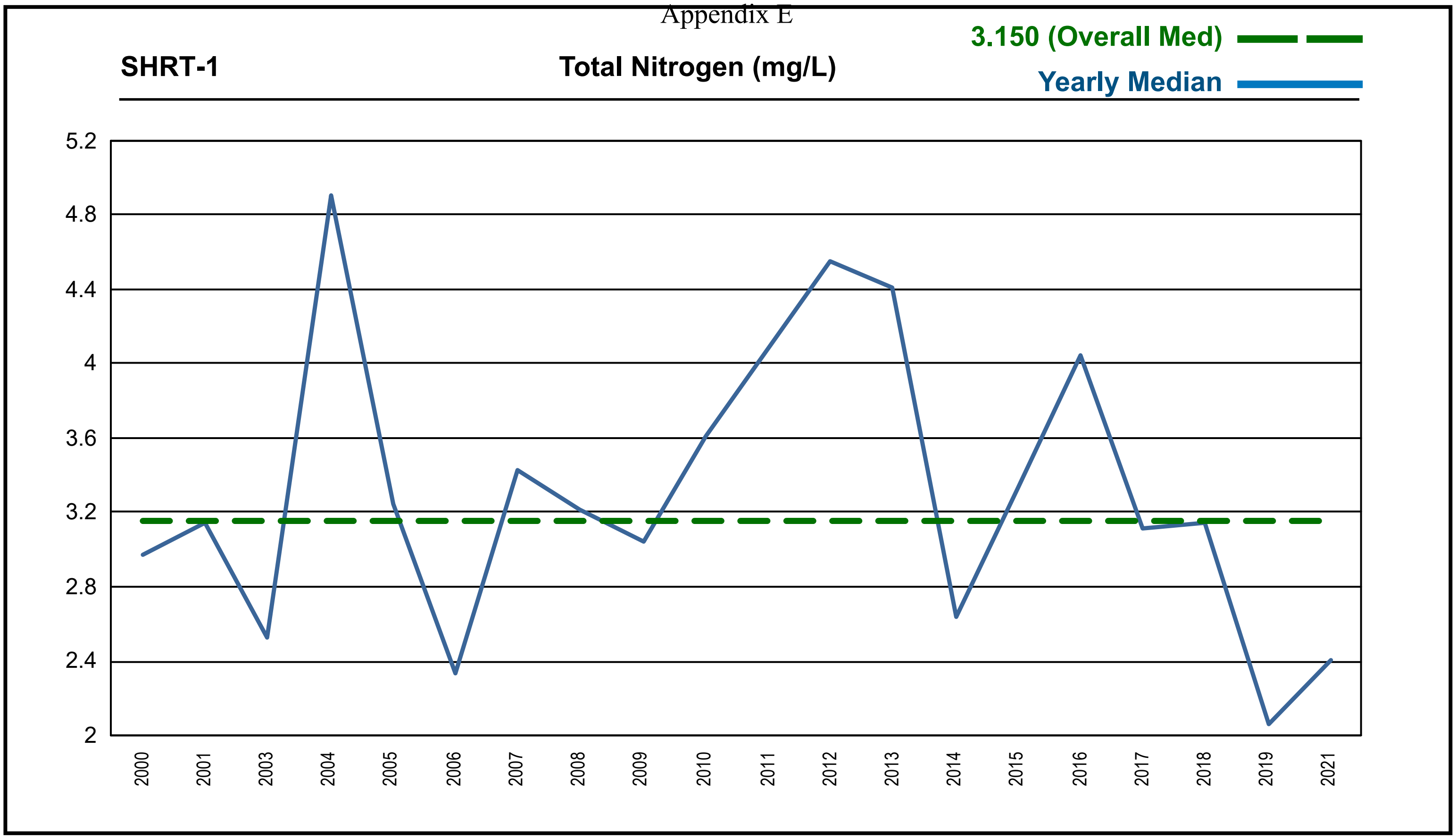

SHLL-2
Total Nitrogen (mg/L)
0.771 (Overall Med)
Yearly Median
0.92
0.88
0.84
0.80
0.76
0.72
0.68
2015
2016
2017
2018
2019
2020
2021


SHRT-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
2000
1600
1200
800
400
0
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2021

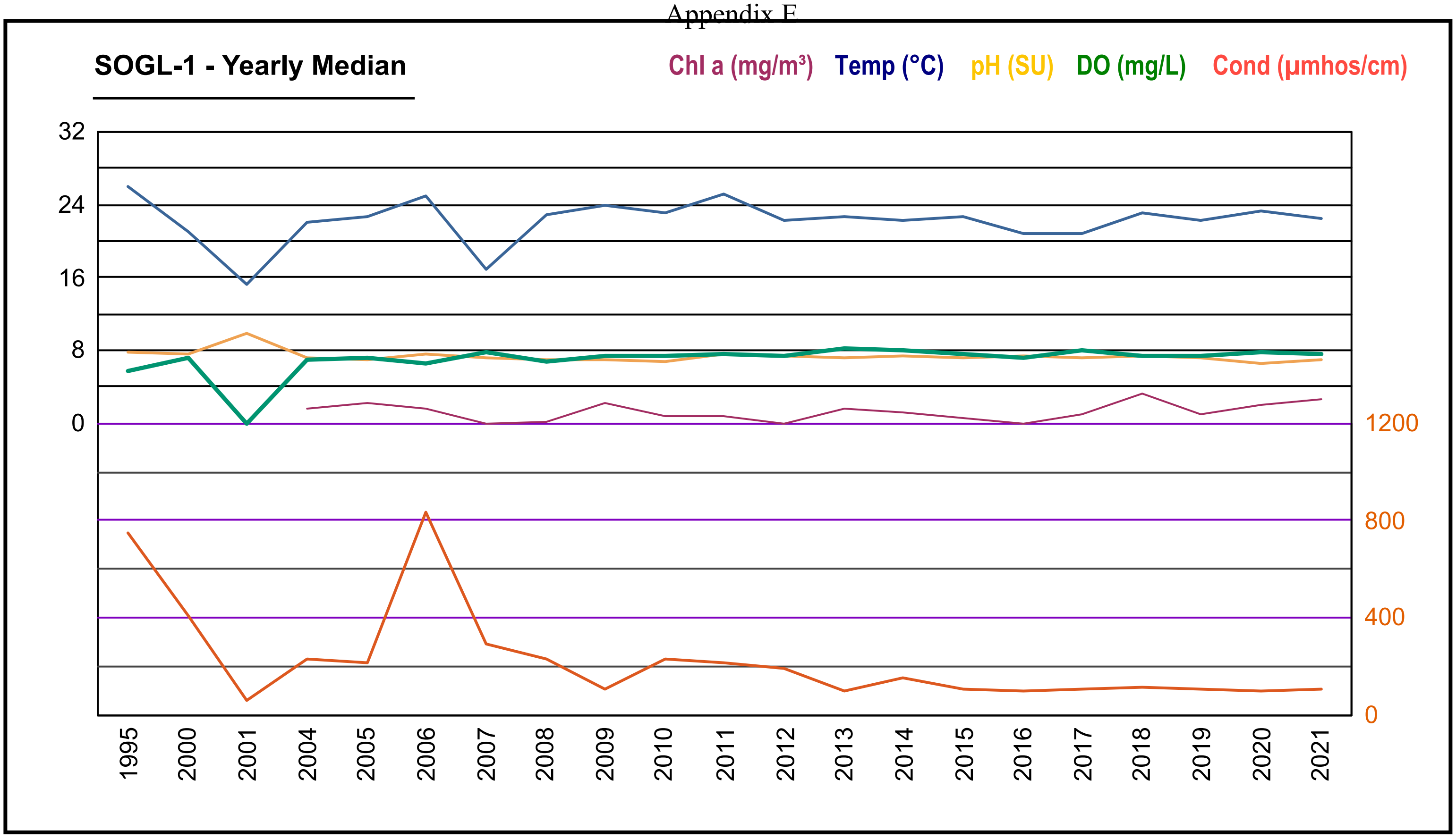

SHRT-1
Turbidity (NTU)
4.2 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2
0
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2021

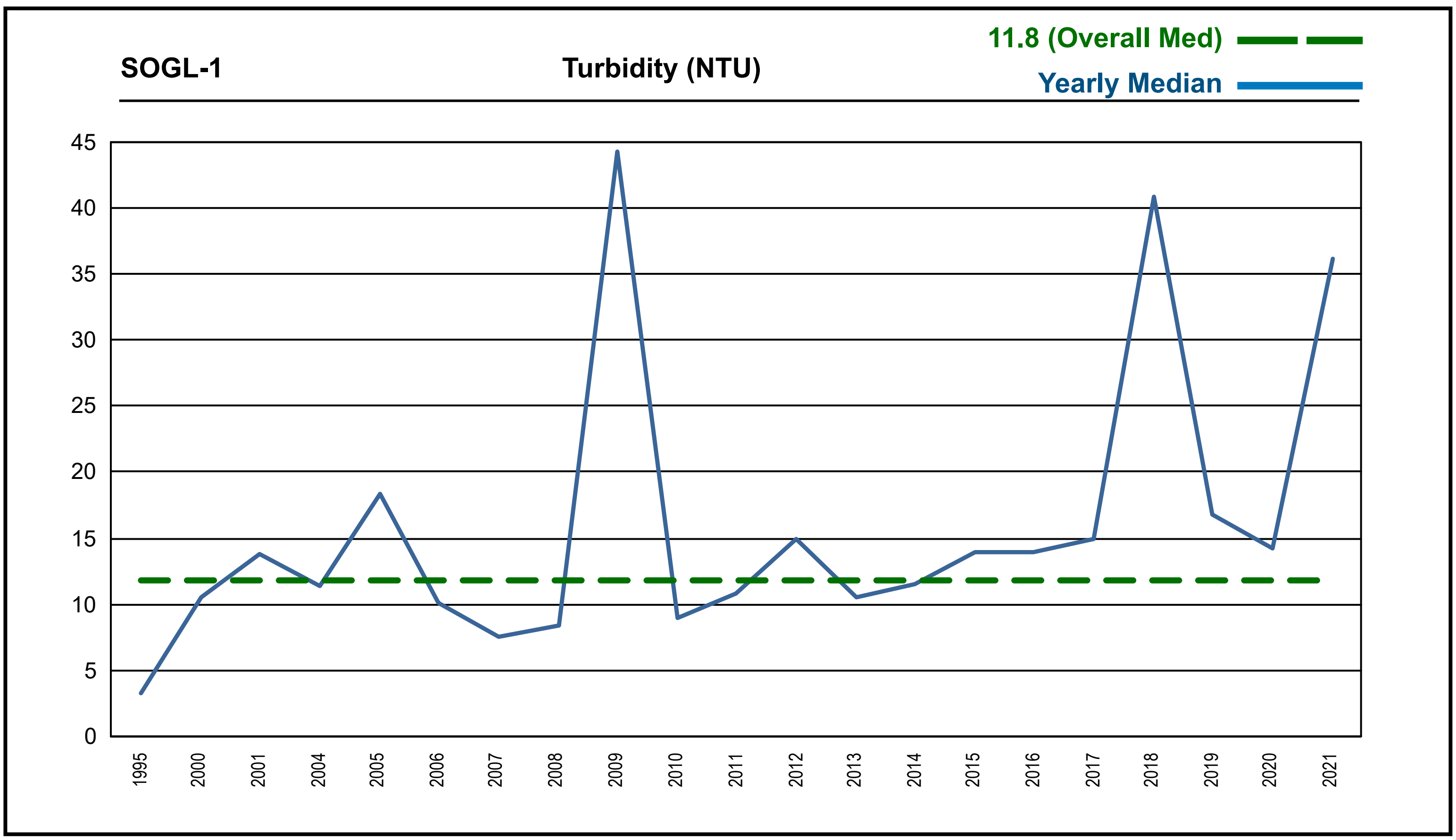

SHRT-1
Total Suspended Solids (mg/L)
6.0 (Overall Med)
Yearly Median
10
8
6
4
2
0
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

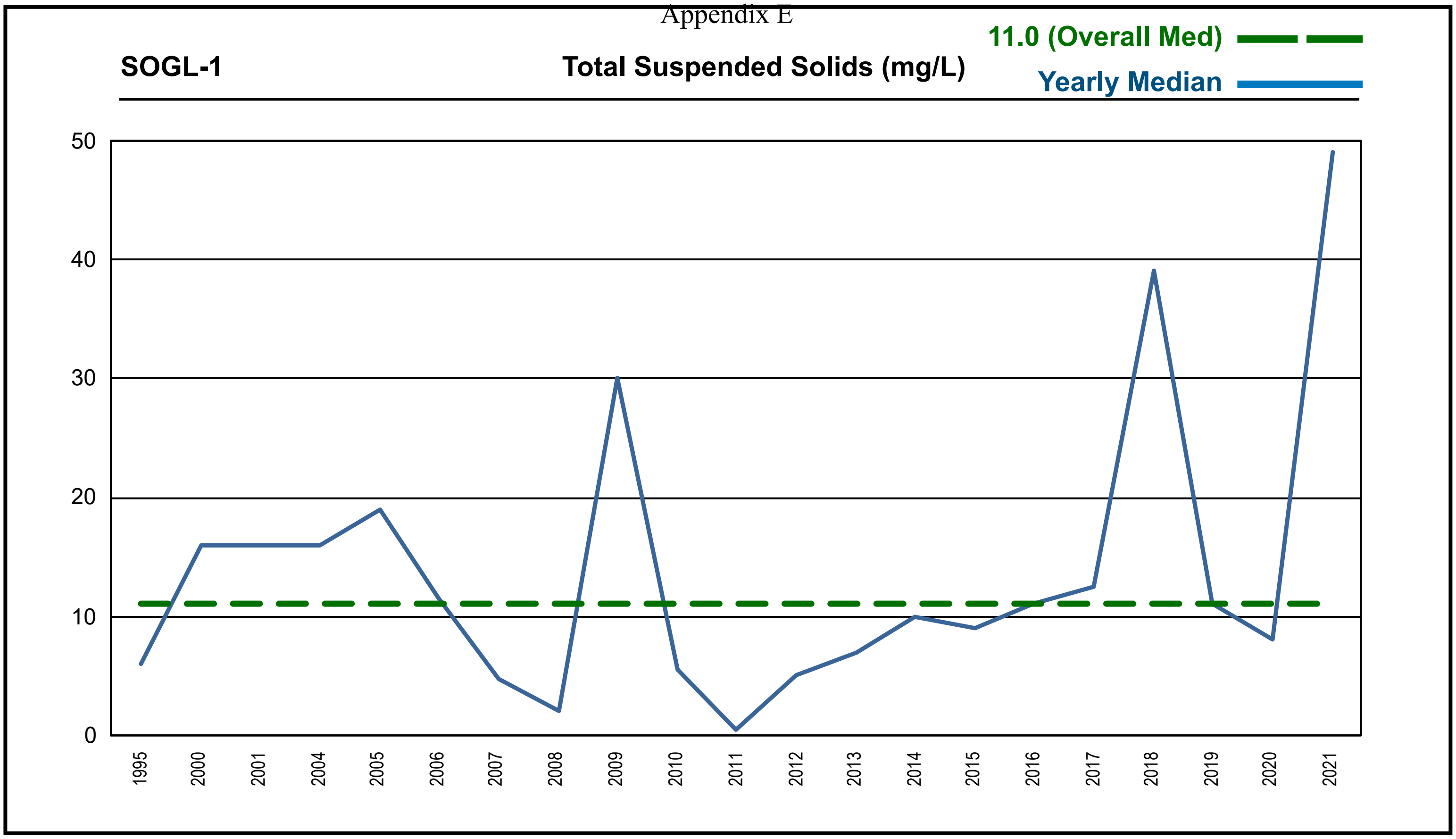

SHRT-1
Total Phosphorus (mg/L)
0.478 (Overall Med)
Yearly Median
10
8
6
4
2
0
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021



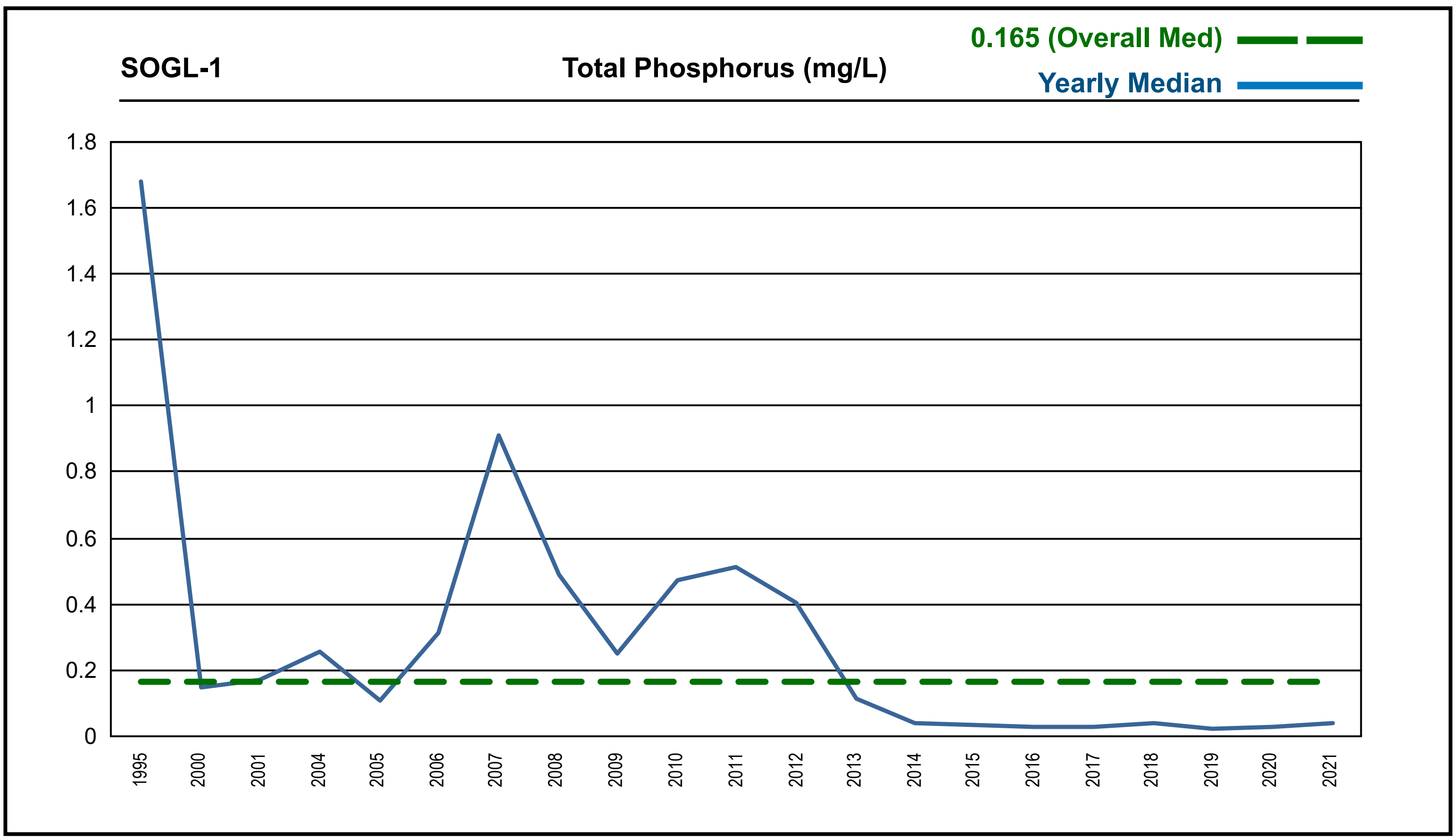
SHRT-1
Total Nitrogen (mg/L)
3.150 (Overall Med)
Yearly Median
5.2
4.8
4.4
4
3.6
3.2
2.8
2.4
2
2000
2001
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


SOGL-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
1200
800
400
0
1995
2000
2001
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

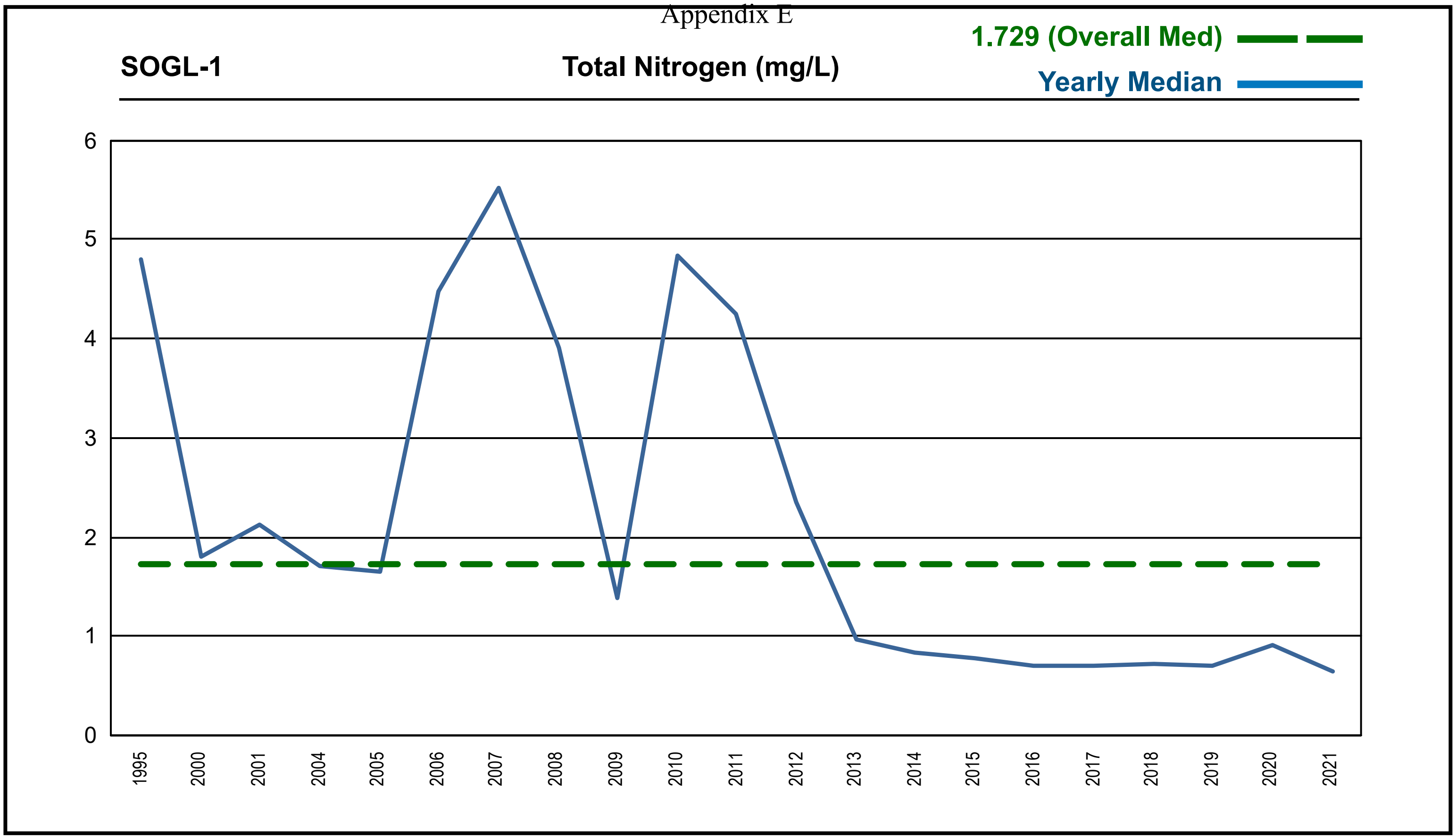

SOGL-1
Turbidity (NTU)
11.8 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
0
1995
2000
2001
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

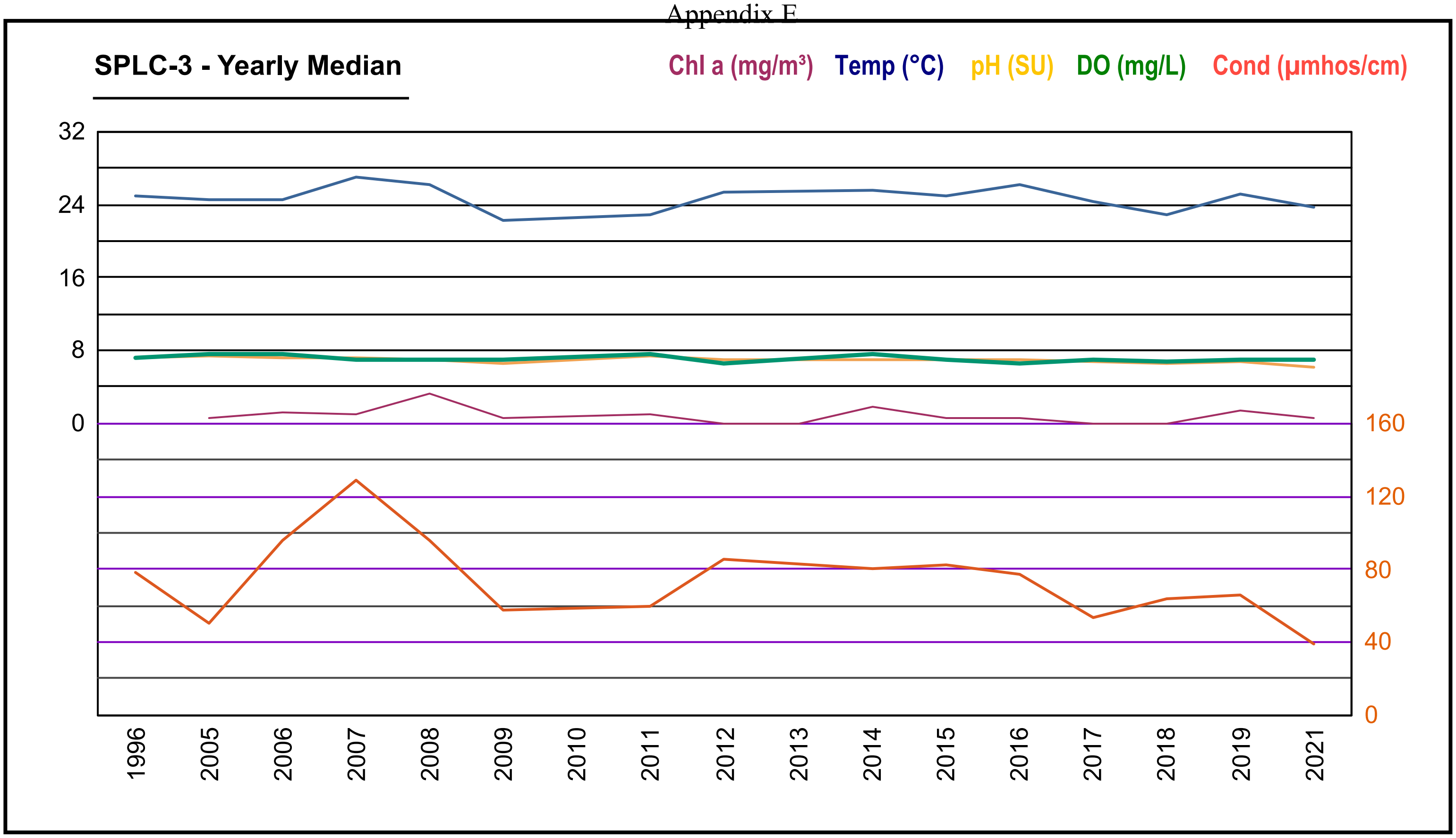


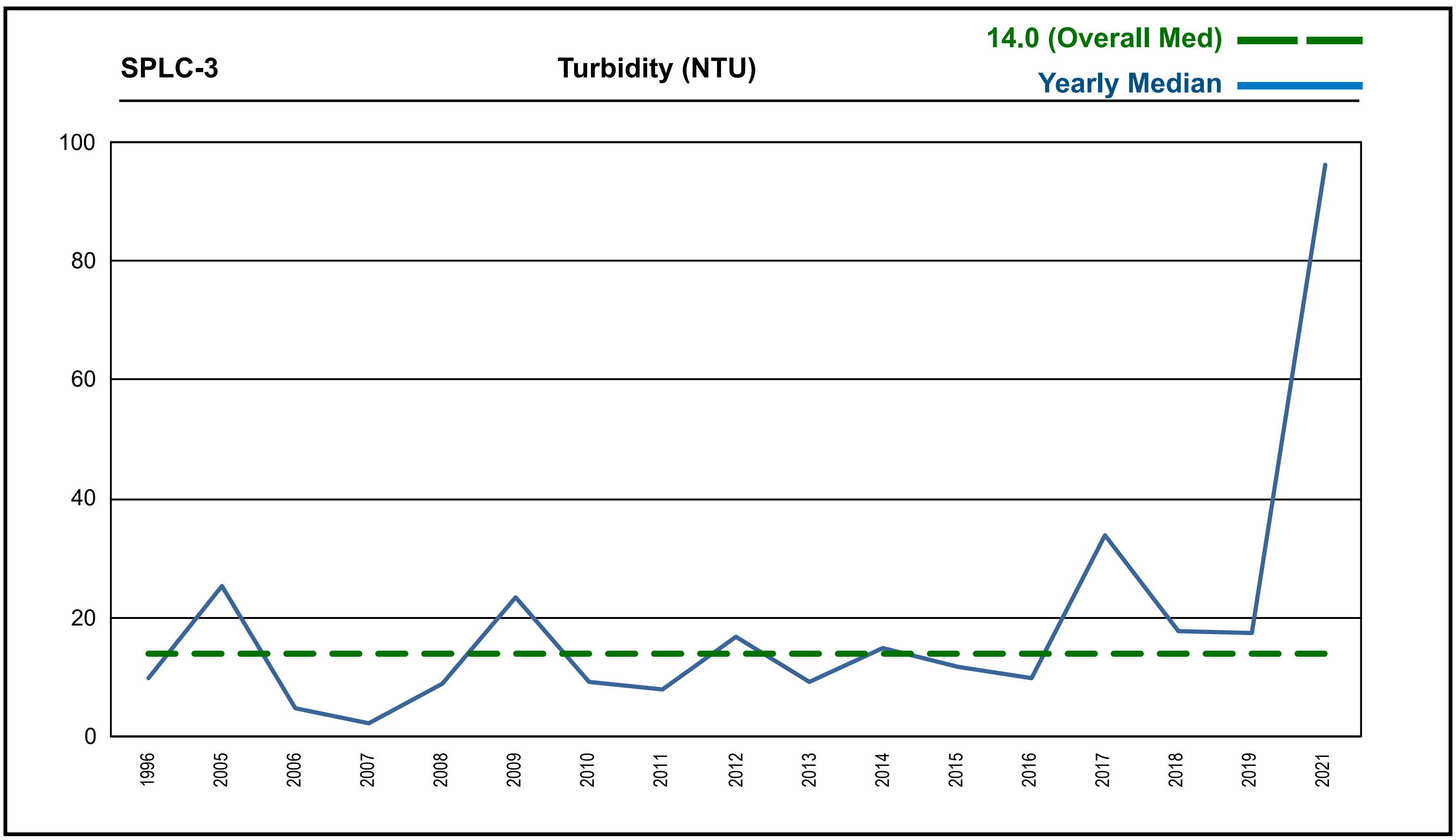
11.0 (Overall Med)
SOGL-1
Total Suspended Solids (mg/L)
Yearly Median
50
40
30
20
10
0
1995
2000
2001
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

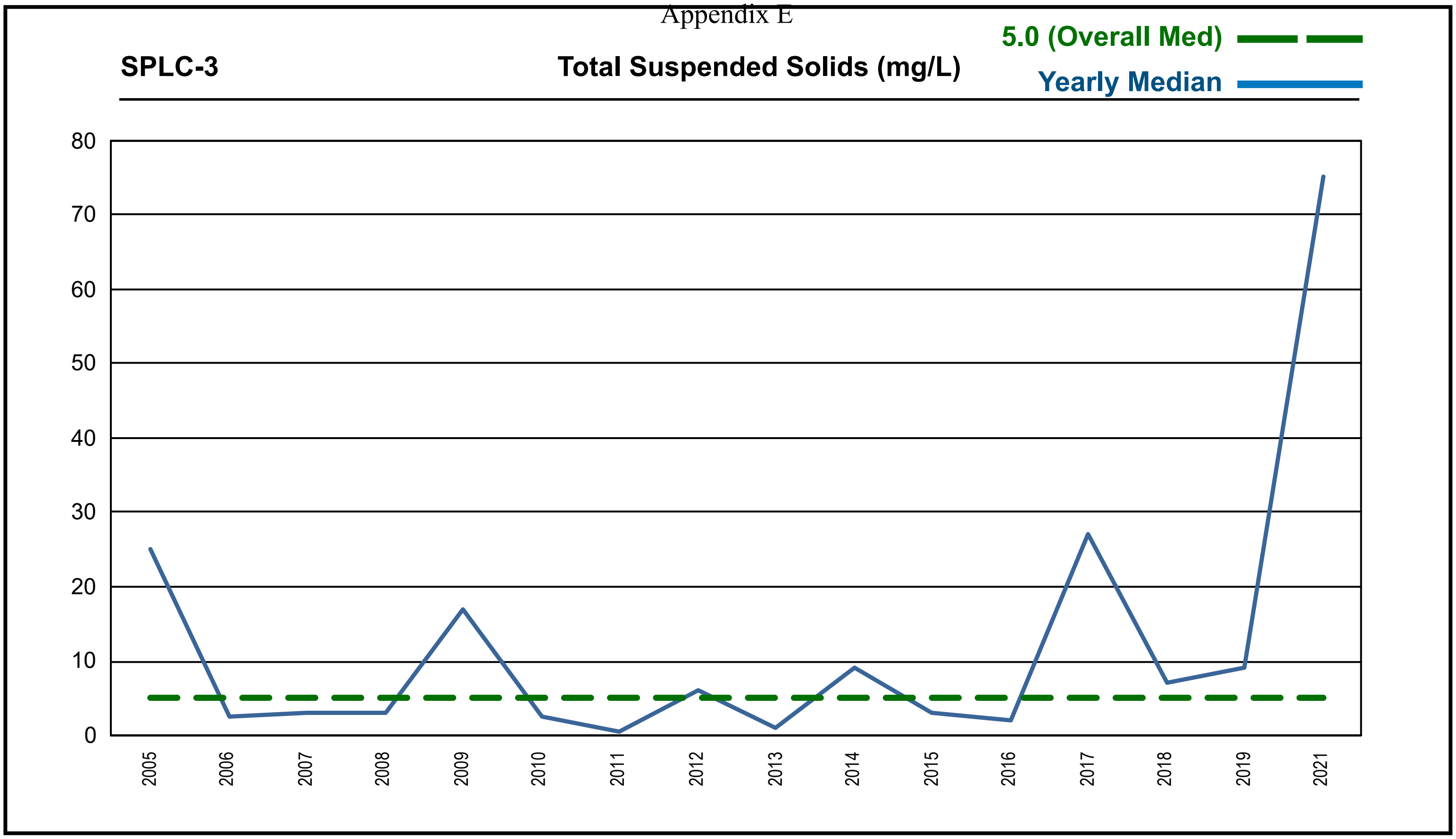


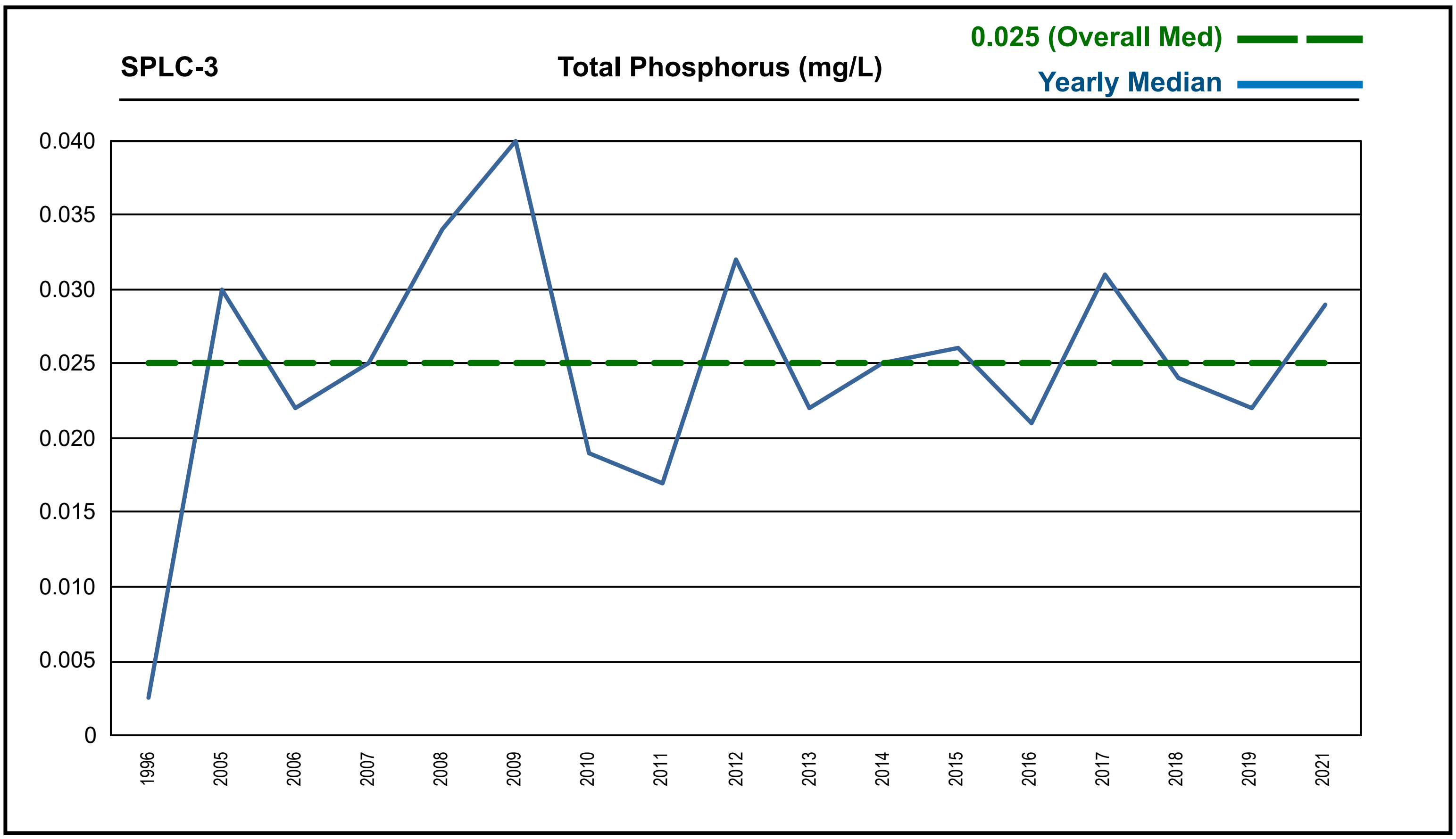
0.165 (Overall Med)
SOGL-1
Total Phosphorus (mg/L)
Yearly Median
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1995
2000
2001
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

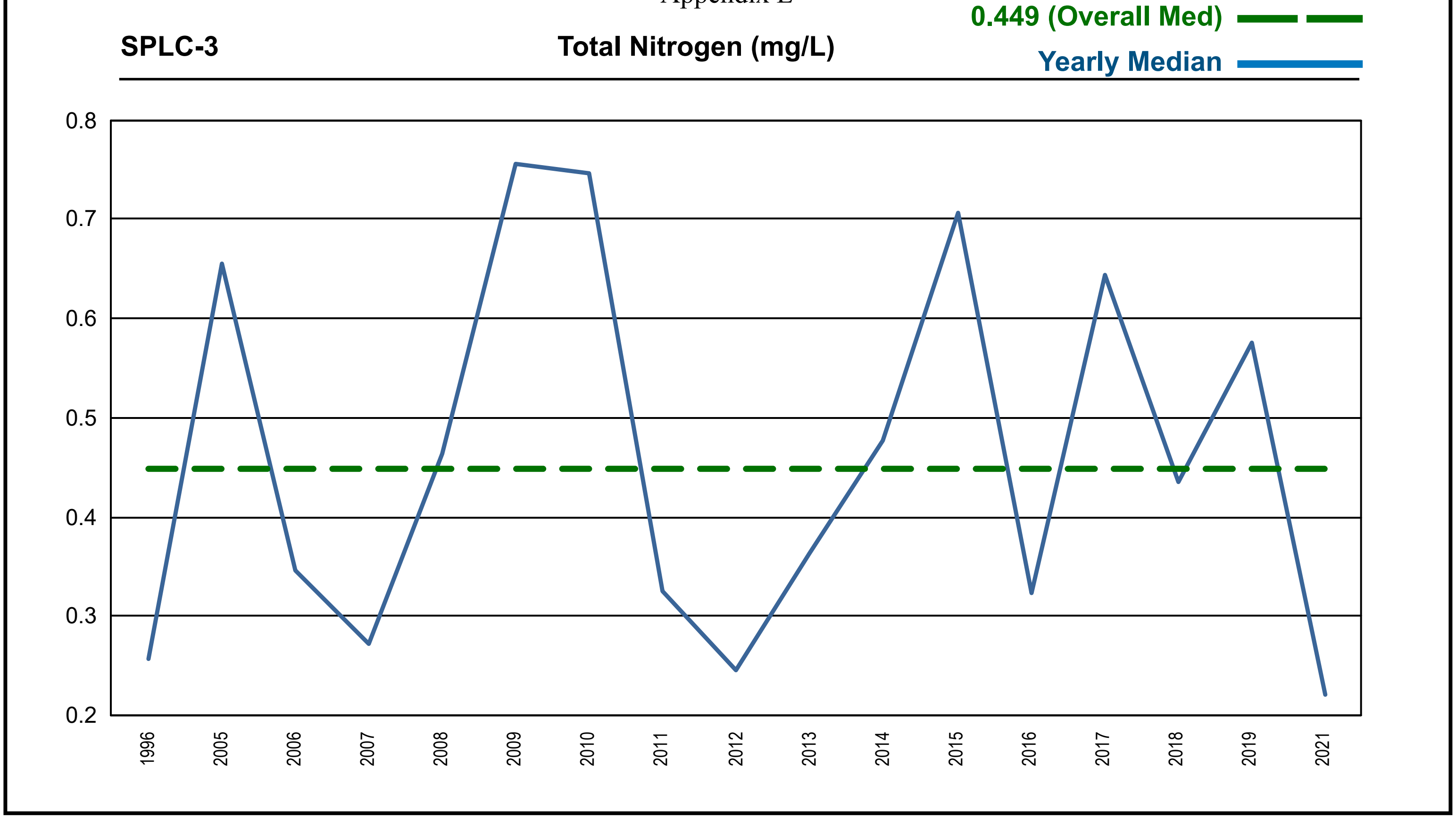

SOGL-1
Total Nitrogen (mg/L)
1.729 (Overall Med)
Yearly Median
6
5
4
3
2
1
0
1995
2000
2001
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

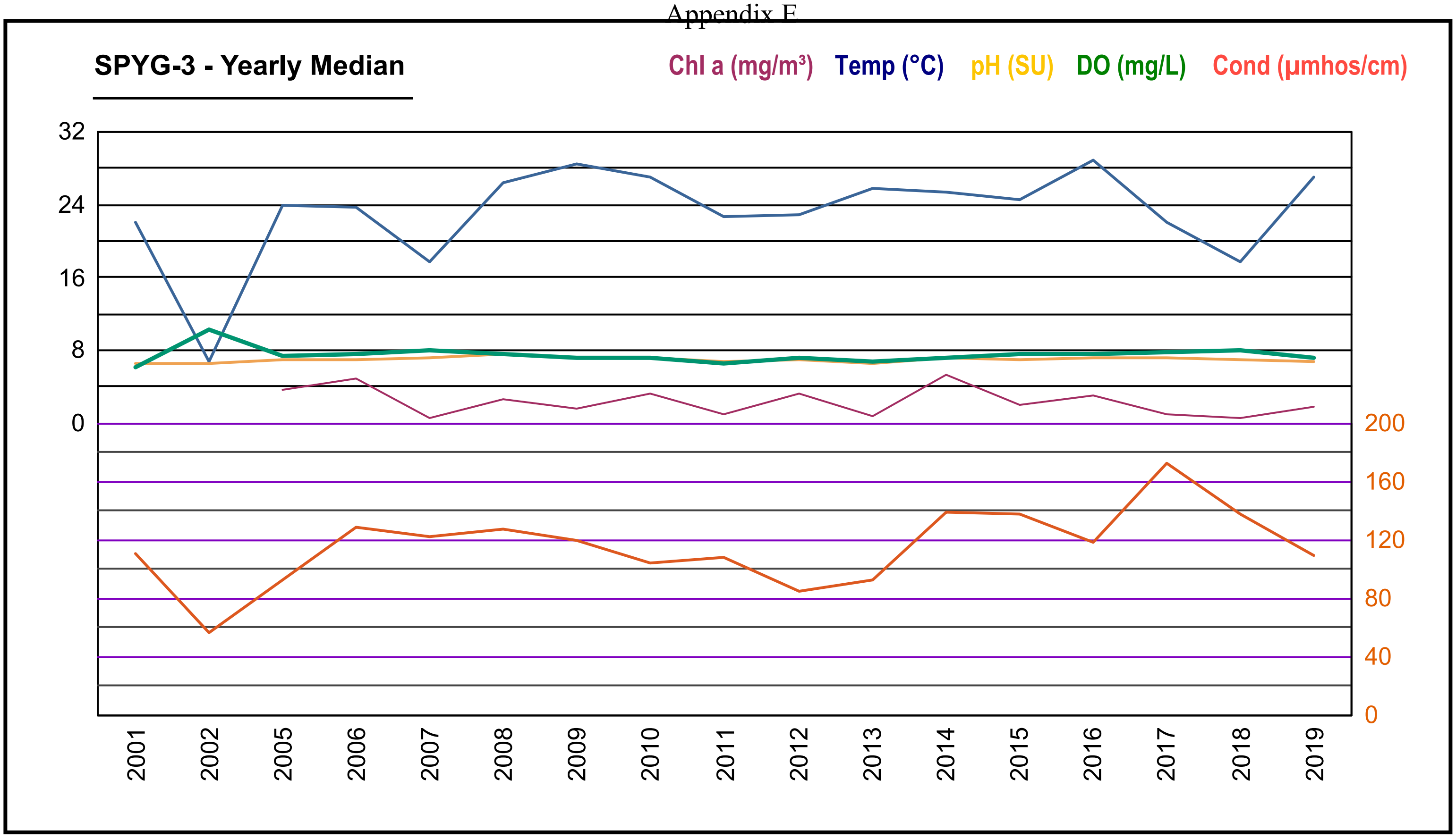

SPLC-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


SPLC-3
Turbidity (NTU)
14.0 (Overall Med)
Yearly Median
100
80
60
40
20
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

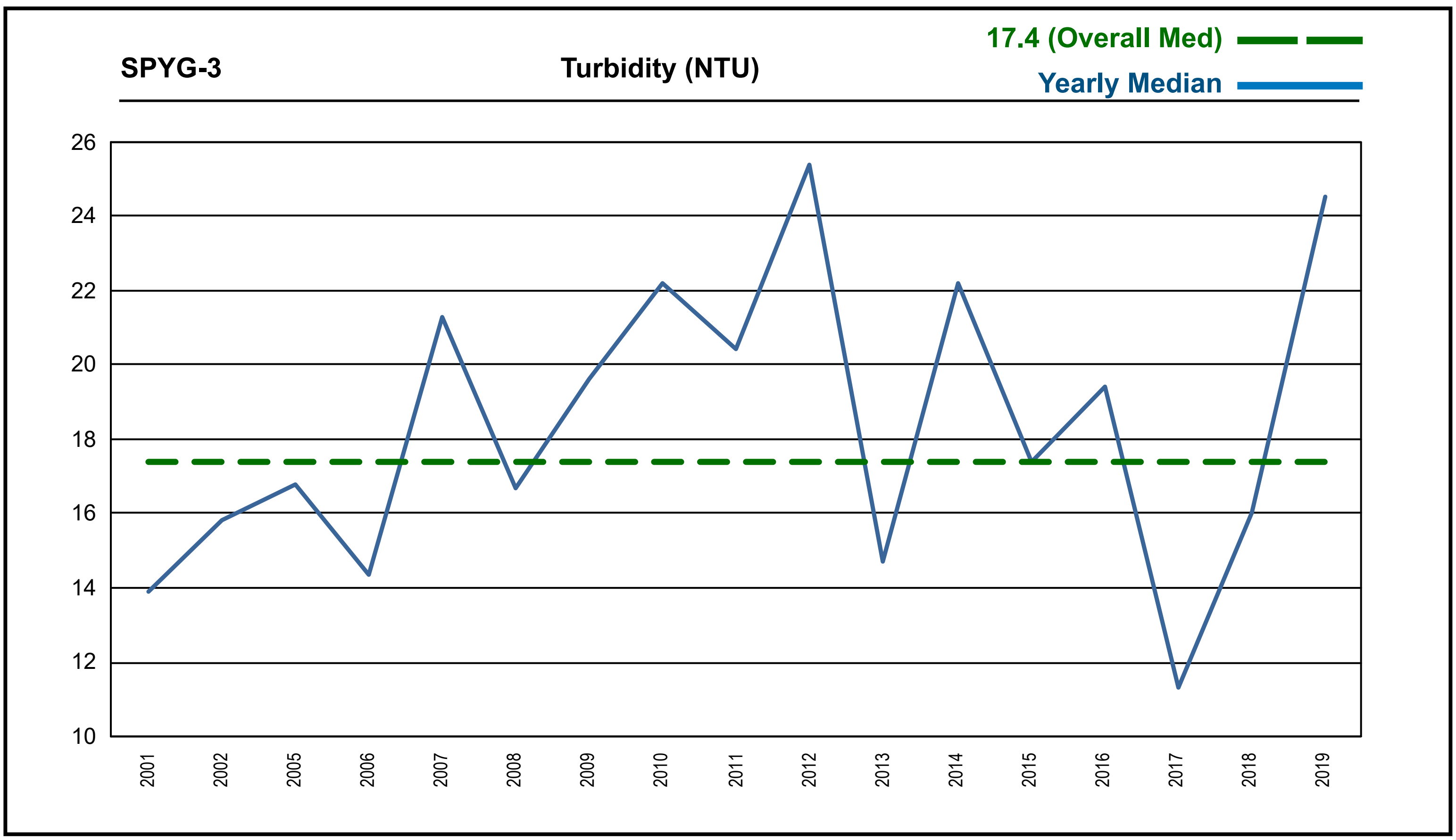

5.0 (Overall Med)
Yearly Median
SPLC-3
Total Suspended Solids (mg/L)
80
70
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


0.025 (Overall Med)
Yearly Median
SPLC-3
Total Phosphorus (mg/L)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

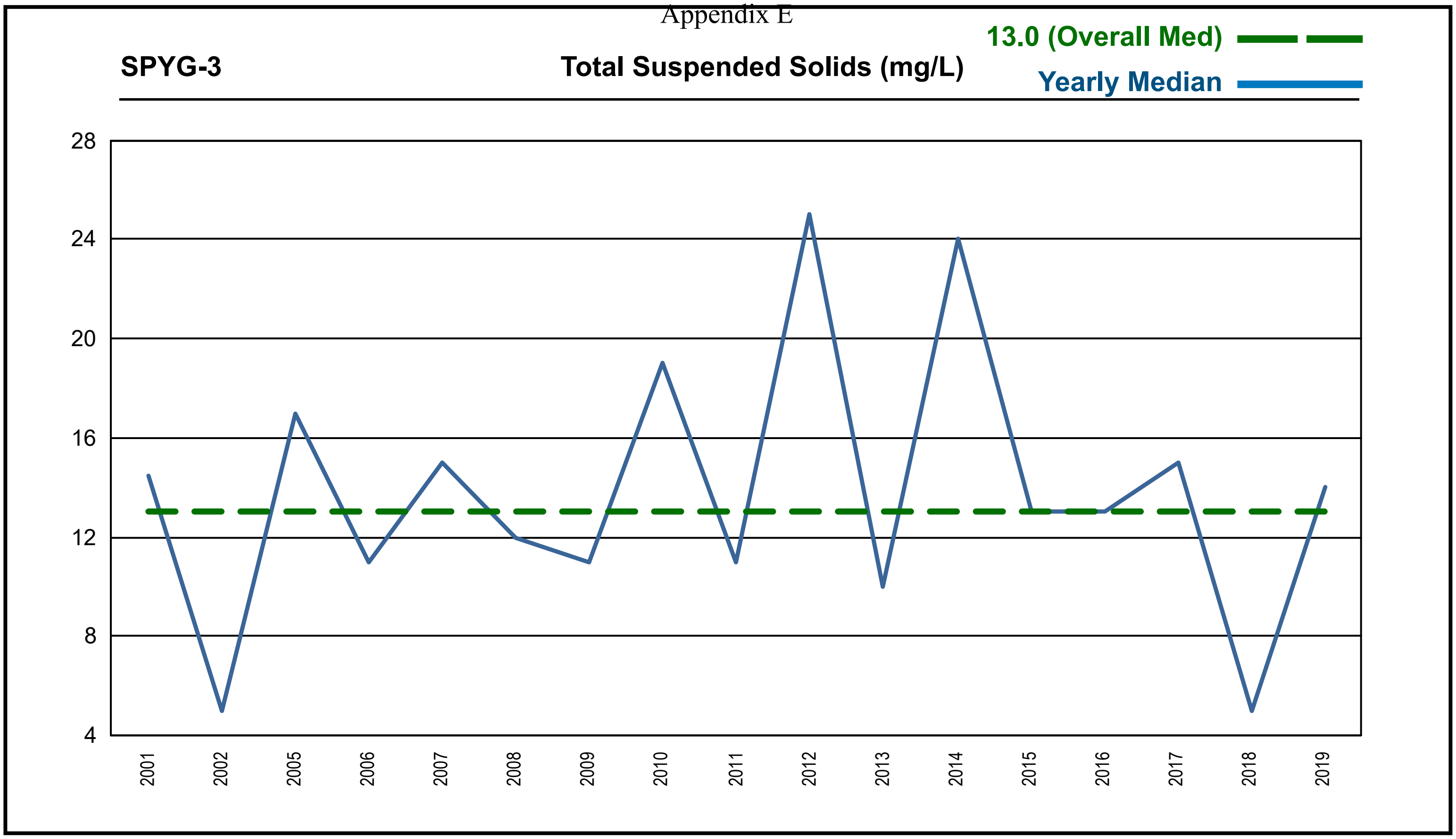

0.449 (Overall Med)
Yearly Median
SPLC-3
Total Nitrogen (mg/L)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
1996
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

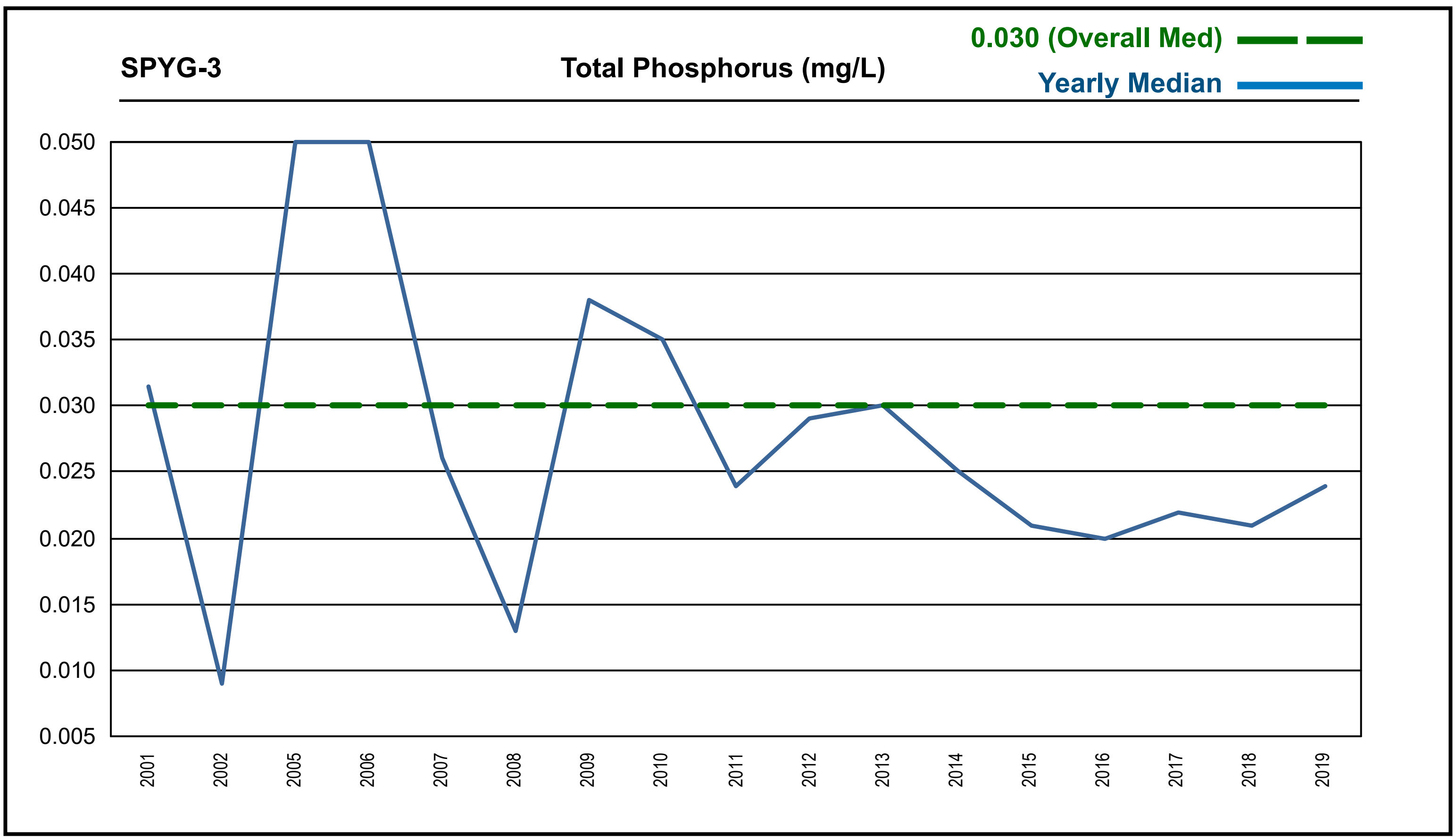


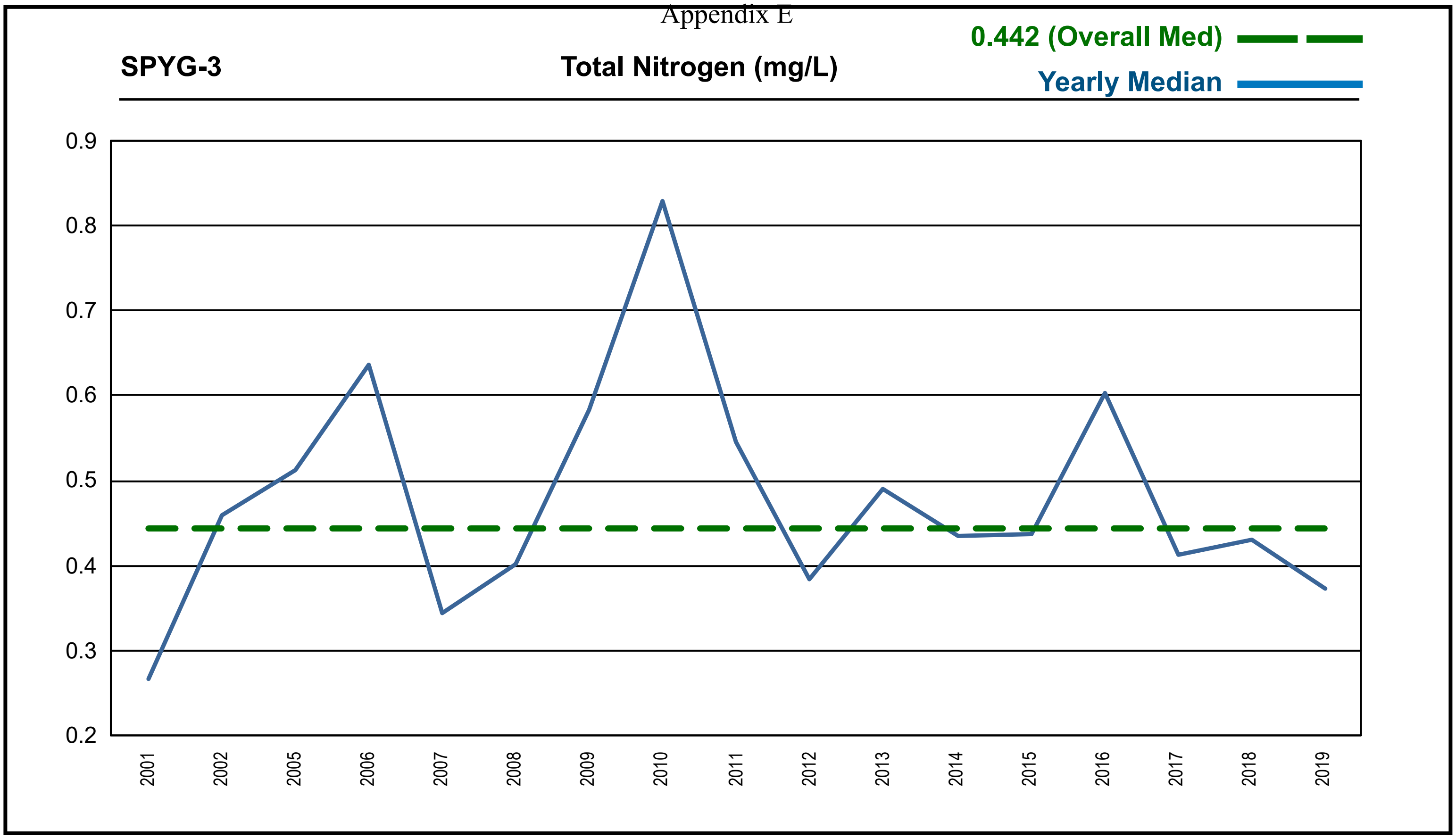
SPYG-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
200
160
120
80
40
0
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019



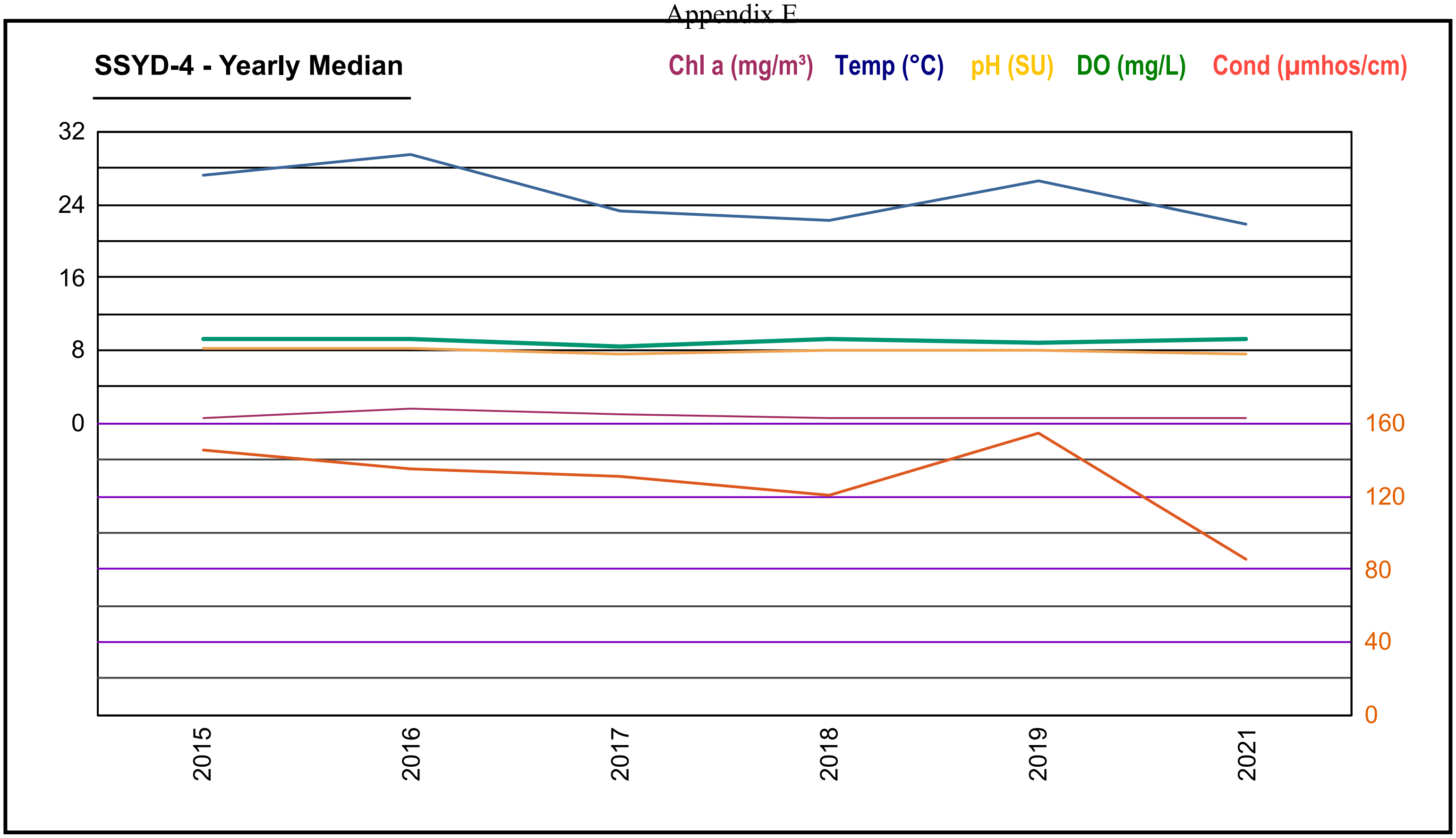
SPYG-3
Turbidity (NTU)
17.4 (Overall Med)
Yearly Median
26
24
22
20
18
16
14
12
10
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

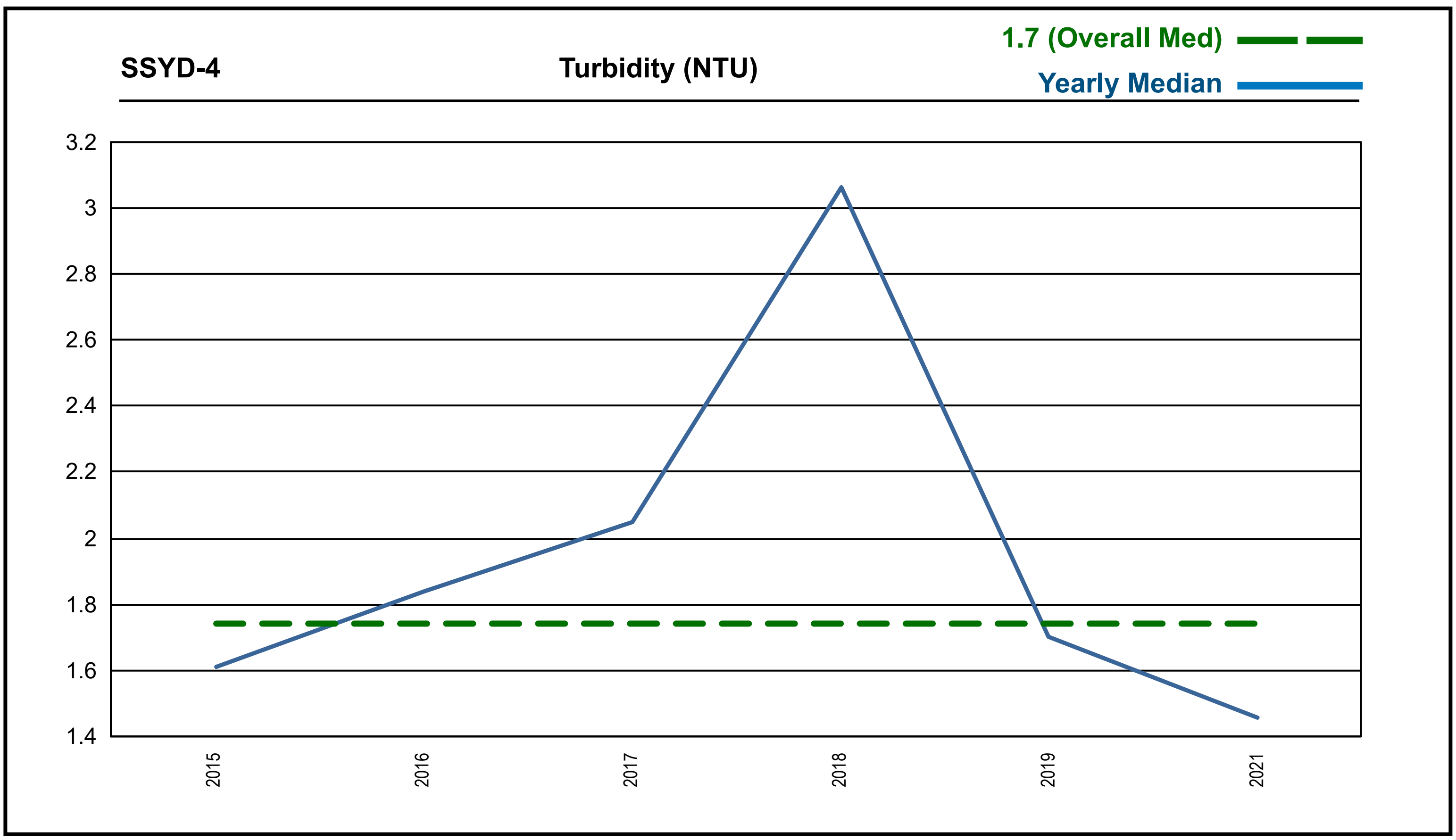

13.0 (Overall Med)
Yearly Median
SPYG-3
Total Suspended Solids (mg/L)
28
24
20
16
12
8
4
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

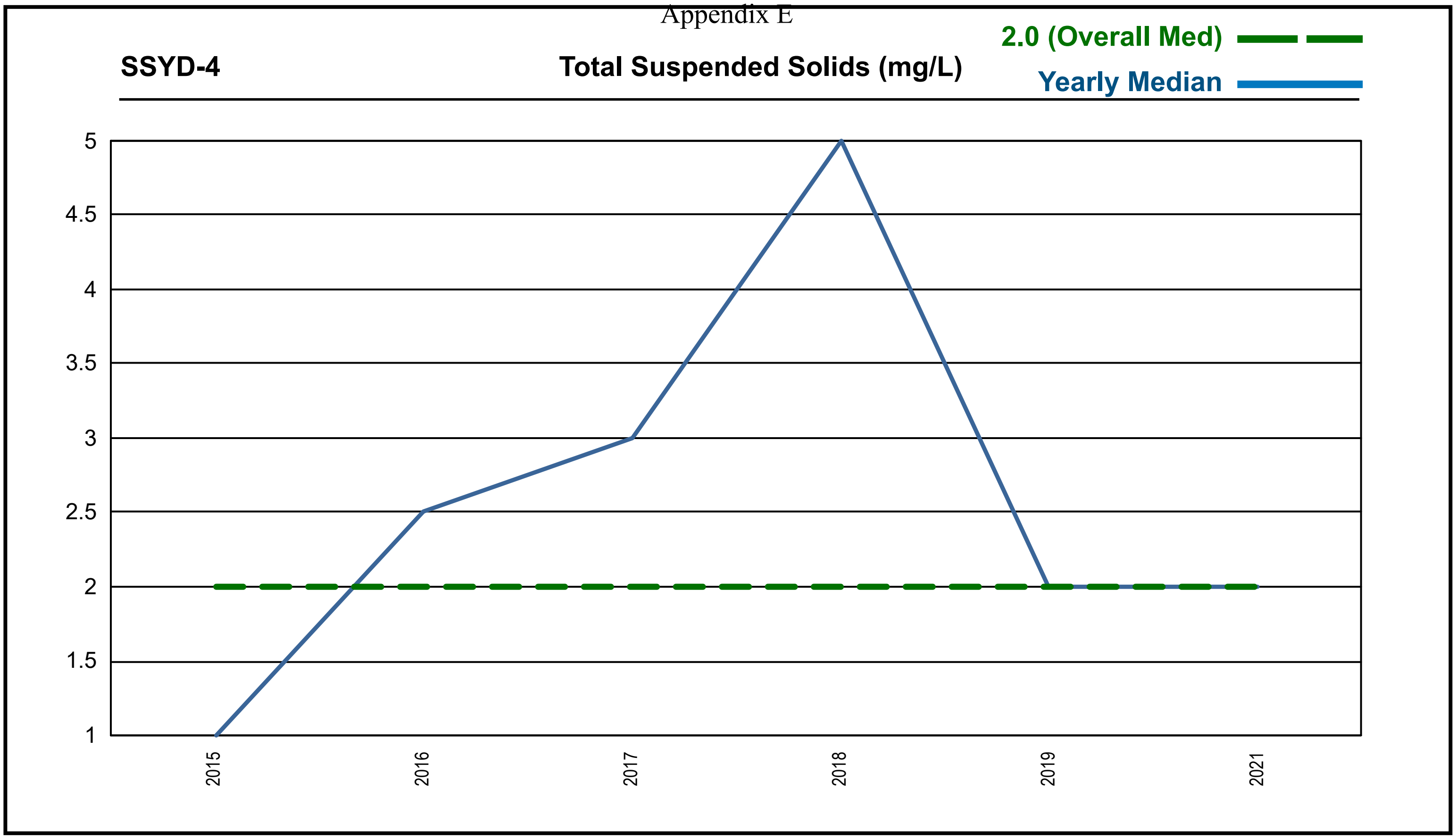

0.030 (Overall Med)
Yearly Median
SPYG-3
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

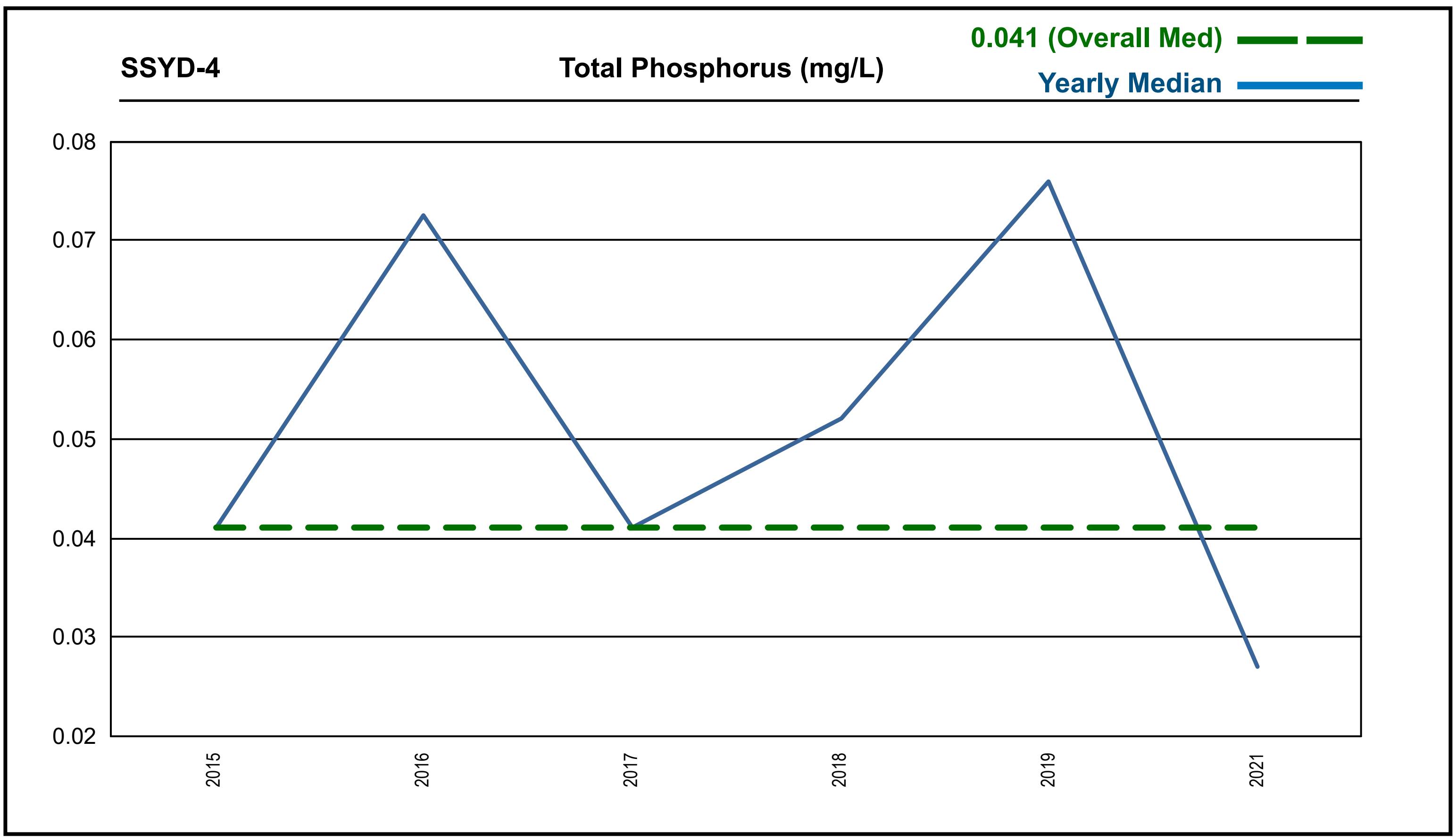


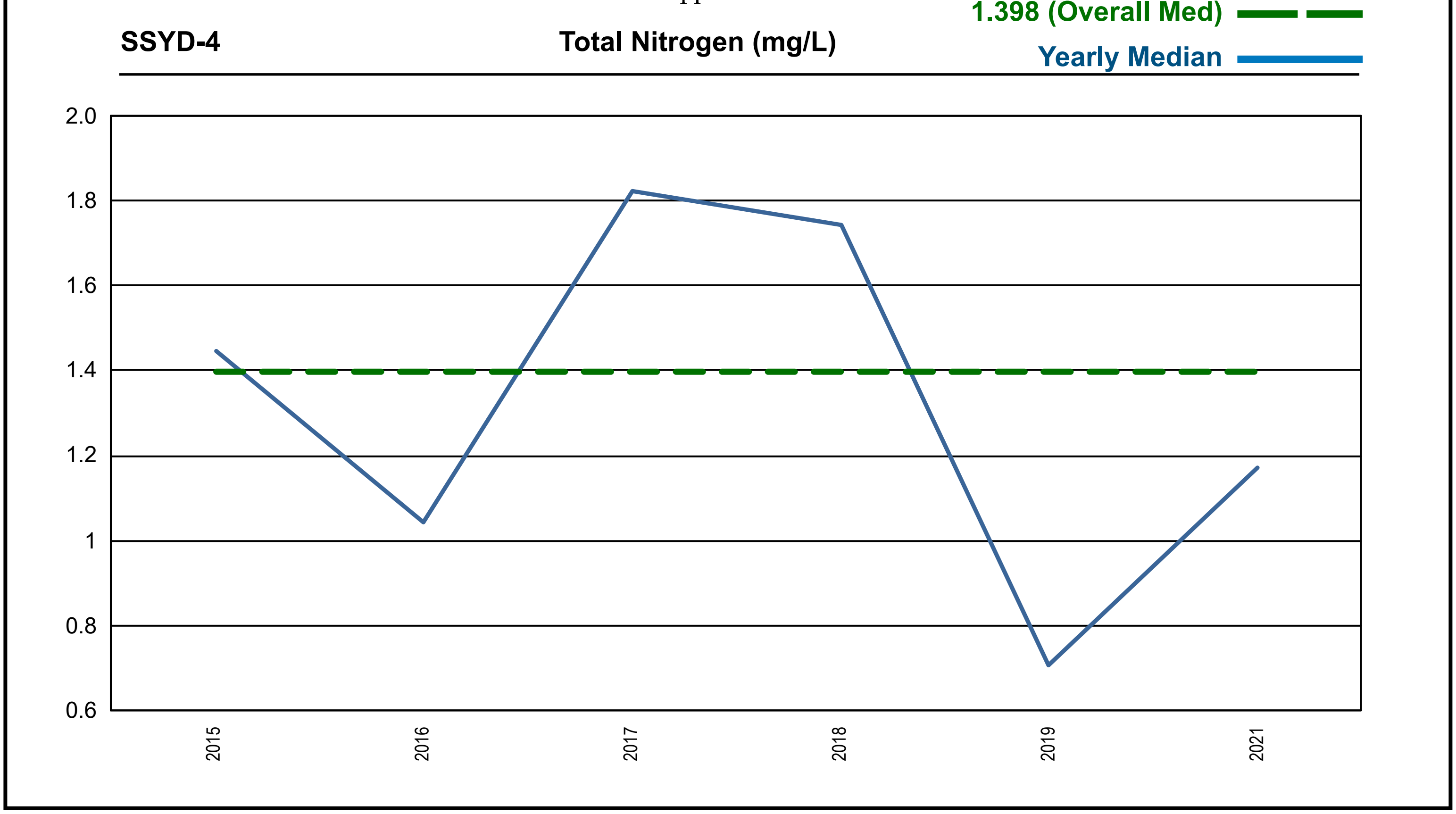
SPYG-3
Total Nitrogen (mg/L)
0.442 (Overall Med)
Yearly Median
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

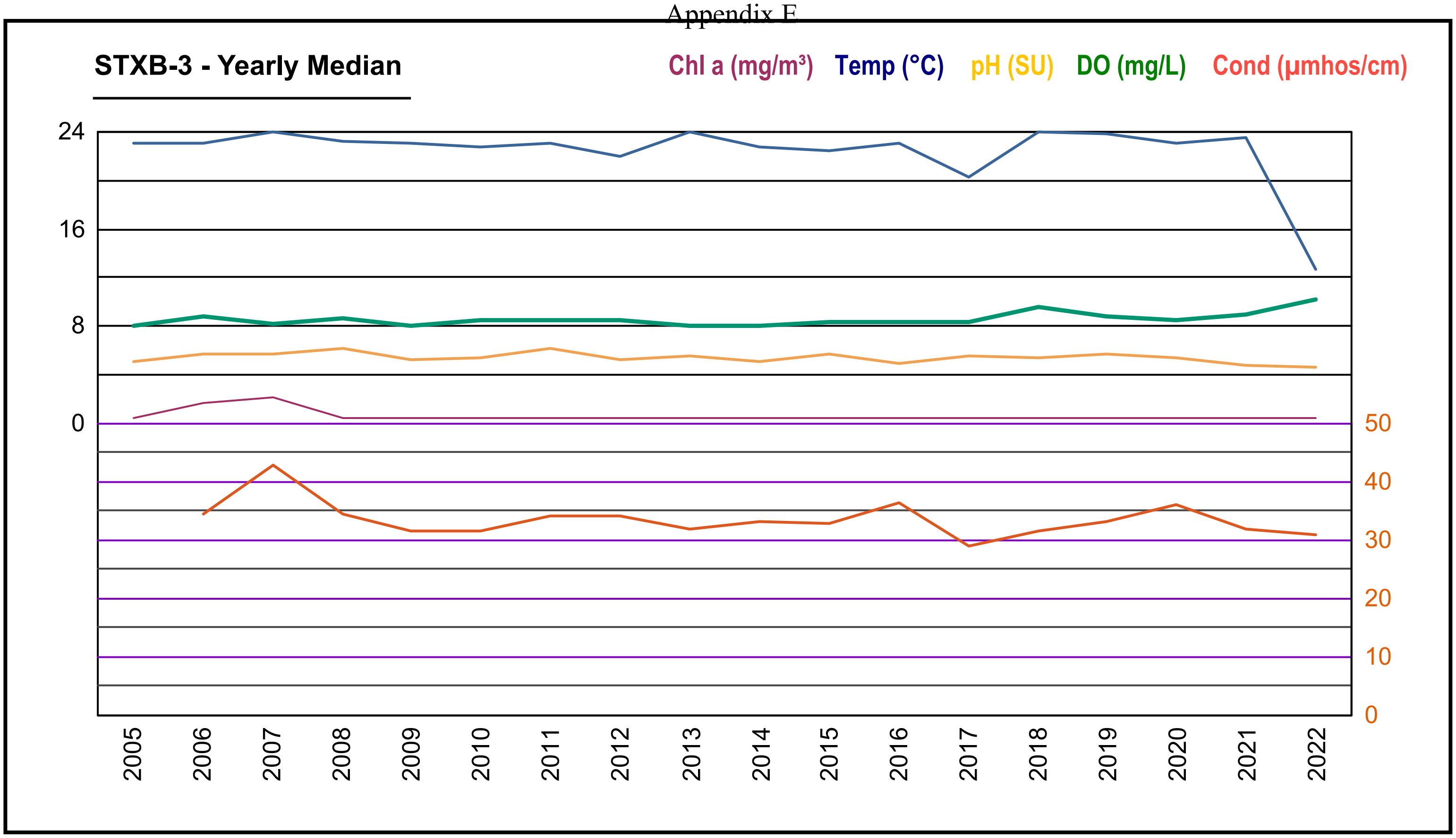

SSYD-4 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2015
2016
2017
2018
2019
2021

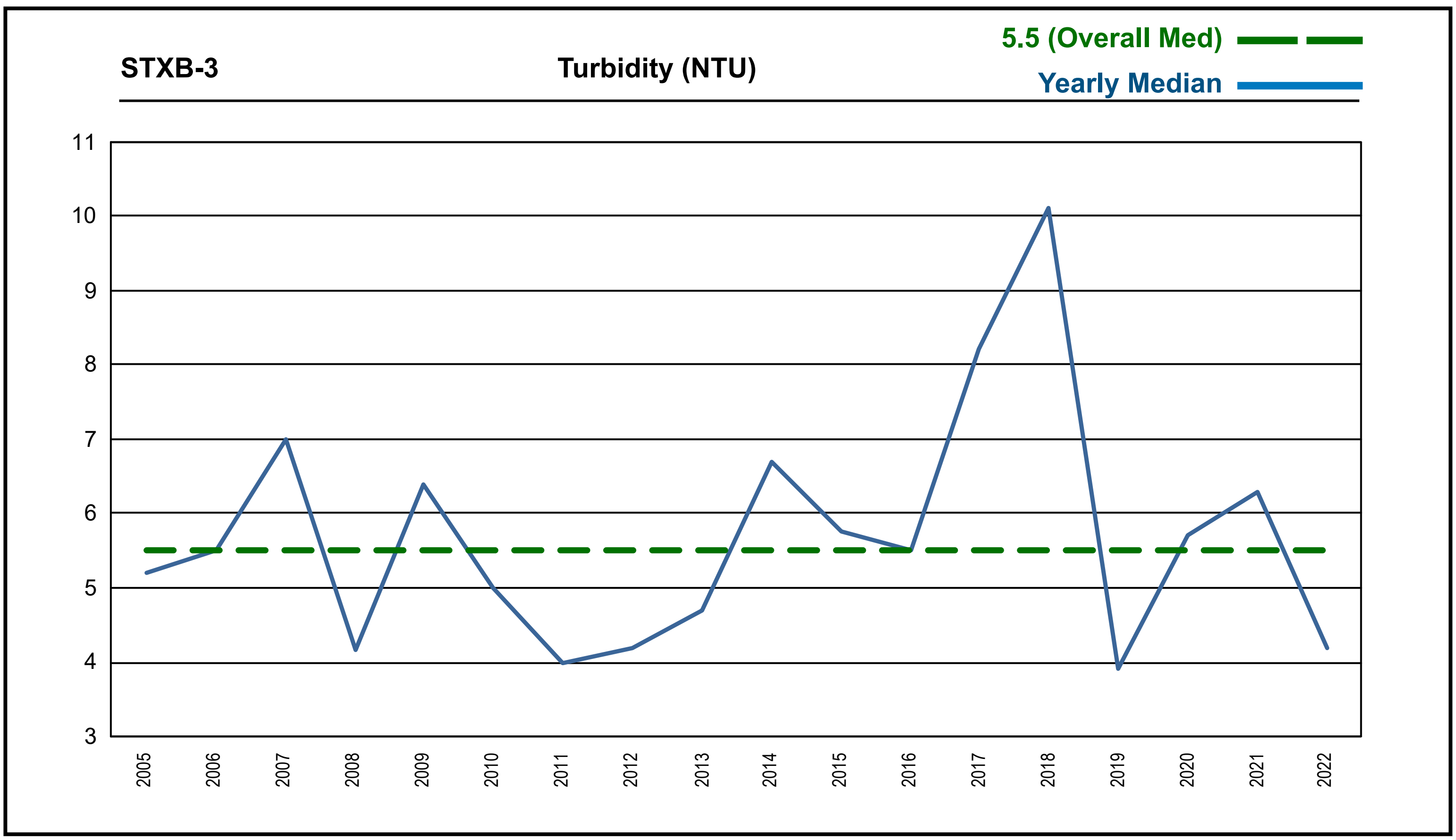

SSYD-4
Turbidity (NTU)
1.7 (Overall Med)
Yearly Median
3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
2015
2016
2017
2018
2019
2021

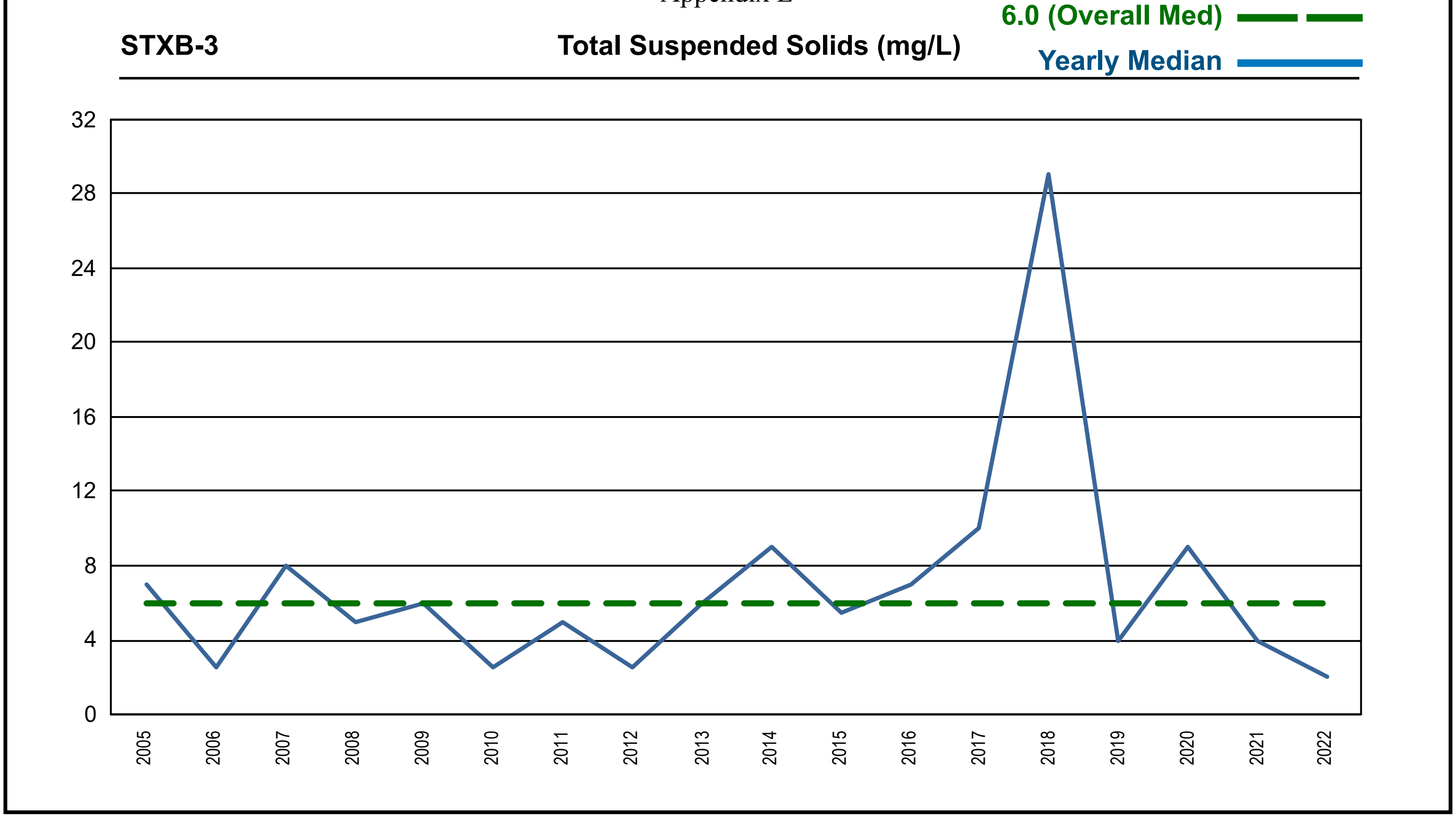

2.0 (Overall Med)
SSYD-4
Total Suspended Solids (mg/L)
Yearly Median
5
4.5
4
3.5
3
2.5
2
1.5
1
2015
2016
2017
2018
2019
2021

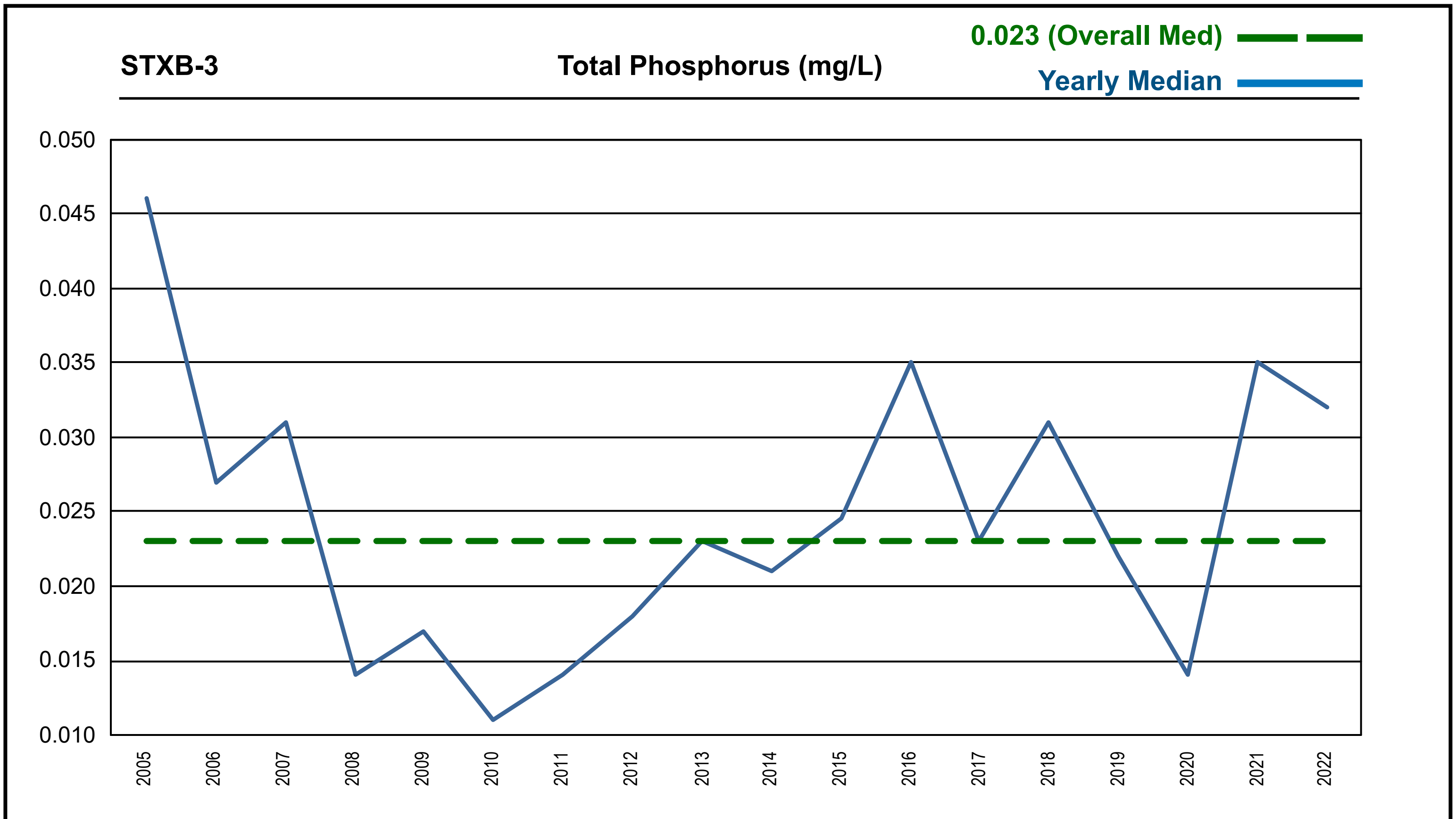

0.041 (Overall Med)
SSYD-4
Total Phosphorus (mg/L)
Yearly Median
0.08
0.07
0.06
0.05
0.04
0.03
0.02
2015
2016
2017
2018
2019
2021

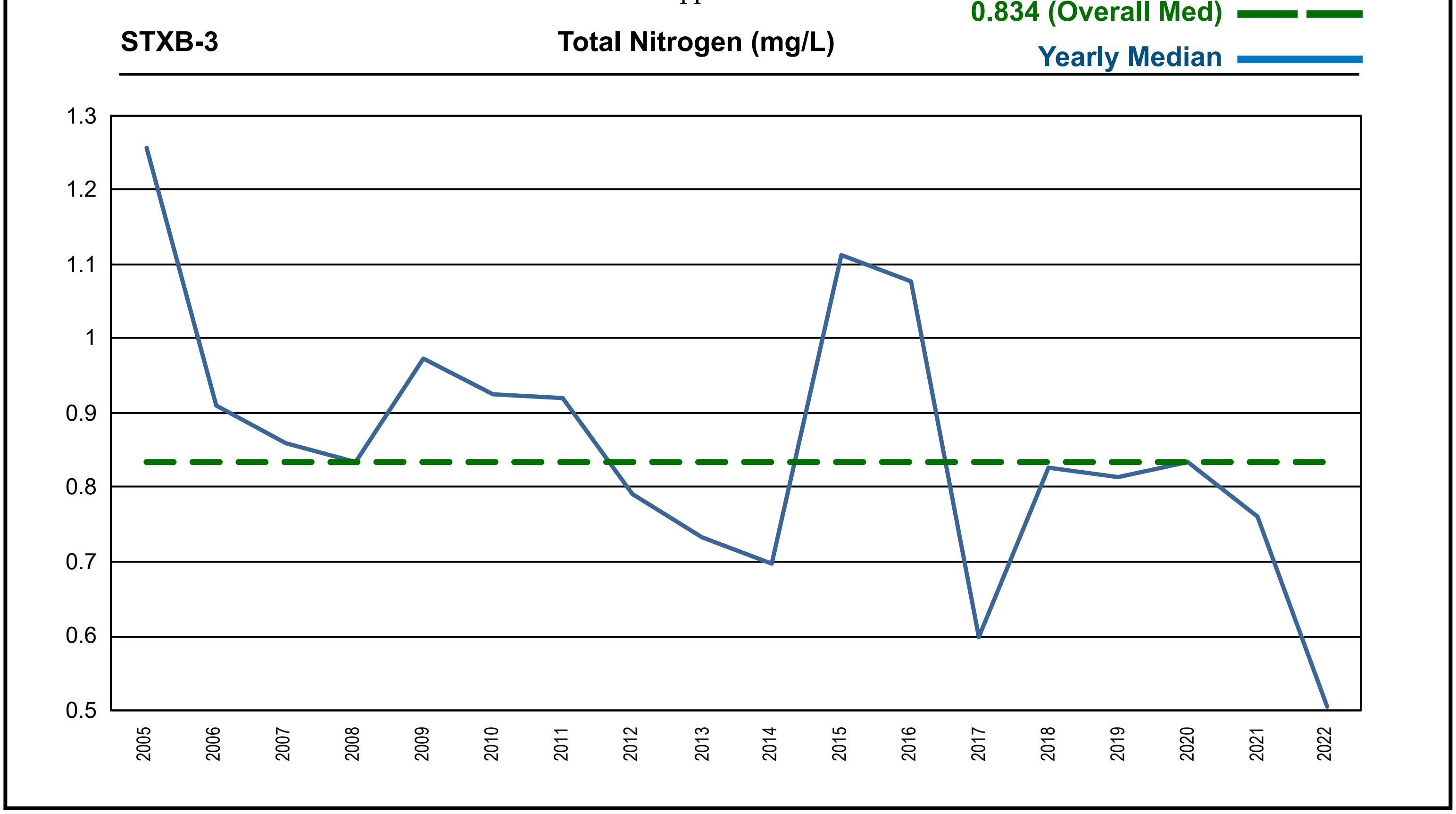

SSYD-4
Total Nitrogen (mg/L)
1.398 (Overall Med)
Yearly Median
2.0
1.8
1.6
1.4
1.2
1
0.8
0.6
2015
2016
2017
2018
2019
2021


STXB-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

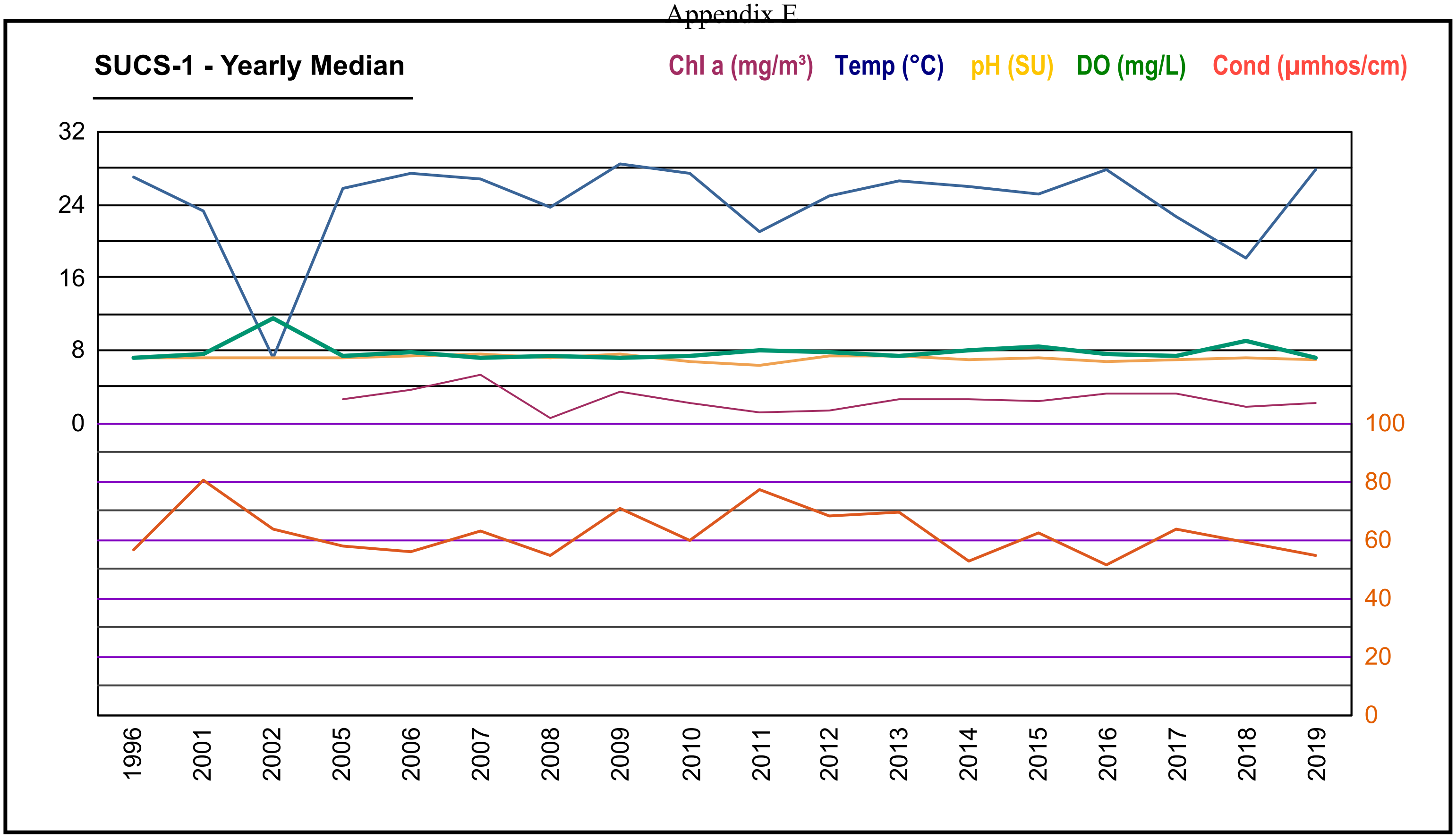

STXB-3
Turbidity (NTU)
5.5 (Overall Med)
Yearly Median
11
10
9
8
7
6
5
4
3
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

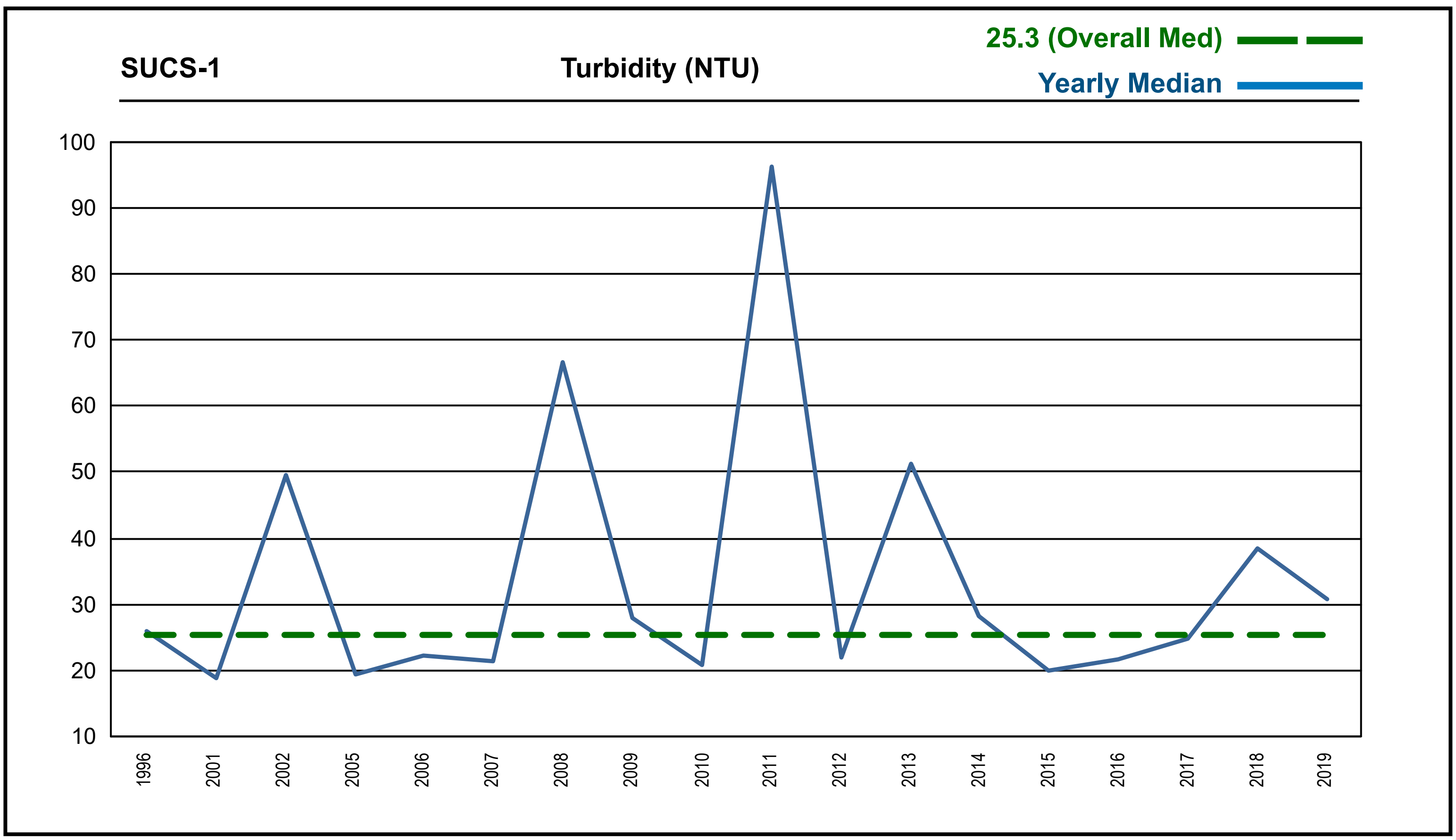

6.0 (Overall Med)
Yearly Median
STXB-3
Total Suspended Solids (mg/L)
32
28
24
20
16
12
8
4
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

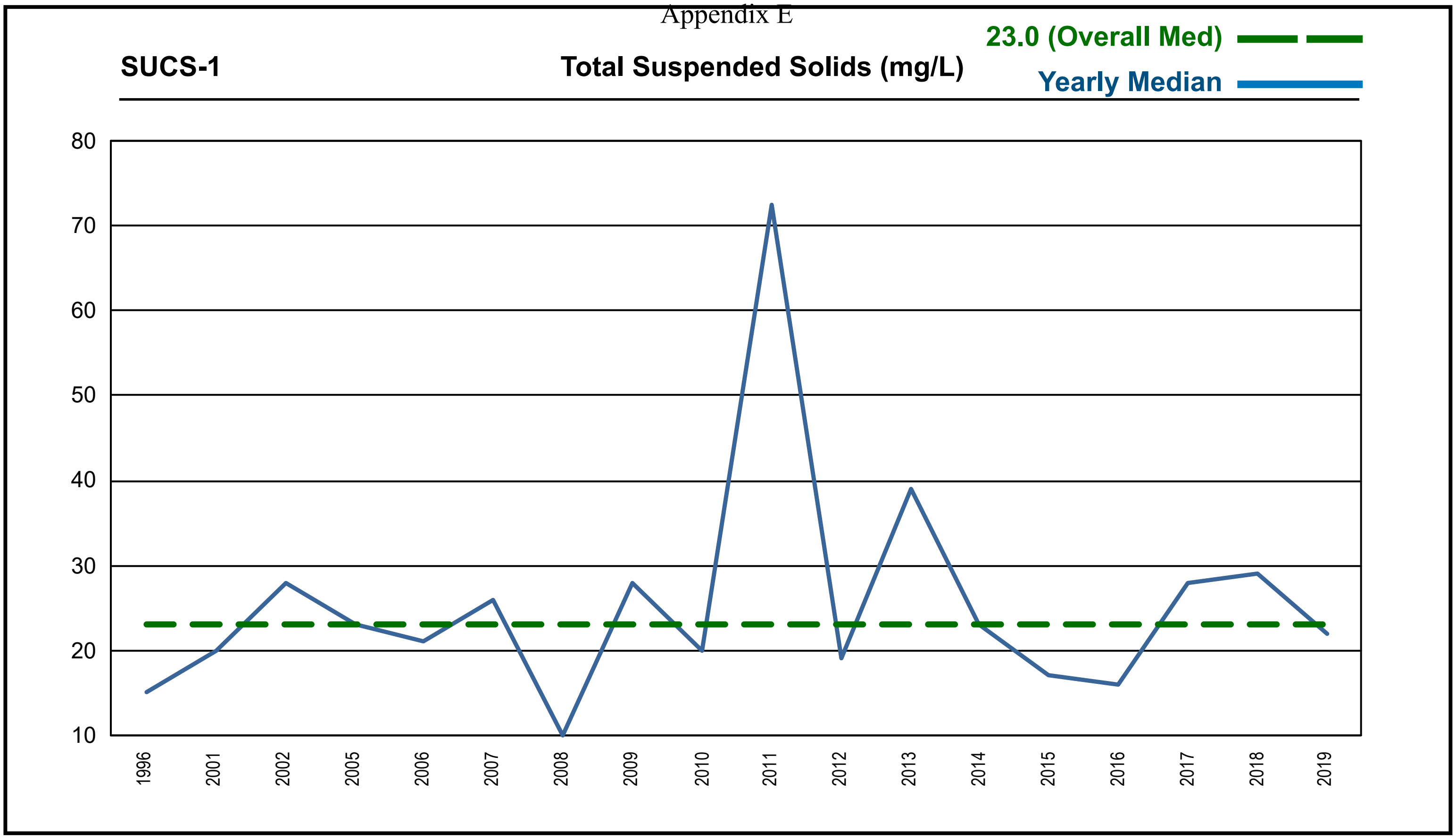

0.023 (Overall Med)
Yearly Median
STXB-3
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

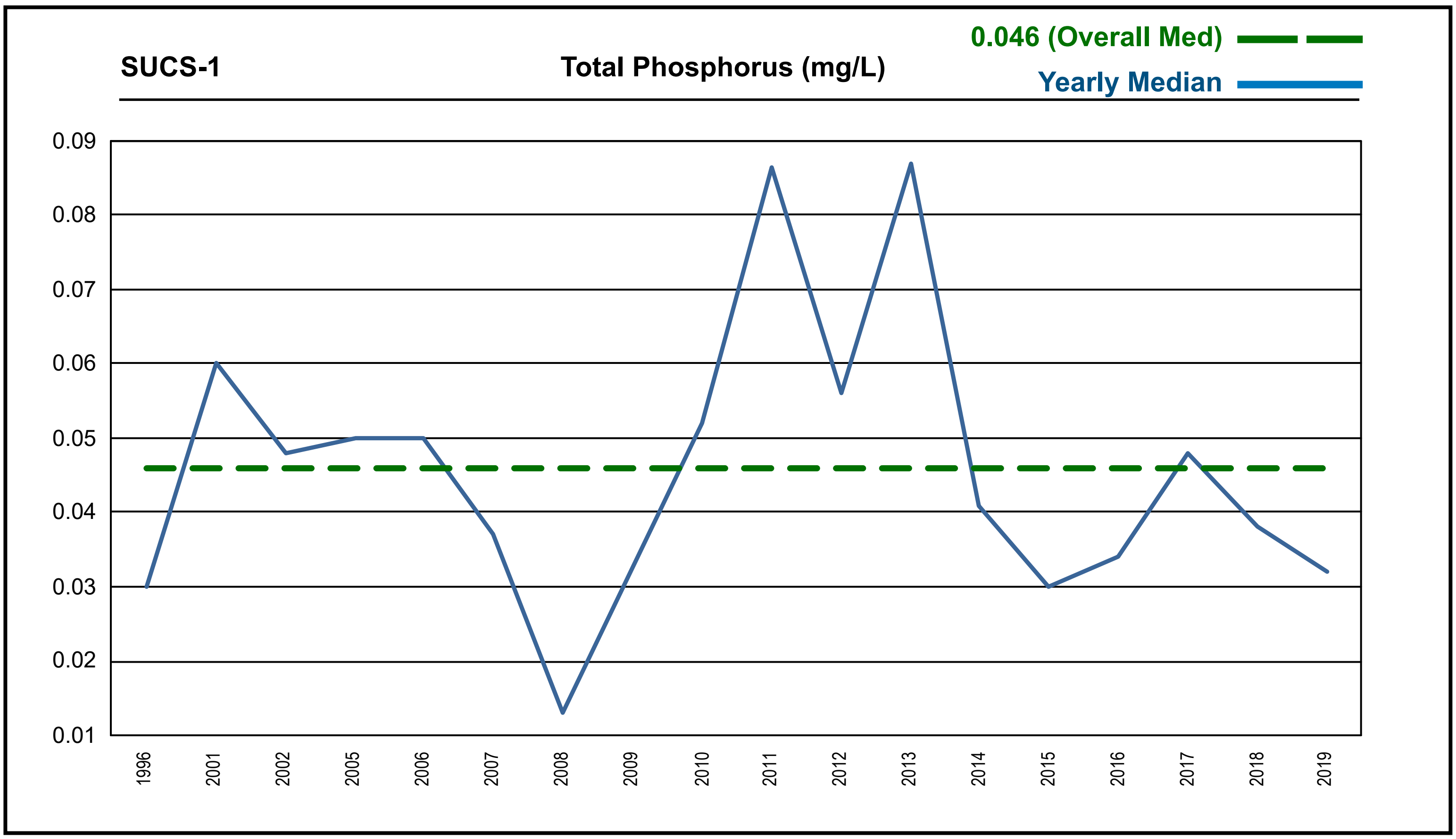


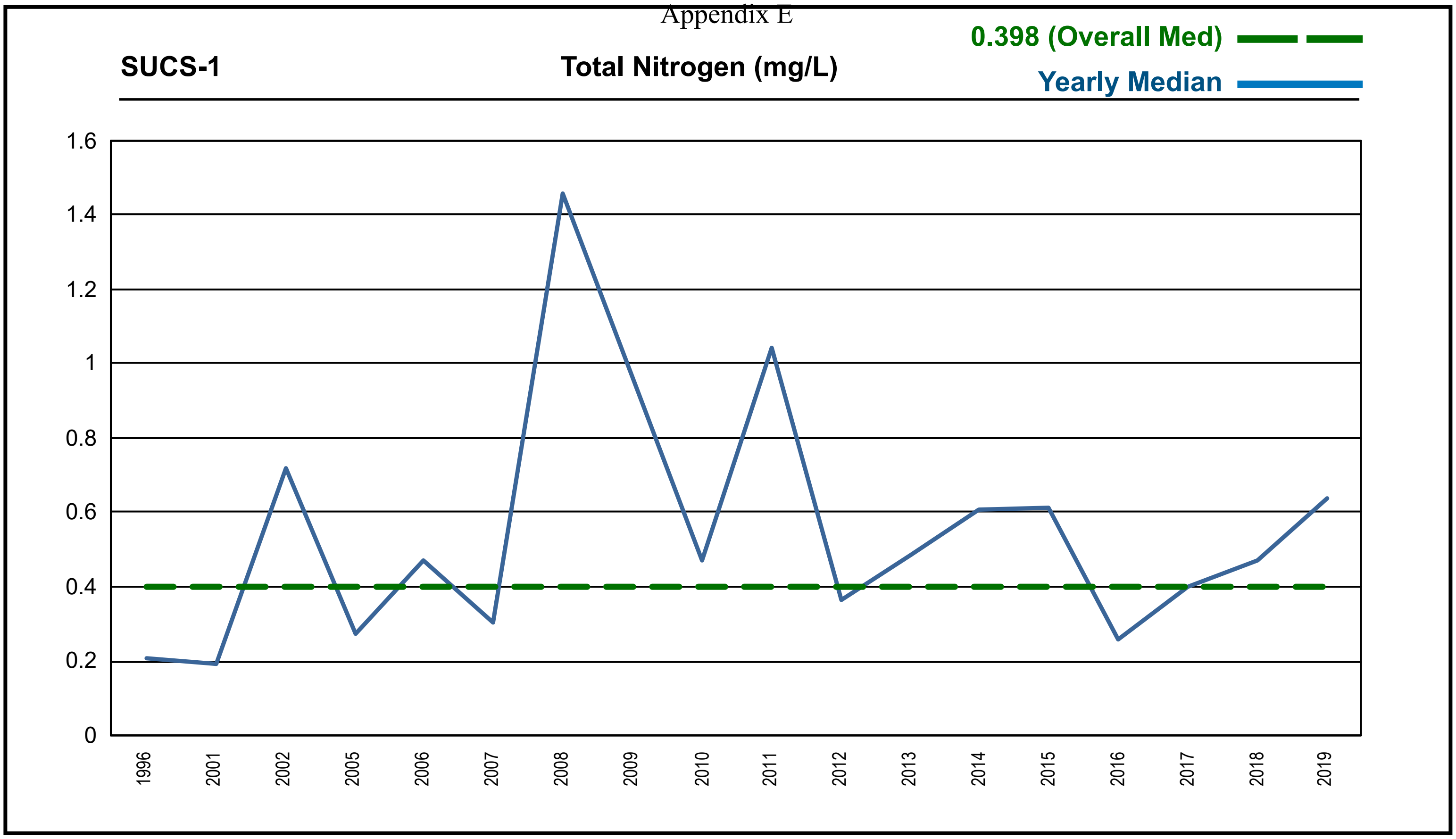
STXB-3
Total Nitrogen (mg/L)
0.834 (Overall Med)
Yearly Median
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


SUCS-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
100
80
60
40
20
0
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

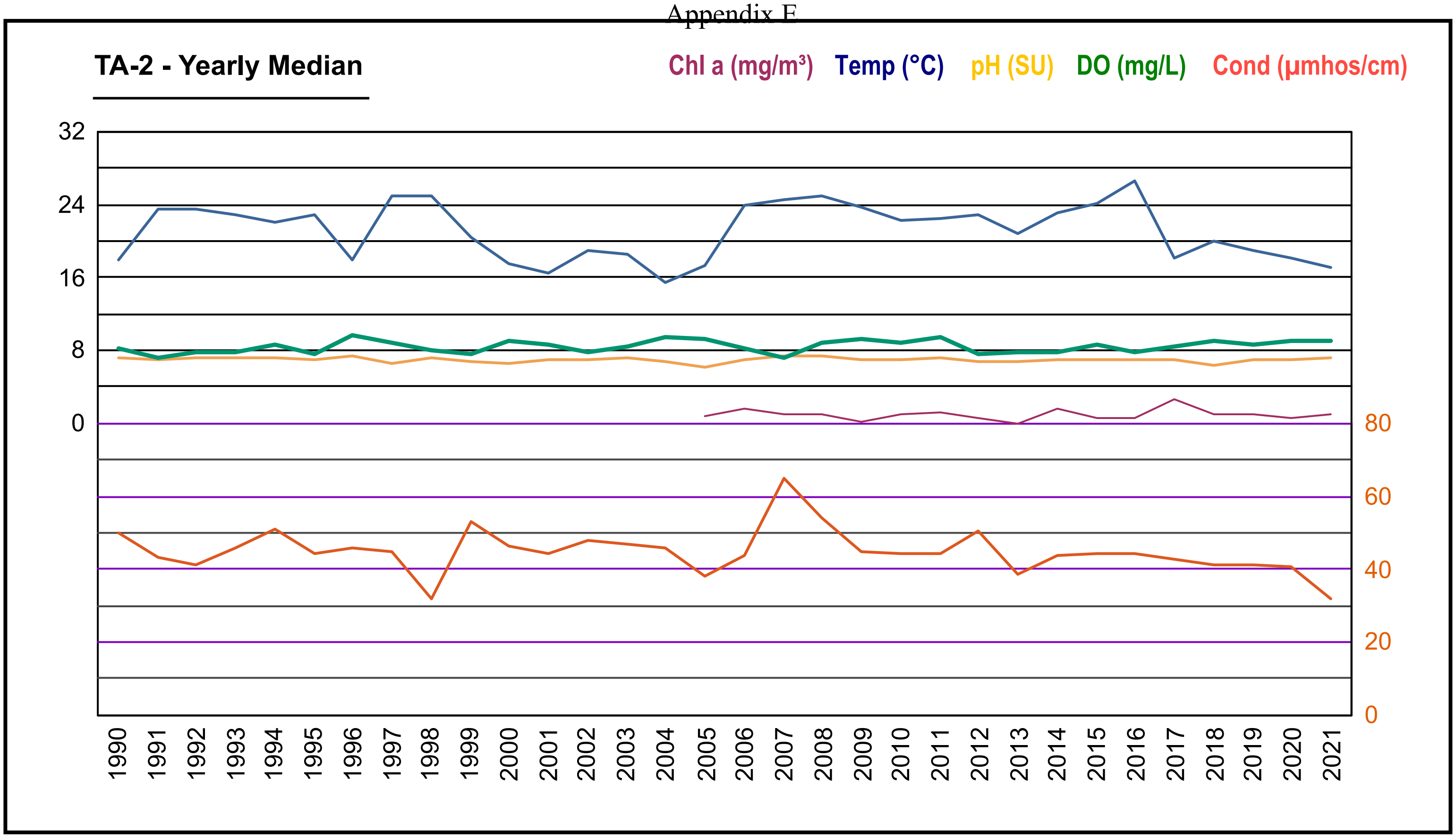

SUCS-1
Turbidity (NTU)
25.3 (Overall Med)
Yearly Median
100
90
80
70
60
50
40
30
20
10
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

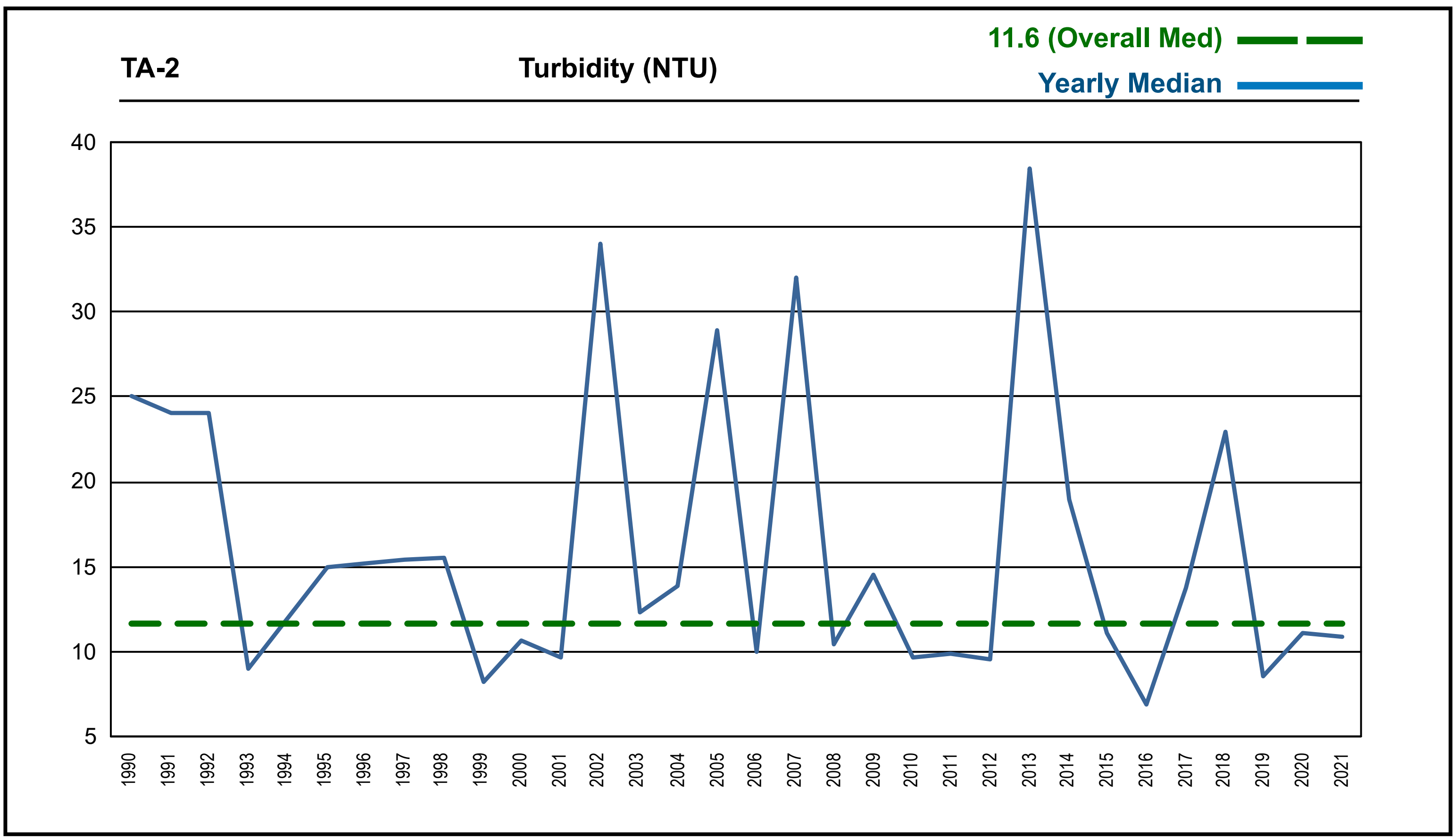

23.0 (Overall Med)
SUCS-1
Total Suspended Solids (mg/L)
Yearly Median
80
70
60
50
40
30
20
10
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

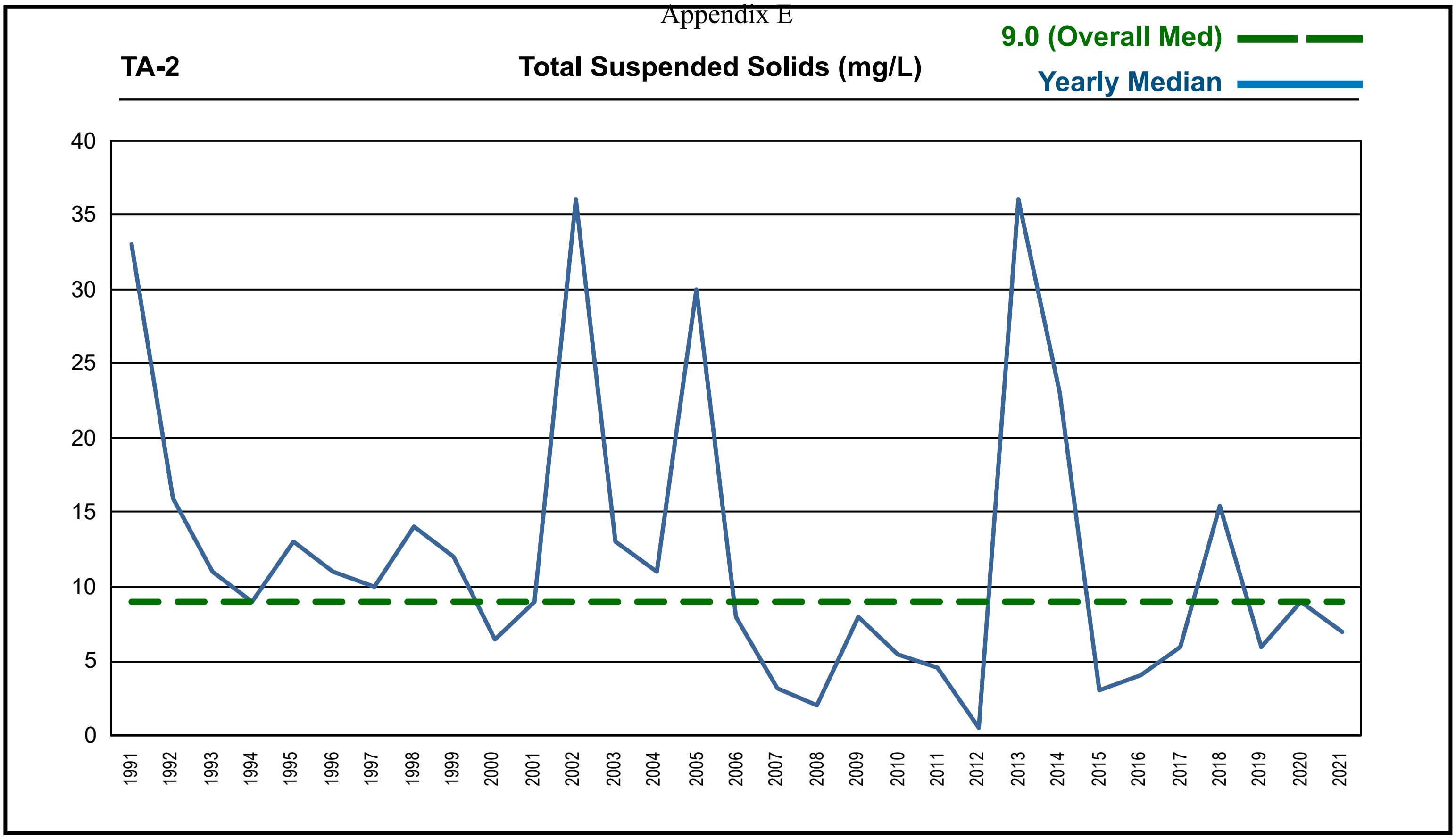

0.046 (Overall Med)
SUCS-1
Total Phosphorus (mg/L)
Yearly Median
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

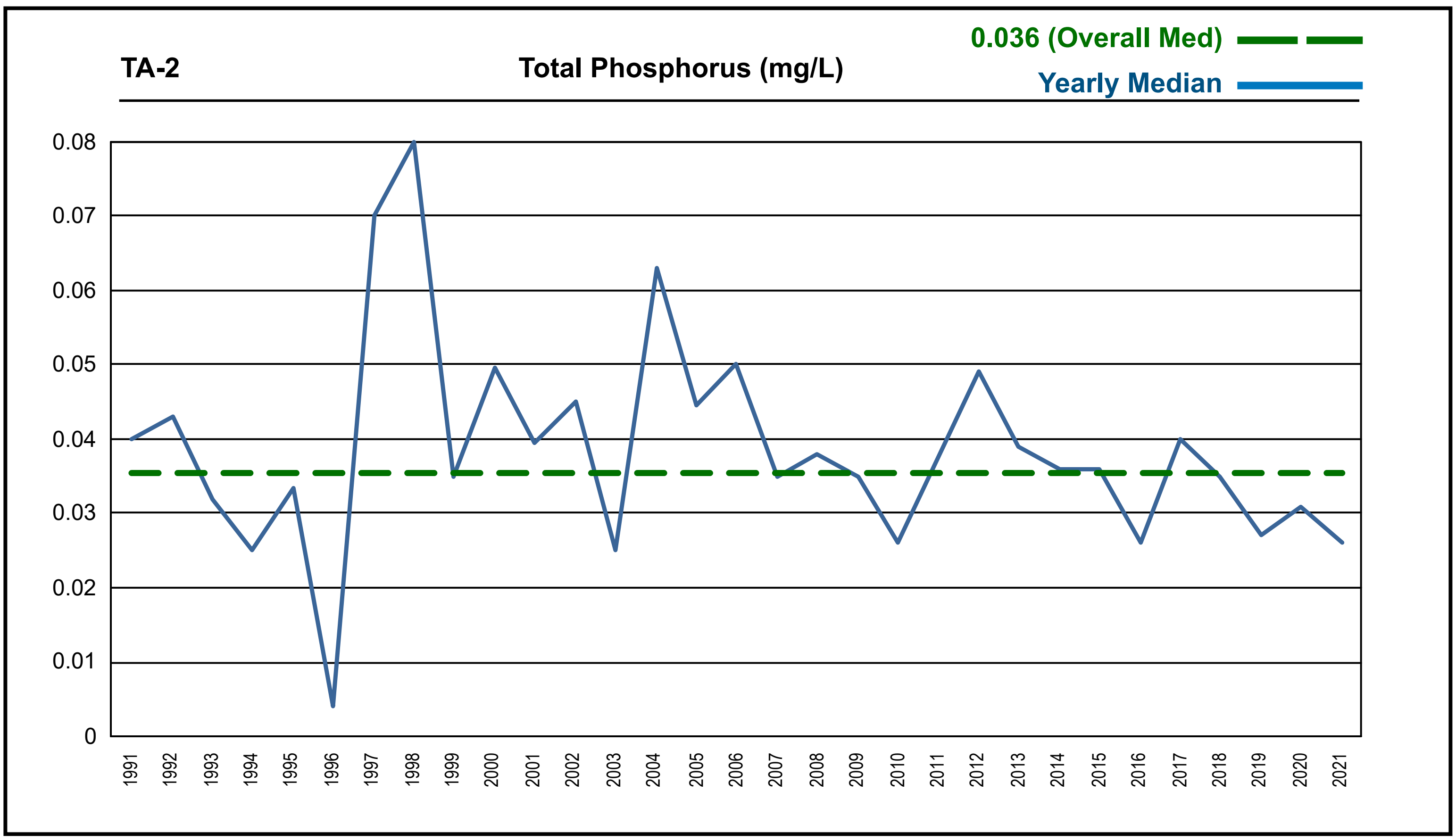


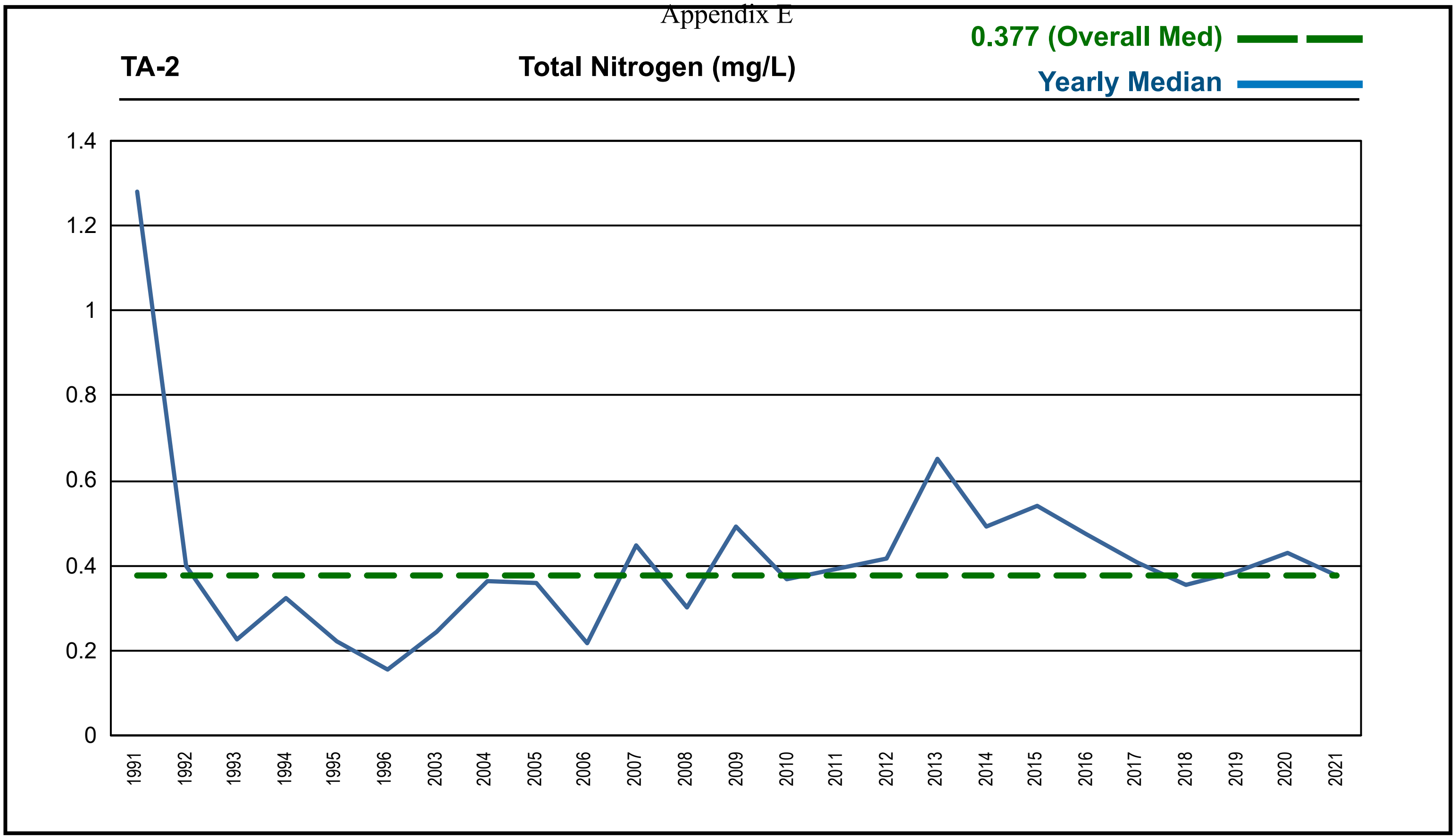
SUCS-1
Total Nitrogen (mg/L)
0.398 (Overall Med)
Yearly Median
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1996
2001
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019


TA-2 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
80
60
40
20
0
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

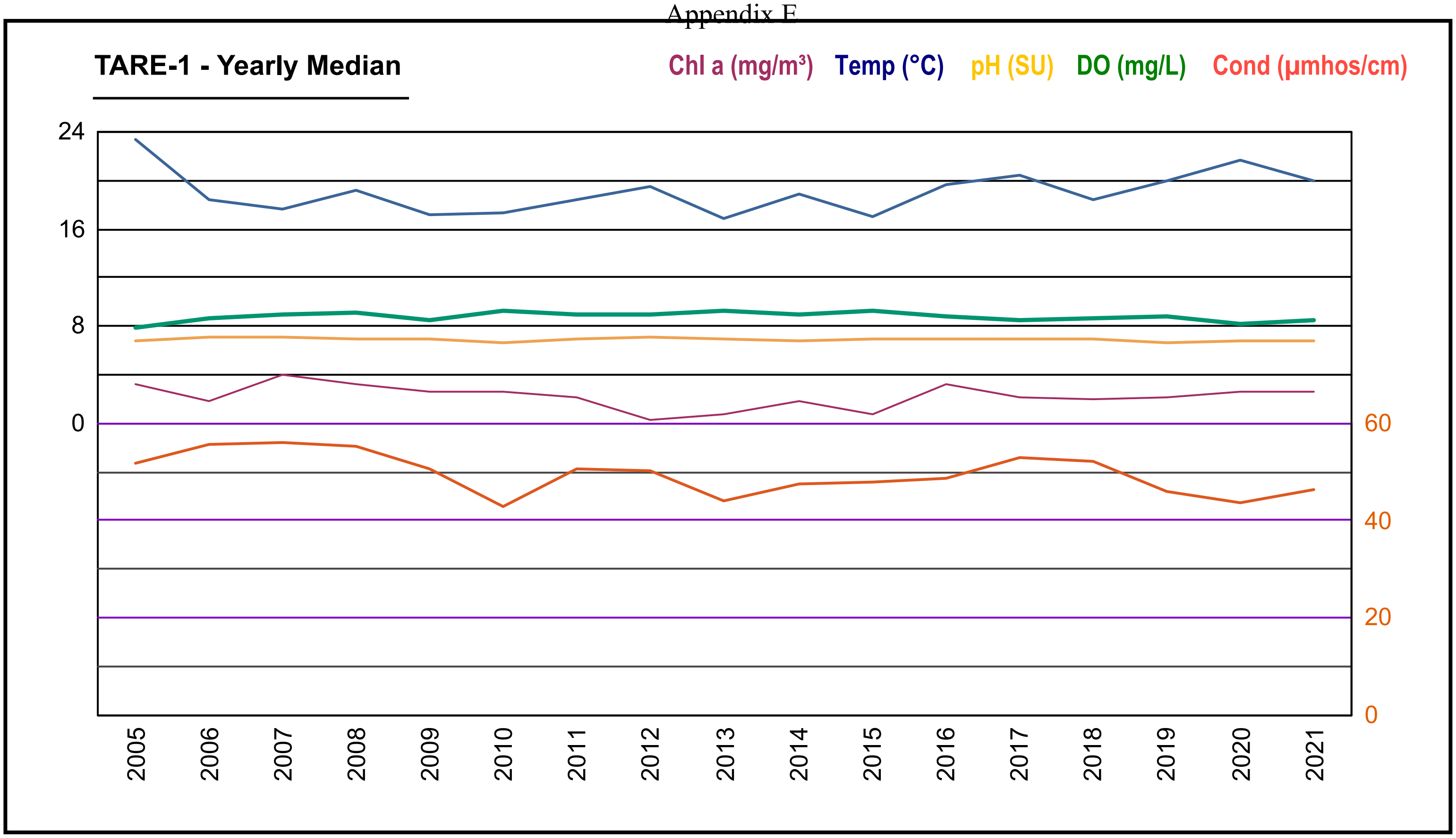

TA-2
Turbidity (NTU)
11.6 (Overall Med)
Yearly Median
40
35
30
25
20
15
10
5
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

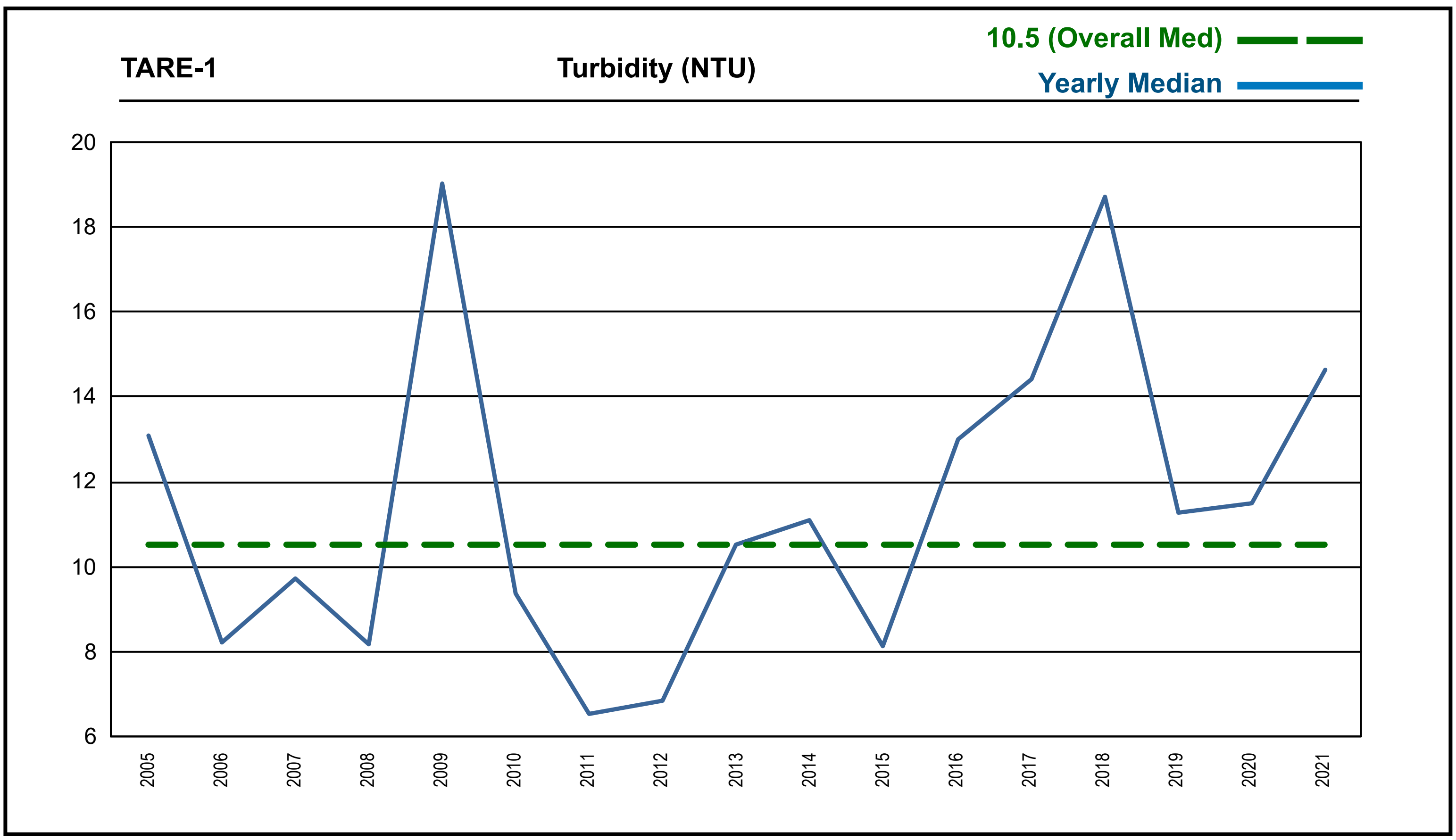

TA-2
Total Suspended Solids (mg/L)
9.0 (Overall Med)
Yearly Median
40
35
30
25
20
15
10
5
0
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

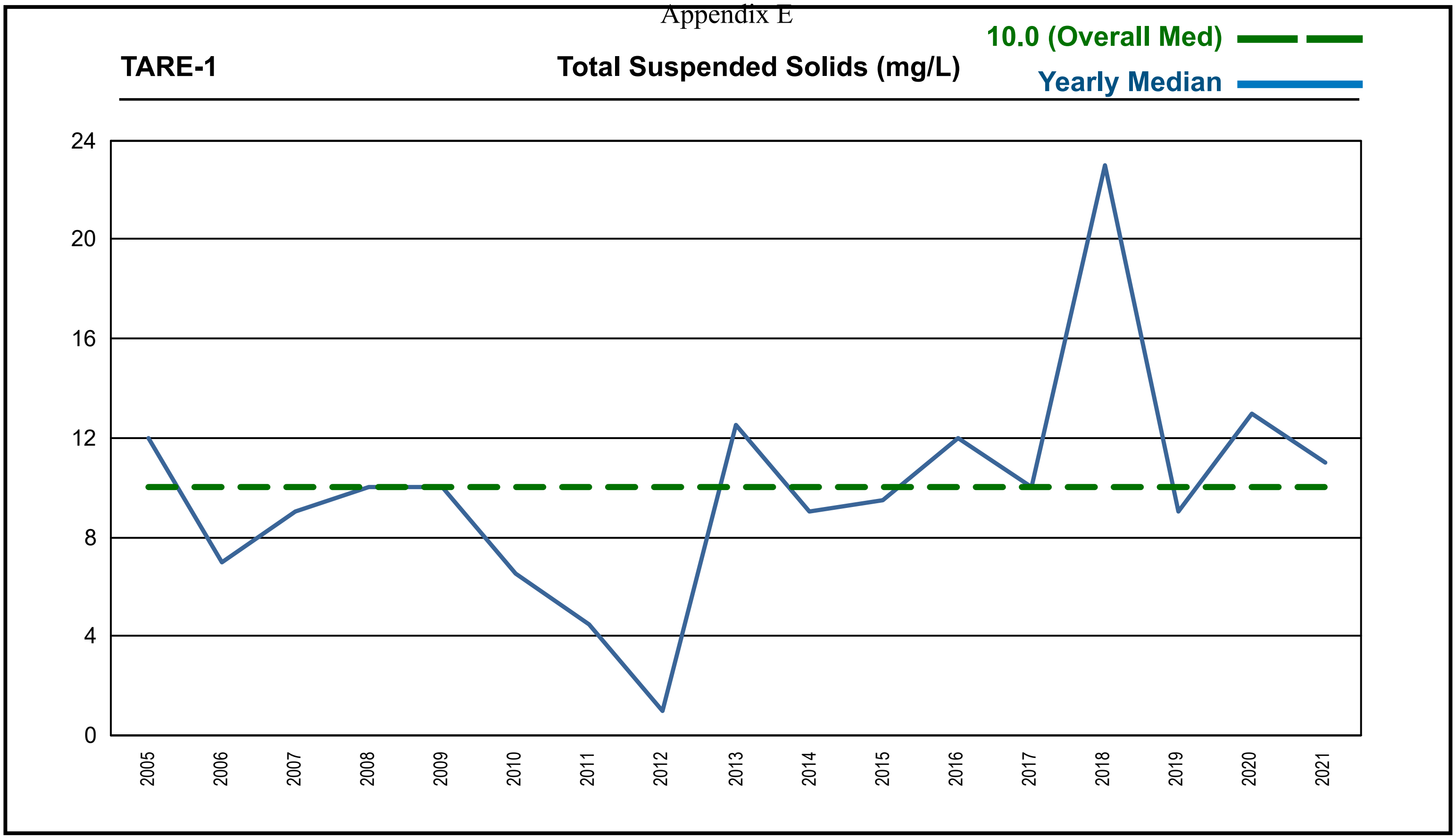

TA-2
Total Phosphorus (mg/L)
0.036 (Overall Med)
Yearly Median
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

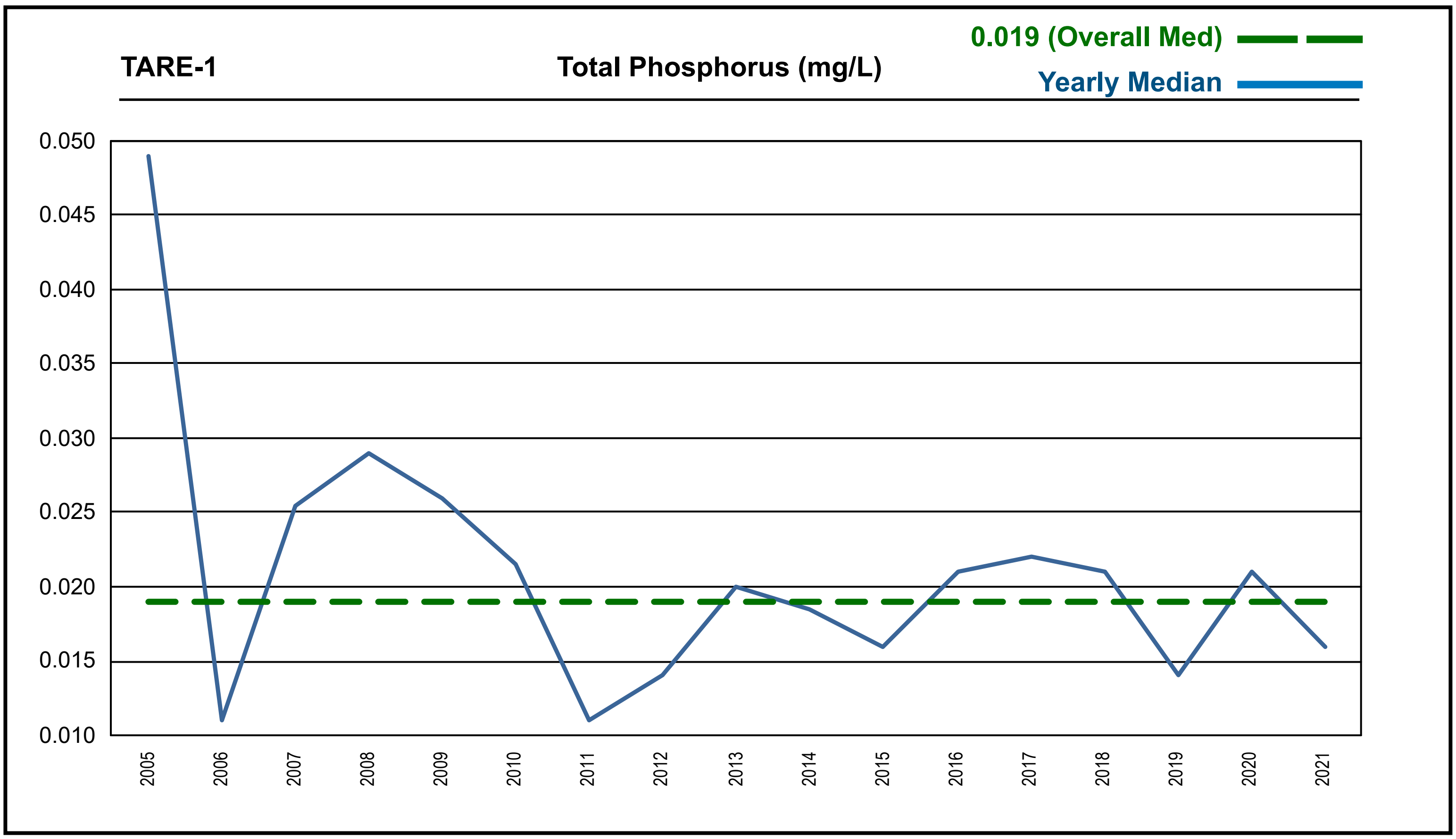


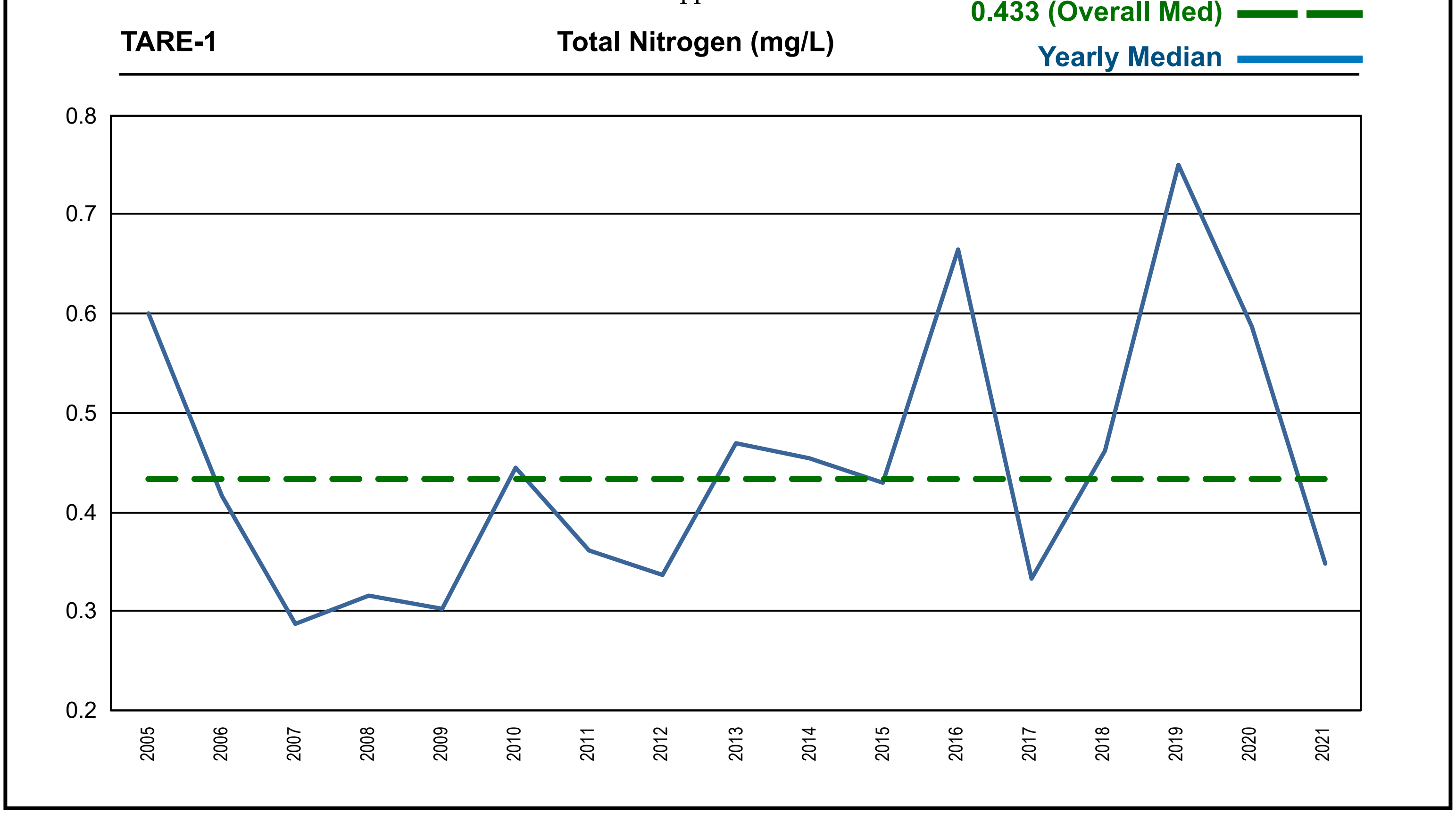
TA-2
Total Nitrogen (mg/L)
0.377 (Overall Med)
Yearly Median
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1991
1992
1993
1994
1995
1996
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

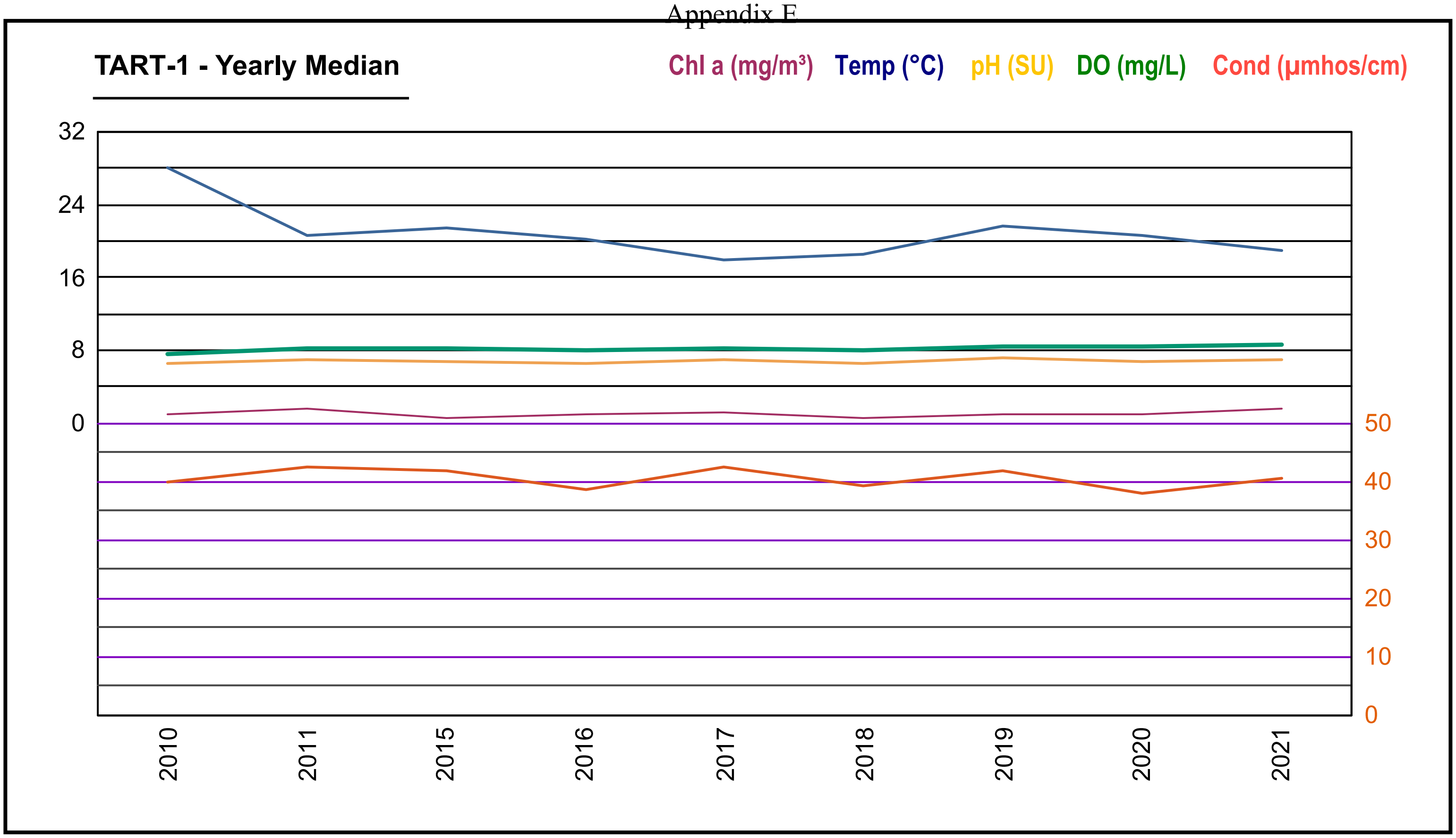

TARE-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

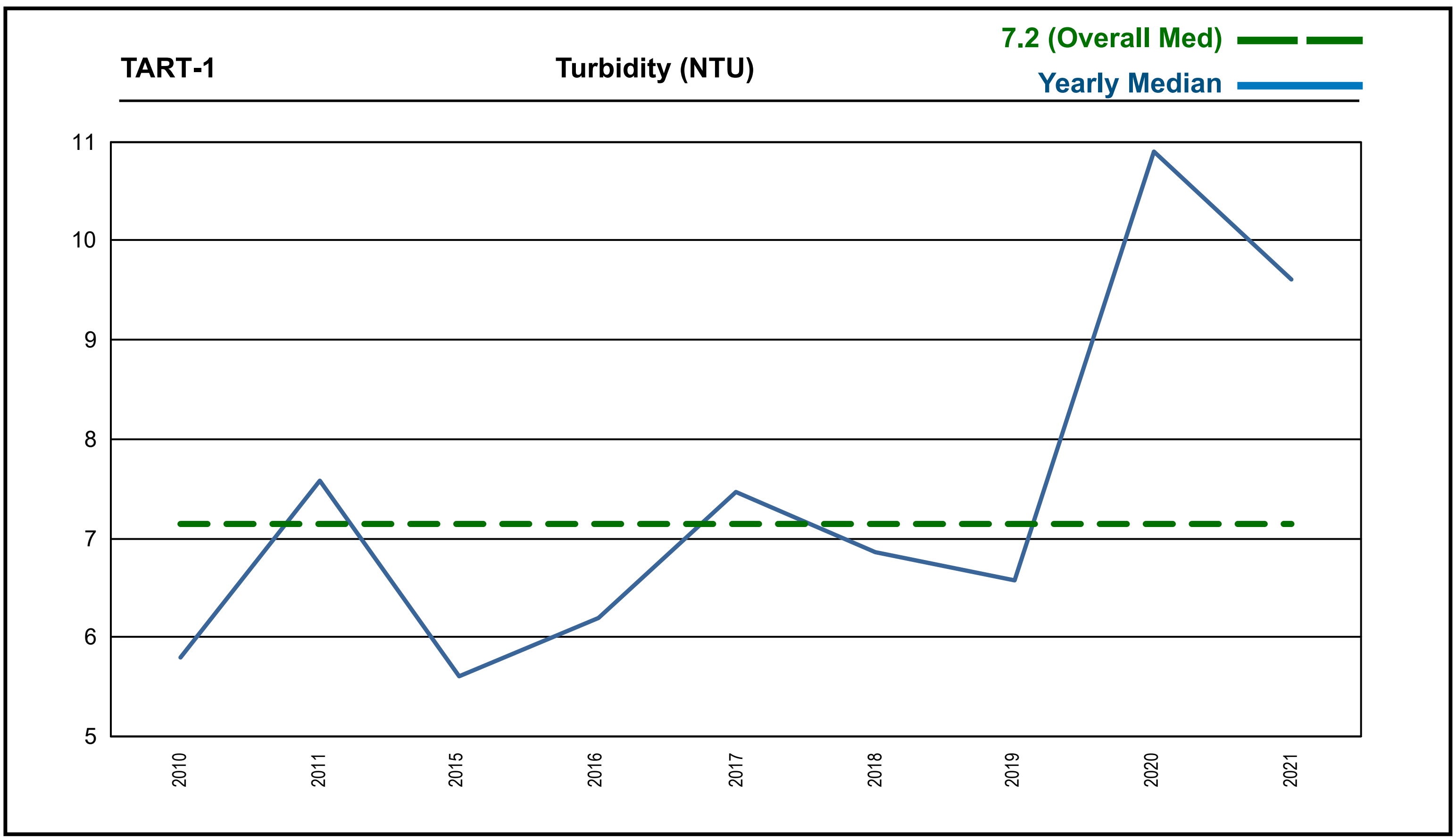

TARE-1
Turbidity (NTU)
10.5 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

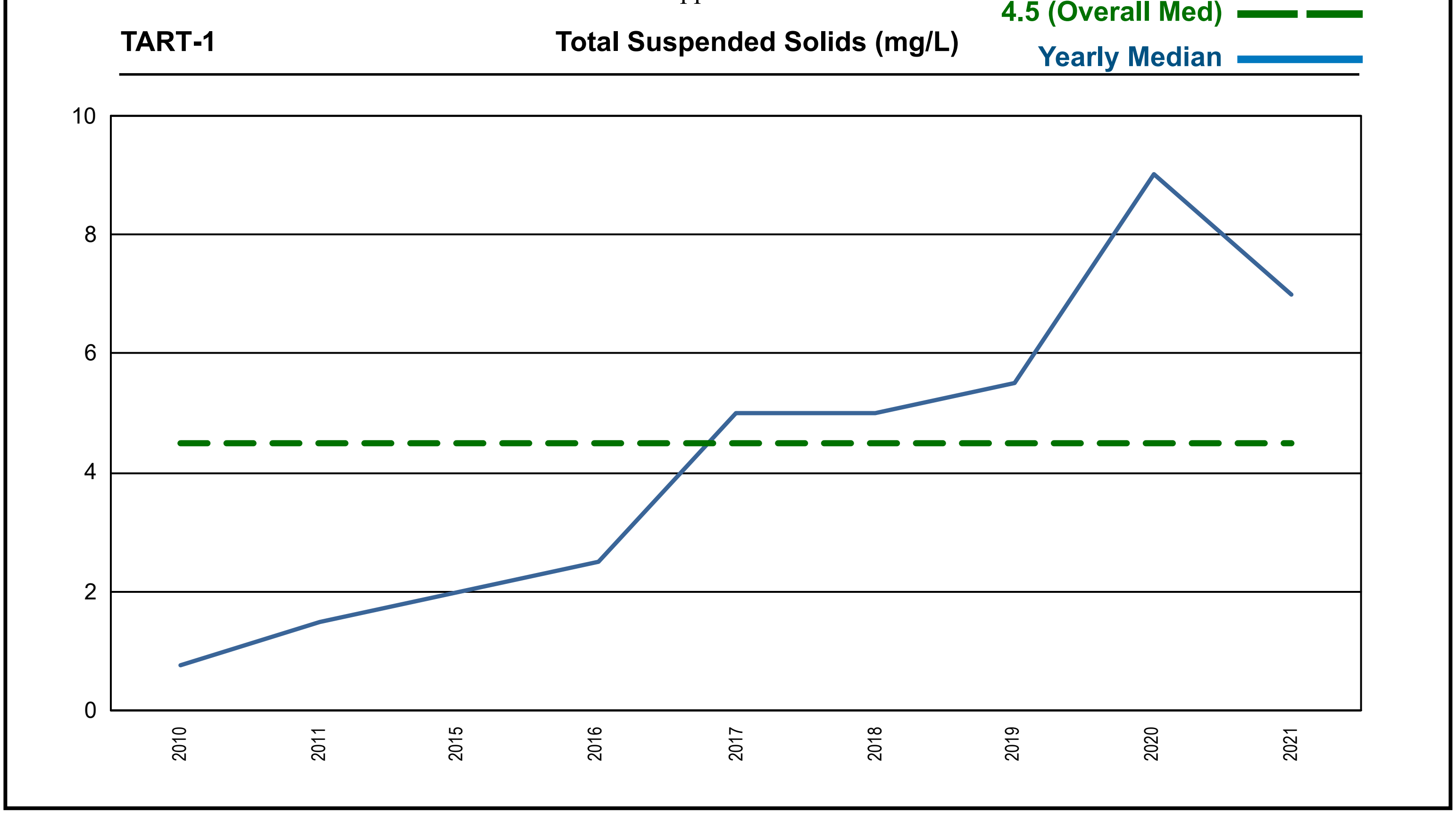

10.0 (Overall Med)
Yearly Median
TARE-1
Total Suspended Solids (mg/L)
24
20
16
12
8
4
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

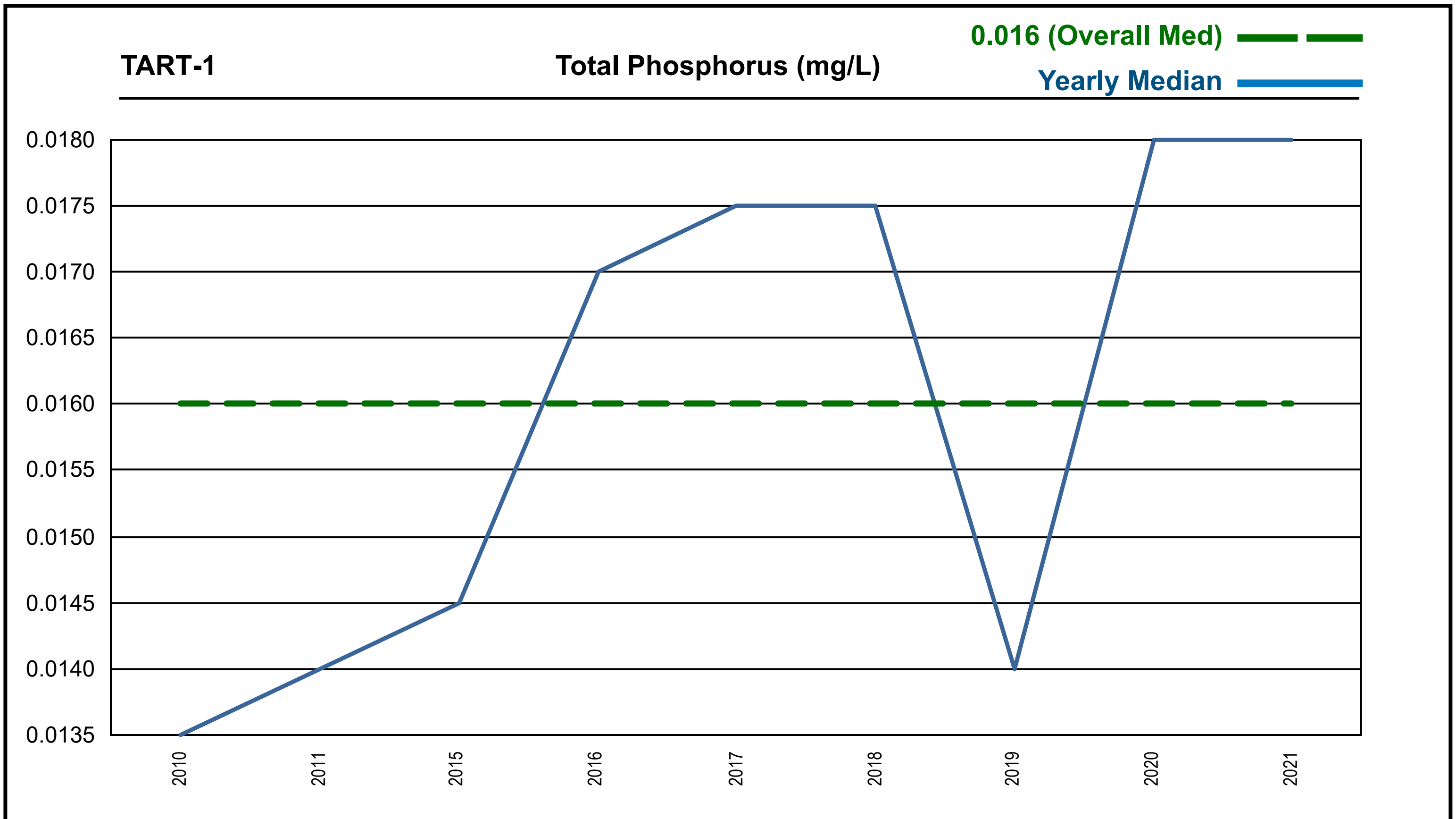

0.019 (Overall Med)
Yearly Median
TARE-1
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

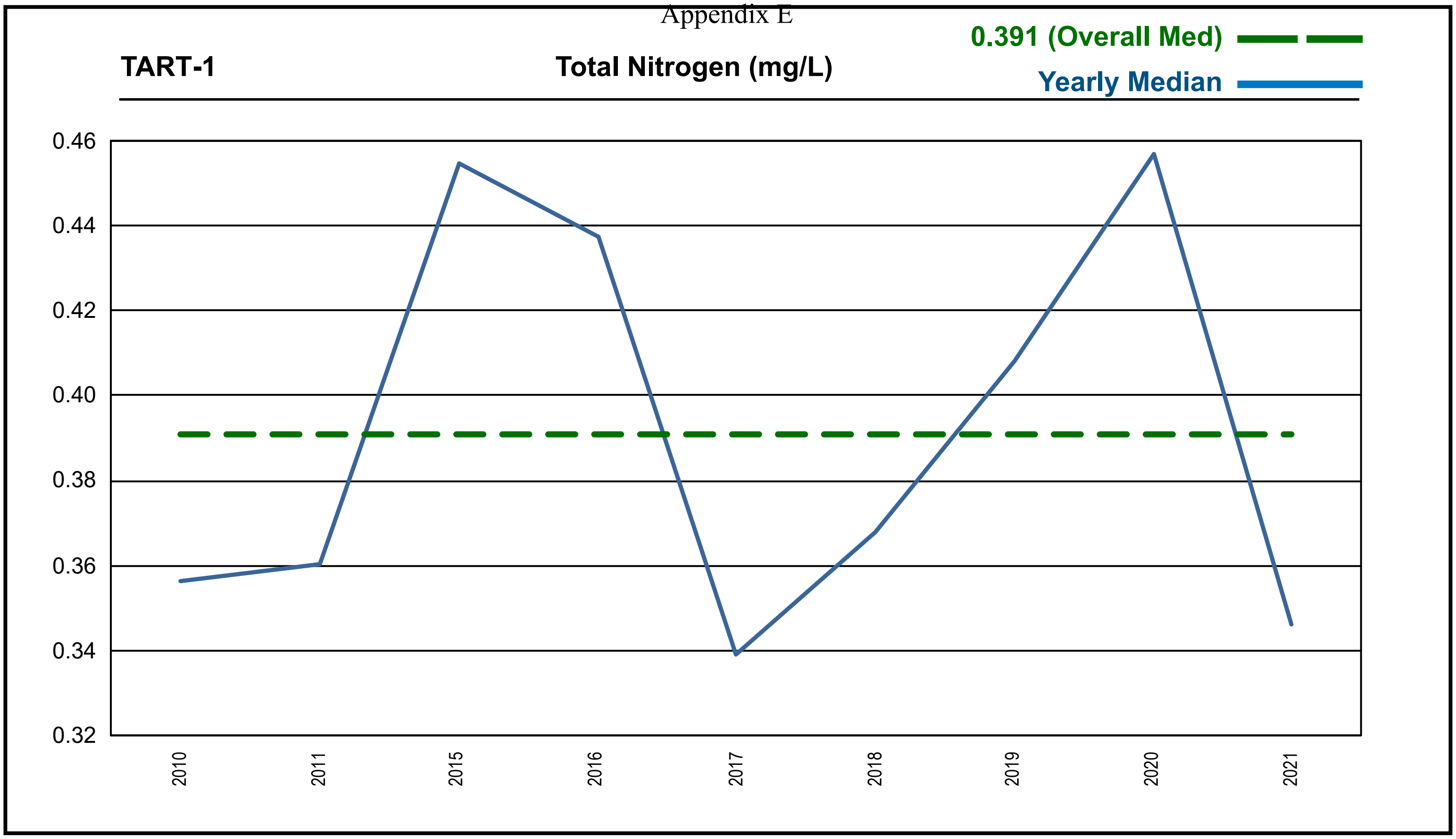

TARE-1
Total Nitrogen (mg/L)
0.433 (Overall Med)
Yearly Median
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

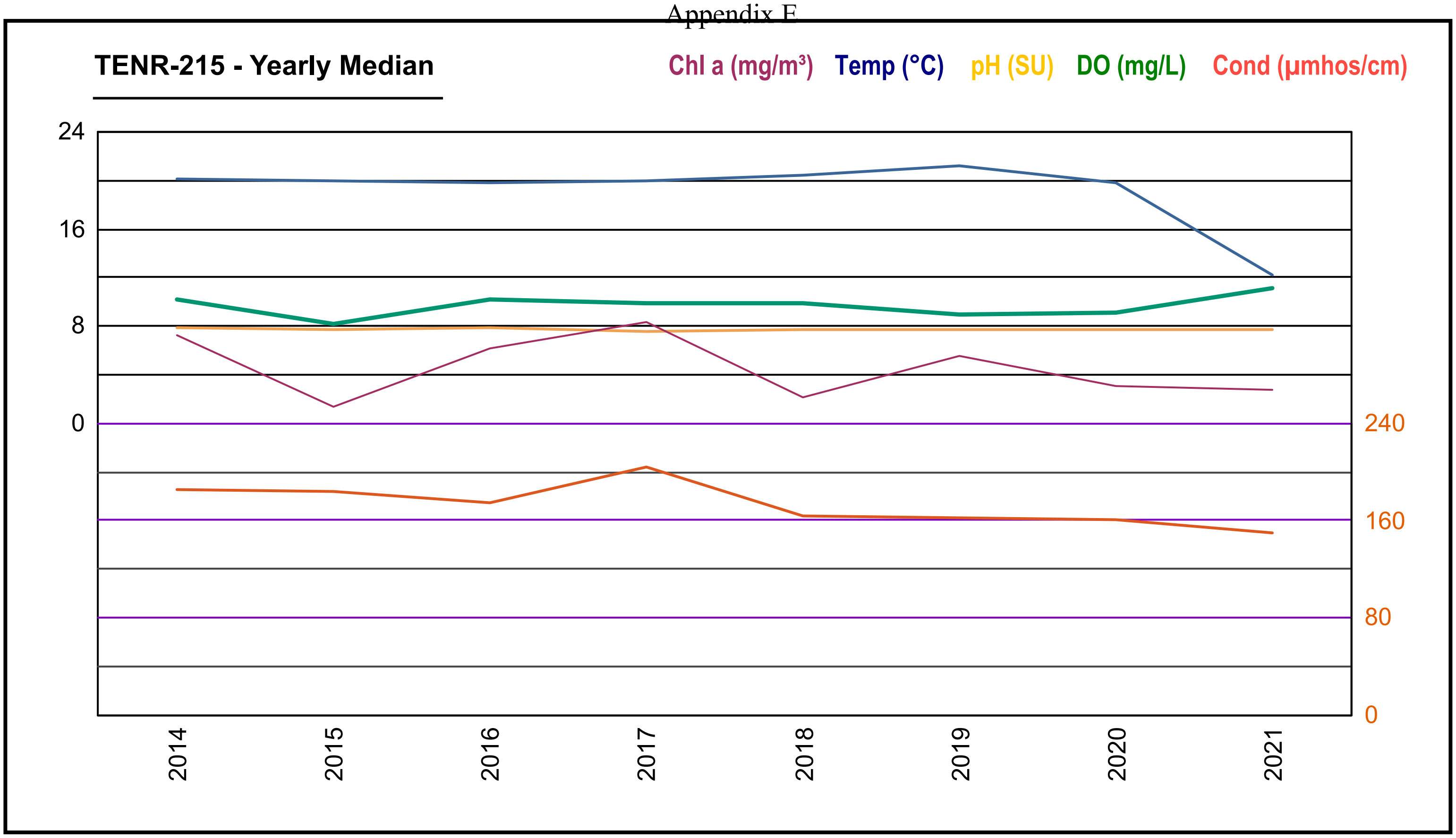

TART-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
50
40
30
20
10
0
2010
2011
2015
2016
2017
2018
2019
2020
2021

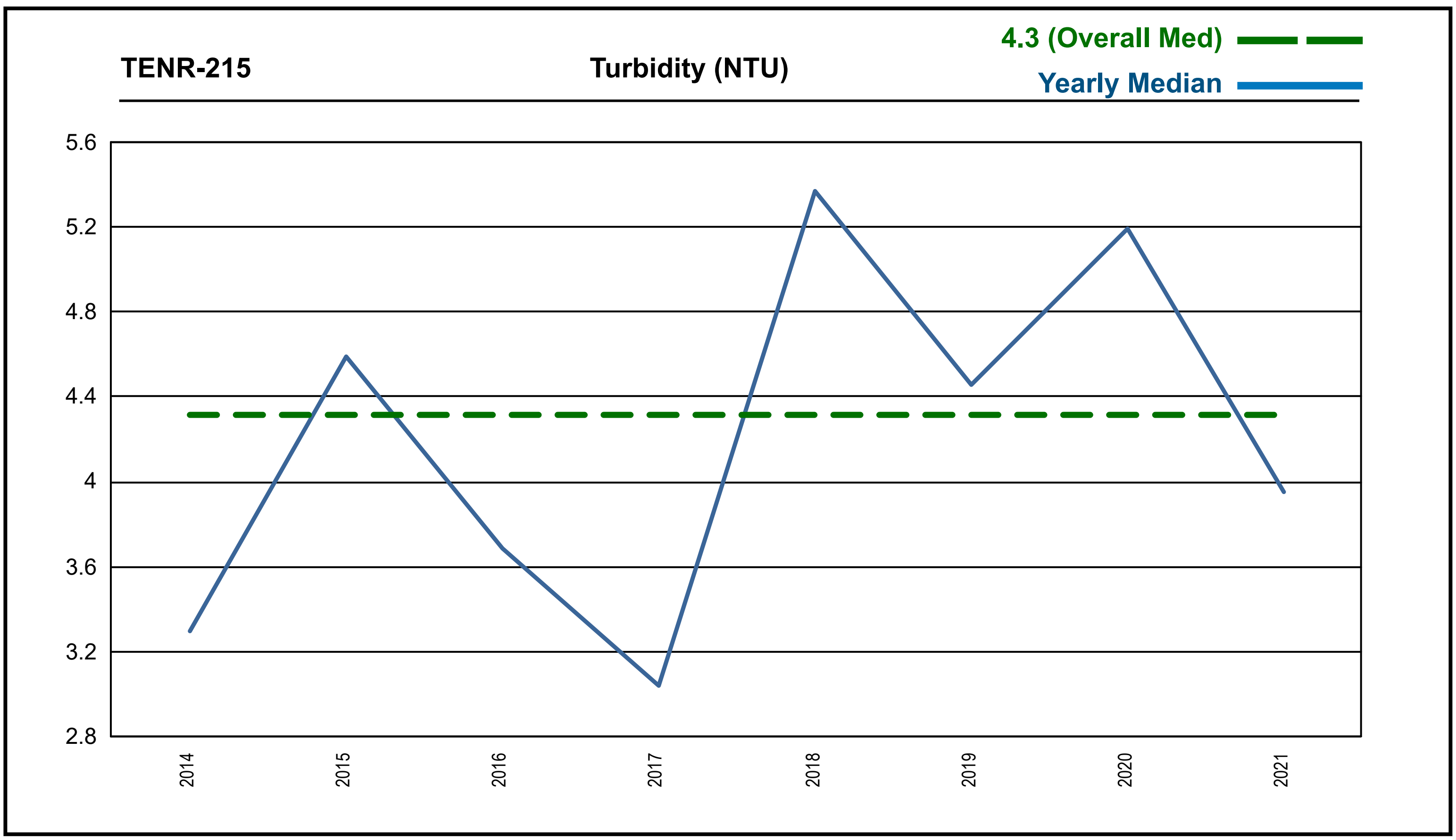

TART-1
Turbidity (NTU)
7.2 (Overall Med)
Yearly Median
11
10
9
8
7
6
5
2010
2011
2015
2016
2017
2018
2019
2020
2021

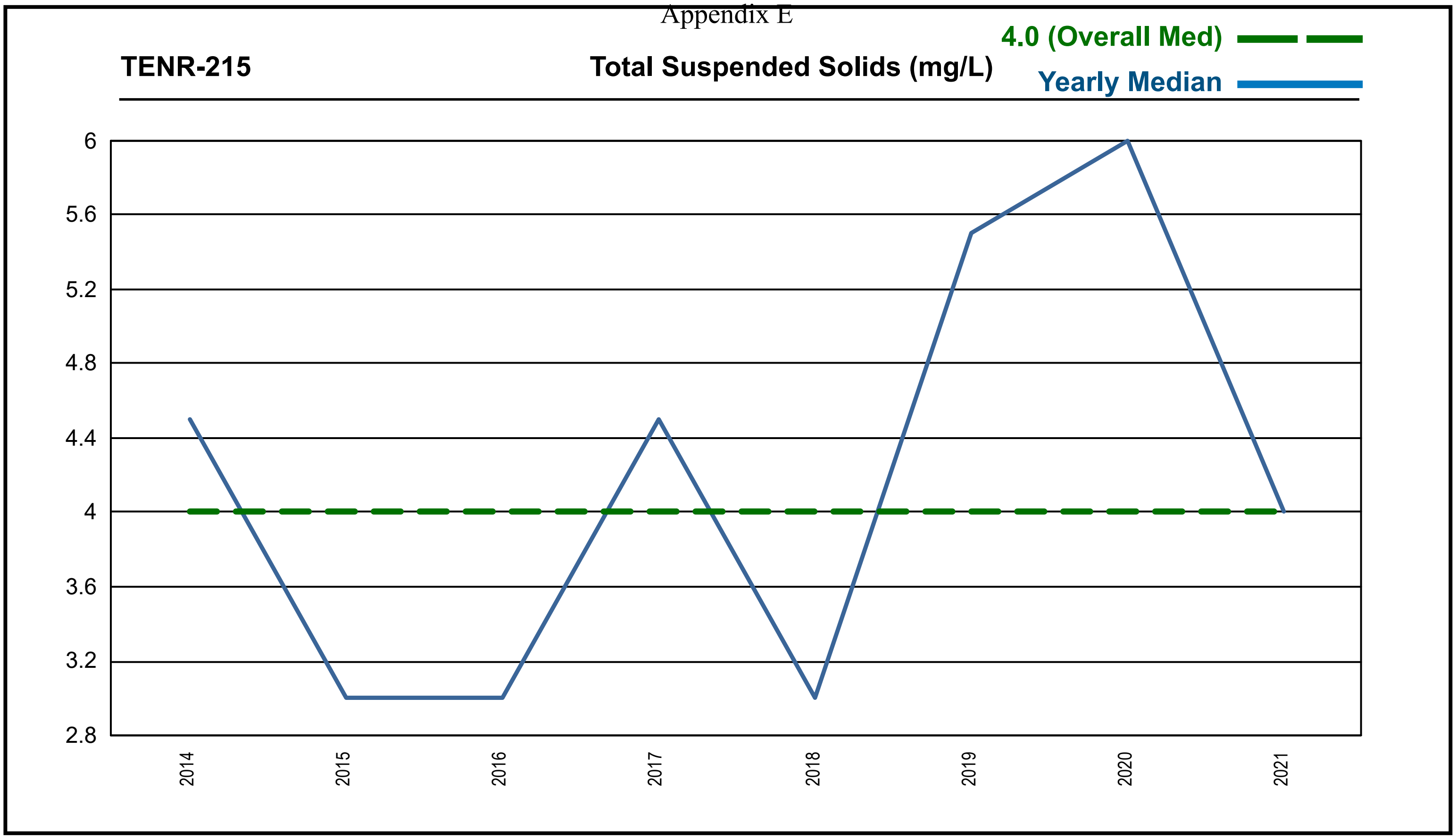

4.5 (Overall Med)
TART-1
Total Suspended Solids (mg/L)
Yearly Median
10
8
6
4
2
0
2010
2011
2015
2016
2017
2018
2019
2020
2021


0.016 (Overall Med)
TART-1
Total Phosphorus (mg/L)
Yearly Median
0.0180
0.0175
0.0170
0.0165
0.0160
0.0155
0.0150
0.0145
0.0140
0.0135
2010
2011
2015
2016
2017
2018
2019
2020
2021

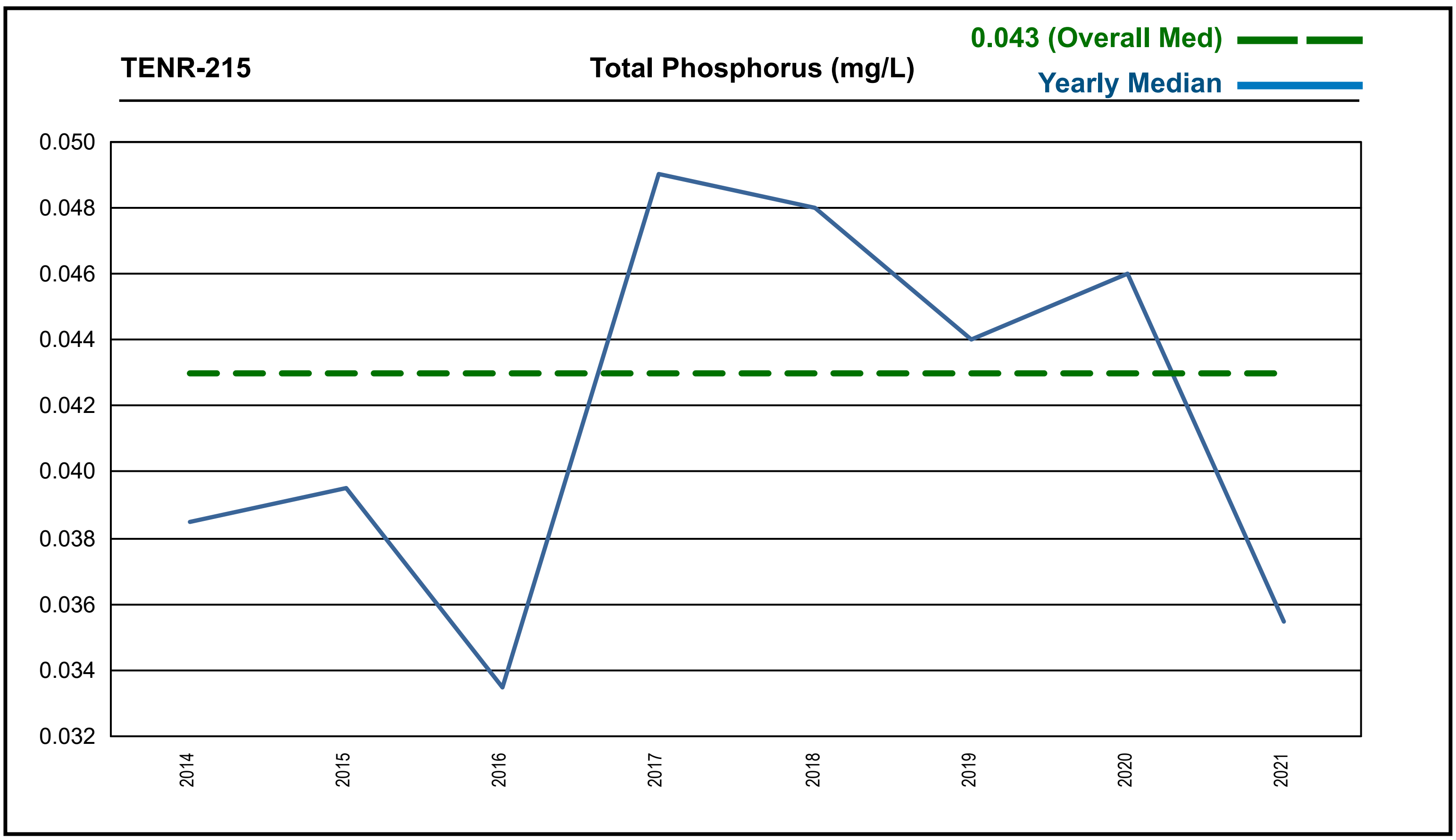

0.391 (Overall Med)
Yearly Median
TART-1
Total Nitrogen (mg/L)
0.46
0.44
0.42
0.40
0.38
0.36
0.34
0.32
2010
2011
2015
2016
2017
2018
2019
2020
2021


TENR-215 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
240
160
80
0
2014
2015
2016
2017
2018
2019
2020
2021

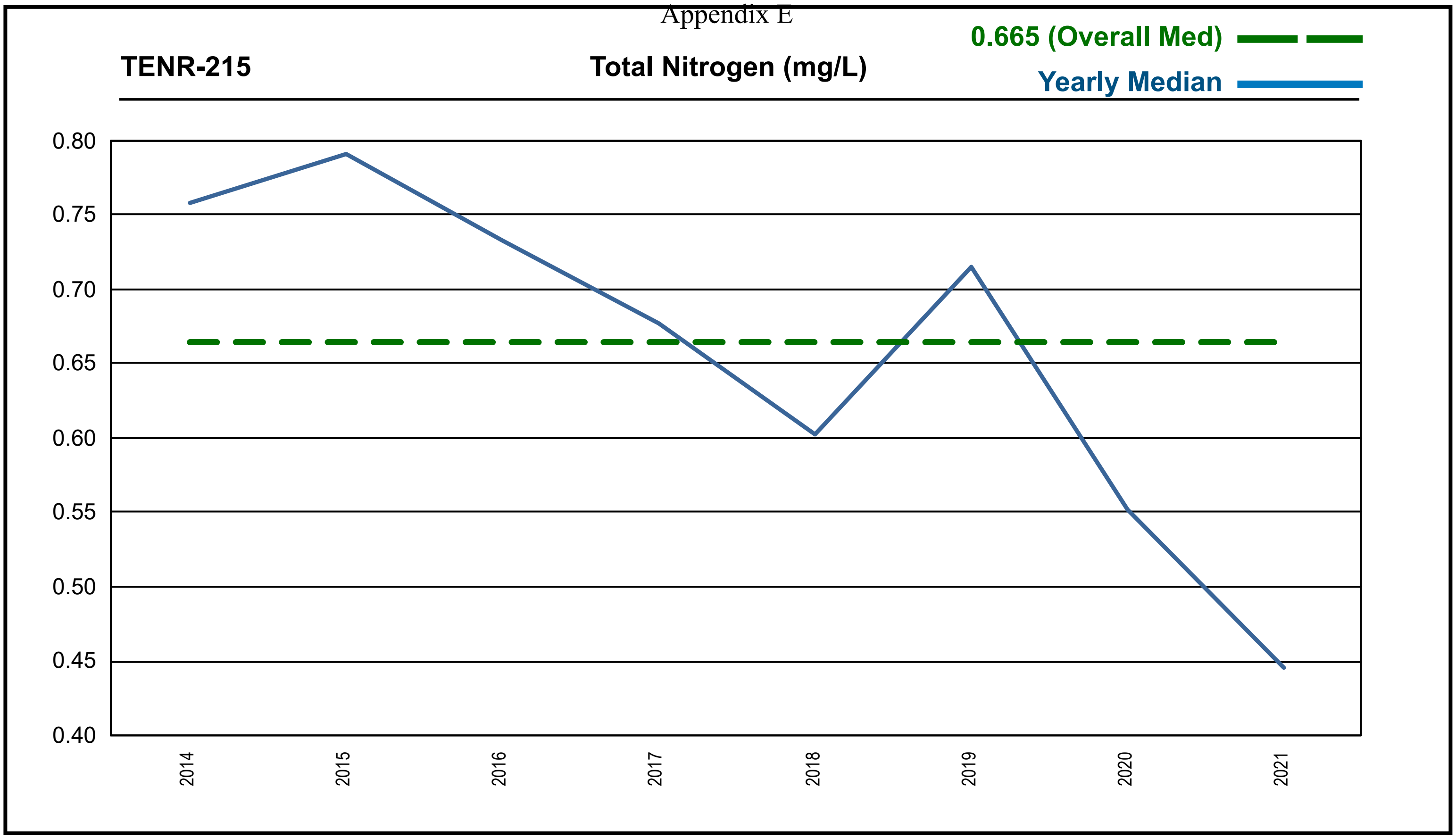

TENR-215
Turbidity (NTU)
4.3 (Overall Med)
Yearly Median
5.6
5.2
4.8
4.4
4
3.6
3.2
2.8
2014
2015
2016
2017
2018
2019
2020
2021

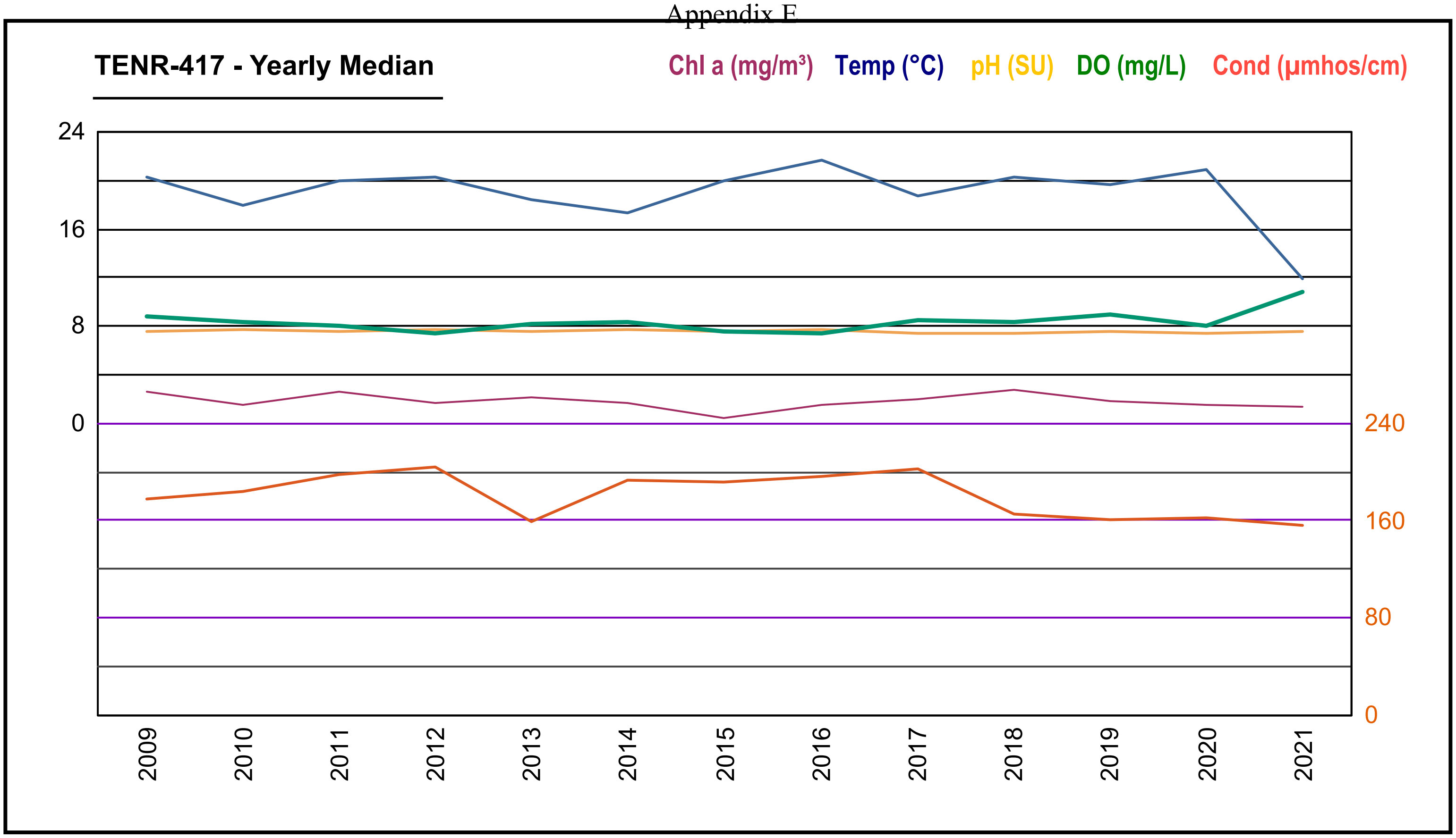


TENR-215
Total Suspended Solids (mg/L)
4.0 (Overall Med)
Yearly Median
6
5.6
5.2
4.8
4.4
4
3.6
3.2
2.8
2014
2015
2016
2017
2018
2019
2020
2021

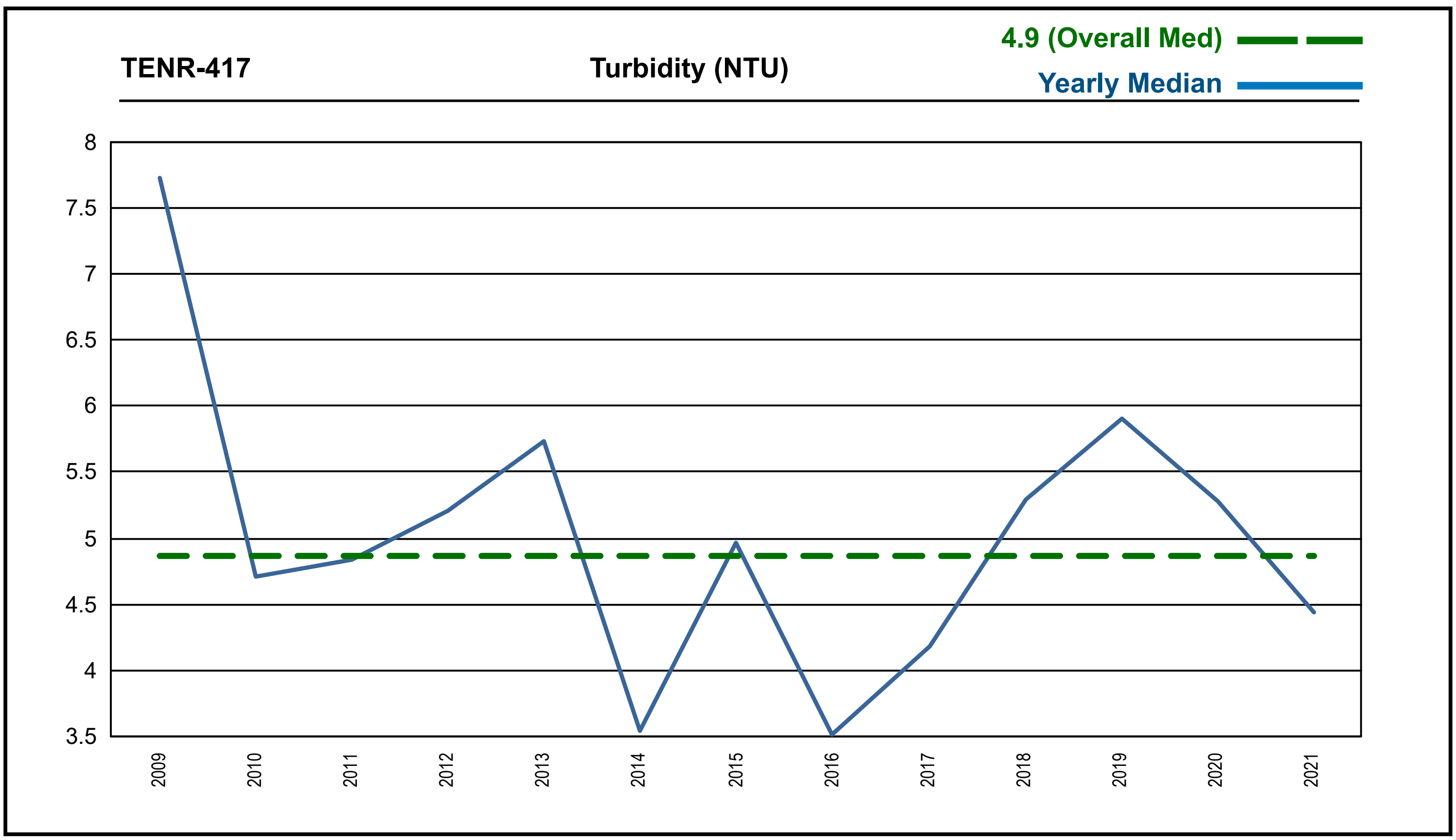


TENR-215
Total Phosphorus (mg/L)
0.043 (Overall Med)
Yearly Median
0.050
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
2014
2015
2016
2017
2018
2019
2020
2021

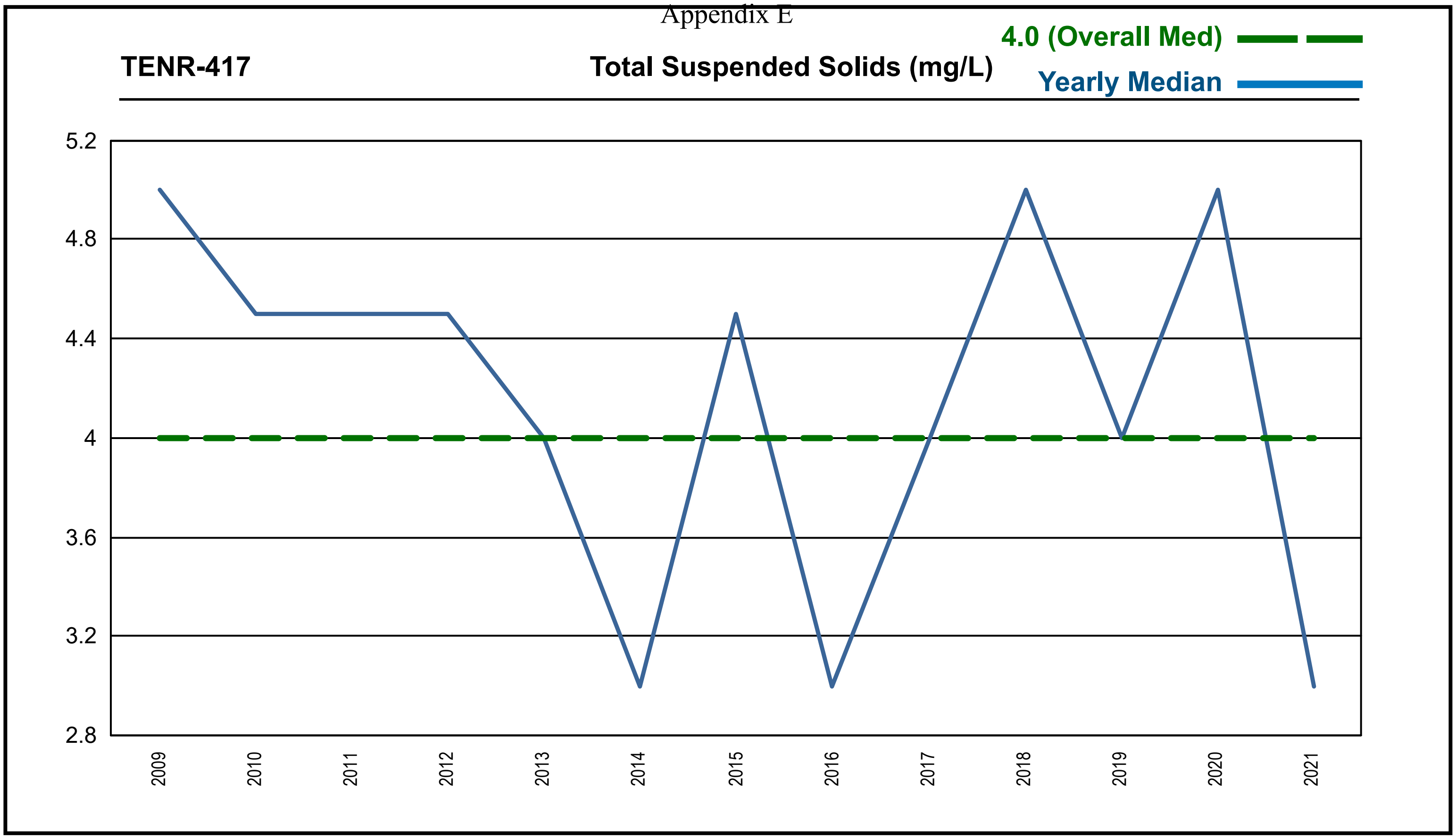

TENR-215
Total Nitrogen (mg/L)
0.665 (Overall Med)
Yearly Median
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
2014
2015
2016
2017
2018
2019
2020
2021

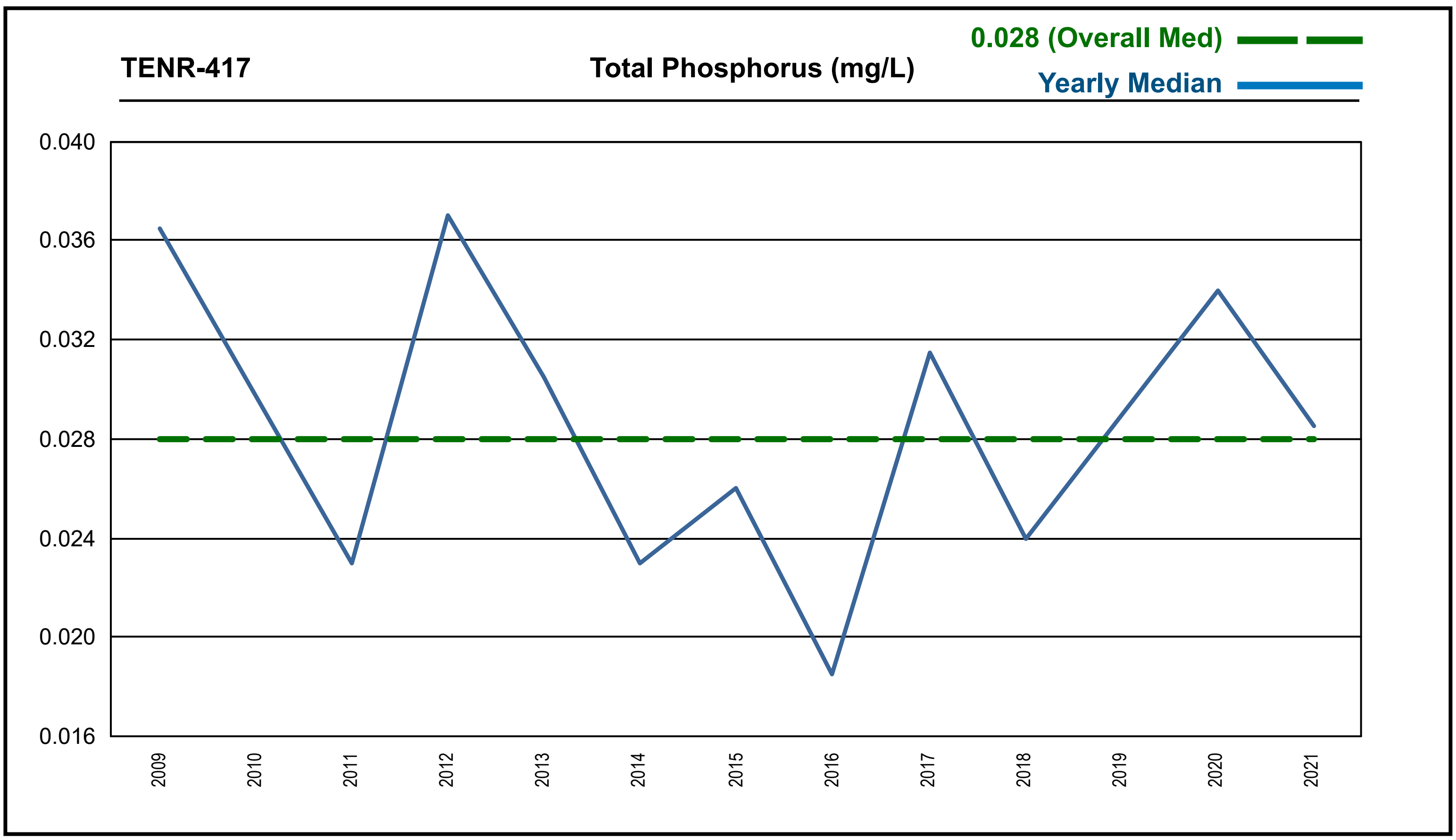


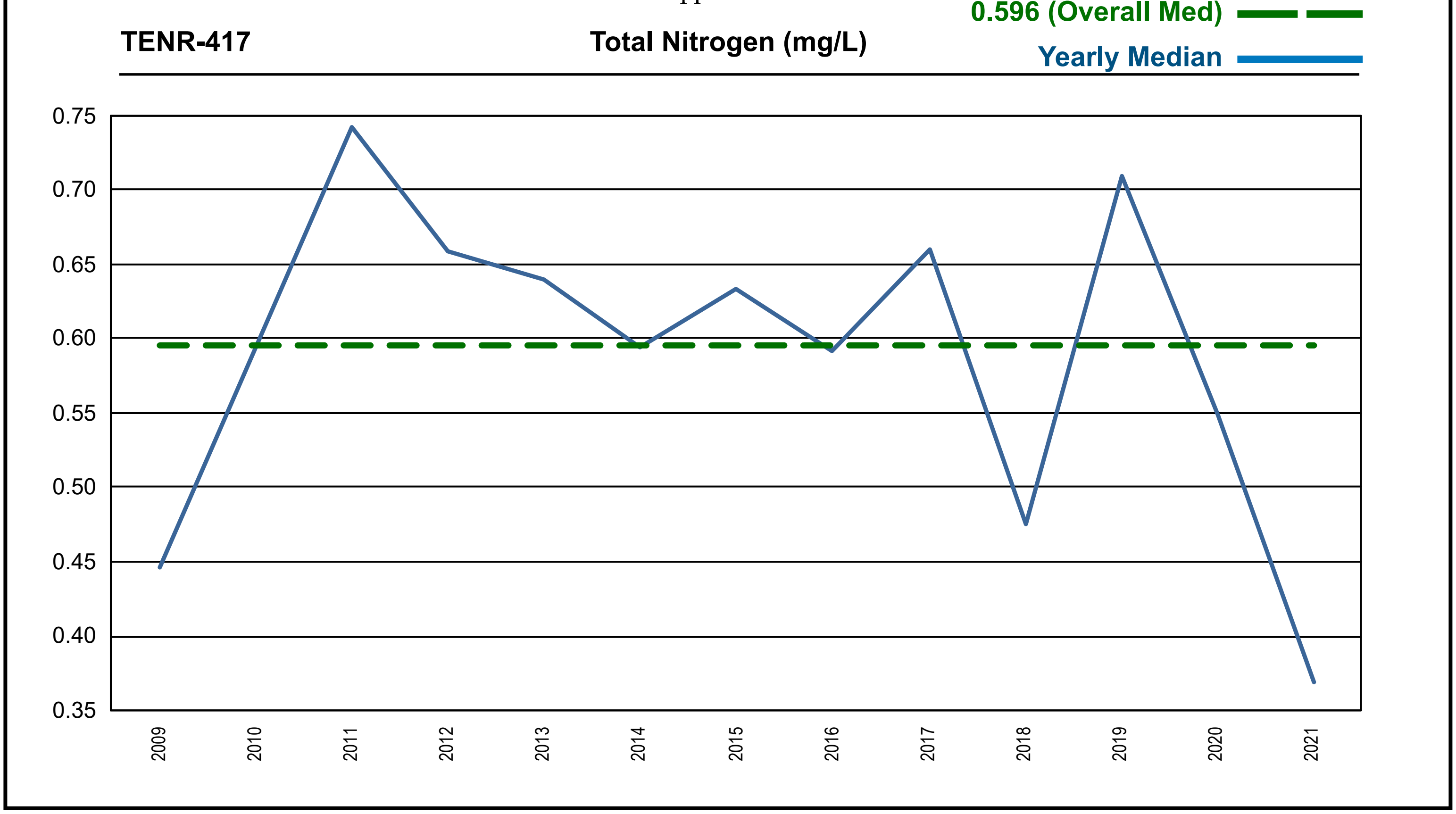
TENR-417 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (μmhos/cm)
24
16
8
0
240
160
80
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

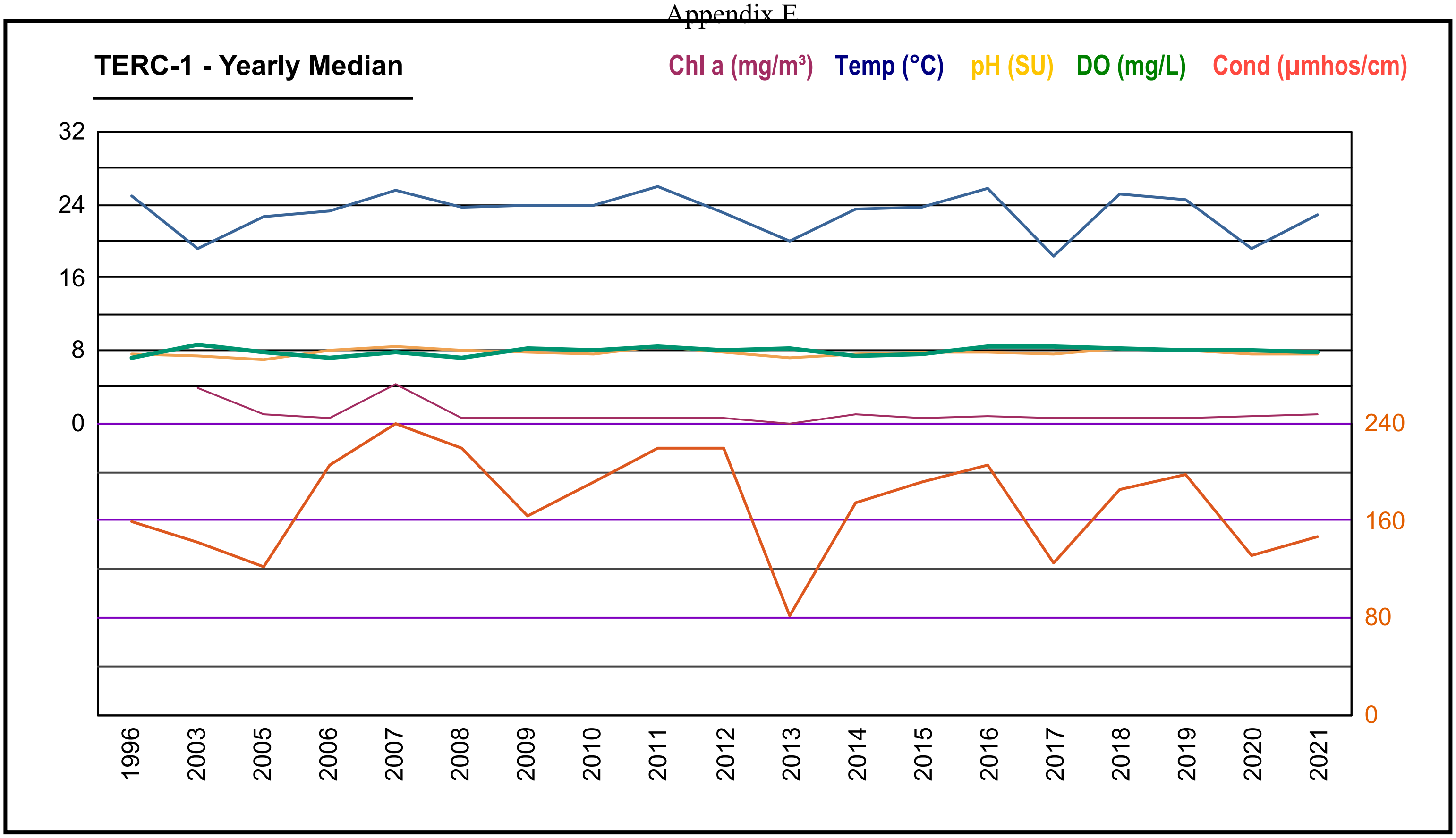


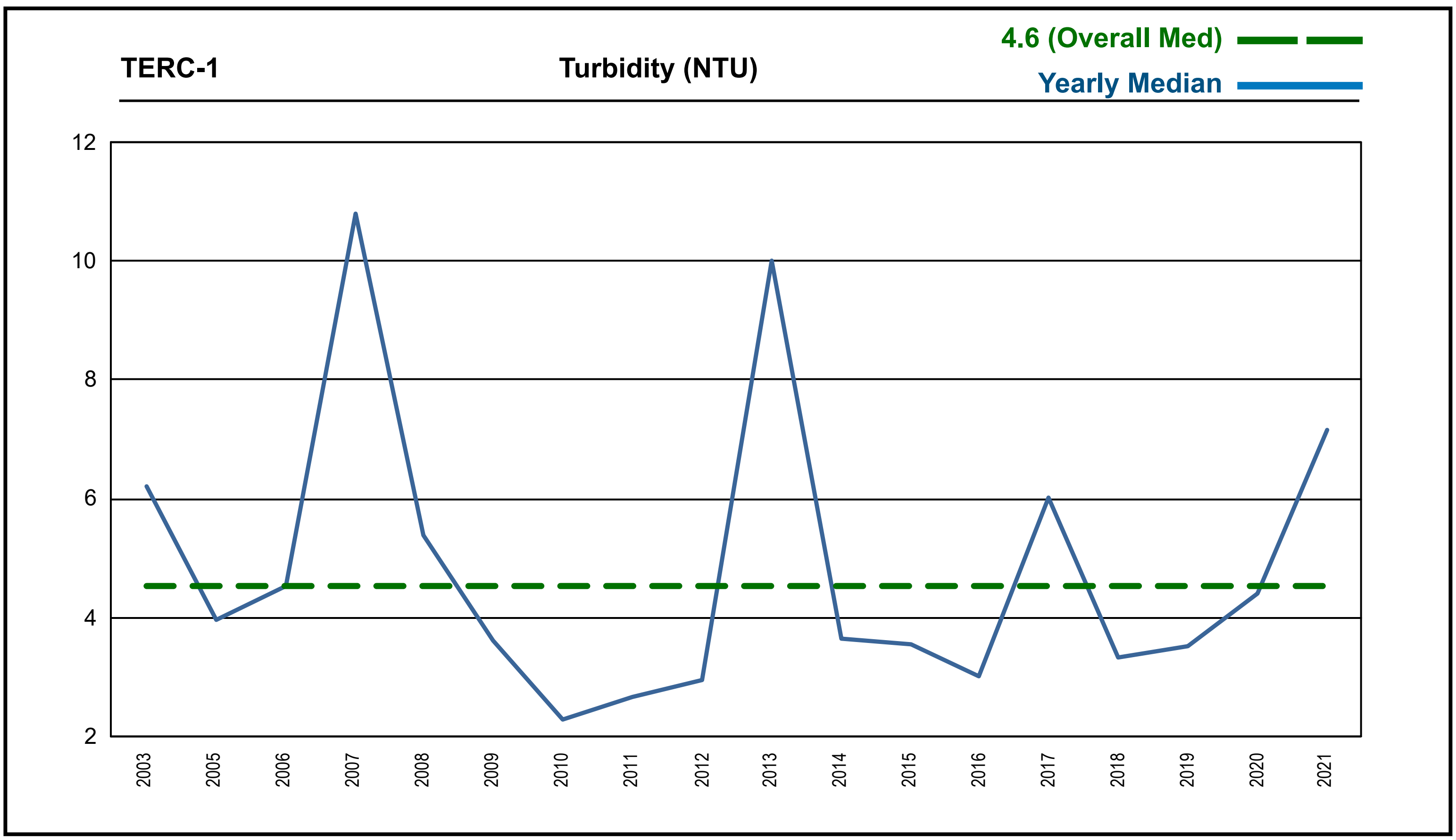
TENR-417
Turbidity (NTU)
4.9 (Overall Med)
Yearly Median
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

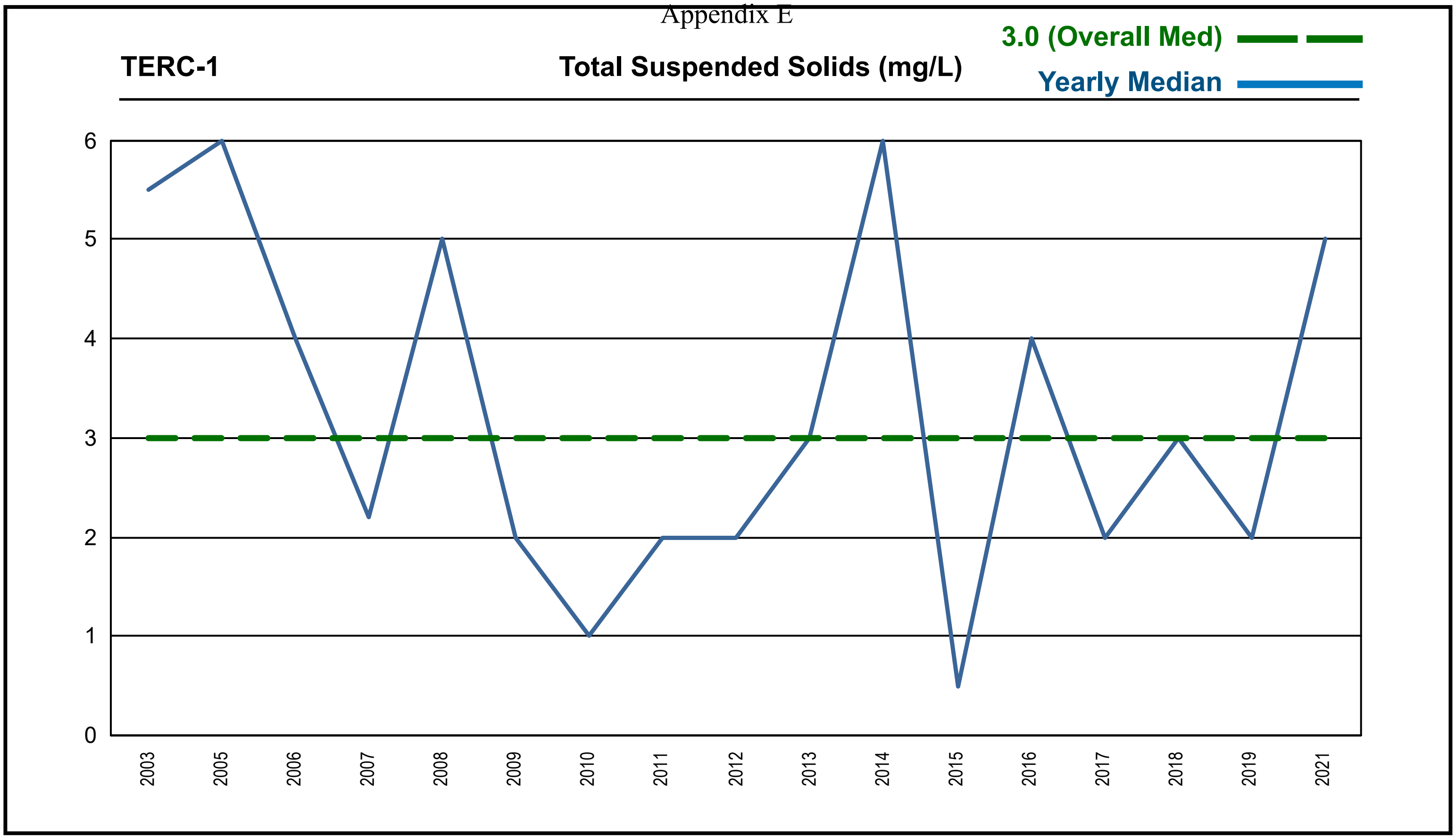

4.0 (Overall Med)
Yearly Median
TENR-417
Total Suspended Solids (mg/L)
5.2
4.8
4.4
4
3.6
3.2
2.8
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

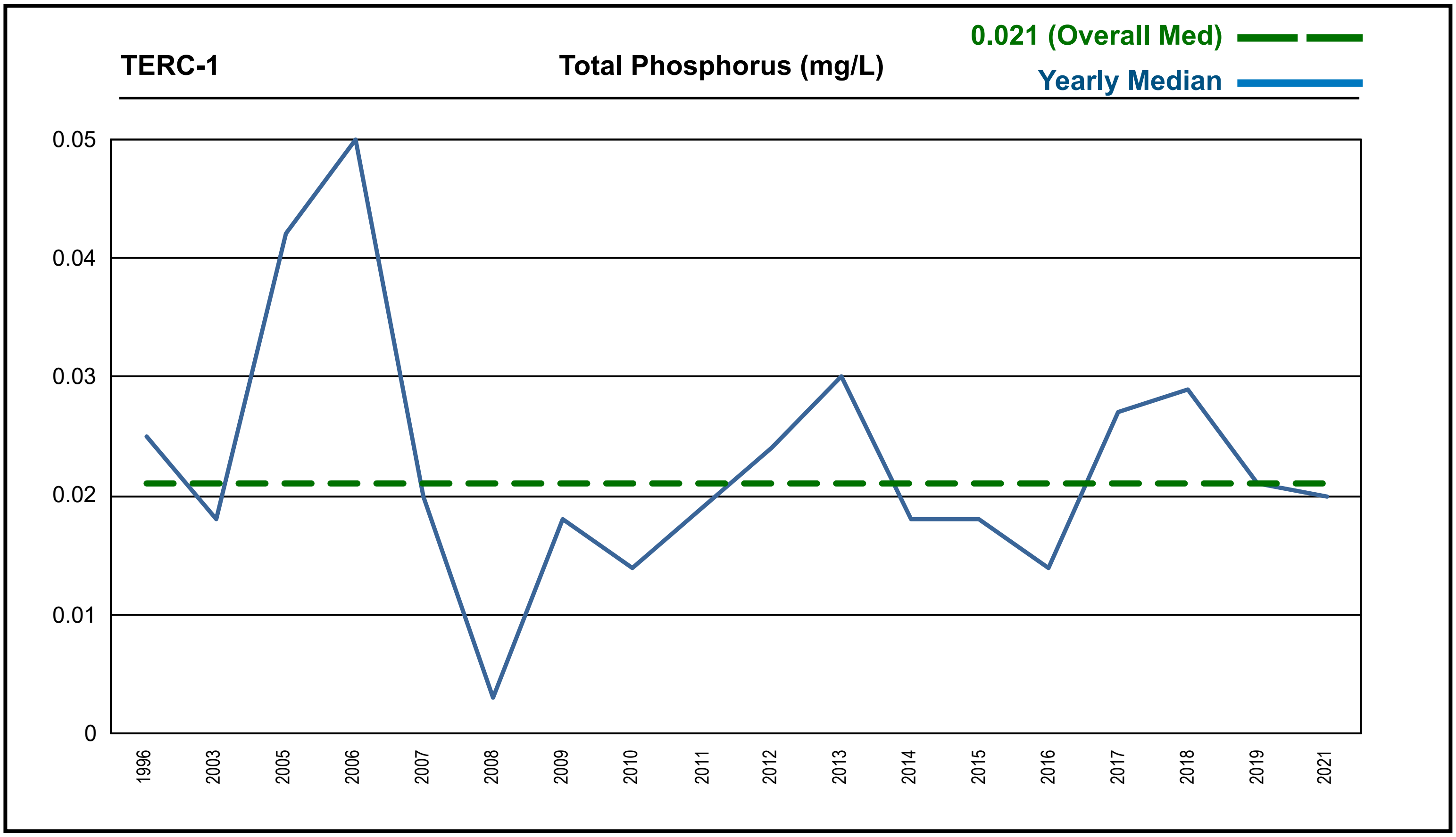

0.028 (Overall Med)
Yearly Median
TENR-417
Total Phosphorus (mg/L)
0.040
0.036
0.032
0.028
0.024
0.020
0.016
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

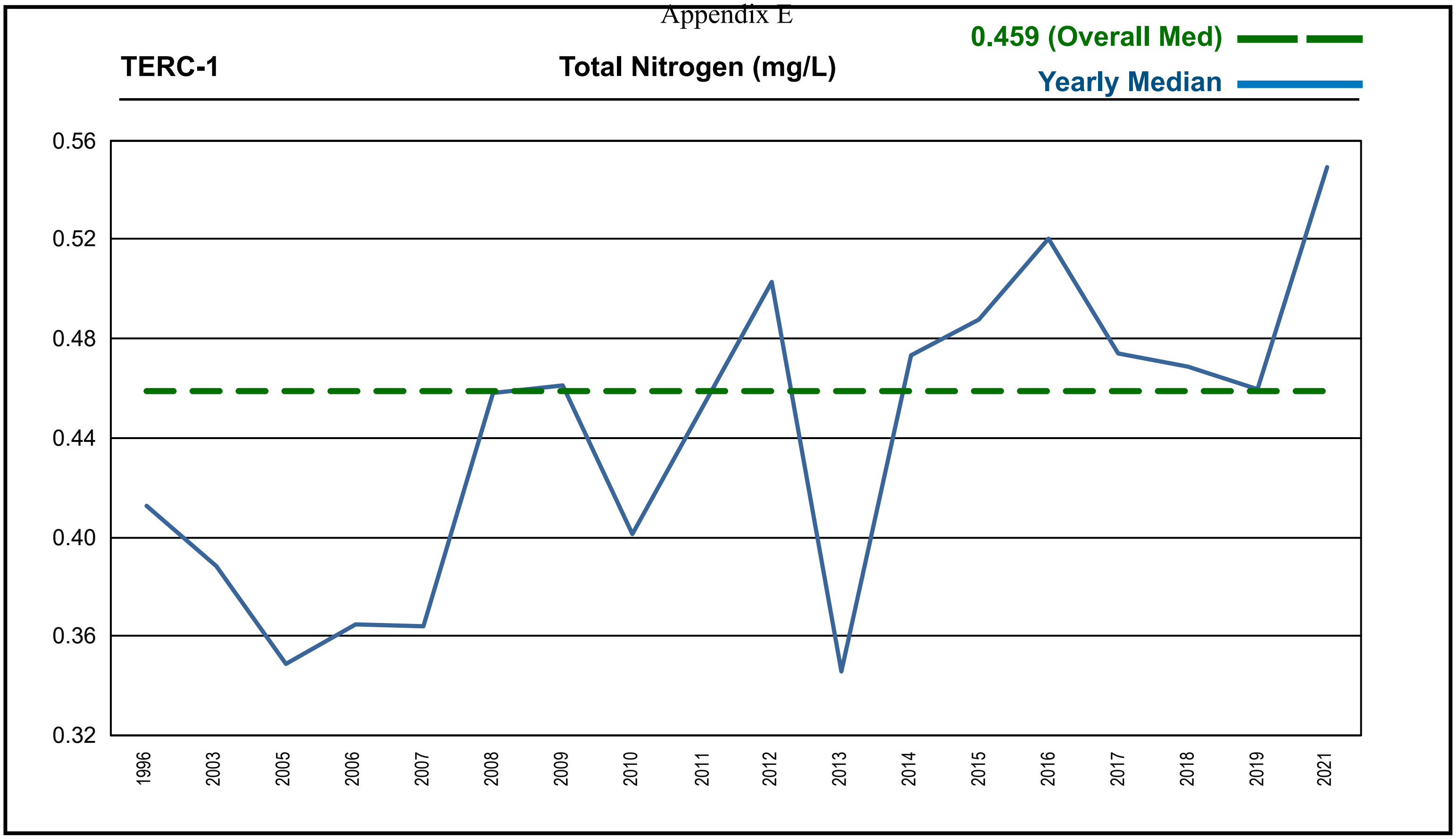

TENR-417
Total Nitrogen (mg/L)
0.596 (Overall Med)
Yearly Median
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

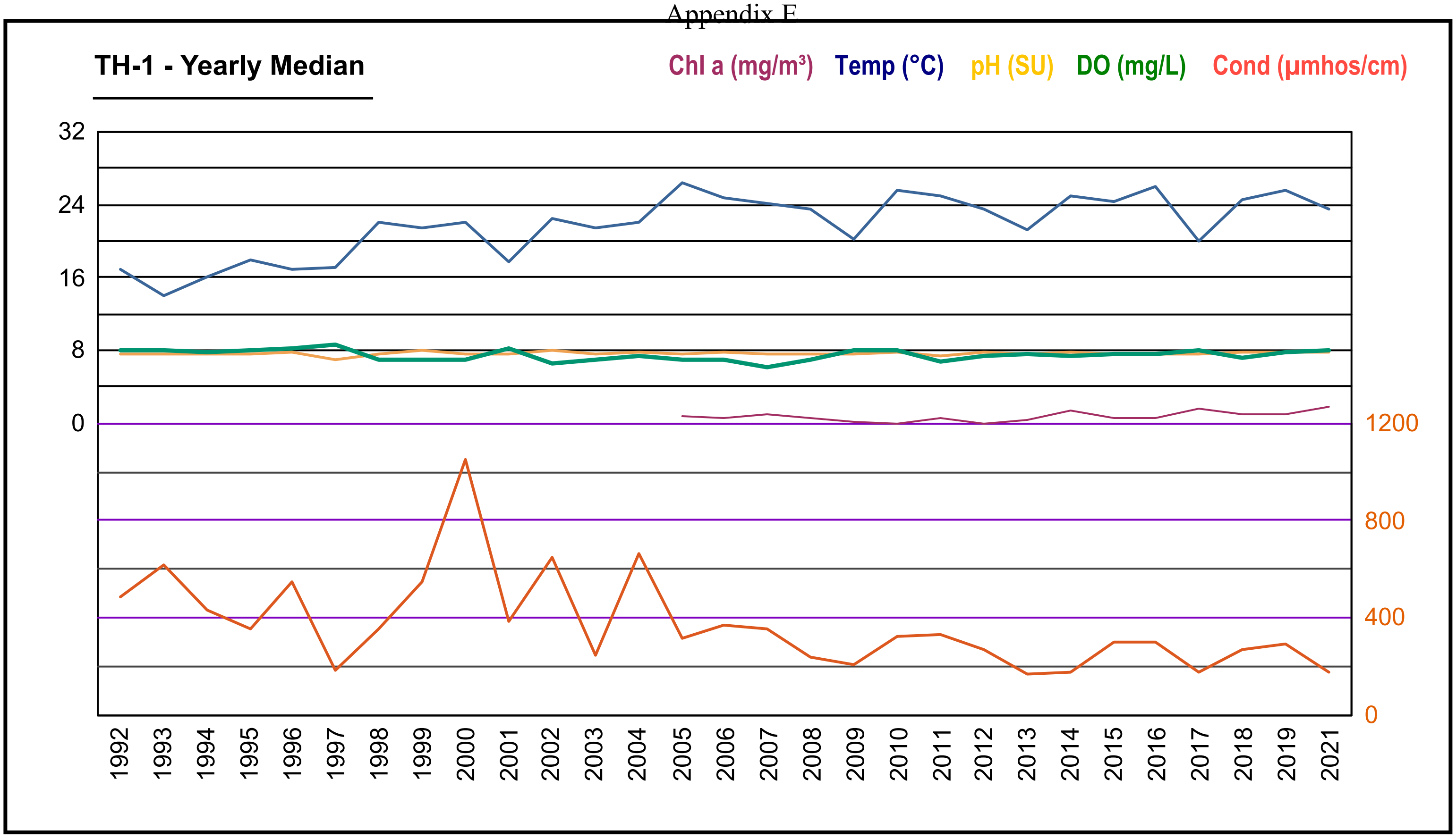

TERC-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
1996
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


TERC-1
Turbidity (NTU)
4.6 (Overall Med)
Yearly Median
12
10
8
6
4
2
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

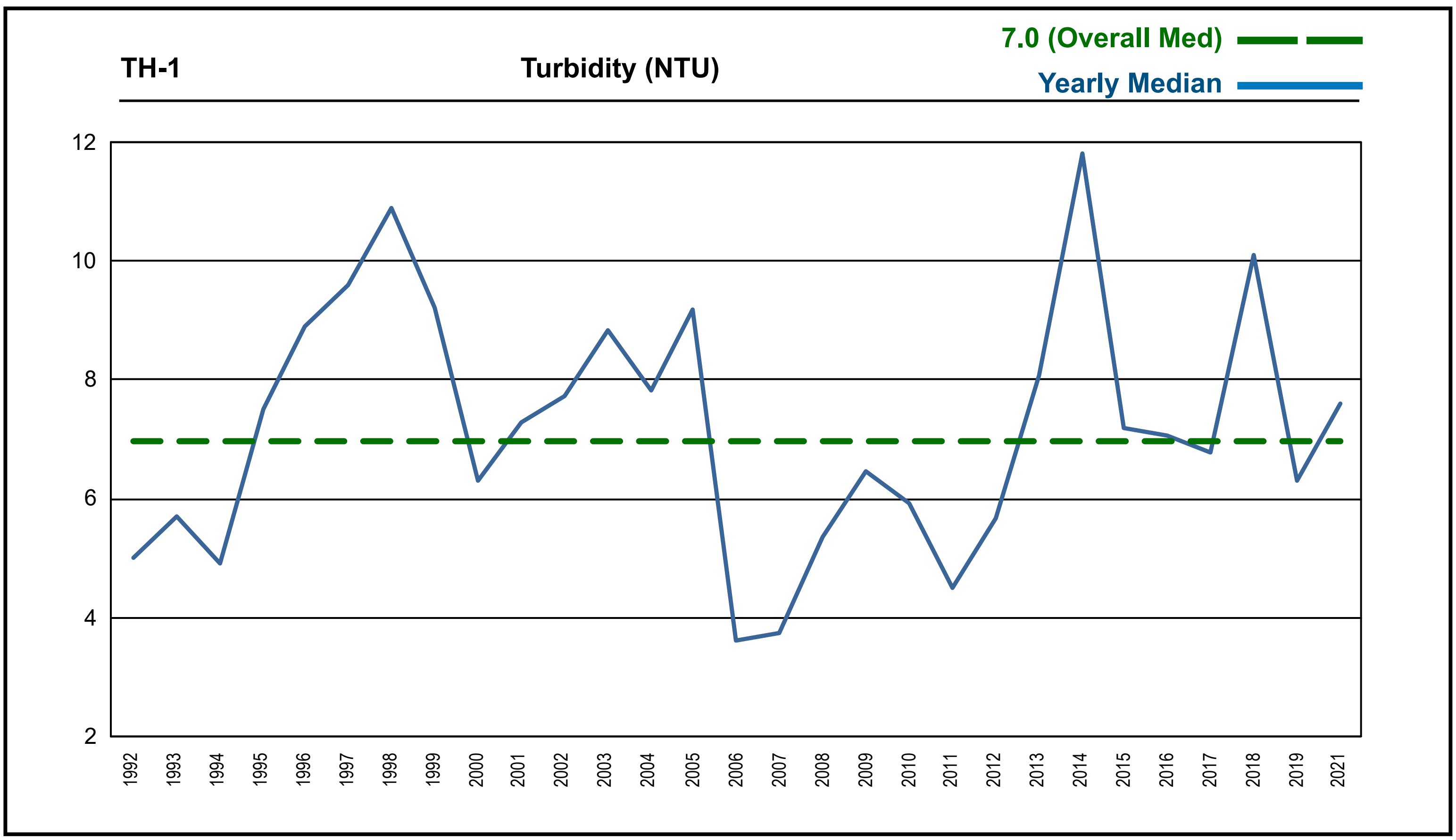

3.0 (Overall Med)
TERC-1
Total Suspended Solids (mg/L)
Yearly Median
6
5
4
3
2
1
0
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


0.021 (Overall Med)
TERC-1
Total Phosphorus (mg/L)
Yearly Median
0.05
0.04
0.03
0.02
0.01
0
1996
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

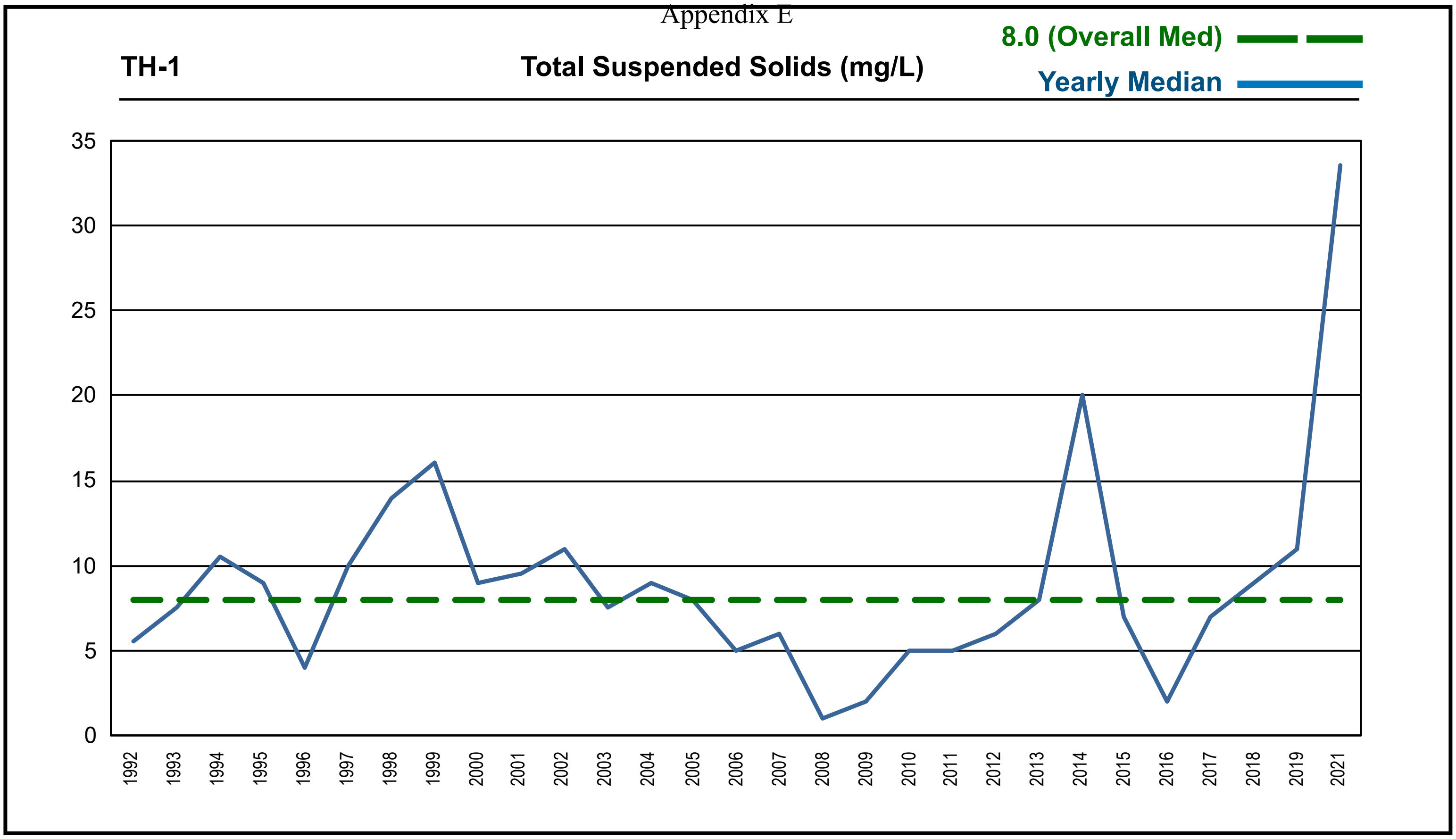

TERC-1
Total Nitrogen (mg/L)
0.459 (Overall Med)
Yearly Median
0.56
0.52
0.48
0.44
0.40
0.36
0.32
1996
2003
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

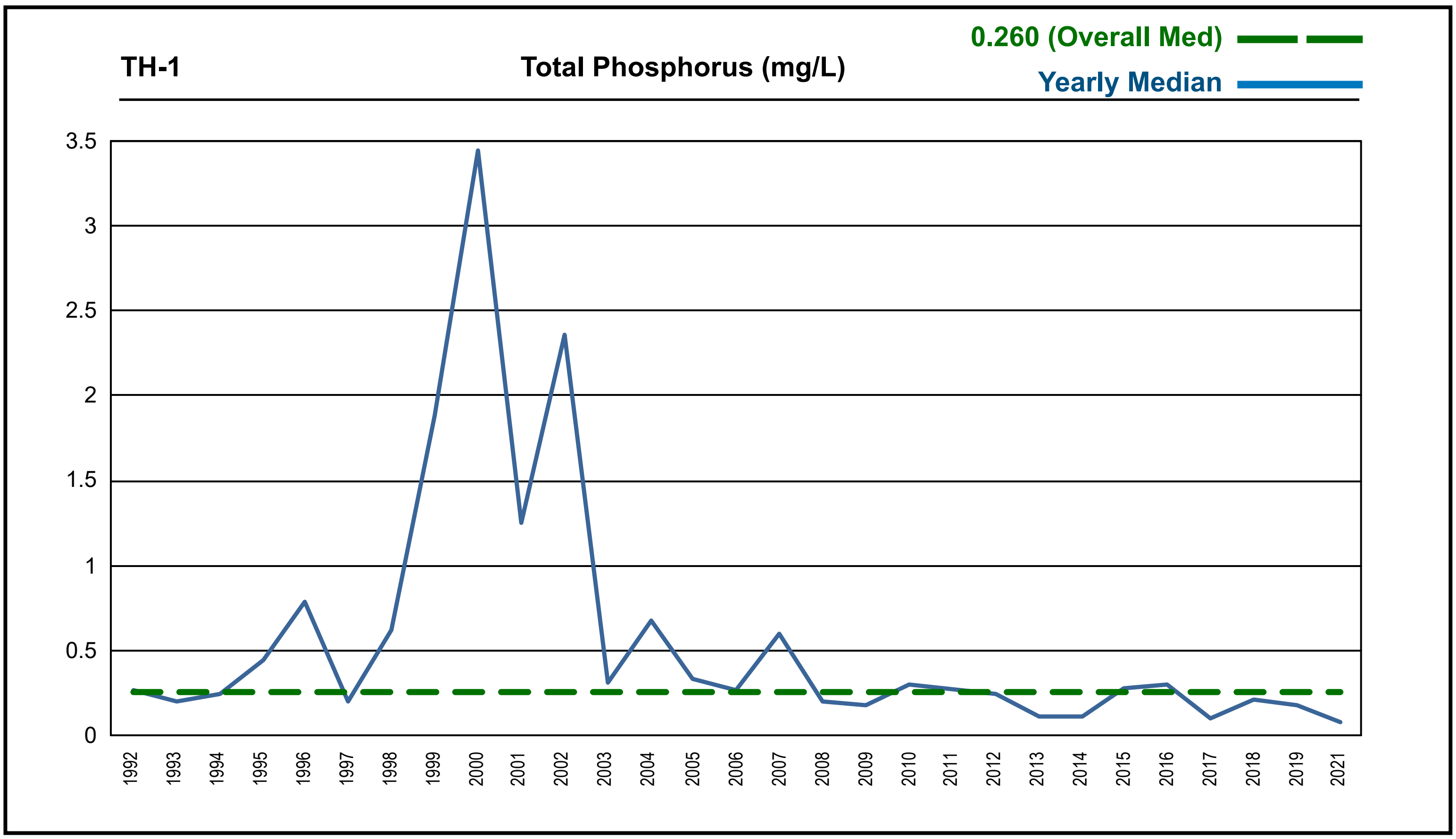


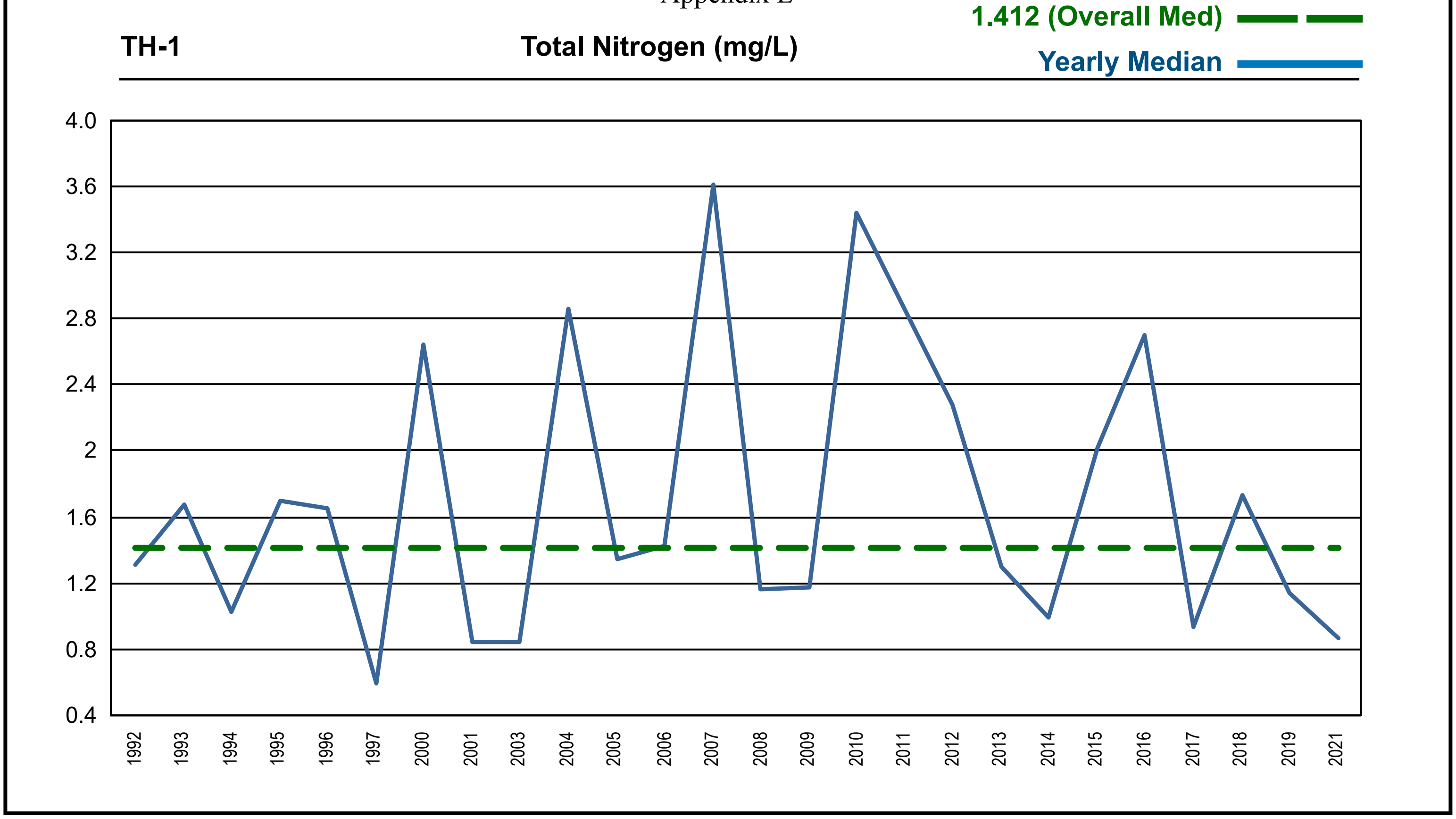
TH-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
1200
800
400
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021



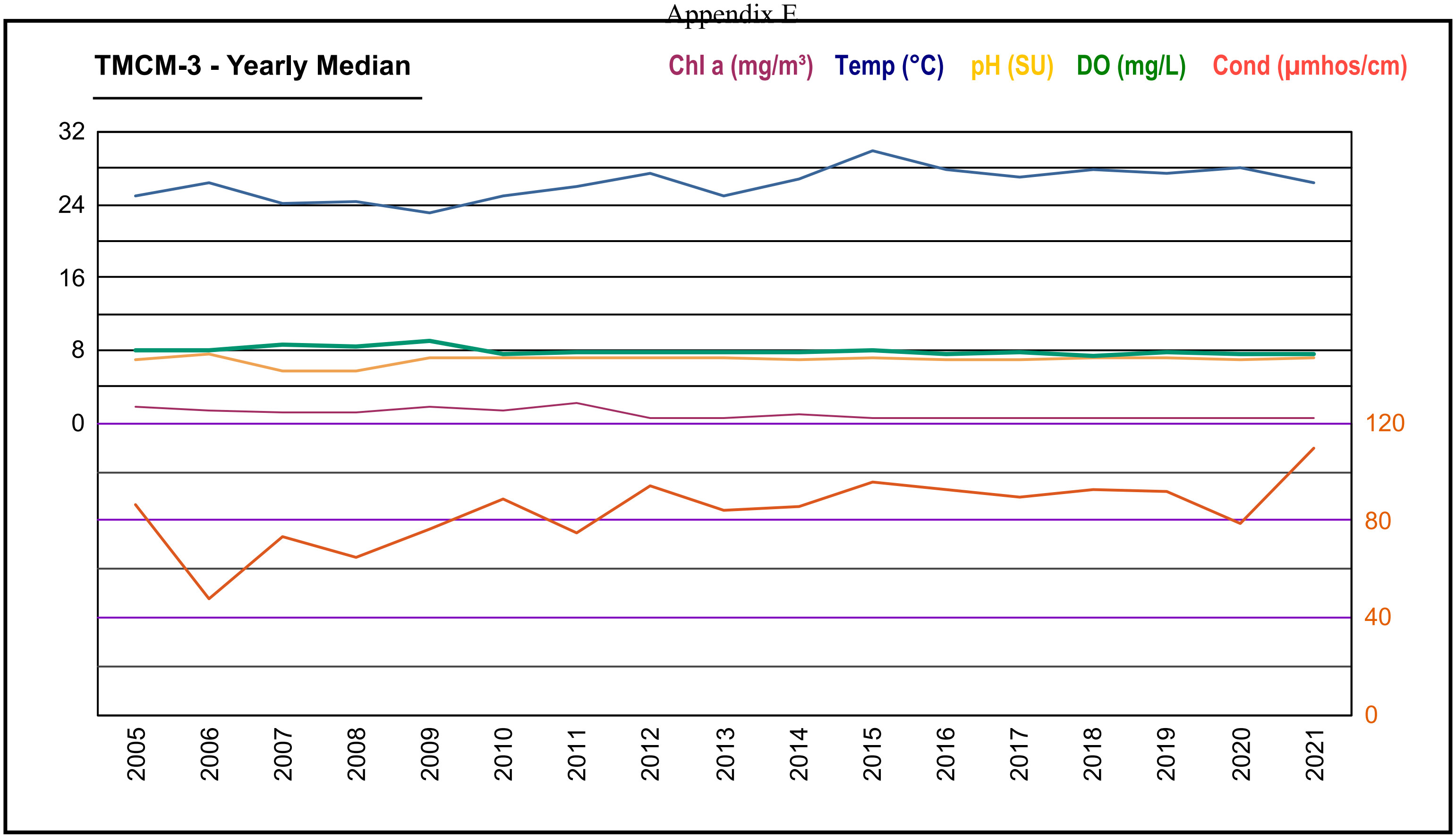
TH-1
Turbidity (NTU)
7.0 (Overall Med)
Yearly Median
12
10
8
6
4
2
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

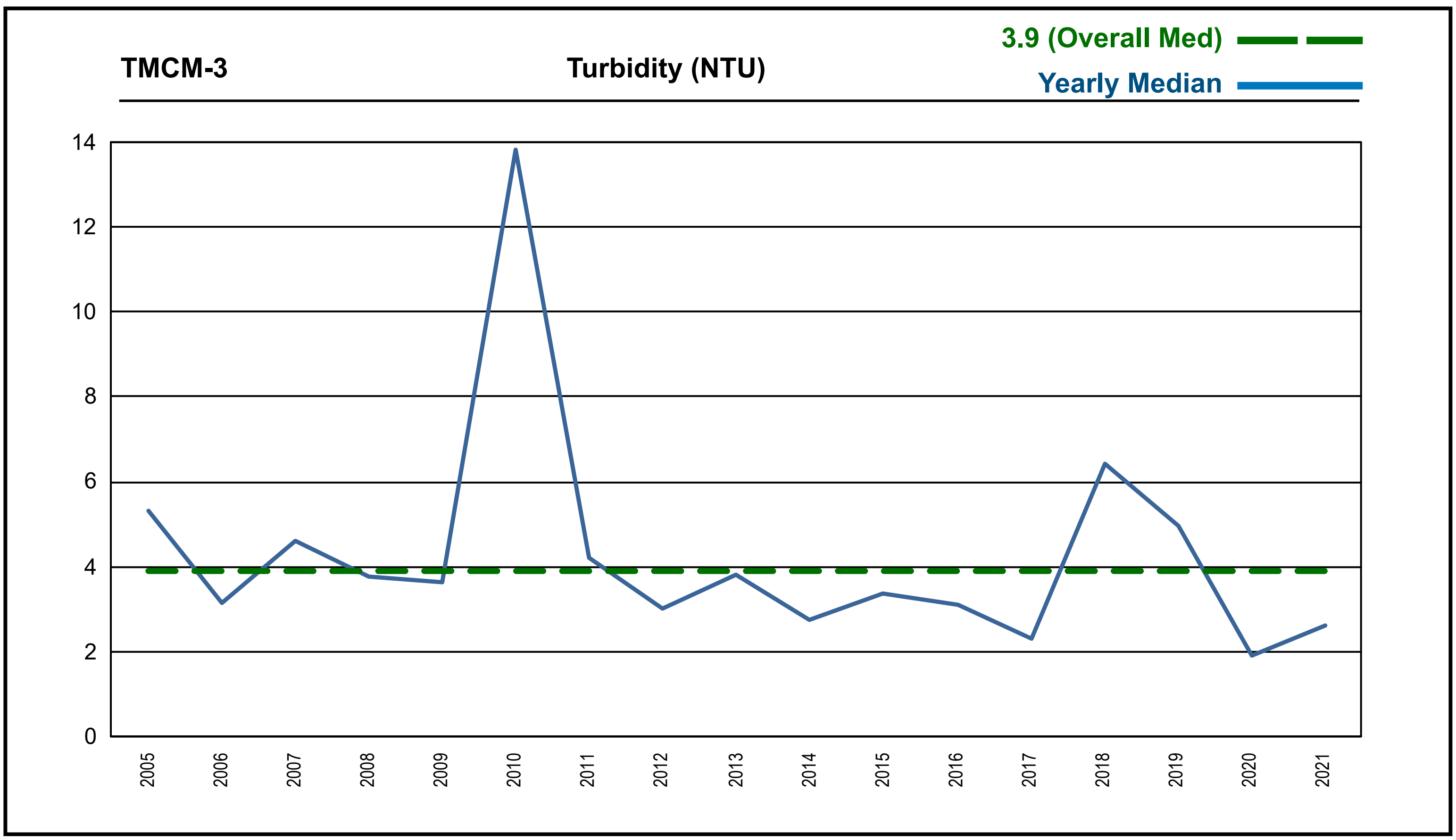

8.0 (Overall Med)
Yearly Median
TH-1
Total Suspended Solids (mg/L)
35
30
25
20
15
10
5
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

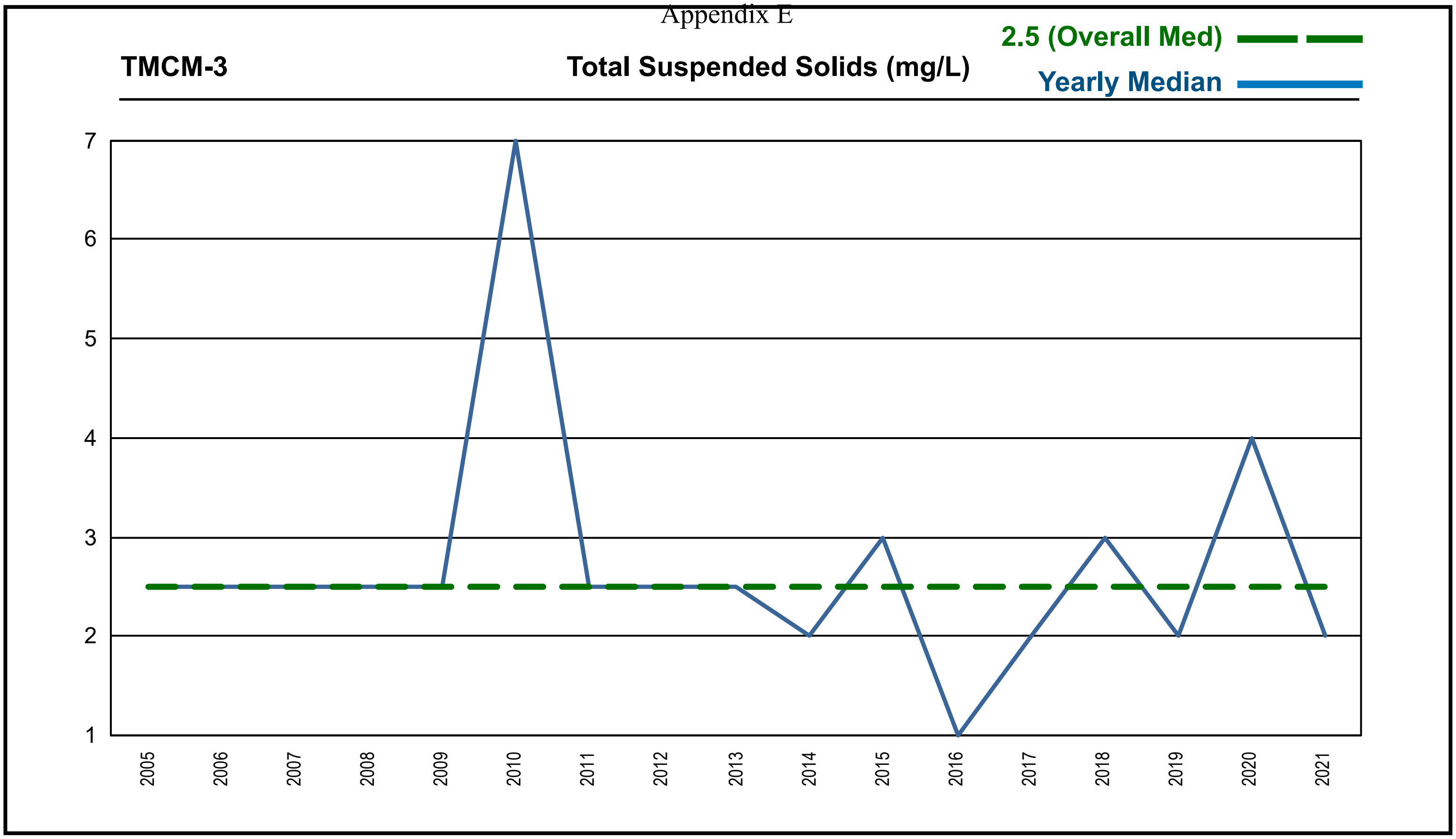

0.260 (Overall Med)
Yearly Median
TH-1
Total Phosphorus (mg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

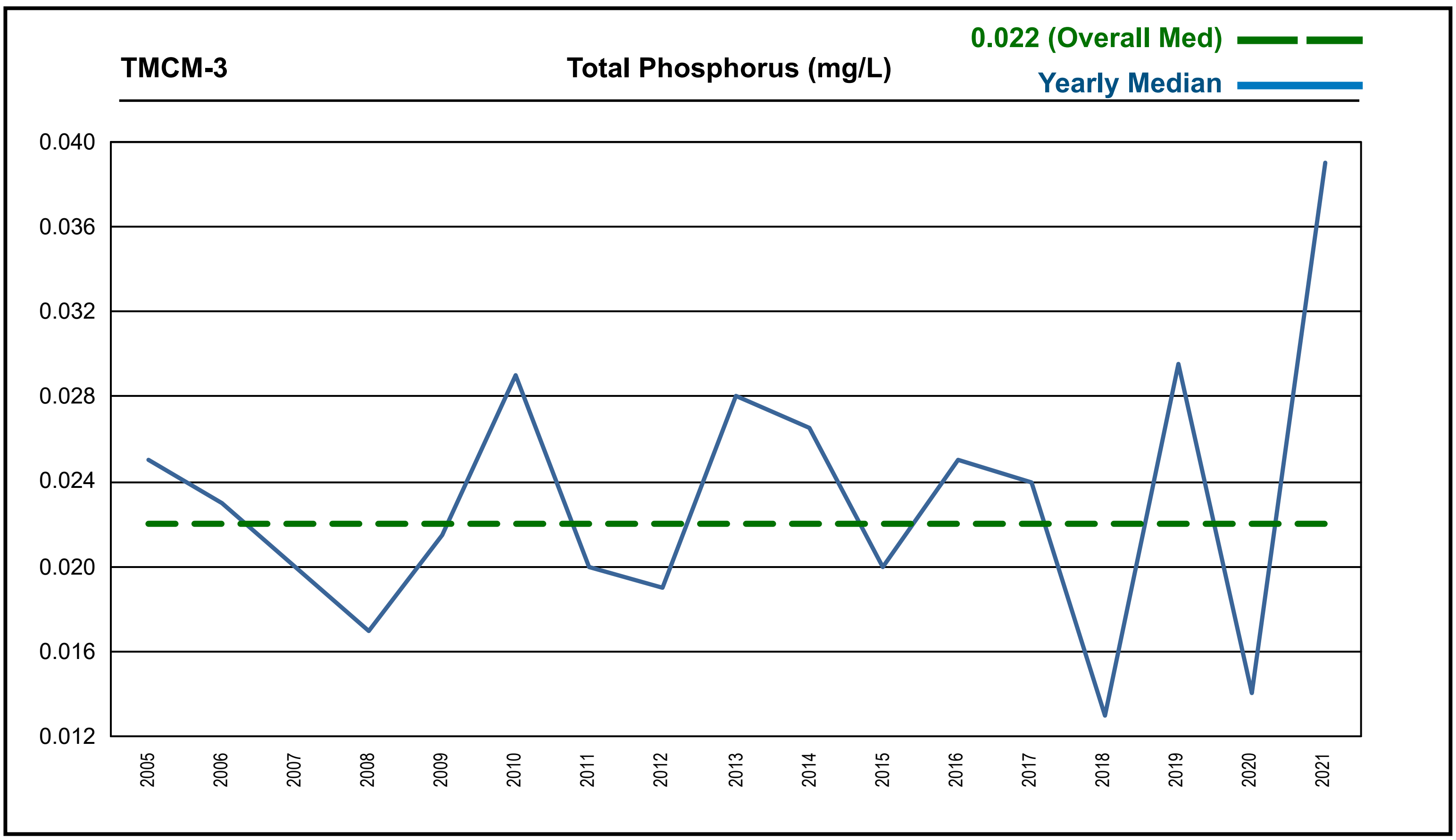


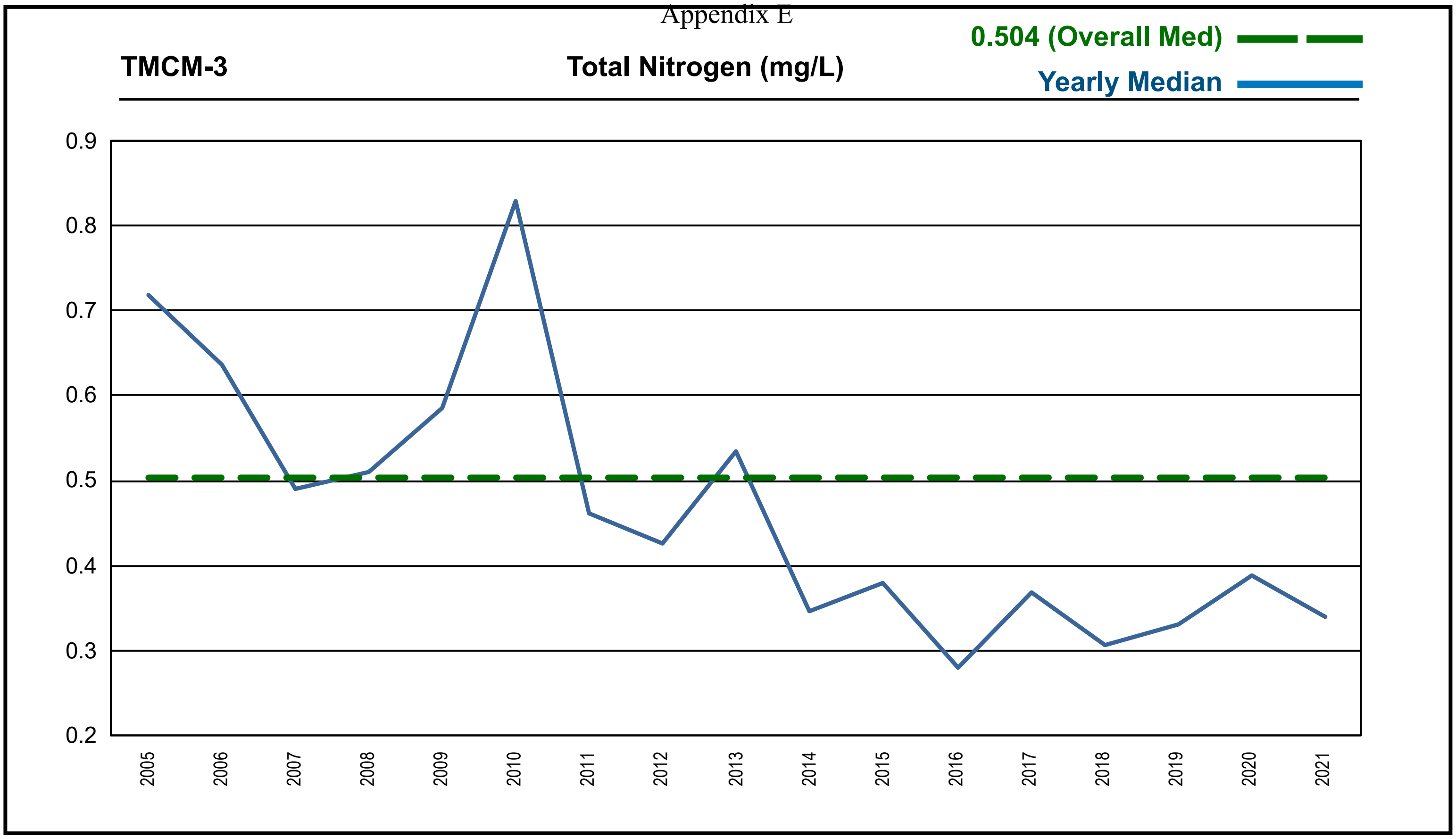
1.412 (Overall Med)
TH-1
Total Nitrogen (mg/L)
Yearly Median
4.0
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
1992
1993
1994
1995
1996
1997
2000
2001
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

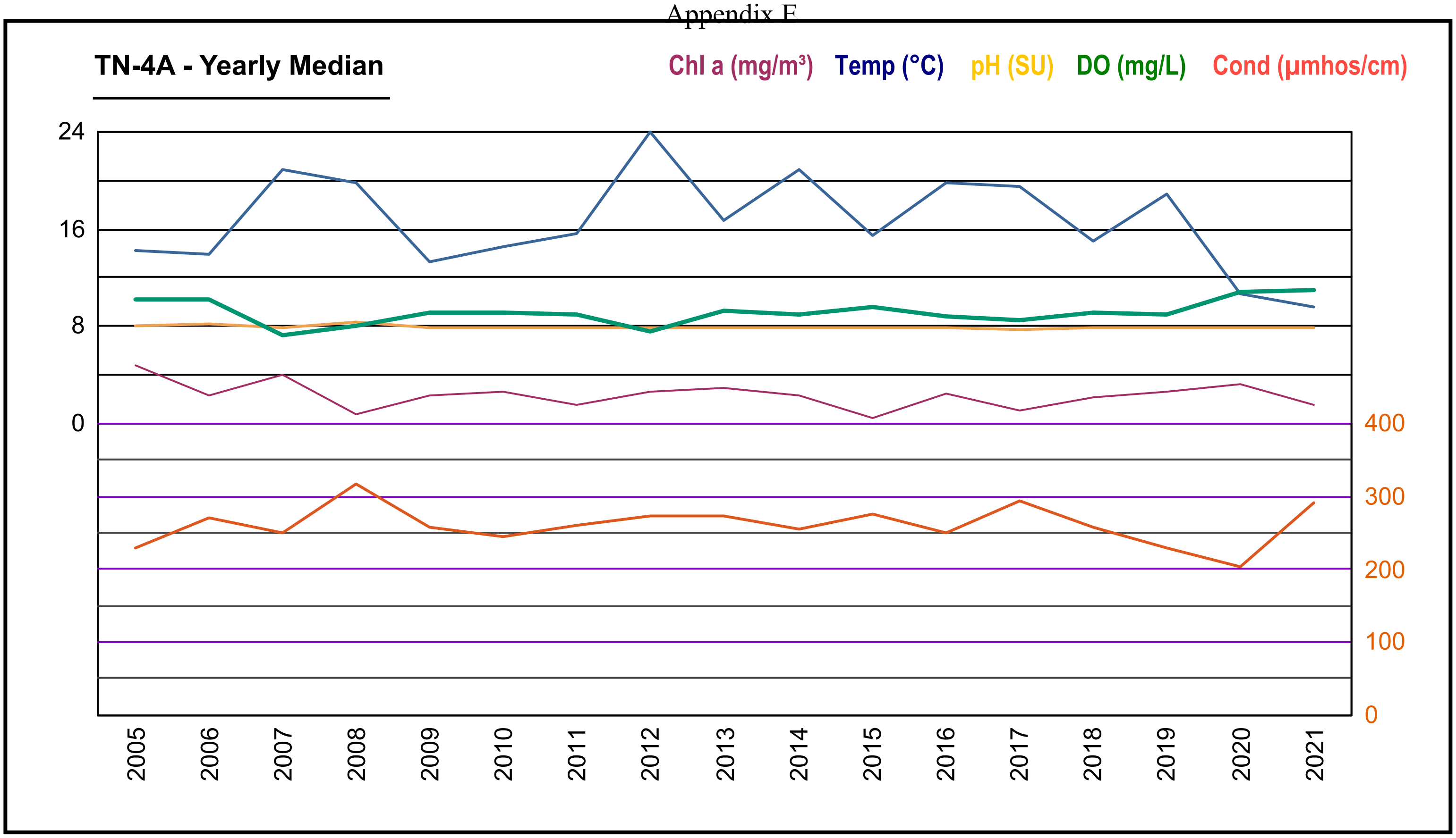

TMCM-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
120
80
40
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

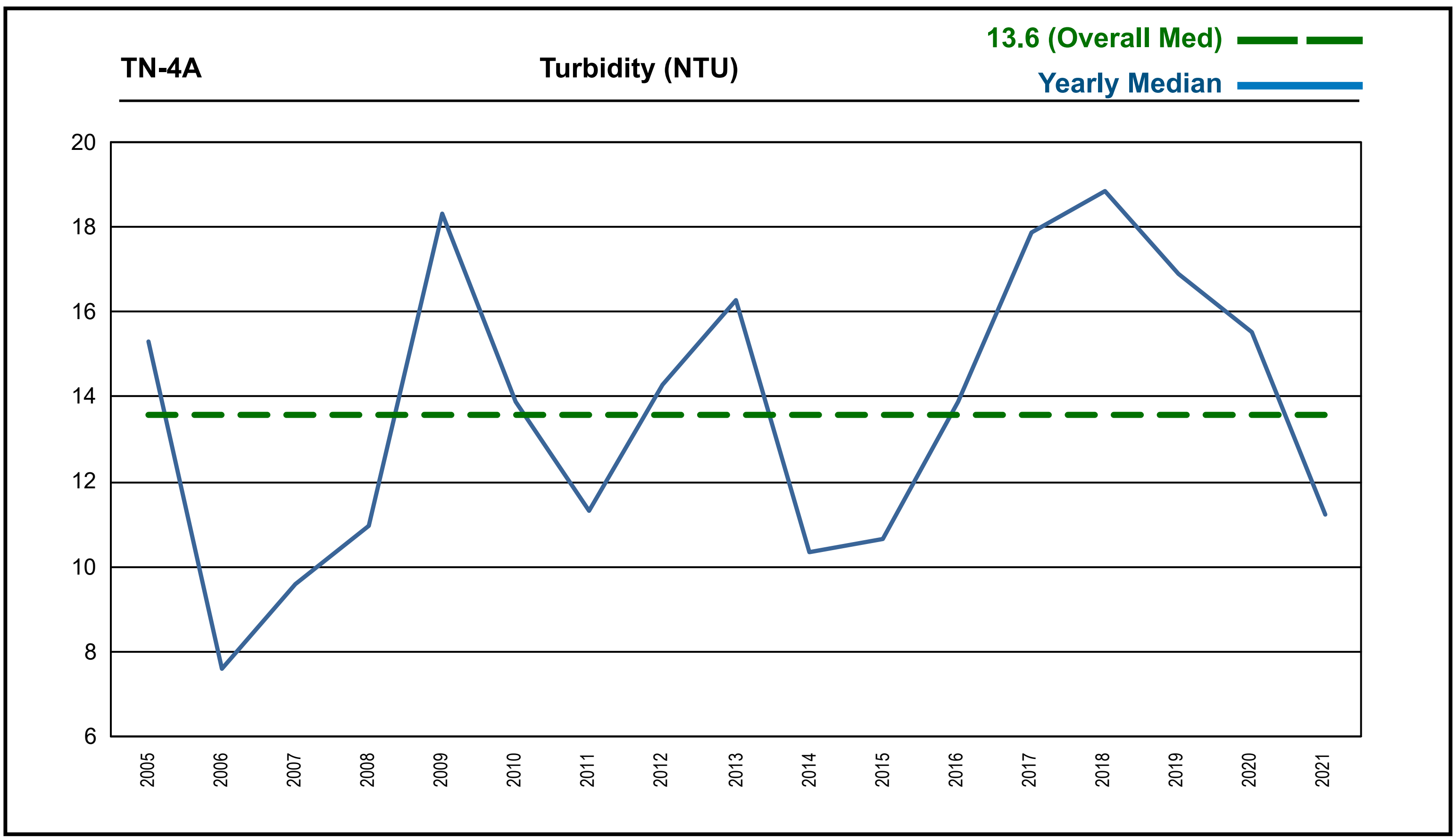

TMCM-3
Turbidity (NTU)
3.9 (Overall Med)
Yearly Median
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

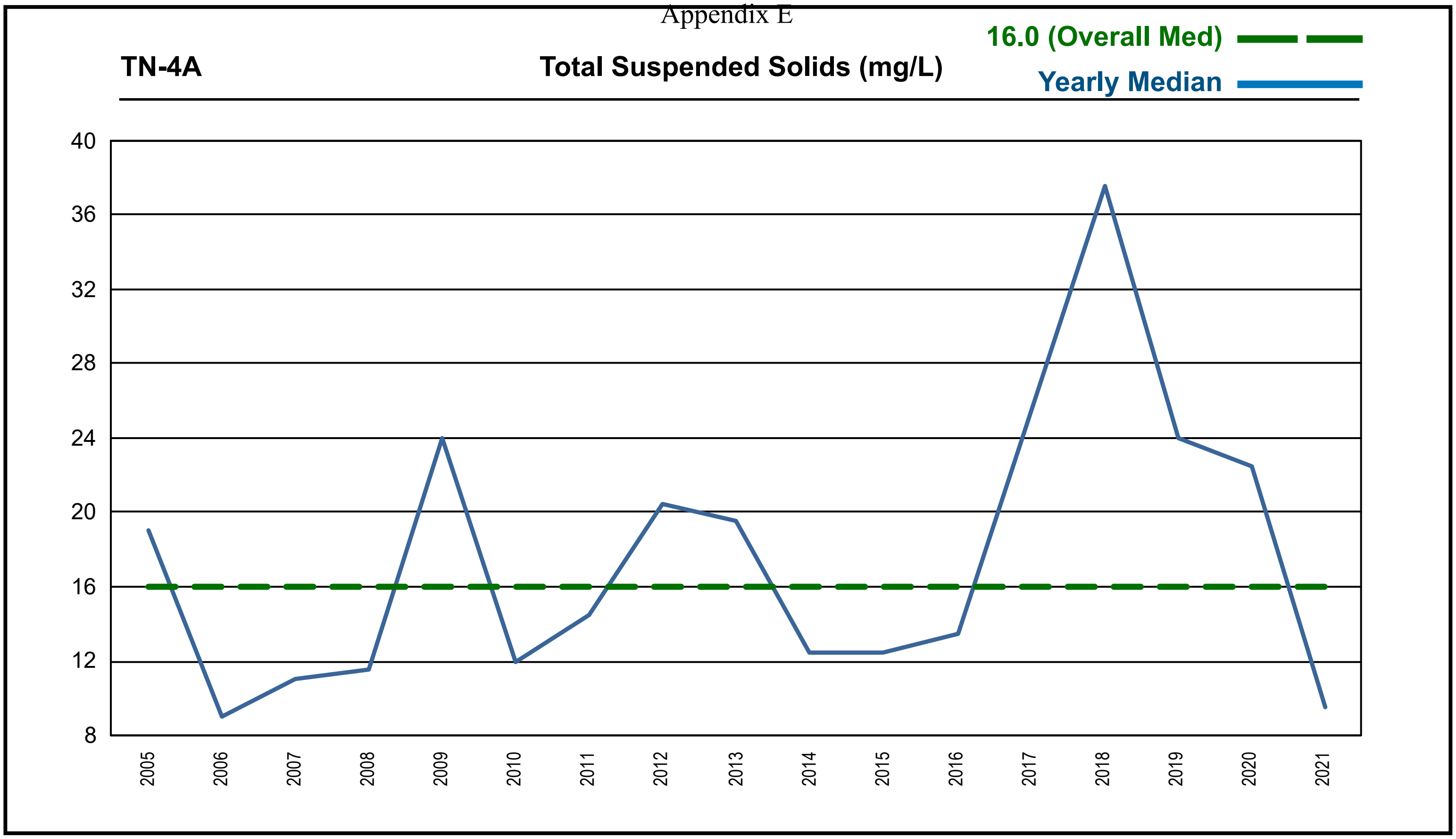

2.5 (Overall Med)
TMCM-3
Total Suspended Solids (mg/L)
Yearly Median
7
6
5
4
3
2
1
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

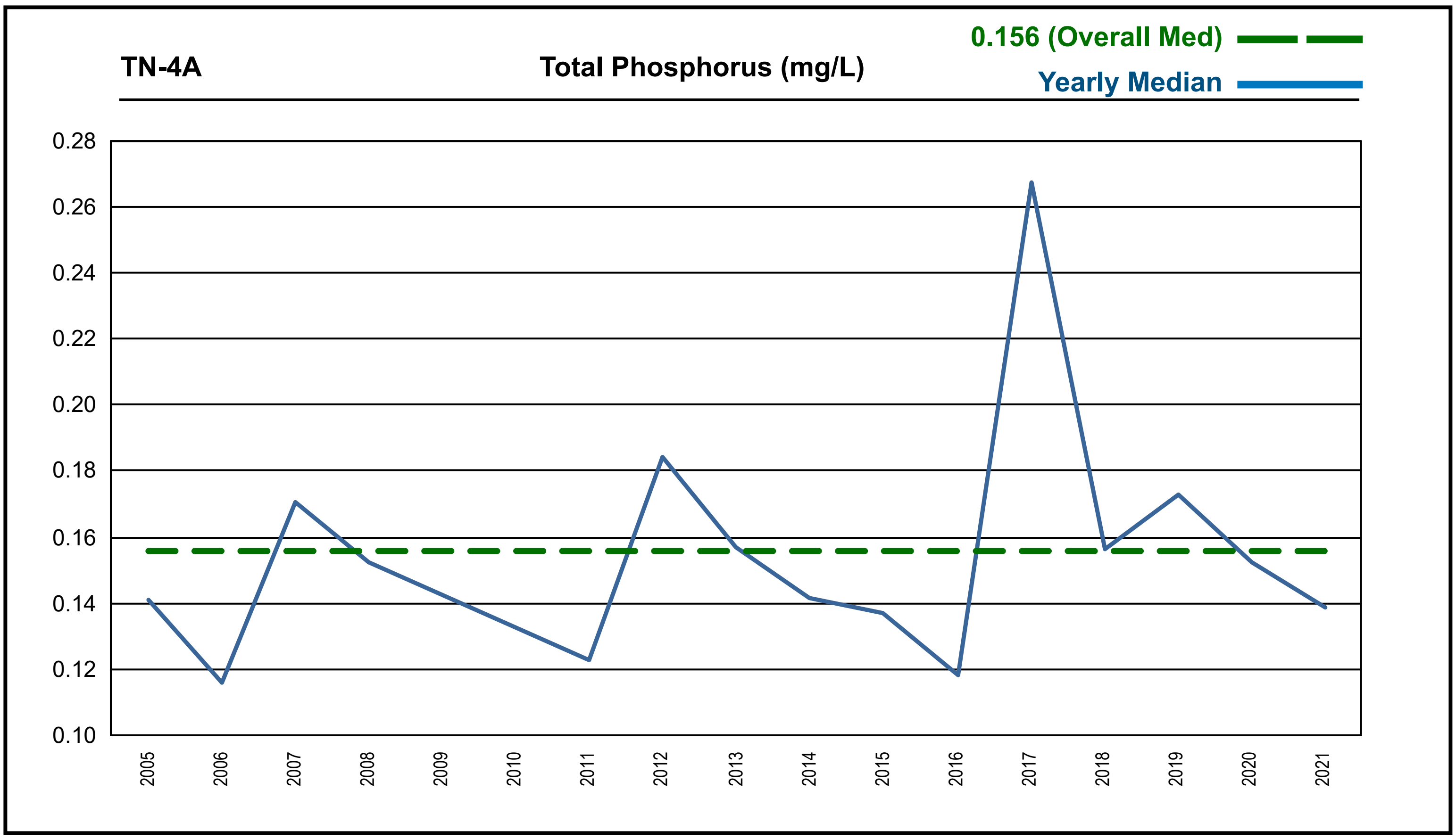

0.022 (Overall Med)
TMCM-3
Total Phosphorus (mg/L)
Yearly Median
0.040
0.036
0.032
0.028
0.024
0.020
0.016
0.012
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

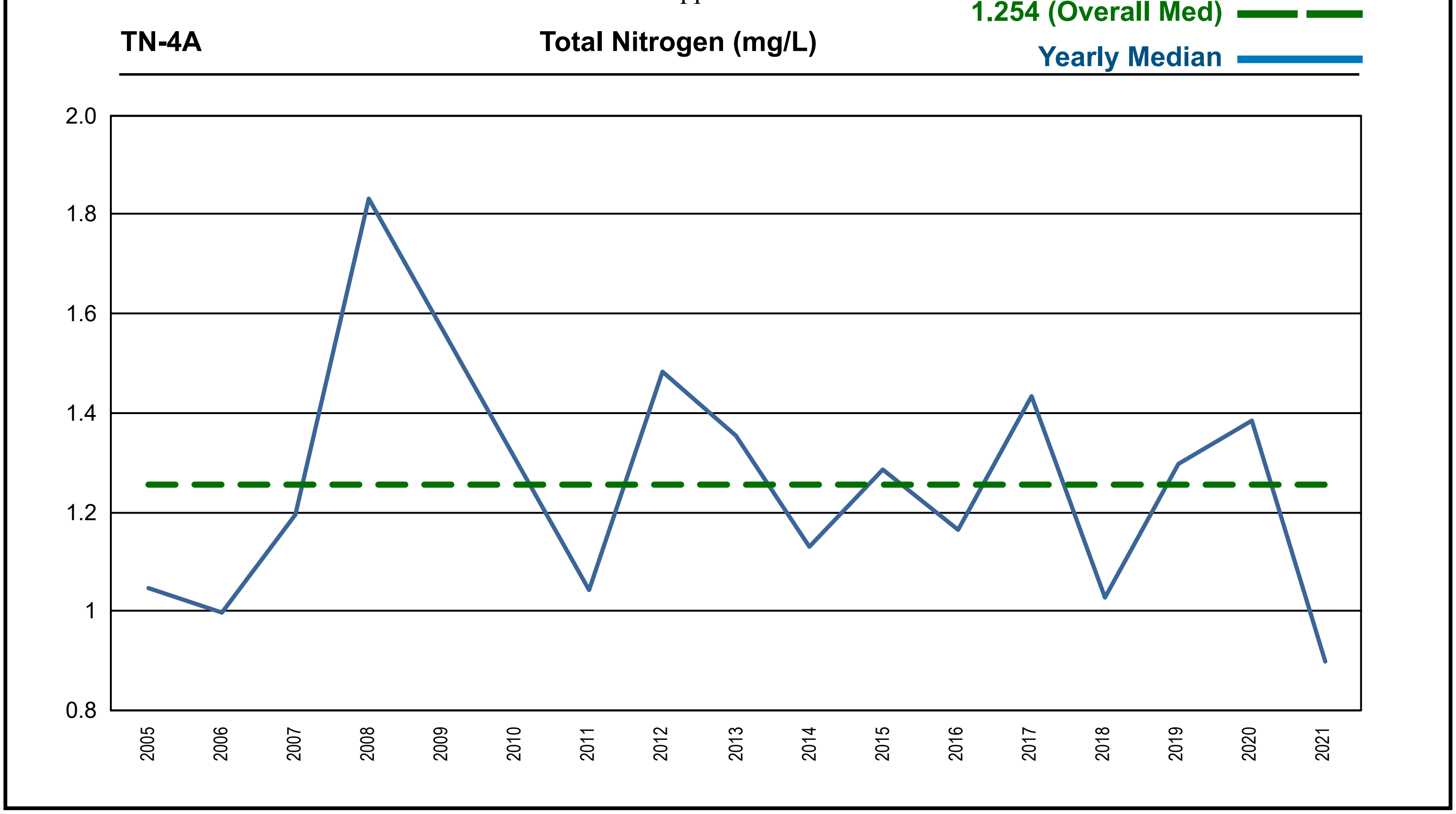

TMCM-3
Total Nitrogen (mg/L)
0.504 (Overall Med)
Yearly Median
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

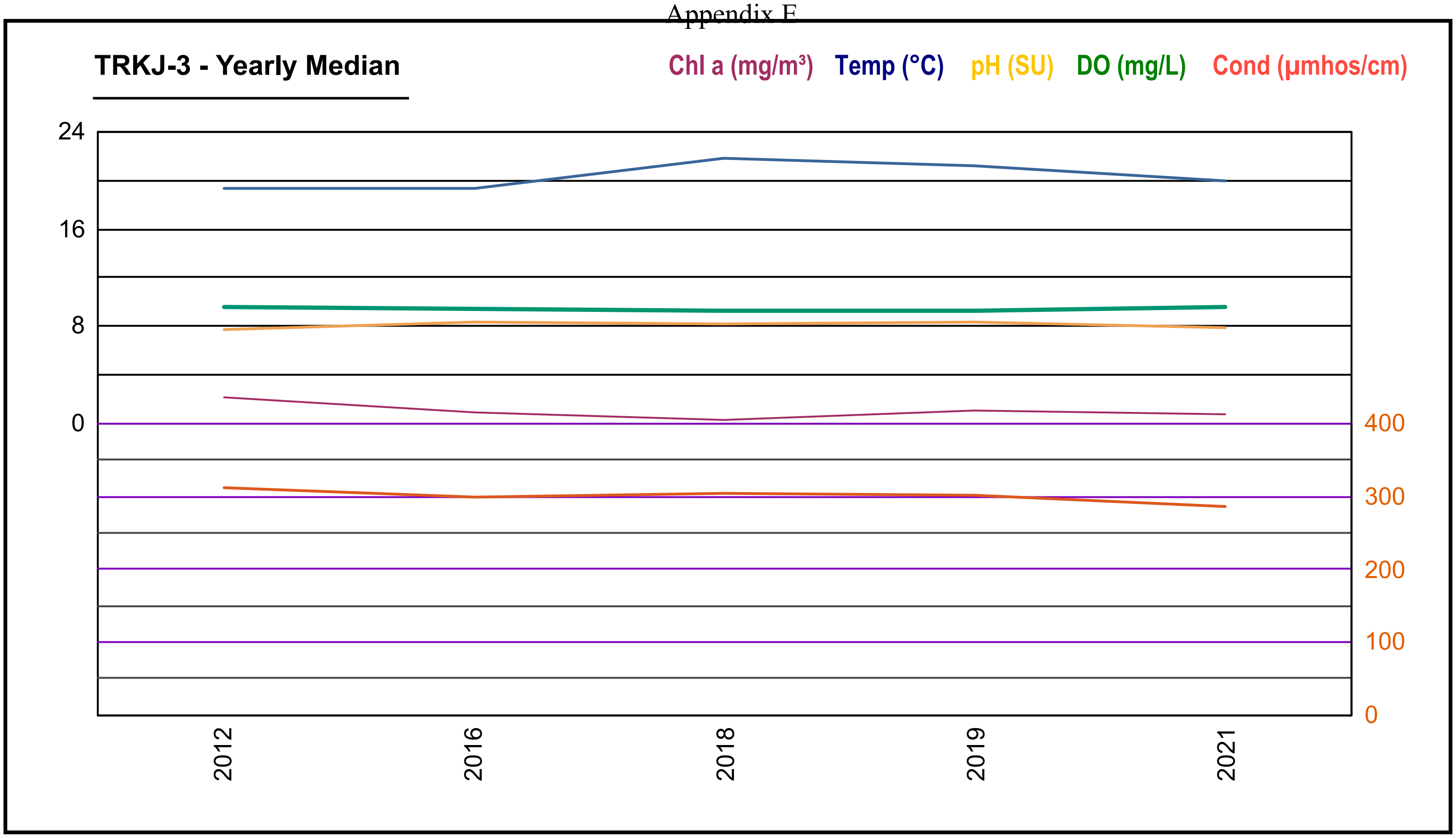

TN-4A - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
400
300
200
100
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

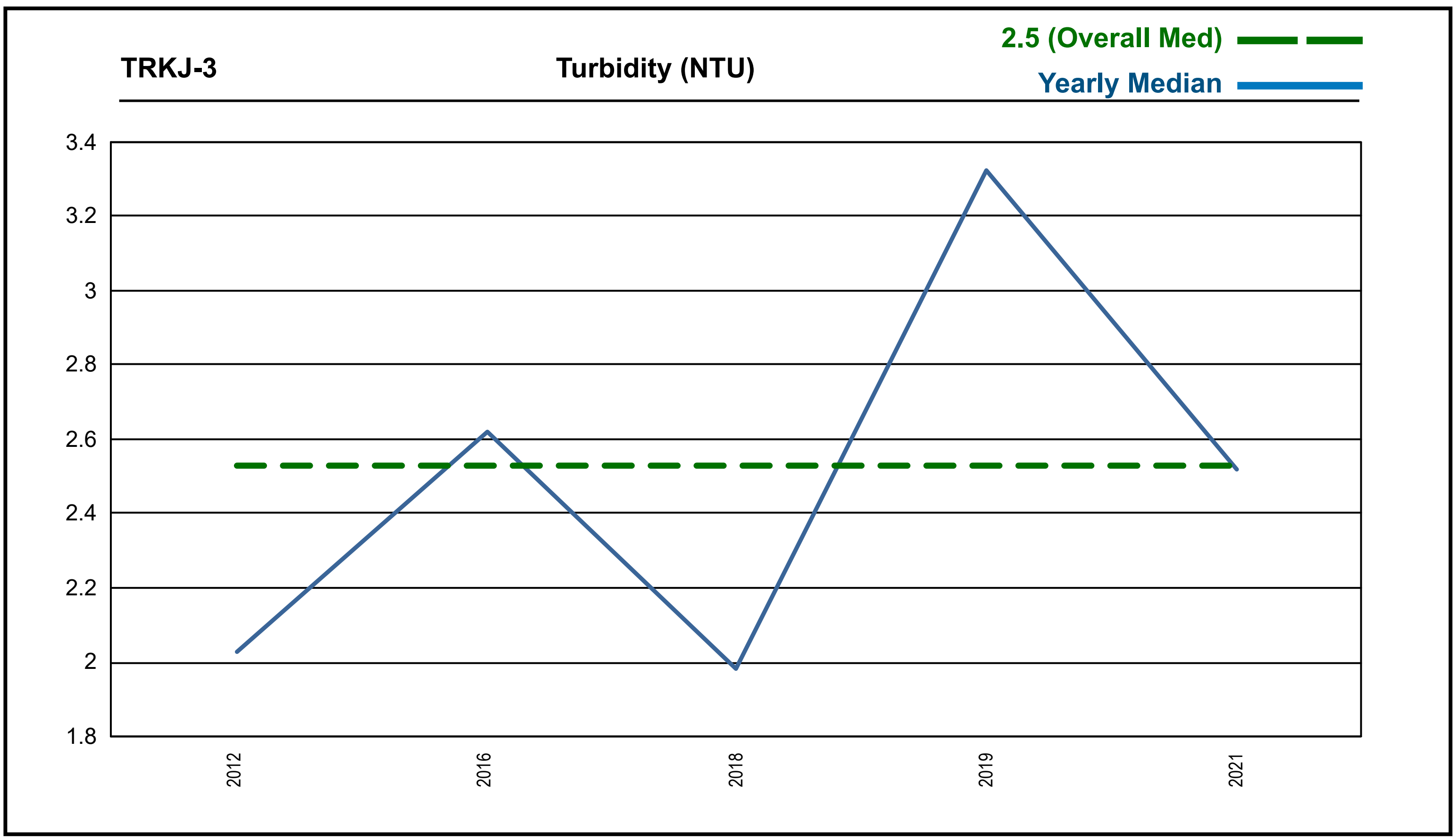

TN-4A
Turbidity (NTU)
13.6 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

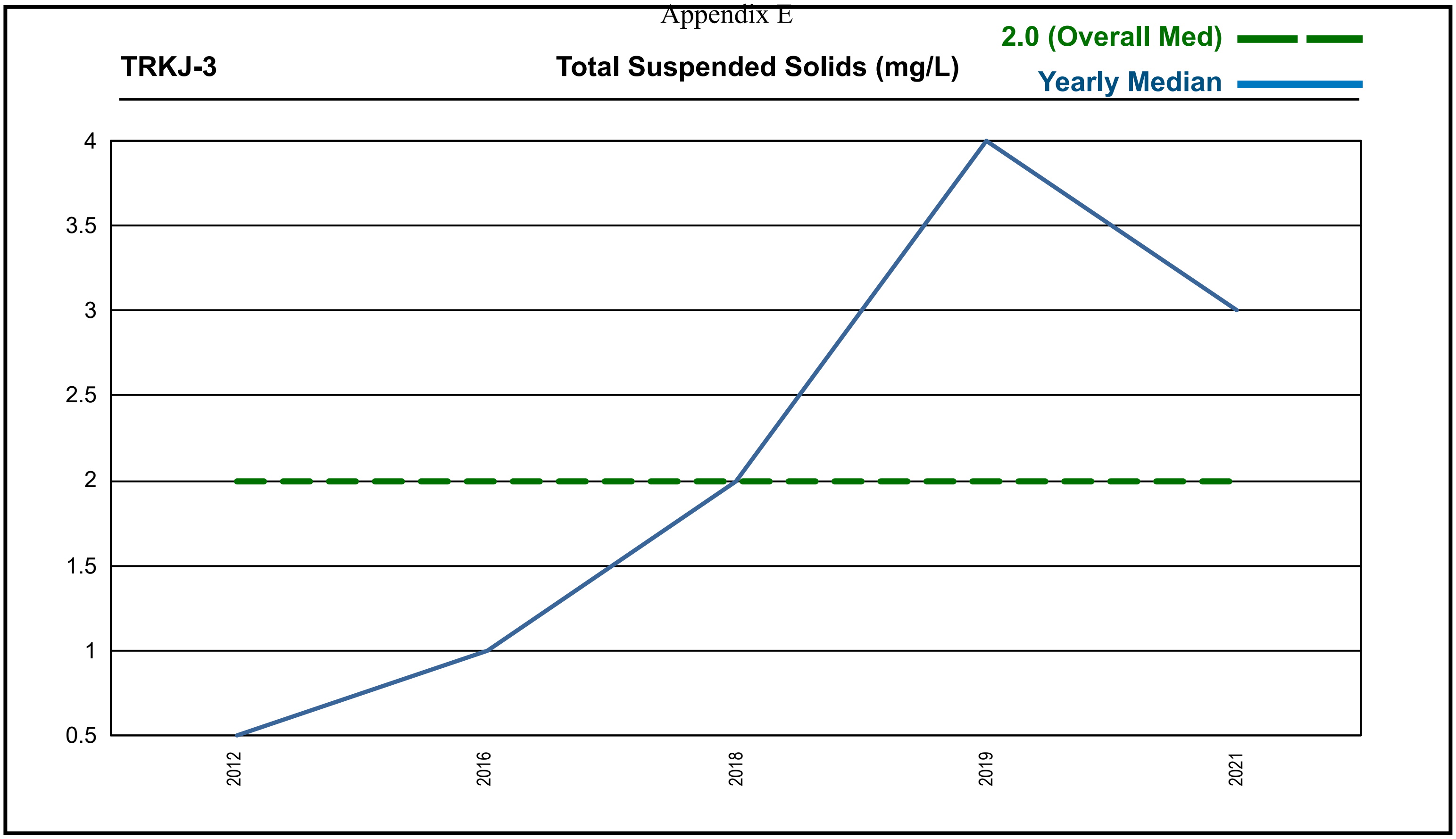

16.0 (Overall Med)
TN-4A
Total Suspended Solids (mg/L)
Yearly Median
40
36
32
28
24
20
16
12
8
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

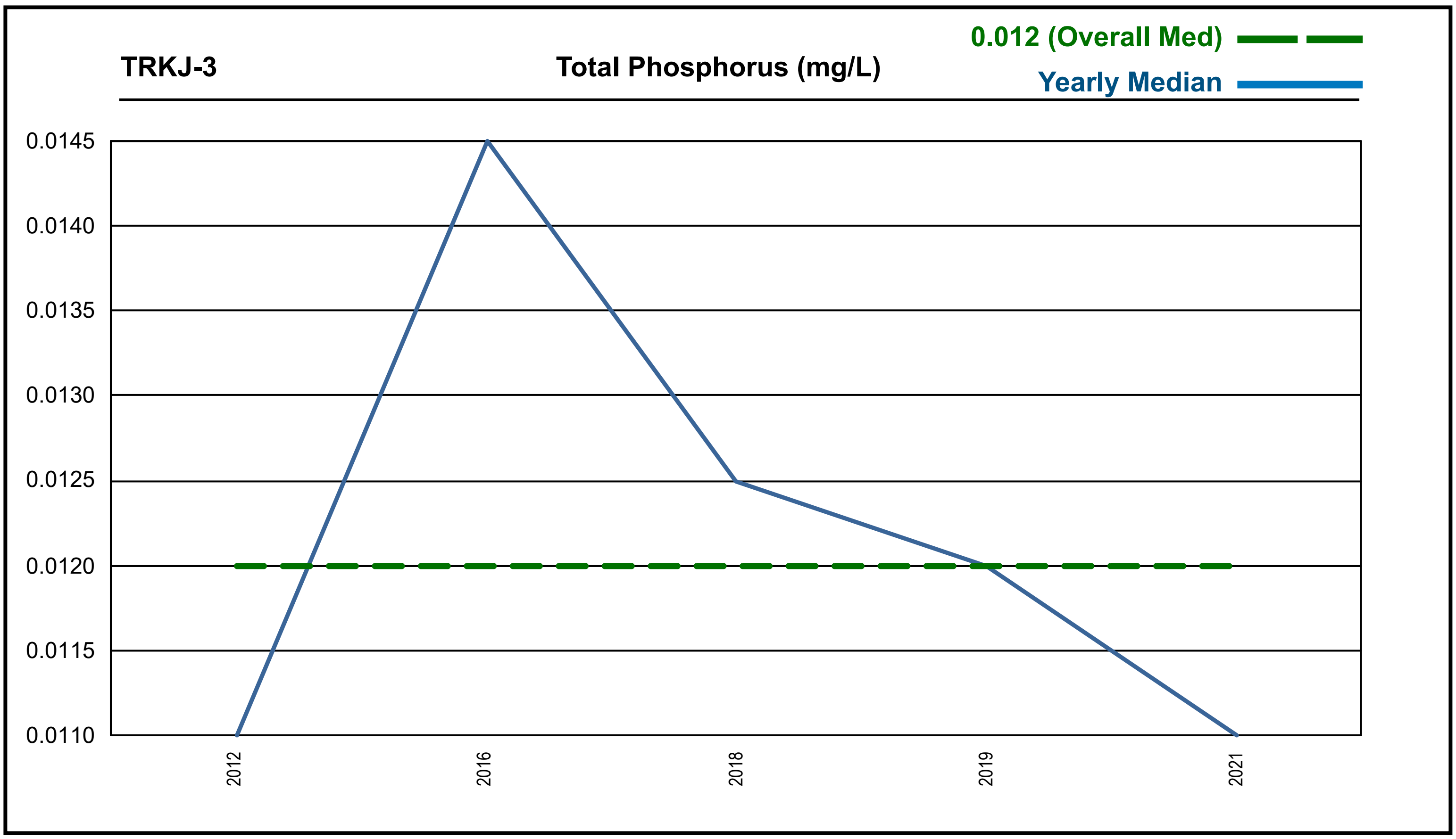

0.156 (Overall Med)
TN-4A
Total Phosphorus (mg/L)
Yearly Median
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

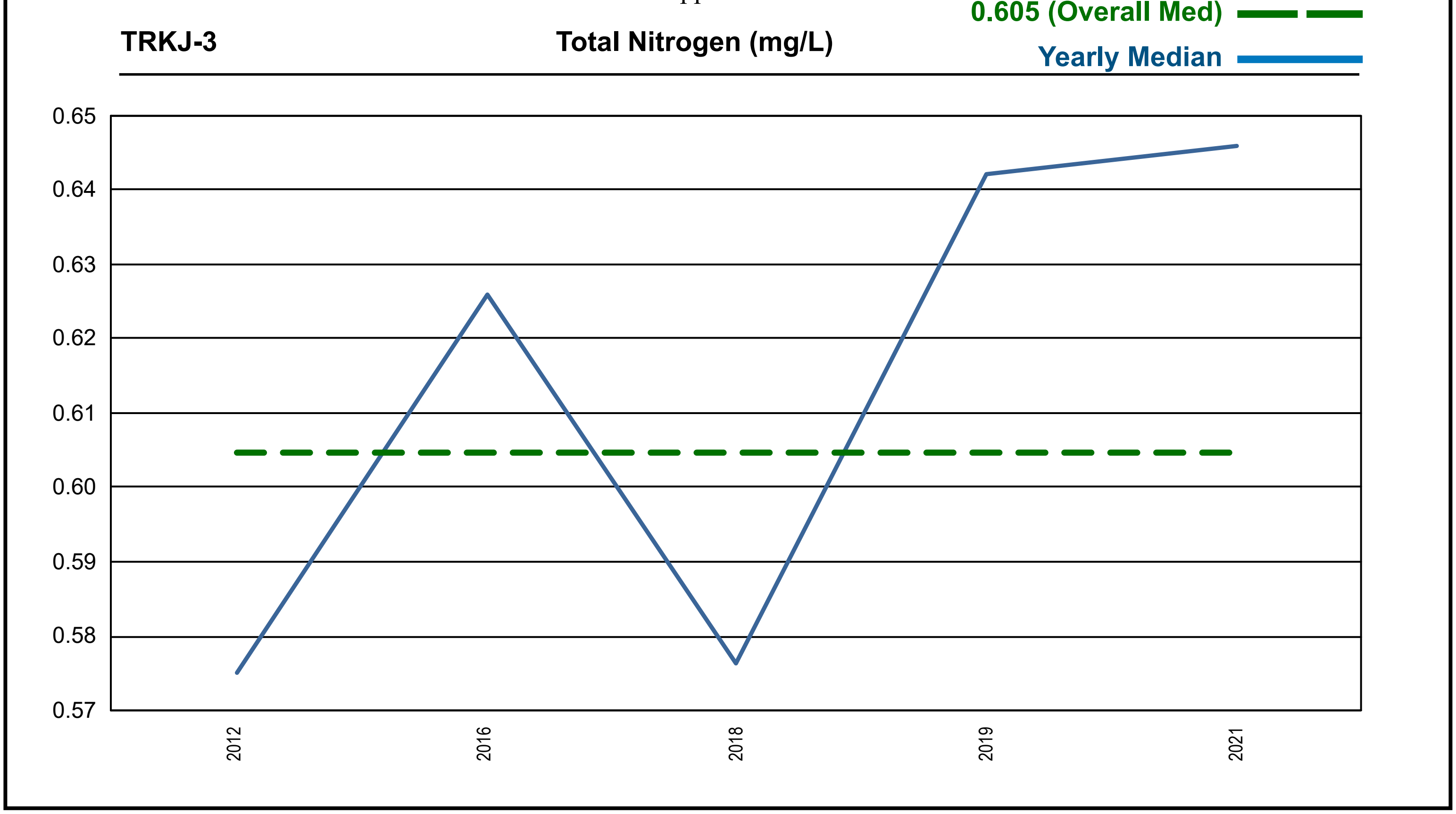

TN-4A
Total Nitrogen (mg/L)
1.254 (Overall Med)
Yearly Median
2.0
1.8
1.6
1.4
1.2
1
0.8
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

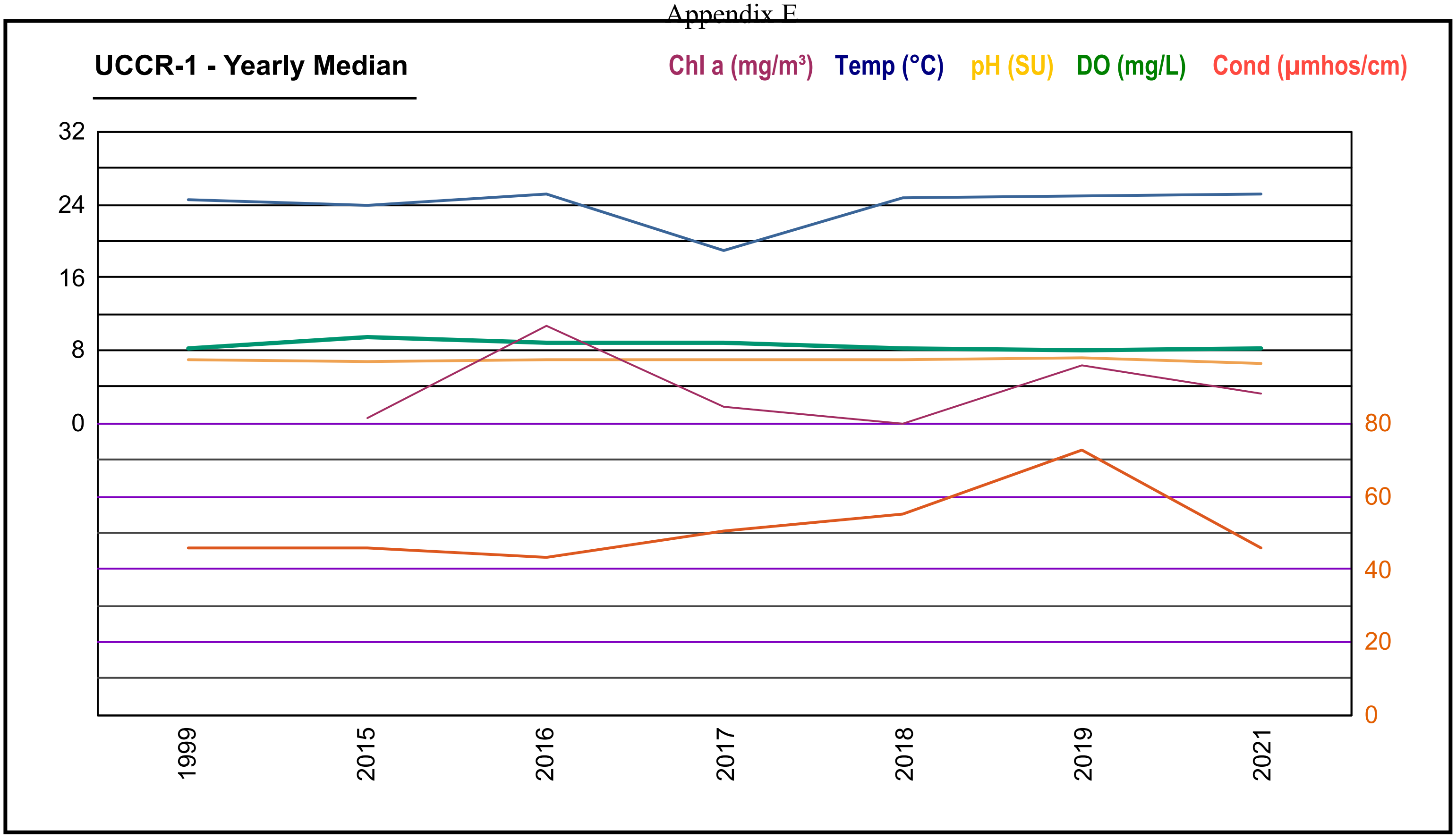

TRKJ-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
24
16
8
0
400
300
200
100
0
2012
2016
2018
2019
2021

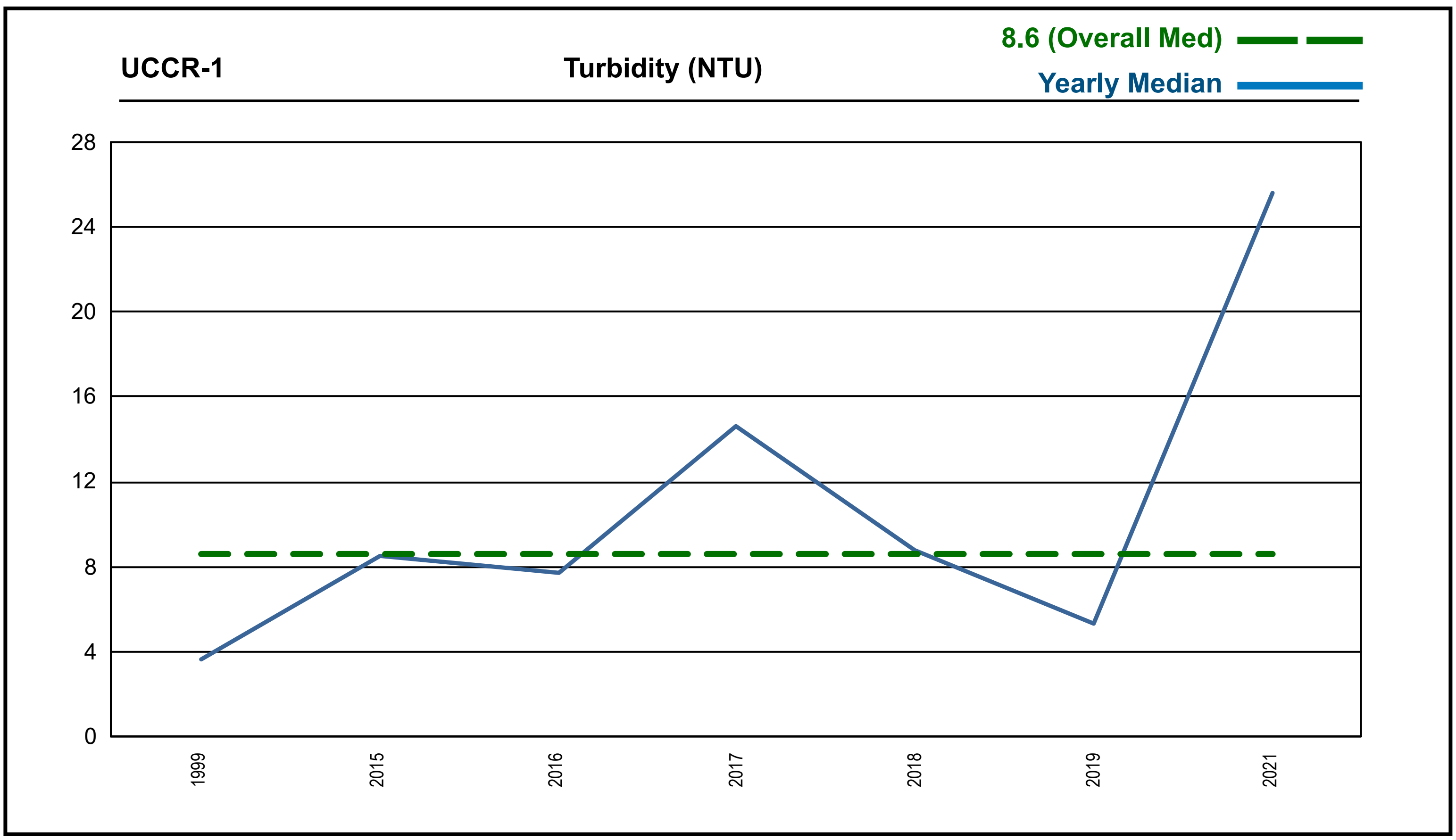

TRKJ-3
Turbidity (NTU)
2.5 (Overall Med)
Yearly Median
3.4
3.2
3
2.8
2.6
2.4
2.2
2
1.8
2012
2016
2018
2019
2021

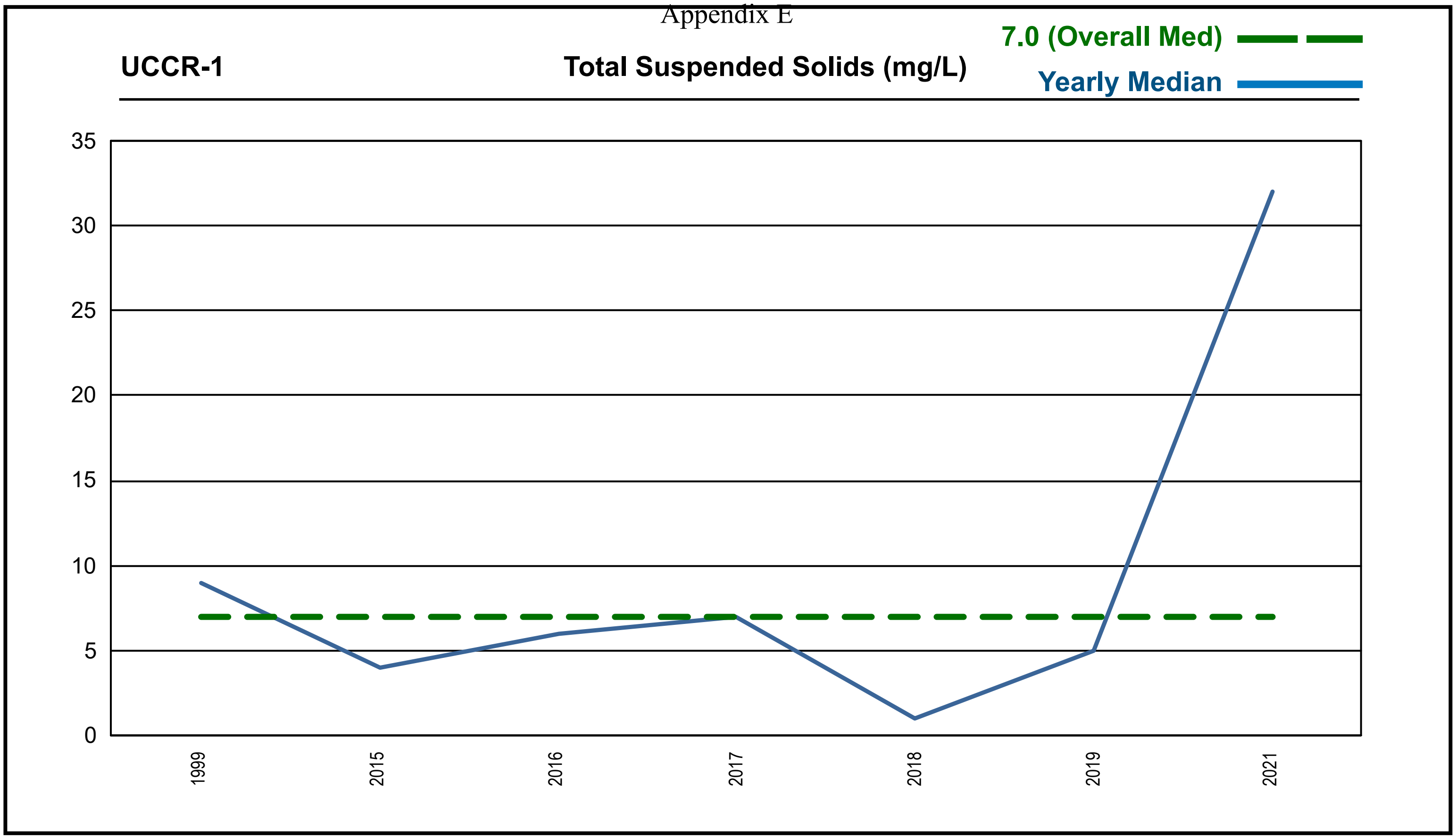

2.0 (Overall Med)
Yearly Median
TRKJ-3
Total Suspended Solids (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
2012
2016
2018
2019
2021

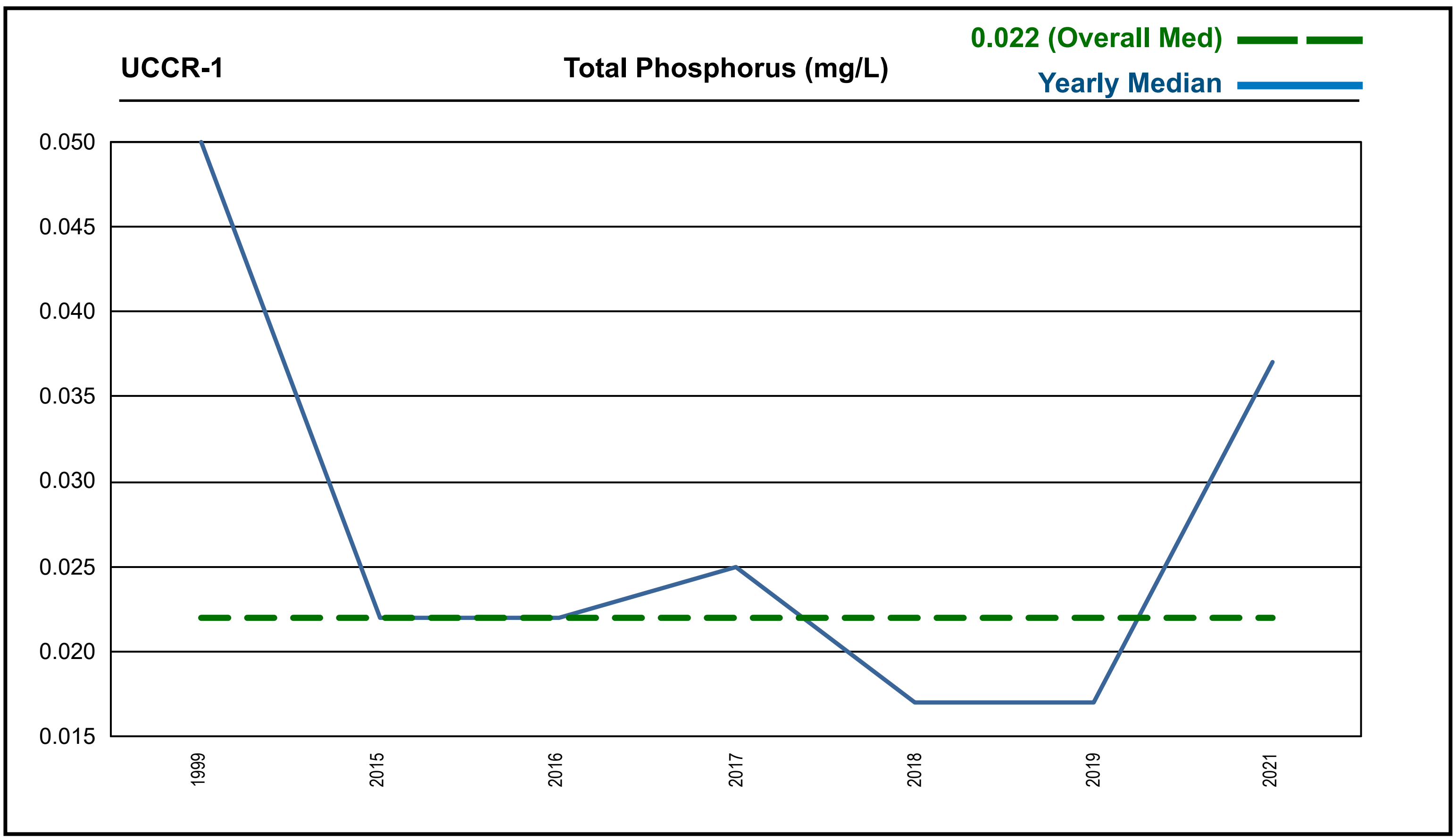

0.012 (Overall Med)
Yearly Median
TRKJ-3
Total Phosphorus (mg/L)
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
2012
2016
2018
2019
2021

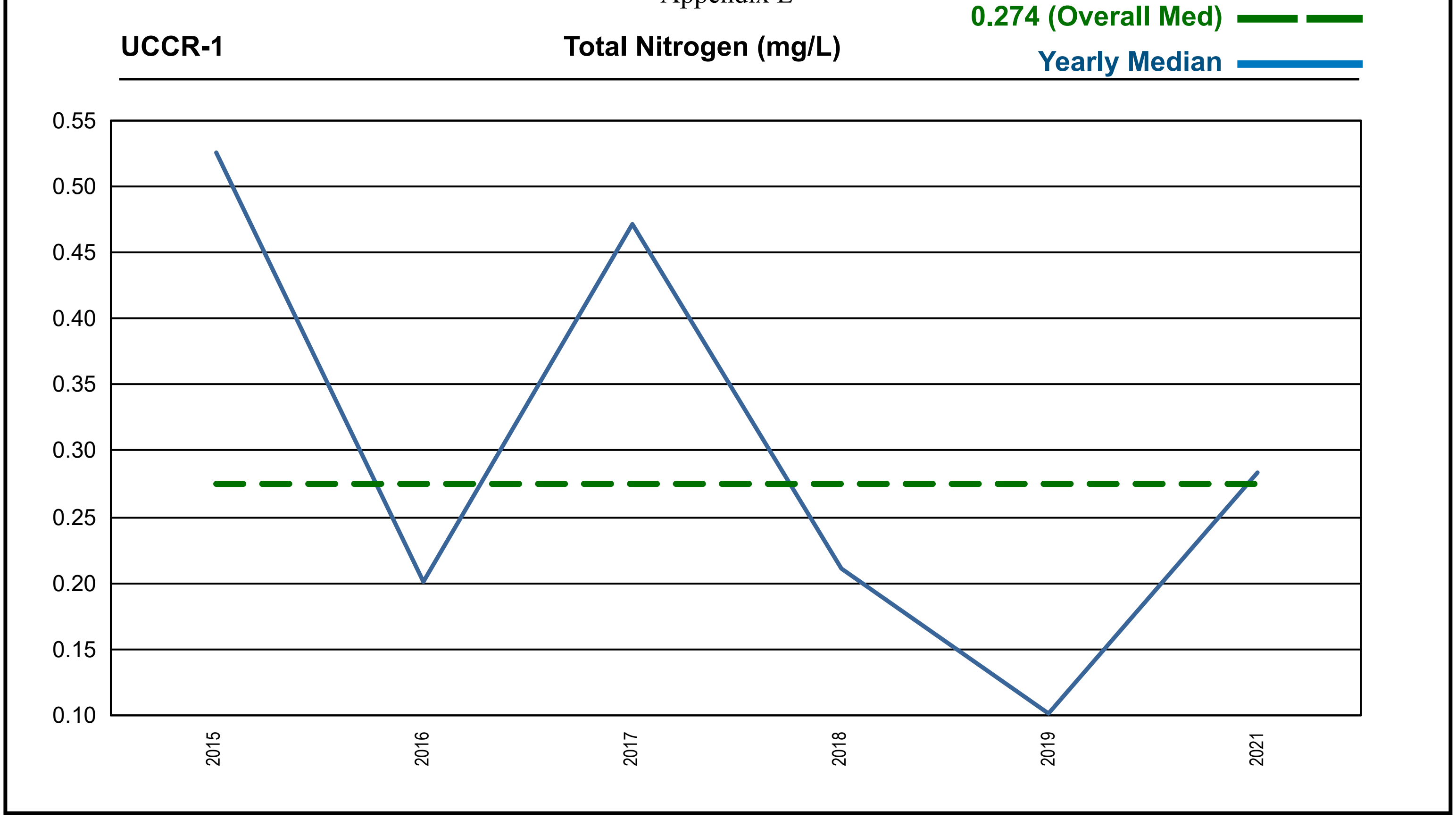

TRKJ-3
Total Nitrogen (mg/L)
0.605 (Overall Med)
Yearly Median
0.65
0.64
0.63
0.62
0.61
0.60
0.59
0.58
0.57
2012
2016
2018
2019
2021

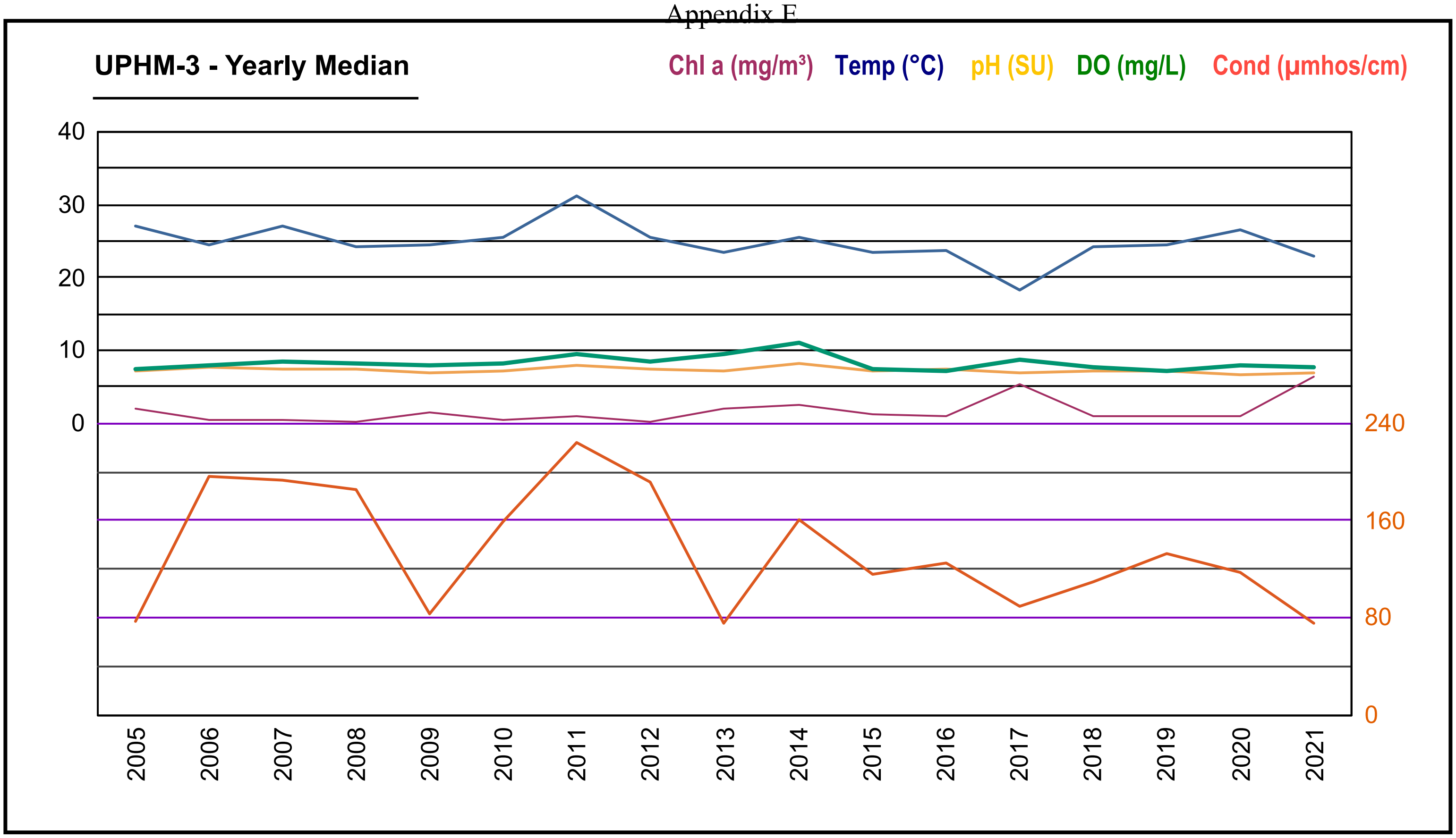

UCCR-1 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
80
60
40
20
0
1999
2015
2016
2017
2018
2019
2021

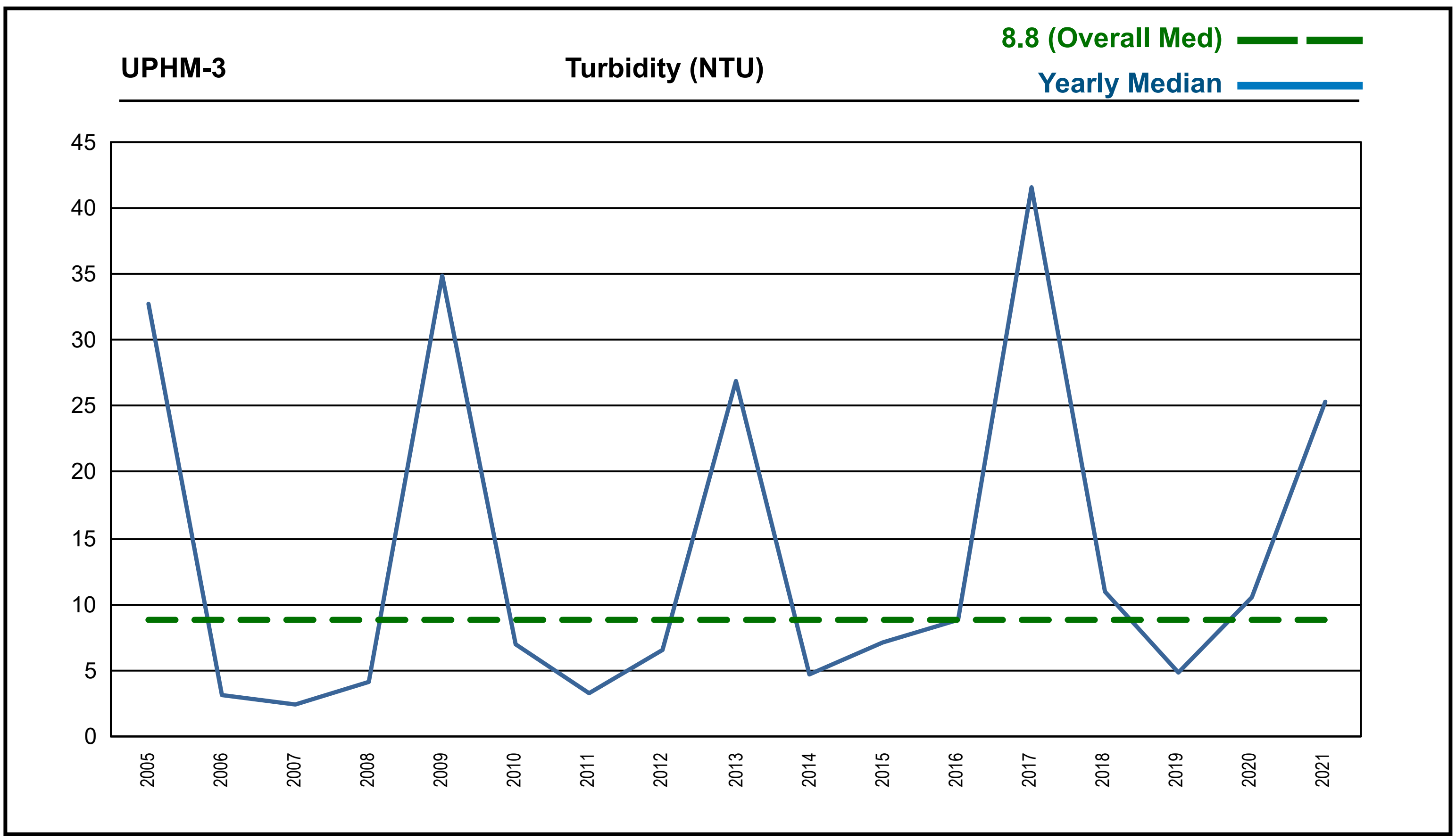

UCCR-1
Turbidity (NTU)
8.6 (Overall Med)
Yearly Median
28
24
20
16
12
8
4
0
1999
2015
2016
2017
2018
2019
2021

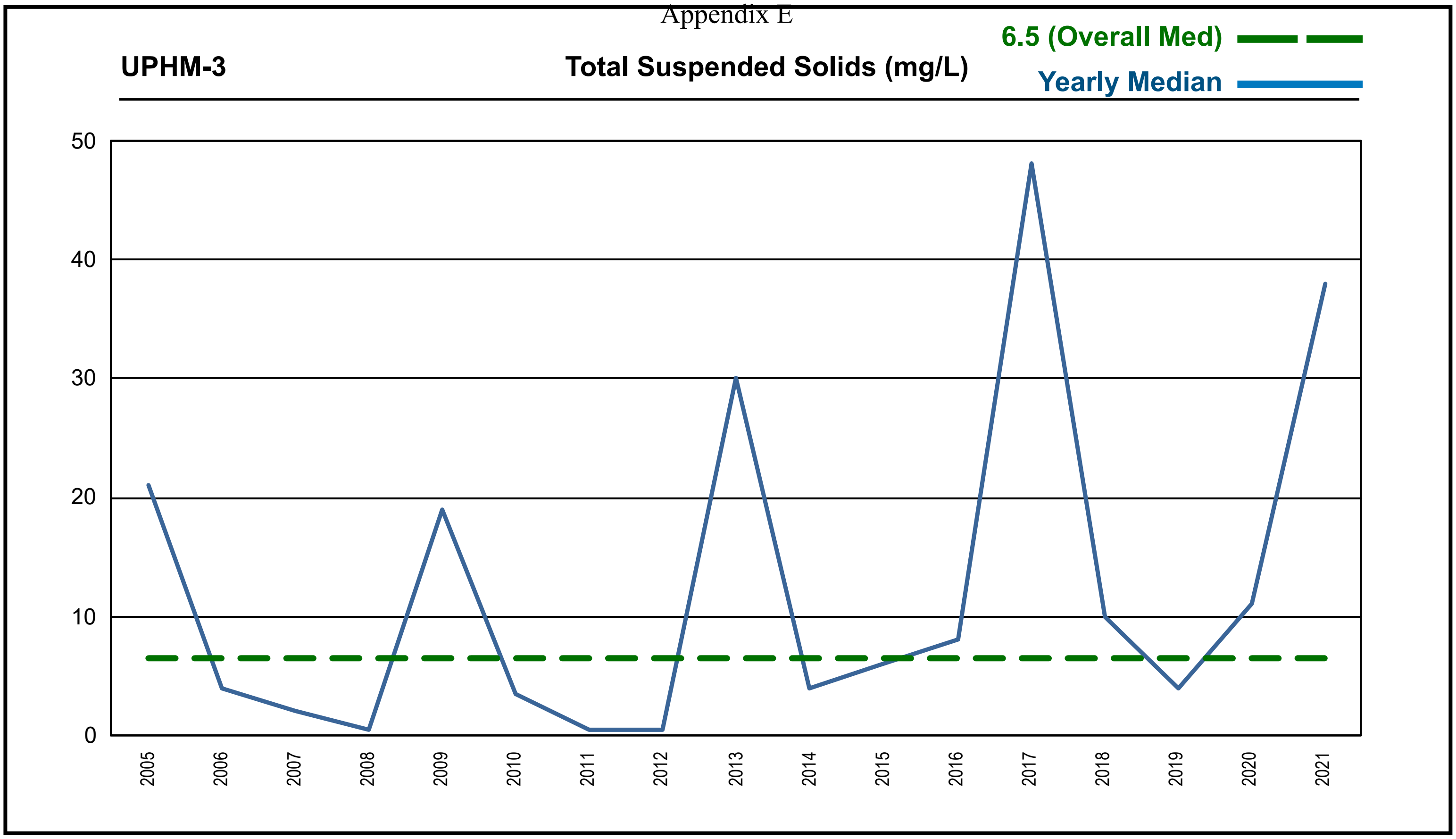

7.0 (Overall Med)
Yearly Median
UCCR-1
Total Suspended Solids (mg/L)
35
30
25
20
15
10
5
0
1999
2015
2016
2017
2018
2019
2021

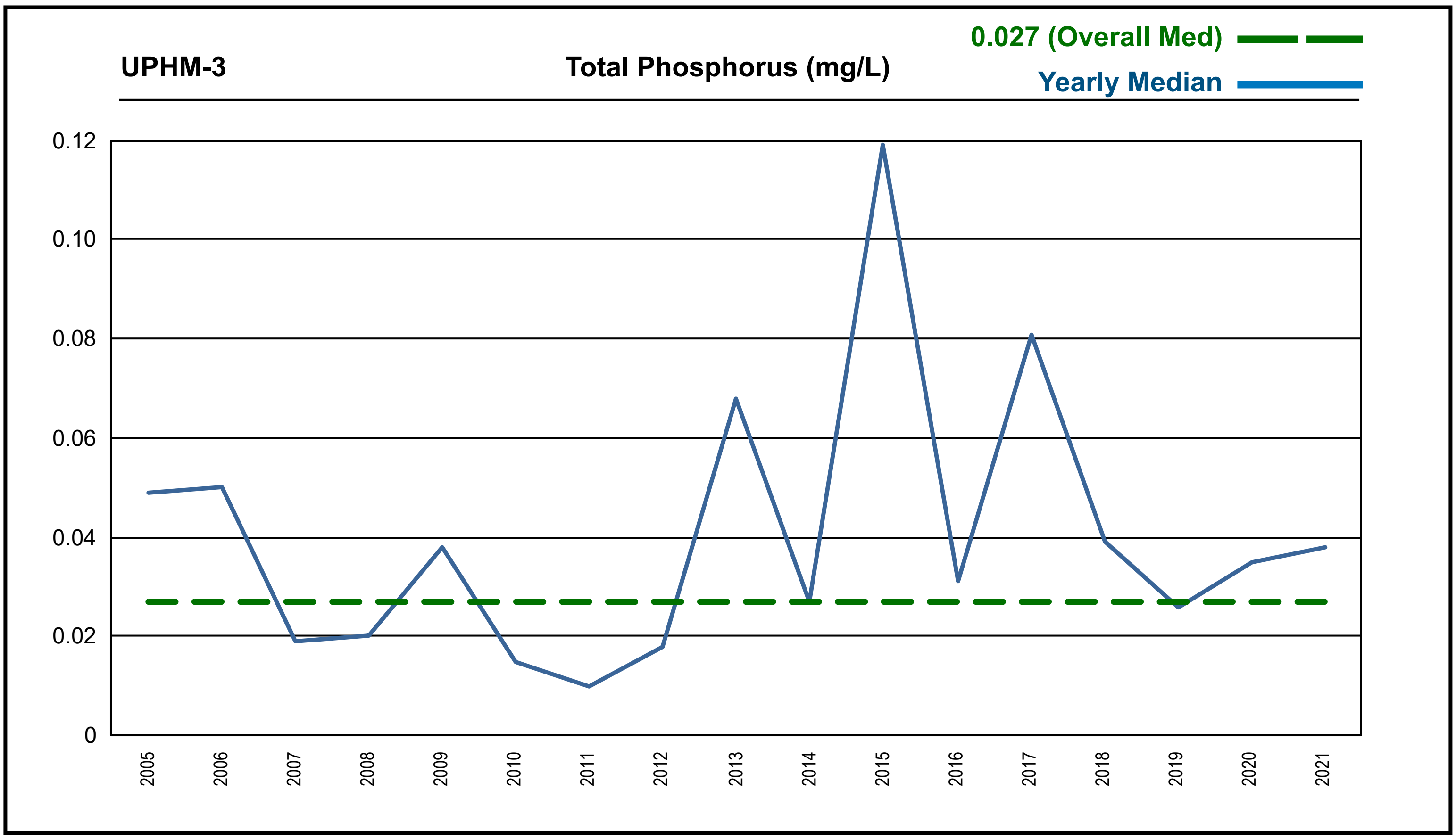

0.022 (Overall Med)
Yearly Median
UCCR-1
Total Phosphorus (mg/L)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
1999
2015
2016
2017
2018
2019
2021

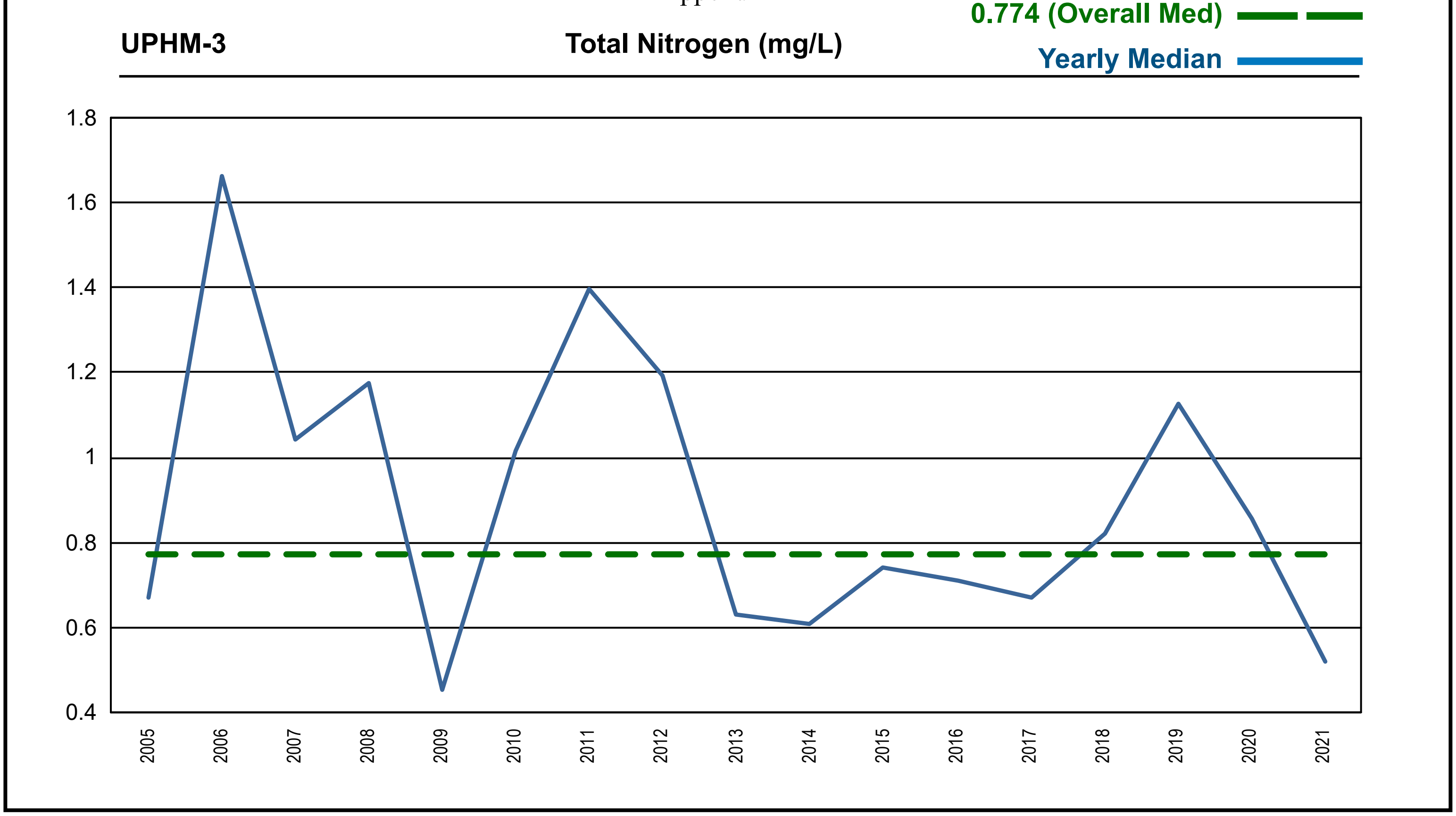

0.274 (Overall Med)
Yearly Median
UCCR-1
Total Nitrogen (mg/L)
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
2015
2016
2017
2018
2019
2021

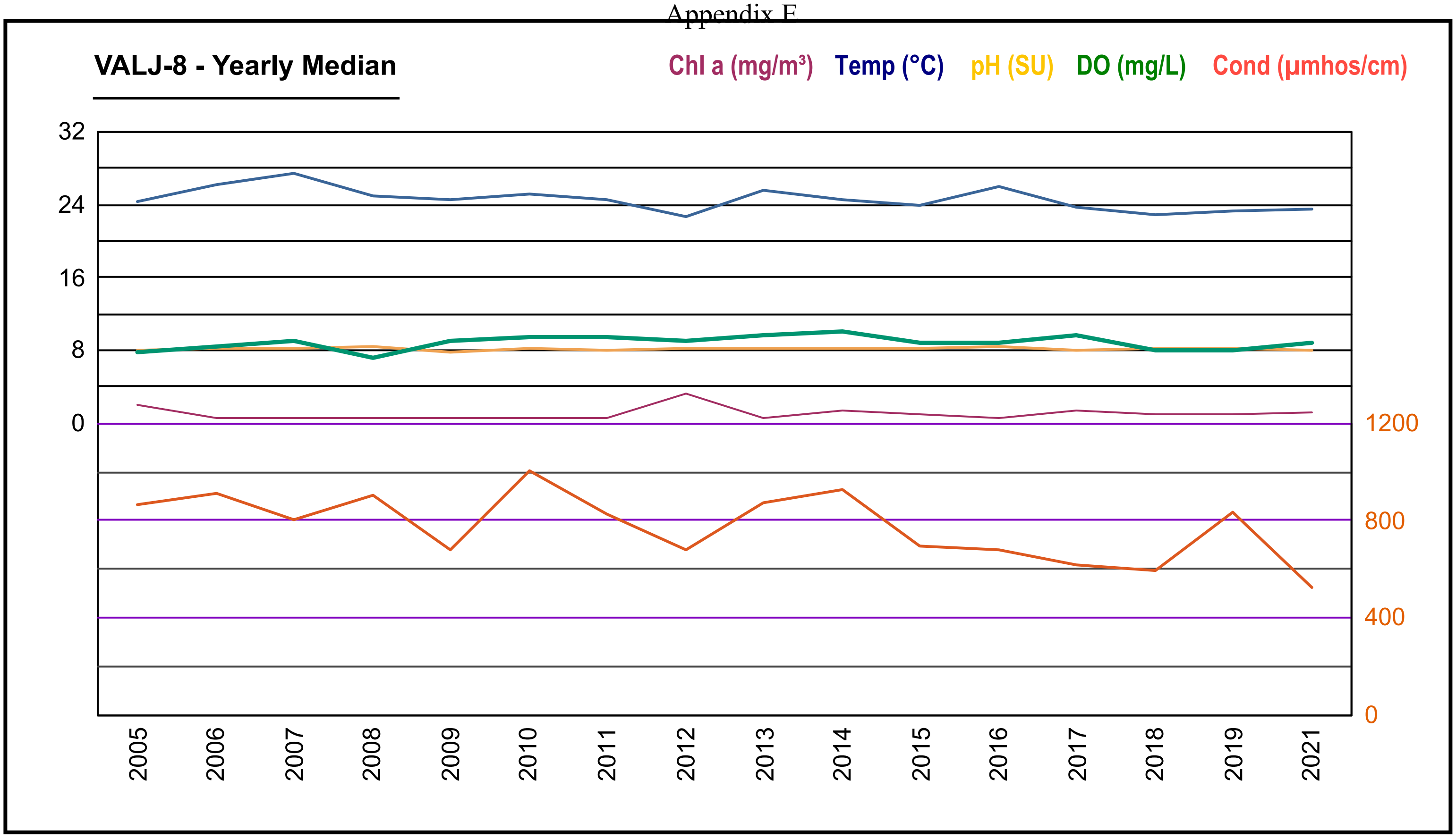

UPHM-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
40
30
20
10
0
240
160
80
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

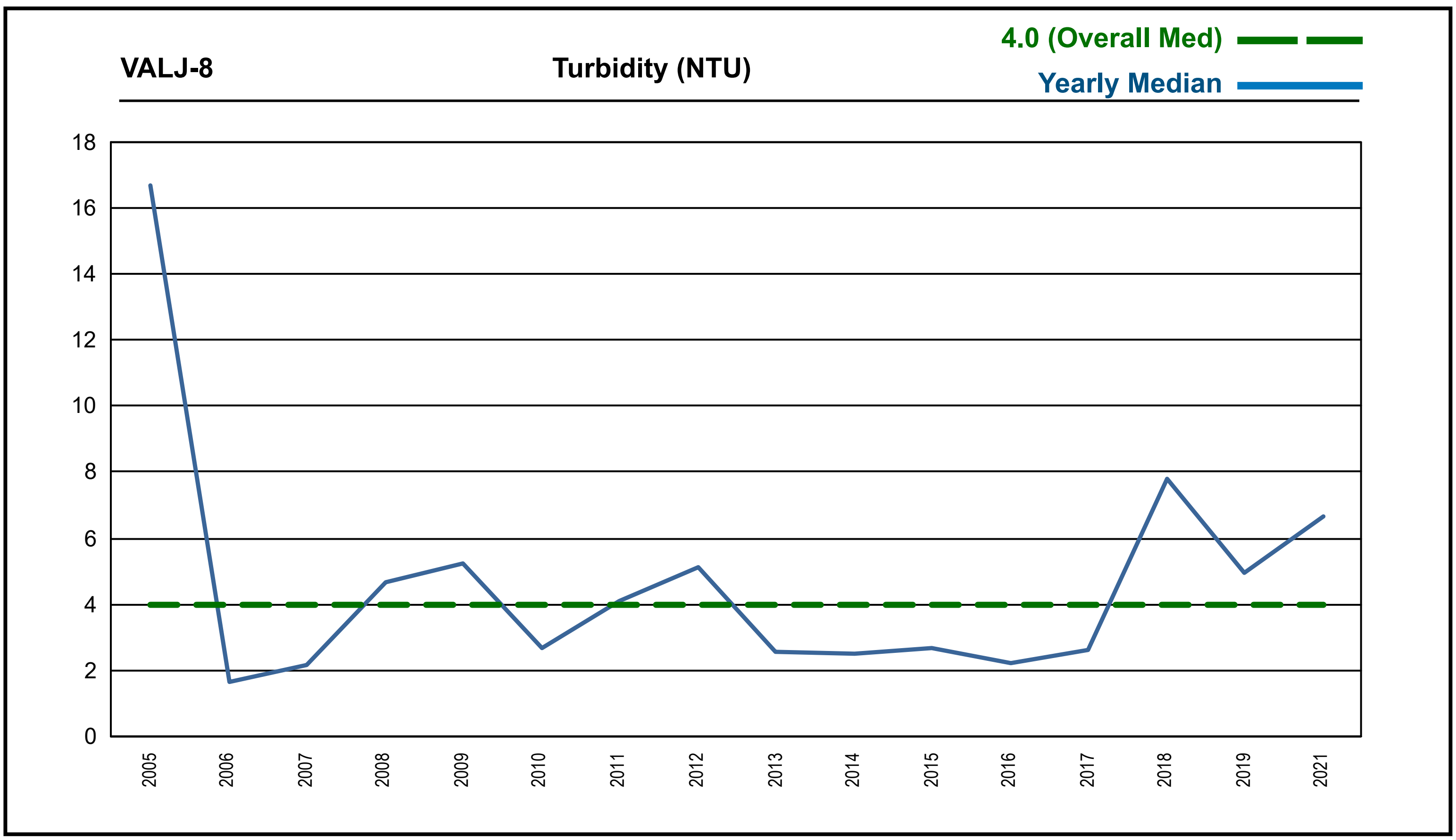

UPHM-3
Turbidity (NTU)
8.8 (Overall Med)
Yearly Median
45
40
35
30
25
20
15
10
5
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

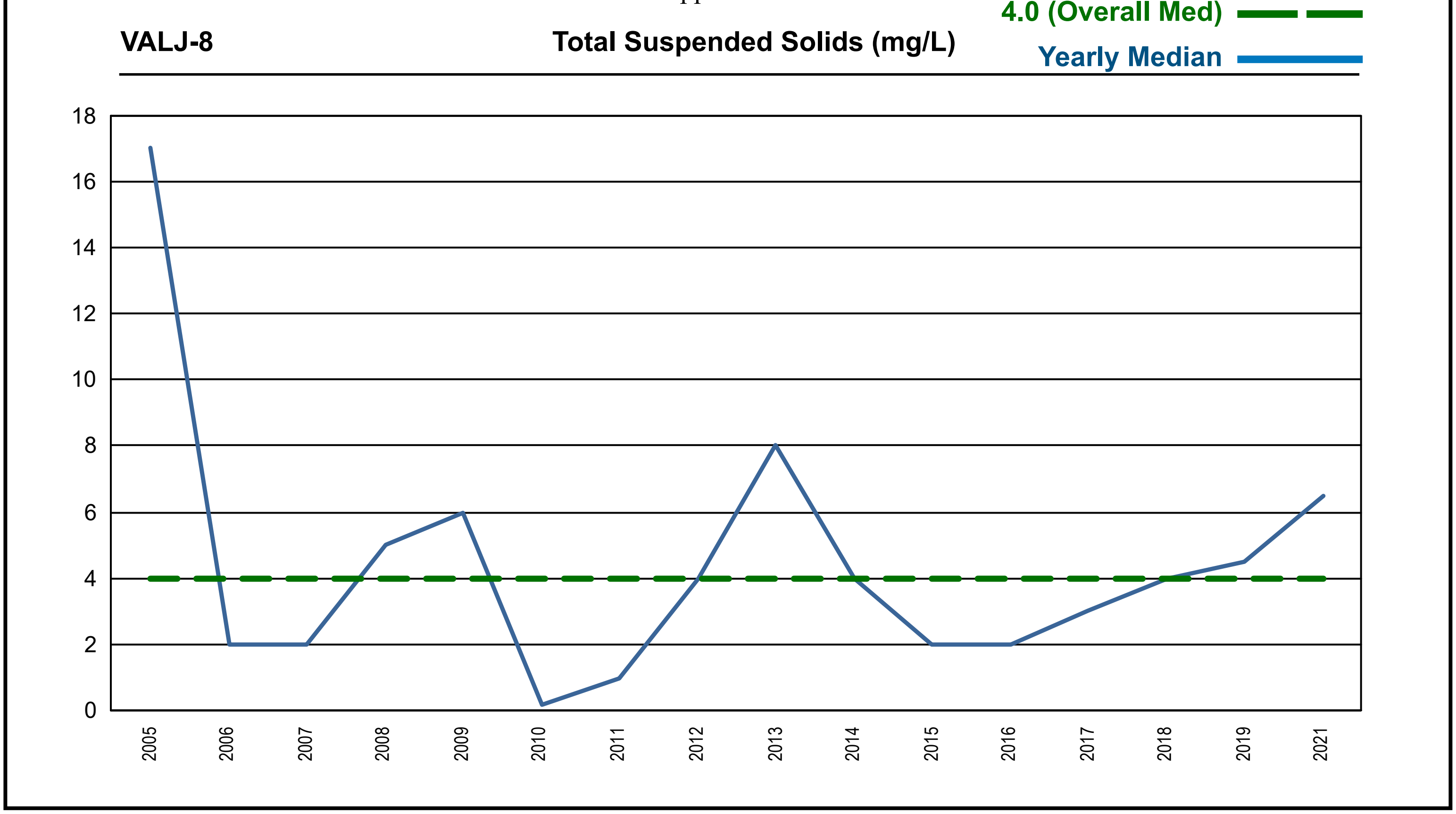

6.5 (Overall Med)
UPHM-3
Total Suspended Solids (mg/L)
Yearly Median
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

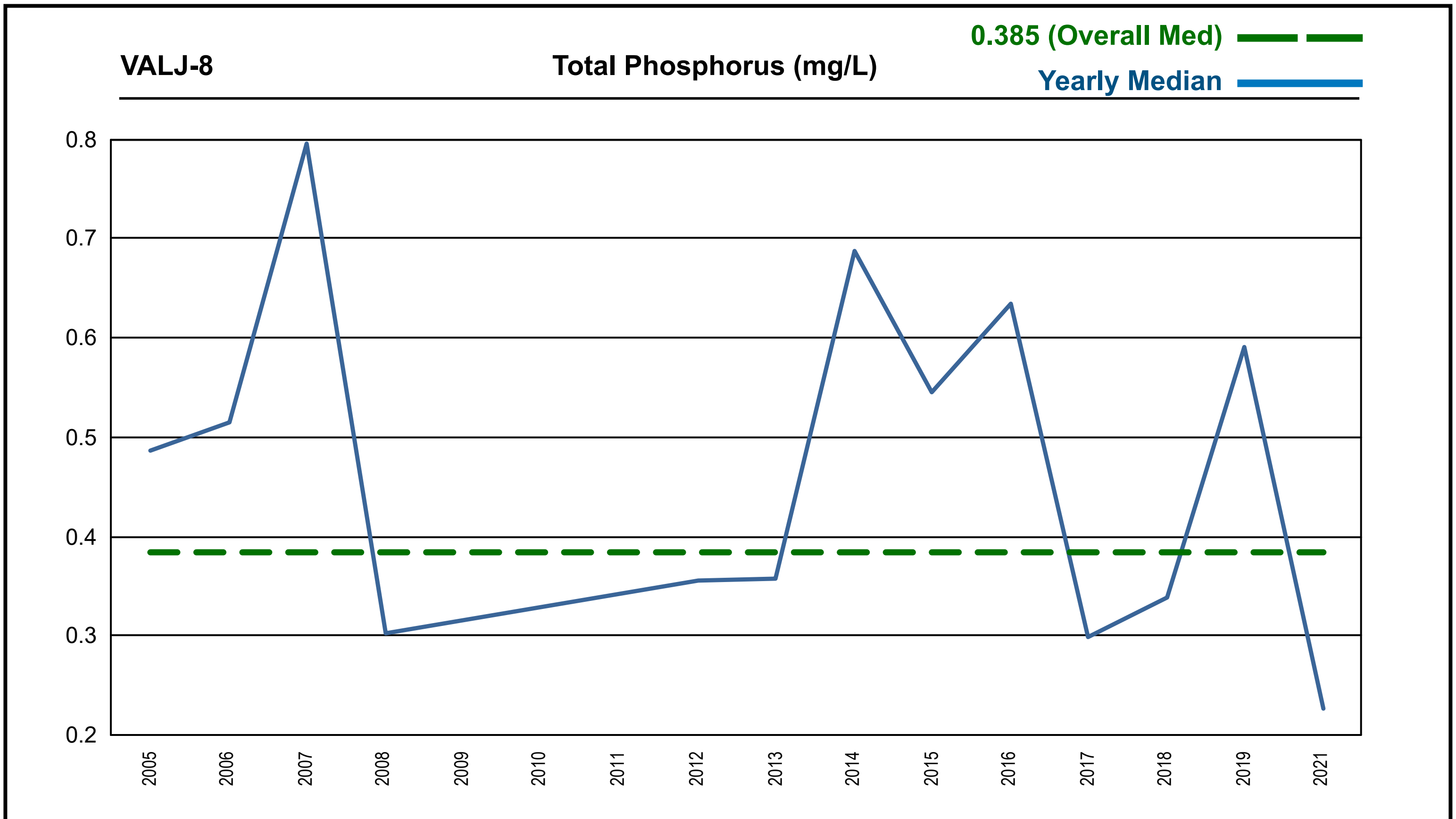

0.027 (Overall Med)
UPHM-3
Total Phosphorus (mg/L)
Yearly Median
0.12
0.10
0.08
0.06
0.04
0.02
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

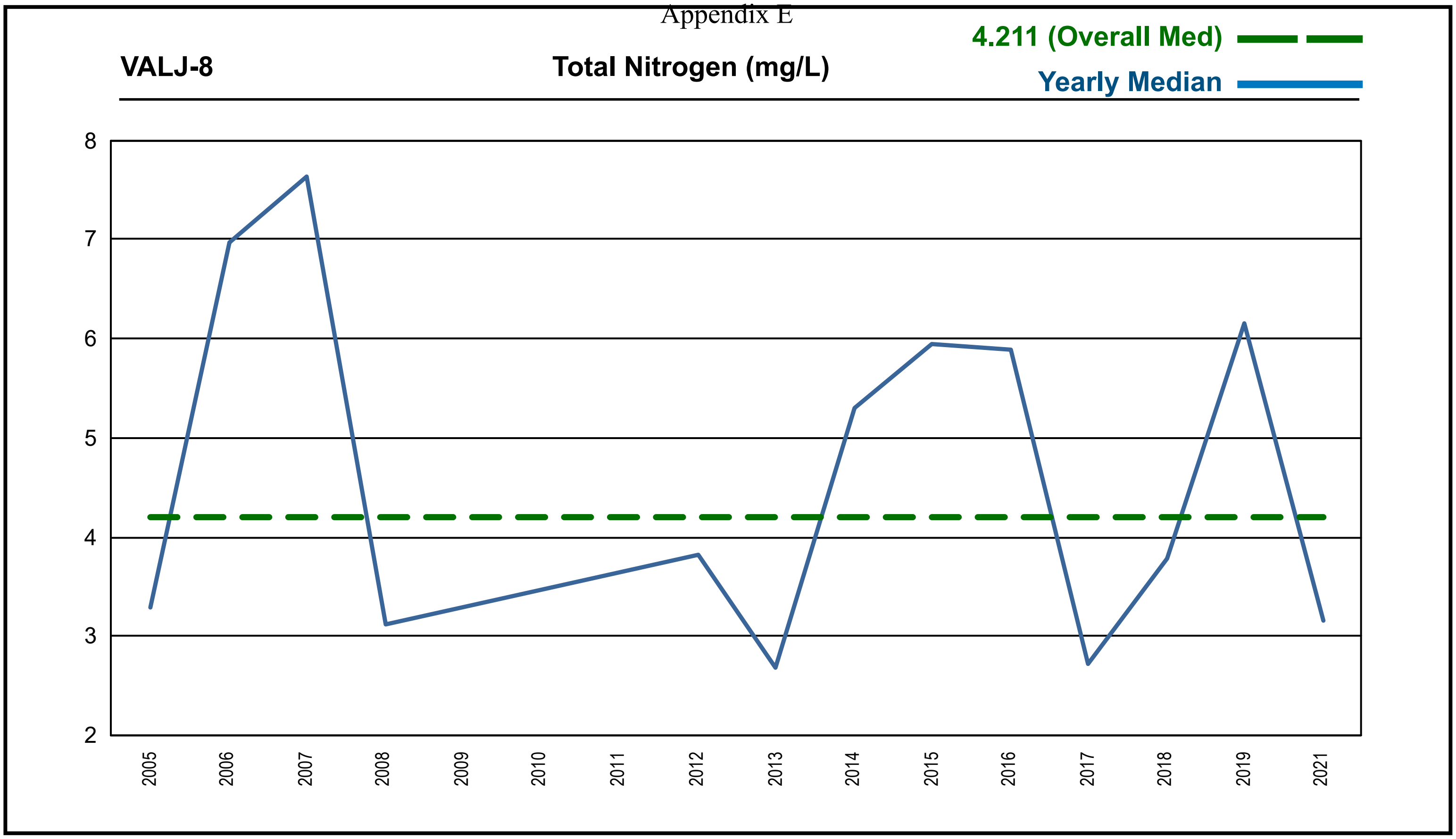

UPHM-3
Total Nitrogen (mg/L)
0.774 (Overall Med)
Yearly Median
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

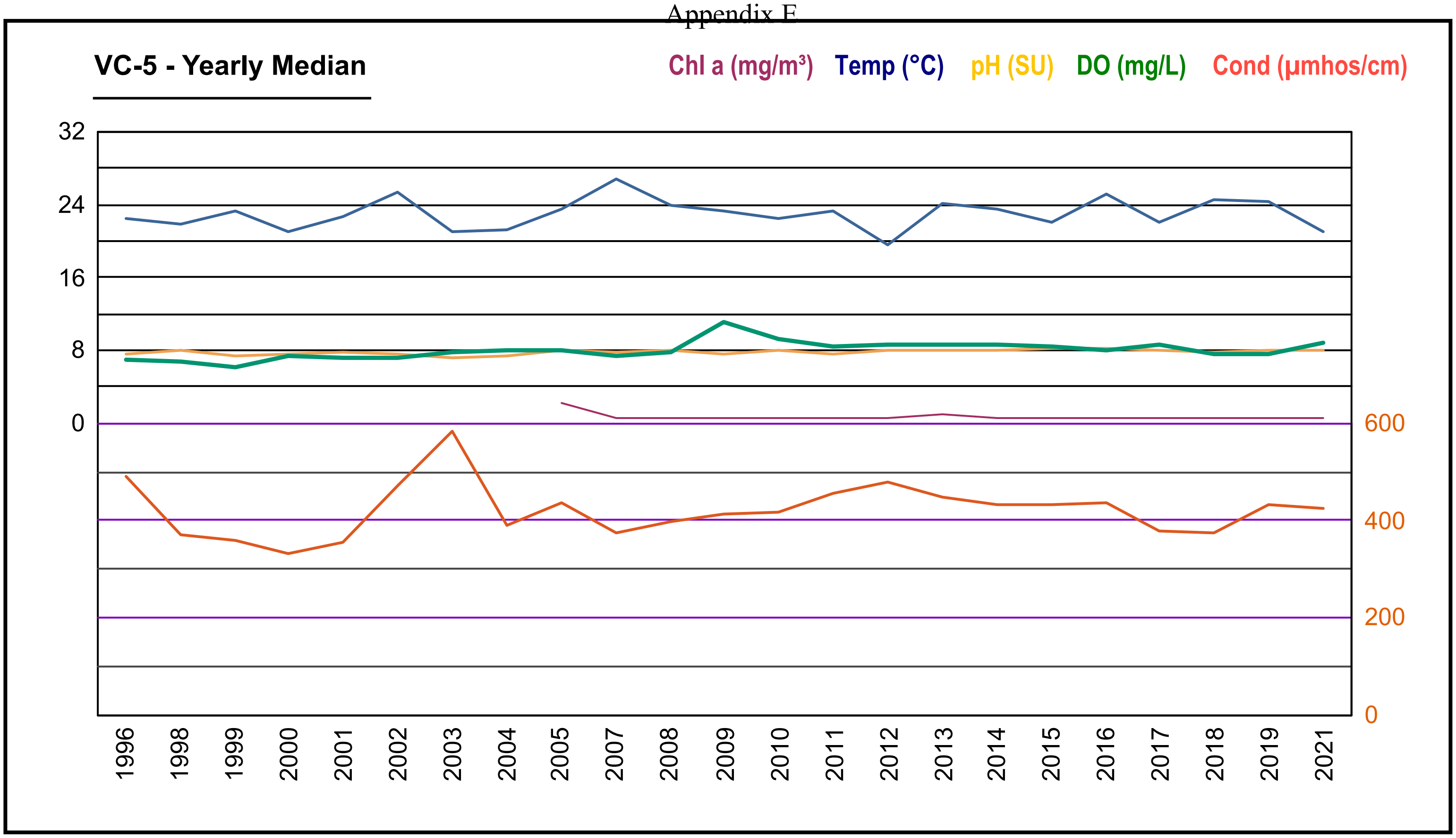

VALJ-8 - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
1200
800
400
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2021

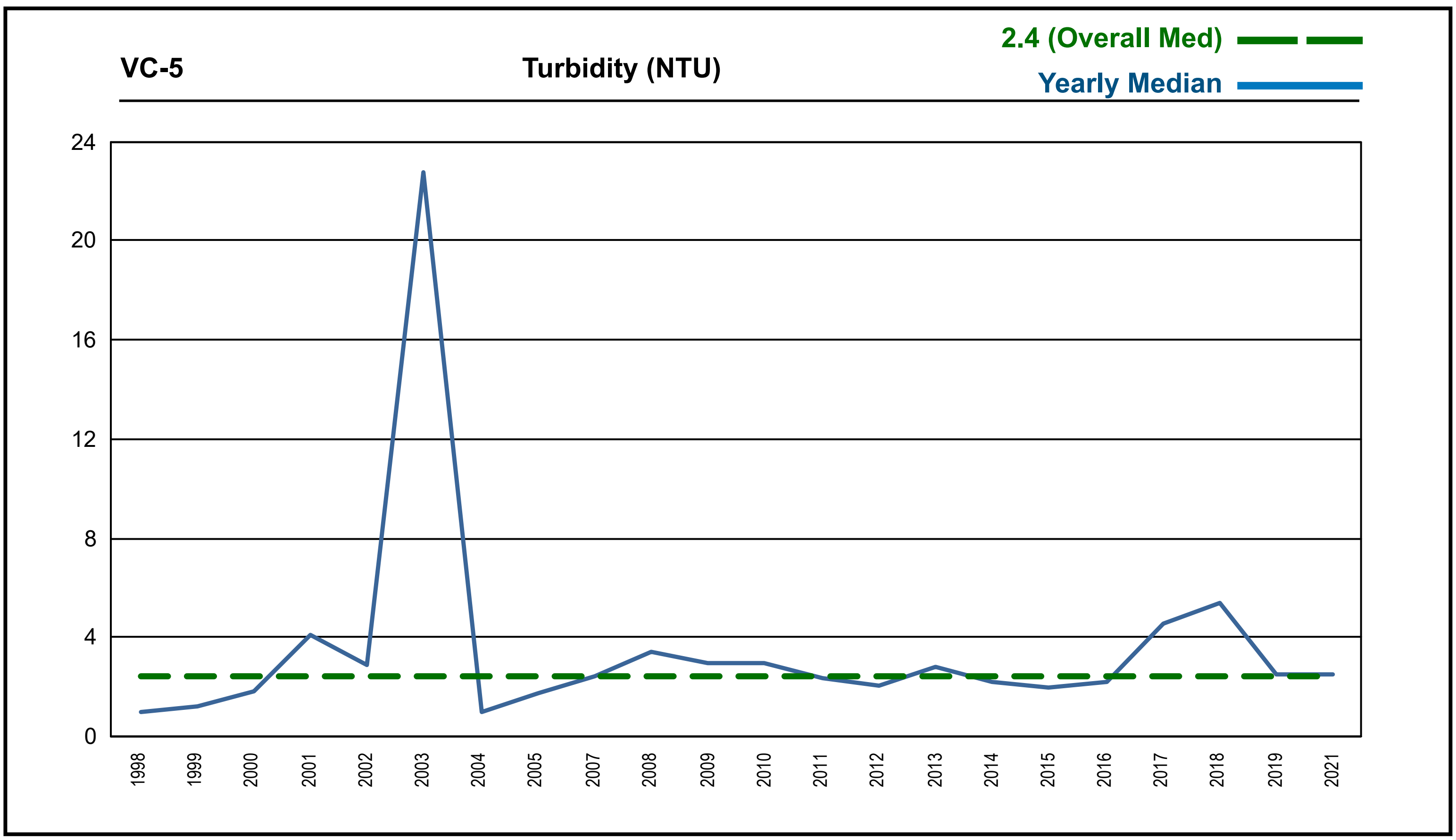

VALJ-8
Turbidity (NTU)
4.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2
0
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2021

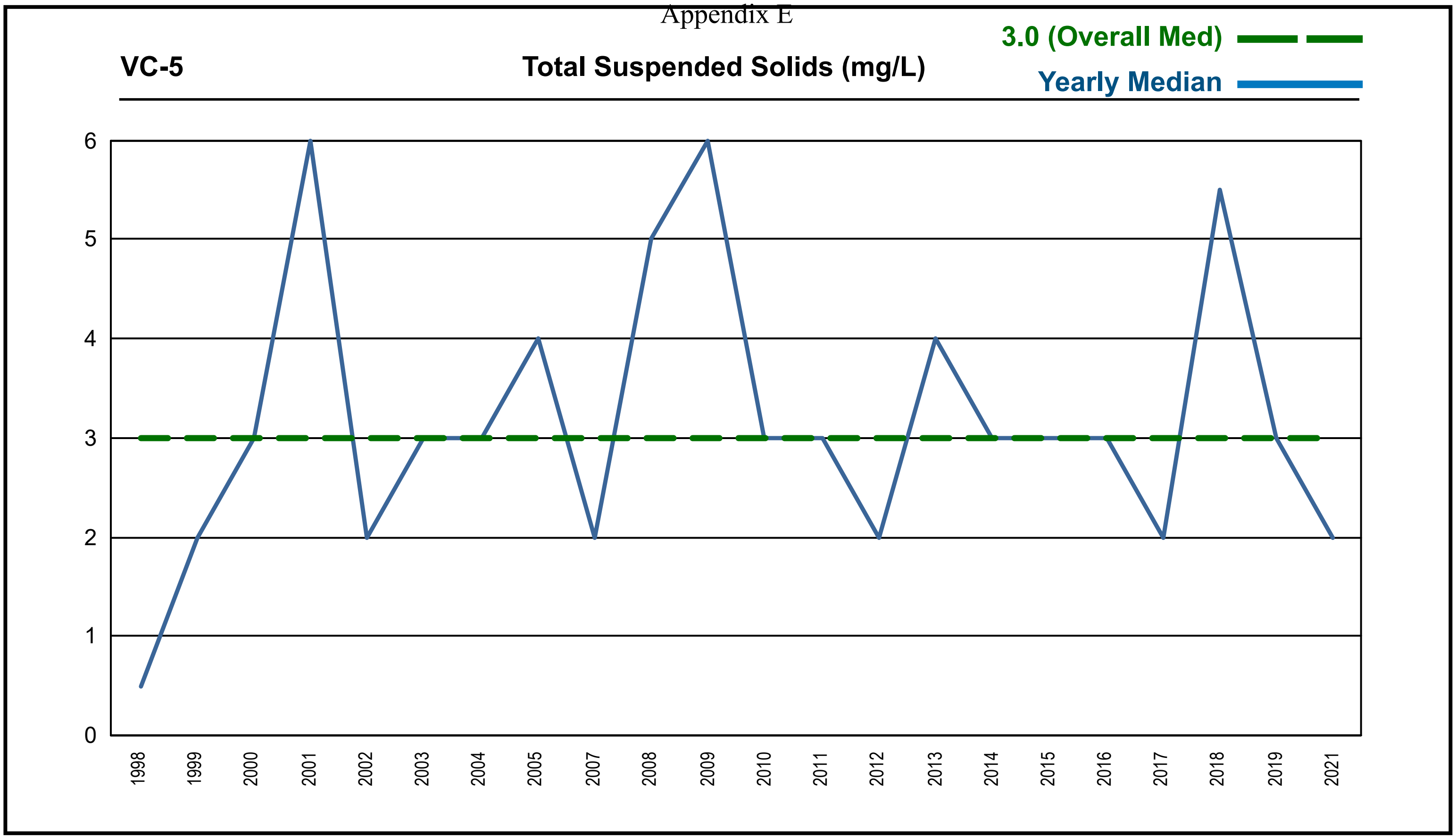

VALJ-8
Total Suspended Solids (mg/L)
4.0 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

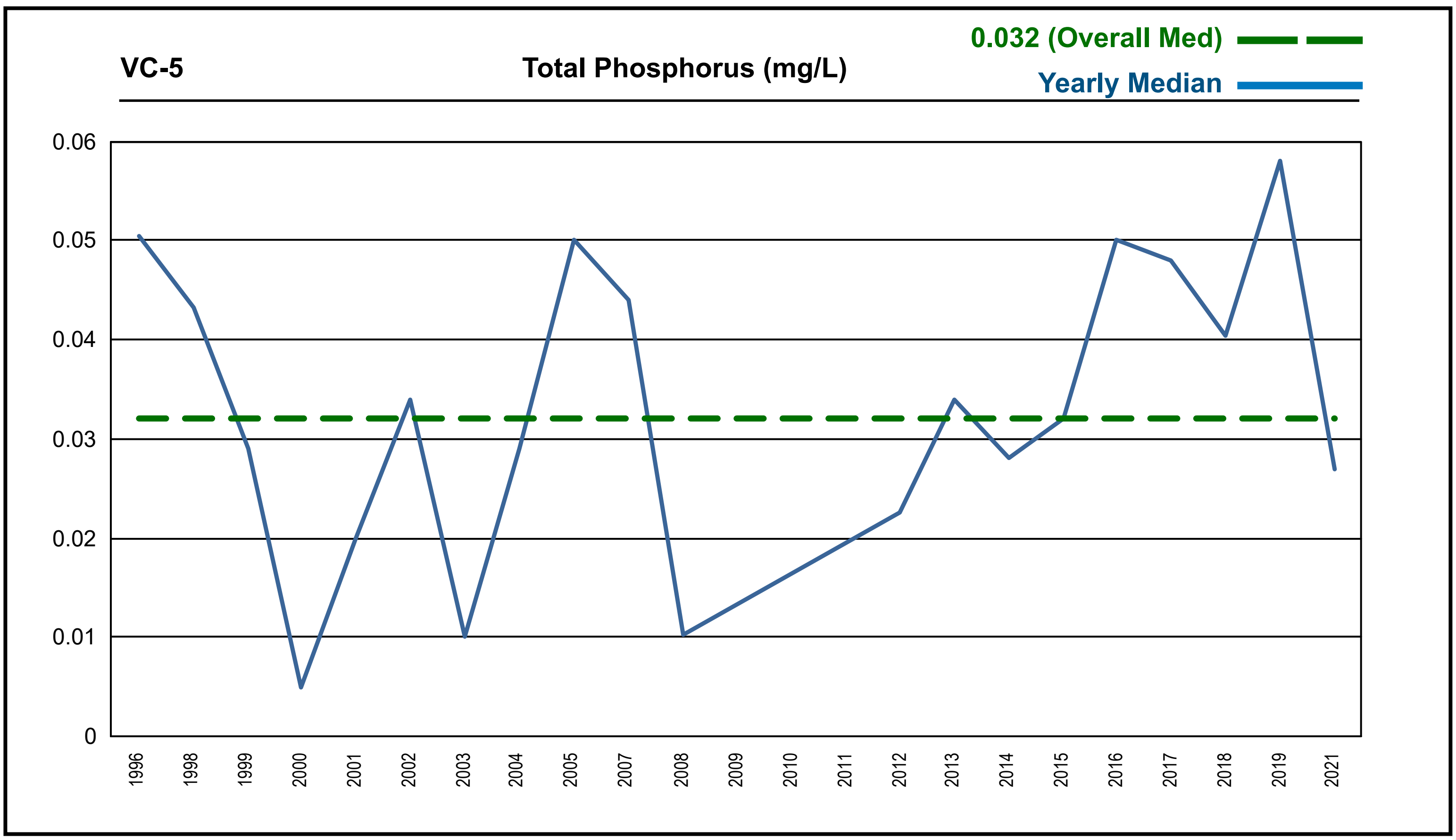

VALJ-8
Total Phosphorus (mg/L)
0.385 (Overall Med)
Yearly Median
0.8
0.7
0.6
0.5
0.4
0.3
0.2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

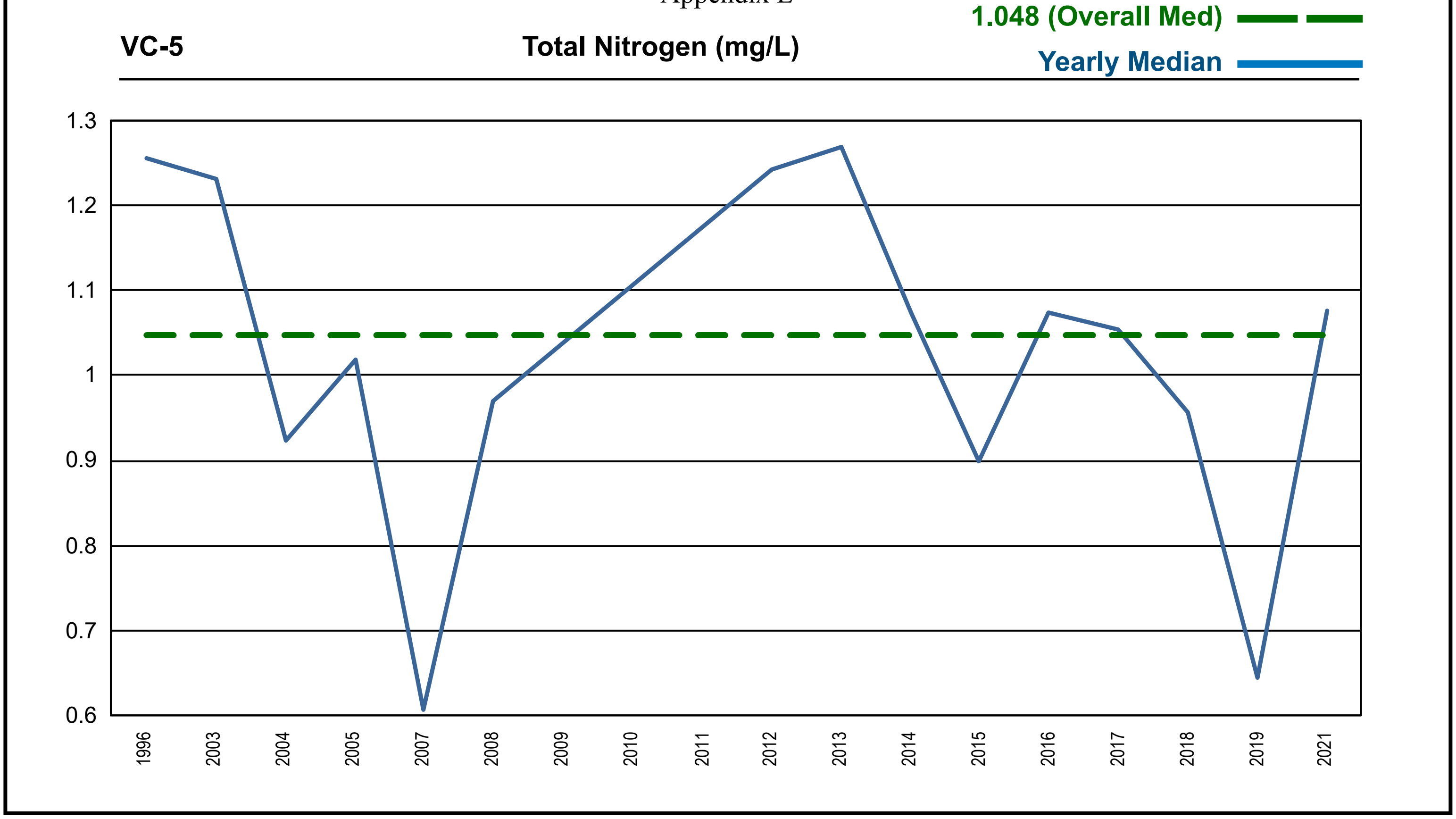

VALJ-8
Total Nitrogen (mg/L)
4.211 (Overall Med)
Yearly Median
8
7
6
5
4
3
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

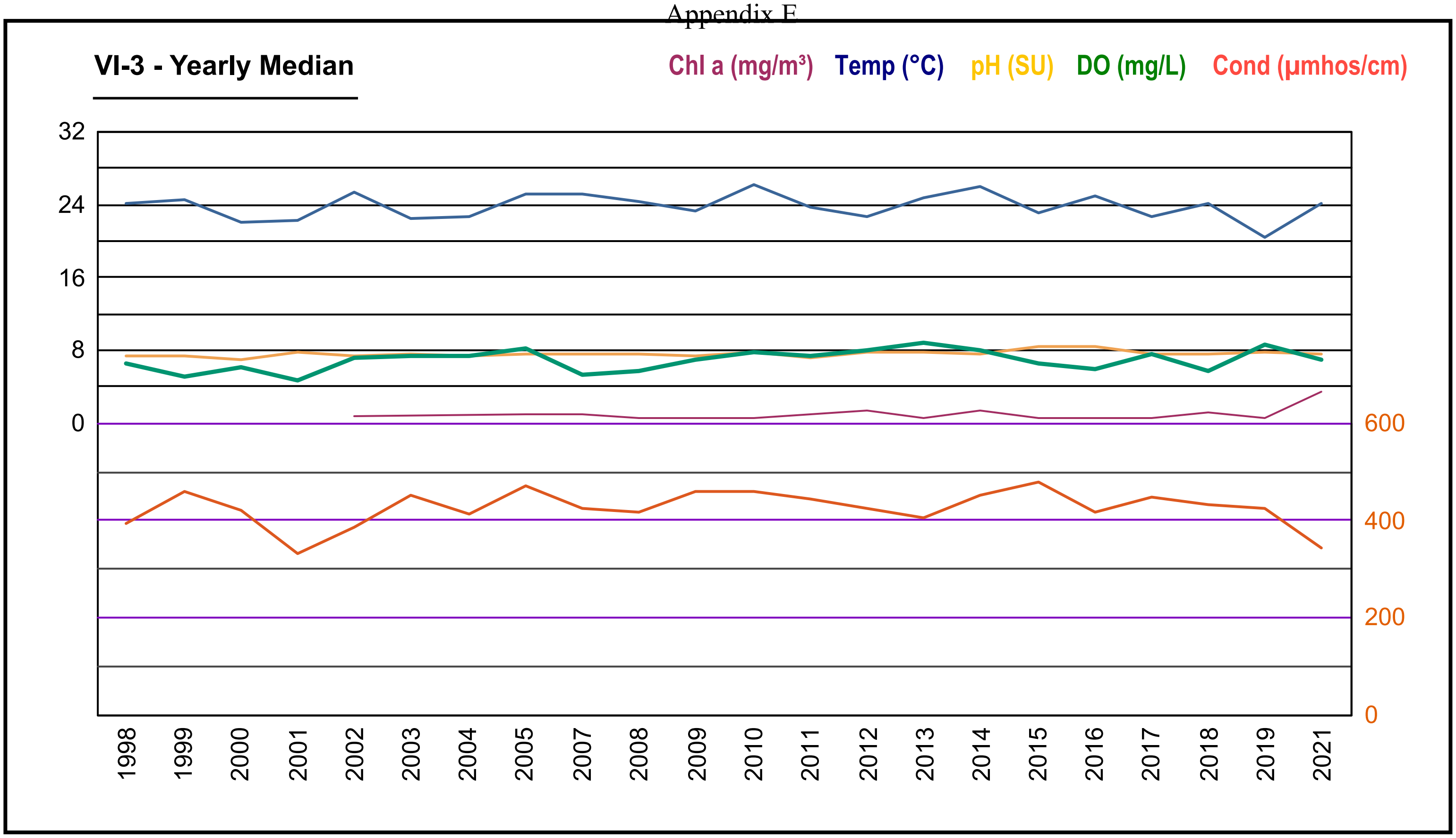

VC-5 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
600
400
200
0
1996
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

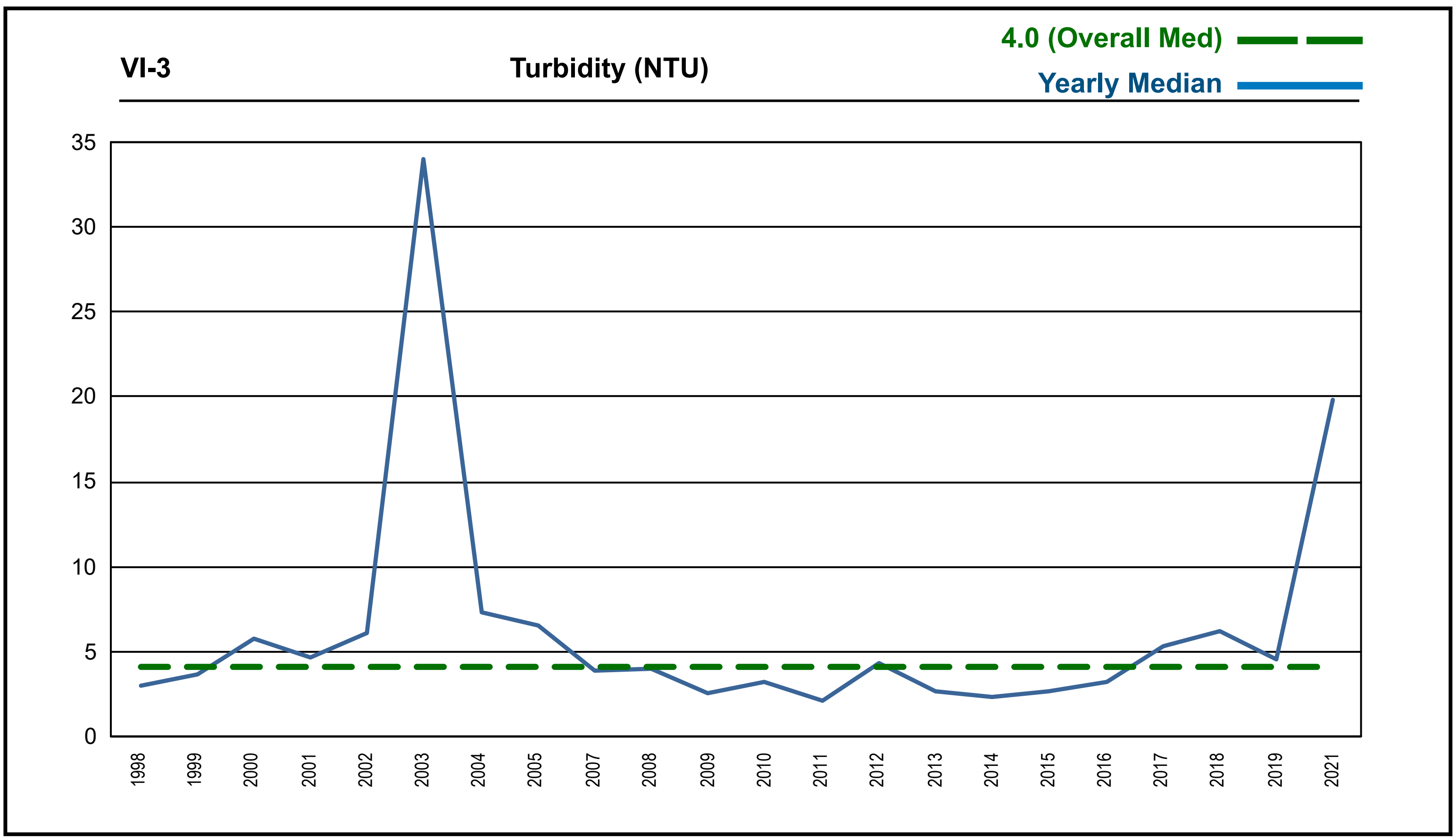

VC-5
Turbidity (NTU)
2.4 (Overall Med)
Yearly Median
24
20
16
12
8
4
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

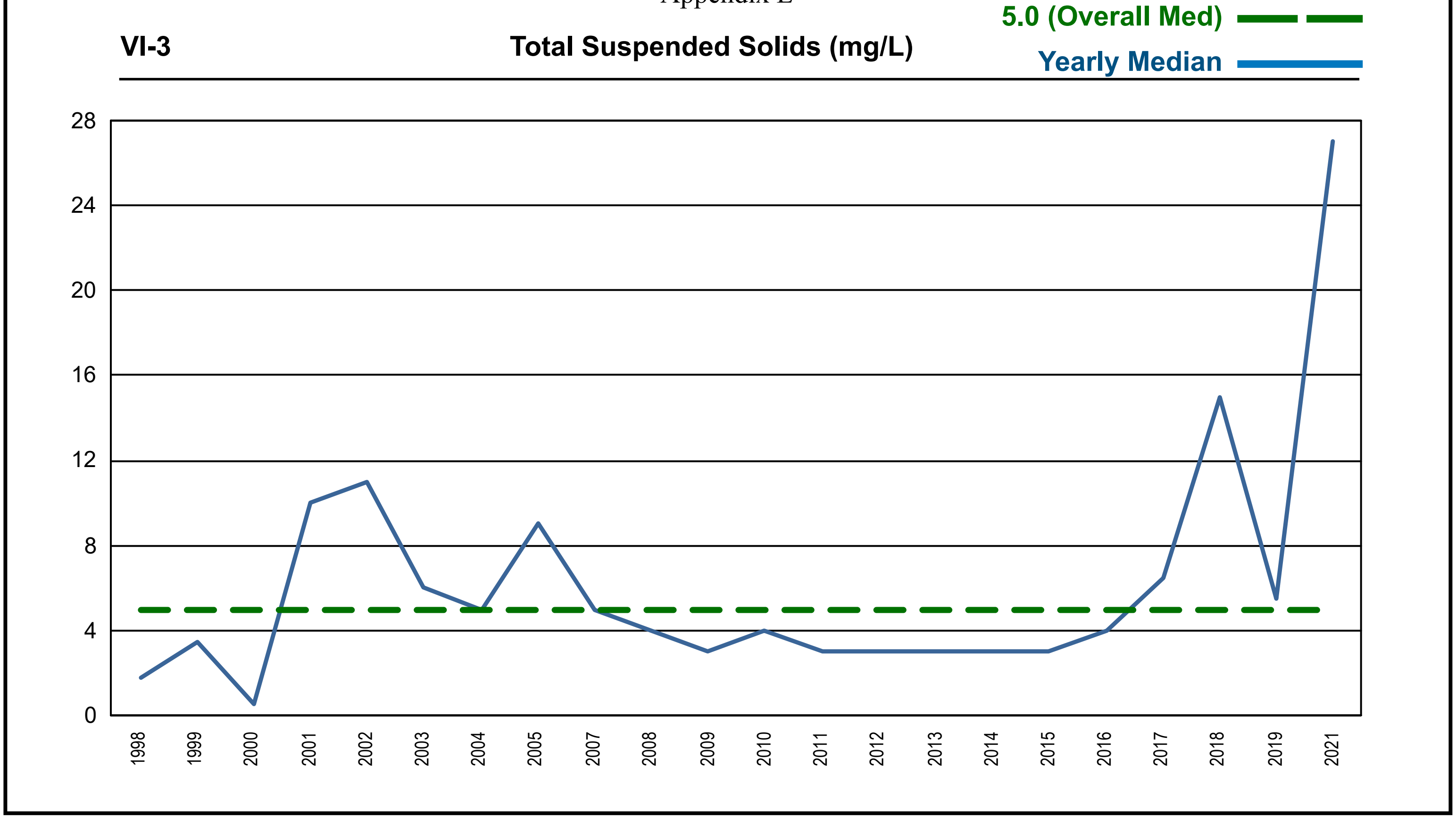

VC-5
Total Suspended Solids (mg/L)
3.0 (Overall Med)
Yearly Median
6
5
4
3
2
1
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


VC-5
Total Phosphorus (mg/L)
0.032 (Overall Med)
Yearly Median
0.06
0.05
0.04
0.03
0.02
0.01
0
1996
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

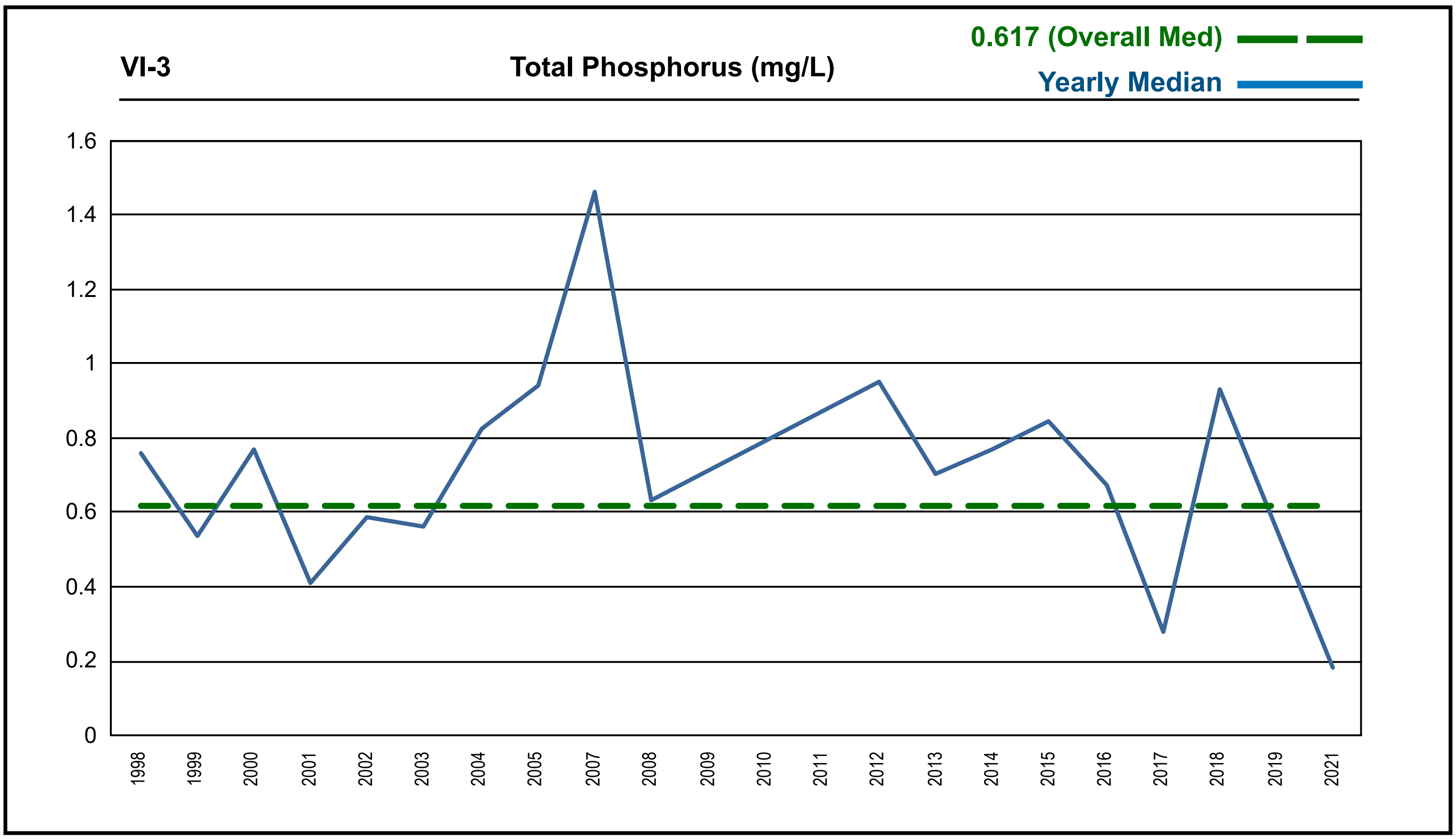

1.048 (Overall Med)
Yearly Median
VC-5
Total Nitrogen (mg/L)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
1996
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


VI-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
600
400
200
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

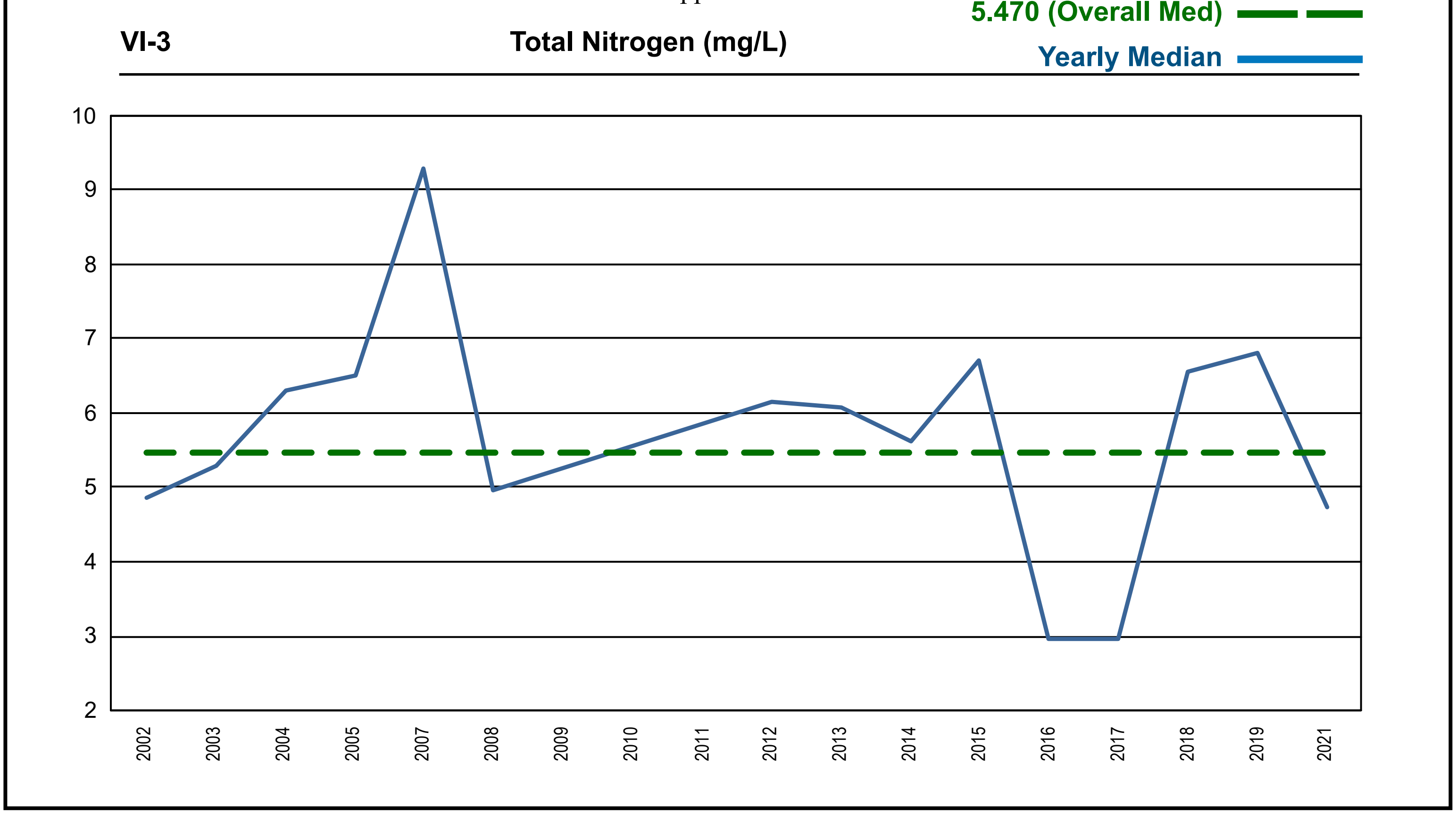

VI-3
Turbidity (NTU)
4.0 (Overall Med)
Yearly Median
35
30
25
20
15
10
5
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

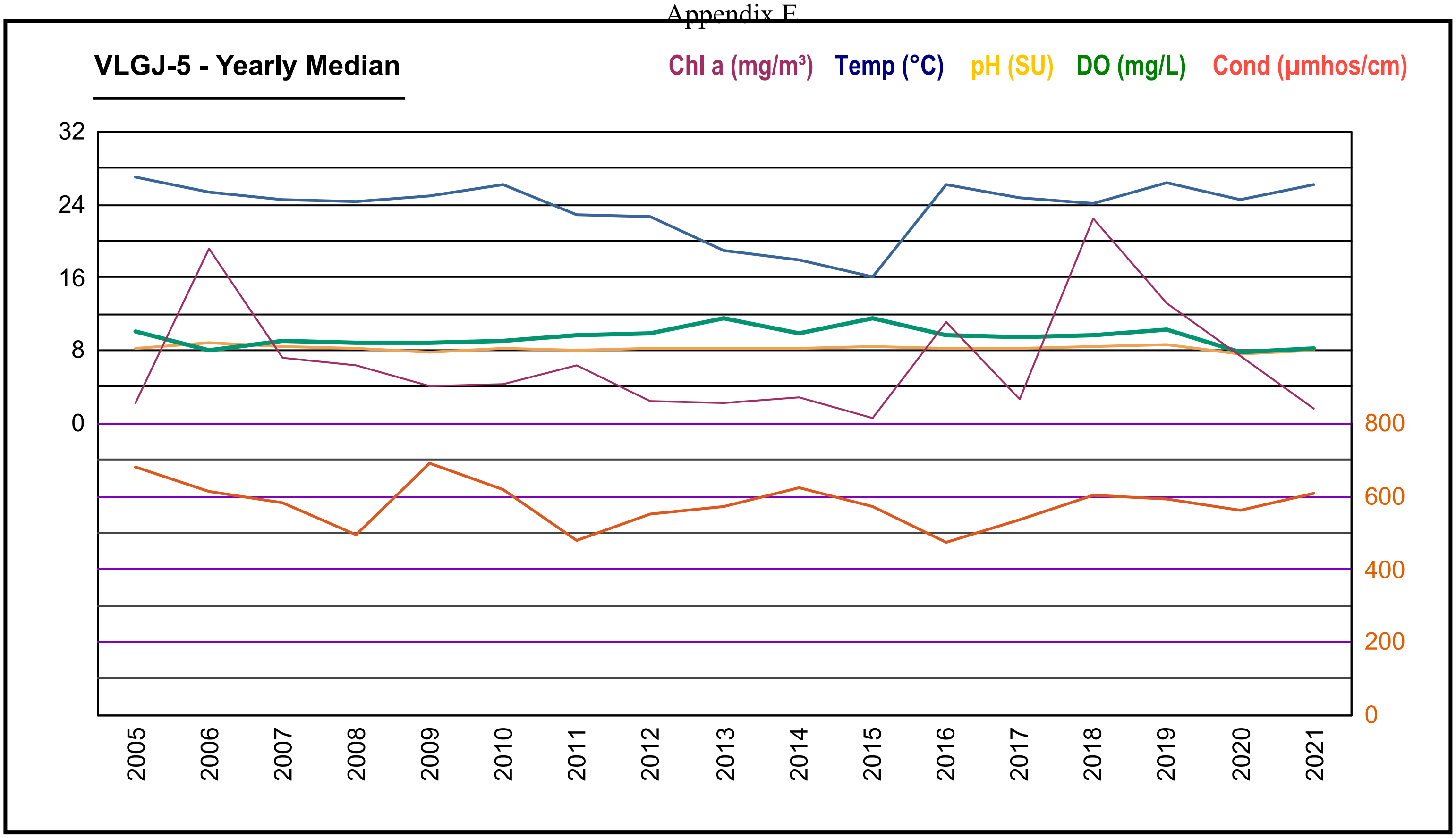


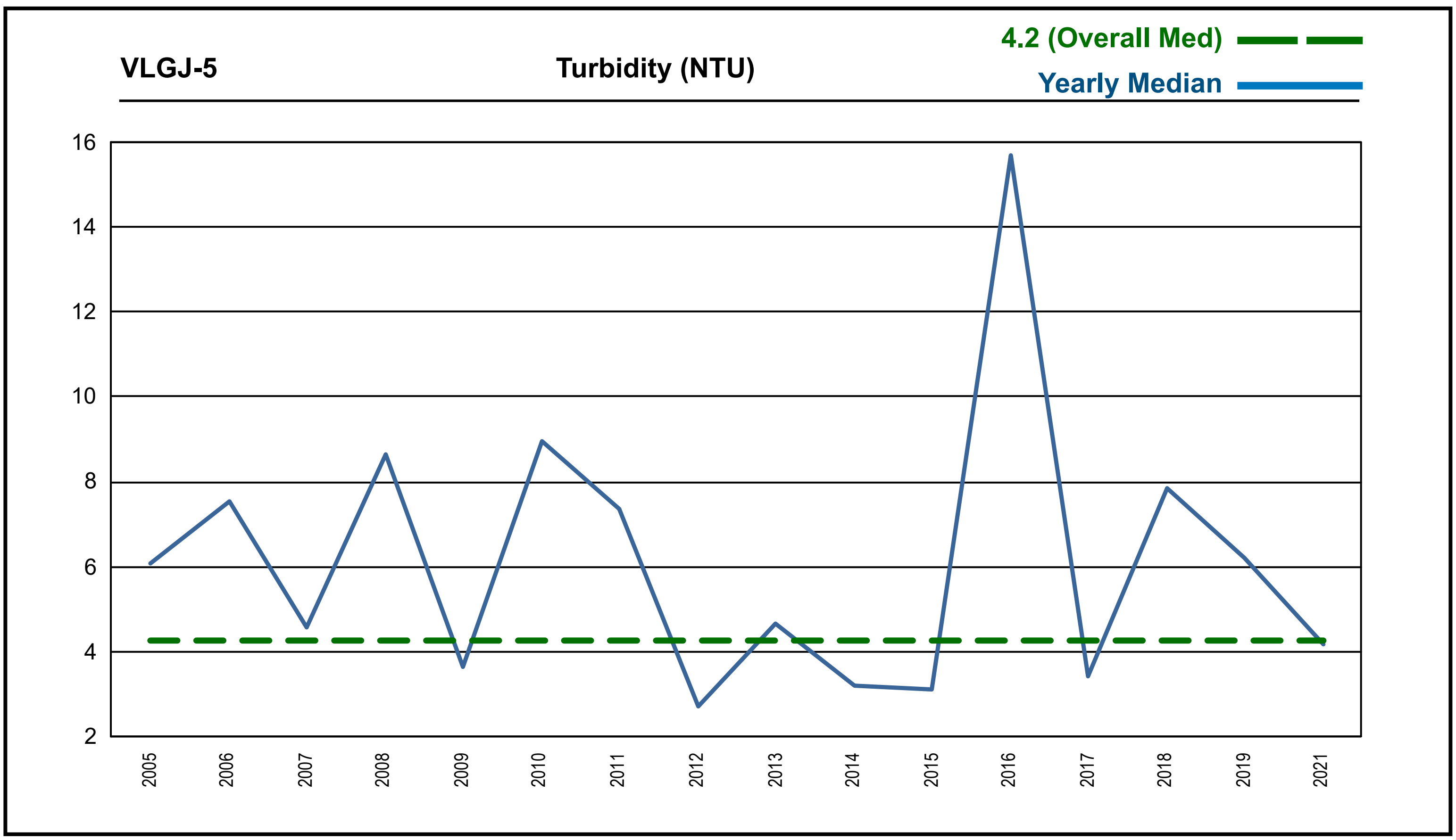
5.0 (Overall Med)
VI-3
Total Suspended Solids (mg/L)
Yearly Median
28
24
20
16
12
8
4
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

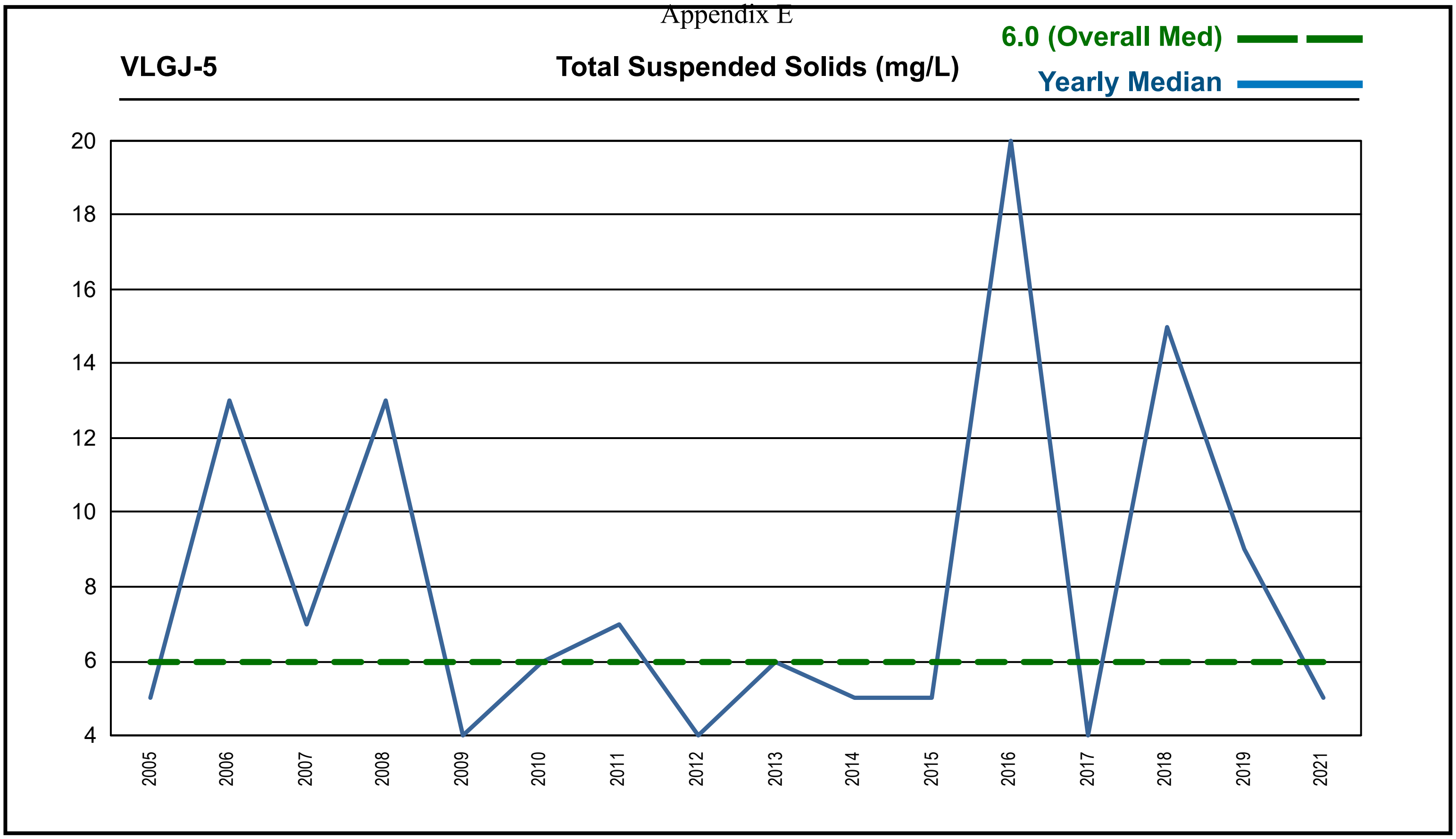


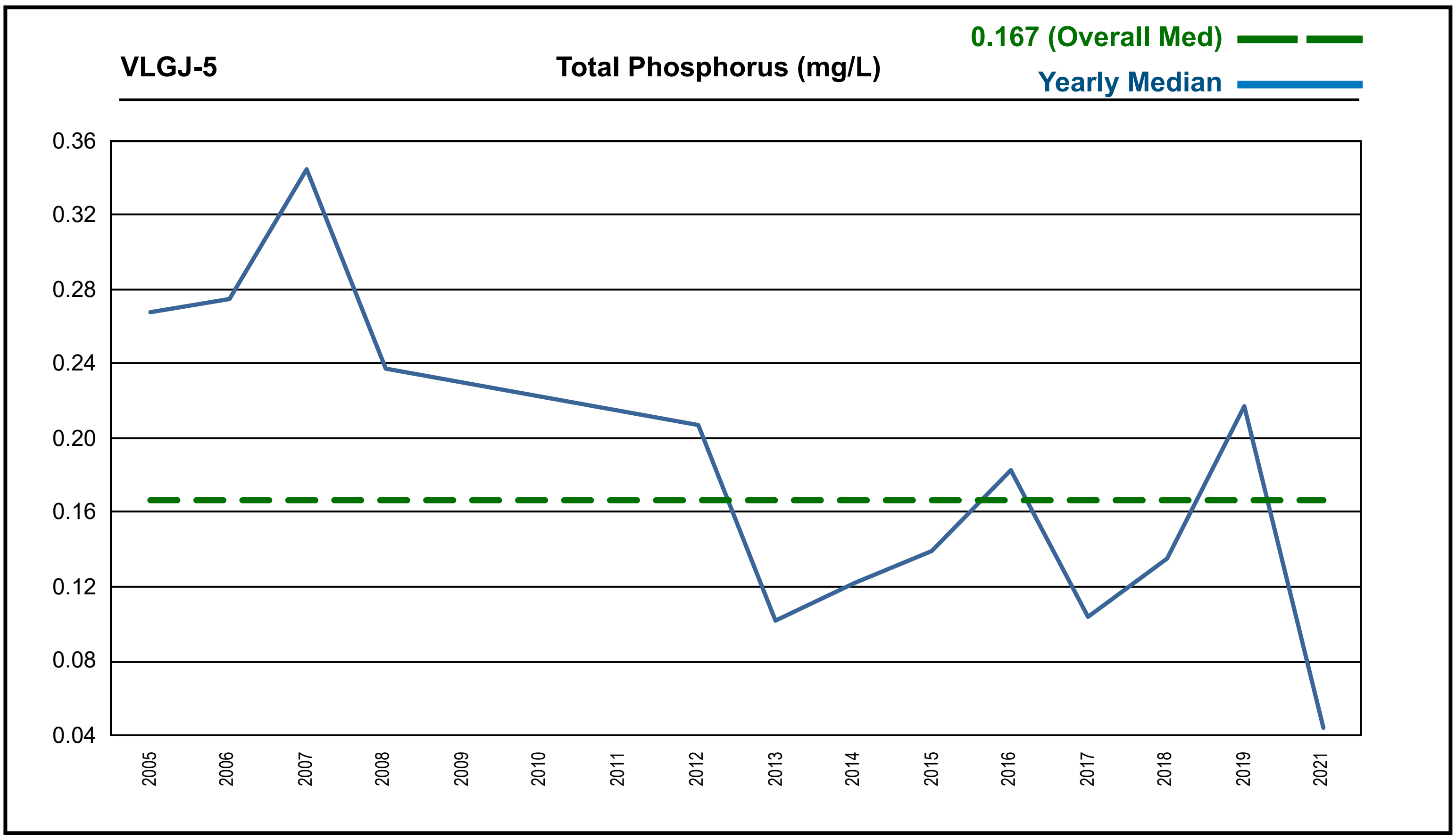
0.617 (Overall Med)
VI-3
Total Phosphorus (mg/L)
Yearly Median
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1998
1999
2000
2001
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

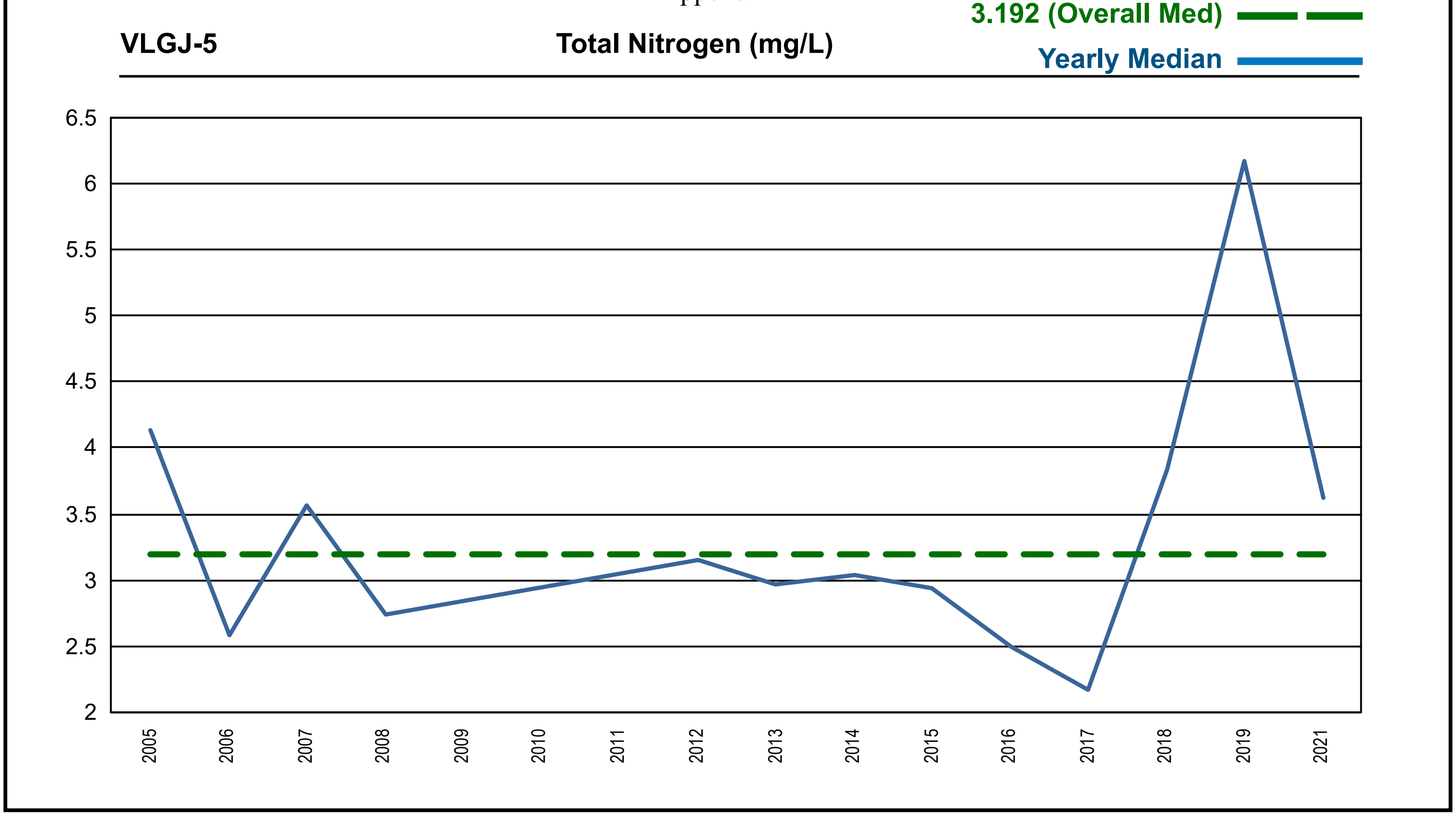

VI-3
Total Nitrogen (mg/L)
5.470 (Overall Med)
Yearly Median
10
9
8
7
6
5
4
3
2
2002
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

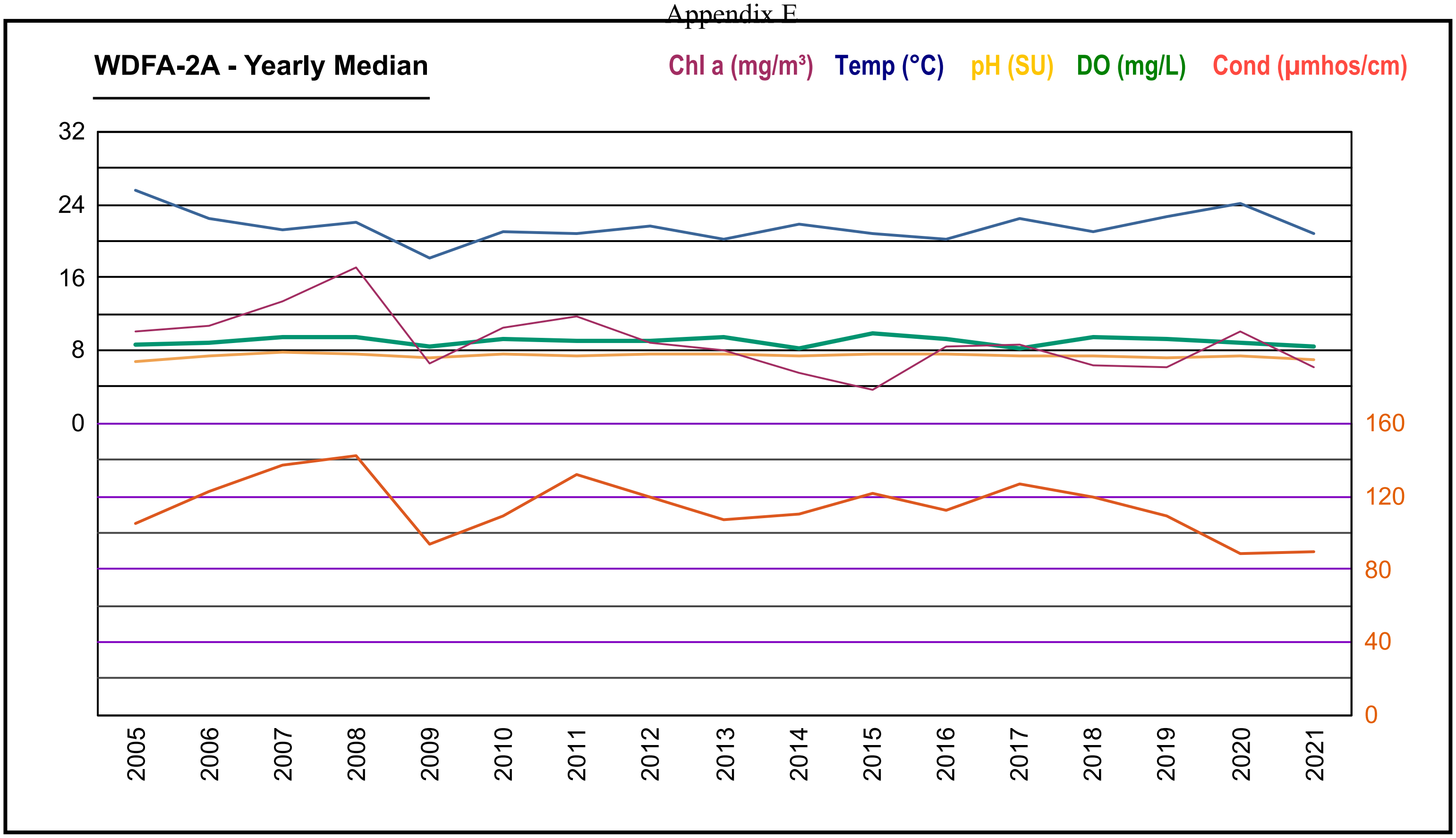

VLGJ-5 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
800
600
400
200
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

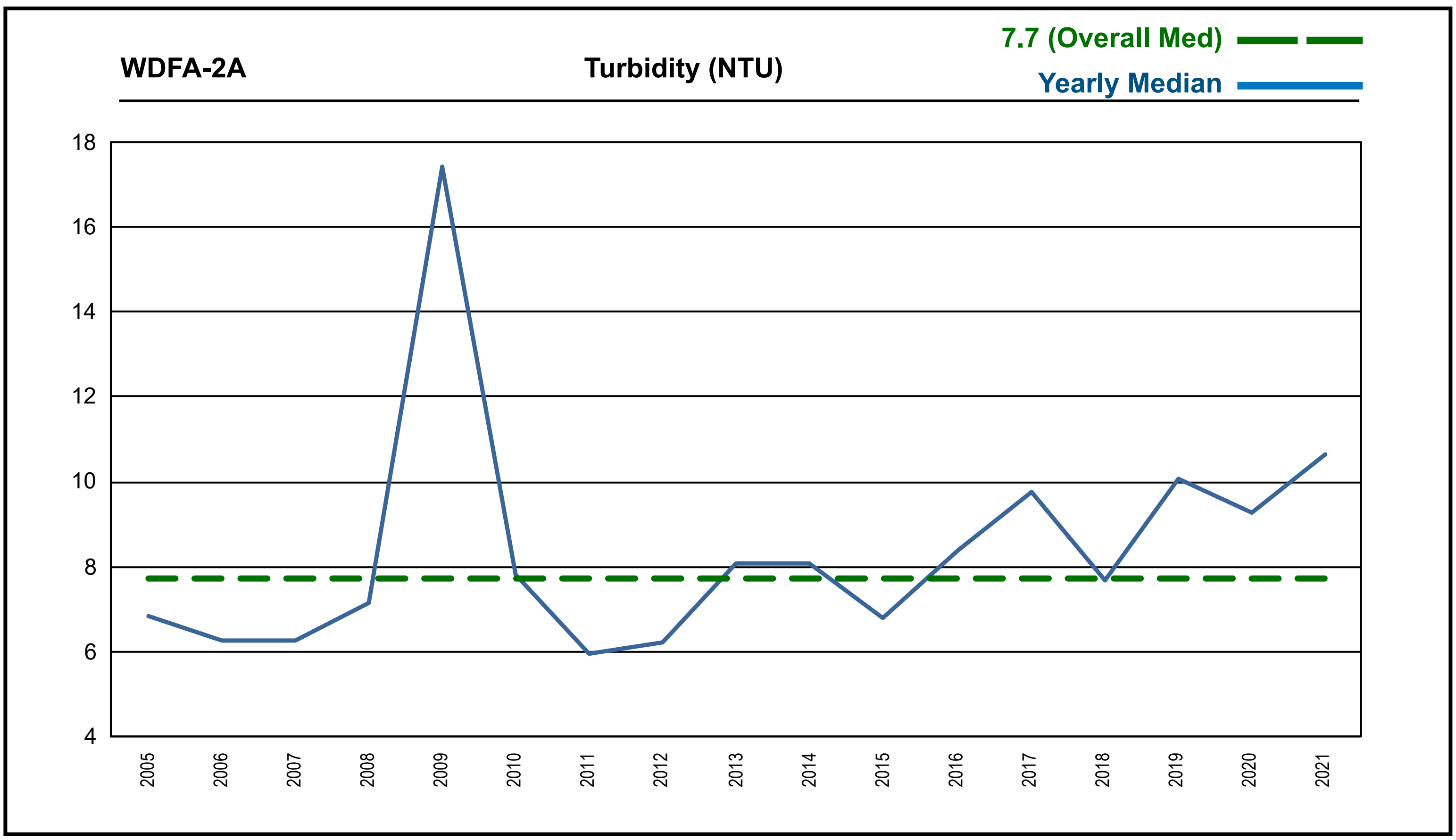

VLGJ-5
Turbidity (NTU)
4.2 (Overall Med)
Yearly Median
16
14
12
10
8
6
4
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

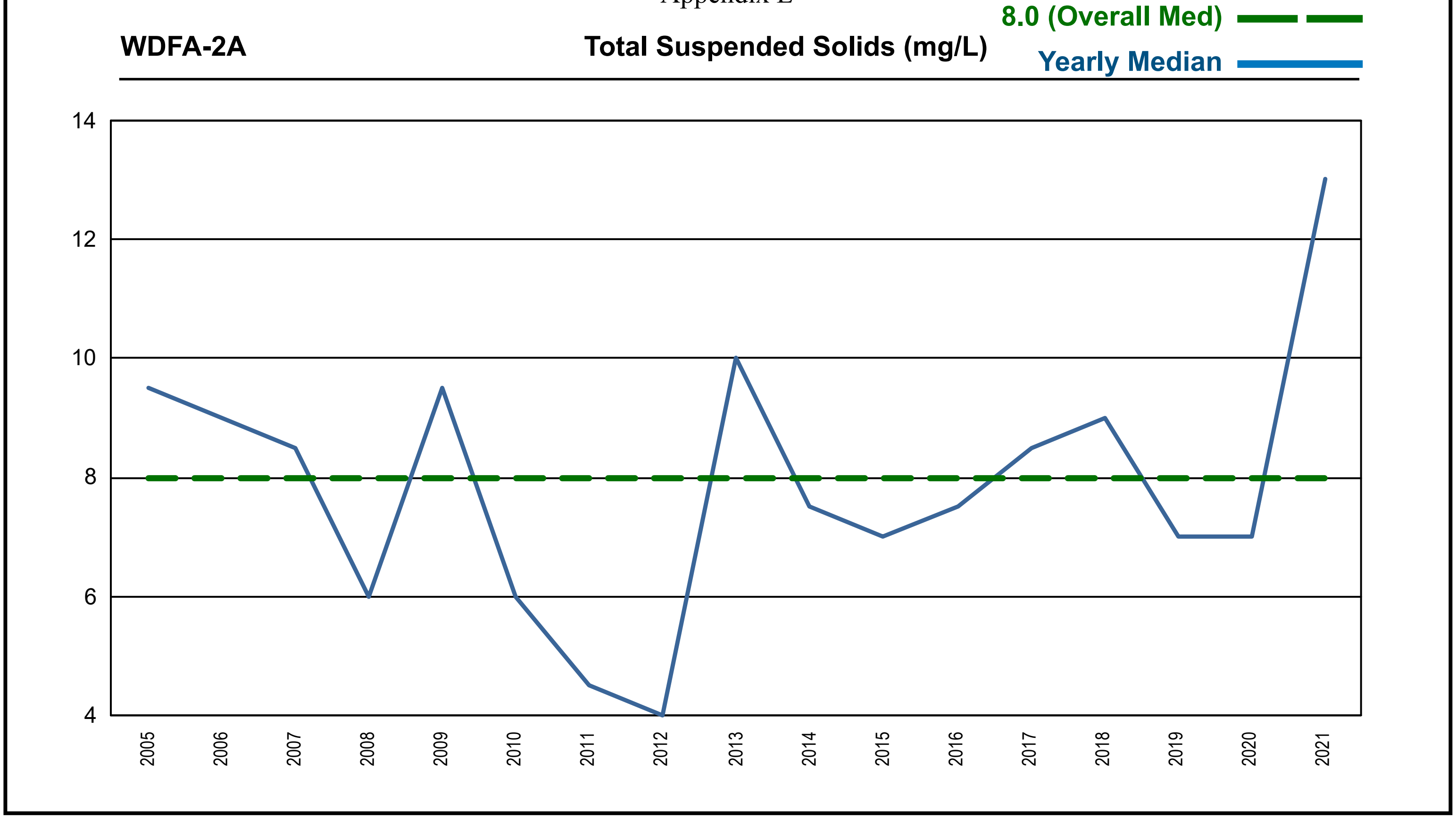

6.0 (Overall Med)
Yearly Median
VLGJ-5
Total Suspended Solids (mg/L)
20
18
16
14
12
10
8
6
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

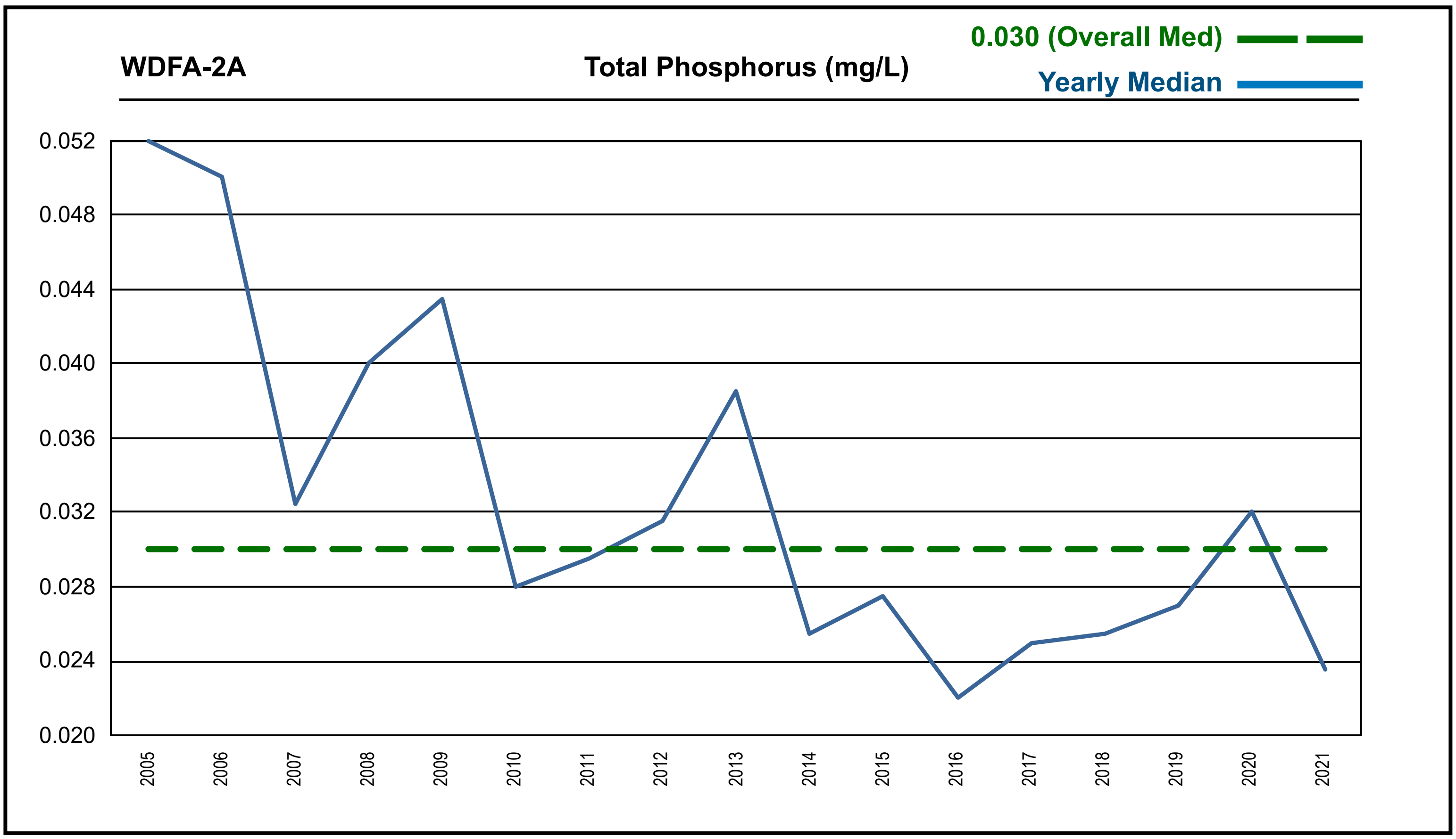

0.167 (Overall Med)
Yearly Median
VLGJ-5
Total Phosphorus (mg/L)
0.36
0.32
0.28
0.24
0.20
0.16
0.12
0.08
0.04
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021

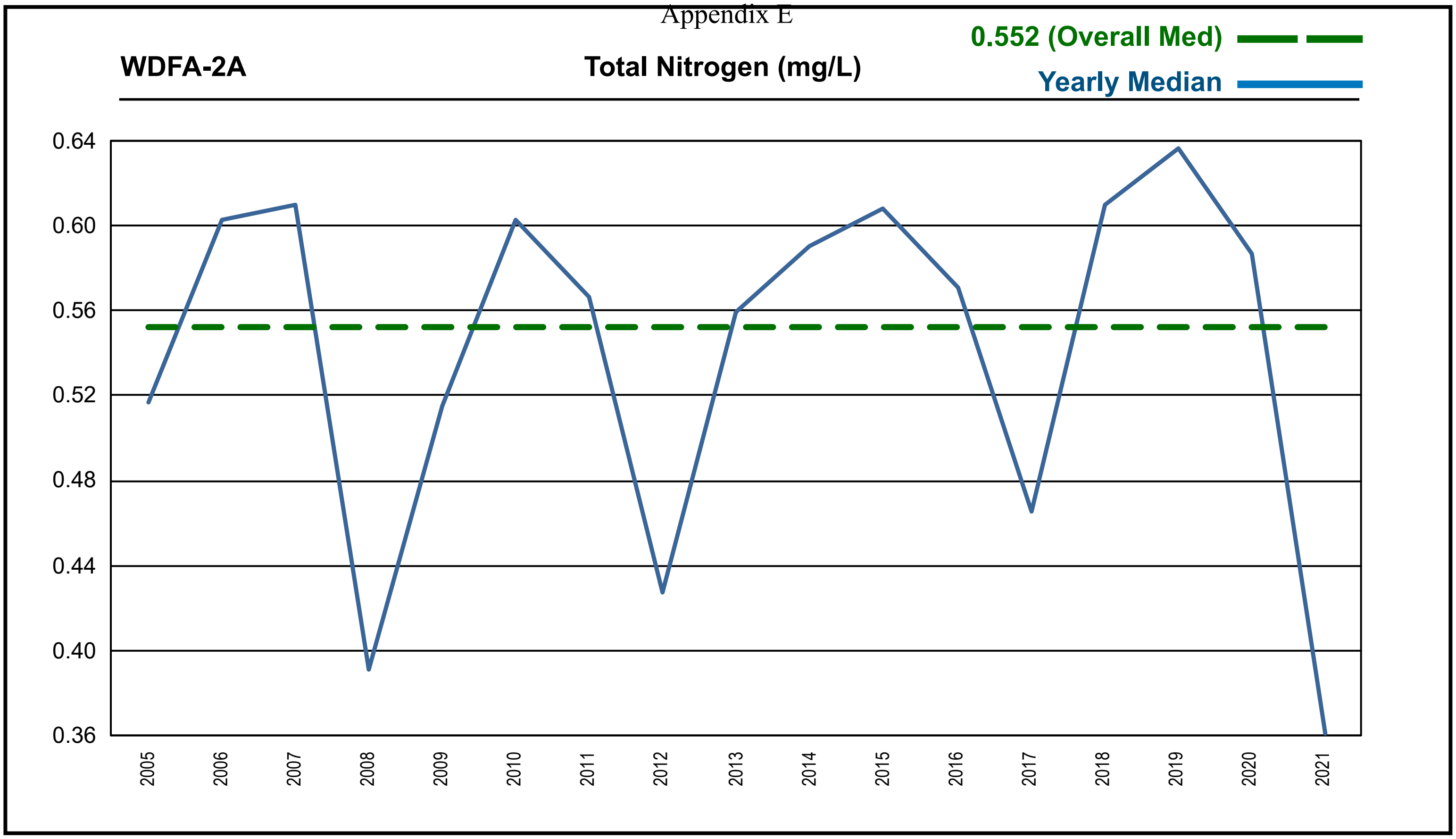

VLGJ-5
Total Nitrogen (mg/L)
3.192 (Overall Med)
Yearly Median
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2021


WDFA-2A - Yearly Median
Chl a (mg/m³) Temp (°C) pH (SU) DO (mg/L) Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

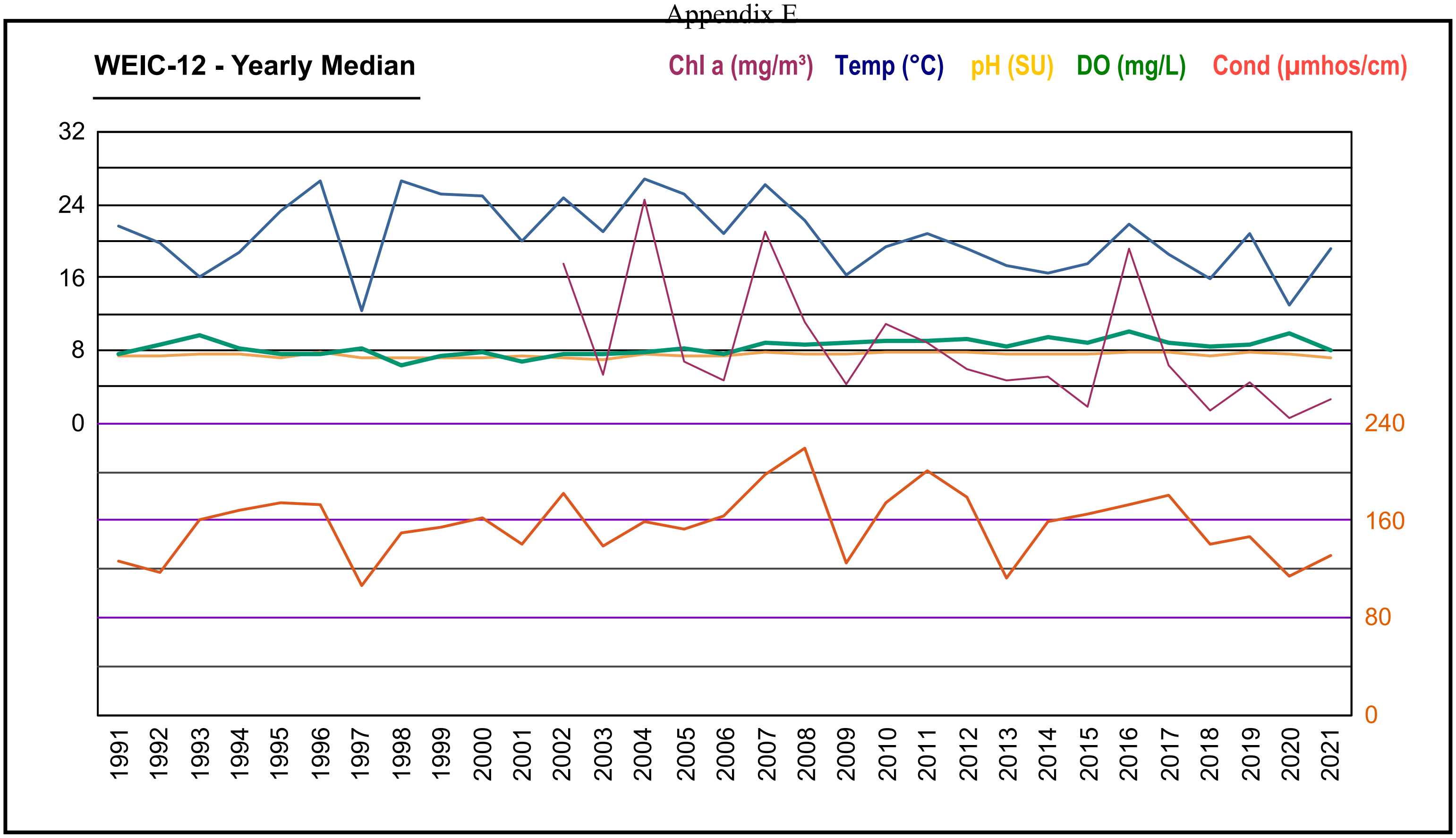

WDFA-2A
Turbidity (NTU)
7.7 (Overall Med)
Yearly Median
18
16
14
12
10
8
6
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

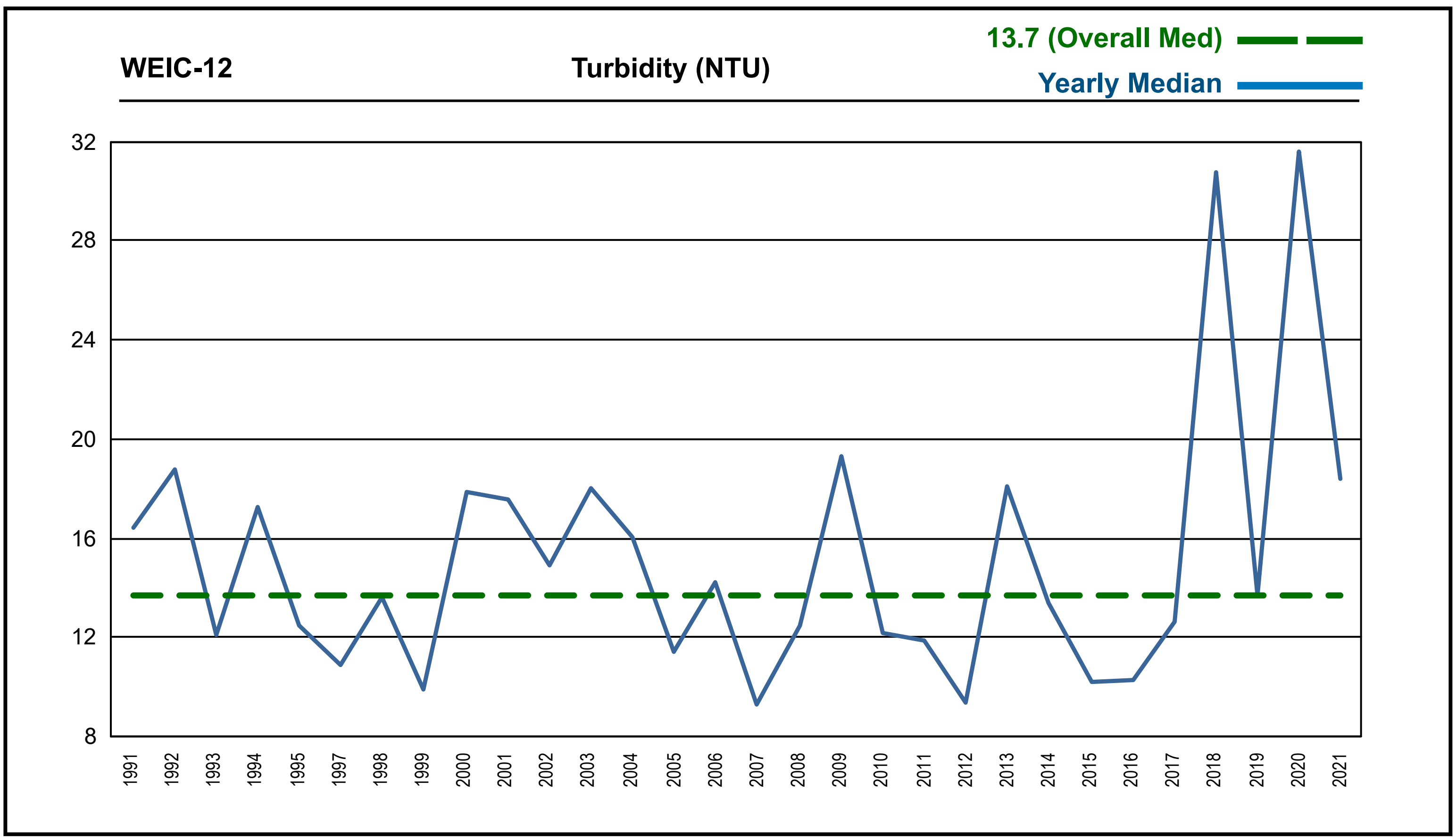

8.0 (Overall Med)
Yearly Median
WDFA-2A
Total Suspended Solids (mg/L)
14
12
10
8
6
4
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

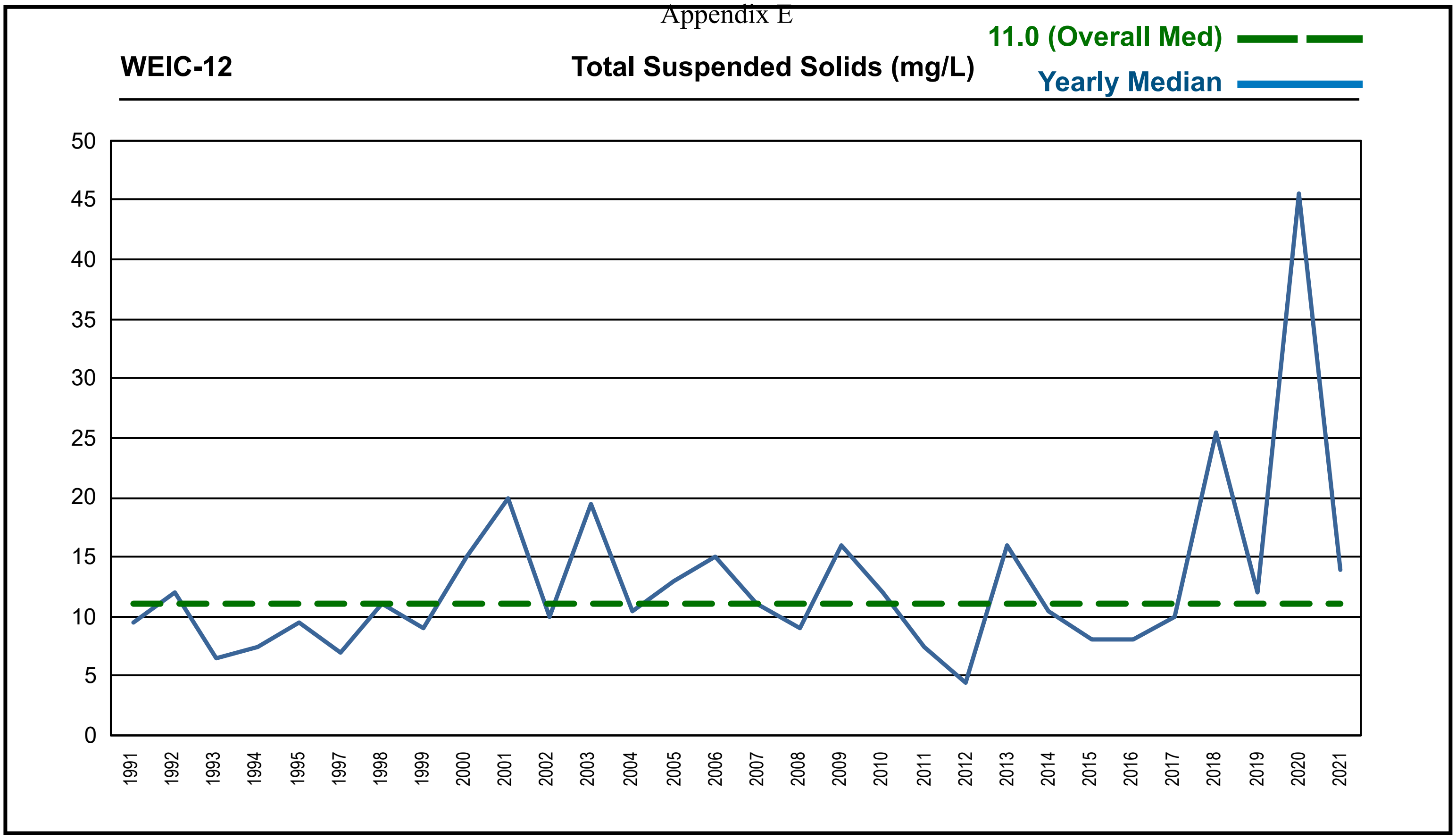

0.030 (Overall Med)
Yearly Median
WDFA-2A
Total Phosphorus (mg/L)
0.052
0.048
0.044
0.040
0.036
0.032
0.028
0.024
0.020
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

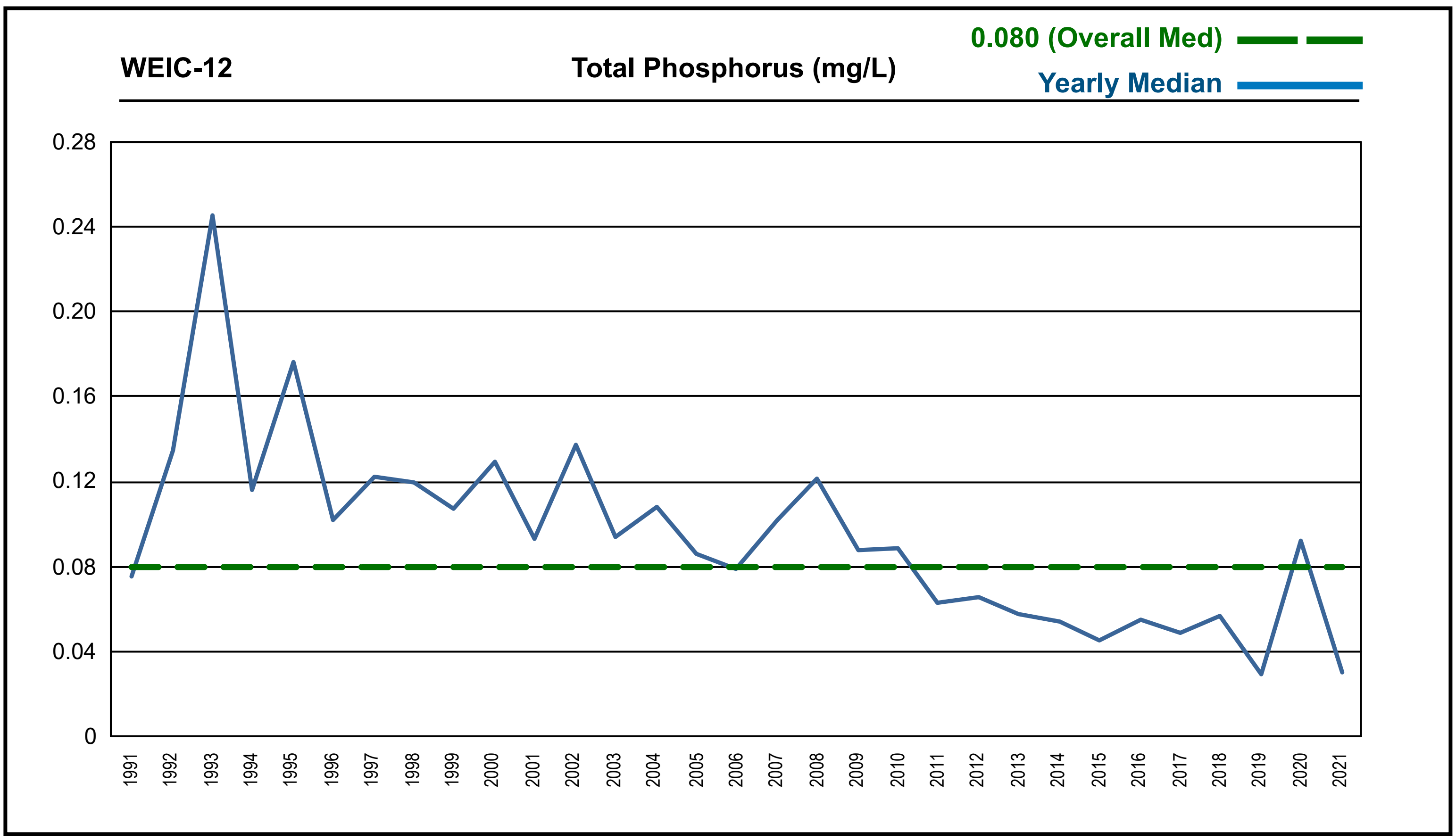


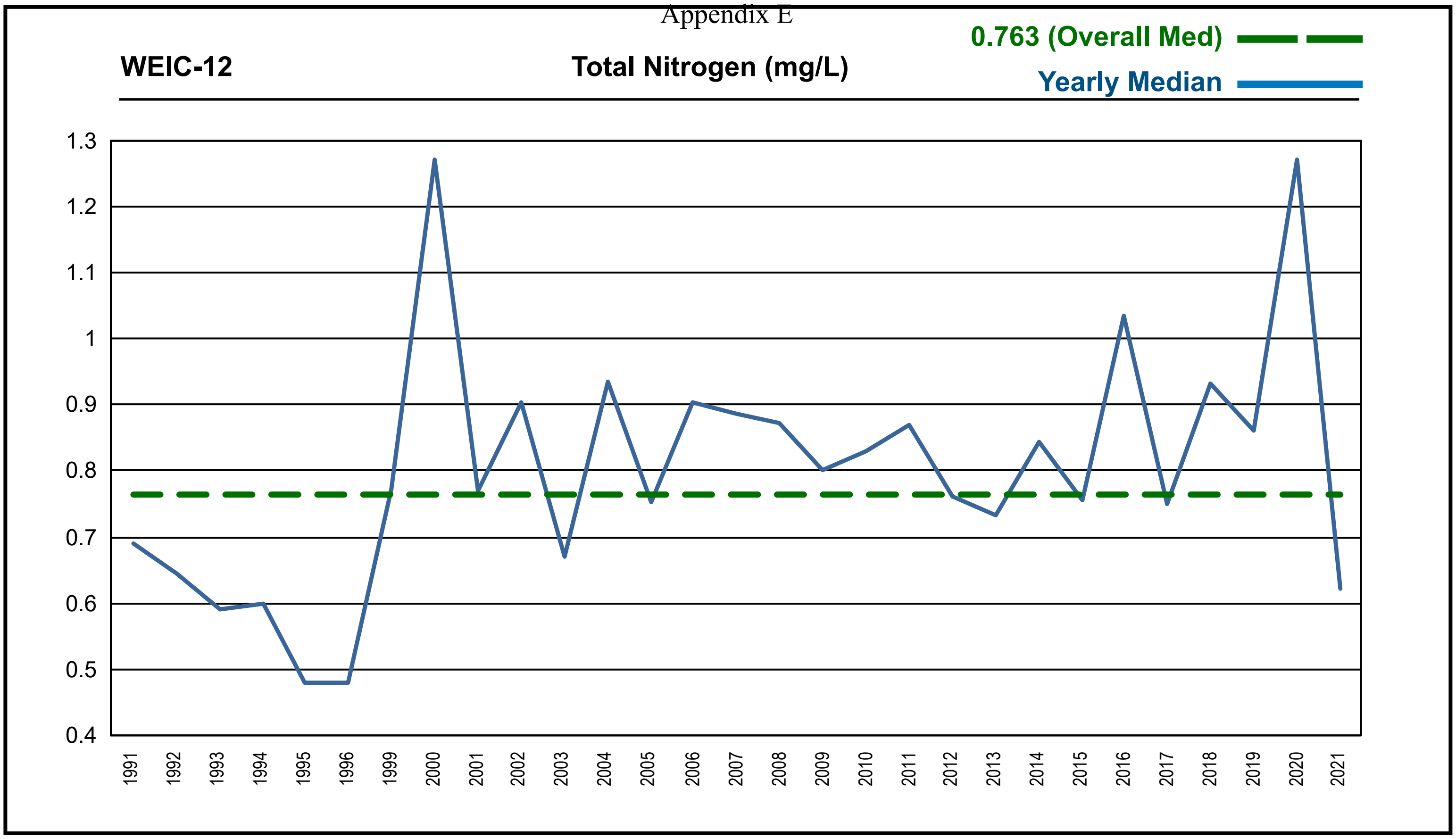
0.552 (Overall Med)
Yearly Median
WDFA-2A
Total Nitrogen (mg/L)
0.64
0.60
0.56
0.52
0.48
0.44
0.40
0.36
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

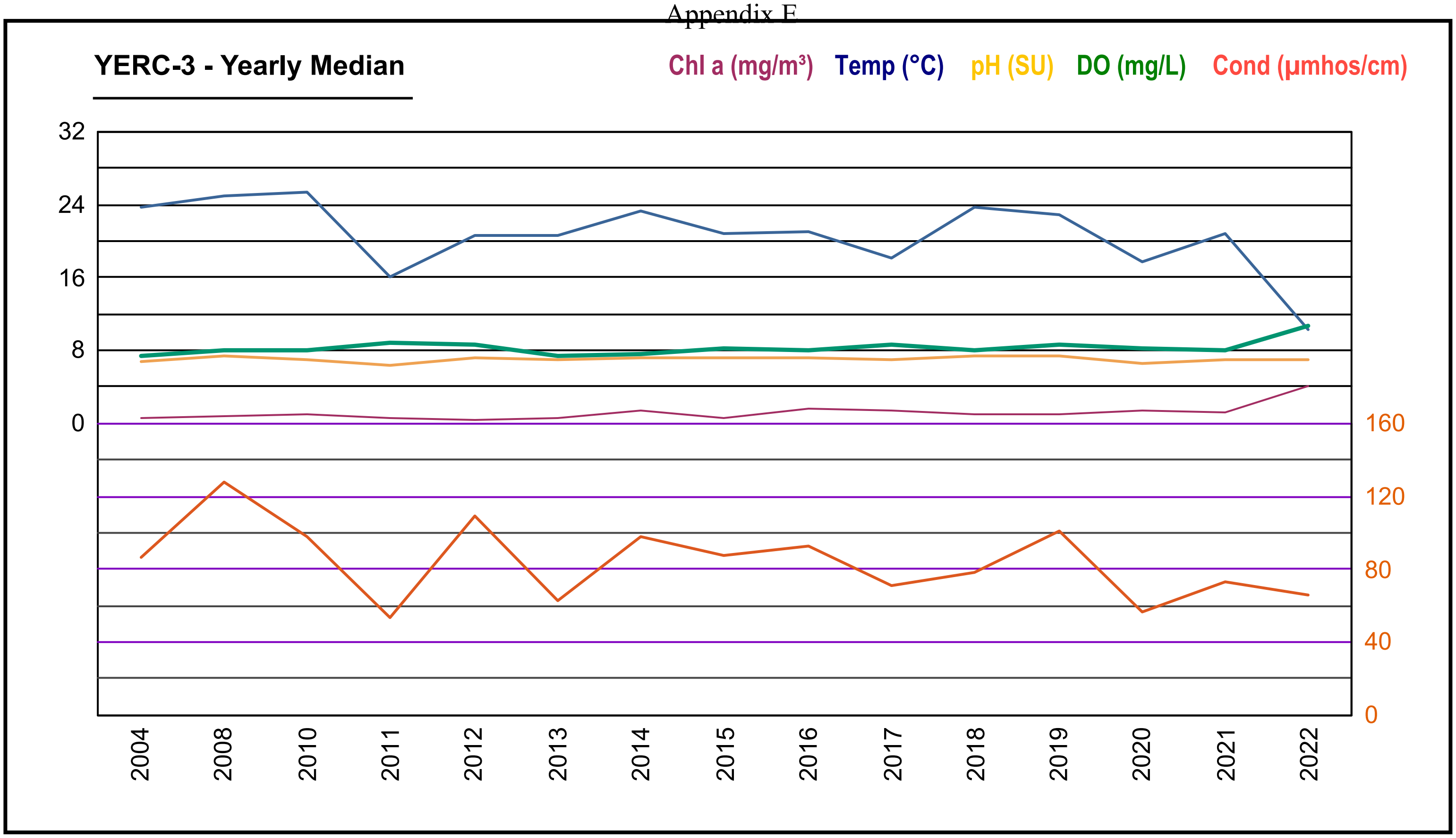

WEIC-12 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
240
160
80
0
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

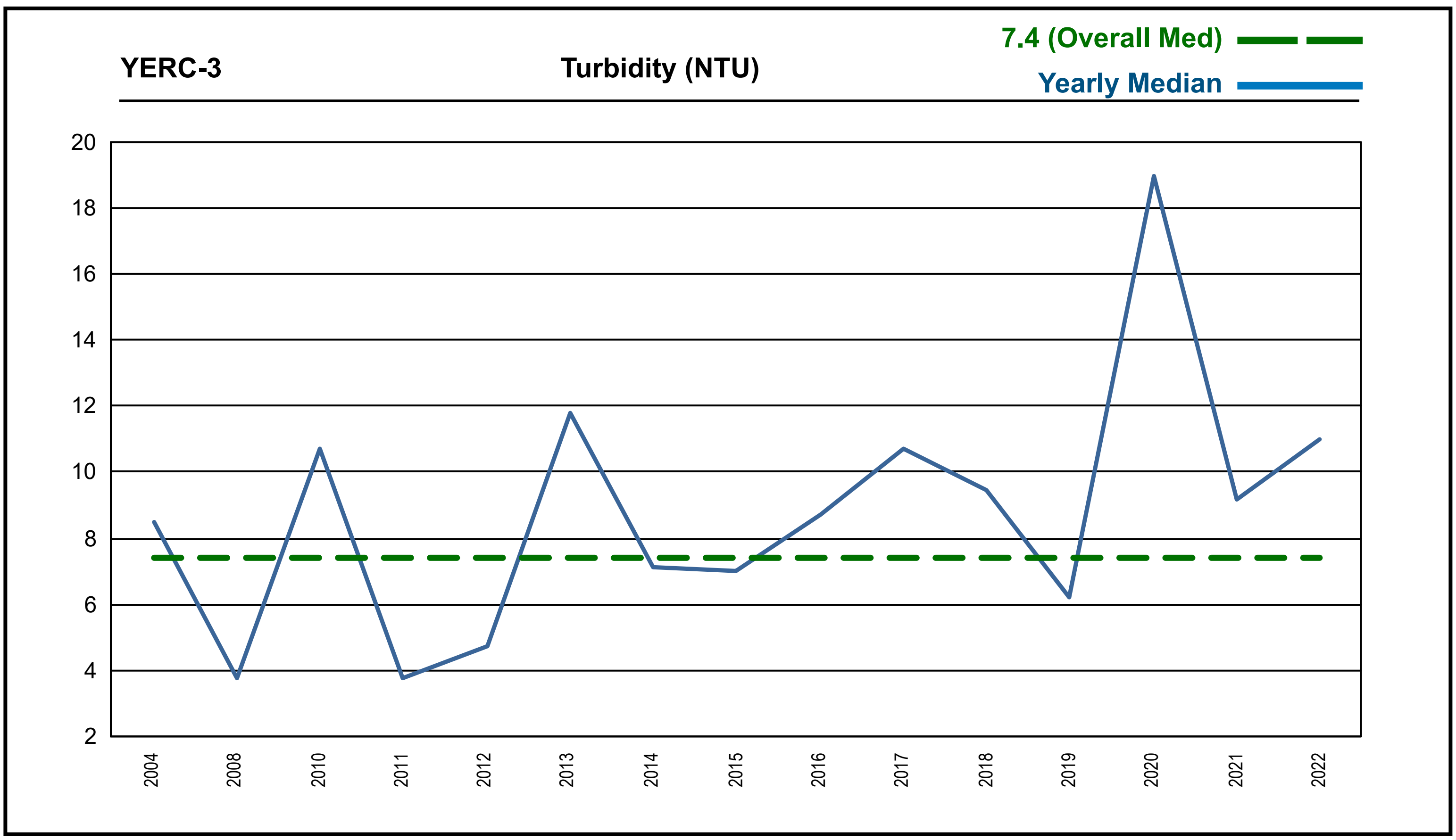

WEIC-12
Turbidity (NTU)
13.7 (Overall Med)
Yearly Median
32
28
24
20
16
12
8
1991
1992
1993
1994
1995
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

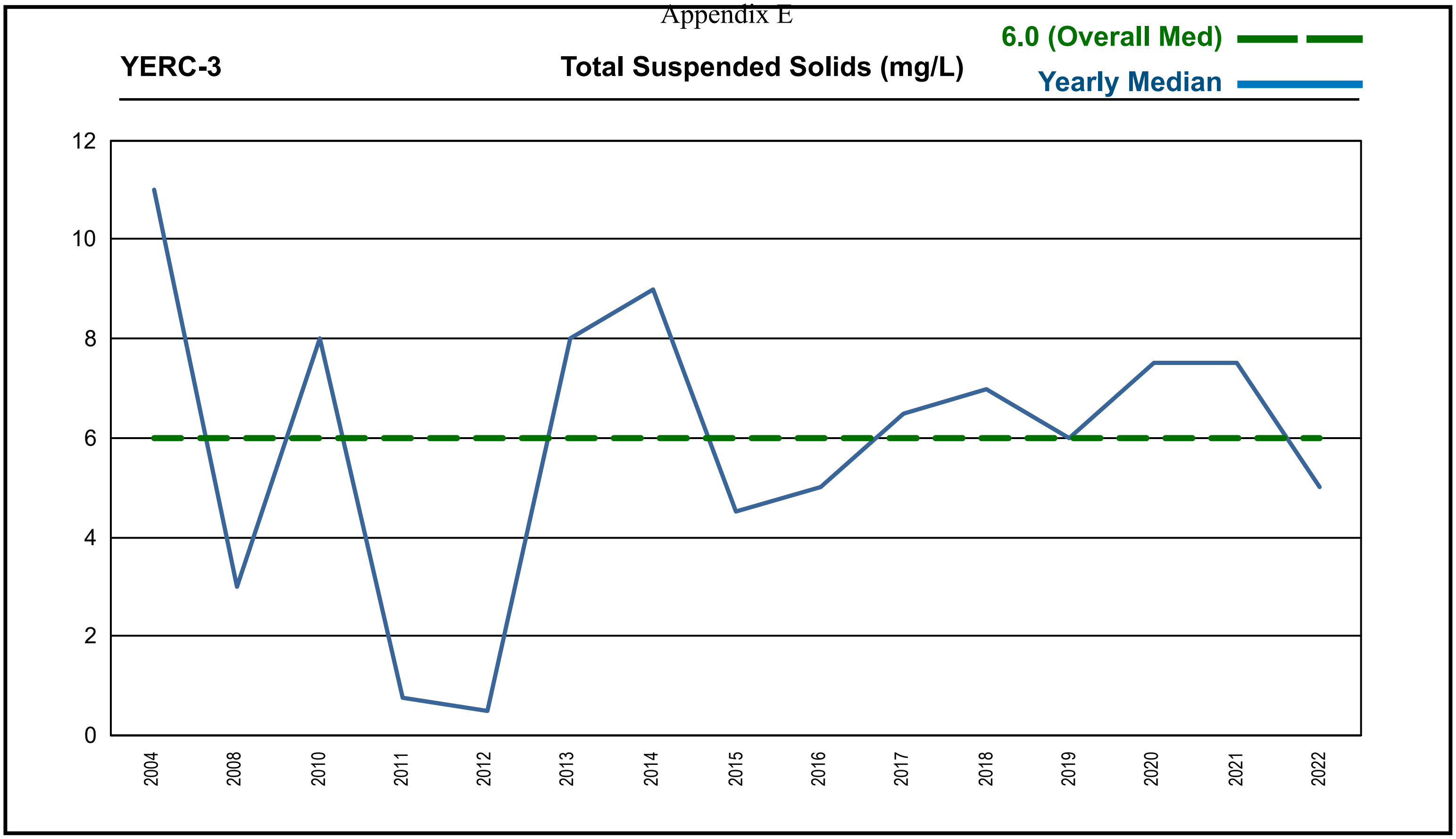

WEIC-12
Total Suspended Solids (mg/L)
11.0 (Overall Med)
Yearly Median
50
45
40
35
30
25
20
15
10
5
0
1991 1992 1993 1994 1995 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

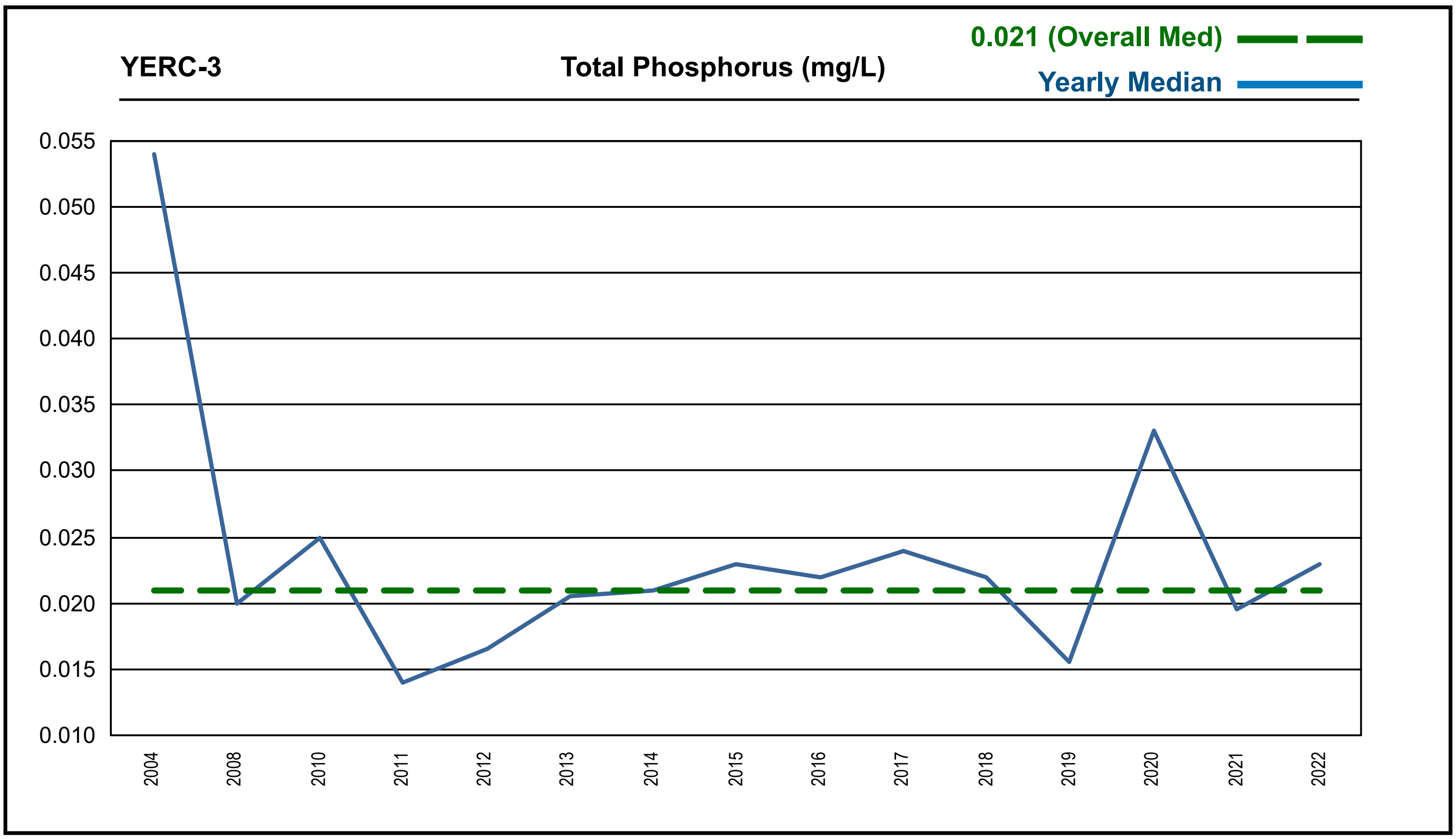

WEIC-12
Total Phosphorus (mg/L)
0.080 (Overall Med)
Yearly Median
0.28
0.24
0.20
0.16
0.12
0.08
0.04
0
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

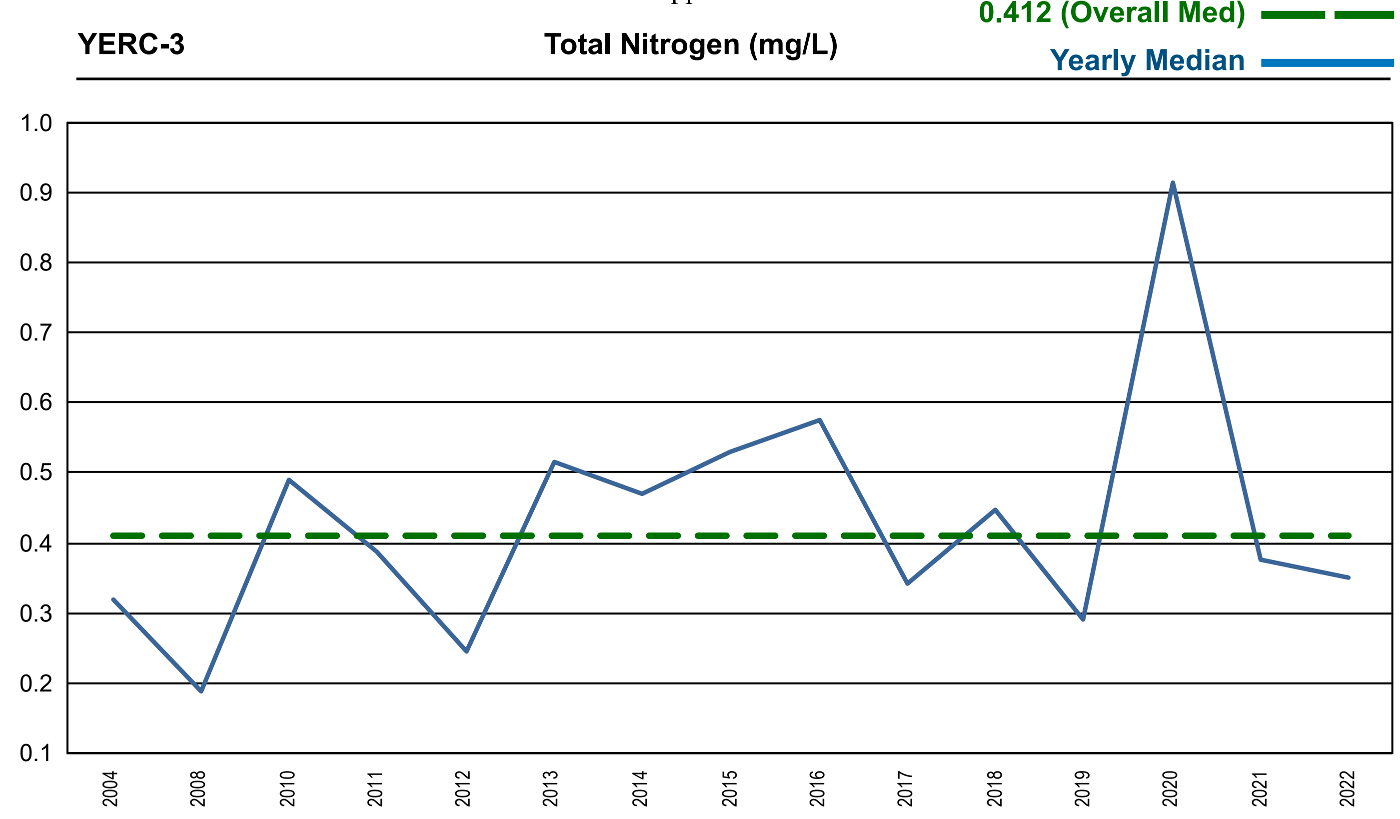

WEIC-12
Total Nitrogen (mg/L)
0.763 (Overall Med)
Yearly Median
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
1991 1992 1993 1994 1995 1996 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021


YERC-3 - Yearly Median
Chl a (mg/m³)
Temp (°C)
pH (SU)
DO (mg/L)
Cond (µmhos/cm)
32
24
16
8
0
160
120
80
40
0
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


YERC-3
Turbidity (NTU)
7.4 (Overall Med)
Yearly Median
20
18
16
14
12
10
8
6
4
2
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


6.0 (Overall Med)
Yearly Median
YERC-3
Total Suspended Solids (mg/L)
12
10
8
6
4
2
0
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


0.021 (Overall Med)
Yearly Median
YERC-3
Total Phosphorus (mg/L)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022


YERC-3
Total Nitrogen (mg/L)
0.412 (Overall Med)
Yearly Median
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2004
2008
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022

Appendix F

Waterbodies/Causes moved from Category 4a to Category 1

Waterbodies moved from Category 4a to Category 1

Assessment Unit	Waterbody Name	River Basin	County	Causes	Basis for Removal from Category 4a to Category 1	Source / Date of Data
AL06030001-0805-200	Scarham Creek	Tennessee	Dekalb Marshall	Organic Enrichment (BOD)	Records at ADEM stations SCRL-2 and SHMD-2 from 2018, 2019, and 2020 show that Scarham Creek now meets water quality standards for DO criteria.	ADEM 2018, 2019, 2020
AL06030001-0805-200	Scarham Creek	Tennessee	Dekalb Marshall	Ammonia	Records at ADEM stations SCRL-2 and SHMD-2 from 2018, 2019, and 2020 show that Scarham Creek now meets water quality standards for ammonia criteria.	ADEM 2018, 2019, 2020