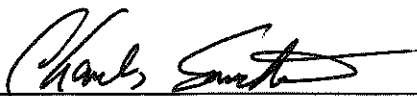


**Lower Neuse Basin Association
P.O. Box 1410
Clayton, North Carolina 27528-1410**

**Annual Monitoring Report
2023**

Submitted By: , Chairman
Charles Smithwick

Prepared By: Haywood M. Phthisic, III, Executive Director

Lower Neuse Basin Association Contact Information

Officers of the Lower Neuse Basin Association

Chairman -

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Contentnea MSD
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cmsd100@embargmail.com

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Association Counsel -

Daniel F. McLawhorn
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Coalition Web Site Address - <https://www.lnba.net>

Lower Neuse Basin Association

April 18, 2024

Members and Contact Information

A complete list of LNBA delegates for 2023 follows in Section I.

Monitoring Stations for 2023

A complete list of the monitoring stations with station numbers, descriptions, coordinates, county, sub basin and stream classification included in Section II. The LNBA staff visited each station during 2023.

The Agreement between the LNBA and the Division of Water Resources was renewed in 2019. The effective date was August 1, 2019 through July 31, 2024. There were several sampling stations, added, deleted, or moved to a better location for safety reasons or environmental conditions.

Quality Assurance/Quality Control Issues

Waypoint Analytical acquired Environment I in 2023 and the business name was changed during the year. Waypoint Analytical reported no quality assurance or quality control issues in 2023.

Waypoint Analytical reported it completed and passed proficiency testing for its satellite lab (field testing equipment) in 2023.

NCDEQ- DWQ did not conduct a field review and inspection in 2023.

On April 3, 2007, the Division of Water Quality suspended the collection and analysis of total recoverable metals as required by the monitoring coalitions. The metals are no longer collected as part of the LNBA MOA agreement.

The Waypoint Analytical contact information and sampling methods/protocols are listed in Section III with the sampling errors and omissions for 2023.

Special Projects

The Lower Neuse Basin Association, in cooperation with its sister organization, the Neuse River Compliance Association, has continued with its partnership with Dr. Hans Pearl of the University of North Carolina at Chapel Hill, Institute of Marine Science. The two associations support the MODMON monitoring program of the Neuse River Estuary. The associations began assisting with this research in July 2006.

Suggested Changes

There are no suggested changes at this time.

Statistical Analysis of Data

Statistical analyses of the data for each monitoring station are included in Section IV.

Section I

LNBA Members and Contact Information

NPDES Permit #	LNBA Permittees Ownership and Facility	Authorized Representative and Title	County	Region	HUC (8 Digit)
NC0003417	Duke Energy Progress, LLC H. F. Lee Energy Complex	Jeffery D. Hines General Manager	Wayne	WaRO	3020201
NC0003760	CovationBio, Inc.	David Suggs	Lenoir	WaRO	3020202
NC0020389	Town of Benson - Benson WWTP	Kimberly Picket Public Utility Director	Johnston	RRO	3020201
NC0021253	City of Havelock - Havelock WWTP	Chris McGee City Manager	Craven	WaRO	3020204
NC0021644	Town of LaGrange - LaGrange WWTP	Shawn Condon Town Manager	Lenoir	WaRO	3020202
NC0023906	City of Wilson - Wilson WWTP	Grant Goings City Manager	Wilson	RRO	3020203
NC0023949	City of Goldsboro - Goldsboro WWTP	Matthew Livingston City Manager	Wayne	WaRO	3020202
NC0024236	City of Kinston - Kinston Regional WWTF	Steve Miller Director of Public Services	Lenoir	WaRO	3020202
NC0025348	City of New Bern - New Bern WWTP	Foster Hughes City Manager	Craven	WaRO	3020204
NC0025453	Town of Clayton - Little Creek WWTP	Rich Cappola Town Manager	Johnston	RRO	3020201
NC0029033	City of Raleigh - Neuse River WWTP	Edward Buchan Assistant Utility Director	Wake	RRO	3020201
NC0029572	Town of Farmville - Farmville WWTP	David Hodgkins Town Manager	Pitt	WaRO	3020203
NC0030716	Johnston County Central Johnston County Regional WWTP	Rick J. Hester County Manager	Johnston	RRO	3020201
NC0030759	City of Raleigh - Smith Creek WWTP	Edward Buchan Assistant Utility Director	Wake	RRO	3020201
NC0032077	Contentnea Metropolitan Sewerage District Contentnea MSD WWTP	Charles M. Smithwick, Jr. District Manager	Pitt	WaRO	3020203
NC0048879	Town of Cary - North WWTP	Jonathan Bulla North Cary WRF Manager	Wake	RRO	3020201
NC0064050	Town of Apex - Apex WRF	Randal E. Vosburg Town Manager	Wake	RRO	3020201
NC0064891	Town of Kenly - Kenly Regional WWTP	Tony Sears Interim Town Manager	Johnston	RRO	3020201
NC0065102	Town of Cary - South WWTP	Jarrod Buchanan South Cary WRF Manager	Wake	RRO	3020201
NC0066516	Town of Fuquay Varina Terrible Creek WWTP	Michael Wagner Town Manager	Wake	RRO	3020201
NC0020842	Town of Snow Hill Snow Hill WWTF	Todd Whaley Town Manager	Greene	WaRO	3020203
NC0079316	City of Raleigh - Little Creek WWTP	Edward Buchan Assistant Utility Director	Wake	RRO	3020203
NC0084735	Johnston County Johnston County WTP	Rick J. Hester County Manager	Johnston	RRO	3020201

Section II

Monitoring Station Information

List Of Monitoring Stations

Station	Location	County	Latitude	Longitude	Class	Sub-Basin
J2230000	Smith Creek @ SR 2045 (Burlington Mill Road) near Wake Forest	Wake	35.9182	-78.5348	C NSW	03020201
J2330000	Neuse River at SR 2215 (Buffalo Road) near Neuse	Wake	35.8479	-78.5302	C NSW	03020201
J3310000	Crabtree Creek @ SR 2921, North Raleigh Blvd, Raleigh	Wake	35.8041	-78.6081	C NSW	03020201
J3970000	Walnut Creek at SR 2551 (Barwell Road) near Raleigh	Wake	35.7493	-78.5345	C NSW	03020201
J4050000	Neuse River @ SR 2555 (Auburn Knightdale Road) near Raleigh	Wake	35.7266	-78.5139	C NSW	03020201
J4080000	Poplar Creek @ SR 2049 (Bethlehem Road) near Knightdale	Wake	35.7309	-78.4776	C NSW	03020201
J4115000	Marks Creek @ Neuse River Trail near Archers Lodge	Johnston	35.693264	-78.438694	C NSW	03020201
J4130000	Neuse River @ SR 1700 (Covered Bridge Road) near Archer's Lodge	Johnston	35.6749	-78.4364	WS-V NSW	03020201
J4170000	Neuse River @ at NC 42E of Clayton	Johnston	35.6473	-78.4056	WS-IV NSW	03020201
J4370000	Neuse River at US 70 Business @ Smithfield	Johnston	35.5128	-78.3498	WS-IV NSW	03020201
J4414000	Swift Creek @ SR 1152 (Holly Springs Road) near Macedonia	Wake	35.7187	-78.7527	WS-III NSW	03020201
J4500000	Swift Creek @ Indian Creek former discharge location near Garner, N.C.	Wake	35.6476	-78.6041	C NSW	03020201
J4510500	Swift Creek at SR 1525, Cornwallis Road near Clayton	Johnston	35.5999	-78.5356	C NSW	03020201
J4511000	White Oak Creek @ N.C. 42 Hwy near Clayton, N.C.	Johnston	35.6176	-78.5281	C NSW	03020201
J4520000	Swift Creek @ SR 1562 (Steel Bridge Road) near Smithfield, N.C.	Johnston	35.5515	-78.46	C NSW	03020201
J4580000	Swift Creek @ SR 1501 (Swift Creek Road) near the Johnston County Airport	Johnston	35.5442	-78.397	C NSW	03020201
J4690000	Middle Creek @ SR 1152 (Holly Springs Road) near Holly Springs	Wake	35.6609	-78.8042	C NSW	03020201
J4868000	Middle Creek @ SR 1375 (Lake Wheeler Road) near Banks	Wake	35.6356	-78.7279	C NSW	03020201
J4980000	Middle Creek @ SR 1006 (Old Stage Road) near Willow Springs	Wake	35.6091	-78.6866	C NSW	03020201

<i>Station</i>	<i>Location</i>	<i>County</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Class</i>	<i>Sub-Basin</i>
J5002000	Middle Creek @ SR 1517 (Old Sanders Hse) near Edmonson	Johnston	35.5626	-78.5756	C NSW	03020201
J5010000	Middle Creek @ NC 210 near Smithfield	Johnston	35.5075	-78.4013	C NSW	03020201
J5170000	Black Creek @ SR 1162 (Black Creek Road) near Four Oaks	Johnston	35.46925	-78.45681	C NSW	03020201
J5250000	Neuse River @ SR 1201 (Richardson Bridge Road) near Cox Mill	Johnston	35.3741	-78.1962	WS-IV NSW	03020201
J5390000	Hannah Creek @ SR 1158 (Allens Crossroads Drive) near Benson	Johnston	35.3868	-78.511	C NSW	03020201
J5390800	Hannah Creek @ SR 1227 (Ivey Road) near Benson	Johnston	35.4025	-78.4952	C NSW	03020201
J5410000	Mill Creek @ SR 1200 (Richardson Bridge Road) near Cox Mill	Johnston	35.342	-78.2162	C NSW	03020201
J5500000	Falling Creek @ SR 1219 (Old Grantham Road) near Grantham	Wayne	35.3224	-78.1282	WS-IV NSW	03020201
J5630000	Little River @ SR 2320, Riley Road near Zebulon	Wake	35.8375	-78.3599	HQW NSW	03020201
J5685000	Little River at Weaver Road near Bagley	Johnston	35.5791	-78.1723	WS-V NSW	03020201
J5750000	Little River at SR 2339 (Bagley Road) near Lowell Mill	Johnston	35.5613	-78.1594	WS-V NSW	03020201
J5790000	Buffalo Creek @ SR 2358 (Lake Glad Road) near Webdeil, N.C.	Wake	35.7697	-78.7697	C NSW	03020201
J5930000	Little River @ US 581 near Cherry Hospital	Wayne	35.393	-78.0258	C NSW	03020201
J6010950	Walnut Creek @ SR 1730 (Saint Johns Church Road) near Walnut Creek	Wayne	35.2817	-77.8686	C NSW	03020202
J6024000	Neuse River @ SR 1731 (Piney Grove Road) near Seven Springs	Wayne	35.229	-77.846	C NSW	03020202
J6044400	Bear Creek at SR 1603, Washington Street near LaGrange	Lenoir	35.3137	-77.8153	C Sw NSW	03020202
J6044500	Bear Creek @ SR 1311 (Bear Creek Road) near Kinston	Lenoir	35.2489	-77.7843	WS-IV Sw NSW	03020202
J6055000	Mosley Creek @ SR 1327 (Willey Measley Road) near LaGrange	Lenoir	35.3119	-77.7313	C Sw NSW	03020202
J6150000	Neuse River @ NC 11 Bypass at Kinston	Lenoir	35.2587	-77.5835	C NSW	03020202
J6250000	Neuse River @ NC 55 near Graingers	Lenoir	35.2957	-77.4962	C NSW	03020202
J6410000	Little Creek @ NC 97 near Zebulon	Wake	35.8279	-78.3025	C NSW	03020203

<i>Station</i>	<i>Location</i>	<i>County</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Class</i>	<i>Sub-Basin</i>
J6450000	Little Creek @ NC 39 near Zebulon	Wake	35.8125	-78.2681	C NSW	03020203
J6500000	Moccasin Creek @ SR 1131 (Antioch Church Road) near Conner	Wilson	35.7301	-78.1895	C NSW	03020203
J6680000	Turkey Creek @ SR 1101 (Claude Lewis Rodd) near Middlesex	Nash	35.7519	-78.1597	C NSW	03020203
J6765000	Contentnea Creek at Willow Springs drive near Dixie	Wilson	35.6838	-77.941	C Sw NSW	03020203
J6890000	Contentnea Creek @ SR 1622 (Evansdale Road) near Wilson	Wilson	35.6429	-77.8902	C Sw NSW	03020203
J7210000	Contentnea Creek @ NC 58 near Stantonburg	Wilson	35.5861	-77.8111	C Sw NSW	03020203
J7240000	Toisnot Swamp @ SR 1539 (Sand Pit Road) near Stantonburg	Wilson	35.5976	-77.7947	C Sw NSW	03020203
J7325000	Nahuntia Swamp @ NC 58 near Contentnea	Greene	35.5081	-77.7455	C Sw NSW	03020203
J7330000	Contentnea Creek @ US 13 near Snow Hill	Greene	35.4585	-77.6753	C Sw NSW	03020203
J7690000	Little Contentnea Creek @ SR 1218 (Chinquapin Road) near Farmville	Pitt	35.5881	-77.5416	C Sw NSW	03020203
J7740000	Little Contentnea Creek @ SR 1110 (HWY 903) near Scuffleton	Pitt	35.4567	-77.4854	C Sw NSW	03020203
J7850000	Neuse River @ SR 1470 (Maple Cypress Road) at the boat ramp dock upstre	Craven	35.31368	-77.30287	C Sw NSW	03020202
J8870000	Trent River @ the Alfred Cunningham Drawbridge on E. Front Street, New Be	Craven	35.10159	-77.03708	SB Sw NSW	03020204

Section III

Contract Laboratory Information,
Audits, MOA Revisions, and Sample
Errors and Omissions

Contract Laboratory Providing All Sampling and Analysis

Waypoint Analytical, Inc. (formally Environment I)

Mark Oliveira, General Manager

114 Oakmont Dr.

Greenville, N.C. 27835-7085

252.756.6208

rboquist@waypointanalytical.com

Waypoint Analytical - River Basin Method Codes 2023

Parameter	EPA / SM code	Rev./ date
Temp (° C)	SM 2550B	2010
DO (mg/l)	SM 4500 OG	2016
pH (su)	SM 4500 HB	2011
Conductivity (umhos/cm)	SM 2510 B	2011
Fecal Coliform	SM 9222 D	2015
Suspended Residue, (mg/l)	SM 2540 D	2015
Turbidity (NTU)	SM 2130 B	2011
Chlorophyll a (ug/l)	EPA 445.0	Rev. 1.2 - 1997
NH3 N (mg/l)	EPA 350.1	Rev. 2.0 - 1993
TKN N (mg/l)	EPA 351.2	Rev. 2.0 - 1993
NO2 NO3 N (mg/l)	EPA 353.2	Rev. 2.0 - 1993
TP (mg/l)	EPA 365.4	Rev. 2.0 - 1974

DIVISION OF WATER RESOURCES LABORATORY CERTIFICATION BRANCH

In accordance with the provisions of N.C.G.S. 143-215.3 (a) (1), 143-215.3 (a)(10) and NCAC 2H.0800:



2023

Waypoint Analytical - Greenville

Is hereby certified to perform environmental analysis as listed on the Laboratory's Certified Parameter List and report monitoring data to DEQ for compliance with NPDES effluent, surface water, groundwater, soil and pretreatment regulations.

By reference 15A NCAC 2H .0800 is made a part of this certificate.

This certificate does not guarantee validity of data generated, but indicates the methodology, equipment, quality control procedures, records, and proficiency of the laboratory have been examined and found to be acceptable.

This certificate shall be valid until 12/31/2023

Certificate No. 10

A handwritten signature in black ink, reading "Todd Crawford".

Todd Crawford

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Waypoint Analytical - Greenville
Address: 114 Oakmont Dr.
Greenville, NC 27858

Certificate Number: 10
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 6/29/2022

The above named laboratory, having duly met the requirements of 15A NCAC 2H.0800, is hereby certified for the measurement of the parameters listed below.

CERTIFIED PARAMETERS

INORGANIC	SM 4500 F ⁻ C-2011 (Aqueous)
ALKALINITY	HARDNESS TOTAL - WET CHEM
SM 2320 B-2011 (Aqueous)	SM 2340 C-2011 (Aqueous)
BACTERIA - COLIFORM FECAL	NITROGEN, AMMONIA
SM 9221 E-2014 (MPN) (Aqueous)	EPA 350.1, Rev. 2.0, 1993 (Aqueous)
SM 9221 E-2014 (MPN) (Biosolids)	NITROGEN, NITRATE
SM 9222 D-2015 (MF) (Aqueous)	(NO3 + NO2 EPA 353.2, Rev. 2.0, 1993) - (NO2 EPA 353.2, Rev. 2.0, 1993) (Aqueous)
BACTERIA - COLIFORM TOTAL	NITROGEN, NITRITE
SM 9222 B-2015 (MF) (Aqueous)	EPA 353.2, Rev. 2.0, 1993 (Aqueous)
SM 9221 B-2014 (MPN) (Aqueous)	NITROGEN, NO3 + NO2
BACTERIA - ENTEROCOCCI	EPA 353.2, Rev. 2.0, 1993 (Aqueous)
IDEXX Enterolert® (MPN) (Aqueous)	NITROGEN, TOTAL KJELDAHL
BOD	EPA 351.2, Rev. 2.0, 1993 (Aqueous)
SM 5210 B-2016 (Aqueous)	OIL & GREASE
CBOD	EPA 1664 Rev. B (Aqueous)
SM 5210 B-2016 (Aqueous)	ORGANIC CARBON, TOTAL
CHLORIDE	SM 5310 C-2014 (Aqueous)
SM 4500 Cl ⁻ B-2011 (Aqueous)	pH
CHLOROPHYLL a	SM 4500 H+B-2011 (Aqueous)
EPA 445.0, Rev. 1.2 (Fluorometric) (Aqueous)	PHOSPHATE, ORTHO
COD	SM 4500 P E-2011 (Aqueous)
Hach 8000 (Aqueous)	PHOSPHORUS, TOTAL
COLOR, ADMI	EPA 365.4, 1974 (Aqueous)
SM 2120 F-2011 (ADMI) (Aqueous)	RESIDUE, DISSOLVED 180 C
COLOR, PC	SM 2540 C-2015 (Aqueous)
SM 2120 B-2011 (PtCo) (Aqueous)	ASTM D5907-13 (Aqueous)
CONDUCTIVITY	RESIDUE, SETTLEABLE
SM 2510 B-2011 (Aqueous)	SM 2540 F-2015 (Aqueous)
CYANIDE	RESIDUE, SUSPENDED
SM 4500 CN ⁻ E-2016 (Total) (Aqueous)	SM 2540 D-2015 (Aqueous)
SM 4500 CN ⁻ E-2016 (Total) (Non-Aqueous)	RESIDUE, TOTAL
DISSOLVED OXYGEN	SM 2540 B-2015 (Aqueous)
SM 4500 O G-2016 (Aqueous)	SM 2540 G-2015 (Non-Aqueous)
FLUORIDE	SALINITY

This certification requires maintenance of an acceptable quality assurance program, use of approved methodology, and satisfactory performance on evaluation samples. Laboratories are subject to civil penalties and/or decertification for infractions as set forth in 15A NCAC 2H.0807.

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

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Address:114 Oakmont Dr.
Greenville, NC 27858

Certificate Number:10

Effective Date:1/1/2023

Expiration Date:12/31/2023

Date of Last Amendment:6/29/2022

The above named laboratory, having duly met the requirements of 15A NCAC 2H.0800, is hereby certified for the measurement of the parameters listed below.

CERTIFIED PARAMETERS

SM 2520 B-2011 (Aqueous)	SM 3113 B-2010 (Non-Aqueous)
SULFATE	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SM 4500 SO4 ²⁻ E-2011 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SULFIDE	SW-846 6020 B (Aqueous)
SM 4500 S ²⁻ D-2011 (Aqueous)	CALCIUM
TEMPERATURE	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SM 2550 B-2010 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
TURBIDITY	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SM 2130 B-2011 (Aqueous)	CHROMIUM TOTAL
METAL	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
ALUMINUM	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	SW-846 6020 B (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	COBALT
SW-846 6020 B (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
ANTIMONY	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SM 3113 B-2010 (Aqueous)	SW-846 6020 B (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	COPPER
SW-846 6020 B (Aqueous)	SM 3111 B-2011 (Aqueous)
ARSENIC	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SM 3113 B-2010 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
SM 3113 B-2010 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	SW-846 6020 B (Aqueous)
SW-846 6020 B (Aqueous)	IRON
BARIUM	SM 3111 B-2011 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
SW-846 6020 B (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
BERYLLIUM	SW-846 6020 B (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	LEAD
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	SM 3113 B-2010 (Aqueous)
SW-846 6020 B (Aqueous)	SM 3113 B-2010 (Non-Aqueous)
CADMIUM	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SM 3113 B-2010 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)

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CERTIFIED PARAMETERS

SW-846 6020 B (Aqueous)	SW-846 6020 B (Aqueous)
MAGNESIUM	SILVER
SM 3111 B-2011 (Aqueous)	SM 3113 B-2010 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
MANGANESE	SW-846 6020 B (Aqueous)
SM 3111 B-2011 (Aqueous)	SODIUM
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SM 3111 B-2011 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	SM 3111 B-2011 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
MERCURY	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 245.1, Rev. 3.0, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SW-846 7471 B (Non-Aqueous)	THALLIUM
EPA 1631 E (Aqueous)	EPA 279.2, 1978 (Aqueous)
MOLYBDENUM	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 6020 B (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	TIN
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 6020 B (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
NICKEL	SW-846 6020 B (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	VANADIUM
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SW-846 6020 B (Aqueous)	SW-846 6020 B (Aqueous)
POTASSIUM	ZINC
SM 3111 B-2011 (Aqueous)	SM 3111 B-2011 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SELENIUM	SW-846 6020 B (Aqueous)
SM 3113 B-2010 (Aqueous)	ORGANIC
SM 3113 B-2010 (Non-Aqueous)	BASE NEUTRAL/ACID, ORGANICS
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 625.1, Dec 2016 (Aqueous)

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CERTIFIED PARAMETERS

- SW-846 8270 E (Aqueous)
- CHLORINATED ACID HERBICIDES
- SW-846 8151 A (Aqueous)
- PESTICIDES, ORGANOCHLORINE
- SW-846 8081 B (Aqueous)
- PURGEABLE, AROMATICS
- EPA 602, 1984 (Aqueous)
- SM 6200 C-2011 (Aqueous)
- PURGEABLE, HALOCARBONS
- SM 6200 C-2011 (Aqueous)
- PURGEABLE, ORGANICS
- EPA 624.1, Dec 2016 (Aqueous)
- SW-846 8260 D (Aqueous)



A Waters Company

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EPA ID: NC00024
ERA Customer Number: E547001
Report Issued: 09/05/2023
Study Dates: 07/17/2023 - 08/31/2023

WP-342 Final Evaluation Report

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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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WP pH (cat# 577, lot# P342-977)

1900	pH	S.U.	9.42	9.53	9.33 - 9.73	Acceptable	SM 4500-H+ B-2011 2011	8/21/2023	-1.08	9.52	0.0926	
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WP Settleable Solids (cat# 883, lot# P342-911)

1965	Settleable Solids	mL/L	7.7	7.45	5.07 - 10.5	Acceptable	SM 2540 F-2015 2015	8/21/2023	-0.252	7.90	0.781	
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WP Solids (cat# 241, lot# P342-499)

1960	Total Suspended Solids	mg/L	60	60.0	47.6 - 67.9	Acceptable	SM 2540 D-2015 2015	8/22/2023	0.387	59.2	2.12	
1955	Total Dissolved Solids at 180°C	mg/L	464	474	427 - 521	Acceptable	ASTM D5907-13 2013	8/22/2023	-0.117	465	12.0	
1950	Total Solids at 105°C	mg/L	524	550	495 - 605	Acceptable	SM 2540 B-2015 2015	8/16/2023	-0.943	540	17.3	

WP Simple Nutrients (cat# 584, lot# P342-505)

1515	Ammonia as N	mg/L	5.16	5.45	4.24 - 6.69	Acceptable	EPA 350.1 2 1993	8/17/2023	-0.979	5.45	0.295	
1820	Nitrate + Nitrite as N	mg/L		4.22	3.44 - 4.97	Not Reported				4.20	0.230	
1810	Nitrate as N	mg/L		4.22	3.38 - 5.04	Not Reported				4.19	0.209	
1870	ortho-Phosphate as P	mg/L		2.62	2.23 - 3.01	Not Reported				2.65	0.129	
1827	Total Nitrogen	mg/L		9.67	5.52 - 13.8	Not Reported				9.67	0.309	

WP Complex Nutrients (cat# 579, lot# P342-525)

1795	Total Kjeldahl Nitrogen	mg/L	16.3	14.0	10.4 - 17.2	Acceptable	EPA 351.2 2 1993	8/29/2023	4.53	13.9	0.541	
1910	Total phosphorus as P	mg/L	2.03	1.87	1.51 - 2.23	Acceptable	EPA 365.4 1974	8/16/2023	1.80	1.86	0.0916	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : WP-342



A Waters Company

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EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

NC00024
E547001
03/27/2023
02/06/2023 - 03/23/2023

WS-319 Final Evaluation Report

Ver. 1
Page 8 of 36

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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WS Hardness (cat# 555, lot# S319-693)

1035	Calcium	mg/L	70.1	72.9	62.0 - 83.8	Acceptable	EPA 200.8 5.4 1994	3/20/2023	-0.243	70.7	2.64	NAB
1085	Magnesium	mg/L	3.14	3.38	2.87 - 3.89	Acceptable	EPA 200.8 5.4 1994	3/20/2023	-1.14	3.39	0.223	NAB
1155	Sodium	mg/L	24.4	27.0	23.0 - 31.0	Acceptable	EPA 200.8 5.4 1994	3/20/2023	-1.80	27.0	1.46	NAB
1550	Calcium Hardness as CaCO3	mg/L		182	155 - 209	Not Reported				176	5.14	
1755	Total Hardness as CaCO3	mg/L	202	196	167 - 225	Acceptable	SM 2340 C-2011 2011	3/20/2023	1.87	192	5.55	ADR

WS Hardness (cat# 555, lot# S319-693)

1035	Calcium	mg/L	73.7	72.9	62.0 - 83.8	Acceptable	EPA 200.7 4.4 1994	3/13/2023	1.12	70.7	2.64	MTM
1085	Magnesium	mg/L	3.51	3.38	2.87 - 3.89	Acceptable	EPA 200.7 4.4 1994	3/13/2023	0.520	3.39	0.223	MTM
1155	Sodium	mg/L	28.3	27.0	23.0 - 31.0	Acceptable	EPA 200.7 4.4 1994	3/13/2023	0.867	27.0	1.46	MTM
1550	Calcium Hardness as CaCO3	mg/L		182	155 - 209	Not Reported				176	5.14	
1755	Total Hardness as CaCO3	mg/L		196	167 - 225	Not Reported				192	5.55	

WS Inorganics (cat# 591, lot# S319-698)

1505	Alkalinity as CaCO3	mg/L	92.0	95.2	85.7 - 105	Acceptable	SM 2320 B-2011 2011	3/20/2023	-1.08	96.4	4.03	HMV
1575	Chloride	mg/L	92.0	91.3	77.6 - 105	Acceptable	SM 4500-Cl B-2011 2011	3/20/2023	0.151	91.6	2.58	JDJ
1610	Conductivity at 25°C	µmhos/cm	914	895	806 - 985	Acceptable	SM 2510 B-2011 2011	3/20/2023	2.07	892	10.5	BNC
1730	Fluoride	mg/L	2.29	3.35	3.02 - 3.68	Not Acceptable	SM 4500-F C-2011 2011	3/23/2023	-5.77	3.37	0.188	JDS
1820	Nitrate + Nitrite as N	mg/L	5.34	5.17	4.39 - 5.95	Acceptable	EPA 353.2 2 1993	3/20/2023	1.07	5.11	0.218	TRJ
1810	Nitrate as N	mg/L	5.38	5.17	4.65 - 5.69	Acceptable	EPA 353.2 2 1993	3/21/2023	1.13	5.08	0.265	BMD
1125	Potassium	mg/L	19.8	21.3	18.1 - 24.5	Acceptable	EPA 200.8 5.4 1994	3/20/2023	-1.39	21.2	1.03	NAB
2000	Sulfate	mg/L	151	153	130 - 176	Acceptable	SM4500SO4 - 2011 2011	3/20/2023	-0.339	153	6.29	
1955	Total Dissolved Solids at 180°C	mg/L	590	634	507 - 761	Acceptable	ASTM D5907-13 2013	3/14/2023	-0.591	611	35.2	BLV



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WS-319



A Waters Company

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USA

WP-342



Final Report

WatR™ Pollution Proficiency Testing

WatR™ Pollution Study

Open Date: 07/17/2023

Close Date: 08/31/2023

Report Issued Date: 09/05/2023



A Waters Company

September 5, 2023

Ron Boquist
Waypoint Analytical - Greenville
114 Oakmont Drive
Greenville, NC 27858

Enclosed is your final report for ERA's WP-342 WatR™ Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-342 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the most current TNI Fields of Proficiency Testing (FoPT) table the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the table and the evaluation criteria contained in the 2016 TNI Standard, Volume 3. If the analyte is not included in the TNI FoPT table, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 730002268).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (Quik™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

Thank you for your participation in ERA's WP-342 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Huff", with a stylized flourish at the end.

Craig Huff
Senior Technical Manager

attachments





A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type
North Carolina (WP)	Todd Crawford / 919-733-3908 x202	All Analytes



A Waters Company

WP-342 Definitions & Study Discussion

Study Dates: 07/17/2023 - 08/31/2023

Report Issued: 09/05/2023

WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) table. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2016 TNI Standard. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current TNI FoPT table or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

Acceptable	= Reported Value falls within the Acceptance Limits.
Not Acceptable	= Reported Value falls outside the Acceptance Limits.
No Evaluation	= Reported Value cannot be evaluated.
Not Reported	= No Value reported.

The Method Description is the method the laboratory reported to ERA.

WP Study Discussion

ERA's WP-342 WatR™ Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2016 TNI Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) table.

ERA's WP-342 WatR™ Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2016 TNI Standard and the criteria contained in the most current TNI FoPT table.

All activities associated with this proficiency testing study were performed by Waters/ERA with the exception of those noted below. The following physical samples/products were manufactured for Waters/ERA by a subcontractor:

Microbiology products with the following catalog numbers:
880, 935, 079, 077, 080, 595, 595A, 576, 576A

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-342 WatR™ Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™ Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





A Waters Company

Final Evaluation Report

Study: **WP-342**

ERA Customer Number: **E964393**

Laboratory Name: **Waypoint Analytical -
Greenville**

Inorganic Results



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.
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Study # : WP-342



WP-342 Final Evaluation Report

A Waters Company

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EPA ID: NC01687
ERA Customer Number: E964393
Report Issued: 09/05/2023
Study Dates: 07/17/2023 - 08/31/2023

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
WP Minerals (cat# 581, lot# P342-506)												
1505	Alkalinity as CaCO ₃	mg/L		87.8	74.6 - 101	Not Reported				88.2	3.28	
1575	Chloride	mg/L		50.9	44.1 - 57.8	Not Reported				50.8	1.43	
1610	Conductivity at 25°C	µmhos/cm	372	370	333 - 407	Acceptable	SM 2510 B-2011 2011	8/22/2023	-0.0801	373	10.6	
1730	Fluoride	mg/L		2.01	1.60 - 2.35	Not Reported				2.00	0.126	
1125	Potassium	mg/L		15.8	12.6 - 19.0	Not Reported				16.0	0.823	
1155	Sodium	mg/L		72.7	58.2 - 87.2	Not Reported				72.8	4.61	
2000	Sulfate	mg/L		14.3	10.9 - 16.9	Not Reported				14.2	0.711	
1955	Total Dissolved Solids at 180°C	mg/L		310	265 - 355	Not Reported				300	19.4	
1950	Total Solids at 105°C	mg/L		326	281 - 371	Not Reported				321	18.6	
WP pH (cat# 577, lot# P342-977)												
1900	pH	S.U.	9.45	9.53	9.33 - 9.73	Acceptable	SM 4500-H+ B-2011 2011	8/22/2023	-0.758	9.52	0.0926	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.
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Study # : WP-342



A Waters Company

Final Evaluation Report

Study: **WP-342**

ERA Customer Number: **E964393**

Laboratory Name: **Waypoint Analytical -
Greenville**

Microbiology Results



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.
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Study # : WP-342



A Waters Company

WP-342 Final Evaluation Report

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EPA ID: NC01687
ERA Customer Number: E964393
Report Issued: 09/05/2023
Study Dates: 07/17/2023 - 08/31/2023

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
WP WasteWatR™ Coliform Microbe™ - SM 9221 (cat# 576A, lot# P342-083A)												
2500	Total Coliform (MPN-Multiple Tube)	MPN/100mL		249	14.1 - 4400	Not Reported				249	732	
2530	Fecal Coliform (MPN-Multiple Tube)	MPN/100mL		326	34.0 - 3120	Not Reported				326	514	
2525	E.coli (MPN-Multiple Tube)	MPN/100mL		281	58.5 - 1350	Not Reported				281	216	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.
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Study # : WP-342

CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

WP-342

Waypoint Analytical - Greenville

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 1017 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Minerals

pH

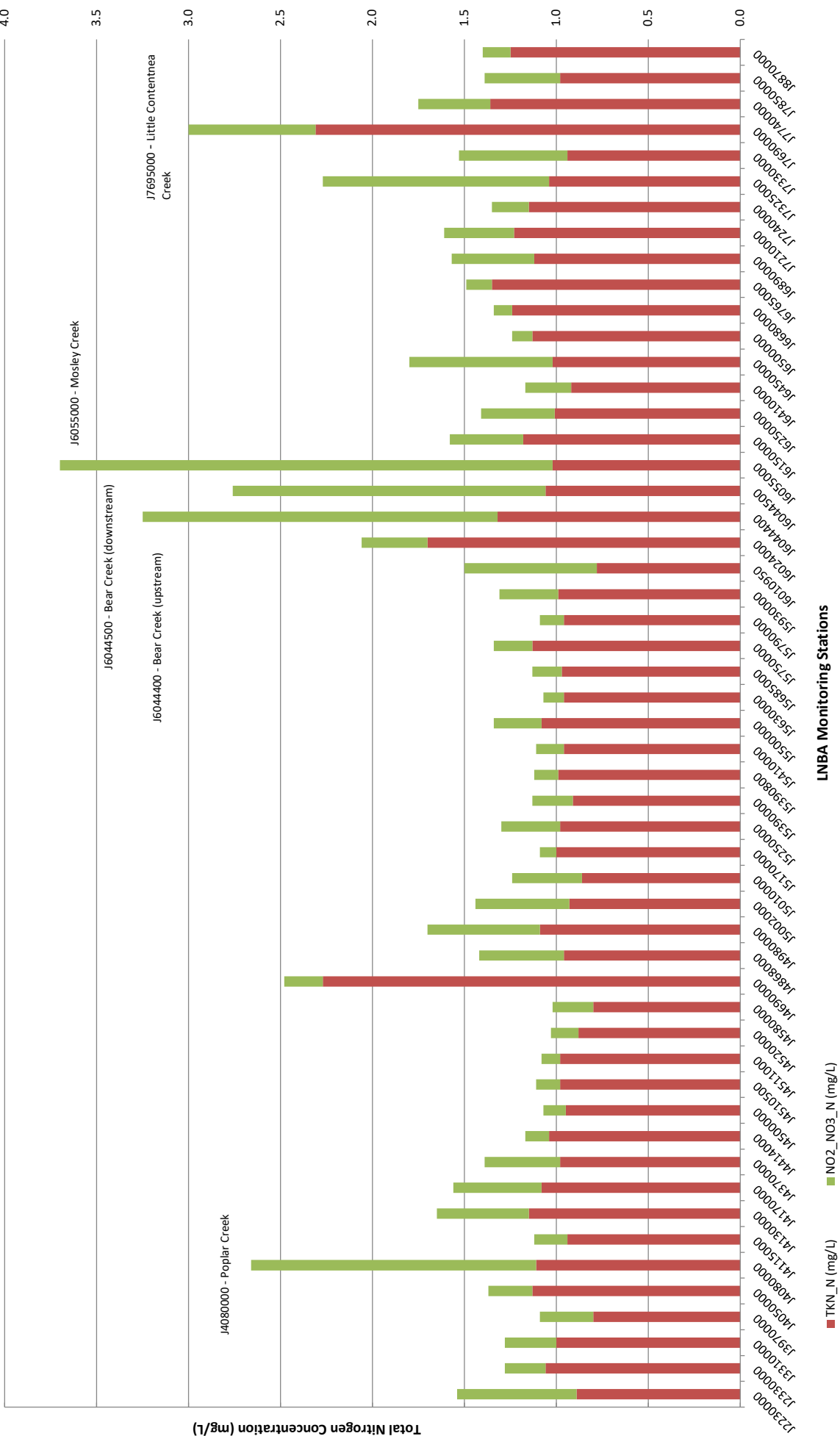


Craig Huff
Senior Technical Manager

Section IV

Statistical Analysis of Sampling Data

2023 LNBA Monitoring Stations Total Nitrogen Annual Average Concentrations



2023 LNBA Monitoring Report

Station J2230000

Smith Creek @ SR 2045 (Burlington Mill Road) near Wake Forest **Stream Class:** C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.9182

Longitude: -78.5348

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.0	26.2	18.3
<i>DO (mg/l)</i>	17	N/A	4	0	6.3	11.4	8.4
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.2	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	1	N/A	N/A	50	139	111
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	7	66	4,800	441
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	34.0	9.9
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.7	50.0	14.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.58	0.18
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.50	1.77	0.89
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.40	0.84	0.65
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	1.89	0.24
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J2330000

Neuse River at SR 2215 (Buffalo Road) near Neuse

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.8479

Longitude: -78.5302

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.9	29.9	20.1
<i>DO (mg/l)</i>	17	N/A	4	0	5.2	11.3	7.6
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.5	7.6	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	54	133	102
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	0	13	250	64
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.7	31.0	11.9
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.1	21.0	12.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.07	0.54	0.18
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.49	1.44	1.06
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.47	0.22
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.02	0.16	0.06
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J3310000

Crabtree Creek @ SR 2921, North Raleigh Blvd, Raleigh

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.8041

Longitude: -78.6081

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.6	29.0	19.6
<i>DO (mg/l)</i>	17	N/A	4	0	4.3	11.6	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.3	7.9	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	58	276	154
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	6	82	800	291
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.0	27.0	8.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.1	37.0	14.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.26	0.13
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.31	1.86	1.00
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.20	0.54	0.28
<i>TP (mg/l)</i>	12	2	N/A	N/A	0.02	0.47	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J3970000

Walnut Creek at SR 2551 (Barwell Road) near Raleigh

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.7493

Longitude: -78.5345

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.9	27.2	18.7
<i>DO (mg/l)</i>	17	N/A	4	0	6.0	9.8	7.9
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.5	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	76	191	125
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	64	818	210
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	49.0	10.4
<i>Turbidity (NTU)</i>	12	N/A	50	1	6.3	70.0	16.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.06	0.59	0.18
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.48	1.41	0.80
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.17	0.40	0.29
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	2.32	0.24
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4050000

Neuse River @ SR 2555 (Auburn Knightdale Road) near Raleigh **Stream Class:** C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.7266

Longitude: -78.5139

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.1	29.9	19.7
<i>DO (mg/l)</i>	17	N/A	4	0	5.7	10.1	7.6
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.6	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	84	136	113
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	26	864	159
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.2	39.0	13.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.7	45.0	15.0
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.23	0.11
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.59	2.00	1.13
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.07	0.35	0.24
<i>TP (mg/l)</i>	12	2	N/A	N/A	0.02	0.13	0.06
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4080000

Poplar Creek @ SR 2049 (Bethlehem Road) near Knightdale

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.7309

Longitude: -78.4776

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.7	26.0	17.4
<i>DO (mg/l)</i>	17	N/A	4	0	6.1	10.3	8.1
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.2	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	55	242	138
<i>** Fecal Coliform (/100 mls)</i>	9	N/A	400	5	120	773	433
<i>Suspended Residue (mg/l)</i>	9	0	N/A	N/A	5.2	40.0	13.0
<i>Turbidity (NTU)</i>	9	N/A	50	0	6.3	50.0	16.6
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	9	0	N/A	N/A	0.07	0.46	0.20
<i>TKN_N (mg/l)</i>	9	0	N/A	N/A	0.78	1.92	1.11
<i>NO2_NO3_N (mg/l)</i>	9	0	N/A	N/A	0.81	2.64	1.55
<i>TP (mg/l)</i>	9	0	N/A	N/A	0.09	0.52	0.26
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4115000

Marks Creek @ Neuse River Trail near Archers Lodge

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.693264 **Longitude:** -78.43869

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	16	N/A	N/A	N/A	5.5	25.5	17.5
<i>DO (mg/l)</i>	16	N/A	4	0	6.2	10.9	8.1
<i>*** pH (SU)</i>	16	N/A	6 to 9	0	6.2	7.4	N/A
<i>Conductivity (umhos/cm)</i>	16	0	N/A	N/A	53	96	82
<i>** Fecal Coliform (/100 mls)</i>	10	N/A	400	6	220	9,100	619
<i>Suspended Residue (mg/l)</i>	10	0	N/A	N/A	2.8	32.0	12.4
<i>Turbidity (NTU)</i>	10	N/A	50	0	4.7	45.0	16.1
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	10	0	N/A	N/A	0.03	0.24	0.13
<i>TKN_N (mg/l)</i>	10	0	N/A	N/A	0.28	3.09	0.94
<i>NO2_NO3_N (mg/l)</i>	10	0	N/A	N/A	0.13	0.24	0.18
<i>TP (mg/l)</i>	10	2	N/A	N/A	0.02	0.11	0.06
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4130000

Neuse River @ SR 1700 (Covered Bridge Road) near Archer's Lodge

Stream Class: WS-V NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.6749

Longitude: -78.4364

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	9.3	28.5	19.7
<i>DO (mg/l)</i>	17	N/A	4	0	5.2	9.8	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.6	7.3	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	97	278	182
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	42	864	131
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.8	40.0	14.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.9	33.0	15.1
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.23	0.12
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.55	3.46	1.15
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.12	0.90	0.50
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.49	0.26
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4170000

Neuse River @ at NC 42E of Clayton

Stream Class: WS-IV NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.6473

Longitude: -78.4056

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.5	28.0	19.4
<i>DO (mg/l)</i>	17	N/A	4	0	5.5	9.7	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.6	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	86	267	179
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	33	818	122
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	4.5	39.0	15.6
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.8	45.0	17.3
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.20	0.10
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.29	2.31	1.08
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.15	0.75	0.48
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.06	0.38	0.20
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>**** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J4370000

Neuse River at US 70 Business @ Smithfield

Stream Class: WS-IV NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5128

Longitude: -78.3498

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.0	27.9	19.7
<i>DO (mg/l)</i>	17	N/A	4	0	5.7	10.5	7.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.6	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	89	312	189
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	31	6,000	215
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	183.0	33.5
<i>Turbidity (NTU)</i>	12	N/A	50	1	2.5	160.0	29.9
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.34	0.16
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.62	1.59	0.98
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.09	0.63	0.41
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.10	0.35	0.21
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4414000

Swift Creek @ SR 1152 (Holly Springs Road) near Macedonia

Stream Class: WS-III NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.7187

Longitude: -78.7527

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.7	27.6	18.6
<i>DO (mg/l)</i>	17	N/A	4	0	4.0	10.3	7.4
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.5	8.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	60	158	96
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	50	6,000	278
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	54.0	11.5
<i>Turbidity (NTU)</i>	12	N/A	50	1	6.1	60.0	16.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.39	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.45	2.55	1.04
<i>NO2_NO3_N (mg/l)</i>	12	1	10	0	0.02	0.27	0.13
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.28	0.12
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4500000

Swift Creek @ Indian Creek former discharge location near Garner, N.C.

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.6476

Longitude: -78.6041

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	16	N/A	N/A	N/A	7.8	28.8	18.9
<i>DO (mg/l)</i>	16	N/A	4	0	4.0	10.4	7.0
<i>*** pH (SU)</i>	16	N/A	6 to 9	0	6.5	7.2	N/A
<i>Conductivity (umhos/cm)</i>	16	0	N/A	N/A	69	91	82
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	21	1,100	158
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	6.3	119.0	27.8
<i>Turbidity (NTU)</i>	12	N/A	50	0	12.0	36.0	20.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.52	0.19
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.42	1.67	0.95
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.21	0.12
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.14	0.09
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4510500

Swift Creek at SR 1525, Cornwallis Road near Clayton

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5999

Longitude: -78.5356

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.5	27.2	18.8
<i>DO (mg/l)</i>	17	N/A	4	0	4.3	10.0	7.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.8	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	62	94	83
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	64	846	169
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	47.0	14.8
<i>Turbidity (NTU)</i>	12	N/A	50	1	5.2	55.0	19.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	2	N/A	N/A	0.02	0.51	0.19
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.40	2.51	0.98
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.06	0.22	0.13
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.16	0.09
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J4511000

White Oak Creek @ N.C. 42 Hwy near Clayton, N.C.

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.6176

Longitude: -78.5281

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.8	29.1	20.6
<i>DO (mg/l)</i>	17	N/A	4	1	3.3	11.0	7.3
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.6	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	1	N/A	N/A	50	80	66
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	3	8,300	49
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	4.1	47.0	13.8
<i>Turbidity (NTU)</i>	12	N/A	50	2	6.6	85.0	23.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.29	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.45	1.78	0.98
<i>NO2_NO3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.26	0.10
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.18	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4520000

Swift Creek @ SR 1562 (Steel Bridge Road) near Smithfield, N.C. **Stream Class:** C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5515

Longitude: -78.46

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.6	26.8	18.5
<i>DO (mg/l)</i>	17	N/A	4	0	6.0	11.0	7.9
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.7	7.8	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	61	101	83
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	58	4,100	291
<i>Suspended Residue (mg/l)</i>	12	5	N/A	N/A	2.5	96.0	21.6
<i>Turbidity (NTU)</i>	12	N/A	50	2	3.0	120.0	25.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.26	0.10
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.33	1.67	0.88
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.25	0.15
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.03	0.28	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4580000

Swift Creek @ SR 1501 (Swift Creek Road) near the Johnston County Airport

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5442

Longitude: -78.397

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.8	26.4	17.8
<i>DO (mg/l)</i>	17	N/A	4	0	6.0	10.9	8.0
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	51	164	93
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	54	4,800	153
<i>Suspended Residue (mg/l)</i>	12	4	N/A	N/A	2.5	100.0	14.5
<i>Turbidity (NTU)</i>	12	N/A	50	1	3.0	100.0	18.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.24	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.39	1.55	0.80
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.32	0.22
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.15	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J4690000

Middle Creek @ SR 1152 (Holly Springs Road) near Holly Springs

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.6609

Longitude: -78.8042

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	1	N/A	N/A	N/A	15.7	15.7	15.7
<i>DO (mg/l)</i>	1	N/A	4	0	9.3	9.3	9.3
<i>*** pH (SU)</i>	1	N/A	6 to 9	0	6.9	6.9	N/A
<i>Conductivity (umhos/cm)</i>	1	0	N/A	N/A	81	81	81
<i>** Fecal Coliform (/100 mls)</i>	1	N/A	400	1	2,900	2,900	2,900
<i>Suspended Residue (mg/l)</i>	1	0	N/A	N/A	74.0	74.0	74.0
<i>Turbidity (NTU)</i>	1	N/A	50	1	110.0	110.0	110.0
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	1	0	N/A	N/A	0.07	0.07	0.07
<i>TKN_N (mg/l)</i>	1	0	N/A	N/A	2.27	2.27	2.27
<i>NO2_NO3_N (mg/l)</i>	1	0	N/A	N/A	0.21	0.21	0.21
<i>TP (mg/l)</i>	1	0	N/A	N/A	0.25	0.25	0.25
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J4868000

Middle Creek @ SR 1375 (Lake Wheeler Road) near Banks

Stream Class: C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.6356

Longitude: -78.7279

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.2	27.3	19.4
<i>DO (mg/l)</i>	17	N/A	4	0	5.4	10.3	7.4
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.7	8.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	89	388	229
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	4	52	2,400	268
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	59.0	17.1
<i>Turbidity (NTU)</i>	12	N/A	50	1	2.8	80.0	22.3
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.32	0.13
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.65	1.51	0.96
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.21	0.80	0.46
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.08	0.46	0.18
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J4980000

Middle Creek @ SR 1006 (Old Stage Road) near Willow Springs **Stream Class:** C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.6091

Longitude: -78.6866

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.1	26.9	18.9
<i>DO (mg/l)</i>	17	N/A	4	0	4.2	9.7	7.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.8	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	87	387	223
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	100	4,600	296
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	98.0	28.9
<i>Turbidity (NTU)</i>	12	N/A	50	2	4.0	65.0	26.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.29	0.11
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.55	1.85	1.09
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.20	1.02	0.61
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.08	0.54	0.19
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5002000

Middle Creek @ SR 1517 (Old Sanders Hse) near Edmonson

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5626

Longitude: -78.5756

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.1	26.5	18.4
<i>DO (mg/l)</i>	17	N/A	4	1	2.8	11.2	7.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.7	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	71	300	173
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	68	1,900	244
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	49.0	17.5
<i>Turbidity (NTU)</i>	12	N/A	50	2	3.7	65.0	23.1
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.73	0.22
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.44	1.92	0.93
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.21	1.09	0.51
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.26	0.11
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5010000

Middle Creek @ NC 210 near Smithfield

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5075

Longitude: -78.4013

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.8	26.1	17.8
<i>DO (mg/l)</i>	17	N/A	4	0	6.3	11.0	8.1
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.4	7.2	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	77	279	156
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	54	4,800	121
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	61.0	11.5
<i>Turbidity (NTU)</i>	12	N/A	50	1	4.2	75.0	18.7
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.50	0.25
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.47	1.28	0.86
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.28	0.50	0.38
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.09	0.89	0.19
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5170000

Black Creek @ SR 1162 (Black Creek Road) near Four Oaks

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.46925

Longitude: -78.45681

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.9	25.9	17.8
<i>DO (mg/l)</i>	17	N/A	4	4	1.8	10.6	5.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	2	5.9	7.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	62	194	93
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	25	5,200	78
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.0	23.0	6.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	8.2	34.0	12.6
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.07	0.62	0.21
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.56	1.60	1.00
<i>NO2_NO3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.27	0.09
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.25	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5250000

Neuse River @ SR 1201 (Richardson Bridge Road) near Cox Mill **Stream Class:** WS-IV NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.3741

Longitude: -78.1962

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.1	28.4	19.7
<i>DO (mg/l)</i>	17	N/A	4	1	3.5	10.5	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.4	7.6	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	94	312	181
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	30	3,500	97
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	143.0	33.6
<i>Turbidity (NTU)</i>	12	N/A	50	1	5.5	100.0	28.7
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.30	0.18
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.55	1.84	0.98
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.16	0.40	0.32
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.11	0.90	0.27
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5390000

Hannah Creek @ SR 1158 (Allens Crossroads Drive) near Benson

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.3868

Longitude: -78.511

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.3	25.6	17.7
<i>DO (mg/l)</i>	17	N/A	4	3	3.0	10.5	6.1
<i>*** pH (SU)</i>	17	N/A	6 to 9	8	4.3	7.8	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	78	139	104
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	28	1,100	117
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.0	14.0	7.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	7.2	26.0	16.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.10	0.50	0.23
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.44	2.53	0.91
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.41	0.22
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.10	0.05
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J5390800

Hannah Creek @ SR 1227 (Ivey Road) near Benson

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.4025

Longitude: -78.4952

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.5	26.2	18.2
<i>DO (mg/l)</i>	17	N/A	4	7	2.1	10.2	5.0
<i>*** pH (SU)</i>	17	N/A	6 to 9	2	5.0	7.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	72	260	150
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	18	2,000	64
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.3	13.0	7.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	7.0	26.0	12.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.24	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.56	1.63	0.99
<i>NO2_NO3_N (mg/l)</i>	12	3	N/A	N/A	0.02	0.42	0.13
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.63	0.27
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J5410000

Mill Creek @ SR 1200 (Richardson Bridge Road) near Cox Mill

Stream Class: C NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.342

Longitude: -78.2162

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.0	26.5	18.4
<i>DO (mg/l)</i>	17	N/A	4	0	5.1	9.9	6.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	2	5.3	7.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	73	143	103
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	28	6,300	122
<i>Suspended Residue (mg/l)</i>	12	4	N/A	N/A	2.5	26.0	6.2
<i>Turbidity (NTU)</i>	12	N/A	50	0	4.4	21.0	10.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.29	0.15
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.50	1.74	0.96
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.02	0.45	0.15
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.12	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5500000

Falling Creek @ SR 1219 (Old Grantham Road) near Grantham

Stream Class: WS-IV NSW

County: Wayne

Sub-Basin: 03020201

Latitude: 35.3224

Longitude: -78.1282

	N > Ref or N < RL				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.5	25.1	17.6
<i>DO (mg/l)</i>	17	N/A	4	4	2.6	9.9	5.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	4	5.8	6.8	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	84	195	134
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	15	3,500	103
<i>Suspended Residue (mg/l)</i>	12	7	N/A	N/A	2.5	28.0	5.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	2.8	45.0	9.1
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.09	0.52	0.24
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.57	1.44	1.08
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.03	0.81	0.26
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.03	0.50	0.13
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5630000

Little River @ SR 2320, Riley Road near Zebulon

Stream Class: HQW NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.8375

Longitude: -78.3599

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	15	N/A	N/A	N/A	8.1	27.0	19.4
<i>DO (mg/l)</i>	15	N/A	4	1	3.8	11.1	6.6
<i>*** pH (SU)</i>	15	N/A	6 to 9	1	5.7	7.1	N/A
<i>Conductivity (umhos/cm)</i>	15	0	N/A	N/A	61	136	88
<i>** Fecal Coliform (/100 mls)</i>	10	N/A	400	2	33	530	102
<i>Suspended Residue (mg/l)</i>	10	0	N/A	N/A	2.6	12.0	6.0
<i>Turbidity (NTU)</i>	10	N/A	50	0	2.8	22.0	9.6
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	10	0	N/A	N/A	0.05	0.30	0.13
<i>TKN_N (mg/l)</i>	10	0	N/A	N/A	0.54	1.52	0.96
<i>NO2_NO3_N (mg/l)</i>	10	0	10	0	0.02	0.20	0.11
<i>TP (mg/l)</i>	10	0	N/A	N/A	0.03	0.14	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>**** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5685000

Little River at Weaver Road near Bagley

Stream Class: WS-V NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5791

Longitude: -78.1723

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.1	26.7	18.3
<i>DO (mg/l)</i>	17	N/A	4	0	5.1	11.1	7.3
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.1	7.2	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	58	107	78
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	40	773	124
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	27.0	7.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.0	40.0	12.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.02	0.55	0.13
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.37	1.97	0.97
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.05	0.28	0.16
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.03	0.11	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5750000

Little River at SR 2339 (Bagley Road) near Lowell Mill

Stream Class: WS-V NSW

County: Johnston

Sub-Basin: 03020201

Latitude: 35.5613

Longitude: -78.1594

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	5.8	26.6	18.3
<i>DO (mg/l)</i>	17	N/A	4	0	5.1	13.0	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.4	7.8	N/A
<i>Conductivity (umhos/cm)</i>	17	1	N/A	N/A	50	153	89
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	38	618	113
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	27.0	8.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	4.3	31.0	13.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.19	0.09
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.29	2.08	1.13
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.05	0.30	0.21
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.20	0.09
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5790000

Buffalo Creek @ SR 2358 (Lake Glad Road) near Webdell, N.C. **Stream Class:** C NSW

County: Wake

Sub-Basin: 03020201

Latitude: 35.7697

Longitude: -78.7697

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	4.3	26.2	17.6
<i>DO (mg/l)</i>	17	N/A	4	0	4.5	11.0	7.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.8	7.1	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	50	146	78
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	76	2,100	248
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	13.0	8.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.1	26.0	10.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.19	0.11
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.48	1.70	0.96
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.07	0.35	0.13
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.08	0.05
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J5930000

Little River @ US 581 near Cherry Hospital

Stream Class: C NSW

County: Wayne

Sub-Basin: 03020201

Latitude: 35.393

Longitude: -78.0258

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.9	27.7	19.4
<i>DO (mg/l)</i>	17	N/A	4	0	4.8	10.2	7.3
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.9	7.3	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	55	166	111
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	44	6,800	193
<i>Suspended Residue (mg/l)</i>	12	3	N/A	N/A	2.5	54.0	13.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.4	50.0	14.6
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.06	0.60	0.23
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.56	1.35	0.99
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.17	0.52	0.32
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.26	0.12
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6010950

Walnut Creek @ SR 1730 (Saint Johns Church Road) near
Walnut Creek

Stream Class: C NSW

County: Wayne

Sub-Basin: 03020202

Latitude: 35.2817

Longitude: -77.8686

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.7	27.4	19.1
<i>DO (mg/l)</i>	17	N/A	4	0	4.8	10.5	7.0
<i>*** pH (SU)</i>	17	N/A	6 to 9	4	5.2	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	76	194	100
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	0	2	400	50
<i>Suspended Residue (mg/l)</i>	12	6	N/A	N/A	2.5	25.0	5.5
<i>Turbidity (NTU)</i>	12	N/A	50	0	1.3	11.0	4.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.06	0.18	0.13
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.40	1.43	0.78
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.15	1.26	0.72
<i>TP (mg/l)</i>	12	3	N/A	N/A	0.02	0.10	0.05
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6024000

Neuse River @ SR 1731 (Piney Grove Road) near Seven Springs **Stream Class:** C NSW

County: Wayne

Sub-Basin: 03020202

Latitude: 35.229

Longitude: -77.846

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.8	29.7	19.7
<i>DO (mg/l)</i>	17	N/A	4	0	4.7	11.8	7.6
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.2	8.0	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	71	280	148
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	15	4,100	109
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	1,450.0	136.5
<i>Turbidity (NTU)</i>	12	N/A	50	1	3.4	70.0	25.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.32	0.16
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.62	9.03	1.70
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.17	0.53	0.36
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	5.38	0.57
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6044400

Bear Creek at SR 1603, Washington Street near LaGrange

Stream Class: C Sw NSW

County: Lenoir

Sub-Basin: 03020202

Latitude: 35.3137

Longitude: -77.8153

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.4	25.6	17.8
<i>DO (mg/l)</i>	17	N/A	4	0	6.2	11.1	8.1
<i>*** pH (SU)</i>	17	N/A	6 to 9	3	5.8	6.7	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	93	141	123
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	26	746	179
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	36.0	12.3
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.4	29.0	12.6
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.25	0.16
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.68	2.09	1.32
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.85	2.68	1.93
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.54	0.17
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6044500

Bear Creek @ SR 1311 (Bear Creek Road) near Kinston

Stream Class: WS-IV Sw N

County: Lenoir

Sub-Basin: 03020202

Latitude: 35.2489

Longitude: -77.7843

	N > Ref or N < RL				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.2	25.8	17.9
<i>DO (mg/l)</i>	17	N/A	4	0	5.7	11.1	8.1
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.9	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	77	180	115
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	25	900	140
<i>Suspended Residue (mg/l)</i>	12	3	N/A	N/A	2.5	24.0	8.7
<i>Turbidity (NTU)</i>	12	N/A	50	0	1.6	26.0	10.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.09	0.44	0.19
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.51	1.97	1.06
<i>NO2_NO3_N (mg/l)</i>	12	0	10	0	0.77	2.83	1.70
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.41	0.17
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	25	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6055000

Mosley Creek @ SR 1327 (Willey Measley Road) near LaGrange **Stream Class:** C Sw NSW

County: Lenoir

Sub-Basin: 03020202

Latitude: 35.3119

Longitude: -77.7313

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.0	24.3	17.4
<i>DO (mg/l)</i>	17	N/A	4	0	5.9	10.8	8.0
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.8	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	100	160	123
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	7	131	809	370
<i>Suspended Residue (mg/l)</i>	12	3	N/A	N/A	2.5	20.0	6.8
<i>Turbidity (NTU)</i>	12	N/A	50	0	2.9	14.0	7.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.08	0.30	0.16
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.68	1.59	1.02
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	1.79	3.47	2.68
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.30	0.14
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6150000

Neuse River @ NC 11 Bypass at Kinston

Stream Class: C NSW

County: Lenoir

Sub-Basin: 03020202

Latitude: 35.2587

Longitude: -77.5835

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.8	30.0	20.0
<i>DO (mg/l)</i>	17	N/A	4	0	5.9	12.0	8.0
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.5	8.5	N/A
<i>Conductivity (umhos/cm)</i>	17	1	N/A	N/A	50	255	145
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	10	1,200	73
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	59.0	23.6
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.0	45.0	22.7
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.27	0.11
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.53	2.49	1.18
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.14	0.70	0.40
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.03	0.59	0.19
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6250000

Neuse River @ NC 55 near Graingers

Stream Class: C NSW

County: Lenoir

Sub-Basin: 03020202

Latitude: 35.2957

Longitude: -77.4962

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.6	29.8	19.8
<i>DO (mg/l)</i>	17	N/A	4	0	5.7	11.4	7.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.3	7.9	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	77	258	156
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	16	900	82
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	5.2	34.0	19.0
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.7	40.0	21.0
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.37	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.48	1.52	1.01
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.20	0.68	0.40
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.02	0.28	0.14
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6410000

Little Creek @ NC 97 near Zebulon

Stream Class: C NSW

County: Wake

Sub-Basin: 03020203

Latitude: 35.8279

Longitude: -78.3025

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.5	23.9	16.7
<i>DO (mg/l)</i>	17	N/A	4	3	2.8	9.4	6.7
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	5.0	7.1	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	82	141	101
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	9	60	3,700	690
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	17.0	6.9
<i>Turbidity (NTU)</i>	12	N/A	50	0	6.4	23.0	10.7
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.09	0.31	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.59	1.22	0.92
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.11	0.53	0.25
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.24	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6450000

Little Creek @ NC 39 near Zebulon

Stream Class: C NSW

County: Wake

Sub-Basin: 03020203

Latitude: 35.8125

Longitude: -78.2681

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.4	25.8	18.4
<i>DO (mg/l)</i>	17	N/A	4	0	5.9	10.4	8.2
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.5	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	102	574	310
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	46	2,300	208
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	61.0	21.1
<i>Turbidity (NTU)</i>	12	N/A	50	2	3.5	100.0	28.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.02	0.28	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.56	2.32	1.02
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.39	1.07	0.78
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.62	0.15
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6500000

Moccasin Creek @ SR 1131 (Antioch Church Road) near Conner **Stream Class:** C NSW

County: Wilson

Sub-Basin: 03020203

Latitude: 35.7301

Longitude: -78.1895

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.4	26.0	17.7
<i>DO (mg/l)</i>	17	N/A	4	1	3.8	11.1	7.3
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.6	7.6	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	61	174	107
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	33	818	117
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.3	22.0	8.1
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.0	40.0	12.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.33	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.69	2.24	1.13
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.02	0.20	0.11
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.15	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6680000

Turkey Creek @ SR 1101 (Claude Lewis Rodd) near Middlesex

Stream Class: C NSW

County: Nash

Sub-Basin: 03020203

Latitude: 35.7519

Longitude: -78.1597

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.4	26.8	18.0
<i>DO (mg/l)</i>	17	N/A	4	4	2.2	10.9	5.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.1	7.1	N/A
<i>Conductivity (umhos/cm)</i>	17	1	N/A	N/A	50	106	76
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	31	2,100	80
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.9	27.0	9.8
<i>Turbidity (NTU)</i>	12	N/A	50	0	9.9	34.0	15.4
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.38	0.14
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.87	1.61	1.24
<i>NO2_NO3_N (mg/l)</i>	12	1	N/A	N/A	0.02	0.25	0.10
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.02	0.12	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>**** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J6765000

Contentnea Creek at Willow Springs drive near Dixie

Stream Class: C Sw NSW

County: Wilson

Sub-Basin: 03020203

Latitude: 35.6838

Longitude: -77.941

	N > Ref or N < RL				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.2	28.9	20.4
<i>DO (mg/l)</i>	17	N/A	4	1	3.8	11.8	7.2
<i>*** pH (SU)</i>	17	N/A	6 to 9	1	3.8	7.4	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	67	107	79
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	21	2,800	109
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	6.4	172.0	28.3
<i>Turbidity (NTU)</i>	12	N/A	50	1	4.9	60.0	17.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.43	0.12
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.79	2.24	1.35
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.52	0.14
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.03	0.17	0.07
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J6890000

Contentnea Creek @ SR 1622 (Evansdale Road) near Wilson

Stream Class: C Sw NSW

County: Wilson

Sub-Basin: 03020203

Latitude: 35.6429

Longitude: -77.8902

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.1	28.7	20.1
<i>DO (mg/l)</i>	17	N/A	4	0	5.0	11.4	7.8
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.3	7.5	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	90	256	171
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	36	3,100	99
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	29.0	8.6
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.2	33.0	11.3
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.63	0.15
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.71	1.57	1.12
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.22	0.76	0.45
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.21	0.11
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7210000

Contentnea Creek @ NC 58 near Stantonburg

Stream Class: C Sw NSW

County: Wilson

Sub-Basin: 03020203

Latitude: 35.5861

Longitude: -77.8111

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.6	29.0	20.3
<i>DO (mg/l)</i>	17	N/A	4	1	3.7	10.6	6.9
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.1	7.3	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	72	251	143
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	64	1,900	164
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.7	21.0	8.5
<i>Turbidity (NTU)</i>	12	N/A	50	0	6.5	29.0	11.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.36	0.15
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.63	2.22	1.23
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.20	0.62	0.38
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	1.76	0.24
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7240000

Toisnot Swamp @ SR 1539 (Sand Pit Road) near Stantonsburg

Stream Class: C Sw NSW

County: Wilson

Sub-Basin: 03020203

Latitude: 35.5976

Longitude: -77.7947

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.0	26.9	18.2
<i>DO (mg/l)</i>	17	N/A	4	3	2.4	10.6	6.4
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.2	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	71	131	99
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	28	1,600	148
<i>Suspended Residue (mg/l)</i>	12	4	N/A	N/A	2.5	12.0	5.2
<i>Turbidity (NTU)</i>	12	N/A	50	0	4.2	22.0	10.1
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.27	0.13
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.46	1.58	1.15
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.46	0.20
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.29	0.11
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7325000

Nahunta Swamp @ NC 58 near Contentnea

Stream Class: C Sw NSW

County: Greene

Sub-Basin: 03020203

Latitude: 35.5081

Longitude: -77.7455

	N > Ref or N < Ref				Minimum	Maximum	* Average
	N	N < RL	Ref	N < Ref			
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.7	27.6	18.5
<i>DO (mg/l)</i>	17	N/A	4	0	4.5	10.8	7.9
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.4	7.2	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	70	130	109
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	3	86	1,200	251
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	19.0	6.7
<i>Turbidity (NTU)</i>	12	N/A	50	0	4.3	26.0	11.5
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.07	0.93	0.20
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.53	1.64	1.04
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.91	1.54	1.23
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.06	0.24	0.12
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

*Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.*

*** The Fecal Coliform average is a geometric mean.*

**** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions*

***** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.*

2023 LNBA Monitoring Report

Station J7330000

Contentnea Creek @ US 13 near Snow Hill

Stream Class: C Sw NSW

County: Greene

Sub-Basin: 03020203

Latitude: 35.4585

Longitude: -77.6753

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.3	28.3	20.1
<i>DO (mg/l)</i>	17	N/A	4	1	3.9	11.3	7.3
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.3	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	56	170	117
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	1	21	1,000	72
<i>Suspended Residue (mg/l)</i>	12	2	N/A	N/A	2.5	15.0	6.3
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.3	35.0	11.3
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.25	0.12
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.44	1.36	0.94
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.37	0.72	0.59
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.16	0.10
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7690000

Little Contentnea Creek @ SR 1218 (Chinquapin Road) near Farmville

Stream Class: C Sw NSW

County: Pitt

Sub-Basin: 03020203

Latitude: 35.5881

Longitude: -77.5416

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	8.0	27.4	18.2
<i>DO (mg/l)</i>	17	N/A	4	7	0.4	10.0	5.4
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.0	7.2	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	76	380	168
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	50	1,000	180
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.7	9.2	5.6
<i>Turbidity (NTU)</i>	12	N/A	50	0	4.3	16.0	9.8
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	1.66	0.37
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	1.04	2.62	1.67
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.29	2.31	0.69
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.85	0.29
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7740000

Little Contentnea Creek @ SR 1110 (HWY 903) near Scuffleton

Stream Class: C Sw NSW

County: Pitt

Sub-Basin: 03020203

Latitude: 35.4567

Longitude: -77.4854

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	7.4	27.0	18.9
<i>DO (mg/l)</i>	17	N/A	4	3	3.2	10.2	6.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.2	7.1	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	69	199	149
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	46	1,900	172
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	2.5	49.0	8.3
<i>Turbidity (NTU)</i>	12	N/A	50	0	5.7	21.0	10.2
<i>Chlorophyll-a (ug/l)</i>	0	0	40	0			
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.04	0.48	0.19
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.67	2.18	1.36
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.03	0.72	0.39
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.04	0.46	0.25
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>*** Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J7850000

Neuse River @ SR 1470 (Maple Cypress Road) at the boat ramp dock upstream of the bridge. **Stream Class:** C Sw NSW

County: Craven

Sub-Basin: 03020202

Latitude: 35.31368

Longitude: -77.30287

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.5	29.8	20.0
<i>DO (mg/l)</i>	17	N/A	4	0	5.2	11.4	7.5
<i>*** pH (SU)</i>	17	N/A	6 to 9	0	6.4	8.3	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	85	310	153
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	2	7	1,200	48
<i>Suspended Residue (mg/l)</i>	12	1	N/A	N/A	2.5	29.0	14.4
<i>Turbidity (NTU)</i>	12	N/A	50	0	3.8	33.0	17.4
<i>Chlorophyll-a (ug/l)</i>	12	0	40	0	1.00	25.84	6.34
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.05	0.26	0.12
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.62	1.49	0.98
<i>NO2_NO3_N (mg/l)</i>	12	0	N/A	N/A	0.21	0.68	0.41
<i>TP (mg/l)</i>	12	1	N/A	N/A	0.02	0.29	0.14
<i>Cadmium (ug/l)</i>	0	0	2	0			
<i>Chromium (ug/l)</i>	0	0	50	0			
<i>Copper (ug/l)</i>	0	0	7	0			
<i>Nickel (ug/l)</i>	0	0	88	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	50	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	N/A	N/A			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.012	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.

2023 LNBA Monitoring Report

Station J8870000

Trent River @ the Alfred Cunningham Drawbridge on E. Front Street, New Bern

Stream Class: SB Sw NSW

County: Craven

Sub-Basin: 03020204

Latitude: 35.10159

Longitude: -77.03708

	N	N<RL	Ref	N >Ref or N< Ref	Minimum	Maximum	* Average
<i>Temperature (C)</i>	17	N/A	N/A	N/A	6.5	29.3	20.3
<i>DO (mg/l)</i>	17	N/A	5	5	0.5	12.0	6.3
<i>*** pH (SU)</i>	17	N/A	6.8 to 8.5	0	6.8	8.1	N/A
<i>Conductivity (umhos/cm)</i>	17	0	N/A	N/A	1,704	24,968	12,674
<i>** Fecal Coliform (/100 mls)</i>	12	N/A	400	0	7	230	52
<i>Suspended Residue (mg/l)</i>	12	0	N/A	N/A	3.4	17.0	7.7
<i>Turbidity (NTU)</i>	12	N/A	25	2	2.7	55.0	13.6
<i>Chlorophyll-a (ug/l)</i>	12	0	40	3	3.72	48.08	22.84
<i>NH3_N (mg/l)</i>	12	0	N/A	N/A	0.06	0.48	0.20
<i>TKN_N (mg/l)</i>	12	0	N/A	N/A	0.67	1.63	1.25
<i>NO2_NO3_N (mg/l)</i>	12	2	10	0	0.02	0.31	0.15
<i>TP (mg/l)</i>	12	0	N/A	N/A	0.05	0.48	0.15
<i>Cadmium (ug/l)</i>	0	0	5	0			
<i>Chromium (ug/l)</i>	0	0	20	0			
<i>Copper (ug/l)</i>	0	0	3	0			
<i>Nickel (ug/l)</i>	0	0	8	0			
<i>Lead (ug/l)</i>	0	0	25	0			
<i>Zinc (ug/l)</i>	0	0	86	0			
<i>****Aluminum (ug/l)</i>	0	0	87	0			
<i>Iron (ug/l)</i>	0	0	1,000	0			
<i>Manganese (ug/l)</i>	0	0	200	0			
<i>Arsenic (ug/l)</i>	0	0	10	0			
<i>Mercury (ug/l)</i>	0	0	0.025	N/A			

Notes: * Results below the laboratory reporting limit (<RL) are included in the calculation as if they were at the reporting level.

** The Fecal Coliform average is a geometric mean.

*** Tidal salt waters classified as swamp waters may have a pH as low as 4.3 if it is the result of natural conditions

**** The aluminum reference level (Ref) is from the EPA's national recommended water quality criteria.