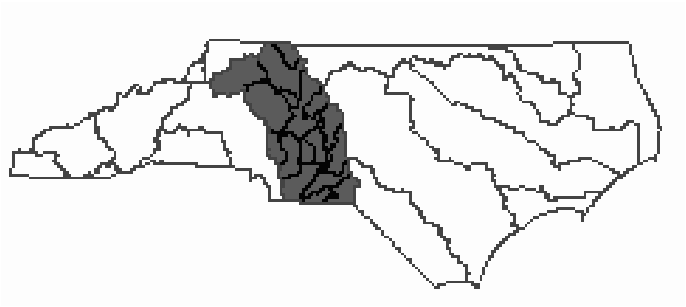
Memorandum of Agreement
Between
The State of North Carolina's Division of Water Quality
And
The Yadkin Pee Dee River Basin Association Permittees

**Effective:**
**August 1, 2008 through July 31, 2013**



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## MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (MOA) is made by and between the NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER QUALITY (the DWQ), the NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGERS in the Yadkin Pee-Dee River Basin who have voluntarily executed this MOA (the YPDRBA PERMITTEES), and the YADKIN PEE-DEE RIVER BASIN ASSOCIATION (the YPDRBA), a non-profit corporation whose members include the YPDRBA PERMITTEES. The MOA includes all the attached tables and appendices. This MOA does not affect any of the NPDES permit requirements of the YPDBRA PERMITTEES with the one exception of performing upstream and downstream water quality monitoring. The YPDRBA PERMITTEES are exempted from instream monitoring as specified in their individual NPDES permits beginning on the effective date of this MOA and continuing for the duration of each permittee's participation in this MOA. Subsequent to the execution of this MOA, the DWQ NPDES Unit will issue a letter to each YPDRBA PERMITTEE notifying the permittee that the instream monitoring requirements of its permit are suspended for as long as this MOA is in place and the permittee remains a party to this MOA.

The purpose of this MOA is to establish a formal agreement between the DWQ, the YPDRBA PERMITTEES, and the YPDRBA. This MOA authorizes the YPDRBA to act on behalf of the YPDRBA PERMITTEES as described herein. This MOA identifies the responsibilities of the YPDRBA PERMITTEES and the YPDRBA for surface water monitoring and reporting within the Yadkin Pee-Dee River Basin. The water quality monitoring will occur at strategically located surface water sites to obtain information on water quality in the basin. Monitoring sites and parameters were established by the DWQ, and are listed in Table A-1, such that the instream monitoring is efficient, effective, and basin-oriented.

The YPDRBA will perform the monitoring activities described herein on behalf of YPDRBA PERMITTEES who are members in good standing of YPDRBA. Each YPDRBA PERMITTEE agrees to remain a member in good standing of the YPDRBA and to make timely payment of annual YPDRBA dues for as long as it remains a party to this MOA. The YPDRBA shall subcontract, as necessary, with a laboratory appropriately certified by the DWQ for the required laboratory and field analyses. Sample collection and field measurements will be made by the YPDRBA PERMITTEES, the YPDRBA or a sub-contractor who will act as agent(s) of the YPDRBA PERMITTEES for the sole purpose of performing monitoring services required by this MOA. It will be the responsibility of the YPDRBA to coordinate the collection and analyses of the water quality monitoring data for the locations, parameters, and frequencies specified in Appendix A of this MOA. Sample collection, field measurements, and target reporting limits are specified in Appendix B of this MOA. Monthly and annual reporting requirements, including data format and data summaries are described in Appendix C of this MOA.

The YPDRBA shall submit the water quality data to the DWQ using the format documented in Appendix C of this MOA preferably in Microsoft® Excel version 2000, a subsequent version, or the equivalent. The YPDRBA shall submit the water quality data to the DWQ within 90 days of the end of the month in which the sampling was performed. All data shall be archived by the YPDRBA for a period of 10 years. Each YPDRBA PERMITTEE has the right to review and comment on work, data or reports prepared by any contractor on behalf of the YPDRBA PERMITTEES and to notify the DWQ of any objection or disagreement with any portion of the work, data, or reports. Unless such notice is made within thirty (30) days of submission of the annual report or other reports to the DWQ, it shall be deemed to be waived and the work, data and reports submitted shall be deemed to be approved by the YPDRBA PERMITTEES.

Failure by the YPDRBA PERMITTEES or the YPDRBA to collect or analyze the water quality data as described in this MOA or to provide the data to the DWQ in the required format may result in the revocation of this MOA by the DWQ and the return to individual upstream and downstream monitoring requirements, as specified in the individual NPDES permits of the YPDRBA PERMITTEES.

The YPDRBA shall submit an annual written report that summarizes the year's sampling results and formally finalizes the water quality data for the previous calendar year. The report shall be submitted no later than April 30th each year that this MOA is in effect. Appendix C of this MOA describes the required annual report content. Two copies, signed by the YPDRBA chairman, of these and any other reports required herein, shall be submitted to the DWQ Coalition Coordinator at the following address: 1621 Mail Service Center, Raleigh, NC 27699-1621.

Stream sampling may be temporarily suspended at such times as flow conditions in the receiving waters, extreme weather conditions, or other monitoring site conditions will result in a substantial risk of injury or death to persons collecting samples. Sampling may also be discontinued due to environmental conditions such as a dry stream. In such cases, on each day that sampling is discontinued, the DWQ coalition coordinator shall be notified within one week of the discontinuance and written justification for the discontinuance shall be required in the data submittal sheet of the month in which the event occurred. This provision shall not be utilized to avoid the requirements of this MOA when performance of these requirements is attainable. When there is a sampling discontinuance pursuant to this provision, sampling shall be resumed at the first opportunity after the risk period has ceased.

This MOA may be modified by the written consent of the DWQ and the YPDRBA. The DWQ or the YPDRBA may determine that it is necessary to request changes in monitoring frequency, parameters or sites to be sampled. Any such changes can only be made by a written amendment to this MOA agreed to by the DWQ and the YPDRBA. The amendment shall be signed by the YPDRBA chairman and by the DWQ director. Such amendments may be entered into at any time.

The following additional dischargers may enter into this MOA subsequent to the effective date hereof:

1) Dischargers who receive a NPDES permit within the Yadkin/Pee Dee River Basin.
2) Dischargers who have NPDES permits within the Yadkin/Pee Dee River Basin but are not parties to this Agreement.

The addition of such dischargers to this MOA may be made only with the consent of the DWQ and the YPDRBA and shall require a written amendment to this MOA signed by the YPDRBA chairman, the DWQ director, and an authorized representative of any such discharger who wishes to enter into the MOA. The DWQ will consider modification of the existing monitoring program described in this MOA with the addition of any discharger. Such amendments may be made at any time that this MOA is in effect.

This MOA shall be effective until July 31, 2013, unless extended by the consent of the DWQ and the YPDRBA. Upon 60 days written notice, the DWQ or the YPDRBA may terminate this MOA for any reason. Upon termination of this MOA, the monitoring requirements contained in the individual NPDES permit of each YPDRBA PERMITTEE shall become effective immediately. Any YPDRBA PERMITTEE may terminate and cancel its participation in this MOA by providing 60 days written notice to the YPDRBA, the DWQ Coalition Coordinator, the appropriate DWQ Regional Office, and the DWQ NPDES Unit. The monitoring requirements contained in the individual NPDES permit shall become effective immediately upon such cancellation or termination.

IN WITNESS WHEREOF, the parties have caused the execution of this instrument by authority duly given, to be effective as of the date executed by the DWQ.

**DIVISION OF WATER QUALITY**

By: received August 12, 2008

**Coleen H. Sullins**
**Director**
**Division of Water Quality**

Dated:_____

**YADKIN PEE-DEE RIVER BASIN ASSOCIATION**

By: received August 4, 2008

**Kim Hinson**
**Chairman**
**Yadkin Pee-Dee River Basin Association**

Dated:_____

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0004774 | Duke Energy Corporation<br>Buck Steam Station | received June 18, 2008<br>Thomas E. Rawe<br>Vice President<br>New Generation |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0004944 | Performance Fibers<br>Salisbury Plant | received June 11, 2008<br>Anthony Branecky<br>Facility Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0005266 | Louisiana Pacific Corporation<br>ABT Co. Mill | received June 30, 2008<br>Jim Reavis<br>Plant Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0020427 | City of Rockingham<br>Rockingham WWTP | received June 4, 2008<br>Monty Crump<br>City Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0020567 | Town of Elkin<br>Elkin WWTP | received June 9, 2008<br>Robert Fuller<br>Public Works Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0020591 | City of Statesville<br>Third Creek WWTP | received June 9, 2008<br>Joe Hudson<br>Director, Water Resources |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0020761 | Town of North Wilkesboro<br>Thurman Street WWTP | received June 9, 2008<br>Jimmy Martin<br>ORC |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021105 | Town of Mount Gilead<br>Mount Gilead WWTP | received July 15, 2008<br>Bryan Thompson<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021121 | City of Mount Airy<br>Mount Airy WWTP | received June 10, 2008<br>Kent Scott<br>Plant Supervisor |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021491 | Town of Mocksville<br>Dutchman's Creek WWTP | received July 15, 2008<br>Christine Sanders<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021580 | Town of Jonesville<br>Jonesville WWTP | received July 22, 2008<br>Scott Buffkin<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021717 | Town of Wilkesboro<br>Cub Creek WWTP | received June 30, 2008<br>Ken Noland<br>Town Manager |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0021784 | Town of Ellerbe<br>Ellerbe WWTP | received June 17, 2008<br>Lynn McCaskill<br>Mayor |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0023884 | City of Salisbury<br>Salisbury-Rowan WWTP | received July 8, 2008<br>David Treme<br>City Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0024112 | City of Thomasville<br>Hamby Creek WWTP | received June 10, 2008<br>Morgan Huffman<br>Public Services Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0024228 | City of High Point<br>Westside WWTP | received July 1, 2008<br>Terry Houk<br>Assistant Director of Public Services |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0024333 | City of Monroe<br>Monroe WWTP | received June 9, 2008<br>Russell Colbath<br>Director of Water Resources |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0024872 | Davie County Water System<br>Cooleemee WWTP | received August 1, 2008<br>Terry Bralley<br>County Manager |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0026646 | Town of Pilot Mountain<br>Pilot Mountain WWTP | received June 9, 2008<br>Blair Knox<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0026689 | Town of Denton<br>Denton WWTP | received July 21, 2008<br>F.E. Isenhour, Jr.<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0030210 | Charlotte-Mecklenburg Utilities<br>Mallard Creek WWTP | received July 10, 2008<br>Barry Gullet<br>Deputy Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0031836 | City of Statesville<br>Fourth Creek WWTP | received June 9, 2008<br>Joe Hudson<br>Director of Water Resources |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0036269 | Water & Sewer Authority of Cabarrus Co.<br>Rocky River WWTP | received June 13, 2008<br>Coleman Keeter<br>Executive Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0037834 | City of Winston-Salem<br>Archie Elledge WWTP | received June 9, 2008<br>David K. Saunders<br>City/County Utilities Director |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0041408 | Anson County<br>Anson County Regional WWTP | received July 10, 2008<br>Vance Gulledge<br>Utilities Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0043320 | Burlington Industries<br>Richmond Plant | received June 30, 2008<br>Robert Fariole<br>Director of Corporate Engineering |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0043532 | Town of Oakboro<br>Oakboro WWTP | received July 21, 2008<br>Joyce Little<br>Mayor |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0046728 | Town of Mooresville -<br>Mooresville WWTP | received June 30, 2008<br>John C. Vest<br>Public Services Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0049867 | Town of Cleveland<br>Cleveland WWTP | received June 6, 2008<br>James A. Brown<br>Mayor |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0050342 | City of Winston-Salem<br>Muddy Creek WWTP | received June 9, 2008<br>David K. Saunders<br>City/County Utilities Director |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0050903 | Town of Mocksville<br>Bear Creek WWTP | received July 15, 2008<br>Christine Sanders<br>Town Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0055786 | City of Lexington<br>Lexington Regional WWTP | received June 17, 2008<br>John T. Walser, Jr.<br>Mayor |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0069523 | Union Co. Public Works Department<br>Tallwood Estates WWTP | received July 30, 2008<br>Al Greene<br>County Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0069841 | Union Co. Public Works Department<br>Crooked Creek WWTP #2 | received July 30, 2008<br>Al Greene<br>County Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0072508 | Union Co. Public Works Department<br>Hunley Creek WWTP | received July 30, 2008<br>Al Greene<br>County Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0074756 | Greater Badin Water & Sewer District<br>Badin WWTP | received July 3, 2008<br>Donna Davis<br>Director of Stanly County Utilities |

## YPDRBA PERMITEE SIGNATURES

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0078361 | City of Salisbury<br>Second Creek WWTP | received July 8, 2008<br>David Treme<br>City Manager |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0081621 | Water & Sewer Authority of Cabarrus Co.<br>Muddy Creek WWTP | received June 13, 2008<br>Coleman Keeter<br>Executive Director |

| NPDES Permit Number | Permittee | Signature |
|---|---|---|
| NC0085812 | Union Co. Public Works Department<br>Grassy Branch WWTP | received July 30, 2008<br>Al Greene<br>County Manager |

## Table 1. YPDRBA PERMITTEES in Basin Order

| NPDES Permit Number | Yadkin Pee Dee River Basin Association Permittees Ownership and Facility | Authorized Representative and Title | County | Region | 8 Digit HUC |
|---|---|---|---|---|---|
| NC0005266 | Louisiana Pacific Corporation - ABTCo Mill | Jim Reavis, Plant Manager | Wilkes | WSRO | 03040101 |
| NC0020761 | Town of North Wilkesboro - Thurman Street WWTP | Jimmy Martin, ORC | Wilkes | WSRO | 03040101 |
| NC0021717 | Town of Wilkesboro - Cub Creek WWTP | Ken Nowland, Town Manager | Wilkes | WSRO | 03040101 |
| NC0020567 | Town of Elkin - Elkin WWTP | Robert S. Fuller, Public Works Director | Surry | WSRO | 03040101 |
| NC0021580 | Town of Jonesville - Jonesville WWTP | Scott Buffkin, Town Manager | Yadkin | WSRO | 03040101 |
| NC0021121 | City of Mount Airy - Mount Airy WWTP | Kent Scott, Plant Supervisor | Surry | WSRO | 03040101 |
| NC0026646 | Town of Pilot Mountain - Pilot Mountain WWTP | Blair Knox, Town Manager | Surry | WSRO | 03040101 |
| NC0037834 | City of Winston-Salem - Archie Elledge WWTP | David K. Saunders, City/County Utilities Director | Forsyth | WSRO | 03040101 |
| NC0050342 | City of Winston-Salem - Muddy Creek WWTP | David K. Saunders, City/County Utilities Director | Forsyth | WSRO | 03040101 |
| NC0023884 | City of Salisbury – Salisbury-Rowan Creek WWTP | David Treme, City Manager | Rowan | MRO | 03040103 |
| NC0021491 | Town of Mocksville - Dutchman's Creek WWTP | Christine Sanders, Town Manager | Davie | WSRO | 03040101 |
| NC0024872 | Davie County Water System – Cooleemee WWTP | Terry L. Bralley, County Manager | Davie | WSRO | 03040102 |
| NC0050903 | Town of Mocksville - Bear Creek WWTP | Christine Sanders, Town Manager | Davie | WSRO | 03040102 |
| NC0004774 | Duke Energy Corporation - Buck Steam Station | Thomas E. Rawe, Vice President New Generation | Rowan | WSRO | 03040103 |
| NC0078361 | City of Salisbury - Second Creek WWTP | David Treme, City Manager | Rowan | MRO | 03040102 |
| NC0004944 | Performance Fibers - Salisbury Plant | Anthony Branecky, Facility Manager | Rowan | MRO | 03040102 |
| NC0031836 | City of Statesville - Fourth Creek WWTP | Joe Hudson, Director Water Resources | Iredell | MRO | 03040102 |
| NC0020591 | City of Statesville - Third Creek WWTP | Joe Hudson, Director Water Resources | Iredell | MRO | 03040102 |
| NC0049867 | Town of Cleveland –Cleveland WWTP | James A Brown, Mayor | Rowan | MRO | 03040102 |
| NC0024228 | City of High Point - Westside WWTP | Terry Houk, Assistant Director of Public Services | Davidson | WSRO | 03040103 |
| NC0024112 | City of Thomasville | Morgan Huffman, Public Services Director | Davidson | SWRO | 03040103 |

(Continued on next page)

## Table 1. Continued - YPDRBA PERMITTEES in Basin Order

| NPDES Permit Number | Yadkin Pee Dee River Basin Association Permittees Ownership and Facility | Authorized Representative and Title | County | Region | 8 Digit HUC |
|---|---|---|---|---|---|
| NC0055786 | City of Lexington - Lexington Regional WWTP | John T. Walser, Jr., Mayor | Davidson | WSRO | 03040103 |
| NC0026689 | Town of Denton - Denton WWTP | Michael High, Superintendent of Water and Wastewater | Davidson | WSRO | 03040103 |
| NC0074756 | Greater Badin Water and Sewer District - Badin WWTP | Donna Davis, Stanly County Utilities Director | Stanley | MRO | 03040104 |
| NC0021105 | Town of Mount Gilead - Mount Gilead WWTP | Bryan Thompson, Town Manager | Montgomery | FRO | 03040104 |
| NC0021784 | Town of Ellerbe - Ellerbe WWTP | Lynn McCaskill, Mayor | Richmond | FRO | 03040201 |
| NC0030210 | Charlotte-Mecklenburg Utilities - Mallard Creek WWTP | Barry Gullet, Deputy Director | Mecklenburg | MRO | 03040105 |
| NC0046728 | Town of Mooresville - Mooresville WWTP | John C Vest, Public Services Director | Iredell | MRO | 03040105 |
| NC0085812 | Union County Public Works Department - Grassy Branch WWTP | Richard Black, Interim County Manager | Union | MRO | 03040105 |
| NC0072508 | Union County Public Works Department - Hunley Creek WWTP | Richard Black, Interim County Manager | Union | MRO | 03040105 |
| NC0069523 | Union County Public Works Department - Tallwood Estates WWTP | Richard Black, Interim County Manager | Union | MRO | 03040105 |
| NC0036269 | Water and Sewer Authority of Cabarrus County - Rocky River WWTP | Coleman Keeter, Executive Director | Cabarrus | MRO | 03040105 |
| NC0081621 | Water and Sewer Authority of Cabarrus County - Muddy Creek WWTP | Coleman Keeter, Executive Director | Cabarrus | MRO | 03040105 |
| NC0043532 | Town of Oakboro - Oakboro WWTP | Joyce Little, Mayor | Stanley | MRO | 03040105 |
| NC0024333 | City of Monroe - Monroe WWTP | Russell Colbath, Director of Water Resources | Union | MRO | 03040105 |
| NC0069841 | Union County Public Works Department - Crooked Creek WWTP #2 | Richard Black, Interim County Manager | Union | MRO | 03040105 |
| NC0041408 | Anson County - Anson County Regional WWTP | Vance E. Gulledge, Utilities Director | Anson | FRO | 03040201 |
| NC0043320 | Burlington Industries – Richmond | Robert Fariole, Director of Corporate Engineering | Richmond | FRO | 03040201 |
| NC0020427 | City of Rockingham - Rockingham WWTP | Monty R. Crump, City Manager | Richmond | FRO | 03040201 |

## APPENDIX A - YPDRBA MONITORING PROGRAM

### Table A-1 YPDRBA Sampling Stations, Parameters and Sampling Frequency

| NC DWQ Station Number | Sampling Station Location | Station Comments | Latitude (dd.dddd) | Longitude (dd.dddd) | 8 digit HUC | Stream Classification | Field Measurements: Temp, DO, pH, Conductivity | *Nutrients: $NH_3$, $NO_2$+$NO_3$, TKN, TP | **Metals: Al, As, Cd, Total Cr, Cu, Fe, Hg, Ni, Mn, Pb, Zn | Turbidity | Suspended Residue | Chlorophyll *a* | Bacteria: Fecal Coliform |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q0360000 | Reddies River at SR 1517 at N. Wilkesboro | Significant Tributary, USGS gauge | 36.1748 | -81.1694 | 03040101 | WS-II CA | M+2SM | M | | M | M | | M |
| Q0450000 | Yadkin River at Bus NC 421 (Statesville Rd.) in N. Wilkesboro | Dns of Wilkesboro and N. Wilkesboro WWTPs ,DWQ ambient station | 36.1659 | -81.1344 | 03040101 | C | M+2SM | M | Q | M | | | M |
| Q0720000 | Yadkin River at SR 2303 (Clingman Rd.) nr Ronda | Dns of ABT-Co (major) | 36.2154 | -80.9367 | 03040101 | WS-IV | M+2SM | M | Q | M | | | M |
| Q1065000 | Mitchell River at SR 1001 (Popular Springs Rd.) | DWQ benthic site, significant tributary to Yadkin River, USGS gauge | 36.3115 | -80.8071 | 03040101 | C | M+2SM | M | | M | M | | M |
| Q1215000 | Fisher River at NC 268 nr Fairview | DWQ benthic site, dns of Wayne Poultry | 36.3395 | -80.6852 | 03040101 | C | M+2SM | M | | M | M | | M |
| Q1350000 | Yadkin River at SR 1003 nr Siloam | Ups of Ararat River, DWQ benthic site | 36.2824 | -80.5622 | 03040101 | C | M+2SM | M | Q | M | M | | M |
| Q1500000 | Ararat River at Hwy 52 S. Bypass nr Mt Airy | Ups of Mt. Airy WWTP | 36.4799 | -80.6004 | 03040101 | C | M+2SM | | | M | | | M |
| Q1550000 | Ararat River at WWTP Road at Mt. Airy WWTP | Dns of Mt. Airy WWTP | 36.4770 | -80.6045 | 03040101 | C | M+2SM | | | M | | | M |
| Q1725000 | Ararat River at SR 2119 (Sheep Farm Rd.) nr Mt Airy | Ups Pilot Mtn. WWTP, below Stewarts Creek | 36.4517 | -80.6092 | 03040101 | C | M+2SM | | | M | | | M |
| Q1935000 | Ararat River at SR 2044 nr Pilot Mountain | Dns Pilot Mtn. WWTP | 36.36402 | -80.5399 | 03040101 | C | M+2SM | | | M | | | M |
| Q2120000 | N Deep Creek at SR 1510 (Styres Mill Rd.) nr Yadkinville | Dns of Yadkinville WWTP, DWQ benthic site | 36.1259 | -80.5918 | 03040101 | C | M+2SM | | | M | | | M |
| Q2135000 | S Deep Creek at SR 1733 (Old Stage Rd.) nr Shacktown | Dns of proposed drinking water impoundment (ups of Cranberry Creek) for Yadkinville water supply | 36.1065 | -80.5877 | 03040101 | WS-IV | M+2SM | | | M | | | M |
| Q2180000 | Yadkin River at US 158 at Clemmons | Ups of Muddy Creek WWTP discharge, dns of Deep Creek | 36.0144 | -80.4164 | 03040101 | WS-IV | M+2SM | M | Q | M | M | | M |
| Q2291000 | Muddy Creek at I40 nr Clemmons | Above Silas and Little Creeks | 36.0470 | -80.3662 | 03040101 | C | M+2SM | | Q | M | | | M |
| Q2479455 | Salem Creek at SR 2740 (Reynolds Park Rd.) in Winston Salem | Below Salem Lake, urban | 36.0884 | -80.2121 | 03040101 | C | M+2SM | | Q | M | | | M |
| Q2540000 | Salem Creek at SR 1120 (Clemmonsville Rd.) at Winston Salem | Ups of Archie Elledge WWTP | 36.0312 | -80.3137 | 03040101 | C | M+2SM | M | | M | | | M |
| Q2570000 | Salem Creek at SR 2991 (Fraternity Church Rd.) nr Winston Salem | Below Archie Elledge WWTP, DWQ benthic site, urban | 36.0086 | -80.3353 | 03040101 | C | M+2SM | M | Q | M | | | M |
| Q2720000 | Muddy Creek at SR 1485 (Hampton Rd. nr Old Mill) nr Winston Salem | Muddy Creek above confluence with Yadkin River, Dns of Muddy Creek WWTP (outfall 02) | 35.9402 | -80.3580 | 03040101 | C | M+2SM | M | | M | | | M |
| Q2810000 | Yadkin River at US 64 at Yadkin College | Dns of Muddy Creek WWTP, DWQ ambient station, USGS gauge | 35.8570 | -80.3863 | 03040101 | WS-IV CA | M+2SM | M | Q | M | M | | M |
| Q3105000 | Dutchmans Creek at US 64 nr Mocksville | Dns of Mocksville Dutchmans Creek WWTP | 35.8811 | -80.5012 | 03040101 | WS-IV | M+2SM | | | M | | | M |
| Q3555000 | Bear Creek at SR 1116 (Junction Rd.) nr Mocksville | Dns of Town of Mocksville Bear Creek WWTP, DWQ benthic site | 35.8256 | -80.5852 | 03040102 | WS-IV | M+2SM | | Q | M | | | M |
| Q3720000 | Fourth Creek at SR 2316 (Bell Farm Rd.) nr Statesville | Ups of Statesville Fourth Creek WWTP | 35.7761 | -80.7958 | 03040102 | C | M+2SM | | | M | | | M |
| Q3735000 | Fourth Creek at SR 2308 (Elmwood Rd.) nr Elmwood | ,Dns of Statesville Fourth Creek WWTP, DWQ ambient station, DWQ fish site | 35.7685 | -80.7499 | 03040102 | C | M+2SM | | | M | | | M |
| Q3900000 | Third Creek at SR 2342 (Amity Hill Rd.) nr Statesville | Ups of Third Creek WWTP | 35.7492 | -80.8775 | 03040102 | C | M+2SM | | | M | | | M |
| Q3932000 | Third Creek at SR 2359 (Bethesda Rd.) nr Statesville | Dns of Statesville Third Creek WWTP | 35.7330 | -80.8039 | 03040102 | C | M+2SM | | | M | | | M |
| Q3970000 | S Yadkin River at US 601 nr Cooleemee | Dns of Cooleemee WWTP, significant tributary | 35.7784 | -80.5067 | 03040102 | C | M+2SM | M | Q | M | M | | M |
| Q4030000 | Second Creek at Hwy 801- Sherrills Ford Rd (SR 1526) nr Salisbury | Ups of KoSa and 2nd Creek. WWTP and above Beaverdam Creek, DWQ benthic and fish site | 35.6970 | -80.6117 | 03040102 | C | M+2SM | | Q | M | | | M |
| Q4165000 | Second Creek at US 601 nr Salisbury | Dns of KoSa and 2nd Creek WWTP | 35.7625 | -80.5108 | 03040102 | C | M+2SM | | Q | M | | | M |
| Q4540000 | Grants Creek at SR 1915 (Hollywood Dr.) nr Salisbury | Significant tributary, urban, DWQ ambient station | 35.7072 | -80.4361 | 03040103 | C | M+2SM | | | M | | | M |
| Q4660000 | Yadkin River at NC 150 nr Spencer | Dns of Salisbury-Rowan WWTP Discharge, Ups of Buck Steam Station, DWQ ambient station | 35.7230 | -80.3905 | 03040103 | WS-V | M+2SM | M | | M | | SM | M |
| Q5135000 | Swearing Creek at SR 1272 (Jersey Church Rd.) nr Linwood | Ups of High Rock Lake, urban drainage | 35.7291 | -80.3049 | 03040103 | C | M+2SM | | | M | | | M |
| Q5210000 | Town Creek at SR 1915 (Andrew St.) nr Spencer | urban | 35.6787 | -80.4158 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5750000 | Rich Fork Creek at SR 1755 (W. Lexington Ave.) nr High Point | Ups of High Point West Side WWTP | 35.9489 | -80.1017 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5785000 | Rich Fork Creek at SR 1787 (Kanoy Rd.) nr High Point | Ups of Hunts Fork Creek, dns of High Point West Side WWTP | 35.8984 | -80.1454 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5790000 | Rich Fork Creek at SR 2123 (Old Hwy 29) between Thomasville and Lexington | Ups of Abbots Creek | 35.8543 | -80.1822 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5860000 | North Hamby Creek at SR 2775 (Old Emanuel Church Rd) nr Thomasville | Ups Thomasville WWTP | 35.8500 | -80.1063 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5940000 | Abbotts Creek at I 85 nr Lexington | Ups of Lexington Regional WWTP | 35.7873 | -80.2357 | 03040103 | C | M+2SM | M | | M | | | M |
| Q5970000 | Abbotts Creek at NC 47 nr Cotton Grove | At High Rock Lake, dns of Lexington Regional WWTP, DWQ ambient station | 35.7479 | -80.2414 | 03040103 | WS-V+B | M+2SM | M | Q | M | | SM | M |

## Table A-1 Continued - YPDRBA Sampling Stations, Parameters and Sampling Frequency

| NC DWQ Station Number | Sampling Station Location | Station Comments | Latitude (dd.dddd) | Longitude (dd.dddd) | 8 digit HUC | Stream Classification | Field Measurements: Temp, DO, pH, Conductivity | *Nutrients: NH3, NO2+NO3, TKN, TP | **Metals: Al, As, Cd, Total Cr, Cu, Fe, Hg, Ni, Mn, Pb, Zn | Turbidity | Suspended Residue | Chlorophyll *a* | Bacteria: Fecal Coliform |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q6120000 | Yadkin River at SR 1002 (Stokes Ferry Rd.) at High Rock | Dns of High Rock Lake Dam, DWQ ambient station | 35.5962 | -80.2325 | 03040103 | WS-IV B, CA | M+2SM | M | Q | M | M | SM | M |
| Q6140000 | Lick Creek at SR 1002 nr Healing Springs | Dns Denton WWTP | 35.6164 | -80.1754 | 03040103 | C | M+2SM | | | M | | | M |
| Q6705000 | Uwharrie River at NC 49 nr Farmer | Significant Tributary | 35.6421 | -79.9650 | 03040103 | C | M+2SM | | | M | | | M |
| Q6930000 | Little Mountain Creek at SR 1720 (Valley Rd.) nr Badin | Dns of Badin WWTP, DWQ fish site | 35.38122 | -80.11285 | 03040104 | WS-IV | M+2SM | M | | M | | | M |
| Q6960000 | Lake Tillery at Boat Ramp in Morrow Mt. State Park Off NC 1730. | Pee Dee River at Boat Ramp in Morrow Mtn. State Park, Lake Tillery below Badin Lake. At this location the Yadkin and Uwharrie Rivers meet to form the Pee Dee River. | 35.3797 | -80.0613 | 03040104 | WS-IV CA | M+2SM | M | | M | | SM | M |
| Q7030000 | Pee Dee River at NC 24, 27 and 73 nr Albemarle | Lake Tillery | 35.3083 | -80.0797 | 03040104 | WS-IV B | M+2SM | M | | M | M | SM | M |
| Q7210000 | Clarks Creek at SR 1187 (Tillery Dam Rd.) nr Mount Gilead | | 35.2044 | -80.0575 | 03040104 | C | M+2SM | | | M | | | M |
| Q7330000 | Rocky River at SR 2420 (E. Rocky River Rd.) nr Davidson | Dns Rocky River WWTP (Mooresville), DWQ ambient station, DWQ benthic site | 35.4749 | -80.7795 | 03040105 | C | M+2SM | M | | M | | | M |
| Q7450000 | Rocky River at US 29 nr Harrisburg | Below confluence of E and W branches of Rocky River, ups of Mallard Creek | 35.3586 | -80.6766 | 03040105 | C | M+2SM | | | M | | | M |
| Q7550000 | Mallard Creek at Pavillion Rd. nr Harrisburg | Ups of Mallard Creek WWTP (CMUD), USGS gauge | 35.3323 | -80.7157 | 03040105 | C | M+2SM | M | Q | M | | | M |
| Q7570000 | Mallard Creek at Morehead Rd (SR 1300) nr Harrisburg | Dns of Mallard Creek WWTP (CMUD), DWQ fish site | 35.3338 | -80.6682 | 03040105 | C | M+2SM | M | Q | M | | | M |
| Q7600000 | Rocky River at SR 1304 (Roberta Rd.) nr Harrisburg | Dns of Mallard, Back, and Reedy Creeks | 35.3345 | -80.6444 | 03040105 | C | M+2SM | M | Q | M | | | M |
| Q7700000 | Coddle Creek at SR 1304 (Roberta Rd.) nr Roberta Mill | Significant tributary | 35.3424 | -80.6120 | 03040105 | C | M+2SM | | | M | | | M |
| Q7780000 | Rocky River at SR 1132 (Flowes Store Rd.) nr Harrisburg | Ups Rocky River WWTP, Dns of Coddle Creek and Reedy Creek | 35.3244 | -80.5603 | 03040105 | C | M+2SM | M | | M | | | M |
| Q8200000 | Cold Water Creek at SR 1132 (Miami Church Rd.) nr Concord | Significant tributary, urban impacts | 35.3624 | -80.5303 | 03040105 | C | M+2SM | | | M | | | M |
| Q8210000 | Rocky River at US 601 nr Concord | Dns of Rocky River WWTP, DWQ benthic site | 35.3245 | -80.5154 | 03040105 | C | M+2SM | M | | M | | | M |
| Q8341000 | Clear Creek at SR 1118 (Ben Black Rd.) nr Brief | Ups Tallwood Estates WWTP | 35.2163 | -80.5456 | 03040105 | C | M+2SM | | | M | | | M |
| Q8342000 | Clear Creek at US 601 nr Brief | Dns Tallwood Estates, significant tributary | 35.1947 | -80.5293 | 03040105 | C | M+2SM | | | M | | | M |
| Q8355000 | Rocky River at SR 1114 (Garmon Mill Rd.) nr Midland | Ups of Muddy Creek WWTP (WSACC) | 35.2212 | -80.4871 | 03040105 | C | M+2SM | M | Q | M | M | | M |
| Q8359500 | Goose Creek in Hunley Creek. Subdivision | Ups of former Hunley Creek WWTP | 35.1386 | -80.6336 | 03040105 | C | M+2SM | M | | M | M | | M |
| Q8360000 | Goose Creek at SR 1524 (Stevens Mill Rd.) nr Mint Hill | DWQ ambient station, dns former Hunley Creek WWTP | 35.1309 | -80.6311 | 03040105 | C | M+2SM | | | M | | | M |
| Q8385000 | Rocky River at SR 1606 (Sykes Mill Rd.) nr Fairview Crossroads | Dns of Goose Creek, ups Crooked Creek, USGS gauge | 35.1699 | -80.4728 | 03040105 | C | M+2SM | M | Q | M | | | M |
| Q8386000 | N Fork Crooked Creek at SR 1520 (Indian Trail-Fairview Rd.) nr Monroe | Ups of Crooked Creek WWTP (Union County) | 35.1079 | -80.6154 | 03040105 | C | M+2SM | | | M | | | M |
| Q8386200 | N Fork Crooked Creek at SR 1514 (Rocky River Rd.) nr Monroe | Dns of Crooked Creek WWTP (Union County) | 35.1024 | -80.5843 | 03040105 | C | M+2SM | | | M | | | M |
| Q8388000 | Crooked Creek at NC 218 nr Fairview Crossroads | Dns of Grassy Branch WWTP (Union County) | 35.1330 | -80.4896 | 03040105 | C | M+2SM | | | M | | | M |
| Q8388900 | Crooked Creek at SR 1601 (Unionville-Brief Rd.) nr Fairview Crossroads | Ups of Grassy Branch WWTP (Union County) | 35.1381 | -80.5054 | 03040105 | C | M+2SM | | | M | | | M |
| Q8715000 | Long Creek at SR 1968 (Hartsell Rd.) nr Oakboro | | 35.2667 | -80.2569 | 03040105 | C | M+2SM | | | M | | | M |
| Q8800000 | Richardson Creek at SR 1751 (Walkup Ave.) at Monroe | Ups of Monroe WWTP, urban stream | 34.9897 | -80.5097 | 03040105 | C | M+2SM | M | | M | | | M |
| Q8820000 | Richardson Creek at SR 1006 (Olie Branch Rd.) nr Monroe | Dns of Monroe WWTP | 35.0322 | -80.4716 | 03040105 | C | M+2SM | M | | M | | | M |
| Q9021300 | Lanes Creek at SR 1005 (Landsford Rd.) nr Marshville | Significant tributary to Rocky River, concentration of animal operations | 34.9227 | -80.3421 | 03040105 | WS-V | M+2SM | M | Q | M | M | | M |
| Q9320000 | Little River at SR 1148 (Grassy Island Rd.) nr Ellerbe | Ups of Pee Dee River, Significant tributary | 35.1063 | -79.8989 | 03040104 | WS-IV | M+2SM | | | M | | | M |
| Q9340000 | Toms Branch at SR 1310 (Bennett Rd.) nr Ellerbe | Dns of Town of Ellerbe WWTP | 35.0878 | -79.7894 | 03040104 | C | M+2SM | | | M | | | M |
| Q9400000 | Pee Dee River at US 74 nr Rockingham | Ups Rockingham and Anson County Regional WWTPs, DWQ ambient station, USGS gauge | 34.9457 | -79.8691 | 03040201 | C | M+2SM | M | Q | M | M | | M |

*Nutrients include Ammonia as N ($NH_3$), Nitrate/Nitrite as N ($NO_2/NO_3$), Total Kjeldahl Nitrogen (TKN), and total Phosphorus as P

**Metals analysis will include the following metals: Aluminum (Al), Arsenic (As), Cadmium (Cd), Chromium (Cr) (total), Copper (Cu), Iron (Fe), Lead (Pb), Manganese (Mn), Mercury (Hg), Nickel (Ni), and Zinc (Zn). Metals monitoring was suspended per DWQ April 2008 letter at the agreement of DWQ and YPDRBA.

M=Monthly M+2SM=Monthly with Twice Monthly Summer Sampling (May, June, July, August, and September ). Samples shall be collected at least ten days apart except when extenuating circumstances arise such as inclement weather or other emergency situations.

ups=upstream, dns=downstream

## APPENDIX B- SAMPLE COLLECTION AND ANALYSIS

**Sample Collection Procedures**

Sample collection shall be performed by trained personnel employed with NC DWQ certified laboratories and in accordance with the DWQ NPDES Discharge Monitoring Coalition Program Field Monitoring Guidance document.

**Laboratory and Field Analysis**

All laboratory and field analyses shall be performed by a DWQ certified laboratory using approved methods as prescribed by 40 CFR, part 136 or other methods certifiable by the DWQ Laboratory Certification Branch (http://h2o.enr.state.nc.us/lab/cert.htm) or the Director of DWQ. Section 40 of the Code of Federal Regulations part 136 (40CFR136) can be accessed on the web at http://h2o.enr.state.nc.us/lab/MethodsUpdateRuleMUR.htm.

Reporting levels will be at least as stringent as the target reporting levels achieved by the DWQ laboratory. For guidance purposes table B-1 lists a target reporting level for each parameter. The lowest possible analytical limits for all the parameters should be pursued.

**Table B-1 Target Reporting Limits**

| Parameters | Target Reporting Level | Comments |
|---|---|---|
| Temperature | | Resolution to 0.1 degree Celsius |
| Dissolved Oxygen | | Report results to the nearest 0.1 mg/l. |
| pH | | Report results to the nearest 0.1 SU. |
| Specific Conductivity | | Report results to the nearest whole µmho/cm at 25 ºC. |
| Turbidity | 1.0 NTU | |
| Suspended Residue | 1.0 mg/L | |

**Table B-1 Continued -DWQ Laboratory Reporting Limits and Methods**

| Parameters | Target Reporting Level | Comments |
|---|---|---|
| Fecal Coliform | 1 colony/100 mL | Use at least 3 dilutions to achieve optimum colony counts of 20-60 colonies per membrane filter |
| Chlorophyll a | 1 µg/L | Analysis by HPLC is not approved by DWQ. |
| Ammonia ($NH_3$ as N) | 0.02 mg/L | Address distillation requirement. See 40CFR136 Table 1B footnote. |
| Nitrate/Nitrite ($NO_2$/$NO_3$) as N | 0.02 mg/L | |
| Total Kjeldahl Nitrogen (TKN) as N | 0.20 mg/L | |
| Total Phosphorus (TP) | 0.02 mg/L | |
| Al | 50 µg/L | |
| As | 5 µg/L | |
| Cd | 1 µg/L | |
| Cr | 10 µg/L | |
| Cu | 2 µg/L | |
| Fe | 50 µg/L | |
| Pb | 10 µg/L | |
| Mn | 10 µg/L | |
| Hg | 0.2 µg/L | |
| Ni | 10 µg/L | |
| Zn | 10 µg/L | |

**Data Remarks Codes**

When reporting data, the DWQ's data remark codes must be used to provide additional information regarding data quality and interpretation. The current set (codes are subject to change) of remark codes to be used is provided in Table B-2. Review the data remark codes at least once a year and utilize the most current set being utilized by the DWQ laboratory. Use the following website to check for changes in the remark codes: http://h2o.enr.state.nc.us/lab/qa.htm.

**Table B-2 Data Remark Codes for Use with Coalition Data as of May 6, 2008**

| Data Remark Code | Code Definition |
|---|---|
| **A** | Value reported is the mean (average) of two or more determinations. This code is to be used if the results of two or more discrete and separate samples are averaged. These samples shall have been processed and analyzed independently (e.g. field duplicates, different dilutions of the same sample). This code is not required for BOD or coliform reporting since averaging multiple dilutions for these parameters is fundamental to those methods. |
| **B** | Results are based upon colony counts outside the acceptable range and should be used with caution. This code applies to microbiological tests and specifically to membrane filter (MF) colony counts. It is to be used if less than 100% sample was analyzed and the colony count is generated from a plate in which the number of coliform colonies exceeds the ideal ranges indicated by the method. These ideal ranges are defined in the method as:<br><br>*Fecal coliform bacteria: 20-60 colonies* *Total coliform bacteria: 20-80 colonies*<br><br>B1. Countable membranes with less than 20 colonies. Reported value is estimated or is a total of the counts on all filters reported per 100 mL.<br>B2. Counts from all filters were zero. The value reported is based on the number of colonies per 100 mL that would have been reported if there had been one colony on the filter representing the largest filtration volume (reported as a less than "<" value).<br>B3. Countable membranes with more than 60 or 80 colonies. The value reported is calculated using the count from the smallest volume filtered and reported as a greater than ">" value.<br>B4. Filters have counts of both >60 or 80 and <20. Reported value is a total of the counts from all countable filters reported per 100 mL.<br>B5. Too many colonies were present; too numerous to count (TNTC). TNTC is generally defined as > 150 colonies. The numeric value represents the maximum number of counts typically accepted on a filter membrane (60 for fecal and 80 for total), multiplied by 100 and then divided by the smallest filtration volume analyzed. This number is reported as a greater than value.<br>B6. Estimated Value. Blank contamination evident.<br>B7. Many non-coliform colonies or interfering non-coliform growths are present. In this competitive situation, the reported coliform value may under-represent actual coliform density. |
| **C** | Total residual chlorine was present in sample upon receipt in the laboratory; value is **estimated**. Generally applies to cyanide, phenol, $NH_3$, TKN, coliform, and organics) |

**Table B-2 Continued -Data Remark Codes for Use with Coalition Data**

| Data Remark Code | Code Definition |
|---|---|
| **G** | A single quality control failure occurred during biochemical oxygen demand (BOD) analysis. The sample results should be used with caution.<br>G1. The dissolved oxygen (DO) depletion of the dilution water blank exceeded 0.2 mg/L.<br>G2. The bacterial seed controls did not meet the requirement of a DO depletion of at least 2.0 mg/L and/or a DO residual of at least 1.0 mg/L.<br>G3. No sample dilution met the requirement of a DO depletion of at least 2.0 mg/L and/or a DO residual of at least 1.0 mg/L.<br>G4. Evidence of toxicity was present. This is generally characterized by a significant increase in the BOD value as the sample concentration decreases. The reported value is calculated from the highest dilution representing the maximum loading potential and should be considered an **estimated** value.<br>G5. The glucose/glutamic acid standard exceeded the range of 198± 30.5 mg/L.<br>G6. The calculated seed correction exceeded the range of 0.6 to 1.0 mg/L.<br>G7. Less than 1 mg/L DO remained for all dilutions set. The reported value is an **estimated** greater than value and is calculated for the dilution using the least amount of sample.<br>G8. Oxygen usage is less than 2 mg/L for all dilutions set. The reported value is an **estimated** less than value and is calculated for the dilution using the most amount of sample.<br>G9. The DO depletion of the dilution water blank produced a negative value. |
| **J** | **Estimated** value; value may not be accurate. This code is to be used in the following instances:<br>J1. Surrogate recovery limits have been exceeded;<br>J2. The reported value failed to meet the established quality control criteria for either precision or accuracy;<br>J3. The sample matrix interfered with the ability to make any accurate determination;<br>J4. The data is questionable because of improper laboratory or field protocols (e.g. composite sample was collected instead of grab, plastic instead of glass container)<br>J5. Temperature limits exceeded (samples frozen or >6° C) during transport or not verifiable (e.g., no temperature blank provided);, non-reportable for NPDES compliance monitoring.<br>J6. The laboratory analysis was from an unpreserved or improperly chemically preserved sample. The data may not be accurate.<br>J7. This qualifier is used to identify analyte concentration exceeding the upper calibration range of the analytical instrument/method. The reported value should be considered estimated.<br>J8. Temperature limits exceeds (samples frozen or >6°C during storage. The data may not be accurate.<br>J9. The reported value is determined by a **one-point estimation** rather than against a regression equation. The estimated concentration is less than the laboratory practical quantitation limit and greater than the laboratory method detection limit.<br>J10. Unidentified peak; estimated value.<br>J11. The reported value is determined by a **one-point estimation** rather than against a regression equation. The estimated concentration is less than the laboratory practical quantitation limit and greater than the laboratory method detection limit. *This code is used when an MDL has not been established for the analyte in question.*<br>J12. The calibration verification did not meet the calibration acceptance criterion for **field parameters**.<br>Note: A "J" value shall not be used if another code applies (ex. N, V, M). |

**Table B-2 Continued -Data Remark Codes for Use with Coalition Data**

| Data Remark Code | Code Definition |
|---|---|
| **M** | Sample and duplicate results are "out of control." The sample is non-homogenous (e.g. VOA soil). The reported value is the lower value of duplicate analyses of a sample. |
| **N** | Presumptive evidence of presence of material; **estimated** value. This code is to be used if:<br>N1. The component has been tentatively identified based on mass spectral library search;<br>N2. There is an indication that the analyte is present, but quality control requirements for confirmation were not met (i.e., presence of analyte was not confirmed by alternate procedures).<br>N3. This code shall be used if the level is too low to permit accurate quantification, but the **estimated** concentration is less than the laboratory practical quantitation limit and greater than the laboratory method detection limit. *This code is not routinely used for most analyses.*<br>N4. This code shall be used if the level is too low to permit accurate quantification, but the estimated concentration is less than the laboratory practical quantitation limit and greater than the instrument noise level. *This code is used when an MDL has not been established for the analyte in question.*<br>N5. The component has been tentatively identified based on a retention time standard. |
| **P** | Elevated practical quantitation limit (PQL)* due to matrix interference and/or sample dilution. |
| **Q** | Holding time exceeded. These codes shall be used if the value is derived from a sample that was received, prepared and/or analyzed after the approved holding time restrictions for sample preparation and analysis. The value does not meet NPDES requirements.<br>Q1. Holding time exceeded prior to receipt by lab<br>Q2. Holding time exceeded following receipt by lab |
| **S** | Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD). |
| **U** | Indicates that the analyte was analyzed for but not detected above the reported practical quantitation limit (PQL)*. The number value reported with the "U" qualifier is equal to the laboratory's PQL*. |
| **V** | Indicates the analyte was detected in both the sample and the associated method blank.<br>Note: The value in the blank shall not be subtracted from the associated samples. |
| **X** | Sample not analyzed for this constituent. This code is to be used if:<br>X1. Sample not screened for this compound.<br>X2. Sampled, but analysis lost or not performed-field error<br>X3. Sampled, but analysis lost or not performed-lab error |
| **Y** | Elevated PQL* due to insufficient sample size |
| **Z** | The presence or absence of the analyte cannot be verified. The sample analysis/results are not reported due to:<br>Z1. Inability to analyze the sample.<br>Z2. Questions concerning data reliability. |

* The Practical Quantitation Limit (PQL) is defined as the lowest level achievable among laboratories within specified limits during routine laboratory operation. The Practical Quantitation Limit (PQL) is "about three to five times the method detection limit (MDL) and represents a practical and routinely achievable detection level with a relatively good certainty that any reported value is reliable." (APHA, AWWA, WEF. 1992. Standard Methods for the Examination of Water and Wastewater, 18th ed.)

## APPENDIX C - DATA FORMAT AND REPORTING REQUIREMENTS

**Data Format for Monthly submittals**

Table C-1 provides the required data submittal format. Do not use commas, tabs, pipes or other common file delimiters anywhere in the table. The first row should contain the column headings only. Column headings must include appropriate information on measurement units (mg/L, µg/L, cfu/100mL, etc.). The second row must contain the method code. It is very important that the format of the headings and the number and order of columns is consistent among all monthly submissions. The DWQ station number must be provided (e.g. Q9320000). An additional column containing the location description is acceptable as long as it is consistently included. Include a comment column for describing pertinent information related to the sampling event or specific samples. Ensure no missing values for station, date, time, and depth. Place all remark codes in a separate column as demonstrated in Table C-1. If there is no result for a particular parameter leave the cell blank. Screen all data for inappropriate or improbable values, such as a pH of 21.2.

**Annual Report**

The YPDRBA will be required to submit an annual report by April 30th for each year the MOA is in effect. The annual report will summarize all data collected in the past calendar year and contain the following elements:

- Monitoring Station List to include station number, station description, county, accurate latitude and longitude (in decimal degrees to 4 decimal places), stream classification, and 8 digit Hydrologic Unit Codes (HUC).
- Coalition Web Site Links
- List of all certified laboratories that conducted work for the coalition in the past year and laboratory methods used for all parameters. Identify a time frame for all laboratories and laboratory methods used in the last year. Summarize any laboratory certification issues for individual parameters.
- Submit a CD that includes all monitoring data for the past year with a statistical summary for each station. These data should be combined into a single table containing the year's reviewed and finalized data. The annual statistical summary must describe for each parameter at each location:
  - Number of observations (N)
  - Number of observations less than the laboratory reporting limit (N<RL)
  - Identify the water quality standard, action level, or other reference level (Ref)
  - Identify the number of observations that violate the reference level (N>Ref) or (N<Ref)
  - Maximum observed value (Max) and Minimum observed value (Min)
  - Annual mean value (Annual geometric mean for fecal coliform)
- Include a list of active YPDRBA members with authorized representative updates, contact names, email addresses and phone numbers. Identify the facility name and permit number.
- Provide a list of members that are no longer active and their permit numbers.
- Provide a list of changes in facilities' names, ownerships, and discharge locations.
- Summarize all quality assurance and quality control issues and any field audits conducted.
- Summarize any significant issues, special studies, or projects.
- Describe any required data collection that was missed and provide an explanation.
- Review the monitoring program and recommend potential MOA modifications.

## Table C-1 File Format For Coalition Data Reporting

| | | | | Temp (°C) | Temp_rmk | DO (mg/l) | DO_rmk | pH (su) | pH_rmk | Conductivity (uohm/cm) | Conductivity_rmk | Fecal Coliform | Fecal Coliform_rmk | Suspended Residue (mg/L) | Suspended Residue_rmk | Turbidity (NTU) | Turbidity_rmk | Chlorophyll_a (µg/l) | Chlorophyll_rmk | NH3_N (mg/L) | NH3_N_rmk | TKN_N (mg/L) | TKN_N_rmk | NO2_NO3_N (mg/L) | NO2_NO3_N_rmk | TP_P (mg/L) | TP_P_rmk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Station** | **Date (m/d/yyyy)** | **Time (hh:mm)** | **Depth (m)** | **10** | **10 rmk** | **300** | **300 rmk** | **400** | **400 rmk** | **94** | **94 rmk** | **31613** | **31613 rmk** | **530** | **530 rmk** | **82079** | **82079 rmk** | **32209** | **32209 rmk** | **610** | **610 rmk** | **625** | **625 rmk** | **630** | **630 rmk** | **665** | **665 rmk** |
| A1234567 | 8/19/2002 | 15:30 | 0.1 | 25.2 | | 7.8 | | 6.9 | | 133 | | 110 | | 45 | | 22 | | 23 | Q1 | 0.1 | | 0.20 | | 0.3 | | | |
| B9876543 | 8/20/2002 | 11:50 | 0.1 | 27.2 | | 7.1 | | 7.2 | | 125 | | 30 | | 4.0 | | 5.6 | | 5 | | 0.14 | | 0.60 | | 0.31 | | | |
| B9876543 | 8/20/2002 | 11:50 | 1 | 28 | | 6.5 | | 7.0 | | 122 | | | | | | | | | | | | | | | | | |
| B9876543 | 8/20/2002 | 11:50 | 2 | 25 | | 6.7 | | 6.9 | | 119 | | | | | | | | | | | | | | | | | |
| B9876543 | 8/20/2002 | 11:50 | 3 | 17 | | 5.5 | | 6.7 | | 120 | | | | | | | | | | | | | | | | | |
| C1357924 | 8/21/2002 | 16:10 | 0.1 | 22.1 | | 3.1 | | 6.2 | | 233 | | 15 | B1 | 55 | | 11 | | | | | | | | | | | |
| C0246813 | 9/1/2002 | 9:30 | 0.1 | 19.7 | | 8.3 | | 7.0 | | 99 | | 6000 | B5 | 410 | | 36 | | | | 0.26 | | 0.40 | | 0.57 | | | |
| C0246813 | 10/1/2002 | 11:30 | 0.1 | 12 | | 8.9 | | 7.3 | | 115 | | 1200 | B3 | 95 | A | | X3 | | | 0.16 | J2 | 0.20 | | 0.09 | | | |
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The reporting format table continues with metals and comment columns on the next page.

## Table C-1 (Continued) File Format For Coalition Data Submittals

| Cadmium, Cd (µg/L) | Cadmium, Cg_rmk | Chromium, Cr (µg/L) | Chromium, Cr_rmk | Copper, Cu (µg/L) | Copper, Cu_rmk | Nickel, Ni (µg/L) | Nickel, Ni_rmk | Lead, Pb (µg/L) | Lead, Pb_rmk | Zinc, Zn (µg/L) | Zinc, Zn_rmk | Aluminum, Al (µg/L) | Aluminum, Al_rmk | Iron, Fe (µg/L) | Iron, Fe_rmk | Manganese, Mn (µg/L) | Manganese, Mn_rmk | Arsenic, As (µg/L) | Arsenic, As_rmk | Mercury, Hg (µg/L) | Mercury, Hg_rmk | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1027 | 1027 rmk | 1034 | 1034rmk | 1042 | 1042rmk | 1067 | 1067rmk | 1051 | 1051rmk | 1092 | 1092rmk | 1105 | 1105rmk | 1045 | 1045rmk | 1055 | 1055 rmk | 1002 | 1002 rmk | 71900 | 71900 rmk | |
| 130 | | | | 3 | | 27 | | 4.4 | | 610 | | 10 | | | | 0.21 | | 12 | | 12 | | |
| 120 | | 10 | U | 2 | U | 25 | U | 2 | U | 510 | | 10 | U | 10 | U | 0.2 | U | 10 | U | 10 | U | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 333 | | 10 | U | 2 | U | 25 | U | 2 | U | 624 | | 10 | U | 10 | U | 0.2 | U | 10 | U | 10 | U | Nutrient Sample Spilled |
| 120 | | 10 | U | 2 | U | 25 | U | 2 | U | 510 | | 10 | U | 10 | U | 0.2 | U | 10 | U | 10 | U | 2.5” of rain on 8/31/2002 |
| 120 | | 10 | U | 2 | U | 25 | U | 2 | U | 510 | | 10 | U | 10 | U | 0.2 | U | 10 | U | 10 | U | |
| | | | | | | | | | | | | | | | | | | | | | | |