

**Memorandum of Agreement  
between  
The State of North Carolina Division of Water Resources  
and  
The New River Basin Coalition**

**Effective:  
August 1, 2016 through July 31, 2021**



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## MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (MOA) is made by and between the NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY'S DIVISION OF WATER RESOURCES (DWR), the NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGERS in the New River basin who have voluntarily executed this MOA (the NRB PERMITTEES), and the NEW RIVER BASIN COALITION (the NRBC), whose members include the NRB PERMITTEES and other stakeholders. The MOA includes all the attached tables and appendices. This MOA does not affect any influent or effluent monitoring requirement or any other NPDES permit requirements of individual permit holders, with the one exception of performing upstream and downstream water quality monitoring. The New River Basin (NRB) 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 DWR will issue a letter to each NRB PERMITTEE whose permit contains instream monitoring requirements, notifying the permittee that the instream monitoring requirements of its permit are not effective 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 DWR, the NRB PERMITTEES, and the NRBC. This MOA authorizes the NRBC to act on behalf of the NRB PERMITTEES as described herein. This MOA identifies the responsibilities of the NRB PERMITTEES and the NRBC for surface water monitoring and reporting within the New 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, listed in Appendix A, were established by the DWR such that the instream monitoring is efficient, effective, and basin-oriented.

The NRBC will perform the monitoring activities described herein on behalf of NRB PERMITTEES who are members in good standing of the NRBC. Each NRB PERMITTEE agrees to remain a member in good standing of the NRBC. The NRBC will contract for the performance of the monitoring activities described herein and in Appendix B with a laboratory appropriately certified by the DWR for the required laboratory and field analyses. Sample collection and field measurements will be made by appropriately DWR-certified NRB PERMITTEES, the NRBC, or a sub-contractor who will act as agent(s) of the NRB PERMITTEES for the sole purpose of performing monitoring services required by this MOA. It will be the responsibility of the NRBC 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 measurement, 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 NRBC shall submit the water quality data to the DWR using the format documented in Appendix C of this MOA in Microsoft® Excel 2000, a subsequent version, or the equivalent. The NRBC shall submit the water quality data to the DWR within 90 days of the end of the month in

which the sampling was performed. All data shall be archived by the NRBC for a period of at least 5 years. Each NRB PERMITTEE and NRBC member has the right to review and comment on work, data, or reports prepared by any contractor on behalf of the NRBC and to notify the DWR 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 data or other reports to the DWR, it shall be deemed to be waived and the work, data, and reports submitted shall be deemed to be approved by the NRB PERMITTEES and NRBC. Failure by the NRB PERMITTEES or the NRBC to collect or analyze the water quality data as described in this MOA, or to provide the data to the DWR in the required format, may result in the revocation of this MOA by the DWR and the return to individual upstream and downstream monitoring requirements, as specified in the individual NPDES permits of the NRB PERMITTEES.

The NRBC shall submit an annual written report that summarizes the previous calendar year's sampling results and formally finalize the water quality data. The report shall be submitted no later than April 30th each year that this MOA is in effect. The annual report shall include the NPDES permit number of each actively participating permit holder and a contact name, email address, and phone number for each member. Appendix C of this MOA describes the required annual report content. Two copies, signed by the NRBC chairman, of these and any other reports required herein shall be submitted to the DWR Coalition Coordinator at 1621 Mail Service Center, Raleigh, NC 27699-1621.

Stream sampling may be discontinued at such times as flow conditions in the receiving waters or extreme weather conditions will result in a substantial risk of injury or death to persons collecting samples. Sampling may also be discontinued when environmental conditions, such as a dry stream, prevent sample collection. In such cases, on each day that sampling is discontinued, the DWR Coalition Coordinator shall be notified within one week of the discontinuance and written justification for the discontinuance shall be submitted with the monthly data submittal. 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.

This MOA may be modified by the written consent of the DWR and the NRBC. The DWR or the NRBC may determine that it is necessary to request changes in membership, 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 DWR and the NRBC. The amendment shall be signed by the NRBC chairman and by the DWR. Such amendments may be entered into at any time.

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

- 1) Dischargers who receive a NPDES permit within the NRB,
- 2) Dischargers who have NPDES permits within the NRB but are not parties to this Agreement, or
- 3) Stakeholders in the NRB with whom the DWR and NRBC agree to allow membership.

The addition of such parties to this MOA may be made only with the consent of the DWR and the NRBC and shall require a written amendment to this MOA signed by the NRBC chairman, by the DWR, and by an authorized representative of any such party who wishes to enter into the MOA. The DWR will not unreasonably withhold consent to the addition of a party to the MOA. The DWR will consider modification of the existing monitoring program described in this MOA for the addition of a member to the MOA. Such amendments may be made at any time that this MOA is in effect. The NRB PERMITTEES and original NRBC members included in this MOA are listed in Table 1.

This MOA shall be effective until (July 31, 2021) unless extended by the consent of both the DWR and the NRBC. Upon sixty (60) days written notice, the DWR or the NRBC may terminate this MOA for any reason. Upon termination of this MOA, the instream monitoring requirements contained in the individual NPDES permit of each NRB PERMITTEE shall become effective immediately. An individual permit holder or member may terminate and cancel its participation in this MOA by providing one-hundred eighty (180) days written notice to the NRBC, and sixty (60) days written notice to the DWR Coalition Coordinator, the appropriate DWR Regional Office, and the DWR Complex Permitting Branch. The monitoring requirements contained in the individual NPDES permit shall become effective immediately upon such cancellation or termination. In the event a permit holder terminates or cancels its participation in this MOA or its membership in the NRBC is terminated for any reason, the NRBC may request that DWR review the monitoring plan described in this MOA for a possible reduction in sampling effort or requirements.

Should any part of this Agreement be declared invalid or unenforceable by a court of competent jurisdiction, invalidation of the affected portion shall not invalidate the remaining portions of the Agreement and they shall remain in full force and effect.

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 DWR.

**DIVISION OF WATER RESOURCES**

**NEW RIVER BASIN COALITION**

By: \_\_\_\_\_

By: \_\_\_\_\_

**S. Jay Zimmerman, P.G.**  
**Director**  
**Division of Water Resources**

**Ricky L. Miller**  
**Chairman**  
**New River Basin Coalition**

Date: Signed on September 23, 2016

Date: Signed on September 7, 2016

**Table 1-- NRBC PERMITTEES**

<b>NPDES Permit Number</b>	<b>New River Basin Association Permittees Facility &amp; Ownership</b>	<b>Authorized Representative and Title</b>	<b>County</b>	<b>Region</b>	<b>8 Digit HUC</b>
NC0020621	Jimmy Smith WWTP Town of Boone	Ricky L. Miller Public Works Director	Watauga	WSRO	05050001
na	Ashe County	Adam Stumb Ashe County Planner	Ashe	WSRO	05050001
na	Watauga	Joe Furman Watauga County Planning Director	Watauga	WSRO	05050001

WSRO = Winston Salem Regional Office

<sup>a</sup> Stormwater permits

**Table 2: NRBC PERMITTEE & MEMBER SIGNATURES**

<b>NPDES Permit Number (if applicable)</b>	<b>Permittee/Member</b>	<b>Signature</b>	<b>Date</b>
NC0020621	Town of Boone Jimmy Smith WWTP	<u>Signed Sept 7, 2016</u> Ricky L. Miller Public Utilities Director	
na	Ashe County	<u>Signature received Sept 19, 2016</u> Adam Stumb Ashe County Planner	
na	Watauga County	<u>Signature received Sept 19, 2016</u> Joe Furman Watauga County Planning Director	

Table A-1. NRBC Sampling Stations, Parameters and Frequencies.

	DWR Station Number			
	K2100000	K3000000	K6400000	K7010000
<b>Station Information</b>				
<b>Location</b>	S. Fork New River at US 221 and 421 at Perkinsville	S. Fork New River at SR1159 (Boggs Rd) near Glendale Springs	Buffalo Ck at BC Hunter Rd near Warrentsville	N. Fork New River at SR 1514 (Deep Ford Rd) near Bina
<b>Comments</b>	Overlapping AMS stn downstream of Boone WWTP	Drainage for Pine Swamp and Beaver Cr watersheds downstream of GE Aviation	Downstream of W. Jefferson WWTP; Heavy Ag area	Downstream of United Chemi-Con & Lansing WWTPs
<b>Latitude</b>	36.2208	36.3469	36.4437	36.4803
<b>Longitude</b>	-81.6397	-81.4044	-81.5193	-81.4771
<b>County</b>	Watauga	Ashe	Ashe	Ashe
<b>Stream Class</b>	C:+	WS-IV; HQW	C; Tr, HQW	C; ORW
<b>Stream Index</b>	10-1-(3.5)	10-1-(26)	10-2-20	10-2-(21.5)
<b>8-Digit-HUC</b>	05050001	05050001	05050001	05050001
<b>Parameters and Sampling Frequency<sup>1</sup></b>				
<b>Field Parameters<sup>2</sup></b>	Q	Q	Q	Q
<b>Fecal Coliform</b>	Q	Q	Q	Q
<b>Turbidity</b>	Q	Q	Q	Q
<b>TSS</b>				
<b>Nutrients</b>	Q	Q	Q	Q
<b>Metals</b>				

<sup>1</sup> Sampling frequency: Q=Quarterly

<sup>2</sup> Field parameters: Water temperature, dissolved oxygen, pH and specific conductance

### **Sample Collection Procedures**

Sample collection shall be performed by trained personnel employed by NC DWR-certified laboratories in accordance with the DWR NPDES Monitoring Coalition Program Field Monitoring Guidance Document (December 2012) and subsequent documents. The Field Monitoring Guidance Document can be found on the web at:

<https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Coalition%20Program/guidance%20document%20Version%202.0%20Final.pdf>. Alternate collection procedures require the approval of the DWR Coalition Coordinator prior to use.

### **Laboratory Analysis**

All laboratory analyses shall be performed at a DWR-certified laboratory using approved methods as prescribed by section 40 of the Code of Federal Regulations part 136 (40CFR136) or other methods certified by the DWR Laboratory Certification Branch

(<http://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification>) or the Director of DWR. 40CFR136 can be accessed on the web at:

<http://portal.ncdenr.org/web/wq/lab/cert/nonfield/rules>.

Reporting levels will be at least as stringent as the reporting levels used by the DWR Laboratory. For guidance purposes Table B-1 lists target reporting levels for each parameter based on the reporting levels of the DWR Laboratory. The lowest possible analytical limits for all the parameters should be pursued.



**TABLE B-1: DWR Laboratory Reporting Limits**

<b>Parameters</b>	<b>Target Reporting Level</b>	<b>Comments</b>
Water Temperature		Resolution to 0.1 degree Celsius
Dissolved Oxygen		Report results to the nearest 0.1 mg/L.
pH		Meters should be calibrated to measure a pH range of at least 4.01 to 9.18. Report results to the nearest 0.1 pH units.
Specific Conductivity		Report results to the nearest whole $\mu\text{mho/cm}$ at 25 °C.
Turbidity	1.0 NTU	
TSS	6.2 mg/L	
Fecal Coliform	1 colony/100 mL	At least 3 dilutions should be used to achieve optimum colony counts per membrane filter of 20-60 colonies.
Chlorophyll <i>a</i>	1 $\mu\text{g/L}$	Report chlorophyll <i>a</i> values free from pheophytin and other chlorophyll pigments. Analysis by HPLC is not approved by DWR.
Ammonia (NH <sub>3</sub> as N)	0.02 mg/L	Address distillation requirement. See 40CFR136 Table II footnote.
Nitrate + Nitrite as N	0.02 mg/L	
Total Kjeldahl Nitrogen as N	0.20 mg/L	
Total Phosphorus as P	0.02 mg/L	

**Data Qualification Codes**

When reporting data, the DWR’s data qualifier codes must be used to provide additional information regarding data quality and interpretation. The current set of qualifier codes to be used is provided in Table B-2. Review the data remark codes at least annually and utilize the most current set, as codes are subject to change. A copy of this table can be found at <https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Coalition%20Program/DataQualifiers12.2011.pdf>.

TABLE B-2: Data Remark Codes for Use with Coalition Data

Data Remark Code	Code Definition
A	<p>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, coliform or acute/chronic metals reporting since averaging multiple results for these parameters is fundamental to those methods or manner of reporting.</p> <p>A1. The reported value is an average, where at least one result is qualified with a “U”. The PQL is used for the qualified result(s) to calculate the average.</p>
B	<p>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:</p> <p><i>Fecal coliform bacteria: 20-60 colonies</i>      <i>Total coliform bacteria: 20-80 colonies</i></p> <p>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.</p> <p>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 "&lt;" value).</p> <p>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 "&gt;" value.</p> <p>B4. Filters have counts of both &gt;60 or 80 and &lt;20. Reported value is a total of the counts from all countable filters reported per 100 mL.</p> <p>B5. Too many colonies were present; too numerous to count (TNTC). TNTC is generally defined as &gt; 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.</p> <p>B6. Estimated Value. Blank contamination evident.</p> <p>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.</p>
C	<p>Total residual chlorine was present in sample upon receipt in the laboratory; value is <b>estimated</b>. Generally applies to cyanide, phenol, NH<sub>3</sub>, TKN, coliform, and organics)</p>

Data Remark Code	Code Definition
G	<p>A <u>single</u> quality control failure occurred during biochemical oxygen demand (BOD) analysis. The sample results should be used with caution.</p> <p>G1. The dissolved oxygen (DO) depletion of the dilution water blank exceeded 0.2 mg/L.</p> <p>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.</p> <p>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.</p> <p>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 <b>estimated</b> value.</p> <p>G5. The glucose/glutamic acid standard exceeded the range of 198± 30.5 mg/L.</p> <p>G6. The calculated seed correction exceeded the range of 0.6 to 1.0 mg/L.</p> <p>G7. Less than 1 mg/L DO remained for all dilutions set. The reported value is an <b>estimated</b> greater than value and is calculated for the dilution using the least amount of sample.</p> <p>G8. Oxygen usage is less than 2 mg/L for all dilutions set. The reported value is an <b>estimated</b> less than value and is calculated for the dilution using the most amount of sample.</p> <p>G9. The DO depletion of the dilution water blank produced a negative value.</p>
J	<p><b>Estimated</b> value; value may not be accurate. This code is to be used in the following instances:</p> <p>J1. Surrogate recovery limits have been exceeded;</p> <p>J2. The reported value failed to meet the established quality control criteria for either precision or accuracy;</p> <p>J3. The sample matrix interfered with the ability to make any accurate determination;</p> <p>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)</p> <p>J5. Temperature limits exceeded (samples frozen or &gt;6° C) during transport or not verifiable (e.g., no temperature blank provided);, non-reportable for NPDES compliance monitoring.</p> <p>J6. The laboratory analysis was from an unpreserved or improperly chemically preserved sample. The data may not be accurate.</p> <p>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.</p> <p>J8. Temperature limits exceeds (samples frozen or &gt;6°C during storage. The data may not be accurate.</p>

**APPENDIX B – SAMPLE COLLECTION AND ANALYSIS**

<b>Data Remark Code</b>	<b>Code Definition</b>
	<p>J9. The reported value is determined by a <b>one-point estimation</b> 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.</p> <p>J10. Unidentified peak; estimated value.</p> <p>J11. The reported value is determined by a <b>one-point estimation</b> 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. <i>This code is used when an MDL has not been established for the analyte in question.</i></p> <p>J12. The calibration verification did not meet the calibration acceptance criterion for <b>field parameters</b>. <i>Note: A "J" value shall not be used if another code applies (ex. N, V, M).</i></p>
<b>M</b>	<p>Sample and duplicate results are "out of control." The sample is non-homogenous (e.g. VOA soil). The reported value is the <u>lower</u> value of duplicate analyses of a sample.</p>
<b>N</b>	<p>Presumptive evidence of presence of material; <b>estimated</b> value. This code is to be used if:</p> <p>N1. The component has been tentatively identified based on mass spectral library search;</p> <p>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).</p> <p>N3. This code shall be used if the level is too low to permit accurate quantification, but the <b>estimated</b> concentration is less than the laboratory practical quantitation limit and greater than the laboratory method detection limit. <i>This code is not <u>routinely</u> used for most analyses.</i></p> <p>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. <i>This code is used when an MDL has not been established for the analyte in question.</i></p> <p>N5. The component has been tentatively identified based on a retention time standard.</p>
<b>P</b>	<p>Elevated practical quantitation limit (PQL)* due to matrix interference and/or sample dilution.</p>
<b>Q</b>	<p>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.</p> <p>Q1. Holding time exceeded prior to receipt by lab</p> <p>Q2. Holding time exceeded following receipt by lab</p>
<b>S</b>	<p>Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD).</p>

**APPENDIX B – SAMPLE COLLECTION AND ANALYSIS**

<b>Data Remark Code</b>	<b>Code Definition</b>
<b>U</b>	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*.
<b>V</b>	Indicates the analyte was detected in both the sample and the associated method blank. <u>Note:</u> The value in the blank shall not be subtracted from the associated samples. V1. The analyte was detected in both the sample and the method blank. V2. The analyte was detected in both the sample and the field blank.
<b>X</b>	Sample not analyzed for this constituent. This code is to be used if: X1. Sample not screened for this compound. X2. Sampled, but analysis lost or not performed-field error X3. Sampled, but analysis lost or not performed-lab error
<b>Y</b>	Elevated PQL* due to insufficient sample size
<b>Z</b>	The presence or absence of the analyte cannot be verified. The sample analysis/results are not reported due to: Z1. Inability to analyze the sample. Z2. Questions concerning data reliability.
<b>Supporting Definitions</b>	
<b>MDL</b>	A Method Detection Limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the true value is greater than zero and is determined in accordance with 40 CFR Part 136, Appendix B.
<b>ML</b>	Minimum Levels are used in some EPA methods. A Minimum Level (ML) is the lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes and cleanup procedures have been employed. The ML is calculated by multiplying the MDL by 3.18 and rounding the result to the nearest factor of 10 multiple (i.e., 1, 2, or 5). For example, MDL = 1.4 mg/L; ML = 1.4 mg/L x 3.18 = 4.45 rounded to the nearest factor of 10 multiple (i.e., 5) = 5.0 mg/L.
<b>PQL</b>	The Practical Quantitation Limit (PQL) is defined as the lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. PQLs are subjectively set at some multiple of typical MDLs for reagent water (generally 3 to 10 times the MDL depending upon the parameter or analyte and based on the analyst's best professional judgement, the quality and age of the instrument and the nature of the samples) rather than explicitly determined. PQLs may be nominally chosen within these guidelines to simplify data reporting and, where applicable, are generally equal to the concentration of the lowest non-zero standard in the calibration curve. PQLs are adjusted for

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<b>Data Remark Code</b>	<b>Code Definition</b>
	<p>sample size, dilution and % moisture. For parameters that are not amenable to MDL studies, the PQL may be defined by the sample volume and buret graduations for titrations or by minimum measurement values set by the method for method-defined parameters (e.g., BOD requires a minimum DO depletion of 2.0 mg/L, fecal coliform requires a minimum plate count of 20 cfu, total suspended residue requires a minimum weight gain of 2.5 mg, etc.). Additionally, some EPA methods prescribe MLs and the lab may set the PQL equal to this method-stated ML. Determination of PQL is fully described in the laboratory's analytical Standard Operating Procedure (SOP) document.</p>

### **Data Format for Monthly submittals**

Table C-1 provides the required data submittal spreadsheet format with sample data. 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 DWR station number must be provided (e.g., K6140000). 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 NRBC 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 coordinates (in decimal degrees to 4 decimal places), stream classification, and 8-digit hydrologic unit code (HUC).
- List of all certified laboratories that conducted work for the coalition in the past year, identify time frames for all laboratories and analysis methods used during the year, and 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 level (N<RL)
  - Identify the water quality standard, action level, or other reference level (Ref)
  - Identify the number of observations that do not meet the reference level (N>Ref) or (N<Ref)
  - Maximum observed value (Max) and Minimum observed value (Min)
  - Annual arithmetic mean value (except for fecal coliform where geometric mean values should be calculated and pH)
- Include a list of active NRBC 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 in the NRBC and their permit numbers.
- Provide a list of changes in members' 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.

## **APPENDIX C – DATA FORMAT AND REPORTING REQUIREMENTS**

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- Describe any required data collection that was missed and provide an explanation.
- Review and update the monitoring program and suggest potential MOA modifications.
- Provide the NRBC's Website Address.



Table C-1: File Format for Coalition Data Reporting

Station	Date (m/d/yyyy)	Time (hh:mm)	Depth (m)	Temp (°C)	Temp_rmk	DO (mg/l)	DO_rmk	pH (su)	pH_rmk	Conductivity (µS/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
				10	10 rmk	300	300 rmk	400	400 rmk	94	94 rmk	31616	31616 rmk	530	530r mk	82079	82079 rmk	32230	32230 rmk	610	610 rmk	625	625 rmk	630	630r mk	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		0.2		0.3			
B9876543	8/20/2002	11:50	0.1	27.2		7.1		7.2		125		30		4		5.6		5		0.14		0.6		0.31			
B9876543	8/20/2002	11:50	1	28		6.5		7		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		99		6000	B5	410		36				0.26		0.4		0.57			
C0246813	10/1/2002	11:30	0.1	12		8.9		7.3		115		1200	B3	95	A		X3			0.16	J2	0.2		0.09			

APPENDIX C – DATA FORMAT AND REPORTING REQUIREMENTS

	Cadmium, Cd (µg/l)	Cadmium, Cd_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	1034	1042	1042	1067	1067	1051	1051	1092	1092	1105	1105	1045	1045	1055	1055	1002	1002	71900	71900	
130			11		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	
																							Dry stream
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	