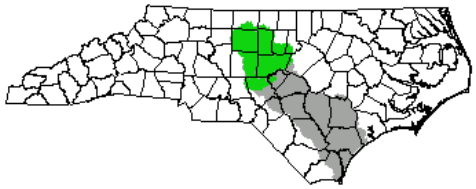
Memorandum of Agreement
Among
The State of North Carolina's Division of Water Resources,
The Upper Cape Fear River Basin Association Permittees,
and
The Upper Cape Fear River Basin Association

Upper Cape Fear River Basin Association



Effective:
May 1, 2020 through April 30, 2025

MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (MOA) is entered into this 1st day of May 2020, by and among the NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY'S DIVISION OF WATER RESOURCES (DWR), the NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGERS in the Upper Cape Fear River Basin who have voluntarily executed this MOA (UCFRBA PERMITTEES), and the UPPER CAPE FEAR RIVER BASIN ASSOCIATION (UCFRBA), a non-profit corporation whose members include the UCFRBA PERMITTEES (see Table 1).

WITNESSETH, THAT,

Whereas, the UCFRBA Permittees have instream (e.g., upstream and downstream) monitoring requirements in their respective NPDES permits pursuant to Federal and State law.

Whereas, the DWR has obligations to collect water quality data, which it uses for various purposes, including but not limited to enforcement, regulatory, scientific, and educational purposes.

Whereas, DWR has discretion in determining instream sampling locations in the context of NPDES permitting.

Whereas, the UCFRBA Permittees are willing to combine their resources to provide for a more efficient and effective method for instream monitoring to meet the requirements of their respective NPDES permits.

Whereas, all parties to this MOA benefit from the collection of instream water quality data in the Upper Cape Fear River Basin.

NOW, THEREFORE, in consideration of mutual benefits that will accrue to each party, the parties agree as follows:

Purpose:

- The purpose of this MOA is to:
  1) facilitate the collection of instream water quality data for parameters that are of interest to all parties to this MOA;
  2) facilitate the collection of instream water quality data at preferred sampling locations (i.e., to reduce duplicative sampling locations and to sample at locations that would otherwise not be sampled) which are mutually agreeable to the both parties;
  3) facilitate the collection of instream water quality data at frequencies that provide useful information to all parties to this MOA;
  4) leverage the resources available to the parties of this MOA for instream sampling; and
  5) provide all parties with consistent instream water quality data for the Upper Cape Fear River Basin.

General Provisions:

- This MOA only applies to the collection and submission of instream water quality monitoring data for the parameters, locations, and frequencies identified in Table 2.

- Nothing in this MOA precludes DWR from requesting UCFRBA Permittees or UCFRBA to take additional samples. Similarly, there is nothing in this MOA that precludes UCFRBA Permittees or

UCFRBA to voluntarily conduct and submit sampling data to DWR in addition to what is set forth in Table 2, including hardness and emerging contaminants.

- This MOA does not relieve UCFRBA Permittees from complying with other NPDES permit requirements, including influent and effluent monitoring requirements, or other Federal and State laws, including State water quality standards.

- By signing this MOA, the UCFRBA PERMITTEES authorize the UCFRBA to act as their agent and on their behalf in collecting and submitting instream monitoring data to DWR for the parameters listed in Table 2.

- The UCFRBA PERMITTEES are exempted from instream water quality monitoring for certain parameters *as specified in their individual NPDES permits*. If there is any discrepancy or conflict between this MOA and an UCFRBA Permittee's NPDES permit, the UCFRBA Permittee's NPDES permit shall prevail.

Collection of instream water quality data:

- The UCFRBA and its agents shall perform the collection and analyses of the instream water quality monitoring data for the parameters, locations and frequencies specified in Table 2 of this MOA.

- The UCFRBA will contract for the performance of the monitoring activities with a laboratory appropriately certified by DWR for the required laboratory and field analysis.

- The UCFRBA and its agents shall comply with the requirements and protocols set forth in Tables 3 and 4 located in Appendix A.

Submission of (monthly) instream water quality data to DWR:

- The UCFRBA shall submit the monitoring results to DWR on behalf of UCFRBA PERMITTEES.

- The UCFRBA shall submit the water quality data to the DWR within 90 days of the end of the month in which the sampling was performed to the Coalition Coordinator at coalitioncoordinator@ncdenr.gov.

- The UCFRBA or its agents shall submit the water quality data to the DWR in a format set forth in Table 5 located in Appendix B of this MOA and preferably in Microsoft® Excel.

- The UCFRBA shall archive all data for five (5) years.

- The UCFRBA PERMITTEES may provide comments to DWR on data and work submitted by UCFRBA to DWR.

- Failure by the UCFRBA PERMITTEES or the UCFRBA or their agents to collect or analyze the water quality data as described in this MOA, or to provide data to the DWR in the required format, may result in the termination of this MOA by the DWR and the return to individual upstream and downstream monitoring requirements, as specified in the individual NPDES permits for each of the UCFRBA PERMITTEES.

- Special and/or additional data collected (i.e., hardness) at a designated monitoring station concurrently with the regularly scheduled samples, should be submitted to the Coalition

Coordinator

Annual Report:

- The UCFRBA shall submit an annual written report that summarizes the previous calendar year's sampling activities.

- The UCFRBA shall submit the annual report no later than April 30th each year that this MOA is in effect and shall comply with the requirements set forth in Appendix B.

- The UCFRBA shall submit the annual report to the DWR Coalition Coordinator at 1621 Mail Service Center, Raleigh, NC 27699-1621 or electronically at coalitioncoordinator@ncdenr.gov.

Signatures for all Submissions to DWR:

- The UCFRBA Chair shall sign annual reports submitted to DWR pursuant to this MOA.

Special Circumstances affecting sampling:

- Stream sampling under this MOA may be suspended or discontinued under the following circumstances:
  1) If flow conditions in the receiving waters and/or extreme weather conditions will result in a substantial risk of injury to the person(s) collecting samples; or
  2) If environmental conditions, such as a dry stream, prevent sample collection.

- If sampling is suspended or discontinued for any reason, the UCFRBA shall provide a written explanation to DWR explaining why sampling was not performed. The written explanation shall be submitted to the DWR Coalition Coordinator with UCFRBA's monthly data submittal (electronic submittal is authorized).

- If sampling is suspended or discontinued under the provisions above, UCFRBA shall resume stream sampling as soon as possible.

Modification:

- This MOA may be modified by the written consent of the DWR and the UCFRBA. Either DWR or the UCFRBA may determine that it is necessary to request changes in monitoring frequency, parameters, and/or sampling locations. Any changes to sampling parameters, locations, or frequencies shall be made by a written amendment to this MOA agreed to by the DWR, the UCFRBA PERMITTEES, and the UCFRBA. The amendment shall be signed by the UCFRBA chair and by the DWR Director. Such amendments may be entered into at any time.

New Parties to this MOA:

- The following additional NPDES permit dischargers may enter into this MOA subsequent to the effective date hereof:
  1) Dischargers who receive a NPDES permit within the Upper Cape Fear River Basin, or
  2) Dischargers who have NPDES permits within the Upper Cape Fear 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 DWR, the UCFRBA PERMITTEES, and the UCFRBA and shall require a written amendment to this MOA signed by the UCFRBA chairperson, by the DWR, and by an authorized representative of any such discharger who wishes to enter into the MOA. The DWR will not unreasonably withhold consent

to the addition of a discharger to the MOA. The DWR will consider modification of the existing monitoring program described in this MOA for the addition of a NPDES permit discharger to the MOA. Such amendments may be made at any time that this MOA is in effect. The UCFRBA PERMITTEES included in this MOA are listed in Table 1.

Term:

- This MOA shall be effective upon the signature until April 30, 2025 unless extended by the consent of both the DWR Director and the UCFRBA.

Withdraw/Termination as between DWR and UCFRBA:

- Upon sixty (60) days written notice, the DWR or the UCFRBA may terminate this MOA for any reason. Upon termination of this MOA, the monitoring requirements contained in the individual NPDES permit for each UCFRBA PERMITTEE shall become effective immediately.

Withdraw/Termination as between DWR and individual UCFRBA Permittees:

- An individual permit holder may withdraw and cancel its participation in this MOA by providing sixty (60) days written notice to the UCFRBA, and sixty (60) days written notice to the DWR Coalition Coordinator, the appropriate DWR Regional Office(s), and the DWR Water Quality Permitting Section. The monitoring requirements contained in the individual NPDES permit shall become effective upon the termination date specified in the notice.

- The withdrawal of an individual UCFRBA Permittee shall require a written amendment to this MOA signed by the UCFRBA chair and the DWR Director.

- In the event a UCFRBA NPDES permit holder terminates or cancels its participation in this MOA or its membership in the UCFRBA is terminated for any reason, the UCFRBA may request that DWR review the monitoring plan described in this MOA for a possible reduction in sampling effort and/or requirements.

No limitation on use of the data:

- There are no limitations on DWR's, UCFRBA, or UCFRBA Permittee's use of the data collected under this MOA.

Entire Agreement:

- This MOA constitutes the entire agreement between the parties and supersedes all previous agreements.

Incorporation:

- Appendices A and B are attached to and incorporated into this MOA.

Savings Clause:

- 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.

Remedies for Breach:

- The only remedy for breach of this MOA is an action for specific performance or injunction.

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

By: *Signature on file*

Danny Smith
Director
Division of Water Resources

Date: 4/27/2020

UPPER CAPE FEAR RIVER BASIN ASSOCIATION

By: *Signature on file*

Michael Rhoney
Chair
Upper Cape Fear River Basin Association

Date: 4/21/2020

Table 1 – UCFRBA Permittees

NPDES Permit Number	UCFRBA Permittees Ownership and Facility	Authorized Representative Signature	Signature Date
NC0000892	Arclin Arclin WWTP	*Signature on file* Mr. Brian Reddy Plant Manager	2-25-2020
NC0020354	Town of Pittsboro Pittsboro WWTP	*Signature on file* Mr. Robert Morgan Interim Town Manager	3-23-2020
NC0021211	City of Graham Graham WWTP	*Signature on file* Ms. Tonya Mann Utilities Director	2-4-2020
NC0021474	City of Mebane Mebane WWTP	*Signature on file* Mr. Dennis Hodge Water Resources Manager	2-4-2020
NC0023868	City of Burlington Burlington East WWTP	*Signature on file* Mr. Bob Patterson Water Resources Director	2-4-2020
NC0023876	City of Burlington Burlington South WWTP	*Signature on file* Mr. Bob Patterson Water Resources Director	2-4-2020
NC0024147	City of Sanford Big Buffalo WWTP	*Signature on file* Mr. Scott Siletzkey Water Reclamation Administrator	2-4-2020
NC0024210	City of High Point East Side WWTP	*Signature on file* Mr. Terry Houk Director of Public Services	3-10-2020
NC0024881	City of Reidsville Reidsville WWTP	*Signature on file* Mr. Chuck Smith Public Works Director	2-4-2020

NPDES Permit Number	UCFRBA Permittees Ownership and Facility	Authorized Representative Signature	Signature Date
NC0025241	Orange Water and Sewer Authority Mason Farm WWTP	*Signature on file* Mr. Ed Kerwin Executive Director	2-18-2020
NC0025445	City of Randleman Randleman WWTP	*Signature on file* Mr. Zack Hewett City Manager	3-10-2020
NC0026123	City of Asheboro Asheboro WWTP	*Signature on file* Mr. Michael Rhoney Water Resources Director	2-4-2020
NC0026441	Town of Siler City Siler City WWTP	*Signature on file* Mr. Roy Lynch Town Manager	3-3-2020
NC0026565	Town of Ramseur Ramseur WWTP	*Signature on file* Ms. Vicki Caudle Mayor	2-4-2020
NC0047384	City of Greensboro T.Z. Osborne WWTP	*Signature on file* Mr. Michael Borchers Assistant Director of Water Resources	2-4-2020
NC0047597	City of Durham South Durham WRF	*Signature on file* Mr. Charlie Cocker Plant Superintendent - SDWRF	2-4-2020
NC0058548	Town of Star Star WWTP	*Signature on file* Ms. Mary H. O'Brien Mayor	2-4-2020
NC0072575	Pilgrim's Pride Pilgrim's Pride Processing Plant	*Signature on file* Mr. Jamal Mohammed Complex Manager	3-10-2020

Table 2
UCFRBA Sampling Stations, Parameters, & Frequencies

Station Number	Location	Comments	Latitude	Longitude	County	Region	8 Digit HUC	Stream Classification	Index	[1] Field measurements	[2] Nutrients	Turbidity	Suspended Residue	Fecal Coliform
B0050000	Haw Riv at US 29 Bus nr Benaja	ups Reidsville WWTP	36.2652	-79.6523	Rockingham	WSRO	03030002	WS-V, NSW	16-(1)	M + 2SM	M	M	M	M
B0070010	Troublesome Crk at US 29 Bus nr Reidsville	major tributary, nps inputs	36.2768	-79.6499	Rockingham	WSRO	03030002	WS-V, NSW	16-6-(3)	M	M	M	M	M
B0170000	Haw Riv at SR 2620 High Rock Rd nr Williamsburg	below Reidsville WWTP	36.2514	-79.5647	Rockingham	WSRO	03030002	WS-V, NSW	16-(1)	M + 2SM	M	M	M	M
B0400000	Reedy Fork at SR 2719 High Rock Rd nr Monticello	model verification	36.1778	-79.6177	Guilford	WSRO	03030002	WS-V, NSW	16-11-(9)	M	M	M	M	M
B0480050	N Buffalo Crk at N Buffalo Crk WWTP Influent Conduit Pier at Greensboro	ups N. Buffalo WWTP	36.1074	-79.7502	Guilford	WSRO	03030002	WS-V, NSW	16-11-14-1	M + 2SM	M	M	M	M
B0540050	N Buffalo Crk at SR 2770 Huffine Mill Rd nr McLeansville	dns N. Buffalo WWTP	36.1299	-79.6626	Guilford	WSRO	03030002	WS-V, NSW	16-11-14-1	M + 2SM	M	M	M	M
B0670000	S Buffalo Crk at SR 3000 McConnell Rd nr Greensboro	USGS gage, ups TZ Osborne WWTP	36.0598	-79.7256	Guilford	WSRO	03030002	WS-V, NSW	16-11-14-2	M + 2SM	M	M	M	M
B1020000	Haw Riv at SR 1700 Lower Hopedale Rd at Hopedale	ups Burlington East WWTP	36.1247	-79.4083	Alamance	WSRO	03030002	WS-IV, NSW	16-(1)	M+2SM	M	M	M	M
B1200000	Haw Riv at NC 54 nr Graham	btw Burlington East and Graham	36.0481	-79.3667	Alamance	WSRO	03030002	WS-V, NSW	16-(1)	M + 2SM	M	M	M	M
B1350000	Moadams Crk at Corrigdor Rd nr Mebane	ups Mebane WWTP	36.0885	-79.2844	Alamance	WSRO	03030002	WS-V, NSW	16-18-7	M + 2SM	M	M	M	M
B1380000	Moadams Crk at SR 1940 Gibson Rd nr Florence Town	dns Mebane WWTP	36.0891	-79.3074	Alamance	WSRO	03030002	WS-V, NSW	16-18-7	M + 2SM	M	M	M	M
B1440000	Haw Riv at SR 2158 Swepsonville Rd nr Swepsonville	dns Graham WWTP	36.0256	-79.3682	Alamance	WSRO	03030002	WS-V, NSW	16-(1)	M + 2SM	M	M	M	M
B1940000	Big Alamance Crk at NC 87 nr Swepsonville	ups Burlington S. WWTP	36.0242	-79.3943	Alamance	WSRO	03030002	WS-V, NSW	16-19-(4.5)	M + 2SM	M	M	M	M
B2000000	Haw Riv at SR 1005 nr Saxpahaw	Rural area, dns Cane Crk	35.8953	-79.2585	Alamance	WSRO	03030002	WS-V, NSW	16-(1)	M	M	M	M	M

Station Number	Location	Comments	Latitude	Longitude	County	Region	8 Digit HUC	Stream Classification	Index	[1] Field measurements	[2] Nutrients	Turbidity	Suspended Residue	Fecal Coliform
B2100000	Haw Riv at SR 1713 nr Bynum	USGS Gage, ups Jordan L., DWR ambient stn	35.7716	-79.1449	Chatham	RRO	03030002	WS-IV, NSW	16-(28.5)	M	M	M	M	M
B3020000	New Hope Crk at NC 54 nr Durham	ups S. Durham WRF, below waterfowl imp.	35.9167	-78.9704	Durham	RRO	03030002	WS-IV, NSW	16-41-1-(11.5)	M + 2SM	M	M	M	M
B3025000	Third Fork Crk at NC 54 nr Durham	Urban runoff	35.9187	-78.9548	Durham	RRO	03030002	WS-IV, NSW	16-41-1-12-(2)	M	M	M	M	M
B3039000	New Hope Creek above SR1107 at concrete impoundment	DWR ambient stn, USGS gage, Jordan Lake TMDL	35.8858	-78.9653	Durham	RRO	03030002	WS-IV, NSW	16-41-1-(11.5)	M + 2SM	M	M	M	M
B3300000	Northeast Crk at SR 1102 Sedwick Rd nr RTP	ups Durham Co. RTP WWTP	35.8870	-78.8994	Durham	RRO	03030002	WS-IV, NSW	16-41-1-17-(0.7)	M + 2SM	M	M	M	M
B3670000	Northeast Crk at SR 1731 O Kelly Church Road nr Durham	dns Durham Co. RTP WWTP, Jordan Lake TMDL	35.8555	-78.9397	Chatham	RRO	03030002	WS-IV, NSW	16-41-1-17-(0.7)	M + 2SM	M	M	M	M
B3899180	Morgan Crk at Mason Farm WWTP entrance at Chapel Hill	ups OWASA	35.8987	-79.0263	Orange	RRO	03030002	WS-IV, NSW	16-41-2-(5.5)	M + 2SM	M	M	M	M
B3900000	Morgan Crk at SR 1726 Old Farrington Rd nr Farrington	dns OWASA, DWR ambient stn	35.8612	-79.0100	Chatham	RRO	03030002	WS-IV, NSW	16-41-2-(5.5)	M + 2SM	M	M	M	M
B4080000	Haw Riv at SR 1011 Old US 1 nr Haywood	dns Honeywell, ups Neste Resins	35.6164	-79.0569	Chatham	RRO	03030002	WS-IV	16-42	M + 2SM	M	M	M	M
B4350000	Deep Riv at SR 1113 Kivett Dr nr Hayworth Spring	ups Richland Crk	35.9594	-79.9061	Guilford	WSRO	03030003	WS-IV, CA*	17-(4)	M + 2SM	M	M	M	M
B4380000	Richland Crk at SR 1154 Kersey Valley Rd nr High point	ups High Point Eastside WWTP, fecal coliform TMDL	35.9410	-79.9322	Guilford	WSRO	03030003	WS-IV CA*	17-7-(4)	M + 2SM	M	M	M	M
B4621000	Muddy Crk at SR 1917 Suits Rd nr Glenola	fecal coliform TMDL	35.8958	-79.9195	Randolph	WSRO	03030003	WS-IV*	17-9-(1)	M	M	M	M	M
B4770500	Deep Riv at 220 Bus Main St at Randleman	ups Randleman WWTP ups Hasketts Crk	35.8233	-79.8033	Randolph	WSRO	03030003	C	17-(10.5)	M + 2SM	M	M	M	M
B4800000	Deep Riv at SR 2122/2128 Worthville Rd at Worthville	dns Randleman WWTP dns Worthville dam	35.8007	-79.7762	Randolph	WSRO	03030003	C	17-(10.5)	M + 2SM	M	M	M	M

Station Number	Location	Comments	Latitude	Longitude	County	Region	8 Digit HUC	Stream Classification	Index	[1] Field measurements	[2] Nutrients	Turbidity	Suspended Residue	Fecal Coliform
B4870000	Haskett Crk at Asheboro WWTP Bridge nr Asheboro	ups Asheboro WWTP	35.7647	-79.7862	Randolph	WSRO	03030003	C	17-12	M	M	M	M	M
B4920000	Deep Riv at SR 2261 Old Liberty Rd nr Central Falls	dns Asheboro WWTP, below Hasketts Crk	35.7635	-79.7721	Randolph	WSRO	03030003	C	17-(10.5)	M + 2SM	M	M	M	M
B5070000	Deep Riv at SR 2615 Brooklyn Ave at Ramseur	ups Ramseur WWTP,	35.7302	-79.6558	Randolph	WSRO	03030003	C	17-(10.5)	M + 2SM	M	M	M	M
B5100000	Deep Riv at SR 2628 Hinshaw Town Rd nr Parks Crossroads	dns Ramseur WWTP	35.6724	-79.6274	Randolph	WSRO	03030003	C	17-(10.5)	M + 2SM	M	M	M	M
B5390800	Cotton Crk at SR 1372 Auman Rd nr Star	dns Starr WWTP	35.3782	-79.7551	Montgomery	FRO	03030003	WS-III	17-26-5-3	M + 2SM	M	M	M	M
B5685000	Deep Riv at Deep River Park Bridge nr Cumnock	ups Golden Poultry	35.5704	-79.2411	Chatham	RRO	03030003	C	17-(38.7)	M + 2SM	M	M	M	M
B5820000	Deep Riv at US 15 and 501 nr Sanford	dns Sanford WWTP	35.5782	-79.1942	Lee	RRO	03030003	C	17-(38.7)	M + 2SM	M	M	M	M
B5890000	Loves Creek at Waste Treatment Plant Rd at Siler City	ups of Siler City WWTP	35.7298	-79.4289	Chatham	RRO	03030003	C	17-43-10	M+2SM	M	M	M	M
B5920000	Loves Creek at Progress Blvd at Siler City	dns of Siler City WWTP	35.7322	-79.4246	Chatham	RRO	03030003	C	17-43-10	M+2SM	M	M	M	M
B5950000	Rocky Riv at US 64 nr Siler City	dns reservoir, ups Siler City WWTP	35.7351	-79.4233	Chatham	RRO	03030003	C	17-43-(8)	M + 2SM	M	M	M	M
B5980000	Rocky Riv at SR 2170 Rives Chapel Rd nr Siler City	dns Siler City WWTP	35.6985	-79.3756	Chatham	RRO	03030003	C	17-43-(8)	M + 2SM	M	M	M	M
B6040300	Deep Riv at SR 1011 Old US 1 nr Moncure	ups of confluence with Haw River, DWR ambient stn	35.6176	-79.0912	Chatham	RRO	03030003	WS-IV	17-(43.5)	M	M	M	M	M

[1]Field parameters include Temperature, Dissolved Oxygen, pH and Conductivity.
[2]Nutrients include Ammonia as N (NH_3), Total Kjeldahl Nitrogen (TKN), Nitrate/Nitrite as N (NO_2/NO_3), and Total Phosphorous as P.
M = Monthly M+2SM = Monthly with twice Monthly Summer Sampling May, June, July, August and September. Samples are to be collected as least 10-days apart except during extenuating circumstances.
ups = upstream, dns = downstream

APPENDIX A

SAMPLE COLLECTION AND ANALYSIS

Sample Collection Procedures

Sample collection shall be performed by trained personnel employed by NC DWR-certified laboratories in accordance with the DWR Monitoring Coalition Program Field Monitoring Guidance Document (November 2017) and subsequent documents. The Field Monitoring Guidance Document can be found on the web at: http://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/ecosystems-branch/monitoring-coalition-program. 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 (40 CFR part 136) 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) or the Director of DWR. 40 CFR Part 136 can be accessed on the web at http://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/rules-regulations.

Reporting levels will be at least as stringent as the reporting levels used by the DWR Laboratory. For guidance purposes Table 3 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 3
DWR Laboratory Reporting Limits

Parameters	Target Reporting Level	Comments
Water 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 pH units.
Specific Conductivity		Report results to the nearest whole µmho/cm at 25 ºC.
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 *a*	1 µg/L	Report Chlorophyll *a* values free from pheophytin and other chlorophyll pigments. Analysis by HPLC is not approved by DWR.
Ammonia (NH3 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	
Hardness	1.0 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 4. Review the data remark codes at least annually and utilize the most current set, as codes are subject to change. Contact the Coalition Coordinator for a current copy of the codes.

Table 4
Data Qualification Codes for Use with Coalition Data

Symbol	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, coliform or acute/chronic metals reporting since averaging multiple results for these parameters is fundamental to those methods or manner of reporting. 1 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.
B	Results 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 colonies exceeds the ideal ranges indicated by the method. These ideal ranges are defined in the method as: *Fecal coliform or Enterococcus bacteria: 20-60 colonies Total coliform bacteria: 20-80 colonies* 1 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. 2 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). 3 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. 4 Filters have counts of both >60 or 80 and <20. Reported value is estimated or is a total of the counts on all filters reported per 100 ml. 5 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 or enterococcus 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. 6 Estimated Value. Blank contamination evident. 7 Many non-coliform or non-enterococcus colonies or interfering non-coliform or non-enterococcus growth present. In this competitive situation, the reported value may under- represent actual density. Note: A "B" value shall be accompanied by justification for its use denoted by the numbers listed above (e.g., B1, B2, etc.). Note: A "J2" should be used for spiking failures.
C	Total residual chlorine was present in sample upon receipt in the laboratory; value is **estimated**. Generally, applies to cyanide, phenol, NH3, TKN, coliform, and organics.

Symbol	Definition
G	A single quality control failure occurred during biochemical oxygen demand (BOD) analysis. The sample results should be used with caution. 1 The dissolved oxygen (DO) depletion of the dilution water blank exceeded 0.2 mg/L. 2 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. 3 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. 4 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. 5 The glucose/ glutamic acid standard exceeded the range of 198 ± 30.5 mg/L. 6 The calculated seed correction exceeded the range of 0.6 to 1.0 mg/L. 7 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. 8 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. 9 The DO depletion of the dilution water blank produced a negative value. The cBOD value is greater than the BOD value. Note: A "G" value shall be accompanied by justification for its use denoted by the numbers listed above (e.g., G1, G2, etc.).
J	**Estimated** value; value may not be accurate. This code is to be used in the following instances: 1 Surrogate recovery limits have been exceeded. 2 The reported value failed to meet the established quality control criteria for either precision or accuracy. 3 The sample matrix interfered with the ability to make any accurate determination. 4 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, etc.). 5 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. 6 The laboratory analysis was from an unpreserved or improperly chemically preserved sample. The data may not be accurate. 7 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. 8 Temperature limits exceeded (samples frozen or >6ºC) during storage, the data may not be accurate. 9 The reported value is determined by a one-point estimation rather than against a regression equation. The estimated concentration is less than the laboratory PQL and greater than the laboratory method detection limit. 10 Unidentified peak; estimated value. 11 The reported value is determined by a one-point estimation rather than against a regression equation. The estimated concentration is less than the laboratory PQL and greater than the instrument noise level. This code is used when an MDL has not been established for the analyte in question. 12 The calibration verification did not meet the calibration acceptance criterion for field parameters. Note: A "J" value shall be accompanied by justification for its use denoted by the numbers listed above (e.g., J1, J2, etc.). A "J" value shall not be used if another code applies (e.g., N, V, M).
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.

Symbol	Definition
N	Presumptive evidence of presence of material; estimated value. This code is to be used if: 1 The component has been tentatively identified based on mass spectral library search. 2 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). 3 This code shall be used if the level is too low to permit accurate quantification, but the estimated concentration is less than the laboratory PQL and greater than the laboratory method detection limit. This code is not routinely used for most analyses. 4 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. 5 The component has been tentatively identified based on a retention time standard.
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. 1 Holding time exceeded prior to receipt by lab. 2 Holding time exceeded following receipt by lab.
P	Elevated PQL due to matrix interference and/or sample dilution.
S	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or matrix spike duplicate (MSD).
U	Indicates that the analyte was analyzed for, but not detected above the reported PQL. The number value reported with the "U" qualifier is equal to the laboratory's PQL*.
UU	Indicates that the analyte was not detected by a screen analysis. The number value reported with the "UU" qualifier is equal to the laboratory's PQL. The number value was determined by a one-point estimation at the PQL, rather than against a regression equation.
V	Indicates the analyte was detected in both the sample and the associated blank. Note: The value in the blank shall not be subtracted from the associated samples. 1 The analyte was detected in both the sample and the method blank. 2 The analyte was detected in both the sample and the field blank.
X	Sample not analyzed for this constituent. This code is to be used if: 1 Sample not screened for this compound. 2 Sampled, but analysis lost or not performed-field error. 3 Sampled, but analysis lost or not performed-lab error. Note: an "X" value shall be accompanied by justification for its use by the numbers listed.
Y	Elevated PQL due to insufficient sample size.
Z	The sample analysis/results are not reported due to: 1 Inability to analyze the sample. 2 Questions concerning data reliability. Note: The presence or absence of the analyte cannot be verified.
Supporting Definitions listed below	
MDL	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.
ML	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.

Supporting Definitions listed below	
PQL	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 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 Minimum Levels (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.

*PQL, 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.)
** Data remarks are current as of May 4, 2018.

APPENDIX B

DATA FORMAT AND REPORTING REQUIREMENTS

Data Format for Monthly submittals:

Table 5 provides the format of a data submittal spreadsheet. **It is very important that the format of the headings and the number and order of columns is consistent among all monthly submissions.** Do not use commas, tabs, or other common file delimiters anywhere in the submittal spreadsheet table. Do not add, delete, or hide any rows or columns. The first row should contain the column headings only. Column headings must include appropriate information on measurement units (e.g., mg/L, µg/L, cfu/100mL, etc.). The second row must contain the method code. The DWR station number (e.g., B6140000) must be provided as identified in the MOA. The comment column is used for describing pertinent information related to the sampling event or specific samples. Ensure that there are no missing values for station, date, time, and depth. Place all remark codes in a separate column, as demonstrated in Table 5. If there is no result for a particular parameter, leave the cell blank. Delete duplicate rows for stations that were not sampled (e.g., stations sampled twice in summer months). Screen all data for inappropriate or improbable values, such as a pH of 21.2 SU.

Annual Report:

The UCFRBA will be required to submit an annual report by April 30th for each year the MOA is in effect. The annual report will formally summarize all data collection activities in the past calendar year and contain at least 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.
- A list of active UCFRBA members with authorized representative updates, contact names, email addresses, and phone numbers. Identify the facility name and permit number.
- A list of members whom became inactive during the year and their permit numbers.
- A summary of all quality assurance and quality control issues and any field audits conducted.
- A summary of any significant issues, special studies, or projects.
- Description of any required data collection that was missed, with an explanation.
- Suggested changes to the monitoring program and/or MOA modifications.
- The UCFRBA's website address.

Table 5
File Format for Coalition Data Reporting

				Temp (ºC)	Temp_rmk	DO (mg/L)	DOrmk	pH (su)	pH_rmk	Conductivity (umhos/cm)	Conductivity_rmk	Fecal Coliform	Fecal Coliform_rmk	Suspended Residue (mg/L)	Suspended Residue_rmk	Turbidity (NTU)	Turbidity_rmk	Chlorophyll_a (ug/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 (mg/L)	TP_rmk	Hardness (ug/L)	Hardness_rmk	
Station	Date (m/d/yyyy)	Time (hh:mm)	Depth (m)	10	10rmk	300	300rmk	400	400rmk	94	94rmk	31616	31616rmk	530	530rmk	82079	82079rmk	32209	32209rmk	610	610rmk	625	625rmk	630	630rmk	665	665rmk	900	900rmk	Comments