UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

EXTERNAL CIVIL RIGHTS COMPLIANCE OFFICE
OFFICE OF GENERAL COUNSEL

May 7, 2018

Return Receipt Requested
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In Reply Refer to:
EPA File No. 11R-14-R4

Mr. Michael S. Regan
Secretary
North Carolina Department of Environmental Quality
1622 Mail Service Center
Raleigh, NC 27699-1611

Re: Closure of Administrative Complaint

Dear Secretary Regan:

This is to notify you that the U.S. Environmental Protection Agency (EPA), External Civil Rights Compliance Office (ECRCO), is closing the administrative complaint filed with ECRCO on September 3, 2014, on behalf of the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (Complainants) against the North Carolina Department of Environmental Quality (NCDEQ). In general, the complaint alleged that NCDEQ violated Title VI of the Civil Rights Act of 1964, as amended, 42 United States Code 2000d *et seq*. and the EPA's nondiscrimination regulations found at 40 Code of Federal Regulations (C.F.R.) Part 7.

EPA ECRCO is responsible for enforcing several federal civil rights laws that prohibit discrimination on the bases of race, color, national origin (including limited-English proficiency), disability, sex, and age in programs or activities that receive federal financial assistance from the EPA. On February 20, 2015, and August 2, 2016, respectively, ECRCO accepted for investigation:

> Whether NCDEQ's regulation of swine feeding operations discriminates against African Americans, Latinos, and Native Americans on the basis of race and national origin in neighboring communities and violates Title VI of the Civil Rights Act of 1964 and the Environmental Protection Agency's implementing regulations; and
>
> Whether NCDEQ's actions or inactions, including those associated with the presence and activities of the Pork Council related to the January 2016 mediation session, violated 40 C.F.R § 7.100 which prohibits intimidating, threatening, coercing, or engaging in other discriminatory conduct against any individual or

group because of actions taken and/or participation in an action to secure rights protected by the non-discrimination statutes ECRCO enforces.

On May 3, 2018, Complainants and NCDEQ reached a "Settlement Agreement" through EPA ECRCO's Alternative Dispute Resolution process (ADR), with the assistance of a mediator provided by EPA. (Settlement Agreement enclosed.) ECRCO has reviewed the "Settlement Agreement" and found the terms in the May 3, 2018, "Settlement Agreement" to be a reasonable resolution of the issues accepted for investigation by ECRCO for EPA File No. 11R-14-R4. In light of this, ECRCO is closing the complaint as of the date of this letter, without further action.

ECRCO is not a party to the ADR "Settlement Agreement" and ECRCO will not monitor the implementation of this "Settlement Agreement." However, ECRCO will respond to complaints by the Complainants and NCDEQ of "Settlement Agreement" breaches, as appropriate, pursuant to the procedures set forth in its Case Resolution Manual. (See Sections 3.11 and 3.9 at: https://www.epa.gov/ocr/case-resolution-manual .) ECRCO is of course available to provide technical assistance to NCDEQ as it works to develop and implement its nondiscrimination program.

We would like to thank the Complainants and NCDEQ for working collaboratively to reach this agreement. If you have any questions regarding this letter, please contact me at (202)564-9649, or dorka.lilian@epa.gov.

Sincerely,

Lilian S. Dorka
Director
External Civil Rights Compliance Office
Office of General Counsel

Enclosure

Cc: Elise B. Packard
Associate General Counsel
Civil Rights and Finance Law Office
Office of General Counsel

Kenneth Lapierrre
Assistant Regional Administrator
U.S. EPA Region 4

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is made, entered into and executed by and between the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (collectively, Complainants) and the North Carolina Department of Environmental Quality (DEQ or Department).

Title VI of the Civil Rights Act of 1964 (Title VI), 42 U.S.C. §§ 2000d *et seq.*, and the U.S. Environmental Protection Agency (EPA) regulations promulgated pursuant to Title VI, 40 C.F.R. Part 7, prohibit discrimination on the basis of race, color, or national origin in any program or activity receiving federal financial assistance.

Section I: Factual Background

The Parties

Complainant North Carolina Environmental Justice Network (NCEJN) is a statewide, grassroots-led organization made up of community members and other organizations that are working to fight environmental injustice. NCEJN seeks to promote health and environmental equality for all people in North Carolina through organizing, advocacy, research, and education based on principles of economic equity and democracy for all. NCEJN supports the communities that are most impacted by environmental injustice and has worked for more than a decade to address the impacts of industrial swine facilities in North Carolina's low-income and African American communities.

Complainant Rural Empowerment Association for Community Help (REACH) is a non-profit organization that seeks to address social, economic, and environmental inequities, primarily in Duplin, Sampson, Pender and Bladen Counties. Through research, advocacy, and collaborative problem-solving, REACH has worked to change practices at industrial swine facilities and to address their impacts on the environment, health, and welfare of affected communities.

Waterkeeper Alliance, Inc. (Waterkeeper) is a nonprofit organization that unites the more than 300 Waterkeeper organizations that patrol and protect the waterways in North Carolina, across the United States, and around the world. In North Carolina, there are currently 14 Waterkeeper affiliates with members who live, work, recreate on, and obtain their drinking water from waterways and in watersheds in North Carolina. Waterkeeper's Pure Farms, Pure Waters Campaign has worked with communities in eastern North Carolina to address the impacts of industrial swine facilities on local waterways and human health.

DEQ, formerly called the North Carolina Department of Environment and Natural Resources (DENR), is an agency of the State of North Carolina. DEQ is charged with protecting North Carolina's environment and public health and has the power to

issue permits to carry out this mission. The Environmental Management Commission ("EMC") has the authority to issue permits for animal waste management systems at swine facilities and has delegated this authority to DEQ. DEQ is a recipient of financial assistance from EPA and is subject to the provisions of Title VI and EPA's implementing regulations.

2014 General Permit

In 1996, the North Carolina legislature required that the State develop a general permit program to prevent the discharge of waste from animal operations, including swine operations with 250 or more swine.

DEQ began issuing general permits for controlling swine waste management systems on January 1, 1997. The following year the North Carolina legislature enacted a moratorium on new or expanded lagoon and sprayfield waste management systems at swine facilities. See G.S. 143-215-10I.

DEQ has since issued revised general permits, first on June 4, 2004, and again on February 20, 2009. In 2013, DENR published draft state permits to control animal waste, including AWG100000, the Swine Waste Management System General Permit.

Complainants NCEJN and Waterkeeper, along with others, submitted comments to DEQ on December 6, 2013, asking DEQ to modify the proposed general permit for the purpose of complying with Title VI. The Comments requested that DEQ "assess the racial and ethnic impact of the permitting program" before finalizing the general permit and "adopt measures that protect communities from pollution from swine facilities."

On March 7, 2014, DEQ finalized the 2014 renewal of the Permit No. AWG100000 (the General Permit).

Title VI Complaints to EPA's External Civil Rights Compliance Office

On September 3, 2014, Complainants submitted a complaint to EPA's Office of Civil Rights, now called the External Civil Rights Compliance Office (ECRCO) alleging that DEQ issued a general permit for industrial swine facilities in North Carolina in violation of Title VI and EPA implementing regulations, 40 C.F.R. Part 7.

On February 20, 2015, EPA accepted the complaint for investigation. The EPA found that the allegation met EPA's jurisdictional requirements.

On March 6, 2015 the Complainants and DEQ agreed to engage in Alternative Dispute Resolution ("ADR") and EPA placed its investigation on hold pending the outcome of ADR. The Parties commenced ADR but did not reach resolution, and EPA reinitiated its investigation on May 5, 2016.

On July 11, 2016, Complainants filed a second complaint with EPA alleging that DEQ, directly and through the actions of third parties, engaged in and failed to protect Complainants from intimidation, which is prohibited by Title VI and EPA regulations, 40 C.F.R. § 7.100.

On August 2, 2016, EPA accepted for investigation the Complainants' second complaint. EPA found that the complaint met EPA's jurisdictional requirements.

On January 12, 2017, EPA sent to DEQ a Letter of Concern providing preliminary information on ECRCO's investigation and making a series of recommendations.

On March 8, 2017, EPA suspended its investigation in light of the fact that the Complainants and DEQ agreed to engage in Alternative Dispute Resolution (ADR). EPA informed Complainants and DEQ that, pursuant to procedures set forth in its Complaint Resolution Manual, EPA would resume its investigation if the Parties did not reach resolution through ADR.

On June 30, 2017, Complainants and DEQ entered into mediation.

Section II: Recitals

DEQ is committed to carrying out its responsibilities in a nondiscriminatory manner, in accordance with the requirements of Title VI and EPA implementing regulations. The activities in Sections III through VII of this Agreement, which DEQ has voluntarily agreed to undertake and implement, are in furtherance of this commitment and DEQ's mission as the lead stewardship agency for the protection of North Carolina's environment and natural resources.

DEQ is committed to providing meaningful opportunities for public input, including language access and public participation in permitting processes, to be responsive to public inquiries, and to protect against intimidation and other forms of interference in the exercise of rights.

DEQ is committed to ensuring compliance with Title VI and EPA regulations by evaluating whether policies and programs have a disparate impact on the basis of race. DEQ maintains an ongoing interest in integrating into DEQ programs better protections for human health, vulnerable communities, the environment and civil rights.

Complainants are committed to ensuring that the civil rights of all residents of North Carolina are respected, protected and enforced. Complainants are also committed to ensuring that those residents most directly and adversely impacted can effectively and safely participate in environmental permitting and governmental decision-making processes that are free from intimidation.

Complainants and DEQ (collectively, the Parties) therefore agree to the following terms described in the remainder of this Agreement:

Section III: Specific Terms Related to the Swine General Permit

A. DEQ agrees to submit the draft General Permit, attached as Exhibit A and incorporated herein, for consideration in its Stakeholder Process. DEQ reserves the right to make additional changes for clarity, consistency with new statutes and regulations, and specificity, but commits to utilizing the substance of this attached draft for stakeholder comments. The Complainants reserve the right to raise additional issues not agreed to in this settlement during the stakeholder and notice and comment processes.

DEQ agrees to advance and explain the proposed changes throughout the stakeholder and public notice and comment period for the renewal of the General Permit. DEQ has responsibility to conduct a meaningful and substantial review of comments made by all stakeholders in the stakeholder and public notice and comment period, but cannot make assurance as to the content of the final General Permit.

DEQ will implement the process commitments around the stakeholder process as described below in III.B

B. Stakeholder Process:

1. The stakeholder process and public hearings will be facilitated by an independent non-partisan facilitator. The facilitator will be selected by DEQ and will be compensated by DEQ. The facilitator will establish ground rules for the process to ensure mutually constructive, inclusive and respectful dialogue.

2. Invitees to the stakeholder process will not be limited to those who have previously been involved as stakeholders and will include the Complainants as well as a range of other parties who may be affected.

3. The stakeholder process will include input from the public at large, including community residents in the eastern part of the state where most existing swine operations covered under the General Permit are located. DEQ and others involved in the stakeholder process will hold one or more public forums – including at least one in Duplin or Sampson Counties – to invite questions and initial input, before notice and comment rulemaking. Notice to the public will also be made in Spanish or other languages spoken by communities impacted by the permit in accordance with federal guidance (listed at Section VI). Facilities where public forums are held shall be accessible.

4. Notice of stakeholder meetings will be provided at least one (1) month in advance.

5. DEQ will adhere to Public Participation and LEP policies, as state and federally required, in conducting the stakeholder process. If the stakeholder process proceeds before such policies are finalized, DEQ will create and

implement an action plan to comply with federal LEP and Public Participation standards, including the translation of vital documents.

6. The initial draft General Permit for review in the stakeholder process will be released to all participating parties at the same time, with an opportunity for public review at least two weeks prior to any stakeholder meeting. Any subsequent drafts, should there be any, will be released to all parties simultaneously.

7. DEQ will provide for a record of stakeholder meeting discussion via sign-in sheets, audio recordings, meeting notes or summaries, or other means that capture the range of issues, ideas and concerns discussed.

C. Point System:

Within twelve months of the effective date of this agreement, DEQ will prepare a draft rule designating a system of points to be assigned to operators under the general permit for violations in accordance with G.S. 143-215.6A.

Section IV: Air Monitoring

To determine the degree of air contamination and air pollution in and around Duplin County, North Carolina, and to ensure that residents have access to reliable information about air quality, DEQ agrees to design and implement a temporary ambient air quality study in partnership with REACH. DEQ and the Complainants agree to undertake the air monitoring activities outlined in the Air Quality Monitoring Agreement, attached as Exhibit B. At the conclusion of the 12-month study period, DEQ will determine on the basis of the data collected whether the study should be extended for an additional agreed upon time period. Additionally, at the conclusion of the 12-month study period, a draft report will be compiled by DAQ staff and provided to the interested parties for comment. A final version of the report will be posted to the DAQ website.

Section V: Water Monitoring

DEQ and the Complainants agree to undertake the surface water monitoring activities outlined in the Surface Water Monitoring Agreement, attached as Exhibit C, including focused surface water sampling and establishment of at least one additional station to be included in the agency's ambient surface water monitoring system. At the conclusion of the 12-month study period, a draft report will be compiled by DEQ staff and provided to the interested parties for comment. A final version of the report will be posted to the DEQ website.

Section VI: Title VI Programmatic Terms

A. Non-Discrimination Civil Rights Policy and Civil Rights Compliance: DEQ is committed to maintaining and implementing a non-discrimination civil rights policy through the Department and publishing electronic copies on the Internet.

Specifically, DEQ will comply with applicable state and federal civil rights requirements during permitting processes and during regulatory oversight of facilities within its jurisdiction. In revising its Non-Discrimination Civil Rights Policy, DEQ will provide public notice and seek comment from Complainants and the public.

The Department in its discretion will be guided by and take into account the policies and guidance set forth below:

1. 42 U.S. C. § 2000d-2000d-7 - Prohibition Against Exclusion From Participation In, Denial Of Benefits Of, And Discrimination Under Federally Assisted Programs On Ground Of Race, Color, Or National Origin

2. 40 CFR Part 7 - Nondiscrimination In Programs Or Activities Receiving Federal Assistance From The Environmental Protection Agency

3. U.S. DOJ, "Proving Discrimination: Disparate Impact," Section VII, Title VI Legal Manual (Updated), available at https://www.justice.gov/crt/fcs/T6Manual7.

4. U.S. EPA, External Civil Rights Compliance Toolkit (Chapter 1, Transmittal Letter, FAQs) (Jan. 18, 2017), available at https://www.epa.gov/sites/production/files/2017-01/documents/toolkit-chapter1-transmittal_letter-faqs.pdf.

5. U.S. DOT of Transportation, Federal Transit Administration FTA C 4703.1 CIRCULAR, August 14, 2012, Environmental Justice Policy Guidance for Federal Transit Administration Recipients. https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/environmental-justice-policy-guidance-federal-transit:

6. U.S. DOT of Transportation, Federal Transit Administration FTA C 4702.1B CIRCULAR, October 1, 2012, Title VI Requirements and Guidelines for Federal Transit Administration Recipients. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf.

B. Environmental Justice (EJ) Tool: DEQ will develop an EJ geographical information tool that will allow DEQ programs to conduct environmental justice analyses.

In developing the EJ tool, DEQ will review and, as appropriate, incorporate available data that are relevant to environmental, demographic, and health factors. DEQ will convene a stakeholder process to gather public input on the development of the EJ tool. DEQ's internal deadline for completing the development of the EJ tool is April 1, 2019. If DEQ is not able to complete the tool development by that date, DEQ will notify the Complainants of the deadline extension.

C. Public Participation and Language Access Policies: DEQ is committed to ensuring that all North Carolinians, regardless of race, color, national origin, limited English access, or disability, are engaged respectfully and can safely participate during rulemaking, permitting and other events that involve public engagement. DEQ is also committed to meaningful engagement and public participation among its programs, free of intimidation or retaliation. Therefore, DEQ will, after public notice and comment, adopt and implement policies to enhance public involvement and language access policies. This will be done with particular attention to marginalized communities due to socio-economic status, race, ethnicity, and language usage, using procedures that provide for early identification and integration of public concerns into permitting decisions. DEQ will draft policies on public participation and language access for DEQ programs and process and publish them for comment no later than six (6) months after the effective date of this agreement and will adopt final policies no later than six (6) months after the publication of the draft policies. In developing the policies on public participation and language access, DEQ will in its discretion consider and address the guidance below:

1. Public Participation

   Federal Register Vol 71, No. 54. Tuesday, March 21, 2006. – Environmental Protection Agency, Title VI Public Involvement Guidance For EPA Assistance Recipients Administering Environmental Permitting Programs (Recipient Guidance)

   28 C.F.R. 42.405 (b)(c) – Coordination of Enforcement of Non-Discrimination in Federally Assistant Programs – Implementation of Title VI of the Civil Rights Act of 1964 (public notice provisions).

   Check List for Procedural Safeguards for Recipients: Federal Non-Discrimination Obligations, Attachment C to Letter of Concern from EPA to Acting Secretary Ross (Jan. 12, 2017), at 20-21 (public participation).

2. Language Access

   Federal Register Vol. 69, No. 122. Friday, June 25, 2004, [FRL–7776–6] – Environmental Protection Agency, Guidance To Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons

   Check List for Procedural Safeguards for Recipients: Federal Non-Discrimination Obligations, Attachment C to Letter of Concern from EPA to Acting Secretary Ross (Jan. 12, 2017), at 21-22 (language access).

D. Title VI Coordinator: DEQ has established a Title VI and Environmental Justice Coordinator position ("the Coordinator"). The Coordinator and DEQ shall facilitate

communication and information between the public, industries and the government regarding DEQ's Title VI program. The Coordinator shall track and respond in a meaningful and timely manner to allegations of civil rights violations and environmental injustice against the department, its employees, and its contractors. The Coordinator shall maintain a website for North Carolinians to submit anonymous comments online. The role of the Coordinator will fulfill the responsibilities set forth in the Check List for Procedural Safeguards for Recipients: Federal Non-Discrimination Obligations, Attachment C to Letter of Concern from EPA to DEQ (Jan. 12, 2017), at 19-20 (non-discrimination coordinator).

E. Additional Programmatic Commitments: In addition, DEQ will:

1. Engage environmental networks, grassroots organizations, and communities so as to understand and consider their concerns;

2. Increase awareness of environmental conditions among communities of color, low-income communities, indigenous communities, and local governments;

3. Increase awareness of environmental conditions in communities of color, low-income communities, and indigenous communities among industry and permitted entities;

4. Engage the Commission of Indian Affairs; and

5. Create and maintain a database of contacts who have shown or might show interest in participation of program events as stakeholders. The Coordinator will assist with the expansion of the "Sunshine List" used by DEQ to invite participants in stakeholder processes for permits. This may include, but is not limited to, environmental networks, organizations, grassroots groups and activists, commissions, federal agencies, state agencies, county officials, and community-based individuals. The database shall be reviewed and updated by the Coordinator on an annual basis for accuracy. Complainants agree to provide suggestions for expansion of the Sunshine List to the Coordinator by June 1, 2018.

Section VII: Review of Activities

A. DEQ and the Complainants agree to maintain ongoing communication on the implementation of this Agreement. In addition to other communications that result from implementation of Sections III, IV, V and VI of this Agreement, the parties shall convene semi-annual conference calls after the effective date of this Agreement to review the status of this Agreement, the results of all monitoring efforts and other activities to be conducted under part VII.B below, and the implications of such activities for further action.

B. Upon the completion of all activities described in Sections III through VI, including the renewal of the Swine General Permit in 2019, DEQ will conduct a review of such activities to assess the overall compliance of the Swine General Permit program with Title VI requirements. During the review, and in consultation with Complainants as described in VII.A above, DEQ will evaluate the following information:

1. The provisions of the renewed 2019 Swine General Permit and the implementation of stakeholder processes described in Section III;
2. The final report from the air monitoring activities described in Section IV;
3. The final report from the water monitoring program described in Section V;
4. The status of the DEQ Title VI program elements described in Section VI; and
5. Results from application of the EJ tool described in Section VI.B to at least five communities selected by DEQ, in consultation with the Complainants, that are located near facilities regulated under the General Permit. Such communities shall include, all or subsections of Duplin and Sampson Counties.

In applying the EJ tool described in Section VI.B, DEQ in its discretion will be guided by and take into account those portions of the policies and guidance set forth below which are relevant to conducting an equity analysis:

1. US EPA, Guidance on Considering Environmental Justice During the Development of Regulatory Actions (May, 2015), https://www.epa.gov/environmentaljustice/guidance-considering-environmental-justice-during-development-action.

2. US EPA, Technical Guidance for Assessing Environmental Justice in Regulatory Analysis (June, 2016), https://www.epa.gov/sites/production/files/2016-06/documents/ejtg_5_6_16_v5.1.pdf.

3. US DOT, Federal Transit Administration FTA C 4703.1 Circular, August 14, 2012, Environmental Justice Policy Guidance for Federal Transit Administration Recipients. https://222.transit.dot.gov/regulations-and-guidance/fta-circulars/environmental-justice-policy-guidance-federal-transit.

DEQ will undertake the review of activities upon completion of all of the five tasks above. DEQ's internal deadline to complete the review is November 1, 2019. If DEQ is not able to complete the review by that date, DEQ will notify the Complainants of the deadline extension. If, upon completion of the review, DEQ determines that further changes to the Swine General Permit program are necessary, DEQ will prepare a written summary of DEQ action items and a schedule for implementation. The list of action items will be made available to the Complainants and the public.

Section VIII: Dispute Notification Terms

The Parties shall notify each other in writing if either party contends that the other has not satisfied a term of this Agreement within ninety (90) calendar days of the alleged failure to act, and shall include a statement of the facts and circumstances supporting such contention.

Notifications in this Agreement shall be provided to the following entities using the following contact information:

A. Notification from DEQ to the Complainants shall be directed to:

Marianne Engelman Lado
Environmental Justice Clinic
Yale Law School
127 Wall Street
New Haven, CT 06511
Marianne.engelman-lado@ylsclinics.org
917 608-2053 (cell)

Elizabeth Haddix
Mark Dorosin
Julius L. Chambers Center for Civil Rights
P.O.Box 956
Carrboro, NC 27510
chambersccr@gmail.com
919 548-3584 (EH)
919 225-3809 (MD)

Will Hendrick
Staff Attorney
976 Martin Luther King Jr Blvd, Suite P
Chapel Hill NC 27514
whendrick@waterkeeper.org
212 747-0622 x 162

B. Notification from Complainants to DEQ shall be directed to:

William F. Lane
Office of General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

The Parties shall attempt to resolve any disputed issue(s) by informal means within sixty (60) calendar days from the date written notice is received. The Parties may agree in writing to continue the 60-calendar day period for dispute resolution.

The enforcement of the terms of this agreement by either party is limited to the Title VI case management process under EPA's jurisdiction.

Section IX: Effect of Agreement and Public Disclosure Terms

Effective Date: The Effective Date and date of execution of this Agreement is the

date by which all Parties have signed this Agreement. This Agreement can be signed in counterparts.

Scope of Settlement: As of the Effective Date of this Agreement, the Parties have settled the Title VI Complaints (EPA File No. 11R-14-R4), filed by the Complainants. This Agreement constitutes a full and final release by Complainants (except for the executory provisions hereof) of only the specific claims made in Complainants' two Title VI Complaints (EPA File No 11R-14-R4). Complainants reserve any and all rights, claims, demands, and causes of action that they might have against DEQ with respect to any matter, transaction, or occurrence that was not made in Complainants' September 3, 2014 and July 11, 2016 complaints filed with EPA.

This Agreement constitutes the entire agreement between DEQ and the Complainants regarding the matters addressed, and no other statement, promise, or agreement made by any other person shall be construed to change any term of this Agreement, except as specifically agreed to by the Parties in accordance with the provisions of this Agreement.

This Agreement does not constitute an admission by DEQ or a finding of any violations of Title VI or 40 C.F.R. Part 7 in connection with the allegations in Complainants' Title VI Complaints.

The Parties do not intend, and nothing in this Agreement shall be construed to mean, that any provision in this Agreement creates any right or interest in any non-party or in any member of the public as a third-party beneficiary.

Resolution of Complaints: The Parties agree that signing and implementing the terms of this Agreement will result in the full resolution of the Title VI Complaints filed with EPA (EPA File No. 11R-14-R4), and understand that OCR will issue a letter closing the complaint upon receipt of the executed Agreement. Such closure may be subject to reopening as specified in Section VIII, above. The Parties further acknowledge that the mediator will provide a copy of the executed Agreement to ECRCO.

Modification: Any party seeking to modify any portion of this Agreement because of changed conditions making performance impractical or impossible, or for other good cause, shall promptly notify the other in writing, setting forth the facts and circumstances justifying the proposed modification. Any modification(s) to this Agreement shall take effect only upon written agreement executed by all Parties.

Disclosure: This Agreement is a public document. A copy of this Agreement and any information contained in it can be made available to any person by DEQ or Complainants on request under the North Carolina Public Records Law or otherwise.

Duration: This Agreement shall remain in effect for two (2) years from its Effective Date, except as otherwise specified in the terms of the Agreement. Nothing in this

Agreement, however, shall affect DEQ's continuing responsibility to comply with Title VI and EPA's implementing regulations for Title VI, which are not subject to the time limit expressed in this paragraph. This includes compliance with all civil rights requirements in any future permit decisions.

Authorization: The undersigned representatives of the Parties certify that they are fully authorized to consent to the terms and conditions of this Agreement. Signature on a counterpart or authorization of an electronic signature shall constitute a valid signature.

Signatures on the Pages to Follow

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is made, entered into and executed by and between the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (collectively, Complainants) and the North Carolina Department of Environmental Quality (DEQ or Department).

On behalf of the North Carolina Department of Environmental Quality:

Michael S. Regan — May 3, 2018

Name — Date

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is made, entered into and executed by and between the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (collectively, Complainants) and the North Carolina Department of Environmental Quality (DEQ or Department).

On behalf of the North Carolina Environmental Justice Network:

Naeema Muhammad 5/3/18

Name Date

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is made, entered into and executed by and between the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (collectively, Complainants) and the North Carolina Department of Environmental Quality (DEQ or Department).

On behalf of the Rural Empowerment Association for Community Health:

Devon J. Hall 5/3/18

Name Date

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is made, entered into and executed by and between the North Carolina Environmental Justice Network, Rural Empowerment Association for Community Help, and Waterkeeper Alliance, Inc., (collectively, Complainants) and the North Carolina Department of Environmental Quality (DEQ or Department).

On behalf of the Waterkeeper Alliance, Inc.:

Name

5/3/2018

Date

Exhibit A: Draft General Permit
Permit Number AWG100000

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

SWINE WASTE MANAGEMENT SYSTEM GENERAL PERMIT

This General Permit is issued pursuant to North Carolina G.S. §143-215 et seq., may apply to any swine facility in the State of North Carolina, and shall be effective from October 1, 2014 until September 30, 2019.

All activities authorized herein shall be consistent with the terms and conditions of this General Permit.

Holders of Certificates of Coverage (COC) under this General Permit shall comply with the following specified conditions and limitations.

I. PERFORMANCE STANDARDS

1. Any discharge of waste that reaches surface waters or wetlands is prohibited except as otherwise provided in this General Permit and associated statutory and regulatory provisions. Waste shall not reach surface waters or wetlands by runoff, drift, manmade conveyance, direct application, direct discharge or through ditches, terraces, or grassed waterways not otherwise classified as state waters.

   The waste collection, treatment, storage and application system operated under this General Permit shall be effectively maintained and operated as a non-discharge system to prevent the discharge of pollutants to surface waters or wetlands. Application of waste to terraces and grassed waterways is acceptable as long as it is applied in accordance with Natural Resources Conservation Service (NRCS) Standards and does not result in a discharge of waste to surface waters or wetlands.

   Facilities must be designed, constructed, operated, and maintained to contain all waste plus the runoff from a 25-year, 24-hour rainfall event for the location of the facility. A facility that has a discharge of waste that results because of a storm event more severe than the 25-year, 24-hour storm will not be considered to be in violation of this General Permit if the facility is otherwise in compliance with its Certified Animal Waste Management Plan (CAWMP) and this General Permit.

   Any discharge or application of waste to a ditch that drains to surface waters or wetlands is prohibited except as follows: (a) discharges from the ditches are controlled by best management practices (BMPs) designed in accordance with NRCS standards; (b) the BMPs have been submitted to and approved by the Division of Water Resources (Division); (c) the BMPs were implemented as designed to prevent a discharge to surface waters or wetlands; (d) the waste was removed immediately from the ditch upon discovery; and (e) the event was documented and reported in accordance with Condition III.13. of this General Permit. Nothing in this exception shall excuse a discharge to surface waters or wetlands except as may result because of rainfall from a storm event more severe than the 25-year, 24-hour storm.

2. This General Permit does not allow the Permittee to cause a violation of any of the water quality standards established pursuant to Title 15A, Subchapter 2B of the North Carolina Administrative Code and Title 15A, Subchapter 2L of the North Carolina Administrative Code.

3. The facility's COC and its CAWMP are hereby incorporated by reference into this General Permit. The CAWMP must be consistent with all applicable laws, rules, ordinances, and standards (federal, state and local) in effect at the time of siting, design and certification of the facility.

The Permittee must assess and record, on an ongoing basis, the effectiveness of the implementation of the CAWMP. The Permittee must make major changes" or "revisions" to the CAWMP, as defined in Section VII, "Definitions," of this General Permit, in order to address any changes needed to maintain compliance with the facility's COC and this General Permit. Major changes," and "revisions" to the CAWMP must be documented, dated, and included as part of the CAWMP. "Major changes "and "revisions" to the CAWMP shall be submitted to the appropriate Division Regional Office within thirty (30) calendar days of the "major change" or "revision." If field, riser or pull numbers are changed, an explanation shall also be submitted and include a description of how the new numbers relate to the old numbers.

Any violation of the COC or the CAWMP shall be considered a violation of this General Permit and subject to enforcement actions. A violation of this General Permit may result in the Permittee having to take immediate or long-term corrective action(s) as required by the Division. These actions may include but are not limited to: modifying the CAWMP; ceasing land application of waste; removing animals from the facility; or the COC being reopened and modified, revoked and reissued, and/or terminated.

4. Any proposed increase or modification to the operation type or the annual average design capacity from that authorized by the COC will require a modification to the CAWMP and the COC prior to modification of the facility. New swine operations and expansion of existing swine operations are not eligible for coverage under this General Permit. No collection, treatment or storage facilities may be constructed in a 100-year flood plain.

5. Any field with a soil analysis P-index of XX or higher must be evaluated for compliance with NC NRCS Standard 590 as it relates to phosphorus using the NC Phosphorus Loss Assessment Tool (PLAT). PLAT must be run within twelve (12) months of receiving the high P-index soil analysis results. PLAT results must be documented on forms supplied by or approved by the Division and must be submitted to the Division. Per NC NRCS Standard 590, PLAT results are valid for five years

   All fields with a "HIGH" PLAT rating shall have land application rates that do not exceed the established crop removal rate (agronomic rate) for phosphorus. There shall be no waste application on fields with a "VERY HIGH" PLAT rating.

6. If prior approval is received from the Director of the Division (Director), facilities that have been issued a COC to operate under this General Permit may add treatment units for the purpose of removing pollutants before the waste is discharged into the lagoons/storage ponds. Prior to any approval, the Permittee must demonstrate to the satisfaction of the Director that the new treatment unit will not interfere with the operation of the existing treatment system and that a process is in place to properly manage and track the pollutants removed.

7. If prior approval is received from the Director, facilities that have been issued a COC to operate under this General Permit may add innovative treatment processes to the systems on a pilot basis in order to determine if the innovative treatment process will improve how the waste is treated and/or managed. Prior to any approval, the Permittee must demonstrate to the satisfaction of the Director that the innovative treatment process will not interfere with the operation of the existing treatment system and that a process is in place to properly manage and track the pollutants removed.

8. Animal waste shall not be applied within 100 feet of any well with the exception of monitoring wells. The allowable distance to monitoring wells shall be established on a case-by-case basis by the Division. Animal waste shall also not be applied within 25 feet of perennial streams or water bodies for facilities sited or expanded before 9-30-95; within 50 feet of perennial streams or water bodies (other than an irrigation ditch or canal) for facilities sited after 9-30-95 and constructed or expanded before 8-27-97; and within 75 feet of perennial streams or water bodies (other than an irrigation ditch or canal) for facilities sited or expanded after 8-27-97.

9. Existing swine dry lots may remain in wetlands as long as the wetlands uses are not removed or degraded as a result of the swine. The swine however may not be confined within 100 feet of an adjacent surface water or a seasonally-flooded area. The swine also must not cause a loss of more than 10% of the existing tree canopy. Where trees do not exist, the area must be managed to include crop rotation.

II. OPERATION AND MAINTENANCE REQUIREMENTS

1. The collection, treatment, and storage facilities, and the land application equipment and fields shall be properly operated and maintained at all times.

2. A vegetative cover shall be maintained as specified in the facility's CAWMP on all land application fields and buffers in accordance with the CAWMP. No waste shall be applied upon areas not included in the CAWMP or upon areas where the crop is insufficient for nutrient utilization. However, if the CAWMP allows, then waste may be applied up to thirty (30) days prior to planting or breaking dormancy.

3. Soil pH on all land application fields must be maintained in the optimum range for crop production.

4. Land application rates shall be in accordance with the CAWMP. In no case shall the total land application rates from all nutrient sources (including but not limited to effluent, sludges, and commercial fertilizers) exceed the agronomic rate of the nutrient of concern for the receiving crop.

5. In no case shall land application result in excessive ponding or any runoff during any given application event.

6. Animal waste shall not be directly applied onto crops for direct human consumption that do not undergo further processing (e.g., strawberries, melons, lettuce, cabbage, apples, etc.) at any time during the growing season, or in the case of fruit bearing trees, following breaking dormancy. Application of animal wastes shall not occur within thirty (30) days of the harvesting of fiber and food crops for direct human consumption that undergoes further processing.

7. If manure or sludges are applied on conventionally tilled bare soil, the waste shall be incorporated into the soil within one (1) day after application on the land, or prior to the next rainfall event, whichever occurs first. This requirement does not apply to no-till fields, pastures, or fields where crops are actively growing. In no case shall land application on such fields result in excessive ponding or any runoff during any given application event.

8. No material other than animal wastes of the type generated on this facility shall be disposed of in the animal waste collection, treatment, storage, or application systems. This includes but is not limited to pesticides, toxic chemicals and petroleum products.

9. Domestic and/or industrial wastewater from showers, toilets, sinks, etc. shall not be discharged into the animal waste collection, treatment, storage, and application system. Washdown of stock trailers owned by and used to transport animals to and from the facility only, will be permissible as long as the system has been evaluated and approved to accommodate the additional volume. Only those cleaning agents and soaps that are EPA approved according to their label, will not harm the cover crop, and will not contravene the groundwater standards listed in 15A NCAC 2L may be utilized in facilities covered by this General Permit. Instruction labels are to be followed when using cleaning agents and soaps.

10. Disposal of dead animals, which is the responsibility of the Permittee, shall be done in accordance with the facility's CAWMP and the North Carolina Department of Agriculture and Consumer Services (NCDA&CS) Veterinary Division's Statutes and regulations. G.S. 143-215.10C(e)(3) requires the CAWMP to include provisions that set forth acceptable methods of disposing of mortalities. Disposal of dead animals, regardless of method, must occur within twenty-four hours after knowledge of the death as required by G.S. 106-403. Mortality records shall be kept daily to include number of animals by species/operation type and by disposal method.

    Burial is not recommended for disposal of mortality. Mortality management plans that utilize burial must include maps showing existing and planned burial locations with setbacks from surface waters, wells, and property lines. The Division may require groundwater monitoring for mortality burial sites.

    For burial that either addresses mortality numbers that exceed the capacity of the primary mortality method or the primary/normal mortality method is unable to be used, the facility shall:
    a. consult with the NCDA&CS Veterinary Division prior to burial;
    b. map the burial sites, showing burial locations and setbacks from surface waters, wells, and property lines;
    c. record the dates and numbers of the animals buried by species and type; and
    d. submit the map and burial records within fifteen (15) calendar days of burial to the Water Quality Regional Operations Section located within the appropriate Regional Office.

    In the event of a state of emergency declared by the Governor, disposal of dead animals shall be done in accordance with the guidelines issued by the State Veterinarian.

11. Unless accounted for in temporary storage volume, all uncontaminated runoff from the surrounding property and buildings shall be diverted away from the waste lagoons/storage ponds to prevent any unnecessary addition to the liquid volume in the structures.

12. A protective vegetative cover shall be established and maintained on all earthen lagoon/storage pond embankments (outside toe of embankment to maximum pumping elevation), berms, pipe runs, and diversions to surface waters or wetlands with the goal of preventing erosion. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the lagoon/storage pond embankments. All trees shall be removed in accordance with good engineering practices. Lagoon/storage pond areas shall be accessible, and vegetation shall be kept mowed.

13. At the time of sludge removal from a lagoon/storage pond, the sludge must be managed in accordance with the CAWMP. When removal of sludge from the lagoon is necessary, provisions must be taken to prevent damage to the lagoon dikes and liner.

14. Lagoons/storage ponds shall be kept free of foreign debris including, but not limited to, tires, bottles, light bulbs, gloves, syringes or any other solid waste.

15. The facility must have at least one of the following items at all times: (a) adequate animal waste application and handling equipment, (b) a lease, or other written agreement, for the use of the necessary equipment, or (c) a contract with a third party applicator capable of providing adequate waste application.

16. The Permittee shall designate a certified animal waste management system operator with a valid certification to be in charge of the animal waste management system. The waste management system shall be operated by the Operator in Charge (OIC) or a person under the OIC's supervision.

17. In accordance with 15A NCAC 8F .0203(b)(2), the OIC or a designated back-up OIC of a Type A Animal Waste Management System shall inspect, or a person under the supervision of an OIC or designated back-up OIC shall inspect, the land application site as often as necessary to insure that the animal waste is land applied in accordance with the CAWMP. In no case shall the time between inspections be more than 120 minutes during the application of waste. A record of each inspection shall be recorded on forms supplied by, or approved by, the Division and shall include the date, time, land application area, number and name of the operator for each inspection. Inspection shall include but not be limited to visual observation of application equipment, land application areas, subsurface drain outlets, ditches, and drainage ways for any discharge of waste.

18. Upon written notification from the Director, the permittee shall install and operate automatic flow meters with flow totalizers. Written notification may be based on the facility's violations, incomplete or incorrect record keeping events, or if the Division determines that flow estimation techniques do not effectively quantify volumes of waste applied. The equipment must be in place no later than ninety (90) days following receipt of notice from the Director. [15A NCAC 02T .0108(c)]

19. No waste shall be applied in wind conditions that cause or might reasonably be expected to cause the mist to reach surface waters or wetlands or cross property lines or field boundaries.

20. The Permittee shall maintain buffer strips or other equivalent practices as specified in the facility's CAWMP near feedlots, manure storage areas and land application areas.

21. Waste shall not be applied on land that is flooded, saturated with water, frozen or snow covered at the time of land application.

22. Land application of waste is prohibited during precipitation events. The Permittee shall consider pending weather conditions in making the decision to land apply waste and shall document the weather conditions at the time of land application on forms supplied by or approved by the Division.

    Land application of waste shall cease within four (4) hours after the National Weather Service first issues a Hurricane Warning, Tropical Storm Warning, or a Flood Watch/Flash Flood Watch in advance of an associated tropical system including a hurricane, tropical storm, or tropical depression for the county in which the permitted facility is located. Watches and warnings are posted on the National Weather Service's website located at: **www.weather.gov**. More detailed website information can be found on Page 2 of the Certificate of Coverage. Watch and warning information can also be obtained by calling the local National Weather Service Office that serves the respective county, which can be found on Page 2 of the Certificate of Coverage. Watch and warning information can also be obtained by calling the local National Weather Service Office that serves the respective county, which can be found on Page 2 of the Certificate of Coverage.

23. Permittees shall install, operate and maintain devices on all irrigation pumps/equipment designed to automatically stop irrigation activities during precipitation within 12 months of the issuance of the Certificate of Coverage for this General Permit. The permittee shall maintain such devices according to the manufacturer's instructions and warranties.

24. Land application activities shall cease on any application site that exceeds a Mehlich 3 Soil Test Index for Copper of greater than 3,000 (108 pounds per acre) or Zinc of greater than 3,000 (213 pounds per acre).

25. All waste application equipment must be tested and calibrated at least once every year. The results must be documented on forms provided by, or approved by, the Division.

26. Any major structural repairs to lagoons/storage ponds must have written documentation from a technical specialist certifying proper design and installation. However, if a piece of equipment is being replaced with a piece of equipment of the identical specifications, no technical specialist approval is necessary [i.e. piping, reels, valves, pumps (if the gallons per minute (gpm) capacity is not being increased or decreased), etc.] unless the replacement involves disturbing the lagoon/storage pond embankment or liner.

27. Crops for which animal waste is land applied must be removed from the land application site and properly managed and utilized unless other management practices are approved in the CAWMP. Hay stored outside should be fed by the end of the first winter after cutting; it shall be moved from the farm where it is cut within 24 months of cutting.

28. In accordance with NRCS North Carolina Conservation Practice Standard No. 359 "Waste Treatment Lagoon", an operator may temporarily lower lagoon levels to provide irrigation water during drought periods and to provide additional temporary storage for excessive rainfall during the hurricane season and in preparation for the following winter months. All conditions of NRCS NC Standard No. 359 must be satisfied prior to lowering lagoon levels below designed stop pump levels.

III. MONITORING AND REPORTING REQUIREMENTS

1. An inspection of the waste collection, treatment, and storage structures, and runoff control measures shall be conducted and documented at a frequency to insure proper operation but at least monthly and after all storm events of greater than one (1) inch in 24 hours. For example, lagoons/storage ponds, and other structures should be inspected for evidence of erosion, leakage, damage by animals or discharge. Inspection shall also include visual observation of subsurface drain outlets, ditches, and drainage ways for any discharge of waste. Inspections of waste collection, treatment, and storage structures shall be conducted pursuant to the most recent DEQ Certification Training Manual for Operators of Animal Waste Management Systems, Chapter 5.

2. Monitoring and Recording Freeboard Levels

   a. Highly visible waste-level gauges shall be maintained to mark the level of waste in each lagoon/storage pond that does not gravity feed through a free flowing transfer pipe into a subsequent structure. The gauge shall have readily visible permanent markings.

      The waste level in each lagoon with a waste level gauge shall be monitored and recorded weekly on forms supplied by or approved by the Division.

The Director may require more frequent monitoring and recording of waste levels based on the facility's compliance history for freeboard violations.

b. Upon written notification from the Director, the permittee shall monitor and record waste levels as describe below. Written notification may be provided if the Division determines that waste level monitoring and recordkeeping do not adequately represent the volumes of waste in the structure to ensure appropriate management, if facilities experience freeboard violations in two or more consecutive years, or as determined necessary by the Director.

In addition to the facility's existing lagoon waste-level gauges, automated lagoon/storage pond waste-level monitors and recorders (monitored and recorded at least hourly) must be installed on all treatment and storage structures covered by a COC issued under this General Permit to measure and record freeboard. This equipment must be properly maintained and calibrated in a manner consistent with manufacturer's operation and maintenance recommendations. This automated equipment must be in place no later than ninety (90) days following notification from the Director. The Director may determine that installation of automated waste level monitors is not required if the Permittee can demonstrate that preventative measures were taken to avoid the violations and that the violations resulted from conditions beyond the Permittee's control.

If an automated level monitor(s) becomes inoperable, the Permittee shall:

i. report the problem by telephone to the appropriate Division Regional Office as soon as possible, but in no case more than 24 hours following first knowledge of the problem; and,

ii. make any needed repairs to the equipment as quickly as possible, and take and record daily waste levels at the same time every day until such time as the automated equipment is placed back into operation.

c. Upon written notification from the Director, the permittee shall install and operate new or modified waste-level gauges. Written notification may be provided if the Division determines that the existing gauges are not adequate to accurately indicate lagoon levels required to be maintained by this General Permit. The equipment must be in place no later than ninety (90) days following receipt of notice from the Director. [15A NCAC 02T .0108(c)].

3. Monitoring and Recording Precipitation Events

a. Precipitation events at facilities issued a COC to operate under this General Permit shall be monitored and recorded as follows:

For all facilities, a rain gauge must be installed at a site that is representative of the weather conditions at the farm's land application site(s) to measure all precipitation events. The precipitation type and amount must be recorded daily for all precipitation events and maintained on site for review by the Department of Environment and Natural Resources (Department). Daily records do not need to be maintained for those days without precipitation events.

b. Upon written notification from the Director, the permittee shall install and operate an automated rain gauge and recorder. Written notification may be provided if the Division determines that the existing rainfall recordkeeping methods/equipment are not adequate to track rainfall events. This equipment must be properly maintained and calibrated in a manner consistent with manufacturer's operation and maintenance recommendations. The equipment must be in place no later than ninety (90) days following receipt of notice from the Director. [15A NCAC 02T .0108(c)].

If an automated rain gauge(s) becomes inoperable, the Permittee shall:

i. report the problem by telephone to the appropriate Division Regional Office as soon as possible, but in no case more than twenty four (24) hours following first knowledge of the problem; and,

ii. make any needed repairs to the equipment as quickly as possible, and take and record all rainfall events until such time as the automated equipment is placed back into operation.

4. A representative Standard Soil Fertility Analysis, including pH, phosphorus, copper, and zinc, shall be conducted on each application field receiving animal waste in accordance with G.S. § 143-215.10C(e)(6). As of the effective date of this General Permit, the Statute requires that the analysis be conducted at least once every three years.

5. An analysis of a representative sample of the animal waste to be applied shall be conducted in accordance with recommended laboratory sampling procedures as close to the time of application as practical and at least within sixty (60) days (before or after) of the date of application. Every reasonable effort shall be made to have the waste analyzed prior to the date of application and as close to the time of waste application as possible. This analysis shall include the following parameters:

Nitrogen	Zinc
Phosphorus	Copper

6. The Permittee shall record all irrigation and land application event(s) including hydraulic loading rates, nutrient loading rates and cropping information. The Permittee shall also record removal of solids and document nutrient loading rates if disposed of on-site, or record the off-site location(s). These records must be on forms supplied by, or approved by, the Division.

7. A record shall be created and maintained of all transfers of waste between waste structures on the same site not typically operated in series. Such record shall include at least the identity of the structure from which the waste was transferred, the identity of the structure receiving the waste, the date and time of transfer and the total volume of waste transferred.

8. The Permittee must maintain monthly stocking records for the facility and make the records available to the Department.

9. If, for any reason, there is a discharge from the waste collection, treatment, storage and application systems (including the land application sites), to surface waters or wetlands, the Permittee is required to make notification in accordance with Condition III. 13. The discharge notification shall include the following information:

a. Description of the discharge: A description of the discharge including an estimate of the volume discharged, a description of the flow path to the receiving surface waters or wetlands and a site sketch showing the path of the waste.

b. Time of the discharge: The length of time of the discharge, including the exact dates and times that it started and stopped, and if not stopped, the anticipated time the discharge is expected to continue.

c. Cause of the discharge: A detailed statement of the cause of the discharge. If caused by a precipitation event, detailed information from the on-site rain gauge concerning the inches and duration of the precipitation event.

d. All steps being taken to reduce, stop and cleanup the discharge. All steps to be taken to prevent future discharges from the same cause.

e. Analysis of the waste: A copy of the last waste analysis conducted as required by Condition III. 5. above.

f. A waste sample, obtained within forty-eight (48) hours following first knowledge of the discharge to surface waters or wetlands, from the source lagoon/storage pond, shall be analyzed for the following minimum parameters:

Fecal coliform bacteria	Five-day biochemical oxygen demand (BOD_5)
Total suspended solids	Total phosphorous
Ammonia nitrogen (NH_3-N)	Total Kjeldahl nitrogen (TKN)
Nitrate nitrogen (NO_3-N)	

Samples shall be collected in accordance with methods described in Certification Training Manual for Operators of Animal Waste Management Systems, Chapter 4. Permittees shall contact a state certified laboratory to verify any sample preservation, handling and time requirements for proper sample analysis. Monitoring results must be submitted to the Division within thirty (30) days of the discharge event.

10. Upon notification by the Division, in accordance with 15A NCAC 02T .0108(c), the permittee shall undertake monitoring and reporting (including but not limited to groundwater, surface water or wetland, waste, sludge, soil, lagoon/storage pond levels and plant tissue) necessary to determine the source, quantity, quality, and effect of animal waste upon the surface waters, groundwaters or wetlands. Such monitoring, including its scope, frequency, duration and any sampling, testing, and reporting systems, shall meet all applicable Division requirements.

The Division shall require groundwater monitoring when any of the following conditions exist, including but not limited to: 1) evidence that groundwater impacts to public or private water wells are occurring off site; 2) evidence of migration of contaminated groundwater to off-site property or properties; 3) evidence of surface water impacts via groundwater.

11. A copy of this General Permit, the facility's COC, certification forms, lessee and landowner agreements, the CAWMP and copies of all records required by this General Permit and the facility's CAWMP shall be maintained by the Permittee in chronological and legible form for five (5) years. Records include but are not limited to: soil and waste analyses, rain gauge readings, freeboard levels, irrigation and land application event(s), past inspection reports and operational reviews, animal stocking records, records of additional nutrient sources applied (including but not limited to sludges, unused feedstuff leachate, milk waste, septage and commercial fertilizer), cropping information, waste application equipment testing and calibration, and records of removal of solids to off-site location(s). These records shall be maintained on forms provided or approved by the Division and shall be readily available at the facility (stored at places such as the farm residence, office, outbuildings, etc.) where animal waste management activities are being conducted.

12. Within fifteen (15) working days of receiving the request from the Division, the Permittee shall provide to the Division one (1) copy of all requested information and reports related to the operation of the animal waste management system. Once received by the Division, all such information and reports become public information, unless they constitute confidential information under G.S. § 132-1.2, and shall be made available to the public by the Division as specified in Chapter 132 of the General Statutes.

13. Regional Notification:

    The Permittee shall report by telephone to the appropriate Division Regional Office as soon as possible, but in no case more than twenty-four (24) hours following first knowledge of the occurrence of any of the following events:

    a. Failure of any component of the animal waste management system resulting in a discharge to ditches, surface waters, or wetlands.

    b. Any failure of the waste treatment and disposal system that renders the facility incapable of adequately receiving, treating, or storing the waste and/or sludge.

    c. A spill or discharge from a vehicle transporting waste or sludge to the land application field which results in a discharge to ditches, surface waters, or wetlands or an event that poses a serious threat to surface waters, wetlands, or human health and safety.

    d. Any deterioration or leak in a lagoon/storage pond that poses an immediate threat to the environment or human safety or health.

    e. Failure to maintain storage capacity in a lagoon/storage pond greater than or equal to that required in Condition V.2. of this General Permit.

    f. Failure to maintain waste level in a lagoon/storage pond below that of the designed structural freeboard (twelve (12) inches from top of dam or as specified in lagoon/storage pond design). Note that this notification is in addition to the report required by Condition III.13.e above.

    g. An application of waste either in excess of the limits set out in the CAWMP or where runoff enters ditches, surface waters, or wetlands.

    h. Any discharge to ditches, surface waters, or wetlands or any discharge that poses a serious threat to the environment or human health or safety.

    For any emergency, which requires immediate reporting after normal business hours, contact must be made with the Division of Emergency Management at **1-800-858-0368**.

The Permittee shall also file a written report to the appropriate Division Regional Office within five (5) calendar days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to be taken to correct the problem and to ensure that the problem does not recur. In the event of storage capacity violations as described in Condition III.13.e, the written report shall outline the actions proposed to be taken to restore compliance within thirty (30) calendar days. The requirement to file a written report may not be waived by the Division Regional Office.

In the event the waste level in a lagoon/storage pond is found to be within the designed structural freeboard, the Permittee shall file a written report to the appropriate Division Regional Office within two (2) calendar days following first knowledge of the occurrence. This report shall outline actions taken or proposed to be taken to reduce waste levels below the designed structural freeboard within five (5) calendar days of first knowledge of the occurrence.

14. The Director shall require the Permittee to file an annual certification report. The report must be filed using the form in Attachment A. These reports will be kept on file at DEQ and made available for public review upon request.

15. In the event of a discharge of 1,000 gallons or more of animal waste to surface waters or wetlands, the Permittee must issue a press release to all print and electronic news media that provide general coverage in the county in which the discharge occurred setting out the details of the discharge. The press release must be issued within forty-eight (48) hours after it is determined that the discharge has reached the surface waters or wetlands. A copy of the press release and a list of the news media to which it was distributed must be kept for at least one (1) year after the discharge and must be distributed to any person upon request.

    The permittee shall include the name of the facility, location of the discharge, estimated volume of waste entering state waters, time and date discharge occurred, duration of the discharge, identification of water body that was discharged into including creek and river basin if applicable, actions taken to prevent further discharge, and a facility contact person and phone number. The permittee shall provide a copy of the press release to DWR.

16. In the event of a discharge of 15,000 gallons or more of animal waste to surface waters or wetlands, a public notice is required in addition to the press release described in Condition III 15. The public notice must be placed in a newspaper having general circulation in the county in which the discharge occurred and the county immediately downstream within ten (10) days of the discharge. The notice shall be captioned "NOTICE OF DISCHARGE OF ANIMAL WASTE". The minimum content of the notice is the name of the facility, location of the discharge, estimated volume of waste entering state waters, time and date discharge occurred, duration of the discharge, identification water body that was discharged into including creek and river basin if applicable, actions taken to prevent further discharge, and a facility contact person and phone number. The owner or operator shall file a copy of the notice and proof of publication with the Department within thirty (30) days after the notice is published. Publication of a notice of discharge under this Condition is in addition to the requirement to issue a press release under Condition III.15. Permittee must maintain a copy of the press release and public notice consistent with Section 3.11 (records retention).

17. If a discharge of 1,000,000 gallons or more of animal waste reaches surface waters or wetlands, the appropriate Division Regional Office must be contacted to determine in what additional counties, if any, a public notice must be published. A copy of all public notices and proof of publication must be sent to the Division within thirty (30) days after the notice is published.

These requirements are in addition to those found in condition III.15 and condition III.16. The Permittee must maintain a copy of the public notice and proof of publication consistent with Section 3.11 (records retention).

18. All facilities, which are issued a COC to operate under this General Permit, shall conduct a survey of the sludge accumulation in all lagoons every year. The survey report should be written on forms provided or approved by the Division and shall include a sketch showing the depth of sludge in the various locations within each lagoon. This survey frequency may be reduced if it can be demonstrated to the satisfaction of the Division that the rate of sludge accumulation does not warrant an annual survey.

    If the sludge accumulation is such that the structure does not satisfy the criteria set by NRCS NC Conservation Practice Standard No. 359, a sludge removal or management plan must be submitted to the appropriate Division Regional Office within ninety (90) days of the determination. The plan shall describe removal and waste utilization procedures to be used. Compliance regarding sludge levels must be achieved within two (2) years of the determination.

IV. INSPECTIONS AND ENTRY

1. The permittee is subject to inspections at any time, without announcement, by the Department. The Permittee shall allow any authorized representative of the Department, upon the presentation of credentials and other documents as may be required by law and in accordance with reasonable and appropriate biosecurity measures, to:

    a. Enter the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this General Permit;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this General Permit;

    c. Inspect, at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this General Permit; and,

    d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance, any substances or parameters at any location.

V. GENERAL CONDITIONS

1. The issuance of a COC to operate under this General Permit shall not relieve the Permittee of the responsibility for compliance with all applicable surface water, wetlands, groundwater and air quality standards or for damages to surface waters, wetlands or groundwaters resulting from the animal operation.

2. The maximum waste level in lagoons/storage ponds shall not exceed that specified in the facility's CAWMP. At a minimum, maximum waste level for lagoons/storage ponds must not exceed the level that provides adequate storage to contain the 25-year, 24-hour storm event plus an additional one (1) foot of structural freeboard except that there shall be no violation of this condition if: (a) there is a storm event more severe than a 25-year, 24-hour event, (b) the Permittee is in compliance with its CAWMP, and (c) there is at least one (1) foot of structural freeboard (NRCS standard 359).

In addition to the above requirements, for new and expanding farms with lagoon and storage pond designs completed after September 1, 1996, storage must also be provided for the heavy rainfall factor for the lagoons/storage pond. In case of lagoons/storage ponds in series that are gravity fed, the 25-year, 24-hour storm event and/or the heavy rainfall factor storage requirement for the system may be designed into the lowest lagoon/storage pond in the system. However, adequate freeboard must be designed into the upper lagoons/storage ponds to allow sufficient storage to prevent the waste level from rising into the structural freeboard while the storm water is draining into the lowest structure in the system.

3. Any containment basin, such as a lagoon or a storage pond, used for waste management shall continue to be subject to the conditions and requirements of this General Permit until properly closed. When the containment basin is properly closed in accordance with the NRCS NC Conservation Practice Standard No. 360 "Closure of Waste Impoundments," April 2012 or any subsequent amendment, the containment basin shall not be subject to the requirements of this General Permit. The Permittee must submit a letter to the Division to request rescission of the COC by providing documentation of closure of all containment basins.

   Closure shall also include a minimum of 24 hours pre-notification of the Division and submittal of the Animal Waste Storage Pond and Lagoon Closure Report Form to the address identified on the form within fifteen (15) days of completion of closure.

4. This General Permit allows for the distribution of up to four (4) cubic yards of manure per visit to individuals for personal use. The maximum distribution of manure per individual for personal use is ten (10) cubic yards per year. The Permittee must provide the recipient(s) with information on the nutrient content of the manure. Distribution of greater quantities must be to individuals or businesses permitted to distribute the waste, or to be land applied to sites identified in the Permittee's CAWMP.

   The Permittee must inform the recipient(s) of his/her responsibilities to properly manage the land application of manure. Record keeping for the distribution of manure up to four (4) cubic yards per visit or ten (10) cubic yards per year to individuals for personal use is not required.

5. The annual permit fee shall be paid by the Permittee within thirty (30) days after being billed by the Division. Failure to pay the fee accordingly constitutes grounds for revocation of its COC to operate under this General Permit.

6. Failure of the Permittee to maintain, in full force and effect, lessee and landowner agreements, which are required in the CAWMP, shall constitute grounds for revocation of its COC to operate under this General Permit.

7. A COC to operate under this General Permit is not transferable. In the event there is a desire for the facility to change ownership, or there is a name change of the Permittee, a Notification of Change of Ownership form must be submitted to the Division, including documentation from the parties involved and other supporting materials as may be appropriate. This request shall be submitted within sixty (60) days of change of ownership. The request will be considered on its merits and may or may not be approved.

8. A COC to operate under this General Permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data. The Permittee shall notify the Division immediately of any applicable information not provided in the permit application.

   Any proposed modification to an animal waste management system including the installation of lagoon covers shall require approval from the Division prior to construction.

9. If the Permittee wishes to continue an activity regulated by this General Permit after the expiration date of this General Permit, the Permittee must apply for and obtain a new COC. Renewal applications must be filed at least 180 calendar days prior to the expiration of the General Permit.

10. The issuance of a COC to operate under this General Permit does not prohibit the Division from reopening and modifying the General Permit or COC, revoking and reissuing the General Permit or COC, or terminating the General Permit or COC as allowed by the appropriate laws, rules, and regulations.

11. The Director may require any person, otherwise eligible for coverage under this General Permit, to apply for an individual permit by notifying that person that an application is required.

12. The Groundwater Compliance Boundary is established by 15A NCAC 2L .0102 and 15A NCAC 2T .0103. An exceedance of Groundwater Quality Standards at or beyond the Compliance Boundary is subject to the requirements of 15A NCAC 2L and the Division in addition to the penalty provisions applicable under the North Carolina General Statutes.

13. Upon abandonment or depopulation for a period of five years or more, Permittee must satisfy all the following prior to restocking the facility (S.L. 2015-263):
    a. The Permittee must notify the Division of Water Resources in writing at least 60 days prior bringing any animals back on to the site.
    b. The facility has not been abandoned or depopulated for more than ten years.
    c. At the time the system ceased operation, the animal operation was in compliance with an individual or a general permit issued pursuant to G.S. 143-215.10C.
    d. The facility has maintained coverage under an individual permit or a certificate of coverage under a general permit.
    e. The Division issues an individual permit or a certificate of coverage under a general permit issued pursuant to G.S. 143-215.10C for the animal operation before any animals are brought on the facility.
    f. The permit for the animal waste management system does not allow the production, measured by SSLW, to exceed the greatest SSLW previously permitted under G.S. 143-215.10C.
    g. No component of the animal waste management system and swine farm, other than the existing swine house or land application site, shall be constructed within the 100-year floodplain.
    h. The inactive animal waste management system was not closed using the expenditure of public funds and was not closed pursuant to a settlement agreement, court order, cost share agreement, or grant condition

VI. PENALTIES

1. Failure to abide by the conditions and limitations contained in this General Permit; the facility's COC; the facility's CAWMP; and/or applicable state law; may subject the Permittee to an enforcement action by the Division including but not limited to the modification of the animal waste management system, civil penalties, criminal penalties and injunctive relief.

2. The Permittee must comply with all conditions of this General Permit. Any permit noncompliance constitutes a violation of state law and is grounds for enforcement action; for permit coverage termination, revocation and reissuance, or modification; or denial of a permit coverage renewal application.

3. It shall not be a defense for a Permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

VII. DEFINITIONS

25-year, 24-hour rainfall or storm event means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years, as defined by the National Oceanic and Atmospheric Administration Atlas 14 (NOAA 14), Volume 2, version 3.0 2004 revised 2006, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom. *[reference – NC NRCS Title 210 – National Engineering Handbook (NEH) Part 650, Engineering Field Handbook Chapter 2 (EFH-2), North Carolina Supplement, October 2017]*

Agronomic rates means the amount of animal waste and/or other nutrient sources to be applied to lands as outlined in NRCS NC Conservation Practice Standards No. 590 "Nutrient Management" or as recommended by the NCDA&CS and the North Carolina Cooperative Extension Service at the time of certification of the Animal Waste Management Plan by the appropriate certified technical specialist.

Animal feeding operation means a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of forty five (45) days or more in any twelve (12) month period, and (ii) crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single animal feeding operation if they adjoin each other, or if they use a common area or system for the disposal of wastes.

Certification means technical specialist certification of the CAWMP in accordance with the requirements of 15A NCAC 02T .1304. It is unrelated to terms "Annual Certification" as used in Condition III.14 of this General Permit, and the "No Discharge Certification Option" allowed by the November 2008 EPA CAFO Rule.

Discharge is defined by G.S. 143-213 which states: "Whenever reference is made in this Article to "discharge" or the "discharge of waste," it shall be interpreted to include discharge, spillage, leakage, pumping, placement, emptying, or dumping into waters of the State, or into any unified sewer system or arrangement for sewage disposal, which system or arrangement in turn discharges the waste into the waters of the State. A reference to "discharge" or the "discharge of waste" shall not be interpreted to include "emission" as defined in subdivision (12) of this section."

Ditch means any man made channel for the purpose of moving water off a site to the surface waters.

Excessive Ponding means any area of the application field where visible liquid waste is ponded on the surface of the land application site more than four (4) hours following the application of waste. Excessive ponding also means any areas where the ponding of waste has resulted in crop failure.

Expansion means an increase in the permitted steady state live weight at the animal operation.

Facility means an animal feeding operation including confinement areas, waste collection areas, waste treatment areas, waste storage areas, and land application areas.

Groundwaters means any subsurface waters, as defined in 15A NCAC 2L .0102.

Land application area means the area used for the application of animal wastewater or waste solids.

Land application means the application of wastewater and/or waste solids onto or incorporation into the soil.

Major changes to the CAWMP means changes in the number of animals, type of operation (feeder to finish to wean to feeder), retrofit of a lagoon, installation of a new irrigation system, and similar type changes. Recertification is only required for major changes to the CAWMP. Major changes to a facility must first be approved by the Division. The new CAWMP and the certification shall be submitted with a request that the COC be amended to reflect the changes. The facility may not make the changes until a new or amended COC has been issued.

Revision to the CAWMP means a change to an entire CAWMP to meet current applicable standards. A CAWMP must be revised if the operation cannot utilize all N nitrogen generated by the animal production in accordance with the existing CAWMP, except for the specific conditions noted in the CAWMP amendment criteria as previously defined. For an existing CAWMP, a change in crops and/or cropping pattern that utilizes more than 25% of the N generated by the operation is considered a plan revision. Any change to an existing CAWMP, whether an amendment or revision, must be signed and dated by both the producer and a technical specialist for the new CAWMP to be valid. A revision of the CAWMP does not require recertification.

State Waters means all surface waters, wetlands, groundwaters and waters of the United States located in the State.

Surface Waters means any stream, river, brook, swamp, lake, sound, tidal estuary, bay, creek, reservoir, waterway, or other surface body or surface accumulation of water, whether public or private, or natural or artificial, that is contained in, flows through, or borders upon any portion of the State of North Carolina, including any portion of the Atlantic Ocean over which the State has jurisdiction as well as any additional Waters of the United States which are located in the State.

Waste means manure, animal waste, process wastewater and/or sludge generated at an animal feeding operation.

Wetlands means areas that are inundated or saturated by an accumulation of surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined in 15A NCAC 2B .0202.

This General Permit issued the_____..

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

_____, Director

North Carolina Division of Water Resources
By Authority of the Environmental Management Commission

Permit Number AWG100000

Exhibit B: Air Quality Monitoring Agreement

To determine the degree of air contamination and air pollution in and around Duplin County, North Carolina, and to ensure that local residents have access to reliable information about air quality, the North Carolina Department of Environmental Quality (DEQ) agrees to design and implement a temporary ambient air quality study in partnership with the Rural Empowerment Association for Community Help ("REACH"), according to the conditions set out below.

In consultation with REACH, DEQ's Division of Air Quality ("DAQ") will conduct an ambient air quality study to evaluate whether ambient concentrations of particulate matter (PM2.5), hydrogen sulfide (H2S), and/or ammonia (NH3) may exceed relevant regulatory limits, published odor thresholds, or levels at the control site at the non-source oriented sites in and around Duplin County. In preparation for this study, DAQ in consultation with REACH and taking into account EPA siting criteria will determine the placement of a temporary fixed air monitoring site in or near Kenansville, North Carolina by May 15, 2018. This site will be within 1-2 miles of the previous Kenansville PM2.5 monitoring site. This is to provide continuity of data from the historical data to the current time period. This site will be equipped with instruments to monitor PM2.5, H2S, and NH3, as well as wind speed, wind direction, temperature, and relative humidity (the "Monitoring Equipment"). DAQ will begin to operate this monitoring equipment on or around June 1, 2018. The Monitoring Equipment will collect data 24 hours/day for at least 3 continuous months. DAQ will also establish a comparison site at the existing DAQ ambient monitoring site located in Candor, North Carolina. The comparison site will have instrumentation identical to the Monitoring Equipment and will collect data 24 hours/day during the same 3 continuous months as the Kenansville site.

By June 30, 2018, DAQ and REACH will agree on at least 3 additional temporary fixed air monitoring sites in or near Duplin County, North Carolina. At least one of these sites will be operated on a continuous 12-month cycle to gather one year's data to account for seasonal variations in air quality and other factors. During this same 12-month period, monitoring at the remaining two sites will either occur at one site for the entire period or will be moved from one to the other to complete the balance of the 12-month monitoring period. Monitoring at these sites will begin by September 1, 2018. Note: There will be only two active monitoring sites during any period during the study given availability of equipment. DAQ and REACH will agree on a decision about whether to move the Monitoring Equipment based on the collected data

DAQ reserves the option to remove instrumentation from any site if it is needed for another State air quality emergency such as a wildfire or chemical releases. In the event of such an emergency, DAQ will reestablish the Monitoring Equipment at the site from which it was removed within 2 weeks of the cessation of emergency monitoring requiring the use of the study instrumentation. The sites would be reestablished to complete the remaining time period for that site. Example: if an EBAM were removed from a site(s) for 4 weeks, upon returning it to operation at that site, it would remain for an additional 4 weeks from the original planned end date.

Subject to the availability of DAQ resources, operation and logistics will be conducted by state personnel in accordance with established protocols. REACH will have access to each temporary fixed air monitoring site and the authority to conduct independent air monitoring, using REACH's equipment, at those sites. DAQ will provide REACH with written permission indicating this

access and authority at least two weeks prior to beginning monitoring at these temporary fixed air monitoring sites. DAQ will make all data accessible to REACH and its partners and available to the public on the DAQ website. The schedule for data sharing will be dependent on the operational parameters of the instruments and the staffing required to collect the data. A tentative schedule will be determined in agreement with REACH prior to the beginning of monitoring.

By October 15, 2019, DAQ will determine on the basis of the data collected whether the study should be extended for an additional agreed upon time period.

By November 1, 2019, DAQ will release a draft report summarizing data from this study for public comment. A final report will be posted to the DAQ website by February 1, 2020.

Provided that REACH's independent monitoring adheres to conditions to be established by DAQ and made available to REACH prior to REACH beginning data collection during the 12-month fixed air monitoring site study, DAQ will post REACH's independent community monitoring results report on the DAQ website after DAQ has the opportunity to review and comment.

Exhibit C: Surface Water Monitoring Agreement

Purpose: Evaluate surface water quality impacts in areas with concentrated animal feeding operations in Sampson and Duplin Counties.

Department of Environmental Quality (DEQ) will identify and incorporate into its Ambient Monitoring System an additional ambient water quality monitoring station to increase coverage in the Sampson Duplin Counties area and undertake a focused surface water sampling initiative to evaluate potential surface water impacts in areas with high concentrations of animal feeding operations in Duplin and Sampson Counties. DEQ will utilize existing surface water monitoring programs in these counties and consider data collected by Complainants using agreed-upon protocols for quality assurance for non-enforcement purposes, to determine where more focused sampling may be helpful in monitoring impacts. DEQ will utilize existing staff resources to conduct the sampling, and where practical include existing monitoring coalitions to support the initiative. It is the intent of DEQ to utilize this initiative to help develop a systematic approach for determining if surface water impacts are occurring in areas with many animal feeding operations, and if there are impacts, determining which operations are responsible.

DEQ has initiated the following steps to identify potential sampling locations:

- Evaluate existing surface water monitoring locations to determine where additional monitoring may be beneficial by mapping:
    - Existing Monitoring stations historic data, (NCDWR and Coalitions)
    - Surface waters
    - Municipalities (or populations densities)
    - Animal Operations.
    - Roads
- Evaluate existing surface water monitoring data to determine where additional sampling may be beneficial by:
    - Ensuring proper indicator parameters and monitoring frequencies are incorporated into monitoring plans for selected stations.
    - Mapping of monitoring results to show relationships of results for parameters that may be indicators of impacts from animal operations.
- Determine strategy to prioritize additional monitoring locations based on evaluation of existing stations and data. Prioritization will include:
    - Environmental data documenting water quality impacts
    - Location of potential or observed impacts relative to animal operations
    - Location of potential or observed impacts relative to communities
    - Accessibility of surface waters
    - Available resources

Parameters

Each station will be monitored for the following parameters:

- Temperature
- Specific Conductivity
- pH
- Dissolved Oxygen
- Turbidity
- Fecal coliform
- Nutrients (ammonia as N, total kjeldahl nitrogen, nitrate-nitrite, total phosphorus)

Exhibit C: Surface Water Monitoring Agreement

Focused SW Sampling

Initial evaluation of potential sites focused on existing surface water data supporting potential impacts to water quality, concentration on animal feeding operations, and access roads. Based on initial evaluation of available data the following locations will be considered for a focused surface water study:

Stream Name	Stream Index	Location	Watershed Characteristics	County
Stockinghead Creek	18-74-24	Cool Spring Rd	Several Crossroads throughout this high density CAFO watershed. This is a headwaters stream crossing.	Duplin
		S Dobson Chapel Rd		
		Stocking Head Rd.		
		S NC Highway 50	Fish station at this crossroads.	
		Pasture Branch Rd.	Benthic macroinvertebrate station at this crossroads.	
Murpheys Creek	18-74-29-0.5	S NC Highway 903	High density CAFO watershed.	Duplin
Muddy Creek	18-74-25	Durwood Evan Rd.	Medium density CAFO watershed. Impaired biological station at this location.	Duplin
		Jackson Store Rd	Med. Density CAFO, upstream closer to swine CAFOs.	
Sikes Mill Run	18-68-2-10-4	Beasley Mill Rd.	High density CAFO watershed with stream originating on hog farm.	Duplin
Stewarts Creek	18-68-2-10	Waycross Rd.	High density CAFO watershed.	Sampson
Cane Creek	18-68-2-12	Edmonds Matthis Rd.	Medium density CAFO watershed. Benthic macroinvertebrate station located at this crossroad.	Sampson
Maple Branch	18-74-19-15	Include road crossings at: (1) E Wards Bridge Rd (2) Summerlins Crossroad Rd	Data summary from Reach; There are approx. 12 CAFOs in this watershed.	Duplin

Stockinghead Creek, Murpheys Creek, Muddy Creek, and Sikes Mill Run have been identified as the highest priority sites for initial evaluation. DEQ will begin sampling in these waterbodies at the specified sites in April 2018 and continue for at least six months. DEQ will further refine and expand the potential sites by considering population demographics for the counties of interest. DEQ will also continue to refine and expand the list of potential study sites as staff learn from the ongoing study sites, and as more data becomes available.

Furthermore, a potential reference site has been identified on Harrisons Creek in Pender County. The watershed for this stream is largely forested with no registered animal operations and little development. Visual review of the watershed using aerial imagery showed no potential significant nutrient or pathogen sources. This stream has been used in the past by researchers from UNCW as a reference site. Water quality data collected at Harrisons Creek will be used as a point of comparison to data collected at the sites identified above. Statistical comparisons will help DEQ determine if any significant differences are present for pollutants associated with CAFOs in the CAFO-dense watersheds versus the reference watershed.

Exhibit C: Surface Water Monitoring Agreement

DEQ will evaluate the need for additional monitoring at each study site as data becomes available. In addition to sampling results, DEQ will consider other factors in determining if additional monitoring is necessary to determine if a point source can be identified. These factors may include the following:

- Visual observation of discharges (initiate further investigation of discharge source and proceed to enforcement)
- Accessibility to upstream segments of the stream (no road crossings, or facilities adjacent to the stream)
- Flow conditions of the upstream segment
- Adjacent land uses not indicative of measured surface water impacts. (e.g., forested area adjacent to and upstream of measured fecal coliform impacts).
- Operational records at CAFO facilities with individual permits or coverage under a general permit. DWR staff will request operational data after initial sampling results are available.

In addition, to provide surface water data in areas with high concentration of animal operations, it is DEQ's intent to utilize the focused surface water sampling efforts to identify and address any discharges. DEQ may elect to stop further sampling for a study area if monitoring data and field observations are found to be inconclusive in locating unpermitted pollutant sources.

Ambient Monitoring Station

DEQ plans to establish an additional ambient monitoring station in Duplin or Sampson County by January 1, 2019. Selection of an appropriate ambient monitoring station is anticipated to be a two-step process. The first step will include reconnaissance of potential sites to determine suitability as monitoring stations. Factors in determining suitability will include but are not limited to the following:

- Accessibility (Landowner Permission, Terrain, Safety)
- Perennial Stream may not be suitable for AMS.
- Measurable Flow (Non-wetland) rates may limit a stream segments suitability

Once suitable sites are identified, DEQ will monitor these sites on a short-term basis. Results of the short-term study will be used to identify locations with observed adverse water quality impacts indicative of CAFO operations. These monitoring results, along with geographical location and landscape position (headwater stream, "major tributary," etc.), will be used to select a station for incorporation into the ambient monitoring system. Sampling events will begin as early as April 2018. Based on initial evaluation of available data the following locations for initial screening of ambient monitoring locations have been determined:

Stream Name	Stream Index	Location	Watershed Characteristics	County
Murpheys Creek	18-74-29-0.5	S NC Highway 903	Upstream in Rockfish Creek watershed. Closer to CAFO influences.	Duplin
Muddy Creek	18-74-25	Jackson Store Rd	Muddy Creek further upstream closer to CAFO's.	Duplin
Stockinghead Creek	18-74-24	Stocking Head Rd.	Mid watershed location. There are several other stream crossings for possible locations.	Duplin
Rockfish Creek	18-74-29a	Providence Rd.		Duplin

Exhibit C: Surface Water Monitoring Agreement

Stream Name	Stream Index	Location	Watershed Characteristics	County
Goshen Swamp	18-74-19a	I-440 Connector	Very High Fecal conc. Upstream of Panther Cr. which has the high fecal readings. Alternative is downstream of Panther Cr. at Hwy 117 or further upstream at Emmett Jackson Rd.	Duplin
Six Runs Creek	18-68-2-(0.3)b	Needmore Rd.	Colocated with Bug station BB336 - (Fair 11/1996)	Sampson
Six Runs Creek	18-68-2-(0.3)b	Rowan Rd. or Turkey Hwy	Upper portion of the watershed.	Sampson
Stewarts Creek	18-68-2-10	Blanchard Carrolls Rd.	Upper portion of Stewarts Creek watershed.	Sampson
Stewarts Creek	18-68-2-10	Waycross Rd.		Sampson
Great Coharie Creek	18-68-1b	Roanoke Rd.	Maybe to swampy/low flow to sample for AMS purposes.	Sampson
Great Coharie Creek	18-68-1b	Keener Rd.	Maybe to swampy/low flow to sample for AMS purposes.	Sampson