



Request for Qualifications No. 2022-082

Engineering Services for Grassy Branch WRF Expansion

Due Date: August 10, 2022
Time: 10:00 AM EST
Receipt Location: Government Center
Procurement Department
500 N. Main Street, Suite 709
Monroe, NC 28112
(Note: Follow the submittal instructions listed in this document to electronically upload a SOQ proposal package)

Non-Mandatory Pre-Submittal Meeting

Date: July 20, 2022
Time: 9:00 AM EST
Location: Grassy Branch WRF
1629 Old Fish Road
Monroe, NC 28110

Procurement Contact:

Corey Brooks
Senior Procurement Specialist
E-mail: corey.brooks@unioncountync.gov
Phone: 704.283.3683

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1 NOTICE OF ADVERTISEMENT

Union County, North Carolina
Request for Qualifications No. 2022-082
Engineering Services for the
Grassy Branch WRF Expansion

Electronic Statements of Qualifications (SOQs) will be received by the Union County's Procurement Department at the Union County Government Center, 500 North Main Street, Monroe, NC 28112 until **10:00 AM EST on August 10, 2022.** Late submittals will not be accepted.

Union County, North Carolina, through Union County Water, is seeking SOQs from qualified firms for engineering services for the expansion of the Grassy Branch WRF to 0.120 MGD as outlined in this solicitation. As a Request for Qualifications (RFQ), responding firms are not required to submit price information nor work product with submittal packages. Compliance with NC G.S. 143-64.31 is required.

This solicitation may be examined at the Union County Government Center, Procurement Department, 500 North Main Street, Suite 709, Monroe, NC 28112, Monday through Friday between the hours of 8:00 am and 5:00 pm. Copies of the solicitation may be obtained from the locations listed below:

1. Download the Solicitation Documents from the Union County Website
<https://www.unioncountync.gov/departments/bids-procurement/current-bids>
2. Download the Solicitation Documents from the State of North Carolina IPS website
www.ips.state.nc.us (Bid by Departments, search County of Union).

Union County (UC) reserves the right to reject any or all submittals, to waive technicalities and to make such selection deemed in its best interest. With limited response, Union County reserves the right to extend the solicitation opening date as appropriate in order to assure a competitive procurement process.

Offerors are required to comply with the non-collusion requirements set forth in the Solicitation Documents.

Union County encourages good faith effort outreach to Minority and Women Businesses (HUB Certified) and Small Businesses.

2 SUBMITTAL DETAILS

2.1 SUBMISSION DEADLINE AND DELIVERY ADDRESS

All submittals, for the services specified, are to be received by the Union County Procurement Department no later than **10:00 AM EST on August 10, 2022** per the instructions below. Any submittals received after this date and time shall be rejected without exception.

2.2 SUBMISSION REQUIREMENTS

The Statement of Qualifications (SOQ) must be submitted electronically by using the following link: <https://portal.unioncountync.gov/Forms/procurementsubmit>. The submittal, one complete document, must be signed by a person who is authorized to bind the proposing Company. Instructions for preparing the SOQ are provided herein.



Paper submissions will not be accepted.

There is no expressed or implied obligation for Union County to reimburse Offerors for any expenses incurred in preparing a response to this request.

Union County (UC) reserves the right to reject any or all submittals, to waive technicalities and to make such selection deemed in its best interest.

2.3 NON-MANDATORY, PRE-SUBMITTAL MEETING AND SITE VISIT

A Non-Mandatory Pre-Submittal Meeting and Site Visit will be held on **July 20, 2022 at 9:00 AM EDT** at the **Grassy Branch WRF at 1629 Old Fish Road, Monroe, NC 28110**. Although attendance at this meeting and following site visit is not mandatory, it is strongly encouraged. Individual requests for site visits will not be accommodated. Attendance is limited to two (2) representatives per company.

2.4 SUBMITTAL QUESTIONS

Submittal questions will be due on or before **July 27, 2022 by 5:00 PM EST**. The primary purpose is to provide participating Offerors with the opportunity to ask questions, in writing, related to the RFQ. Addenda will be issued prior to due date to answer applicable questions.

Submit questions by e-mail to corey.brooks@unioncountync.gov by the deadline shown above. The email should identify the RFQ number and project title. All questions and answers may be posted as addenda on www.unioncountync.gov and www.ips.state.nc.us.

2.5 PROPOSAL ADDENDUM

Union County may modify the RFQ prior to the date fixed for submission of SOQs by the issuance of an addendum.

Should an Offeror find discrepancies or omissions in this RFQ or any other documents provided by Union County, the Offeror should immediately notify the County of such potential discrepancy in writing via email as noted above.

Any addenda to these documents shall be issued in writing. No oral statements, explanations, or commitments by anyone shall be of effect unless incorporated in the written addenda. Receipt of Addenda shall be acknowledged by the Offeror on Appendix B, Addendum and Anti-Collusion form.

2.6 COMMUNICATION

All communications, any modifications, clarifications, amendments, questions, responses or any other matters related to this Request for Qualifications must be made only through the Procurement Contact noted on the cover of this RFQ. A violation of this provision is cause for the County to reject a Company's proposal. No contact regarding this document with the Board of County Commissioners or other County employees is permitted and may be grounds for disqualification.



3 PURPOSE

Union County, North Carolina, through Union County Water, is seeking SOQs from qualified firms for engineering services for the Grassy Branch WRF Expansion as outlined in this solicitation. The expansion to 0.120 MGD shall include, but many not be limited to, the following components:

- Larger influent pumps
- Retrofit of existing aeration basin coarse bubble diffusers to fine bubble diffuser equipment
- One additional package plant secondary treatment train, including flow equalization volume, an aeration basin, secondary clarifier, and aerobic digester
- New blowers for the existing and new aeration basins
- New cloth disk filter to replace the existing sand filter
- New UV disinfection equipment
- Electrical upgrades including new generator, automatic transfer switch, service entrance/main breaker, transformer, feeder panels, instrumentation, etc.

Union County reserves the right to negotiate with one or more parties and is not obligated to enter into any contract with any respondent on any terms or conditions.

Submittals made in response to this RFQ will be reviewed by an evaluation team and scored/ranked based on criteria identified herein. At the discretion of Union County, selection may be based on the SOQ rankings or a short list of firms may be selected based on SOQ rankings to be interviewed to determine final selection.

Note: This is a Request for Qualification (RFQ). Responding firms are not required to submit project specific scope information nor price. Do not submit price information nor work product with your submittal package. Each submittal package will be reviewed based on qualification criteria listed in this RFQ. In accordance with NC G.S. 143-64.31, the County will negotiate a contract with the best qualified firm based on the Scope of Work listed in this RFQ.

4 PROJECT BACKGROUND

The Grassy Branch WRF is currently permitted for a monthly average daily discharge of 0.050 MGD to Crooked Creek via NPDES permit NC0085812. The facility serves three schools, two subdivisions, and several additional private parcels. The facility has been issued Notice of Violations (NOVs) for flow, biochemical oxygen demand (BOD), ammonia, total suspended solids, fecal coliform, and pH over the last several years dating back to 2018. It has been determined that the majority of the NOVs have been a result of record rainfall events; however, over-allocation of sewer capacity has also contributed to discharge permit compliance issues. The County has actively been addressing inflow and infiltration (I & I), but the over-allocation of sewer capacity must be addressed through a plant expansion. The County has entered into a Special Order of Consent (SOC) to address the capacity issues through expansion of the facility, and a schedule of compliance is included in Appendix E.

The facility's NPDES discharge permit includes provisions for expansion to 0.120 MGD upon issuance of an Authorization to Construct from NCDEQ. The effluent discharge limits for the facility at 0.120 MGD are summarized in Table 1 below, and the complete NPDES discharge permit is included in the Appendix D.



Table 1: Grassy Branch WRF 0.120 MGD – NPDES Effluent Limits

Effluent Parameter	Monthly Average	Weekly Average
Flow	0.120 MGD	-
BOD ₅ (April 1 – October 31)	5 mg/L	7.5 mg/L
BOD ₅ (November 1 – March 31)	10 mg/L	15 mg/L
TSS	30 mg/L	45 mg/L
NH ₃ (April 1 – October 31)	2 mg/L	6 mg/L
NH ₃ (November 1 – March 31)	4 mg/L	12 mg/L
DO	> 6 mg/L	-
Fecal Coliform (geometric mean)	200/100 mL	400/100 mL
pH	6 < pH < 9	-

Current flows for the facility in 2022 through March have averaged 0.062 MGD. The highest monthly average from 2020 through 2022 occurred in December 2020 with an average daily flow of 0.078 MGD. Additional influent and effluent values from 2020 through 2022 are outlined in Table 2 and Table 3 below.

Table 2: Grassy Branch WRF 2020 – 2022 Influent Sampling Data

Year	BOD ₅ (mg/L)	TSS (mg/L)	NH ₃ (mg/L)
2020	133	228	25
2021	150	231	31
2022 ¹	124	165	26

Note 1: Data ends March 2022

Table 3: Grassy Branch WRF 2020 – 2022 Effluent Sampling Data

Year	Flow (MGD)	BOD ₅ (mg/L)	TSS (mg/L)	NH ₃ (mg/L)
2020	0.044	2.4	4.3	0.14
2021	0.043	2.7	4.5	0.26
2022 ¹	0.062	4.6	5.2	0.55

Note 1: Data ends March 2022

The Grassy Branch WRF is an extended aeration package treatment plant constructed by Hydro-Aerobics Package Wastewater Treatment Systems in 1997. The facility currently consists of an influent pump station, manual coarse screening, flow equalization, two conventional aeration basins with coarse bubble diffusers, two secondary clarifiers, tertiary sand filter, ultraviolet (UV) disinfection, effluent measuring/sampling box, aerobic digestion, blower building, and emergency back-up power. Digested biosolids are pumped to a tanker truck and transported to the Crooked Creek WRF for further stabilization.

5 DETAILED SUBMITTAL REQUIREMENTS AND INSTRUCTIONS

5.1 PROPOSAL FORMAT

Offerors should prepare their SOQ in accordance with the instructions outlined in this section. The submittal should be one (1) complete document. Each Offeror is required to submit the SOQ electronically – Refer to item, 2.2. The SOQ should be prepared as simply as possible and provide



a straightforward, concise description of the Offeror's capabilities to satisfy the requirements of the RFQ.

Utmost attention should be given to accuracy, completeness, and clarity of content. All parts, pages, figures, or tables should be numbered and clearly labeled. Response information should be limited to pertinent information only. Marketing and sales type information is not to be included.

The total length of the submittal, including cover letter, should be no more than 25 single-sided pages. Submittals should be on 8 ½" x 11" paper with an 11 point minimum text size; special graphics may be included on 11" x 17" paper with an 11 point minimum text size, if necessary. These special graphics pages will count toward the 25 page limit.

Key personnel resumes may also be provided as an appendix to the document and will not count against the page limit. Covers, section acknowledgements, and the required forms do not count against the page limit.

The submittal should be organized into the following sections:

- **Section A** – Cover Letter
- **Section B** – Project Team
- **Section C** – Project Experience
- **Section D** – Project Management, Approach and Quality Control
- **Section E** – Reputation of Firm
- **Section F** – Required Forms
 - Appendix A – Proposal Submission Form
 - Appendix B – Addenda Receipt and Anti-Collusion

Omissions and incomplete answers may be deemed unresponsive. Please initial any corrections.

5.1.1 SECTION A – COVER LETTER

Provide the following information about your company. The cover letter shall briefly introduce your firm, office location where work will be performed, principal in charge as well as:

- Legal Company Name and DBA (if applicable)
Address
Telephone Number
Website Address
- Name of Single Point of Contact
Title
Telephone Number
Email Address



- Name of Person with Binding Authority
Title
Address
Telephone Number
Email Address
- The firm's NC Engineering License.

5.1.2 SECTION B – PROJECT TEAM

Provide a detailed organization chart that presents the team to be dedicated to these services. This should include the project manager, engineers, subconsultants, and other supporting staff to be used in completion of the work. Information to be included in this section shall include:

- Professional, relevant qualifications of each team member, including which projects listed under the Project Experience section of the response, the project team individual(s) had a significant role;
- Office location and number of year's employee has worked with their current firm;
- Available time (in percent) that each team member may commit to these services.
- Subconsultants to be utilized in the execution of the project must be clearly identified within the organizational chart. Provide relevant qualifications for up to five projects for each subconsultant proposed as part of the project team. Projects listed should demonstrate prior successful teaming with the respondent.

5.1.3 SECTION C – PROJECT EXPERIENCE

Provide a representative summary of your firm's professional services experience in wastewater treatment design. Provide a minimum of five (5) representative projects demonstrating your firm's experience including the following information for each project:

- Owner's name;
- Owner's contact person name, address, telephone number, and email address;
- Title and Description of the project;
- Description of the services provided;
- Engineer's opinion of probable cost vs. actual construction cost
- Engineer's estimated project schedule vs. actual project schedule
- Change order history, including reasons for additional cost and/or duration

5.1.4 SECTION D – PROJECT MANAGEMENT, APPROACH AND QUALITY CONTROL

Provide a brief description of the systems and methods employed by the firm to effectively manage the project, including a summary on the management of: goal setting, managing client expectations, communications, scope, approach, quality control, managing project schedule, cost, quality control/assurance, risk and stakeholders within prescribed budgets and change management.



5.1.5 SECTION E – REPUTATION OF FIRM

Provide a record of successfully completed projects without major legal or technical problems.

State whether the firm has been sued or had a claim filed against it in the last five (5) years. If the answer is “yes” please, provide details of each suit or claim and the resolution of the matter.

5.1.6 SECTION F – REQUIRED FORMS

Submittals must include copies of the following documents:

- Appendix A – Proposal Submission (signed)
- Appendix B – Addenda Receipt and Anti-Collusion (signed)

6 EVALUATION CRITERIA AND SELECTION PROCESS

6.1 SELECTION PARTICIPANTS

1. Maintaining the integrity of the RFQ process is of paramount importance for the County. To this end, do not contact any member of the Union County Board of Commissioners or any member of the Union County staff regarding the subject matter of this RFQ until a selection is made, other than the County’s designated contact person identified in the introduction to this RFQ. Failure to abide by this requirement shall be grounds for disqualification from this selection process.
2. The Owner will establish an RFQ Evaluation Team to review and evaluate the submittals. The RFQ Evaluation Team will evaluate the submittals independently in accordance with the published evaluation criteria. Union County reserves the right to conduct interviews with a shortlist of selected respondents.
3. At its sole discretion, the Owner may ask written questions of Offerors, seek written clarification, and conduct discussions with Offerors on the submittals.
4. The Owner will provide written notification to all Offerors of the selection at the conclusion of the Procurement.
5. At the Owner’s discretion, it will initiate negotiations with the Preferred Offeror in accordance with the structure of this RFQ. The “Preferred Offeror” is the Offeror that the Owner determines achieves the apparent best overall score/ranking. If the Owner is unable to execute a contract with the Preferred Offeror, negotiations with the Preferred Offeror may be terminated, and provided that such negotiations are terminated in writing, the Owner may proceed to negotiate with the next Preferred Offeror. The Owner will continue in accordance with this procedure until a contract agreement is reached or the selection process is terminated. Negotiations are at the Owner’s sole discretion.



6.2 EVALUATION SELECTION PROCESS

1. A weighted analysis of the evaluation criteria will be utilized to determine the firm that represents the best value solution for the County.
2. In the evaluation and scoring/ranking of Offerors, the Owner will consider the information submitted in the RFQ as well as the meetings (if applicable) with respect to the evaluation criteria set forth in the RFQ.
3. The initial evaluation criteria/factors and relative weights listed below will be used to recommend selection of the Preferred Offeror or for the purpose of selecting Short-Listed Offerors. The County may choose to award without engaging in interview discussions.

SOQ Criteria	Weights
Project Team -Qualified staff and proposed consultant team for the project; -Current workload and availability to support the project; -Familiarity with the area where the project is located;	35%
Project Experience -Specialized or appropriate project experience; -Past performance on similar projects; -Understanding of specific needs of UCW for this project; -Record of successfully completed projects without major legal or technical difficulties.	35%
Project Management, Approach, and Quality Control -Project management with respect to project goals, communication, and cost & schedule control; -Proposed approach for the project; -Ability to address project challenges in a timely and definitive manner;	20%
Reputation of Firm -History of successful completion of projects without loss or damage due to firm's negligence	10%

4. After ranking of the Offerors' qualifications, the Owner may or may not decide to invite Short-Listed firms for interviews. If interviews are scheduled with the Short-Listed Offerors, previous evaluation and rankings/scores are not carried forward. For the purpose of selecting the Preferred Offeror, the evaluation criteria will be given the following relative weights.

Interview Criteria	Weights
Project Team Project Experience Project Management, Approach, and Quality Control Reputation of Firm	65%
Quality and Relevance of Interview as it Relates to the Scope of the RFQ	35%



6.3 AWARD PROCEDURE

The County reserves the right to make an award without further discussion of the submittals received. It is understood that any SOQ submitted will become part of the public record.

A submittal may be rejected if it is incomplete. Union County may reject any or all submittals and may waive any immaterial deviation in a submittal.

The County may accept the SOQ that best serves its needs, as determined by County officials in their sole discretion.

More than one submittal from an individual, firm, partnership, corporation or association under the same or different names, will not be considered.

The County may select and enter into negotiations with the next most advantageous Offeror if negotiations with the initially chosen Offeror are not successful.

The award document will be a Contract incorporating, by reference, all the requirements, terms and conditions of the solicitation and the Offeror's SOQ as negotiated.

7 GENERAL CONDITIONS AND REQUIREMENTS

7.1 TERMS OF CONTRACT

The contract award will have an initial term of three (3) years with two (2) one-year renewal options at the County's discretion, pending annual budget approval.

Union County has the right to reject any or all proposals, to engage in further negotiations with any Company submitting a proposal, and/or to request additional information or clarification.

All SOQ proposals submitted in response to this request shall become the property of Union County and as such, may be subject to public review.

7.2 TERMS OF SUBMISSION

All material received from a person or company ("Respondent") in response to this solicitation shall become the property of Union County and will not be returned to the Respondent. Any and all costs incurred by a Respondent in preparing, submitting, or presenting submissions are the Respondent's sole responsibility and Union County shall not reimburse the Respondent. All responses to this solicitation will be considered a public record and subject to disclosure under applicable public records law.

Any material in a response which the Respondent considers a trade secret and exempt from disclosure as a public record under applicable law, including N.C.G.S. §§ 132-1.2 and 66-152, must be properly designated as a trade secret. In order to properly designate such material, the Respondent must: (i) submit any trade secret materials in a separate envelope, or file, from all other submitted material, being clearly marked as "Trade Secret – Confidential and Proprietary Information," and (ii) stamp the same trade secret/confidentiality designation on each page of the materials therein which contain trade secrets.



To the extent consistent with public records law, Union County will make reasonable efforts to maintain the confidential nature of trade secrets, as determined by Union County and subject to the conditions set forth herein. Respondent understands and agrees by submitting a response to this solicitation, that if a request is made to review or produce a copy of any information in the Respondent's materials which was properly labeled by the Respondent as a trade secret, Union County will notify the Respondent of the request and the date that such materials will be released to the requestor unless the Respondent obtains a court order enjoining that disclosure. If the Respondent fails to obtain the court order enjoining disclosure prior to that date, Respondent understands and agrees that Union County will release the requested information to the requestor on that date.

Furthermore, the Respondent also agrees to indemnify and hold harmless Union County and each of its officers, employees, and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material that has been designated as a trade secret by Respondent.

7.3 CONTRACTUAL OBLIGATIONS

The contents of this Qualifications statement and the commitments set forth in the selected SOQ shall be considered contractual obligations, if a contract ensues. Failure to accept these obligations may result in cancellation of the award. All legally required terms and conditions shall be incorporated into final contract agreements with the selected Service Provider.

All payroll taxes, liability and worker's compensation are the sole responsibility of the Proposer. The Proposer understands that an employer/employee relationship does not exist under this contract.

7.4 TEMPLATE MASTER AGREEMENT

Appendix C contains Union County's Template Master Agreement that will serve as a basis for the contract with the selected firm.

7.5 EQUAL EMPLOYMENT OPPORTUNITY

All Firms will be required to follow Federal Equal Employment Opportunity (EEO) policies. Union County will affirmatively assure that on any project constructed pursuant to this advertisement, equal employment opportunity will be offered to all persons without regard to race, color, creed, religion, national origin, sex, and marital status, status with regard to public assistance, membership or activity in a local commission, disability, sexual orientation, or age.

7.6 MINORITY BUSINESSES (MBE) OR DISADVANTAGED BUSINESSES (DBE)

It is the policy of Union County that Minority Businesses (MBEs), Women businesses (WBEs), Disadvantaged Business Enterprises (DBEs) and other small businesses shall have the opportunity to compete fairly in contracts financed in whole or in part with public funds. Consistent with this policy, Union County will not allow any person or business to be excluded from participation in, denied the benefits of, or otherwise be discriminated against in connection with the award and performance of any contract because of sex, race, religion, or national origin.



7.7 EXPENSE OF FIRM

The Owner accepts no liability for the cost and expenses incurred by firms in responding to this Procurement. Each Firm that enters into the Procurement process shall prepare the required materials and the SOQ at its own expense and with the express understanding that the Firm cannot make any claims whatsoever for reimbursement from the Owner for the costs and expenses associated with the process, even in the event the Owner cancels this Project or rejects all submittals.

7.8 E-VERIFY

E-Verify is the federal program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program, used to verify the work authorization of newly hired employees pursuant to federal law. Vendor/Firm shall ensure that Firm and any Subcontractor performing work under this contract: (i) uses E-Verify if required to do so; and (ii) otherwise complies with applicable law.

7.9 INSURANCE

One or more of the following insurance limits may be required if it is applicable to the project. The County reserves the right to require additional insurance depending on the nature of the agreement.

At Offeror's sole expense, Offeror shall procure and maintain the following minimum insurances with insurers authorized to do business in North Carolina and rated A-VII or better by A.M. Best, or as otherwise authorized by the Union County Risk Manager.

A. WORKERS' COMPENSATION

Statutory (coverage for three or more employees) limits covering all employees, including Employer's Liability with limits of:

\$500,000 Each Accident

\$500,000 Disease - Each Employee

\$500,000 Disease - Policy Limit

B. COMMERCIAL GENERAL LIABILITY

(for any agreement unless otherwise waived by the Risk Manager)

Covering Ongoing and Completed Operations involved in this Agreement.

\$2,000,000 General Aggregate

\$2,000,000 Products/Completed Operations Aggregate

\$1,000,000 Each Occurrence

\$1,000,000 Personal and Advertising Injury Limit

C. COMMERCIAL AUTOMOBILE LIABILITY



(for any agreement involving the use of a contractor vehicle while conducting services associated with the agreement)

\$1,000,000 Combined Single Limit - Any Auto

D. PROFESSIONAL LIABILITY

(only for any agreement providing professional services such as engineering, architecture, surveying, consulting services, etc.)

\$1,000,000 Claims Made

Offeror shall provide evidence of continuation or renewal of Professional Liability Insurance for a period of two (2) years following termination of the Agreement.

ADDITIONAL INSURANCE REQUIREMENTS

- A. The Offeror's General Liability policy shall be endorsed, specifically or generally, to include the following as Additional Insured:

UNION COUNTY, ITS OFFICERS, AGENTS AND EMPLOYEES ARE INCLUDED AS ADDITIONAL INSURED WITH RESPECTS TO THE GENERAL LIABILITY INSURANCE POLICY.

Additional Insured status for Completed Operations shall extend for a period of not less than three (3) years from the date of final payment.

- B. Before commencement of any work or event, Offeror shall provide a Certificate of Insurance in satisfactory form as evidence of the insurances required above.
- C. Offeror shall have no right of recovery or subrogation against Union County (including its officers, agents and employees).
- D. It is the intention of the parties that the insurance policies afforded by Offeror shall protect both parties and be primary and non-contributory coverage for any and all losses covered by the above-described insurance.
- E. Union County shall have no liability with respect to Offeror's personal property whether insured or not insured. Any deductible or self-insured retention is the sole responsibility of Offeror.
- F. Notwithstanding the notification requirements of the Insurer, Offeror hereby agrees to notify County's Risk Manager at 500 N. Main Street, Suite 130, Monroe, NC 28112, within two (2) days of the cancellation or substantive change of any insurance policy set out herein. Union, in its sole discretion, may deem failure to provide such notice as a breach of this Agreement.



G. The Certificate of Insurance should note in the Description of Operations the following:

Department: _____

Contract #: _____

H. Insurance procured by Offeror shall not reduce nor limit Offeror's contractual obligation to indemnify, save harmless and defend Union County for claims made or suits brought which result from or are in connection with the performance of this Agreement.

I. Certificate Holder shall be listed as follows:

Union County
Attention: Keith A. Richards, Risk Manager
500 N. Main Street, Suite #130
Monroe, NC 28112

J. If Offeror is authorized to assign or subcontract any of its rights or duties hereunder and in fact does so, Offeror shall ensure that the assignee or subcontractor satisfies all requirements of this Agreement, including, but not limited to, maintenance of the required insurances coverage and provision of certificate(s) of insurance and additional insured endorsement(s), in proper form prior to commencement of services.

7.10 INDEMNIFICATION

Offeror agrees to protect, defend, indemnify and hold Union County, its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings, or causes of action of every kind in connection with or arising out of this agreement and/or the performance hereof that are due, in whole or in part, to the negligence of the Offeror, its officers, employees, subcontractors or agents. Offeror further agrees to investigate, handle, respond to, provide defense for, and defend the same at its sole expense and agrees to bear all other costs and expenses related thereto.



8 APPENDIX A – PROPOSAL SUBMISSION FORM

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion

This Proposal is submitted by:

Company Legal Name: _____
Authorized Representative
Name: _____
Authorized Representative
Signature: _____
Representative Title: _____
Address: _____
City/State/Zip: _____
Email Address: _____
Phone Number: _____
Website Address: _____

It is understood that Union County reserves the right to reject any and all proposals, to make awards according to the best interest of the County, to waive formalities, technicalities, to recover and re-advertise this project. Proposal is valid for an estimated 120 calendar days from the Proposal due date and is submitted by an executive of the company that has authority to contract with Union County, NC.

Name: _____
Title: _____
Signature: _____
Date: _____



9 APPENDIX B – ADDENDUM AND ANTI-COLLUSION

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion

Please acknowledge receipt of all addenda by including this form with your Proposal. Any questions or changes received will be posted as an addendum on www.co.union.nc.us and/or www.ips.state.nc.us. It is your responsibility to check for this information.

Addendum No.	Date Downloaded
_____	_____
_____	_____
_____	_____
_____	_____

I certify that this proposal is made in good faith and without collusion with any other offeror or officer or employee of Union County.

Company Name: _____

Name: _____

Title: _____

Email Address: _____

Signature: _____

Date: _____



10 APPENDIX C – TEMPLATE MASTER AGREEMENT

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion



MULTIPLE PROJECT AGREEMENT

BETWEEN

UNION COUNTY, NORTH CAROLINA

AND

ENTER FULL LEGAL NAME OF ENGINEERING FIRM [Click here to enter text.](#)

FOR

PROFESSIONAL ENGINEERING SERVICES

DATE: _____

AGREEMENT
BETWEEN
UNION COUNTY, NORTH CAROLINA
AND
ENTER FULL LEGAL NAME OF ENGINEERING FIRM Click here to enter text.
FOR
PROFESSIONAL ENGINEERING SERVICES

THIS IS AN AGREEMENT made as of _____, between Union County, North Carolina, with principal offices at 500 N. Main St., Monroe, North Carolina, 28112, hereinafter referred to as “OWNER” and **Enter Full Legal Name of Engineering Firm** Click here to enter text., with offices at **Enter Office Address of Engineering Firm** Click here to enter text., hereinafter referred to as “ENGINEER.”

OWNER desires to retain ENGINEER, a professional engineering firm, to provide engineering services on one or more projects in which the OWNER is involved; and

ENGINEER desires to provide such services on such projects as may be agreed, from time to time, by the parties.

OWNER and ENGINEER, in consideration of their mutual covenants, herein agree in respect of the performance of professional services by ENGINEER and the payment for those services by OWNER as set forth below.

SECTION 1 - PROJECT TASK ORDER

1.1 This Agreement shall apply to as many projects as OWNER and ENGINEER agree will be performed under the terms and conditions of this Agreement. Each project ENGINEER performs for OWNER hereunder shall be designated by a “Task Order.” A sample Task Order is attached to this Agreement and marked as Exhibit “A”. No Task Order shall be binding or enforceable unless and until it has been properly executed by both OWNER and ENGINEER. Each properly executed Task Order shall become a separate supplemental agreement to this Agreement. Notwithstanding anything herein to the contrary, this Agreement does not require OWNER to purchase any minimum amount of professional services, and a decision by OWNER to not make any purchase hereunder will violate neither this Agreement nor any implied duty of good faith and fair dealing. OWNER has no financial obligation under this Agreement absent OWNER’s execution of a valid and binding Task Order.

1.2 In resolving potential conflicts between this Agreement and the Task Order pertaining to a specific project, the terms of the Task Order shall control.

1.3 ENGINEER represents and agrees that it is qualified and fully capable to perform and provide the professional engineering services and other services required or necessary under this Agreement in a fully competent and professional manner, and that any consultants ENGINEER

engages (“Consultants”) are also fully capable and qualified to perform and provide the services that they will provide hereunder.

1.4 In performing services pursuant to this Agreement and any Task Order, ENGINEER shall comply with all applicable laws, rules, regulations, ordinances, codes, standards, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction. ENGINEER shall also exercise reasonable care and diligence in performing its services under this Agreement in accordance with generally accepted standards for engineering practice in the region which is the situs of the project or task subject to the Task Order (“Standard of Care”).

1.5 ENGINEER shall be responsible for all errors or omissions in the drawings, specifications, and other documents prepared by ENGINEER. It shall be the responsibility of ENGINEER throughout the period of performance under this Agreement, including any Task Order, to use reasonable professional care and judgment to guard OWNER against defects and deficiencies in any work.

1.6 ENGINEER shall correct at no additional cost to OWNER any and all errors, omissions, discrepancies, ambiguities, mistakes, or conflicts in the drawings, specifications, and other documents prepared by ENGINEER.

1.7 Time is of the essence in this Agreement. ENGINEER shall perform all services in a timely manner in accordance with any schedules set forth herein, including any Task Order. ENGINEER shall ensure all necessary or appropriate applications for approvals are submitted to federal, state, and local governments or agencies in a timely manner so as not to delay design or any other activities of a PROJECT.

1.8 Any of ENGINEER’s key personnel, along with its Consultants and their key personnel, may be listed in a Task Order. No changes to ENGINEER’s key personnel or its Consultants and their key personnel shall be permitted without the written consent of OWNER, which consent shall not be unreasonably withheld.

SECTION 2 - BASIC SERVICES

ENGINEER shall provide OWNER with all engineering and related services required to satisfactorily complete all phases and requirements of a Task Order within the time limitation set forth therein in accordance with the Standard of Care. ENGINEER’s basic services and responsibilities (“Basic Services”) for each Task Order are defined in the Appendix, Exhibit A, “Scope of Services”, which is part of this Agreement as if fully set forth herein. A detailed Scope of Services for each Task Order, or for Additional Services, will be developed at the direction of OWNER and will formally become a part of this Agreement through a Task Order executed by both parties, which Task Order shall include payment provisions and provisions for time of completion by ENGINEER.

2.1 General.

2.1.1 ENGINEER's Basic Services and responsibilities to OWNER are as defined in the Task Order applicable to each project. These services may include providing professional engineering consultation and advice and furnishing (civil, structural, mechanical, electrical, process, chemical, solid waste and recovery) engineering design services and/or construction administration services and related architectural/engineering services incidental thereto.

SECTION 3 - ADDITIONAL SERVICES

3.1 General

Additional Services (“Additional Services”) are not included in the Basic Services; and shall be provided if authorized by Task Order; and shall be paid for by OWNER as provided in this Agreement, in addition to compensation for Basic Services.

SECTION 4 - OWNER'S RESPONSIBILITIES

OWNER shall perform the following:

4.1 Designate in writing a person to act as OWNER's representative with respect to services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret OWNER's policies and make decisions with respect to ENGINEER's services for the PROJECT, except those decisions which require approval by the County Manager or Board of Commissioners.

4.2 Provide to ENGINEER any data, plans, reports, and other information in possession of, and reasonably accessible by, OWNER which are relevant to the execution of ENGINEER's duties on the PROJECT; provide all criteria and full information as to OWNER's requirements for the PROJECT, including design criteria, objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations.

4.3 After receiving notice from ENGINEER, furnish, if necessary, services of soils/geotechnical engineers, archeological professionals or other consultants. These services may include, without limitation, borings, probings and subsurface explorations, hydrographic surveys, laboratory tests and inspections of samples, materials and equipment, with reports and appropriate professional recommendations.

4.4 Provide land surveys to include property, boundary, easement, right-of-way, utility surveys, property descriptions, zoning, deed or other land use restrictions.

4.5 Arrange for access to, and make all provisions for ENGINEER and its Consultants to enter upon public and private property as required by ENGINEER and its Consultants, to perform services under this Agreement.

4.6 Review all studies, reports, sketches, Drawings, Specifications, proposals and other documents presented by ENGINEER.

4.7 Provide, if necessary, environmental assessments, or environmental impact statements related to the PROJECT; furnish approvals and permits from all governmental authorities having jurisdiction over the PROJECT and approvals and consents from others as may be necessary for completion of the PROJECT, except those approvals, permits and consents to be provided by ENGINEER pursuant to this Agreement.

4.8 Provide accounting and insurance counseling services as necessary for OWNER regarding the PROJECT, and auditing services as OWNER may require to ascertain how or for what purpose any contractor has used the monies paid under the construction contract.

4.9 Advertise for proposals from bidders, open the proposals at an appointed time and place, and pay for all costs incidental thereto.

4.10 Give prompt notice to ENGINEER whenever OWNER observes or otherwise becomes aware of any condition that affects the scope or timing of ENGINEER's services, or any defect or nonconformity in the Work of any contractor.

4.11 Render approvals and decisions as is necessary for the orderly progress of ENGINEER's services. ENGINEER shall be entitled to rely upon the accuracy and completeness of all information and services provided by OWNER or at OWNER's direction, unless ENGINEER knows or in the exercise of reasonable professional skill and care should or would have reason to know that information and services provided by OWNER were inaccurate or not completely accurate.

SECTION 5 - PERIODS OF SERVICE

5.1 The provisions of this Section 5 and the various rates of compensation for ENGINEER's services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the PROJECT through completion of the Services contained herein. ENGINEER's obligation to render services hereunder will extend for a period which may reasonably be required for the performance of ENGINEER's services and required extensions thereto. If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such dates are exceeded through no fault of ENGINEER, all rates, measures and amounts of compensation provided herein may be subject to equitable adjustment.

5.2 The services required for the various phases shall be performed within the time stipulated and mutually agreed in the Task Order for which services are authorized.

5.3 ENGINEER's services shall be considered complete at the earlier of (1) the date when the submissions for that phase have been accepted by OWNER; or (2) thirty (30) days after the date when such submissions are delivered to OWNER for final acceptance, provided no dispute exists as to the quality of ENGINEER's submissions.

5.4 If OWNER requests significant modifications or changes in the general scope, extent or character of the PROJECT, the time of performance of ENGINEER's services and the various rates of compensation may be adjusted equitably.

SECTION 6 - PAYMENTS TO ENGINEER

6.1 Methods of Payment for Services and Expenses of ENGINEER

6.1.1 Payroll Cost shall mean the salary and wages at the time services are performed of all personnel engaged directly on the PROJECT, including, but not limited to, engineers, architects, scientists, surveyors, designers, draftsmen, specification writers, estimators, other technical and business personnel; plus the cost of customary and statutory benefits including, but not limited to, social security contributions, unemployment; excise and payroll taxes, workers' compensation, health and retirement benefits, sick leave, vacation, holiday pay, and other benefits.

6.1.2 Direct Labor Costs shall mean salary and wages at the time services are performed of all personnel engaged directly on the PROJECT, including, but not limited to, engineers, architects, surveyors, designers, draftsmen, specification writers, estimators, other technical and business personnel, but does not include indirect payroll-related costs or fringe benefits.

6.1.3 Per Diem shall mean an hourly rate as stated in the Task Order to be paid to ENGINEER as total compensation for each hour an employee of ENGINEER works on the PROJECT, plus Reimbursable Expenses.

6.1.4 Overhead Multiplier shall mean a factor by which the Direct Labor Cost is multiplied to compensate for general and administrative overhead. When the basis of compensation is Per Diem, the Overhead Multiplier includes profit. When the basis of compensation is Cost Plus Fixed Fee, the Overhead Multiplier Does not include profit.

6.1.5 Reimbursable Expenses shall mean the actual expenses incurred directly or indirectly in connection with the PROJECT, limited to: Consultant or subcontractor costs authorized by OWNER, transportation and subsistence incidental thereto, providing and maintaining field office facilities including furnishings and utilities if such office is reasonably necessary, subsistence and transportation of Resident Project Representatives and their assistants, express mail, reproduction of Reports, Drawings, Specifications, Bidding Documents, and similar PROJECT-related items in addition to those required as Basic Services. Reimbursable Expenses for each Task Order issued pursuant hereto shall be limited by a not-to-exceed amount designated in the Task Order.

6.1.6 Lump Sum shall mean a fixed amount agreed upon in advance, subject to modification and amendments, for services rendered.

6.1.7 Cost Plus Fixed Fee shall mean compensation based on Direct Labor Cost times an Overhead Multiplier plus Reimbursable Expenses, plus payment of a fixed amount agreed upon in advance, subject to modifications and amendments, for ENGINEER 's services.

6.2 Amount of Compensation for Services.

Compensation for Basic Services shall be on the basis of Per Diem, Lump Sum, or Cost plus Fixed Fee as specified in each Task Order. Compensation for Additional Services shall be on the basis of Per Diem, Lump Sum, or Cost plus Fixed Fee, with the amount of compensation for Additional Services to be determined at the time the Additional Services are requested.

6.3 Intervals of Payments

6.3.1 Payments to ENGINEER for Basic Services, Additional Services rendered, and Reimbursable Expenses shall be made once every month by OWNER. ENGINEER's invoices will be submitted once every month and will be based upon total services completed at the time of billing. OWNER shall make prompt payments in response to ENGINEER's invoices.

6.4 Other Provisions Concerning Payments

6.4.1 If OWNER fails to make any undisputed payment due ENGINEER for services and expenses within sixty (60) days after receipt of ENGINEER's statement, ENGINEER may, after giving seven (7) days' written notice to OWNER, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses and charges.

6.4.2 If during any authorized phase the PROJECT is suspended or abandoned in whole or in part for more than ninety (90) days through no fault of ENGINEER, ENGINEER shall be compensated for all services performed prior to receipt of written notice from OWNER of such suspension or abandonment, together with any Reimbursable Expenses then due. If the PROJECT is resumed after being suspended for more than ninety (90) days, ENGINEER's compensation may be equitably adjusted.

6.4.3 If and to the extent that the contract time initially established in the Contract Documents is exceeded or extended through no fault of ENGINEER, compensation for any Basic Services required during such extended period of Administration of the Construction Contract may be equitably adjusted.

6.4.4 If any items in any invoices submitted by ENGINEER are disputed by OWNER for any reason, including the lack of supporting documentation, OWNER may temporarily delete the disputed item and pay the remaining amount of the invoice. OWNER shall promptly notify ENGINEER of dispute and request clarification and/or remedial action. After any dispute has been settled, ENGINEER shall include the disputed item on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only.

6.4.5 Accounting records of ENGINEER's compensation for Additional Services and Reimbursable Expenses pertaining to the PROJECT shall be maintained by ENGINEER and its

Consultants and subcontractors in accordance with generally accepted accounting practices and shall be available for inspection by OWNER or OWNER's representatives at mutually convenient times for a period of three (3) years after completion of the PROJECT.

SECTION 7 - GENERAL CONSIDERATIONS

7.1 Termination

7.1.1 If, through any cause within ENGINEER's reasonable control, ENGINEER fails to fulfill in a timely and proper manner its obligations under this Agreement, or if ENGINEER violates any of the covenants, agreements, terms or conditions of this Agreement, OWNER shall thereupon have the right to terminate this Agreement, or any individual Task Order, by giving ten (10) days written notice to ENGINEER of such termination and specifying the date when termination shall be effective. If ENGINEER cures the defaults set forth in the notice, then it shall be obligated to continue to perform under this Agreement.

Notwithstanding the above, ENGINEER shall not be relieved of liability to OWNER for damages sustained by it by virtue of any breach of the Agreement by ENGINEER. OWNER may withhold payments to ENGINEER for the purpose of settlement until such time as the exact amount of damages due OWNER from ENGINEER is determined.

7.1.2 If, through any cause within OWNER's reasonable control, OWNER fails to fulfill in a timely and proper manner its obligations under this Agreement, or if OWNER violates any of the covenants, agreements, terms or conditions of this Agreement, ENGINEER shall thereupon have the right to terminate this Agreement by giving ten (10) days written notice to OWNER of such termination and specifying the date when termination shall be effective. If OWNER cures the defaults set forth in the notice, then ENGINEER shall be obligated to continue to perform under this Agreement.

7.1.3 OWNER may terminate this Agreement, or any individual Task Order, without cause, at any time upon provision of not less than five (5) days' written notice from it to ENGINEER. If the Agreement is terminated by OWNER as provided herein, ENGINEER shall be paid for Basic Services and Additional Services actually performed, less any payments previously made.

7.1.4 Upon termination, ENGINEER shall promptly discontinue all services under this Agreement unless the termination notice from OWNER directs otherwise.

7.2 Reuse of Documents

7.2.1 ENGINEER hereby assigns to OWNER, without reservation, all copyrights in all PROJECT-related documents, models, photographs, and other expression created by ENGINEER as required deliverables pursuant to this Agreement. Among those documents are certain "Instruments of Service," including any design drawings and construction documents. OWNER's obligation to pay ENGINEER is expressly conditioned upon ENGINEER's obtaining a valid written comprehensive assignment of copyrights from its Consultants (and subcontractors if applicable) and in terms identical to those that obligate ENGINEER to OWNER as expressed

in this Subsection, which copyrights ENGINEER, in turn, hereby assigns to OWNER. OWNER in return hereby grants ENGINEER and its Consultants (and subcontractors if applicable) a non-revocable, non-exclusive license to reproduce the documents for purposes relating directly to ENGINEER's performance of its obligations under this Agreement, use in ENGINEER's professional activities for ENGINEER's archival records, and for ENGINEER's reproduction of drawings and photographs in ENGINEER's marketing materials.

7.2.2 To the extent that liability arises from misuse of the Instruments of Service or reuse of the Instruments of Service on a project other than the PROJECT contemplated herein by OWNER or another engineer or design professional, ENGINEER shall not be responsible for that misuse or reuse of the Instruments of Service on a project other than the PROJECT contemplated herein.

7.3 Confidentiality

ENGINEER shall maintain the confidentiality of information specifically designated as confidential by OWNER, unless withholding such information would violate the law, create the risk of significant harm to the public, or prevent ENGINEER from establishing a claim or defense in an adjudicatory proceeding. ENGINEER understands and agrees that in addition to any other information designated as confidential by OWNER, the detailed plans and drawings of public buildings and infrastructure facilities, pursuant to G.S. 132-1.7, are not considered public record and ENGINEER shall keep such information confidential. ENGINEER shall require of its Consultants and subcontractors similar agreements to maintain the confidentiality of information required to remain confidential by this Agreement.

7.4 Insurance

At ENGINEER's sole expense, ENGINEER shall procure and maintain the following minimum insurances with insurers authorized to do business in North Carolina and rated A-VII or better by A.M. Best, or as otherwise authorized by the Union County Risk Manager.

- A. **WORKERS' COMPENSATION**
Statutory (coverage for three or more employees) limits covering all employees, including Employer's Liability with limits of:

\$500,000	Each Accident
\$500,000	Disease - Each Employee
\$500,000	Disease - Policy Limit

- B. **COMMERCIAL GENERAL LIABILITY**
Covering Ongoing and Completed Operations involved in this Agreement.

\$2,000,000	General Aggregate
\$2,000,000	Products/Completed Operations Aggregate
\$1,000,000	Each Occurrence
\$1,000,000	Personal and Advertising Injury Limit

C. COMMERCIAL AUTOMOBILE LIABILITY
\$1,000,000 Combined Single Limit - Any Auto

D. PROFESSIONAL LIABILITY
\$1,000,000 Per Claim

ENGINEER shall provide evidence of continuation or renewal of Professional Liability Insurance for a period of two (2) years following termination of the Agreement.

ADDITIONAL INSURANCE REQUIREMENTS

A. ENGINEER's General Liability policy shall be endorsed, specifically or generally, to include the following as Additional Insured:

UNION COUNTY, ITS OFFICERS, AGENTS AND EMPLOYEES ARE INCLUDED AS ADDITIONAL INSURED WITH RESPECT TO THE GENERAL LIABILITY INSURANCE POLICY.

B. Before commencement of any work or event, ENGINEER shall provide a Certificate of Insurance in satisfactory form as evidence of the insurances required above.

C. ENGINEER shall have no right of recovery or subrogation against Union County (including its officers, agents and employees), it being the intention of the parties that the insurance policies so affected shall protect both parties and be primary coverage for any and all losses covered by the above-described insurance.

D. OWNER shall have no liability with respect to ENGINEER's personal property whether insured or not insured. Any deductible or self-insured retention is the sole responsibility of ENGINEER.

E. Notwithstanding the notification requirements of the Insurer, ENGINEER hereby agrees to notify OWNER's Risk Manager at 500 N. Main Street, Suite #130, Monroe, NC 28112, within two (2) days of the cancellation or substantive change of any insurance policy set out herein. OWNER, in its sole discretion, may deem failure to provide such notice as a breach of this Agreement.

F. The Certificate of Insurance should note in the Description of Operations the following:

Department: Public Works

G. Insurance procured by ENGINEER shall not reduce nor limit ENGINEER's contractual obligation to indemnify and save harmless OWNER for claims made or suits brought which result from or are in connection with the performance of this Agreement.

H. Certificate Holder shall be listed as follows:

Union County
Attention: Risk Manager
500 N. Main Street, Suite #130
Monroe, NC 28112

I. If ENGINEER is authorized to assign or subcontract any of its rights or duties hereunder and in fact does so, ENGINEER shall ensure that the assignee or subcontractor satisfies all requirements of this Agreement, including, but not limited to, maintenance of the required insurances coverage and provision of certificate(s) of insurance and additional insured endorsement(s), in proper form prior to commencement of services.

7.5 Controlling Law

7.5.1 This Agreement shall be construed and enforced in accordance with the laws of the State of North Carolina. The parties to this agreement confer exclusive jurisdiction of all disputes arising hereunder upon the General Courts of Justice of Union County, North Carolina.

7.5.2 By its signature on this Agreement, ENGINEER represents and warrants that it is licensed and authorized to do business in the state of North Carolina and shall obtain all necessary licenses and permits required to perform the services set forth in this Agreement.

7.6 Successors and Assigns

7.6.1 OWNER and ENGINEER hereby bind their respective partners, successors, executors, administrators, legal representatives and, to the extent permitted by paragraph 7.6.2. below, their assigns, to the terms, conditions and covenants of this Agreement.

7.6.2 Neither OWNER nor ENGINEER shall assign, sublet or transfer any rights under or interest in this Agreement (including, but without limitation, monies that may become due or monies that are due) without the written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law.

7.6.3 Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent ENGINEER from employing such independent professional associates, Consultants, and subcontractors as ENGINEER may deem appropriate to assist in the performance of services under this Agreement; however, the

cost of any such professionals shall be passed through to OWNER without any surcharge, finder's fee or other added charge imposed by ENGINEER.

7.6.4 Except as may be expressly stated otherwise in this Agreement, nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than OWNER and ENGINEER, and all duties and responsibilities undertaken pursuant to this Agreement shall be for the sole and exclusive benefit of OWNER and ENGINEER and not for the benefit of any other party.

7.7 Equal Employment and Nondiscrimination

In connection with the services under this Agreement, ENGINEER agrees to comply with the applicable provisions of state and federal equal opportunity statutes and regulations.

7.8 Indemnification

ENGINEER agrees to protect, indemnify, and hold OWNER, its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings, or causes of action of every kind in connection with or arising out of this agreement and/or the performance hereof that are proximately caused by the negligence or intentional misconduct of ENGINEER, its officers, employees, subcontractors or agents, except to the extent the same are caused by the negligence or willful misconduct of OWNER.

7.9 Changes and Modifications

OWNER and ENGINEER agree that no change or modification to this Agreement, or any attachments hereto, shall have any force or effect unless the change is reduced to writing, dated, and made a part of this Agreement. The execution of the change shall be authorized and signed in the same manner as this Agreement.

7.10 Severability and Waiver

In the event any provision of this Agreement shall be held invalid and unenforceable, the remaining provisions shall be valid and binding upon OWNER and ENGINEER. One or more waivers by either of any provision, term, condition or covenant shall not be construed by the non-waiving party as a waiver of a subsequent breach of the same provision by the waiving party.

7.11 Extent of Agreement

7.11.1 This Agreement, including all exhibits, and any and all amendments, modifications, and supplements duly executed by OWNER and ENGINEER in accordance with this Agreement, shall govern and supersede any and all inconsistent or contradictory terms, prior oral or written representations or understandings, conditions or provisions set forth in any purchase orders,

requisitions, requests for proposals, authorizations of services, notices to proceed or other forms or documents issued by OWNER with respect to the PROJECT or ENGINEER's services. This Agreement shall constitute the entire understanding and agreement of OWNER and ENGINEER with respect to ENGINEER's services on the PROJECT.

7.11.2 ENGINEER and OWNER shall execute and deliver such further instruments as may reasonably be requested by the other with respect to completion of the transaction contemplated by this Agreement. None of the instruments shall contain undertakings or representations not set forth in the Agreement or inconsistent herewith.

7.12 Notice and Service Thereof.

Notices required hereunder shall be in writing and shall be deemed to have been duly given if mailed by certified or registered mail, return receipt requested, as follows:

- (a) If to OWNER:

Public Works Administrator
500 North Main Street, Suite 500
Monroe, NC 28112

- (b) If to ENGINEER:

Enter Full Legal Name of Engineering Firm [Click here to enter text.](#)
Enter Line One of Mailing Address [Click here to enter text.](#)
Enter Line Two of Mailing Address [Click here to enter text.](#)

or to such other persons or places as OWNER or ENGINEER shall furnish in writing to the other.

Any services and/or work performed, prior to execution of this Agreement, by ENGINEER for OWNER in connection with the PROJECT shall be covered and governed by this Agreement and deemed rendered pursuant hereto.

7.13 E-Verify.

E-Verify is the federal program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program, used to verify the work authorization of newly hired employees pursuant to federal law. ENGINEER shall ensure that ENGINEER and any Consultant or subcontractor performing work under this Agreement: (i) uses E-Verify if required to do so by North Carolina law; and (ii) otherwise complies with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes. A breach of this provision by ENGINEER will be considered a breach of this Agreement, which entitles OWNER to terminate this Agreement, without penalty, upon notice to ENGINEER.

7.14 Iran Divestment Act.

Pursuant to Article 6E of Chapter 147 of the North Carolina General Statutes, OWNER must require most entities with which it contracts, which would include ENGINEER under this Agreement, to certify that the entity is not identified on a list created by the State Treasurer pursuant to N.C.G.S. § 147-86.58 (the “Final Divestment List”). This requirement is related to ensuring that entities with which local governments contract are not involved in investment activities in Iran. ENGINEER certifies that: (i) it is not listed on the Final Divestment List; and (ii) it will not utilize any Consultant or subcontractor performing work under this Agreement which is listed on the Final Divestment List.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals and executed this Agreement as of the day and year first written above.

WITNESS:

UNION COUNTY

By: _____
Lynn West, Clerk to the Board

By: _____(SEAL)
William M. Watson, County Manager

WITNESS:

**ENTER FULL LEGAL NAME OF
ENGINEERING FIRM** [Click here to enter text.](#)

By: _____

By: _____(SEAL)

APPENDIX

Exhibit A

Sample

TASK ORDER

***NOTE: EACH TASK ORDER SHOULD BE SPECIFICALLY TAILORED TO INCLUDE ANY ADDITIONAL INFORMATION, TERMS AND CONDITIONS WHICH APPLY TO A PARTICULAR PROJECT, BUT WHICH DO NOT APPLY TO ALL OF THE OTHER PROJECTS TO BE PERFORMED UNDER THE MULTIPLE PROJECT AGREEMENT. THE "TASK ORDER NUMBER," "PROJECT NAME," "PROJECT DESCRIPTION," "SCOPE OF BASIC SERVICES TO BE PERFORMED BY ENGINEER ON THE PROJECT," "PERIODS OF SERVICE," AND "PAYMENT TO ENGINEER" WILL LIKELY BE INCLUDED IN EACH TASK ORDER. THE REMAINING "PARTS" SHOULD BE DELETED FROM THE TASK ORDER UNLESS THEY ARE NEEDED TO STATE INFORMATION, TERMS OR CONDITIONS WHICH DIFFER FROM THOSE CONTAINED IN THE MULTIPLE PROJECT AGREEMENT.

This Task Order pertains to an Agreement by and between UNION COUNTY ("OWNER"), and ENTER FULL LEGAL NAME OF ENGINEERING FIRM Click here to enter text. ("ENGINEER"), dated _____, ("the Agreement"). ENGINEER shall perform services on the project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the project described below.

TASK ORDER NUMBER: _____

NOTE: THIS IS A SEQUENTIAL NUMBER BASED UPON THE CONTRACT NUMBER FOR THE MULTIPLE PROJECT AGREEMENT. FOR EXAMPLE, IF THE CONTRACT NUMBER FOR THE MULTIPLE PROJECT AGREEMENT WAS 5924, THE FIRST TASK ORDER WOULD BE NUMBER "5924-1," THE SECOND TASK ORDER WOULD BE NUMBER "5924-2," ETC.

RELATED RFQ NUMBER: _____

PROJECT NAME: _____

PART 1.0 PROJECT DESCRIPTION:

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY ENGINEER ON THE PROJECT:

PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

PART 4.0 OWNER'S RESPONSIBILITIES:

PART 5.0 PERIODS OF SERVICE:

PART 6.0 PAYMENTS TO ENGINEER:

- 1. Payment for Basic Services
- 2. Payment for Additional Services:

PART 7.0 OTHER:

This Task Order is executed this _____.

UNION COUNTY,
NORTH CAROLINA

ENTER FULL LEGAL NAME OF ENGINEERING FIRM [Click here to enter text.](#)

By: _____

By: _____

Name: William M. Watson

Name: _____

Title: County Manager

Title: _____

Address: 500 N. Main St.
Monroe, NC 28112

Address: _____

11 APPENDIX D – GRASSY BRANCH WRF NPDES PERMIT

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion



STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

PERMIT

TO DISCHARGE WASTEWATER UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES)

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Union County Public Works

are hereby authorized to discharge wastewater from a facility located at the


Grassy Branch WWTP
1629 Old Fish Road (off NCSR 1610), Monroe, NC
Union County

to receiving waters designated as Crooked Creek within the Yadkin-Pee Dee River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

The permit shall become effective **May 1, 2022**

This permit and the authorization to discharge shall expire at midnight on **October 31, 2023**.

Signed this day **April 5, 2022**

DocuSigned by:

8328B44CE9EB4A1...

S. Daniel Smith, Director
Division of Water Resources
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

Union County Public Works

is hereby authorized to:

1. Continue to operate an existing 0.05 MGD wastewater treatment facility that includes the following wastewater treatment components:

- an influent pump station
- a manual bar screen
- a flow equalization basin
- two (2) aeration basins
- two (2) secondary clarifiers
- aerated sludge digester
- two (2) tertiary filters
- ultraviolet disinfection
- backup chlorination/dechlorination
- continuous flow measurement
- standby power

located at the Grassy Branch WWTP (1629 Old Fish Road, Monroe) in Union County; and

2. after receipt of an Authorization to Construct and submittal of an Engineers Certification for expansion to 0.120 MGD, operate wastewater treatment plant consisting of the following components:

- an influent pump station
- two (2) manual bar screens
- two (2) flow equalization basins
- three (3) aeration basins
- three (3) secondary clarifiers
- three (3) aerated sludge digesters
- a disc filter system
- ultraviolet disinfection
- backup chlorination/dechlorination
- continuous flow measurement
- standby power

3. discharge from said treatment works, via Outfall 001, at a location specified on the attached map, into Crooked Creek [Stream Index 13-17-20], currently Class C waters within Subbasin 03-07-12 [HUC 030401050702] of the Yadkin-Pee Dee River Basin.

PART I

A. (1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

[15A NCAC 02B .0400 et seq., 15A NCAC 02B .0500 et seq.]

Grade II Biological Water Pollution Control System [15A NCAC 08G.0302]

During the period beginning on the effective date of this permit and lasting until expansion above 0.050 MGD or expiration, the Permittee is authorized to discharge treated wastewater from Outfall 001. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS [PARAMETER CODES]		LIMITS			MONITORING REQUIREMENTS ¹		
		Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ²
Flow (MGD)	50050	0.050 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C (mg/L) ³ (April 1 – October 31)	CO310	5.0 mg/L	7.5 mg/L		Weekly	Composite	Effluent, Influent
BOD, 5-day, 20°C (mg/L) ³ (November 1–March 31)	CO310	10.0 mg/L	15.0 mg/L		Weekly	Composite	Effluent, Influent
Total Suspended Solids ³ (TSS) (mg/L)	CO530	30.0 mg/L	45.0 mg/L		Weekly	Composite	Effluent, Influent
NH ₃ as N (mg/L) (April 1 – October 31)	CO610	2.0 mg/L	6.0 mg/L		Weekly	Composite	Effluent
NH ₃ as N (mg/L) (November 1 – March 31)	CO610	4.0 mg/L	12.0 mg/L		Weekly	Composite	Effluent
Dissolved Oxygen (DO) (mg/L)	00300	Daily Average ≥ 6.0 mg/L			Weekly	Grab	Effluent
Fecal Coliform (#/100 ml) (geometric mean)	31616	200/100 ml	400/100 ml		Weekly	Grab	Effluent
Temperature (°C)	00010	Monitoring & Report			Weekly	Grab	Effluent
Total Residual Chlorine ^{4,5} (TRC) (µg/L)	50060			17 µg/L ⁵	2/Week	Grab	Effluent
pH (su)	00400	≥ 6.0 and ≤ 9.0 standard units			Weekly	Grab	Effluent
Mercury, Total (ng/L) ⁶	COMER	Once Per Permit Cycle ⁶			Once per permit cycle	Grab	Effluent
Dissolved Oxygen (DO) (mg/L)	00300	Monitor & Report			Variable ²	Grab	U, D
Temperature (°C)	00010	Monitor & Report			Variable ²	Grab	U, D

Footnotes:

- The permittee shall submit discharge monitoring reports electronically using the Division's eDMR system [see A. (4)].
- Sample locations: U- Upstream 50 feet above discharge point, D- Downstream at NC 218 bridge. Upstream/downstream samples shall be collected 3/Week during June, July, August, September, and Weekly during the remaining months of the year. Instream monitoring requirements shall be provisionally waived so long as the permittee remains a member of the Yadkin Pee Dee River Basin Association and the Association continues to function as approved by the Division and Environmental Management Commission.

3. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).
4. Total Residual Chlorine monitoring is required only if chlorine is added to the effluent.
5. The Division shall consider all effluent TRC values reported below 50 µg/l to be in compliance with the permit. However, the Permittee shall continue to record and submit all values reported by a North Carolina certified laboratory (including field certified), even if these values fall below 50 µg/L.
6. Compliance with this limit shall be determined in accordance with A. (3).

Conditions:

- There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

[15A NCAC 02B .0400 et seq., 15A NCAC 02B .0500 et seq.]

Grade II Biological Water Pollution Control System [15A NCAC 08G.0302]

During the period beginning upon receipt of an Engineer's Certification for completion of the 0.120 MGD expansion and lasting until expiration, the Permittee is authorized to discharge treated wastewater from Outfall 001. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS [PARAMETER CODES]		LIMITS			MONITORING REQUIREMENTS ¹		
		Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ²
Flow (MGD)	50050	0.120 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C (mg/L) ³ (April 1 – October 31)	CO310	5.0 mg/L	7.5 mg/L		Weekly	Composite	Effluent, Influent
BOD, 5-day, 20°C (mg/L) ³ (November 1–March 31)	CO310	10.0 mg/L	15.0 mg/L		Weekly	Composite	Effluent, Influent
Total Suspended Solids ³ (TSS) (mg/L)	CO530	30.0 mg/L	45.0 mg/L		Weekly	Composite	Effluent, Influent
NH ₃ as N (mg/L) (April 1 – October 31)	CO610	2.0 mg/L	6.0 mg/L		Weekly	Composite	Effluent
NH ₃ as N (mg/L) (November 1 – March 31)	CO610	4.0 mg/L	12.0 mg/L		Weekly	Composite	Effluent
Dissolved Oxygen (DO) (mg/L)	00300	Daily Average ≥ 6.0 mg/L			Weekly	Grab	Effluent
Fecal Coliform (#/100 ml) (geometric mean)	31616	200/100 ml	400/100 ml		Weekly	Grab	Effluent
Temperature (°C)	00010	Monitoring & Report			Weekly	Grab	Effluent
Total Residual Chlorine ^{4,5} (TRC) (µg/L)	50060			17 µg/L ⁵	2/Week	Grab	Effluent
pH (su)	00400	≥ 6.0 and ≤ 9.0 standard units			Weekly	Grab	Effluent
Mercury, Total (ng/L) ⁶	COMER	Once Per Permit Cycle ⁶			Once per permit cycle	Grab	Effluent
Dissolved Oxygen (DO) (mg/L)	00300	Monitor & Report			Variable ²	Grab	U, D
Temperature (°C)	00010	Monitor & Report			Variable ²	Grab	U, D

Footnotes:

1. The permittee shall submit discharge monitoring reports electronically using the Division's eDMR system [see A. (4)].
2. Sample locations: U- Upstream 50 feet above discharge point, D- Downstream at NC 218 bridge. Upstream/downstream samples shall be collected 3/Week during June, July, August, September, and Weekly during the remaining months of the year. Instream monitoring requirements shall be provisionally waived so long as the permittee remains a member of the Yadkin Pee Dee River Basin Association and the Association continues to function as approved by the Division and Environmental Management Commission.
3. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).

4. Total Residual Chlorine monitoring is required only if chlorine is added to the effluent.
5. The Division shall consider all effluent TRC values reported below 50 µg/l to be in compliance with the permit. However, the Permittee shall continue to record and submit all values reported by a North Carolina certified laboratory (including field certified), even if these values fall below 50 µg/L.
6. Compliance with this limit shall be determined in accordance with A. (3).

Conditions:

- There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (3.) EFFLUENT MERCURY ANALYSIS [G.S. 143-215.66]

The Permittee shall provide one effluent mercury analysis, using EPA Method 1631E, in conjunction with the next permit renewal application. The analysis should be taken within 12 months prior to the application date. Any additional mercury effluent mercury measurement conducted from the effective date of this permit and up to the application date shall be submitted with the renewal application.

If the result of the mercury analysis is not provided with the application, the application may be returned as incomplete and the Permittee considered non-compliant.

A. (4.) ELECTRONIC REPORTING - DISCHARGE MONITORING REPORTS [G.S. 143-215.1 (b)]

Federal regulations require electronic submittal of all discharge monitoring reports (DMRs) and program reports. The final NPDES Electronic Reporting Rule was adopted and became effective on December 21, 2015.

NOTE: This special condition supplements or supersedes the following sections within Part II of this permit (*Standard Conditions for NPDES Permits*):

- Section B. (11.) Signatory Requirements
- Section D. (2.) Reporting
- Section D. (6.) Records Retention
- Section E. (5.) Monitoring Reports

1. **Reporting Requirements [Supersedes Section D. (2.) and Section E. (5.) (a)]**

The permittee shall report discharge monitoring data electronically using the NC DWR's Electronic Discharge Monitoring Report (eDMR) internet application.

Monitoring results obtained during the previous month(s) shall be summarized for each month and submitted electronically using eDMR. The eDMR system allows permitted facilities to enter monitoring data and submit DMRs electronically using the internet. The eDMR system may be accessed at: <https://deq.nc.gov/about/divisions/water-resources/edmr>.

If a permittee is unable to use the eDMR system due to a demonstrated hardship or due to the facility being physically located in an area where less than 10 percent of the households have broadband access, then a temporary waiver from the NPDES electronic reporting requirements may be granted and discharge monitoring data may be submitted on paper DMR forms (MR 1, 1.1, 2, 3) or alternative forms approved by the Director. Duplicate signed copies shall be submitted to the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

See "How to Request a Waiver from Electronic Reporting" section below.

Monitoring results obtained during the previous month(s) shall be summarized for each month and reported via the eDMR system no later than the last calendar day of the month following the completed reporting period. Regardless of the submission method, the first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge.

Starting on **December 21, 2025**, the permittee must electronically report the following compliance monitoring data and reports, when applicable:

- Sewer Overflow/Bypass Event Reports;
- Pretreatment Program Annual Reports; and
- Clean Water Act (CWA) Section 316(b) Annual Reports.

The permittee may seek an electronic reporting waiver from the Division (see “How to Request a Waiver from Electronic Reporting” section below).

2. **Electronic Submissions**

In accordance with 40 CFR 122.41(l)(9), the permittee must identify the initial recipient at the time of each electronic submission. The permittee should use the EPA’s website resources to identify the initial recipient for the electronic submission.

Initial recipient of electronic NPDES information from NPDES-regulated facilities means the entity (EPA or the state authorized by EPA to implement the NPDES program) that is the designated entity for receiving electronic NPDES data [see 40 CFR 127.2(b)].

EPA plans to establish a website that will also link to the appropriate electronic reporting tool for each type of electronic submission and for each state. Instructions on how to access and use the appropriate electronic reporting tool will be available as well. Information on EPA’s NPDES Electronic Reporting Rule is found at: <https://www.federalregister.gov/documents/2015/10/22/2015-24954/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule>

Electronic submissions must start by the dates listed in the “Reporting Requirements” section above.

3. **How to Request a Waiver from Electronic Reporting**

The permittee may seek a temporary electronic reporting waiver from the Division. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to the Division. Requests for temporary electronic reporting waivers must be submitted in writing to the Division for written approval at least sixty (60) days prior to the date the facility would be required under this permit to begin submitting monitoring data and reports. The duration of a temporary waiver shall not exceed 5 years and shall thereupon expire. At such time, monitoring data and reports shall be submitted electronically to the Division unless the permittee re-applies for and is granted a new temporary electronic reporting waiver by the Division. Approved electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to the Division for the period that the approved reporting waiver request is effective.

Information on eDMR and the application for a temporary electronic reporting waiver are found on the following web page:

<http://deq.nc.gov/about/divisions/water-resources/edmr>

4. Signatory Requirements [Supplements Section B. (11.) (b) and Supersedes Section B. (11.) (d)]

All eDMRs submitted to the permit issuing authority shall be signed by a person described in Part II, Section B. (11.) (a) or by a duly authorized representative of that person as described in Part II, Section B. (11.) (b). A person, and not a position, must be delegated signatory authority for eDMR reporting purposes.

For eDMR submissions, the person signing and submitting the DMR must obtain an eDMR user account and login credentials to access the eDMR system. For more information on North Carolina's eDMR system, registering for eDMR and obtaining an eDMR user account, please visit the following web page:

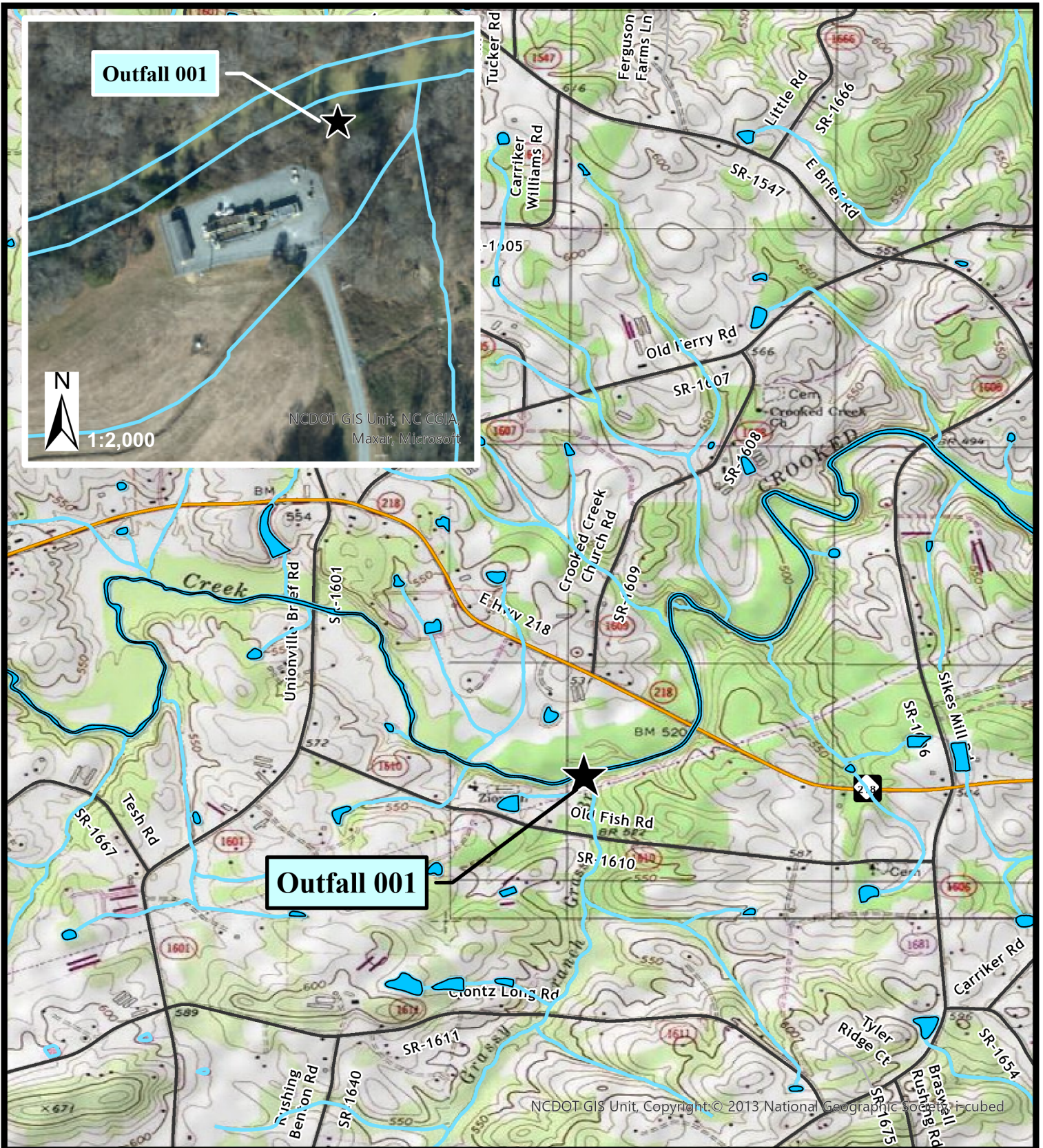
<http://deq.nc.gov/about/divisions/water-resources/edmr>

Certification. Any person submitting an electronic DMR using the state's eDMR system shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

5. Records Retention [Supplements Section D. (6.)]

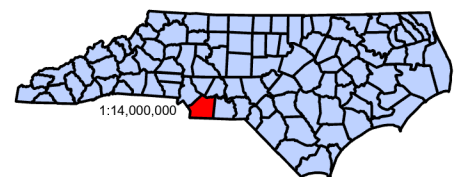
The permittee shall retain records of all Discharge Monitoring Reports, including eDMR submissions. These records or copies shall be maintained for a period of at least 3 years from the date of the report. This period may be extended by request of the Director at any time [40 CFR 122.41].



Union County Public Works
Grassy Branch WWTP
NPDES Permit NC0085812
 1629 Old Fish Road, Monroe, NC

Receiving Stream: Crooked Creek
 Stream Segment: 13-17-20
 River Basin: Yadkin-Pee Dee
 County: Union

Stream Class: C
 Sub-Basin #: 03-07-12
 HUC: 030401050702



Outfall 001: 35° 07' 52" N, -80° 29' 39" W
 USGS Quad: Stanfield, NC

PART II STANDARD CONDITIONS FOR NPDES PERMITS

Section A. Definitions

2/Month

Samples are collected twice per month with at least ten calendar days between sampling events. These samples shall be representative of the wastewater discharged during the sample period.

3/Week

Samples are collected three times per week on three separate calendar days. These samples shall be representative of the wastewater discharged during the sample period.

Act or "the Act"

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), as amended, 33 USC 1251, et. seq.

Annual Average

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar year. In the case of fecal coliform, the geometric mean of such discharges.

Arithmetic Mean

The summation of the individual values divided by the number of individual values.

Bypass

The known diversion of waste streams from any portion of a treatment facility including the collection system, which is not a designed or established or operating mode for the facility.

Calendar Day

The period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

Calendar Week

The period from Sunday through the following Saturday.

Calendar Quarter

One of the following distinct periods: January through March, April through June, July through September, and October through December.

Composite Sample

A sample collected over a 24-hour period by continuous sampling or combining grab samples of at least 100 mL in such a manner as to result in a total sample representative of the wastewater discharge during the sample period. The Director may designate the most appropriate method (specific number and size of aliquots necessary, the time interval between grab samples, etc.) on a case-by-case basis. Samples may be collected manually or automatically. Composite samples may be obtained by the following methods:

- (1) Continuous: a single, continuous sample collected over a 24-hour period proportional to the rate of flow.
- (2) Constant time/variable volume: a series of grab samples collected at equal time intervals over a 24 hour period of discharge and combined proportional to the rate of flow measured at the time of individual sample collection, or
- (3) Variable time/constant volume: a series of grab samples of equal volume collected over a 24 hour period with the time intervals between samples determined by a preset number of gallons passing the sampling point. Flow measurement between sample intervals shall be determined by use of a flow recorder and totalizer, and the preset gallon interval between sample collection fixed at no greater than 1/24 of the expected total daily flow at the treatment system, or

- (4) Constant time/constant volume: a series of grab samples of equal volume collected over a 24-hour period at a constant time interval. Use of this method requires prior approval by the Director. This method may only be used in situations where effluent flow rates vary less than 15 percent. The following restrictions also apply:
- Influent and effluent grab samples shall be of equal size and of no less than 100 milliliters
 - Influent samples shall not be collected more than once per hour.
 - Permittees with wastewater treatment systems whose detention time < 24 hours shall collect effluent grab samples at intervals of no greater than 20 minutes apart during any 24-hour period.
 - Permittees with wastewater treatment systems whose detention time exceeds 24 hours shall collect effluent grab samples at least every six hours; there must be a minimum of four samples during a 24-hour sampling period.

Continuous flow measurement

Flow monitoring that occurs without interruption throughout the operating hours of the facility. Flow shall be monitored continually except for the infrequent times when there may be no flow or for infrequent maintenance activities on the flow device.

Daily Discharge

The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (40 CFR 122.2; see also "Composite Sample," above.)

Daily Maximum

The highest "daily discharge" during the calendar month.

Daily Sampling

Parameters requiring daily sampling shall be sampled 5 out of every 7 days per week unless otherwise specified in the permit. Sampling shall be conducted on weekdays except where holidays or other disruptions of normal operations prevent weekday sampling. If sampling is required for all seven days of the week for any permit parameter(s), that requirement will be so noted on the Effluent Limitations and Monitoring Page(s).

DWR or "the Division"

The Division of Water Resources, Department of Environmental Quality.

Effluent

Wastewater discharged following all treatment processes from a water pollution control facility or other point source whether treated or untreated.

EMC

The North Carolina Environmental Management Commission

EPA

The United States Environmental Protection Agency

Facility Closure

Cessation of all activities that require coverage under this NPDES permit. Completion of facility closure will allow this permit to be rescinded.

Geometric Mean

The Nth root of the product of the individual values where N = the number of individual values. For purposes of calculating the geometric mean, values of "0" (or "< [detection level]") shall be considered = 1.

Grab Sample

Individual samples of at least 100 mL collected over a period of time not exceeding 15 minutes. Grab samples can be collected manually. Grab samples must be representative of the discharge (or the receiving stream, for instream samples).

Hazardous Substance

Any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Instantaneous flow measurement

The flow measured during the minimum time required for the flow measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.

Monthly Average (concentration limit)

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar month. In the case of fecal coliform or other bacterial parameters or indicators, the geometric mean of such discharges.

Permit Issuing Authority

The Director of the Division of Water Resources.

Quarterly Average (concentration limit)

The arithmetic mean of all samples taken over a calendar quarter.

Severe property damage

Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage excludes economic loss caused by delays in production.

Toxic Pollutant:

Any pollutant listed as toxic under Section 307(a)(1) of the CWA.

Upset

An incident beyond the reasonable control of the Permittee causing unintentional and temporary noncompliance with permit effluent limitations and/or monitoring requirements. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Weekly Average (concentration limit)

The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar week. In the case of fecal coliform or other bacterial parameters or indicators, the geometric mean of such discharges.

Section B. General Conditions**1. Duty to Comply**

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

- a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- b. The CWA provides that any person who violates section[s] 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$37,500 per day for each violation. [33 USC 1319(d) and 40 CFR 122.41(a)(2)]
- c. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or

imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [33 USC 1319(c)(1) and 40 CFR 122.41(a)(2)]

- d. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. [33 USC 1319(c)(2) and 40 CFR 122.41(a)(2)]
 - e. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions. [40 CFR 122.41(a)(2)]
 - f. Under state law, a civil penalty of not more than \$25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]
 - g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500. Penalties for Class II violations are not to exceed \$16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$177,500. [33 USC 1319(g)(2) and 40 CFR 122.41(a)(3)]
2. Duty to Mitigate
The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41(d)].
 3. Civil and Criminal Liability
Except as provided in permit conditions on "Bypassing" (Part II.C.4), "Upsets" (Part II.C.5) and "Power Failures" (Part II.C.7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.
 4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USG 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.
 5. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41(g)].
 6. Onshore or Offshore Construction
This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information

The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41(h)].

9. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41(b)].

10. Expiration of Permit

The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.) [40 CFR 122.21(d)] Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements

All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41(k)].

a. All permit applications shall be signed as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures .
- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above;
- (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- (3) The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

- c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]
- d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

12. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41(f)].

13. Permit Modification, Revocation and Reissuance, or Termination

The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 02H .0100; and North Carolina General Statute 143.215.1 et. al.

14. Annual Administering and Compliance Monitoring Fee Requirements

The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 02H .0105(b)(2) may cause this Division to initiate action to revoke the permit.

Section C. Operation and Maintenance of Pollution Controls

1. Certified Operator

Owners of classified water pollution control systems must designate operators, certified by the Water Pollution Control System Operators Certification Commission (WPCSOCC), of the appropriate type and grade for the system, and, for each classification must [15A NCAC 08G .0201]:

- a. designate one Operator In Responsible Charge (ORC) who possesses a valid certificate of the type and grade at least equivalent to the type and grade of the system;
- b. designate one or more Back-up Operator(s) in Responsible Charge (Back-up ORCs) who possesses a valid certificate of the type of the system and no more than one grade less than the grade of the system, with the exception of no backup operator in responsible charge is required for systems whose minimum visitation requirements are twice per year; and
- c. submit a signed completed "Water Pollution Control System Operator Designation Form" to the Commission (or to the local health department for owners of subsurface systems) countersigned by the designated certified operators, designating the Operator in Responsible Charge (ORC) and the Back-up Operator in Responsible Charge (Back-up ORC):
 - (1) 60 calendar days prior to wastewater or residuals being introduced into a new system; or
 - (2) within 120 calendar days following:
 - receiving notification of a change in the classification of the system requiring the designation of a new Operator in Responsible Charge (ORC) and Back-up Operator in Responsible Charge (Back-up ORC) of the proper type and grade; or
 - a vacancy in the position of Operator in Responsible Charge (ORC) or Back-up Operator in Responsible Charge (Back-up ORC).

- (3) within seven calendar days of vacancies in both ORC and Back-up ORC positions replacing or designating at least one of the responsibilities.

The ORC of each Class I facility (or the Back-up ORC, when acting as surrogate for the ORC) must:

- Visit the facility as often as is necessary to insure proper operation of the treatment system; the treatment facility must be visited at least weekly
- Comply with all other conditions of 15A NCAC 08G .0204.

The ORC of each Class II, III and IV facility (or the Back-up ORC, when acting as surrogate for the ORC) must:

- Visit the facility as often as is necessary to insure proper operation of the treatment system; the treatment facility must be visited at least five days per week, excluding holidays
- Properly manage and document daily operation and maintenance of the facility
- Comply with all other conditions of 15A NCAC 08G .0204.

2. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40 CFR 122.41(e)].

NOTE: Properly and officially designated operators are fully responsible for all proper operation and maintenance of the facility, and all documentation required thereof, whether acting as a contract operator [subcontractor] or a member of the Permittee's staff.

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit [40 CFR 122.41(c)].

4. Bypassing of Treatment Facilities

a. Bypass not exceeding limitations [40 CFR 122.41(m)(2)]

The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.

b. Notice [40 CFR 122.41(m)(3)]

- (1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.
- (2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Part II.E.6. (24-hour notice).

c. Prohibition of Bypass

- (1) Bypass from the treatment facility is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for bypass, unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (C) The Permittee submitted notices as required under Paragraph b. of this section.
- (2) Bypass from the collection system is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for a bypass as provided in any current or future system-wide collection system permit associated with the treatment facility.

- (3) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph c. (1) of this section.

5. Upsets

- a. Effect of an upset [40 CFR 122.41(n)(2)]: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph b. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- b. Conditions necessary for a demonstration of upset: Any Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- (1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - (2) The Permittee facility was at the time being properly operated; and
 - (3) The Permittee submitted notice of the upset as required in Part II.E.6.(b) of this permit.
 - (4) The Permittee complied with any remedial measures required under Part II.B.2. of this permit.
- c. Burden of proof [40 CFR 122.41(n)(4)]: The Permittee seeking to establish the occurrence of an upset has the burden of proof in any enforcement proceeding.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of in accordance with NCGS 143-215.1 and in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States except as permitted by the Commission. The Permittee shall comply with all applicable state and Federal regulations governing the disposal of sewage sludge, including 40 CFR 503, Standards for the Use and Disposal of Sewage Sludge; 40 CFR Part 258, Criteria For Municipal Solid Waste Landfills; and 15A NCAC Subchapter 2T, Waste Not Discharged To Surface Waters. The Permittee shall notify the Permit Issuing Authority of any significant change in its sludge use or disposal practices.

7. Power Failures

The Permittee is responsible for maintaining adequate safeguards (as required by 15A NCAC 02H .0124) to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be representative of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is representative of the discharge for the period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41(j)].

2. Reporting

Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 1.1, 2, 3) or alternative forms approved by the Director, postmarked no later than the last calendar day of the month following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

3. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures

Laboratories used for sample analysis must be certified by the Division. Permittees should contact the Division's Laboratory Certification Section (919 733-3908) or visit <https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch> for information regarding laboratory certifications.

Facilities whose personnel are conducting testing of field-certified parameters only must hold the appropriate field parameter laboratory certifications.

Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the CWA (as amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention

Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:

- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation
- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

8. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

- a. Enter, at reasonable times, upon 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 permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location [40 CFR 122.41(i)].

Section E Reporting Requirements

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41(l)]. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or
- c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41(l)(2)].

4. Transfers

This permit is not transferable to any person without prior written notice to and approval from the Director in accordance with 40 CFR 122.61. The Director may condition approval in accordance with NCGS 143-215.1, in

particular NCGS 143-215.1(b)(4)b.2., and may require modification or revocation and reissuance of the permit, or a minor modification, to identify the new permittee and incorporate such other requirements as may be necessary under the CWA [40 CFR 122.41(l)(3), 122.61] or state statute.

5. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41(l)(4)].

- a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II.D.2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.
- b. If the Permittee monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 and at a sampling location specified in this permit or other appropriate instrument governing the discharge, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting

- a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41(l)(6)].
- b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.
- c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 858-0368 or (919) 733-3300.

7. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Part II.E.5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.E.6. of this permit [40 CFR 122.41(l)(7)].

8. Other Information

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41(l)(8)].

9. Noncompliance Notification

The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
- b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
- c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass without treatment of all or any portion of the influent to such station or facility.

Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence. Also see reporting requirements for municipalities in Part IV.C.2.c. of this permit.

10. Availability of Reports

Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices

of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1(b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports

The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

12. Annual Performance Reports

Permittees who own or operate facilities that primarily collect or treat municipal or domestic wastewater and have an average annual flow greater than 200,000 gallons per day shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

The report shall be sent to:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

PART III OTHER REQUIREMENTS

Section A. Construction

- a. The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless (1) the Division has issued an Authorization to Construct (AtC) permit or (2) the Permittee is exempted from such AtC permit requirements under Item b. of this Section.
- b. In accordance with NCGS 143-215.1(a5) [SL 2011-394], no permit shall be required to enter into a contract for the construction, installation, or alteration of any treatment work or disposal system or to construct, install, or alter any treatment works or disposal system within the State when the system's or work's principle function is to conduct, treat, equalize, neutralize, stabilize, recycle, or dispose of industrial waste or sewage from an industrial facility and the discharge of the industrial waste or sewage is authorized under a permit issued for the discharge of the industrial waste or sewage into the waters of the State. Notwithstanding the above, the permit issued for the discharge may be modified if required by federal regulation.
- c. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

Section B. Groundwater Monitoring

The Permittee shall, upon written notice from the Director, conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater standards.

Section C. Changes in Discharges of Toxic Substances

The Permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe (40 CFR 122.42):

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five times the maximum concentration value reported for that pollutant in the permit application.
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

Section D. Facility Closure Requirements

The Permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent adverse impacts to waters of the State. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

PART IV SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES

Section A. Definitions

In addition to the definitions in Part II of this permit, the following definitions apply to municipal facilities:

Indirect Discharge or Industrial User

Any non-domestic source that discharges wastewater containing pollutants into a POTW regulated under section 307(b), (c) or (d) of the CWA. [40 CFR 403.3 (i) and (j) and 15A NCAC 02H .0903(b)(11)]

Interference

Inhibition or disruption of the POTW treatment processes; operations; or its sludge process, use, or disposal which causes or contributes to a violation of any requirement of the Permittee's (or any satellite POTW's if different from the Permittee) NPDES, collection system, or non-discharge permit or prevents sewage sludge use or disposal in compliance with specified applicable State and Federal statutes, regulations, or permits. [15A NCAC 02H .0903(b)(14)]

Pass Through

A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or with discharges from other sources, causes a violation, including an increase in the magnitude or duration of a violation, of the Permittee's (or any satellite POTW's, if different from the Permittee) NPDES, collection system, or non-discharge permit. [15A NCAC 02H .0903(b)(23)]

Publicly Owned Treatment Works (POTW)

A treatment works as defined by Section 212 of the CWA, which is owned by a State or local government organization. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes the collection system, as defined in 15A NCAC 2T .0402, only if it conveys wastewater to a POTW treatment plant. The term also means the local government organization, or municipality, as defined in section 502(4) of the CWA, which has jurisdiction over indirect discharges to and the discharges from such a treatment works. In this context, the organization may be the owner of the POTW treatment plant or the owner of the collection system into which an indirect discharger discharges. This second type of POTW may be referred to as a "satellite POTW organization." [15A NCAC 02H .0903(b)(26)]

"Significant Industrial User" or "SIU"

An Industrial User that discharges wastewater into a publicly owned treatment works and that [15A NCAC 02H .0903(b)(33)]:

1. Discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewaters); or
2. Contributes process wastewater which makes up five percent or more of the NPDES or non-discharge permitted flow limit or organic capacity of the POTW treatment plant. In this context, organic capacity refers to BOD, TSS and ammonia; or
3. Is subject to categorical standards under 40 CFR Part 403.6 and 40 CFR Parts 405-471; or
4. Is designated as such by the Permittee on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, or the POTW's effluent limitations and conditions in its NPDES or non-discharge permit, or to limit the POTW's sludge disposal options;
5. Subject to approval under 15A NCAC 02H .0907(b), the Permittee may determine that an Industrial User meeting the criteria in paragraphs 1 or 2 of this definition above has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the POTW's effluent limitations and conditions in its NPDES or non-discharge permit, or to limit the POTW's sludge disposal options, and thus is not a Significant Industrial User (SIU); or
6. Subject to approval under 15A NCAC 02H .0907(b), the Permittee may determine that an Industrial User meeting the criteria in paragraph 3 of this definition above meets the requirements of 40 CFR Part 403.3(v)(2) and thus is a non-significant categorical Industrial User.

Section B. Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following [40 CFR 122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger, regardless of the means of transport, which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced by an indirect discharger as influent to that POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on (1) the quality and quantity of effluent introduced into the POTW, and (2) any anticipated impact that may result from the change of the quantity or quality of effluent to be discharged from the POTW.

Section C. Municipal Control of Pollutants from Industrial Users.

1. Effluent limitations are listed in Part I of this permit. Other pollutants attributable to inputs from Industrial Users discharging to the POTW may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants in accordance with best practicable technology or water quality standards.
2. Prohibited Discharges
 - a. The Permittee shall develop and enforce their Pretreatment Program to implement the prohibition against the introduction of pollutants or discharges into the waste treatment system or waste collection system which cause or contribute to Pass Through or Interference as defined in 15A NCAC 02H .0900 and 40 CFR 403. [40 CFR 403.5(a)(1)]
 - b. The Permittee shall develop and enforce their Pretreatment Program to implement the prohibitions against the introduction of the following wastes in the waste treatment or waste collection system [40 CFR 403.5(b)]:
 - (1) Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
 - (2) Pollutants which cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges;
 - (3) Solid or viscous pollutants in amounts which cause obstruction to the flow in the POTW resulting in Interference;
 - (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
 - (5) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;
 - (6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
 - (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; or
 - (8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.
 - c. The Permittee shall investigate the source of all discharges into the POTW, including slug loads and other unusual discharges, which have the potential to adversely impact the Permittee's Pretreatment Program and/or the operation of the POTW.

The Permittee shall report such discharges into the POTW to the Director or the appropriate Regional Office. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the discharge; the investigation into possible sources; the period of the discharge, including exact dates and times; if the discharge has not ceased, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance,

3. With regard to the effluent requirements listed in Part I of this permit, it may be necessary for the Permittee to supplement the requirements of the Federal Pretreatment Standards (40 CFR, Part 403) to ensure compliance by the Permittee with all applicable effluent limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.
4. The Permittee shall require any Industrial User (IU) discharging to the POTW to meet Federal Pretreatment Standards developed under Section 307(b) of the Act as amended (which includes categorical standards and specific local limits, best management practices and narrative requirements). Prior to accepting wastewater from any Significant Industrial User (SIU), the Permittee shall either develop and submit to the Division a new Pretreatment Program or, as necessary, a modification of an existing Pretreatment Program, for approval as required under section D below as well as 15A NCAC 02H .0907(a) and (b). [40 CFR 122.44(j)(2)]
5. This permit shall be modified, or alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under Section 402 (b)(8) of the CWA and implementing regulations or by the requirements of the approved State pretreatment program, as appropriate.

Section D. Pretreatment Programs

Under authority of sections 307 (b) and (c) and 402(b)(8) of the CWA and implementing regulations 40 CFR 403, North Carolina General Statute 143-215.3(14) and implementing regulations 15A NCAC 02H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the pretreatment program submittal are an enforceable part of this permit. [40 CFR 122.44(j)(2)]

The Permittee shall operate its approved pretreatment program in accordance with Section 402(b)(8) of the CWA, 40 CFR 403, 15A NCAC 02H .0900, and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division approved modifications thereof. Such operation shall include but is not limited to the implementation of the following conditions and requirements. Terms not defined in Part II or Part IV of this permit are as defined in 15A NCAC 02H .0903 and 40 CFR 403.3.

1. **Sewer Use Ordinance (SUO)**

The Permittee shall maintain adequate legal authority to implement its approved pretreatment program. [15A NCAC 02H .0903(b)(32), .0905 and .0906(b)(1); 40 CFR 403.8(f)(1) and 403.9(b)(1) and (2)]

2. **Industrial Waste Survey (IWS)**

The Permittee shall implement an IWS consisting of the survey of users of the POTW collection system or treatment plant, as required by 40 CFR 403.8(f)(2)(i-iii) and 15A NCAC 02H .0905 [also 40 CFR 122.44(j)(1)], including identification of all Industrial Users that may have an impact on the POTW and the character and amount of pollutants contributed to the POTW by these Industrial Users and identification of those Industrial Users meeting the definition of SIU. Where the Permittee accepts wastewater from one or more satellite POTWs, the IWS for the Permittee shall address all satellite POTW service areas, unless the pretreatment program in those satellite service areas is administered by a separate Permittee with an approved Pretreatment Program. The Permittee shall submit a summary of its IWS activities to the Division at least once every five years, and as required by the Division. The IWS submission shall include a summary of any investigations conducted under paragraph C.2.c. of this Part. [15A NCAC 02H .0903(b)(13), .0905 and .0906(b)(2); 40 CFR 403.8(f)(2) and 403.9]

3. **Monitoring Plan**

The Permittee shall implement a Division-approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits. Effluent data from the Plan shall be reported on the DMRs (as required by Parts II.D and II.E.5.). [15A NCAC 02H .0903(b)(16), .0906(b)(3) and .0905]

4. **Headworks Analysis (HWA) and Local Limits**

The Permittee shall obtain Division approval of a HWA at least once every five years, and as required by the Division. Within 180 days of the effective date of this permit (or any subsequent permit modification) the Permittee shall submit to the Division a written technical evaluation of the need to revise local limits (i.e., an updated HWA or documentation of why one is not needed) [40 CFR 122.44]. The Permittee shall develop, in accordance with 40 CFR 403.5(c) and 15A NCAC 02H .0909, specific Local Limits to implement the prohibitions listed in 40 CFR 403.5(a) and (b) and 15A NCAC 02H .0909. Pursuant to 40 CFR 403.5, local limits are

enforceable Pretreatment Standards as defined by 40 CFR 403.3(1). [15A NCAC 02H .0903(b)(10), .0905, and .0906(b)(4)]

5. Industrial User Pretreatment Permits (IUP) & Allocation Tables

In accordance with NCGS 143-215.1, the Permittee shall issue to all Significant Industrial Users, permits for operation of pretreatment equipment and discharge to the Permittee's collection system or treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain a current Allocation Table (AT) which summarizes the results of the HWA and the limits from all IUPs. Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA. [15A NCAC 02H .0906(b)(6), .0909, .0916, and .0917; 40 CFR 403.5, 403.8(f)(1)(iii); NCGS 143-215.67(a)]

6. Authorization to Construct (AtC)

The Permittee shall ensure that an Authorization to Construct permit (AtC) is issued to all applicable Industrial Users for the construction or modification of any pretreatment facility. Prior to the issuance of an AtC, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all Industrial User Pretreatment Permit (IUP) limitations. [15A NCAC 02H .0906(b)(7) and .0905; NCGS 143-215.1(a)(8)]

7. POTW Inspection & Monitoring of their IUs

The Permittee shall conduct inspection, surveillance, and monitoring activities as described in its Division approved pretreatment program in order to determine, independent of information supplied by Industrial Users, compliance with applicable pretreatment standards. [15A NCAC 02H .0908(e); 40 CFR 403.8(f)(2)(v)] The Permittee must:

- a. Inspect all Significant Industrial Users (SIUs) at least once per calendar year;
- b. Sample all Significant Industrial Users (SIUs) at least once per calendar year for all SIU permit-limited parameters including flow except as allowed under 15A NCAC .0908(e); and
- c. At least once per year, document an evaluation of any non-significant categorical Industrial User for compliance with the requirements in 40 CFR 403.3(v)(2), and either continue or revoke the designation as non-significant.

8. IU Self Monitoring and Reporting

The Permittee shall require all Industrial Users to comply with the applicable monitoring and reporting requirements outlined in the Division-approved pretreatment program, the industry's pretreatment permit, or in 15A NCAC 02H .0908. [15A NCAC 02H .0906(b)(5) and .0905; 40 CFR 403.8(f)(1)(v) and (2)(iii); 40 CFR 122.44(j)(2) and 40 CFR 403.12]

9. Enforcement Response Plan (ERP)

The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the CWA (40 CFR 405 et. seq.), prohibitive discharge standards as set forth in 40 CFR 403.5 and 15A NCAC 02H .0909, specific local limitations, and other pretreatment requirements. All remedies, enforcement actions and other, shall be consistent with the Enforcement Response Plan (ERP) approved by the Division. [15A NCAC 02H .0903(b)(7), .0906(b)(8) and .0905; 40 CFR 403.8(f)(5)]

10. Pretreatment Annual Reports (PAR)

The Permittee shall report to the Division in accordance with 15A NCAC 02H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 02H .0904 (b) may be required to submit a partial annual report or to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a Pretreatment Annual Report (PAR) describing its pretreatment activities over the previous calendar year to the Division at the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
Pretreatment, Emergency Response, and Collection Systems (PERCS) Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

These reports shall be submitted by March 1 of each year and shall contain the following:

- a. Narrative
A narrative summary detailing actions taken, or proposed, by the Permittee to correct significant non-compliance and to ensure compliance with pretreatment requirements;
 - b. Pretreatment Program Summary (PPS)
A pretreatment program summary (PPS) on forms or in a format provided by the Division;
 - c. Significant Non-Compliance Report (SNCR)
A list of Industrial Users (IUs) in significant noncompliance (SNC) with pretreatment requirements, and the nature of the violations on forms or in a format provided by the Division;
 - d. Industrial Data Summary Forms (IDSF)
Monitoring data from samples collected by both the POTW and the Significant Industrial Users (SIUs). These analytical results must be reported on Industrial Data Summary Forms (IDSF) or on other forms or in a format provided by the Division;
 - e. Other Information
Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of IUs in SNC, a summary of data or other information related to significant noncompliance determinations for IUs that are not considered SIUs, and any other information, upon request, which in the opinion of the Director is needed to determine compliance with the pretreatment implementation requirements of this permit;
11. Public Notice
The Permittee shall publish annually a list of Industrial Users (IUs) that were in significant noncompliance (SNC) as defined in the Permittee's Division-approved Sewer Use Ordinance with applicable pretreatment requirements and standards during the previous twelve month period. This list shall be published within four months of the applicable twelve-month period. [15A NCAC 02H .0903(b)(34), .0908(b)(5) and .0905 and 40 CFR 403.8(f)(2)(viii)]
12. Record Keeping
The Permittee shall retain for a minimum of three years records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW and shall retain all other Pretreatment Program records as required by 15A NCAC 02H .0908(f). [15A NCAC 02H .0908(f); 40 CFR 403.12(o)]
13. Pretreatment Program Resources
The Permittee shall maintain adequate funding and qualified personnel to accomplish the objectives of its approved pretreatment program. and retain a written description of those current levels of inspection. [15A NCAC 02H .0906(b)(9) and (10) and .0905; 40 CFR 403.8(f)(3), 403.9(b)(3)]
14. Modification to Pretreatment Programs
Modifications to the approved pretreatment program including but not limited to local limits modifications, POTW monitoring of their Significant Industrial Users (SIUs), and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 40 CFR 403.18, 15 NCAC 02H .0114 and 15A NCAC 02H .0907.

12 APPENDIX E – GRASSY BRANCH WRF SOC COMPLIANCE SCHEDULE

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion

Scheduled Activity	SOC Due Date
Submit contract documents for regulatory approval for Grassy Branch WRF upgrade project	December 31, 2023
Upon receipt of the required Division of Water Resources permit(s), begin construction of Grassy Branch WRF upgrades	September 30, 2024
Complete construction of the upgrades to the wastewater treatment plant and submit a certification of completion (Engineer's Certification) from a professional engineer verifying that the construction has been completed. Begin use of new UV disinfection system.	March 31, 2027
Attain compliance with NPDES permit final limits	June 30, 2027



13 APPENDIX F – GRASSY BRANCH WRF TECHNICAL MEMORANDUM

RFQ 2022-082, Engineering Services for Grassy Branch WRF Expansion



Hazen *Technical Memorandum (DRAFT)*

North Carolina License C-0381

June 28, 2019

To: Union County Department of Public Works
From: Jim Struve, PE, Hazen and Sawyer (Hazen)
Mary Sadler, PE, Hazen
Joe Rohrbacher, PE, Hazen
Michael Parker, PE, Hazen
Amanda Ford, Hazen

Engineer Certification for Grassy Branch Water Reclamation Facility Special Order by Consent

1. Introduction

This process certification is in support of the Union County Public Works (UCPW) application for a Special Order by Consent (SOC) for the Grassy Branch Water Reclamation Facility (WRF). This correspondence is an independent professional report on the status of the Grassy Branch WRF to meet the existing National Pollutant Discharge Elimination System (NPDES) permit limits during the period the WRF will be operating under the SOC. The following narratives specifically address the SOC application requirements. It should be noted that all engineering determinations are supported by a detailed process evaluation published separately from this signed and sealed certification.

2. Summary of Existing WRF Infrastructure

The Grassy Branch WRF is an extended aeration package treatment plant (PTP) constructed by Hydro-Aerobics Package Wastewater Treatment Systems in 1997. The WRF is permitted for a maximum month design flow of 50,000 gallons per day (gpd), or 0.05 million gallons per day (mgd). Union County operates the facility NPDES permit NC0085812. Table 2-1 summarizes the final effluent permit limits for five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), ammonia (NH₃-N), and fecal coliform.

The Grassy Branch WRF consists of coarse screening, flow equalization, two conventional aeration basins with coarse bubble diffusers, two secondary clarifiers, a sand filter, and ultraviolet (UV) disinfection. Waste activated sludge (WAS) is processed in an aerobic digester for volatile solids reduction. The digested solids are then pumped to a tanker truck and transported to the Crooked Creek WRF for further stabilization. Table 2-2 summarizes the design criteria of the existing Grassy Branch WRF infrastructure.

Table 2-1: Final Effluent Permit Limits

Parameter	Monthly Average	Weekly Average
BOD ₅ , mg/L (April 1 through October 31)	5	7.5
BOD ₅ , mg/L (November 1 through March 31)	10	15
TSS, mg/L	30	45
Ammonia, mg/L (April 1 through October 31)	2	6
Ammonia, mg/L (November 1 through March 31)	4	12
Fecal coliform, geometric mean/100 mL	200	400

Table 2-2: Summary of Design Criteria for Existing Grassy Branch WRF Infrastructure

Unit Process	Parameter	Design Criteria
Influent Pump Station	Number of pumps	2
	Capacity per pump, gpd	129,600
	Capacity total, gpd	259,200
Influent Screening	Type	Coarse Manual Bar Screen
	Number	1
	Opening diameter, inch	2
Flow Equalization	Number	2
	Volume per basin, gallon	7,700
	Volume total, gallon	15,400
	Type of aeration system	Coarse bubble
Flow Equalization Treatment Aeration System	Number of blowers	2
	Type of blowers	Positive displacement
	Motor, horsepower (HP)	2
Secondary Treatment	Number	2
	Volume per basin, gallon	25,000
	Volume total, gallon	50,000

Table 2-2: Summary of Design Criteria for Existing Grassy Branch WRF Infrastructure

Unit Process	Parameter	Design Criteria
	Hydraulic retention time per basin, hour	12
	Hydraulic retention time total, hour	24
Secondary Treatment Aeration System	Type of aeration system	Coarse bubble
	Number of blowers	2
	Type of blowers	Positive displacement
	Motor, horsepower (HP)	7.5
Secondary Clarifier	Number of clarifiers	2
	Diameter, feet	10
	Surface area, SF	78.5
Sand Filter	Number of beds	2
	Area of bed per unit, SF	18.75
	Area of bed total, SF	37.5
	Fill material	Anthracite/Sand
Sand Filter Aeration System	Number of blowers	2
	Type of blowers	Positive displacement
	Motor, horsepower (HP)	3
Ultraviolet Disinfection	Number of banks	2
	Number of modules	3
	Number of lamps per module	2

3. Flow Evaluation

The historical data indicate that influent flows in excess of the permitted design capacity of the WRF have resulted in final effluent permit violations for flow, conventional pollutants, and bacterial pollutants. The County has attributed the majority of the Notice of Violations (NOVs) to record rainfall events in the region. The County also acknowledges that more sewer connections have been allocated to the Grassy Branch WRF than available capacity. Hazen recommends a permanent increase in the design maximum month flow from 0.05 mgd to 0.120 mgd.

Two parallel analysis were run to verify the proposed 120,000 gpd maximum month design capacity. The first analysis used the average day wastewater flow rates published in 15A NCAC 02T .0114 (Wastewater Design Flow Rates). The wastewater unit flow rates for schools and dwelling units were applied to the number of students and homes served by the Grassy Branch WRF. Due to the proximity to schools, an assumption of three bedrooms per dwelling unit was used in the analysis. The second flow analysis used a Hazen and Sawyer statistical approach for evaluating flow metrics and peaking factors.

Table 3-4 summarizes the proposed design annual average for both analyses. Both calculation methods result in an annual average flow within 20%. The statistically-derived maximum month, maximum week, and maximum day peaking factors are also summarized in Table 3-4. The more conservative annual average flow of 67,000 gpd was used to fully account for the impact of the seasonal flow variation attributed to the three schools.

Table 3-4: Summary of Methods Used to Calculate Proposed Maximum Month Design Flow

Average Day Wastewater Flow Calculations per 15A NCAC 02T .0114			Hazen Statistical Analysis	
Dwelling Unit / School	Unit Flow Rate ^{1,2}	Flow, gpd	Flow, gpd	Peaking Factor
Piedmont High School (1,363 students)	15 gpd / student ²	10,082	----	----
Piedmont Middle School (1,018 students)	15 gpd / student ²	7,530	----	----
Unionville Elementary School (701 students)	12 gpd / student ²	4,148	----	----
Loxdale Subdivision (52 homes)	360 gpd / dwelling unit ³	18,720	----	----
Smithfield Subdivision (62 homes)	360 gpd / dwelling unit ³	22,320	----	----
Private parcels (12 homes)	360 gpd / dwelling unit ³	4,320	----	----
Annual average flow		67,120	53,440	----
Maximum month flow		120,000	----	1.8
Maximum week (7-day) flow		201,000	----	3.0
Maximum day flow		469,000	----	7.0

¹ Per 15A NCAC 02T .0114 – Wastewater Design Flow Rates.

² Average day school flow rate converted to an annual average flow (e.g., school in session 180 days per year).

³ The calculations assume three bedrooms per dwelling unit due to the proximity to schools.

4. Evaluation and Optimization of Existing Treatment Units

4.1 Historical Influent Characterization Data

Tables 4-1 and 4-2 summarize the maximum month, maximum week (e.g., 7-day), and maximum day peaking factors (PF) and influent concentrations and loads, respectively. Data was evaluated from 2015 through 2018. Data from the year 2019 does not account for the impact of the seasonal flow variation and

was therefore not included in the analysis. A statistical approach was used for evaluating influent characterization metrics and peaking factors. The original design influent loads and concentrations for the WRF are not known, as the criteria were not provided in the manufacturer's Wastewater Treatment Systems Operations and Maintenance (O&M) manual. The proposed design concentrations and loads for the Grassy Branch WRF improvements project are summarized in Table 4-3.

Table 4-1: Influent Flow and Peaking Factors

Parameter	2015	2016	2017	2018
Maximum month peaking factor	1.94	1.65	1.74	1.91
Maximum week (7-day) peaking factor	2.98	3.44	2.70	2.72
Maximum day peaking factor	7.76	7.00	6.74	6.72

Table 4-2: Annual Average Influent Concentrations and Loads

Parameter	2015	2016	2017	2018
BOD ₅ , mg/L	135	185	217	203
BOD ₅ , lb/d	46	59	69	87
TSS, mg/L	184	325	462	458
TSS, lb/d	63	98	137	170
NH ₃ -N, mg/L	33	33	27	29
NH ₃ -N, lb/d	10	11	9	11

Table 4-3: Proposed Influent Design Concentrations and Loads

Parameter	Concentration, mg/L	Load, lb/d	Maximum Month Peaking Factor	Maximum Week Peaking Factor	Maximum Day Peaking Factor
TSS	250	140	1.2	1.5	2.0
BOD ₅	250	140	1.2	1.5	2.0
TKN	40	22	1.2	1.5	2.0
NH ₃ -N	26	15	1.2	1.5	2.0
TP	5.0	2.8	1.2	1.5	2.0

4.2 Influent Pumps

The existing influent pumps are rated at 130,000 gpd each at 15 feet of total dynamic head (TDH), which allows for 260,000 gpd with both units in service. The existing pumps cannot be further optimized and do not have sufficient capacity for the proposed maximum month design flow. Additional pumps will be needed to provide adequate capacity with redundancy for the proposed improvements.

4.3 Influent Screening

Influent screening is comprised of a manual coarse bar screen designed for a peak hour flow of 150,000 gpd (e.g., 2.5 times the maximum month design flow of 50,000 gpd). The existing bar screen cannot be further optimized. Additional screening unit(s) are required as the existing screen does not have adequate capacity to meet the proposed maximum month design flow.

4.4 Flow Equalization

Existing flow equalization consists of two 7,700-gallon basins, or 15,400 gallons total volume. The existing flow equalization basins cannot be further optimized, as the basins do not provide adequate hydraulic retention time to attenuate the proposed maximum month design flow. Additional equalization volume is required as part of the facility improvements.

4.5 Secondary Treatment Train

The secondary treatment process consists of a 50,000 gpd (e.g., two trains in service) conventional aeration activated sludge process. The PTP is equipped with coarse bubble diffusers and two rotary lobe positive displacement blowers. The aeration basins were designed to provide a 24-hour hydraulic retention time at the current maximum month design flow of 0.05 mgd. However, only 15 hours of hydraulic retention time is provided at current flows. The WAS flow is not measured nor were solids hauling records available for the determination of the solids retention time (SRT). The positive displacement blowers and coarse bubble aeration system does not have adequate capacity to treat the existing annual average, maximum month, maximum week, and maximum day loads with one blower out of service. Based on the available hydraulic, process, and equipment capacity, the secondary process cannot be further optimized to treat additional flow. New process volume and aeration equipment is required as part of the facility improvements for the proposed maximum month design flow.

4.6 Secondary Clarifiers

The Grassy Branch WRF has two 10 foot diameter secondary clarifiers. Each clarifier has a sidewater depth of 10 feet. The reported historical peak day surface overflow rates (SOR) and surface loading rates (SLR) are 1,823 gpd/SF and 63 lb/SF, respectively. The calculated overflow and loading rates are excessive compared to standard engineering best practices. Typical design overflow rates range from 300 to 1,000 gpd/SF. Typical solids loading rates range from 15 to 35 lb/day-SF. The existing secondary

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clarifiers are undersized and cannot be further optimized. New secondary clarification capacity is required for the proposed improvements.

4.7 Tertiary Filtration

The WRF has two mixed media (anthracite/sand) tertiary filters each with a surface area of 18.75 SF. The historic peak day hydraulic loading rate and solids loading rate are 7.3 gpm/SF and 3.9 lb/SF, respectively. The calculated hydraulic and solids loading rates are excessive compared to standard engineering best practices. Typical filter design hydraulic and solids loading rates are 5 gpd/SF and 3 lb/day-SF, respectively. The existing mixed media filters cannot be further optimized. New filtration capacity is required for the proposed improvements.

4.8 UV Disinfection

The existing UV disinfection system was installed in the original chlorine contact chamber as a retrofit project. Routine maintenance is problematic as it requires that UCPW staff remove grating and stand in the channel. The existing UV system cannot be further optimized and does not have the required capacity to meet the proposed maximum month design flow. An additional unit(s) will be required to meet the proposed peak day flow.

4.9 Effluent Flow Measurement

Effluent flow is measured via a discharge weir. The existing weir will require replacement to accommodate the proposed maximum month design flow.

4.10 Post Aeration

The facility does not have a formal post aeration system. Aeration is achieved through the effluent flow weir and head drop to the final effluent discharge location. The facility has not had any effluent permit violations for dissolved oxygen, so it is not anticipated that additional post aeration capacity will be needed.

4.11 Aerobic Digester

The existing aerobic digester equalization consists of two 4,500-gallon basins for 9,000 gallons of total volume. The aerobic digester is equipped with coarse bubble diffusers connected to the secondary treatment positive displacement blowers. The aerobically digested solids are pumped out and transported to the Crooked Creek WRF for final disposal. Additional aerobic digestion volume will be needed to accommodate the proposed maximum design flow. The final disposal method will not be altered.

4.12 Operational Procedures

Current operating procedures are consistent with best practices for operation of a wastewater treatment facility. Housekeeping and maintenance of the facility are excellent for industry standards. No operational changes are recommended at this time.

5. Specific Requirements of the SOC

5.1 Evaluation of Existing Treatment Units and Operational Procedures

The existing Grassy Branch WRF does not have adequate process capacity to adequately treat the current flows and loads and maintain NPDES permit compliance. The WRF cannot be further optimized or operated in a manner that achieves compliance with final effluent permit limits. Additional process units are necessary to be in compliance with the existing final effluent permit limits.

5.2 The Effluent Limits that the Facility Could Be Expected to Meet if Operated at Their Maximum Efficiency during the Term of the Requested SOC (Consider Interim Construction Phases)

The historical data indicate influent flows greater than the permitted maximum month design flow results in final effluent permit violations for flow, BOD, TSS, ammonia, and fecal coliform. Table 5-1 summarizes the requested interim effluent limits for the Grassy Branch WRF. The requested limits are based on the 2015 to 2018 historical data in conjunction with the process modeling and WRF evaluation. It is not anticipated that construction phases will be applicable to the proposed upgrade project, so tiered interim limits are not necessary.

Table 5-1: Interim Effluent Permit Limits Request

Parameter	Monthly Average	Weekly Average
BOD ₅ , mg/L (November 1 through March 31)	30	45
BOD ₅ , mg/L (April 1 through October 31)	10	15
TSS, mg/L	100	200
Ammonia, mg/L (November 1 through March 31)	20	30
Ammonia, mg/L (April 1 through October 31)	4	12
Fecal coliform, geometric mean/100 mL	900	---

5.3 Any Other Actions Taken to Correct Problems Prior to Requesting the SOC

The County has been actively involved in reduction of infiltration and inflow (I&I) in the collection system. A Phase 1 I&I study was commissioned in 2016 to broadly determine problem areas. A Phase 2

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study in 2017 focused on repair efforts readily identified in the Phase 1 study. The Phase 2 study also included wet weather monitoring. In 2018, Phase 3 efforts included confirming the effectiveness of previous repair efforts, extensive CCTV review of the entire collection system, and the continuation of repair efforts. Phase 4 of the I&I reduction effort started in 2019. This phase consists of a review of dry and wet weather data and patterns and on-going inspection of the collection system. As of January 2019, the entire Grassy collection system has been surveyed by CCTV. As of May 2019, 42 manholes have been grouted and 48 inflow collectors installed.

Union County has also been actively evaluating process changes at the WRF to minimize NOVs. Staff has taken several precautionary measures in anticipation of high flow events, as follows:

- Bypassing of filters
- Increased monitoring of WRF to include frequent visits during a wet weather event and constant monitoring of telemetry via SCADA
- Control of air input to aeration basins to retain suspended solids:
 - Shutting down of all compressors except one.
 - Reducing remaining compressor to 30 Hz.
 - Shutting down all aerator drop legs except the first set.

6. Summary of Recommendations for Infrastructure Improvements

The historical data indicate the influent flows that exceed the permitted design capacity of the Grassy Branch WRF have resulted in final effluent permit violations for flow, conventional pollutants, and bacterial pollutants. The County has attributed the majority of the NOVs to record rainfall events in the region. The County also acknowledges that more sewer connections have been allocated to the Grassy Branch WRF than available capacity. Hazen recommends a permanent increase in the design maximum month flow from 0.05 mgd to 0.120 mgd.

Hazen recommends an expansion of the Grassy Branch WRF which would include larger influent pumps, an additional secondary treatment train and secondary clarifier, the addition of cloth disk filters, and a new UV disinfection system. Hydraulics would be evaluated during detail design. Existing unit processes will remain in service during construction. It is not anticipated that construction activity will affect the current facility performance.