**The Division of Water Resources will not accept an application package unless all instructions are followed. Plans, specifications and supporting documents shall be prepared in accordance with** [**15A NCAC 02L .0100**](http://www.ncnhp.org/)**,** [**15A NCAC 02T .0100**](https://www.membersbase.com/ncbels-vs/public/searchdb.asp)**,** [**15A NCAC 02T .0600**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf)**,** [**15A NCAC 18A .1900**](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SFRLoadingRatePolicy-20080912.pdf)**,** [**Division Policies**](http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/non-discharge-permitting-unit/policies) **and** [**good engineering practices**](http://www.ncbels.org/rulesandlaws.html)**. Failure to submit all required items may result in the application being returned, and will necessitate additional processing and review time.**

##### *For more information, visit the Water Quality Permitting Section’s Non-Discharge Permitting Unit* [*website*](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0606.pdf)

##### 

**General** – When submitting a non-discharge application to the Water Quality Permitting Section’s Non-Discharge Permitting Unit, please use the following instructions as a checklist in order to ensure all required items are submitted. Adherence to these instructions and checking the provided boxes will help produce a quicker review time by assisting the reviewer in locating the required materials and potentially reducing the amount of requested additional information. Unless otherwise noted, the Applicant shall submit one original and at least two copies of the application and supporting documentation.

1. **Cover Letter** (All Application Packages):

List all items and attached supporting documentation included in the application package, as well as a brief description of the requested permitting action.

1. **Application Fee** (All New and Major Modification Application Packages):

Submit a check, money order or electronic funds transfer made payable to: North Carolina Department of Environmental Quality (NCDEQ).

The appropriate fee amount for new and major modification application packages may be found at: [Standard Review Project Fees](http://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/LAU/SFR/SFRWWIS%20O%26M%2008-13.pdf).

1. **Single-Family Residence Wastewater Irrigation Systems (FORM: SFRWWIS 06-16) Application** (All Application Packages):

Submit the completed and appropriately executed Single-Family Residence Wastewater Irrigation Systems (FORM: SFRWWIS 06-16) application. Any unauthorized content changes to FORM: SFRWWIS 06-16 shall result in the application package being returned. If necessary for clarity or due to space restrictions, attachments to the application may be made, as long as the attachments are numbered to correspond to the section and item to which they refer.

If the Applicant Type in Item I.2. is a corporation or company, provide documentation it is registered for business with the [North Carolina Secretary of State](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf).

If the Applicant Type in Item I.2. is a partnership, sole proprietorship, trade name, or d/b/a, enclose a copy of the certificate filed with the Register of Deeds in the county of business.

The facility name in Item II.2. shall be consistent with the facility name on the plans, specifications, agreements, etc.

The Professional Engineer’s Certification on Page 6 of the Single-Family Residence Wastewater Irrigation Systems (FORM: SFRWWIS 06-16) application shall be signed, sealed and dated by a [North Carolina licensed Professional Engineer](https://www.membersbase.com/ncbels-vs/public/searchdb.asp).

The Applicant’s Certification on Page 6 of the Single-Family Residence Wastewater Irrigation Systems (FORM: SFRWWIS 06-16) application shall be signed in accordance with [15A NCAC 02T .0106(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0106.pdf). Per [15A NCAC 02T .0106(c)](http://www.ncleg.net/EnactedLegislation/Statutes/HTML/BySection/Chapter_143/GS_143-215.6B.html), an alternate person may be designated as the signing official if a delegation letter is provided from a person who meets the criteria in [15A NCAC 02T .0106(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/15a%20ncac%2002l%20.0108.pdf).

If this project is for a renewal without modification, use the [Non-Discharge System Renewal (FORM: NDSR)](http://www.ncleg.net/EnactedLegislation/Statutes/HTML/BySection/Chapter_143/GS_143-215.6A.html) application.

1. **Existing Permit** (All Modification Packages):

Submit the most recently issued existing permit.

Provide a list of any items within the permit the Applicant would like the Division to address during the permit modification (i.e., compliance schedules, permit description, monitoring, permit conditions, etc.).

1. **Property Ownership Documentation** (All Application Packages):

Per [15A NCAC 02T .0604(e)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), the Applicant shall demonstrate they are the owner of all property containing the wastewater treatment, storage and irrigation facilities:

Legal documentation of ownership (i.e., contract, deed or article of incorporation), or

Written notarized intent to purchase agreement signed by both parties with a plat or survey map, or

Written notarized lease agreement that specifically indicates the intended use of the property and has been signed by both parties, as well as a plat or survey map. Lease agreements shall adhere to the requirements of [15A NCAC 02L .0107](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/15a%20ncac%2002l%20.0107.pdf).

Provide all agreements, easements, setback waivers, etc. that have a direct impact on the wastewater treatment, conveyance, storage and irrigation facilities.

1. **Soil Evaluation** (All Application Packages that include new irrigation sites):

Per [15A NCAC 02T .0604(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf) and current [Division Policy](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/subchapter%20l%20rules.pdf), submit a detailed soil evaluation that has been signed, sealed and dated by a [North Carolina Licensed Soil Scientist](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20b/15a%20ncac%2002b%20.0110.pdf) and includes at a minimum:

The report shall identify all the sites/fields with project name, location, and include a statement that the sites/fields were recommended for the proposed land application activity.

Note, if the soil evaluation was performed more than one year prior to the submittal of this application package, a statement shall be included indicating that the site has not changed since the original investigation.

Field delineated detailed soils map meeting all of the requirements of the [Soil Scientist Evaluation Policy](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SoilsEvaluationPolicy-20080912.pdf).

Soil profile descriptions meeting all of the requirements of the [Soil Scientist Evaluation Policy](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SoilsEvaluationPolicy-20080912.pdf).

Provide all soil boring logs performed at the site.

Standard soil fertility analysis conducted no more than one year prior to permit application for each map unit in the soil map legend for the following parameters:

|  |  |  |
| --- | --- | --- |
| * Acidity | * Exchangeable sodium percentage (by calculation) | * Phosphorus |
| * Base saturation (by calculation) | * Magnesium | * Potassium |
| * Calcium | * Manganese | * Sodium |
| * Cation exchange capacity | * Percent humic matter | * Zinc |
| * Copper | * pH |  |

Note: The number of samples will vary depending upon the project size and past land use history. Multiple samples for each map unit are required if the irrigation zones are separated, and cropland, pasture, hay land and wooded areas shall be sampled separately for the same map unit due to past differences in soil fertility management.

Saturated hydraulic conductivity (KSAT) data that shall include at a minimum:

A minimum of three KSAT tests shall be conducted in the most restrictive horizon for each soil series in the soil map.

All KSAT tests shall be conducted in areas representative of the site.

All KSAT tests shall be run until steady-state equilibrium has been achieved.

All collected KSAT data shall be submitted, including copies of field worksheets showing all collected readings.

Submit a soil profile description for each KSAT data point that shall extend at least one foot below the tested horizon.

Soil evaluation recommendations shall include at a minimum:

A brief summary of each map unit and its composition and identification of minor contrasting soils.

Maximum irrigation precipitation rate (in/hr) for each soil/map unit within the proposed irrigation areas.

Identification of areas not suitable for wastewater irrigation.

Recommended geometric mean KSAT rate to be used in determining the SFR Loading Rate Group for each soil/map unit based upon in-situ measurement of the saturated hydraulic conductivity from the most restrictive horizon.

Recommended annual hydraulic loading rate (in/yr) for each soil/map unit within the proposed irrigation areas based upon in-situ KSAT measurements form the most restrictive soil horizon. The recommended loading rate must be in accordance with the [Single-Family Residence Wastewater Irrigation System Loading Rate Calculation Policy](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf).

A completed copy of the [Single-Family Residence Loading Rate Workbook](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/LAU/Agreements/WSCA%2008-13.pdf) (i.e., Project Information, Potential Evapotranspiration, Precipitation, and Irrigation Area Calculations).

1. **Engineering** **Plans** (All Application Packages):

Per [15A NCAC 02T .0604(c)(1)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), submit standard size and 11 x 17-inch plan sets that have been signed, sealed and dated by a [North Carolina licensed Professional Engineer](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SFR_Loading_Rate_Workbook_20080912.xls).

At a minimum, the engineering plans shall include the following items:

Table of contents with each sheet numbered, as well as cross-referenced with the appropriate application items.

A general location map with at least two geographic references, vicinity map, topographic map and site map.

A process and instrumentation diagram showing all flow, recycle/return, electrical paths, etc.

Plan and profile views of all treatment and storage units, including their piping, valves, and equipment (i.e., pumps, etc.), as well as their dimensions and elevations.

Details of all piping, valves, pumps, precipitation/soil moisture sensors, etc.

A hydraulic profile from the treatment plant headworks to the highest irrigation point.

The irrigation area with an overlay of the suitable irrigation areas depicted in the Soil Evaluation.

Each nozzle/emitter and their wetted area influence, and each irrigation zone labeled as it will be operated.

Locations within the irrigation system of air releases, drains, control valves, highest irrigation nozzle/emitter, etc.

Plans shall represent a completed design and not be labeled with preliminary phrases (e.g., FOR REVIEW ONLY, NOT FOR CONSTRUCTION, etc.) that indicate they are anything other than final specifications. However, the plans may be labeled with the phrase: FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION.

1. **Specifications** (All Application Packages):

Per [15A NCAC 02T .0604(c)(2)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), submit specifications that have been signed, sealed and dated by a [North Carolina licensed Professional Engineer](https://www.membersbase.com/ncbels-vs/public/searchdb.asp).

At a minimum, the specifications shall include the following items:

Table of contents with each section/page numbered, as well as cross-referenced with the appropriate application items.

Detailed specifications for each treatment/storage/irrigation unit, as well as all piping, valves, equipment (i.e., pumps, etc.), nozzles/emitters, precipitation/soil moisture sensor, audible/visual high water alarms, liner material, etc.

Site Work (i.e., earthwork, clearing, grubbing, excavation, trenching, backfilling, compacting, fencing, seeding, etc.)

Materials (i.e., concrete, masonry, steel, painting, method of construction, etc.)

Electrical (i.e., control panels, etc.)

Means for ensuring quality and integrity of the finished product, including leakage, pressure and liner testing.

Specifications shall represent a completed design and not be labeled with preliminary phrases (e.g., FOR REVIEW ONLY, NOT FOR CONSTRUCTION, etc.) that indicate they are anything other than final specifications. However, the specifications may be labeled with the phrase: FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION.

1. **Engineering Calculations** (All Application Packages):

Per [15A NCAC 02T .0604(c)(3)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), submit engineering calculations that have been signed, sealed and dated by a [North Carolina licensed Professional Engineer](http://ehs.ncpublichealth.com/oswp/docs/rules/RulesCompleteEff10012011.pdf).

At a minimum, the engineering calculations shall include the following items:

Hydraulic and pollutant loading calculations for each treatment unit demonstrating how the designed effluent concentrations in Application Item V.1. were determined (Note: “black box” calculations are unacceptable).

Sizing criteria for each treatment unit and associated equipment (i.e., pumps, etc.).

Total and effective storage calculations for each storage unit.

Friction/total dynamic head calculations and system curve analysis for each pump used.

Manufacturer’s information for all treatment units, pumps, irrigation system, etc.

Flotation calculations for all treatment and storage units constructed partially or entirely below grade.

Demonstrate the designed maximum precipitation and annual loading rates do not exceed the recommended rates.

Demonstrate the specified auxiliary power source is capable of powering all essential treatment units.

A properly completed and executed [Single-Family Residence Loading Rate Workbook](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/15a%20ncac%2002l%20.0107.pdf).

1. **Site Map** (All Application Packages):

Per [15A NCAC 02T .0604(d)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), submit standard size and 11 x 17-inch site maps that have been signed, sealed and dated by a [North Carolina licensed Professional Engineer and/or Professional Land Surveyor](https://www.membersbase.com/ncbels-vs/public/searchdb.asp).

For clarity, multiple site maps of the facility with cut sheet annotations may be submitted.

At a minimum, the site map shall include the following:

A scaled map of the site with topographic contour intervals not exceeding two feet and showing all facility-related structures and fences within the wastewater treatment, storage and irrigation areas.

Soil mapping units shown on all irrigation sites.

The location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all wastewater treatment, storage and irrigation sites.

Delineation of the compliance and review boundaries per [15A NCAC 02L .0107(i)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf) and [.0108](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0606.pdf).

Setbacks as required by [15A NCAC 02T .0606](http://ncblss.org/lss-directory.pdf).

Site property boundaries within 500 feet of all wastewater treatment, storage and irrigation sites.

All habitable residences or places of public assembly within 500 feet of all treatment, storage and irrigation sites.

1. **Operation and Maintenance Plan** (All Application Packages):

Per [15A NCAC 02T .0604(f)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), submit an operation and maintenance (O&M) plan encompassing all wastewater treatment, storage and irrigation systems that at a minimum shall address:

How to perform routine inspections.

A maintenance schedule.

A troubleshooting guide.

A layman’s explanation of the wastewater treatment, storage and irrigation systems.

A crop maintenance and management plan.

Note a final O&M Plan may be submitted with the partial and/or final Engineering Certification required under [15A NCAC 02T .0116](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0116.pdf), however, a preliminary O&M Plan shall be submitted with each application package.

1. **Operation and Maintenance Agreement** (All Application Packages):

Per [15A NCAC 02T .0604(h)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf), submit a notarized [Operation and Maintenance Agreement](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20b/subchapter%20b%20rules.pdf) that has been signed and dated by all deeded property owners.

1. **County Health Department Denial Letter** (All New Application Packages):

Per [15A NCAC 02T .0604(g)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), provide a written letter from the local County Health Department denying the site for all subsurface systems.

1. **Floodway Regulation Compliance** (All Application Packages where any portion of the wastewater treatment, storage and irrigation system is located within the 100-year floodplain):

Per [15A NCAC 02T .0105(c)(8)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf), provide written documentation from all local governing entities that the facility is in compliance with [Article 21 Part 6 of Chapter 143 of the General Statutes](http://www.ncleg.net/enactedlegislation/statutes/pdf/byarticle/chapter_143/article_21.pdf) (i.e., § 143-215.51. through § 143-215.61.).

1. **Threatened or Endangered Aquatic Species Documentation** (All Application Packages):

Per [15A NCAC 02T .0105(c)(10)](https://www.sosnc.gov/search/index/corp), submit documentation from the Department’s [Natural Heritage Program](http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/non-discharge-permitting) demonstrating the presence or absence of threatened or endangered aquatic species within the boundary of the wastewater treatment, storage and irrigation facilities.

If the facility directly impacts such species, this documentation shall provide information on the need for permit conditions pursuant to [15A NCAC 02B .0110](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP2012_corrections_21-sep-2012.pdf).

1. **Other Environmental Permits** (All Application Packages that include stream or wetland crossings):

Per [15A NCAC 02T .0105(c)(6)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf), submit a copy of either the approved permit/certification or a letter from the appropriate review agency acknowledging receipt of the application for the following applicable permits/certifications:

[Division of Water Resources’ Water Quality Permitting Section](http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits) – [Wetlands 401 Certification](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/LAU/NDSR%2006-16.docx)

[US Army Corps of Engineers South Atlantic Division](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0106.pdf) – [Nationwide 12 or Section 404 permit](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0106.pdf)

Per [15A NCAC 02T .0105(c)(6)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), this application shall be considered incomplete or the resulting permit may be issued conditionally, if a pending issuance of any of the aforementioned permits/certifications directly impact the facility herein.

**THE COMPLETED APPLICATION AND SUPPORTING DOCUMENTATION SHALL BE SUBMITTED TO:**

**NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY**

###### DIVISION OF WATER RESOURCES

**WATER QUALITY PERMITTING SECTION**

**NON-DISCHARGE PERMITTING UNIT**

|  |  |
| --- | --- |
| By U.S. Postal Service: | By Courier/Special Delivery: |
| 1617 Mail Service Center | [512 N. SALISBURY ST.](http://maps.google.com/maps?q=512+North+Salisbury+Street,+Raleigh,+NC&hl=en&sll=37.0625,-95.677068&sspn=33.077336,56.162109&vpsrc=0&hnear=512+N+Salisbury+St,+Raleigh,+North+Carolina+27603&t=m&z=16) |
| RALEIGH, NORTH CAROLINA 27699-1617 | [RALEIGH, NORTH CAROLINA 27604](http://maps.google.com/maps?q=512+North+Salisbury+Street,+Raleigh,+NC&hl=en&sll=37.0625,-95.677068&sspn=33.077336,56.162109&vpsrc=0&hnear=512+N+Salisbury+St,+Raleigh,+North+Carolina+27603&t=m&z=16) |
|  |  |
| TELEPHONE NUMBER: (919) 807-6464 | FAX NUMBER: (919) 807-6496 |

1. **APPLICANT INFORMATION:**
2. Applicant's name as appears on deed, contract or lease agreement:
3. Applicant type:  Individual  Corporation  General Partnership
4. Signature authority’s name:       per [15A NCAC 02T .0106(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0106.pdf) Title:
5. Applicant’s mailing address:

City:       State:       Zip:      -

1. Applicant’s contact information:

Telephone number: (   )    -     Fax number: (   )    -     Email Address:

1. **FACILITY INFORMATION:**
2. Facility name:
3. Facility status:  Existing or  Proposed
4. Facility’s physical address:

City:       State:       Zip:      -     County:

1. Wastewater Treatment Facility Coordinates: Latitude:   ○   ′   ″ Longitude: -  ○   ′   ″

Provide the following latitude and longitude coordinate determination information:

Datum: Level of accuracy: Method of measurement:

1. USGS Map Name:
2. **CONSULTANT INFORMATION:**
3. Engineer’s name:       License Number:       Firm:

Engineer’s mailing address:

City:       State:       Zip:      -

Telephone number: (   )    -     Fax number: (   )    -     Email Address:

1. Soil Scientist’s name:       License Number:       Firm:

Soil Scientist’s mailing address:

City:       State:       Zip:      -

Telephone number: (   )    -     Fax number: (   )    -     Email Address:

1. **GENERAL REQUIREMENTS –** [**15A NCAC 02T .0100**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf)**:**
2. Application type:  New  Major Modification  Minor Modification

If a modification, provide the existing permit number: WQ00      and most recent issuance date:

1. Application fee: $
2. Describe the origin of the wastewater and provide a brief project description:
3. Wastewater flow:       GPD
4. **GENERAL REQUIREMENTS –** [**15A NCAC 02T .0100**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0606.pdf) **(CONTINUED):**
5. Using [15A NCAC 02T .0114](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0114.pdf), explain how the total wastewater flow was determined:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Establishment Type** | **Flow Basis** | **Flow Per Unit** | **Number of Units** | Flow |
|  | gal/ |  |  | GPD |
|  | gal/ |  |  | GPD |
| Total | GPD |

1. Per [15A NCAC 02T .0105(c)(6)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf), if the project includes any stream or wetland crossings, what is the status of the following applicable permits/certifications?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Permit/Certification | **Date Submitted** | **Date Approved** | **Permit/Certification No.** | **Agency Reviewer** |
| Nationwide 12 or 404 |  |  |  |  |
| Wetlands 401 |  |  |  |  |

1. What is the nearest 100-year flood plain elevation to the facility?       feet mean sea level. Source:

Are any treatment, storage or irrigation systems located within the 100-year flood plain?  Yes or  No

If yes, has documentation of compliance with Article 21 Part 6 of Chapter 143 of the G.S. been provided?  Yes or  No

1. **DESIGN CRITERIA AND SETBACKS –** [**15A NCAC 02T .0605**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0606.pdf) **&** [**.0606**](http://www.sad.usace.army.mil/)**:**
2. Provide the estimated influent and designed effluent concentrations from the engineering calculations to verify conformance with [15A NCAC 02T .0605(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf) for the following parameters:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | **Estimated Influent Concentration** | **Designed Effluent Concentration (monthly average)** | **Minimum Required Degree of Treatment Prior to Storage** |
| Biochemical Oxygen Demand (BOD5) | mg/l | mg/l | ≤ 30 mg/l |
| Total Suspended Solids (TSS) | mg/l | mg/l | ≤ 30 mg/l |
| Ammonia Nitrogen (NH3-N) | mg/l | mg/l | ≤ 15 mg/l |
| Fecal Coliforms |  | per 100 ml | ≤ 200 colonies/100 ml |

1. Per [15A NCAC 02T .0605(c)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2018%20-%20environmental%20health/subchapter%20a/subchapter%20a%20rules.pdf), is the effluent placed directly in contact with GA classified groundwater?  Yes or  No

If yes, have predictive calculations demonstrating such placement will not contravene GA groundwater standards been provided?  Yes or  No

1. Per [15A NCAC 02T .0605(d)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), are any of the treatment or storage units excavated into bedrock?  Yes or  No

If yes, has a 10 millimeter synthetic liner been provided?  Yes (Plan Sheet:       & Specification Page:      ) or  No

1. In accordance with [15A NCAC 02T .0605(e)](http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits), are any earthen treatment and storage facilities provided?  Yes or  No
2. In accordance with [15A NCAC 02T .0605(f)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20l/15a%20ncac%2002l%20.0107.pdf), have any by-pass or overflow lines been provided?  Yes or  No
3. If any treatment, storage or irrigation systems are located within the 100-year flood plain, in accordance with [15A NCAC 02T .0605(g)](http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/non-discharge-permitting-unit/fees), which systems are affected and what measures being taken to protect them against flooding?
4. In accordance with [15A NCAC 02T .0605(h)](https://www.membersbase.com/ncbels-vs/public/searchdb.asp), has an operation and maintenance plan been submitted?  Yes or  No
5. In accordance with [15A NCAC 02T .0605(i)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), how will restricted access to the irrigation system be provided?

Are all treatment units and control panels locked to prevent entry?  Yes or  No

1. In accordance with [15A NCAC 02T .0605(j)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), do the designed irrigation loading rates (see Application Item VII.4.) exceed the soil scientist recommended loading rates (see Application Item VII.3.)?  Yes or  No
2. In accordance with [15A NCAC 02T .0605(k)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf), does the septic tank design adhere to [15A NCAC 18A .1900](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SoilsEvaluationPolicy-20080912.pdf)?  Yes or  No
3. **DESIGN CRITERIA AND SETBACKS –** [**15A NCAC 02T .0605**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf) **&** [**.0606**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0606.pdf) **(CONTINUED):**
4. In accordance with [15A NCAC 02T .0605(l)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), what is the specified method of disinfection?

If chlorine, specify contact detention time provided:       minutes and where contact time occurs:

If UV, specify the number of banks:      , total lamps:       and maximum flow capacity:       GPM.

1. In accordance with [15A NCAC 02T .0605(m)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0105.pdf), has a minimum of five days of storage based on average daily flow between the pump off float and inlet invert pipe been provided?  Yes or  No
2. In accordance with [15A NCAC 02T .0605(n)](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/APS%20Policies/SFR_Loading_Rate_Workbook_20080912.xls), have all tanks containing pumps been provided with audible and visual alarms that are external to any structure?  Yes (Plan Sheet:       & Specification Page:      ) or  No
3. In accordance with [15A NCAC 02T .0605(o)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), has a precipitation or soil moisture sensor been provided?   
    Yes (Plan Sheet:       & Specification Page:      ) or  No
4. In accordance with [15A NCAC 02T .0605(p)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), has a minimum of 18 inches of vertical separation between the apparent seasonal high water table (SHWT) and the ground surface been provided?  Yes or  No
5. In accordance with [15A NCAC 02T .0605(q)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), has a minimum of 12 inches of vertical separation between any perched seasonal high water table (SHWT) and the ground surface been provided?  Yes or  No
6. In accordance with [15A NCAC 02T .0605(r)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), does the designed annual loading rate exceed 50 inches?  Yes or  No
7. Does the project comply with all setbacks found in the river basin rules ([15A NCAC 02B .0200](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf))?  Yes or  No

If no, list non-compliant setbacks:

1. Per [15A NCAC 02T .0606](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0106.pdf), verify setback compliance by providing the minimum field observed distance (ft) from the facility’s irrigation system and treatment/storage units to each listed setback parameter (Note: Distances greater than 500 feet shall be marked N/A):

|  |  |  |
| --- | --- | --- |
| **Setback Parameter** | **Irrigation System** | Treatment / Storage Units |
| Any habitable residence or place of assembly under separate ownership or not to be maintained as part of the project site |  |  |
| Any habitable residence or place of assembly owned by the Permittee to be maintained as part of the project site |  |  |
| Any private or public water supply source |  |  |
| Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) |  |  |
| Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT) |  |  |
| Subsurface groundwater lowering drainage systems |  |  |
| Surface water diversions (ephemeral streams, waterways, ditches) |  |  |
| Any well with exception of monitoring wells |  |  |
| Any property line |  |  |
| Top of slope of embankments or cuts of two feet or more in vertical height |  |  |
| Any water line from a disposal system |  |  |
| Any swimming pool |  |  |
| Public right of way |  |  |
| Nitrification field |  |  |
| Any building foundation or basement |  |  |

1. Are any setback waivers proposed for this facility?  Yes or  No

If yes, in accordance with [15A NCAC 02T .0606(c)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), submit the appropriate setback waivers ([FORM: NDWSW](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/LAU/Agreements/NDWSW%2011-13.pdf)) that have been notarized, signed by all parties involved and recorded with the County Register of Deeds. Waivers involving the compliance boundary shall be in accordance with [15A NCAC 02L .0107](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf).

1. **WASTEWATER TREATMENT & STORAGE FACILITY DESIGN:**
2. Type of treatment system:
3. Provide the requested information for each treatment/storage unit and its associated mechanical equipment:
4. PRELIMINARY / PRIMARY TREATMENT (i.e., physical removal operations):

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Treatment Unit | **No. of Units** | **Manufacturer or Material** | **Dimensions (ft) / Spacings (in)** | **Volume (gal)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. SECONDARY TREATMENT (i.e., physical, biological and recirculation processes):

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Manufacturer or Material** | **Dimensions (ft)** | **Volume (gal)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. DISINFECTION:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Manufacturer or Material** | **Dimensions (ft)** | **Volume (gal)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. PUMP/STORAGE TANK:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Manufacturer or Material** | **No. of Units** | **Dimensions (ft)** | **Total Volume (gal)** | **Effective Volume (gal)** | **Effective Storage (days)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. PUMPS:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Pumps** | **Purpose** | **Manufacturer / Type** | **Capacity** | | **Plan Sheet Reference** | **Specification Reference** |
| **GPM** | **TDH** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

1. BLOWERS:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Blowers** | **Units Served** | **Manufacturer / Type** | **Capacity (CFM)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. MIXERS:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Mixers** | **Units Served** | **Manufacturer / Type** | **Power (hp)** | **Plan Sheet Reference** | **Specification Reference** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. **IRRIGATION SYSTEM DESIGN:**
2. Are there any artificial drainage or water movement structures within 200 feet of the irrigation area?  Yes or  No

If yes, please explain if the Soil Evaluation addresses artificial structures and indicate if these structures are to be maintained or modified:

1. What is the proposed cover crop?
2. Soil Evaluation recommendations:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Soil Series** | **Fields within Soil Area** | **Minimum Observed Depth to SHWT**  **(ft)** | **Recommended Loading Rate**  **(in/hr)** | **Recommended Loading Rate**  **(in/yr)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. Irrigation System Information (Note – this table may be expanded for additional fields):

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Area (acres) | Dominant Soil Series | Designed Rate (in/hr) | Designed Rate (in/yr) | Latitude 1 (DMS) | Longitude 1 (DMS) | Waterbody Stream Index No. 2 | Classification |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
|  |  |  |  |  | ○   ′   ″ | -  ○   ′   ″ |  |  |
| *Total* |  |  |  |  |  |  |  |  |

1 Provide the following latitude and longitude coordinate determination information:

Datum:  Level of accuracy:  Method of measurement:

2 For assistance determining the waterbody stream index number and its associated classification, instructions may be downloaded at: [https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Quality/Aquifer%20Protection/LAU/Agreements/WSCA%2008-13.pdf](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf).

|  |  |  |  |
| --- | --- | --- | --- |
| **Spray Irrigation Design Elements** | | **Drip Irrigation Design Elements** | |
| Nozzle wetted diameter: | ft | Emitter wetted area: | ft2 |
| Nozzle wetted area: | ft2 | Distance between laterals: | ft |
| Nozzle capacity: | GPM | Distance between emitters: | ft |
| Nozzle manufacturer/model: | / | Emitter capacity: | GPH |
| Elevation of highest nozzle: | ft | Emitter manufacturer/model: | / |
| Specification Reference: |  | Elevation of highest emitter: | ft |
|  |  | Specification Reference: |  |

**Professional Engineer's Certification:**

I, attest that this application for

(Professional Engineer’s name from Application Item III.1.)

(Facility name from Application Item II.1.)

has been reviewed by me and is accurate, complete and consistent with the information supplied in the plans, specifications, engineering calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with this application package and its instructions, as well as all applicable regulations and statutes. Although other professionals may have developed certain portions of this submittal package, inclusion of these materials under my signature and seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design.

**Note**: In accordance with General Statutes [143-215.6A](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf) and [143-215.6B](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf), any person who knowingly makes any false statement, representation, or certification in any application package shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed $10,000, as well as civil penalties up to $25,000 per violation.

North Carolina Professional Engineer's seal, signature, and date:

**Applicant's Certification per** [**15A NCAC 02T .0106(b)**](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0604.pdf)**:**

I, attest that this application for

(Signature Authority’s name & title from Application Item I.3.)

(Facility name from Application Item II.1.)

has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that any discharge of wastewater from this non-discharge system to surface waters or the land will result in an immediate enforcement action that may include civil penalties, injunctive relief, and/or criminal prosecution. I will make no claim against the Division of Water Resources should a condition of this permit be violated. I also understand that if all required parts of this application package are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. I further certify that the applicant or any affiliate has not been convicted of an environmental crime, has not abandoned a wastewater facility without proper closure, does not have an outstanding civil penalty where all appeals have been exhausted or abandoned, are compliant with any active compliance schedule, and do not have any overdue annual fees per [15A NCAC 02T .0105(e)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0605.pdf).

**Note**: In accordance with General Statutes [143-215.6A](http://www.ncleg.net/EnactedLegislation/Statutes/HTML/BySection/Chapter_143/GS_143-215.6A.html) and [143-215.6B](http://www.ncleg.net/EnactedLegislation/Statutes/HTML/BySection/Chapter_143/GS_143-215.6B.html), any person who knowingly makes any false statement, representation, or certification in any application package shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed $10,000 as well as civil penalties up to $25,000 per violation.

Signature: Date: