**Section 1: Instructions and INFORMATION**

1. The Division of Water Resources will accept this application package for review only if all of the items are provided and the application is complete. Failure to submit all of the required items will result in the application package being returned as incomplete per [15A NCAC 02T .0105(b)](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).
2. Plans and specifications must be prepared in accordance with [15 NCAC 02H. 0100](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/subchapter%20h%20rules.pdf), [15A NCAC 02T](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), [North Carolina General Statute 133-3](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_133/GS_133-3.pdf), [North Carolina General Statute 143-215.1](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.1.pdf), and [Division of Water Resources Minimum Design Criteria for NPDES Wastewater Treatment Facilities](https://files.nc.gov/ncdeq/Surface%20Water%20Protection/NPDES/ATC/Minimum-design-criteria-2017.pdf).
3. The plans and specifications submitted must represent a completed final design that is ready to advertise for bid.
4. Any content changes made to this Form ATC-12-14 shall result in the application package being returned.
5. The Applicant shall submit ONE ORIGINAL and ONE DIGITAL COPY (CD) of the application, all supporting documentation and attachments. All information must be submitted bound or in a 3-ring binder, with a Section tab for each Section, except the Engineering Plans.
6. Check the boxes below to indicate that the information is provided and the requirements are met.
7. If attachments are necessary for clarity or due to space limitations, such attachments are considered part of the application package and must be numbered to correspond to the item referenced.
8. For any project that requires review under the State Environmental Policy Act (SEPA), an Authorization to Construct cannot be issued prior to the completion of a State Clearinghouse advertisement period for a FONSI, EIS, etc. unless the project qualifies for a Determination of Minor Construction Activity.

##### For more information, visit the Division of Water Resources web site at: <https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/npdes-wastewater/authorization-to-construct>.

##### In addition to this Authorization to Construct, the Applicant should be aware that other permits may be required from other Sections of the Division of Water Resources (for example: reclaimed water facilities permits; Class A or B biosolids residuals permit).

**SECTION 2: APPLICANT INFORMATION AND PROJECT DESCRIPTION**

1. **APPLICANT**

|  |  |
| --- | --- |
| Applicant’s name |  |
| 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)  |  |
| Signature authority’s title |  |
| Complete mailing address |  |
| Telephone number |  |
| Email address |  |

1. **PROFESSIONAL ENGINEER**

|  |  |
| --- | --- |
| Professional Engineer’s name |  |
| Professional Engineer’s title |  |
| North Carolina Professional Engineer’s License No.  |  |
| Firm name |  |
| Firm License number |  |
| Complete mailing address |  |
| Telephone number |  |
| Email address |  |

1. **NPDES PERMIT**

|  |  |
| --- | --- |
| NPDES Permit number |  |
| Current Permitted flow (MGD) – include permit flow phases if applicable |  |

1. **PROJECT DESCRIPTION**

Provide a brief description of the project:   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_ \_ \_ \_\_

**SECTION 3: APPLICATION ITEMS REQUIRED FOR SUBMITTAL FOR ALL PROJECTS**

1. **Cover Letter**

[ ]  The letter must include a request for the Authorization to Construct; the facility NPDES Number; a brief project description that indicates whether the project is a new facility, facility modification, treatment process modification, or facility expansion; the construction timeline; and a list of all items and attachments included in the application package.

[ ]  If any of the requirements of [15 NCAC 02H. 0100](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/subchapter%20h%20rules.pdf), [15A NCAC 02T](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), [North Carolina General Statute 133-3](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_133/GS_133-3.pdf), [North Carolina General Statute 143-215.1](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.1.pdf), and [Division of Water Resources Minimum Design Criteria for NPDES Wastewater Treatment Facilities](https://files.nc.gov/ncdeq/Surface%20Water%20Protection/NPDES/ATC/Minimum-design-criteria-2017.pdf) are not met by the proposed design, the letter must include an itemized list of the requirements that are not met.

1. **NPDES Permit**

[ ]  Submit Part I of the Final NPDES permit for this facility that includes Part A (Effluent Limitations and Monitoring Requirements) for the monthly average flow limit that corresponds to the work that is requested for this project.

1. **Special Order by Consent**

[ ]  If the facility is subject to any Special Orders by Consent (SOC), submit the applicable SOC.

[ ]  Not Applicable.

1. **Finding of No Significant Impact or Record of Decision**

[ ]  Submit a copy of the Finding of No Significant Impact or Record of Decision for this project.

[ ]  Provide a brief description of any of the mitigating factors or activities included in the approved Environmental Document that impact any aspect of design of this project, if not specified in the Finding of No Significant Impact or Record of Decision.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_

[ ]  Not Applicable.

1. **Engineering Plans**

[ ]  Per [15A NCAC 02T .0504(c)(1)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0504.pdf), submit one set of detailed plans that have been signed, sealed and dated by a [North Carolina Licensed Professional Engineer](http://www.ncbels.org/index.html).

[ ]  Per [21 NCAC 56 .1103(a)(6)](http://reports.oah.state.nc.us/ncac/title%2021%20-%20occupational%20licensing%20boards%20and%20commissions/chapter%2056%20-%20engineers%20and%20surveyors/21%20ncac%2056%20.1103.pdf), the name, address and License number of the Licensee’s firm shall be included on each sheet of the engineering drawings.

[ ]  Plans must be labeled as follows: FINAL DRAWING – FOR REVIEW PURPOSES ONLY – NOT RELEASED FOR CONSTRUCTION.

[ ]  [15A NCAC 02H .0124](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/15a%20ncac%2002h%20.0124.pdf) requires multiple (dual at a minimum) components such as pumps, chemical feed systems, aeration equipment and disinfection equipment. Is this requirement met by the design? [ ] [ ]  Yes or [ ] [ ]  No. If no, provide an explanation:   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_ \_\_\_\_ \_\_\_\_

**Plans shall include:**

[ ]  Plans for all applicable disciplines needed for bidding and construction of the proposed project (check as appropriate):

 [ ]  Civil [ ]  Not Applicable

[ ]  Process Mechanical [ ]  Not Applicable

[ ]  Structural [ ]  Not Applicable

[ ]  Electrical [ ]  Not Applicable

[ ]  Instrumentation/Controls [ ]  Not Applicable

[ ]  Architectural [ ]  Not Applicable

 [ ]  Building Mechanical [ ]  Not Applicable

 [ ]  Building Plumbing [ ]  Not Applicable

[ ]  Plan and profile views and associated details of all modified treatment units including piping, valves, and equipment (pumps, blowers, mixers, diffusers, etc.)

[ ]  Are any modifications proposed that impact the hydraulic profile of the treatment facility? [ ] [ ]  Yes or [ ] [ ]  No. If yes, provide a hydraulic profile drawing on one sheet that includes all impacted upstream and downstream units. The profile shall include the top of wall elevations of each impacted treatment unit and the water surface elevations within each impacted treatment unit for two flow conditions: (1) the NPDES permitted flow with all trains in service and (2) the peak hourly flow with one treatment train removed from service.

[ ]  Are any modifications proposed that impact the process flow diagram or process flow schematic of the treatment facility? [ ] [ ]  Yes or [ ] [ ]  No. If yes, provide the process flow diagram or process flow schematic showing all modified flow paths including aeration, recycle/return, wasting, and chemical feed, with the location of all monitoring and control instruments noted.

1. [ ]  **Engineering Specifications**

[ ]  Per [15A NCAC 02T .0504(c)(2)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0504.pdf), submit one set of specifications that have been signed, sealed and dated by a [North Carolina Licensed Professional Engineer](http://www.ncbels.org/index.html).

[ ]  Specifications must be labeled as follows: FINAL SPECIFICATIONS – FOR REVIEW PURPOSES ONLY – NOT RELEASED FOR CONSTRUCTION.

**Specifications shall include:**

[ ]  Specifications for all applicable disciplines needed for bidding and construction of the proposed project (check as appropriate):

 [ ]  Civil [ ]  Not Applicable

[ ]  Process Mechanical [ ]  Not Applicable

[ ]  Structural [ ]  Not Applicable

[ ]  Electrical [ ]  Not Applicable

[ ]  Instrumentation/Controls [ ]  Not Applicable

[ ]  Architectural [ ]  Not Applicable

 [ ]  Building Mechanical [ ]  Not Applicable

 [ ]  Building Plumbing [ ]  Not Applicable

[ ]  Detailed specifications for all treatment units and processes including piping, valves, equipment (pumps, blowers, mixers, diffusers, etc.), and instrumentation.

[ ]  Means of ensuring quality and integrity of the finished product including leakage testing requirements for structures and pipelines, and performance testing requirements for equipment.

[ ]  Bid Form for publicly bid projects.

1. **Construction Sequence Plan**

[ ]  Construction Sequence Plan such that construction activities will not result in overflows or bypasses to waters of the State. The Plan must not imply that the Contractor is responsible for operation of treatment facilities. List the location of the Construction Sequence Plan as in the Engineering Plans or in the Engineering Specifications or in both:   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_ \_\_\_\_ \_\_\_\_

1. **Engineering Calculations**

[ ]  Per [15A NCAC 02T .0504(c)(3)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0504.pdf), submit one set of engineering calculations that have been signed, sealed and dated by a [North Carolina Licensed Professional Engineer](http://www.ncbels.org/index.html); the seal, signature and date shall be placed on the cover sheet of the calculations.

**For new or expanding facilities and for treatment process modifications that are included in Section 4.C, the calculations shall include at a minimum:**

[ ]  Demonstration of how peak hour design flow was determined with a justification of the selected peaking factor.

[ ]  Influent pollutant loading demonstrating how the design influent characteristics in Section 4.B.2 of this form were determined.

[ ]  Pollutant loading for each treatment unit demonstrating how the design effluent concentrations in Section 4.B.2 of this form were determined.

[ ]  Hydraulic loading for each treatment unit.

[ ]  Sizing criteria for each treatment unit and associated equipment (blowers, mixers, pumps, etc.)

[ ]  Total dynamic head (TDH) calculations and system curve analysis for each pump specified that is included in Section 4.C.6.

[ ]  Buoyancy calculations for all below grade structures.

[ ]  Supporting documentation that the specified auxiliary power source is capable of powering all essential treatment units.

1. **Permits**

[ ]  Provide the following information for each permit and/or certification required for this project:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Permit/Certification | **Not Applicable** | **DateSubmitted** | **DateApproved** | **Permit/****Certification Number** | **If Not Issued Provide Status and Expected Issuance Date** |
| [Dam Safety](https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/dam-safety) |       |       |       |       |       |
| [Soil Erosion and Sediment Control](https://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control) |       |       |       |       |       |
| [USCOE / Section 404 Permit](http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx) |       |       |       |       |       |
| [Water Quality Certification (401)](https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits) |       |       |       |       |       |
| [USCOE / Section 10](http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx) |       |       |       |       |       |
| [Stormwater Management Plan](https://deq.nc.gov/about/divisions/energy-mineral-land-resources/stormwater) |       |       |       |       |       |
| [CAMA](http://www.nccoastalmanagement.net/) |       |       |       |       |       |
| NCDOT Encroachment Agreement |       |       |       |       |       |
| Railroad Encroachment Agreement |       |       |       |       |       |
| Other:       |       |       |       |       |       |

1. **Residuals Management Plan**

[ ]  For all new facilities, expanding facilities, or modifications that result in a change to sludge production and/or sludge processes, provide a Residuals Management Plan meeting the requirements of [15A NCAC 02T .0504(j)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20manjgement/subchapter%20t/15a%20ncac%2002t%20.0504.pdf) and [15A NCAC 02T .0508](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0508.pdf); the Plan must include:

[ ]  A detailed explanation as to how the generated residuals (including trash, sediment and grit) will be collected, handled, processed, stored, treated, and disposed.

[ ]  An evaluation of the treatment facility’s residuals storage requirements based upon the maximum anticipated residuals production rate and ability to remove residuals.

[ ]  A permit for residuals utilization or a written commitment to the Applicant from a Permittee of a Department approved residuals disposal/utilization program that has adequate permitted capacity to accept the residuals or has submitted a residuals/utilization program application.

[ ]  If oil, grease, grit or screenings removal and collection is a designated unit process, a detailed explanation as to how the oil/grease will be collected, handled, processed, stored and disposed.

 [ ]  Not Applicable.

**SECTION 4: PROJECT INFORMATION**

1. **WASTEWATER TREATMENT PLANT FLOW INFORMATION – COMPLETE FOR NEW OR EXPANDING FACILITIES**
2. Provide the following flow information:

|  |
| --- |
| **Plant Flows** |
| Existing Plant Design  |       MGD |
| Current NPDES Permit Limit |       MGD |
| Current Annual Average (past 12 months) |       MGD |
|  | **For Past 12 Months:****Start Date:** month/yr**End Date:** month/yr  | **For Past 24 Months:****Start Date:** month/yr**End Date:** month/yr  |
| Maximum Month  |       MGD |       MGD |
| Maximum Day |       MGD |       MGD |
| Peak Hour  |       MGD |       MGD |

1. **WASTEWATER TREATMENT FACILITY DESIGN INFORMATION – COMPLETE FOR NEW OR EXPANDING FACILITIES AND FOR TREATMENT PROCESS MODIFICATIONS**
2. Have all of the requirements of [15 NCAC 02H. 0100](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/15a%20ncac%2002h%20.0100.pdf), [15A NCAC 02T](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), [North Carolina General Statute 133-3](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_133/GS_133-3.pdf), [North Carolina General Statute 143-215.1](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.1.pdf), and [Division of Water Resources Minimum Design Criteria for NPDES Wastewater Treatment Facilities](https://files.nc.gov/ncdeq/Surface%20Water%20Protection/NPDES/ATC/Minimum-design-criteria-2017.pdf) been met by the proposed design and specifications? [ ] [ ]  Yes or [ ] [ ]  No. If no, provide justification as to why the requirements are not met, consistent with [15A NCAC 02T .0105(n)](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):  \_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_ \_ \_\_\_
3. Provide the design influent and effluent characteristics that are used as the basis for the project design, and the NPDES permit limits for the following parameters:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | **Influent Concentration - Current Annual Average (past 12 months) if Available** | **Project Basis of Design** | **NPDES Permit Limits (monthly average)** |
| **Design Influent Concentration (Must be supported by Engineering Calculations [Section 3.H])** | **Design Influent Load** **(Must be supported by Engineering Calculations [Section 3.H])** | **Design Effluent Concentration and/or Load** |
| Ammonia Nitrogen (NH3-N) |       mg/L |       mg/L |       lb/day |       mg/L Summer |       mg/L Summer |
|       mg/L Winter |       mg/L Winter |
| Biochemical Oxygen Demand (BOD5) |       mg/L |       mg/L |       lb/day |       mg/L Summer |       mg/L Summer |
|       mg/L Winter |       mg/L Winter |
| Fecal Coliform |  |  |  |       per 100 mL |       per 100 mL |
| Nitrate + Nitrite Nitrogen (NO3-N + NO2-N) |  |  |  |       mg/L |       mg/L |
| Total Kjeldahl Nitrogen |       mg/L |  |  |  |  |
| Total Nitrogen |  |  |  |       mg/L |       mg/L |
|       lb/year |       lb/year |
| Total Phosphorus |       mg/L |       mg/L |       lb/day |       mg/L |       mg/L |
|       lb/year |       lb/year |
| Total Suspended Solids (TSS) |       mg/L |       mg/L |       lb/day |       mg/L |       mg/L |

1. Based on the “Project Basis of Design” parameters listed above, will the proposed design allow the treatment facility to meet the NPDES Permit Limits listed above? [ ] [ ]  Yes or [ ] [ ]  No. If no, describe how and why the Permit Limits will not be met:
2. Per [15A NCAC 02T .0505(j)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf), by-pass and overflow lines are prohibited. Is this condition met by the design? [ ] [ ]  Yes or [ ] [ ]  No If no, describe the treatment units bypassed, why this is necessary, and where the bypass discharges:
3. Per [15A NCAC 02T .0505(k)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf), multiple pumps shall be provided wherever pumps are used. Is this condition met by the design? [ ] [ ]  Yes or [ ] [ ]  No. If no, provide an explanation:
4. Per [15A NCAC 02T .0505(l)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf), power reliability shall be provided consisting of automatically activated standby power supply onsite capable of powering all essential treatment units under design conditions, or dual power supply shall be provided per [15A NCAC 02H. 0124(2)(a)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/15a%20ncac%2002h%20.0124.pdf). Is this condition met by the design? [ ] [ ]  Yes or [ ] [ ]  No. If no, provide (as an attachment to this Application) written approval from the Director that the facility:
* Has a private water supply that automatically shuts off during power failures and does not contain elevated water storage tanks, and
* Has sufficient storage capacity that no potential for overflow exists, and
* Can tolerate septic wastewater due to prolonged detention.
1. Per [15A NCAC 02T .0505(o)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf), a minimum of 30 days of residual storage shall be provided. Is this condition met by the design? [ ] [ ]  Yes or [ ] [ ]  No. If no, explain the alternative design criteria proposed for this project in accordance [15A NCAC 02T .105(n)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf):
2. Per [15A NCAC 02T .0505(q)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0505.pdf), the public shall be prohibited from access to the wastewater treatment facilities. Explain how the design complies with this requirement:   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Is the treatment facility located within the 100-year flood plain? [ ] [ ]  Yes or [ ] [ ]  No. If yes, describe how the facility is protected from the 100-year flood:  \_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **WASTEWATER TREATMENT UNIT AND MECHANICAL EQUIPMENT INFORMATION – COMPLETE FOR NEW OR EXPANDING FACILITIES AND FOR MODIFIED TREATMENT UNITS**
5. **PRELIMINARY AND PRIMARY TREATMENT** (i.e., physical removal operations and flow equalization):

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Treatment Unit | **No. of Units** | **Type** | **Size per Unit** | **Plan Sheet Reference** | **Specification Reference** | **Calculations Provided? (Yes or No)** |
| Manual Bar Screen |       |       |       MGD at peak hourly flow |       |       |  |
| Mechanical Bar Screen |       |       |       MGD at peak hourly flow |       |       |  |
| Grit Removal  |       |       |       MGD at peak hourly flow  |       |       |  |
| Flow Equalization |       | -- |       gallons |       |       |  |
| Primary Clarifier |       | Circular |       ft diameter;       ft side water depth |       |       |  |
| Primary Clarifier |       | Rectangular |       square feet;       ft side water depth |       |       |  |
| Other |       |       |       |       |       |  |

1. **SECONDARY TREATMENT (BIOLOGICAL REACTORS AND CLARIFIERS)** (i.e., biological and chemical processes to remove organics and nutrients)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Type** | **Size per Unit** | **Plan Sheet Reference** | **Specification Reference** | **Calculations Provided? (Yes or No)** |
| Aerobic Zones/ Tanks |       |       |       gallons |       |       |  |
| Anoxic Zones/ Tanks |       |       |       gallons |       |       |  |
| Anaerobic Zones/Tanks |       |       |       gallons |       |       |  |
| Sequencing Batch Reactor (SBR) |       | -- |       gallons |       |       |  |
| Membrane Bioreactor (MBR) |       | -- |       gallons |       |       |  |
| Secondary Clarifier |       | Circular |       ft diameter;       ft side water depth |       |       |  |
| Secondary Clarifier |       | Rectangular |       square feet;       ft side water depth |       |       |  |
| Other |       |       |       |       |       |  |

1. **TERTIARY TREATMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Type** | **Size per Unit** | **Plan Sheet Reference** | **Specification Reference** | **Calculations Provided? (Yes or No)** |
| Tertiary Clarifier |       | Circular |       ft diameter;       ft side water depth |       |       |  |
| Tertiary Clarifier |       | Rectangular |       square feet;       ft side water depth |       |       |  |
| Tertiary Filter |       |       |       square feet |       |       |  |
| Tertiary Membrane Filtration |       |       |       square feet |       |       |  |
| Post-Treatment Flow Equalization |       | -- |       gallons |       |       |  |
| Post-Aeration |       |  |       gallons |       |       |  |
| Other |       |       |       |       |       |  |

1. **DISINFECTION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Type** | **Size per Unit** | **Plan Sheet Reference** | **Specification Reference** | **Calculations Provided? (Yes or No)** |
| Ultraviolet Light |       |       (Parallel; in series) |       gal/day per bank at peak hourly flow;       number of banks;       number of lamps/bank |       |       |  |
| Chlorination |       |       (Gas; tablet; liquid) |       gallons of contact tank/unit |       |       |  |
| Dechlorination |       |       (Gas; tablet; liquid) |       gallons of contact tank/unit |       |       |  |

1. **RESIDUALS TREATMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Treatment Unit** | **No. of Units** | **Type** | **Size per Unit** | **Plan Sheet Reference** | **Specification Reference** | **Calculations Provided? (Yes or No)** |
| Gravity Thickening Tank |       |       |       square feet;       ft side water depth |       |       |  |
| Mechanical Thickening/ Dewatering |       |       |       dry lb/hour |       |       |  |
| Aerobic Digestion |       |       |       gallons |       |       |  |
| Anaerobic Digestion |       |       |       gallons |       |       |  |
| Composting |       |       |       dry lb/hour |       |       |  |
| Drying |       |       |       dry lb/hour |       |       |  |
| Other |       |       |       |       |       |  |

1. **PUMP SYSTEMS** (include influent, intermediate, effluent, major recycles, waste sludge, thickened waste sludge and plant drain pumps)

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

1. **MIXERS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Mixers** | **Purpose** | **Type** | **Power of each Mixer(HP)** | **Plan Sheet Reference** | **Specification Reference** |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |

1. **BLOWERS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Blowers** | **Purpose** | **Type** | **Capacity of each Blower (CFM)** | **Plan Sheet Reference** | **Specification Reference** |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |
|       |       |       |       |       |       |       |

1. **ODOR CONTROL**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Location** | **No. of Units** | **Purpose** | **Type** | **Plan Sheet Reference** | **Specification Reference** |
|       |       |       |       |       |       |
|       |       |       |       |       |       |
|       |       |       |       |       |       |

1. **SETBACKS – COMPLETE FOR NEW WASTEWATER TREATMENT STRUCTURES**
2. The minimum distance for each setback parameter to the wastewater treatment/storage units per [15A NCAC 02T .0506(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0506.pdf) are as follows:

|  |  |  |
| --- | --- | --- |
| **Setback Parameter** | Minimum Distance Required from Nearest Treatment/Storage Unit | Is Minimum Distance Requirement met by the Design? If “No”, identify Setback Waivers in Item D.2 Below |
| Any habitable residence or place of assembly under separate ownership or not to be maintained as part of the project site | 100 ft | [ ] [ ]  Yes | [ ] [ ]  No |
| Any private or public water supply source | 100 ft | [ ] [ ]  Yes | [ ] [ ]  No |
| Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands) | 50 ft | [ ] [ ]  Yes | [ ] [ ]  No |
| Any well with exception of monitoring wells | 100 ft | [ ] [ ]  Yes | [ ] [ ]  No |
| Any property line | 50 ft | [ ] [ ]  Yes | [ ] [ ]  No |

1. Have any setback waivers been obtained per [15A NCAC 02T .0506(d)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0506.pdf)? [ ] [ ]  Yes or [ ] [ ]  No. If yes, have these waivers been written, notarized and signed by all parties involved and recorded with the County Register of Deeds? [ ] [ ]  Yes or [ ] [ ]  No. If no, provide an explanation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION 5: APPLICATION CERTIFICATION BY PROFESSIONAL ENGINEER**

**Professional Engineer's Certification per** [**15A NCAC 02T .0105**](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)**:**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   , attest that this application package for an Authorization to Construct

 (Typed Name of Professional Engineer)

for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_

 (Facility and Project Name)

was prepared under my direct supervisory control and to the best of my knowledge is accurate, complete and consistent with the information supplied in the engineering plans, specifications, calculations, and all other supporting documentation for this project. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with all applicable regulations and statutes, [15 NCAC 02H. 0100](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20h/subchapter%20h%20rules.pdf), [15A NCAC 02T](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/subchapter%20t%20rules.pdf), [North Carolina General Statute 133-3](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_133/GS_133-3.pdf), [North Carolina General Statute 143-215.1](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.1.pdf), and [Division of Water Resources Minimum Design Criteria for NPDES Wastewater Treatment Facilities](https://files.nc.gov/ncdeq/Surface%20Water%20Protection/NPDES/ATC/Minimum-design-criteria-2017.pdf), and this Authorization to Construct Permit Application, except as provided for and explained in Section 4.B.1 of this Application. I understand that the Division of Water Resources’ issuance of the Authorization to Construct Permit may be based solely upon this Certification and that the Division may waive the technical review of the plans, specifications, calculations and other supporting documentation provided in this application package. I further understand that the application package may be subject to a future audit by the Division. Although certain portions of this submittal package may have been prepared, signed and sealed by other professionals licensed in North Carolina, inclusion of these materials under my signature and seal signifies that I have reviewed the materials and have determined that the materials are consistent with the project design.

I understand that in accordance with General Statutes [143-215.6A](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.6A.pdf) and [143-215.6B](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.6B.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 with written signature placed over or adjacent to the seal and dated:

**SECTION 6: APPLICATION CERTIFICATION BY APPLICANT**

**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%20.0106.pdf)**:**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  , attest that this application package for an Authorization to Construct

 (Typed Name of Signature Authority and Title)

for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_

 (Facility and Project Name)

has been reviewed by me and is accurate and complete to the best of my knowledge. 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 in accordance with [15A NCAC 02T .0120(b)](http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20t/15a%20ncac%2002t%20.0120.pdf), the Applicant or any affiliate has not been convicted of environmental crimes, has not abandoned a wastewater facility without proper closure, does not have an outstanding civil penalty where all appeals have been abandoned or exhausted, are compliant with any active compliance schedule, and does not have any overdue annual fees.

I understand that the Division of Water Resources’ issuance of the Authorization to Construct Permit may be based solely upon acceptance of the Licensed Professional Engineer’s Certification contained in Section 5, and that the Division may waive the technical review of the plans, specifications, calculations and other supporting documentation provided in this application package. I further understand that the application package may be subject to a future audit.

I understand that in accordance with General Statutes [143-215.6A](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.6A.pdf) and [143-215.6B](http://www.ncleg.net/EnactedLegislation/Statutes/PDF/BySection/Chapter_143/GS_143-215.6B.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.

Signature: Date:

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

**North Carolina Department of Environment and Natural Resources**

###### Division of Water Resources/NPDES

|  |  |
| --- | --- |
| **By U.S. Postal Service****1617 Mail Service Center****RALEIGH, NORTH CAROLINA 27699-1617** |  By Courier/Special Delivery:**512 n. sALISBURY sTREET, 9th FLOOR****RALEIGH, NORTH CAROLINA 27604** |

 **TELEPHONE NUMBER: (919) 807-6396**