

**NCDENR On-Site Water Protection Section – Engineering Review  
Small (< 3,000 gpd) Subsurface Wastewater System  
Plans and Specifications Transmittal Checklist**

The following transmittal checklist must be filled out and included with every submittal under 3,000 gallons per day that is sent to the On-Site Water Protection Section for Engineering Review

**DONE    NA**

**I. Applicant and General Information**

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Property owner's name, mailing address and daytime phone number  |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. All consultants' contact information (address, license number, phone, FAX, and e-mail address)   |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Designated use of the property, facility type and proposed design daily flow   |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Basis for the design flow if other than a single-family residence, including plumbing plans, specifications/cut sheets for all water using fixtures and any other additional information as required to support the proposed design daily flow |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Any plumbing or collection system appurtenances (grinder pumps, etc) that may affect the operation and performance of the system   |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Written documentation from the system manufacturer on company letterhead specifying that the named designer is currently authorized for systems that require authorized designers  |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Locator map for the property   |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Application has been submitted to local health department  |

**II. Soil/Site Evaluation**

***Note that when the concurrence of the OSWP Regional Soils Scientist (RSS) is being sought, a complete copy of the soil and site evaluation report shall be sent by the LHD to the RSS for review prior to submittal to the OSWP Central Office.***

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Written documentation (letter) from the local health department or the Regional Soil Scientist concurring with the following  |
| <input type="checkbox"/> | <input type="checkbox"/> | a. Proposed LTAR   |
| <input type="checkbox"/> | <input type="checkbox"/> | b. Trench depth  |
| <input type="checkbox"/> | <input type="checkbox"/> | c. Reductions in vertical or horizontal setbacks (if applicable)   |
| <input type="checkbox"/> | <input type="checkbox"/> | d. Increase in LTAR (if applicable)  |
| <input type="checkbox"/> | <input type="checkbox"/> | e. Hydraulic assessment, if required, and associated data and analysis   |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Written documentation (letter) from the local health department that all the information specified in the "Soil and Site Evaluation" Section of "Requirements for Submittals of Soil Reports and Pretreatment and/or Dispersal System Designs" has been included in the submittal |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Written documentation (letter) from the local health department that the local health department has field verified the layout of the proposed drainfield, including that the drainfield lines are on contour   |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Copy of the soils report and all supporting documentation that the local health department or Regional Soil Scientist reviewed  |

**III. Pretreatment Components**

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Site plan detailing the proposed system at a scale no smaller than 1 inch = 20 feet, a North Arrow, and the following information   |
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Tanks  |
| <input type="checkbox"/> | <input type="checkbox"/> | a. Plan and profile drawings  |
| <input type="checkbox"/> | <input type="checkbox"/> | b. Tank dimensions, location and relevant elevations (e.g. inlet and outlet inverts, ground surface elevations and other elevations as need to show that the system design works as proposed) |
| <input type="checkbox"/> | <input type="checkbox"/> | c. Other pertinent elevations in recirculation and pump tanks (i.e. float activation levels)  |

DONE NA

- d. Identification number of state approved tanks
- e. Access riser, manhole, effluent filter and discharge pipe details
- f. Provisions for anti-floatation including calculations and drawings
- 2. Advanced Pretreatment Components
  - a. Plan and profile drawings
  - b. Drawings showing all treatment units and appurtenances, piping (size and type), disinfection unit, blowers if needed, location of control panels, height of control panels, etc
  - c. Details on all appurtenances supplied with the advanced pretreatment unit (pump curves, cut sheets, control panels, valves, etc)
  - d. Documentation from the manufacturer supporting the proposed design and use of the advanced pretreatment system, if needed
  - e. Reference the specific accepted, innovative, controlled demonstration or experimental approval
- 3. Pump Systems
  - a. Calculations for system total dynamic head including friction loss, elevation head, pressure head, etc
  - b. Cut sheet for pump with pump curve
  - c. Description of float sequencing, control panel function under normal and other than normal conditions, and appropriate settings
  - d. Control panel must meet requirement of 15A NCAC 18A .1952(c)(6) and (7) and most recent version of the I&E approval, as applicable
  - e. Emergency storage capacity calculations and provision for auto-dialer and stand-by power, where applicable
  - f. For pressure dispersal, dosing and flushing conditions for pumping and filter backwash requirements, as applicable
  - g. Single or multiple control panels, who will be providing the panel(s) and what each panel will be controlling
- 4. Location and identification of all gravity and pressure lines, including calculations, size and type of piping from building to tanks, among tanks and pretreatment units, and from tanks to nitrification field
- 5. Testing and start-up procedures

#### IV. Nitrification Fields

Detailed site plan at a scale no smaller than 1 inch = 30 feet with the following information

- a. Location, layout, and design of the initial and repair areas
- b. Field contour lines must be shown on the plans or a minimum of two-foot intervals or spot elevations shall be provided if there is less than two-foot elevation variation across the site

Following information must be included in the submittal

- 1. Trench and lateral distribution system plan and cross sectional details (e.g. trench width and length, trench depth, hole spacing, pipe size and type)
- 2. Specific trench media to be used, including model number, if applicable
- 3. Manifolds, supply lines, return lines, cleanouts, interconnection details and appurtenances
- 4. Flow distribution device design and construction details
- 5. Drainage system locations, discharge points and design details
- 6. Fill modifications referencing both depth and location to established horizontal and vertical benchmarks
- 7. Reference the specific accepted, innovative, controlled demonstration or experimental approval

DONE NA

#### V. Site Preparation, Installation, and Other Items

- 1. Proposed installation procedures, including site preparation, method of trench/tubing installation, provisions and procedures for blanking, where applicable

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 2. An operation and maintenance plan for the proposed system, and proposed maintenance of pretreatment and drainage, if applicable   |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Details of cleanouts, aerial crossings, road crossings, water line crossings, storm sewer crossings, etc, as needed   |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Written documentation from the local health department that all necessary legal documents, including easements, association documents, Tri-Party Agreements, etc, have been submitted   |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Flow reduction information as needed for projects other than single or multiple family home systems   |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Additional information based on the soil and site evaluation  |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Fill installation procedures, including selection and incorporation of fill material  |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Methods for removal of vegetation, including trees  |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Slope stabilization plan and maintenance provisions for slopes greater than 30 percent  |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Final landscaping and vegetation establishment provisions for the nitrification field area, including maintenance of vegetation or landscaping over system   |
| <input type="checkbox"/> | <input type="checkbox"/> | 11. Identification of any well(s) to be abandoned, including a statement that well abandonment shall be per the Division of Water Quality in the Department of Environment and Natural Resources or local health department regulations, as applicable |
| <input type="checkbox"/> | <input type="checkbox"/> | 12. Identification of old roads, buildings, etc, to be removed and removal procedures  |
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Locations of any debris to be buried on site shall be specified  |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. Any other site specific installation procedures recommended by the consultant  |

Concurring Signature, the applicant has, to the best of his/her abilities and belief, provided complete and factual representations of the information requested above:

_____	_____
Applicant or Applicant's Agent	Date

Health Department's Concurrence that Application has been submitted, requested information appears complete and State review is requested:

_____	_____
Local Health Department Environmental Health Specialist	Date

\* **Note to all interested persons.** This transmittal check list and necessary accompanying information shall be submitted by the LHD to the On-Site Water Protection Section, Division of Environmental Health, 1642 Mail Service Center, Raleigh, NC-27699-1642 (Fax: 919-715-3227).