

15A NCAC 02U .0402 DESIGN CRITERIA FOR DEDICATED RECLAIMED WATER TREATMENT FACILITIES

- (a) In addition to the design criteria established in Rule .0401 of this Section, the requirements in this Rule shall apply to all new and expanding dedicated reclaimed water treatment facilities.
- (b) Each facility, except for those using septic tanks or lagoon treatment, shall provide flow equalization with either a capacity based upon a representative diurnal hydrograph or a capacity of 25 percent of the daily system design flow.
- (c) Dual facilities shall be provided for all essential treatment units.
- (d) Effluent from the treatment facility shall be discharged to a five-day side-stream detention unit if either the turbidity exceeds 10 NTUs or if the permitted pathogen levels cannot be met. The facility shall have the ability to return the effluent in the five-day side-stream detention unit back to the head of the treatment facility.
- (e) The public shall be prohibited access to the wastewater treatment facility or the five-day side-stream detention unit.
- (f) The storage and five-day side-stream detention units shall have either a liner of natural material at least one foot in thickness and having a hydraulic conductivity of no greater than 1×10^{-6} centimeters per second when compacted, or a synthetic liner of sufficient thickness to exhibit structural integrity and an effective hydraulic conductivity no greater than that required of the natural material liner. Liner requirements of the unit or separation distances between the bottom of the storage basin and the groundwater table may be reduced if it can be demonstrated by predictive calculations or modeling that construction and use of the unit will not result in contravention of assigned groundwater standards at the compliance boundary.
- (g) By-pass and overflow lines shall be prohibited.
- (h) Multiple pumps shall be provided wherever pumps are used.
- (i) A water-tight seal on all treatment and storage units or two feet of protection from the 100-year flood elevation shall be provided.
- (j) 30 days of residual storage shall be provided.
- (k) Utilization areas shall be designed to maintain a one-foot vertical separation between the seasonal high water table and the ground surface.
- (l) Influent pump stations shall meet the sewer design criteria set forth in 15A NCAC 02T .0300.
- (m) Domestic, commercial, or industrial dedicated reclaimed water systems, including single-family residence facilities, with flow less than 1,000 gallons per day, are exempt from meeting Paragraphs (c) and (h) of this Rule, if repair or replacement of essential treatment units can be completed within five days.
- (n) Facilities shall be provided with a flow meter to measure the volume of treated reclaimed water applied to each field.

*History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. June 18, 2011;
Readopted Eff. September 1, 2018.*