

SECTION .1100 - WETLANDS AUGMENTATION

15A NCAC 02U .1101 WETLANDS AUGMENTATION

(a) Wetland augmentation shall be limited as follows:

- (1) Wetland augmentation shall be limited to pine flat and hardwood flat wetlands as defined in the most current version of the N.C. Wetland Assessment Method (NC WAM) User Manual developed by the N.C. Wetland Functional Assessment Team (NC WFAT), excluding riparian zones;
- (2) Reclaimed water discharge to Salt Water Wetlands (SWL) or Unique Wet Lands (UWL), as defined in 15A NCAC 02B .0101, is not permitted under the rules in this Subchapter; and
- (3) Reclaimed water discharge to wetlands areas shall be limited to times when the depth to groundwater is greater than or equal to one foot.

(b) In addition to the requirements established in Rule .0201 or Rule .0202 of this Subchapter, all new and expanding wetlands augmentation facilities shall:

- (1) Identify the classification of the existing wetlands according to the most current version of the N.C. Wetlands Assessment Method (NC WAM) User Manual and information provided by the North Carolina Natural Heritage Program (NC NHP);
- (2) Identify the existing beneficial uses of the reclaimed water to the wetlands in accordance with 15A NCAC 02B .0231, and demonstrate the net environmental benefit;
- (3) Determine the hydrologic regime of the wetlands, including depth and duration of inundation, and average monthly water level fluctuations. An estimated monthly water budget shall be provided by the applicant and compared to actual conditions during operation;
- (4) Identify the class of reclaimed water to be discharged, associated parameter concentrations, and annual loading rates to the wetlands;
- (5) Determine whether the wetland occurs in a ground water recharge or discharge area;
- (6) Provide baseline monitoring information for wetlands to allow determination of reference conditions, to be performed for at least one representative year prior to initiation of discharge;
- (7) Provide a project evaluation and receiver site agronomic plan that includes a hydraulic loading recommendation based on the soils report, hydrogeologic description, agronomic investigation, wetland type, local topography, aquatic life, wildlife, and all other investigative results to support that there will be no negative effects on the uses of the wetlands, including the biological criteria and net environmental benefits that will be gained. Hydraulic loading recommendations shall reflect seasonal changes to wetlands, including restrictions during times of high water table levels;
- (8) For dedicated wetlands augmentation systems, provide 200 percent of the land requirements based on the recommended hydraulic loading rate. After five years of operation the permittee may request and receive a reduction in the additional land requirement if operational data supports that sufficient utilization capacity exists for the reclaimed water generator;
- (9) Ten percent of the land requirements shall remain in a natural state to be used as a basis of comparison to the wetlands receiving reclaimed water;
- (10) For application of reclaimed water exhibiting parameter concentrations greater than 100 percent of the groundwater standards, provide a site-specific hydrogeologic investigation (i.e., evaluation of wetlands/groundwater interaction, groundwater recharge/discharge, gradient, project proximity to water supply wells) to show that hydrogeologic conditions are adequate to prevent degradation of groundwater quality and demonstrate through hydrogeological modeling that groundwater standards will not be exceeded at the compliance boundary; and
- (11) Provide documentation that any applicable NPDES program requirements have been met, pursuant to 15A NCAC 02H .0100.

(c) All renewal applications for wetlands augmentation facilities shall submit documentation that the project continues to function as designed and that the net environmental benefit aspects remain applicable.

(d) Reclaimed water utilized for wetlands augmentation shall meet the following reclaimed water effluent standards:

- (1) Reclaimed water discharged to natural wetlands shall be treated to Type 1 reclaimed water standards;
- (2) In addition to water quality requirements associated with Type 1 reclaimed water, reclaimed water discharged to wetlands shall not exceed the following concentrations, unless net environmental benefits are provided:

- (A) Total Nitrogen (as Nitrogen) of 4.0 mg/L; and
 - (B) Total Phosphorus (as Phosphorus) of 1 mg/L;
 - (3) Metal concentrations in reclaimed water discharged to wetlands shall not exceed North Carolina surface water quality standards, unless acute whole effluent toxicity testing demonstrates absence of toxicity.
- (e) Reclaimed water facilities utilizing wetlands augmentation shall meet the criteria below:
- (1) Notification shall be provided by the permittee or its representative to inform the public of the use of reclaimed water and that the reclaimed water is not intended for drinking;
 - (2) The reclaimed water generator shall develop and maintain a wetlands monitoring program. This monitoring will be conducted during the first five growing seasons after initiation of the application of reclaimed water, after which the applicant may apply for reduced monitoring. The monitoring requirements shall include the following items:
 - (A) vegetation, macroinvertebrates, amphibians, fish, birds, and threatened or endangered species surveys;
 - (B) water chemistry;
 - (C) surface water and ground water depth readings; and
 - (D) a groundwater monitoring plan, except for those projects receiving reclaimed water characterized by average annual parameter concentrations less than or equal to 50 percent of ground water quality criteria, and less than 50 percent of required surface water discharge concentrations;
 - (3) The reclaimed water generator shall develop and maintain an education program for all users of reclaimed water on property not owned by the generator;
 - (4) The reclaimed water generator shall develop and maintain a routine review and inspection program for the wetlands augmentation system; and
 - (5) The compliance boundary and the review boundary for groundwater shall be established at the property line. No deed restrictions or easements are required to be filed on adjacent properties. Land application of reclaimed water shall be on property controlled by the generator unless a contractual agreement is provided in accordance with 15A NCAC 02L .0107, except when a compliance boundary is not established.
- (f) Permitting of wetlands augmentation uses shall not be delegated to local programs.

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