15A NCAC 02H .0125 PERMIT REQUIREMENTS FOR PEAT MINING

(a) Any person who discharges or proposes to discharge pollutants from a peat mining operation to the surface waters of the state shall apply for, obtain, and comply with an NPDES permit for the discharge per the rules of this Section. Application shall be made to the Division in accordance with Rule .0105 of this Section. The application shall also include the following information:

(1) a list of and copies of all permits required by G.S. 143 215.1 for the project site, or copies of the applications submitted for those permits, including permits for waste disposal for sanitary facilities, on-site power plants, or energy conversion facilities;

(2) supporting information to evaluate compliance with the requirements of this Rule, including maps, diagrams, calculations, assumptions, engineering specifications, and documentation of any proposed deed restrictions, easements, contracts, performance bonds, or other legal mechanisms intended to ensure long term effectiveness of proposed control and mitigation measures; and

(3) other information required by this Rule.

(b) Applicability. The requirements of this Rule shall apply to mining, reclamation, post-reclamation, and related activities at all peat mining operations that have a reasonable potential to cause or contribute to the violation of water quality standards or loss of designated uses in estuarine nursery areas or any other downstream waters. The water quality standards and uses of the waters shall be protected during all phases of a peat mining project, and the cumulative impacts of other peat mining or land uses shall be considered in the evaluation of each permit. Estuarine nursery areas include:

(1) all Primary and Secondary Nursery Areas as designated by the Marine Fisheries Commission or the Wildlife Resources Commission;

(2) all anadromous fish spawning grounds and nursery areas identified in publications of the N.C. Division of Marine Fisheries; and

(3) all other nursery areas designated or otherwise identified by the Marine Fisheries Commission or the Wildlife Resources Commission.

(c) Drainage:

(1) Canals draining peat mines shall not outlet directly into estuarine nursery areas and shall be directed towards freshwater bodies unless:

(A) evaluations based on dye tracer studies, computer modeling, or other analyses indicate that the drainage will not cause or contribute to impairment of those estuarine nursery areas; or

(B) the discharge is approved in advance by the Marine Fisheries Commission or Wildlife Resources Commission, whichever established the designation.

(2) If the evaluation in Subparagraph (1) or other analyses indicate that the drainage could flow into estuarine nursery areas or other downstream waters identified per Paragraph (b) of this Rule, the project shall be designed such that the total annual water released from the site does not exceed that expected from the site covered with mature natural vegetation. Mature natural vegetation is the assemblage of indigenous plants expected to occur on a proposed project site if it developed undisturbed. This expectation may include periodic disturbance by fire at natural frequencies and intensities. Also, the peak flows from the site shall be controlled by the use of management techniques, such as basins, that moderate release rates so that flows do not exceed those expected from the site undrained and with mature natural vegetation. For purposes of this Subparagraph, undrained is the state of the proposed project site without structures or features imposed by human agency intended to facilitate removal of surface or subsurface water. In modelling or other analysis required by this Rule, major canals existing as of September 1, 1986, at a density no greater than one per mile by one per 1/2 mile (or 320 acre blocks), may be allowed at the discretion of the Commission when it is determined that modeling techniques for evaluating "undrained" conditions are not available. Water management systems shall be designed to meet the flow control requirements of this Paragraph utilizing models or other quantitative methods in accordance with Paragraph (g) of this Rule and considering the historic range of rainfall conditions. At no time shall flows exceed those expected under conditions existing at the time of permit issuance.

(3) Peat mining projects shall comply with the flow restrictions in Subparagraph (2) within four years of permit issuance and must show yearly improvements in runoff volumes as stipulated in the project plan.

(d) Nutrients. The project shall be designed so that nutrient loadings discharged from the site are no greater than would occur if the site were covered with mature natural vegetation. However, more stringent conditions may be established if monitoring, modeling or other quantitative methods indicate that the nutrient discharges would result in:

(1) growths of microscopic vegetation such that chlorophyll a values are greater than the applicable standard established in 15A NCAC 02B .0200; or

(2) growths of microscopic or macroscopic vegetation that impair the intended best usage of the waters.

Peat mining projects shall comply with the nutrient restrictions in this Paragraph within four years of permit issuance and must show yearly improvements in nutrient loadings as outlined in the project plan.

(e) Sediment. Best management practices, including settling basins on field ditches, shall be utilized to control sediment in drainage waters. The levels of sediment discharged must be predicted for the different stages of the operation and evidence provided that these levels will not adversely affect the uses of the receiving waters. The deposition of windblown dust into both drainage and adjacent waters and the effects during and after fires must be included in this analysis. Details on the rate of sediment buildup and the frequency and procedures for removal in the various components for the water control system, including canals and settling basins, must be provided. Adequate sediment controls must be provided during maintenance and expansion of canals and water control structures to ensure that receiving waters conform to surface water quality standards and controls in 15A NCAC 02B .0200.

(f) Other pollutants. The characteristics of the drainage water leaving the site must be described for all phases of the project. Any substances that may be discharged during some phase of the project, including those in runoff or leachate from on-site storage of peat or ash, must be identified and their potential impacts evaluated. The application shall include the results of the characterization and evaluation and shall describe the measures that will be taken to comply with the water quality standards and to protect the uses of the receiving waters.

(g) Quantitative methods of analysis. Modelling or other quantitative methods of analysis shall be used to determine the effectiveness of proposed pollution control measures and shall, at a minimum, meet the following requirements:

(1) All factors that may affect the quality or quantity of the discharge must be included in the design and evaluation of the water control system, including factors such as individual storm events, sequential storm events, fires, various land uses during different stages of the project, recharge or discharge to the groundwater, and construction, expansion, filling-in and maintenance of ditches, canals, settling basins, and impoundments;

(2) The assumptions made for each analysis or condition must be listed and possible errors and the effects of such errors, including interactions, must be evaluated for each assumption;

(3) Situations under which the predictions would be inaccurate must be identified and evaluated;

(4) Conditions under which the proposed water control system would fail to comply with flow, nutrient, or other control requirements must be evaluated, including mechanical failures, and descriptions of the storage and flow capacities of all system components along with the intensities and durations of storms that would be expected to exceed the capacity of the various components during each phase of the project. The impact of such failures on water quality and flows must be evaluated;

(5) In order to evaluate the performance of the proposed system under all anticipated conditions, various methods of analyses shall be utilized, including detailed models using historical rainfall data, as well as methods based on individual design storms and runoff coefficients.

(h) Wetland or swamp discharges. A discharge to a wetland or swamp shall not cause or contribute to the violation of water quality standards or loss of designated uses in these waters. For purposes of this Rule, wetlands are as defined in the federal NPDES regulations in 40 CFR 122.2, including any subsequent amendments and editions. These regulations can be accessed free of charge at http://www.gpo.gov/fdsys/. Where available, determinations of wetland status by the U.S. Environmental Protection Agency or the U.S. Army Corps of Engineers may be used in making wetland evaluations. The Commission may also make determinations of wetland status and define where water quality standards and uses must be protected. The application shall include information on the size, topography, soils, flows, water depths, channels, vegetation, wildlife resources, uses by wildlife and man, and other characteristics of a proposed filter area in order to demonstrate that the discharge will flow in the desired direction, that sheet flow and water quality benefits will be maintained over the long-term, and that water quality and existing uses of the area will not be threatened. The effects of storms or high water levels on these benefits and characteristics shall also be evaluated. A description of the means of diffusion to provide sheet flow shall be provided. The terms wildlife and wildlife resources are used as defined in G.S. 113-129.

(i) Effects on groundwater. The impacts of the proposed project and water control system on groundwater shall be evaluated in order to determine if the project will comply with Title 15A, Subchapter 2L, Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina.
(j) Effects on adjacent landowners. Hydrologic and other alterations shall not cause or contribute to the loss of designated uses in waters of the state. The applicant shall prepare a description of the project and summary of the expected impacts on water quality and uses, send a copy to each adjacent landowner, and attach a copy of the document and any responses to the permit application.
(k) Assurance of continued operation. The permit application shall identify how the applicant will ensure the continued operation and maintenance of water control systems during peat mining operations and lasting until completion of reclamation activities in order to protect water quality. These mechanisms shall include paying for the costs of operating and maintaining the system. These assurances shall be provided by current owners and shall be required through all changes in ownership until reclamation is completed. Assurances of implementation of these mechanisms prior to the initiation of mining activity shall be a condition of the permit.
(l) Abandonment. The consequences of abandonment of the drainage and water control systems shall be described for each phase of the project, including the period after the reclamation plan is implemented. If the area of the project is abandoned at any time, the drainage discharges must comply with the design requirements of this Rule within four years or on a schedule approved by the Commission such that pollution never exceeds levels in existence at the start of the project. The analyses must verify that the mining bond and reclamation plan after the bond is released are both adequate to meet this condition. Further, it must be determined whether the mined area would flood, and if so, the depth of the water and points and rates of overflow must be described along with the impacts on adjacent lands and waters.
(m) Characteristics of treatment systems.

(1) For the purposes of this Rule, the characteristics of a treatment system are that the structure:
    (A) is manmade and intended to be utilized for water management and water pollution control;
    (B) is entirely on a single tract of privately owned land with the owner or owners controlling the inflows and outflows;
    (C) has controls at the outlets so water may flow out but, under normal hydrological conditions, not into the structure or facility through the outlet(s); and
    (D) is not an integral part of the ecosystem of the receiving waters so that if the operation causing the pollution is discontinued, the structure or facility can be removed from use without adversely impacting the hydrology or water quality of the receiving waters.
(2) Waters within a treatment system are not subject to water quality standards. However, if an impoundment lagoon, canal, ditch, or other treatment unit has all of the characteristics of a treatment system listed in Subparagraph (1), and if the public utilizes the waters within the treatment system, such as for fishing, the Commission may include conditions in the facility's permit that support the continued utilization of the waters, provided that such conditions are consistent with the provisions of this Section.

(n) Identification of outlet points. Waters downstream from an outlet point must be protected to meet the water quality standards and public uses. Canals are generally classified waters of the state, either as named stream segments in the Schedule of Classifications or as unnamed tributaries. The following factors shall be used as guidance in determining the outlet point:

(1) the outlet point must be entirely on the property of the permit applicant;
(2) the outlet point must be selected so that the owner can block, obstruct, or open the outlet point:
    (A) without removing any established uses of the waters including navigation, fishing, and wildlife; and
    (B) without adversely affecting drainage by other landowners;
(3) once a point has been designated as an outlet, the receiving waters shall not be obstructed by any landowner without approval and a permit modification by the Commission in accordance with the rules of this Section; and
(4) outlet designations may require reconsideration of the classification of the waters consistent with 15A NCAC 02B .0100-.0200.

History Note: *Authority G.S. 143-214.1; 143-215(a); 143-215(b); 143-215.1; 143-215.3(a)(1);*
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