

15A NCAC 02E .0502 WITHDRAWAL PERMITS

(a) Permits are not required for surface water use under Section .0500 of this Subchapter in the Central Coastal Plain Capacity Use Area as delineated in Rule .0501 of this Section.

(b) No person shall withdraw ground water in excess of 100,000 gallons per day by a well, group of wells operated as a system, or sump for any purpose unless he or she obtains a water use permit from the Director.

(c) Ground water withdrawals shall be governed by the following standards:

- (1) Adverse impacts of ground water withdrawals shall be avoided or minimized. Adverse impacts include, but are not limited to:
 - (A) dewatering of aquifers;
 - (B) encroachment of salt water;
 - (C) land subsidence or sinkhole development; or
 - (D) declines in aquifer water levels that indicate that aggregate water use exceeds the aquifer replenishment rate.
- (2) Adverse impacts on other water users from ground water withdrawals shall be corrected or minimized through efficient use of water and development of sustainable water sources.
- (3) In determining the importance and necessity of a proposed withdrawal the efficiency of water use and implementation of conservation measures shall be considered.

(d) An application for a water use permit must be submitted on a form to the North Carolina Division of Water Resources. The application shall describe the purpose or purposes for which water shall be used, shall set forth the method and location of withdrawals, shall justify the quantities needed, and shall document water conservation measures to be used by the applicant to ensure efficient use of water and avoidance of waste. Any other information necessary to determine whether to grant or deny an application as requested by the Division shall be submitted to the Division within 30 days of the request. Withdrawal permit applications shall include the following information:

- (1) location by latitude and longitude of all wells to be used for withdrawal of water and all other wells within 1500 feet of the applicant's wells;
- (2) specifications for design and construction of existing and proposed production and monitoring wells including well diameter, total depth of well, depths of all open hole or screened intervals that will yield water to the well, depth of pump intake(s), size, capacity, and type of pump, depth to gravel pack, and depth measurements shall be within accuracy limits of plus or minus 0.10 feet and referenced to a known land surface elevation; exceptions may be made where specific items of information are not critical, as determined by the Director based upon site specific conditions, to manage the ground water resource;
- (3) withdrawal permit applications for use of ground water from the Cretaceous aquifer system shall be reviewed protecting the Cretaceous aquifer system zones. Cretaceous aquifer system wells shall be identified using the specifications in Rule .0502(d)(1) and .0502(d)(2) of this Section and the hydrogeological framework;
- (4) withdrawal permit applications for dewatering of mines, pits, or quarries shall include a dewatering or depressurization plan that includes:
 - (A) the current withdrawal rate or estimates of the proposed withdrawal rate;
 - (B) the location, designs, and specifications of any sumps, drains, or other withdrawal sources including wells and trenches;
 - (C) the lateral extent and depth of the zone(s) to be dewatered or depressurized;
 - (D) location by latitude and longitude of all wells within 1500 feet of the excavation boundary;
 - (E) a monitoring plan that provides data to delineate the nature and extent of dewatering or depressurization; and
 - (F) certification of all engineering plans and hydrogeological analyses prepared to meet these requirements consistent with professional licensing board statutes and rules governing such activities.

Exceptions may be made where specific items of information are not critical, as determined by the Director based upon site specific conditions, to manage the ground water resource; and

- (5) the applicant shall provide information on existing conservation measures and conservation measures to be implemented during the permit period as follows:
 - (A) Public water supply systems shall develop and implement a water conservation plan incorporating, at a minimum, the following components. Each component shall be

described, including a timetable for implementing each component that does not already exist.

- (i) adoption of a water conservation-based rate structure, such as flat rates, increasing block rates, seasonal rates, or quantity-based surcharges;
 - (ii) implementation of a water loss reduction program if unaccounted for water is greater than 15 percent of the total amount produced, as documented annually using a water audit. Water loss reduction programs shall consist of annual water audits, in-field leak detection, and leak repair;
 - (iii) adoption of a water conservation ordinance for irrigation, such as time-of-day and day-of-week restrictions on lawn and ornamental irrigation or automatic irrigation system shut-off devices;
 - (iv) implementation of a retrofit program that makes available indoor water conservation devices to customers, such as showerheads, toilet flappers, and faucet aerators;
 - (v) implementation of a public education program, such as water bill inserts, school and civic presentations, water treatment plant tours, and public services announcements; and
 - (vi) evaluation of the feasibility of water reuse as a means of conservation, where applicable.
- (B) Users of water for commercial purposes, other than irrigation of crops and forestry stock, shall develop and implement a water conservation plan as follows:
- (i) an audit of water use by type of activity, such as process make up water and non-contact cooling water, including existing and potential conservation and reuse measures for each type of water use; and
 - (ii) an implementation schedule for feasible measures identified in the above item for conservation and reuse of water at the facility.
- (C) Users of water for irrigation of crops and forestry stock shall provide the following information:
- (i) total acreage with irrigation available;
 - (ii) types of crops that may be irrigated;
 - (iii) method of irrigation such as wells that supply water to canals, ditches or central pivot systems or any other irrigation method using ground water); and
 - (iv) a statement that the applicant uses conservation practice standards for irrigation as defined by the Natural Resources Conservation Service.
- (6) if an applicant intends to operate an aquifer storage and recovery program (ASR), the applicant shall provide information on the storage zone, including the depth interval of the storage zone, lateral extent of the projected storage area, construction details of wells used for injection and withdrawal of water, and performance of the ASR program.
- (e) Persons holding a permit shall submit signed water usage and water level reports to the Director not later than 30 days after the end of each permit reporting period as specified in the permit. Monitoring report requirements shall include:
- (1) amounts of daily withdrawal from each well;
 - (2) pumping and static water levels for each supply well as measured with a steel or electric tape, or an alternative method as specified in the permit, at time intervals specified in the permit;
 - (3) static water levels in observation wells at time intervals specified in the permit;
 - (4) annual sampling by applicants located in the salt water encroachment zone and chloride concentration analysis by a State certified laboratory; and
 - (5) any other information the Director determines to be pertinent and necessary to the evaluation of the effects of withdrawals during the application review process.
- (f) Water use permit holders shall not add new wells without prior approval from the Director through a permit modification.
- (g) The Director may require permit holders to construct observation wells to observe water level and water quality conditions before and after water withdrawals begin if there are concerns about adverse impacts to the aquifer based on the withdrawal amount and location. Aquifer monitoring may be necessary to assess the impact of the withdrawal on the aquifer.

- (h) For all water uses other than dewatering of mines, pits, or quarries, withdrawals shall be permitted only from wells that are constructed such that the pump intake or intakes are at a shallower depth than the top of the uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological framework. Where wells in existence as of August 1, 2002 are not in compliance with the requirements of this provision, the permit shall include a compliance schedule for retrofitting or replacement of non-compliant wells. Withdrawals from unconfined aquifers shall not lower the water table by an amount large enough to decrease the effective thickness of the unconfined aquifer by more than 50 percent.
- (i) For withdrawals to dewater mines, pits, or quarries, the permit shall delimit the extent of the area and depths of the aquifer(s) to be dewatered or depressurized. Maximum withdrawal rates and the permissible extent of dewatering or depressurization shall be determined by the Director using data provided by the applicant, data related to permits under G.S. 74-50, and other publicly available information. Withdrawal rates that do not cause adverse impacts, as defined in Paragraph (c) of this Rule, shall be approved.
- (j) Withdrawals of water that cause changes in water quality such that the available uses of the resource are adversely impacted, by dewatering or salt water encroachment, shall not be permitted.
- (k) General permits may be developed by the Division and issued by the Director for categories of withdrawal that involve the same or substantially similar operations, have similar withdrawal characteristics, require the same limitations or operating conditions, and require similar monitoring.
- (l) Permitted water users may withdraw and sell or transfer water to other users provided that their permitted withdrawal limits are not exceeded.
- (m) A permitted water user may sell or transfer to other users a portion of his permitted withdrawal. To carry out such a transfer, the original permittee must request a permit modification to reduce his permitted withdrawal and the proposed recipient of the transfer must apply for a new or amended withdrawal permit.
- (n) The Director shall issue a temporary permit when the following conditions are met:
- (1) an applicant or permit holder demonstrates that compliance with water withdrawal limits established pursuant to this Section is not possible because of construction schedules, requirements of other laws, or other reasons beyond the control of the applicant or permit holder;
 - (2) the applicant or permit holder has made efforts to conserve water and develop other water sources; and
 - (3) the applicant or permit holder provides data from monitoring wells that support a higher withdrawal rate which does not exceed the recharge rate.

*History Note: Authority G.S. 143-215.14; 143-215.15; 143-215.16;
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