

FINAL RULES

**TITLE 15A - DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES**

CHAPTER 2 - ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 2E - WATER USE REGISTRATION AND ALLOCATION

SECTION .0100 - AUTHORITY

.0102 PURPOSE

These regulations are intended to provide for the management of water withdrawal and uses in the designated capacity use areas as needed to conserve water resources in the areas, and to maintain conditions that are conducive to the orderly development and beneficial use of these resources.

*History Note: Authority G.S. 143-215.12; 143-215.14;
Eff. February 1, 1976;
Repealed Eff. August 1, 2002.*

.0103 SCOPE

These regulations establish general and specific requirements that are applicable to all persons who withdraw, obtain or utilize water within the designated capacity use areas. Special requirements applicable to individual users will normally be included in appropriate water use permits.

*History Note: Authority G.S. 143-215.14;
Eff. February 1, 1976;
Repealed Eff. August 1, 2002.*

.0106 DEFINITIONS

As used herein, unless the context otherwise requires:

- (1) "Director" means the Director of the Division of ~~Environmental Management.~~ Water Resources.
- (2) "Division" means the Division of ~~Environmental Management.~~ Water Resources.

*History Note: Authority G.S. 87-87; 143-215.14; 143-215.21;
Eff. March 1, 1985;
Amended Eff. August 1, 2002.*

.0107 DELEGATION

(a) The Director is delegated the authority to grant, modify, revoke or deny permits under G.S. 143-215.15 and G.S. 143-215.16.

(b) The Director may delegate any permitting function given by the rules of this Subchapter.

(c) The Director is delegated the authority to assess civil penalties and request the Attorney General to institute civil actions under G.S. 143-215.17.

(d) The Director of the ~~Division of Water Resources~~ is delegated the authority to process applications and collect fees for registration of water withdrawals and transfers under G.S. 143-215.22H and G.S. 143- 215.3(a)(1b).

(e) The Director of the ~~Division of Water Resources~~ may delegate any water withdrawal or transfer registration processing functions given by the rules of this Subchapter.

*History Note: Filed as a Temporary Amendment Eff. October 14, 1991 for a period of 180 Days to Expire on April 11, 1992;
Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4);
Eff. March 1, 1985;
Amended Eff. August 1, 2002; September 1, 1994; April 1, 1992.*

SECTION .0200 - CAPACITY USE AREA NO. 1

**.0201 DECLARATION AND DELINEATION OF
CAPACITY USE AREA NO. 1**

~~The Environmental Management Commission on the 18th day of December, 1968, declared and delineated the following described geographical area a capacity use area:~~

*North Carolina Division of Water Resources
Environmental Management Commission*

I-5

*Central Coastal Plain Capacity Use Area Rules
Hearing Officers' Report – November 2000*

FINAL RULES

1 "That area bounded by a line beginning at the intersection of Highway US 17 and Roanoke River, at Williamston, and
2 running south along Highway US 17 to the Martin-Beaufort Counties line; thence northwest along the Martin-Beaufort
3 Counties line to the Pitt County line; thence generally south along the Pitt-Beaufort Counties line to the Craven County
4 line; thence southwest along the Pitt-Craven Counties line to the Neuse River; thence southeast along the Neuse River
5 to New Bern; thence south along Highway US 70 to Morehead City and on to Atlantic; thence north along the eastern
6 edge of Cedar Island, across Pamlico Sound, along the eastern edge of Great Island, to the intersection of Highways US
7 264 and NC 94 near the south shore of Lake Mattamuskeet; thence north along Highway NC 94 to Columbia; thence
8 west along the south shore of Albemarle Sound to the mouth of Roanoke River; thence generally southwest along
9 Roanoke River to Highway US 17 at Williamston, the beginning."

10
11 *History Note: Authority G.S. 143-215.13;*
12 *Eff. February 1, 1976;*
13 *Repealed Eff. August 1, 2002.*
14

15 **.0202 PERSONS WITHDRAWING GROUNDWATER**
16 **IN CAPACITY USE AREAS**

17 (a) **Permits Required**

18 (1) **Water Use Permit**

- 19 (A) No person shall, after June 18, 1969 (as designated the Commission), withdraw, obtain or utilize
20 surface waters or ground waters, or both, in excess of 100,000 gallons per day for any purpose unless
21 such person shall first apply for a water use permit therefor from the Director.
22 (B) Application for such water use permit shall be submitted on a form approved by the Director. An
23 approved form, may be obtained from the Department of Natural Resources and Community
24 Development, P.O. Box 27687, Raleigh, N.C. 27611. The application shall describe the specific
25 purpose or purposes for which the water will be withdrawn or used, and shall justify the quantity
26 needed for each purpose. Each application submitted to the Division will be considered and acted
27 upon as soon as practicable. Pending the Director's issuance or denial of a permit, the applicant may
28 continue the same withdrawal or use which existed prior to the date of declaration of the capacity use
29 area.
30 (C) Water use permits shall be issued for a period to be determined by the Director but not to exceed the
31 longest of the following:
32 (i) 10 years, or
33 (ii) the duration of the existence of the capacity use area, or
34 (iii) the period found by the Director to be necessary for reasonable amortization of the applicant's
35 water withdrawal and water using facilities.
36 (D) Each water use permit shall be subject to review, modification or renewal by the Director as set forth in
37 Section 143-215.15(c) of the General Statutes of North Carolina (Water Use Act of 1967). Holders of
38 water use permits will be expected to notify the Director of any major changes in usage. Review of
39 water use permits may require the justification of continuing needs and the documentation of all water
40 conservation measures.
41 (E) Water use permits shall not be transferred except with the approval of the Director.
42 (F) Water withdrawn under any water use permit shall be used only for the purpose(s) set forth in the
43 permit.

44 (2) **Well Construction Permit**

- 45 (A) A well construction permit shall be obtained prior to construction of all wells except those constructed
46 for individual domestic water supplies.
47 (B) Application for a well construction permit shall be made of Form GW22, "Application for Permit to
48 Construct a Well," which can be obtained from the Division. The application shall state the purpose of
49 the well, and shall include the proposed location, construction specifications, the estimated withdrawal
50 rate, the location and ownership of all water supply wells within a radius of either:
51 (i) 1,000 feet for wells withdrawing less than 100,000 gallons per day;
52 (ii) 1,500 feet for wells withdrawing 100,000 to 1,000,000 gallons per day;
53 (iii) 2,500 feet for wells withdrawing more than 1,000,000 gallons per day; and such other
54 information as the Director may reasonably deem necessary.

55 (b) **Withdrawal and Water Level Controls Required**

- 56 (1) **Total Quantity.** The water use permit issued by the Director shall establish the maximum total quantity that
57 may be withdrawn daily, and may specify the timing of withdrawals.

FINAL RULES

- 1 (2) ~~Maximum Withdrawal Rates. Maximum rates of withdrawal of water from individual wells or surface water~~
2 ~~intakes may be set forth in the water use permit issued by the Director, when the Director determines that~~
3 ~~such control is required to conserve water or protect the water quality.~~
4 (3) ~~Maximum Drawdown Levels. The water use permit may specify the lowest water level that may be produced~~
5 ~~in any well or wells.~~
6 (4) ~~Additional Provisions. The water use permit shall be issued subject to such other provisions as the Director~~
7 ~~deems necessary to conserve or protect the water resources of the capacity use area. The permit may:~~
8 (A) ~~require that the applicant cooperate with the Division, and with other users of water in the affected~~
9 ~~area, in determining and implementing reasonable and practical methods and processes to conserve~~
10 ~~and protect the water resources while avoiding or minimizing adverse effects on the quantity and~~
11 ~~quality of water available to persons whose water supply has been materially reduced or impaired as a~~
12 ~~result of withdrawals made pursuant to water use permits;~~
13 (B) ~~require that any portion of the water withdrawn be returned to the source or to any other stream or~~
14 ~~aquifer as approved by the Director;~~
15 (C) ~~require the holder of a water use permit to obtain the Director's approval of the locations and~~
16 ~~distribution of individual surface water intakes and wells, and of the depths, zones, aquifers or parts of~~
17 ~~aquifers from which withdrawals may be made;~~
18 (D) ~~require that each well or surface water intake be equipped with an approved monitoring device that~~
19 ~~will provide a continuous record of withdrawals within an accuracy of plus or minus five percent;~~
20 (E) ~~require that observation stations or wells be installed and maintained for monitoring water levels and~~
21 ~~water quality;~~
22 (F) ~~require that holders of water use permits unite in joint efforts to conserve water quantity and quality by~~
23 ~~any and all of the requirements in this Rule when applicable.~~
24 (e) ~~Reports Required~~
25 (1) ~~Well Record or Well Completion or Abandonment Report. Any person completing or abandoning any well~~
26 ~~shall furnish the Director, on Form GW-1, a certified record of the construction or abandonment of such well~~
27 ~~within a period of 30 days from completion of construction or abandonment, as required in the provisions of~~
28 ~~Article 7, Chapter 87 and Article 38, Chapter 143, General Statutes of North Carolina. The required~~
29 ~~completion report shall include the location, size, depth, casing record, method of finishing, formation log,~~
30 ~~static water level, yield data and records of any surveys, geophysical logs, test or water analyses. Samples of~~
31 ~~formation cuttings from all wells shall be furnished to the Director except when the Director specifies that~~
32 ~~such samples are not required. For wells withdrawing more than 1,000,000 gallons a day, a description of the~~
33 ~~proposed device for metering withdrawals is required. The required abandonment report shall include the~~
34 ~~location and method of sealing and plugging.~~
35 (2) ~~Reports and Records of Withdrawal from each Source. For withdrawals of more than 100,000 gallons per~~
36 ~~day, monthly reports of daily withdrawals from each well or surface water intake shall be furnished to the~~
37 ~~Director not later than 15 days after the end of each calendar month. Withdrawals shall be measured by a~~
38 ~~method acceptable to the Director. Withdrawals of 1,000,000 gallons per day or more shall be measured by~~
39 ~~an approved metering device, equipped with an automatic chart recorder, and having any accuracy of plus or~~
40 ~~minus five percent. The required reports shall include copies of chart recordings.~~
41 (3) ~~Reports of Water Levels. For withdrawals of less than 1,000,000 gallons per day, water level reporting, if~~
42 ~~required, may be specified in the permit. For withdrawals of 1,000,000 gallons per day or more monthly~~
43 ~~reports of water levels shall be furnished to the Director not later than 15 days after the end of each calendar~~
44 ~~month as follows:~~
45 (A) ~~the pumping water level for each supply well as measured with a steel or electric tape from a fixed~~
46 ~~reference point each day at approximately the same hour, or at such other time intervals as may be~~
47 ~~satisfactory to the Director. The measurements shall be within accuracy limits of plus or minus 0.25 of~~
48 ~~a foot or three inches.~~
49 (B) ~~The level of each surface water used as a source of supply, as measured by a method and at such~~
50 ~~frequency as specified in the permit.~~
51 (C) ~~The Water levels in observation wells other than supply wells as measured from a fixed reference point~~
52 ~~at intervals specified by the permit.~~
53 (4) ~~Other Reports. The Director may require reports of other data pertinent and necessary to the evaluation of the~~
54 ~~effects of withdrawals.~~

56 *History Note: Authority G.S. 143-215.14; 143-215.15;*
57 *Eff. February 1, 1976;*
58 *Amended Eff. March 1, 1985;*
59 *Repealed Eff. August 1, 2002.*

.0205 ACTIVITIES

Activities Requiring Prior Approval by the Commission. No construction or installation of works of improvement which may significantly affect the quantity or quality of the water resources shall be undertaken without prior approval from the Commission. These include, but are not necessarily limited to, the following:

- (1) **Surface Drainage Projects**
 - (a) Any project involving the drainage or diversion of ponded or standing water, except water temporarily impounded as the result of flooding, from an area in excess of five acres;
 - (b) Application for approval of any such project shall include:
 - (i) a description of the area;
 - (ii) purpose of the project and method of drainage, and
 - (iii) a general evaluation of the probable effects of the project on the water resources.
- (2) **Subsurface Drainage Projects**
 - (a) Any project involving the withdrawal or diversion of ground water, except for the purpose of water supply or agricultural use, that will probably result in lowering existing ground water levels or artesian head more than three feet for a period of one year in any area of more than five acres;
 - (b) Application for approval of any such project shall include a description of the area, purpose of the project and method of drainage, and a general evaluation of the probable effects of the project on the water resources.
- (3) **Well Mining Projects**
 - (a) Any projects involving the removal or extraction of minerals through wells;
 - (b) Application for approval of any such project shall include:
 - (i) a description of the location and extent of the area;
 - (ii) methods, procedures and processes of removal or extraction;
 - (iii) well plugging and abandonment procedures, and
 - (iv) an evaluation of the effects of the water resources.
- (4) **Excavation Projects**
 - (a) Any project involving the excavation of any land that lies under water;
 - (b) Any project involving the excavation of any single area in excess of five acres to any depth below the highest natural level of groundwater;
 - (c) Application for approval of any such projects shall include a description of the location and the extent of the area, purpose, depth, and excavation methods.

*History Note: Authority G.S. 143-215.14; 143-215.20;
Eff. February 1, 1976;
Repealed Eff. August 1, 2002.*

SECTION .0500 - CENTRAL COASTAL PLAIN CAPACITY USE AREA

.0501 DECLARATION AND DELINEATION OF CENTRAL COASTAL PLAIN CAPACITY USE AREA

The area encompassed by the following 15 North Carolina counties and adjoining creeks, streams, and rivers is hereby declared and delineated as the Central Coastal Plain Capacity Use Area: Beaufort, Carteret, Craven, Duplin, Edgecombe, Greene, Jones, Lenoir, Martin, Onslow, Pamlico, Pitt, Washington, Wayne and Wilson. The Environmental Management Commission finds that the use of ground water requires coordination and limited regulation in this delineated area for protection of the public interest. The intent of this Section is to protect the long term productivity of aquifers within the designated area and to allow the use of ground water for beneficial uses at rates which do not exceed the recharge rate of the aquifers within the designated area.

*History Note: Authority G.S. 143-215.13;
Eff. August 1, 2002.*

.0502 WITHDRAWAL PERMITS

(a) Existing ground water withdrawal permits issued in Capacity Use Area No. 1 (15A NCAC 2E .0200) within the Central Coastal Plain Capacity Use Area are reissued under Section .0500 of this Subchapter and are valid until the expiration date specified in each permit. Water use permits are no longer required for withdrawals in Hyde and Tyrrell Counties as of the effective date of this Rule. 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 after the effective date of this Rule in excess of 100,000 gallons per day by a well, group of wells operated as a system, or sump for any purpose unless such person shall first obtain a water use

FINAL RULES

1 permit from the Director. Existing withdrawals of ground water as of the effective date of this Rule and proposed
2 withdrawals previously approved for funding appropriated pursuant to the “Clean Water and Natural Gas Critical Needs
3 Bond Act of 1998” or other local, state or federally funded projects as of the effective date of this Rule shall be allowed
4 to proceed with construction or to continue to operate under interim status until a permit has been issued or denied by
5 the Director, provided that persons withdrawing in excess of 100,000 gallons per day by a well, group of wells operated
6 as a system, or sump comply with the following requirements:

- 7 (1) Persons conducting withdrawals in the Capacity Use Area that require a permit shall submit a permit
8 application to the Division of Water Resources within 180 days of the effective date of this Rule.
- 9 (2) Persons who have submitted applications shall provide any additional information requested by the Division
10 of Water Resources for processing of the permit application within 30 days of the receipt of that request.
- 11 (3) Persons conducting withdrawals in the Capacity Use Area that require a permit shall submit water level and
12 water use data on a form supplied by the Division four times a year, within 30 days of the end of March, June,
13 September, and December until a permit has been issued or denied by the Division of Water Resources.

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

- 15 (1) Adverse impacts of ground water withdrawals shall be avoided or minimized. Adverse impacts include, but
16 are not limited to:
 - 17 (A) dewatering of aquifers;
 - 18 (B) encroachment of salt water;
 - 19 (C) land subsidence or sinkhole development;
 - 20 (D) long-term declines in aquifer water levels.
- 21 (2) Adverse impacts on other water users from ground water withdrawals shall be corrected or minimized
22 through efficient use of water and development of sustainable water sources.
- 23 (3) In determining the importance and necessity of a proposed withdrawal the efficiency of water use and
24 implementation of conservation measures shall be considered.

25 (d) An application for a water use permit must be submitted on a form approved by the Director to the North
26 Carolina Division of Water Resources. The application shall describe the purpose or purposes for which water will be
27 used, shall set forth the method and location of withdrawals, shall justify the quantities needed, and shall document
28 water conservation measures to be used by the applicant to ensure efficient use of water and avoidance of waste.
29 Withdrawal permit applications shall include the following information:

- 30 (1) Location by latitude and longitude of all wells to be used for withdrawal of water.
- 31 (2) Specifications for design and construction of existing and proposed production and monitoring wells.
32 Exceptions may be made where specific items of information are not critical, as determined by the Director,
33 to manage the ground water resource.
 - 34 (A) Well diameter;
 - 35 (B) Total depth of the well;
 - 36 (C) Depths of all open hole or screened intervals that will yield water to the well;
 - 37 (D) Depth of pump intake(s);
 - 38 (E) Size, capacity and type of pump;
 - 39 (F) Depth to top of gravel pack;
 - 40 (G) Depth measurements shall be within accuracy limits of plus or minus 0.10 feet and referenced to a
41 known land surface elevation.
- 42 (3) Withdrawal permit applications for use of ground water from the Cretaceous aquifer system shall include
43 plans to reduce water use from these aquifers as specified in Rule .0503 of this Section. Withdrawal rates
44 from the Cretaceous aquifer system that exceed the approved base rate may be permitted during Phase I of
45 Rule .0503 of this Section if the applicant can demonstrate to the Director’s satisfaction a need for the greater
46 amount. Cretaceous aquifer system wells will be identified using the specifications in Rule .0502(d)(1) and
47 .0502(d)(2) of this Section and the hydrogeological framework.
- 48 (4) Withdrawal permit applications for dewatering of mines, pits or quarries shall include a dewatering or
49 depressurization plan that includes:
 - 50 (A) a hydrogeological analysis of the dewatering or depressurization activity;
 - 51 (B) the location, design and specifications of any sumps, drains or other withdrawal sources including
52 wells and trenches;
 - 53 (C) the lateral extent and depth of the zone(s) to be dewatered or depressurized;
 - 54 (D) a monitoring plan that provides data to delineate the nature and extent of dewatering or
55 depressurization;
 - 56 (E) certification by an appropriate North Carolina Licensed Engineer or Geologist of all plans and
57 hydrogeological analyses prepared to meet these requirements.
- 58 (5) Conservation Measures. The applicant shall provide information on existing conservation measures and
59 conservation measures to be implemented during the permit period as follows:

FINAL RULES

- 1 (A) Public water supply systems shall develop and implement a feasible water conservation plan
2 incorporating, at a minimum, the following components. Each component shall be described,
3 including a timetable for implementing each component that does not already exist.
4 (i) Adoption of a water conservation-based rate structure, such as: flat rates, increasing block rates,
5 seasonal rates, or quantity-based surcharges.
6 (ii) Implementation of a water loss reduction program if unaccounted for water is greater than 15
7 percent of the total amount produced, as documented annually using a detailed water audit.
8 Water loss reduction programs shall consist of annual water audits, in-field leak detection, and
9 leak repair.
10 (iii) Adoption of a water conservation ordinance for irrigation, including such measures as: time-of-
11 day and day-of-week restrictions on lawn and ornamental irrigation, automatic irrigation system
12 shut-off devices or other appropriate measures.
13 (iv) Implementation of a retrofit program that makes available indoor water conservation devices to
14 customers (such as showerheads, toilet flappers, and faucet aerators).
15 (v) Implementation of a public education program (such as water bill inserts, school and civic
16 presentations, water treatment plant tours, public services announcements, or other appropriate
17 measures).
18 (vi) Evaluation of the feasibility of water reuse as a means of conservation, where applicable.
19 (B) Users of water for commercial purposes, other than irrigation of crops and forestry stock, shall develop
20 and implement a water conservation plan as follows:
21 (i) an audit of water use by type of activity (for example, process make-up water, non-contact
22 cooling water) including existing and potential conservation and reuse measures for each type
23 of water use;
24 (ii) an implementation schedule for feasible measures identified in the above item for conservation
25 and reuse of water at the facility.
26 (C) Users of water for irrigation of crops and forestry stock shall provide the following information:
27 (i) total acreage with irrigation available;
28 (ii) types of crops that may be irrigated;
29 (iii) method of irrigation (for example, wells that supply water to canals, ditches or central pivot
30 systems or any other irrigation method using ground water);
31 (iv) a statement that the applicant uses conservation practice standards for irrigation as defined by
32 the Natural Resources Conservation Service.
33 (6) If an applicant intends to operate an aquifer storage and recovery program (ASR), the applicant shall provide
34 information on the storage zone, including the depth interval of the storage zone, lateral extent of the
35 projected storage area, construction details of wells used for injection and withdrawal of water, and
36 performance of the ASR program.
37 (e) The Director shall issue, modify, revoke, or deny each permit as set forth in G.S. 143-215.15. Permittees may
38 apply for permit modifications. Any application submitted by a permittee shall be subject to the public notice and
39 comment requirements of G.S. 143-215.15(d).
40 (f) Permit duration shall be set by the Director as described in G.S. 143-215.16(a). Permit transferability is
41 established in G.S. 143-215.16(b).
42 (g) Persons holding a permit shall submit signed water usage and water level reports to the Director not later than 30
43 days after the end of each permit reporting period as specified in the permit. Monitoring report requirements may
44 include:
45 (1) Amounts of daily withdrawal from each well.
46 (2) Pumping and static water levels for each supply well as measured with a steel or electric tape, or an
47 alternative method as specified in the permit, at time intervals specified in the permit.
48 (3) Static water levels in observation wells at time intervals specified in the permit.
49 (4) Annual sampling by applicants located in the salt water encroachment zone and chloride concentration
50 analysis by a State certified laboratory.
51 (5) Any other information the Director determines to be pertinent and necessary to the evaluation of the effects of
52 withdrawals.
53 (h) Water use permit holders shall not add new wells without prior approval from the Director.
54 (i) The Director may require permit holders to construct observation wells to observe water level and water quality
55 conditions before and after water withdrawals begin if there is a demonstrated need for aquifer monitoring to assess the
56 impact of the withdrawal on the aquifer.
57 (j) For all water uses other than dewatering of mines, pits or quarries, withdrawals shall be permitted only from wells
58 that are constructed such that the pump intake or intakes are at a shallower depth than the top of the uppermost confined
59 aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological framework. Where

FINAL RULES

1 wells in existence as of the effective date of this Rule are not in compliance with the requirements of this provision, the
2 permit shall include a compliance schedule for retrofitting or replacement of non-compliant wells. Withdrawals from
3 unconfined aquifers shall not lower the water table by an amount large enough to decrease the effective thickness of the
4 unconfined aquifer by more than 50 percent.

5 (k) For withdrawals to dewater mines, pits or quarries, the permit shall delimit the extent of the area and depths of
6 the aquifer(s) to be dewatered or depressurized. Maximum well withdrawal rates, total use limits, and the permissible
7 extent of dewatering or depressurization will be determined by the Director using available methods of hydrogeologic
8 analysis.

9 (l) Withdrawals of water that cause changes in water quality such that the available uses of the resource are adversely
10 affected will not be permitted. For example, withdrawals shall not be permitted that result in migration of ground water
11 that contains more than 250 milligrams per liter chloride into pumping wells that contain chloride at concentrations
12 below 250 milligrams per liter.

13 (m) General permits may be developed by the Division and issued by the Director for categories of withdrawal that
14 involve the same or substantially similar operations, have similar withdrawal characteristics, require the same
15 limitations or operating conditions, and require similar monitoring.

16 (n) Permitted water users may withdraw and sell or transfer water to other users provided that their permitted
17 withdrawal limits are not exceeded.

18 (o) A permitted water user may sell or transfer to other users a portion of his permitted withdrawal. To carry out
19 such a transfer, the original permittee must request a permit modification to reduce his permitted withdrawal and the
20 proposed recipient of the transfer must apply for a new or amended withdrawal permit under Section .0500 of this
21 Subchapter.

22 (p) Where an applicant or a permit holder can demonstrate that compliance with water withdrawal limits established
23 under Section .0500 of this Subchapter is not possible because of construction schedules, requirements of other laws, or
24 other reasons beyond the control of the applicant or permit holder, and where the applicant or permit holder has made
25 appropriate efforts to conserve water and to plan the development of adequate water sources, the Director may issue a
26 temporary permit with an alternative schedule to attain compliance with provisions of Section .0500 of this Subchapter,
27 as authorized in G.S. 143-215.15(c)(ii).

28
29 *History Note:* Authority G.S. 143-215.14; 143-215.15; 143-215.16;
30 Eff. August 1, 2002.

.0503 PRESCRIBED WATER USE REDUCTIONS IN CRETACEOUS AQUIFER ZONES

31
32 Cretaceous aquifer water use shall be reduced in prescribed areas over a 16 year period, starting from approved base
33 rates on the effective date of this Rule. The Cretaceous aquifer system zones and the three phases of water use
34 reductions are listed as follows:

- 35 (1) Cretaceous aquifer system zones are regions established in the fresh water portion of the Cretaceous aquifer
36 system that delimit zones of salt water encroachment, dewatering and declining water levels. These zones are
37 designated on the paper and digital map entitled "Central Coastal Plain Capacity Use Area Cretaceous
38 Aquifer Zones" (CCPCUA) on file in the Office of the Secretary of State one week prior to the effective date
39 of these Rules.
- 40 (2) The reductions specified in Rule .0503 of this Section do not apply to intermittent users.
- 41 (3) If a permittee implements an aquifer storage and recovery program (ASR), reduction requirements will be
42 based on the total net withdrawals. The reductions specified in Rule .0503 of this Section do not apply if the
43 volume of water injected into the aquifer is greater than the withdrawal volume. If the withdrawal volume is
44 greater than the injected volume, reductions specified in Rule .0503 of this Section apply to the difference
45 between the withdrawal volume and the injected volume.
- 46 (4) The reductions specified in Rule .0503 of this Section shall not reduce permitted water use rates below
47 100,001 gallons per day.
- 48 (5) Phase definitions:
- 49 (a) Phase I: The six year period extending into the future from the effective date of this Rule.
- 50 (b) Phase II: The five year period extending into the future from six years after the effective date of this
51 Rule to 11 years after the effective date of this Rule.
- 52 (c) Phase III: The five year period extending into the future from 11 years after the effective date of this
53 Rule to 16 years after the effective date of this Rule.
- 54 (6) Phase reductions:
- 55 (a) Phase I:
- 56 (i) At the end of the Phase I, permittees who are located in the dewatering zone will be required to
57 reduce annual water use from Cretaceous aquifers by 25% from their approved base rate.
58

FINAL RULES

- 1 (ii) At the end of the Phase I, permittees who are located in the salt water encroachment zone will be
2 required to reduce annual water use from Cretaceous aquifers by 25% from their approved base
3 rate.
4 (iii) At the end of the Phase I, permittees who are located in the declining water level zone will be
5 required to reduce annual water use from Cretaceous aquifers by 10% from their approved base
6 rate.
7 (b) Phase II:
8 (i) At the end of the Phase II, permittees who are located in the dewatering zone will be required to
9 reduce annual water use from Cretaceous aquifers by 50% from their approved base rate.
10 (ii) At the end of the Phase II, permittees who are located in the salt water encroachment zone will
11 be required to reduce annual water use from Cretaceous aquifers by 50% from their approved
12 base rate.
13 (iii) At the end of the Phase II, permittees who are located in the declining water level zone will be
14 required to reduce annual water use from Cretaceous aquifers by 20% from their approved base
15 rate.
16 (c) Phase III:
17 (i) At the end of the Phase III, permittees who are located in the dewatering zone will be required to
18 reduce annual water use from Cretaceous aquifers by 75% from their approved base rate.
19 (ii) At the end of the Phase III, permittees who are located in the salt water encroachment zone will
20 be required to reduce annual water use from Cretaceous aquifers by 75% from their approved
21 base rate.
22 (iii) At the end of the Phase III, permittees who are located in the declining water level zone will be
23 required to reduce annual water use from Cretaceous aquifers by 30% from their approved base
24 rate.
25 (7) The CCPCUA Cretaceous Aquifer Zones map will be updated, if necessary, in the sixth, eleventh, and
26 sixteenth years following the effective date of this Rule to account for aquifer water level responses to phased
27 withdrawal reductions. The map update will be based on the following conditions:
28 (a) Rate of decline in water levels in the aquifers;
29 (b) Rate of increase in water levels in the aquifers;
30 (c) Stabilization of water levels in the aquifers;
31 (d) Chloride concentrations in the aquifers.

32 This aquifer information will be analyzed on a regional scale and used to develop updated assessments of aquifer
33 conditions in the Central Coastal Plain Capacity Use Area. The Environmental Management Commission (EMC) may
34 adjust the aquifer zones and the water use reduction percentages for each zone based on the assessment of conditions.
35 The EMC will adopt the updated map and reduction percentage changes after public hearing.

- 36 (8) The reductions specified in Rule .0503 of this Section do not apply to wells exclusively screened or open to
37 the Peedee aquifer.
38 (9) An applicant may submit documentation supporting the exemption of a well located in the Declining Water
39 Level Zone from the withdrawal reductions specified in Rule .0503 of this Section. This documentation must
40 include a record of monthly static water levels from that well over at least a three-year period, ending with the
41 month when the request for exemption is submitted. The Director may exempt a well from reductions if the
42 water level history shows no pattern of decline during this three-year period. A well previously exempted
43 from the withdrawal reductions shall become subject to the reductions if water levels begin to show a pattern
44 of decline.
45

46 *History Note: Authority G.S. 143-215.15;*
47 *Eff. August 1, 2002.*
48

49 **.0504 REQUIREMENTS FOR ENTRY AND INSPECTION**

- 50 (a) The Division may enter and inspect property in order to evaluate wells, pumps, metering equipment or other
51 withdrawal or measurement devices and records of water withdrawals and water levels, if:
52 (1) Persons conduct an activity that the Division believes requires the use of water at quantities that subject the
53 person to regulation under these Rules;
54 (2) A permittee or applicant has not provided data or information on use of water and wells and other water
55 withdrawal facilities as required by these Rules; or
56 (3) Water levels and chloride concentrations at the person's facility, or at nearby facilities or monitoring stations,
57 indicate that aquifers may be damaged by overpumping or salt water encroachment, or other adverse affects
58 that may be attributed to withdrawal by the person.

FINAL RULES

(b) All information submitted to fulfill the requirements of these Rules, or to obtain a permit under these Rules, or obtained by inspection under these Rules, shall be treated as Confidential Business Information, if requested by the applicant, and found to be such by the Division. Reports defined in Rule .0502(g) of this Section are not considered Confidential Business Information.

*History Note: Authority G.S. 143-215.19;
Eff. August 1, 2002.*

.0505 ACCEPTABLE WITHDRAWAL METHODS THAT DO NOT REQUIRE A PERMIT

(a) As of the effective date of this Rule, any person who is not subject to Rule .0502 of this Section and withdraws more than 10,000 gallons per day from surface or ground water in the Central Coastal Plain Capacity Use Area, shall register such withdrawals on a form supplied by the Division and comply with the following provisions:

- (1) Construct new wells such that the pump intake or intakes are above the top of the uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological framework.
- (2) Report surface and ground water use to the Division of Water Resources on an annual basis on a form supplied by the Division.
- (3) Withdraw water in a manner that does not damage the aquifer or cause salt water encroachment or other adverse impacts.

(b) These requirements do not apply to withdrawals to supply an individual domestic dwelling.

(c) Agricultural water users may either register water use with the Division of Water Resources as provided in this Rule or provide the information to the North Carolina Department of Agriculture and Consumer Services.

*History Note: Authority G.S. 143-215.14; 143-355(k);
Eff. August 1, 2002.*

.0506 CENTRAL COASTAL PLAIN CAPACITY USE AREA STATUS REPORT

Within two years of the effective date of this Rule, and at five year intervals thereafter, the Division of Water Resources shall publish a status report on the Central Coastal Plain Capacity Use Area. The report shall include the following:

- (1) Compilations of water use data.
- (2) Evaluations of surface and ground water resources.
- (3) Updated information about the hydrogeologic framework in the Central Coastal Plain Capacity Use Area.
- (4) A summary of alternative water sources and water management techniques that may be feasible by generalized geographic location, and
- (5) A status report on actions by water users to develop new water sources and to increase water use efficiency.

*History Note: Authority G.S. 143-215.14;
Eff. August 1, 2002.*

.0507 DEFINITIONS

The following is a list of definitions for terms found in Section .0500 of this Subchapter.

- (1) Approved base rate: The larger of a person's January 1, 1997 through December 31, 1997 or August 1, 1999 through July 31, 2000 annual water use rate from the Cretaceous aquifer system, or an adjusted water use rate determined through negotiation with the Division using documentation provided by the applicant of:
 - (a) water use reductions made since January 1, 1992,
 - (b) use of wells for which funding has been approved or for which plans have been approved by the Division of Environmental Health by the effective date of this Rule.
 - (c) the portion of a plant nursery operation using low volume micro-irrigation, or
 - (d) other relevant information.
- (2) Aquifer: Water-bearing earth materials that are capable of yielding water in usable quantities to a well or spring.
- (3) Aquifer storage and recovery program (ASR): Controlled injection of water into an aquifer with the intent to store water in the aquifer for subsequent withdrawal and use.
- (4) Confining unit: A geologic formation that does not yield economically practical quantities of water to wells or springs. Confining units separate aquifers and slow the movement of ground water.
- (5) Cretaceous aquifer system: A system of aquifers in the North Carolina coastal plain that is comprised of water-bearing earth materials deposited during the Cretaceous period of geologic time. The extent of the Cretaceous Aquifer System is defined in the hydrogeological framework and includes the Peedee, Black Creek, Upper Cape Fear and Lower Cape Fear aquifers.

FINAL RULES

- 1 (6) Dewatering: Dewatering occurs when aquifer water levels are depressed below the top of a confined aquifer
2 or water table declines adversely affect the resource.
3 (7) Flat rates: Unit price remains the same regardless of usage within customer class.
4 (8) Fresh water: Water containing chloride concentrations equal to or less than 250 milligrams per liter.
5 (9) Gravel pack: Sand or gravel sized material inside the well bore and outside the well screen and casing.
6 (10) Ground water: Water in pore spaces or void spaces of subsurface sediments or consolidated rock.
7 (11) Hydrogeological framework: A three-dimensional representation of aquifers and confining units that is stored
8 in Division data bases and may be adjusted by applicant supplied information.
9 (12) Increasing block rates: Unit price increases with additional usage.
10 (13) Intermittent users: Persons who withdraw ground water less than 60 days per calendar year; or who withdraw
11 less than 15 million gallons of ground water in a calendar year; or aquaculture operations licensed under the
12 authority of GS 106-761 using water for the initial filling of ponds or refilling of ponds no more frequently
13 than every 5 years.
14 (14) Observation well: A non-pumping well screened in a particular aquifer where water levels can be measured
15 and water samples can be obtained.
16 (15) Pumping water level: The depth to ground water in a pumping well as measured from a known land surface
17 elevation. Measurements shall be made four hours after pumping begins. Measurements shall be within
18 accuracy limits of plus or minus 0.10 feet.
19 (16) Quantity based surcharges: Surcharges billed with usage over a certain determined quantity.
20 (17) Salt water: Water containing chloride concentrations in excess of 250 milligrams per liter.
21 (18) Salt water encroachment: The lateral or vertical migration of salt water toward areas occupied by fresh water.
22 This may occur in aquifers due to natural or man-made causes.
23 (19) Seasonal rates: Unit prices change according to the season.
24 (20) Static water level: The depth to ground water in a non-pumping well as measured from a known land surface
25 elevation. Measurements shall be made after pumping has ceased for 12 hours. Measurements shall be
26 within accuracy limits of plus or minus 0.10 feet.
27 (21) Unaccounted for water: The difference between the total water entering the system (produced and purchased)
28 and the total metered or otherwise accounted for water usage.
29 (22) Water table: The water level in an unconfined aquifer.

30
31 History Note: Authority G.S. 143-215.14;
32 Eff. August 1, 2002.