

Regulatory Impact Analysis

Rule Citation Number: 15A NCAC 02E, Section .0501 - .0507

Rule Topic: Amendment and Readoption of Rules under 02E - .0500
Central Coastal Plain Capacity Use Area (CCPCUA)

DEQ Division: Division of Water Resources (DWR)

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Impact Summary: State government: No
Local government: No
Private entities: No
Substantial Impact: No
Federal government: No

Necessity: N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for a portion of the Department's rules.

1. Summary

The DWR reviewed the Central Coastal Plain Capacity Use Area (CCPCUA) rules in accordance with G.S. §150B-21.3A and proposes to re-adopt all the rules with minor changes including removal of text which is deemed to be no longer necessary and changes to text to improve clarity.

As measured from the baseline conditions, these rule readoptions are proposed with no substantive changes. G.S. §150B-21.3A (d)(2) states: "If a rule is readopted without substantive change, or if the rule is amended to impose a less stringent burden on regulated persons, the agency is not required to prepare a fiscal note as provided by G.S. 150B-21.4." As such, a fiscal note has not been prepared for this rulemaking package.

2. Background

Central Coastal Plain Capacity Use Area (CCPCUA)

The Water Use Act of 1967 gives the Environmental Management Commission the authority to declare capacity use areas in the State where it finds that the use of ground or surface water requires coordination and limited regulation for protection of the resource. The Act defines a capacity use area as "one where the Commission finds that the aggregate uses of ground water or surface water, or both, in or affecting said area (i) have developed or threatened to develop to a

degree which requires coordination and regulation, or (ii) exceed or threaten to exceed, or otherwise threaten or impair, the renewal or replenishment of such waters or any part of them.”

The CCPCUA was created due to unsustainable ground water withdrawals of two major aquifers in the central coastal plain: the Black Creek and Upper Cape Fear. There is evidence of present and future ground water supply shortages within the area encompassed by the following 15 counties: Beaufort, Carteret, Craven, Duplin, Edgecombe, Greene, Jones, Lenoir, Martin, Onslow, Pamlico, Pitt, Washington, Wayne, and Wilson. Within this area, ground water from the Black Creek and Upper Cape Fear aquifers is being withdrawn at a rate that exceeds the available recharge. To address this problem, DWR created the CCPCUA to regulate water use through permitting to avoid damage to the ground water resources and to maintain those sources of water indefinitely.

CCPCUA permit holders were required to reduce their water withdrawals from these two aquifers by 30% or 75% depending on location over a 16-year period which ended on August 1, 2018. Large investments totaling over \$386 million have been spent to date on developing alternate water sources. Permit holders that can demonstrate sustainable water use at a higher amount than their reduced permit amount are issued a temporary permit at the higher withdrawal rate.

Rules Review and Readoption Process

G.S. §150B-21.3A requires the Department to evaluate each of its existing rules and make an initial determination as to whether the rules are:

1. Necessary with substantive public interest – the agency has received public comment on the rule within the past two years or the rule affects the property interest of the regulated public, and the agency knows or suspects that any person may object to the rule.
2. Necessary without substantive public interest – the agency determines that the rule is needed, and the rule has not had public comment in the last two years. This category includes rules that identify information that is readily available to the public, such as an address or telephone number.
3. Unnecessary – the agency determines that the rule is obsolete, redundant or otherwise not needed.

The Department must then determine which rules are still necessary and propose to re-adopt, with or without modifications, or to repeal each rule as appropriate. The Division categorized all the subject rules as “Necessary with substantive public interest.”

The Division presented the timeline for the proposed draft rules to the Water Allocation Committee (WAC) of the Environmental Management Commission (EMC) on July 10, 2019. A staff attorney to the NC Rules Review Commission performed a pre-review of the rules, and the Division has edited the rules in accordance with the pre-review comments.

The Division prepared draft rules and solicited input on the proposed actions from stakeholders through public notice and posted the proposed rule changes on the Division’s webpage from August 19, 2019 to September 20, 2019. The initial public comment period gave stakeholders the opportunity to review and submit comments on the Division’s draft proposed rules.

3. Economic Impact Analysis

The following table briefly describes the proposed rule. None of these changes will result in an economic or environmental impact.

3.1: Subchapter 02E – Water Use Registration and Allocation

Section .0500 – Central Coastal Plain Capacity Use Area

Rule	Proposed Change
15A NCAC 02E .0501 Declaration and Delineation of Central Coastal Plain Capacity Use Area	Format changes and removed language deemed unnecessary.
15A NCAC 02E .0502 Withdrawal Permits	Format changes and removed language deemed unnecessary. Updated language for clarification.
15A NCAC 02E .0503 Prescribed Water Use Reductions in Cretaceous Aquifer Zones	Repeal rule. Removed language deemed unnecessary.
15A NCAC 02E .0504 Requirements for Entry and Inspection	Updated language for clarification.
15A NCAC 02E .0505 Acceptable Withdrawal Methods that Do Not Require a Permit	Format changes and removed language deemed unnecessary.
15A NCAC 02E .0506 Central Coastal Plain Capacity Use Area Status Report	Repeal rule. Removed language deemed unnecessary.
15A NCAC 02E .0507 Definitions	Updated language for clarification. Added 3 definitions (aquifer recharge, cretaceous aquifer system zones, and recharge rate).

3.2 Costs and Benefits Analysis

State Government, Local Government, Regulated Community, and the Environment

Changes to the CCPCUA rules are technical in nature and include the removal of unnecessary language since the prescribed water withdrawal reductions have been implemented as of August 1, 2018. There are no substantive changes, and no changes that will impose an additional burden on the regulated community. None of these changes will require DEQ or local governments to revise their existing procedures or to procure additional staff; as such, there should be no economic cost to state agencies or local governments.

The improved clarity of the rules should translate into less time spent by the regulated community on the water withdrawal permitting process as well as less time spent by regulatory staff providing technical assistance. The amount of time saved will be negligible and will not provide a significant financial benefit; however, it is noted here for completeness.

Lastly, as measured from the baseline conditions, the proposed changes will maintain existing environmental protections at an equivalent level with no cost or benefit to the environment.

4. Total Economic Impact

As measured from the baseline conditions, there are no substantive changes associated with the proposed rule readoptions. Consequently, no new economic or environmental impacts are anticipated to result from the proposed rule readoptions.

1 **SECTION .0500 - CENTRAL COASTAL PLAIN CAPACITY USE AREA**

2
3 **15A NCAC 02E .0501 DECLARATION AND DELINEATION OF CENTRAL COASTAL PLAIN**
4 **CAPACITY USE AREA**

5 The area encompassed by the following 15 North Carolina counties and adjoining creeks, streams, and rivers is hereby
6 declared and delineated as the Central Coastal Plain Capacity Use Area:

- 7 (1) Beaufort
- 8 (2) Carteret
- 9 (3) Craven
- 10 (4) Duplin
- 11 (5) Edgecombe
- 12 (6) Greene
- 13 (7) Jones
- 14 (8) Lenoir
- 15 (9) Martin
- 16 (10) Onslow
- 17 (11) Pamlico
- 18 (12) Pitt
- 19 (13) Washington
- 20 (14) Wayne; and
- 21 (15) Wilson.

22 ~~The Environmental Management Commission finds that the~~ The use of ground water requires coordination and limited
23 regulation in this delineated area for protection of the public interest. The intent ~~of this Section~~ is to protect the long-
24 term productivity of aquifers within the designated area and to allow the use of ground water for ~~beneficial~~ uses at
25 rates which do not exceed or threaten to exceed the recharge rate of the aquifers within the designated area.

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

29
30 **15A NCAC 02E .0502 WITHDRAWAL PERMITS**

31 ~~(a) Existing ground water withdrawal permits issued in Capacity Use Area No. 1 (15A NCAC 02E .0200) within the~~
32 ~~Central Coastal Plain Capacity Use Area are reissued under Section .0500 of this Subchapter and are valid until the~~
33 ~~expiration date specified in each permit. Water use permits are no longer required for withdrawals in Hyde and Tyrrell~~
34 ~~Counties as of the effective date of this Rule.~~ Permits are not required for surface water use under Section .0500 of
35 this Subchapter in the Central Coastal Plain Capacity Use Area as delineated in Rule .0501 of this Section.

36 (b) No person shall withdraw ground water ~~after the effective date of this Rule~~ in excess of 100,000 gallons per day
37 by a well, group of wells operated as a system, or sump for any purpose unless ~~such person shall first obtain~~ he or she

1 ~~obtains~~ a water use permit from the Director. ~~Existing withdrawals of ground water as of the effective date of this~~
2 ~~Rule and proposed withdrawals previously approved for funding appropriated pursuant to the "Clean Water and~~
3 ~~Natural Gas Critical Needs Bond Act of 1998" or other local, state or federally funded projects as of the effective date~~
4 ~~of this Rule shall be allowed to proceed with construction or to continue to operate under interim status until a permit~~
5 ~~has been issued or denied by the Director, provided that persons withdrawing in excess of 100,000 gallons per day by~~
6 ~~a well, group of wells operated 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~~
10 ~~Division of Water Resources for processing of the permit application within 30 days of the receipt~~
11 ~~of that request.~~

12 (3) ~~Persons conducting withdrawals in the Capacity Use Area that require a permit shall submit water~~
13 ~~level and water use data on a form supplied by the Division four times a year, within 30 days of the~~
14 ~~end of March, June, September, and December until a permit has been issued or denied by the~~
15 ~~Division of Water Resources.~~

16 (c) No ground water withdrawal shall result in adverse impacts, including dewatering of aquifers, encroachment of
17 salt water, land subsidence or sinkhole development, or decline in aquifer water levels that indicate aggregate water
18 use exceeds the aquifer recharge rate. ~~Ground water withdrawals shall be governed by the following standards:~~

19 (1) ~~Adverse impacts of ground water withdrawals shall be avoided or minimized. Adverse impacts~~
20 ~~include, but are not limited to:~~

21 (A) ~~dewatering of aquifers;~~

22 (B) ~~encroachment of salt water;~~

23 (C) ~~land subsidence or sinkhole development; or~~

24 (D) ~~declines in aquifer water levels that indicate that aggregate water use exceeds the aquifer~~
25 ~~replenishment rate.~~

26 (2) ~~Adverse impacts on other water users from ground water withdrawals shall be corrected or~~
27 ~~minimized through efficient use of water and development of sustainable water sources.~~

28 (3) ~~In determining the importance and necessity of a proposed withdrawal the efficiency of water use~~
29 ~~and implementation of conservation measures shall be considered.~~

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

1 (1) ~~location~~ Location by latitude and longitude of all wells to be used for withdrawal of water and all
2 other wells within 1500 feet of the applicant's wells;

3 (2) ~~specifications~~ Specifications for design and construction of existing and proposed production and
4 monitoring wells including well diameter, total depth of well, depths of all open hole or screened
5 intervals that will yield water to the well, depth of pump intake(s), size, capacity, and type of pump,
6 depth to gravel pack, and depth measurements shall be within accuracy limits of plus or minus 0.10
7 feet and referenced to a known land surface elevation;

8 (A) ~~Well diameter;~~

9 (B) ~~Total depth of the well;~~

10 (C) ~~Depths of all open hole or screened intervals that will yield water to the well;~~

11 (D) ~~Depth of pump intake(s);~~

12 (E) ~~Size, capacity and type of pump;~~

13 (F) ~~Depth to top of gravel pack; and~~

14 (G) ~~Depth measurements shall be within accuracy limits of plus or minus 0.10 feet and~~
15 ~~referenced to a known land surface elevation.~~

16 Exceptions may be made where specific items of information are not critical, as determined by the
17 Director, to manage the ground water resource;

18 (3) ~~withdrawal~~ Withdrawal permit applications for use of ground water from the Cretaceous aquifer
19 system shall be reviewed recognizing the Cretaceous aquifer system zones, include plans to reduce
20 water use from these aquifers as specified in Rule .0503 of this Section. Withdrawal rates from the
21 Cretaceous aquifer system that exceed the approved base rate may be permitted during Phase I of
22 Rule .0503 of this Section if the applicant can demonstrate to the Director's satisfaction a need for
23 the greater amount. Cretaceous aquifer system wells shall be identified using the specifications in
24 Rule .0502(d)(1) and .0502(d)(2) of this Section and the hydrogeological framework;

25 (4) ~~withdrawal~~ Withdrawal permit applications for dewatering of mines, pits or quarries shall include a
26 dewatering or depressurization plan that includes:

27 (A) the current withdrawal rate or estimates of the proposed withdrawal rate;

28 (B) the location, design and specifications of any sumps, drains or other withdrawal sources
29 including wells and trenches;

30 (C) the lateral extent and depth of the zone(s) to be dewatered or depressurized;

31 (D) location by latitude and longitude of all wells within 1500 feet of the excavation boundary;

32 (E) ~~(D)~~ a monitoring plan that provides data to delineate the nature and extent of dewatering or
33 depressurization; and

34 (F) ~~(E)~~ certification of all engineering plans and hydrogeological analyses prepared to meet these
35 requirements consistent with professional licensing board statutes and rules governing such
36 activities.

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

3 (5) ~~conservation measures.~~ the The applicant shall provide information on existing conservation
4 measures and conservation measures to be implemented during the permit period as follows:

5 (A) Public water supply systems shall develop and implement a ~~feasible~~ water conservation
6 plan incorporating, at a minimum, the following components. Each component shall be
7 described, including a timetable for implementing each component that does not already
8 exist.

9 (i) ~~adoption~~ Adoption of a water conservation-based rate structure, such as: flat rates,
10 increasing block rates, seasonal rates, or quantity-based ~~surcharges; surcharges.~~

11 (ii) ~~implementation~~ Implementation of a water loss reduction program if unaccounted
12 for water is greater than 15 percent of the total amount produced, as documented
13 annually using a ~~detailed~~ water audit. Water loss reduction programs shall consist
14 of annual water audits, in-field leak detection, and leak ~~repair; repair.~~

15 (iii) ~~adoption~~ Adoption of a water conservation ordinance for irrigation, ~~including~~
16 such ~~measures as:~~ as time-of-day and day-of-week restrictions on lawn and
17 ornamental ~~irrigation, irrigation or~~ automatic irrigation system shut-off devices;
18 ~~or other appropriate measures.~~

19 (iv) ~~implementation~~ Implementation of a retrofit program that makes available indoor
20 water conservation devices to customers, such (~~such~~ as showerheads, toilet
21 flappers, and faucet ~~aerators; aerators).~~

22 (v) ~~implementation~~ Implementation of a public education program, such (~~such~~ as
23 water bill inserts, school and civic presentations, water treatment plant tours, and
24 public services announcements; and ~~announcements, or other appropriate~~
25 ~~measures).~~

26 (vi) ~~evaluation~~ Evaluation of the feasibility of water reuse as a means of conservation,
27 where applicable.

28 (B) Users of water for commercial purposes, other than irrigation of crops and forestry stock,
29 shall develop and implement a water conservation plan as follows:

30 (i) an audit of water use by type of activity, such as process make up water and non-
31 contact cooling water, ~~activity (for example, process make up water, non-contact~~
32 ~~cooling water)~~ including existing and potential conservation and reuse measures
33 for each type of water use; and

34 (ii) an implementation schedule for feasible measures identified in the above item for
35 conservation and reuse of water at the facility.

36 (C) Users of water for irrigation of crops and forestry stock shall provide the following
37 information:

- 1 (i) total acreage with irrigation available;
- 2 (ii) types of crops that may be irrigated;
- 3 (iii) method of irrigation such as ~~(for example,~~ wells that supply water to canals,
4 ditches or central pivot systems or any other irrigation method using ground
5 water); and
- 6 (iv) a statement that the applicant uses conservation practice standards for irrigation
7 as defined by the Natural Resources Conservation Service.
- 8 (6) if ~~If~~ an applicant intends to operate an aquifer storage and recovery program (ASR), the applicant
9 shall provide information on the storage zone, including the depth interval of the storage zone, lateral
10 extent of the projected storage area, construction details of wells used for injection and withdrawal
11 of water, and performance of the ASR program.
- 12 ~~(e) The Director shall issue, modify, revoke, or deny each permit as set forth in G.S. 143-215.15. Permittees may~~
13 ~~apply for permit modifications. Any application submitted by a permittee shall be subject to the public notice and~~
14 ~~comment requirements of G.S. 143-215.15(d).~~
- 15 ~~(f) Permit duration shall be set by the Director as described in G.S. 143-215.16(a). Permit transferability is established~~
16 ~~in G.S. 143-215.16(b).~~
- 17 ~~(e) (g)~~ Persons holding a permit shall submit signed water usage and water level reports to the Director not later than
18 30 days after the end of each permit reporting period as specified in the permit. Monitoring report requirements shall
19 may include:
- 20 (1) amounts ~~Amounts~~ of daily withdrawal from each well; ~~well.~~
- 21 (2) pumping ~~Pumping~~ and static water levels for each supply well as measured with a steel or electric
22 tape, or an alternative method as specified in the permit, at time intervals specified in the permit;
23 ~~permit.~~
- 24 (3) static ~~Static~~ water levels in observation wells at time intervals specified in the permit; ~~permit.~~
- 25 (4) annual ~~Annual~~ sampling by applicants located in the salt water encroachment zone and chloride
26 concentration analysis by a State certified laboratory; ~~and laboratory.~~
- 27 (5) any ~~Any~~ other information the Director determines to be pertinent and necessary to the evaluation
28 of the effects of withdrawals during the application review process.
- 29 ~~(f) (h)~~ Water use permit holders shall not add new wells without prior approval from the Director through a permit
30 modification.
- 31 ~~(g) (i)~~ The Director may require permit holders to ~~(construct~~ observation wells to observe water level and water quality
32 conditions before and after water withdrawals begin if there are concerns about adverse impacts to the aquifer based
33 on the withdrawal amount and location. ~~there is a demonstrated need for aquifer~~ Aquifer monitoring may be necessary
34 to assess the impact of the withdrawal on the aquifer.
- 35 ~~(h) (j)~~ For all water uses other than dewatering of mines, pits or quarries, withdrawals shall be permitted only from
36 wells that are constructed such that the pump intake or intakes are at a shallower depth than the top of the uppermost
37 confined aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological framework.

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

5 ~~(i) (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 withdrawal rates and the permissible extent of dewatering
7 or depressurization shall be determined by the Director using data provided by the applicant, data related to permits
8 under G.S. ~~74-50-74-47~~, and other publicly available information. Withdrawal rates that do not cause adverse impacts,
9 as defined in Rule .0502(c) of this Section, shall be approved.

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

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

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

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

23 ~~(n) (p)~~ The Director shall issue a temporary permit when the following conditions are met:

24 ~~(1) Where~~ an applicant or a permit holder ~~can demonstrate~~ demonstrates that compliance with water
25 withdrawal limits established pursuant to this Section ~~under Section .0500 of this Subchapter~~ is not possible because
26 of construction schedules, requirements of other laws, or other reasons beyond the control of the applicant or permit
27 holder; ~~holder~~, and ~~where~~

28 (2) the applicant or permit holder has made ~~good faith~~ efforts to conserve water and ~~to plan the development~~
29 ~~of other water sources, and sources,~~ the Director may issue a temporary permit with an alternative schedule to attain
30 ~~compliance with provisions of Section .0500 of this Subchapter, as authorized in G.S. 143-215.15(e)(ii).~~

31 (3) the applicant or permit holder provides data from monitoring wells which support a higher withdrawal
32 rate which does not exceed the recharge rate.

33
34 *History Note:* Authority G.S. 143-215.14; 143-215.15; 143-215.16;
35 Eff. August 1, 2002.
36

1 **15A NCAC 02E .0503 PRESCRIBED WATER USE REDUCTIONS IN CRETACEOUS AQUIFER**
2 **ZONES**

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

6 (1) ~~Cretaceous aquifer system zones are regions established in the fresh water portion of the Cretaceous~~
7 ~~aquifer system that delimit zones of salt water encroachment, dewatering and declining water levels.~~
8 ~~These zones are designated on the paper and digital map entitled "Central Coastal Plain Capacity~~
9 ~~Use Area Cretaceous Aquifer Zones" (CCPCUA) on file in the Office of the Secretary of State one~~
10 ~~week prior to the effective date of these Rules~~

11 (2) ~~The reductions specified in this Rule do not apply to intermittent users.~~

12 (3) ~~If a permittee implements an aquifer storage and recovery program (ASR), reduction requirements~~
13 ~~will be based on the total net withdrawals. The reductions specified in this Rule do not apply if the~~
14 ~~volume of water injected into the aquifer is greater than the withdrawal volume. If the withdrawal~~
15 ~~volume is greater than the injected volume, reductions specified in this Rule apply to the difference~~
16 ~~between the withdrawal volume and the injected volume.~~

17 (4) ~~The reductions specified in this Rule shall not reduce permitted water use rates below 100,001~~
18 ~~gallons per day.~~

19 (5) ~~Phase definitions:~~

20 (a) ~~Phase I: The six year period extending into the future from the effective date of this Rule.~~

21 (b) ~~Phase II: The five year period extending into the future from six years after the effective~~
22 ~~date of this Rule to 11 years after the effective date of this Rule.~~

23 (c) ~~Phase III: The five year period extending into the future from 11 years after the effective~~
24 ~~date of this Rule to 16 years after the effective date of this Rule.~~

25 (6) ~~Phase reductions:~~

26 (a) ~~Phase I:~~

27 (i) ~~At the end of the Phase I, permittees who are located in the dewatering zone shall~~
28 ~~reduce annual water use from Cretaceous aquifers by 25% from their approved~~
29 ~~base rate.~~

30 (ii) ~~At the end of the Phase I, permittees who are located in the salt water~~
31 ~~encroachment zone shall reduce annual water use from Cretaceous aquifers by~~
32 ~~25% from their approved base rate.~~

33 (iii) ~~At the end of the Phase I, permittees who are located in the declining water level~~
34 ~~zone shall reduce annual water use from Cretaceous aquifers by 10% from their~~
35 ~~approved base rate.~~

36 (b) ~~Phase II:~~

1 (i) ~~At the end of the Phase II, permittees who are located in the dewatering zone shall~~
2 ~~reduce annual water use from Cretaceous aquifers by 50% from their approved~~
3 ~~base rate.~~

4 (ii) ~~At the end of the Phase II, permittees who are located in the salt water~~
5 ~~encroachment zone shall reduce annual water use from Cretaceous aquifers by~~
6 ~~50% from their approved base rate.~~

7 (iii) ~~At the end of the Phase II, permittees who are located in the declining water level~~
8 ~~zone shall reduce annual water use from Cretaceous aquifers by 20% from their~~
9 ~~approved base rate.~~

10 (e) ~~Phase III:~~

11 (i) ~~At the end of the Phase III, permittees who are located in the dewatering zone~~
12 ~~shall reduce annual water use from Cretaceous aquifers by 75% from their~~
13 ~~approved base rate.~~

14 (ii) ~~At the end of the Phase III, permittees who are located in the salt water~~
15 ~~encroachment zone shall reduce annual water use from Cretaceous aquifers by~~
16 ~~75% from their approved base rate.~~

17 (iii) ~~At the end of the Phase III, permittees who are located in the declining water level~~
18 ~~zone shall reduce annual water use from Cretaceous aquifers by 30% from their~~
19 ~~approved base rate.~~

20 (7) ~~The CCPCUA Cretaceous Aquifer Zones map shall be updated, if necessary, in the sixth, eleventh,~~
21 ~~and sixteenth years following the effective date of this Rule to account for aquifer water level~~
22 ~~responses to phased withdrawal reductions. The map update shall be based on the following~~
23 ~~conditions:~~

24 (a) ~~Rate of decline in water levels in the aquifers;~~

25 (b) ~~Rate of increase in water levels in the aquifers;~~

26 (c) ~~Stabilization of water levels in the aquifers; and~~

27 (d) ~~Chloride concentrations in the aquifers.~~

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

32 (8) ~~The reductions specified in this Rule do not apply to wells exclusively screened or open to the~~
33 ~~Peedee aquifer.~~

34 (9) ~~An applicant may submit documentation supporting the exemption of a well located in the Declining~~
35 ~~Water Level Zone from the withdrawal reductions specified in this Rule. This documentation must~~
36 ~~include a record of monthly static water levels from that well over at least a three year period, ending~~
37 ~~with the month when the request for exemption is submitted. The Director may exempt a well from~~

1 ~~reductions if the water level history shows no pattern of decline during this three year period. A~~
2 ~~well previously exempted from the withdrawal reductions shall become subject to the reduction if~~
3 ~~water levels begin to show a pattern of decline.~~

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5 *History Note: Authority G.S. 143-215.15;*
6 *Eff. August 1, 2002.*

7
8 **15A NCAC 02E .0504 REQUIREMENTS FOR ENTRY AND INSPECTION**

9 (a) The Division may enter and inspect property in order to evaluate wells, pumps, metering equipment or other
10 withdrawal or measurement devices and records of water withdrawals and water levels, if:

- 11 (1) Persons conduct an activity that the Division believes requires the use of water at quantities that
12 subject the person ~~subject to regulation under~~ these Rules;
- 13 (2) A permittee or applicant has not provided data or information on use of water and wells and other
14 water withdrawal facilities as required by these Rules; or
- 15 (3) Water levels and chloride concentrations at the person's facility, or at nearby facilities ~~and/or~~ ~~or~~
16 monitoring stations, indicate that aquifers may be damaged by ~~overpumping, overpumping or~~ salt
17 water encroachment, or other adverse ~~impacts~~ ~~affects~~ that may be attributed to withdrawal by the
18 person.

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

23
24 *History Note: Authority G.S. 143-215.19;*
25 *Eff. August 1, 2002.*

26
27 **15A NCAC 02E .0505 ACCEPTABLE WITHDRAWAL METHODS THAT DO NOT REQUIRE A**
28 **PERMIT**

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

- 32 (1) ~~construct~~ ~~Construct~~ new wells such that the pump intake or intakes are above the top of the
33 uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in
34 the hydrogeological framework;
- 35 (2) ~~report~~ ~~Report~~ surface and ground water use to the Division of Water Resources on an annual basis
36 on a form supplied by the Division; and

1 (3) ~~withdraw~~ ~~Withdraw~~ water in a manner that does not damage the aquifer, ~~aquifer~~ or cause salt water
2 ~~encroachment, encroachment~~ or other adverse impacts.

3 (b) Requirements of this Rule ~~These requirements~~ do not apply to withdrawals to supply an individual domestic
4 dwelling.

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

7
8 *History Note:* Authority G.S. 143-215.14; 143-355(k);
9 Eff. August 1, 2002.

10
11 **15A NCAC 02E .0506 CENTRAL COASTAL PLAIN CAPACITY USE AREA STATUS REPORT**

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

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

23
24 *History Note:* Authority G.S. 143-215.14;
25 Eff. August 1, 2002.

26
27 **15A NCAC 02E .0507 DEFINITIONS**

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

- 29 (1) Approved base rate: The larger of a person's January 1, 1997 through December 31, 1997 or August
30 1, 1999 through July 31, 2000 annual water use rate from the Cretaceous aquifer system, or an
31 adjusted water use rate determined by through negotiation with the Division based upon
32 documentation of the following information: ~~using documentation provided by the applicant of:~~
33 (a) water use reductions made since January 1, 1992;
34 (b) use of wells for which funding has been approved or for which plans have been approved
35 by the ~~Division of Environmental Health~~ Department of Environmental Quality by the
36 ~~effective date of this Rule~~ August 1, 2002;
37 (c) the portion of a plant nursery operation using low volume micro-irrigation; or

- 1 (d) other ~~relevant~~ information pertaining to water use during the time periods specified.
- 2 (2) Aquifer: Water-bearing earth materials that are capable of yielding water in usable quantities to a
3 well or spring.
- 4 (3) Aquifer recharge: Precipitation that infiltrates into the subsurface.
- 5 (4) ~~(3)~~ Aquifer storage and recovery program (ASR): Controlled injection of water into an aquifer with
6 the intent to store water in the aquifer for subsequent withdrawal and use.
- 7 (5) ~~(4)~~ Confining unit: A geologic formation that does not yield usable economically practical quantities
8 of water to wells or springs. Confining units separate aquifers and slow the movement of ground
9 water.
- 10 (6) ~~(5)~~ Cretaceous aquifer system: A system of aquifers in the North Carolina coastal plain that is
11 comprised of water-bearing earth materials deposited during the Cretaceous period of geologic
12 time. The extent of the Cretaceous Aquifer System is defined in the hydrogeological framework
13 and includes the Peedee, Black Creek, Upper Cape Fear and Lower Cape Fear aquifers.
- 14 (7) Cretaceous aquifer system zones: Regions established in the fresh water portion of the Cretaceous
15 aquifer system that delimit zones of salt water encroachment, dewatering and declining water levels.
16 These zones are designated on the paper and digital map entitled "Central Coastal Plain Capacity
17 Use Area Cretaceous Aquifer Zones" (CCPCUA) on file in the Office of the Secretary of State.
18 These zones encompass areas sensitive to over-development because aquifer withdrawal rates can
19 exceed recharge rates. Between August 1, 2002 and July 31, 2019 Cretaceous Aquifer system zone
20 users were required to reduce withdrawals from their Approved Base Rates up to 30% in the
21 declining water level zone and up to 75% in the dewatering and salt water encroachment zones. The
22 reductions came about through large investments by water users in alternative water sources and
23 water treatment systems. Intermittent users were not required to reduce withdrawals. Users of wells
24 exclusively screened or open to the Peedee aquifer were not required to reduce withdrawals.
- 25 (8) ~~(6)~~ Dewatering: Dewatering occurs when aquifer water levels are depressed below the top of a confined
26 aquifer or water table declines adversely impact affect the resource.
- 27 (9) ~~(7)~~ Flat rates: Unit price remains the same regardless of usage within customer class.
- 28 (10) ~~(8)~~ Fresh water: Water containing chloride concentrations equal to or less than 250 milligrams per liter.
- 29 (11) ~~(9)~~ Gravel pack: Sand or gravel sized material inside the well bore and outside the well screen and
30 casing.
- 31 (12) ~~(10)~~ Ground water: Water in pore spaces or void spaces of subsurface sediments or consolidated rock.
- 32 (13) ~~(11)~~ Hydrogeological framework: A three-dimensional representation of aquifers and confining units
33 that is stored in Division data bases and may be adjusted by applicant supplied information.
- 34 (14) ~~(12)~~ Increasing block rates: Unit price increases with additional usage.
- 35 (15) ~~(13)~~ Intermittent users: Persons who withdraw ground water less than 60 days per calendar year and or
36 who withdraw less than 15 million gallons of ground water in a calendar year; or aquaculture
37 operations registered by the Board of Agriculture in accordance with G.S. 106-761 licensed under

1 ~~the authority of G.S. 106-761~~ using water for the initial filling of ponds or refilling of ponds no more
2 frequently than every five years.

3 (16) ~~(14)~~ Observation well: A non-pumping well screened in a particular aquifer where water levels can be
4 measured and water samples can be obtained.

5 (17) ~~(15)~~ Pumping water level: The depth to ground water in a pumping well as measured from a known
6 land surface elevation. Measurements shall be made four hours after pumping begins.
7 Measurements shall be within accuracy limits of plus or minus 0.10 feet.

8 (18) ~~(16)~~ Quantity based surcharges: Surcharges billed with usage over a certain determined quantity.

9 (19) ~~(17)~~ Recharge rate: The rate of which water replenishes an aquifer. Recharge rates for the Cretaceous
10 aquifer system vary depending on the thickness and hydraulic conductivity of the overlying
11 sedimentary layers. A best fit line through water levels from the Division operated monitoring wells
12 over a given time interval will show if withdrawals exceed, are less than, or are equal to the aquifer
13 recharge rate.

14 (20) ~~(17)~~ Salt water: Water containing chloride concentrations equal to and in excess of 250 milligrams per
15 liter.

16 (21) ~~(18)~~ Salt water encroachment: The lateral or vertical migration of salt water toward areas occupied by
17 fresh water. This may occur in aquifers due to natural or man-made causes.

18 (22) ~~(19)~~ Seasonal rates: Unit price changes ~~prices change~~ according to the season.

19 (23) ~~(20)~~ Static water level: The depth to ground water in a non-pumping well as measured from a known
20 land surface elevation. Measurements shall be made after pumping has ceased for 12 hours.
21 Measurements shall be within accuracy limits of plus or minus 0.10 feet.

22 (24) ~~(21)~~ Unaccounted for water: The difference between the total water entering the system, including
23 produced and purchased, system ~~(produced and purchased)~~ and the total metered or otherwise
24 accounted for water usage.

25 (25) ~~(22)~~ Water table: The water level in an unconfined aquifer.

26
27 *History Note: Authority G.S. 143-215.14;*
28 *Eff. August 1, 2002.*