1	15A NCAC 021	E .0106 is readopted as published in 35:21 NCR 2350 as follows:
2		
3	15A NCAC 02	E .0106 DEFINITIONS
4	As used herein,	unless the context otherwise requires:
5	(1)	"Director" means the Director of the Division of Water Resources
6	(2)	"Division" means the Division of Water Resources.
7		
8	History Note:	Authority G.S. 87-87; 143-215.14; 143-215.21;
9		Eff. March 1, 1985;
10		Amended Eff. August 1, 2002;
11		Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0107 is readopted as published in 35:21 NCR 2350 as follows: 2 3 15A NCAC 02E .0107 DELEGATION 4 (a) The Director is delegated the authority to grant, modify, revoke or deny permits under G.S. 143-215.15 and G.S. 5 143-215.16. 6 (b) The Director may delegate any permitting function given by the Rules of this Subchapter. 7 (c) The Director is delegated the authority to assess civil penalties and request the Attorney General to institute civil 8 actions under G.S. 143-215.17. 9 (d) The Director is delegated the authority to process applications and collect fees for registration of water 10 withdrawals and transfers under G.S. 143-215.22H and G.S. 143-215.3(a)(1b). 11 (e) The Director may delegate any water withdrawal or transfer registration processing functions given by the Rules 12 of this Subchapter. 13 14 History Note: Filed as a Temporary Amendment Eff. October 14, 1991 for a Period of 180 Days to Expire on 15 April 11, 1992; 16 Authority G.S. 143-215.3(a)(1); 143-215.3(a)(4); 17 Eff. March 1, 1985; 18 Amended Eff. August 1, 2002; September 1, 1994; April 1, 1992;

Readopted Eff. January 1, 2022.

19

1 15A NCAC 02E .0301 is readopted with changes as published in 35:21 NCR 2351-2352 as follows:

2

3

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29 30

31

32 33

15A NCAC 02E .0301 APPLICATION; PROCESSING FEES

- 4 (a) Any person subject to G.S. 143-215.22H, shall complete, sign, and submit an application for registration, on a
- 5 form provided by the Department, to the Director of the Division of Water Resources. The registration application
- and registration processing fee as set forth in Paragraph (b) of this Rule (if applicable) shall be mailed to the Division
- 7 of Water Resources, North Carolina Department of Environment, Health, and Natural Resources, Post Office Box
- 8 27687, Raleigh, North Carolina 27611-7687 Environmental [Quality,] Quality. The mailing address shall be provided
- 9 by Division of Water Resources.
- (b) Except as otherwise provided in this Rule, a non-refundable registration processing fee in the amount of fifty
 dollars (\$50.00) shall be paid when the registration application form is submitted.
 - (1) No registration application form is complete until the registration processing fee is paid.
 - (2) Each facility from which a person withdraws or transfers one million gallons per day or more must be separately registered. The registration application for each facility to be registered must include the fee in the amount set forth in this Rule.
 - (3)(2) A late registration fee in the amount of five dollars (\$5.00) per day for each day the registration of a water transfer or withdrawal is late, up to a maximum of five hundred dollars (\$500.00), shall be assessed as a penalty for failure to register the water transfer or withdrawal in a timely manner. The penalty <u>pursuant to G.S. 143-215.22H(e)</u> shall stop stops accruing on the date of receipt of the completed registration application by the Division of Water Resources.
 - (4)(3) Payment of the registration processing fee may be by check or money order made payable to the "N. C. Department of Environment, Health, and Natural Resources." "N. C. Department of Environmental Quality." The check or money order shall refer to the water withdrawal or transfer registration application.
 - (c) Except as otherwise provided in this Rule, upon receipt of a properly completed application form and the registration processing fee, the applicant shall be issued a receipt of registration.
 - (d) Pursuant to G.S. 143-215.3(a)(la), and G.S. 143-215.22H, no fees including late registration fees for failing to register or update registrations in a timely manner, are required to be paid under this Rule by a farmer who submits an application for or an update of a registration of a withdrawal or transfer that pertains to farming operations. Upon receipt of a properly completed application from a farmer, the applicant will be issued a receipt of registration. whose activities are directly related or incidental to the production of crops, fruits, vegetables, ornamental and flowering plants, dairy products, livestock, poultry, and other agricultural products, or to the creation or maintenance of waterfowl impoundments.
- (e) Pursuant to G.S. 143-215.22H(c), separate registration of a water withdrawal or transfer is not required of a local
 government that completes and periodically revises and updates its water supply plan pursuant to G.S. 143-355(l).
- 36 (f) Any person who withdraws or transfers one million gallons or more in any single day must register the withdrawal
 37 or transfer.

1		
2	History Note:	Filed as a Temporary Rule Eff. October 14, 1991 for a Period of 180 Days to Expire on April 11,
3		1992;
4		Authority G.S. 143-215.3(a)(1a); 143-215.3(a)(1b); 143-215.22H; 143-355(1);
5		Eff. April 1, 1992;
6		Amended Eff. September 1, 1994;
7		Readopted Eff. January 1, 2022.
8		

1 15A NCAC 02E .0501 is readopted as published in 35:21 NCR 2350 as follows: 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 <u>(2)</u> Carteret 9 <u>(3)</u> Craven 10 <u>(4)</u> **Duplin** 11 <u>(5)</u> **Edgecombe** 12 <u>(6)</u> Greene 13 <u>(7)</u> <u>Jones</u> 14 **(8)** Lenoir 15 <u>(9)</u> Martin (10)Onslow 16 17 **Pamlico** <u>(11)</u> 18 <u>(12)</u> <u>Pitt</u> 19 <u>(13)</u> Washington 20 Wayne; and <u>(14)</u> 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. 26 27 History Note: Authority G.S. 143-215.13; 28 Eff. August 1, 2002; 29 Readopted Eff. January 1, 2022.

1	15A NCAC 02E .0502 is readopted with changes as published in 35:21 NCR 2350 with changes as follows:
2	
3	15A NCAC 02E .0502 WITHDRAWAL PERMITS
4	(a) Existing ground water withdrawal permits issued in Capacity Use Area No. 1 (15A NCAC 02E .0200) within the
5	Central Coastal Plain Capacity Use Area are reissued under Section .0500 of this Subchapter and are valid until the
6	expiration date specified in each permit. Water use permits are no longer required for withdrawals in Hyde and Tyrrell
7	Counties as of the effective date of this Rule. Permits are not required for surface water use under Section .0500 of
8	this Subchapter in the Central Coastal Plain Capacity Use Area as delineated in Rule .0501 of this Section.
9	(b) No person shall withdraw ground water after the effective date of this Rule in excess of 100,000 gallons per day
10	by a well, group of wells operated as a system, or sump for any purpose unless such person shall first obtain he or she
11	obtains a water use permit from the Director. Existing withdrawals of ground water as of the effective date of this
12	Rule and proposed withdrawals previously approved for funding appropriated pursuant to the "Clean Water and
13	Natural Gas Critical Needs Bond Act of 1998" or other local, state or federally funded projects as of the effective date
14	of this Rule shall be allowed to proceed with construction or to continue to operate under interim status until a permit
15	has been issued or denied by the Director, provided that persons withdrawing in excess of 100,000 gallons per day by
16	a well, group of wells operated as a system, or sump comply with the following requirements:
17	(1) Persons conducting withdrawals in the Capacity Use Area that require a permit shall submit a permit
18	application to the Division of Water Resources within 180 days of the effective date of this Rule.
19	(2) Persons who have submitted applications shall provide any additional information requested by the
20	Division of Water Resources for processing of the permit application within 30 days of the receipt
21	of that request.
22	(3) Persons conducting withdrawals in the Capacity Use Area that require a permit shall submit water
23	level and water use data on a form supplied by the Division four times a year, within 30 days of the
24	end of March, June, September, and December until a permit has been issued or denied by the
25	Division of Water Resources.
26	(c) No ground water withdrawal shall result in adverse impacts, including dewatering of aquifers, encroachment of
27	salt water, land subsidence or sinkhole development, or decline in aquifer water levels that indicate aggregate water
28	use exceeds the aquifer recharge rate.] Ground water withdrawals shall be governed by the following standards:
29	(1) Adverse impacts of ground water withdrawals shall be avoided or minimized. Adverse impacts
30	include, but are not limited to:
31	(A) dewatering of aquifers;
32	(B) encroachment of salt water;
33	(C) land subsidence or sinkhole development; or
34	(D) declines in aquifer water levels that indicate that aggregate water use exceeds the aquifer
35	replenishment rate.
36	(2) Adverse impacts on other water users from ground water withdrawals shall be corrected or
37	minimized through efficient use of water and development of sustainable water sources.

1	(3)	In determining the importance and necessity of a proposed withdrawal the efficiency of water use
2		and implementation of conservation measures shall be considered.
3	(d) An application	on for a water use permit must be submitted on a form approved by the Director to the North Carolina
4	Division of Wate	er Resources. The application shall describe the purpose or purposes for which water shall be used,
5	shall set forth the	e method and location of withdrawals, shall justify the quantities needed, and shall document water
6	conservation me	asures to be used by the applicant to ensure efficient use of water and avoidance of waste. Any other
7	information nece	essary to determine whether to grant or deny an application as requested by the Division shall be
8	submitted to the	Division within 30 days of the request. Withdrawal permit applications shall include the following
9	information:	
10	(1)	<u>location</u> <u>Location</u> by latitude and longitude of all wells to be used for withdrawal of water <u>and all</u>
11		other wells within 1500 feet of the applicant's wells;
12	(2)	specifications Specifications for design and construction of existing and proposed production and
13		monitoring wells including well diameter, total depth of well, depths of all open hole or screened
14		intervals that will yield water to the well, depth of pump intake(s), size, capacity, and type of pump,
15		depth to gravel pack, and depth measurements shall be within accuracy limits of plus or minus 0.10
16		feet and referenced to a known land surface elevation;
17		(A) Well diameter;
18		(B) Total depth of the well;
19		(C) Depths of all open hole or screened intervals that will yield water to the well;
20		(D) Depth of pump intake(s);
21		(E) Size, capacity and type of pump;
22		(F) Depth to top of gravel pack; and
23		(G) Depth measurements shall be within accuracy limits of plus or minus 0.10 feet and
24		referenced to a known land surface elevation.
25		Exceptions may be made where specific items of information are not critical, as determined by the
26		Director based upon site specific conditions, to manage the ground water resource;
27	(3)	withdrawal withdrawal permit applications for use of ground water from the Cretaceous aquifer
28		system shall be reviewed protecting [recognizing] the Cretaceous aquifer system zones. include
29		plans to reduce water use from these aquifers as specified in Rule .0503 of this Section. Withdrawal
30		$rates \ from \ the \ Cretaceous \ aquifer \ system \ that \ exceed \ the \ approved \ base \ rate \ may \ be \ permitted \ during$
31		Phase I of Rule .0503 of this Section if the applicant can demonstrate to the Director's satisfaction a
32		need for the greater amount. Cretaceous aquifer system wells shall be identified using the
33		specifications in Rule .0502(d)(1) and .0502(d)(2) of this Section and the hydrogeological
34		framework;
35	(4)	withdrawal Withdrawal permit applications for dewatering of mines, pits pits, or quarries shall
36		include a dewatering or depressurization plan that includes:
37		(A) the current withdrawal rate or estimates of the proposed withdrawal rate;

1		(B)	the loca	tion, design designs, and specifications of any sumps, drains drains, or other		
2			withdray	wal sources including wells and trenches;		
3		(C)	the later	al extent and depth of the zone(s) to be dewatered or depressurized;		
4		(D)	location	ocation by latitude and longitude of all wells within 1500 feet of the excavation boundary;		
5		<u>(E) (D)</u>	a monito	monitoring plan that provides data to delineate the nature and extent of dewatering or		
6			depressi	epressurization; and		
7		<u>(F)(E)</u>	certifica	ertification of all engineering plans and hydrogeological analyses prepared to meet these		
8			requiren	equirements consistent with professional licensing board statutes and rules governing such		
9			activitie	s.		
10		Exception	ons may l	be made where specific items of information are not critical, as determined by the		
11		Director	based up	oon site specific conditions, to manage the ground water resource; and		
12	(5)	conserve	ation me	asures. the The applicant shall provide information on existing conservation		
13		measure	s and cor	nservation measures to be implemented during the permit period as follows:		
14		(A)	Public v	water supply systems shall develop and implement a feasible water conservation		
15			plan inc	orporating, at a minimum, the following components. Each component shall be		
16			describe	d, including a timetable for implementing each component that does not already		
17			exist.			
18			(i)	adoption Adoption of a water conservation-based rate structure, such as: flat rates,		
19				increasing block rates, seasonal rates, or quantity-based surcharges; surcharges.		
20			(ii)	implementation Implementation of a water loss reduction program if unaccounted		
21				for water is greater than 15 percent of the total amount produced, as documented		
22				annually using a detailed water audit. Water loss reduction programs shall consist		
23				of annual water audits, in-field leak detection, and leak repair; repair.		
24			(iii)	adoption Adoption of a water conservation ordinance for irrigation, including		
25				such measures as: as time-of-day and day-of-week restrictions on lawn and		
26				ornamental irrigation, irrigation or automatic irrigation system shut-off devices;		
27				or other appropriate measures.		
28			(iv)	implementation Implementation of a retrofit program that makes available indoor		
29				water conservation devices to customers, such (such as showerheads, toilet		
30				flappers, and faucet aerators; aerators).		
31			(v)	implementation Implementation of a public education program, such (such as		
32				water bill inserts, school and civic presentations, water treatment plant tours, and		
33				public services announcements; and announcements, or other appropriate		
34				measures).		
35			(vi)	evaluation Evaluation of the feasibility of water reuse as a means of conservation,		
36				where applicable.		

1	((B)	Users of	water for commercial purposes, other than irrigation of crops and forestry stock,
2			shall dev	velop and implement a water conservation plan as follows:
3			(i)	an audit of water use by type of activity, such as process make up water and non-
4				contact cooling water, activity (for example, process make up water, non-contact
5				eooling water) including existing and potential conservation and reuse measures
6				for each type of water use; and
7			(ii)	an implementation schedule for feasible measures identified in the above item for
8				conservation and reuse of water at the facility.
9	•	(C)	Users o	f water for irrigation of crops and forestry stock shall provide the following
10			informat	tion:
11			(i)	total acreage with irrigation available;
12			(ii)	types of crops that may be irrigated;
13			(iii)	method of irrigation $\underline{\text{such as}}$ (for example, wells that supply water to canals,
14				ditches or central pivot systems or any other irrigation method using ground
15				water); and
16			(iv)	a statement that the applicant uses conservation practice standards for irrigation
17				as defined by the Natural Resources Conservation Service.
18	(6)	if If an	applicant	intends to operate an aquifer storage and recovery program (ASR), the applicant
19	:	shall pro	vide info	rmation on the storage zone, including the depth interval of the storage zone, lateral
20	•	extent of	the proj	ected storage area, construction details of wells used for injection and withdrawal
21	•	of water.	and per	formance of the ASR program.
22	(e) The Director	shall iss ı	ue, modi	fy, revoke, or deny each permit as set forth in G.S. 143 215.15. Permittees may
23	apply for permit n	nodificat	tions. A	ny application submitted by a permittee shall be subject to the public notice and
24	comment requiren	nents of	G.S. 143	-215.15(d).
25	(f) Permit duration	n shall be	set by th	ne Director as described in G.S. 143-215.16(a). Permit transferability is established
26	in G.S. 143 215.16	6(b).		
27	(e) (g) Persons ho	lding a p	ermit sh	all submit signed water usage and water level reports to the Director not later than
28	30 days after the e	nd of ea	ch permi	t reporting period as specified in the permit. Monitoring report requirements shall
29	may include:			
30	(1)	<u>amounts</u>	Amount	s of daily withdrawal from each well; well.
31	(2)	pumping	Pumpin	g and static water levels for each supply well as measured with a steel or electric
32	1	tape, or	an altern	ative method as specified in the permit, at time intervals specified in the permit;
33	i	permit.		
34	(3)	static Sta	itic water	r levels in observation wells at time intervals specified in the permit; permit.
35	(4)	<u>annual</u>	Annual sa	ampling by applicants located in the salt water encroachment zone and chloride
36	•	concentr	ation ana	alysis by a State certified <u>laboratory; and</u> laboratory.

1	(5) <u>any</u> Any other information the Director determines to be pertinent and necessary to the evaluation
2	of the effects of withdrawals during the application review process.
3	(f) (h) Water use permit holders shall not add new wells without prior approval from the Director through a permit
4	modification.
5	(g) (i) The Director may require permit holders to construct observation wells to observe water level and water quality
6	conditions before and after water withdrawals begin if there are concerns about adverse impacts to the aquifer based
7	on the withdrawal amount and location. there is a demonstrated need for aquifer Aquifer monitoring may be necessary
8	to assess the impact of the withdrawal on the aquifer.
9	(h) (j) For all water uses other than dewatering of mines, pits pits, or quarries, withdrawals shall be permitted only
10	from wells that are constructed such that the pump intake or intakes are at a shallower depth than the top of the
11	uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological
12	framework. Where wells in existence as of the effective date of this Rule August 1, 2002 are not in compliance with
13	the requirements of this provision, the permit shall include a compliance schedule for retrofitting or replacement of
14	non-compliant wells. Withdrawals from unconfined aquifers shall not lower the water table by an amount large
15	enough to decrease the effective thickness of the unconfined aquifer by more than 50 percent.
16	(i) (k) For withdrawals to dewater mines, pits pits, or quarries, the permit shall delimit the extent of the area and depths
17	of the aquifer(s) to be dewatered or depressurized. Maximum withdrawal rates and the permissible extent of
18	dewatering or depressurization shall be determined by the Director using data provided by the applicant, data related
19	to permits under G.S. 74-50 74-47, and other publicly available information. Withdrawal rates that do not cause
20	adverse impacts, as defined in Rule .0502(c) of this Section, Paragraph (c) of this Rule. shall be approved.
21	(i) (1) Withdrawals of water that cause changes in water quality such that the available uses of the resource are
22	adversely affected, impacted, by dewatering or salt water encroachment, shall not be permitted. For example,
23	withdrawals shall not be permitted that result in migration of ground water that contains more than 250 milligrams per
24	liter chloride into pumping wells that contain chloride at concentrations below 250 milligrams per liter.
25	(k) (m) General permits may be developed by the Division and issued by the Director for categories of withdrawal
26	that involve the same or substantially similar operations, have similar withdrawal characteristics, require the same
27	limitations or operating conditions, and require similar monitoring.
28	(1) (n) Permitted water users may withdraw and sell or transfer water to other users provided that their permitted
29	withdrawal limits are not exceeded.
30	(m) (o) A permitted water user may sell or transfer to other users a portion of his permitted withdrawal. To carry out
31	such a transfer, the original permittee must request a permit modification to reduce his permitted withdrawal and the
32	proposed recipient of the transfer must apply for a new or amended withdrawal permit. permit under Section .0500 of
33	this Subchapter.
34	(n) (p) The Director shall issue a temporary permit when the following conditions are met:
35	(1) Where an applicant or a permit holder can demonstrate demonstrates that compliance with water
36	withdrawal limits established <u>pursuant to this Section under Section .0500 of this Subchapter</u> is not

1	possible because of construction schedules, requirements of other laws, or other reasons beyond the
2	control of the applicant or permit holder; holder, and where
3	(2) the applicant or permit holder has made good faith efforts to conserve water and to plan the developmen
4	of other water sources, sources; and sources, the Director may issue a temporary permit with a
5	alternative schedule to attain compliance with provisions of Section .0500 of this Subchapter, as
6	authorized in G.S. 143 215.15(c)(ii).
7	(3) the applicant or permit holder provides data from monitoring wells [which] that support a higher
8	withdrawal rate which does not exceed the recharge rate.
9	
10	History Note: Authority G.S. 143-215.14; 143-215.15; 143-215.16;
11	Eff. August 1, 2002;
12	Readopted Eff. January 1, 2022.

1	15A NCAC 021	E .0503 is	repealed through r	eadoption a	as publ	ished in 35:21 NC	R 23	50 as follows:	
2									
3	15A NCAC 02	E .0503	PRESCRIBED	WATER	USE	REDUCTIONS	IN	CRETACEOUS	AQUIFER
4			ZONES						
5									
6	History Note:	Author	rity G.S. 143-215.15	5;					
7		Eff. Au	gust 1, 2002;						
8		Repeal	ed Eff. January 1, .	<u> 2022.</u>					

1	15A NCAC 02E	.0504 is readopted as published in 35:21 NCR 2350 with changes as follows:
2		
3	15A NCAC 02E	.0504 REQUIREMENTS FOR ENTRY AND INSPECTION
4	(a) The Division	n may enter and inspect property in order to evaluate wells, pumps, metering equipment metering
5	equipment, or ot	her withdrawal or measurement devices and records of water withdrawals and water levels, if:
6	(1)	Persons conduct an activity that the Division believes requires the use of water at quantities that
7		subject the person [subject to] regulation under these Rules; pursuant to Rule .0502(b) of this
8		Section.
9	(2)	A permittee or applicant has not provided data or information on use of water and wells and other
10		water withdrawal facilities as required by these Rules; or
11	(3)	Water levels and chloride concentrations at the person's facility, or at nearby facilities [and/or-] or
12		monitoring stations, indicate that aquifers may be damaged by overpumping, overpumping or salt
13		water encroachment, or other adverse impacts affects that may be attributed to withdrawal by the
14		person.
15	(b) All informa	tion submitted to fulfill the requirements of these Rules, or to obtain a permit under these Rules, or
16	obtained by insp	pection under these Rules, shall be treated as Confidential Business Information, if requested by the
17	applicant, and fo	ound to be such by the Division. Division pursuant to G.S. 143-215.19(e). Reports defined in Rule
18	.0502(e) .0502(g	e) of this Section are not considered Confidential Business Information.
19		
20	History Note:	Authority G.S. 143-215.19;
21		Eff. August 1, 2002;
22		Readopted Eff. January 1, 2022.

1	15A NCAC 02E	.0505 is readopted as published in 35:21 NCR 2350 as follows:
2		
3	15A NCAC 02E	2.0505 ACCEPTABLE WITHDRAWAL METHODS THAT DO NOT REQUIRE A
4		PERMIT
5	(a) As of the effe	extive date of this Rule, any Any person who is not subject to Rule .0502 of this Section and withdraws
6	more than 10,00	0 gallons per day from surface or ground water in the Central Coastal Plain Capacity Use Area, shall
7	register such wit	hdrawals on a form supplied by the Division and comply with the following provisions:
8	(1)	construct Construct new wells such that the pump intake or intakes are above the top of the
9		uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in
10		the hydrogeological framework;
11	(2)	report Report surface and ground water use to the Division of Water Resources on an annual basis
12		on a form supplied by the Division; and
13	(3)	withdraw Withdraw water in a manner that does not damage the aquifer, aquifer or cause salt water
14		encroachment, encroachment- or other adverse impacts.
15	(b) Requirement	ats of this Rule These requirements do not apply to withdrawals to supply an individual domestic
16	dwelling.	
17	(c) Agricultural	water users may either register water use with the Division of Water Resources as provided in this
18	Rule or provide	the information to the North Carolina Department of Agriculture and Consumer Services.
19		
20	History Note:	Authority G.S. 143-215.14; 143-355(k);
21		Eff. August 1, 2002;
22		Readopted Eff. January 1, 2022.

l	15A NCAC 02I	.0506 is repealed through readoption as published in 35:21 NCR 2350 as follows:
2		
3	15A NCAC 02	.0506 CENTRAL COASTAL PLAIN CAPACITY USE AREA STATUS REPORT
1		
5	History Note:	Authority G.S. 143-215.14;
5		Eff. August 1, 2002;
7		Repealed Eff. January 1, 2022.

1	15A NCAC 02E	.0507 is r	eadopted as published in 35:21 NCR 2350 with changes as follows:
2			
3	15A NCAC 02E	2.0507	DEFINITIONS
4	The following is	a list of d	efinitions for terms found in Section .0500 of this Subchapter:
5	(1)	Approve	d base rate: The larger of a person's January 1, 1997 through December 31, 1997 or August
6		1, 1999	through July 31, 2000 annual water use rate from the Cretaceous aquifer system, or an
7		adjusted	water use rate determined by through negotiation with the Division based upon
8		documen	ntation of the following information: using documentation provided by the applicant of:
9		(a)	water use reductions made since January 1, 1992;
10		(b)	use of wells for which funding has been approved or for which plans have been approved
11			by the Division of Environmental Health Department of Environmental Quality by the
12			effective date of this Rule August 1, 2002;
13		(c)	the portion of a plant nursery operation using low volume micro-irrigation; or
14		(d)	other relevant information pertaining to water use during the time periods specified.
15	(2)	Aquifer:	Water-bearing earth materials that are capable of yielding water in usable quantities to a
16		well or s	pring.
17	<u>(3)</u>	Aquifer	recharge: Precipitation that infiltrates into the subsurface. The addition of water to the
18		zone of s	saturation.
19	<u>(4) (3)</u>	Aquifer	storage and recovery program (ASR): Controlled injection of water into an aquifer with
20		the inten	t to store water in the aquifer for subsequent withdrawal and use.
21	<u>(5)</u> (4)	Confinin	g unit: A geologic formation that does not yield usable economically practical quantities
22		of water	to wells or springs. Confining units separate aquifers and slow the movement of ground
23		water.	
24	<u>(6)</u> (5)	Cretaceo	ous aquifer system: A system of aquifers in the North Carolina coastal plain that is
25		comprise	ed of water-bearing earth materials deposited during the Cretaceous period of geologic
26		time. Th	ne extent of the Cretaceous Aquifer System is defined in the hydrogeological framework
27		and inclu	ides the Peedee, Black Creek, Upper Cape Fear <u>Upper Cape Fear.</u> and Lower Cape Fear
28		aquifers.	
29	<u>(7)</u>	Cretaceo	ous aquifer system zones: Regions established in the fresh water portion of the Cretaceous
30		aquifer s	system that delimit zones of salt water encroachment, [dewatering] dewatering, and
31		declining	g water levels. These zones are designated on the paper and digital map entitled "Central
32		Coastal I	Plain Capacity Use Area Cretaceous Aquifer Zones" (CCPCUA) on file in the Office of the
33		Secretary	y of State. These zones encompass areas sensitive to over-development because aquifer
34		withdraw	val rates can exceed recharge [rates. Between] rates and includes the regions where, between
35		<u>August</u>	1, 2002 and [July 31, 2019] July 31, 2019, Cretaceous Aquifer system zone users were
36		required	to reduce withdrawals from their Approved Base Rates up to 30% in the declining water
37		level zor	ne and up to 75% in the dewatering and salt water encroachment zones. [The reductions

1		came about through large investments by water users in alternative water sources and water
2		treatment systems.] Intermittent users [were not required to reduce withdrawals. Users] and users
3		of wells exclusively screened or open to the Peedee aquifer were not required to reduce withdrawals.
4	<u>(8)</u> (6)	Dewatering: Dewatering occurs when aquifer water levels are depressed below the top of a confined
5		aquifer or water table declines adversely impact affect the resource.
6	<u>(9)</u> (7)	Flat rates: Unit price remains the same regardless of usage within customer class.
7	<u>(10)</u> (8)	Fresh water: Water containing chloride concentrations equal to or less than 250 milligrams per liter.
8	<u>(11)</u> (9)	Gravel pack: Sand or gravel sized material inside the well bore and outside the well screen and
9		casing.
10	<u>(12)</u> (10	Ground water: Water in pore spaces or void spaces of subsurface sediments or consolidated rock.
1	<u>(13)</u> (11	Hydrogeological framework: A three-dimensional representation of aquifers and confining units
12		that is stored in Division data bases and may be adjusted by applicant supplied information.
13	<u>(14)</u> (12) Increasing block rates: Unit price increases with additional usage.
14	<u>(15)</u> (13) Intermittent users: Persons who withdraw ground water less than 60 days per calendar year [and]
15		or who withdraw less than 15 million gallons of ground water in a calendar year; or aquaculture
16		operations registered by the Board of Agriculture in accordance with G.S. 106-761 licensed under
17		the authority of G.S. 106-761 using water for the initial filling of ponds or refilling of ponds no more
18		frequently than every five years.
19	<u>(16)</u> (14	Observation well: A non-pumping well screened in a particular aquifer where water levels can be
20		measured and water samples can be obtained.
21	<u>(17)</u> (15	Pumping water level: The depth to ground water in a pumping well as measured from a known
22		land surface elevation. Measurements shall be made four hours after pumping begins.
23		Measurements shall be within accuracy limits of plus or minus 0.10 feet.
24	<u>(18)</u> (16	Quantity based surcharges: Surcharges billed with usage over a certain determined quantity.
25	<u>(19)</u> (17	() Recharge rate: The rate of which water replenishes an aquifer. [Recharge rates for the Cretaceous
26		aquifer system vary depending on the thickness and hydraulic conductivity of the overlying
27		sedimentary layers. A best fit line through water levels from the Division operated monitoring wells
28		over a given time interval will show if withdrawals exceed, are less than, or are equal to the aquifer
29		recharge rate.]
30	<u>(20) (17</u>	Salt water: Water containing chloride concentrations <u>equal to and</u> in excess of 250 milligrams per
31		liter.
32	<u>(21) (18</u>	Salt water encroachment: The lateral or vertical migration of salt water toward areas occupied by
33		fresh water. This may occur in aquifers due to natural or man-made causes.
34	(22) (19	Seasonal rates: Unit <u>price changes</u> prices change according to the season.
35	<u>(23)</u> (20	Static water level: The depth to ground water in a non-pumping well as measured from a known
36		land surface elevation. Measurements shall be made after pumping has ceased for 12 hours.
37		Measurements shall be within accuracy limits of plus or minus 0.10 feet.

1	<u>(24)</u> (2	1) Unaccounted for water: The difference between the total water entering the system, including
2		produced and purchased, system (produced and purchased) and the total metered or otherwise
3		accounted for water usage.
4	<u>(25)</u> (2	2) Water table: The water level in an unconfined aquifer.
5		
6	History Note:	Authority G.S. 143-215.14;
7		Eff. August 1, 2002;
8		Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0601 is readopted as published in 35:21 NCR 2359 as follows: 2 3 15A NCAC 02E .0601 **SCOPE** 4 The purpose of this Section is to minimize harmful impacts of drought and water supply emergencies on public health 5 and safety, environmental quality, and the economy by establishing minimum standards and practices for water 6 shortage response planning, water use reporting, water conservation, and water reuse during droughts and water supply 7 emergencies. 8 9 History Note: Authority G.S. 143-354(a)(1); 143-354(a)(8); S.L. 2002-167; 10 Eff. March 19, 2007; Readopted Eff. January 1, 2022. 11

1	15A NCAC 02E	.0602 is readopted as published in 35:21 NCR 2359 with changes as follows:
2		
3	15A NCAC 02E	.0602 DEFINITIONS
4	The following de	finitions shall apply for the purposes of this Section, Section:
5	(9) (1)	"Council" and "NCDMAC" mean the North Carolina Drought Management Advisory Council.
6	(8) (2)	"Department" means the North Carolina Department of Environment and Natural Resources
7		(DENR). Environmental Quality (DEQ).
8	(10)(3) '	Drought Advisory" means an advisory issued by the NCDMAC that delineates the geographic extent
9		and severity of a water deficit significant enough to have social, environmental environmental or
10		economic effects. Drought Advisories shall be designated as Abnormally Dry, Moderate Drought,
11		Severe Drought, Extreme Drought Drought, and Exceptional Drought to indicate the severity of
12		conditions from least to most severe, respectively.
13	<u>(4)</u>	"Effective" means [successful in] producing the desired or intended result.
14	<u>(5)</u>	"Efficient" achieving maximum productivity with minimum wasted effort or expense.
15	<u>(6)</u>	"Efficient use" is reducing water wastage by measuring the amount of water required for a particular
16		purpose and the amount of water used or delivered.
17	(4) (7)	"Essential water use" means the use of water necessary for fire fighting, health, and safety
18		purposes; water needed to sustain human and animal life; and water necessary to satisfy federal,
19		state state, and local public health, safety safety, or environmental protection requirements.
20	<u>(8)</u>	"Industry Best Management Practices" are methods that [have been determined to be] are the most
21		effective and practical means of completing a task.
22	<u>(9)</u>	"Industry Standards" are a set of criteria within an industry relating to the standard functioning and
23		carrying out of operations in their respective fields of production.
24	<u>(10)</u>	"Normal Operating Procedures (NOPs)" is a set of step-by-step instructions compiled by an
25		organization to help workers carry out [complex] routine operations. NOPs aim to achieve
26		efficiency, quality [output, and uniformity of performance, while reducing
27		miscommunication and failure to comply with industry regulations.
28	(5) (11)	"Non-essential water use" means categories of water use, other than essential water use, that may
29		be curtailed during droughts and water emergencies.
30	(2) (12)	"Person" means any individual, corporation, company, association, partnership, unit of local
31		government, state agency, federal agency, or other legal entity.
32	<u>(13)</u>	"Privately owned" are water systems that can be for-profit systems managed by investors or
33		shareholders.
34	<u>(14)</u>	"Publicly owned" are water systems that are [usually] non-profit entities managed by local or state
35		governments, for which rates are set by a governing board.
36	(6) <u>(15)</u>	"State agencies" includes all agencies of the executive branch of the government of North Carolina,
37		the General Assembly, the General Court of Justice, and the University of North Carolina.

1	(11) (16)) "Syringing" means the application of a small volume of water, usually 0.10 inch or less of water,
2		near midday to correct plant water deficits, reduce plant tissue temperatures temperatures, and reduce
3		the heat stress on turfgrass plants.
4	(7) (17)	"Unit of local government" means a county, city, town, incorporated village, consolidated city-
5		county, sanitary district or other local political subdivision, or authority or agency of local
6		government.
7	(1) (18)	"Water" means any waters of the State located on or below the land surface as well as water
8		contained within a water treatment and distribution system.
9	(3) (19)	"Water delivery system" means any open or closed conveyance system used to move water for
10		potable or non-potable purposes from its point of origin to a point of use, including: municipal water
11		systems; residential, commercial, industrial, and commercial plumbing systems; irrigation systems;
12		water using equipment; and flexible hoses.
13		
14	History Note:	Authority G.S. 143-354(a)(8); S.L. 2002-167;
15		Eff. March 19, 2007;
16		Readopted Eff. January 1, 2022.

1	15A NCAC 02E	2.0603 is readopted as published in 35:21 NCR 2360 as follows:
2		
3	15A NCAC 021	E .0603 GENERAL INFORMATION
4	(a) The provision	ons of this Section apply to the following classes of water users:
5	(1)	Publicly owned and privately owned water supply systems;
6	(2)	State agencies;
7	(3)	Units of local government;
8	(4)	Business and industrial water users; and
9	(5)	Agricultural and horticultural water users.
10	(b) This Section	on does not prevent owners and operators of a water delivery system or other persons from
11	developing, imp	elementing and requiring water use measures in response to droughts or emergency water shortages
12	that are more re	strictive than the specified response measures in Rules .0612 through .0614.
13	(b) All owners	and operators of a water delivery system may develop, implement, and require more stringent
14	standards than	those set forth in Rules .0612 through .0614 of this Section in response to droughts or emergency
15	water shortages	
16	(c) All establis	hed and new uses of reclaimed water, consistent with the provisions of 15A NCAC 02H .0200 02U
17	<u>.0100</u> and any s	uccessive rules and amendments that define and the use of reclaimed water, as administered by the
18	Department's D	vision of Water Resources Quality, shall be exempt from the requirements set forth in this Section.
19		
20	History Note:	Authority S.L. 2002-167;
21		Eff. March 19, 2007;
2.2.		Readonted Eff. January 1, 2022

1 15A NCAC 02E .0604 is readopted as published in 35:21 NCR 2360 as follows: 2 3 15A NCAC 02E .0604 ANNUAL REPORTING OF WATER USE DATA 4 In order to improve the availability of data for the development of the State water supply plan to be used when 5 managing water resources during drought and water supply emergencies and to provide a basis for evaluating the 6 effectiveness of emergency water conservation measures, the following data reporting requirements have been 7 established: 8 (1) Water systems that are required to prepare a Local Water Supply Plan under G.S. 143-355(1) shall, 9 irrespective of the issuance of a drought advisory, annually report to the Department the following 10 information: 11 (a) Water system identification information; 12 Annual average daily water use (total amount of surface and ground water withdrawn as (b) 13 well as water supplied by another system) by the water system, in million gallons per day 14 (MGD); 15 (c) The average daily water use (total amount of surface and ground water withdrawn as well 16 as water supplied by another system) for each month of the prior calendar year, in million 17 gallons per day (MGD); 18 (d) The number of connections for residential, industrial, commercial and institutional metered 19 and non-metered water use, as of December 31st of the reporting year; 20 (e) The annual average daily water use in million gallons per day (MGD) categorized by 21 residential, industrial, commercial, institutional water uses and sales to other systems to the 22 extent that this information by category is available; and 23 (f) Water used by the system, in addition to the amount delivered to customers, to meet water 24 treatment and distribution requirements, in million gallons per day (MGD). 25 (2) All persons that are required to register water withdrawals and transfers under G.S. 143-215.22H, 26 who are not subject to Item (1) of this Rule, shall annually report to the Department monthly average 27 water use in million gallons per day (MGD) for each month. The following information shall be 28 reported: 29 Owner and facility identification information; (a) 30 (b) Sources of water withdrawn; 31 (c) Number of days water was withdrawn for each month; and 32 (d) Average daily withdrawal for the actual number of days water was withdrawn each month, 33 in million gallons per day (MGD). 34 Data shall be submitted electronically. Water users that exhibit to the Division of Water Resources (3) 35 an inability to submit data electronically may submit data in writing on a form supplied by the 36 Department.

1	(4)	Data shall be submitted to the Department by April 1st of each year for the period of January 1st to
2		December 31st of the prior year.
3		
4	History Note:	Authority G.S. 143-355(k); 143-355(l); 143-354(a);
5		Eff. March 19, 2007;
6		Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0605 is readopted as published in 35:21 NCR 2360 as follows: 2 3 15A NCAC 02E .0605 WATER USE REDUCTION REPORTING, NEW WATER WITHDRAWAL 4 REPORTING AND REGIONAL COORDINATION DURING DROUGHTS 5 In order to promote regional cooperation for the equitable use of water resources during a drought or other water 6 supply emergency, all persons, as specified below, shall comply with the following reporting and coordination 7 procedures: 8 (1) Publicly and privately owned community water systems and units of local government shall report 9 to the Division of Water Resources the implementation of mandatory water conservation measures 10 within 72 hours of their initial enactment. 11 (2) All persons that intend to make a new water withdrawal, which that has not previously been 12 registered under G.S. 143-215.22H, of 100,000 gallons or more in an area designated by the 13 Council as suffering from Extreme or Exceptional Drought shall report to the Division of Water 14 Resources, by the same means outlined in Item (3) of Rule .0604, Rule .0604(3) of this Section, 15 the following information at least seven days prior to the withdrawal: 16 (a) Contact information for the person making the water withdrawal; 17 (b) Source(s) of water to be withdrawn; 18 (c) Number of days water is anticipated to be withdrawn; and (d) 19 Anticipated average daily withdrawal in million gallons per day (MGD). 20 (3) All persons that withdraw water shall monitor drought and water supply conditions and shall 21 participate in regional coordination for the management of water resources, evaluation of the 22 cumulative effects of water withdrawals on regional water resources and the development of 23 alternative water supply sources. Based on an assessment of drought severity and regional water 24 supply conditions, the Department may contact water systems within the affected region to arrange 25 a consultation meeting between water systems and relevant state and local agencies. The 26 Department shall moderate these consultations and provide technical assistance. 27 28 History Note: Authority G.S. 143-354(a)(8); 143-355(k); S.L. 2002-167; Eff. March 19, 2007; 29 30 Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0606 is readopted as published in 35:21 NCR 2361 as follows: 2 3 15A NCAC 02E .0606 WATER SHORTAGE RESPONSE PLANNING REQUIREMENTS 4 All classes of water users shall prepare a Water Shortage Response Plan according to the water shortage response 5 planning provisions in Rules .0607 through .0611 for their appropriate class of water use. All classes of water users 6 shall prepare a Water Shortage Response Plan in accordance with Rules .0607-.0611 of this Section. The purpose of 7 these Water Shortage Response Plans is to plan for an effective course of action to minimize harmful impacts of 8 drought and water supply emergencies on public health and safety, environmental quality, and the economy. Water 9 Shortage Response Plans shall take into account the specific characteristics of the water sources and the water uses 10 for which the plan is prepared. 11 12 History Note: Authority G.S. 143-354(a)(1); 143-355(l); S.L. 2002-167; 13 Eff. March 19, 2007; 14 Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0607 is readopted as published in 35:21 NCR 2361 as follows: 2 3 15A NCAC 02E .0607 PUBLICLY AND PRIVATELY OWNED WATER SYSTEM WATER SHORTAGE 4 RESPONSE PLANNING REQUIREMENTS 5 (a) Publicly and privately owned Units of local governments and large community water systems that are required to 6 prepare a Local Water Supply Plan under G.S. 143-355(l) shall include the following information in their local Water 7 Shortage Response Plans for review by the Division of Water Resources: 8 (1) The designation of a staff position or organizational unit responsible for the implementation of their 9 Water Shortage Response Plan; 10 (2) Notification procedures that will be used to inform employees and water users about the 11 implementation of the plan and required water conservation response measures; 12 (3) Tiered levels of response actions to be taken to reduce water use based on the severity of water 13 shortage conditions; 14 (4) Specific measurements of available water supply, water demand and system conditions that will be 15 used to determine the severity of water shortage conditions and to initiate water use reduction 16 measures and the movement between various levels; 17 (5) Procedures that will be used to regulate compliance with the provisions of the plan; 18 (6) Procedures for affected parties to review and comment on the plan prior to final adoption; 19 (7) Procedures to receive and review applications for variances from specific requirements of the plan 20 and the criteria that will be considered in the determination to issue a variance; 21 (8) An evaluation method to determine the actual water savings accomplished and the effectiveness of 22 the Water Shortage Response Plan when implemented; and 23 (9) Procedures for revising and updating Water Shortage Response Plans to improve plan effectiveness 24 and adapt to new circumstances. 25 (b) Publiely and privately owned Units of local governments and large community water systems that are required to 26 prepare a Local Water Supply Plan shall submit a copy of their Water Shortage Response Plan and any subsequent 27 revisions of the plan to the Division of Water Resources for review every five years with the full Local Water Supply 28 Plan, as required by G.S. 143-355(l). 29 (c) Publicly and privately owned water systems not required to prepare a Local Water Supply Plan shall: 30 (1) Assess their vulnerability to drought and water shortage emergencies; and 31 (2) Prepare a written plan for responding to water shortage emergencies and drought using the 32 provisions of Paragraph (a) of this Rule. 33 (d) Publicly and privately owned water systems that depend on the water storage in a private or public impoundment 34 that they do not own and operate under a contract for the withdrawal of water issued by the owner of an impoundment 35 shall prepare a written plan for responding to water shortages that is consistent with the provisions of the contract and 36 shall comply with all Water Shortage Response Plan provisions established by the owner of the impoundment.

1	(e) Water Shor	tage Response Plans shall provide for water users who have made improvements to maximize water					
2	use efficiency	use efficiency in their daily operations and may face disproportionate hardships when making further water use					
3	reductions. Wat	reductions. Water Shortage Response Plans shall avoid restricting efficient water users in ways that would undermine					
4	incentives for v	vater users to seek continued improvements in water use efficiency and shall honor locally approved					
5	certification pro	ograms that recognize efficient water users who meet industry standards for water use efficiency and					
6	water conservat	ion.					
7	(f) When the N	CDMAC issues a drought advisory designating an area of the state as currently suffering from drought,					
8	publicly and pr	ivately owned water systems that depend on water from the designated area shall for the duration of					
9	the designation:						
10	(1)	Implement the provisions of their Water Shortage Response Plan, as determined by the specific					
11		indicators established in the plan for initiating response measures;					
12	(2)	Monitor and document water supply conditions;					
13	(3)	Educate customers and employees on the need to conserve water and how to prepare for potential					
14		drought conditions;					
15	(4)	Inspect water delivery system components and ensure that existing equipment is operating as					
16		efficiently as possible;					
17	(5)	Stay informed on drought and water shortage emergency conditions and participate in regional					
18		coordination for the management of water resources; and					
19	(6)	Evaluate the feasibility of reclaiming and recycling water to meet water needs.					
20							
21	History Note:	Authority G.S. 143-354(a)(1); 143-355(l); S.L. 2002-167;					
22		Eff. March 19, 2007;					
23		Readopted Eff. January 1, 2022.					

1911 Herre 02E	.0000 13	readopied a	s published in	33:21 NCK 2	302 as follows:		
15A NCAC 02E	.0608	STATE	AGENCY	WATER	SHORTAGE	RESPONSE	PLANNING
		REQUIR	EMENTS				
(a) State agenci	es that si	upply their	own water sha	ll prepare a w	ritten plan for res	ponding to water	shortages using
the provisions of	Rule .06	507(a). <u>.060</u>	7(a) of this Sec	ction.			
(b) State agencie	es that ar	e supplied v	vater by a publ	icly or private	ely owned water sy	stem shall:	
(1)	Review	normal op	erating proced	ures and wat	er use to identify	options to reduc	e water use and
	maximi	ize water u	se efficiency of	during water	supply emergenci	es, including cha	anges to normal
	operatii	ng procedur	es;				
(3)	Provide	e informatio	on to their wa	ater purveyor	(s) upon request	to support deve	lopment of the
	purveyo	or's Water S	Shortage Respo	onse Plan(s),	including the age	ncy's ability to re	educe water use
	and lim	itations to r	educing water	use during dro	oughts and water e	mergencies;	
(4)	Develo	p procedur	es for inform	ning employ	ees of drought	designations, wa	ater emergency
	declara	tions and re	sponse measur	es; and			
(5)	Evaluat	te the feasib	ility of reclaim	ing and recyc	ling water to meet	water needs.	
History Note:	Authori	ity G.S. 143	-354(a)(1); S.L	. 2002-167;			
	Eff. Ma	rch 19, 200	7;				
	<u>Readop</u>	oted Eff. Jan	uary 1, 2022.				
	(a) State agencia the provisions of (b) State agencia (1) (3)	(a) State agencies that so the provisions of Rule 406 (b) State agencies that are (1) Review maximore operation operation (3) Provided purvey and limit (4) Developed declaration (5) Evaluation Eff. Matter Matter (5) Authority (5) Eff. Matter (5) Authority (5) Eff. Matter (5) (5) (6) (6) (6) (6) (6) (6) (6) (6) (6) (6	15A NCAC 02E .0608 STATE REQUIR (a) State agencies that supply their of the provisions of Rule .0607(a)0602 (b) State agencies that are supplied w (1) Review normal op maximize water us operating procedure (3) Provide information purveyor's Water Stand limitations to recommodate the feasib (4) Develop procedure declarations and recommodate the feasib History Note: Authority G.S. 143-Eff. March 19, 200	15A NCAC 02E .0608 STATE AGENCY REQUIREMENTS (a) State agencies that supply their own water shat the provisions of Rule .0607(a)0607(a) of this Sec (b) State agencies that are supplied water by a public (1) Review normal operating procedures; (a) Provide information to their water use efficiency of operating procedures; (b) State agencies that are supplied water by a public (1) Review normal operating procedures; (c) Provide information to their water use operating procedures; (d) Provide information to reducing water (1) Develop procedures for informations and response measure (2) Evaluate the feasibility of reclaims	15A NCAC 02E .0608 STATE AGENCY WATER REQUIREMENTS (a) State agencies that supply their own water shall prepare a water provisions of Rule .0607(a)0607(a) of this Section. (b) State agencies that are supplied water by a publicly or private (1) Review normal operating procedures and water maximize water use efficiency during water operating procedures; (3) Provide information to their water purveyor purveyor's Water Shortage Response Plan(s), and limitations to reducing water use during dred (4) Develop procedures for informing employ declarations and response measures; and (5) Evaluate the feasibility of reclaiming and recycles. History Note: Authority G.S. 143-354(a)(1); S.L. 2002-167; Eff. March 19, 2007;	(a) State agencies that supply their own water shall prepare a written plan for rest the provisions of Rule .0607(a)0607(a) of this Section. (b) State agencies that are supplied water by a publicly or privately owned water sy (1) Review normal operating procedures and water use to identify maximize water use efficiency during water supply emergence operating procedures; (3) Provide information to their water purveyor(s) upon request purveyor's Water Shortage Response Plan(s), including the age and limitations to reducing water use during droughts and water experience (4) Develop procedures for informing employees of drought declarations and response measures; and (5) Evaluate the feasibility of reclaiming and recycling water to meet thistory Note: Authority G.S. 143-354(a)(1); S.L. 2002-167; Eff. March 19, 2007;	15A NCAC 02E .0608 STATE AGENCY WATER SHORTAGE RESPONSE REQUIREMENTS (a) State agencies that supply their own water shall prepare a written plan for responding to water the provisions of Rule .0607(a) .0607(a) of this Section. (b) State agencies that are supplied water by a publicly or privately owned water system shall: (1) Review normal operating procedures and water use to identify options to reduce maximize water use efficiency during water supply emergencies, including characteristic operating procedures; (3) Provide information to their water purveyor(s) upon request to support develop purveyor's Water Shortage Response Plan(s), including the agency's ability to reand limitations to reducing water use during droughts and water emergencies; (4) Develop procedures for informing employees of drought designations, water declarations and response measures; and (5) Evaluate the feasibility of reclaiming and recycling water to meet water needs. **History Note: Authority G.S. 143-354(a)(1); S.L. 2002-167; Eff. March 19, 2007;

1	15A NCAC 02E	.0609 is readopted a	s published in 35:21	NCR 2362	as follows:		
2							
3	15A NCAC 02E	.0609 LOCAL	GOVERNMENT	WATER	SHORTAGE	RESPONSE	PLANNING
4		REQUIR	EMENTS				
5	(a) Units of local	l government that pr	ovide water to the pu	ıblic shall m	eet the requirem	ents of Rule .06	07(a). <u>.0607(a)</u>
6	of this Section.						
7	(b) Units of local	l government that do	not provide water to	the public s	shall:		
8	(1)	Review normal wa	ater use for the type	s and numb	er of facilities of	perated to iden	tify options to
9		reduce water use a	nd maximize water u	ise efficienc	y by local gover	nment operatior	ns during water
10		shortage emergenc	ies, including possib	le changes to	o normal operatir	ng procedures;	
11	(2)	Cooperate with loc	cal water purveyor(s)	on the deve	elopment and im	plementation of	the purveyor's
12		Water Shortage Re	sponse Plan(s);				
13	(3)	Establish a proced	ure for informing cit	tizens of dro	ought designation	ns, recommende	d conservation
14		activities and mar	ndatory response me	easures to 1	reduce water us	e during droug	thts and water
15		shortage emergenc	ies;				
16	(4)	Provide a mechani	sm whereby resident	ts can apply	for and receive	a variance from	specific water
17		use reduction requi	irements implemente	d by local go	overnments;		
18	(5)	Consider dispropo	rtionate hardships th	hat water sh	ortage response	policies and o	rdinances may
19		cause water users v	who have already ma	de improvei	ments to maximiz	ze water use eff	iciency in their
20		daily operations; an	nd				
21	(6)	Evaluate the feasib	ility of reclaiming ar	nd recycling	water to meet wa	ater needs.	
22							
23	History Note:	Authority G.S. 143	-354(a)(1); S.L. 2002	2-167;			
24		Eff. March 19, 200	7;				
25		Readopted Eff. Jan	uary 1, 2022.				

1 15A NCAC 02E .0610 is readopted as published in 35:21 NCR 2362 as follows: 2 3 15A NCAC 02E .0610 BUSINESS AND INDUSTRIAL WATER SHORTAGE RESPONSE PLANNING 4 REQUIREMENTS 5 (a) Self-supplied business and industrial water users subject to the water withdrawal registration requirements of 6 G.S. 143-215.22H shall prepare a written plan, for responding to water shortages that is consistent with industry 7 water efficiency and drought response guidelines, that incorporate the relevant provisions of Rule .0607(a). .0607(a) 8 of this Section. 9 (b) Business and industrial water users that depend on the water storage of a privately or publicly owned 10 impoundment or withdraw water under a contract issued by the owner of an impoundment shall have a written plan 11 for responding to water shortages that is consistent with the provisions of the contract and with any Water Shortage 12 Response Plan provisions established by the owner of the impoundment. 13 (c) Business and industrial water users that are supplied water by a publicly or privately owned water system shall 14 establish a procedure for responding to water shortages that is complementary to their water purveyor's Water 15 Shortage Response Plan. 16 17 History Note: Authority G.S. 143-354(a)(1); S.L. 2002-167; 18 Eff. March 19, 2007; 19 Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0611 is readopted as published in 35:21 NCR 2363 as follows: 2 3 AGRICULTURAL AND HORTICULTURAL WATER SHORTAGE RESPONSE 15A NCAC 02E .0611 4 PLANNING REQUIREMENTS 5 (a) Agricultural and horticultural water users subject to the water withdrawal registration requirements of G.S. 143-6 215.22H shall develop a written plan for responding to water shortages to maximize water use efficiency and reduce 7 water usage to the maximum extent possible. Any of the guidance documents on best management practices for the 8 efficient use of water in agricultural and horticultural operations developed by the United States Department of 9 Agriculture's Natural Resources Conservation Service, the North Carolina Department of Agriculture and Consumer 10 Services (NCDA&CS), the NCDA&CS Division of Soil and Water Conservation, North Carolina State 11 University, the North Carolina Cooperative Extension Service or other industry trade organizations may be used to 12 assist agricultural and horticultural water users identify the most appropriate water use efficiency measures that they 13 may incorporate into the plan for their particular operational needs. 14 (b) When a region of the state is designated as suffering from Severe Drought, Extreme Drought or Exceptional 15 Drought by a NCDMAC drought advisory, agricultural and horticultural water users shall reexamine and maintain 16 water delivery systems to minimize water loss and maximize water use efficiency. 17 (c) Agricultural and horticultural water users that depend on the water storage of a privately or publicly owned 18 impoundment or withdraw water under a contract issued by the owner of an impoundment shall have a written plan 19 for responding to water shortages that is consistent with the provisions of the contract and with any Water Shortage 20 Response Plan provisions established by the owner of the impoundment. 21 22 History Note: Authority S.L. 2002-167; 23 Eff. March 19, 2007;

Readopted Eff. January 1, 2022.

24

1 15A NCAC 02E .0612 is readopted as published in 35:21 NCR 2363 as follows: 2 3 15A NCAC 02E .0612 DEFAULT WATER SHORTAGE RESPONSE PLANNING MEASURES 4 Publicly or privately owned water systems that are required to prepare a Local Water Supply Plan under G.S. 143-5 355(1) that do not have a written Water Shortage Response Plan, as outlined in Rule .0607, .0607 of this Section, 6 shall implement the default water use reduction measures of Rules .0613 and .0614 of this Section when their water 7 system or water source is located in an area designated as suffering from Extreme or Exceptional Drought by the 8 Council. 9 10 Authority S.L. 2002-167; History Note: 11 Eff. March 19, 2007; 12 Readopted Eff. January 1, 2022.

1	15A NCAC 02	E .0613 is	s readopted as published in 35:21 NCR 2363 as follows:					
2								
3	15A NCAC 02E .0613		DEFAULT WATER USE REDUCTION MEASURES DURING NCDMAC					
4			EXTREME DROUGHT DESIGNATIONS					
5	When the NCDMAC designates a region of the state as suffering from Extreme Drought, the following water use							
6	reduction stan	dards sha	ll apply to water users in the designated area, as indicated in Rule0612: .0612 of this					
7	Section:							
8	(1)	Water	users shall reduce water use by at least 10% below the amount used in the month prior to a					
9		NCDN	MAC Extreme Drought designation in the affected area.					
0	(2)	All wa	ater users shall minimize non-essential use of water.					
1	(3)	Outdo	or irrigation is prohibited, except for:					
12		(a)	Watering lawns less than one inch of water per week, between the hours of 8:00 PM and					
13			8:00 AM;					
4		(b)	Maintaining newly installed landscapes, lawns and erosion control projects that were					
15			initiated prior to the issuance of an Extreme Drought advisory, not to exceed the					
16			minimum rate necessary on the day of installation and for 60 days following installation,					
17			by means designed and operated to maximize water use efficiency and to prevent run-off					
18			and excessive watering;					
19		(c)	Using spray irrigation by wastewater effluent treatment systems from the NCDMAC					
20			Extreme Drought designated area(s) according to permit conditions under the provisions					
21			of North Carolina Administrative Code 15A NCAC 02H .020002U .0100 and any					
22			successive rules and amendments, as administered by the Department's Division of Water					
23			Quality;					
24		(d)	Maintaining athletic fields with less than one inch of water per week between the hours					
25			of 8:00 PM and 8:00 AM;					
26		(e)	Maintaining personal food gardens;					
27		(f)	Maintaining existing landscape plantings at the minimum rate necessary, between the					
28			hours of 8:00 PM and 8:00 AM, using a hand held container or hose with an automatic					
29			shutoff or using drip irrigation;					
30		(g)	Watering golf course tees, fairways and greens by means of an automated irrigation					
31			system between the hours of 8:00 PM and 8:00 AM with less than one inch of water per					
32			week;					
33		(h)	Syringing golf course tees and greens exhibiting visible signs of stress between the hours					
34			of 12:00 PM and 4:00 PM, at the minimum rate necessary; and					
35		(i)	Maintaining plant inventories, by means designed and operated to maximize water use					
36			efficiency, at retail garden centers, garden centers within mass merchant stores or other					
37			businesses with live plants as their stock in trade.					

1	(4)	The use	e of water for washing or cleaning of mobile equipment including automobiles, trucks,			
2		boats as	nd fleet vehicles is prohibited, except for:			
3		(a)	Operating commercial car washes that utilize the industry's best management practices			
4			for the efficient use of water and those that recycle, reclaim or reuse a portion of their			
5			wash water in their daily operations and have reduced total water consumption by 10%			
6			below the amount used in the month prior to a NCDMAC Extreme Drought designation			
7			in the affected area;			
8		(b)	Washing with a hand-held hose with an automatic shutoff device using less than five			
9			gallons per vehicle;			
10		(c)	Cleaning new and used vehicles using less than five gallons per vehicle to prepare for			
11			display in a dealer's show room, upon receipt from the manufacturer or prior owner, and			
12			following a sale prior to delivery to the purchaser; and			
13		(d)	Cleaning of construction, emergency, transport or public transportation vehicles if			
14			necessary to preserve the proper functioning and safe operation of the vehicle.			
15	(5)	The use	e of water for washing impervious and paved surfaces is prohibited, except for:			
16		(a)	Prewashing in preparation for painting, recoating or sealing; and			
17		(b)	Applying at the minimum rate necessary for sanitation and public health purposes.			
18	(6)	The use	e of water for ornamental fountains, artificial waterfalls, misting machines, reflecting pools,			
19		and orn	and ornamental ponds is prohibited, except for the minimum amount of make-up water necessary			
20		to main	atain aquatic life.			
21	(7)	The use	e of water for power washing of buildings and other structures is prohibited except when			
22		necessa	ary to meet federal, state and local public health and safety requirements.			
23	(8)	The use	e of water for flushing sewer lines is prohibited except when necessary to meet public			
24		health a	and safety standards.			
25	(9)	The use	e of water from fire hydrants is prohibited, except for:			
26		(a)	Fighting fire and fire protection purposes;			
27		(b)	Testing or training if it is necessary to protect public safety and has been approved by the			
28			applicable water purveyor; and			
29		(c)	Flushing of potable water lines to protect the public health.			
30	(10)	The fill	ling of family, public or private swimming pools, including hot tubs, spas and whirlpool			
31		tubs, is	prohibited, except:			
32		(a)	For health and rehabilitative purposes as prescribed by a medical doctor or administered			
33			by a medical facility; and			
34		(b)	For the minimal amount of make-up water necessary to maintain a pool's structural			
35			integrity and filtration system.			
36	(11)	The ser	rving of water in eating and drinking establishments shall be done on customer request			
37		only.				

1	(12)	Water shall be applied at the minimum rate necessary to maintain effective dust and erosion
2		control during the construction of roads and highways initiated prior to the declaration of an
3		Extreme Drought by the NCMDAC.
4		
5	History Note:	Authority S.L. 2002-167;
6		Eff. March 19, 2007;
7		Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0614 is readopted as published in 35:21 NCR 2364 as follows: 2 3 15A NCAC 02E .0614 DEFAULT WATER USE REDUCTION MEASURES DURING NCDMAC 4 **EXCEPTIONAL DROUGHT DESIGNATIONS** 5 When the NCDMAC designates a region of the state as suffering from Exceptional Drought, the following water use 6 reduction standards shall apply to water users in the designated area, as indicated in Rule .0612: .0612 of this 7 Section: 8 (1) Water users shall reduce water use by at least 20% below the amount used in the month prior to 9 the most recent NCDMAC Extreme Drought designation in the affected area. 10 (2) Non-essential water use shall be minimized by the maximum extent possible. 11 (3) Outdoor irrigation is prohibited, except for: 12 Using spray irrigation by wastewater effluent treatment systems in NCDMAC (a) 13 Exceptional Drought designated areas according to permit conditions under the 14 provisions of North Carolina Administrative Code 15A NCAC 02H .020002U .0100 and 15 any successive rules and amendments, as administered by the Department's Division of 16 Water Quality; 17 (b) Watering personal food gardens by hand with a container or hand held hose with an 18 automatic shutoff device or using drip irrigation between the hours of 8:00 PM and 8:00 19 AM; 20 (c) Maintaining existing landscape plantings at the minimum rate necessary, between the 21 hours of 8:00 PM and 8:00 AM, using a hand held container or hose with an automatic 22 shutoff or using drip irrigation; 23 (d) Watering golf course tees, fairways and greens, athletic fields and lawns between the 24 hours of 8:00 PM and 8:00 AM with less than one half inch of water per week; 25 Syringing of golf course tees and greens exhibiting visible signs of stress between the (e) 26 hours of 1:00 PM and 4:00 PM, at the minimum rate necessary; 27 (f) Maintaining newly installed landscapes, lawns and erosion control projects that were 28 initiated prior to the issuance of an Extreme Drought advisory, not to exceed the 29 minimum rate necessary on the day of installation and for 28 days following installation, 30 by means designed and operated to maximize water use efficiency and to prevent run-off 31 and excessive watering; and 32 Maintaining plant inventories, by means designed and operated to maximize water use (g) 33 efficiency, at retail garden centers, garden centers within mass merchant stores, or other 34 businesses with live plants as their stock in trade. 35 (4) The use of water for washing or cleaning mobile equipment including automobiles, trucks, boats 36 and fleet vehicles is prohibited, except for:

1		(a) Operating commercial car washes that utilize the industry's best management practices
2		for the efficient use of water and those that recycle, reclaim or reuse a portion of their
3		wash water and have reduced total water consumption by 20% below the amount used in
4		the month prior to the most recent NCDMAC Extreme Drought designation in the
5		affected area;
6		(b) Cleaning of new and used vehicles in preparation for display in a dealer's show room,
7		using less than five gallons per vehicle; and
8		(c) Using the minimum amount of water necessary to clean construction, emergency,
9		transport or public transportation vehicles, if required to preserve the proper functioning
10		and safe operation of the vehicle as required by law.
11	(5)	The use of water for washing impervious and paved surfaces is prohibited except for using the
12		minimum amount of water necessary for sanitation and public health purposes.
13	(6)	The use of water for power washing of buildings and other structures is prohibited.
14	(7)	The use of water for flushing sewer lines is prohibited except when necessary to meet public
15		health and safety standards.
16	(8)	The use of water from fire hydrants is prohibited, except for:
17		(a) Fighting fire and fire protection purposes; and
18		(b) Flushing of drinking water lines to protect public health and safety.
19	(9)	The filling of family, public or private swimming pools, including hot tubs, spas and whirlpool
20		tubs, is prohibited except for health and rehabilitative purposes as prescribed by a medical doctor
21		or administered by a medical facility.
22	(10)	The use of water for ornamental fountains, artificial waterfalls, misting machines, reflecting pools,
23		and ornamental ponds is prohibited, except for the minimum amount of make-up water necessary
24		to maintain aquatic life.
25	(11)	The serving of water in eating and drinking establishments shall be done on customer request
26		only.
27	(12)	Water shall be applied at the minimum rate necessary to maintain effective dust and erosion
28		control during the construction of roads and highways initiated prior to the declaration of an
29		Extreme Drought by the NCDMAC.
30		
31	History Note:	Authority S.L. 2002-167;
32		Eff. March 19, 2007;
33		Readopted Eff. January 1, 2022.

1 15A NCAC 02E .0615 is readopted as published in 35:21 NCR 2365 as follows: 2 3 WATER REUSE DURING DROUGHTS AND WATER EMERGENCIES 15A NCAC 02E .0615 4 Water users may use reclaimed water under the provisions of North Carolina Administrative Code 15A NCAC 02H 5 .020002U .0100 and any successive rules and amendments, as administered by the Department's Division of Water 6 Quality, during droughts and other water emergencies to reduce withdrawals of surface water and ground water and 7 to extend available water supplies. 8 9 Authority S.L. 2002-167; G.S. 143-215.1; 143-215.3(a)(1); 143-355.5; History Note: 10 Eff. March 19, 2007; Readopted Eff. January 1, 2022. 11

15A NCAC 02L .0202 is amended as published in 35:14 NCR 1560 with changes as follows:

15A NCAC 02L .0202 GROUNDWATER QUALITY STANDARDS

- (a) The groundwater quality standards for the protection of the groundwaters of the state are those specified in this Rule. They are the maximum allowable concentrations resulting from any discharge of contaminants to the land or waters of the state, which may be tolerated without creating a threat to human health or which would otherwise render the groundwater unsuitable for its intended best usage.
- 8 (b) The groundwater quality standards for contaminants specified in Paragraphs (h) and (i) of this Rule are as listed, 9 except that:
 - (1) Where the standard for a substance is less than the practical quantitation limit, the detection of that substance at or above the practical quantitation limit constitutes a violation of the standard.
 - (2) Where two or more substances exist in combination, the Director shall consider the effects of chemical interactions as determined by the Division of Public Health and may establish maximum concentrations at values less than those established in accordance with Paragraphs (c), (h), or (i) of this Rule. In the absence of information to the contrary, in accordance with Paragraph (d) of this Rule, the carcinogenic risks associated with carcinogens present shall be considered additive and the toxic effects associated with non-carcinogens present shall also be considered additive.
 - (3) Where naturally occurring substances exceed the established standard, the standard shall be the naturally occurring concentration as determined by the Director.
 - (4) Where the groundwater standard for a substance is greater than the Maximum Contaminant Level (MCL), the Director shall apply the MCL as the groundwater standard at any private drinking water well or public water system well that may be impacted.
 - (c) Except for tracers used in concentrations which have been determined by the Division of Public Health to be protective of human health, and the use of which has been permitted by the Division, substances which are not naturally occurring and for which no standard is specified shall not be permitted in concentrations at or above the practical quantitation limit in Class GA or Class GSA groundwaters. Any person may petitionrequest the Director of the Division of Water Resources to establishestablish, update, or remove an interim maximum allowable concentration[Interim Maximum Allowable Concentration (IMAC) for a substance for which a standard has not been established under this Rule. In response to this request, the Director may establish, update, or remove an IMAC. The petitionerrequestor shall submit relevant toxicological and epidemiological data, study results, and calculations necessary to establish a standard in accordance with ParagraphParagraphs (d) and (e) of this Rule. Within three months after the establishment of an interim maximum allowable concentration for a substance by the Director, the Director shall initiate action to consider adoption of a standard for that substance. If the information submitted is not in accordance with Paragraphs (d) and (e) of this Rule, the Director of the Division of Water Resources shall request additional information from the [petitioner-]requester. If the [petitioner]requester does not provide the additional information necessary to be in accordance with Paragraphs (d) and (e) of this Rule, the Director of the Division of Water Resources shall [deny]return the [petition-]request. The Director shall provide an annual update to the

I	Commission on	the status of IMAC requests. At least 30 days prior to [establishing]establishing, updating, or
2	<mark>removing</mark> an IM	AC for any substance, the Division of Water Resources shall provide public notice that an IMAC has
3	been [requested	-lrequested to be established, updated, or removed. The public notice shall include the [petition
4	requesting the e	stablishment request for the establishment, update, or removal of the IMAC for a substance, the level
5	of the proposed	IMAC, if applicable the level of the existing IMAC, and the basis upon which the Division of Water
6	Resources has re	elied in development of the proposed [HMAC.]IMAC establishment, update, or removal. This notice
7	shall be publish	ned in the North Carolina Register and posted on the Division of Water Resources's website:
8	https://deq.nc.go	$\underline{\text{ov/about/divisions/water-resources/water-planning/classification-standards/groundwater-imacs.} \ If the \underline{\text{ov/about/divisions/water-resources/water-planning/classification-standards/groundwater-imacs.} \ If the \underline{\text{ov/about/divisions/water-planning/classification-standards/groundwater-imacs.} \ If the \underline{\text{ov/about/divisions/water-planning/classification-standards/groundwater-imacs.} \ If the \underline{\text{ov/about/divisions/water-planning/classification-standards/groundwater-imacs.} \ If \underline{\text{ov/about/division-standards/groundwater-imacs.} \ If \text{ov/about/division-stan$
9	Director of the D	Division of Water Resources establishes or updates an IMAC, the IMAC shall be posted on the Division
10	of Water Resou	rce's website and the Commission shall be notified in writing within 30 calendar days that a new
11	IMAC has been	[established.]established or an existing IMAC has been updated or removed.
12	(d) Except as p	rovided in Paragraph (f) of this Rule, groundwater quality standards for substances in Class GA and
13	Class GSA grou	indwaters are established as the least of:
14	(1)	Systemic threshold concentration calculated as follows: [Reference Dose (mg/kg/day) x 70 kg (adult
15		body weight) x Relative Source Contribution $\frac{(.10(0.10 \text{ for inorganics}) - 200.20}{(.10(0.10 \text{ for inorganics}))}$ [2]
16		liters/day (avg. water consumption)];
17	(2)	Concentration which corresponds to an incremental lifetime cancer risk of 1x10-6;
18	(3)	Taste threshold limit value;
19	(4)	Odor threshold limit value;
20	(5)	Maximum contaminant level; or
21	(6)	National secondary drinking water standard.
22	* *	ng references, in order of preference, shall be used in establishing concentrations of substances which
23	correspond to le	vels described in Paragraph (d) of this Rule.
24	(1)	Integrated Risk Information System (U.S. EPA).
25	(2)	Health Advisories (U.S. EPA Office of Drinking Water).
26	(3)	Other health risk assessment data published by the U.S. EPA.
27	(4)	Other relevant, published health risk assessment data, and scientifically valid peer-reviewed
28		published toxicological data.
29	(f) The Commi	ssion may establish groundwater standards less stringent than existing maximum contaminant levels
30	or national secon	ndary drinking water standards if it finds, after public notice and opportunity for hearing, that:
31	(1)	more recent data published in the EPA health references listed in Paragraph (e) of this Rule results
32		in a standard which is protective of public health, taste threshold, or odor threshold;
33	(2)	the standard will not endanger the public health and safety, including health and environmental
34		effects from exposure to groundwater contaminants; and
35	(3)	compliance with a standard based on the maximum contaminant level or national secondary drinking
36		water standard would produce serious hardship without equal or greater public benefit.

(g) Groundwater quality standards specified in Paragraphs (h) and (i) of this Rule and interim maximum allowable 1 2 concentrations IMACs established pursuant to Paragraph (c) of this Rule shall be reviewed by the Director Division of 3 Water Resources on a triennial basis basis and reported to the Commission. The Director of the Division of Water 4 Resources shall [consider] take any of the following actions during the review of an established IMAC: 5 recommend codifying the IMAC as a groundwater quality standard under this Rule; <u>(1)</u> 6 <u>(2)</u> update the IMAC value based on data published or rescinded subsequent to the previous review; 7 remove the IMAC based on data published or rescinded subsequent to the previous review; or **(3)** 8 **(4)** retain the IMAC at the current value; 9 Any IMAC recommended under Subparagraph (g)(1) of this Rule that the Commission does not codify shall remain 10 an established IMAC and be reviewed during the next triennial review. Appropriate modifications Modifications to 11 established standards shall be mademade, through rulemaking, in accordance with the procedure procedures prescribed 12 in ParagraphParagraphs (d) and (e) of this Rule where modifications are considered appropriate based on data 13 published subsequent to the previous review. 14 (h) Class GA Standards. Unless otherwise indicated, the standard refers to the total concentration in micrograms per 15 liter (µg/L) of any constituent in a dissolved, colloidal or particulate form which is mobile in groundwater. This does 16 not apply to sediment or other particulate matter which is preserved in a groundwater sample as a result of well 17 construction or sampling procedures. The Class GA standards are: 18 Acenaphthene: 80; (1)19 (2)Acenaphthylene: 200; 20 Acetone: 6 mg/L; 21 Acrylamide: 0.008; 22 Anthracene: 2 mg/L; 23 Arsenic: 10; 24 Atrazine and chlorotriazine metabolites: 3; Barium: 700; 25 (8)26 (9) Benzene: 1; 27 (10)Benzo(a)anthracene (benz(a)anthracene): 0.05; 28 Benzo(b)fluoranthene: 0.05; Benzo(k)fluoranthene: 0.5; 29 (12)30 (13)Benzoic acid: 30 mg/L; (14) Benzo(g,h,i,)perylene: 200; 31 Benzo(a)pyrene: 0.005; 32 (15)33 Bis(chloroethyl)ether: 0.03; 34 (17)Bis(2 ethylhexyl) phthalate (di(2 ethylhexyl) phthalate): 3; Boron: 700; 35 (18)36 Bromodichloromethane: 0.6; (19)Bromoform (tribromomethane): 4; 37

```
1
              (21) n Butylbenzene: 70;
 2
                      sec Butylbenzene: 70;
              (22)
 3
              (23) tert Butylbenzene: 70;
                      Butylbenzyl phthalate: 1 mg/L;
 4
              (24)
 5
                      Cadmium: 2;
              (25)
 6
                      Caprolactam: 4 mg/L;
              (26)
 7
              (27)
                      Carbofuran: 40;
 8
              (28) Carbon disulfide: 700;
 9
                      Carbon tetrachloride: 0.3;
10
              (30)
                    Chlordane: 0.1;
                      Chloride: 250 mg/L;
11
                      Chlorobenzene: 50;
12
              (32)
13
              (33)
                      Chloroethane: 3,000;
14
              (34)
                      Chloroform (trichloromethane): 70;
15
                      Chloromethane (methyl chloride): 3;
              (36) 2-Chlorophenol: 0.4;
16
17
              (37) 2 Chlorotoluene (o chlorotoluene): 100;
18
              (38)
                    Chromium: 10;
                      Chrysene: 5;
19
              (39)
                      Coliform organisms (total): 1 per 100 mL;
20
21
              (41)
                     Color: 15 color units;
22
              (42)
                    Copper: 1 mg/L;
23
              (43) Cyanide (free cyanide): 70;
                    2, 4 D (2,4 dichlorophenoxy acetic acid): 70;
24
25
              (45) DDD: 0.1;
                      DDT: 0.1;
26
              (46)
                    Dibenz(a,h)anthracene: 0.005;
27
              (47)
28
                      Dibromochloromethane: 0.4;
              (49)
                     1,2 Dibromo 3 chloropropane: 0.04;
29
30
              (50)
                      Dibutyl (or di n butyl) phthalate: 700;
              (51) 1,2 Dichlorobenzene (orthodichlorobenzene): 20;
31
                     1,3 Dichlorobenzene (metadichlorobenzene): 200;
32
              (52)
33
              (53)
                    1,4 Dichlorobenzene (paradichlorobenzene): 6;
                      Dichlorodifluoromethane (Freon 12; Halon): 1 mg/L;
34
              (54)
                      1,1 Dichloroethane: 6;
35
              (55)
                      1,2 Dichloroethane (ethylene dichloride): 0.4;
36
              (56)
                      1,2 Dichloroethene (cis): 70;
37
              (57)
```

```
(58) 1,2 Dichloroethene (trans): 100;
 1
 2
                      1,1 Dichloroethylene (vinylidene chloride): 350;
 3
              (60) 1,2 Dichloropropane: 0.6;
 4
              (61)
                     1,3 Dichloropropene (cis and trans isomers): 0.4;
              (62) Dieldrin: 0.002;
 5
 6
              (63)
                     Diethylphthalate: 6 mg/L;
 7
                      2,4 Dimethylphenol (m xylenol): 100;
              (65) Di n octyl phthalate: 100;
 8
 9
              (66) 1,4 Dioxane (p dioxane): 3;
              (67) Dioxin (2.3.7.8 TCDD): 0.0002 ng/L;
10
              (68) 1,1 Diphenyl (1,1, biphenyl): 400;
11
              (69) Dissolved solids (total): 500 mg/L;
12
13
              (70)
                   Disulfoton: 0.3;
14
              (71)
                    Diundecyl phthalate (Santicizer 711): 100;
                     Endosulfan: 40;
15
              (72)
              (73) Endrin, total (includes endrin, endrin aldehyde and endrin ketone): 2;
16
                      Epichlorohydrin: 4;
17
18
              (75)
                      Ethyl acetate: 3 mg/L;
                      Ethylbenzene: 600;
19
              (76)
                      Ethylene dibromide (1,2 dibromoethane): 0.02;
20
              (78)
21
                     Ethylene glycol: 10 mg/L;
              (79) Fluoranthene: 300;
22
              (80) Fluorene: 300:
23
              (81) Fluoride: 2 mg/L;
24
              (82) Foaming agents: 500;
25
              (83) Formaldehyde: 600;
26
              (84) Gross alpha (adjusted) particle activity (excluding radium 226 and uranium): 15 pCi/L;
27
28
                     Heptachlor: 0.008;
              (86) Heptachlor epoxide: 0.004;
29
              (87) Heptane: 400;
30
              (88) Hexachlorobenzene (perchlorobenzene): 0.02;
31
              (89) Hexachlorobutadiene: 0.4:
32
33
              (90) Hexachlorocyclohexane isomers (technical grade): 0.02;
              (91) n Hexane: 400;
34
              (92) Indeno(1,2,3 cd)pyrene: 0.05;
35
              (93) Iron: 300;
36
              (94) Isophorone: 40;
37
```

```
(95) Isopropylbenzene: 70;
 1
 2
                   Isopropyl ether: 70;
 3
              (97) Lead: 15;
              (98) Lindane (gamma hexachlorocyclohexane): 0.03;
 4
 5
              (99) Manganese: 50;
 6
              (100) Mercury: 1;
 7
              (101) Methanol: 4 mg/L;
              (102) Methoxychlor: 40;
 8
 9
              (103) Methylene chloride (dichloromethane): 5;
              (104) Methyl ethyl ketone (2 butanone): 4 mg/L;
10
              (105) 2-Methylnaphthalene: 30;
11
              (106) 3 Methylphenol (m cresol): 400;
12
13
              (107) 4 Methylphenol (p cresol): 40;
14
              (108) Methyl tert butyl ether (MTBE): 20;
15
              (109) Naphthalene: 6;
              (110) Nickel: 100;
16
17
              (111) Nitrate (as N): 10 mg/L;
18
              (112) Nitrite (as N): 1 mg/L;
19
              (113) N-nitrosodimethylamine: 0.0007;
20
              (114) Oxamyl: 200;
21
              (115) Pentachlorophenol: 0.3;
              (116) Petroleum aliphatic carbon fraction class (C5 C8): 400;
22
              (117) Petroleum aliphatic carbon fraction class (C9 C18): 700;
23
              (118) Petroleum aliphatic carbon fraction class (C19 C36): 10 mg/L;
24
25
              (119) Petroleum aromatics carbon fraction class (C9 C22): 200;
              (120) pH: 6.5 8.5;
26
              (121) Phenanthrene: 200;
27
28
              (122) Phenol: 30;
              (123) Phorate: 1;
29
30
              (124) n Propylbenzene: 70;
              (125) Pyrene: 200;
31
              (126) Selenium: 20;
32
33
              (127) Silver: 20;
              (128) Simazine: 4;
34
              (129) Styrene: 70;
35
              (130) Sulfate: 250 mg/L;
36
              (131) 1,1,2,2 Tetrachloroethane: 0.2;
37
```

```
(132) Tetrachloroethylene (perchloroethylene; PCE): 0.7;
1
2
             (133) 2,3,4,6 Tetrachlorophenol: 200;
             (134) Toluene: 600;
3
             (135) Toxaphene: 0.03;
4
5
              (136) 2,4,5 TP (Silvex): 50;
6
              (137) 1,2,4 Trichlorobenzene: 70;
7
              (138) 1,1,1 Trichloroethane: 200;
              (139) Trichloroethylene (TCE): 3;
8
9
              (140) Trichlorofluoromethane: 2 mg/L;
10
              (141) 1,2,3 Trichloropropane: 0.005;
              (142) 1,2,4 Trimethylbenzene: 400;
11
              (143) 1,3,5 Trimethylbenzene: 400;
12
13
             (144) 1,1,2 Trichloro 1,2,2 trifluoroethane (CFC 113): 200 mg/L;
              (145) Vinyl chloride: 0.03;
14
15
              (146) Xylenes (o, m, and p): 500; and
              (147) Zine: 1 mg/L.
16
```

Substance	Chemical Abstracts	Standard (µg/L)
	Service (CAS) Registry	
	<u>Number</u>	
Acenaphthene	83-32-9	<u>80</u>
Acenaphthylene	<u>208-96-8</u>	<u>200</u>
Acetic acid	<u>64-19-7</u>	5,000
Acetochlor	<u>34256-82-1</u>	<u>100</u>
Acetochlor ESA	<u>187022-11-3</u>	<u>500</u>
Acetochlor OXA	<u>184992-44-4</u>	<u>500</u>
Acetone	<u>67-64-1</u>	6,000
Acetophenone	<u>98-86-2</u>	<u>700</u>
Acrolein	<u>107-02-8</u>	4
Acrylamide	<u>79-06-1</u>	0.008
Alachlor	<u>15972-60-8</u>	2
Aldrin	<u>309-00-2</u>	0.002
Anthracene	<u>120-12-7</u>	2,000
Antimony	<u>7440-36-0</u>	1
Arsenic	<u>7440-38-2</u>	<u>10</u>
Atrazine and chlorotriazine metabolites	<u>1912-24-9</u>	3
<u>Barium</u>	<u>7440-39-3</u>	<u>700</u>

Benzene	<u>71-43-2</u>	1
Benzo(a)anthracene	<u>56-55-3</u>	0.05
Benzo(a)pyrene	<u>50-32-8</u>	0.005
Benzo(b)fluoranthene	<u>205-99-2</u>	0.05
Benzo(g,h,i)perylene	<u>191-24-2</u>	<u>200</u>
Benzo(k)fluoranthene	207-08-9	0.5
Benzoic acid	<u>65-85-0</u>	<u>30,000</u>
Benzyl alcohol	<u>100-51-6</u>	<u>700</u>
Beryllium	<u>7440-41-7</u>	4
Bis(chloroethyl)ether	111-44-4	0.03
Bis(2-ethylhexyl) phthalate	<u>117-81-7</u>	3
Boron	7440-42-8	<u>700</u>
Bromodichloromethane	<u>75-27-4</u>	0.6
<u>Bromoform</u>	<u>75-25-2</u>	4
Bromomethane	74-839-9	<u>10</u>
n-Butanol	<u>71-36-3</u>	<u>590</u>
sec-Butanol	<u>78-92-2</u>	10,000
n-Butylbenzene	<u>104-51-8</u>	<u>70</u>
sec-Butylbenzene	<u>135-98-8</u>	<u>70</u>
tert-Butylbenzene	<u>98-06-6</u>	<u>70</u>
Butylbenzyl phthalate	<u>85-68-7</u>	1,000
<u>Cadmium</u>	7440-43-9	2
<u>Caprolactam</u>	105-60-2	4,000
<u>Carbofuran</u>	<u>1563-66-2</u>	<u>40</u>
Carbon disulfide	<u>75-15-0</u>	<u>700</u>
Carbon tetrachloride	<u>56-23-5</u>	<u>0.3</u>
Chlordane	<u>12789-03-6</u>	<u>0.1</u>
Chloride	<u>16887-00-6</u>	<u>250,000</u>
Chlorobenzene	<u>108-90-7</u>	<u>50</u>
Chloroethane	<u>75-00-3</u>	<u>3,000</u>
Chloroform	<u>67-66-3</u>	<u>70</u>
Chloromethane	<u>74-87-3</u>	3
2-Chlorophenol	<u>95-57-8</u>	<u>0.4</u>
2-Chlorotoluene	<u>95-49-8</u>	<u>100</u>
<u>4-Chlorotoluene</u>	<u>106-43-4</u>	<u>24</u>

Chromium	7440-47-3	<u>10</u>
Chrysene	<u>218-01-9</u>	5
Cobalt	7440-48-4	1
Coliform organisms (total)	No CAS Registry Number	<u>1 per 100 mL</u>
Color	No CAS Registry Number	15 color units
Copper	7440-50-8	<u>1,000</u>
Cyanide (free cyanide)	<u>57-12-5</u>	<u>70</u>
2,4-D (2,4-dichlorophenoxy acetic acid)	94-75-7	<u>70</u>
<u>Dalapon</u>	<u>75-99-0</u>	<u>200</u>
DDD	<u>72-54-8</u>	<u>0.1</u>
<u>DDE</u>	<u>72-55-9</u>	<u>0.1</u>
DDT	50-29-3	<u>0.1</u>
Dibenz(a,h)anthracene	<u>53-70-3</u>	<u>0.005</u>
1,4-Dibromobenzene	<u>106-37-06</u>	<u>70</u>
Dibromochloromethane	<u>124-48-1</u>	0.4
1,2-Dibromo-3-chloropropane	<u>96-12-8</u>	0.04
Dibutyl phthalate	84-74-2	<u>700</u>
Dichloroacetic acid	<u>79-43-6</u>	<u>0.7</u>
1,2-Dichlorobenzene	<u>95-50-1</u>	<u>20</u>
1,3-Dichlorobenzene	<u>541-73-1</u>	<u>200</u>
1,4-Dichlorobenzene	<u>106-46-7</u>	6
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	1,000
1,1-Dichloroethane	<u>75-34-3</u>	6
1,2-Dichloroethane	<u>107-06-2</u>	<u>0.4</u>
1,2-Dichloroethene (cis)	<u>156-59-2</u>	<u>70</u>
1,2-Dichloroethene (trans)	<u>156-60-5</u>	<u>100</u>
1,1-Dichloroethylene	<u>75-35-4</u>	<u>350</u>
2,4-Dichlorophenol	120-83-2	0.98
1,2-Dichloropropane	<u>78-87-5</u>	<u>0.6</u>
1,3-Dichloropropene (cis and trans isomers)	<u>542-75-6</u>	<u>0.4</u>
<u>Dieldrin</u>	60-57-1	0.002
Diethylphthalate	84-66-2	<u>6,000</u>
2,4-Dimethylphenol	<u>105-67-9</u>	<u>100</u>
2.4-Dinitrotoluene	<u>121-14-2</u>	0.05
2,6-Dinitrotoluene	606-20-2	<u>0.05</u>

Di-n-octyl phthalate	<u>117-84-0</u>	<u>100</u>
Dinoseb	<u>88-85-7</u>	7
1,4-Dioxane	<u>123-91-1</u>	3
<u>Dioxin (2,3,7,8-TCDD)</u>	<u>1746-01-6</u>	<u>0.0002 ng/L</u>
1,1-Diphenyl	<u>92-52-4</u>	<u>400</u>
Diphenyl ether	<u>101-84-8</u>	<u>180</u>
Diquat	<u>85-00-7</u>	<u>20</u>
Dissolved solids (total)	No CAS Registry Number	500,000
<u>Disulfoton</u>	<u>298-04-4</u>	0.3
Diundecyl phthalate (Santicizer 711)	<u>3648-20-2</u>	<u>100</u>
Endosulfan	<u>115-29-7</u>	<u>40</u>
Endosulfan sulfate	<u>115-29-7</u>	<u>40</u>
<u>Endothall</u>	145-73-3	<u>100</u>
Endrin, total (includes endrin, endrin aldehyde, and endrin ketone)	<u>72-20-8</u>	2
<u>Epichlorohydrin</u>	<u>106-89-8</u>	4
Ethyl acetate	<u>141-78-6</u>	3,000
Ethylbenzene	<u>100-41-4</u>	<u>600</u>
Ethylene dibromide	<u>106-93-4</u>	0.02
Ethylene glycol	<u>107-21-1</u>	10,000
Fluoranthene	<u>206-44-0</u>	<u>300</u>
Fluorene	<u>86-73-7</u>	<u>300</u>
Fluoride	<u>16984-48-8</u>	2,000
Foaming agents	No CAS Registry Number	<u>500</u>
<u>Formaldehyde</u>	<u>50-00-0</u>	<u>600</u>
Gross alpha (adjusted) particle activity (excludes radium-226 and uranium)	<u>12587-46-1</u>	<u>15 pCi/L</u>
<u>Heptachlor</u>	<u>76-44-8</u>	0.008
Heptachlor epoxide	<u>1024-57-3</u>	0.004
<u>Heptane</u>	<u>142-82-5</u>	400
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	0.02
<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	0.4
Hexachlorocyclohexane isomers (technical grade)	608-73-1	0.02
alpha-Hexachlorocyclohexane	<u>319-84-6</u>	0.006
beta-Hexachlorocyclohexane	<u>319-85-7</u>	0.02
gamma-Hexachlorocyclohexane (Lindane)	<u>58-89-9</u>	0.03
<u>n-Hexane</u>	<u>110-54-3</u>	400

Indeno(1,2,3-cd)pyrene	<u>193-39-5</u>	0.05
<u>Iron</u>	<u>7439-89-6</u>	300
<u>Isophorone</u>	<u>78-59-1</u>	<u>40</u>
Isopropyl ether	108-20-3	<u>70</u>
<u>Isopropylbenzene</u>	<u>98-82-8</u>	<u>70</u>
4-Isopropyltoluene	<u>99-87-6</u>	<u>25</u>
Lead	7439-92-1	<u>15</u>
Manganese	<u>7439-96-5</u>	<u>50</u>
Mercury	<u>7439-97-6</u>	1
<u>Methanol</u>	<u>67-56-1</u>	4,000
Methoxychlor	<u>72-43-5</u>	<u>40</u>
Methylene chloride	<u>75-09-2</u>	5
Methyl butyl ketone	<u>591-78-6</u>	<u>40</u>
Methyl ethyl ketone	<u>78-93-3</u>	4,000
Methyl isobutyl ketone	<u>108-10-1</u>	<u>100</u>
Methyl methacrylate	<u>80-62-6</u>	<u>25</u>
1-Methylnapthalene	90-12-0	1
2-Methylnaphthalene	<u>91-57-6</u>	<u>30</u>
2-Methylphenol	<u>95-48-7</u>	<u>400</u>
3-Methylphenol	<u>108-39-4</u>	<u>400</u>
4-Methylphenol	<u>106-44-5</u>	<u>40</u>
Methyl tert-butyl ether (MTBE)	<u>1634-04-4</u>	<u>20</u>
<u>Naphthalene</u>	91-20-3	6
<u>Nickel</u>	7440-02-0	<u>100</u>
Nitrate (as N)	<u>14797-55-8</u>	10,000
Nitrite (as N)	<u>14797-65-0</u>	1,000
N-nitrosodimethylamine	<u>62-75-9</u>	0.0007
<u>Oxamyl</u>	23135-22-0	<u>200</u>
<u>Pentachlorophenol</u>	608-93-5	0.3
[Perfluorooctane sulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA), total]	[1763-23-1 (PFOS); 335-67-1 (PFOA)]	[0.07]
Petroleum aliphatic carbon fraction class (C5 – C8)	No CAS Registry Number	400
Petroleum aliphatic carbon fraction class (C9 – C18)	No CAS Registry Number	<u>700</u>
Petroleum aliphatic carbon fraction class (C19 – C36)	No CAS Registry Number	10,000
Petroleum aromatics carbon fraction class (C9 – C22)	No CAS Registry Number	<u>200</u>
<u>pH</u>	No CAS Registry Number	6.5 - 8.5 (no unit)

<u>Phenanthrene</u>	<u>85-01-8</u>	<u>200</u>
<u>Phenol</u>	108-95-2	<u>30</u>
<u>Phorate</u>	<u>298-02-2</u>	1
n-Propylbenzene	103-65-1	<u>70</u>
Propylene glycol	<u>57-55-6</u>	100,000
Pyrene	<u>129-00-0</u>	<u>200</u>
Selenium	7782-49-2	<u>20</u>
Silver	7440-22-4	<u>20</u>
Simazine	122-34-9	4
Strontium	<u>7440-24-6</u>	2,000
Styrene	100-42-5	<u>70</u>
Sulfate	14808-79-8	<u>250,000</u>
1,2,4,5-Tetrachlorobenzene	<u>95-94-3</u>	<u>2</u>
1,1,2,2-Tetrachloroethane	<u>79-34-5</u>	0.2
1,1,1,2-Tetrachloroethane	<u>630-20-6</u>	1
Tetrachloroethylene (PCE)	<u>127-18-4</u>	0.7
2,3,4,6-Tetrachlorophenol	<u>58-90-2</u>	<u>200</u>
<u>Thallium</u>	7440-28-0	2
Tin (inorganic forms)	<u>7440-31-5</u>	2,000
Toluene	108-88-3	<u>600</u>
Toxaphene	8001-35-2	0.03
2,4,5-TP (Silvex)	93-72-1	<u>50</u>
1,2,4-Trichlorobenzene	120-82-1	<u>70</u>
1,1,1-Trichloroethane	<u>71-55-6</u>	<u>200</u>
1,1,2-Trichloroethane	<u>79-00-5</u>	0.6
Trichloroethylene (TCE)	<u>79-01-6</u>	3
Trichlorofluoromethane	<u>75-69-4</u>	2,000
2,4,5-Trichlorophenol	<u>95-95-4</u>	<u>63</u>
2,4,6-Trichlorophenol	<u>88-06-2</u>	4
1,2,3-Trichloropropane	<u>96-18-4</u>	0.005
1,2,4-Trimethylbenzene	<u>95-63-6</u>	400
1,3,5-Trimethylbenzene	108-67-8	<u>400</u>
<u>Vanadium</u>	7440-62-2	7
1,1,2-Trichloro-1,2,2-trifluoroethane	<u>76-13-1</u>	200,000
Vinyl chloride	<u>75-01-4</u>	0.03

Xylenes	<u>1330-20-7</u>	<u>500</u>
Zinc	<u>7440-66-6</u>	<u>1,000</u>

1 2 (i) Class GSA Standards. The standards for this class are the same as those for Class GA except as follows: 3 chloride: allowable increase not to exceed 100 percent of the natural quality concentration; and (1) 4 (2) dissolved solids (total): 1000 mg/L.1,000,000 μg/L. 5 (i) Class GC Standards. 6 (1) The concentrations of substances that, at the time of classification, exceed the standards applicable 7 to Class GA or GSA groundwaters shall not be caused to increase, nor shall the concentrations of 8 other substances be caused to exceed the GA or GSA standards as a result of further disposal of 9 contaminants to or beneath the surface of the land within the boundary of the area classified GC. 10 (2) The concentrations of substances that, at the time of classification, exceed the standards applicable 11 to GA or GSA groundwaters shall not be caused to migrate as a result of activities within the 12 boundary of the GC classification, so as to violate the groundwater or surface water quality standards 13 in adjoining waters of a different class. 14 Concentrations of specific substances, that exceed the established standard at the time of (3) 15 classification, are listed in Section .0300 of this Subchapter. 16 17 Authority G.S. 143-214.1; 143B-282(a)(2); History Note: 18 Eff. June 10, 1979; 19 Amended Eff. November 1, 1994; October 1, 1993; September 1, 1992; August 1, 1989; 20 Temporary Amendment Eff. June 30, 2002; Amended Eff. August 1, 2002; 21 22 Temporary Amendment Expired February 9, 2003; 23 Amended Eff. April 1, 2013; January 1, 2010; April 1, 2005; 24 Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. March 6, 25 2018;

Amended Eff. January 1, 2022.

26