

## **Part II: Summary Table of Comments and Responses**

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Arliss Albertson, County Commissioner, Duplin County	Statement at Afternoon Public Hearing August 8, 2000	• problem is due to greater withdrawals to the east of Duplin County	L
		• pumping levels from wells are mostly 200 feet above the top of the aquifer	D
		• “Water level declines have often been less than a foot per year and have typically been less than two feet per year...”	L
		• western half of county will be limited to their approved base rate and eastern half will be cut 30% from their approved base rate— regulation goes too far	I <sub>4</sub>
		• western half should not be subject to reduction requirements unless compelling evidence shows area is in jeopardy; should not have an approved base rate	I <sub>4</sub>
Melvin Albritton, Maintenance Supervisor, North Lenoir Water Corporation	Letter received September 15, 2000	• North Lenoir Water Corporation pumps about 55,000,000 gallons per month and serves 5,000 accounts and Kinston Dupont Plant	L
		• “blanket rule and covers areas that do not have immediate aquifer problems”	I <sub>1</sub> , I <sub>4</sub>
		• do not rush to implement rules	H
		• economic development hurt in an area with other problems	E, B
		• “we understand there is a problem”	L
		• funding is needed to develop alternate sources	A
		• water conservation education is important	L
Frederick R. Allen, P.E., Executive Director, North Carolina Aggregates Association	Letter dated September 11, 2000	• numerous crushed stone, and sand and gravel quarries exist in area	L
		• do reduction specifications apply to mining operations?	I <sub>10</sub>
		• why have complex permitting requirements for mines?	J <sub>2</sub>
		• why are mines subject to requirements for studies on rates of water use and local hydrology and does this provide “double coverage” with DLR’s mine permit program	J <sub>2</sub>
		• several mines have been contacted in the search for alternate sources of water	L
		• why include adjoining creeks, streams and rivers when surface water is not permitted?	I <sub>3</sub>

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Frederick R. Allen (continued)		<ul style="list-style-type: none"> <li>• what is a ground water withdrawal, is it by wells?</li> <li>• quarterly reports seem excessive</li> <li>• sinkholes are not an adverse impact unless they are specifically linked to a ground water withdrawal</li> <li>• long-term decline in aquifer should not be linked to quarries</li> <li>• why include local ground water impacts in this rule, language is vague .0502(c)(2)</li> <li>• .0502(c)(3) is subjective and vague</li> <li>• application information can not possibly be generated in 60 days</li> </ul>	<p>I<sub>18</sub></p> <p>I<sub>19</sub></p> <p>I<sub>16</sub></p> <p>I<sub>10</sub></p> <p>I<sub>16</sub></p> <p>I<sub>16</sub></p> <p>I<sub>4</sub></p>
Ed Andrews, Consulting Hydrogeologist	Statement at Afternoon & Evening Public Hearing August 8, 2000 and letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• include “system of prioritization” of use – 1. public health emergency, 2. potable water, 3. small utility, 4. large public utilities, 5. industrial use, 6. agricultural use, 7. lawn irrigation</li> <li>• breakdown the Cretaceous aquifer into components to allow for portions of aquifers as an alternate source, different than one that is overused</li> <li>• appeals process for removal from reduction requirements – reference appeal procedure</li> <li>• implement rules under the EMC’s guidance at a local level – primacy – let ECCOG implement rule</li> <li>• in .0506 there needs to be a provision for local and regional input on aquifer conditions</li> <li>• no provision for new water systems using the Cretaceous aquifer</li> <li>• location by NC Grid NAD83</li> <li>• one foot accuracy on measurements</li> <li>• “public health emergency” added to .0502(p) temporary permit provision</li> </ul>	<p>J<sub>3</sub></p> <p>I<sub>1</sub></p> <p>I<sub>10</sub>, I<sub>5</sub></p> <p>L</p> <p>I<sub>17</sub></p> <p>J<sub>4</sub></p> <p>I<sub>12</sub></p> <p>I<sub>12</sub></p> <p>I<sub>5</sub></p>
Tony Ballance, Ballance Farms, Inc.	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• commend proposed capacity use initiative – aquifers need to be maintained for the future</li> <li>• could a voluntary initiative aimed at a smaller group of large volume users achieve the same results</li> </ul>	<p>L</p> <p>F</p>

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		<ul style="list-style-type: none"> <li>• if a rule is necessary then their focus should be on the problem areas</li> <li>• rule must not inhibit agricultural growth</li> </ul>	F C
General David B. Barker, Chairman, Global TransPark Development Commission	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• adequate water supply is critical – proposed regulatory program is necessary</li> <li>• rule contains many of the specifics lacking in original drafts, including base line year, step-wise approach to reduction, different geographic zones, temporary permits, and authorization of the transfer or sale of water and water use rights</li> <li>• delay adoption to get broader support</li> <li>• the state must play leadership role in planning and funding water supplies</li> <li>• require DWR to submit to the EMC a plan for achieving water-use reduction goals developed in cooperation with water users</li> <li>• EMC should adopt a resolution calling for the General Assembly to fund the planning effort and public education programs, conservation measures and development of alternative supplies</li> <li>• rule favors existing users over new and expanding users</li> </ul>	L  L  H L  L L  J <sub>4</sub>
Jerry Bean, Eastern Wayne Sanitary District	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• we must stop over-use of certain aquifers, but not pay a private company for access to ground water removed to accommodate mining – the water should be provided to public water systems at no charge</li> </ul>	L, G <sub>1</sub>
Keith R. Beavers, President, Duplin County Farm Bureau	Letter dated August 8, 2000	<ul style="list-style-type: none"> <li>• farmers should have affordable, convenient access to water</li> <li>• limits are set too low</li> <li>• geographic scope of regulations needs refinement</li> <li>• farmers shouldn't have to gauge water use with meters, water use estimates by USDA/CES/NRCS should suffice</li> <li>• rule will impede growth</li> </ul>	C J <sub>5</sub> F I <sub>19</sub> C
Harold Blizzard, Craven County Manager	Statement at Afternoon Public Hearing August 8, 2000 and letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• impacted by hurricanes</li> <li>• overuse problem did not occur overnight and will take more than 16 years to fix</li> <li>• state's data is unreliable, needs to be better and more scientific</li> </ul>	B H D

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Harold Blizzard (continued)		<ul style="list-style-type: none"> <li>stakeholder group not truly representative – the CCPCUA Association is representative</li> </ul>	J <sub>6</sub>
		<ul style="list-style-type: none"> <li>fiscal analysis is “something of a joke” and totally unrealistic</li> </ul>	A
		<ul style="list-style-type: none"> <li>rules need to fairly address the problem with least cost to users and that reduction requirements need to vary according to extent of adverse impact</li> </ul>	F
		<ul style="list-style-type: none"> <li>Cretaceous aquifer should be protected only if the state foots the bill</li> </ul>	A
		<ul style="list-style-type: none"> <li>“...all entities are being treated the same irrespective of the amount of water used and their corresponding impact on the aquifer.”</li> </ul>	F
Todd Bollick, Town of Bethel	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>there is a water supply issue with the Cretaceous aquifers and rule is only a starting point</li> </ul>	L, F
		<ul style="list-style-type: none"> <li>what is proposed cost of rule – it appears grossly underestimated</li> </ul>	A
		<ul style="list-style-type: none"> <li>what is the point in conserving water if the community is gone?</li> </ul>	J <sub>7</sub>
Dan K. Boone, P.E., The Wooten Company	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>endorses rule</li> </ul>	L
		<ul style="list-style-type: none"> <li>rule provides for: flexibility of enforcement addressing the diversity of water systems and withdrawals; protecting the public from unregulated withdrawals; time for planning and implementation; collection of data; and adjustment; and affirmative action in a timely manner</li> </ul>	L
		<ul style="list-style-type: none"> <li>the cost of not going forward with a rule is greater than with the rule</li> </ul>	L
Helen Boyette, Citizen of Duplin County	Statement at Afternoon Public Hearing August 8, 2000 and letter dated September 15, 2000	<ul style="list-style-type: none"> <li>other problems</li> </ul>	B
		<ul style="list-style-type: none"> <li>we need state assistance to maintain reasonable water rates</li> </ul>	A
		<ul style="list-style-type: none"> <li>we need to use conservation measures and find new sources of water</li> </ul>	L
		<ul style="list-style-type: none"> <li>director has too much power – should be a committee</li> </ul>	L
		<ul style="list-style-type: none"> <li>what is the cost of permits or penalties, that information should be in the rules</li> </ul>	I <sub>9</sub> , I <sub>11</sub>
Woody Brinson, Economic Development Director, Duplin County	Statement at Afternoon Public Hearing August 8, 2000 and letter dated September 15, 2000	<ul style="list-style-type: none"> <li>there are water problems in other areas of North Carolina</li> </ul>	L
		<ul style="list-style-type: none"> <li>fiscal analysis underestimates cost to correct problem – \$400-500 million compared to \$78 million</li> </ul>	A
		<ul style="list-style-type: none"> <li>industries will be at a competitive disadvantage if we impose conservation requirements</li> </ul>	E

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Woody Brinson (continued)		<ul style="list-style-type: none"> <li>• conservation measures for industries are not as clearly defined as they are for public water systems</li> <li>• where did figures come from in fiscal analysis if water sources are not metered at industries or farms – how do we know how much water industry is using without meters?</li> <li>• we are at a disadvantage for recruitment of new industries with attention on water problems – the proposed rule has already scared away some prospects</li> <li>• are regulations too broad based – do we need to focus on locations that are experiencing problems</li> <li>• why must we suddenly implement rules without full understanding of data</li> <li>• hard hit by Floyd, tobacco cut backs, livestock moratorium</li> <li>• “cookie-cutter” approach not proper</li> <li>• question data and fiscal analysis accuracy</li> <li>• delay adoption of rule for two years – voluntary efforts will work better than regulatory</li> <li>• require only monitoring of western Cretaceous area</li> <li>• re-evaluate fiscal impact</li> <li>• “Adjust regulations so as to not impact the operation, potential growth, and financial stability of our existing industries.”</li> <li>• industries should use production unit based rate</li> </ul>	<p>I<sub>13</sub></p> <p>J<sub>8</sub></p> <p>E</p> <p>F</p> <p>H</p> <p>B</p> <p>F</p> <p>D, A</p> <p>H</p> <p>I<sub>4</sub></p> <p>L</p> <p>L</p> <p>I<sub>6</sub></p>
Judy Brown, Assistant County Manager, Duplin County	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• how is an approved base rate determined for water districts with no infrastructure</li> <li>• does EMC have the authority to implement regulations that may have a negative effect on the district’s ability to repay its debt service</li> <li>• devastated by hurricane Floyd</li> <li>• need state to provide funding (100% grant funds)</li> <li>• citizens of Duplin County have been encouraged to connect to public water for safe potable water, these rules will raise rates and cause those</li> </ul>	<p>I<sub>6</sub></p> <p>J<sub>9</sub></p> <p>B</p> <p>A</p> <p>J<sub>10</sub></p>

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		people to switch back to private wells – is that what we want?	
Rose Burlington, Rosebud Ranch	Letter dated August 31, 2000	<ul style="list-style-type: none"> <li>• farmers must have affordable, convenient access to water – concerned about proposed rules</li> <li>• the rule must not impede future growth of agriculture and aquaculture</li> <li>• do not require permitting, reporting or restriction of surface water use</li> <li>• rule should be refined to focus on wells with declining water levels</li> <li>• permitting process should be prompt and application should be simple</li> <li>• farmers should not have to purchase, install and monitor meters</li> <li>• should be a learning experience for other areas of state – consider voluntary efforts now</li> <li>• DWR should not “rush” to implement water use regulations state-wide</li> </ul>	<p>C</p> <p>C</p> <p>I<sub>3</sub></p> <p>F, D</p> <p>L</p> <p>I<sub>19</sub></p> <p>L</p> <p>L</p>
Paul E. Busick, President and Executive Director, North Carolina Global TransPark Authority	Statement at Evening Public Hearing August 8, 2000 and letter dated September 15, 2000 (see comments under General David B. Barker)	<ul style="list-style-type: none"> <li>• important public policy issue with three main tasks, 1. protection of aquifers, 2. develop regional alternative water sources, and 3. practical water conservation and re-use</li> <li>• water supply and economic well-being are not separate issues</li> <li>• supports objectives of proposed rule</li> <li>• the Global TransPark must be developed in a responsible, sustainable manner and they plan to lead by example</li> <li>• we need to grow the region <u>and</u> have an adequate supply of water</li> <li>• area needs state financial support</li> </ul>	<p>L</p> <p>L</p> <p>L</p> <p>L</p> <p>L</p> <p>A</p>
CEC/NC • PENC Environmental Committee, <u>Dan K. Boone</u> , P.E., The Wooten Company & <u>John Eick</u> , P.E., W.K. Dickson & Co, Inc.	Letter dated May 9, 2000	<ul style="list-style-type: none"> <li>• endorse efforts by DWR to protect ground water resources</li> <li>• continued unregulated use of the Cretaceous aquifer system will result in irreparable damage</li> <li>• endorse rule</li> </ul>	<p>L</p> <p>L</p> <p>L</p>
Eddie Coltrain, District Manager, Wayne Water Districts	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• water levels in Black Creek aquifer in eastern Wayne County do not show declines</li> <li>• member of CCPCUA Association</li> <li>• include in .0503: “Withdrawals from sources within the Cretaceous aquifer system, such as unconfined or partially confined aquifers, which</li> </ul>	<p>L</p> <p>L</p> <p>I<sub>1</sub>, I<sub>10</sub></p>

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Eddie Coltrain (continued)		are demonstrated by scientific evidence not to cause adverse impacts as provided in .0502(c)(1) shall be allowed in addition to the approved base rate and shall not be subject to the phase [sic] reduction requirements.”	
Curtis Consolvo, Hydrogeologist with Groundwater Management Associates, Inc.	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• Cretaceous aquifer system is an incredible resource that is threatened by current withdrawal rates and is already damaged in places</li> <li>• concept of rules is needed to continue to enjoy the benefits of the resource without scrambling to find alternate sources in the future</li> </ul>	L L
Ken Cornatzer, Town Manager, Town of Wallace	Letter dated September 8, 2000	<ul style="list-style-type: none"> <li>• Town of Wallace strongly supports draft rule changes put forth by the Division of Water Resources on August 29, 2000: 1. exclude wells exclusively screened in Peedee aquifer from reductions in .0503, 2. append the following to the Cretaceous aquifer system definition – “and includes the Peedee, Black Creek, Upper Cape Fear and Lower Cape Fear aquifers.”, 3. delete portions of .0503 – .0503(6)(a)(iv), .0503(6)(b)(iv), and .0503(6)(c)(iv), and 4. change application submittal deadline from 60 to 180 days [.0502(b)(1)]</li> </ul>	I <sub>4</sub>
Landis Davis, Belfast-Patetown Sanitary District, Wayne County	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• the extent of aquifer over-use appears to be in question – rules should be implemented only after extent of problem is determined</li> <li>• other problems have hurt area, rules will have adverse economic consequences</li> </ul>	F, D B, A
Chester Ellis, Environmental Manager, Collins & Aikman	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• supports need to control water withdrawals in the CCP</li> <li>• supplied by public water system</li> <li>• water conservation plan requirements do not specify a time frame or what constitutes a “feasible” measure</li> <li>• past efforts at conservation should be taken into account</li> </ul>	L L I <sub>13</sub> I <sub>13</sub> , I <sub>6</sub>
Tom Ellis, NC Department of Agriculture	Letter and Minority Report from the Aquaculture Community dated May 9, 2000 and letter dated September 12, 2000	<ul style="list-style-type: none"> <li>• do not adopt temporary rules – circulate for additional comments to insure adequacy</li> <li>• water level decline data shows problem around continuous use at industrial and population centers</li> </ul>	L F



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Tom Ellis (continued)		<u>Aquaculture Minority Report</u> <ul style="list-style-type: none"> <li>• exempt aquaculture</li> <li>• most growers will not be impacted by reduction requirements as they are intermittent users</li> <li>• concerned about declining water levels and are not contesting need to manage ground water resources, but are concerned about methods</li> <li>• we are in too much of a rush to institute rules</li> <li>• ground water level declines are occurring at locations of large continuous users in rapidly urbanizing portions of area – rules should focus on that</li> <li>• rules are “hastily-arrived-at set of blanket restrictions”</li> <li>• costs and restrictions could severely cripple aquaculture industry</li> <li>• aquaculture is “an environmentally sound, aesthetically pleasing use of farms”</li> <li>• state monitoring wells do not point to aquaculture as source of water level declines – are they to wait for water level stabilization near municipalities before reduction targets are met?</li> <li>• efficient water use already</li> <li>• no control of price and therefore no way to pass along cost of regulation</li> <li>• potential costs include: modifying wells to facilitate water level measuring [.0502(g)(2)], purchase of water meters and plumbing [.0502(g)(1)], installation of monitoring wells [.0502(i)], daily monitoring and reporting [.0502(g)(1)], hiring consultants to determine well construction and water conservation information for application [.0502(d)(1&amp;2) &amp; .0502(d)(5)(B)]</li> <li>• no acceptable alternate water sources – can not use surface water</li> <li>• rule will impede growth of farms</li> <li>• public comment process will cause problems for new growers from neighbors who do not understand nature of business [.0502(e)]</li> <li>• problem did not occur overnight – why rush</li> </ul>	<p>C</p> <p>L</p> <p>L</p> <p>H</p> <p>F</p> <p>F</p> <p>C, A</p> <p>L</p> <p>D</p> <p>L</p> <p>L</p> <p>A</p> <p>G<sub>2</sub></p> <p>C</p> <p>I<sub>2</sub></p> <p>H</p>

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Tom Ellis (continued)		<ul style="list-style-type: none"> <li>rule language should be adjusted to allow for inclusion of certain aquaculture operations as intermittent users as follows: 1. “aquaculture operations licensed under the authority of GS 106-761 and which withdraw ground water 60 days or less per calendar year, not withstanding the need for initial filling and refilling of ponds on a minimum of a 5-year cycle, shall be considered an intermittent user.” or 2. “.0507 (13) Intermittent users: Persons who withdraw ground water in amounts greater than 100,000 gallons per day less than 60 days per calendar year; or who withdraw less than 15 million gallons of ground water in a calendar year; or aquaculture operations licensed under the authority of GS 106-761 involved in initial filling or refilling of ponds no more frequently than every 5 years.”</li> </ul>	I <sub>8</sub>
Denny Garner, Chairman, Greene County Board of Commissioners	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>Greene County is designated as within the “Dewatering Zone,” but since water levels are above the top of the aquifer we should be in the “Declining Water Level Zone”</li> <li>reduction requirements mean county use must reduce from 1.6 mgd to 0.4 mgd over a 16 year period and alternate water sources are not obvious</li> <li>1.06 mgd recharge potential is calculated using an estimate of 4,000 gpd/square mile and a 265 square mile area, thus 75% reduction over 16 years appears punitive; again, a reclassification to the “Declining Water Level Zone” appears appropriate</li> <li>although other counties have alternatives, Greene County does not – give the Director the authority to modify reduction requirements in cases lacking alternative supplies</li> </ul>	K  G <sub>3</sub>  K  G <sub>3</sub> , I <sub>5</sub>
Ralph Heath, Consulting Hydrogeologist	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>endorses rule and pushed for it because it takes many years to identify new sources and bring them on line</li> <li>see also comments from joint letter under Dr. Richard K. Spruill</li> </ul>	L
Harold Herring, Assistant Director	Statement at Afternoon	<ul style="list-style-type: none"> <li>recognize that water level declines are a real problem “and that the days</li> </ul>	L

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of Public Utilities, Kinston and also represents the Neuse Regional Water & Sewer Authority	Public Hearing August 8, 2000	of cheap water is coming to an end”	
		• “not totally against the rules,” but rules need to be studied for refinement and economic impact	F
		• severely impacted by hurricanes, reductions in farming, the improvements needed to the aged wastewater collection system, and other rules	B
		• if imposed the state should provide grants to maintain reasonable water rates	A
		• engineers have estimated the Lenoir intake to cost \$55 million and double our water rates	A
		• need to encourage industries east of Interstate 95	E
Richard Hicks, Town Manager, Town of Farmville and Chairman of the CCPCUA Association	Statement at Afternoon Public Hearing August 8, 2000, letter dated September 13, 2000 and letter dated September 15, 2000	• more time is needed for initial implementation	H
		• move slower with rule-making – you have everyone’s attention	H
		• this is a water supply issue and an economic impact issue	L
		• Farmville is facing many economic issues including Floyd recovery, agricultural, nitrogen reductions in discharge, electricity deregulation, ozone non-attainment area	B
		• Farmville does not see an alternative water source in Pitt County	G <sub>3</sub>
		• support our efforts for funding – needs may be between \$400 and 600 million	A
		• more monitoring wells are needed	D
		• agree there is a problem with supply from CCP aquifers, but with adequate funding from the state there would be no need for rules	L, H
		• rule does not consider economic impact nor the other problems facing this area	A, B
		• proposed rule is already hurting industrial recruitment	E
		• rule will hurt existing industry because they will not find alternate sources	G <sub>3</sub>
		• there are not enough monitoring wells in 15 counties, additional	D

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Richard Hicks (continued)		<p>scientific data is needed, DWR’s recent additions to the network illustrate that there are gaps in the network</p> <ul style="list-style-type: none"> <li>• large users have caused cones of depression, do not reduce water usage for everyone in the 15 county region, provide money to the large users to find alternate sources of water</li> <li>• rules lack control over agriculture – all water users should be required to submit detailed water use figures</li> <li>• alternate sources can not be obtained in the first 6 years because of other existing regulatory requirements</li> <li>• fiscal note underestimates costs of rule</li> <li>• it may be difficult to phase in costs over the 16 year period</li> <li>• because of difficulties creating interlocal agreements that may be necessary to obtain alternative sources, the rules should specify a variance procedure</li> <li>• there are water resource problems statewide, DWR should develop a comprehensive plan for the entire state</li> <li>• agree with proposed change to rules to exclude the Peedee aquifer from reduction requirements</li> <li>• bedrock wells and wells in shallower aquifers should be excluded from regulation</li> <li>• legislature should provide funds for developing our understanding of the aquifer system</li> <li>• delay approval of rule for 2-3 years to allow for better understanding</li> <li>• water users should not be allowed to sell excess capacity</li> <li>• partially complete public water systems do not know their water needs and may be penalized or may not be able to repay loans which could prompt legal action</li> <li>• opposes facing costs of modifying wells (which may be abandoned in the future due to reduction requirements) to accept electric or steel tapes</li> </ul>	<p>F</p> <p>I<sub>3</sub></p> <p>I<sub>5</sub></p> <p>A</p> <p>A</p> <p>I<sub>5</sub></p> <p>L</p> <p>I<sub>4</sub></p> <p>I<sub>4</sub></p> <p>L</p> <p>L</p> <p>I<sub>14</sub></p> <p>I<sub>6</sub></p> <p>I<sub>19</sub></p>

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Richard Hicks (continued)		<ul style="list-style-type: none"> <li>• public review process could cause delays – “Public review often changes the permit review process from a scientific basis to a political basis.”</li> </ul>	I <sub>2</sub>		
		<ul style="list-style-type: none"> <li>• what are fees?</li> </ul>	I <sub>9</sub>		
		<ul style="list-style-type: none"> <li>• permit length is not stated in rule</li> </ul>	I <sub>15</sub>		
		<ul style="list-style-type: none"> <li>• rule does not allow for the continued use of the aquifer if many significant users move to alternate sources</li> </ul>	J <sub>11</sub>		
		<ul style="list-style-type: none"> <li>• we should not rush into rules there may be better options</li> </ul>	H		
		<ul style="list-style-type: none"> <li>• developing a regional water supply solution may make permanent rules unnecessary</li> </ul>	J <sub>12</sub>		
		<hr/>		<ul style="list-style-type: none"> <li>• is Peedee aquifer still proposed to be removed from the proposed rules?</li> </ul>	I <sub>4</sub>
				<ul style="list-style-type: none"> <li>• “Our first priority is to arrange for financing of the alternative water sources that would make a rule unnecessary.”</li> </ul>	L
				<ul style="list-style-type: none"> <li>• numerous amendments to the rule language are proposed on the attached pages</li> </ul>	I
		Stephen F. Hines, Project Planner & Developer, Eastern Carolina Council of Governments	Statement at Evening Public Hearing August 8, 2000 and letter received September 14, 2000	<ul style="list-style-type: none"> <li>• the rule will put restrictions on communities ill-prepared to deal with them and who have other problems to deal with</li> </ul>	B
<ul style="list-style-type: none"> <li>• communities now are aware of the situation</li> </ul>	H				
<ul style="list-style-type: none"> <li>• time coupled with financial resources are needed to develop alternatives – some alternatives are more accessible</li> </ul>	A				
<ul style="list-style-type: none"> <li>• delay implementation until further input can be obtained by these affected communities – rules need to assist not hurt our citizens</li> </ul>	H				
David G. Hyatt, President, Panoramic Farms and Board Member of the North Carolina Association of Nurserymen	Letter dated September 13, 2000	<ul style="list-style-type: none"> <li>• concerned about the precedent rule would set</li> </ul>	L		
		<ul style="list-style-type: none"> <li>• uses best management practices to recapture 100% of irrigation water</li> </ul>	L		
		<ul style="list-style-type: none"> <li>• micro-irrigation practices require clean, high quality water and only ground water meets the necessary standards</li> </ul>	L		
		<ul style="list-style-type: none"> <li>• nurseries should not be subject to reductions due to their efficient use of water and recapturing of irrigation water</li> </ul>	I <sub>6</sub> , I <sub>10</sub>		
Jean Hood, Southwestern Wayne	Statement at Evening Public	<ul style="list-style-type: none"> <li>• well water levels in district have not been declining so why limit</li> </ul>	I <sub>4</sub>		

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Sanitary District	Hearing August 8, 2000	<ul style="list-style-type: none"> <li>withdrawals</li> <li>• costs will be huge so do not require unnecessary expenditures where ground water is sustainable</li> </ul>	A, I <sub>4</sub>
Honorable W. J. Igoe, Mayor, Town of Faison	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>• member of the CCPCUA Association</li> <li>• do not unfairly penalize western Duplin County</li> </ul>	L I <sub>4</sub>
Arthur L. Kennedy, P.E., President, The Wooten Company	Statement at Evening Public Hearing and Letter dated August 8, 2000	<ul style="list-style-type: none"> <li>• endorses rule</li> <li>• provide flexibility in rule to allow for well-documented cases of recharge rates exceeding withdrawal</li> <li>• reports made available to public on initiatives to reverse current trends</li> <li>• increase water level monitoring</li> <li>• be prepared to amend rule and/or boundaries as subsequent data analysis may dictate</li> <li>• use hydrogeological data to allocate water use according to user class and quantity and quality required</li> <li>• show no favoritism</li> <li>• award Clean Water Bond Grant program priority points</li> <li>• the economy of eastern North Carolina is dependent on a reliable water supply – we need the rule to preserve these aquifers</li> </ul>	L I <sub>1</sub> I <sub>17</sub> D L J <sub>3</sub> L A L
Clifford Lee, Environmental Manager, DuPont Kinston Plant	Letter dated April 13, 2000	<ul style="list-style-type: none"> <li>• endorses rule</li> </ul>	L
Jerry Lee, Vice President, Wight Nurseries of North Carolina, Inc.	Letter dated September 6, 2000	<ul style="list-style-type: none"> <li>• recognizes ground water issues exist and that steps must be taken</li> <li>• fiscal analysis seems to underestimate cost of rule</li> <li>• commission needs to allow for latitude to take into account individual circumstances as stated in GS 143-215.16(e)</li> <li>• commission needs to consider land investments as stated in GS 143-215.16(f)</li> <li>• reduction requirements based on water needs of a 25% complete nursery will negatively impact business and the local economy</li> </ul>	L A I <sub>5</sub> I <sub>5</sub> I <sub>6</sub>
Harry E. LeGrand, Hydrogeologist	Letter dated August 8, 2000	<ul style="list-style-type: none"> <li>• endorses rule</li> <li>• do not postpone action, existing data is convincing</li> </ul>	L D

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
		<ul style="list-style-type: none"> <li>• need for better explanations (simpler)</li> </ul>	L
Mark Loomis, Carolina Classics Catfish	Statement at Afternoon Public Hearing August 8, 2000 and email dated September 19, 2000	<ul style="list-style-type: none"> <li>• see comments under Tom Ellis, Aquaculture Community Minority Report</li> <li>• add to .0502(d)(2) “(H) Aquaculturists shall supply well specifications A through G at the completion of well construction within tolerances normally reported by driller.”</li> <li>• add to .0502(d)(5) “(D) Users of water for aquaculture shall follow Best Management Practices including: i. Allow pond water levels to drop eight inches before pumping; ii. Stop pumping before water level reaches the top of stand pipe; iii. Flushing with well reserved for stock endangering emergencies; and iv. Pond refilling reserved for pond levee and bottom renovations.”</li> <li>• add to .0502(g) “(6) Aquaculturists shall report water used for fish culture by estimates based on pump running times. Static water levels shall be measured once a month. Monitoring wells shall not be required for aquaculture facilities.”</li> </ul>	I <sub>12</sub>  I <sub>13</sub>  I <sub>19</sub>
Wayne Malone, Kinston City Council and represents the Neuse Regional Water & Sewer Authority	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• NRWASA includes North Lenoir, Deep Run, Pink Hill, La Grange and Kinston</li> <li>• convinced there is a problem</li> <li>• costs are high and area needs money</li> </ul>	L  L  A
Senator R. L. Martin and Representatives Stan Fox and Bill Owens; Co-Chairs of the Natural and Economic Resources Appropriations Subcommittee	Letter dated September 14, 2000	<ul style="list-style-type: none"> <li>• ground water issue is of utmost importance to the members of the subcommittee</li> <li>• “...respectfully submit our strong concerns regarding the appropriateness of the rules.”</li> <li>• evidence is clear that water levels are declining in the Black Creek and Upper Cape Fear aquifers and this “can lead to a series of adverse impacts including dewatering of the aquifers, permanent loss of water storage capacity, salt water encroachment and land subsidence or sinkhole development.”</li> <li>• DWR needs to know the causes of the declining water levels before</li> </ul>	L  L  L  D

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Senator R. L. Martin (continued)		<p>suggesting solutions, by knowing how much water is withdrawn and the recharge rates of these aquifers</p> <ul style="list-style-type: none"> <li>• DWR needs to know the correct withdrawal rates the aquifers can support to determine extent of water reductions necessary</li> <li>• basic approach to the problem is reasonable, but accurate reduction estimates are necessary given the potential negative impact on the economy</li> <li>• what practical alternatives exist for small users?</li> <li>• what is the fiscal impact?</li> <li>• “The implications of DWR’s proposed rules have serious consequences for the citizens, municipalities and industries in the affected 15 county region that can not be ignored or dismissed.”</li> <li>• viable alternatives must be developed to provide sustainable water supplies</li> <li>• “Without definitive answers to these questions, we believe that is premature to move ahead with rules as proposed.”</li> <li>• “We understand that ultimately, water withdrawals will have to be reduced until they match recharge rates; however, the data to inform this balance is not available.”</li> </ul>	<p>D</p> <p>D</p> <p>G<sub>3</sub></p> <p>A</p> <p>J<sub>13</sub></p> <p>L</p> <p>D</p> <p>L, D</p>
Bob Murphy, Director, Agricultural Statistics Division, NC Department of Agriculture and Consumer Services	Letter dated August 29, 2000	<ul style="list-style-type: none"> <li>• all information collected by Division is protected by confidentiality (see attached)</li> </ul>	L
Mitch Peele, North Carolina Farm Bureau Federation	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• rules have the potential to greatly affect the North Carolina farmers’ quality of life</li> <li>• farmers have faced “unparalleled despair” in recent years</li> <li>• support the goal of protecting our finite water resources, but not necessarily the method</li> <li>• mandatory reductions may not affect farmers, but we propose that the state narrow the scope of these reductions to where adverse affects are</li> </ul>	<p>C</p> <p>B</p> <p>L</p> <p>F</p>



## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Mitch Peele (continued)		<ul style="list-style-type: none"> <li>observed</li> <li>• rule requirements to put intakes no lower than the top of the uppermost confining aquifer may force farmers to seek expensive alternate water supplies</li> <li>• if we had known about this sooner there would not be a need for a rule because the problem would have been voluntarily addressed</li> </ul>	<p style="margin: 0;">I<sub>7</sub></p> <p style="margin: 0;">F</p>
William H. Perkins, Jr., Town Administrator, Town of Lucama	Letter dated September 14, 2000	<ul style="list-style-type: none"> <li>• Town of Lucama draws water from rock wells and is not in one of the three Cretaceous zones</li> <li>• costly for community, need exemption</li> </ul>	<p style="margin: 0;">L</p> <p style="margin: 0;">F</p>
Horace Phillips, Chairman of the Jones County Commissioners	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• they have been told to put their wells in the western part of the county by the engineers for the last 25 years where water levels are declining 3 feet per year</li> <li>• now they are being told to use the Castle Hayne aquifer</li> <li>• with Floyd damage – they need grants to shift to the Castle Hayne</li> </ul>	<p style="margin: 0;">L</p> <p style="margin: 0;">A</p> <p style="margin: 0;">B, A</p>
David Pittman, Northwestern Wayne Sanitary District David Pittman (continued)	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• Deep aquifer water is of excellent quality because of natural treatment over hundreds or thousands of years and we use it in a matter of seconds or minutes without second thought</li> <li>• it has won national awards for its quality and taste – it’s too special for anything but drinking, yet it costs much less than \$0.89 per liter (common convenience store price), that price typically buys about 1,000 gallons</li> <li>• rule needs to require tougher standards for conservation with rate structures that economically prohibit irrigation and random use of water</li> <li>• local ordinances are needed to require irrigation wells within the surficial aquifer</li> </ul>	<p style="margin: 0;">L</p> <p style="margin: 0;">L</p> <p style="margin: 0;">I<sub>13</sub></p> <p style="margin: 0;">L</p>
Paul H. Pittman, III, Clean Water Campaign Coordinator, North Carolina Sierra Club	Statement at Afternoon Public Hearing August 8, 2000 and letter dated September 14, 2000	<ul style="list-style-type: none"> <li>• we appreciate the attention given to this growing problem</li> <li>• need public access to information of users of more than 10,000 gpd – agricultural reporting provision in .0505 is “secrecy shield”</li> <li>• need comprehensive water budget before issuing permits</li> <li>• permits should only be issued to users with clean record of compliance</li> </ul>	<p style="margin: 0;">L</p> <p style="margin: 0;">I<sub>3</sub></p> <p style="margin: 0;">D</p> <p style="margin: 0;">L</p>

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Paul H. Pittman (continued)		<ul style="list-style-type: none"> <li>• animal operations in the central coastal plain use over 70 mgd</li> <li>• Bladen and Robeson Counties need to be included due to water level declines and high water use</li> <li>• what plan is in place to deal with the water needs of the Global TransPark?</li> </ul>	<p>L</p> <p>F</p> <p>L</p>
Sondra Ipock Riggs, Jones County Commissioner	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• rule will put the little farmer or small water suppliers out of business</li> </ul>	<p>J<sub>1</sub></p>
James E. Scoggins, General Manager, Wight Nurseries of North Carolina, Inc.	Letter dated September 8, 2000	<ul style="list-style-type: none"> <li>• recognizes ground water issues exist and that steps must be taken</li> <li>• base rate of water usage should be that rate from full site development</li> <li>• because they are already using the best water conservation practices and recycling techniques, the reduction requirement should be halved</li> <li>• nurseries are economically important and provide many jobs for the amount of water it consumes</li> <li>• costs will increase as reduction requirements are met so recommend implementing a state cost-share program for development of alternative water sources</li> <li>• special consideration to nurseries so they can care for plants during times of drought</li> </ul>	<p>L</p> <p>I<sub>6</sub></p> <p>I<sub>1</sub>, I<sub>10</sub></p> <p>L</p> <p>A</p> <p>I<sub>5</sub>, I<sub>10</sub></p>
Marion Smith, Executive Director, Neuse River Foundation, Inc.	Letter dated May 9, 2000 and Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>• .0502(c)(1) &amp; (2) – instead of “avoid or minimize” should be “avoid or minimize and mitigate”</li> <li>• .0505(c) – a “confidential” reporting provision defeats intended purpose and maybe illegal and certainly not considered a “trade secret”</li> <li>• qualified support of rule – aforementioned changes to rule after stakeholder process weakened the rule</li> <li>• must have accurate records of water use to develop a water budget and fair allocation process</li> <li>• proposed regulations are a small step in the right direction</li> </ul>	<p>I<sub>16</sub></p> <p>I<sub>3</sub></p> <p>L</p> <p>I<sub>3</sub></p> <p>L</p>
Honorable Ralph Smith, Mayor, Town of Black Creek	Letter dated September 11, 2000	<ul style="list-style-type: none"> <li>• opposes rule – exempt the Town of Black Creek</li> <li>• not in a Cretaceous Zone and they use bedrock wells, but are in Wilson County</li> </ul>	<p>F</p> <p>F, I<sub>4</sub></p>

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
		<ul style="list-style-type: none"> <li>rule will be costly to community and hamper growth</li> </ul>	A
William Lee Smith, III, County Manager, Washington County	Letter dated July 13, 2000	<ul style="list-style-type: none"> <li>unfair that Washington County is included in rule, should be excluded as they use the Castle Hayne aquifer</li> </ul>	F
Dr. Richard K. Spruill, East Carolina University	Statement at Evening Public Hearing August 8, 2000 and letter with Ralph Heath dated September 12, 2000	<ul style="list-style-type: none"> <li>the scientific community is in agreement that since the 1960's ground water is being removed from the Cretaceous aquifers faster than it is replenished – we know where the problem area is</li> <li>rule will curtail overdraft of the aquifers in a stepwise fashion aimed at the safe yield</li> <li>it will also protect against salt water encroachment and land subsidence</li> <li>the rule will foster research and force users to use alternative water sources</li> <li>cost is a big concern, but we face greater costs to produce water anyway and in a crisis, costs will be much worse – we are trying to prevent a crisis</li> </ul>	L, D
		<ul style="list-style-type: none"> <li>some aquifers in central coastal plain are being “mined” because water is being withdrawn faster than can be recharged</li> <li>recharge is estimated to be about 75% less than what is currently being withdrawn from the Black Creek and Upper Cape Fear aquifers</li> <li>very large cones of depression have formed</li> <li>continued use at current rates will cause irreparable damage to the aquifer system such as salt water intrusion, land subsidence and aquifer dewatering</li> <li>we must reduce withdrawals to a rate equal to the rate of recharge</li> <li>“We believe that implementation of the rule will ultimately preserve the groundwater resources in the Central Coastal Plain, and it will provide the regulatory framework for long-term best management of this vital resource.”</li> <li>Ralph Heath predicted in 1970 that “excessive development of the Cretaceous aquifers would result in serious groundwater problems.”</li> </ul>	L, D L, D L, D L, D L, D L L

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Dr. Richard K. Spruill (continued)		• Richard Spruill began in 1987 describing the overdraft situation in a series of talks	L
		• the data needed to evaluate this situation has and continues to be available from monitoring network and production wells	L
		• alternate sources of water exist from aquifers with higher recharge rates and surface water	L
		• “The monitoring-well network...has evolved from a few wells in the 1940’s to a complex network of dozens of strategically-located wells today....Those who oppose the proposed rule based upon the assertion that our monitoring-well network is inadequate are ill-informed! The monitoring-well network in the Coastal Plain of North Carolina is, in our opinion, superior to the network in most, if not all, of our United States.”	L
		• “The rule does NOT propose to eliminate use of groundwater from these two aquifers, but rather it proposes to protect the aquifer by allowing development at a sustainable rate.”	L
		• “We particularly endorse this phased approach to reductions in withdrawals because it will allow developers and users of the resource to deal with the economic impacts of development of alternate water sources in a rational way, and because it will allow us to determine the definitive sustainable rate of withdrawal of the aquifer system.”	L
Keith Starner, NC Rural Water Association	Statement at Afternoon Public Hearing August 8, 2000	• Sammy Boyette represented the 90 member water systems on the stakeholder group	L
		• there is need for regulation of water use in the CCPCUA and there is need for further improvement to the rules	L, F
		• consider economic impact of the rule as many of the water systems are at their debt servicing limit	A
		• fiscal note grossly underestimates costs of the rule	A
		• water users should not be able to transfer a portion of their permitted allocation for profit	I <sub>14</sub>

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Keith Starner (continued)		<ul style="list-style-type: none"> <li>a system should be able to demonstrate that current or additional withdrawals will not have an adverse impact and avoid reduction requirements</li> <li>the rules should require measurement accuracy of one half foot</li> </ul>	I <sub>1</sub>  I <sub>12</sub>
Scott Stephens, City Engineer for Kinston	Statement at Afternoon Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>do not dispute the need for rules – we need to develop alternative sources of water</li> <li>cost of water treatment plant in Lenoir County is \$60 million – that cost spread over the 15 county region means a total cost of \$400-500 million</li> <li>water rates will increase 50-100% and we have many other costs (hurricanes, tobacco, air quality issues...)</li> <li>capacity use designation will hurt recruitment of industry</li> <li>we should be given priority for financial assistance</li> </ul>	L  L, A  B  E  A
Jimmy Summers, Corporate Environmental Manager, Guilford Mills, Inc.	Letter dated August 7, 2000	<ul style="list-style-type: none"> <li>agrees with goals of rule, but is worried about economic growth</li> <li>manufacturing facilities not adequately addressed in rule – growing companies will be unduly burdened</li> <li>approved base rate should allow for a “production unit based rate” (# of gallons per pound of production) instead of a total volume base rate</li> <li>growing companies, with increasing production levels is hurt compared to no-growth companies</li> <li>water use efficiency would be goal shared by all companies without encouraging companies to move out of the CCPCUA</li> </ul>	L  E  I <sub>6</sub>  E  E
James Taylor, member of the Southeastern Wayne Sanitary District	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>concerned with public health aspects of the proposed rule because it will tend to increase costs of providing central water services</li> <li>significant increases in rates will tend to push customers to private wells – loss of customers drives rates higher</li> <li>provide state funding</li> </ul>	A  A  A
Brent Turner, Director of Engineering, Automotive Business Unit, Guilford Mills, Inc.	Statement at Evening Public Hearing August 8, 2000	<ul style="list-style-type: none"> <li>ground water resources in the coastal plain are valuable and need to be protected – sustainable use of ground water resources is a worthy goal</li> <li>rules do not adequately address manufacturing facilities in the area</li> <li>rules will add a burden to growing companies while allowing</li> </ul>	L  E  E

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Brent Turner (continued)		<p>companies that do not provide economic growth to shoulder less of a load in this conservation effort</p> <ul style="list-style-type: none"> <li>.0507(1) approved base rate definition should be changed to be a production unit rate (X gallons per pound of production) to make facilities more efficient</li> </ul>	I <sub>6</sub>
Eelco H. Tinga, Jr., President, Tinga Nursery, Inc.	Letter dated September 13, 2000	<ul style="list-style-type: none"> <li>propose an additional definition: “The reductions specified in Rule .0503 do not apply to the portion of any agricultural enterprise using low-volume micro-irrigation which was in place before July 1, 2001. The base established during Phase I for micro-irrigated acreage will not be subject to reductions for those production areas which are low-volume, micro-irrigated and in use by July 1, 2001.”</li> </ul>	I <sub>1</sub>
Jeffery B. Turner, Vice President of Environmental Resources, Murphy Family Farms	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>are permits only required for individual farms that exceed 100,000 gpd and not owners of multiple farms that collectively use more than 100,000 gpd? – includes suggested language changes for .0502(b) and .0505(a)</li> </ul>	I <sub>18</sub>
Larry B. Wooten, President, North Carolina Farm Bureau Federation	Letter dated September 15, 2000	<ul style="list-style-type: none"> <li>target parts of counties that are experiencing ground water level declines</li> <li>“DWR has said that agricultural water users are not causing significant water supply problems. Therefore, farmers should not be forced to hire engineers or pay for expensive laboratory tests to comply with the rule.”</li> <li>prefer use of “reduction goals” rather than mandated reductions</li> <li>concerned about the delineation of the critical zones</li> <li>strongly encourage DWR to maintain intermittent user exemption to reductions in rule</li> <li>agree with comments put forward by Mike Worthington – requesting exemption of micro-irrigation systems from the water use reduction formula</li> <li>commend DWR for changing rule to allow for registration and reporting of water use by those using more than 10,000 gpd to the</li> </ul>	<p>F</p> <p>C</p> <p>L</p> <p>F</p> <p>I<sub>8</sub></p> <p>I<sub>8</sub></p> <p>I<sub>3</sub></p>

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
Larry B. Wooten (continued)		<p>Agricultural Statistics Division (ASD) through surveys</p> <ul style="list-style-type: none"> <li>• still request that the rule be modified to allow reporting directly to the ASD without use of surveys</li> <li>• use of these water use data collection methods will increase knowledge of water use by agricultural interests</li> <li>• amend definition of intermittent user: “Persons who withdraw ground water in amounts greater than 100,000 gallons per day less than 60 days per calendar year; or who withdraw less than 15 million gallons of ground water in a calendar year; or aquaculture operations licensed under the authority of GS 106-761 involved in initial filling or refilling of ponds no more frequently than every 5 years.”</li> </ul>	<p>I<sub>3</sub></p> <p>I<sub>3</sub></p> <p>I<sub>8</sub></p>
Mike Worthington, Worthington Farms	Letter dated September 6, 2000	<ul style="list-style-type: none"> <li>• nursery industry was not represented in stakeholder process</li> <li>• companies have recently invested heavily in new production areas – construction costs range from \$20,000 to \$40,000 per acre – depending on the crop, value can range form \$50,000 to \$250,000 per acre</li> <li>• where possible, growers have used surface waters for economic reasons (electrical costs)</li> <li>• nurseries are heavily invested in the most efficient forms of irrigation and need high quality water (deep aquifer water is best)</li> <li>• nurseries use Best Management Practice guidelines so as to not waste water</li> <li>• producers cannot reduce water use where the most efficient irrigation technology is used</li> <li>• add provision to .0503 – “The reductions specified in Rule .0503 do not apply to the portion of any agricultural enterprise using low-volume micro-irrigation which was in place before July 1, 2001. The base established during Phase I for micro-irrigated acreage will not be subject to reductions for those production areas which are low-volume, micro-irrigated and in use by July 1, 2001.”</li> </ul>	<p>J<sub>6</sub></p> <p>L</p> <p>L</p> <p>L</p> <p>L</p> <p>L</p> <p>I<sub>6</sub>, I<sub>10</sub></p>
David C. Yaeck, Consultant, Neuse	Statement at Afternoon	<ul style="list-style-type: none"> <li>• demand exceeds supply and creates threat of saltwater intrusion</li> </ul>	<p>L</p>

## Central Coastal Plain Capacity Use Area Rules – Summary of Public Comments

Name & Association	Type and Date of Comments	Summary of Comments	Key to Response Summary
River Foundation	Public Hearing August 8, 2000 and letter dated September 1, 2000	<ul style="list-style-type: none"> <li>• no firm cutoff date [.0502(b)] will allow people to place “one last straw” into the Cretaceous aquifer</li> <li>• stakeholder group recommended prohibition of adverse impacts, but that has been changed to “minimized” impact [.0502(c)]</li> <li>• line 10, page 5 conflicts with lines 58 &amp; 59 on page 6</li> <li>• “statement” on line 22, page 6 should be changed to “certification”</li> <li>• confidential reporting through surveys are not appropriate and not in the best interest of the residents of North Carolina</li> <li>• line 1, page 9 should be changed to require registration to include locations of new and existing wells by latitude and longitude</li> <li>• there will be costs associated with rule, but the American Public has yet to realize the true cost of water</li> <li>• rules do not offer opportunity for comprehensive water resources planning</li> <li>• existing state water supply planning should incorporate a regional approach</li> <li>• an effective water management plan will require a committee be formed for leadership in this long and detailed process – a planning committee would also serve to assist water users with a unified voice</li> <li>• without a planning committee there needs to be a rule provision requiring updates to local water supply plans that reflect capacity use requirements</li> <li>• rule needs penalty clause</li> </ul>	<p>L</p> <p>I<sub>16</sub></p> <p>I<sub>16</sub></p> <p>I<sub>13</sub></p> <p>I<sub>3</sub></p> <p>I<sub>3</sub></p> <p>A</p> <p>L</p> <p>L</p> <p>L</p> <p>L</p> <p>I<sub>11</sub></p>



**Central Coastal Plain Capacity Use Area Rules  
Responses to Comments**

Introduction

Because many comments were repeated responses were grouped for easier reading. Please see the response key following each comment and trace it to the appropriate response section below.

A.	Cost of rule
B.	Other problems face this region
C.	Exempt agriculture – do not inhibit agricultural growth
D.	Data on the ground water problem
E.	Rule hurts industrial recruitment and growing companies
F.	Alter rule scope – refine rule
G.	Lack alternative water sources
H.	Do not rush into rules – now, people are aware of the problem
I.	Specific rule language concerns and suggested changes
J.	Miscellaneous comments
K.	Classified in wrong Cretaceous zone
L.	Comment noted

A. Cost of rule

The Central Coastal Plain Capacity Use Area rules set up a framework to guide water users as they prepare for and implement sustainable water supplies. It provides a sixteen year period of time during which users will plan and invest in alternative sources of water to make up for reductions in water use from the Cretaceous aquifers and to provide for growth in water use.

The costs of reacting to water shortages in a crisis when wells run dry would greatly exceed costs associated with planning and implementing new water sources in this predictable regulatory framework. And there is the distinct possibility that without a good planning element, caused by regulation, alternative water sources will not be as successful.

DWR’s fiscal analysis dealt with determining the cost of rule implementation during the first six years of the rule. It estimated the cost of conversion to an array of new sources and answered the question required by the Administrative Procedure Act – does the proposed rule impact those affected by more than \$5 million? Comparison of a \$55-65 million surface water intake and

water treatment facility for Lenoir County to the \$78 million impact estimated in the fiscal analysis is like comparing apples to oranges. Assuming that similar costs to those facing Lenoir County can be used to extrapolate impact on the 15 counties (\$400-600 million) is not valid. The Lenoir County surface water treatment facility, as proposed, will provide water to 2025 or 2030, thus long past the first six years. Also, many water users will have lower cost alternative sources available to them.

DWR is on record as recognizing that the CCP communities will need access to funds as they plan and invest in sustainable sources. Transitioning to a sustainable water supply within a regulatory framework is the most practical, fair, and cost effective way.

B. Other problems face this region

It is unfortunate that other problems (especially those out of human control) affect this CCP region. DWR believes that the rule guides this region down the fairest path to a sustainable water supply. Once there, or even during implementation of a plan to achieve sustainability, the CCP will be better off and not be as susceptible to other problems.

C. Exempt agriculture – do not inhibit agricultural growth

Water level declines in the Black Creek and Upper Cape Fear aquifers are the combined effect of hundreds of water users. There is no “big” water user or few users causing the problem. The rule is designed to bring our total use of ground water within the limits of the aquifers’ ability to recharge. The rule and statute only give the EMC and DWR the ability to regulate those using more than 100,000 gallons per day. It is fairest to apply that responsibility evenly without excluding users.

D. Data on the ground water problem

There is an extraordinary amount of data that describes this ground water situation. Data from hundreds of boreholes tell us about the subsurface materials and water levels from hundreds of wells in this 15 county area tell us where regional water level problems exist. A picture of the aquifer system has been developed that illustrates how water moves through the aquifers and how water pressures (illustrated by the water levels in wells) change over very large areas as water is withdrawn.

Water pressures are affected tens of miles away from a withdrawal point. As more wells withdraw ground water, the water pressures and therefore water levels in wells drop and form

large cones of depression. Those cones of depression have coalesced into a very large cone covering many counties. In the deepest parts of this cone of depression water levels have dropped below the top of the aquifer (dewatering the aquifer). Near the eastern parts of this cone of depression salt water intrusion is occurring. As water is withdrawn land subsidence has and is occurring at about 5 millimeters per year. The storage capacity of the aquifer is reducing. This aquifer system's capacity to yield water is diminishing in several ways as we use it in an unsustainable way – faster than it is recharged.

DWR did not discover this problem recently. Many ground water experts have documented the problem over a 35 year period. The following table illustrates part of the breadth of scrutiny and length of time devoted to this issue:

Stephenson and Johnson	1912	<i>The Water Resources of the Central Coastal Plain of North Carolina</i> ; North Carolina Geologic and Economic Survey First water level data from 71 wells in Cretaceous aquifers.
Nelson and Barksdale	1965	<i>Interim Report on Ground Water Resources of the Kinston Area</i> ; North Carolina Division of Ground Water First report documenting declines in Cretaceous aquifers. Reported large cone of depression in Cretaceous aquifers in Kinston area.
Narkunas	1980	<i>Groundwater Evaluation in the Central Coastal Plain of North Carolina</i> ; NC Department of Natural Resources and Community Development.  First to report and document severe regional declines in Cretaceous aquifers. Emphasized need for management of withdrawals in order to preserve future water supplies.
Winner and Lyke	1986	<i>History of Ground-Water Pumpage and Water Level Decline in the Black Creek and Upper Cape Fear Aquifers of the Central Coastal Plain of North Carolina</i> ; USGS
Lyke and Brockman	1990	<i>Groundwater Pumpage and Water-Level Declines in the Pee Dee and Black Creek Aquifers in Onslow and Jones Counties, North Carolina, 1900-86</i> ; USGS
Winner and Lyke	1989	<i>Aquifers in Cretaceous Rocks of the Central Coastal Plain of North Carolina</i> ; USGS
Lyke and Winner	1990	<i>Hydrogeology of Aquifers in Cretaceous and Younger Rocks in the Vicinity of Onslow and Southern Jones Counties, North Carolina</i> ; USGS
Winner, Lyke, and Brockman	1986	<i>Potentiometric Surface of the Lower Cape Fear Aquifer in the Central Coastal Plain of North Carolina, December, 1986</i> ; USGS
Eimers, Lyke and Brockman	1989	<i>Simulation of Ground-Water Flow in Aquifers in Cretaceous Rocks in the Central Coastal Plain, North Carolina</i> ; USGS

		Defined regional hydrogeology, ground water level declines, mapped cones of depression in the Cretaceous aquifers, and developed a computer model to predict future ground water declines.
Lyke, Winner and Brockman	1986	<i>Potentiometric Surface of the Black Creek Aquifer in the Central Coastal Plain of North Carolina, Dec. 1986; USGS</i>
Winner, Lyke and Brockman	1986	<i>Potentiometric Surface of the Upper Cape Fear Aquifer in the Central Coastal Plain of North Carolina, December, 1986; USGS</i>
NC Division of Water Resources	1993	<i>Central Coastal Plain Ground Water Model Interim Report</i>

E. Rule hurts industrial recruitment and growing companies

With this rule, water systems will be required to plan and move toward a sustainable water supply. That outcome will put the CCP in a much stronger position for industrial recruitment and growth of existing industries. Failure to take action to resolve the ground water depletion problem and to assure a sustainable supply for the future would threaten the economic welfare of the region.

F. Alter rule scope – refine rule

The Division, with stakeholder input, has put forward the best rule that current knowledge allows. County boundaries were chosen as the most recognizable and the fifteen counties contain the problem area completely. The eastern counties were included because the Castle Hayne aquifer underlies that area and regulations will force people to find alternative sources there. The Castle Hayne aquifer can accommodate new users and the permit system can assure that new wells are located where they will not interfere with existing users.

Limiting the regulation to a smaller number of the biggest users will not fix the problem. It is the cumulative impact of many hundreds of users that has put us where we are. The rule does require more severe reductions from the larger users because it uses percentage cutbacks in recognition that the larger users can afford more expensive alternatives. The Zones established for the Cretaceous aquifer vary the level of water use reduction to match the extent of the aquifer depletion problem.

Some suggest that voluntary efforts can solve the problem. DWR notes that water systems have had decades to reduce overdrafts and only a few have done so. Those systems that have made good investments toward sustainability do not want their efforts thwarted by those who would

take a free ride. The rule is the fairest way to assure that all water users will share the burden of developing sustainable water supplies.

G. Lack alternative water sources

G<sub>1</sub>. Provide PCS Phosphate Mine water to public water systems for free

PCS Phosphate ground water from their depressurization wells (Castle Hayne aquifer) could be an excellent alternative source of water for many people in the CCP. However, it will take a massive investment in transmission water lines to move water westward. That investment must be returned through a cost to users.

G<sub>2</sub>. Another water source is not acceptable

Water sources can always be treated to meet the end users' needs. The cost and practicality of alternative sources are the real questions. Each water user needs to plan for the most acceptable and lowest cost sustainable water source to meet future needs.

G<sub>3</sub>. Alternate sources not obvious

The Division can help any affected users find alternative sources and will respond to any request for advice on alternatives.

H. Do not rush into rules – now, people are aware of the problem

Most water system representatives in the CCP or their consultants have known for decades that water levels have been declining. Many systems have lost wells due to ground water levels dropping below the pump intake where the pump intake had been lowered as far as it would go. Through all this, only a few water systems have invested and moved toward sustainable water sources. It is highly unlikely, without a rule, that equitable decisions about water source investment will occur throughout the CCP. There are decades of history from the CCP in support of this statement.

I. Specific rule language concerns and suggested changes

I<sub>1</sub>. Need exemption from reductions for areas where water level declines are not documented

Clause .0503(9) was added to deal with this situation. "An applicant may submit documentation supporting the exemption of a well located in the Declining Water

Level Zone from the withdrawal reductions specified in Rule .0503 of this Section. This documentation must include a record of monthly static water levels from that well over at least a three-year period, ending with the month when the request for exemption is submitted. The Director may exempt a well from reductions if the water level history shows no pattern of decline during this three-year period. A well previously exempted from the withdrawal reductions shall become subject to the reductions if water levels begin to show a pattern of decline.”

I<sub>2</sub>. Public comment process

This procedure is established in the Water Use Act and is not part of this rule making effort.

I<sub>3</sub>. Agricultural registration reporting requirements in .0505(c)

The Farm Bureau Federation explanation of this reporting requirement is found in Larry Wooten’s letter of September 15, 2000 (see page V-104). It is reasonable to assume many more agricultural water users will come forward and report usage for this registration process with this alternative option.

I<sub>4</sub>. Division of Water Resources proposed changes of August 29, 2000

1. exclude wells exclusively screened in the Peedee aquifer from reductions in .0503;
2. append the following to the Cretaceous aquifer system definition – “and includes the Peedee, Black Creek, Upper Cape Fear and Lower Cape Fear aquifers.” [.0507(5)];
3. delete portions of .0503 – .0503(6)(a)(iv), .0503(6)(b)(iv), and .0503(6)(c)(iv); and
4. change application submittal deadline from 60 to 180 days [.0502(b)(1)]

I<sub>5</sub>. Temporary permit provision .0502(p)

.0502(p) Where an applicant or a permit holder can demonstrate that compliance with water withdrawal limits established under Section .0500 of this Subchapter is not possible because of construction schedules, requirements of other laws, or other reasons beyond the control of the applicant or permit holder, and where the

applicant or permit holder has made appropriate efforts to conserve water and to plan the development of adequate water sources, the Director may issue a temporary permit with an alternative schedule to attain compliance with provisions of Section .0500 of this Subchapter, as authorized in G.S. 143-215.15(c)(ii).

I<sub>6</sub>. Approved Base Rate .0507(1)

.0507(1) Approved base rate: The larger of a person's January 1, 1997 through December 31, 1997 or August 1, 1999 through July 31, 2000 annual water use rate from the Cretaceous aquifer system, or an adjusted water use rate determined through negotiation with the Division using documentation provided by the applicant of, 1. water use reductions made since January 1, 1992, 2. use of wells for which funding has been approved or for which plans have been approved by the Division of Environmental Health by the effective date of this Rule, 3. the portion of a plant nursery operation using low volume micro-irrigation, or 4. other relevant information.

I<sub>7</sub>. Intake depth .0502(j)

The emboldened text allows for an unspecified amount of time to come into compliance. The Division will negotiate with applicants to determine an appropriate schedule.

.0502(j) For all water uses other than dewatering of mines, pits or quarries, withdrawals shall be permitted only from wells that are constructed such that the pump intake or intakes are at a shallower depth than the top of the uppermost confined aquifer that yields water to the well. Confined aquifer tops are established in the hydrogeological framework. **Where wells in existence as of the effective date of this Rule are not in compliance with the requirements of this provision, the permit shall include a compliance schedule for retrofitting or replacement of non-compliant wells.** Withdrawals from unconfined aquifers shall not lower the water table by an amount large enough to decrease the effective thickness of the unconfined aquifer by more than 50 percent.

I<sub>8</sub>. Intermittent users .0507(13)

The intermittent user definition deserves attention to allow for the aquaculture form of intermittent use. Catfish farmers fill and refill their ponds on a 5-year interval. If that higher fill rate is converted to a daily rate over five years, their use would fall under 100,000 gallons per day. Please note changes as proposed in the final CCPCUA rules on page I-14.

I<sub>9</sub>. Permit application cost

There are no permit application fees. Obviously, there are costs to both the state and to the applicant associated with application preparation, processing and reporting.

I<sub>10</sub>. Reduction specifications .0503

Phased reductions will only be required for those permittees who are not classified as intermittent users and who use the Black Creek or Upper Cape Fear aquifers in one of the three Cretaceous reduction zones.

I<sub>11</sub>. Penalties

Penalties and enforcement actions are delineated in the Water Use Act of 1967 and are not affected by these rules. G.S. 143-215.17 describes enforcement procedures including criminal and civil penalties and injunctive relief.

I<sub>12</sub>. Accuracy of measurements and application requirements .0502(d)(1-2)

It is reasonable to require accuracy of measurements to within 0.1 feet or about an inch. Conversion between NC State Plane Coordinates and latitude and longitude does not pose a problem. We recognize that some measurements may not be known to the applicant, but the driller's information on well construction is certainly acceptable.

I<sub>13</sub>. Conservation measures .0502(d)(5)

The conservation measures described in the rules form a reasonable set of requirements on water users.



I<sub>14</sub>. Selling water .0502(n) & (o)

Provisions for selling water will give permit holders an incentive to conserve water and to help neighboring water systems meet short term needs by selling them water.

I<sub>15</sub>. Permit duration

Permit duration is established in the Water Use Act of 1967 in G.S. 143-215.16. Typical permit duration in CUA #1 is 5 to 10 years.

I<sub>16</sub>. Introduction to permitting .0502(c)

The language in this part of Rule .0502 is intentionally general as it serves to bridge the gap between the Water Use Act and these specific rules. It describes the basic principles drawn from the Act to guide permitting. It is meant to introduce the standards by which impacts are measured and to provide a basis for permitting.

I<sub>17</sub>. Status report .0506

The CCPCUA status report is intended to draw together information about water use, water levels, alternative sources, and actions taken by individuals or groups of users as they plan for reductions in some ground water withdrawals and for the development of new water sources.

I<sub>18</sub>. “Well or group of wells” in .0502(b)

This phrase refers to a series of wells under one ownership (“person”) that works as a system, for example filling interconnected pipes. They may be spread over a large area of land. This should not be construed to mean a series of individual wells operated as individual systems under one ownership. These may or may not be spread over a large area of land. Ground water may also be withdrawn by other means such as a sump in a mine pit.

I<sub>19</sub>. Reporting requirements .0502(g)

Reporting requirements and frequency of reporting will be specified in each permit and may vary with type of use or other factors.

J. Miscellaneous comments

J<sub>1</sub>. Rule will put small water users out of business

The intentions of the CCPCUA rule are to achieve a secure and sustainable water supply by bringing ground water use in line with aquifer recharge. The rule has the least effect on smaller users (only users of more than 100,000 gallons per day are permitted) although many smaller users are required to register water use.

J<sub>2</sub>. Mining questions and concerns

Although the main thrust of the CCPCUA rule is to equate ground water withdrawals with recharge, there are and will be many local ground water issues at stake in this region. One of these issues is the impact of mining (especially limestone quarries) through formation of sinkholes or other adverse impacts. Sometimes complex hydrogeological studies are required to assess that impact. The Division will continue to dovetail its requirements with the requirements of the Division of Land Resources Mining Program.

J<sub>3</sub>. Use priorities

No stakeholders encountered during the last two and a half years of rule making has proposed priorities among types of water users. A prosperous economy requires a balance of municipal, industrial, and agricultural water use.

J<sub>4</sub>. Rule doesn't allow new users

The rule does not allow for new users of the Black Creek or Upper Cape Fear Cretaceous aquifers. But, new users are possible almost everywhere using alternative sources including shallower aquifers, the Peedee aquifer, the Castle Hayne aquifer, surface water, or purchased water.

J<sub>5</sub>. Limits are set too low

The Water Use Act specifies the 100,000 gallon per day threshold for water use permits.

J<sub>6</sub>. Stakeholder group not representative

DWR considers all people, and the groups they represent, part of the stakeholder process. Officially, there was a stakeholder group that met between January and April, 2000 to write draft rules. This group included several local governments, industries, farmers, the League of Municipalities, the Association of County Commissioners, the Homebuilders Association, the Rural Water Association, and conservation groups. However, before and since then the rules were influenced by conversations with many other people.

J<sub>7</sub>. What is the point of conserving water if community is gone

All communities in the region have some type of alternative water source available to them to continue to support the local economy.

J<sub>8</sub>. How do we know amount of industrial water use?

Industrial water use is estimated using various techniques, from actual metered use to methods of extrapolation based on standard water use rates for various industries. For example, water use rates for hog production are typically 4 gallons per day per hog.

J<sub>9</sub>. Can EMC implement regulations that cause a district to not be able to repay debt service?

It is not the intent of the EMC or the Division or the CCPCUA rules to put anyone in financial jeopardy. The greatest risk to the economy and the public finances of the region would be to continue to deplete the Cretaceous aquifer until wells run dry and no water is available to support the economy or to provide revenues to water systems.

J<sub>10</sub>. Rule will push up water rates and encourage people to use private wells

The alternative water sources available to the region will have a range of costs. Some will be only modestly more expensive than present sources and some will be higher. Water costs are going up all across North Carolina as new sources have to be developed at higher costs. In some cases using private wells may be a good choice for homeowners.

J<sub>11</sub>. Rule should allow for continued use of aquifer as users move to alternate sources

Continued use at the aquifer's recharge rate is allowed.

J<sub>12</sub>. Regional solution may make rule unnecessary

DWR firmly believes that regional solutions will play a role, but that no regional solutions will come about without the rules.

J<sub>13</sub>. Serious implications of the rule can not be ignored

The ground water level declines, dewatering, and salt water encroachment have much more serious consequences.

K. Classified in wrong Cretaceous zone

The Cretaceous Dewatering Zone is a name given to the zone where water level declines are at a high rate and there is a near-future danger of dewatering or dewatering is actually taking place. The recharge estimates by Greene County are not reliable. Recharge calculations are much more complicated, because the recharge area for a particular county is not usually the same as the surface area of that county and because the rate of recharge varies from place to place. What can safely be withdrawn from Greene County via wells is also controlled by the location and construction of those wells and the location of wells outside the County that influence water levels in Greene County. The DWR monitoring network is the best guide to map water level decline trends and tell us when our withdrawals match recharge. When water level declines stop and levels stay constant or rise, then we will know that withdrawals are in balance with recharge.

L. Comment noted