

Central Coastal Plain Capacity Use Area

2014 Status Report

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Ground Water Management Branch
Water Planning Section



CCPCUA Map



- 15 counties in the central portion of the Coastal Plain
- Currently 293 permit holders and 56 registrations

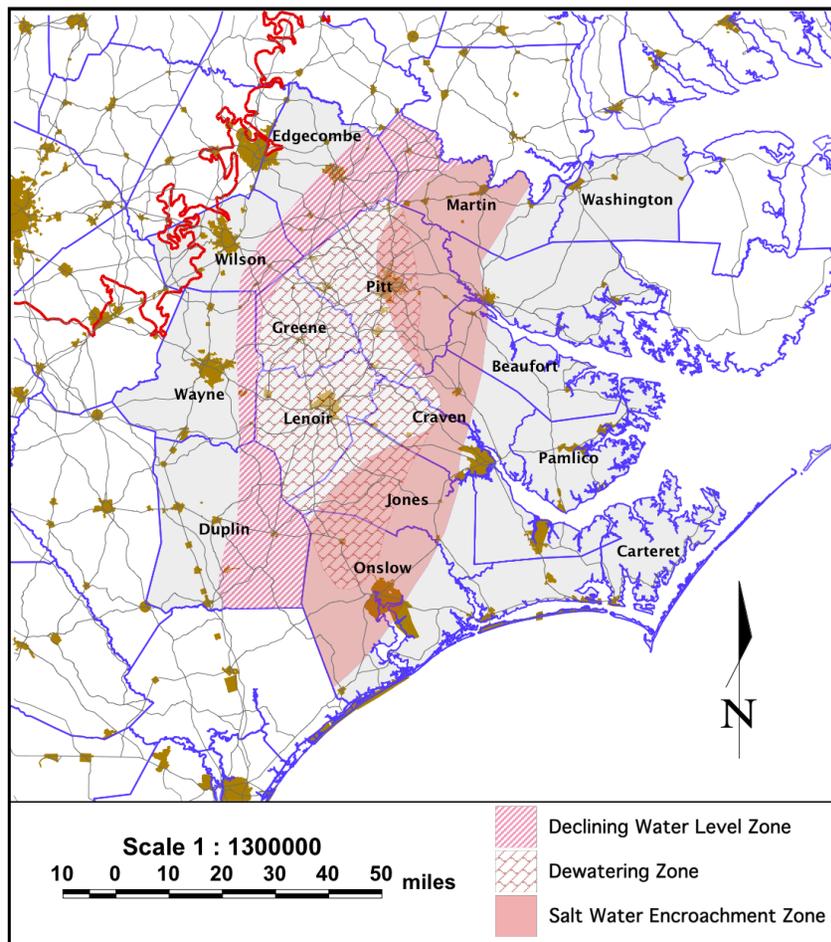


CCPCUA Requirements

- Within the CUA ground water use above 100,000 gallons per day requires a permit
- Ground water withdrawals between 10,000 and 100,000 gallons per day require annual registration
- Surface water withdrawals above 10,000 gallons per day require annual registration
- Permits require reporting of daily withdrawals, monthly water levels & annual chloride concentrations

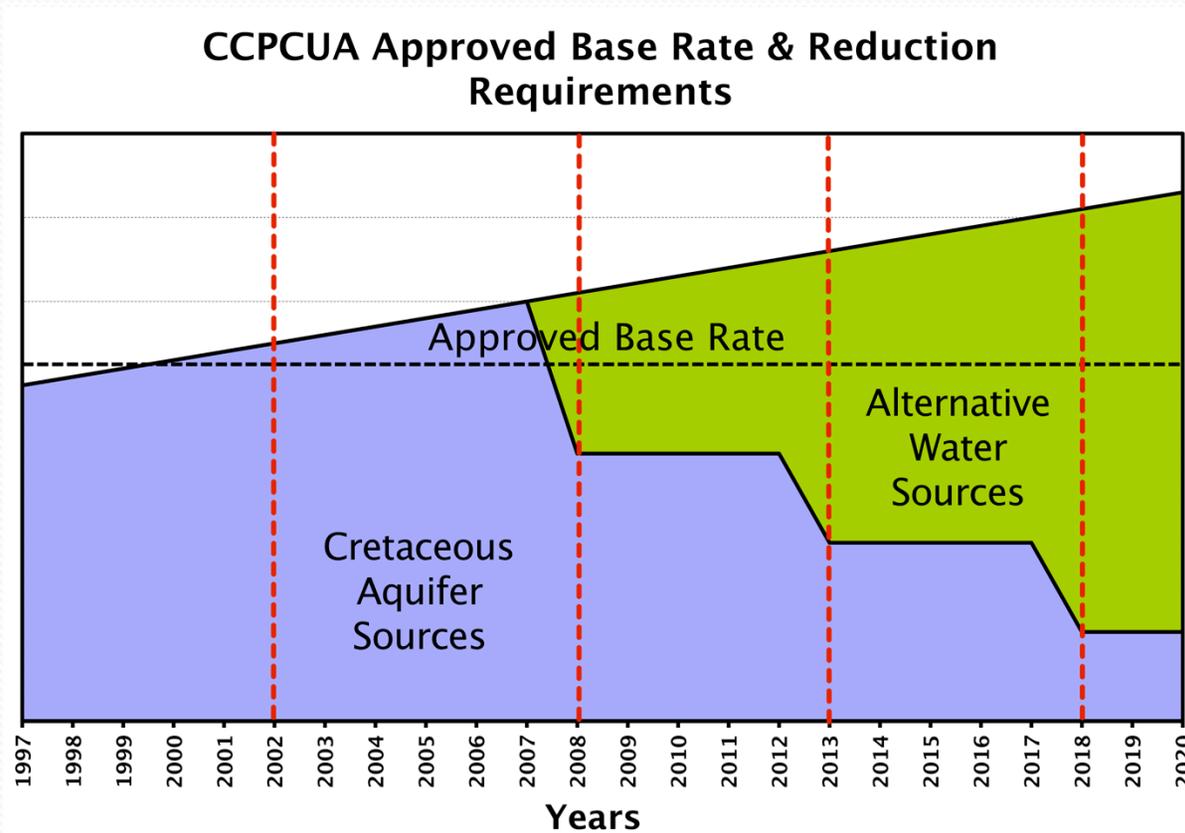
CCPCUA Reductions

CCPCUA Cretaceous Aquifer Zones



- Cretaceous Zones: Declining Water Level, Dewatering, and Salt Water Encroachment
- Approved Base Rate (ABR)
- Water users required to reduce withdrawals between 2002 and 2018 by 30 to 75%, in three phases, from ABR

CCPCUA Compliance



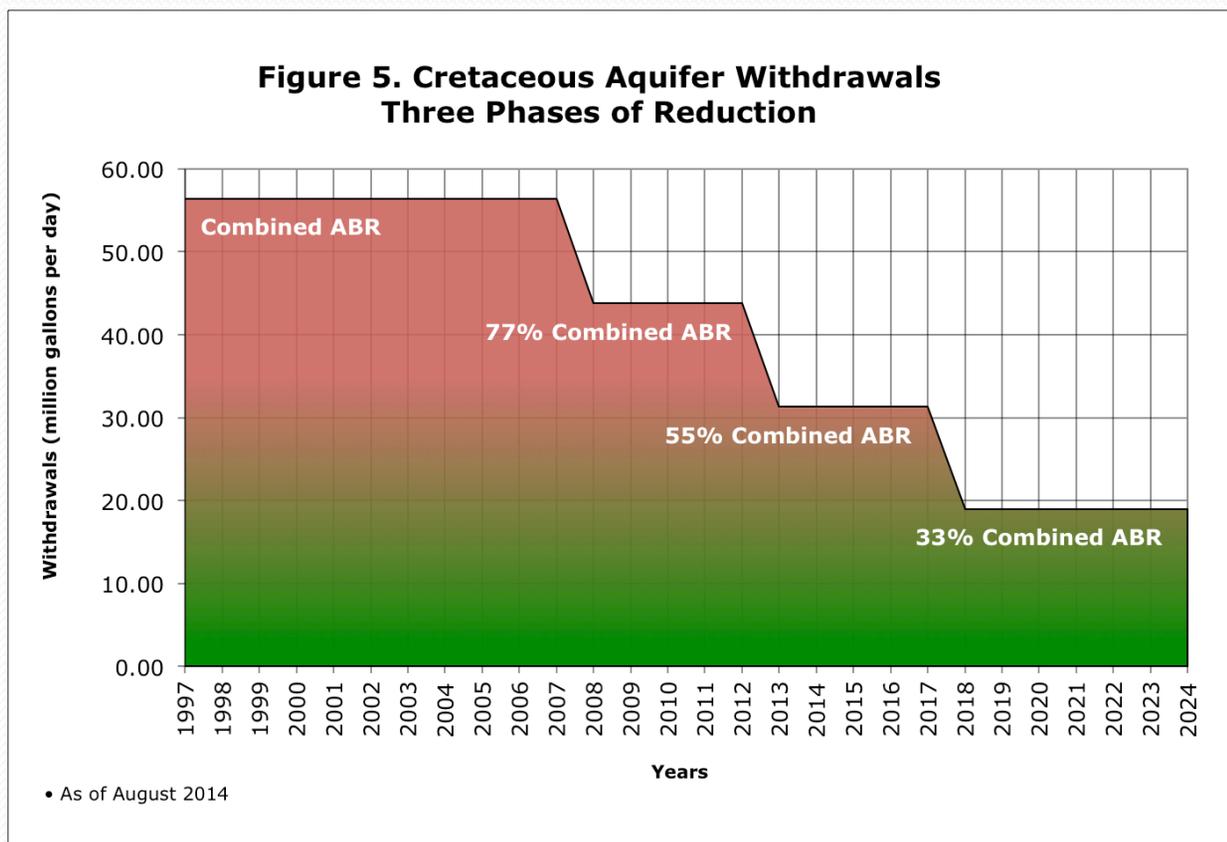
- Regional & independent alternative water supplies
- Surface water
- Shallower wells
- Better water treatment capability
- Investment of hundreds of millions of dollars



Compliance & Enforcement

- We know that those complying are investing millions of dollars in their water systems, and they expect compliance by all other permit holders.
- As a result of a 2009 legislative bill, penalty assessments can be as high as \$1,000 per day

CCPCUA Compliance



- Reductions over 16 year period should lead to sustainable rate of withdrawal from Cretaceous aquifers
- Alternative water sources will make up for reductions and allow for growth



CCPCUA Web Resources

- On-line access to ground water levels, withdrawal data, and reporting tools
 - CCPCUA web page link off the DWR home page, topics tab, permits and registrations link
 - Ground water data web page link off the DWR home page, topics tab, ground water link
- The 2004 CCPCUA Status Report (pdf)
- The 2008 CCPCUA Assessment Report (pdf)
- The 2009 CCPCUA Status Report (pdf)
- The 2013 CCPCUA Assessment Report (pdf)
- The 2014 CCPCUA Status Report (pdf)

Permit Data

Division of Water Resources

Google Search

Central Coastal Plain Capacity Use Area Permit Data for City of Kinston

Permit holder	City of Kinston	Application Received	12/02/2013
Permit number	CU3024	Application Complete	12/06/2013
Permit status	Active	Application Public Notice	12/10/2012
County	Lenoir	Draft Permit Public Notice	12/23/2012
Type of Use	Public Supply	Issue Date	01/16/2014
Cretaceous Water Bank	Yes	Expiration Date	02/28/2019
Bank Start Date	08/01/2005	Date First Issued	08/30/2004

Abbreviation	Aquifer
S	Surficial
Tu	Upper Tertiary
Ty	Yorktown
Tch	Castle Hayne
Tb	Beaufort
Kpd	Peedee
Kbc	Black Creek
Kucf	Upper Cape Fear
Klcf	Lower Cape Fear
Br	Basement Rock

Withdrawals Subject to .0503 Reductions 2,545,027,200 Aquifer: Kbc, Kucf No. of Wells: 19
 Approved Base Rate (in GPY):

Future Permitted Annual Withdrawal Rates (in GPY)	
August 1, 2008 through July 31, 2013	1,908,770,400
August 1, 2013 through July 31, 2018	1,272,513,600
August 1, 2018	636,256,800

[North Carolina Aquifer Information](#)

[Ground Water Management Branch web site](#)

This permittee has filed a Local Water Supply Plan. Click [here](#) to review their plan. Access this permit holder's withdrawal data formatted for Local Water Supply Planning for [all wells](#) and [individual wells](#).
 Access any Local Water Supply Plan [here](#).

Water Withdrawal Statistics for City of Kinston (CU3024) Wells Subject to .0503 Reductions August 1 through July 31 Years

Year	Year Total (gallons)	Average Day (gallons/day)	Maximum Day (gallons/day)	# of Days
8-1-1996 thru 7-31-1997	1,098,175,800	5,180,075	9,488,600	212
8-1-1997 thru 7-31-1998	849,070,800	5,585,992	9,821,600	152
8-1-1999 thru 7-31-2000	1,827,834,500	4,994,083	8,577,000	366
8-1-2001 thru 7-31-2002	923,685,200	4,357,006	6,971,200	212
8-1-2002 thru 7-31-2003	1,359,318,200	3,724,159	5,843,000	365
8-1-2003 thru 7-31-2004	1,322,303,141	3,612,850	6,015,000	366
8-1-2004 thru 7-31-2005	1,367,224,000	3,745,819	5,591,000	365
8-1-2005 thru 7-31-2006	1,373,807,000	3,763,855	5,702,000	365
8-1-2006 thru 7-31-2007	1,281,443,000	3,510,803	5,688,000	365
8-1-2007 thru 7-31-2008	1,276,466,000	3,487,612	5,689,000	366
8-1-2008 thru 7-31-2009	661,175,000	2,592,843	6,475,000	253
8-1-2009 thru 7-31-2010	72,718,000	1,817,950	5,265,000	28
8-1-2010 thru 7-31-2011	260,424,000	1,282,877	4,908,000	197
8-1-2011 thru 7-31-2012	448,396,000	1,731,259	4,243,000	256
8-1-2012 thru 7-31-2013	480,919,000	1,821,663	3,982,000	260
8-1-2013 thru 7-31-2014	585,080,000	2,479,153	5,723,000	230
8-1-2014 thru 7-31-2015	45,350,000	2,519,444	3,818,000	18

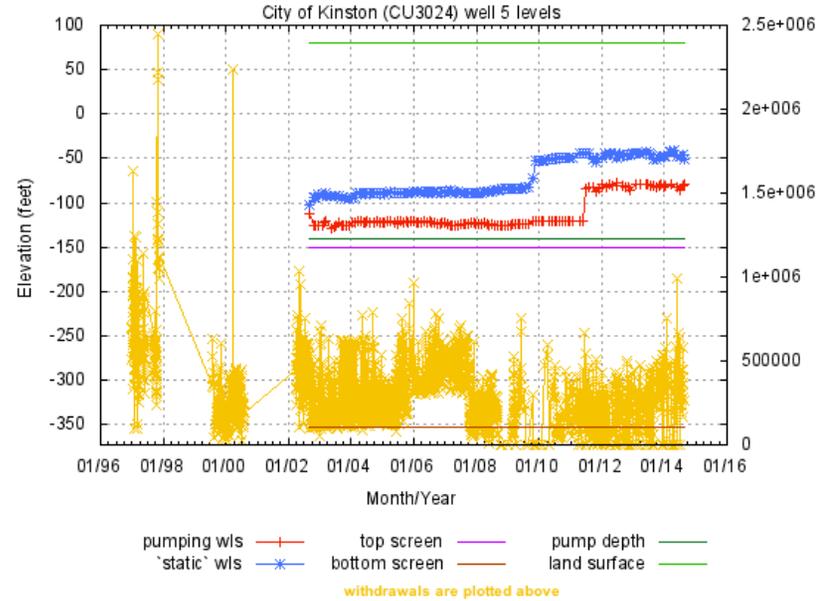
Production Wells

City of Kinston (CU3024) Well Information

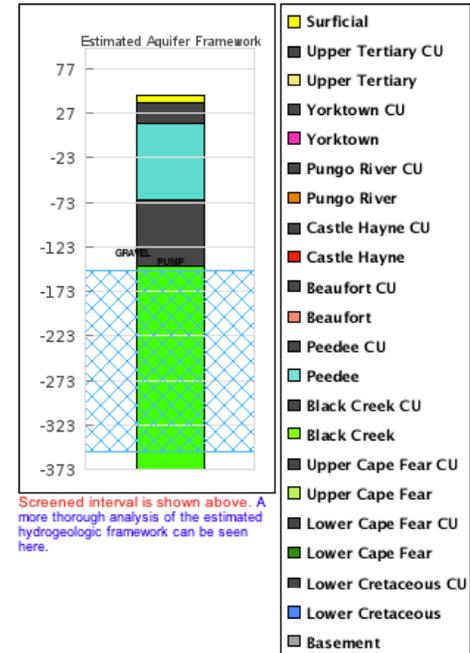
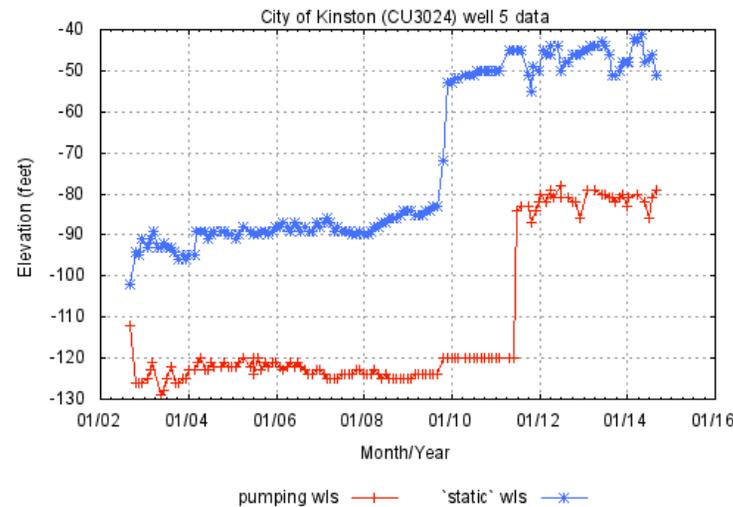
#	Source	Land Surface Elevation (feet)	Diameter (inches)	Pump Capacity (gallons per minute)	Pump Intake Depth (feet)	Top Screen Depth (feet)	Bottom Screen Depth (feet)	Well Depth (feet)	Aquifer Top Depth (feet)	Aquifer(s)	Type	.0503 Reduction Well?	Status	.0503 Zone	Production or Monitoring Well (P or M)	Geo Logs	Well Cons Form (GW1)	Pump Diagram
1	1	44.00	12	230	247	205	356	360	233	Kbc	Well	yes	Existing	25	P	yes		
2	1,3	0.00	0	0	0	0	0	0		Kbc	Well	yes			P			
3	3	43.00	8	200	273	315	365	365	226	Kbc	Well	yes	Existing	25	P			yes
4	4	79.00	10	650	230	390	515	520	270	Kbc	Well	yes	Existing	25	P			yes
5	5	80.00	10	400	220	230	433	443	225	Kbc	Well	yes	Existing	25	P			yes
6	6	31.00	10	450	190	230	447	483	237	Kbc	Well	yes	Existing	25	P			yes
7	7	60.00	10	380	236	215	440	445	204	Kbc	Well	yes	Existing	25	P	yes		yes
8	8	42.00	10	850	197	316	482	527	247	Kbc, Kucf	Well	yes	Existing	25	P	yes		yes
9	9	77.00	10	860	245	272	482	482	265	Kbc	Well	yes	Existing	25	P			yes
10	10	88.00	10	350	274	250	412	415	179	Kbc	Well	yes	Existing	25	P	yes		yes
11	11	39.00	10	1,000	234	302	370	420	222	Kbc	Well	yes	Existing	25	P			yes
12	12	37.00	10	1,030	237	270	485	490	265	Kbc, Kucf	Well	yes	Existing	25	P			yes
13	13	78.00	8	450	195	302	395	395	172	Kbc	Well	yes	Existing	25	P			yes
14	14	51.00	12	650	200	240	388	405	133	Kbc	Well	yes	Existing	25	P			yes
15	16	57.00	6	300	210	271	325	325	147	Kbc	Well	yes	Existing	25	P			yes
16	18	95.00	12	650	279	270	320	330	146	Kbc	Well	yes	Existing	25	P			yes
17	20	97.00	6	55	168	183	270	312	177	Kbc	Well	yes	Existing	25	P			yes
18	21	75.00	14	470	320	379	429	439	269	Kbc	Well	yes	Existing	25	P			yes
19	23	45.00	14	415	0	300	375	453	294	Kbc	Well	yes	Proposed	25	P	yes		
20	24	47.00	14	825	0	282	388	509	277	Kbc	Well	yes	Proposed	25	P	R		
21	NRWASA-Kinston	0.00	0	0	0	0	0	0			Surface Water	no	Existing		P			

pump intake below top of screen; pump intake below top of screen and top of aquifer; pump intake below top of aquifer

Water Levels



[View Static Data](#) [View Pumping Data](#) [View Usage Data](#)



Division of Water Resources

Choose a year...

- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013

[return to CCPCUA page](#)

Central Coastal Plain Capacity Use Area 2012 Water Withdrawal Summary Tables

Tables compiled 10-08-2014, units are gallons per day

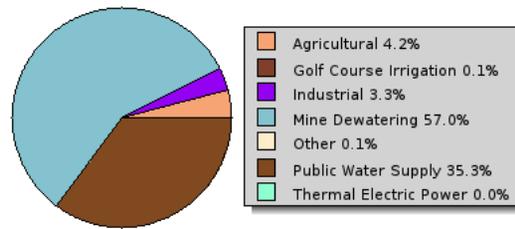
Permitted				Reported for 2012				Permitted				Reported for 2012			
County	Current Permit Limits			Ground Water			Surface Water	Type of Use	Current Permit Limits			Ground Water			Surface Water
	max daily	yearly (ABRs)	yearly (2018)	by all permits	by yearly permits	by registrations	by registrations		max daily	yearly (ABRs)	yearly (2018)	by all permits	by yearly permits	by registrations	by registrations
Beaufort	172,760,400			72,802,270		54,585	246,615	Agricultural	188,526,320	520,611	300,003	7,088,244	146,978	6,028,025	15,916,482
Carteret	28,445,480			6,009,788		263,282	146,986	Golf Course Irrigation	4,002,000	85,589	85,589	217,108	14,419	89,849	391,129
Craven	69,679,300	6,956,526	1,814,132	22,469,344	3,936,518		14,368,303	Industrial	14,958,400	4,969,508	2,789,327	5,604,257	2,183,105	70,870	74,023,464
Duplin	36,935,200	3,402,140	2,714,730	8,711,389	2,291,757	2,693,844	64,211	Mine Dewatering	233,945,240			96,926,296		206,880	
Edgecombe	9,804,000	527,697	429,388	1,554,514	319,776	335,533	5,412,375	Other	5,860,480	268,560	200,002	157,477	118,085		
Greene	108,000	3,058,197	914,551	1,400,658	1,400,658	292,467	56,416	Public Water Supply	131,890,380	50,538,560	15,601,016	60,013,293	20,798,930	661,413	34,245,022
Jones	49,816,400	679,282	169,821	18,912,097	405,240			Thermal Electric Power							6,547
Lenoir	3,556,320	13,522,312	3,522,953	3,960,643	3,915,435	183,868	15,336,532	Totals:	579,182,820	56,382,827	18,975,938	170,006,675	23,261,517	7,057,037	124,582,643
Martin	3,504,000	4,795,505	2,126,325	2,219,243	1,603,468	29,359	59,655,161								
Onslow	67,899,320	9,845,143	2,461,286	20,199,942	5,487,026	356,259									
Pamlico	35,712,200			1,712,551											
Pitt	8,704,800	8,651,572	2,521,003	2,153,917	1,815,731	313,234	12,911,425								
Washington	69,635,200			1,184,088		184,289									
Wayne	13,937,400	4,385,570	1,910,531	5,325,657	1,746,630	639,225	4,871,657								
Wilson	8,684,800	558,883	391,218	1,390,573	339,278	168,115	9,212,296								
Totals:	579,182,820	56,382,827	18,975,938	170,006,675	23,261,517	7,057,037*	124,489,068*								

Permitted				Reported for 2012		
Aquifer	Current Permit Limits			Ground Water		
	max daily	yearly (ABRs)	yearly (2018)	by all permits	by yearly permits	by registrations
Bedrock	16,025,200			1,925,328		202,562
Black Creek	15,719,100	23,023,449	7,745,263	16,513,567	12,539,173	1,033,340
Peedee	20,778,003	7,216,869	1,870,146	2,396,268	508,665	43,135
Upper Cape Fear	29,111,700	26,092,509	9,310,528	14,767,486	10,200,581	104,726
Lower Cape Fear		50,001	50,001	13,099	13,099	
Surficial	118,707,273			24,476,237		334,818
Castle Hayne	353,361,543			108,558,490		397,692
Beaufort						109,953
Upper Tertiary						
Yorktown	25,354,000			1,356,200		122,098
Totals:	579,056,820	56,382,827	18,975,938	170,006,675	23,261,517	7,057,037

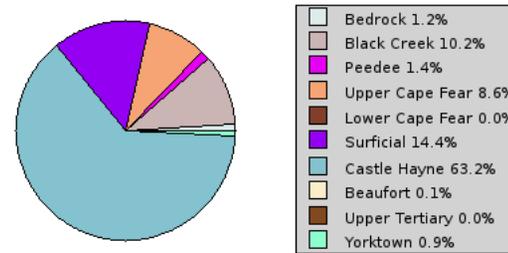
Yearly permit limits are linked to withdrawals from the Cretaceous aquifers where reductions are mandated. As phased reductions occur, annual limits allow permit holders more flexibility to plan when withdrawals are made. ABR refers to "Approved Base Rate" and is the annual rate calculated based on 1997 or August 1, 1999 through July 31, 2000 withdrawals. The ABR is the annual rate from which reductions take place (see CCPCUA FAQs). *Yearly (2018) is the final rate of withdrawal if all three phases of reduction are administered. Figures in the "by all permits" columns are total withdrawals reported by all permit holders (max day and yearly).

*Totals may include additional water use not reported in county totals because of Department of Agriculture nondisclosure policy.

CCPCUA Reported Ground Water Withdrawals by Type of Use



CCPCUA Reported Ground Water Withdrawals by Aquifer



Withdrawals

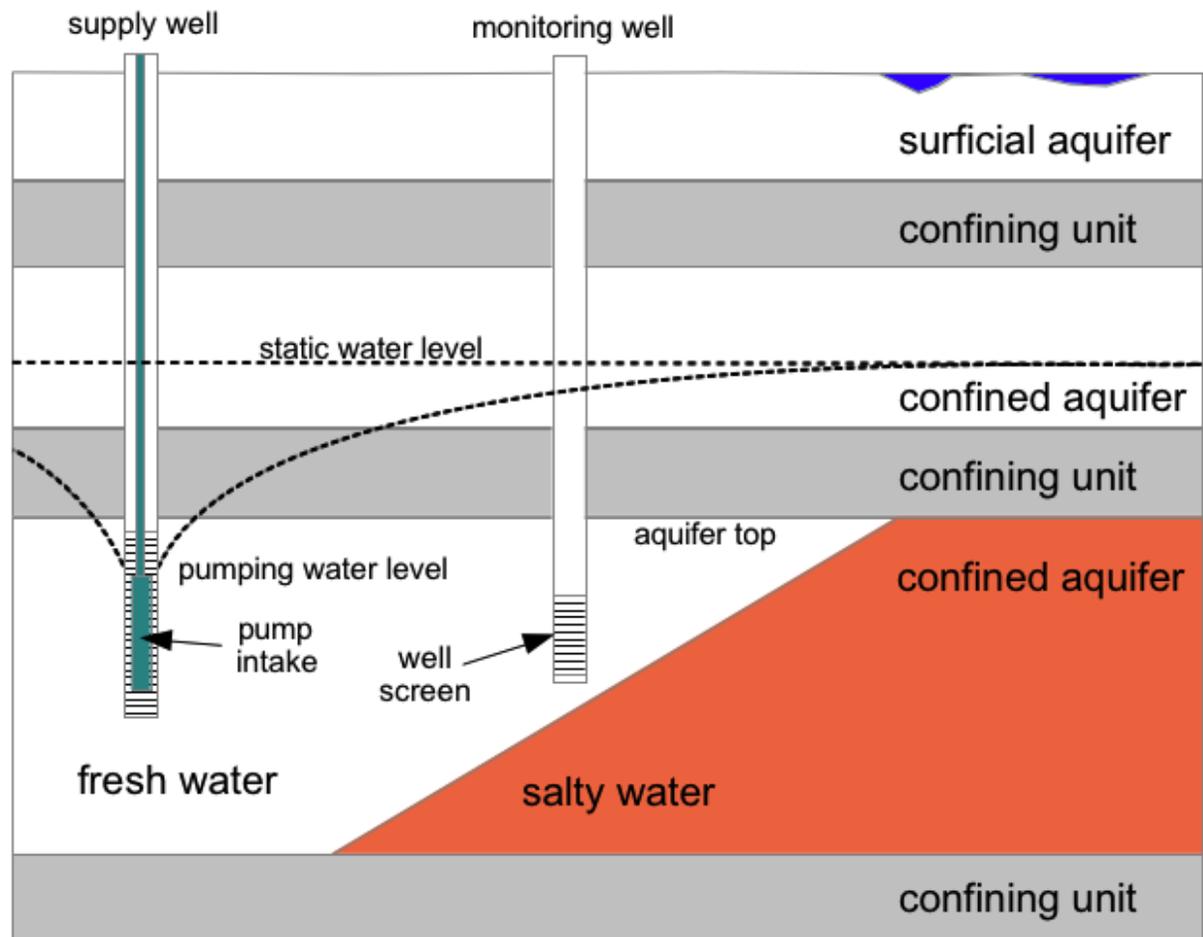


CCPCUA Web Resources – cont.

- Status of alternative water supply development in the CCPCUA as of March 1, 2011 (pdf)
 - Neuse Regional Water and Sewer Authority serves Lenoir County, and part of Pitt County with treated Neuse River water. This project became operational in Fall 2008.
 - Greenville Utilities are supplying treated Tar River water to several new customers including Greene County and the Town of Farmville.
 - Many other solutions are described in 2014 Status Report
- Link to water rates dashboard hosted by the UNC Environmental Finance Center

Temporary Permit Criteria Diagram

- Static water level trends must be level or upward trending
- Pump intakes must be above aquifer top
- Pumping water levels must be above aquifer top
- Chloride concentrations are fresh with no upward trend



Temporary Permits Issued

- Six temporary permits have been issued in 2014
- Permit holders are located in Wayne, Greene & Lenoir counties
- We anticipate several other requests in a few years, prior to the last reduction
- Temporary permits allow DWR to customize withdrawals to location and help us achieve the highest sustainable use of ground water

Table 2. Temporary Permits Issued

Permit Holder	CCPCUA Permit #	Date Temporary Permit Issued	Annual Permit Amount (GPY)
Belfast-Patetown Sanitary District	CU3082	04/17/2014	272,710,333
Fork Township Sanitary District	CU3001	06/04/2014	221,119,500
Greene County Regional Water System	CU3092	01/03/2014	607,401,750
Northwestern Wayne Sanitary District	CU3083	06/04/2014	59,871,333
Southeastern Wayne Sanitary District	CU3006	07/11/2014	146,419,000
Town of La Grange	CU3003	01/16/2014	106,016,250

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