



Water-Data Report 2007

351019077184102 Local number CR-543, DENR Cove City Research Station well, R23x2

Castle Hayne aquifer
 Castle Hayne Formation
 Craven County, NC

LOCATION.--Lat 35°10'19", long 77°18'41" referenced to North American Datum of 1927, Craven County, NC, Hydrologic Unit 03020202, Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 98 ft. Upper casing diameter 2.5 in, top of first opening 88 ft, bottom of last opening 98 ft.

PERIOD OF RECORD.--Water years 2003, 2005, 2007.

REMARKS.--Well is part of the National Water Quality Assessment Program (NAWQA).

**WATER-QUALITY DATA
 WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Time	Depth to water level, feet below LSD (72019)	Water level, depth below MP, feet (61055)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd μS/cm 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
Apr 10...	1500	5.66	7.00	2.1	762	1.4	15	6.8	554	17.7	310	120	2.17
Jun 01...	1045	6.74	8.08	1.2	764	.1	1	6.7	559	17.6	--	--	--

**WATER-QUALITY DATA
 WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide, water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
Apr 10...	1.11	3.56	283	345	.02	5.37	.11	12.4	E.13	357	<.020	<.06	<.002
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

351019077184102 Local number CR-543, DENR Cove City Research Station well, R23x2—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Total nitrogen, water, fltrd, mg/L (62854)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Antimony, water, fltrd, µg/L (01095)	Arsenic, water, fltrd, µg/L (01000)	Barium, water, fltrd, µg/L (01005)	Beryllium, water, fltrd, µg/L (01010)	Boron, water, fltrd, µg/L (01020)	Cadmium, water, fltrd, µg/L (01025)	Chromium, water, fltrd, µg/L (01030)	Cobalt, water, fltrd, µg/L (01035)	Copper, water, fltrd, µg/L (01040)	Hydrogen sulfide, water, unfltrd, mg/L (71875)
Apr 10...	.26	.349	1.8	E.05	.13	43	<.06	8	<.04	1.3	.13	<.40	U
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	U

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lithium, water, fltrd, µg/L (01130)	Manganese, water, fltrd, µg/L (01056)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Selenium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)	Strontium, water, fltrd, µg/L (01080)	Thallium, water, fltrd, µg/L (01057)	Vanadium, water, fltrd, µg/L (01085)	Zinc, water, fltrd, µg/L (01090)	1-Naphthol, water, fltrd, 0.7u GF µg/L (49295)
Apr 10...	2,010	<.12	1.5	65.0	.1	.67	<.08	<.1	231	<.04	.44	4.2	<.09
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	2,6-Diethyl-aniline, water, fltrd, 0.7u GF µg/L (82660)	2Chloro-2',6'-diethyl acet-anilide, wat flt µg/L (61618)	CIAT, water, fltrd, µg/L (04040)	2-Ethyl-6-methyl-aniline, water, fltrd, µg/L (61620)	3,4-Di-chloro-aniline, water, fltrd, µg/L (61625)	3,5-Di-chloro-aniline, water, fltrd, µg/L (61627)	4-Chloro-2methyl phenol, water, fltrd, µg/L (61633)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-Endo-sulfan, water, fltrd, µg/L (34362)	Atra-zine, water, fltrd, µg/L (39632)	Azin-phos-methyl oxon, water, fltrd, µg/L (61635)	Azin-phos-methyl, water, fltrd, 0.7u GF µg/L (82686)
Apr 10...	<.006	<.006	<.014	<.010	<.004	<.012	<.005	<.006	<.005	<.011	<.007	<.04	<.080
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

351019077184102 Local number CR-543, DENR Cove City Research Station well, R23x2—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 6 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Ben-flu- alin, water, fltrd 0.7u GF µg/L (82673)	Car- baryl, water, fltrd 0.7u GF µg/L (82680)	Carbo- furan, water, fltrd 0.7u GF µg/L (82674)	Chlor- pyrifos oxon, water, fltrd, µg/L (61636)	Chlor- pyrifos water, fltrd, µg/L (38933)	cis- Per- methrin water fltrd 0.7u GF µg/L (82687)	cis- Propi- cona- zole, water, fltrd, µg/L (79846)	Cyana- zine, water, fltrd, µg/L (04041)	Cyflu- thrin, water, fltrd, µg/L (61585)	lambda- Cyhalo- thrin, water, fltrd, µg/L (61595)	Cyper- methrin water, fltrd, µg/L (61586)	DCPA, water, fltrd 0.7u GF µg/L (82682)	Desulf- inyl- fipro- nil, water, fltrd, µg/L (62170)
Apr 10...	<.010	<.060	<.020	<.06	<.005	<.010	<.013	<.018	<.053	<.014	<.046	<.003	<.012
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 7 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Diazi- non, water, fltrd, µg/L (39572)	Dicro- tophos, water, fltrd, µg/L (38454)	Diel- drin, water, fltrd, µg/L (39381)	Dimeth- oate, water, fltrd 0.7u GF µg/L (82662)	Disulf- oton sulfone water, fltrd, µg/L (61640)	Disul- foton, water, fltrd 0.7u GF µg/L (82677)	Endo- sulfan sulfate water, fltrd, µg/L (61590)	EPTC, water, fltrd 0.7u GF µg/L (82668)	Ethion monoxon water, fltrd, µg/L (61644)	Ethion, water, fltrd, µg/L (82346)	Etho- prop, water, fltrd 0.7u GF µg/L (82672)	Fenami- phos sulfone water, fltrd, µg/L (61645)	Fenami- phos sulf- oxide, water, fltrd, µg/L (61646)
Apr 10...	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053	<.04
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

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[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Fenami- phos, water, fltrd, µg/L (61591)	Desulf- inyl- fipro- nil amide, wat flt µg/L (62169)	Fipro- nil sulfide water, fltrd, µg/L (62167)	Fipro- nil sulfone water, fltrd, µg/L (62168)	Fipro- nil, water, fltrd, µg/L (62166)	Fonofos water, fltrd, µg/L (04095)	Hexa- zinone, water, fltrd, µg/L (04025)	Ipro- dione, water, fltrd, µg/L (61593)	Isofen- phos, water, fltrd, µg/L (61594)	Mala- oxon, water, fltrd, µg/L (61652)	Mala- thion, water, fltrd, µg/L (39532)	Meta- laxyl, water, fltrd, µg/L (61596)	Methi- althion water, fltrd, µg/L (61598)
Apr 10...	<.03	<.029	<.013	<.024	<.016	<.006	<.026	<.026	<.011	<.039	<.016	<.007	<.009
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 9 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Methyl para- oxon, water, fltrd, µg/L (61664)	Methyl para- thion, water, fltrd, 0.7u GF µg/L (82667)	Metola- chlor, water, fltrd, µg/L (39415)	Metri- buzin, water, fltrd, µg/L (82630)	Moli- nate, water, fltrd, 0.7u GF µg/L (82671)	Myclo- butanil water, fltrd, µg/L (61599)	Oxy- fluor- fen, water, fltrd, µg/L (61600)	Pendi- meth- alin, water, fltrd, 0.7u GF µg/L (82683)	Phorate oxon, water, fltrd, µg/L (61666)	Phorate water, fltrd, 0.7u GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)	Phosmet water, fltrd, µg/L (61601)	Prome- ton, water, fltrd, µg/L (04037)
Apr 10...	<.02	<.008	<.010	<.012	<.003	<.033	<.017	<.020	<.03	<.020	<.05	<.008	<.01
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 10 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Prome- tryn, water, fltrd, µg/L (04036)	Propy- zamide, water, fltrd, 0.7u GF µg/L (82676)	Pro- panil, water, fltrd, 0.7u GF µg/L (82679)	Propar- gite, water, fltrd, 0.7u GF µg/L (82685)	Sima- zine, water, fltrd, µg/L (04035)	Tebu- thiuron water, fltrd, 0.7u GF µg/L (82670)	Teflu- thrin, water, fltrd, µg/L (61606)	Ter- bufos sulfone water, fltrd, µg/L (61674)	Terbu- fos, water, fltrd, 0.7u GF µg/L (82675)	Ter- buthyl- azine, water, fltrd, µg/L (04022)	Thio- bencarb water, fltrd, 0.7u GF µg/L (82681)	trans- Propi- conazole, water, fltrd, µg/L (79847)	Tribu- phos, water, fltrd, µg/L (61610)
Apr 10...	<.006	<.004	<.011	<.02	<.006	<.02	<.003	<.04	<.01	<.01	<.010	<.03	<.035
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 11 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Tri- flur- alin, water, fltrd, 0.7u GF µg/L (82661)	1,1,1,2 -Tetra- chloro- ethane, water, unfltrd µg/L (77562)	1,1,1- Tri- chloro- ethane, water, unfltrd µg/L (34506)	1,1,2,2 -Tetra- chloro- ethane, water, unfltrd µg/L (34516)	CFC-113 water, unfltrd µg/L (77652)	1,1,2- Tri- chloro- ethane, water, unfltrd µg/L (34511)	1,1-Di- chloro- ethane, water, unfltrd µg/L (34496)	1,1-Di- chloro- ethene, water, unfltrd µg/L (34501)	1,1-Di- chloro- propene water, unfltrd µg/L (77168)	1,2,3,4 -Tetra- methyl- benzene water, unfltrd µg/L (49999)	1,2,3,5 -Tetra- methyl- benzene water, unfltrd µg/L (50000)	1,2,3- Tri- chloro- benzene water, unfltrd µg/L (77613)	1,2,3- Tri- chloro- propane water, unfltrd µg/L (77443)
Apr 10...	<.009	<.04	<.04	<.10	<.04	<.04	<.06	<.02	<.04	<.1	<.1	<.1	<.12
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

351019077184102 Local number CR-543, DENR Cove City Research Station well, R23x2—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 12 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	1,2,3-Tri-methyl-benzene water, unfltrd µg/L (77221)	1,2,4-Tri-chloro-benzene water, unfltrd µg/L (34551)	1,2,4-Tri-methyl-benzene water, unfltrd µg/L (77222)	Dibromo-chloro-propane water, unfltrd µg/L (82625)	1,2-Di-bromo-ethane water, unfltrd µg/L (77651)	1,2-Di-chloro-benzene water, unfltrd µg/L (34536)	1,2-Di-chloro-ethane water, unfltrd µg/L (32103)	1,2-Di-chloro-propane water, unfltrd µg/L (34541)	1,3,5-Tri-methyl-benzene water, unfltrd µg/L (77226)	1,3-Di-chloro-benzene water, unfltrd µg/L (34566)	1,3-Di-chloro-propane water, unfltrd µg/L (77173)	1,4-Di-chloro-benzene water, unfltrd µg/L (34571)	2,2-Di-chloro-propane water, unfltrd µg/L (77170)
Apr 10...	<.1	<.1	<.04	<.5	<.04	<.04	<.1	<.02	<.04	<.04	<.1	<.04	<.06
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 13 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	2-Chloro-toluene water, unfltrd µg/L (77275)	2-Ethyl-toluene water, unfltrd µg/L (77220)	3-Chloro-propene water, unfltrd µg/L (78109)	4-Chloro-toluene water, unfltrd µg/L (77277)	4-Iso-propyl-toluene water, unfltrd µg/L (77356)	Acetone water, unfltrd µg/L (81552)	Acrylo-nitrile water, unfltrd µg/L (34215)	Benzene water, unfltrd µg/L (34030)	Bromo-benzene water, unfltrd µg/L (81555)	Bromo-chloro-methane water, unfltrd µg/L (77297)	Bromo-di-chloro-methane water, unfltrd µg/L (32101)	Bromo-ethene water, unfltrd µg/L (50002)	Bromo-methane water, unfltrd µg/L (34413)
Apr 10...	<.04	<.04	<.08	<.04	<.08	<6	<.4	<.02	<.02	<.06	<.04	<.1	<.4
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 14 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Carbon di-sulfide water, unfltrd µg/L (77041)	Chloro-benzene water, unfltrd µg/L (34301)	Chloro-ethane water, unfltrd µg/L (34311)	Chloro-methane water, unfltrd µg/L (34418)	cis-1,2-Di-chloro-ethene water, unfltrd µg/L (77093)	cis-1,3-Di-chloro-propene water, unfltrd µg/L (34704)	Di-bromo-chloro-methane water, unfltrd µg/L (32105)	Di-bromo-methane water, unfltrd µg/L (30217)	Di-chloro-di-fluoro-methane water, unfltrd µg/L (34668)	Di-chloro-methane water, unfltrd µg/L (34423)	Di-ethyl ether water, unfltrd µg/L (81576)	Diiso-propyl ether water, unfltrd µg/L (81577)	Ethyl methac-rylate water, unfltrd µg/L (73570)
Apr 10...	<.06	<.02	<.1	<.1	<.02	<.06	<.1	<.04	<.14	<.04	<.1	<.06	<.1
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

351019077184102 Local number CR-543, DENR Cove City Research Station well, R23x2—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 15 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Ethyl methyl ketone, water, unfltrd µg/L (81595)	Ethyl-benzene, water, unfltrd µg/L (34371)	Hexa-chloro-butadiene, water, unfltrd µg/L (39702)	Hexa-chloro-ethane, water, unfltrd µg/L (34396)	Iodo-methane, water, unfltrd µg/L (77424)	Iso-butyl methyl ketone, water, unfltrd µg/L (78133)	Iso-propyl-benzene, water, unfltrd µg/L (77223)	Methyl acrylonitrile, water, unfltrd µg/L (81593)	Methyl acrylate, water, unfltrd µg/L (49991)	Methyl methacrylate, water, unfltrd µg/L (81597)	Methyl tert-pentyl ether, water, unfltrd µg/L (50005)	meta-+ para-Xylene, water, unfltrd µg/L (85795)	Naphthalene, water, unfltrd µg/L (34696)
Apr 10...	<1.6	<.02	<.1	<.1	<.40	<.2	<.04	<.4	<.4	<.2	<.04	<.08	<.4
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 16 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Methyl n-butyl ketone, water, unfltrd µg/L (77103)	n-Butyl benzene, water, unfltrd µg/L (77342)	n-propyl-benzene, water, unfltrd µg/L (77224)	o-Xylene, water, unfltrd µg/L (77135)	sec-Butyl-benzene, water, unfltrd µg/L (77350)	Styrene, water, unfltrd µg/L (77128)	t-Butyl ether, water, unfltrd µg/L (50004)	Methyl t-butyl ether, water, unfltrd µg/L (78032)	tert-Butyl-benzene, water, unfltrd µg/L (77353)	Tetra-chloro-ethene, water, unfltrd µg/L (34475)	Tetra-chloro-methane, water, unfltrd µg/L (32102)	Tetra-hydro-furan, water, unfltrd µg/L (81607)	Toluene, water, unfltrd µg/L (34010)
Apr 10...	<.4	<.1	<.04	<.04	<.04	<.04	<.04	<.1	<.08	<.04	<.08	<.1	<.02
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 17 of 17

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	trans-1,2-Di-chloro-ethene, water, unfltrd µg/L (34546)	trans-1,3-Di-chloro-propene, water, unfltrd µg/L (34699)	trans-1,4-Di-chloro-2-butene, water, unfltrd µg/L (73547)	Tri-bromo-methane, water, unfltrd µg/L (32104)	Tri-chloro-ethene, water, unfltrd µg/L (39180)	Tri-chloro-fluoro-methane, water, unfltrd µg/L (34488)	Tri-chloro-methane, water, unfltrd µg/L (32106)	Vinyl chloride, water, unfltrd µg/L (39175)	Di-chloro-vos, water, unfltrd µg/L (38775)	Tritium 2-sigma, water, unfltrd pCi/L (75985)	Tritium, water, unfltrd pCi/L (07000)	Uranium natural, water, unfltrd µg/L (22703)
Apr 10...	<.02	<.10	<.6	<.08	<.02	<.08	<.04	<.1	<.01	.70	10.3	<.04
Jun 01...	--	--	--	--	--	--	--	--	--	--	--	--