

Water-Data Report 2008

# 344139077211205 Local number ON-265, NCDENR Hadnot Point Research Station X24s5, at Camp Lejeune, NC (Castle Hayne)

Castle Hayne aquifer Castle Hayne Formation

Onslow County, NC

LOCATION.--Lat 34°41'35", long 77°21'06" referenced to North American Datum of 1983, Onslow County, NC, Hydrologic Unit 03030001, 1.6 mi south of intersection of Brewster Boulevard and Stone Street Extension, at Camp Lejeune. Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

#### **GROUND-WATER RECORDS**

WELL CHARACTERISTICS.--Drilled observation well, depth 295 ft, diameter 4 in., well cased to 285 ft, screened interval from 285 ft to 295 ft.

DATUM.--Land-surface datum is 24.88 ft above North American Vertical Datum of 1988. Measuring point: top of well casing, 3.23 ft above land-surface datum, November 16, 2007 to present.

PERIOD OF RECORD.--February 1988 to July 2005, November 2007 to present.

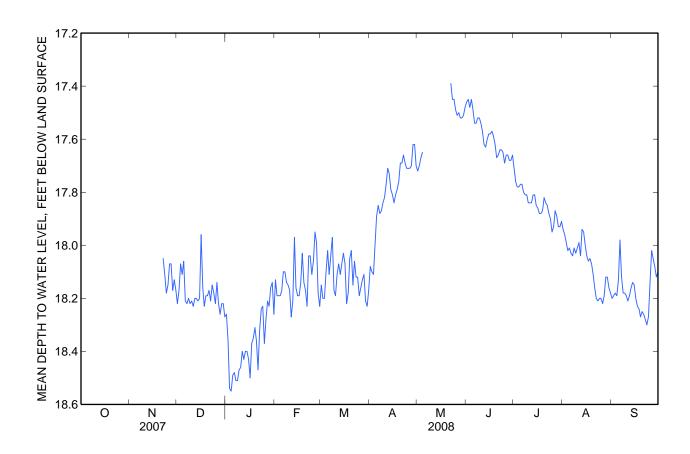
GAGE.--Water-level recorder collecting data at 60-minute intervals. Satellite telemetry at site.

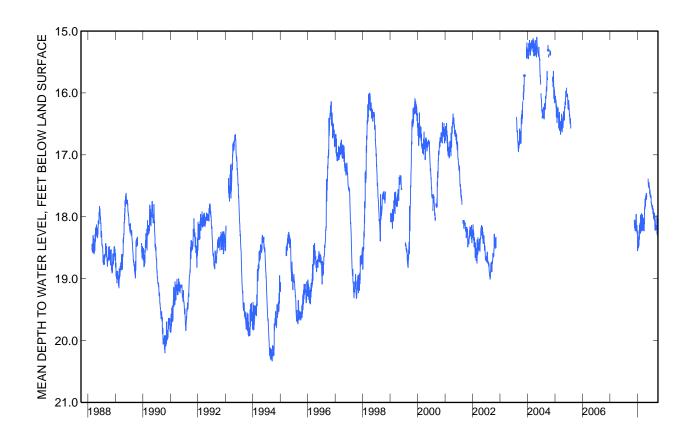
REMARKS.--Well is part of U.S. Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.06 ft below land-surface datum, March 16, 2004; lowest water level recorded, 20.36 ft below land-surface datum, September 12, 16, 1994.

# DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008 DAILY MEAN VALUES

						Y WEAN V	ALULU					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1			18.22	18.26	18.13	18.15	18.08	17.72	17.46	17.71	17.94	18.20
2			18.17	18.36	18.19	18.20	18.10	17.70	17.45	17.76	17.96	18.19
3			18.07	18.54	18.19	18.20	18.11	17.67	17.48	17.78	17.99	18.18
4			18.11	18.55	18.19	18.10	18.00	17.65	17.45	17.78	18.02	18.19
5			18.06	18.49	18.17	18.02	17.89		17.49	17.77	18.01	18.13
6			18.21	18.48	18.10	18.11	17.85		17.54	17.77	18.03	17.98
7			18.22	18.51	18.10	18.04	17.88		17.54	17.80	18.04	18.12
8			18.20	18.51	18.14	17.97	17.87		17.52	17.81	18.01	18.18
9			18.22	18.47	18.15	18.17	17.84		17.52	17.81	18.03	18.18
10			18.21	18.46	18.17	18.19	17.82		17.54	17.84	18.01	18.19
11			18.23	18.40	18.27	18.11	17.77		17.57	17.84	17.99	18.21
12			18.20	18.43	18.21	18.07	17.71		17.62	17.84	18.04	18.19
13			18.20	18.40	17.97	18.11	17.73		17.63	17.81	17.94	18.16
14			18.21	18.40	18.16	18.07	17.79		17.60	17.81	17.95	18.14
15			18.20	18.43	18.19	18.03	17.81		17.58	17.85	18.00	18.15
16			17.96	18.50	18.19	18.07	17.84		17.58	17.86	18.04	18.20
17			18.16	18.37	18.14	18.22	17.81		17.57	17.88	18.06	18.23
18			18.23	18.35	18.03	18.18	17.79		17.59	17.88	18.05	18.24
19			18.19	18.31	18.14	18.05	17.76		17.62	17.87	18.07	18.27
20			18.19	18.36	18.17	18.02	17.69		17.67	17.82	18.11	18.25
21			18.17	18.47	18.23	18.15	17.69		17.66	17.84	18.16	18.26
22		18.05	18.21	18.32	18.04	18.06	17.66	17.39	17.64	17.85	18.20	18.28
23		18.11	18.15	18.24	18.04	18.12	17.69	17.45	17.64	17.88	18.21	18.30
24		18.18	18.18	18.23	18.11	18.12	17.71	17.45	17.65	17.90	18.20	18.27
25		18.15	18.22	18.37	18.06	18.19	17.71	17.49	17.69	17.95	18.20	18.14
26		18.07	18.14	18.28	17.95	18.16	17.71	17.51	17.66	17.93	18.22	18.02
27		18.07	18.22	18.21	17.99	18.13	17.70	17.50	17.66	17.87	18.19	18.05
28		18.17	18.26	18.23	18.18	18.11	17.62	17.52	17.68	17.89	18.12	18.08
29		18.13	18.22	18.16	18.23	18.21	17.62	17.52	17.68	17.93	18.12	18.12
30		18.17	18.22	18.14		18.23	17.70	17.51	17.66	17.93	18.16	18.10
31			18.27	18.26		18.17		17.48		17.91	18.18	
Mean			18.18	18.37	18.13	18.12	17.80		17.59	17.84	18.07	18.17
Max			18.27	18.55	18.27	18.23	18.11		17.69	17.95	18.22	18.30
Min			17.96	18.14	17.95	17.97	17.62		17.45	17.71	17.94	17.98





#### **WATER-QUALITY RECORDS**

PERIOD OF RECORD.--November 2007 to September 2008.

PERIOD OF DAILY RECORD .--

SPECIFIC CONDUCTANCE: November 2007 to September 2008. WATER TEMPERATURE: November 2007 to September 2008.

INSTRUMENTATION.--Water-quality monitor in operation from November 2007 to September 2008.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 956 microsiemens, April 29; minimum recorded, 830 microsiemens, on several days during the period. WATER TEMPERATURE: Maximum recorded, 18.9°C, on several days during the period; minimum recorded, 18.2°C, May 25, 26.

### TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	
		October			Novembe	r	December			January			
1							18.8	18.8	18.8	18.7	18.7	18.7	
2							18.8	18.8	18.8	18.7	18.7	18.7	
3							18.8	18.8	18.8	18.7	18.7	18.7	
4							18.8	18.8	18.8	18.7	18.7	18.7	
5							18.8	18.8	18.8	18.7	18.7	18.7	
6										18.7	18.7	18.7	
7							18.8	18.8	18.8	18.7	18.7	18.7	
8							18.8	18.8	18.8	18.7	18.7	18.7	
9							18.8	18.8	18.8	18.7	18.7	18.7	
10							18.8	18.8	18.8	18.7	18.7	18.7	
11							18.8	18.8	18.8	18.7	18.7	18.7	
12							18.8	18.8	18.8	18.7	18.7	18.7	
13							18.8	18.8	18.8	18.7	18.7	18.7	
14							18.8	18.8	18.8	18.7	18.7	18.7	
15							18.8	18.8	18.8	18.7	18.7	18.7	
16							18.8	18.8	18.8	18.7	18.7	18.7	
17							18.8	18.8	18.8	18.7	18.7	18.7	
18							18.8	18.8	18.8	18.7	18.6	18.7	
19							18.8	18.8	18.8	18.6	18.6	18.6	
20							18.8	18.8	18.8	18.6	18.6	18.6	
21							18.8	18.8	18.8	18.6	18.6	18.6	
22							18.8	18.8	18.8	18.6	18.6	18.6	
23							18.8	18.7	18.8	18.6	18.6	18.6	
24				18.9	18.9	18.9	18.7	18.7	18.7	18.6	18.6	18.6	
25				18.9	18.9	18.9	18.7	18.7	18.7	18.6	18.6	18.6	
26				18.9	18.9	18.9	18.7	18.7	18.7	18.6	18.6	18.6	
27				18.9	18.8	18.9	18.7	18.7	18.7	18.6	18.6	18.6	
28				18.8	18.8	18.8	18.7	18.7	18.7	18.6	18.6	18.6	
29				18.8	18.8	18.8	18.7	18.7	18.7	18.6	18.6	18.6	
30				18.8	18.8	18.8	18.7	18.7	18.7	18.6	18.6	18.6	
31							18.7	18.7	18.7	18.6	18.5	18.6	
Month										18.7	18.5	18.7	

### TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

1		February										
		rebluary			March			April			May	
	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5
2	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5
3	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5
4	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5
5	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
6	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
7	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
8	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
9	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
10	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
11	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
12	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
13	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
14	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
15	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
16	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
17	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
18	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
19	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
20	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
21	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5			
22	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.3	18.3	18.3
23	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.3	18.3	18.3
24	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.3	18.3	18.3
25	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.3	18.2	18.3
26	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.3	18.2	18.3
27	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.3	18.3	18.3
28	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5	18.3	18.3	18.3
29	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.5	18.3	18.3	18.3
30				18.5	18.5	18.5	18.5	18.5	18.5	18.3	18.3	18.3
31				18.5	18.5	18.5				18.3	18.3	18.3
Month	18.6	18.6	18.6	18.6	18.5	18.6	18.5	18.5	18.5			

## TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June		July			August			September		
1	18.3	18.3	18.3	18.4	18.4	18.4	18.6	18.6	18.6	18.7	18.6	18.6
2	18.3	18.3	18.3	18.4	18.4	18.4	18.6	18.6	18.6	18.7	18.6	18.7
3	18.3	18.3	18.3	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
4	18.4	18.3	18.3	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
5	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
6	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.7
7	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
8	18.4	18.4	18.4	18.5	18.5	18.5	18.6	18.6	18.6	18.7	18.6	18.6
9	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
10	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.7
11	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
12	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
13	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
14	18.4	18.4	18.4	18.5	18.4	18.5				18.7	18.6	18.6
15	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
16	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
17	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
18	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
19	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
20	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
21	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
22	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
23	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
24	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
25	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
26	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
27	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.7	18.6	18.6
28	18.4	18.4	18.4	18.5	18.4	18.5	18.6	18.6	18.6	18.8	18.6	18.7
29	18.4	18.4	18.4	18.5	18.4	18.5	18.7	18.6	18.6	18.8	18.8	18.8
30	18.4	18.4	18.4	18.5	18.4	18.5	18.7	18.6	18.6	18.8	18.8	18.8
31				18.6	18.4	18.5	18.7	18.6	18.6			
<b>l</b> onth	18.4	18.3	18.4	18.6	18.4	18.5				18.8	18.6	18.6

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	
	October			November			December			January			
1							852	849	851	852	844	849	
2							854	849	853	844	830	836	
3							854	854	854	830	830	830	
4							854	854	854	830	830	830	
5							855	854	854	830	830	830	
6										830	830	830	
7							852	848	849	830	830	830	
8							853	849	851	830	830	830	
9							851	849	850	830	830	830	
10							852	849	850	830	830	830	
11							851	849	850	834	830	832	
12							853	849	851	832	831	832	
13							853	850	852	838	832	834	
14							852	849	851	837	833	835	
15							854	849	851	836	831	833	
16							856	854	855	831	831	831	
17							854	852	853	848	830	839	
18							852	850	851	843	837	840	
19							853	852	853	848	837	844	
20							853	852	853	847	831	840	
21							853	852	853	832	831	831	
22							853	852	852	848	832	843	
23							853	852	853	850	848	849	
24				852	851	852	853	852	853	851	845	849	
25				853	852	853	853	852	852	845	833	839	
26				854	853	853	854	853	853	850	840	847	
27				854	853	854	853	849	852	851	849	850	
28				853	852	852	851	846	849	851	848	849	
29				854	853	854	853	851	852	853	850	852	
30				854	852	853	853	851	852	854	848	852	
31							853	844	848				
Month													

### SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February	,		March			April			May	
1	873	865	866	876	864	870	895	875	886	938	932	936
2	865	864	864	867	860	863	892	873	884	941	935	938
3	864	863	864	867	860	864	893	873	882	945	937	941
4	864	864	864	896	867	879	904	893	899	947	941	944
5	864	864	864	909	878	896	923	901	914			
6	875	864	868	881	873	878	925	916	920			
7	875	865	869	907	873	892	918	913	916			
8	867	863	865	913	879	903	919	915	917			
9	867	863	865	879	863	869	922	918	921			
10	865	863	864	873	861	865	925	921	923			
11	863	861	861	886	873	879	930	924	928			
12	866	861	862	893	880	887	937	930	934			
13	919	866	907	883	877	880	936	927	933			
14	894	862	868	893	878	887	928	925	927			
15	866	863	864	909	886	894	927	919	924			
16	867	862	864	909	867	888	923	917	921			
17	875	862	869	867	855	859	927	921	925			
18	904	873	891	878	855	868	929	924	927			
19	873	865	870	902	878	891	932	926	929			
20	871	863	866	912	875	895	940	932	937			
21	865	859	862	881	869	875	940	936	938			
22	900	865	890	896	881	889	945	937	941			
23	896	878	890	890	875	880	942	936	938	928	924	926
24	882	870	876	884	876	881	938	933	936	926	923	924
25	890	881	885	876	860	867	937	934	935	924	920	921
26	919	890	908	877	868	873	938	935	936	922	917	920
27	917	876	900	881	875	879	938	935	937	922	919	920
28	876	860	865	885	878	882	953	938	946	921	914	918
29	864	859	860	879	852	864	956	939	948	920	916	918
30				863	852	858	941	935	938	921	915	919
31				876	862	872				925	919	922
/lonth	919	859	873	913	852	878	956	873	925			

### SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June		July				August		:	Septembe	er
1	928	921	924	877	869	872	863	862	863	925	924	924
2	930	923	925	870	868	869	863	862	862	924	923	923
3	927	920	923	869	868	869	862	862	862	923	922	922
4	927	924	926	869	869	869	862	862	862	922	921	922
5	926	918	921	869	868	869	862	862	862	921	921	921
6	920	909	915	869	868	869	862	861	862	926	921	923
7	917	912	915	869	869	869	862	861	861	921	921	921
8	919	916	918	869	868	869	861	861	861	921	920	920
9	920	916	918	868	867	868	861	861	861	920	919	919
10	917	911	915	867	866	866	861	861	861	919	918	918
11	913	887	905	866	865	865	861	860	861	918	917	918
12	890	874	882	865	865	865	861	860	860	917	917	917
13	886	871	879	865	865	865	861	860	860	917	916	916
14	903	882	892	866	865	865				916	916	916
15	905	893	900	866	864	865	902	897	900	916	915	916
16	903	888	897	866	865	865	897	895	895	915	914	915
17	906	896	902	866	866	866	895	894	895	914	914	914
18	903	889	896	866	865	866	894	894	894	914	913	913
19	899	880	887	866	865	865	894	892	893	913	912	912
20	880	869	873	865	865	865	892	886	891	912	911	912
21	880	870	874	865	865	865	886	879	883	912	910	911
22	885	876	881	865	865	865	879	874	877	911	910	910
23	890	874	882	865	865	865	879	862	872	910	908	909
24	890	872	880	865	864	864	879	864	873	908	907	908
25	874	870	872	864	864	864				916	908	910
26	882	873	877	864	864	864	931	928	930	916	913	914
27	880	874	877	864	863	864	929	928	928	913	912	913
28	878	872	875	864	863	864	928	927	927	912	910	912
29	878	870	875	864	863	863	927	926	927	911	910	910
30	880	873	877	863	863	863	926	925	926	910	908	909
31				863	863	863	925	925	925			
Month	930	869	896	877	863	866				926	907	916