Water-Data Report 2007

263044080035102 Local number PB 1195. USGS Observation Well in Boynton Beach, FL.

Surficial Aquifer System

Palm Beach County, FL

LOCATION.--Lat 26°30'49.1", long 80°03'46.1" referenced to North American Datum of 1983, in NE ¼ NW ¼ NE ¼ sec.33, T.45 S., R.43 E., Palm Beach County, FL, Hydrologic Unit 03090202, about 500 ft southwest of the intersection of the Florida East Coast Railroad and East Woolbright Road, 0.5 mi east of U.S. Interstate 95, about 400 ft south of East Woolbright Road and about 350 ft east of Seacrest Boulevard.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Drilled, observation, diameter 4 in., depth 325 ft, cased to 300 ft, screened 300 to 320 ft.

DATUM.--Land-surface datum is 19 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 19.95 ft above National Geodetic Vertical Datum of 1929, July 1, 2005, to present. Prior to July 2005, top of casing was 20.13 ft above NGVD. See REMARKS.

PERIOD OF RECORD.--September 2000 to current year.

INSTRUMENTATION.--Monthly measurement with electronic tape. Annual profile with induction logger. See REMARKS.

REMARKS.--Well is also used for salinity monitoring, including an annual induction log. Induction logs are used to assess the movement of the fresh-water/salt-water interface on ground water. See RECORDS OF BULK CONDUCTIVITY. A calibration error was found to have affected some of the historical bulk conductivity logs. Bulk conductivity logs prior to the water year 2002 had been calibrated to a standard of 1,301 mS/m. For these calibrations an internal setting limited the probe response to 1,000 mS/m. Data for the affected years was corrected by applying a 0.7686 multiplier. Records of water-level elevation prior to October 2001, are available in the files of the U.S. Geological Survey. Top of casing measuring point was altered during reconstruction of the well shelter in 2005. Water-level elevation data not published in the 2005 water year has been computed using the measuring point established March 2006, record is available in the files of the U.S. Geological Survey. See DATUM.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.24 ft NGVD, Jan. 7, 2002; lowest, 2.06 ft below NGVD, Nov. 13, 2002.

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Date	Time	Elevation, Feet above NGVD (72020)	Specific conductance, wat unf, µS/cm, 25 degC (00095)	Chloride, water, fltrd, mg/L (00940)
Oct				
26...	0942	.76	36,000	12,800
Nov				
07...	1224	.79	--	--
Dec				
12...	1417	-.03	--	--
Jan				
10...	1023	.13	36,300	12,700
Feb				
05...	1402	-.22	--	--
Mar				
02...	1358	-.37	--	--
May				
30...	1225	-.04	--	--
Jun				
04...	0920	1.90	37,200	12,900
19...	1045	2.57	--	--
Jul				
13...	1255	2.95	36,500	13,000
Aug				
10...	1110	2.34	--	--
Sep				
18...	0945	1.46	--	--

Lithologic log, USGS 263044080035102. Local Number PB -1195

Depth interval feet below land surface	Lithologic description
0 - 10	Sandy limestone, medium light gray to light gray, hard, with abundant shell fragments
10 - 30	Unconsolidated shell fragments with quartz sand, sand is fine to coarsely grained
30 - 50	Sandstone, dark yellowish orange, fine to coarsely grained, poorly cemented with calcite, with shell fragments
50 - 80	Sandstone, white to dark yellowish gray, fine to coarsely grained, grains are clear, poorly cemented with calcite, with shell fragments
80 - 100	Sandstone, dark reddish brown, fine to coarsely grained, grains are clear, well cemented with chert, with shell fragments
100 - 160	Sandstone, grayish orange, well consolidated and well cemented with calcite, grains are sub-angular to rounded
160 - 210	Sandstone, grayish orange, well consolidated and well cemented with calcite, grains are sub-angular to rounded, with abundant shell fragments
210 - 280	Sandstone, grayish orange to light olive gray, well consolidated and well cemented with calcite, fine to medium grained, grains are angular to rounded, with abundant shell fragments and fine black grains
280 - 325	Sandstone, light olive gray, well sorted, loosely consolidated and cemented with calcite, very fine to coarse grained, with some shell fragments and fine black grains

Modified from CH2MHILL Southeast, Inc. drilling report. The location of the well from which the lithology is described in the report is 75 ft north of PB-1195.

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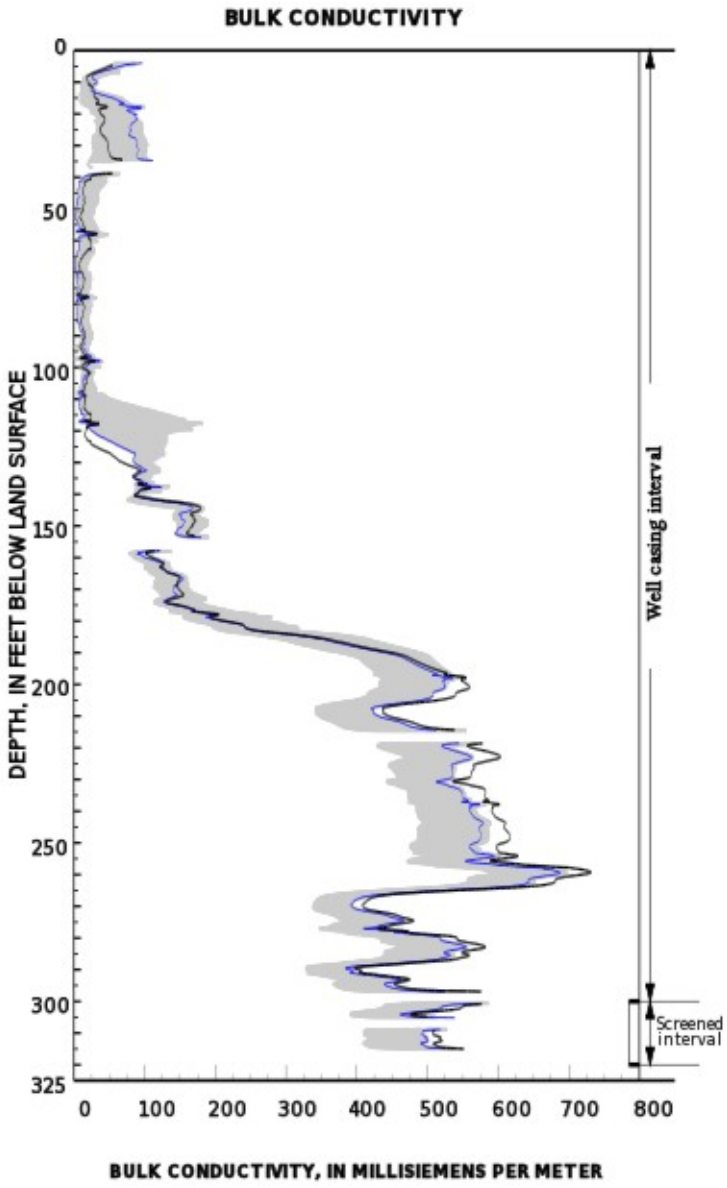
WY 2007 Induction log results
Station: USGS 263044080035102
Local name: PB -1195



INDUCTION LOG DATES, ASSOCIATED CHLORIDE SAMPLE DATES

Induction log date	Chloride sample date	Dissolved chloride concentration, in mg/L
June 4, 2007	June 4, 2007	12,900
May 4, 2006	May 4, 2006	13,400
May 24, 2005	May 24, 2005	12,800
May 4, 2004	May 4, 2004	12,700
May 13, 2003	May 13, 2003	12,800
May 24, 2002	May 24, 2002	12,800
May 1, 2001	May 1, 2001	11,700
Sept. 15, 2000	Sept. 15, 2000	11,900

EXPLANATION

Bulk conductivity, in millisiemens per meter, May 4, 2006, June 4, 2007.

Shaded area represents range in bulk conductivity logs collected September 15, 2000 through May 4, 2006

Delimits the interval for which the well is open to the aquifer