

Water-Data Report 2012

**255358080114101 Local number G 3601. USGS Observation Well near North Miami, FL.**

Biscayne aquifer  
Biscayne Limestone Aquifer

Miami-Dade County, FL

LOCATION.--Lat 25°53'58", long 80°11'41" referenced to North American Datum of 1927, in SW ¼ SW ¼ SW ¼ sec.19, T.52 S., R.42 E., Miami-Dade County, FL, Hydrologic Unit 03090202, 300 ft north of NW 135th Street, 28 ft west of Memorial Boulevard, along east bank of Biscayne Canal.

**WATER-QUALITY RECORDS**

WELL CHARACTERISTICS.--Depth 190 ft. Upper casing diameter 2; top of first opening 185 ft, bottom of last opening 190 ft.

DATUM.--Land-surface datum is 6.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: From Sept. 12, 1995, to present, measuring point has been top of casing, 6.83 ft above National Geodetic Vertical Datum of 1929. Prior to the 2000 water year, the top of casing was estimated to be 5 ft above NGVD from topographic map but this reference was not used to compute water levels. See REMARKS.

PERIOD OF RECORD.--September 1995 to current year. See REMARKS.

INSTRUMENTATION.--Quarterly measurement with chalked steel tape or electric tape. Annual profile with electromagnetic induction logger. See REMARKS.

REMARKS.--This station is also used for salinity monitoring, including an annual induction log. Quarterly chloride sampling began in September 1995. Quarterly water-level measurement began in October 1996. Induction logs are used to assess movement of the fresh-water/salt-water interface in ground water. See [RECORDS OF BULK CONDUCTIVITY](#).

Water-level elevation data collected prior to March 14, 2000, have been computed using the measuring point established on March 14, 2000 and are in the files of the U.S. Geological Survey. See DATUM.

In 2008, the instrument used to calibrate the induction logging probe was re-examined, and found to have been constructed to a different specification than originally communicated by the manufacturer. As a consequence of this calibration problem, logs of bulk conductivity collected from 1995 to 2007 are considered to be in error. The 0.7686 multiplier correction applied to most bulk conductivity data collected prior to 2002, as referenced in previous data publications, is not required. Instead, a 1.33 multiplier correction is required for bulk conductivity data collected from water years 1998, and 2002 to 2007. A 1.0 multiplier has been applied to the remainder of the data, to the current year. However, the depths of hydrologic or lithologic features shown in the published logs are not affected by this correction.

In order to display changes in bulk conductivity between induction logs collected over the period of record, each log has been adjusted to a median conductivity value at a depth that corresponds to a stable lithologic feature which produces a consistent conductivity profile, based on data collected from 1996 to 2008. These adjustments compensate for small variations in equipment response resulting from variations in environmental conditions and/or probe calibrations. For this station, induction logs are adjusted to a median response of 9.7 mS/m at a depth of 136.4 ft below land surface. The resulting plot of logs collected from 1996 to the current year is provided in this report. The original and corrected records of bulk conductivity, in millisiemens per meter, are available in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--

WATER-LEVEL ELEVATION: Highest water level measured, 3.14 ft NGVD, Oct. 21, 1999; lowest, 1.13 ft NGVD, Jan. 16, 1998.

CHLORIDE CONCENTRATION: Highest measured chloride concentration, 1,480 mg/L, July 20, 2012; lowest, 490 mg/L, Sept. 28, 1995.

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**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**  
 [NGVD, National Geodetic Vertical Datum; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sample start time	Specific conductivity, water, unfiltered, µS/cm at 25°C (00095)	Elevation above NGVD 1929, ft (72020)	Chloride, water, unfiltered, mg/L (99220)
<b>October 24, 2011</b>	<b>1359</b>	4,850	2.05	1,400
<b>January 23, 2012</b>	<b>0928</b>	4,890	1.54	1,300
<b>May 9, 2012</b>	<b>0857</b>	4,870	1.65	1,400
<b>July 20, 2012</b>	<b>1003</b>	4,820	2.20	1,500

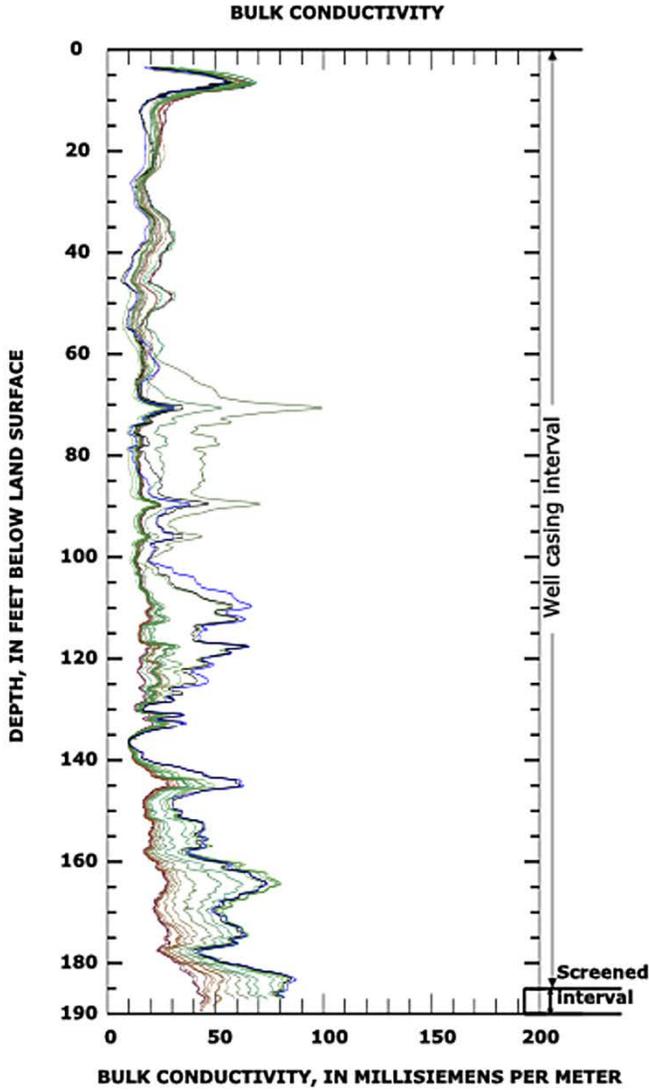
## Lithologic log, USGS 255358080114101. Local Number G -3601

Depth interval (ft below land surface)	Lithologic description
0 - 10	Regolith and moderately sorted quartz sand with a high organic content
10 - 25	Quartz sand, moderately sorted, medium grained, high organic content
25 - 30	Coral limestone with dissolution features
30 - 40	Fragmented limestone with dissolution features
40 - 45	Sandy limestone, mostly spar with some micrite, many dissolution features
45 - 55	Sandy molluscan limestone; poorly sorted quartz and carbonate sand
55 - 100	Fragmented sandy limestone with sparite and some micrite, sand is medium-grained quartz with some carbonate grains, sorting increases up sequence, marine shell fragments, dissolution features, phosphate
100 - 110	Micritic limestone with coral fragments and dissolution features
110 - 125	Fragmented sandy limestone with marine shell, sand is poorly sorted quartz and carbonate grains, phosphate, burrow features
125 - 145	Sandy molluscan limestone and sandy limestone, sand is poorly sorted quartz and carbonate grains, quartz content increases upsequence, marine shell fragments and phosphate
145 - 190	Sandy limestone with spar and some micrite, dissolution features and phosphate

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WY 2012 Induction log results  
 Station: USGS 255358080114101  
 Local name: G -3601



**INDUCTION LOG DATES,  
 ASSOCIATED CHLORIDE SAMPLE DATES**

Induction log date	Chloride sample date	Dissolved chloride concentration, in mg/L
May 9, 2012	May 9, 2012	1,380
Apr. 26, 2011	Apr. 26, 2011	1,400
Apr. 21, 2010	Apr. 21, 2010	1,300
Apr. 30, 2009	Apr. 30, 2009	1,280
May 5, 2008	May 5, 2008	1,240
June 19, 2007	June 19, 2007	1,200
Sept. 13, 2006	Sept. 13, 2006	1,140
Apr. 25, 2005	Apr. 25, 2005	1,080
Apr. 22, 2004	Apr. 22, 2004	1,000
Apr. 29, 2003	Apr. 29, 2003	880
May 13, 2002	May 13, 2002	840
Apr. 11, 2001	Apr. 11, 2001	800
Apr. 2000	Apr. 17, 2000	660
Apr. 12, 1999	Apr. 12, 1999	660
May 1998	July 30, 1998	640
Apr. 21, 1997	Apr. 21, 1997	600
May 9, 1996	- no sample -	--
Jan. 10, 1996	Jan. 10, 1996	540