

Water-Data Report 2012

254108080170601 Local number G 3608. USGS Observation Well near Kendall, FL.

Biscayne aquifer
Biscayne Limestone Aquifer

Miami-Dade County, FL

LOCATION.--Lat 25°41'03.9", long 80°17'04.6" referenced to North American Datum of 1983, in NW ¼ SW ¼ NW ¼ sec.6, T.55 S., R.41 E., Miami-Dade County, FL, Hydrologic Unit 03090202, 16 ft east of SW 57th Avenue and about 300 ft north of SW 94th Street, across the street from 9320 SW 57th Avenue, west of Snapper Creek Canal.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 100 ft. Upper casing diameter 2; top of first opening 95 ft, bottom of last opening 100 ft.

DATUM.--Land-surface datum is 11 ft above National Geodetic Vertical Datum of 1929. Measuring point: From Aug. 26, 1995, to present, measuring point has been top of casing, 10.95 ft above National Geodetic Vertical Datum of 1929. Prior to March 2000, the measuring point was estimated to be 11 ft above NGVD from a topographic map. See REMARKS.

PERIOD OF RECORD.--August 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 has been used for groundwater salinity monitoring since August 1995, including electromagnetic induction logging since January 1996. Water-level measurements began in October 1996. Water-level elevation records collected prior to March 14, 2000, have been computed using the top of casing measuring point surveyed March 14, 2000, and are in the files of the U.S. Geological Survey. See DATUM. Weekly chloride sampling was conducted from April 2007 to July 2007, and monthly sampling from September 2007 to July 2008, as part of a drought monitoring project. Induction logs are used to assess movement of the fresh-water/salt-water interface in ground water. See [RECORDS OF BULK CONDUCTIVITY](#).

In 2008, the induction probe calibration equipment was found to have been misidentified by the manufacturer, resulting in a combination of errors of scale for converting instrument response to units of measurement (mS/m) and errors in correcting the log data to consistent units of measurement among the induction logs collected. The equipment misidentification and resulting errors affect data collected from 2000 to 2007 at this station. As a result, published induction logs released by the U.S. Geological Survey prior to 2008 are considered to be in error. The combined corrections require a 1.33 multiplier to be applied to the bulk conductivity data collected in 1998, and from 2002 to 2007. A 1.0 multiplier has been applied to the remainder of the data, to the current year.

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 2001, and 2003 to 2007. 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 13.2 mS/m at a depth of 42.5 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, 3.48 ft NGVD, Oct. 28, 2004; lowest, 2.03 ft NGVD, May 6, 2009.

CHLORIDE CONCENTRATION: Highest measured chloride concentration, 240 mg/L, Aug. 04, 2004, Apr. 28, 2008; lowest, 62 mg/L, Apr. 13, Nov. 3, 2000, and Aug. 21, 2001.

254108080170601 Local number G 3608. USGS Observation Well near Kendall, FL.—Continued

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)
October 24, 2011	1055	740	3.22	100
January 19, 2012	1225	711	3.13	90
April 20, 2012	1039	655	2.86	82
July 19, 2012	1151	711	2.29	98

Lithologic log, USGS 254108080170601. Local Number G -3608

Depth interval (ft below land surface)	Lithologic description
0 - 20	Sandy limestone with fine-grained quartz sand
20 - 40	Quartz sand, color ranges upward from beige to tan, coarse to fine-grained, poorly sorted; includes sandy limestone fragments and very fine-grained black phosphate
40 - 45	Sand, medium to fine grained , poorly sorted; marine shells; with fragments of quartz sandstone, micritic matrix
45 - 55	Quartz sandstone, fine to very fine-grained, micritic matrix; includes marine shells, dissolution features, and very fine- grained phosphate particles
55 - 60	Quartz sand, medium to very fine-grained, poorly sorted; with beds of quartz sandstone, micritic matrix; includes marine shell fragments, dissolution features, and very fine-grained phosphate
60 - 75	Quartz sand, medium to very fine-grained, poorly sorted; with sandy limestone fragments, marine shell fragments, and very fine-grained phosphate particles
75 - 100	Quartz sandstone, fine to very fine-grained, micritic matrix; includes dissolution features and marine shells with some recrystallization and calcite fill

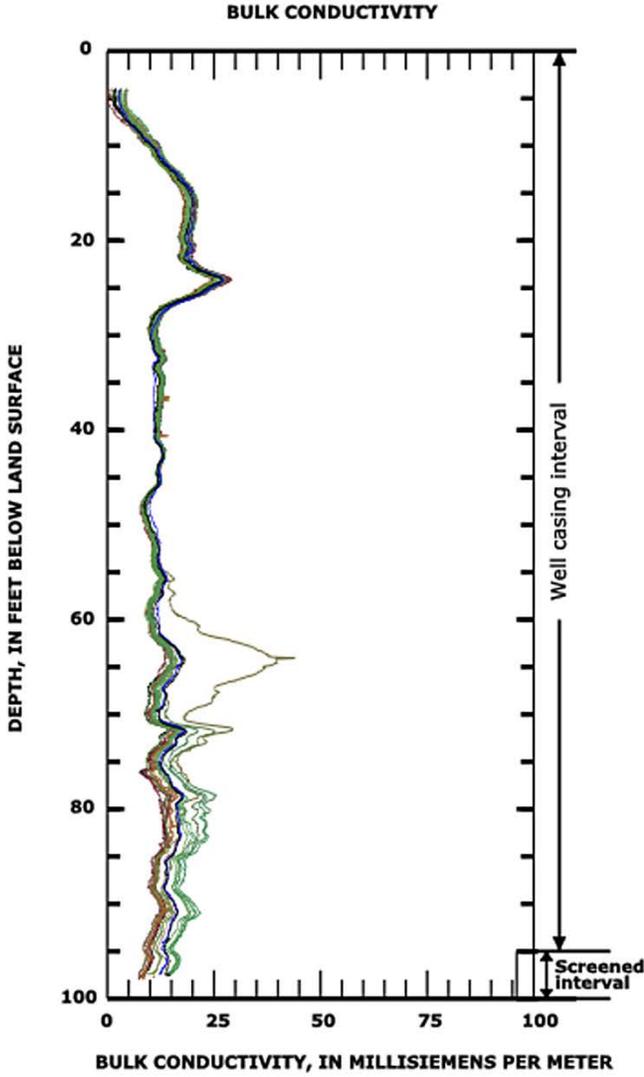
254108080170601 Local number G 3608. USGS Observation Well near Kendall, FL.—Continued



WY 2012 Induction log results

Station: USGS 254108080170601

Local name: G -3608



INDUCTION LOG DATES,
ASSOCIATED CHLORIDE SAMPLE DATES

Induction log date	Chloride sample date	Dissolved chloride concentration, in mg/L
Apr. 20, 2012	Apr. 20, 2012	82
Apr. 21, 2011	Apr. 21, 2011	98
Apr. 14, 2010	Apr. 14, 2010	135
May 6, 2009	May 6, 2009	170
May 6, 2008	May 6, 2008	190
June 13, 2007	June 13, 2007	205
Apr. 24, 2006	Apr. 24, 2006	230
Apr. 26, 2005	Apr. 26, 2005	225
Apr. 23, 2004	Apr. 23, 2004	200
Apr. 30, 2003	Apr. 30, 2003	72
May 20, 2002	May 20, 2002	64
Apr. 6, 2001	Apr. 6, 2001	64
Apr. 13, 2000	Apr. 13, 2000	62
Apr. 9, 1999	Apr. 9, 1999	64
Apr. 1998	Apr. 16, 1998	74
Apr. 23, 1997	Apr. 23, 1997	72
May 24, 1996	- no sample -	--
Jan. 9, 1996	Jan. 16, 1996	80