

Water-Data Report 2012

252431080261001 Local number G -3946 D. USGS Observation Well in Homestead, FL.

Biscayne aquifer
Biscayne Limestone Aquifer

Miami-Dade County, FL

LOCATION.--Lat 25°24'30.7", long 80°26'09.7" referenced to North American Datum of 1983, Miami-Dade County, FL, Hydrologic Unit 03090202, 1.3 mi east of Old Card Sound Road (State Road 905A), 3 mi south of U.S. Highway 1 in Florida City, FL.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.-- Drilled, observation, water-table well, depth 87 ft, diameter 2 in., cased to 62 ft, screened 62 to 67 ft, cased 67 to 87 ft.

DATUM.--Land-surface datum is 3.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: measuring point has been north side of top of 2-in. PVC casing, 3.28 ft above National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--October 2010 to current year. See REMARKS.

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

REMARKS.--Well is also used for salinity monitoring, including an annual induction log. Annual induction logs began in April 2011. Water-level measurements began in January 2011. Salinity sampling began in October 2010. Induction logs are used to assess the movement of the fresh-water/salt-water interface in ground water. See [RECORDS OF BULK CONDUCTIVITY](#).

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 in 2011. 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 mean response of 10.9 mS/m at a depth of 39.3 ft below land surface. The resulting plot of logs collected from 2011 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 CURRENT YEAR.--

WATER-LEVEL ELEVATION: Highest water level measured, 2.72 ft NGVD, Oct. 21, 2011; lowest, 0.35 ft NGVD, June 1, 2011.

CHLORIDE CONCENTRATION: Highest measured chloride concentration, 4,800 mg/L, December 21, 2011; lowest, 3,400 mg/L, Jan. 7, 2011.

252431080261001 Local number G -3946 D. USGS Observation Well in Homestead, FL.—Continued**WATER-QUALITY DATA****WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

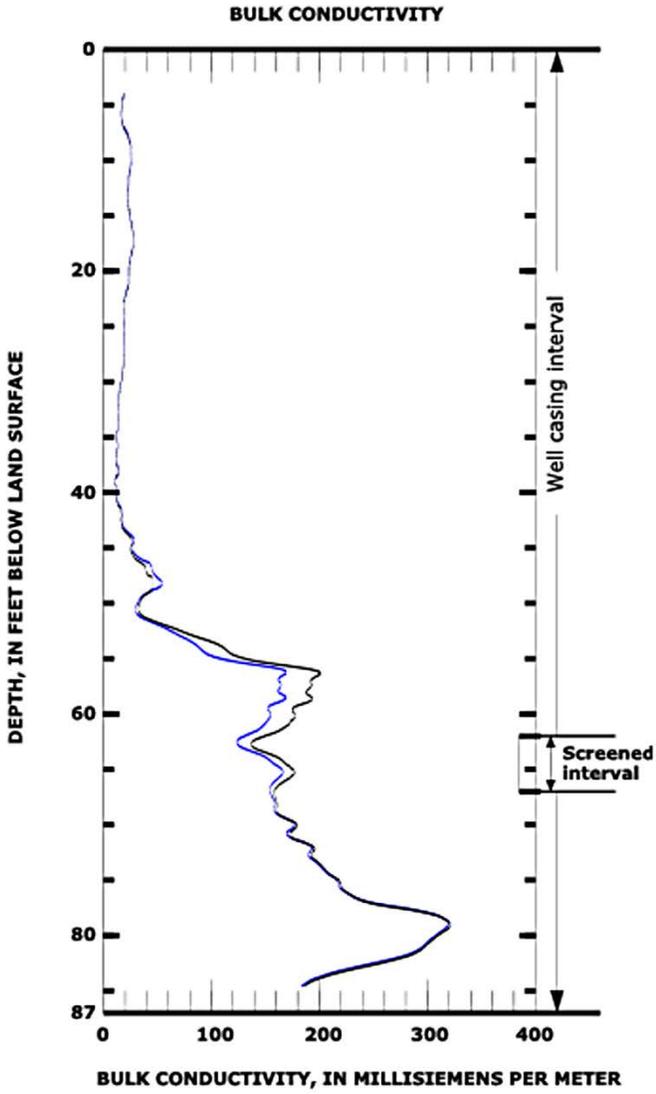
[NGVD, National Geodetic Vertical Datum; ft, feet; mg/L, milligrams per liter;
°C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter]

Date	Sample start time	Specific conduc- tance, water, unfiltered, $\mu\text{S}/\text{cm}$ at 25°C (00095)	Elevation above NGVD 1929, ft (72020)	Chloride, water, unfiltered, mg/L (99220)
October 21, 2011	1640	11,600	2.72	3,600
November 17, 2011	1420	12,000	1.88	3,500
December 21, 2011	1545	11,600	1.47	4,800
January 12, 2012	1448	12,000	1.29	3,900
February 17, 2012	1425	12,000	1.84	4,000
March 15, 2012	0920	12,000	1.34	3,900
April 4, 2012	1125	12,000	1.01	4,100
May 25, 2012	1322	12,400	2.43	4,200
June 22, 2012	1248	12,500	2.20	4,200
July 18, 2012	1437	12,700	2.66	4,300
August 24, 2012	1329	12,600	2.25	4,200
September 20, 2012	1528	13,000	2.55	4,200

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WY 2012 Induction log results
 Station: USGS 252431080261001
 Local name: G -3946D



INDUCTION LOG DATES,
 ASSOCIATED CHLORIDE SAMPLE DATES

Induction log date	Chloride sample date	Dissolved chloride concentration, in mg/L
Apr. 4, 2012	Apr. 4, 2012	4,100
Apr. 11, 2011	Apr. 4, 2011	3,550