



Water-Data Report 2010

354302081433202 Local number BK-127, NCDENR GLEN ALPINE RESEARCH STATION NEAR MORGANTON, NC (REGOLITH)

Piedmont and Blue Ridge crystalline-rock aquifers
Regolith

Burke County, NC

LOCATION.--Lat 35°43'02", long 81°43'32" referenced to North American Datum of 1983, Burke County, NC, Hydrologic Unit 03050101, 2.2 mi southwest of Morganton.

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Bored observation well, drilled to 39.5 ft, diameter 2 in., screened interval 29.2 ft to 39.2 ft, sand filter pack 28 ft to 39.5 ft, bentonite plug 3 ft to 27.9 ft, concrete seal 0 to 3 ft.

DATUM.-- Land-surface datum is 1,038 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.29 ft above land-surface datum, October 2008 to present.

PERIOD OF RECORD.--November 2008 to current year.

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

REMARKS.--Well is part of the Catawba-Wateree Drought Monitoring Network.

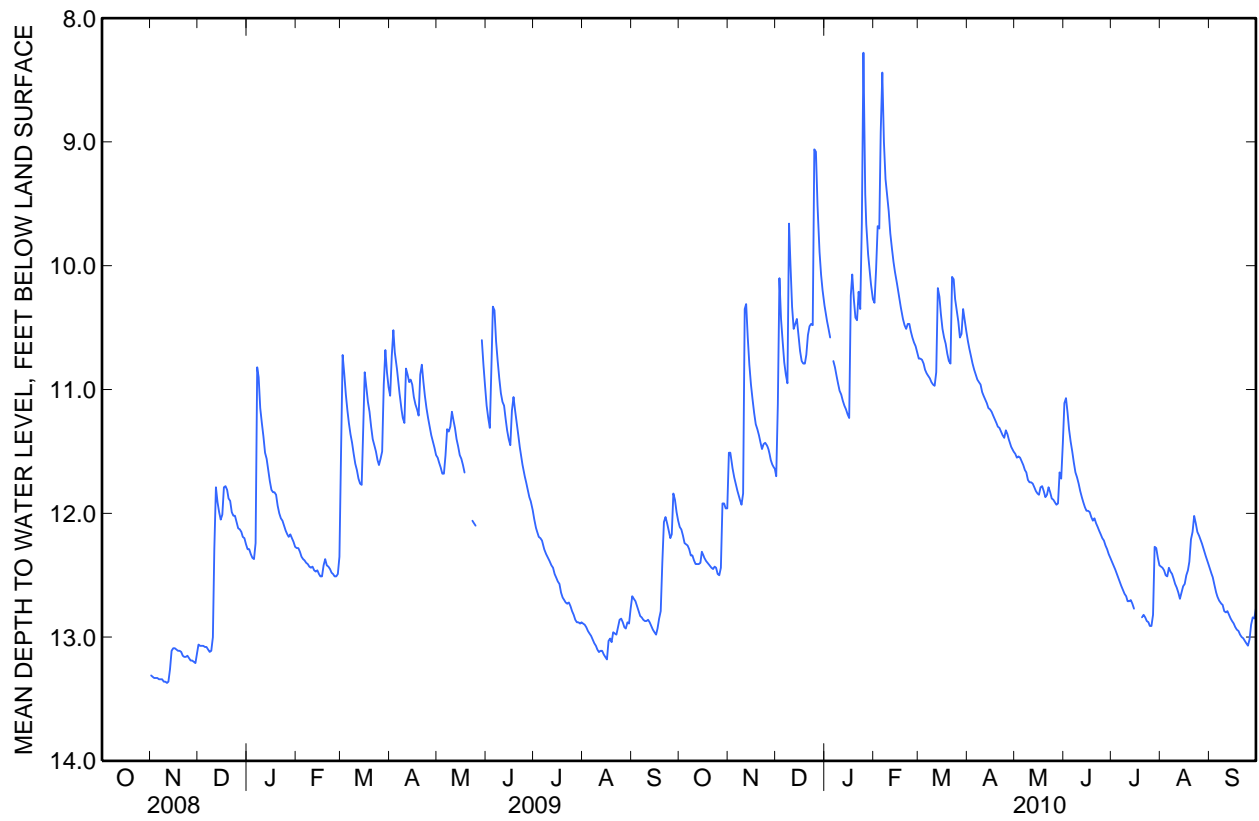
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.39 ft below land-surface datum, January 25, 2010; lowest water level recorded, 13.37 ft below land-surface datum, November 10, 2008.

354302081433202 Local number BK-127, NCDENR GLEN ALPINE RESEARCH STATION NEAR MORGANTON, NC (REGOLITH)—Continued

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12.11	11.51	11.70	10.36	10.30	10.75	10.61	11.52	11.11	12.39	12.43	12.45
2	12.13	11.51	11.12	10.44	10.03	10.75	10.67	11.55	11.07	12.42	12.44	12.49
3	12.18	11.60	10.10	10.51	9.68	10.76	10.73	11.54	11.19	12.45	12.46	12.53
4	12.24	11.68	10.43	10.58	9.70	10.79	10.79	11.55	11.32	12.48	12.50	12.60
5	12.25	11.74	10.61	---	8.92	10.84	10.84	11.58	11.42	12.52	12.51	12.64
6	12.26	11.80	10.78	10.77	8.44	10.87	10.88	11.61	11.50	12.55	12.44	12.68
7	12.29	11.84	10.88	10.82	9.00	10.89	10.92	11.65	11.59	12.59	12.47	12.71
8	12.34	11.89	10.95	10.89	9.30	10.91	10.94	11.67	11.67	12.62	12.49	12.73
9	12.34	11.93	9.66	10.95	9.43	10.94	10.96	11.73	11.71	12.65	12.53	12.74
10	12.38	11.84	9.99	11.01	9.56	10.96	11.02	11.75	11.76	12.67	12.57	12.79
11	12.41	10.35	10.33	11.04	9.74	10.97	11.05	11.75	11.82	12.71	12.60	12.80
12	12.41	10.31	10.51	11.09	9.86	10.86	11.08	11.76	11.87	12.71	12.64	12.79
13	12.41	10.58	10.47	11.13	9.97	10.18	11.11	11.79	11.91	12.70	12.69	12.82
14	12.40	10.80	10.43	11.16	10.05	10.25	11.15	11.82	11.95	12.73	12.64	12.85
15	12.31	10.96	10.56	11.20	10.12	10.39	11.16	11.84	11.98	12.77	12.59	12.87
16	12.34	11.08	10.69	11.23	10.21	10.51	11.18	11.85	11.98	---	12.57	12.89
17	12.37	11.19	10.77	10.24	10.28	10.58	11.21	11.79	11.99	---	12.50	12.92
18	12.39	11.28	10.79	10.07	10.36	10.63	11.24	11.78	12.03	---	12.46	12.94
19	12.41	11.32	10.79	10.27	10.43	10.71	11.27	11.82	12.06	---	12.39	12.95
20	12.42	11.37	10.72	10.42	10.48	10.77	11.30	11.87	12.04	12.84	12.21	12.98
21	12.44	11.43	10.56	10.44	10.51	10.79	11.31	11.85	12.08	12.82	12.15	13.00
22	12.45	11.48	10.49	10.21	10.47	10.09	11.34	11.79	12.11	12.84	12.02	13.01
23	12.43	11.44	10.47	10.35	10.47	10.11	11.37	11.83	12.14	12.87	12.08	13.03
24	12.44	11.43	10.48	9.66	10.53	10.27	11.39	11.88	12.17	12.88	12.15	13.05
25	12.49	11.45	9.06	8.28	10.58	10.36	11.33	11.89	12.20	12.91	12.18	13.07
26	12.50	11.48	9.08	9.30	10.62	10.45	11.36	11.91	12.22	12.91	12.21	13.02
27	12.44	11.54	9.51	9.70	10.65	10.58	11.41	11.93	12.26	12.82	12.25	12.90
28	11.92	11.59	9.80	9.89	10.70	10.55	11.45	11.92	12.29	12.27	12.29	12.84
29	11.92	11.62	10.04	10.07	---	10.35	11.48	11.67	12.33	12.28	12.33	12.85
30	11.96	11.64	10.18	10.15	---	10.44	11.50	11.72	12.36	12.36	12.37	12.77
31	11.96	---	10.27	10.27	---	10.53	---	11.44	---	12.42	12.41	---
Mean	12.30	11.39	10.39	---	10.01	10.61	11.13	11.74	11.87	---	12.41	12.82
Max	12.50	11.93	11.70	---	10.70	10.97	11.50	11.93	12.36	---	12.69	13.07
Min	11.92	10.31	9.06	---	8.44	10.09	10.61	11.44	11.07	---	12.02	12.45

354302081433202 Local number BK-127, NCDENR GLEN ALPINE RESEARCH STATION NEAR MORGANTON, NC (REGOLITH)—Continued



354302081433202 Local number BK-127, NCDENR GLEN ALPINE RESEARCH STATION NEAR MORGANTON, NC (REGOLITH)—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2010.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Depth to water level, ft below land surface (72019)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)	Temperature, water, °C (00010)
01-05-2010	1200	Ground water	Regular	738	-2.5	10.67	4.9	7.3	84	14.0

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; E, estimated]

Date	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (90410)	Bromide, water, filtered, mg/L (71870)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)
01-05-2010	156	6.63	3.28	1.51	5.65	53	E .02	1.82	E .08	32.2

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; E, estimated]

Date	Sulfate, water, filtered, mg/L (00945)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Total nitrogen, water, filtered, analytically determined, mg/L (62854)	Aluminum, water, filtered, μg/L (01106)	Aluminum, water, unfiltered, recoverable, μg/L (01105)	Cadmium, water, filtered, μg/L (01025)
01-05-2010	.56	E .016	.06	E .001	.033	.13	21.2	23,300	.04

354302081433202 Local number BK-127, NCDENR GLEN ALPINE RESEARCH STATION NEAR MORGANTON, NC (REGOLITH)—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; E, estimated]

Date	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, filtered, μg/L (01030)	Chromium, water, unfiltered, recoverable, μg/L (01034)	Copper, water, filtered, μg/L (01040)	Copper, water, unfiltered, recoverable, μg/L (01042)	Iron, water, filtered, μg/L (01046)	Lead, water, filtered, μg/L (01049)	Lead, water, unfiltered, recoverable, μg/L (01051)	Manganese, water, filtered, μg/L (01056)	Manganese, water, unfiltered, recoverable, μg/L (01055)
	01-05-2010	.21	1.4	109	E .70	62.1	18	.07	6.25	84.5

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 5

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; E, estimated]

Date	Nickel, water, filtered, μg/L (01065)	Nickel, water, unfiltered, recoverable, μg/L (01067)	Zinc, water, filtered, μg/L (01090)	Zinc, water, unfiltered, recoverable, μg/L (01092)	Arsenic, water, filtered, μg/L (01000)	Arsenic, water, unfiltered, μg/L (01002)	Boron, water, filtered, μg/L (01020)	Selenium, water, filtered, μg/L (01145)	Selenium, water, unfiltered, μg/L (01147)
	01-05-2010	2.7	70.0	9.6	102	.05	.80	E 1.9	.04