01396790 SPRUCE RUN RESERVOIR AT CLINTON, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°38′37″, long 74°55′25″ referenced to North American Datum of 1983, Union Township, Hunterdon County, NJ, Hydrologic Unit 02030105, at dam on Spruce Run, 0.5 mi north of Clinton, and 0.6 mi upstream from mouth.

DRAINAGE AREA.--41.3 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1963 to current year.

REVISED RECORDS.--WDR NJ-84-1: (M). WDR NJ-85-1: 1984.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

COOPERATION.--Records provided by New Jersey Water Supply Authority.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed in October 1963 with crest of spillway at elevation 273.00 ft. Usable capacity, 11,000,000,000 gal. Dead storage 300,000 gal. Reservoir used for water supply and recreation. Outflow mostly regulated by gates. Water is released to maintain minimum flow on the South Branch Raritan River and for municipal supply. Records given herein represent usable capacity. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 11,820,000,000 gal, Jan. 24, 1979, elevation, 274.72 ft; minimum observed, 3,100,000,000 gal, Oct. 18, 1983, elevation, 246.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,512,000,000 gal, Mar 14, elevation, 274.11 ft; minimum observed, 5,848,000,000 gal, Sep 30, elevation, 258.04 ft.

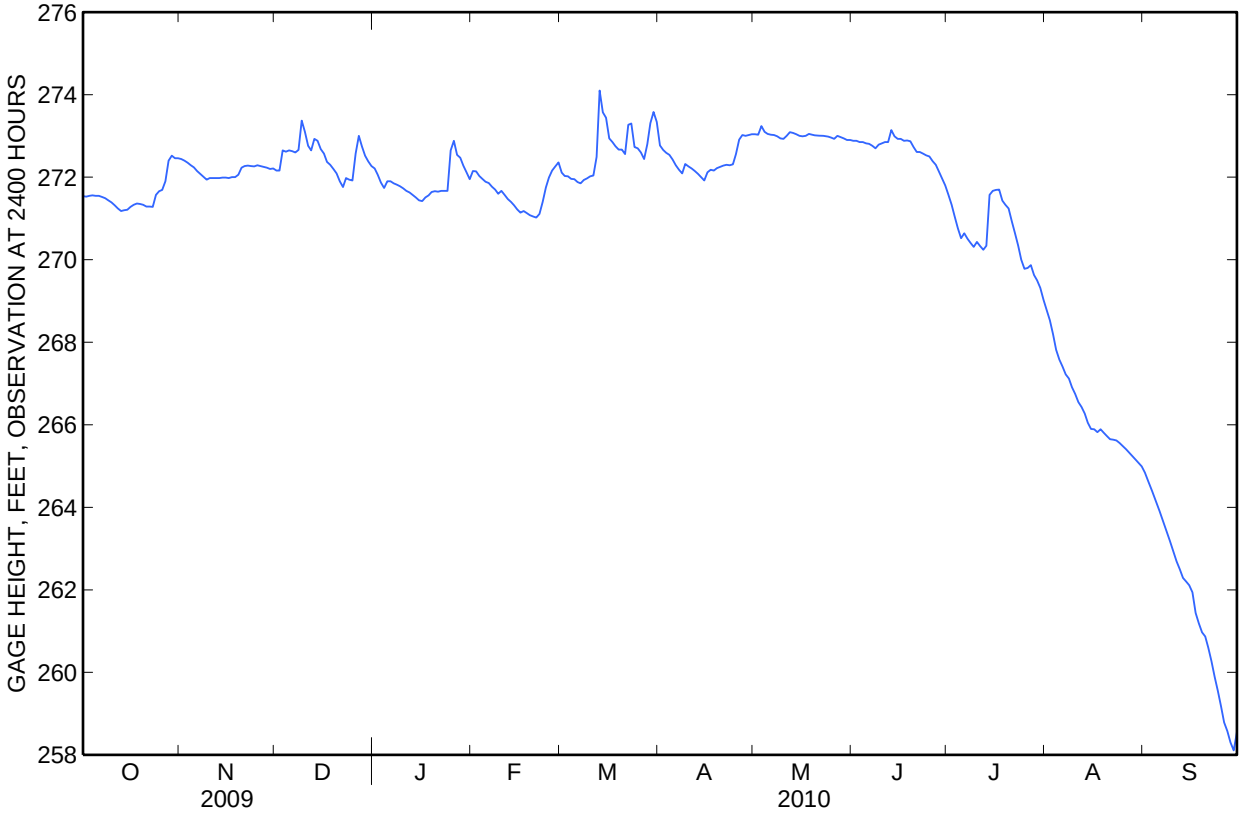
01396790 SPRUCE RUN RESERVOIR AT CLINTON, NJ—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY OBSERVATION AT 2400 HOURS

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	271.54	272.44	272.16	272.21	272.15	272.11	272.77	273.04	272.88	271.57	268.78	264.84
2	271.53	272.40	272.16	272.06	272.14	272.03	272.66	273.03	272.88	271.33	268.53	264.64
3	271.55	272.35	272.65	271.87	272.03	272.02	272.59	273.24	272.85	271.05	268.19	264.45
4	271.56	272.29	272.62	271.74	271.96	271.96	272.54	273.10	272.85	270.76	267.82	264.23
5	271.55	272.24	272.65	271.90	271.89	271.95	272.43	273.05	272.82	270.52	267.58	264.04
6	271.55	272.15	272.63	271.90	271.86	271.88	272.29	273.03	272.81	270.64	267.41	263.83
7	271.52	272.08	272.60	271.85	271.77	271.85	272.18	273.02	272.76	270.51	267.22	263.62
8	271.49	272.01	272.66	271.82	271.70	271.93	272.09	272.99	272.70	270.41	267.12	263.38
9	271.44	271.94	273.37	271.78	271.60	271.97	272.32	272.94	272.79	270.31	266.91	263.15
10	271.39	271.98	273.10	271.73	271.67	272.02	272.26	272.93	272.82	270.43	266.75	262.91
11	271.32	271.98	272.76	271.67	271.57	272.04	272.21	273.00	272.85	270.33	266.55	262.69
12	271.24	271.98	272.65	271.63	271.47	272.49	272.15	273.09	272.85	270.24	266.43	262.50
13	271.18	271.98	272.93	271.57	271.40	274.10	272.08	273.07	273.14	270.34	266.27	262.29
14	271.20	271.99	272.88	271.51	271.32	273.57	272.00	273.04	272.99	271.57	266.05	262.20
15	271.21	271.99	272.68	271.44	271.22	273.44	271.92	273.00	272.93	271.67	265.90	262.11
16	271.28	271.98	272.57	271.42	271.14	272.94	272.12	272.99	272.93	271.69	265.89	261.94
17	271.33	272.00	272.37	271.51	271.18	272.85	272.18	273.00	272.88	271.70	265.82	261.44
18	271.36	272.00	272.30	271.56	271.13	272.75	272.16	273.05	272.89	271.43	265.89	261.19
19	271.35	272.06	272.20	271.64	271.08	272.67	272.22	273.03	272.87	271.33	265.81	260.97
20	271.33	272.23	272.09	271.66	271.05	272.67	272.25	273.01	272.73	271.24	265.73	260.87
21	271.29	272.27	271.90	271.65	271.02	272.56	272.28	273.01	272.61	270.93	265.65	260.60
22	271.29	272.28	271.76	271.67	271.11	273.27	272.30	273.00	272.61	270.64	265.64	260.27
23	271.28	272.27	271.98	271.67	271.40	273.30	272.29	273.00	272.57	270.34	265.62	259.89
24	271.57	272.26	271.94	271.67	271.75	272.73	272.31	272.98	272.53	270.00	265.56	259.55
25	271.66	272.29	271.92	272.65	271.99	272.70	272.56	272.96	272.50	269.78	265.49	259.17
26	271.69	272.27	272.57	272.88	272.16	272.60	272.91	272.93	272.39	269.80	265.41	258.79
27	271.90	272.25	273.00	272.54	272.26	272.44	273.02	273.00	272.30	269.87	265.33	258.58
28	272.40	272.23	272.75	272.47	272.36	272.80	273.00	272.97	272.14	269.63	265.24	258.30
29	272.52	272.20	272.52	272.28	---	273.31	273.02	272.94	271.97	269.50	265.16	258.11
30	272.46	272.21	272.38	272.12	---	273.58	273.04	272.90	271.80	269.32	265.08	258.55
31	272.46	---	272.27	271.95	---	273.34	---	272.90	---	269.03	264.99	---
Mean	271.56	272.15	272.48	271.87	271.62	272.64	272.40	273.01	272.69	270.58	266.32	261.64
Max	272.52	272.44	273.37	272.88	272.36	274.10	273.04	273.24	273.14	271.70	268.78	264.84
Min	271.18	271.94	271.76	271.42	271.02	271.85	271.92	272.90	271.80	269.03	264.99	258.11
Month-end contents (million gallons)												
	10,792	10,653	10,671	10,555	10,722	11,190	11,024	10,960	10,480	9,369	7,947	5,960
Change in contents (equivalent in ft3/s)												
	+20.1	-7.2	+0.9	-5.8	+9.2	+23.4	-8.6	-3.2	-24.8	-55.5	-71.0	-102

	Change in contents, (equivalent in ft3/s)
CALENDAR YEAR 2009	+5.0
WATER YEAR 2010	-18.8

01396790 SPRUCE RUN RESERVOIR AT CLINTON, NJ—Continued



01396790 SPRUCE RUN RESERVOIR AT CLINTON, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 2010.

REMARKS.--Cooperative Network Site Descriptor: Development of Mercury-Bioaccumulation Factors special study site.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 2

[%, percent; NTRU, nephelometric turbidity ratio unit; cm, centimeter; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; M, presence verified but not quantified]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per centimeter (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per centimeter (61726)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)
04-30-2010	1230	752	29.0	.062	.046	--	--	8.0	214
04-30-2010	1231	752	--	--	--	7.1	65	--	--
04-30-2010	1232	752	--	--	--	8.7	85	--	--
04-30-2010	1233	752	--	--	--	9.6	93	--	--
06-25-2010	1100	757	32.0	.058	.042	--	--	9.2	211
06-25-2010	1101	757	--	--	--	2.0	21	--	--
06-25-2010	1102	757	--	--	--	3.3	37	--	--
06-25-2010	1103	757	--	--	--	8.4	103	--	--
08-19-2010	1200	755	33.0	.057	.039	--	--	8.8	216
08-19-2010	1201	755	--	--	--	M	M	--	--
08-19-2010	1202	755	--	--	--	.1	1.0	--	--
08-19-2010	1203	755	--	--	--	8.3	103	--	--

01396790 SPRUCE RUN RESERVOIR AT CLINTON, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 2

[%, percent; NTRU, nephelometric turbidity ratio unit; cm, centimeter; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; M, presence verified but not quantified]

Date	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Sampling depth, ft (00003)	Depth of sensor below water surface, feet (72147)	Sulfate, water, filtered, mg/L (00945)	Mercury, water, unfiltered, nanograms per liter (50286)	Methyl-mercury, water, filtered, recoverable, nanograms per liter (50285)	Organic carbon, water, filtered, mg/L (00681)
04-30-2010	--	3.7	1.00	--	11.5	.73	.09	2.8
04-30-2010	11.6	--	--	50.00	--	--	--	--
04-30-2010	13.0	--	--	25.00	--	--	--	--
04-30-2010	14.2	--	--	1.00	--	--	--	--
06-25-2010	--	2.9	1.00	--	11.5	.58	< .04	3.4
06-25-2010	8.4	--	--	50.00	--	--	--	--
06-25-2010	20.8	--	--	35.00	--	--	--	--
06-25-2010	27.2	--	--	1.00	--	--	--	--
08-19-2010	--	5.1	1.00	--	12.0	.41	< .04	3.9
08-19-2010	14.5	--	--	50.00	--	--	--	--
08-19-2010	19.5	--	--	30.00	--	--	--	--
08-19-2010	26.7	--	--	1.00	--	--	--	--