

CHESTER COUNTY

395052075434501. Local number, CH 5176
(New Garden Township, Chester County, Spray Irrigation Project)

LOCATION.--Lat 39°50'52", long 75°43'45", Hydrologic Unit 02040205, at Spray Irrigation Site in New Garden Township.

Owner: New Garden Township Municipal Authority.

AQUIFER.--Felsic Gneiss of Precambrian age.

WATER-LEVEL RECORDS

WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 89 ft, cased to 89 ft, closed end, screened from 69-89 ft.

INSTRUMENTATION.--Electronic data logger with 60-minute recording interval.

DATUM.--Elevation of land surface is 340 ft above sea level from a GPS unit. Measuring point: Top of plywood shelf, 3.2 ft above land-surface datum.

REMARKS.--In addition to the daily mean water levels shown below, daily maximum and minimum water levels, since July 1998, are also available from the District Office. Data for this project are presented in tables on pages 308-313 and 499-542.

PERIOD OF RECORD.--July 14, 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the instantaneous depth below land surface for the period of record indicated above.

Highest water level, 10.47 ft below land-surface datum, Sept. 30, 1999; lowest, 13.47 ft below land-surface datum, Jan. 1-3, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	11.63	12.09
2	---	---	---	---	---	---	---	---	---	---	11.65	12.10
3	---	---	---	---	---	---	---	---	---	---	11.66	12.11
4	---	---	---	---	---	---	---	---	---	---	11.69	12.12
5	---	---	---	---	---	---	---	---	---	---	11.71	12.15
6	---	---	---	---	---	---	---	---	---	---	11.74	12.16
7	---	---	---	---	---	---	---	---	---	---	11.76	12.18
8	---	---	---	---	---	---	---	---	---	---	11.78	12.20
9	---	---	---	---	---	---	---	---	---	---	11.79	12.22
10	---	---	---	---	---	---	---	---	---	---	11.80	12.24
11	---	---	---	---	---	---	---	---	---	---	11.80	12.25
12	---	---	---	---	---	---	---	---	---	---	11.82	12.26
13	---	---	---	---	---	---	---	---	---	---	11.83	12.28
14	---	---	---	---	---	---	---	---	---	11.27	11.84	12.30
15	---	---	---	---	---	---	---	---	---	11.29	11.85	12.31
16	---	---	---	---	---	---	---	---	---	11.30	11.88	12.32
17	---	---	---	---	---	---	---	---	---	11.31	11.88	12.34
18	---	---	---	---	---	---	---	---	---	11.34	11.88	12.35
19	---	---	---	---	---	---	---	---	---	11.36	11.90	12.36
20	---	---	---	---	---	---	---	---	---	11.37	11.91	12.37
21	---	---	---	---	---	---	---	---	---	11.40	11.91	12.38
22	---	---	---	---	---	---	---	---	---	11.42	11.93	12.39
23	---	---	---	---	---	---	---	---	---	11.43	11.94	12.41
24	---	---	---	---	---	---	---	---	---	11.45	11.96	12.43
25	---	---	---	---	---	---	---	---	---	11.48	11.98	12.44
26	---	---	---	---	---	---	---	---	---	11.50	11.99	12.45
27	---	---	---	---	---	---	---	---	---	11.52	12.01	12.46
28	---	---	---	---	---	---	---	---	---	11.53	12.02	12.49
29	---	---	---	---	---	---	---	---	---	11.55	12.03	12.51
30	---	---	---	---	---	---	---	---	---	11.59	12.05	12.52
31	---	---	---	---	---	---	---	---	---	11.60	12.07	---
MEAN	---	---	---	---	---	---	---	---	---	11.43	11.86	12.31
MAX	---	---	---	---	---	---	---	---	---	11.60	12.07	12.52
MIN	---	---	---	---	---	---	---	---	---	11.27	11.63	12.09

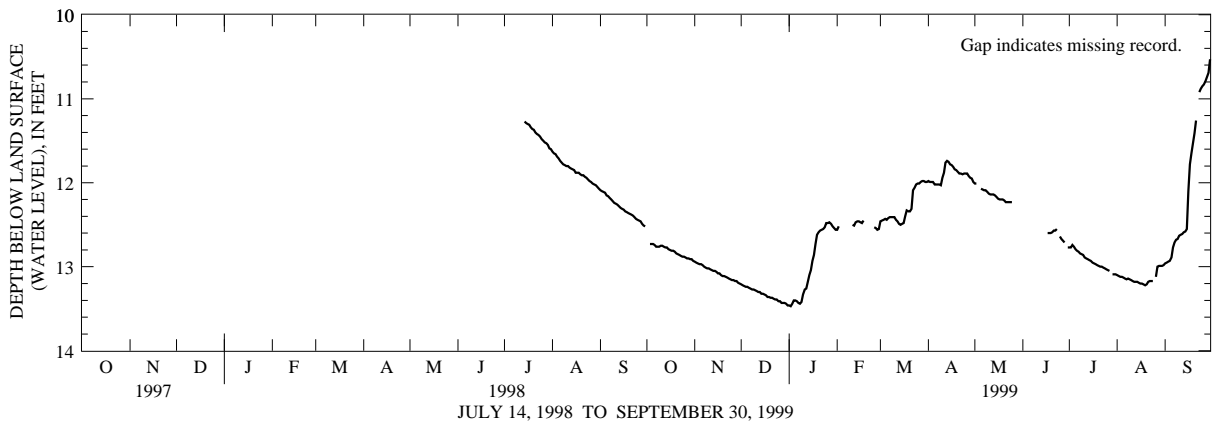
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	12.94	13.21	13.46	12.56	12.46	11.98	12.01	---	12.77	13.10	12.96
2	---	12.95	13.22	13.47	12.52	12.45	11.99	12.01	---	12.77	13.11	12.95
3	12.73	12.96	13.23	13.44	---	12.44	11.99	---	---	12.74	13.12	12.94
4	12.73	12.97	13.24	13.40	---	12.43	11.99	---	---	12.76	13.12	12.93
5	12.73	12.97	13.24	13.40	---	12.44	12.02	12.07	---	12.79	13.13	12.89
6	12.74	12.98	13.25	13.41	---	12.42	12.02	12.08	---	12.81	13.14	12.77
7	12.76	13.00	13.26	13.43	---	12.41	12.02	12.09	---	12.82	13.15	12.71
8	12.76	13.01	13.27	13.44	---	12.41	12.02	12.09	---	12.84	13.14	12.68
9	12.76	13.02	13.27	13.42	---	12.41	12.03	12.11	---	12.85	13.15	12.67
10	12.75	13.02	13.28	13.33	---	12.41	11.94	12.13	---	12.86	13.16	12.63
11	12.75	13.03	13.29	13.27	12.50	12.44	11.88	12.14	---	12.89	13.17	12.62
12	12.76	13.04	13.30	13.26	12.51	12.46	11.76	12.14	---	12.90	13.18	12.61
13	12.77	13.05	13.30	13.18	12.47	12.49	11.74	12.14	---	12.91	13.18	12.59
14	12.77	13.05	13.32	13.10	12.46	12.50	11.75	12.15	---	12.92	13.18	12.58
15	12.79	13.06	13.32	13.04	12.46	12.49	11.78	12.17	---	12.93	13.19	12.55
16	12.80	13.08	13.33	12.93	12.47	12.48	11.79	12.19	---	12.95	13.20	12.10
17	12.81	13.08	13.34	12.86	12.48	12.40	11.81	12.20	12.60	12.96	13.20	11.78
18	12.81	13.10	13.36	12.73	12.45	12.33	11.84	12.20	12.60	12.97	13.21	11.65
19	12.82	13.11	13.36	12.62	---	12.34	11.85	12.20	12.60	12.98	13.22	11.53
20	12.84	13.11	13.37	12.59	---	12.34	11.87	12.21	12.59	12.99	13.21	11.41
21	12.85	13.12	13.37	12.57	---	12.31	11.89	12.23	12.57	13.00	13.18	11.26
22	12.86	13.13	13.38	12.56	---	12.09	11.89	12.23	12.57	13.00	13.17	---
23	12.87	13.14	13.39	12.55	---	12.06	11.90	12.23	12.55	13.01	13.17	10.92
24	12.88	13.15	13.39	12.53	---	12.02	11.89	12.23	---	13.02	13.17	10.88
25	12.88	13.16	13.41	12.48	12.53	12.01	11.89	12.23	12.64	13.03	---	10.85
26	12.89	13.16	13.41	12.48	12.54	12.01	11.89	---	12.67	13.04	13.12	10.83
27	12.90	13.17	13.43	12.47	12.56	11.99	11.92	---	12.69	13.05	13.00	10.79
28	12.90	13.17	13.43	12.49	12.55	11.98	11.94	---	12.71	---	12.99	10.74
29	12.91	13.19	13.43	12.52	---	11.98	11.95	---	---	13.09	12.99	10.69
30	12.91	13.20	13.44	12.54	---	11.99	11.99	---	12.77	13.09	12.99	10.53
31	12.93	---	13.46	12.56	---	11.99	---	---	---	13.09	12.98	---
MEAN	12.82	13.07	13.33	12.95	12.50	12.29	11.91	12.15	12.63	12.93	13.13	11.97
MAX	12.93	13.20	13.46	13.47	12.56	12.50	12.03	12.23	12.77	13.09	13.22	12.96
MIN	12.73	12.94	13.21	12.47	12.45	11.98	11.74	12.01	12.55	12.74	12.98	10.53

WTR YR 1999: HIGHEST 10.53, SEPTEMBER 30; LOWEST 13.47, JANUARY 2.



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WATER-QUALITY RECORDS

REMARKS.-- Samples collected with submersible pump from recovery water after well was pumped more than 3 casing volumes.
PERIOD OF RECORD.--June 1998 to current year.

WATER-QUALITY DATA, JUNE 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
JUN 1998	15...	80020	1028	--	6.5	7.8	574	--	66	8.7	30
OCT	01...	80020	1028	4.3	6.4	7.1	570	13.0	62	8.8	14
FEB 1999	19...	80020	1028	6.4	6.7	6.7	610	12.8	73	12	5.6
MAY	03...	80020	1028	5.8	6.4	6.7	620	13.1	80	12	5.5
	27...	80020	1028	7.5	--	--	622	13.0	--	--	--
JUN	29...	9813	1028	3.8	6.4	--	628	13.5	83	14	7.6
JUL	29...	9813	1028	4.9	6.4	--	617	13.6	--	--	--
AUG	25...	9813	1028	2.9	6.3	--	620	12.6	--	--	--
SEP	22...	--	--	4.1	6.4	--	621	13.8	79	13	5.1

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD IT FIELD (MG/L AS CACO3) (00419)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
JUN 1998	20	73	45	<.10	21	43	.030	.33	--	--	23.4
OCT	18	51	51	<.10	22	25	.027	.16	--	--	26.7
FEB 1999	13	76	58	<.10	27	23	<.020	.12	--	--	28.9
MAY	03...	13	72	57	<.10	23	.035	.12	--	--	27.1
	27...	--	--	--	--	--	<.020	--	<.020	39	26.0
JUN	29...	14	88	58	<.20	23	<.020	--	--	29	2.43
JUL	29...	--	132	--	--	--	<.020	--	<.020	25	29.2
AUG	25...	--	72	--	--	--	<.020	--	<.020	29	28.1
SEP	22...	12	--	45	<.20	25	<.020	--	--	29	10.8

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	ALUM-INUM, DIS-SOLVED (µG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (µG/L AS SB) (01095)	ARSENIC DIS-SOLVED (µG/L AS AS) (01000)	BARIUM, DIS-SOLVED (µG/L AS BA) (01005)
JUN 1998	23.4	24	.022	.019	.026	.103	409	17	<1.0	<1	193
OCT	26.8	27	.125	<.050	.019	<.050	380	E8.9	--	--	--
FEB 1999	29.1	29	.211	<.050	.011	<.050	403	<10	--	--	--
MAY	03...	27.6	28	.422	E.039	.024	485	<10	--	--	--
	27...	--	--	<.040	.012	.006	--	--	--	--	--
JUN	29...	--	--	.220	.031	.002	--	624	--	--	--
JUL	29...	--	--	.300	.015	.004	--	--	--	--	--
AUG	25...	--	--	.230	.025	.011	--	--	--	--	--
SEP	22...	--	--	<.040	.018	.007	--	564	--	<2.0	<4

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WATER-QUALITY DATA, JUNE 1998 TO SEPTEMBER 1999

DATE	BERYL- LIUM, DIS- SOLVED (µG/L AS BE) (01010)	BORON, DIS- SOLVED (µG/L AS B) (01020)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	LITHIUM DIS- SOLVED (µG/L AS LI) (01130)
JUN 1998 15...	<1.0	<16	.067	<8.0	3.9	<12	<1.0	<10	<1.0	14
OCT 01...	--	<16	--	--	--	--	--	<10	--	--
FEB 1999 19...	--	<16	--	--	--	--	--	E6.1	--	--
MAY 03...	--	E7.2	--	--	--	--	--	<10	--	--
JUN 27...	--	--	--	--	--	--	--	--	--	--
JUN 29...	--	<200	<.20	--	--	--	--	<20	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	<200	.22	<10	<4.0	--	<4.0	<20	--	<25

DATE	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	MERCURY DIS- SOLVED (µG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (µG/L AS MO) (01060)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	SILVER, DIS- SOLVED (µG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (µG/L AS V) (01085)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
JUN 1998 15...	4.6	<.1	<60	<1.0	2	<1.0	488	<10	27	1.7
OCT 01...	5.4	--	--	--	--	--	--	--	49	1.1
FEB 1999 19...	7.0	--	--	--	--	--	--	--	37	2.0
MAY 03...	7.9	--	--	--	--	--	--	--	175	3.4
JUN 27...	--	--	--	--	--	--	--	--	--	--
JUN 29...	24	--	--	--	--	--	--	--	<10	1.6
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	<10	<.2	--	<4.0	<7	--	273	--	<10	1.0