

CHESTER COUNTY

395043075440702. Local number, CH 5183
(New Garden Township, Chester County, Spray Irrigation Project)

LOCATION.--Lat 39°50'43", long 75°44'07", 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 90 ft, cased to 90 ft, closed end, screened from 70-90 ft.

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

DATUM.--Elevation of land surface is 386 ft above sea level from a GPS unit. Measuring point: Top of plywood shelf, 1.95 ft above land-surface datum.

REMARKS.--In addition to the daily mean water levels shown below, daily maximum and minimum water levels, since May 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.--May 30, 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, 21.14 ft below land-surface datum, June 13, 14, 1998; lowest, 26.72 ft below land-surface datum, Mar. 30, 31, Apr. 2, 3, 5, 6, 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	---	---	---	---	---	---	---	---	21.31	21.22	21.87	22.65
2	---	---	---	---	---	---	---	---	21.29	21.28	21.88	22.65
3	---	---	---	---	---	---	---	---	21.30	21.29	21.88	22.71
4	---	---	---	---	---	---	---	---	21.29	21.27	21.90	22.73
5	---	---	---	---	---	---	---	---	21.27	21.29	21.94	22.80
6	---	---	---	---	---	---	---	---	21.28	21.33	21.96	22.79
7	---	---	---	---	---	---	---	---	21.28	21.33	22.00	22.78
8	---	---	---	---	---	---	---	---	21.27	21.30	22.03	22.83
9	---	---	---	---	---	---	---	---	21.26	21.32	22.04	22.90
10	---	---	---	---	---	---	---	---	21.24	21.33	22.01	22.95
11	---	---	---	---	---	---	---	---	21.23	21.38	22.03	22.97
12	---	---	---	---	---	---	---	---	21.19	21.40	22.11	22.98
13	---	---	---	---	---	---	---	---	21.15	21.42	22.16	23.02
14	---	---	---	---	---	---	---	---	21.15	21.44	22.17	23.06
15	---	---	---	---	---	---	---	---	21.16	21.45	22.19	23.08
16	---	---	---	---	---	---	---	---	21.19	21.44	22.23	23.10
17	---	---	---	---	---	---	---	---	21.22	21.43	22.24	23.14
18	---	---	---	---	---	---	---	---	21.21	21.48	22.26	23.17
19	---	---	---	---	---	---	---	---	21.19	21.52	22.33	23.19
20	---	---	---	---	---	---	---	---	21.18	21.52	22.36	23.21
21	---	---	---	---	---	---	---	---	21.22	21.55	22.37	23.23
22	---	---	---	---	---	---	---	---	21.24	21.56	22.38	23.25
23	---	---	---	---	---	---	---	---	21.21	21.56	22.39	23.33
24	---	---	---	---	---	---	---	---	21.21	21.62	22.41	23.35
25	---	---	---	---	---	---	---	---	21.22	21.67	22.45	23.37
26	---	---	---	---	---	---	---	---	21.18	21.68	22.48	23.39
27	---	---	---	---	---	---	---	---	21.18	21.68	22.53	23.38
28	---	---	---	---	---	---	---	---	21.25	21.69	22.53	23.44
29	---	---	---	---	---	---	---	---	21.22	21.71	22.56	23.47
30	---	---	---	---	---	---	---	21.36	21.16	21.76	22.60	23.48
31	---	---	---	---	---	---	---	21.31	---	21.80	22.62	---
MEAN	---	---	---	---	---	---	---	21.33	21.23	21.47	22.22	23.08
MAX	---	---	---	---	---	---	---	21.36	21.31	21.80	22.62	23.48
MIN	---	---	---	---	---	---	---	21.31	21.15	21.22	21.87	22.65

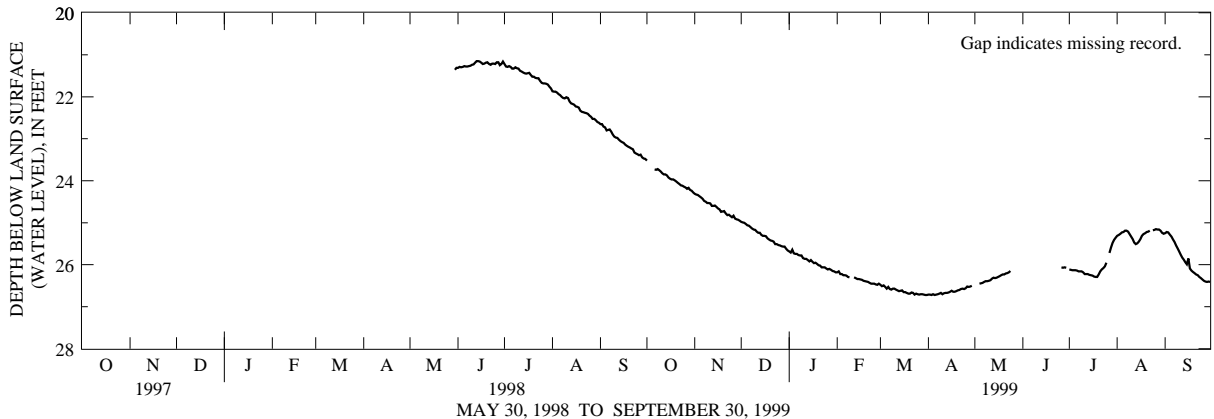
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.52	24.31	24.98	25.68	26.18	26.48	26.71	---	---	26.11	25.31	25.25
2	---	24.33	24.99	25.71	26.16	26.51	26.71	---	---	26.12	25.29	25.22
3	---	24.34	25.00	25.64	26.22	26.49	26.72	---	---	26.13	25.26	25.23
4	---	24.37	25.03	25.73	26.22	26.53	26.70	26.45	---	26.13	25.23	25.28
5	---	24.40	25.06	25.74	26.25	26.57	26.72	26.44	---	26.13	25.22	25.33
6	23.73	24.43	25.07	25.74	26.25	26.53	26.71	26.43	---	26.14	25.19	25.40
7	23.74	24.48	25.10	25.77	26.26	26.58	26.70	26.41	---	26.16	25.19	25.46
8	23.72	24.50	25.14	25.78	26.29	26.59	26.69	26.39	---	26.16	25.21	25.54
9	23.75	24.53	25.16	25.78	26.30	26.57	26.67	26.39	---	26.16	25.27	25.61
10	23.78	24.53	25.17	25.84	---	26.57	26.70	26.38	---	26.18	25.33	25.68
11	23.82	24.54	25.21	25.86	---	26.59	26.68	26.37	---	26.22	25.39	25.76
12	23.85	24.60	25.24	25.86	26.30	26.61	26.67	26.33	---	26.22	25.47	25.83
13	23.85	24.60	25.24	25.89	26.32	26.63	26.67	26.31	---	26.22	25.51	25.88
14	23.87	24.59	25.29	25.92	26.34	26.62	26.66	26.32	---	26.24	25.49	25.94
15	23.92	24.62	25.31	25.89	26.34	26.61	26.64	26.31	---	26.25	25.45	25.99
16	23.95	24.66	25.31	25.93	26.35	26.65	26.62	26.29	---	26.26	25.39	25.85
17	23.97	24.68	25.32	25.96	26.36	26.65	26.64	26.27	---	26.28	25.31	26.09
18	23.97	24.74	25.37	25.95	26.38	26.67	26.64	26.25	---	26.29	25.27	26.14
19	23.99	24.73	25.40	25.98	26.39	26.69	26.63	26.23	---	26.29	25.25	26.17
20	24.02	24.72	25.42	26.01	26.40	26.69	26.61	26.23	---	26.23	25.22	26.20
21	24.05	24.78	25.43	26.02	26.41	26.66	26.60	26.21	---	26.16	25.21	26.23
22	24.08	24.82	25.45	26.06	26.43	26.67	26.58	26.20	---	26.11	25.19	26.25
23	24.11	24.81	25.51	26.06	26.45	26.71	26.57	26.18	---	26.08	---	26.29
24	24.12	24.84	25.51	26.06	26.45	26.69	26.58	26.15	---	26.04	25.18	26.32
25	24.14	24.87	25.53	26.09	26.45	26.70	26.56	---	---	25.95	25.17	26.35
26	24.16	24.83	25.54	26.11	26.47	26.71	26.52	---	26.06	---	25.15	26.38
27	24.19	24.90	25.56	26.10	26.48	26.70	26.53	---	26.07	25.72	25.16	26.40
28	24.17	24.92	25.57	26.12	26.45	26.70	26.52	---	26.06	25.59	25.16	26.41
29	24.22	24.93	25.57	26.15	---	26.71	26.50	---	26.07	25.48	25.19	26.40
30	24.24	24.95	25.62	26.16	---	26.72	---	---	---	25.41	25.24	26.41
31	24.28	---	25.66	26.18	---	26.72	---	---	---	25.36	25.26	---
MEAN	23.97	24.64	25.31	25.93	26.34	26.63	26.64	26.31	26.06	26.06	25.27	25.91
MAX	24.28	24.95	25.66	26.18	26.48	26.72	26.72	26.45	26.07	26.29	25.51	26.41
MIN	23.52	24.31	24.98	25.64	26.16	26.48	26.50	26.15	26.06	25.36	25.15	25.22

WTR YR 1999: HIGHEST 23.52, OCTOBER 1; LOWEST 26.72, MARCH 30, 31, APRIL 3, 5.



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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.--May 1998 to current year.

WATER-QUALITY DATA, MAY 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)
MAY 1998											
19...	1350	80020	1028	7.3	7.4	7.6	196	12.0	28	2.8	3.8
OCT 02...	0936	80020	1028	7.8	6.8	7.4	194	12.0	28	3.3	2.1
FEB 1999											
11...	1020	80020	1028	6.5	6.9	7.1	195	12.0	28	3.4	2.1
APR 30...	1232	80020	1028	7.3	6.7	7.2	193	12.5	27	3.2	2.1
JUN 30...	0745	9813	1028	7.4	6.6	--	196	12.0	30	3.6	2.1
JUL 26...	1230	9813	1028	7.4	6.8	--	188	12.8	--	--	--
AUG 23...	1100	9813	1028	8.9	6.7	--	193	12.3	--	--	--
SEP 20...	1430	9813	1028	6.7	6.7	--	184	12.1	28	3.5	2.0

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)
MAY 1998											
19...	5.2	69	5.9	<.10	20	2.5	.043	<.10	--	--	2.49
OCT 02...	4.2	74	5.9	<.10	22	1.6	.020	<.10	--	--	--
FEB 1999											
11...	4.1	69	6.1	<.10	21	1.7	<.020	<.10	--	--	--
APR 30...	4.1	44	6.9	<.10	21	1.5	.034	<.10	--	--	--
JUN 30...	4.4	73	6.3	<.20	20	1.6	<.020	--	--	3.7	2.93
JUL 26...	--	134	--	--	--	--	<.020	--	<.020	3.4	2.97
AUG 23...	--	76	--	--	--	--	.020	--	.020	3.9	2.90
SEP 20...	4.5	--	6.1	<.20	19	1.9	<.020	--	--	3.5	2.90

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	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)
MAY 1998										
19...	2.50	.010	<.010	.022	.024	114	31	<1.0	<1	42
OCT 02...	2.77	<.010	E.031	.024	<.050	120	<10	--	--	--
FEB 1999										
11...	2.97	<.010	<.050	.033	<.050	130	18	--	--	--
APR 30...	2.94	<.010	E.030	.032	<.050	128	<10	--	--	--
JUN 30...	--	<.040	.031	.022	--	130	--	--	--	--
JUL 26...	--	<.040	.033	.010	--	--	--	--	--	--
AUG 23...	--	<.040	.045	.011	--	--	--	--	--	--
SEP 20...	--	<.040	.032	.015	--	156	--	<2.0	<4	50

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WATER-QUALITY DATA, MAY 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)
MAY 1998 19...	<1.0	<16	--	<8.0	2.4	<12	<1.0	<10	<1.0	6
OCT 02...	--	<16	--	--	--	--	--	<10	--	--
FEB 1999 11...	--	<16	--	--	--	--	--	34	--	--
APR 30...	--	E9.4	--	--	--	--	--	E9.9	--	--
JUN 30...	--	<200	<.20	--	--	--	--	<20	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--	--
SEP 20...	--	<200	<.20	<10	<4.0	--	<4.0	<20	<1.0	<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)
MAY 1998 19...	<4.0	<.1	<60	<1.0	<1	<1.0	328	<10	<20	.30
OCT 02...	E1.6	--	--	--	--	--	--	--	E7.6	.20
FEB 1999 11...	3.0	--	--	--	--	--	--	--	E12	.40
APR 30...	<3.0	--	--	--	--	--	--	--	E14	--
JUN 30...	18	--	--	--	--	--	--	--	<10	<1.0
JUL 26...	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--	--
SEP 20...	40	<.2	--	<4.0	<7	--	87	--	<10	<1.0