

CHESTER COUNTY

395045075434701. Local number, CH 5172.
(New Garden Township, Chester County, Spray Irrigation Project)

LOCATION.--Lat 39°50'45", long 75°43'47", 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 125 ft, cased to 123 ft, closed end, screened from 96.5-121.5 ft.

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

DATUM.--Elevation of land surface is 406 ft above sea level from a GPS unit. Measuring point: Top of plywood shelf, 2.5 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 29, 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, 32.79 ft below land-surface datum, Sept. 30, 1999; lowest, 46.04 ft below land-surface datum, Jan. 13-15, 17, 18, 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	---	---	---	---	---	---	---	---	41.19	40.75	41.44	42.38
2	---	---	---	---	---	---	---	---	41.17	40.82	41.46	42.40
3	---	---	---	---	---	---	---	---	41.14	40.84	41.48	42.44
4	---	---	---	---	---	---	---	---	41.13	40.83	41.49	42.47
5	---	---	---	---	---	---	---	---	41.10	40.82	41.53	42.55
6	---	---	---	---	---	---	---	---	41.08	40.86	41.56	42.56
7	---	---	---	---	---	---	---	---	41.07	40.87	41.59	42.55
8	---	---	---	---	---	---	---	---	41.05	40.84	41.64	42.58
9	---	---	---	---	---	---	---	---	41.03	40.84	41.66	42.65
10	---	---	---	---	---	---	---	---	41.00	40.85	41.65	42.71
11	---	---	---	---	---	---	---	---	40.97	40.89	41.65	42.73
12	---	---	---	---	---	---	---	---	40.91	40.91	41.73	42.74
13	---	---	---	---	---	---	---	---	40.86	40.93	41.78	42.78
14	---	---	---	---	---	---	---	---	40.83	40.95	41.80	42.83
15	---	---	---	---	---	---	---	---	40.83	40.96	41.81	42.86
16	---	---	---	---	---	---	---	---	40.84	40.97	41.86	42.88
17	---	---	---	---	---	---	---	---	40.86	40.97	41.88	42.90
18	---	---	---	---	---	---	---	---	40.86	41.00	41.90	42.95
19	---	---	---	---	---	---	---	---	40.83	41.04	41.98	42.98
20	---	---	---	---	---	---	---	---	40.81	41.05	42.03	43.00
21	---	---	---	---	---	---	---	---	40.83	41.08	42.05	43.03
22	---	---	---	---	---	---	---	---	40.84	41.11	42.06	43.04
23	---	---	---	---	---	---	---	---	40.82	41.12	42.08	43.12
24	---	---	---	---	---	---	---	---	40.81	41.15	42.10	43.16
25	---	---	---	---	---	---	---	---	40.80	41.20	42.13	43.17
26	---	---	---	---	---	---	---	---	40.77	41.22	42.16	43.20
27	---	---	---	---	---	---	---	---	40.75	41.24	42.21	43.20
28	---	---	---	---	---	---	---	---	40.80	41.24	42.23	43.24
29	---	---	---	---	---	---	---	---	41.35	40.80	41.26	43.30
30	---	---	---	---	---	---	---	---	41.31	40.73	41.32	43.32
31	---	---	---	---	---	---	---	---	41.24	---	41.35	42.34
MEAN	---	---	---	---	---	---	---	---	41.30	40.92	41.01	41.87
MAX	---	---	---	---	---	---	---	---	41.35	41.19	41.35	42.34
MIN	---	---	---	---	---	---	---	---	41.24	40.73	40.75	41.44

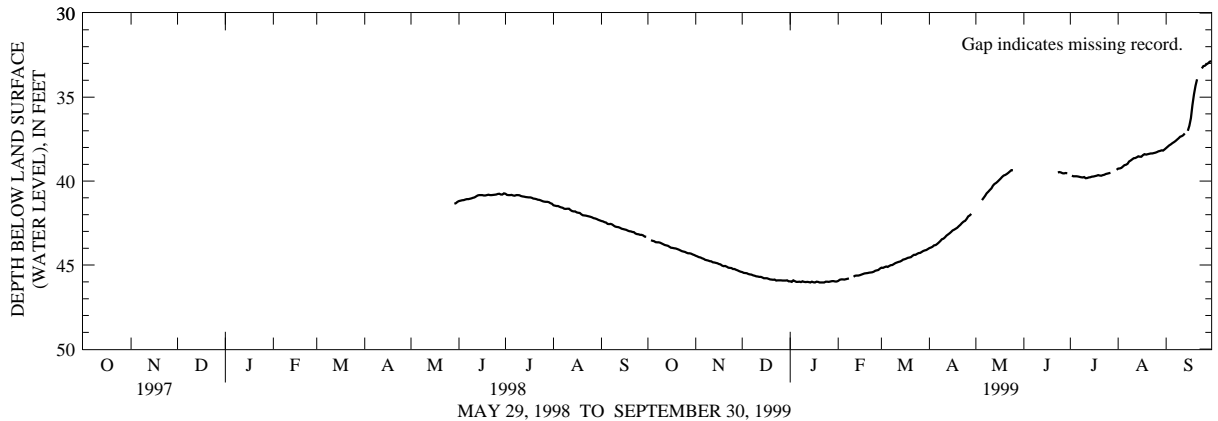
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	44.45	45.42	45.97	45.94	45.16	43.99	---	---	---	39.26	38.04
2	---	44.48	45.46	46.00	45.87	45.17	43.95	---	---	39.68	39.25	37.95
3	43.52	44.52	45.47	45.91	45.85	45.12	43.91	---	---	39.71	39.21	37.88
4	43.55	44.55	45.49	45.96	45.85	45.09	43.83	---	---	39.71	39.13	37.82
5	43.58	44.59	45.53	46.00	45.86	45.11	43.81	41.13	---	39.71	39.05	37.74
6	43.63	44.63	45.55	46.00	45.84	45.05	43.74	41.01	---	39.72	39.03	37.68
7	43.65	44.68	45.57	45.99	45.82	45.01	43.66	40.88	---	39.75	38.97	37.61
8	43.65	44.71	45.61	46.01	45.79	45.00	43.56	40.73	---	39.77	38.83	37.53
9	43.67	44.73	45.64	45.97	---	44.94	43.46	40.63	---	39.78	38.78	37.45
10	43.71	44.77	45.67	46.00	---	44.88	43.43	40.53	---	39.76	38.71	37.36
11	43.76	44.78	45.68	46.01	45.69	44.85	43.35	40.44	---	39.83	38.64	37.33
12	43.81	44.83	45.70	46.00	45.63	44.81	43.25	40.28	---	39.82	38.63	37.27
13	43.83	44.85	45.70	46.01	45.62	44.79	43.18	40.17	---	39.78	38.58	37.17
14	43.85	44.87	45.74	46.04	45.62	44.74	43.11	40.11	---	39.77	38.53	---
15	43.91	44.89	45.78	45.99	45.60	44.67	43.03	40.04	---	39.74	38.55	37.00
16	43.96	44.94	45.78	46.02	45.57	44.65	42.94	39.94	---	39.72	38.55	36.71
17	43.98	44.96	45.78	46.03	45.53	44.62	42.89	39.85	---	39.70	38.46	36.25
18	44.00	45.03	45.82	45.99	45.50	44.57	42.84	39.75	---	39.68	38.40	35.47
19	44.01	45.06	45.85	46.00	45.49	44.55	42.78	39.67	---	39.65	38.42	34.83
20	44.05	45.05	45.86	46.03	45.47	44.52	42.69	39.63	---	39.67	38.40	34.33
21	44.08	45.10	45.87	46.03	45.45	44.45	42.61	39.58	---	39.68	38.38	33.94
22	44.12	45.16	45.86	46.03	45.44	44.39	42.50	39.51	---	39.64	38.36	---
23	44.17	45.17	45.92	46.03	45.43	44.39	42.41	39.43	39.48	39.62	38.35	---
24	44.19	45.18	45.91	45.99	45.39	44.33	42.36	39.35	39.46	39.58	38.33	33.29
25	44.22	45.24	45.91	45.99	45.34	44.29	42.25	39.36	39.49	39.55	38.31	33.16
26	44.26	45.24	45.91	46.00	45.31	44.27	42.10	---	39.53	39.53	38.27	33.13
27	44.30	45.28	45.92	45.98	45.29	44.22	42.04	---	39.54	39.51	38.23	33.05
28	44.30	45.32	45.92	45.96	45.21	44.16	41.95	---	39.52	---	38.21	32.99
29	44.32	45.36	45.92	45.96	---	44.12	---	---	39.53	---	38.17	32.90
30	44.36	45.39	45.91	45.98	---	44.10	---	---	---	---	38.18	32.86
31	44.40	---	45.97	45.98	---	44.05	---	---	---	39.32	38.12	---
MEAN	43.96	44.93	45.75	46.00	45.59	44.65	43.06	40.10	39.51	39.68	38.59	35.88
MAX	44.40	45.39	45.97	46.04	45.94	45.17	43.99	41.13	39.54	39.83	39.26	38.04
MIN	43.52	44.45	45.42	45.91	45.21	44.05	41.95	39.35	39.46	39.32	38.12	32.86

WTR YR 1999: HIGHEST 32.86, SEPTEMBER 30; LOWEST 46.04, JANUARY 14.



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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 COLLECTING 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											
21...	0947	80020	1028	--	9.0	8.8	212	--	24	3.4	8.8
OCT 01...	0938	80020	1028	.8	8.4	8.3	224	13.0	23	3.4	9.1
FEB 1999											
09...	1000	80020	1028	4.6	8.4	8.2	231	10.0	23	3.7	8.1
APR 29...	1405	80020	1028	2.9	8.2	8.4	224	12.5	24	4.0	7.0
MAY 27...	1215	9813	1028	4.2	8.4	--	213	12.5	--	--	--
JUN 30...	1400	9813	1028	3.5	8.0	--	216	13.0	26	4.3	5.8
JUL 29...	1030	--	--	3.8	8.1	--	209	12.8	--	--	--
AUG 25...	1400	9813	1028	3.6	8.0	--	173	14.2	--	--	--
SEP 22...	1400	9813	1028	4.0	7.8	--	212	14.1	22	4.7	3.8

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											
21...	8.7	112	1.7	<.10	15	49	.056	.12	--	--	.131
OCT 01...	8.9	33	1.9	<.10	16	49	.033	<.10	--	--	.059
FEB 1999											
09...	9.9	68	1.9	<.10	14	53	<.020	E.08	--	--	--
APR 29...	8.9	26	1.8	<.10	15	49	<.020	<.10	--	--	--
MAY 27...	--	--	--	--	--	--	<.020	--	<.020	.26	.150
JUN 30...	6.9	48	1.7	<.20	18	47	<.020	--	--	.34	.170
JUL 29...	--	--	--	--	--	--	<.020	--	.040	.32	.220
AUG 25...	--	51	--	--	--	--	<.020	--	<.020	.37	.220
SEP 22...	6.0	54	1.5	<.20	18	44	<.020	--	--	.32	.210

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)
MAY 1998											
21...	.141	.27	.010	<.010	<.010	<.010	141	12	<1.0	<1	13
OCT 01...	.107	--	.048	<.050	.016	E.031	141	11	--	--	--
FEB 1999											
09...	.090	--	<.010	<.050	.027	E.033	148	E8.9	--	--	--
APR 29...	.112	--	<.010	<.050	.013	<.050	152	<10	--	--	--
MAY 27...	--	--	<.040	.010	.010	--	--	--	--	--	--
JUN 30...	--	--	<.040	.005	.002	--	118	--	--	--	--
JUL 29...	--	--	<.040	.011	.006	--	--	--	--	--	--
AUG 25...	--	--	<.040	.020	.005	--	--	--	--	--	--
SEP 22...	--	--	<.040	.012	.005	--	168	--	<2.0	<4	7.5

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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 21...	1.3	<16	--	<8.0	<1.0	<12	<1.0	<10	<1.0	10
OCT 01...	--	<16	--	--	--	--	--	E7.9	--	--
FEB 1999 09...	--	E8.4	--	--	--	--	--	22	--	--
APR 29...	--	E8.5	--	--	--	--	--	11	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	<200	<.20	--	--	--	--	<20	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	<200	<.20	<10	<4.0	--	<4.0	26	<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 21...	<4.0	<.1	<60	<1.0	1	<1.0	469	<10	<20	.90
OCT 01...	E3.1	--	--	--	--	--	--	--	27	1.3
FEB 1999 09...	6.0	--	--	--	--	--	--	--	E8.7	1.7
APR 29...	5.7	--	--	--	--	--	--	--	26	2.7
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 30...	<10	--	--	--	--	--	--	--	<10	<1.0
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	<10	<.2	--	<4.0	<7	--	221	--	<10	<1.0