

CHESTER COUNTY

395052075434502. Local number, CH 5177
(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 2 in., depth 35 ft, cased to 33 ft, closed end, screened from 23-33 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, 1.3 ft above land-surface datum.

REMARKS.--In addition to the daily mean water levels shown below, daily maximum and minimum water levels, since August 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.--August 1, 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, 5.72 ft below land-surface datum, Sept. 30, 1999; lowest, 10.71 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	---	---	---	---	---	---	---	---	---	---	8.45	9.04
2	---	---	---	---	---	---	---	---	---	---	8.46	9.09
3	---	---	---	---	---	---	---	---	---	---	8.48	9.15
4	---	---	---	---	---	---	---	---	---	---	8.48	9.16
5	---	---	---	---	---	---	---	---	---	---	8.49	9.19
6	---	---	---	---	---	---	---	---	---	---	8.55	9.19
7	---	---	---	---	---	---	---	---	---	---	8.58	9.20
8	---	---	---	---	---	---	---	---	---	---	8.61	9.22
9	---	---	---	---	---	---	---	---	---	---	8.63	9.24
10	---	---	---	---	---	---	---	---	---	---	8.63	9.26
11	---	---	---	---	---	---	---	---	---	---	8.63	9.27
12	---	---	---	---	---	---	---	---	---	---	8.66	9.32
13	---	---	---	---	---	---	---	---	---	---	8.68	9.37
14	---	---	---	---	---	---	---	---	---	---	8.68	9.38
15	---	---	---	---	---	---	---	---	---	---	8.71	9.39
16	---	---	---	---	---	---	---	---	---	---	8.74	9.40
17	---	---	---	---	---	---	---	---	---	---	8.74	9.41
18	---	---	---	---	---	---	---	---	---	---	8.74	9.42
19	---	---	---	---	---	---	---	---	---	---	8.76	9.44
20	---	---	---	---	---	---	---	---	---	---	8.77	9.46
21	---	---	---	---	---	---	---	---	---	---	8.79	9.52
22	---	---	---	---	---	---	---	---	---	---	8.81	9.55
23	---	---	---	---	---	---	---	---	---	---	8.81	9.58
24	---	---	---	---	---	---	---	---	---	---	8.83	9.60
25	---	---	---	---	---	---	---	---	---	---	8.86	9.60
26	---	---	---	---	---	---	---	---	---	---	8.90	9.61
27	---	---	---	---	---	---	---	---	---	---	8.93	9.62
28	---	---	---	---	---	---	---	---	---	---	8.94	9.64
29	---	---	---	---	---	---	---	---	---	---	8.96	9.66
30	---	---	---	---	---	---	---	---	---	---	8.99	9.67
31	---	---	---	---	---	---	---	---	---	---	9.01	---
MEAN	---	---	---	---	---	---	---	---	---	---	8.72	9.39
MAX	---	---	---	---	---	---	---	---	---	---	9.01	9.67
MIN	---	---	---	---	---	---	---	---	---	---	8.45	9.04

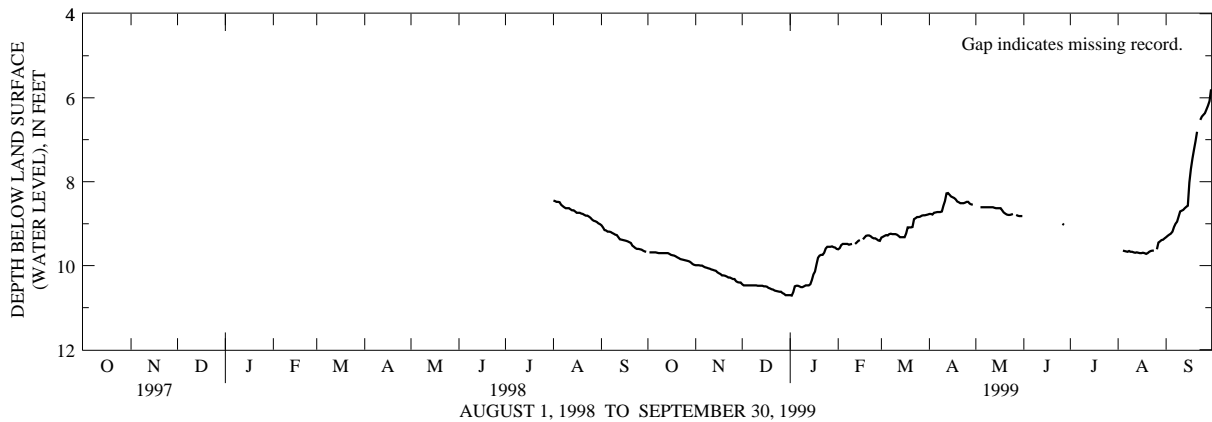
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.99	10.44	10.70	9.61	9.33	8.77	---	---	---	---	9.32
2	9.68	9.99	10.47	10.71	9.58	9.31	8.77	---	---	---	---	9.29
3	9.68	9.99	10.47	10.63	9.51	9.29	8.78	---	---	---	---	9.26
4	9.68	10.00	10.47	10.49	9.48	9.27	8.74	8.61	---	---	9.64	9.24
5	9.68	10.00	10.47	10.48	9.48	9.28	8.73	8.61	---	---	9.65	9.19
6	9.68	10.02	10.47	10.48	9.48	9.25	8.72	8.61	---	---	9.66	9.08
7	9.69	10.04	10.47	10.49	9.48	9.24	8.72	8.61	---	---	9.67	9.00
8	9.70	10.05	10.47	10.51	9.50	9.25	8.72	8.61	---	---	9.65	8.95
9	9.70	10.06	10.47	10.51	9.49	9.25	8.71	8.61	---	---	9.67	8.83
10	9.70	10.07	10.47	10.49	9.48	9.25	8.57	8.61	---	---	9.67	8.71
11	9.70	10.09	10.48	10.47	---	9.26	8.46	8.61	---	---	9.68	8.69
12	9.70	10.10	10.48	10.47	9.48	9.29	8.28	8.61	---	---	9.69	8.67
13	9.70	10.11	10.48	10.47	9.45	9.32	8.27	8.62	---	---	9.68	8.63
14	9.70	10.12	10.48	10.44	9.41	9.32	8.31	8.63	---	---	9.69	8.60
15	9.72	10.16	10.49	10.34	9.39	9.32	8.35	8.63	---	---	9.70	8.57
16	9.74	10.18	10.49	10.21	---	9.32	8.37	8.63	---	---	9.70	8.02
17	9.75	10.20	10.50	10.14	9.37	9.23	8.39	8.63	---	---	9.69	7.70
18	9.76	10.23	10.53	9.97	9.33	9.09	8.42	8.68	---	---	9.70	7.45
19	9.78	10.23	10.54	9.81	9.29	9.09	8.47	8.73	---	---	9.72	7.24
20	9.80	10.24	10.56	9.76	9.28	9.09	8.49	8.76	---	---	9.70	7.04
21	9.82	10.26	10.57	9.74	9.28	9.08	8.51	8.78	---	---	9.67	6.81
22	9.84	10.28	10.59	9.74	9.30	8.89	8.51	8.79	---	---	9.65	---
23	9.85	10.28	10.60	9.69	9.33	8.87	8.51	8.79	---	---	9.64	6.53
24	9.86	10.30	10.61	9.59	9.35	8.84	8.50	8.78	---	---	9.64	6.45
25	9.87	10.32	10.62	9.55	9.35	8.84	8.48	8.77	---	---	---	6.41
26	9.88	10.32	10.62	9.55	9.37	8.83	8.48	---	9.00	---	9.61	6.37
27	9.89	10.37	10.65	9.55	9.40	8.81	8.52	8.79	9.03	---	9.45	6.28
28	9.90	10.39	10.67	9.54	9.41	8.80	8.54	8.81	---	---	9.42	6.19
29	9.93	10.40	10.70	9.56	---	8.80	8.55	8.82	---	---	9.39	6.08
30	9.96	10.40	10.70	9.57	---	8.79	---	8.82	---	---	9.38	5.80
31	9.98	---	10.70	9.60	---	8.78	---	8.82	---	---	9.35	---
MEAN	9.78	10.17	10.54	10.10	9.42	9.11	8.54	8.70	9.01	---	9.62	7.88
MAX	9.98	10.40	10.70	10.71	9.61	9.33	8.78	8.82	9.03	---	9.72	9.32
MIN	9.68	9.99	10.44	9.54	9.28	8.78	8.27	8.61	9.00	---	9.35	5.80

WTR YR 1999: HIGHEST 5.80, SEPTEMBER 30; LOWEST 10.71, 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...	1040	80020	1028	--	5.8	6.5	457	--	52	10	2.9
OCT 01...	1407	80020	1028	6.9	5.8	6.3	429	13.0	48	10	2.2
FEB 1999											
11...	1245	80020	1028	7.0	6.1	6.1	409	12.8	47	9.9	2.4
APR 30...	1523	80020	1028	7.0	5.6	6.0	398	12.0	45	9.4	2.1
JUN 01...	1100	80020	1028	7.0	5.9	--	362	12.5	--	--	--
28...	0955	9813	1028	6.6	5.8	--	388	13.0	46	9.4	1.9
JUL 29...	1230	9813	1028	6.8	5.7	--	388	12.4	--	--	--
AUG 25...	1200	9813	1028	6.9	5.6	--	390	12.6	--	--	--
SEP 22...	1130	9813	1028	7.0	5.8	--	387	12.2	44	8.8	2.1

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-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											
15...	14	28	14	<.10	22	51	.028	.24	--	--	--
OCT 01...	12	33	15	<.10	24	49	<.020	.20	--	--	--
FEB 1999											
11...	12	49	16	<.10	24	51	<.020	.19	--	--	--
APR 30...	11	27	17	<.10	22	49	.031	.17	--	--	--
JUN 01...	--	34	--	--	--	--	<.020	--	<.020	30	16.3
28...	11	33	18	<.20	23	49	<.020	--	--	18	18.0
JUL 29...	--	31	--	--	--	--	<.020	--	<.020	17	19.4
AUG 25...	--	35	--	--	--	--	<.020	--	.030	19	18.6
SEP 22...	11	28	16	<.20	21	49	<.020	--	--	19	13.2

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											
15...	26.3	27	<.010	.029	.028	.104	343	<10	<1.0	<1	45
OCT 01...	23.9	24	<.010	<.050	.031	E.033	291	E6.2	--	--	--
FEB 1999											
11...	24.2	24	<.010	<.050	.038	.165	282	<10	--	--	--
APR 30...	18.7	19	<.010	E.042	.032	.096	292	<10	--	--	--
JUN 01...	--	--	<.040	.024	.024	--	--	--	--	--	--
28...	--	--	<.040	.047	.002	--	322	--	--	--	--
JUL 29...	--	--	<.040	.058	.017	--	--	--	--	--	--
AUG 25...	--	--	<.040	.065	.030	--	--	--	--	--	--
SEP 22...	--	--	<.040	.045	.023	--	340	--	<2.0	<4	36

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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	.015	<8.0	1.2	<12	<1.0	<10	<1.0	<4
OCT 01...	--	<16	--	--	--	--	--	11	--	--
FEB 1999 11...	--	<16	--	--	--	--	--	<10	--	--
APR 30...	--	E10	--	--	--	--	--	<10	--	--
JUN 01...	--	--	--	--	--	--	--	--	--	--
28...	--	<200	<.20	--	--	--	--	<20	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	<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)
JUN 1998 15...	5.3	<.1	<60	1.2	<1	<1.0	122	<10	35	1.9
OCT 01...	E2.9	--	--	--	--	--	--	--	21	1.1
FEB 1999 11...	E2.8	--	--	--	--	--	--	--	21	1.4
APR 30...	E1.6	--	--	--	--	--	--	--	24	1.6
JUN 01...	--	--	--	--	--	--	--	--	--	--
28...	<10	--	--	--	--	--	--	--	13	1.5
JUL 29...	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 22...	<10	<.2	--	<4.0	<7	--	100	--	<10	1.0