

## CHESTER COUNTY

**395049075434301. Local number, CH 5178**  
**(New Garden Township, Chester County, Spray Irrigation Project)**

**LOCATION.**--Lat 39°50'49", long 75°43'43", 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 89.9 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 360 ft. above sea level from a GPS unit. Measuring point: Top of plywood shelf, 1.5 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 23, 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, 12.10 ft below land-surface datum, Sept. 30, 1999; lowest, 23.01 ft below land-surface datum, Jan. 1, 2, 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	---	---	---	---	---	---	---	---	17.45	17.82	18.70	19.66
2	---	---	---	---	---	---	---	---	17.48	17.91	18.74	19.67
3	---	---	---	---	---	---	---	---	17.49	17.93	18.75	19.70
4	---	---	---	---	---	---	---	---	17.54	17.93	18.78	19.73
5	---	---	---	---	---	---	---	---	17.54	17.96	18.81	19.80
6	---	---	---	---	---	---	---	---	17.57	18.02	18.84	19.82
7	---	---	---	---	---	---	---	---	17.60	18.04	18.87	19.81
8	---	---	---	---	---	---	---	---	17.62	18.01	18.91	19.84
9	---	---	---	---	---	---	---	---	17.64	18.01	18.93	19.93
10	---	---	---	---	---	---	---	---	17.64	18.05	18.92	19.98
11	---	---	---	---	---	---	---	---	17.64	18.11	18.92	19.99
12	---	---	---	---	---	---	---	---	17.58	18.14	18.99	20.01
13	---	---	---	---	---	---	---	---	17.50	18.16	19.02	20.04
14	---	---	---	---	---	---	---	---	17.49	18.19	19.04	20.08
15	---	---	---	---	---	---	---	---	17.52	18.20	19.06	20.10
16	---	---	---	---	---	---	---	---	17.55	18.21	19.11	20.13
17	---	---	---	---	---	---	---	---	17.60	18.22	19.13	20.16
18	---	---	---	---	---	---	---	---	17.62	18.26	19.13	20.21
19	---	---	---	---	---	---	---	---	17.63	18.30	19.20	20.24
20	---	---	---	---	---	---	---	---	17.64	18.31	19.26	20.26
21	---	---	---	---	---	---	---	---	17.68	18.35	19.27	20.28
22	---	---	---	---	---	---	---	---	17.72	18.37	19.28	20.30
23	---	---	---	---	---	---	---	17.50	17.71	18.38	19.30	20.37
24	---	---	---	---	---	---	---	17.47	17.73	18.43	19.32	20.43
25	---	---	---	---	---	---	---	17.44	17.75	18.48	19.37	20.44
26	---	---	---	---	---	---	---	17.46	17.72	18.50	19.41	20.46
27	---	---	---	---	---	---	---	17.49	17.73	18.52	19.47	20.48
28	---	---	---	---	---	---	---	17.49	17.82	18.54	19.51	20.51
29	---	---	---	---	---	---	---	17.48	17.84	18.55	19.54	20.63
30	---	---	---	---	---	---	---	17.48	17.75	18.60	19.60	20.66
31	---	---	---	---	---	---	---	17.47	---	18.62	19.63	---
MEAN	---	---	---	---	---	---	---	17.48	17.63	18.23	19.12	20.12
MAX	---	---	---	---	---	---	---	17.50	17.84	18.62	19.63	20.66
MIN	---	---	---	---	---	---	---	17.44	17.45	17.82	18.70	19.66

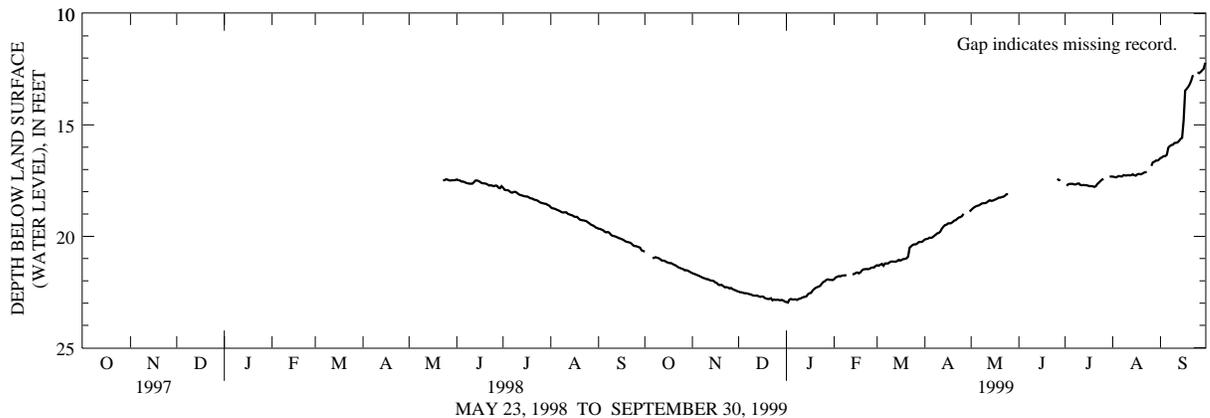
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.68	21.66	22.48	22.95	21.92	21.30	20.14	18.82	---	---	17.32	16.49
2	---	21.68	22.51	22.98	21.85	21.32	20.12	18.75	---	17.73	17.34	16.45
3	---	21.71	22.51	22.84	21.82	21.27	20.11	18.70	---	17.66	17.35	16.40
4	---	21.74	22.54	22.81	21.79	21.24	20.06	18.66	---	17.65	17.32	16.40
5	---	21.77	22.56	22.84	21.80	21.32	20.07	18.63	---	17.65	17.29	16.34
6	20.97	21.80	22.56	22.83	21.77	21.22	20.04	18.61	---	17.65	17.31	16.02
7	20.97	21.84	22.57	22.83	21.76	21.22	19.98	18.57	---	17.67	17.31	15.95
8	20.94	21.87	22.60	22.86	21.75	21.22	19.93	18.53	---	17.67	17.25	15.91
9	20.96	21.89	22.61	22.81	21.75	21.17	19.87	18.51	---	17.64	17.27	15.89
10	20.98	21.92	22.65	22.80	---	21.13	19.85	18.51	---	17.63	17.27	15.81
11	21.02	21.92	22.66	22.76	---	21.13	19.78	18.49	---	17.70	17.25	15.80
12	21.08	21.97	22.67	22.73	---	21.13	19.65	18.43	---	17.71	17.27	15.79
13	21.09	21.98	22.66	22.72	21.71	21.14	19.57	18.38	---	17.70	17.25	15.72
14	21.10	21.99	22.69	22.69	21.69	21.11	19.50	18.41	---	17.71	17.22	15.63
15	21.15	22.02	22.72	22.60	21.65	21.06	19.48	18.40	---	17.71	17.26	15.58
16	21.18	22.08	22.70	22.56	21.62	21.09	19.42	18.37	---	17.73	17.28	14.79
17	21.20	22.10	22.71	22.54	21.67	21.06	19.42	18.34	---	17.75	17.22	13.46
18	21.20	22.18	22.77	22.44	21.62	21.02	19.41	18.31	---	17.75	17.20	13.38
19	21.24	22.19	22.80	22.37	21.54	21.01	19.36	18.26	---	17.76	17.22	13.29
20	21.28	22.18	22.81	22.32	21.49	20.99	19.30	18.26	---	17.78	17.19	13.17
21	21.31	22.24	22.81	22.28	21.48	20.91	19.27	18.24	---	17.75	17.15	13.00
22	21.36	22.29	22.78	22.26	21.47	20.51	19.21	18.22	---	17.65	17.12	12.76
23	21.40	22.28	22.87	22.22	21.48	20.45	19.15	18.18	---	17.59	17.11	---
24	21.43	22.30	22.84	22.13	21.46	20.39	19.14	18.11	---	17.52	---	---
25	21.45	22.34	22.86	22.05	21.42	20.36	19.09	18.11	---	17.46	---	12.63
26	21.48	22.32	22.85	22.02	21.40	20.36	18.99	---	17.42	17.43	16.84	12.67
27	21.53	22.37	22.86	21.96	21.40	20.32	---	---	17.47	---	16.68	12.62
28	21.52	22.40	22.87	21.93	21.33	20.26	---	---	17.48	---	16.65	12.55
29	21.55	22.43	22.86	21.96	---	20.25	---	---	---	---	16.60	12.48
30	21.58	22.46	22.88	21.96	---	20.25	18.89	---	---	17.31	16.60	12.21
31	21.62	---	22.93	21.97	---	20.20	---	---	---	17.32	16.56	---
MEAN	21.23	22.06	22.72	22.48	21.63	20.88	19.59	18.43	17.46	17.64	17.13	14.61
MAX	21.62	22.46	22.93	22.98	21.92	21.32	20.14	18.82	17.48	17.78	17.35	16.49
MIN	20.68	21.66	22.48	21.93	21.33	20.20	18.89	18.11	17.42	17.31	16.56	12.21

WTR YR 1999: HIGHEST 12.21, SEPTEMBER 30; LOWEST 22.98, 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.--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 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 (US/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	20...	80020	1028	--	7.3	--	290	--	34	--	11
OCT 02...	1243	80020	1028	.0	8.1	7.8	277	13.5	32	4.6	11
FEB 1999	10...	80020	1028	1.4	7.9	7.8	252	10.5	33	4.4	6.9
APR 27...	1406	80020	1028	.6	7.3	7.9	235	12.5	30	4.0	5.3
MAY 27...	1200	9813	1028	.9	7.6	--	260	14.0	--	--	--
JUN 29...	1400	9813	1028	.1	7.3	--	250	13.9	34	4.3	6.6
JUL 27...	1400	9813	1028	1.2	7.9	--	239	12.3	--	--	--
AUG 24...	1400	9813	1028	.9	7.7	--	109	13.1	--	--	--
SEP 23...	1100	9813	1028	.3	7.5	--	240	14.1	31	4.5	5.6

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	11	82	3.6	<.10	12	62	.044	.13	--	--	--
OCT 02...	9.1	74	3.8	.14	14	52	.030	.18	--	--	--
FEB 1999	6.8	62	3.9	<.10	14	52	<.020	E.09	--	--	--
APR 27...	5.8	43	4.1	<.10	6.5	47	<.020	<.10	--	--	--
MAY 27...	--	64	--	--	--	--	<.020	--	.030	<.08	<.040
JUN 29...	6.9	42	3.6	<.20	14	52	.030	--	--	.14	<.040
JUL 27...	--	59	--	--	--	--	<.020	--	<.020	.13	<.040
AUG 24...	--	58	--	--	--	--	<.020	--	<.020	<.06	<.040
SEP 23...	6.6	52	3.4	<.20	15	49	<.020	--	--	.08	<.040

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 (MG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (MG/L AS SB) (01095)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)	BARIUM, DIS-SOLVED (MG/L AS BA) (01005)
MAY 1998	<.050	.022	<.010	.010	<.010	185	27	--	<1	41
OCT 02...	<.050	<.010	.020	.013	.327	168	12	--	--	--
FEB 1999	<.050	<.010	<.050	.017	.126	167	E9.6	--	--	--
APR 27...	.053	<.010	<.050	<.010	<.050	160	E8.4	--	--	--
MAY 27...	--	<.040	.024	.016	--	--	--	--	--	--
JUN 29...	--	<.040	.018	.005	--	178	--	--	--	--
JUL 27...	--	<.040	.018	.006	--	--	--	--	--	--
AUG 24...	--	<.040	.032	.011	--	--	--	--	--	--
SEP 23...	--	<.040	.021	.012	--	94	--	<2.0	<4	32

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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 20...	<1.0	<16	--	<8.0	<1.0	<12	<1.0	<10	<1.0	6
OCT 02...	--	<16	--	--	--	--	--	17	--	--
FEB 1999 10...	--	<16	--	--	--	--	--	34	--	--
APR 27...	--	E8.5	--	--	--	--	--	40	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 29...	--	<200	<.20	--	--	--	--	120	--	--
JUL 27...	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	<200	<.20	<10	<4.0	--	<4.0	100	<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 20...	49	<.1	<60	2.7	<1	<1.0	110	<10	47	3.0
OCT 02...	67	--	--	--	--	--	--	--	<20	1.9
FEB 1999 10...	79	--	--	--	--	--	--	--	22	1.6
APR 27...	38	--	--	--	--	--	--	--	32	2.6
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 29...	46	--	--	--	--	--	--	--	14	1.0
JUL 27...	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	--	--	--	--	--	--	--	--	--
SEP 23...	36	<.2	--	<4.0	<7	--	88	--	<10	<1.0