

**CHESTER COUNTY**

**395048075434701. Local number, CH 5174.**  
**(New Garden Township, Chester County, Spray Irrigation Project)**

**LOCATION.**--Lat 39°50'48", 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 99.4 ft, cased to 99 ft, closed end, screened from 79-99 ft.

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

**DATUM.**--Elevation of land surface is 371 ft above sea level from a GPS unit. Measuring point: Top of plywood shelf, 1.7 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 31, 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, 24.58 ft below land-surface datum, Sept. 30, 1999; lowest, 33.70 ft below land-surface datum, Jan. 1, 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	---	---	---	---	---	---	---	---	---	---	29.91	---
2	---	---	---	---	---	---	---	---	---	---	29.93	---
3	---	---	---	---	---	---	---	---	---	---	29.95	30.76
4	---	---	---	---	---	---	---	---	---	---	29.98	30.79
5	---	---	---	---	---	---	---	---	---	---	30.03	30.85
6	---	---	---	---	---	---	---	---	---	---	30.07	30.87
7	---	---	---	---	---	---	---	---	---	---	30.09	30.88
8	---	---	---	---	---	---	---	---	---	---	30.13	30.91
9	---	---	---	---	---	---	---	---	---	---	30.14	30.97
10	---	---	---	---	---	---	---	---	---	---	30.14	31.01
11	---	---	---	---	---	---	---	---	---	---	30.14	31.02
12	---	---	---	---	---	---	---	---	---	---	30.19	31.03
13	---	---	---	---	---	---	---	---	---	---	30.21	31.06
14	---	---	---	---	---	---	---	---	---	---	30.25	31.09
15	---	---	---	---	---	---	---	---	---	---	30.26	31.11
16	---	---	---	---	---	---	---	---	---	---	30.29	31.12
17	---	---	---	---	---	---	---	---	---	---	30.32	31.13
18	---	---	---	---	---	---	---	---	---	---	30.32	31.13
19	---	---	---	---	---	---	---	---	---	---	30.37	31.21
20	---	---	---	---	---	---	---	---	---	---	30.39	31.28
21	---	---	---	---	---	---	---	---	---	---	30.41	31.32
22	---	---	---	---	---	---	---	---	---	---	30.43	31.33
23	---	---	---	---	---	---	---	---	---	---	30.45	31.38
24	---	---	---	---	---	---	---	---	---	---	30.47	31.41
25	---	---	---	---	---	---	---	---	---	---	---	31.43
26	---	---	---	---	---	---	---	---	---	---	---	31.48
27	---	---	---	---	---	---	---	---	---	---	---	31.50
28	---	---	---	---	---	---	---	---	---	---	---	31.55
29	---	---	---	---	---	---	---	---	---	---	---	31.60
30	---	---	---	---	---	---	---	---	---	---	---	31.63
31	---	---	---	---	---	---	---	---	---	29.85	---	---
MEAN	---	---	---	---	---	---	---	---	---	29.85	30.20	31.17
MAX	---	---	---	---	---	---	---	---	---	29.85	30.47	31.63
MIN	---	---	---	---	---	---	---	---	---	29.85	29.91	30.76

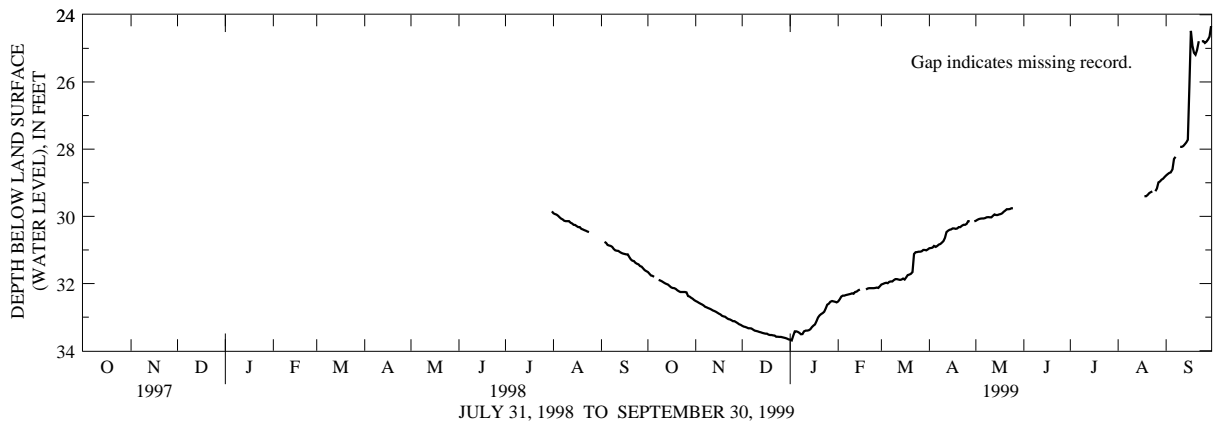
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DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.66	32.52	33.26	33.67	32.53	32.03	30.95	30.13	---	---	---	28.78
2	31.71	32.54	33.28	33.69	32.47	32.01	30.94	30.10	---	---	---	28.74
3	31.76	32.57	33.29	33.55	32.39	31.99	30.93	30.08	---	---	---	28.71
4	31.77	32.60	33.31	33.42	32.36	31.98	30.88	30.07	---	---	---	28.69
5	31.80	32.62	33.33	33.42	32.36	31.99	30.91	30.06	---	---	---	28.60
6	---	32.65	33.33	33.44	32.34	31.95	30.88	30.06	---	---	---	28.29
7	---	32.69	33.34	33.47	32.33	31.94	30.84	30.05	---	---	---	28.23
8	31.89	32.71	33.37	33.51	32.32	31.94	30.82	30.03	---	---	---	---
9	31.91	32.73	33.40	33.50	32.31	31.90	30.78	30.02	---	---	---	---
10	31.93	32.75	33.41	33.42	32.29	31.87	30.74	30.03	---	---	---	27.93
11	31.96	32.77	33.42	33.40	32.30	31.87	30.64	30.03	---	---	---	27.93
12	31.99	32.80	33.44	33.40	32.25	31.88	30.47	29.98	---	---	---	27.91
13	32.01	32.82	33.45	33.39	32.24	31.89	30.43	29.94	---	---	---	27.86
14	32.03	32.84	33.47	33.36	32.20	31.88	30.40	29.96	---	---	---	27.80
15	32.07	32.87	33.48	33.30	32.18	31.85	30.39	29.96	---	---	---	27.72
16	32.11	32.90	33.49	33.25	---	31.88	30.36	29.94	---	---	---	26.16
17	32.13	32.92	33.49	33.22	---	31.82	30.36	29.93	---	---	---	24.48
18	32.14	32.96	33.52	33.12	---	31.75	30.37	29.91	---	---	29.40	24.92
19	32.16	32.98	33.53	33.01	32.18	31.73	30.36	29.86	---	---	29.40	25.13
20	32.20	32.99	33.53	32.95	32.15	31.71	30.32	29.83	---	---	29.36	25.19
21	32.23	33.03	33.54	32.91	32.14	31.66	30.32	29.79	---	---	29.31	25.05
22	32.25	33.06	33.55	32.88	32.14	31.12	30.28	29.79	---	---	29.28	24.79
23	32.25	33.07	33.58	32.84	32.14	31.07	30.25	29.78	---	---	29.26	---
24	32.25	33.09	33.58	32.74	32.14	31.06	30.25	29.76	---	---	---	24.79
25	32.25	33.12	33.59	32.63	32.13	31.05	30.22	29.76	---	---	29.25	24.79
26	32.26	33.12	33.59	32.60	32.12	31.05	30.14	---	---	---	29.17	24.84
27	32.37	33.15	33.60	32.54	32.13	31.04	30.14	---	---	---	28.99	24.80
28	32.39	33.18	33.61	32.52	32.08	31.00	---	---	---	---	28.96	24.74
29	32.42	33.21	33.62	32.53	---	31.00	---	---	---	---	28.91	24.65
30	32.45	33.23	33.64	32.54	---	31.01	30.15	---	---	---	28.88	24.34
31	32.49	---	33.66	32.56	---	30.98	---	---	---	---	28.83	---
MEAN	32.10	32.88	33.47	33.12	32.25	31.61	30.52	29.95	---	---	29.15	26.51
MAX	32.49	33.23	33.66	33.69	32.53	32.03	30.95	30.13	---	---	29.40	28.78
MIN	31.66	32.52	33.26	32.52	32.08	30.98	30.14	29.76	---	---	28.83	24.34

WTR YR 1999: HIGHEST 24.34, SEPTEMBER 30; LOWEST 33.69, JANUARY 2.



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WATER-QUALITY RECORDS

REMARKS.--Samples collected with disposable bailers from recovery water after well was bailed 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	22...	80020	1028	--	8.1	7.7	217	13.0	33	3.3	3.2
OCT	06...	80020	1028	1.7	8.0	8.0	221	12.0	32	3.3	3.0
FEB 1999	17...	80020	1028	1.0	8.1	7.8	217	12.5	33	3.4	3.0
APR	28...	80020	1028	1.0	7.6	8.0	211	13.5	32	3.4	2.9
MAY	27...	9813	1028	1.0	7.6	--	217	12.5	--	--	--
JUL	01...	9813	1028	.2	7.6	--	217	12.9	34	3.6	3.3
JUL	27...	9813	1028	.9	7.8	--	215	12.9	--	--	--
AUG	24...	9813	1028	.4	7.8	--	201	14.6	--	--	--
SEP	23...	9813	1028	.4	7.8	--	220	13.5	32	3.6	3.0

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 (MG/L AS SO4) (00946)	SULFATE (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA (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)
MAY 1998	4.7	83	5.2	<.10	14	--	30	.055	<.10	--	--
OCT	4.0	66	5.3	<.10	15	--	26	<.020	<.10	--	--
FEB 1999	3.8	78	5.1	<.10	15	--	27	<.020	<.10	--	--
APR	4.2	61	2.1	<.10	14	--	50	<.020	<.10	--	--
MAY	--	57	--	--	--	--	--	<.020	--	<.020	<.08
JUL	4.7	70	5.0	<.20	14	27	--	<.020	--	--	<.06
JUL	--	71	--	--	--	--	--	<.020	--	<.020	.10
AUG	--	71	--	--	--	--	--	<.020	--	.020	<.06
SEP	4.5	63	4.5	<.20	16	27	--	<.020	--	--	<.06

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	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	--	<.050	.011	<.010	.016	<.010	138	11	<1.0	<1	20
OCT	--	.062	<.010	<.050	<.010	.010	134	<10	--	--	--
FEB 1999	--	<.050	<.010	<.050	<.010	<.050	133	<10	--	--	--
APR	--	.066	<.010	<.050	<.010	<.050	142	<10	--	--	--
MAY	<.040	--	<.040	.011	.003	--	--	--	--	--	--
JUL	<.040	--	<.040	.008	.005	--	298	--	--	--	--
JUL	<.040	--	<.040	.006	.003	--	--	--	--	--	--
AUG	<.040	--	<.040	.013	<.002	--	--	--	--	--	--
SEP	<.040	--	<.040	.019	.011	--	84	--	<2.0	<4	16

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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 22...	<1.0	<16	--	<8.0	<1.0	<12	<1.0	<10	<1.0	<4
OCT 06...	--	<16	--	--	--	--	--	25	--	--
FEB 1999 17...	--	<16	--	--	--	--	--	33	--	--
APR 28...	--	E10	--	--	--	--	--	41	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	<200	<.20	--	--	--	--	82	--	--
27...	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	<200	<.20	<10	<4.0	--	<4.0	49	<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 22...	29	<.1	<60	<1.0	<1	<1.0	92	<10	<20	.60
OCT 06...	28	--	--	--	--	--	--	--	E16	.20
FEB 1999 17...	28	--	--	--	--	--	--	--	E9.4	.20
APR 28...	25	--	--	--	--	--	--	--	E11	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUL 01...	33	--	--	--	--	--	--	--	<10	<1.0
27...	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	--	--	--	--	--	--	--	--	--
SEP 23...	31	<.2	--	<4.0	<7	--	68	--	<10	<1.0