Table 10. *Median Chemical Analyses of Groundwater from the Valley and Ridge Physiographic Province*[1]

(Concentrations are in milligrams per liter, except where noted)

Geologic unit	Number of samples[2]	Silica (SiO_2)	Iron (Fe), in µg/L	Manganese (Mn), in µg/L	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Sulfate (SO_4), as SO_4	Chloride (Cl)	Fluoride (F)	Nitrate + nitrite (NO_3 + NO_2), as N	Orthophosphate (PO_4), as P	Residue of dissolved solids	Hardness, as $CaCO_3$: Calcium and magnesium	Hardness, as $CaCO_3$: Noncarbonate	Alkalinity, as $CaCO_3$
Harrell and Mahantango Formations[3]	19	14	660	55	24	3.8	8.6	.6	16	4.4	.1	.1	.01	144	76	7	56
Marcellus Formation[3]	6–7	16	1,100	180	41	10	12	.9	46	23	.1	.02	.01	265	160	22	130
Onondaga and Old Port Formations, undivided	3–8	7.3	510	5	56	18	15	2.1	48	20	.1	3.8	.01	301	185	54	118
Keyser and Tonoloway Formations, undivided	8–13	11	110	6	70	20	10	1.2	78	20	.1	.9	.01	374	240	102	140
Wills Creek Formation	8–12	8.4	25	8	38	12	5.3	.6	19	18	.1	2.9	.01	196	130	44	108
Bloomsburg Formation	10–11	9.6	280	30	22	5.4	3.7	.7	20	5.2	.1	2.2	.09	125	77	23	43
Mifflintown Formation	7	8.1	37	38	22	4.7	5.4	.5	16	9.0	.1	.6	.01	135	79	19	84
Rose Hill Formation[4]	15–17	7.4	85	125	21	9.9	2.5	.6	8.9	1.6	.2	.08	.01	100	91	8.0	81
Upper member	4–5	9.5	28	7	21	4.2	4.0	.3	12	4.1	.2	.04	.01	90	84	18	75
Middle and lower members	11–12	7.0	360	160	17	10	1.3	.8	6.3	1.5	.2	.1	.01	100	91	7	93

[1] From Williams and Eckhardt (in preparation).
[2] Number of samples varies for each constituent in most of the geologic units. Minimum and maximum numbers are indicated.
[3] Part of Hamilton Group.
[4] Part of Clinton Group.

Table 11. *Summary of Field Water-Quality Measurements*

Group or formation	Type[1]	pH (units): No. of wells	pH: Percent[2] 25	pH: Percent[2] 50 (median)	pH: Percent[2] 75	Hardness (gr/gal): No. of wells	Hardness: Percent[2] 25	Hardness: Percent[2] 50 (median)	Hardness: Percent[2] 75	Specific conductance (micromhos): No. of wells	Specific conductance: Percent[2] 25	Specific conductance: Percent[2] 50 (median)	Specific conductance: Percent[2] 75
Alluvium	D	5	—	7.0	—	13	2	5	8	12	110	217	350
	N	12	6.0	6.4	7.6	13	3	6	12	12	123	175	300
Llewellyn Formation	D	1	—	5.4	—	—	—	—	—	1	—	2,700	—
	N	—	—	—	—	—	—	—	—	—	—	—	—
Pottsville Group	D	5	—	6.5	—	4	—	2	—	5	—	60	—
	N	1	—	6.8	—	2	—	4	—	1	—	225	—
Mauch Chunk Formation	D	15	6.1	7.0	7.8	19	2	4	6	18	100	208	260
	N	3	—	6.5	—	5	—	3	—	2	—	210	—
Pocono, Spechty Kopf, and Huntley Mountain Formations	D	1	—	6.8	—	2	—	2	—	1	—	125	—
	N	—	—	—	—	—	—	—	—	—	—	—	—
Catskill Formation[3]	D	174	7.0	7.4	7.7	284	3	5	7	285	144	230	305
	N	36	7.1	7.5	7.7	37	4	6	7	34	205	270	315
Irish Valley Member of Catskill Formation	D	14	6.5	6.9	7.4	37	2	2	4	37	87	111	152
	N	—	—	—	—	1	—	3	—	1	—	150	—
Sherman Creek Member of Catskill Formation	D	17	6.4	6.8	7.3	34	2	2	4	34	60	100	159
	N	—	—	—	—	—	—	—	—	—	—	—	—
Trimmers Rock Formation	D	5	—	6.8	—	20	2	3	4	23	110	180	230
	N	—	—	—	—	4	—	6	—	3	—	300	—
Lock Haven Formation	D	21	7.0	7.2	7.4	48	5	8	10	50	332	420	560
	N	2	—	7.8	—	4	—	10	—	5	—	420	—
Hamilton Group	D	31	6.8	7.3	7.6	56	5	8	10	60	202	290	360
	N	6	—	7.4	—	9	—	7	—	10	140	268	600

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