

Temperature, Dissolved Oxygen, Conductivity, and pH Summary Statistics of Samples Collected During 2017

Station	# Samples Collected	Temperature (C°)					Dissolved Oxygen (mg/L)					Conductivity (umhos/cm)					pH (S.U.)				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Chemung	18	0.41	25.38	8.93	10.38	8.82	8.14	15.28	10.57	10.70	2.01	124	505	301	308	117	6.66	8.55	7.83	7.88	0.46
Cohocton	21	0.55	24.69	8.45	10.31	8.81	10.05	16.19	11.79	12.27	1.81	136	679	373	385	153	6.13	8.87	8.11	8.06	0.67
Conklin	20	-0.01	23.58	7.65	9.50	8.51	7.83	15.15	9.97	10.22	2.19	96	267	176	184	47	5.75	8.25	7.75	7.67	0.54
Smithboro	20	0.08	24.17	7.95	9.65	8.48	7.35	14.19	9.80	9.88	2.06	133	375	236	243	67	5.95	8.35	7.83	7.73	0.51
Unadilla	17	0.14	22.27	6.85	8.84	8.32	7.88	14.86	9.48	10.24	2.11	120	360	225	231	66	6.1	8.68	7.85	7.79	0.53
Castanea	17	2.03	22.30	10.70	11.25	6.75	8.37	15.05	10.59	10.97	1.74	146	417	268	282	80	7.05	8.36	7.81	7.80	0.33
Conestoga	30	1.14	25.50	13.59	13.69	7.38	5.87	14.99	9.79	10.02	2.31	374	945	661	648	122	7.22	8.3	7.98	7.91	0.27
Dalmatia	17	-0.01	23.49	8.39	10.49	7.38	6.95	14.67	11.11	11.01	2.26	134	246	201	193	35	7.08	8.53	7.30	7.49	0.44
Danville	27	0.01	25.11	9.53	12.25	8.68	7.42	15.82	10.31	10.76	2.15	126	446	247	241	89	7.11	8.19	7.57	7.60	0.31
Dromgold	18	0.15	23.86	9.05	10.69	7.04	7.48	15.7	11.10	11.20	2.15	116	259	183	179	42	7.03	8.1	7.74	7.68	0.30
Hershey	17	0.10	24.09	8.20	11.24	7.74	7.43	13.77	10.62	10.75	2.08	145	364	299	279	72	7.17	8.07	7.66	7.61	0.27
Hogestown	18	1.42	25.90	10.40	12.04	7.18	7.35	16.15	10.53	11.09	2.06	202	595	399	398	92	7.55	8.59	7.99	7.93	0.27
Jersey Shore	18	0.56	24.92	10.10	12.03	7.88	7.89	14.68	10.70	11.05	1.78	76	426	197	209	95	6.87	8.27	7.56	7.51	0.36
Karthaus	16	0.02	22.84	11.03	11.90	7.60	8.14	14.54	10.55	10.81	1.98	190	655	316	358	132	6.72	8.34	7.23	7.35	0.43
Lewisburg	27	-0.02	25.69	11.30	12.81	8.36	7.76	16	10.53	11.07	1.90	98	363	162	186	76	6.88	8.23	7.43	7.49	0.37
Manchester	18	0.17	26.14	10.71	12.55	7.90	6.46	15.64	10.32	10.87	2.28	191	466	291	294	79	7.29	8.66	7.84	7.84	0.30
Marietta	30	0.18	26.29	11.67	13.37	8.68	7.83	16.9	10.90	10.81	2.24	132	412	221	231	78	7.22	8.9	7.90	7.89	0.37
Martic Forge	17	1.01	23.97	11.78	12.56	7.20	6.87	13.86	10.38	10.38	2.01	320	602	532	509	66	7.45	8.16	7.98	7.91	0.25
Newport	31	0.02	26.80	11.47	12.66	8.16	6.78	15.05	11.38	10.93	2.16	159	357	259	258	49	7.36	8.95	7.96	8.03	0.43
Paxton	18	3.59	23.35	12.46	12.97	6.62	7.49	15.19	11.38	11.50	2.27	187	1074	662	655	231	7.34	8.38	8.04	7.99	0.27
Penns Creek	19	2.10	25.24	10.38	12.19	8.23	8.1	16.31	11.93	12.16	1.83	136	303	237	226	48	6.99	8.98	8.37	8.21	0.57
Reedsville	18	3.74	19.04	11.50	11.04	4.94	8.19	13.42	10.81	11.06	1.52	137	431	337	321	88	7.41	8.42	8.06	8.00	0.31
Saxton	17	0.32	24.40	12.11	10.99	7.90	7.08	13.61	9.57	10.25	2.40	118	425	239	255	84	7.17	8.14	7.79	7.74	0.24
Towanda	29	-0.30	23.62	9.67	10.37	8.58	7.59	14.54	9.89	10.67	2.29	67	399	242	246	80	6.09	8.5	7.70	7.72	0.56
Wilkes-Barre	19	0.19	24.23	6.84	10.37	8.56	7.21	15.07	11.40	10.85	2.38	130	461	200	235	99	6.95	7.93	7.52	7.46	0.26
Richardsmere	16	0.37	24.73	12.61	12.84	7.66	7.64	13.38	10.17	10.43	1.82	220	323	275	276	29	7.22	8.46	7.62	7.61	0.31

Various Total Nitrogen Species Summary Statistics of Samples Collected During 2017, in mg/L

Station	# Samples Collected	Total Nitrogen					Total Ammonium					Total Nitrate plus Nitrite				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Chemung	18	0.86	1.78	1.14	1.18	0.27	0.010	0.076	0.025	0.028	0.018	0.362	1.060	0.664	0.690	0.200
Cohocton	21	1.02	2.34	1.64	1.62	0.31	0.005	0.053	0.010	0.020	0.017	0.551	1.590	1.130	1.122	0.308
Conklin	20	0.38	1.48	0.84	0.86	0.24	0.004	0.050	0.018	0.021	0.014	0.227	0.688	0.396	0.443	0.130
Smithboro	20	0.60	1.43	1.01	1.02	0.20	0.008	0.070	0.035	0.036	0.017	0.381	0.819	0.502	0.556	0.142
Unadilla	17	0.71	1.36	1.02	1.05	0.19	0.007	0.050	0.015	0.020	0.015	0.433	0.998	0.615	0.693	0.201
Castanea	17	0.91	1.92	1.42	1.37	0.27	0.012	0.067	0.038	0.035	0.017	0.607	1.472	1.087	1.069	0.250
Conestoga	30	3.85	7.02	5.82	5.81	0.76	0.017	0.339	0.042	0.086	0.088	2.852	6.837	5.286	5.061	0.993
Dalmatia	17	1.73	9.47	5.96	5.58	2.14	0.012	0.073	0.025	0.030	0.017	1.336	8.762	5.618	5.130	2.105
Danville	27	0.54	1.67	0.89	0.97	0.30	0.012	0.080	0.033	0.035	0.020	0.213	0.924	0.538	0.566	0.167
Dromgold	18	1.25	3.13	2.08	2.10	0.52	0.012	0.120	0.028	0.035	0.027	1.008	2.545	1.828	1.723	0.452
Hershey	17	2.40	4.30	3.34	3.37	0.50	0.015	0.171	0.046	0.052	0.040	1.370	3.840	2.976	2.844	0.691
Hogestown	18	2.99	4.59	3.51	3.62	0.55	0.017	0.076	0.034	0.039	0.021	2.037	4.310	3.165	3.120	0.644
Jersey Shore	18	0.48	0.99	0.65	0.67	0.14	0.012	0.145	0.017	0.026	0.031	0.253	0.566	0.460	0.427	0.099
Karthus	16	0.29	0.97	0.64	0.64	0.21	0.012	0.094	0.032	0.035	0.022	0.134	0.708	0.461	0.432	0.169
Lewisburg	27	0.46	1.99	0.75	0.80	0.31	0.012	0.068	0.017	0.022	0.014	0.303	0.741	0.549	0.530	0.113
Manchester	18	0.84	4.36	2.31	2.46	0.89	0.016	0.144	0.051	0.056	0.039	0.415	2.964	1.584	1.737	0.668
Marietta	30	0.72	2.15	1.15	1.19	0.28	0.012	0.077	0.030	0.031	0.016	0.457	1.510	0.838	0.832	0.236
Martic Forge	17	5.45	7.53	6.25	6.40	0.67	0.014	0.372	0.037	0.071	0.095	3.430	7.289	5.634	5.677	1.021
Newport	31	1.05	2.72	1.54	1.65	0.43	0.012	0.063	0.024	0.027	0.014	0.863	1.837	1.213	1.262	0.267
Paxton	18	0.80	2.78	1.71	1.71	0.52	0.012	0.061	0.019	0.028	0.016	0.542	2.154	1.450	1.317	0.466
Penns Creek	19	1.06	3.11	1.54	1.76	0.55	0.012	0.106	0.017	0.029	0.025	0.769	2.060	1.236	1.327	0.398
Reedsville	18	1.80	4.39	3.44	3.33	0.62	0.012	0.045	0.019	0.026	0.011	0.886	3.631	3.139	2.846	0.814
Saxton	17	1.57	2.97	2.24	2.25	0.42	0.012	0.065	0.039	0.032	0.017	0.875	2.376	1.715	1.711	0.446
Towanda	29	0.58	1.77	0.96	0.99	0.26	0.012	0.086	0.031	0.033	0.018	0.257	0.928	0.531	0.568	0.172
Wilkes-Barre	19	0.61	1.95	0.92	0.96	0.29	0.012	0.069	0.033	0.038	0.015	0.318	0.773	0.510	0.526	0.115
Richardsmere	16	3.93	6.95	5.03	5.44	1.04	0.012	0.146	0.031	0.043	0.040	2.786	6.823	4.436	4.759	1.233

Various Dissolved Nitrogen Species Summary Statistics of Samples Collected During 2017, in mg/L

Station	# Samples Collected	Dissolved Nitrogen					Dissolved Ammonium					Dissolved Nitrate plus Nitrite				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Chemung	18	0.69	1.40	0.98	0.98	0.18	0.010	0.050	0.033	0.032	0.015	0.369	1.050	0.652	0.660	0.189
Cohocton	21	0.95	1.97	1.54	1.51	0.31	0.009	0.061	0.025	0.030	0.020	0.546	1.600	1.120	1.134	0.308
Conklin	20	0.37	1.10	0.70	0.71	0.17	0.009	0.050	0.024	0.029	0.017	0.238	0.689	0.400	0.446	0.128
Smithboro	20	0.56	1.19	0.86	0.85	0.16	0.014	0.200	0.042	0.049	0.039	0.380	0.815	0.513	0.559	0.141
Unadilla	17	0.67	1.23	1.01	0.97	0.18	0.010	0.050	0.024	0.030	0.017	0.440	1.000	0.615	0.703	0.196
Castanea	17	0.78	1.82	1.35	1.33	0.27	0.012	0.063	0.029	0.030	0.016	0.600	1.462	1.089	1.068	0.251
Conestoga	30	3.45	7.12	5.74	5.61	0.93	0.016	0.323	0.039	0.081	0.086	2.841	6.718	5.366	5.093	0.990
Dalmatia	17	1.68	9.31	5.94	5.47	2.12	0.012	0.076	0.024	0.028	0.019	1.324	8.879	5.614	5.135	2.121
Danville	27	0.46	1.19	0.75	0.78	0.19	0.012	0.066	0.027	0.030	0.017	0.209	0.936	0.541	0.566	0.168
Dromgold	18	1.17	3.07	1.98	2.00	0.52	0.012	0.078	0.022	0.028	0.019	1.025	2.544	1.831	1.722	0.450
Hershey	17	1.91	4.44	3.34	3.25	0.64	0.012	0.154	0.035	0.044	0.034	1.366	3.801	2.926	2.830	0.686
Hogestown	18	2.56	4.53	3.43	3.49	0.60	0.017	0.067	0.026	0.034	0.018	2.033	4.290	3.179	3.125	0.630
Jersey Shore	18	0.34	0.85	0.57	0.57	0.13	0.012	0.037	0.015	0.017	0.008	0.249	0.564	0.460	0.425	0.097
Karthaus	16	0.26	0.81	0.59	0.55	0.19	0.012	0.070	0.020	0.026	0.016	0.134	0.708	0.460	0.432	0.170
Lewisburg	27	0.43	0.95	0.64	0.66	0.15	0.012	0.057	0.017	0.020	0.011	0.298	0.740	0.549	0.528	0.114
Manchester	18	0.77	3.37	2.04	2.23	0.74	0.015	0.138	0.046	0.052	0.037	0.410	2.972	1.577	1.733	0.675
Marietta	30	0.68	1.76	1.01	1.04	0.25	0.012	0.067	0.025	0.027	0.015	0.462	1.490	0.836	0.829	0.233
Martic Forge	17	4.99	7.28	6.30	6.22	0.73	0.013	0.365	0.029	0.067	0.093	3.366	7.317	5.658	5.679	1.029
Newport	31	1.05	2.34	1.41	1.50	0.32	0.012	0.053	0.017	0.022	0.011	0.863	1.837	1.206	1.256	0.269
Paxton	18	0.75	2.50	1.59	1.58	0.48	0.012	0.048	0.019	0.023	0.011	0.540	2.134	1.415	1.309	0.461
Penns Creek	19	1.02	2.63	1.52	1.62	0.48	0.012	0.098	0.017	0.026	0.024	0.780	2.059	1.246	1.329	0.395
Reedsville	18	1.32	4.15	3.46	3.15	0.79	0.012	0.043	0.017	0.022	0.010	0.878	3.656	3.117	2.844	0.818
Saxton	17	1.30	2.50	2.03	1.99	0.43	0.012	0.063	0.027	0.028	0.015	0.866	2.378	1.721	1.709	0.447
Towanda	29	0.51	1.23	0.77	0.82	0.21	0.012	0.084	0.025	0.030	0.018	0.256	0.925	0.531	0.567	0.169
Wilkes-Barre	19	0.57	0.95	0.74	0.75	0.11	0.012	0.057	0.032	0.032	0.011	0.317	0.784	0.504	0.522	0.116
Richardsmere	16	3.76	6.99	5.01	5.33	1.07	0.012	0.136	0.031	0.044	0.040	2.741	6.969	4.411	4.791	1.284

Various Phosphorus Species Summary Statistics of Samples Collected During 2017, in mg/L

Station	# Samples Collected	Total Phosphorus					Dissolved Phosphorus					Orthophosphorus				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Chemung	18	0.015	0.449	0.033	0.065	0.101	0.005	0.061	0.015	0.020	0.013	0.002	0.026	0.010	0.012	0.006
Cohocton	21	0.007	0.288	0.024	0.057	0.078	0.003	0.317	0.009	0.029	0.068	0.002	0.299	0.006	0.022	0.064
Conklin	20	0.008	0.272	0.032	0.066	0.075	0.005	0.072	0.009	0.016	0.019	0.003	0.013	0.006	0.007	0.003
Smithboro	20	0.018	0.203	0.045	0.071	0.059	0.009	0.054	0.016	0.018	0.011	0.004	0.022	0.010	0.011	0.006
Unadilla	17	0.008	0.240	0.020	0.049	0.064	0.003	0.063	0.007	0.012	0.014	0.002	0.014	0.006	0.007	0.004
Castanea	17	0.016	0.112	0.030	0.037	0.023	0.006	0.033	0.014	0.017	0.008	0.006	0.040	0.011	0.014	0.010
Conestoga	30	0.070	0.974	0.155	0.206	0.176	0.050	0.280	0.123	0.130	0.059	0.036	0.244	0.106	0.116	0.053
Dalmatia	17	0.010	0.297	0.055	0.097	0.097	0.006	0.057	0.028	0.030	0.016	0.004	0.049	0.023	0.026	0.014
Danville	27	0.017	0.761	0.051	0.120	0.162	0.005	0.124	0.014	0.018	0.022	0.003	0.032	0.009	0.010	0.006
Dromgold	18	0.007	0.303	0.040	0.073	0.077	0.005	0.287	0.023	0.042	0.064	0.004	0.208	0.025	0.036	0.046
Hershey	17	0.011	0.468	0.053	0.103	0.116	0.007	0.086	0.032	0.035	0.023	0.005	0.069	0.024	0.029	0.019
Hogestown	18	0.008	0.166	0.041	0.058	0.048	0.005	0.047	0.021	0.023	0.012	0.004	0.053	0.016	0.020	0.014
Jersey Shore	18	0.005	0.067	0.016	0.028	0.023	0.004	0.013	0.007	0.007	0.003	0.002	0.063	0.004	0.011	0.016
Karthaus	16	0.005	0.065	0.012	0.024	0.023	0.004	0.017	0.005	0.006	0.003	0.002	0.052	0.004	0.010	0.015
Lewisburg	27	0.005	0.410	0.014	0.041	0.080	0.004	0.040	0.007	0.010	0.008	0.002	0.072	0.006	0.011	0.015
Manchester	18	0.018	0.528	0.123	0.181	0.149	0.013	0.245	0.105	0.115	0.063	0.007	0.219	0.091	0.097	0.058
Marietta	30	0.010	0.219	0.039	0.064	0.053	0.005	0.100	0.014	0.020	0.019	0.002	0.055	0.014	0.018	0.014
Martic Forge	17	0.024	0.923	0.151	0.248	0.242	0.013	0.606	0.113	0.161	0.154	0.010	0.461	0.098	0.134	0.121
Newport	31	0.008	0.181	0.033	0.048	0.043	0.005	0.177	0.014	0.021	0.030	0.002	0.088	0.011	0.020	0.021
Paxton	18	0.007	0.253	0.024	0.045	0.059	0.004	0.051	0.015	0.019	0.014	0.002	0.052	0.016	0.017	0.014
Penns Creek	19	0.011	0.446	0.036	0.078	0.115	0.004	0.280	0.016	0.042	0.069	0.003	0.203	0.013	0.034	0.051
Reedsville	18	0.019	0.235	0.053	0.075	0.066	0.012	0.067	0.029	0.033	0.017	0.007	0.098	0.026	0.031	0.022
Saxton	17	0.006	0.238	0.030	0.072	0.070	0.005	0.056	0.018	0.021	0.013	0.004	0.053	0.015	0.017	0.013
Towanda	29	0.015	2.716	0.047	0.199	0.511	0.005	0.231	0.016	0.028	0.045	0.004	0.042	0.012	0.013	0.010
Wilkes-Barre	19	0.015	0.666	0.071	0.136	0.186	0.007	0.092	0.015	0.025	0.024	0.004	0.043	0.009	0.013	0.011
Richardsmere	16	0.014	0.345	0.073	0.097	0.091	0.006	0.368	0.046	0.065	0.083	0.002	0.137	0.035	0.038	0.032

Flow, Turbidity, Total Suspended Solids, and Total Organic Carbon Summary Statistics of Samples Collected During 2017, in mg/L

Station	# Samples Collected	Flow					Turbidity					Total Suspended Solids					Total Organic Carbon				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Chemung	18	386	22,000	2,655	6,367	6,919	0.9	392.6	8.9	65.2	109.5	1.1	711.0	14.6	86.5	177.7	0.50	8.80	3.00	3.72	2.02
Cohocton	21	70	12,400	650	1,659	2,745	0.3	169.1	3.6	36.8	54.1	1.6	154.0	6.2	25.6	46.0	0.50	8.80	3.50	4.15	1.97
Conklin	20	467	31,000	4,820	8,465	8,581	2.8	127.5	11.5	36.1	40.4	1.1	321.0	20.4	58.9	82.2	1.00	6.10	2.30	3.03	1.57
Smithboro	20	1,110	62,100	9,465	18,526	18,353	2.3	1088.0	20.2	156.5	311.5	1.1	281.0	22.6	62.1	78.3	1.00	6.10	2.85	3.24	1.33
Unadilla	17	128	8,540	971	1,963	2,462	3.2	137.2	8.9	39.1	47.8	1.5	239.0	10.2	40.6	66.2	1.00	7.70	2.20	2.73	1.68
Castanea	17	274	5,398	1,320	1,804	1,551	0.1	27.2	5.3	9.5	8.7	5.0	32.0	5.0	8.4	7.1	1.22	3.78	1.92	2.04	0.66
Conestoga	30	215	3,480	422	610	660	0.1	349.0	10.2	26.8	67.9	5.0	292.0	7.0	25.3	60.2	2.17	5.85	3.04	3.30	0.95
Dalmatia	17	57	1,940	260	398	484	0.7	187.0	7.6	23.2	46.6	5.0	98.0	5.0	17.4	27.8	1.44	4.70	2.13	2.49	1.04
Danville	27	2,110	113,000	16,600	30,611	29,452	0.3	818.0	12.3	78.5	170.4	5.0	656.0	8.0	61.0	130.6	1.83	6.66	2.78	3.01	1.01
Dromgold	18	74	3,960	373	671	909	0.7	93.2	5.3	18.5	27.7	5.0	36.0	5.0	10.7	11.3	1.29	8.49	2.58	3.25	2.07
Hershey	17	305	9,060	1,040	1,787	2,228	0.3	241.0	8.8	34.2	59.5	5.0	250.0	5.0	31.5	59.9	1.46	6.63	2.45	3.06	1.68
Hogestown	18	165	3,150	602	882	775	0.7	155.0	4.6	27.2	40.9	5.0	148.0	6.0	21.7	36.4	1.62	5.58	2.63	3.10	1.25
Jersey Shore	18	1,410	48,900	9,830	13,689	12,364	0.1	60.7	4.8	15.7	18.7	5.0	42.0	5.0	13.4	12.9	0.93	4.11	1.64	1.85	0.92
Karthus	16	418	11,000	2,570	3,307	2,775	0.1	59.6	7.7	17.5	21.1	5.0	44.0	5.0	13.2	11.8	0.99	4.27	1.41	1.79	0.91
Lewisburg	27	1,250	67,200	13,700	18,913	17,170	0.1	473.0	3.7	37.6	101.6	5.0	378.0	5.0	29.7	73.2	0.95	5.05	1.59	2.00	1.20
Manchester	18	133	7,250	398	1,116	1,773	2.8	225.5	12.6	43.9	69.0	5.0	300.0	5.0	35.6	83.6	2.55	9.22	4.42	5.24	2.16
Marietta	30	6,900	189,000	43,200	60,348	54,151	1.0	138.1	10.7	33.6	41.5	5.0	136.0	9.0	32.3	40.5	1.82	5.00	2.75	2.85	0.79
Martic Forge	17	67	350	99	126	71	3.5	184.0	11.3	40.4	59.4	5.0	224.0	12.0	34.8	64.7	1.29	8.75	2.38	3.09	1.96
Newport	31	900	41,500	3,680	7,048	8,841	0.1	184.0	7.3	24.2	46.2	5.0	180.0	6.0	18.2	37.5	1.78	7.59	2.45	2.84	1.11
Paxton	18	3	476	16	42	109	0.1	418.0	2.6	34.4	106.4	5.0	570.0	5.0	37.2	133.0	1.57	7.20	2.75	3.07	1.44
Penns Creek	19	84	4,650	357	950	1,361	0.8	147.8	6.0	22.0	40.2	5.0	100.0	5.0	17.8	24.7	1.63	9.29	2.65	3.39	2.29
Reedsville	18	55	2,270	146	419	645	1.2	168.0	8.0	25.3	45.0	5.0	210.0	5.0	26.1	52.1	1.04	11.76	1.96	2.86	2.52
Saxton	17	153	12,700	1,120	2,368	3,160	1.0	229.0	11.4	53.2	80.7	5.0	260.0	6.0	49.5	80.1	1.48	5.99	2.33	3.25	1.57
Towanda	29	1,260	82,200	14,800	20,726	19,848	1.8	423.0	16.4	78.8	120.6	5.0	282.0	14.0	49.1	70.4	2.09	6.69	2.84	3.07	1.00
Wilkes-Barre	19	2,150	94,000	22,600	33,302	29,375	0.1	1057.0	27.6	95.0	236.7	5.0	754.0	12.0	78.7	170.8	1.84	7.24	2.94	3.26	1.23
Richardsmere	16	62	534	112	161	120	0.9	114.0	6.8	17.4	29.3	5.0	130.0	5.0	18.4	35.8	1.95	8.35	3.09	3.43	1.54