Supplemental materials for "Yu et al. (2011) Spatial patterns of mercury in biota of Adirondack, New York lakes. Ecotoxicology, manuscript submitted". Affiliation for the corresponding author is Department of Civil and Environmental Engineering, Syracuse University and email is xuyu@syr.edu.

Table 1 Mean concentrations of THg and MeHg in water, sediment (dry weight) and zooplankton (dry weight), and mean concentrations of THg in whole body and tail of crayfish, mean and standard deviation of fish (YPE) and loon (FLU) Hg concentrations. ND means no data

Lake name	Water THg/MeHg ng L^{-1}	Sediment THg/MeHg ng g^{-1}	Zooplankt THg/MeHg μg g^{-1}	Crayfish Whole/tail μg g^{-1}	Fish, YPE mean ± std (n) μg g^{-1}	Loon, FLU mean ± std (n) μg g^{-1}
Lake Abanankee	2.706/0	39.11/0.01	0.341/0.016	0.048/0.061	0.087 ± 0.031 (4)	0.509 ± 0.224 (5)
Arbutus Lake	1.576/0.11	5.11/0.11	0.187/ND	0.046/0.053	0.291 ± 0.059 (7)	1.412 ± 0.679 (8)
Beaver Lake	1.751/0.084	2.81/0.01	0.427/0.138	0.045/0.050	0.195 ± 0.110 (9)	1.793 ± 1.111 (16)
Big Moose Lake	1.036/0.03	18.91/0.21	0.247/0.089	0.081/0.118	0.225 ± 0.022 (4)	1.893 ± 0.177 (3)
Canada Lake	1.601/ND	ND/ND	0.007/ND	0.000/0.000	0.101 ± 0.061 (3)	1.986 ± 1.321 (7)
Cedar River Flow	1.468/0.084	3.51/0.01	ND/ND	0.026/0.027	0.174 ± 0.000 (1)	0.685 ± 0.520 (3)
Chaumont Pond	2.214/0.201	ND/ND	ND/ND	ND/ND	0.136 ± 0.045 (10)	1.820 ± 0.440 (3)
Clear Pond	0.096/0.012	ND/ND	0.221/0.041	ND/ND	0.085 ± 0.000 (1)	0.566 ± 0.513 (4)
Cranberry Lake	1.043/0	ND/ND	0.413/0.057	ND/ND	0.140 ± 0.067 (5)	2.070 ± 0.814 (14)
Dry Channel Pond	0.995/0.482	ND/ND	0.136/0.081	ND/ND	0.114 ± 0.039 (6)	2.586 ± 0.633 (2)
Lake Durant	3.413/0.056	9.11/0.11	0.229/0.004	0.042/0.045	0.120 ± 0.047 (6)	1.210 ± 0.679 (9)
East Pine Pond	3.181/0.302	ND/ND	ND/ND	ND/ND	0.137 ± 0.087 (4)	1.527 ± 0.407 (4)
Ferris Lake	1.818/0	27.11/0.31	0.628/ND	0.094/0.165	0.360 ± 0.158 (4)	4.135 ± 1.638 (7)
G Lake	1.036/0.126	ND/ND	0.268/0.173	0.024/0.026	0.234 ± 0.065 (4)	1.268 ± 1.091 (2)
Garnet Lake	1.152/0.063	45.21/0.11	0.310/0.066	0.029/0.031	0.098 ± 0.048 (4)	2.093 ± 0.738 (3)
Henderson Lake	1.54/0.181	64.21/1.31	0.393/0.161	0.069/0.091	0.320 ± 0.043 (3)	2.039 ± 0.681 (3)
Hitchins Pond	1.189/0.038	ND/ND	0.447/0.158	ND/ND	0.140 ± 0.078 (4)	1.329 ± 0.789 (5)
Horseshoe Lake	1.449/0	3.11/0.31	0.098/0.056	0.024/0.025	0.130 ± 0.085 (5)	0.310 ± 0.161 (2)
Kushaqua Lake	2.495/0.118	3.71/0.01	0.156/0.066	0.026/0.028	0.129 ± 0.054 (5)	0.894 ± 0.262 (2)
Limekiln Lake	0.555/0.006	ND/ND	0.226/0.028	ND/ND	0.147 ± 0.065 (4)	0.752 ± 0.475 (10)
Little Clear Pond	2.244/0.01	11.61/0.01	0.142/0.018	0.045/0.050	0.142 ± 0.067 (5)	0.577 ± 0.359 (13)
Little Safford Lake	3.164/0.322	ND/ND	0.520/0.059	ND/ND	0.184 ± 0.025 (3)	0.799 ± 0.714 (5)
Long Pond	4.64/0.321	ND/ND	0.056/0.026	ND/ND	0.117 ± 0.032 (5)	1.471 ± 0.919 (11)
Lows Lake	2.396/0	ND/ND	0.194/0.077	ND/ND	0.110 ± 0.024 (4)	1.589 ± 0.807 (13)
Mason Lake	1.525/0.208	88.11/3.61	0.496/0.054	0.058/0.071	0.083 ± 0.028 (4)	1.382 ± 0.680 (4)
Massawepie Lake	1.114/0.208	ND/ND	0.236/0.043	ND/ND	0.061 ± 0.019 (4)	0.846 ± 0.125 (3)
Middle Saranac Lake	1.395/0.061	2.41/0.41	0.309/0.023	0.021/0.023	0.058 ± 0.018 (4)	0.641 ± 0.480 (7)
Moshier Reservoir	2.113/0.12	ND/ND	0.551/0.193	ND/ND	0.207 ± 0.068 (6)	2.601 ± 0.723 (6)
Moss Lake	ND/ND	1.71/0.01	0.305/0.089	0.043/0.048	0.147 ± 0.115 (4)	1.683 ± 0.644 (9)
Newton Falls	1.645/0.129	14.11/0.21	0.319/0.058	0.061/0.076	0.146 ± 0.045 (5)	1.512 ± 0.406 (4)
Nicks Lake	1.231/0.083	ND/ND	0.203/0.026	ND/ND	0.108 ± 0.022 (7)	1.366 ± 0.985 (7)
North Lake	3.78/0.17	11.41/0.21	0.820/0.217	0.070/0.094	0.337 ± 0.096 (6)	3.134 ± 0.611 (3)
Piercefield Flow	1.87/0.12	ND/ND	0.218/0.010	ND/ND	0.116 ± 0.061 (8)	0.599 ± 0.251 (2)
Piseco Lake-Big Bay	1.057/0.121	8.61/0.11	0.213/ND	0.021/0.023	0.102 ± 0.005 (2)	1.085 ± 0.571 (7)
Private Lake #1	3.018/0.03	18.91/1.81	ND/ND	0.079/0.118	0.104 ± 0.017 (3)	2.570 ± 0.113 (2)
Round Lake	1.891/0.015	22.21/0.21	0.236/0.039	0.054/0.064	0.051 ± 0.025 (2)	1.250 ± 1.018 (2)

Seventh Lake	1.197/0.002	ND/ND	0.176/0.029	ND/ND	0.127 ± 0.039 (4)	0.535 ± 0.151 (5)
South Lake	1.119/0.012	8.31/0.11	0.533/0.094	0.055/0.066	0.321 ± 0.148 (6)	1.117 ± 0.567 (8)
South Pond	1.342/0.038	7.31/0.11	0.337/0.040	0.044/0.049	0.200 ± 0.096 (5)	2.411 ± 0.426 (2)
Spitfire Lake	0.614/0.018	ND/ND	0.173/0.006	ND/ND	0.071 ± 0.047 (4)	0.748 ± 0.543 (6)
Squaw Lake	1.804/0.159	ND/ND	0.245/0.182	ND/ND	0.470 ± 0.070 (2)	1.357 ± 0.965 (4)
Taylor Pond	0.713/0.07	2.71/0.01	0.213/0.017	0.030/0.035	0.114 ± 0.041 (5)	1.252 ± 0.922 (3)
Wolf Pond	0.649/0.03	2.51/0.01	0.271/0.040	0.039/0.043	0.174 ± 0.066 (6)	0.955 ± 0.576 (8)
Woodruff Lake	1.728/0.062	ND/ND	0.655/0.055	0.037/0.040	0.096 ± 0.051 (4)	0.848 ± 0.258 (3)

Quality assurance of sample analysis

An initial calibration was performed before every sample analysis of THg, MeHg and chemical variables. Initial calibration verification (ICV, immediately after initial calibration), initial calibration blank (ICB, after ICV), continuing calibration verification (CCV, after every 10 samples and at the end of the run), continuing calibration blank (CCB, after every CCV), quality control sample (QCS), laboratory control sample (LCS, both QCS and LCS were immediately after initial calibration), method blank (immediately after QCS and every 10 samples), matrix spike/matrix spike duplicate sample (MS/MSD, 1 with every batch of 10 samples), sample duplicate (1 every 20 samples), and ongoing precision and recovery (OPR, 1 at the beginning and end of every batch) sample, were used to maintain the analytical quality assurance and instrument performance and stability.

Recoveries for spikes and standards in determining Hg concentrations were well controlled within method guidelines (75-119% on QCS and LCS, 77-111% on MS/MSD, and 76-121% on OPR for THg and MeHg; 90-110% on CCV for THg; and 85-115% on CCV for MeHg), while the relative percent differences for duplicates were controlled at less than 20%. Field and method blanks were controlled at less than 3 times method detection limit (MDL). MDLs for THg in water, sediment and zooplankton were 0.2 ng

L^{-1}, 1 ng g^{-1}, and 0.033 μg g^{-1}, respectively; while MDLs for MeHg were 0.02 ng L^{-1}, 0.002 ng g^{-1}, and 0.0001 μg g^{-1}, respectively.