

Transparency, geomorphology, and mixing regime explain variability in trends in lake temperature and stratification across northeastern North America (1975 - 2012)

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Supporting Information

Table S2: All Thiel-Sen estimators (Sen's slopes) for 1975 cohort.

Table S2. The magnitude of trends from Sen's Slope analyses for each metric of lake thermal structure for the 1975 cohort for NENA lakes. NA values indicate that criteria for calculating that slope were not satisfied for a metric within a particular lake. Buoyancy frequency is the maximum buoyancy frequency in cph units (cycles per hour).

Lake name	Near-surface temperature (°C year ⁻¹)	Deepwater temperature (°C year ⁻¹)	Mean lake temperature (°C year ⁻¹)	Temperature difference (°C year ⁻¹)	Buoyancy Frequency (CPH year ⁻¹)	Density Gradient (kg m ⁻³ year ⁻¹)
ME.AnnabessacookLake.9961	0.020	0.003	0.020	0.001	0.683	0.0005
ME.AuburnLake.3748	0.100	0.018	0.074	0.018	2.078	0.0011
ME.Bear&LittleBearPds.3624	0.045	-0.081	0.084	-0.023	-0.045	0.0028
ME.BearPond.3420	0.022	0.022	-0.008	0.003	1.630	0.0003
ME.BerryPond.3828	-0.021	-0.118	0.092	-0.067	1.095	0.0025
ME.CarltonPond.5310	0.046	0.029	0.015	0.025	0.510	0.0005
ME.CathanceLake.9661	0.077	-0.050	0.114	0.044	3.728	0.0023
ME.ChickawaukiePond.4822	0.028	-0.032	0.035	0.013	2.683	0.0014
ME.Clary(Pleasant)Lake.5382	0.032	-0.038	0.070	-0.010	2.720	0.0035
ME.CobbosseeconteeLake.5236	0.045	0.012	0.022	-0.006	0.852	0.0004
ME.CochnewagonPond.3814	0.011	-0.068	0.111	-0.016	3.207	0.0039
ME.Crystal(Anonymous)Lake.3452	0.033	0.016	0.019	0.031	3.582	0.0005
ME.DamariscottaLake.5400	0.110	NA	NA	0.041	0.199	NA
ME.DexterPond.3830	0.002	-0.114	0.140	-0.046	1.640	0.0045
ME.DuckpuddlePond.5702	0.059	-0.013	0.069	0.015	0.202	0.0039
ME.EastPond.5349	0.061	0.012	0.031	0.038	2.383	0.0021
ME.EmbdenPond.78	0.039	NA	NA	-0.036	4.126	NA
ME.GreatPond.5274	0.117	0.134	0.050	0.107	1.149	0.0015
ME.GreenLake.4294	0.045	NA	NA	0.009	0.944	NA
ME.HaleyPond.3534	0.116	0.070	0.043	0.088	3.561	0.0024
ME.HancockPond.3132	0.100	0.040	0.065	0.002	2.947	0.0016
ME.HighlandLake.3454	0.010	-0.011	0.045	-0.024	-0.928	0.0006
ME.KeysPond.3232	0.088	-0.005	0.100	-0.036	2.268	0.0024
ME.KezarLake.97	0.141	NA	NA	0.019	2.421	NA
ME.LittleCobbosseecontee.8065	0.080	0.028	0.043	0.027	2.158	0.0025
ME.LittleOssipeeLake.5024	0.075	NA	NA	-0.017	3.580	NA
ME.LittlePennesseewassee.367	0.068	-0.017	0.040	-0.008	2.174	0.0021
ME.LittleSebagoLake.3714	0.100	0.024	0.123	0.007	2.075	0.0024
ME.LongLake.5780	0.061	-0.046	0.109	-0.007	2.023	0.0017

ME.LongPond.5272	0.114	0.064	0.062	0.074	1.772	0.0014
ME.LowerNarrowsPond.103	0.025	0.008	0.019	0.000	-0.547	0.0002
ME.MadawaskaLake.1802	0.025	-0.088	0.065	-0.014	2.499	0.0016
ME.MaranacookLake.5312	0.071	0.014	0.036	0.015	0.599	0.0003
ME.McGrathPond.5348	NA	0.066	NA	NA	NA	NA
ME.MessalonskeeLake.5280	0.086	-0.025	0.174	0.039	2.211	0.0026
ME.MoosePond.2590	0.104	0.022	0.085	NA	NA	0.0017
ME.MoosePond.3134	0.033	-0.008	0.064	-0.031	2.508	0.0010
ME.MousamLake.3838	0.069	0.014	0.055	0.017	1.737	0.0008
ME.NorthLake(LittlePond).5344	0.039	0.050	-0.003	0.048	1.467	-0.0001
ME.NorthPond.3500	0.047	NA	NA	0.045	-0.885	NA
ME.PeabodyPond.3374	0.112	0.020	0.072	0.023	1.675	0.0018
ME.PemaquidPond.5704	0.050	-0.006	0.073	-0.016	-0.497	0.0011
ME.PennesseewasseeLake.3434	0.080	-0.014	0.140	0.042	1.811	0.0027
ME.PleasantLake.3446	0.160	0.000	0.172	0.054	5.347	0.0026
ME.PleasantPond.3822	0.068	0.001	0.087	0.003	1.200	0.0011
ME.SabattusPond.3796	0.029	0.045	-0.009	0.037	0.729	-0.0006
ME.SalmonPond(EllisPond).5352	0.077	0.027	0.040	0.038	1.582	0.0012
ME.SandPond(TacomaLakes).5238	0.053	-0.002	0.035	0.001	0.879	0.0010
ME.SandPond.3432	0.086	NA	NA	NA	NA	NA
ME.SebasticookLake.2264	0.052	0.003	0.056	0.021	-0.894	0.0010
ME.SquarePond.3916	0.065	-0.094	0.152	0.007	2.795	0.0040
ME.StGeorgeLake.9971	0.117	0.086	0.035	0.072	0.207	0.0016
ME.SwanLake(GoosePond).5492	0.115	0.044	0.074	0.066	3.460	0.0010
ME.TaylorPond.3750	0.062	-0.091	0.190	-0.031	1.960	0.0032
ME.ThompsonLake(TheHeath).3444	0.044	NA	NA	0.024	2.858	NA
ME.ThreemilePond.5416	0.040	0.003	0.042	0.017	1.068	0.0014
ME.TogusPond.9931	0.109	0.009	0.100	0.034	2.058	0.0020
ME.ToothakerPond.2336	0.075	NA	NA	0.080	-1.199	NA
ME.Torsey(Greeley)Lake.5307	0.062	0.000	0.033	-0.006	2.027	0.0013
ME.TrickyPond.3382	0.056	-0.030	0.097	-0.001	2.415	0.0011
ME.TrippPond.3758	-0.033	-0.038	0.012	-0.008	-2.628	0.0000
ME.UnityPond(WinnecookLake).5172	0.041	-0.033	0.081	NA	NA	0.0022
ME.UpperPleasant(Mud)Pond.5254	0.029	-0.045	0.073	0.001	0.754	0.0027
ME.UpperRangePond.3688	0.082	0.053	0.043	NA	NA	0.0019
ME.Webb(Weld)Lake.3672	0.077	0.010	0.065	0.004	1.031	0.0015

ME.WebberPond.5408	0.029	-0.035	0.031	-0.017	1.767	0.0004
ME.WilsonPond.3832	0.028	0.000	0.038	-0.016	1.912	0.0009
ME.WoodsPond.3456	0.081	-0.114	0.207	0.010	3.810	0.0080
ME.WorthleyPond.3594	0.071	0.013	0.066	NA	NA	0.0014
NY.ADK.EastLake	0.048	-0.060	0.111	NA	NA	0.0016
NY.ADK.FirstBisbyLake	0.099	-0.045	0.150	-0.044	3.631	0.0016
NY.ADK.HonnedagaLake	0.075	-0.135	0.220	-0.096	3.680	0.0012
NY.ADK.LittleMooseLake	0.081	-0.027	0.111	-0.018	2.104	0.0010
NY.ADK.PantherLake	0.079	0.012	0.022	0.039	4.606	0.0012
NY.LakeGeorge	0.063	NA	NA	0.014	0.671	NA
NY.Oneida	0.034	0.048	-0.017	0.034	-0.799	-0.0003
ON.BlueChalk	-0.026	-0.009	-0.022	-0.025	1.132	-0.0003
ON.Chub	0.020	0.008	0.016	-0.004	1.110	0.0002
ON.Crosson	-0.057	-0.006	-0.050	-0.023	1.903	-0.0007
ON.Dickie	-0.057	-0.016	-0.051	-0.026	0.830	-0.0016
ON.Harp	-0.009	0.008	-0.020	0.002	-0.364	-0.0001
ON.Heney	-0.019	-0.039	0.009	-0.037	2.250	0.0007
ON.Plastic	0.021	0.011	0.000	0.012	1.008	0.0003
ON.RedChalkMain	-0.028	-0.008	-0.020	-0.022	0.115	-0.0002
PA.Wallenpaupack	0.000	-0.060	0.063	-0.013	0.397	0.0007