

## THE DESIGNATED LAKES



**Aerial view of Lake 302, the site of eutrophication experiments in the 1970's and acidification experiments in the 1980's and 1990's. All ELA systems are permitted to return to natural conditions following experimentation.**

As noted elsewhere, 58 lakes of the hundreds located within a 15 km radius of the field station have been specifically reserved for experimental studies. These designated lakes range in surface area from 1 to 84.2 hectares, and in maximum depth from 1 to 32.7 metres. Lake drainage orders range from 1st to 52nd, and watershed areas range from 20 to 12,000 hectares. Water renewal or flushing times can vary greatly from year to year (coefficients of variation of 32% to 80% for between 7 and 18 years of record), depending on precipitation. However, on average, the water renewal times ( $\tau$ ) for these lakes range from  $<0.1$  to  $>10$  years.

Any unknown stresses on these systems, such as angling, can confound interpretation of our research results. As a result, [20 of these lakes are formally closed to angling.](#)

**Map of the Experimental Lakes Area. Lakes are indicated by their numbers. The 58 designated research lakes are shaded a darker blue.**

A full-sized (5 MB), Adobe PDF version of the same ELA map, with greater detail, also can be downloaded. Simply click the button below.

The following table provides a brief summary of the designated ELA research lakes and their current status. Click [HERE](#) to access a summary of whole-ecosystem experimental studies conducted in these lake systems.

**Summary of Physical Attributes and Current Status of the 58 Designated Research Lakes.**

<b>LAKE</b>	<b>A0</b>	<b>ZMAX</b>	<b>AD</b>	<b>ORDER</b>	<b>WATERSHED HISTORY</b>	<b>RESEARCH STATUS (2007)</b>
93	5.5	8.2	60	1	Forested	Dormant
106	3.7	2.4	121	1	Logged (~1979)	Never sampled
109	14.9	10.1	42	1	Forested	Dormant
110	5.3	13.0	34	1	Forested	Dormant
111	9.6	35.1	339	3	Forested	Dormant
114	12.1	5.0	58	1	Logged (~1974)	LTER reference, LOSR
115	6.5	1.5	119	1	Logged (~1974)	Dormant
149	26.9	4.1	94	1	Logged (1970's)	Dormant
164	20.3	7.1	4984	32	Logged (1970's)	Dormant
165	18.4	4.6	4802	31	Logged (1970's)	Dormant
191	19.4	~4.2	338	2	Logged (1970's)	Dormant
220	1.6	4.3	20	1	Forested	Never sampled
221	9.0	5.7	82	2	Forested	Dormant
222	16.4	5.8	204	1	Forested	Dormant
223	27.3	14.4	260	3	Forested	Dormant
224	25.9	27.4	98	2	Forested	LTER Reference
225	4.0	2.0	31	1	Forested	Dormant
226	16.1	14.7	97	1	Pt. burned (1979)	Dormant, LO
227	5.0	10.0	34	1	Forested	Eutrophication
239	56.1	30.4	391	1	Burned (1974, 1980)	LTER Reference, LOSRMU
240	44.1	13.1	720	6	Burned (1974, 1980)	METAALICUS Reference, O
260	34.0	14.4	166	2	Logged (1975, 1981)	Estrogen addition recovery
261	5.6	9.6	42	1	Forested	Dormant
262	84.2	30.0	1230	12	Forested	Dormant
265	13.1	18.6	71	1	Burned (1978, 2006)	Dormant
302	23.7	13.8	103	1	Forested, metered	LOSRU
303	9.5	2.5	54	1	Burned (1980)	Dormant
304	3.4	6.7	26	1	Burned (1980)	Dormant
305	52.0	32.7	237	2	Forested (Pt. burned, 1974)	Dormant
309	2.6	1.8	560	6	Forested	Dormant
310	49.7	20.0	539	5	Forested	Dormant
373	27.6	21.5	83	1	Pt. logged (~1978)	LTER and Aquaculture reference, O
375	18.9	26.5	231	2	Pt. logged (~1978)	Cage Aquaculture experiment
377	26.7	19.0	2030	7	Pt. logged (~1980)	Dormant
378	24.3	18.1	136	1	Pt. logged (~1980)	Never Sampled
382	36.9	13.3	205	1	Forested	Dormant

383	5.6	9.7	40	1	Burned (1974)	Dormant
385	24.9	14.0	102	1	Burned (1974)	Never sampled
421	17.0	12.0	51	1	Pt. logged (~1979)	Never sampled
428	6.0	12.0	44	1	Pt. logged (~1978)	Never sampled
442	15.2	16.7	184	2	Pt. logged (~1977)	LTER and Estrogen fish reference
470	5.7	1.7	168	4	Burned (1980)	Dormant, O
622	38.6	30.5	419	3	Pt. logged (~1977)	Dormant
623	36.0	21.3	651	5	Pt. logged (~1977)	Dormant
624	~2	~1	753	6	Pt. logged (~1977)	Never sampled
626	27.9	11.2	388	4	Pt. logged (~1978)	Dormant
627	35.5		314	3	Logged (~1978)	Never sampled
629	63.1	18.0	348	2	Pt. logged (~1977)	Dormant
632	~1.2		~50	1	Logged (~1973)	Dormant
635	~60		200	2	Pt. Logged (1970's)	Never sampled
658	8.34	~13	60	1	Pt. burned (1983)	Mercury Loading and Pathways experiment (METAALICUS), LOSR
659	~20	>6	2320	6	Pt. burned (1983)	Never sampled
661	1.6	1.0	125	3	Burned (1980)	Dormant
663	~40		~1500	9	Logged, Burned (1974,1980)	Dormant
664	~60		1800	14	Logged (~1972)	Dormant
938	19.2	5.9	12000	52	Pt. Logged (1970's)	Dormant
979	~3	1.5	850	7	Burned (1974, 1980)	Flooded, OS
980	~60		200	3	Logged, Burned (1974, 1980)	Never sampled

**Notes:**

**A0** = surface area (Ha)  
**ZMAX** = maximum depth (m)  
**AD** = area of drainage basin (Ha)  
**Order** = drainage order of lake (no. of lakes upstream from lake outflow)  
**Forested** = covered with mature natural forest  
**Logged** = clear cut logging in all or part (pt.) of the watershed  
**Burned** = forest fire burned through all or part (pt.) of the watershed  
**Dormant** = was sampled in the past but is not currently being studied  
**Biomonitoring** = biomonitoring lake sampled in DFO's national program  
**L** = lake water level is monitored  
**O** = lake outflow is monitored  
**S** = inflow stream(s) is monitored  
**R** = rain guage in the watershed  
**M** = meteorological station within  
**U** = upland catchments monitored within the watershed