

Chemical of the Week

Lake Lore

Information about the Madison Lakes

from the
Center for Limnology
University of Wisconsin-Madison



A History of Madison's Lakes

Year	Importance
15,000 B.C.	Madison area under 300 m of glacial ice
10,000 B.C.	Glacial ice gone from Madison; Lake Mendota twice present size
3,000 B.C.	American Indian population flourishing
1,000 B.C.	First signs of Indian mounds
1800	First European settler
1836	Madison becomes territorial capital
1848	Wisconsin becomes 30th state; Madison population 300
1849	First UW class for 17 students; Tenney Locks constructed
1855	Beginning of Lake Mendota and Lake Monona ice records
1877	First limnological studies (E.A. Birge)
1882	First noxious algae growth documented (Madison population 12,000)
1890	Carp introduced
1900	First limnology class taught at University by C. Juday
1920	Madison population 35,000
1928	Sewage diverted around Lake Monona
1940	Madison population 67,000
1958	Madison sewage diverted around Lakes Monona, Waubesa & Kegonsa
1960's	Eurasian water milfoil invades Madison Lakes
1963	Limnology Lab constructed with funds obtained by A.D. Hasler from the National Science Foundation
1971	Waunakee & DeForest sewage diverted around Lake Mendota
1985	Madison population 173,000
1987	Lake Mendota Biotic Manipulation Program begins
1994	Lake Mendota Priority Lake Project begins

Some Statistics about Madison's Lakes

Sizes of the Lakes

		Mendota	Monona	Waubesa	Kegonsa	Wingra
Area	(km ²)	39.8	13.3	8.4	13.0	1.3
	(acres)	9830	3290	2070	3210	320
Shoreline	(km)	35.2	21.2	15.1	15.4	5.9
Length	(miles)	21.9	13.2	9.4	9.6	3.7
Volume	(10 ⁶ m ³)	505	110	40	67	6
	(10 ⁹ gallons)	130	29	11	18	1.6
Maximum	(m)	25.3	22.6	11.6	9.8	4.3
Depth	(ft.)	83	74	38	32	14
Mean Depth	(m)	12.7	8.3	4.7	5.1	2.7
	(ft)	42	27	15	17	9
Direct Drainage	(km ²)	562	105	113	141	14
	(acres)	139000	25900	27900	34800	3460

Water Temperatures for Lake Mendota

Surface Maximum:	34.3°C (94°F)
0 to 7 m (0 to 23 ft):	Average July-23.1°C (74°F)
0 to 7 m (0 to 23 ft):	Maximum July-28.4°C (83°F)
14 to 18 m (46 to 59 ft):	Average July-12.6°C (55°F)

Thickest Annual Ice Cover for Lake Mendota

Average	49 cm (19 in)
Maximum	75 cm (30 in)
Minimum	30 cm (12 in)

Ice Cover

	Mendota	Monona	Wingra
Average days/yr	105	105	120
Maximum	161	160	164
Minimum	47	47	70
Average Freeze Date	20 Dec	15 Dec	27 Nov
Latest	30 Jan 1932	30 Jan 1932	29 Dec 1877
Earliest	23 Nov 1880	22 Nov 1880	2 Nov 1913
Average Opening Date	4 Apr	31 Mar	29 Mar
Latest	6 May 1857	4 May 1857	29 Apr 1881
Earliest	27 Feb 1998	27 Feb 1998	26 Feb 1998

Sources of More Information

- Beckel, A. 1987. "Breaking New Waters: A Century of Limnology at the University of Wisconsin," *Transactions of the Wisconsin Academy of Sciences, Arts and Letters*; available from the Center for Limnology, UW-Madison.
- Brock, T.D. 1985. *A Eutrophic Lake, Lake Mendota, Wisconsin*, Springer-Verlag, New York.
- Frey, D.G. 1963. *Limnology in North America*, University of Wisconsin Press.
- *Madison Area Lakes Map, #84-1*, featuring Monona, Mendota, Wingra and showing depths and boat docks, available from Wisconsin Geological and Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705; phone: 608-262-1705.