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THE PROGRESS OF LAKE MAPPING IN MICHIGAN, 1943

by

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Almost thirteen years have passed since the Institute for Fisheries Research made its first regular lake surveys. During the summers of 1930-32 approximately 100 lakes were mapped and given a fisheries inventory. The early mapping work however, was mostly of poor quality. Outlines of the lakes were secured from either county or land economic survey maps and the location of soundings was mostly by guess. The resurvey of some of these lakes has convinced us that all need to be remapped as soon as personnel and equipment are available.

The advent of C. C. C. labor in 1935 and its aid through 1941 made possible a rather extensive lake mapping program both by the state and the U. S. Forest Service. Most of the outline--contour maps in use at the present time were made by the C. C. C. The quality of these maps is variable. Many of them are entirely adequate but some are not and will have to be done over. On the whole the U. S. Forest Service maps are of poorer quality than those originating in state C. C. C. camps. The quality of maps made by all C. C. C. organizations were undoubtedly commensurate with the ability of the leader who supervised the work, and it is no secret that much of the help was either inexperienced or incompetent.

Our present map list of approximately 1500 lakes includes all maps on hand—both good and bad. We estimate that 300-400 of the lakes listed should be remapped as soon as possible.

The following table gives a summary of the number and size of lakes mapped and not mapped by counties. It also shows the status of the fisheries inventory.

County	Total Number of Lakes	Total Area of Lakes (acres)	Number of Lakes mapped	Area of Lakes Mapped (acres)	Number of Lakes Not Mapped	Area of Lakes Not Mapped (acres)	Number of Lakes Inventoried	Area of Lakes Inventoried (acres)
Alcona	91	12260	11	9322	81	2938	9	9119
Alger	253	12148	116	7208	137	4940	7	517
Allegan	125	8063	4	296	121	7777	4	296
Alpena	34	9774	1	5650	33	4124	1	5650
Antrim	76	33735	35	31960	41	1775	11	30701
Arenac	1	50	0	0	1	50	0	0
Baraga	206	8211	7	1082	199	7129	7	1082
Barry	327	11939	11	1305	316	10634	8	668
Bay	2	182	0	0	2	182	0	0
Benzie	59	16635	3	12315	56	4320	3	12315
Berrien	86	3215	1	860	85	2355	0	0
Branch	78	7767	12	3620	66	4147	10	1320
Calhoun	138	5056	2	700	136	4356	2	700
Cass	143	10128	6	731	137	9397	6	731
Charlevoix	41	22470	17	6163	24	16307	3	638
Cheboygan	148	50838	32	39253	116	11585	3	317
Chippewa	169	7997	35	2303	134	5694	0	0
Clare	203	4371	23	2016	180	2355	2	439
Clinton	48	752	3	214	45	538	3	214
Crawford	55	3347	32	2773	23	574	1	13
Delta	148	5404	62	3873	86	1631	4	830
Dickinson	125	4707	5	1186	120	3521	1	750
Eaton	34	755	0	0	34	755	0	0
Emmet	24	7491	6	5911	18	1580	0	0
Genesee	94	4829	3	663	91	4166	1	545
Gladwin	44	4934	10	979	34	3955	3	22
Gogebic	488	35959	77	22798	411	13161	9	17812
Grand Traverse	186	14730	9	4024	177	10706	3	3294
Gratiot	6	693	0	0	6	693	0	0
Hillsdale	112	3508	25	1688	87	1820	18	1459
Houghton	197	16653	19	1999	176	14654	5	732
Huron	3	1430	0	0	3	1430	0	0
Ingham	29	987	1	452	28	535	1	452
Ionia	49	2237	2	390	47	1847	1	317
Iosco	50	9751	2	1329	48	8422	2	1329
Iron	528	19448	53	8748	475	10700	13	3670
Isabella	55	1977	1	294	54	1683	1	294
Jackson	188	10307	7	587	181	9721	4	224
Kalamazoo	154	9880	4	3205	150	6675	2	2035
Kalkaska	126	4061	81	4029	45	32	68	3639
Kent	270	7341	43	2728	227	4613	5	488
Keweenaw	125	14266	7	3782	118	10484	7	3782
Lake	155	4061	31	2337	124	1724	4	998

(Continued)

(Continued)

County	Total Number	Total Area	Number	Area of Lakes	Number	Area of Lakes	Number	Area of
	of Lakes	of Lakes	of Lakes	Mapped	of Lakes	Not Mapped	of Lakes	Lakes
		(acres)	Mapped	(acres)	Not Mapped	(acres)	Inventoried	Inventoried
Lapeer	234	4327	2	51	232	4276	2	(acres) 51
Leelanau	43	16532	0	0	43	16532	0	0
Lenawee	86	5463	1	440	85	5023	1	440
Livingston	246	8306	84	3322	162	4984	5	705
Luce	571	10800	31	3406	540	7394	4	2636
Mackinac	187	29655	32	24918	155	4737	3	18360
Macomb	16	343	0	0	16	343	0	0
Manistee	87	6782	10	2279	77	4503	6	2093
Marquette	835	30168	35	8835	800	21333	20	7429
Mason	71	9218	17	7370	54	1848	6	6268
Mecosta	135	5233	18	1695	117	3538	14	1059
Menominee	50	2449	10	519	40	1930	9	479
Midland	1	2300	0	0	1	2300	0	0
Missaukee	22	3670	2	2141	21	1529	1	1990
Monroe	3	219	0	0	3	219	0	0
Montcalm	242	7320	5	1376	237	5944	4	1221
Montmorency	126	7240	27	4923	99	2317	12	1710
Muskegon	78	10320	0	0	78	10320	0	0
Newaygo	234	11004	26	2742	208	8262	3	391
Oakland	447	19216	22	2533	425	16583	3	871
Oceana	98	3628	1	271	97	3357	0	0
Ogemaw	179	5816	71	4348	108	1466	19	1477
Ontonagon	81	1931	6	346	75	1585	4	295
Osceola	123	2855	5	600	118	2255	4	450
Oscoda	128	3519	32	1481	96	2028	6	410
Otsego	180	6859	36	3947	144	2912	12	516
Ottawa	24	3475	2	1863	22	1612	1	1780
Presque Isle	91	9548	40	2859	51	6689	0	0
Roscommon	93	33866	6	32400	87	1466	1	9600
Saginaw	0	0	0	0	0	0	0	0
St. Clair	2	32	0	0	2	32	0	0
St. Joseph	100	7665	5	1161	95	6504	4	331
Sanilac	0	0	0	0	0	0	0	0
Schoolcraft	340	20861	100	18859	240	2002	4	9455
Shiawassee	43	449	1	8	42	441	1	8
Tuscola	21	426	0	0	21	426	0	0
Van Buren	129	6170	13	1668	116	4502	3	442
Washtenaw	156	7881	88	6957	68	924	22	4194
Wayne	13	1983	0	0	13	1983	2	1650
Wexford	49	6435	8	5836	41	599	5	3976
	<u>11,037</u>	<u>728,311</u>	<u>1,535</u>	<u>347,927</u>	<u>9502</u>	<u>379,753</u>	<u>413</u>	<u>187,669</u>

In the two counties, Ogemaw and Washtenaw, where the mapping and checking of all lakes is virtually complete, it was found that approximately 40% of the total number and 75% of the total area of all lakes were either public or allowed public access. Assuming that the rest of Michigan has about the same ratio of public and private waters, there remains to be mapped about 3800 public lakes having an area of approximately 285,000 acres.

One winter mapping party can complete a 100 acre lake in two days and while nearly twice this acreage can be covered in one day when larger lakes are being mapped it is suspected that the average will not be more than this. Also most of the larger lakes are already mapped. The mapping left to do, not counting the 300-400 lakes which should be remapped, would take one party approximately 5700 days or about 100 winter seasons (10 week average) to complete the job.

Since many of the lakes in the northern part of Michigan are not all accessible during the period of ice cover, they must be mapped during the summer. Summer mapping requires more time but will be absolutely necessary for certain waters.

It is believed that 10 qualified parties working winter and summer for 5 years could complete the mapping of all public lakes and check all private lakes in the state.

INSTITUTE FOR FISHERIES RESEARCH

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