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**BOATING CAPACITY ANALYSIS
JUSTIFICATION BRIEF**

AT

**ELEPHANT LAKE COTTAGES
HARCOURT, DYSART ET AL.
NORTH AND SOUTH PHASES**

PREPARED FOR:

2463756 Ontario Inc.

July 9th, 2024

Background

King EPCM was retained by the Client (2463756 Ontario Inc.) to conduct engineering investigations and services for the property located along the shoreline of Elephant Lake and Benoir Lake in the County of Haliburton, Municipality of Dysart et al. (the Site), as part of cottage permit submissions. Abovementioned property is approximately 2000 Acres in size, divided to two different Blocks, one of them located east of Benoir Lake, behind the Benoir Lake Rd. (North phase, Lot #1 – 25) and the other, located north of the Elephant lake (South phase, Lot #26 - 63), near the shoreline. The following is a review of a Boating Capacity Analysis as part of full submissions.

Dysart et al Official Plan Requirements

Based on the Municipality of Dysart et al Official Plan, various segments describes the requirement for a Boating Capacity Study, such as Section 5.2.3 Surface Capacity for Recreation. This requirement is primarily based on the baseline consideration that each waterbody can reasonably accommodate a certain number of recreational users, and that beyond which, there may be various different types of negative consequences. The Official Plan has set that recreational density at 1 waterfront shoreline private lot per 1.6 Hectares of lake surface area.

Where new lot creation is being proposed for a waterfront property, Section 17.5.4 of the Municipality of Dysart et al Official Plan describes the terms of reference for what a full and detailed Boating Study will require, specifically:

A boating capacity study will demonstrate to Council's satisfaction that the boating activity generated by the proposed development will not unduly add to existing aquatic recreational stresses, conflicts, and hazards, and that any impacts can be mitigated so that the lake's recreational attractiveness will be maintained or enhanced. A boating study will, as a minimum requirement, include:

- *an inventory of the existing development, including public access points, on the lake;*
- *an inventory of all proposed development on the lake; and*
- *a survey of all boating activity. As a minimum requirement, the survey:*
 - *is to include all motorized and non-motorized boats;*
 - *is to include the July 1st and the August 1st long weekends;*
 - *is to be conducted over a continuous eight hour period beginning at 9:00 a.m.; and*
 - *is to identify and tabulate the type of watercraft, and map the location of the activity.*

Inventory of Existing Developments

There are two primary waterbodies that are reviewed within this report:

- Benoir Lake
- Elephant Lake

Based on “Appendix B – Summary Recreation Carrying Capacity, Key Lakes, Jan 2020” of the Municipality of Dysart et al Official Plan, both of the above noted waterbodies are indexed. As discussed in Official Plan Section 5.2.3, the recommended carrying capacity is 1 waterfront shoreline private lot per 1.6 Hectares of lake surface area.

Benoir Lake:

- Perimeter – 13,513m
- Area – 105.73 Ha
- Number of Properties (waterfront) – 189
- Lake Recreational Capacity – 66
- This lake is considered as “over recreational carrying capacity”

Elephant Lake:

- Perimeter – 37,496m
- Area – 1070.55 Ha
- Number of Properties (waterfront) – 122
- Lake Recreational Capacity – 669
- This lake is considered as “not over recreational carrying capacity”

Proposed Developments – North Phase – Benoir Lake

For the North phase, Lot #1 – 25, each proposed individual Lot is averaging 60.0m in public road frontage (along Benoir Lake Rd), with an average of 1.67 Hectares, and does not have private and direct shoreline access.

As per the Official Plan Section 9.1 – Waterfront Residential Areas, nominal waterfront lots have their frontage counted based on the exposed shoreline length. These proposed North phase Lots do not have direct shoreline access, and are considered as “Backlot” based on Section 1.7 – Definitions, of the Official Plan.

Based on the definition of Section 5.2.3, Section 17.5.4, and Appendix B, “private lots” are only accounted for if it has direct and private waterfront access, in other words, direct shoreline frontage. The proposed North phase Lots do not have shoreline access, and thus future residents and tenants would be tasked with procuring their own access to any waterbody of their choice. In this case, the argument is made that although the North phase lots are fronted on Benoir Lake Road, it cannot be assumed that each property owner and end-user would use Benoir Lake.

It is the Client’s proposal that legally on the title of each of the North phase lots, that each property owner (and therefore the residents and tenants) would have condominium access to the roads and community amenities of the South phase. More specific, it is the Client’s proposal that the North phase would have direct boat launch and community club-house facilities on Elephant Lake, as per Block B of the South phase.

Proposed Developments – South Phase – Elephant Lake

For the South phase, Lot #27 – 63, these lots are generally considered as seasonal dwellings along the waterfront of Elephant Lake. The legal frontage of these Lots are defined by the width of shoreline, and all conform to the minimum requirement of 60.0m. Lot #26 is a proposed private community parkland, and does not intend to have any residents or dwellings.

Due to the Natural Heritage components of Significant Wetlands and shallow lakebed elevations near each of the South phase lots, a premium shared communal boat launch is proposed at Block B.

Only a single communal shared boat launch is proposed at Block B, with access to deep water channel at immediately lakeshore (boat launch does not enter within shallow Significant Wetlands). There is no proposal for individual docks for each waterfront property due to Significant Wetlands extending from shoreline into Elephant Lake.

With three separate sources of potential residents and end-users added onto Elephant Lake, a total combined characteristics below may be assumed:

Elephant Lake:

- Perimeter – 37,496m
- Area – 1070.55 Ha
- Total Combined Properties (Existing and proposed) - 184
 - Number of Properties (existing waterfront) – 122
 - Number of Properties (North phase backlot) – 26
 - Number of Properties (South phase waterfront) – 36
- Lake Recreational Capacity – 669
- This lake is considered as “not over recreational carrying capacity”, at approx. 28% of total theoretical recreational carrying capacity

Summary

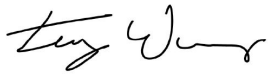
The North phase proposed lots do not have direct and private lake access to Benoir Lake, which is already currently over-capacity and without any community infrastructure. Instead, the North phase residents and tenants would be legally entitled and strongly encouraged to use the shared community infrastructure (boat launch and club house) at Elephant Lake.

Elephant Lake is currently very under-utilized, and post-development, there would be an estimated 185 combined properties versus the estimated carrying capacity of 669, at approx 28% of maximum usage.

It is in the Engineer’s opinion that the proposed combined developments would create an estimated 28% maximum carrying capacity usage on Elephant Lake, and would not unduly interfere with the recreational activities, nor would it reduce the attractiveness for shoreland residents and visits of Elephant Lake.

This report is the intellectual property of King EPCM, and has been prepared for the sole use of 2463756 Ontario Inc. (the Client). King EPCM accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than the Client. The Client may submit this report to the County of Haliburton, and Municipality of Dysart et al. in regards to the Client's residential development project at Elephant Lake, Harcourt, Dysart et al.

Respectfully,



Yu Tao (Tony) Wang, P. Eng
Principal Engineer
King EPCM



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☒ Billings Lake North Boat Launch

☒ Billings Lake South Boat Launch

☒ Bitter Lake Boat Launch

☒ Buckskin Lake Boat Launch

☒ Burdock Lake Boat Launch

☒ Centre Lake Boat Launch

☒ Centre Lake Boat Launch

☒ Clement Lake Boat Launch

☒ Clinto Lake Public Boat Launch

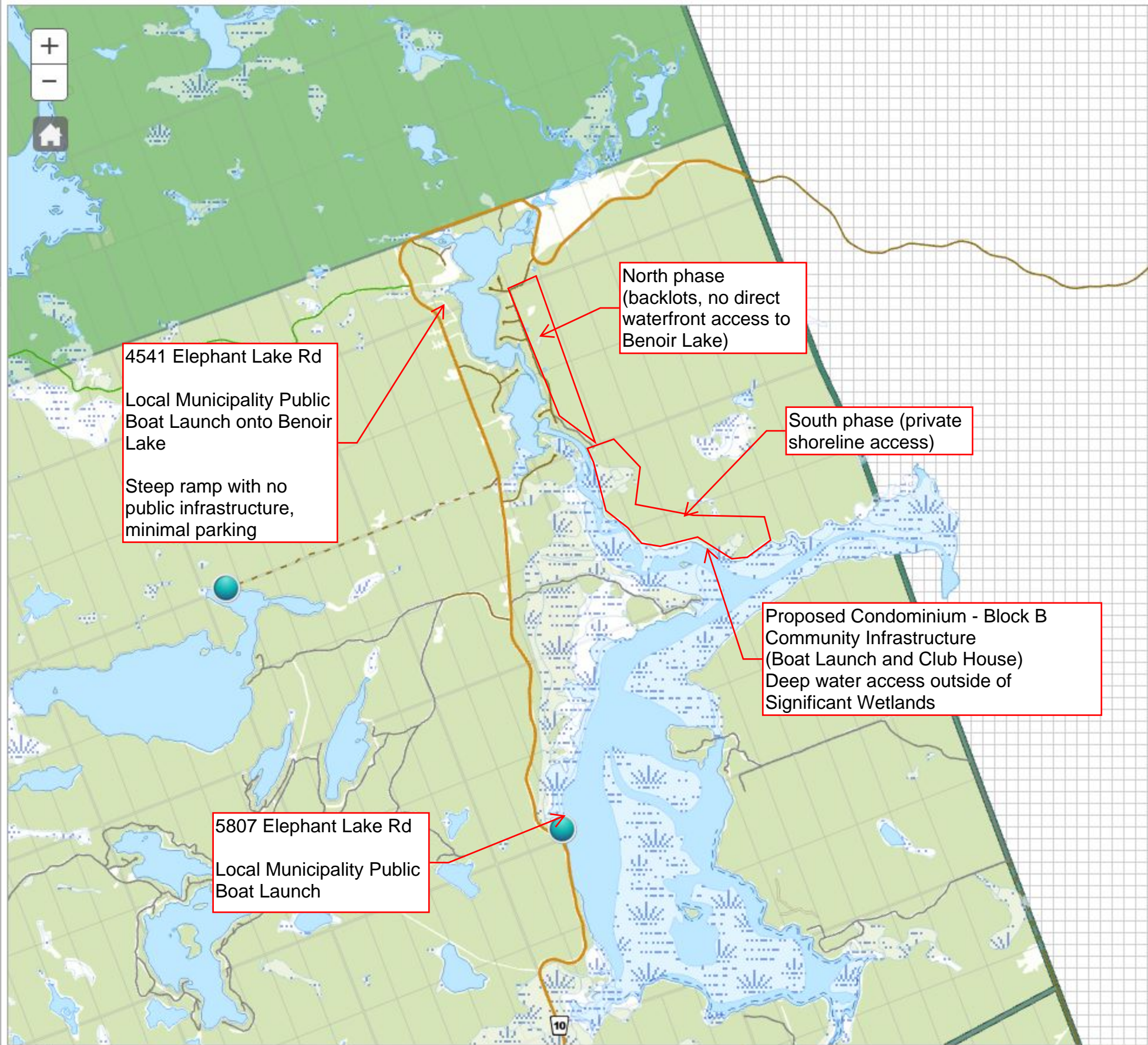
☒ Colborne Lake Boat Launch

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☒ Crown Lake Public Boat Launch



APPENDIX "B"

SUMMARY OF RECREATIONAL CARRYING CAPACITY, KEY LAKES - Revised: January, 2020

MUNICIPALITY OF DYSART ET AL

Blue Text means lake in Harcourt Park Inc.			means lake over recreational carrying capacity	
Green Text means lake in Haliburton Forest + Wild Life				
LAKE NAME	PERIMETER (M)	AREA (H)	NUMBER OF PROPERTIES	LAKE REC. CAPACITY
Allen Lake	6181	96.96	134	61
Barnum Lake	2463	32.57	16	20
Basshaunt Lake	4892	48.77	38	30
Bat Lake	4938	46.82	27	29
Beanpole Lake	3458	21.34	1	13
Beaver Lake	5777	32.61	3	20
Benoir Lake	13513	105.73	189	66
Big Barnum Lake	2910	19.68	53	12
Bitter Lake	4850	44.37	72	28
Bivouac Lake	3675	36.19	1	23
Black Lake	2700	27.28	18	17
Blue Hawk Lake	4429	74.02	50	46
Blue Lake	3026	23.46	5	15
Blue Lake	2153	18.39	1	11
Bone Lake	2437	18.47	2	12
Boyne Lake	2109	17.93	26	11
Buckhorn Lake	7682	83.84	4	52
Burdock Lake	2325	14.21	32	9
Bushwolf Lake	4772	44.80	19	28
Cardiff Lake	3253	26.40	22	17
Cat Lake	7360	57.86	5	36
Charlie George Lake	2826	16.26	47	10
Claypack Lake	3633	22.37	5	14
Clean Lake	6759	159.17	6	99
Clement Lake	2493	19.66	39	12
Coburn Lake	3737	29.65	1	19
Coleman Lake	1870	20.67	25	13
Cranberry Lake	6794	77.97	72	49
Cross Corner Lake	2924	21.54	3	13
Cruiser Lake	2654	27.85	21	17
Delphis Lake	3665	26.84	2	17
Depot Lake	3837	48.64	2	30
Dog Lake	1731	17.21	1	11
Dog Lake	2273	14.13	2	9
Drag Lake	44346	999.39	520	625
Duck Lake	4276	24.09	2	15
Dutton Lake	4183	48.40	2	30
Eagle Lake	12572	244.64	211	153
East Lake	2928	32.00	61	20
East Lake	7111	82.01	7	51
Elephant Lake	37496	1070.55	122	669
Esson Lake	17083	244.03	151	153
Eyre Lake	5400	69.84	1	44
Farquhar Lake	15433	347.06	130	217
Fishtail Lake	12665	252.32	29	158
Fitzgerald Lake	2209	12.21	2	8
Fourcorner Lake	6075	99.73	4	62
Goodwin Lake	7416	56.04	2	35
Grace Lake	9577	221.60	85	138
Grass Lake	5665	66.37	72	41
Green Candle Lake	2302	19.25	1	12
Green Lake	5169	128.91	78	81
Gregorys Pond	1712	11.63	1	7
Guilford Lake	4239	44.65	22	28
Gut Lake	3540	21.52	4	13
Haas Lake	4188	51.14	62	32
Haliburton Lake	40903	1031.03	628	644
Harburn Lake	2856	26.02	2	16
Havelock Lake	15238	203.19	13	127
Head Lake	4871	65.90	55	41
Holland Lake	2907	28.16	2	18
Hosiery Lake	2646	21.69	2	14
Hurricane Lake	5393	56.78	47	35
Hurst Lake	1663	12.26	2	8
Johnson Lake	7110	146.46	2	92
Kashagawigamog Lake	37899	842.95	601	527
Kawagama Lake	110194	3150.91	1055	1969
Kelly Lake	6628	105.25	3	66
Kennaway Lake	3796	33.89	65	21
Kennibik Lake	16415	171.68	5	107
Kennis Lake	64244	1446.68	788	904
Kennis River	3355	12.12	1	8
Klaxon Lake	5437	40.96	10	26
Koshlong Lake	33037	378.11	261	236

Leaffield Lake	2597	30.14	2	19
Lipsy Lake	7478	72.16	35	45
Little Allen Lake	2585	12.60	2	8
Little Art Lake	2468	13.44	4	8
Little Buckhorn Lake	4474	26.30	1	16
Little Clean Lake	1987	21.63	2	14
Little Haas Lake	2540	18.29	1	11
Little Harburn Lake	2222	15.21	4	10
Little Kennisis Lake	15558	234.30	287	146
Little Redstone Lake	15674	236.19	158	148
Little Soyers Lake	5386	57.49	5	36
Little Straggle Lake	4411	38.33	107	24
Long Lake	11358	84.50	160	53
Loon Lake	10827	227.22	124	142
Lost Lake	2259	14.03	1	9
Luke Lake	1628	12.64	2	8
Macdonald Lake	9947	139.76	6	87
Marsden Lake	10455	136.55	12	85
Miskwabi Lake	11150	261.01	179	163
Moore Lake	2265	11.62	2	7
Moose Lake	12119	287.26	115	180
Morrow Lake	4024	19.31	3	12
North Havelock Lake	3700	29.47	1	18
North Lake	5848	78.50	48	49
Nugget Lake	2602	17.36	1	11
Oblong Lake	6275	95.76	30	60
One Island Lake	2966	20.70	1	13
Pelaw Lake	2907	21.41	4	13
Percy Lake	24957	536.10	153	335
Pine Lake	4919	114.08	89	71
Pine Lake - Fisheries	2487	15.26	3	10
Pivot Lake	1578	11.89	13	7
Pockett Lake	3241	21.86	6	14
Portage Lake	2171	13.93	3	9
Raddan Lake	6721	34.57	1	22
Rainbow Lake	2509	39.99	2	25
Red Pine Lake	29851	401.11	60	251
Redstone Lake	46354	1180.43	447	738
Ritchey Lake	1989	11.33	5	7
Ross Lake	2294	24.60	24	15
Roundo Lake	3064	21.69	1	14
Scraggy Lake	3238	39.39	6	25
Silverlynn Lake	1424	10.15	6	6
Slipper Lake	4406	51.99	6	32
Snap Lake	1731	11.47	2	7
South Portage Lake	3300	42.13	48	26
South Wildcat Lake	9067	109.51	6	68
Spider Lake	4716	30.90	7	19
Spruce Lake	9026	120.03	57	75
Sprucehen Lake	2809	15.86	1	10
Stocking Lake	6476	66.16	3	41
Straggle Lake	8428	96.50	177	60
Tedious Lake	4628	33.26	41	21
Two Islands Lake	4728	62.44	7	39
Wenona Lake	5646	62.11	107	39
West Lake	6613	52.40	39	33
Wildcat Lake	13919	105.30	2	66
Wildgoose Lake	3396	12.57	3	8
Wolf Lake	2474	20.79	1	13
Wrench Lake	2877	10.84	3	7
Yankton Lake	5065	74.86	2	47