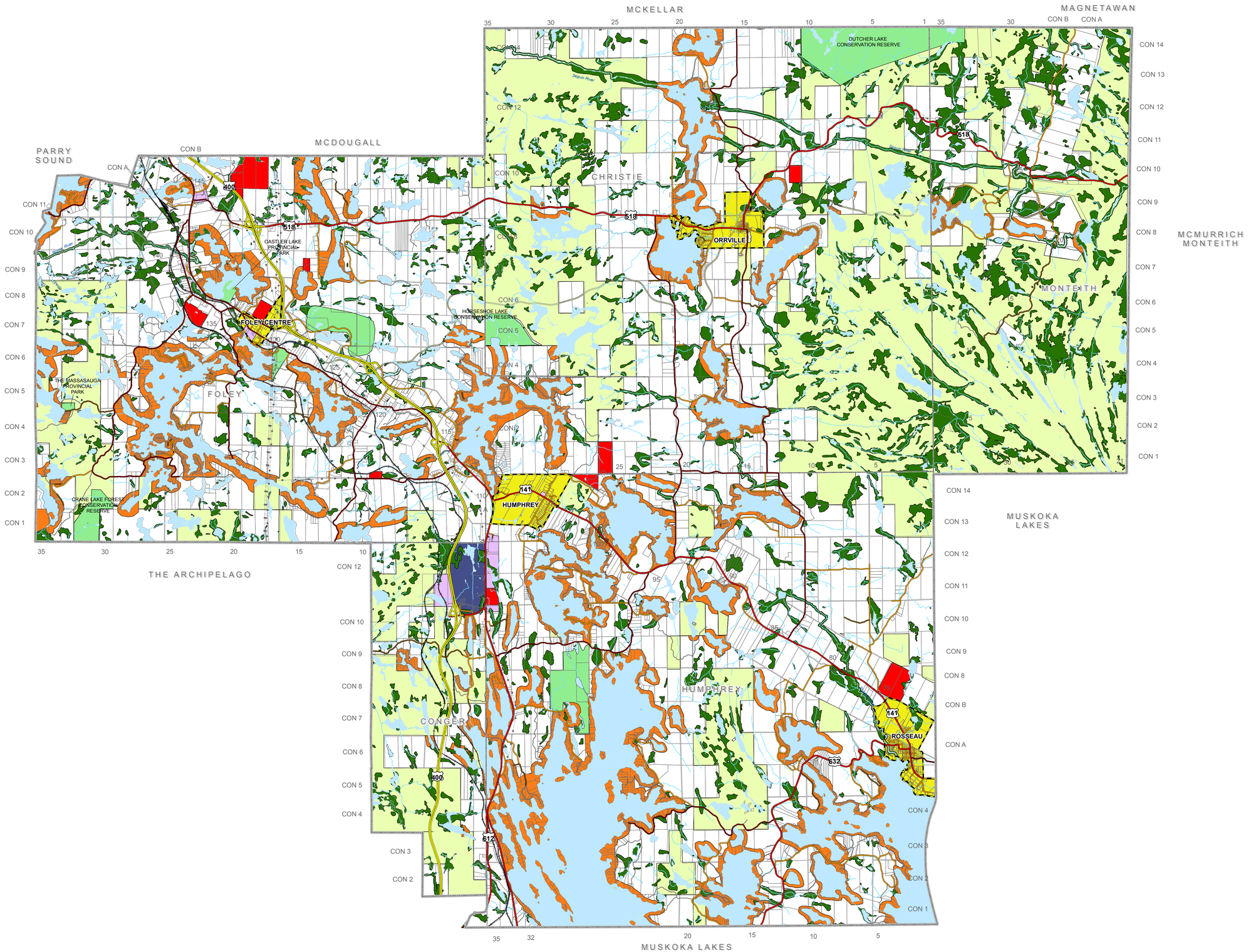
Seguin Township Official Plan Land Use

SCHEDULE A



LEGEND

Land Use Designations

- Shoreline Area
- Settlement Area
- Rural and Resource Area
- Employment Area
- Airport Employment Area
- Aggregate Extraction Area
- Environmental Protection
- Major Open Space
- Crownland
- Settlement Boundary

Base Information

- Highway 400
- Provincial Highway
- Arterial Road
- Municipal Year Round
- Municipal Seasonal
- Private Road
- Rail Lines
- Utility Lines
- Lakes & Rivers

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Kilometres

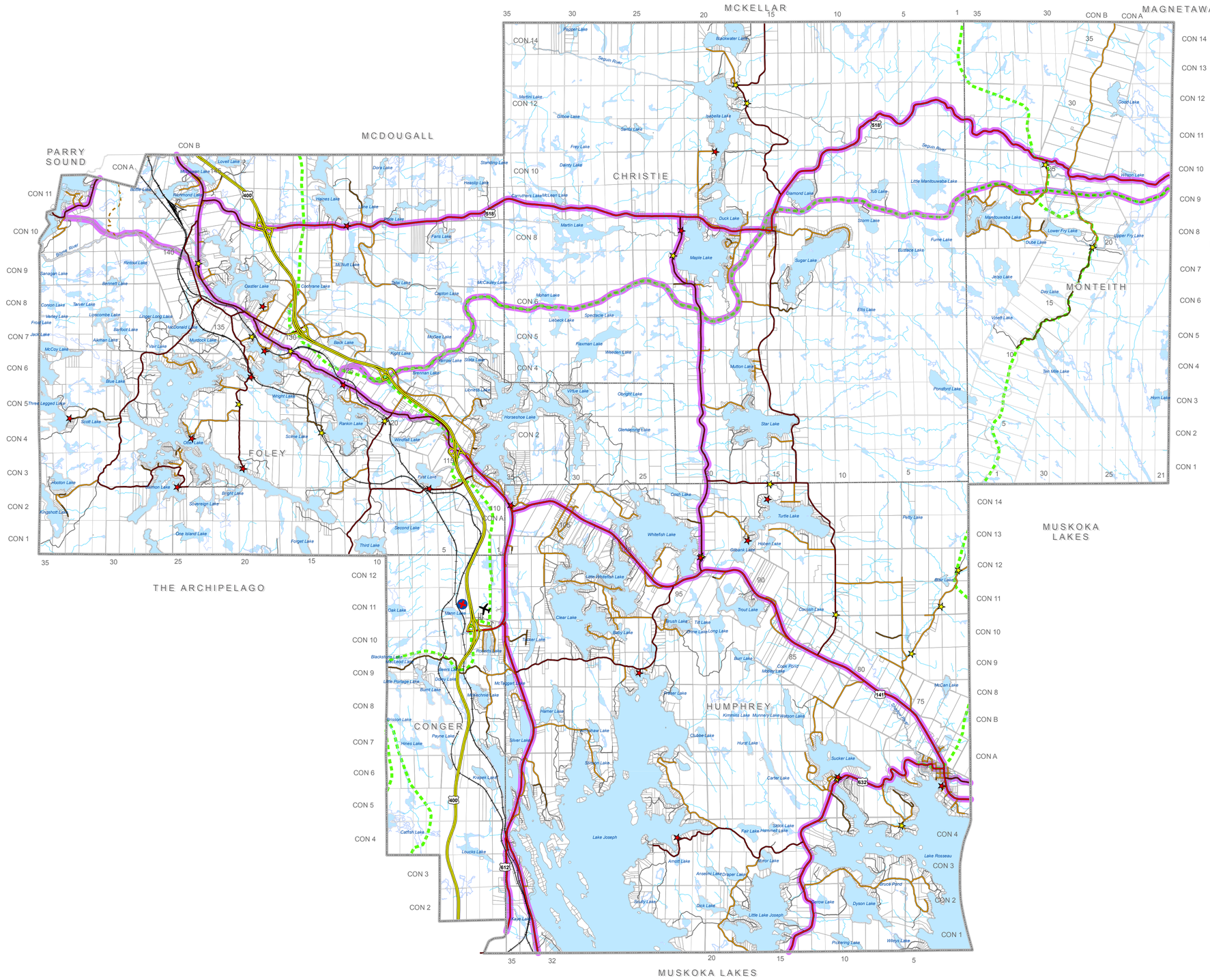
N

Seguin Township
The Natural Place To Be

March 3, 2014

Seguin Township Official Plan Transportation

SCHEDULE B



LEGEND

- Highway 400
- Provincial Highway
- Arterial Road
- Municipal Year Round
- Municipal Seasonal
- Private Road
- Intersection or Bridge Improvement
- Rail Lines
- Access Point
- Future Potential Active Transportation Linkage
- Seguin Trail
- Park to Park Trail
- OFSC Snowmobile Trails
- Airport
- Passenger Train
- Lakes & Rivers

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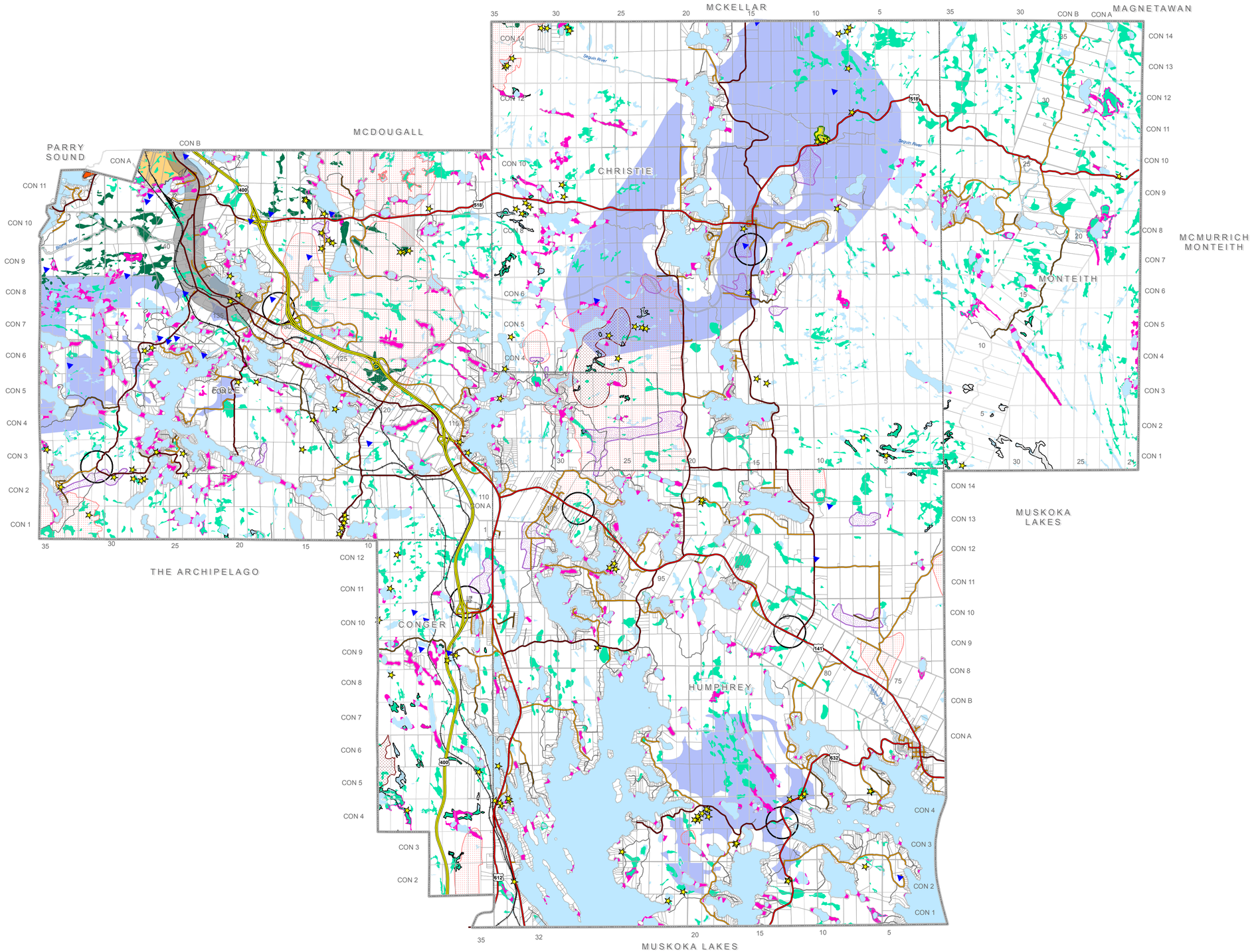
Seguin Township
The Natural Place To Be

March 3, 2014

Seguin Township Resources, Hazards and General Overlay Designations

SCHEDULE C



LEGEND

Natural Heritage Features

- Natural Heritage Feature
- Area of Natural & Scientific Interest (ANSI)
- Moose Aquatic Feeding Area
- Stratum 1 Deer Wintering Area
- Stratum 2 Deer Wintering Area
- Provincially Significant Wetlands (PSW)
- Wetlands

Aggregate and Mineral Resources Overlays

- Aggregate Resource Potential
- Mineral Resource Potential

Hazards

- MNDM Abandoned Sites

General Overlays

- Narrow Waterbodies and Bays
- Waste Disposal Assessment Area
- Employment Corridor Area
- North West Seguin Development Policy Area 1
- North West Seguin Development Policy Area 2

Base Information

- Highway 400
- Provincial Highway
- Arterial Road
- Municipal Year Round
- Municipal Seasonal
- Private Road
- Rail lines
- Lakes & Rivers

0 1 2 4 6

Kilometres

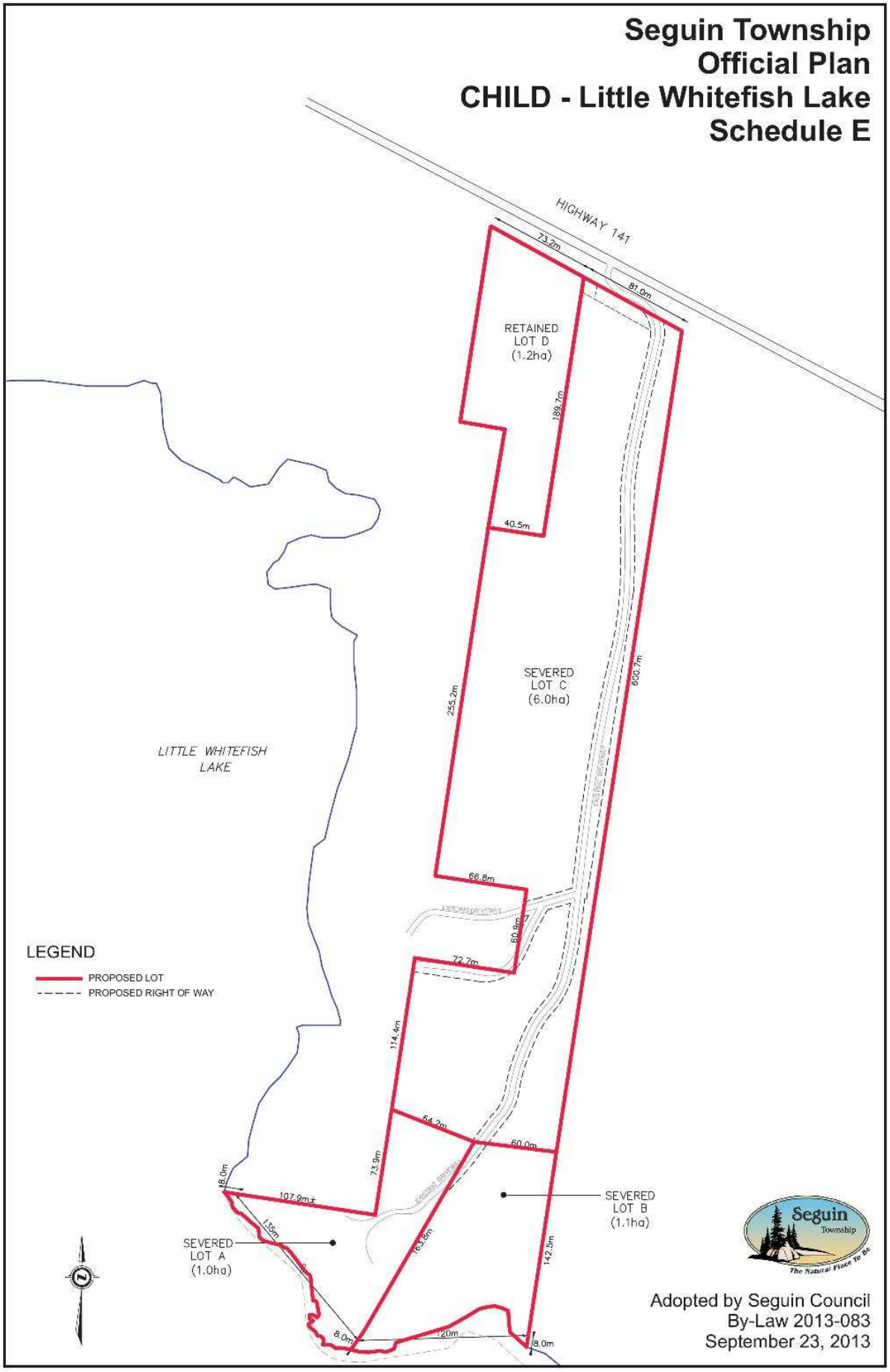
N

Seguin Township
The Natural Place To Be

March 3, 2014

Seguin Township
Official Plan

Schedule D - Reserved


Seguin Township
Official Plan
CHILD - Little Whitefish Lake
Schedule E
HIGHWAY 141
73.2m
81.0m
RETAINED
LOT D
(1.2ha)
189.7m
40.5m
SEVERED
LOT C
(6.0ha)
255.2m
600.7m
LITTLE WHITEFISH
LAKE
66.8m
60.9m
72.7m
114.4m
64.2m
60.0m
73.9m
18.0m
107.9m±
135m
SEVERED
LOT A
(1.0ha)
SEVERED
LOT B
(1.1ha)
163.9m
142.5m
8.0m
120m
8.0m
LEGEND
PROPOSED LOT
PROPOSED RIGHT OF WAY
Seguin
Township
The Natural Place To Be
Adopted by Seguin Council
By-Law 2013-083
September 23, 2013

Appendix I
Lake Sensitivity

Where no sensitivity classification is detailed in column 2 of Appendix I, the policies of Section B.3.1.2 shall apply		
Where no minimum frontage is detailed in Column 3 of Appendix I, the policies of Section C.3.1.3.1 shall apply		
Name	**Lake Sensitivity**	**Minimum Frontage Standards**
1*	Moderate	
4*	Over Threshold/High	
5*	High	
7*	Low	
8*	Low	
9*	Low	
Aikman Lake	Over Threshold/Moderate	
Anselmi Lake	Over ThresholdModerate	
Armishaw Lake	Over Threshold/High	
Arnott Lake		
Baby Lake (H)	Over Threshold/High	
Back (Rankins Back) Lake	Moderate	
Beers Lake		
Bennet Lake	Over Threshold/High	
Blackwater Lake	Low	
Blair's Lake		
Blue Lake	High	
Boundary (Ponsford) Lake	Moderate	
Brennan Lake	Over Threshold/Moderate	200m
Bright Lake		
Brisson Lake		
Broad Lake		
Brown's (Brush) Lake	High	
Burnt (Joselin) Lake	Moderate	
Capton Lake	Moderate	150m
Carruthers Lake	High	
Carter (Long) Lake	High	
Catfish Lake	Low	
Clear Lake	Over Threshold/High	
Clear Lake (Foley)	High	150m
Clubbe Lake	Moderate	
Cochrane Lake	Over Threshold/High	150m
Conlon Lake		
Cornish Lake		
Cosh Lake	Moderate	
Dainty Lake	Low	
Day Lake		
Dell Lake	High	
Diamond Lake	Over Threshold/High	
Dick Lake	Over Threshod/Moderate	
Doley Lake		
Dora Lake		200m
Draper (Duck) Lake	Over Threshold/High	
Duck Lake	Low	
Ellis Lake		
Emily Lake		
Eustace Lake		
Faris Lake	High	200m
Farr's (Fair) Lake	High	
First Lake	Over Threshold/Low	150m
Flaxman Lake	High	
Forget Lake	High	200m
Fraser Lake		
Frey Lake		
Fry's Lake	Low	
Fry's Upper Lake	Low	
Fume (Stinking) Lake	Low	
Georgian Bay		60m
Gerox (Gerow) Lake	Over Threshold/High	
Gilbank Lake	Over Threshold/Low	
Gilboe Lake		
Glendenning Lake		
Good Lake	Moderate	
Haines Lake	Low	

Appendix I
Lake Sensitivity

Where no sensitivity classification is detailed in column 2 of Appendix I, the policies of Section B.3.1.2 shall apply		
Where no minimum frontage is detailed in Column 3 of Appendix I, the policies of Section C.3.1.3.1 shall apply		
Name	**Lake Sensitivity**	**Minimum Frontage Standards**
Hamer Lake	Over Threshold/Moderate	
Hammel Lake		
Heaslip Lake	Over Threshold/Moderate	150m
Hines Lake	Low	
Hoben Lake		
Home Lake	Low	
Hooton (Round) Lake	Over Threshold/High	
Horn (Little) Lake		
Horn Lake	High	
Horseshoe Lake	Over Threshold/High	
Hurst Lake	Low	
Isabella Lake	Low	
Jelso Lake (Loon)	High	
Kight (Miller) Lake	High	
Kingshot Lake	Over Threshold/High	200m
Krapek Lake	Moderate	
Lake Joseph		
Lake Rosseau		
Lane Lake	Over Threshold/High	
Lieback Lake	High	
Lioness Lake	Over Threshold/Low	
Lipscombe Lake	High	
Little Lake Joseph		
Little Manitouwaba Lake	High	
Little Otter Lake	Over Threshold/High	
Little Portage Lake		
Little Whitefish Lake	Over Threshold/High	
Long (Lingen) Lake	Over Threshold/High	
Long Lake (Humphrey)	High	
Loucks Lake	High	
Lovell Lake	Moderate	150m
MacLeod Lake		
Manitouwaba Lake	High	
Mann Lake		
Maple Lake	Over Threshold/Low	
Martini (High) Lake		
Martins (Petty) Lake		
Martins Lake	Moderate	
Mary's Lake (Mohan)	Moderate	
McCann Lake	Low	
McCauley Lake	Moderate	
McClarens Lake	Over Threshold/Low	
McCoy Lake	Moderate	
McDonald Lake	Over Threshold/High	150m
McGee Lake		150m
McGowan Lake	Moderate	200m
McGruther Lake	High	
McKechnie Lake	High	
McLeans Lake	Over Threshold/High	
McNutt Lake	Low	
McTaggart Lake	Over Threshold/Low	
Mirror (Slide) Lake	Over Threshold/High	
Mohan Lake	Low	
Morgan (Dyson) Lake	Over Threshold/High	
Motley Lake	Low	
Mudd (Burr or Burk) Lake	Low	
Munnery Lake		
Murdock Lake	Over Threshold/High	
Mutton Lake	Low	
Napken (Linger Long) Lake	Over Threshold/High	
Neville Lake	Low	
Oak Lake	Moderate	
Oastler Lake	Over Threshold/Low	
Obright Lake		

Appendix I
Lake Sensitivity

Where no sensitivity classification is detailed in column 2 of Appendix I, the policies of Section B.3.1.2 shall apply		
Where no minimum frontage is detailed in Column 3 of Appendix I, the policies of Section C.3.1.3.1 shall apply		
Name	**Lake Sensitivity**	**Minimum Frontage Standards**
One Island Lake	High	150m
Orme Lake		
Otter Lake	Over Threshold/High	120m
Patient Lake		
Payne Lake	High	
Pender Lake	High	150m
Pepper Lake		
Pickering (Long) Lake	Low	
Plate Lake		
Ponsford Lake	Moderate	
Portage Lake	Over Threshold/High	
Rankin Lake	Over Threshold/High	
Richmond Lake	Over Threshold/High	150m
Rintoul Lake	Low	
Roberts Lake	Over Threshold/High	
Salmon Lake	Over Threshold/High	
Sanagan Lake		
Santa Lake	Moderate	
Scime Lake	Over Threshold/High	200m
Scott Lake	Over Threshold/High	
Second Lake	Low	200m
Silver Lake	Moderate	
Small Lake		
Sovereign Lake	Over Threshold/Moderate	200m
Spectacle Lake	High	
Standing Lake		
Star Lake	Over Threshold/Low	
Stinson Lake		
Stock Lake		
Storm Lake	High	
Sucker Lake	Over Threshold/High	
Sugar Lake	Moderate	
Tarver Lake	High	
Tatia (Tatail) Lake		
Ten Mile Lake	Moderate	
Third Lake	Low	200m
Three Legged Lake	High	
Tilt (Third) Lake		
Trout Lake	Over Threshold/High	
Tub Lake	High	
Tucker Lake	Over Threshold/High	
Turtle Lake	Over Threshold/Moderate	
Vair Lake		
Vinett Lake	Low	
Virtue Lake	Over Threshold/High	
Watson Lake	Moderate	
Weeden Lake		
Whitefish Lake	Over Threshold/High	
Wilders Lake		
Wilson Lake		
Windfall Lake	Over Threshold/High	200m
Wright Lake	Over Threshold/High	200m
Wylies Lake		
Yarrow Lake	Moderate	
* Notes to Appendix I:	Coordinates for Numbered Lakes (Easting, Northing): 1 - 577561.18, 5019813.00 4 - 591380.29,5013308.88 5 - 602095.36,5026458.41 7 - 605465.89,5025520.13 8 - 609124.90,5023220.55 9 - 599480.85,5034303.64	

Appendix II
Coldwater / Lake Trout Lakes at Capacity

Lakes
Clear Lake **
Cosh Lake *
Duck Lake (Christie)
Forget lake
Gilbank Lake *
Little Whitefish Lake *
Long (Flaxman) Lake
Otter Lake
Portage Lake
Silver Lake
Star Lake
Sucker Lake
Three Legged Lake
Turtle Lake *
Whitefish Lake

NOTES TO APPENDIX II:

* This lake is not managed for Lake Trout, but it is at capacity because of the impacts of new development on a downstream "at capacity" lake trout lake.

** Clear Lake is near development capacity and the municipality will continue to seek updates on its development capacity status from MNR and MOE before any new planning approvals are granted.

Appendix III
Recreational Capacity of Lakes

**All lakes are classified as "small" lakes unless noted otherwise in the Table

Name	Recreational Lake Capacity (# of units)	Classification
Aikman Lake	2	
Anselmi Lake	3	
Armishaw Lake	4	
Arnott Lake	1	
Baby Lake	0	
Baby Lake	3	
Back (Rankins Back) Lake	6	
Beers Lake	1	
Bennet Lake	2	
Blackwater Lake	35	
Blair's Lake	1	
Blue Lake	8	
Boundary (Ponsford) Lake	21	
Brennan Lake	5	
Bright Lake	1	
Brisson Lake	1	
Broad Lake	4	
Brown's (Brush) Lake	11	
Burnt (Joselin) Lake	4	
Capton Lake	7	
Carruthers Lake	3	
Carter (Long) Lake	5	
Clear Lake	5	
Clear Lake	108	
Clubbe Lake	4	
Cochrane Lake	8	
Conlon Lake	2	
Cornish Lake	1	
Cosh Lake	6	
Dainty Lake	2	
Day Lake	2	
Diamond Lake	26	
Dick Lake	5	
Doley Lake	0	
Dora Lake	1	
Draper (Duck) Lake	6	
Duck Lake	41	
Ellis Lake	0	
Emily Lake	1	
Eustace Lake	2	
Faris Lake	5	
Farr's (Fair) Lake	9	
First Lake	11	
Forget Lake	9	
Fraser Lake	2	
Frey Lake	1	
Fry's Lake	11	
Fry's Upper Lake	8	
Fume (Stinking) Lake	6	
Georgian Bay	0	Large
Gerox (Gerow) Lake	5	
Gilbank Lake	8	
Gilboe Lake	1	
Glendenning Lake	0	
Good Lake	10	
Haines Lake	35	
Hamer Lake	15	
Hammel Lake	1	
Heaslip Lake	5	
Hines Lake	6	
Hoben Lake	1	
Hooton (Round) Lake	10	

Appendix III
Recreational Capacity of Lakes

**All lakes are classified as "small" lakes unless noted otherwise in the Table

Name	Recreational Lake Capacity (# of units)	Classification
Horn Lake	9	
Horseshoe Lake	168	
Isabella Lake	88	
Jelso (Loon) Lake	14	
Kingshot Lake	17	
Kight (Miller) Lake	3	
Krapek Lake	7	
Lake Joseph	1,260	Large
Lake Rosseau	492	Large
Lane Lake	7	
Lieback Lake	8	
Lioness Lake	2	
Lipscombe Lake	5	
Little Lake Joseph	137	
Little Manitouwaba Lake	37	
Little Otter Lake	29	
Little Portage Lake	2	
Little Whitefish Lake	72	
Long (Flaxman) Lake	29	
Long (Lingen) Lake	7	
Long Lake	12	
Loucks Lake	7	
Lovell Lake	6	
MacLeod Lake	1	
Manitouwaba Lake	68	
Mann Lake	2	
Maple Lake	106	
Martini (High) Lake	2	
Martins (Petty) Lake	2	
Martins Lake	44	
Mary's (Mohan) Lake	5	
McCann Lake	3	
McCauley Lake	1	
McClarens Lake	8	
McCoy Lake	12	
McDonald Lake	10	
McGee Lake	2	
McGown Lake	8	
McKechnie Lake	7	
McLeans Lake	3	
McNutt Lake	24	
McTaggart Lake	4	
Mirror (Slide) Lake	6	
Morgan (Dyson) Lake	48	
Motley Lake	1	
Mud (Burr or Burk) Lake	6	
Munnery Lake	1	
Murdock Lake	7	
Mutton Lake	21	
Napken (Linger Long) Lake	10	
Oak Lake	6	
Oastler Lake	54	
Obright Lake	1	
One Island Lake	13	
Orme Lake	1	
Otter Lake	225	
Patient Lake	2	
Payne Lake	7	
Pender Lake	6	
Pepper Lake	1	
Pickering (Long) Lake	6	
Plate Lake	2	

Appendix III
Recreational Capacity of Lakes

**All lakes are classified as "small" lakes unless noted otherwise in the Table		
Name	**Recreational Lake Capacity (# of units)**	**Classification**
Portage Lake	46	
Rankin Lake	61	
Richmond Lake	10	
Rintoul Lake	2	
Roberts Lake	4	
Salmon Lake	30	
Sanagan Lake	0	
Santa Lake	3	
Scime Lake	4	
Scott Lake	6	
Second Lake	10	
Silver Lake	34	
Small Lake	1	
Sovereign Lake	5	
Spectacle Lake	4	
Standing Lake	0	
Star Lake	77	
Stinson Lake	1	
Stock Lake	0	
Storm Lake	11	
Sucker Lake	53	
Sugar Lake	73	
Tarver Lake	3	
Tatia (Tatail) Lake	2	
Ten Mile Lake	7	
Third Lake	16	
Three Legged Lake	40	
Tilt (Third) Lake	2	
Trout Lake	31	
Tub Lake	10	
Tucker Lake	7	
Turtle Lake	64	
Vair Lake	1	
Vinett Lake	0	
Virtue Lake	9	
Watson Lake	13	
Weeden Lake	1	
Whitefish Lake	147	
Wilders Lake	0	
Wilson Lake	2	
Windfall Lake	6	
Wright Lake	7	
Wylies Lake	1	
Yarrow Lake	2	

APPENDIX "A"
Recreational Water Quality Model

General Description

The Recreational Water Quality Model utilized as the basis for the Township of Seguin Official Plan is a mass balance steady state watershed model of phosphorus concentrations that is a variant of the original Dillon-Rigler (1975) model, as updated in Dillon et al (1986), Hutchinson (2002), Gartner Lee Ltd. (2005) and Paterson et al (2006). The model is created and managed in a computer format (spreadsheet). The model is published and accepted in the scientific community and the Paterson et al (2006) variant is used by the MECP as the basis for MECP policy for recreational lake management.

Summary of the 2015 Model

As revised in 2015, the Recreational Water Quality Model utilized in the Seguin Official Plan has been developed to reflect the following water quality issues and the following updates required as a result of new data, information, and science:

- The model places lakes within their watershed context and recognizes that not all lakes are the same and that some are more sensitive to phosphorus loading from development than others.
- Includes all the lands around the lakes but does not account for any soil attenuation of septic system phosphorus as per the MECP Handbook.
- Runoff values have been refined for all lakes specific to a geographical area of ~10 km2.
- Average lot size for recreational properties fronting onto Seguin lakes is 3,789 m2/unit.
- Oxygen status assessed with measured data for 72 lakes.
- Shallow lakes identified from measured lake depth and temperature profile data for 72 lakes.
- Phosphorus retention coefficient for anoxic lakes is applied only to lakes with potential internal loading (shallow, anoxic and/or dystrophic lakes) if model estimates are improved.
- The formula for Total phosphorus concentration conversion from spring overturn (TPso) [as measured by Seguin Township] to ice-free (TPif) [as is predicted by the SWQM] is TPif = 0.992 * TPso – 0.563.
- Identifies and accounts for all phosphorus inputs to lakes, particularly natural sources of phosphorus and storm water.
- Incorporates the best science and technical information possible so that the model, approach and planning decisions based on same are defendable at the LPAT.
- Recognizes the role of wetlands as natural sources of phosphorus loading to a lake.
- The model classifies:
    a) the Status (Over Threshold or not) of individual lakes based on measured and modelled response to existing phosphorus loads; and,
    b) the Sensitivity of individual lakes to phosphorus loadings
- Based on federal and provincial guidance, some lakes have been classified as over threshold (50% increase in phosphorus loading over predevelopment levels).
- Lakes have been classified as having low, moderate or high sensitivity to phosphorus inputs. By using the threshold or trigger value of "Background + 50% established by the water

quality model and understanding the sensitivity of the land and watershed to phosphorus, lake-specific management and policy approaches can be developed.

Detailed Description

A detailed description of the model is contained in "Gartner Lee Ltd. *2005. Recreational Water Quality Management in Muskoka. Gartner Lee Limited. 9-34*" produced for the Department of Planning and Economic Development, District Municipality of Muskoka.

References:

Dillon, P.J. and F.H. Rigler. 1975. A simple method for predicting the capacity of a lake for development based on lake trophic status. J. Fish. Res. Board. Can. 32 : 1519 - 1531.

Dillon, P.J., K.H. Nicholls, W.A. Scheider, N.D. Yan and D.S. Jeffries. 1986. Lakeshore Capacity Study, Trophic Status. Research and Special Projects Branch, Ontario Ministry of Municipal Affairs and Housing. Queen's Printer for Ontario. 89pp.

Hutchinson, N.J. 2002: Limnology, Plumbing and Planning: Evaluation of Nutrient-Based Limits to Shoreline Development in Precambrian Shield Watersheds. Ch. II.17 in : R. France, (ed). Handbook of Water Sensitive Ecological Planning and Design. CRC Press. Boca Raton Fla.

Gartner Lee ltd. 2005. Recreational Water Quality Management in Muskoka. Gartner Lee Limited. 9-34 produced for Department of Planning and Economic Development, District Municipality of Muskoka.

Paterson, A.M., P.J. Dillon, N.J. Hutchinson, M.N. Futter, B.J. Clark, R.B. Mills, R.A. Reid and W.A. Scheider. 2006. A review of the components, coefficients and technical assumptions of Ontario's Lakeshore Capacity Model. Lake and Reservoir Management 22(1): 7 – 18.

APPENDIX "B"

Soil Characteristics for Phosphorus Attenuation

Where the Township of Seguin Official Plan specifies the need to use soils to reduce phosphorus nutrients from entering a lake, the following criteria shall apply:

i) The site where the septic tile-bed is to be located, and the region below and 15 metres down-gradient of this site, toward the lakeshore or a permanently-flowing tributary, across the full width of the tile bed, consist of deep (more than three metres), native and undisturbed, non-calcareous (<1% $CaCO_3$ equivalent by weight) overburden with acid-extractable concentrations of iron and aluminum of >1% equivalent by weight (following Robertson 2005, 2006, Appendix B). Soil depth shall be assessed with test pits and/or boreholes at several sites. Samples for soils chemistry should be taken at a depth adjacent to, or below, the proposed tile bed;

ii) An unsaturated zone of at least 1.5 metres in depth should exist between the tile bed and the shallowest depth (maximum) extent of the water table. The position of the water table shall be assessed with test pits or ground water monitors during periods of maximum soil saturation (e.g., in the spring, following snowmelt or in late fall);

iii) When constructing the tile bed the use of native soils, where possible, is recommended. However, if fill material is required, it should consist of silt-free, fine to medium-grained noncalcareous soils that meets the OBC requirements for percolation time , that are rich in iron and aluminium and that are non-calcareous (<1% wt $CaCo_3$);

iv) Septic effluent should be uniformly distributed over the tile bed to ensure proper infiltration rates and to enhance the mineralization of phosphorus with iron and aluminium in the soils. To ensure proper distribution, systems that use gravity-drainage are discouraged. Pumpdosing is recommended to avoid over-loading in any one area;

v) To ensure the proper functioning of the septic tank-tile bed system over the long-term, add-on systems such as water softening apparatus should not be permitted; and

vi) For moderate sensitivity over-threshold lakes, a long-term monitoring program should be implemented as an early-warning system for septic system failure. This monitoring shall include:

   a. sampling locations immediately below the tile bed, down-gradient of the tile bed, and at least one site up-gradient of the tile-bed;
   b. collection of groundwater samples by a certified professional; all samples should be field filtered (0.45 µm) prior to atmospheric exposure; samples for PO_4^{3-} (or TP), and major ions, should be acidified in the field (pH < 2) with HCl or H_2SO_4, and analysed within two weeks of collection;
   c. chemical analyses should include pH, chloride, total or dissolved phosphorus, nitrate, ammonium, aluminium and iron;
   d. sampling should occur in early summer and late fall for a period of five years