Via email

Mr. Gregory Barker
Senior Planner
Innovative Planning Solutions
150 Dunlop Street, Suite 201
Barrie, ON
L4M 1B1

June 18, 2018

Dear Mr. Barker:

> **Re: Burl's Creek**
> **Alternate Site Search – Agriculture Capability**

Introduction

In response to the AgPlan Limited continued request for proof an alternate site search that contains and addresses the Provincial Policy Statement 2014 (PPS 2014) Policy 2.3.6 Non-Agricultural Uses in Prime Agricultural Areas, DBH Soil Services Inc. was retained to complete a study that directly speaks to Policy 2.3.6.1b) 4. Policy 2.3.6.1b) 4 states:

"alternative locations have been evaluated, and
i. there are no reasonable alternative locations which avoid *prime agricultural areas*; and
ii. there are no reasonable alternative locations in *prime agricultural areas* with lower priority agricultural lands.

This study will document the existing soils/Canada Land Inventory (CLI) data, limitations associated with the data, and assess potential alternative locations which will avoid Prime Agricultural Areas and identify alternative locations in Prime Agricultural Areas with lower priority agricultural lands within the whole of the County of Simcoe.

This study will address only the soil/CLI component of an alternate site search and will be used in conjunction with other disciplines to further define alternate sites.

Methodology - Data

DBH Soil Services Inc. searched the Land Information Ontario (LIO)(Ontario Ministry of Natural Resources (MNR)) warehouse for the most recent iteration of the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) soil survey complex data. The data was available in shapefile format with a publication date of November 20, 2015. Further, DBH Soil Services Inc. contacted OMAFRA to determine if this file is the most up-to-date soils dataset. It was determined that this dataset is the most recent version. The shapefile data was requested from LIO and an email reply from LIO indicated that the dataset was available and ready for download. The file was downloaded to a desktop computer for use in ArcMap 10.1 Geographic Information System (GIS).

Additional data sets were requested and downloaded from LIO including: road; waterbodies; water sources; shoreline; upper level municipal boundaries; and contours. The County of Simcoe provided a shapefile of the Official Plan Land Use designations and a layer file (overlay) of the property fabric. The property fabric layer was a digital image used as an overlay, however, the data itself was not accessible due to privacy issues and the County of Simcoe agreements with Teranet and Municipal Property Assessment Corporation (MPAC).

Due to the continual updates to the soil survey complex datasets, it is prudent to verify or at least confirm that

the soil series data and Canada Land Inventory (CLI) information within the datasets is accurate across the County. In an effort to confirm the correctness of the soils and the Canada Land Inventory data on a soil series basis, the dbase data file that is associated with the County soil survey complex file was exported to excel to run a unique symbols list based on Soil Series, topography, CLI class and CLI subclass.

The unique symbols list (based on the SYMBOL1 column) provided 152 unique symbols combined with the associated slope and CLI class and CLI subclass. The unique symbols list is provided in Appendix A. A review of this list indicated that there were a number of issues with a few of the soils and the respective CLI class and/or subclass.

As noted in the list in Appendix A, the symbol Gsl (Granby Sandy Loam) is listed twice and is presented with 2 different CLI Classes (Class 4w and Class 5w). In this instance both of these CLI classes would be considered as non-prime agricultural lands as they are both within the CLI Class 4 – 7, which are considered as non-prime within the PPS (2014). Therefore, although there is an inconsistency with respect to the Gsl symbol and data, it would not be considered as a detriment to the overall alternate site search assessment.

The Harriston Loam symbol (Hl) was observed twice in the data set. Both times the Hl symbol was given a CLI classification of 1, even though the slopes were listed as 2-5 percent for one, and 15-30 percent for the other. A review of the OMAFRA document "Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario" suggests that Loamy soils on simple (>50m slope length) and on complex (<50m slope length) slopes should be rated as CLI class 5T. A further review of the location of the polygon with this rating indicated that the polygon was a 'sliver' polygon created when clipping out the Simcoe County soils from the Ontario Soils Dataset. As such, due to the small size of this polygon it will have no bearing on this soils/CLI assessment. Further, it was noted that this polygon was part of the Dufferin County Soils data and not part of the Simcoe County soils data.

Similar to the Harriston Loam symbol, the Harriston Silt Loam symbol (Hs) was observed twice in the data set. The CLI classification was listed as class 1 and class 2 on slopes of 2-5 percent and 9-15 percent respectively. A review of the OMAFRA document indicated that these soils on 9-15 percent slopes should be rated as 4T. As with the Harriston Loam symbol, a further review of the location of the Hs polygon with this rating indicated that the polygon was a 'sliver' polygon created when clipping out the Simcoe County soils from the Ontario Soils Dataset. As such, this polygon will have no bearing on this soils/CLI assessment. Further, that this polygon was part of the Dufferin County Soils data and not part of the Simcoe County soils data.

The Osprey Loam symbol (Opl) was noted to have two listings in the unique symbols list. Both listings illustrate a CLI class 3, however, they did have differing CLI subclasses (T and P). The differing subclasses will not impact the soils/CLI assessment.

In similar regard the Osprey Loam symbol (Opl) was noted to have two listings in the unique symbols list. Both listings illustrate a CLI class 3, however, they did have differing CLI subclasses (T and P). The differing subclasses relate to topography and stoniness respectively and will not impact the soils/CLI assessment as they are both CLI class 3 lands and this study will look at all lands with CLI class 3 to 7 equivalent.

The Pontypool Sandy Loam symbol was noted as occurring twice. Both times the symbol was associated with 30-45 percent slopes. One listing illustrates the Psl symbol as CLI class 6MT while the other listing illustrates the Psl symbol as a CLI class 6T. The differing subclasses relate to moisture limitations and topography. The differing subclass will not affect the soils/CLI assessment as they are both CLI class 6 and this study will look at all lands with CLI class 3 to 7 equivalent.

The Smithville Silty Clay Loam symbol appears twice in the unique listings. Both listings occur on 2-5 percent slopes, while one listing has a CLI class1, the other listing is CLI class 2F. The F relates to low soil fertility. Both listings illustrate that the Smithville Silty Clay Loam soils are considered as Prime Agricultural lands. The differing ratings will maintain the Smithville Silty Clay Loam soils as Prime Agricultural lands and will not affect the

soils/CLI assessment.

The Tioga fine Sandy Loam symbol (Tif) appears twice in the unique listings. Both listings occur on 5-9 percent slopes, although one listing is CLI class 2F and the other is CLI class 3FM.   A further review of the location of the Tif polygon with the 3FM rating indicated that the polygon was a small 'sliver' polygon created when clipping out the Simcoe County soils from the Ontario Soils Dataset. As such, this polygon will have no bearing on this soils/CLI assessment. Further, that this polygon was part of the Dufferin County Soils data and not part of the Simcoe County soils data.

The Tioga Loamy Sand symbol (Tis) appears 5 times in the unique symbols listing. There are two occurrences on 15-30 percent slopes where the symbols are rated as CLI class 6TM and CLI 6MT. These are virtually the same rating, with the subclasses transposed. These differences in symbology will have no impact on the soils/CLI assessment. There are two occurrences of the Tis symbol on 30-45 percent slopes that are rated as CLI class 6TM and 7T respectively. Both symbols are contained within the CLI class 3 to 7 criteria, as such these differing classes will have no impact on the soils/CLI assessment. The final Tis symbol occurs on 45 to 70 percent slopes and is rated as CLI class 7ET. This symbol and rating also fall in the CLI class 3 to 7 criteria and will have no impact on the soils/CLI assessment.

The Tioga Loamy Sand – steep phase occurs twice in the unique symbols listing. Both occurrences are on 15-30 percent slopes and have ratings of 6T and 6TM respectively. The difference is related to the CLI subclass. As such, there will be no impact to the soils/CLI assessment.

The Wendigo Sandy Loam symbol (Wes) occurs twice in the unique symbols listing. Both occurrences are on 5-9 percent slopes and have CLI ratings of 4FM and 5FM respectively. The difference is related to the CLI subclass only, while the CLI class is within the criteria range of CLI class 3 to 7. Therefore, this difference in ratings will have no impact on the soils/CLI assessment.

Methodology – Geographic Information System (GIS)

On collection of the respective data sets (soils, roads, County of Simcoe boundary, property layer), each layer was pulled into the desktop Arcmap program (version 10.1). A clip process was initiated to clip the OMAFRA Ontario soils data into a County of Simcoe data set. A similar process was completed for the roads.

Figure 1 illustrates the County of Simcoe Official Plan (OP) Land Use designation – Agriculture. Figures are presented in Appendix B.

The OMAFRA soils data for Simcoe County contains a combination of single and complex soil polygons. The single soil polygons reference only one soil series on one topographic slope class which allows for a single Canada Land Inventory class rating. There can be more than one CLI subclass associated with a soil polygon. The complex soil polygons reference two soil series, which may be associated with two separate and different slope classes. This allows for a complex soil polygon that contains two different CLI class with different subclasses.   As a result, a direct comparison of a single polygon to a complex polygon cannot be completed.

Therefore, for the purposes of allowing for a direct comparison between single and complex soil polygons an additional step must be completed to transform the complex soil polygons into an equivalent single CLI rating. This process was completed through the use of the Hoffman Productivity Index (Soil Productivity Index). The Hoffman Productivity Index was published in ARDA Report No. 4, "The Assessment of Soil Productivity for Agriculture", and is used to equate the relative productivity of land to the Canada Land Inventory (CLI) soil capability. Appendix C documents the process.

On completion of the Hoffman Productivity Index process, a single CLI equivalent rating was assigned to each soil polygon (single and complex polygons). Figure 2 illustrates the CLI equivalent ratings for soils rated class 3 to class 7 in Simcoe County.

Figure 3 illustrates an intersection of the data from Figures 1 and 2 to illustrate the lands within Simcoe County that are designated Agricultural within the Official Plan and occur on CLI equivalent lands of class 3 to 7. The resulting intersection of the soils/CLI and Agricultural Lands created 1413 individual polygons. Areas were calculated for each polygon.   Of the 1413 polygons, 113 comprised areas that were equal to or greater than 81 ha. The majority of the 1413 polygons were created as individual polygons of size less than 81 ha. The road layer was added to provide some clarity to the location of the areas with respect to traffic.

Figures 4, 5, 6 and 7 illustrate the Official Plan designated Agricultural Lands on the CLI equivalent class 3 to 7 for Areas designated as A, B, C and D respectively. The shapefiles for areas (A, B, C and D) were provided by Innovative Planning Solutions to follow the similar assessment process that was used for the Rural Lands. The creation of these Figures was completed through a process of clipping the underlying soils/CLI/Agricultural Lands data (from Figure 3) with each of the Areas (A, B, C and D).

Area calculations (in ha) were completed for each polygon within each respective Area (A, B, C and D). DBH Soil Services Inc. provided the mapping and soils data files to Innovative Planning solutions.

Area A comprised 142 polygons of which 10 contained lands classified as CLI equivalent 3 to 7 lands and were designated as Agricultural Lands with areas greater than 81 ha.

Area B comprised 136 polygons of which 16 contained lands classified as CLI equivalent 3 to 7 lands and were designated as Agricultural Lands with areas greater than 81 ha.

Area C comprised 384 polygons of which 27 contained lands classified as CLI equivalent 3 to 7 lands and were designated as Agricultural Lands with areas greater than 81 ha.

Area D comprised 301 polygons of which 17 contained lands classified as CLI equivalent 3 to 7 lands and were designated as Agricultural Lands with areas greater than 81 ha.

At this stage in the process, DBH Soil Services Inc. has completed an assessment of soils/CLI that has resulted in the delineation of polygons that represent the combination of lands with CLI equivalent class 3 to 7 and designated as Agricultural Lands.

Therefore, DBH Soil Services Inc. has provided the first steps in documenting the Provincial Policy Statement 2014 (PPS 2014) Policy 2.3.6 Non-Agricultural Uses in Prime Agricultural Areas. This data can now be used in conjunction with the other disciplines to narrow the alternate site search.

I trust this information is helpful. Should you have any questions or concerns, please feel free to contact me at your earliest convenience at 519-578-9226.

Sincerely

DBH Soil Services Inc.

Dave Hodgson, P. Ag
President

APPENDIX A

UNIQUE SYMBOLS LIST

SYMBOL1	SLOPE1	CLASS1	RANGE1	STONINESS	CLI1	CLI1_1	CLI1_2
Anf	3.5	C	2 - 5	0	2	F	
Ans	3.5	C	2 - 5	0	3	F	
Ans	1.2	B	0.5 - 2	0	3	F	
Ans-b	3.5	C	2 - 5	1	5	P	
Ayc	1.2	B	0.5 - 2	0	3	W	
Aycl	1.2	B	0.5 - 2	0	3	W	
Aysc	1.2	B	0.5 - 2	0	3	W	
Aysc-b	1.2	B	0.5 - 2	4	5	P	
B.L.	-9.0			0	5	I	
Bef	3.5	C	2 - 5	0	2	F	
Bes	3.5	C	2 - 5	0	2	F	
Bg	7.0	D	5 - 9	1	2	F	M
Bg	3.5	C	2 - 5	0	2	M	
Bg	3.5	C	2 - 5	1	2	M	
Bif	12.0	E	9 - 15	0	1		
Bl	3.5	C	2 - 5	1	1		
Bnf	3.5	C	2 - 5	0	1		
Bof	7.0	D	5 - 9	0	2	F	M
Bos	12.0	E	9 - 15	0	2	F	M
Bos	7.0	D	5 - 9	0	2	F	M
Brsl	3.5	C	2 - 5	0	2	F	M
Brsl/g	3.5	C	2 - 5	0	2	F	M
Bs	3.5	C	2 - 5	1	1		
Bs-b	7.0	D	5 - 9	4	5	P	
Bs-s	22.5	F	15 - 30	1	5	T	
Cg	7.0	D	5 - 9	1	2	F	M
Cg	3.5	C	2 - 5	1	2	F	M
Dc	12.0	E	9 - 15	1	6	T	S
Df	7.0	D	5 - 9	0	1		
Ds	7.0	D	5 - 9	0	1		
Duc	37.5	G	30 - 45	1	7	T	
El	3.5	C	2 - 5	1	1		
El-sh	3.5	C	2 - 5	2	3	R	
Es	3.5	C	2 - 5	0	1		
Ets	22.5	F	15 - 30	0	7	E	
Fl	1.2	B	0.5 - 2	2	6	R	
Gf	1.2	B	0.5 - 2	0	4	W	
Gg	1.2	B	0.5 - 2	1	2	F	
Gg-b	1.2	B	0.5 - 2	4	5	P	
Gil	1.2	B	0.5 - 2	1	4	W	
Grs	1.2	B	0.5 - 2	0	5	W	
Gs	1.2	B	0.5 - 2	0	5	W	
Gsl	1.2	B	0.5 - 2	0	4	W	
Gsl	1.2	B	0.5 - 2	0	5	W	
Gsl-b	0.2	A	0 - 0.5	0	6	P	W
Gul	3.5	C	2 - 5	1	1		

Gul-b	3.5 C	2 - 5	4	6	P	
Gus	3.5 C	2 - 5	1	1		
Gus-b	3.5 C	2 - 5	4	6	P	
Hal	12.0 E	9 - 15	2	4	T	
Hg	1.2 B	0.5 - 2	2	5	F	M
Hl	3.5 C	2 - 5	1	1		
Hl	22.5 F	15 - 30	1	1		
Hl-s	12.0 E	9 - 15	1	4	T	
Hs	3.5 C	2 - 5	1	1		
Hs	12.0 E	9 - 15	1	2		
Kc	3.5 C	2 - 5	1	1		
Kc-sh	3.5 C	2 - 5	1	5	R	
Ks	1.2 B	0.5 - 2	0	5	W	
Ksc	3.5 C	2 - 5	1	1		
Lcl	3.5 C	2 - 5	0	2	D	
Ll	1.2 B	0.5 - 2	1	3	W	
Ll-b	1.2 B	0.5 - 2	4	6	P	W
Lvc	3.5 C	2 - 5	0	2	W	
Lvc-b	3.5 C	2 - 5	4	5	P	
Lvs	3.5 C	2 - 5	0	2	W	
Lvs-b	3.5 C	2 - 5	4	5	P	
M	0.2 A	0 - 0.5	0	O		
M	1.2 B	0.5-2	0	O		
M	1.2 B	0.5 - 2	0	O		
Ma	1.2 B	0.5 - 2	0	7	W	
Ma	0.2 A	0 - 0.5	0	7	W	
Mes	7.0 D	5 - 9	0	2	E	
Mesc	7.0 D	5 - 9	0	2	E	
Mmc	1.2 B	0.5 - 2	0	2	W	
Mms	1.2 B	0.5 - 2	0	2	W	
Ms	1.2 B	0.5-2	0	3	F	
Ms	1.2 B	0.5 - 2	0	3	F	
Ol	3.5 C	2 - 5	1	1		
Ol	3.5 C	2 - 5	3	3	P	
Ol-b	7.0 D	5 - 9	4	6	P	
Ol-s	22.5 F	15 - 30	2	5	T	
Opl	7.0 D	5 - 9	3	3	T	
Opl	7.0 D	5 - 9	3	3	P	
Opl	22.5 F	15 - 30	1	3	T	
Opl	37.5 G	30 - 45	3	6	T	
Opl	57.5 H	45 - 70	3	7	D	T
Opl	37.5 G	30 - 45	3	7	T	
Osl	3.5 C	2 - 5	1	1		
Pal	1.2 B	0.5 - 2	1	2	W	
Pfs	3.5 C	2 - 5	0	1		
Pfs-s	12.0 E	9 - 15	3	4	P	T
Psl	38.0 G	30 - 45	1	6	M	T

Psl	37.5 G	30 - 45	1	6	T	
R	22.5 F	15 - 30	4	7	R	
R	12.0 E	9 - 15	4	7	R	
R.L.	22.5 F	15 - 30	0	7	R	
R.L.	12.0 E	9 - 15	4	7	R	
Scl	3.5 C	2 - 5	0	1		
Scl	1.2 B	0.5-2	0	1		
Sg	7.0 D	5 - 9	0	3	F	M
Shc	3.5 C	2 - 5	0	1		
Shs	3.5 C	2 - 5	0	1		
Shsc	3.5 C	2 - 5	0	1		
Shsc-b	3.5 C	2 - 5	2	3	P	
Shsc-s	22.5 F	15 - 30	0	5	T	
Sic	1.2 B	0.5 - 2	0	2	W	
Sis	1.2 B	0.5 - 2	0	2	W	
Sisc	1.2 B	0.5 - 2	0	2	W	
Sisc-b	1.2 B	0.5 - 2	3	3	P	
Sms	3.5 C	2 - 5	0	1		
Sms	1.2 B	0.5 - 2	0	1		
Smsc	3.5 C	2 - 5	0	1		
Smsc	3.5 C	2 - 5	0	2	F	
Ssc	3.5 C	2 - 5	1	1		
Stsl	7.0 D	5 - 9	0	3	F	M
Stsl-s	22.5 F	15 - 30	0	6	F	M
Tfsl	1.2 B	0.5-2	0	1		
Tif	7.0 D	5 - 9	0	2	F	
Tif	7.0 D	5 - 9	0	3	F	M
Tis	7.0 D	5 - 9	0	4	F	M
Tis	3.5 C	2 - 5	0	4	F	M
Tis	22.5 F	15 - 30	1	6	M	T
Tis	37.5 G	30 - 45	1	6	T	M
Tis	22.5 F	15 - 30	1	6	T	M
Tis	37.5 G	30 - 45	1	7	T	
Tis	57.5 H	45 - 70	1	7	E	T
Tis-b	22.5 F	15 - 30	4	6	P	
Tis-e	37.5 G	30 - 45	1	7	E	
Tisl	7.0 D	5 - 9	0	3	F	M
Tis-s	22.5 F	15 - 30	1	6	T	
Tis-s	22.5 F	15 - 30	0	6	M	T
Tsl	3.5 C	2 - 5	0	2	F	
Tsl	1.2 B	0.5 - 2	1	2	F	
Un	-9.0		0			
UR	-9.0		0			
Vasl	12.0 E	9 - 15	2	2	F	
Vasl-b	12.0 E	9 - 15	3	6	P	
Vasl-s	12.0 E	9 - 15	2	7	T	
Vc	3.5 C	2 - 5	1	1		

Vl	7.0 D	5 - 9	1	2	F	
Vs	7.0 D	5 - 9	1	2	F	
Vsc	3.5 C	2 - 5	1	1		
Waf	1.2 B	0.5 - 2	0	3	W	
Was	1.2 B	0.5 - 2	0	3	W	
Wes	7.0 D	5 - 9	0	4	F	M
Wes	7.0 D	5 - 9	0	5	F	M
Wg	7.0 D	5 - 9	2	5	F	M
Wl	3.5 C	2 - 5	1	1		
Wl-b	7.0 D	5 - 9	3	4	P	
Wsl	22.5 F	15 - 30	0	5	S	T
ZZ	-9.0			W		

APPENDIX B

FIGURES

N

Lake Simcoe
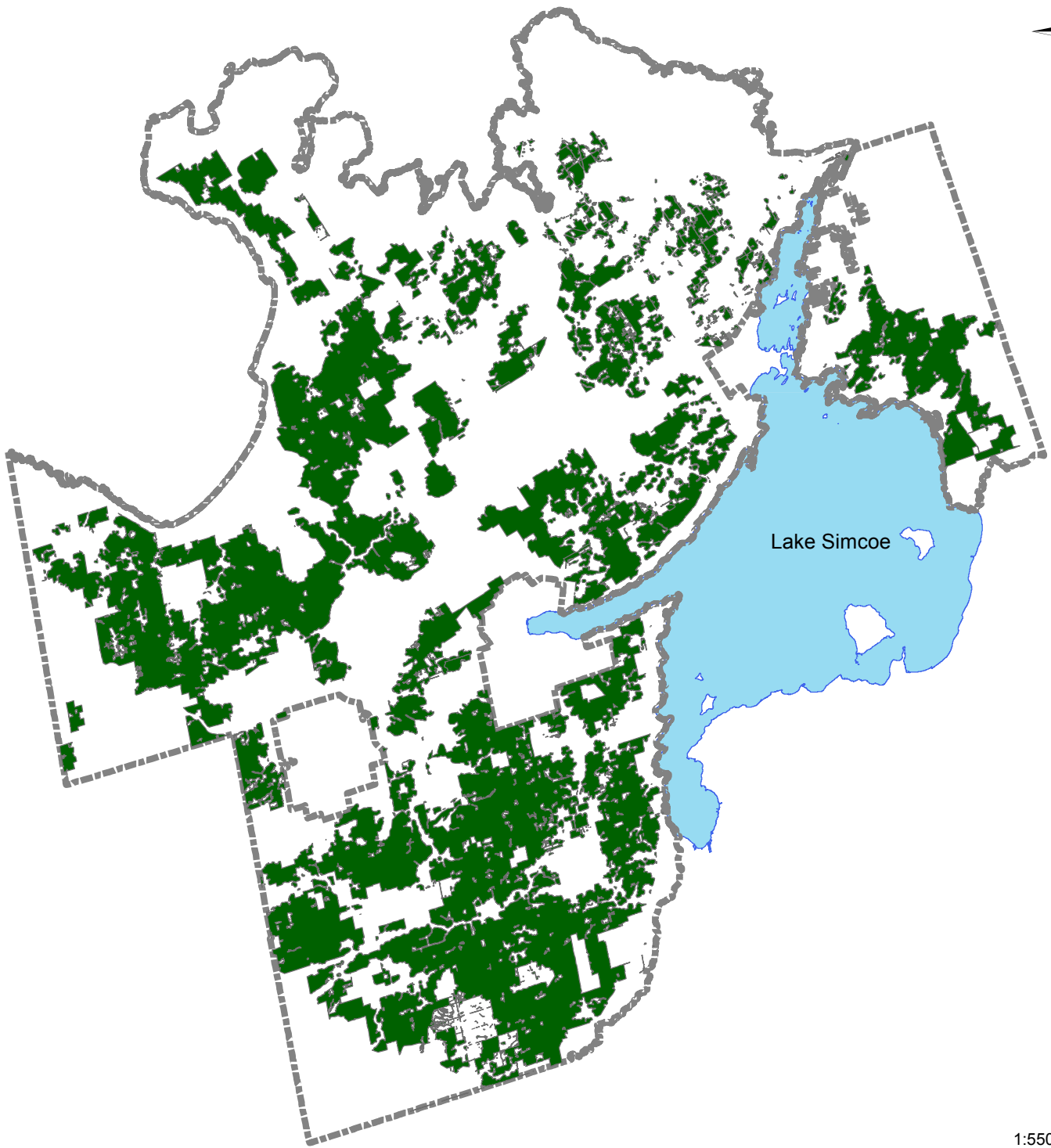
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Legend

Agricultural Lands (Official Plan)

Simcoe County (MNR)

Lake Simcoe
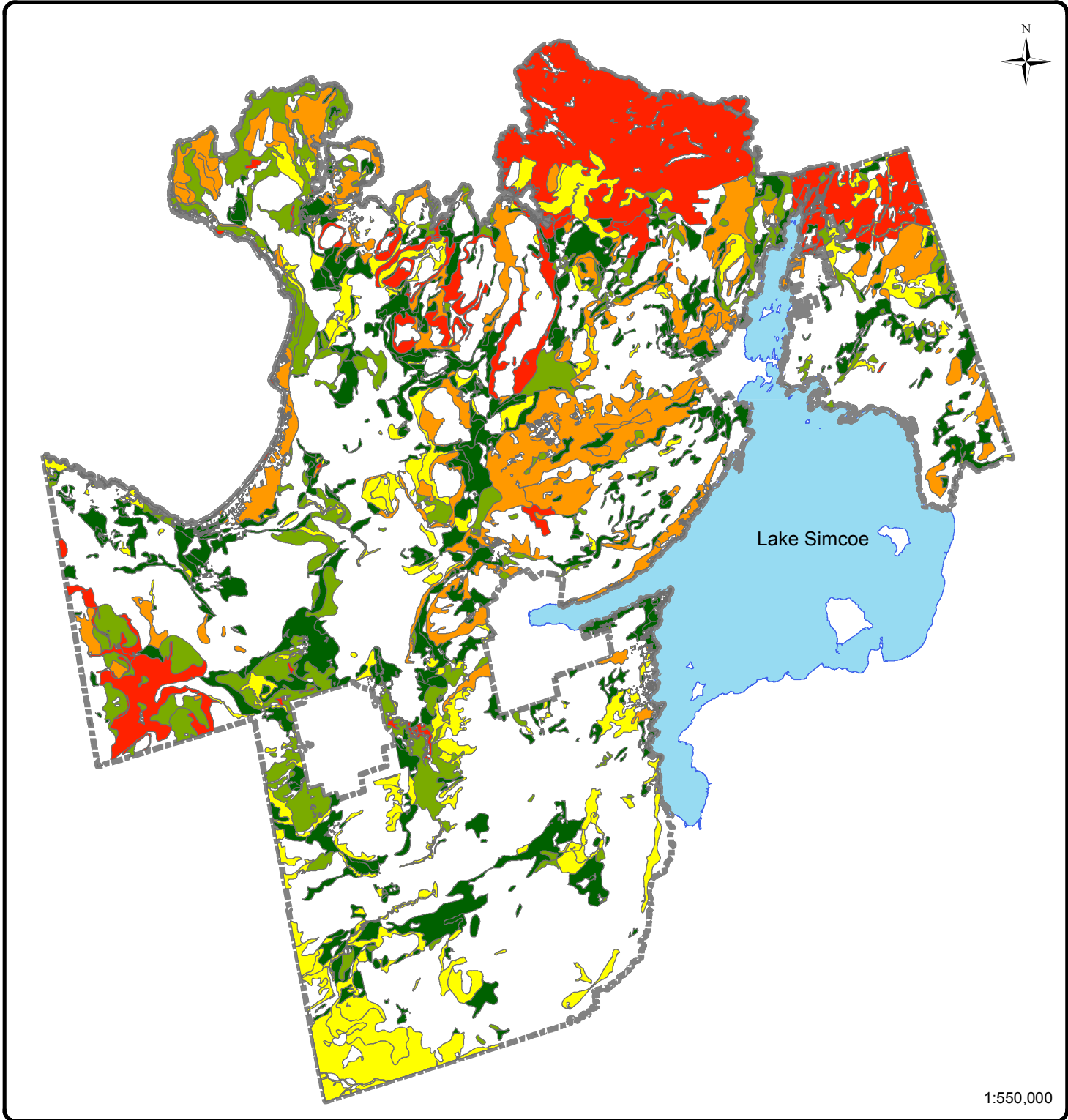
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Legend

- CLI Equivalent Class 3
- CLI Equivalent Class 4
- CLI Equivalent Class 5
- CLI Equivalent Class 6
- CLI Equivalent Class 7
- Simcoe County (MNR)

Figure 2

Canada Land Inventory (CLI)
Class 3 - 7 lands
(OMAFRA)

DBH Soil Services Inc.

March 2018

Lake Simcoe
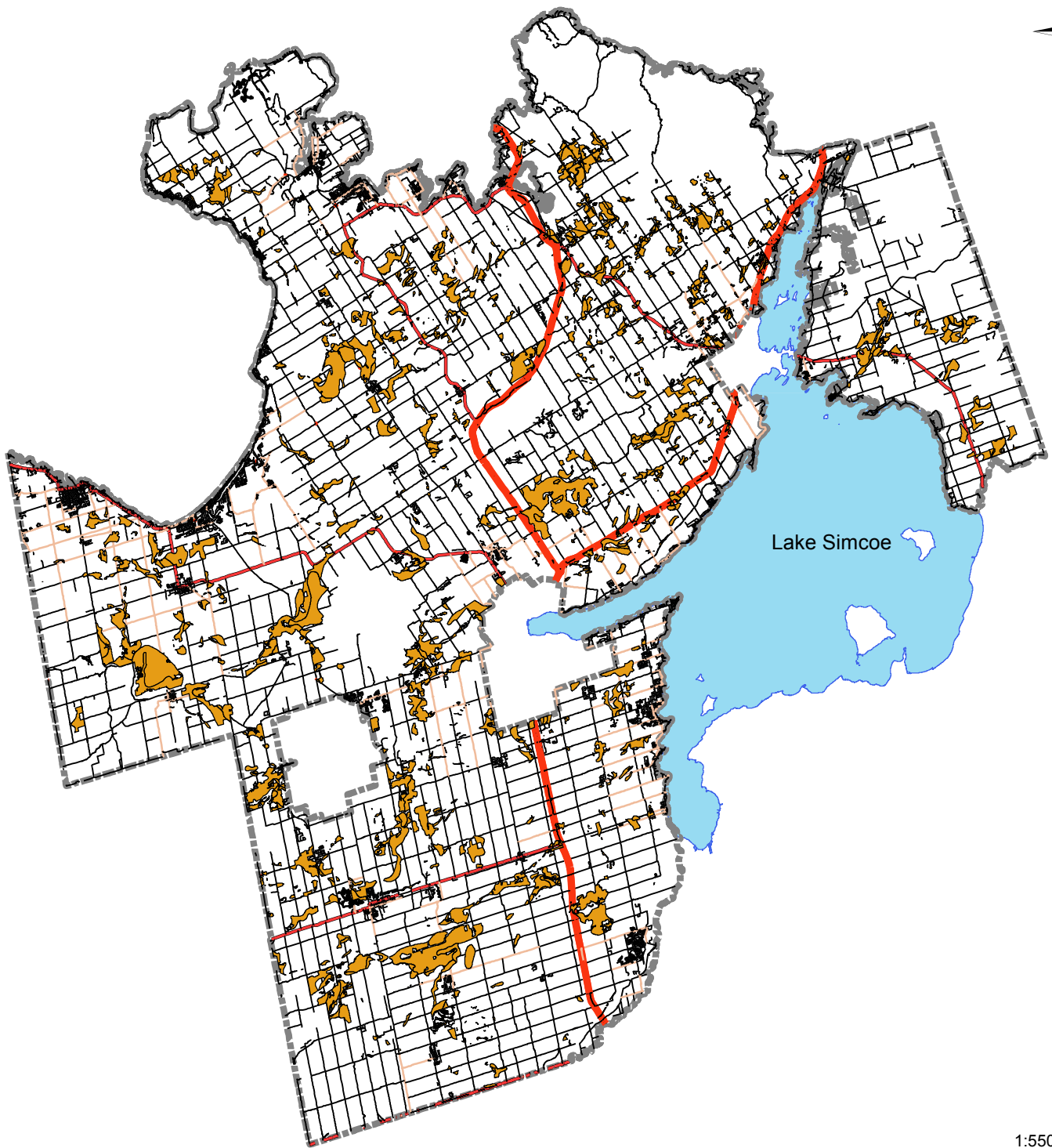
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Legend

Simcoe County (MNR)
Agricultural Land (OP) and CLI Eq 3 - 7

<all other values>
Arterial
Collector
Expressway / Highway
Freeway
Local / Street
Ramp

Figure 3   OMAFRA Soils Data
CLI Equivalents 3 - 7
on Agricultural Lands
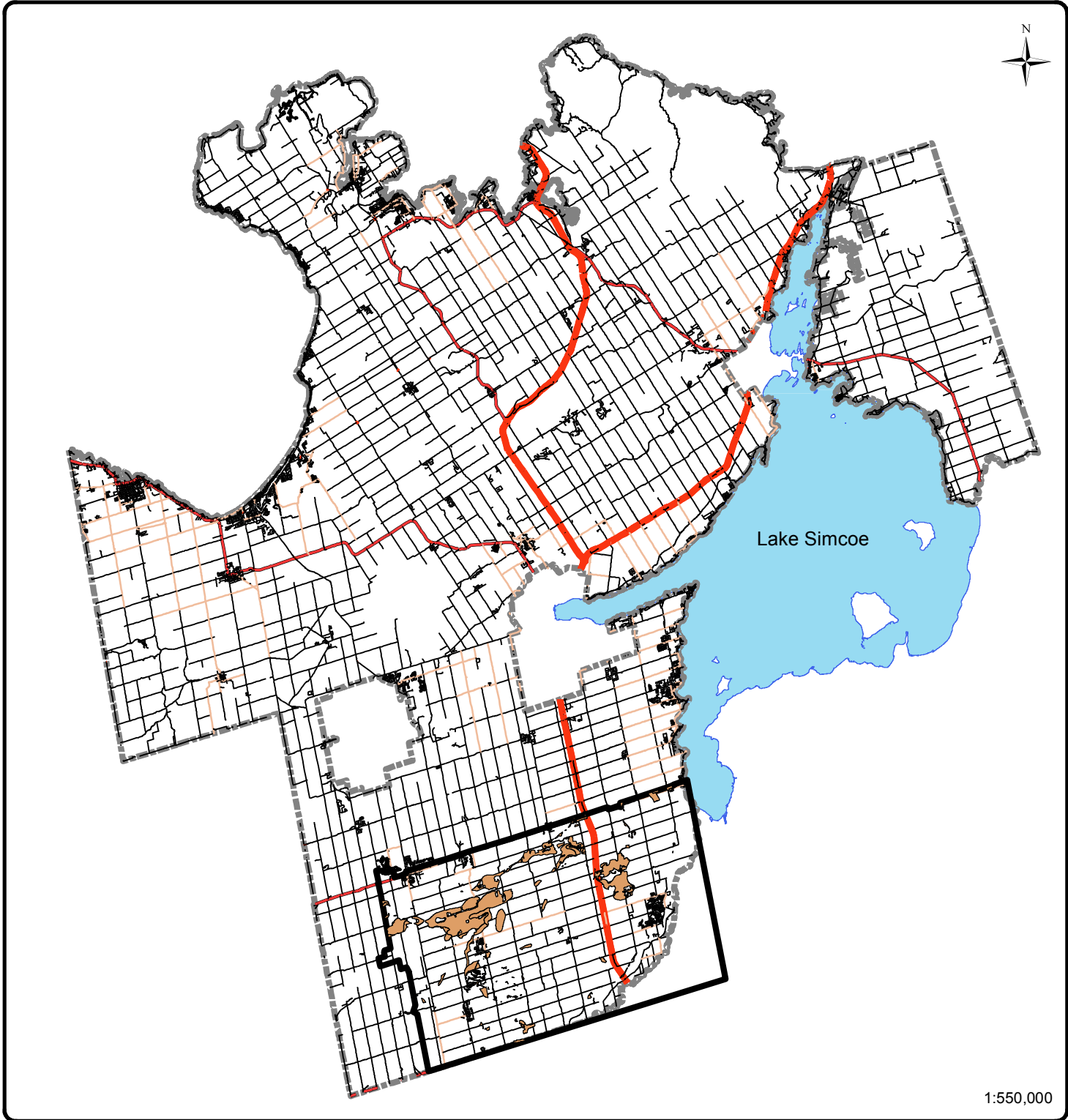
DBH Soil Services Inc.

March 2018

Lake Simcoe

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Figure 4

Area A
CLI Equivalents 3 - 7
on Agricultural Lands

DBH Soil Services Inc.
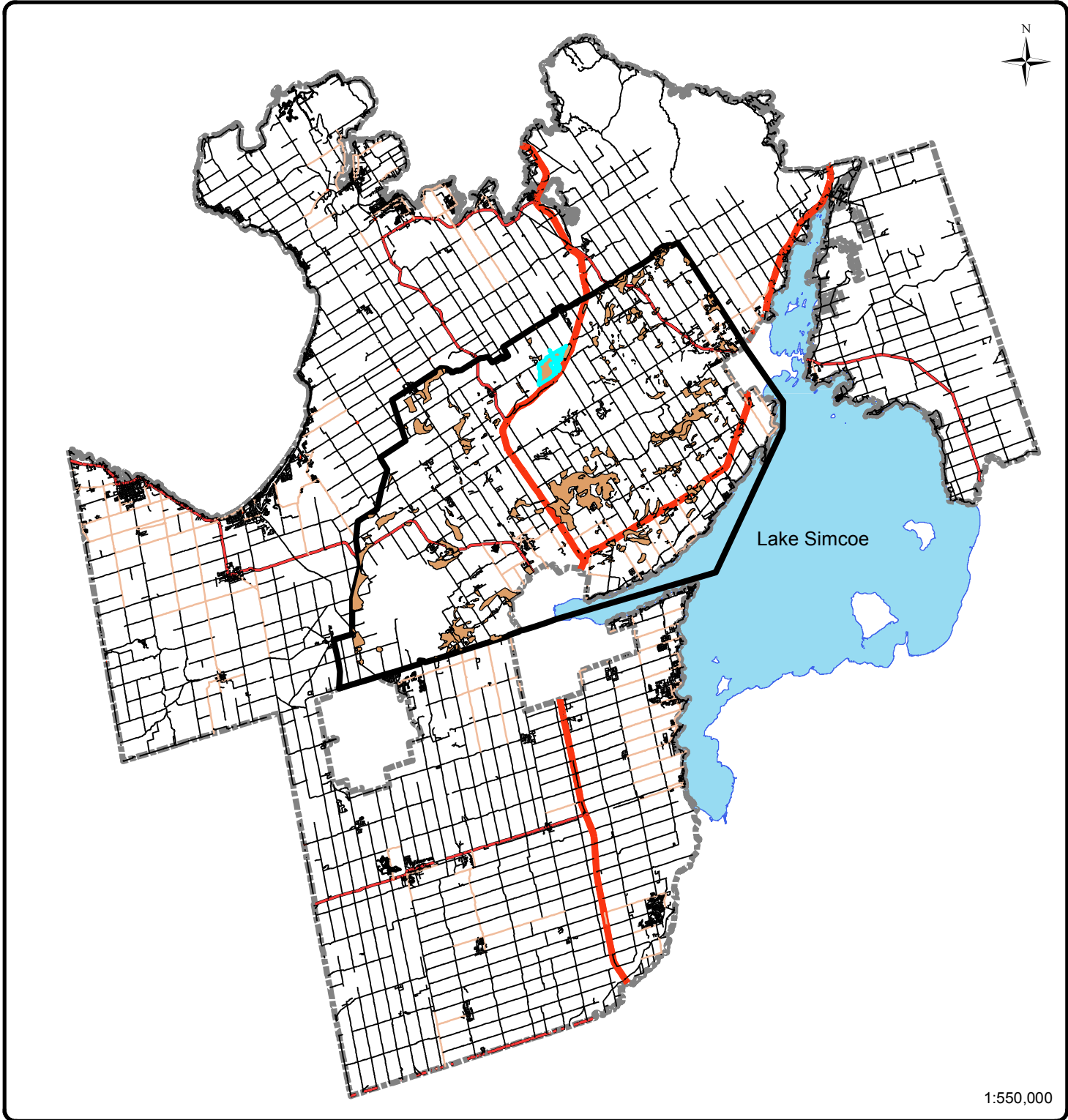
April 2018

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Lake Simcoe

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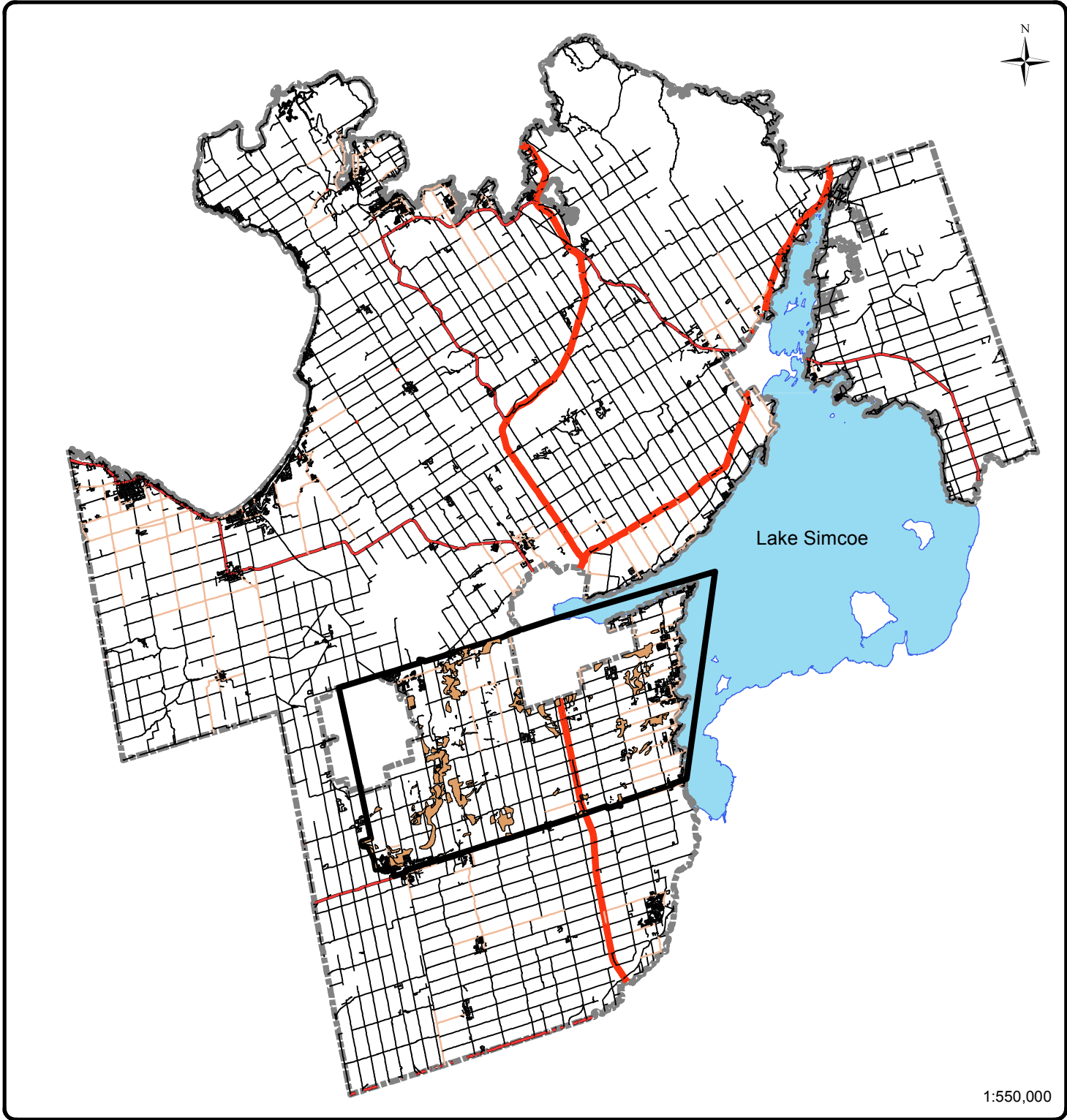
Legend

- Area B - Agricultural Lands and CLI Equiv (3 to 7)
- Area B Boundary
- Simcoe County (MNR)

- —— Arterial
- —— Collector
- —— Expressway / Highway
- —— Freeway
- —— Local / Street
- —— Ramp

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1:550,000

Legend

Area C - Agricultural Lands and CLI Equiv (3 to 7)
Area C Boundary
Simcoe County (MNR)

Arterial
Collector
Expressway / Highway
Freeway
Local / Street
Ramp

N

Figure 6

Area C
CLI Equivalents 3 - 7
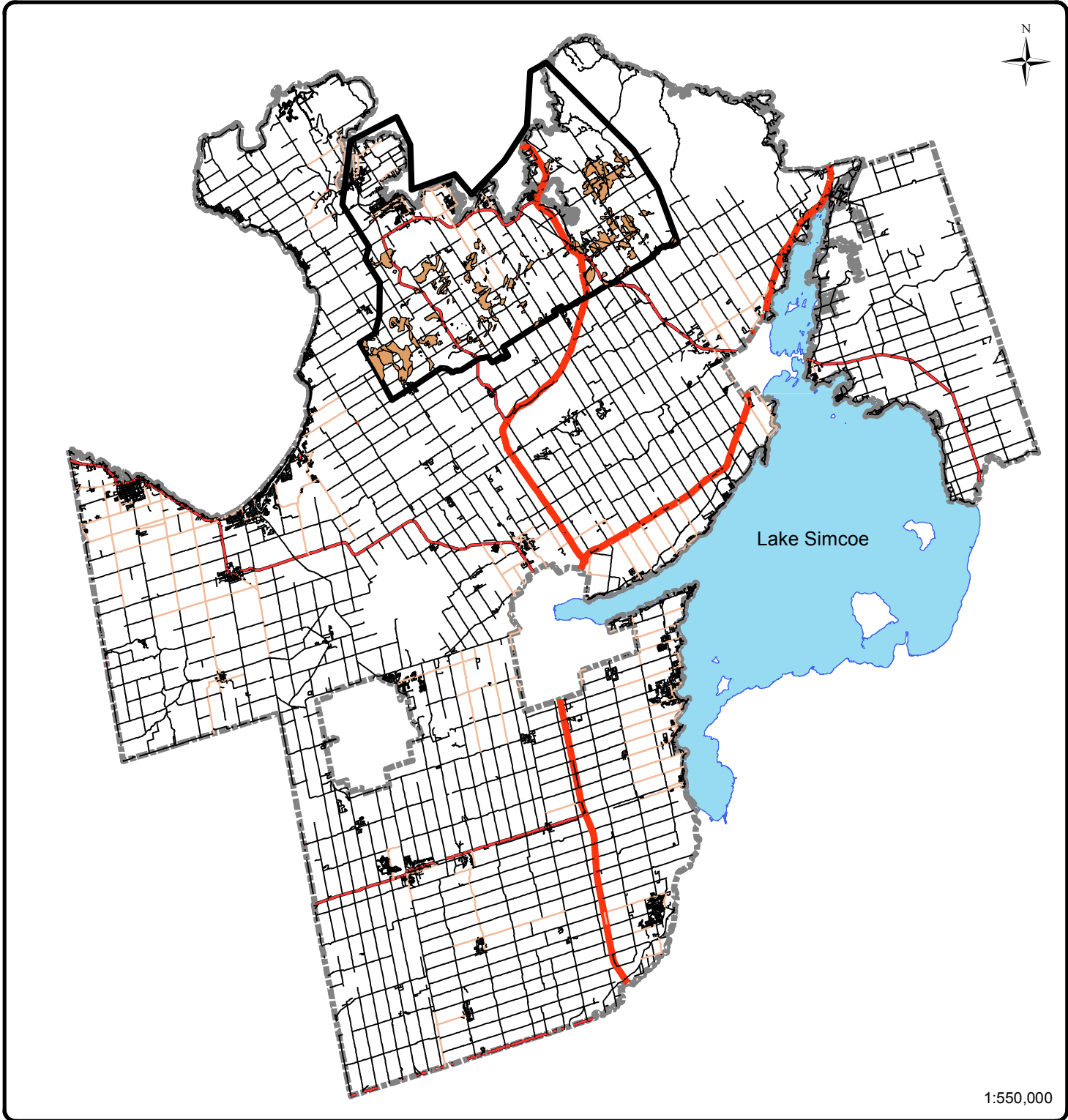on Agricultural Lands

DBH Soil Services Inc.

April 2018

Lake Simcoe

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Legend

- Area D - Agricultural Lands and CLI Equiv (3 to 7)
- Area D Boundary
- Simcoe County (MNR)

— Arterial
— Collector
— Expressway / Highway
— Freeway
— Local / Street
— Ramp

Figure 7

Area D
CLI Equivalents 3 - 7
on Agricultural Lands

DBH Soil Services Inc.

April 2018

APPENDIX C

HOFFMAN PRODUCTIVITY INDEX

Hoffman Productivity Index (Soil Productivity Index)

The Hoffman Productivity Index (HPI) is a tool that was published in ARDA Report No. 4 "The Assessment of Soil Productivity for Agriculture" and is used to relate the productivity of lands to the Canada Land Inventory (CLI) soil capability.

These indices are also referred to as the Soil Productivity Index and are used to calculate and assign a parcel or polygon a single value which represents the overall productivity of that parcel or polygon.

The single value is derived from the sum of the percent occurrence of each CLI Soil Capability Class on the parcel or within the polygon multiplied by the productivity index corresponding to the soil class.

Certain assumptions are made when using the productivity index. The HPI assumes that if the same level of management is applied to areas of differing CLI classes, then the productivity for each class will differ. Hoffman determined the average yields produced for common field crops on lands with CLI classes 1 to 4 within Ontario.

It was determined that a CLI class 2 land produced approximately 80% of the yield that would be associated with a class 1 land. Further that a class 3 land produced approximately 64% of the yield that would be associated with a class 1land, while a class 4 land produced approximately 49%. Values for class 5 through class 7 lands were extrapolated. As a result, it was determined that the productivity ranges were as follows:

Soil Productivity Index Ratings	
CLI Class	**Soil Productivity Index**
1	1.0
2	0.8
3	0.64
4	0.49
5	0.33
6	0.17
7	0.02

A parcels or polygons HPI or Soil Productivity Index is calculated as follows:

Soil Productivity Index =
(percent occurrence of class 1 lands x 1.0) + (percent occurrence of class 2 lands x 0.8) + (percent occurrence of class 3 lands x 0.64) + (percent occurrence of class 4 lands x 0.49) + (percent occurrence of class 5 lands x 0.33) + (percent occurrence of class 6 lands x 0.17) + (percent occurrence of class 7 lands x 0.02)

Once a Soil Productivity Index value is calculated for the parcel or polygon, the value can be related back to a CLI Equivalent. The following table illustrates the range of values which can be directly correlated to the equivalent CLI class.

Soil Productivity Index Range	
CLI Class	**Soil Productivity Range**
1	0.90 - 1.00
2	0.73 - 0.89
3	0.58 – 0.72
4	0.43 – 0.57
5	0.28 – 0.42
6	0.10 – 0.27
7	0.00 – 0.09