EXECUTIVE SUMMARY

Colville Consulting Inc. was retained by the Town of Halton Hills to complete an Agricultural Impact Assessment in support of the Southwest Georgetown Secondary Plan. The Agricultural Impact Assessment is being completed in four phases, with this report summarizing the findings of Phase I and II. Phases I and II include the characterization of agricultural lands within the Study Area and identifies the Minimum Distance Separation (MDS) setback requirements for livestock operations.

The Primary Study Area discussed within this report includes all lands north of 10 Side Road, east of Highway 3 (Trafalgar Road) and south of Highway 15. The Secondary Study Area included all lands south of Highway 15 and within 1 km of the Primary Study Area.

Soil and climate data for the Study Area was also reviewed for the purposes of characterizing the Agricultural lands in the Primary and Secondary Study Areas. Two reconnaissance level land use survey were completed to document the mix of land uses observed in both the Primary and Secondary Study Areas. Detailed information regarding farm operations was also collected. Livestock operators were contacted either during or following the land use survey in order to obtain more detailed information regarding the operation for the purposes of completing MDS I calculations for each livestock operation within the Secondary Study Area.

The study concluded that the majority of the soils in the overall Study Area are derived from morainal till deposits and consist of soils from the Oneida catena (Oneida, Chinguacousy and Jeddo soil series). All of the lands within the Study Area consist of CLI Class 1-3, with the majority being CLI Class 1. The climatic information confirmed that there are no limitations for growing most common field crops. The artificial drainage mapping for the Study Area revealed that there are some drainage systems installed within the Primary Study Area.

The MDS I calculations for the Study Area were made using the data collected during the land use survey as well as communication with farm operators and calculations made using aerial photography. At most, the MDS I setbacks encroach within the Primary Study Area at three locations. One of these livestock facilities (Farm #16), is retired and the facility may not be suitable for housing livestock. Additional information regarding this facility is expected to be forthcoming from the landowners and if it can be confirmed that the building is not suitable for housing livestock, the MDS I formula would not apply.

Although the soils and agricultural capabilities of the Study Area are high, it is not considered a specialty crop area. The overall the Study Area appears to be in agricultural decline, with very little investment being made in agricultural infrastructure and only one active farm operation within the Primary Study Area.
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Appendix A – Land Use Descriptions & MDS I Details
Appendix B – MDS I Reports
1. **INTRODUCTION**

Colville Consulting Inc. was retained by the Town of Halton Hills to provide input to the Vision Georgetown project through the completion of an Agricultural Impact Assessment (AIA) as required in support of the Southwest Georgetown Secondary Plan. The Regional Municipality of Halton has draft guidelines for completing an AIA (Agricultural Impact Assessment Guidelines, 2011, Draft). As stated in this document “An AIA will be required as part of a secondary plan process that, if approved, would permit development within an Urban Area on lands that abut or are in close proximity to an Agricultural Rural Area, and will address mitigation of negative impacts on agricultural operations resulting from the development.”

As per the Terms of Reference for the study, the AIA will be prepared in two stages. The first stage will be to characterize the agricultural lands within the Study Area. The second phase of the study will be to identify potential impacts of the proposed boundary expansion and where possible, develop mitigation measures to reduce the level of impact on farm operations and agricultural resources. This report has been prepared to address the first phase of the study.
2. **Context/Study Area**

In this report, the urban boundary expansion area is referred to as the Primary Study Area and includes the lands north of 10 Side Road and east of Highway 3 (Trafalgar Road). The current urban boundary comprises the northern and eastern boundaries. The Secondary Study Area includes all lands within one kilometer of the Primary Study Area. This generally includes the lands south of the 15th Side Road between Trafalgar Road and the 6th Line and Lots 9 and 10, Concessions 7-11 which are south of the 10th Side Road.

The area of study is shown in Figure 1.
3. **BACKGROUND / ASSESSMENT**

3.1 **Information Reviewed**

The study included a review of existing agricultural resources information for the Primary and Secondary Study Areas. The materials consulted are listed on page 10 of this report and include information regarding:

- the soil resources and CLI agricultural capability of the lands;
- climatic information for the area; and
- OMAFRA’s Artificial Drainage Systems mapping.

In addition, in some cases, land owners were contacted by phone to obtain site specific information regarding their farm operations.

3.2 **Field Work**

A land use survey of the Primary and Secondary Study Areas was completed in two phases. The first reconnaissance site visit was made on June 18, 2013 and a subsequent site visit was completed on August 16, 2013. The reconnaissance level, land use survey identified the cropping pattern observed, the number and type of agricultural operations within the area (both existing and retired), and the extent and type of non-farm land uses in the area. Where livestock operations were identified more specific information was obtained regarding the type of livestock facility, the maximum capacity of the barns capable of housing livestock and the type of manure system used. This information is required to address the Minimum Distance Separation I (MDS I). Farm operators were contacted in person during the land use survey or were contacted by telephone following the survey.
4.0 RESULTS/FINDINGS

4.1 Agricultural Resources

4.1.1 Soil Resources

The soils in the Primary Study Area are comprised mainly of soils developed from morainal till from which the soils of the Oneida catena have developed. The Oneida catena includes the well drained Oneida soil series, the imperfectly drained Chinguacousy soil series and the poorly drained Jeddo soil series. Two additional soils have been mapped in the northern portion of the Primary Study Area. These include the well drained, Font and Grimsby soil series which comprise most of Lot 15, Concession 8. The Font soils are well sorted, coarse sands and gravels; glacio-fluvial in origin. The Grimsby soils are also of glacio-fluvial origin, however they have developed from medium to fine sands.

All of the Secondary Study Area is comprised on soils from the Oneida catena.

According to OMAFRA’s 1:50,000 scale CLI manuscript mapping, all of the soils within the Primary and Secondary Study Areas are rated CLI Classes 1-3. The majority of these soils are rated CLI Class 1 soils.

4.1.2 Climate

Climate data is available through Environment Canada’s National Climate Data and Information Archive’s online database. Climate Normals and Extremes for Georgetown (1971-2001) were obtained from the online database (Appendix A).

Georgetown receives an average of 885 mm of precipitation annually (Environment Canada website); 743.8 mm of rainfall and 114.0 mm of snowfall. The daily average temperature ranges from a high of 12.6°C to a low of 1°C.

According to the OMAFRA Factsheet Freeze Risk During Spring and Autumn in Ontario (Brown, D.M., & A. Bootsma, 1991) the average length of the frost-free period is estimated to be between 150 and 160 days. The frost-free period ranges from about May 5th to October 5th.

Georgetown receives annually an average of between 2700 and 2900 accumulated crop heat units (CHU). The crop heat unit ratings are based on the total accumulated CHU for the frost-free growing season (Brown, D. M., and A. Bootsma. 1993). All common field crops can be grown in areas receiving CHU at these levels.

4.1.3 Artificial Drainage

The OMAFRA Artificial Drainage Systems mapping (Halton Hills map sheet) shows that there are five (four systematic and one random) locations within the Primary Study Area where tile drainage has been installed.

There are only two, relatively small areas within the Secondary Study Area where systematic tile drainage has been installed.

4.2 Assessment of the Minimum Distance Separation I Requirements

Proposed new non-farm land uses, including settlement expansion areas, are required to meet the Minimum Distance Separation I formula as contained in Minimum Distance Separation Implementation Guidelines, Publication 707 of the Ontario Ministry of Agriculture, Food and Rural Affairs, 2006.

Section 2.3.3.3 of the PPS states that “New land uses, including the creation of lots, and new or expanding livestock facilities shall comply with the minimum distance separation formulae.” The MDS is a tool used
to determine the separation distance between livestock facilities and non-compatible land uses. It deals specifically with odour and does not account for noise, dust or other farm generated products. It is applied to all farm operations that have infrastructure reasonably capable of housing livestock. The MDS I formulae provides the minimum distance separation between existing livestock facilities (and empty livestock facilities) and new non-agricultural use including urban boundary expansion.

The Minimum Distance Separation I formula was applied to all livestock facilities within the Study Area and within one kilometer (1,000 m) of the proposed boundary expansion area, with the exception of livestock facilities within the Primary Study Area. This is due to the fact that this area will become “urban” and the MDS formula is not applied to lands within a settlement area unless specifically stated in the municipality’s Official Plan. According to Ms. Tara Buonpensiero, Senior Planner with the Town of Halton Hills, the local Official Plan does not require the application of the MDS I formula for farm operations located within the Town’s urban area.

The MDS I formula uses the following factors to determine the MDS I setback requirements: the type of livestock; the maximum capacity of the barn for livestock; type of manure system and the type of land use (Type A or Type B). For settlement area expansion, the type of land use is considered to be a Type B land use. The amount of tillable acres is often used in the calculation of the MDS I setback however the formula does not include this factor when calculating the MDS I requirement for settlement area expansion.

The MDS I formulae applies to all existing livestock facilities and empty livestock facilities. An empty livestock facility is one that may be retired or no longer is used to house livestock, however it appears to be reasonably capable of housing livestock. The MDS is not applied to barns that are in poor condition and not suitable for housing livestock.

Specific information regarding each farm operation was obtained from land owners or their agents. In cases where this information was not directly available, we relied on best judgement to determine the MDS I factors most likely applicable to the farm operation. These factors are based on the observations recorded during the land use survey and other sources such as other local farmers and through aerial photographic interpretation. In some cases, the building capacity was estimated based on the building dimensions as measured using aerial photography (e.g., Google Earth®). Where information is not readily apparent or available, the most likely scenario (e.g., type of livestock or manure system) is used in the MDS I calculation.

Two site visits were completed; one in June and another in August, 2013. The land uses and cropping patterns were observed and recorded. The factors required to determine the MDS I setback requirements was also collected during the land use surveys. The MDS I factors were input to the MDS I software provided by OMAFRA to determine the MDS I requirements.

Figure 2 shows the land uses and cropping pattern observed during the land use survey. The farm and non-farm land uses were numbered and descriptions for these land uses are contained in Appendix A.

Several farm operations were identified however only six operations are located within the Secondary Study Area and the MDS I formula would potentially only apply to four of these. Those farm operations include Farm No. 6, Farm No. 7, Farm No. 15 and Farm No. 16.

Figure 3 shows the MDS I setback requirements for these farm operations.
Only limited information is available at this time for Farm #16. We have confirmed that the farm is owned by Treeola Farms Ltd. in Brampton, Ontario. Both the planning staff at the Town of Halton Hills and Colville Consulting have attempted to contact the landowners on several occasions. We have learned that the farm is indeed a retired livestock operation. No livestock have been housed in the barns for at least eight years. The owners have also applied for and received a demolition permit for the barn although we have learned that it is now expired. The fact that a demolition permit has been granted in the past would suggest that the barn may not be structurally sound and fit for housing livestock. We will continue to clarify the situation and should it be confirmed that the barn is not structurally sound, the MDS I formula would not be applied to this facility. Until then, Figure 3 continues to demonstrate a conservative estimate that assumes that the barn was in good condition and capable of housing livestock.

The application of the MDS I formula impacts the proposed expansion area at three locations. The extent of encroachment is shown in Table 1.

<table>
<thead>
<tr>
<th>Farm Operation No.</th>
<th>MDS I from Livestock Occupied Portion of Barn</th>
<th>MDS I from Manure Storage Location</th>
<th>Encroachment into Settlement Expansion Area (as measured from Trafalgar Rd.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6 – Valentina Farms</td>
<td>259 m</td>
<td>277 m</td>
<td>None</td>
</tr>
<tr>
<td>No. 7 – Devolin</td>
<td>219 m</td>
<td>219 m</td>
<td>Approximately 17 m</td>
</tr>
<tr>
<td>No. 15 – Wanless (Horses)</td>
<td>243 m</td>
<td>243 m</td>
<td>Approximately 35 m</td>
</tr>
<tr>
<td>No. 16 - Retired</td>
<td>297 m</td>
<td>297 m</td>
<td>Approximately 90 m</td>
</tr>
</tbody>
</table>

In the case of Farm No. 7 which is leased to a local farmer, the MDS I formula only partially applies as there are several non-farm land uses located between and closer to the proposed expansion area (see Figure 3). Where there are four or more non-farm land uses located in close proximity and closer to the proposed development the MDS I is not applied as per MDS I Guideline No 12. This particular Guideline also applies in its entirety to farm operations No. 17 and No. 18.

There are also several retired or remnant farm operations in the area that were not considered to be empty livestock facilities. The MDS I formula was not applied to these facilities because of the poor condition of the barns making them unsuitable for housing livestock, or lack of infrastructure due to the removal of the barns.

More details regarding the MDS I factors used in the calculations are provided in Appendix A and the MDS I reports for each of these livestock operations are provided in Appendix B.
5. **CONCLUSION**

The Primary and Secondary Study Areas are comprised entirely of CLI Classes 1, 2 and 3 lands which are considered to be Prime Agricultural Lands. These lands are considered to be within a Prime Agricultural Area as per the PPS. Settlement area expansion will consume Prime Agricultural Lands within a Prime Agricultural Area.

The soils and climate are suitable for common field crops and the majority of the lands are in common field crop production (corn, soybean, cereal grains and forage). Vegetable crops are grown within the proposed settlement expansion area, however, specialty crops make up a minor component of the crops grown in the area. This area is not considered to be a specialty crop area as defined in the Provincial Policy Statement.

Expansion will also consume investment in agricultural infrastructure and land improvements (i.e., tile drainage). However, in many cases the infrastructure has already been removed. There is only one active farm operation with infrastructure remaining within the Primary Study Area.

The land uses observed show that agriculture in the area is in decline. For the most part infrastructure is being removed or maintained with minimal investment. Little new or significant investment in modern farm infrastructure was observed in the study area.

There are potentially up to three existing farm operations that have MDS I setback requirements which slightly encroach into the proposed settlement area boundary. Land uses proposed within the settlement area will have to respect the MDS I setbacks while the barns are considered suitable for housing livestock.

This report was prepared to address Phases 1 and 2 of the Agricultural Impact Assessment for Vision Georgetown.

\[\text{Sean Colville, President}\]
\[\text{Colville Consulting Inc.}\]

\[\text{Date: February 14, 2014}\]
INFORMATION SOURCES

The following list provides an example of the relevant information sources that will be reviewed as the Study progresses.


Ontario Ministry of Agriculture, Food and Rural Affairs. 1:50,000 scale manuscript mapping.

APPENDIX A
LAND USE DESCRIPTIONS
&
MDS I DETAILS
LAND USE & MDS DETAILS

Land Use Survey completed June 18th and August 16th, 2013. Each land use mapped and described below is identified by number which correlates to the land use mapping in Figure 2 and MDS I Setback in Figure 3.

Land Use Descriptions:


2. Small poultry or hog operation. Difficult to see from road, 2 small steel sided barns visible. Cultivated adjacent lands. Outside of study area.

3. Small green house operation with approximately 7 plastic sided-green houses. Identified as a hobby farm. Outside of study area.


5. Non-agricultural land use. Possibly associated with neighboring landscaping operation. A connected driveway was visible from road and equipment located on both properties. Idle lands located between properties, likely to have been previously planted with corn. Outside of study area.

6. Valentina Farms – Large retired dairy farm operation. Large farm complex in good condition but has not housed animals since 1980’s. Once used for cattle export dairy cows (Holstein) to Europe. All surrounding lands are leased to other farm facilities for cash crops. Surrounding lands are currently in soybean production. Spoke with Mr. Henry Parasol who says there are absolutely no plans on ever using the buildings again as a dairy or any other type of livestock. There are two horses on site but these are tenant horses and will not be kept on site there permanently. Despite the size of the operation, only a relatively few dairy cows were ever on site. Small concrete block barn on west side housed dairy cows. He could not provide me with an estimate as to the numbers however based on barn dimensions (using Google Earth®) it is estimated that the barn could house 26 cows. The manure was removed from the barn and stored outside at the southern end of building, uncovered (V4). The MDS I setback requirement for this operation was determined to be 277 m from the manure storage location and 259 m from the barn. The MDS does not encroach within the proposed settlement expansion area.

7. Associated with Valentina farms. Bank barn with concrete capped silo formerly used for livestock. Barn is rented to a local farmer (Mr. Devolin) who has operated a cow-calf operation and kept up to 25 beef cattle. He does not have any cattle on the site now but continues to rent the barn to store hay from home farm. Mr. Devolin estimates that the barn capacity for beef feeders is between 30 and 40 cattle. He only rents 10 acres of land and therefore has to provide additional feed. The manure storage system is an inside, bedded packed which is periodically cleaned out (>14 days) (V1) and sold to topsoil manufacturer in the area. The MDS I setback requirement for this operation was determined to be 219 m. The MDS encroaches into the proposed settlement expansion area approximately 17 m.


11. Agram Meats - butcher shop. Associated abattoir facility located at back of property. Lands located behind facility are cultivated. MDS does not apply.
12. Non-agricultural land use. Unknown facility, does not appear to be an agricultural use.

13. Lands believed to be associated with former Valentina Farms. Same roof and silo design and colours. Cultivated lands located behind property.

14. Abandoned farm house- no barn or farm infrastructure present. Corn planted on either side of property.

15. Large farm complex – New, steel roof on barns. There are at least two barns capable of housing livestock. Two large-framed and two medium-framed horses observed in pasture. Several paddocks and an apparent riding ring on property. Farm likely converted from other livestock operation (dairy?). Based on measured dimensions (using Google Earth®) the maximum capacity of the barns for horses was determined by MDS software to be 23. The MDS I setback requirement for an equestrian facility was determined to be 243 m. This will encroach approximately 35 m into the proposed settlement expansion area. The landowner was contacted subsequent to our field investigations and he confirmed that the factors used in the MDS formula were appropriate.

16. Hillcrest Farm – Owned by Treeola Farms Ltd. This is a former livestock facility with an old barn which appears to be in fair condition however there is an expired demolition permit for the facility which suggests that perhaps it is not structurally sound and suitable for housing livestock. No other associated buildings other than house and garage. Should the facility be capable of housing livestock, based on measured dimensions (using Google Earth®) the maximum capacity of the barn is approximately 121 beef backgrounders (i.e., the most likely use). It is assumed that the facility would have an inside bedded packed manure system (V1). Given these factors, the facility would require an MDS I setback requirement of 297 m. The MDS I setback will encroach approximately 90 m into the proposed settlement expansion area. More information is needed to confirm the structural integrity of the barn to confirm whether the MDS formula should be applied.

17. Empty livestock operation. Infrastructure appears to be in good condition and could house livestock in future. Several non-farm land uses located between and closer to the proposed expansion area, therefore the MDS I formula would not apply (MDS I Guideline #12). MDS I not determined for this facility.

18. Empty livestock operation. One bank barn with a steel roof and a concrete capped silo. Lands currently cultivated field crops. It does not appear that there are be any livestock present. The buildings appear to be in fairly good condition, however, several non-farm land uses are located between and closer to the proposed expansion area. Therefore the MDS I formula would not apply (MDS I Guideline #12). MDS I not determined for this facility.

19. Former livestock operation. Infrastructure has been removed and is no longer a farm operation.

20. Former livestock operation. Infrastructure is in poor condition and not suitable for housing livestock (confirmed by owner). Owner considering removing old barn as it is considered a safety hazard.

21. Former livestock operation. Infrastructure has been removed and is no longer a farm operation.

22. Former livestock operation. Infrastructure has been removed and is no longer a farm operation.

23. Alison’s Farm Market.

24. Livestock operation with large bank barn, uncapped silo and several outbuildings and grain storage bins. Appears to be sheep and pasture lands based on Google Earth® interpretation. There are also several fields of vegetables. Observed sweet corn, squash crops and other vegetable crops during land
use survey. Vegetable likely sold at Alison’s Farm Market. Because this livestock operation is located within the proposed urban boundary expansion area, the MDS I formula will not apply.
APPENDIX B
MINIMUM DISTANCE SEPARATION REPORTS
Minimum Distance Separation I (MDS I) Report

Application Date: 19-Aug-2013
File Number: C13002
Preparer Information
Sean Colville
Colville Consulting Inc.
404 Queenston St.
St. Catharines, ON, Canada L2P 2Y2
Email: sean@colvilleconsultinginc.com

NOTE TO THE USER:
The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has developed this software program for distribution and use with the Minimum Distance Separation (MDS) Formulae as a public service to assist farmers, consultants, and the general public. This version of the software distributed by OMAFRA will be considered to be the official version for purposes of calculating MDS. OMAFRA is not responsible for errors due to inaccurate or incorrect data or information; mistakes in calculation; errors arising out of modification of the software, or errors arising out of incorrect inputting of data. All data and calculations should be verified before acting on them.

Calculation #1
Farm No. 6 Valencia Farms
Retired dairy operation. Not active since late 80’s. Infrastructure still in good condition.
Raised dairy cattle for export to Europe.

Adjacent Farm Contact Information
Unspecified

Region: Regional Municipality of Halton
Location: Town of Halton Hills

<table>
<thead>
<tr>
<th>Manure Form</th>
<th>Type of Livestock/Material</th>
<th>Existing Capacity</th>
<th>Existing NU</th>
<th>Estimated Barn Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>Dairy; Milking-age Cows (dry or milking) Large Frame (545 - 636 kg) (eg. Holsteins); Tie Stall</td>
<td>26</td>
<td>37.1</td>
<td>266 m²</td>
</tr>
<tr>
<td>Solid</td>
<td>Horses; Large-framed, mature; &gt; 680 kg (including unweaned offspring)</td>
<td>2</td>
<td>2.9</td>
<td>60 m²</td>
</tr>
</tbody>
</table>

Encroaching Land Use Factor: Type B Land Use
This calculation is required for the purposes of a settlement area expansion.

Manure/Material Storage Type: L1. Solid, outside, no cover, 18-30% DM, with uncovered liquid runoff storage

Factor A (Odour Potential): 0.7
Factor B (Nutrient Units): 240
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 40

Distance from nearest livestock building 'F' (A x B x D x E): Required Setback 259 m (849 ft)
Distance from nearest permanent manure/material storage 'S': Actual Setback 277 m (910 ft)

Signature of Preparer: ___________________________  Date: February 14, 2014

Sean Colville, Colville Consulting Inc.
Calculation #2
Farm No. 7
Owned by Valencia Farms, leased to local farmer who keep beef cattle.

Adjacent Farm Contact Information
Unspecified

Summer Location
Regional Municipality of Halton
Town of Halton Hills

<table>
<thead>
<tr>
<th>Manure Form</th>
<th>Type of Livestock/Material</th>
<th>Existing Capacity</th>
<th>Existing NU</th>
<th>Estimated Barn Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>Beef; Feeders (7 - 16 months)</td>
<td>40</td>
<td>13.3</td>
<td>Unavailable</td>
</tr>
</tbody>
</table>

Encroaching Land Use Factor: Type B Land Use
This calculation is required for the purposes of a settlement area expansion.

Manure/Material Storage Type: V1. Solid, inside, bedded pack

Factor A (Odour Potential): 0.8
Factor B (Nutrient Units): 178
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 13

Distance from nearest livestock building 'F' (A x B x D x E):
Distance from nearest permanent manure/material storage 'S':
219 m (719 ft)

Calculation #3
Farm No. 16 - Retired Farm OP
Farm appears to have been retired for several years (decades)

Adjacent Farm Contact Information
Unspecified

Summer Location
Regional Municipality of Halton
Town of Halton Hills

<table>
<thead>
<tr>
<th>Manure Form</th>
<th>Type of Livestock/Material</th>
<th>Existing Capacity</th>
<th>Existing NU</th>
<th>Estimated Barn Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>Beef; Backgrounders (7 - 12.5 months); Yard/Barn</td>
<td>121</td>
<td>40.3</td>
<td>450 m²</td>
</tr>
</tbody>
</table>
Encroaching Land Use Factor: Type B Land Use

This calculation is required for the purposes of a settlement area expansion.

Manure/Material Storage Type: V1. Solid, inside, bedded pack

Factor A (Odour Potential): 0.8
Factor B (Nutrient Units): 241
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 40

Distance from nearest livestock building 'F' (A x B x D x E): 297 m (973 ft)
Distance from nearest permanent manure/material storage 'S': 297 m (973 ft)

Calculation #4

Farm No. 15 - Wanless Farm

Calculated for horses

Adjacent Farm Contact Information
Unspecified

Farm Location
Regional Municipality of Halton
Town of Halton Hills

<table>
<thead>
<tr>
<th>Manure Form</th>
<th>Type of Livestock/Material</th>
<th>Existing Capacity</th>
<th>Existing NU</th>
<th>Estimated Barn Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>Horses; Large-framed, mature; &gt; 680 kg (including unweaned offspring)</td>
<td>23</td>
<td>32.9</td>
<td>694 m²</td>
</tr>
</tbody>
</table>

Encroaching Land Use Factor: Type B Land Use

This calculation is required for the purposes of a settlement area expansion.

Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

Factor A (Odour Potential): 0.7
Factor B (Nutrient Units): 226
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 33

Distance from nearest livestock building 'F' (A x B x D x E): 243 m (798 ft)
Distance from nearest permanent manure/material storage 'S': 243 m (798 ft)

Signature of Preparer: ____________________________ Date: February 14, 2014
Sean Colville, Colville Consulting Inc.