The United Counties of Stormont, Dundas and Glengarry
SDG County Forest

Forest Management Plan
2007-2026

Section C: Five Year Operating Plan (2022-2026)

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Date: _____ Copy #: _____

SDG COUNTY FOREST: FOREST MANAGEMENT PLAN

Documents

SECTION A: **FOREST POLICY PLAN**

SECTION B: **TWENTY YEAR MANAGEMENT PLAN (2007 to 2026)**

SECTION C: **FIVE YEAR OPERATING PLAN (2022 to 2026)**

SECTION D: **AMENDMENT TO THE TWENTY YEAR MANAGEMENT PLAN (2007 TO 2026)**

Terms and Acronyms

Available Harvest Area	AHA
Digital Raster Aerial Photography for Eastern Ontario	DRAPE
Emerald Ash Borer	EAB
Eastern Ontario Model Forest	EOMF
Forest Management Planning	FMP
Forest Resource Inventory	FRI
Geographic Information System	GIS
High Conservation Value Forest	HCVF
Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry	OMNRF
Ontario Professional Foresters Association	OPFA
Registered Professional Forester	R.P.F.
SDG County Forest	County Forest or Forest
South Nation Conservation	SNC
United Counties of Stormont, Dundas and Glengarry	SDG or County

SDG COUNTY FOREST: FOREST MANAGEMENT PLAN

Section C: Five Year Operating Plan (2022-2026)

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C-1.0 REPORT ON PAST FOREST OPERATIONS

C-1.1 Forest Administration

Governance

Management of the Forest is governed by a 2017 Memorandum of Understanding between South Nation Conservation (BD-021/17) and the United Counties of Stormont, Dundas and Glengarry (By-Law No. 5093, Resolution No. 2017-24).

Forest Certification

The SDG County Forest maintained group certification under Forest Stewardship Council (FSC) Certificate RA by renewing a Memorandum of Understanding with the Eastern Ontario Model Forest (Resolution No. 2017-47).

Certified forest must demonstrate compliance with principles and criteria of the Forest Stewardship Council. The SDG County Forest successfully completed annual compliance audits throughout the operating period providing documentation to support compliance with operating standards and participating in fields audits as required. Any non-conformities to FSC standards were rectified.

Accrual & Depletions to the County Forest

The County has an active land acquisition program. During the operating period three forest compartments were added to the County Forest increasing the total forest area by 35.10 hectares. Table 1 provides a summary of the acquisitions completed. The total SDG County Forest area is currently 3,408.07 hectares.

Table 1
Summary of Accruals and Depletion
SDG County Forest
2017 - 2021

Year	Comp.	Municipality	Geographic Township	Acquisition Type	New Area (ha.)
2018	100	South Stormont	Osnabruck	Fee Simple Purchase	12.35
	101	South Stormont	Osnabruck	Added to County Forest	2.66
2021	102	North Glengarry	Lochiel	Fee Simple Purchase	20.00
Total					**35.10**

C-1.2 Summary of Forest Management for the 2017-2021 Operating Period

Table 2 summarizes the forest operations that occurred on the SDG County Forest and harvest areas that were prepared during the 2017-2021 operating period. Forest management activities during the 2017-2021 period included areas carried forward from previous 5-year periods. Harvest areas planned for but not completed during the 2017-2021 operating period will be carried forward to the 2022-2026 Five-Year Operating Plan. The gross total revenues for harvests completed during the 2017-2021 operating period are based on bills of lading and mill receipts of wood delivered from the SDG County Forest. Total revenue was $59,695.30.

Table 2
Summary of Forest Operations
SDG County Forest
2017-2021

Harvest Year	Compartment(s)	Species[1]	Estimated Volume (m^3)	Actual Volume[2] (m^3)	Harvest Area (Ha.)	Value (gross)
2017	SDG 26	Pr	220.0	325.1	10.4	$5,344.13
		Sw	250.0	754.0	12.5	$11,630.54
		Incidental	-	-	-	$1,119.35
2018	No Harvest	-	-	-	-	-
2019-20	SDG 20/21/22/23	Pw	2,057.5	1,661.9	22.1	$5,816.48
		Sw	1,654.3	1,232.7	23.7	$9,491.69
2021	SDG 11/12/13	Pr	450.3	433.2	10.7	$ 5,631.79
		Pw	339.1	271.7	15.3	$ 1,113.82
		Sw/Sn	379.7	892.3		$10,261.23
		Po	-	41.6	-	$ 207.79
		Other	-	156.3	-	$ 781.56
	SDG 90	Sw	594.0	823.3	9.0	$ 8,233.16
		Incidental	-	31.9	-	$ 63.76
Total			5,944.9	6,624.0	103.7	$59,695.30

[1] Pr-Red Pine; Pw-White Pine; Sw-White Spruce; Sn-Norway Spruce; Po-Poplar

[2] Harvest suspended winter 2019 and completed summer 2020.

Table 3 provides a comparison of the allowable harvest area, the total planned harvest area including any carry forward from planned past harvest allocations, and the actual area harvested through the operating period.

During the operating period, the planned harvest objectives were met for Red Pine, White Pine, and White Spruce, completing all new allocations and carry forward from past operating periods except for 10.5 hectares of White Pine. No operations were completed in other conifer forest units. There were no harvests completed in the lowland and tolerant hardwood forest units. Planned operations were brought to tender-ready condition but did not proceed for operational, economic, and administrative reasons.

Table 3
Comparison of Planned Harvest Area and Actual Harvest Area
SDG Country Forest
2017-2021

Forest Unit	Allowable Harvest Area (ha.)	Planned Harvest Area (ha.)			Actual Harvest Area (ha.)
		New	Carry Forward	Total	
Red Pine	21.5	9.8	8.2	18.0	21.1
White Pine	15.5	10.5	25.0	35.5	22.1
White Spruce	25.5	28.7	15.6	44.3	60.5
Other Conifer	14.5	0.0	9.8	9.8	0.0
Intolerant Hardwood	5.5	0.0	2.8	2.8	0.0
Lowland Hardwood	21.0	11.2	41.9	53.1	0.0
Tolerant Hardwood	18.0	21.6	30.9	52.5	0.0
Total	**121.5**	**81.8**	**134.2**	**216.0**	**103.7**

C-1.3 Financial Summary

Table 4 represents the costs associated with management of the SDG County Forest under the MOU between the County and South Nation Conservation. The financial summary provided does not include capital costs paid directly by the Counties, i.e., land acquisition costs or major infrastructure such as the parking lot at Summerstown Forest.

During the five-year period, property management services totalled $62,396.58, an average of approximately $12,500 per year. These services included addressing public enquiries, investigating encroachments, conducting legal surveys, well-decommissioning, and other public safety issues.

Forest management costs included planning forest operations, forest inventory, tree marking, tree planting, contract management and administration of forest certification. Total costs incurred during the five-year operating period was $134,352.03 and averaged $26,870.59 per year.

Table 4
Financial Summary
Property Management and Forest Management Costs
SDG County Forest
2017-2021

Year	Costs ($)								
	Property Management				Forest Management				
	Labour	Contract Services	Materials & Supplies	Total	Labour	Contract Services	FSC Fees	Materials & Supplies	Total
2017	3,934.47	6,500.00	2,447.22	12,881.69	14,842.00	260	2449.95	317.90	17869.85
2018	10,084.75	2,233.34	148.75	12,466.84	11,622.00	391.76	2520.92	0.00	14534.68
2019	2,841.25	0.00	895.66	3,736.91	26,847.50	4173.00	2257.40	1454.66	34732.56
2020	12,286.25	2,000.00	765.22	15,051.47	30,841.25	0.00	4605.10	1408.31	36854.66
2021	8,086.25	8,208.60	1,964.82	18,259.67	15,633.75	8635.00	4514.80	1577.63	30361.18
Total	**37,232.97**	**18,941.94**	**6,221.67**	**62,396.58**	**99,786.5**	**13,459.76**	**16,348.17**	**4,758.50**	**134,352.93**
Avg.	**7,446.59**	**3788.39**	**1244.33**	**12479.32**	**19,957.30**	**2,691.95**	**3,269.63**	**951.70**	**26,870.59**

C-2.0 FIVE YEAR OPERATING PLAN

C-2.1 Available Harvest Area

The calculation of available harvest area (AHA) refers to the harvest level that could continue indefinitely without exceeding the productive capacity of the forest. A sustainable AHA ensures that forests products can be harvested on a regular basis to provide both long-term employment opportunities and revenue to SDG County. AHA is calculated based on assumptions made regarding the length of time required for stands to grow enough merchantable volume to support a commercial harvest (i.e. cutting cycle) and the area that could support a commercial harvest during the term of the next cutting cycle (i.e. harvest eligibility). Due to species variability and differences due to stage of management, an AHA is calculated for each forest unit.

1) Cutting Cycle and Stage of Management

Cutting cycle is a term used to describe the length of time expected between treatments for an average stand of merchantable age. The length of time between treatments varies depending on the species involved and the type of silvicultural treatments. Typically, plantation thinning occurs on a shorter cutting cycle (i.e.10-20 years) than single-tree selection in a hardwood forest (20-30 years) or a clear-cut in a poplar stand (>80 years).

Two stands of the same forest unit but located on different site types, of different age and/or subjected to different natural events (e.g. ice storm, disease, etc.) or human intervention (e.g. thinning, under-planting, etc.) will likely be at different stages of management. In order to meet the objectives for the stand, each stand will need to be subjected to a specific silvicultural treatment based upon its stage of management. Every silvicultural treatment affects a stand in a different way that will ultimately affect the length of the cutting cycle. Silvicultural treatment options are described further in Section B-8.3 Forest Units of the Forest Management Plan.

Cutting cycles should be evaluated periodically as more current information about the forest (species composition, stocking, diameter, etc.) becomes available and once the response to silvicultural treatments is monitored. Forest information collected since 2002 and data from the monitoring of silvicultural treatments were used to predict the likely stage of management and to set appropriate cutting cycles.

2) Harvest Eligibility

Harvest eligibility is an estimate of the amount of area that is likely to support a commercial harvest operation during the next cutting cycle. Like many community forests, the actual area eligible for harvest is a small fraction of the total forest area. This is an artifact of property history, as community forest properties were often lands of lower productivity or had experienced multiple harvest cuts prior to purchase.

The factors which impact the amount of area that is eligible for harvest are:

1) Age of the forest (ineligible forests are too young to be harvested),
2) The stocking level (ineligible stands include failed plantations, ice-storm damaged stands),
3) Stands with operability limitations due to poor access, poor drainage, or small area of the potential treatment site,
4) Areas unable to support a commercially viable harvest at any age (e.g. beaver meadows, treed bogs, etc.), and
5) Areas where forest management is excluded to meet other objectives (e.g. Protected Areas, Areas of Concern, etc.).

The AHA for the five-year Operating Plan is calculated as follows:

$$\frac{\text{Area of Forest Unit (Ha) X Proportion Eligible for Harvest (\%) X 5 Years}}{\text{Cutting Cycle (Years)}}$$

The AHA for each forest unit from the previous plan is summarized in Table 5. It has been slightly adjusted from the previous Operating Plan to reflect current forest conditions. The annual harvest for the Forest represents less than 1% of the productive forest.

Table 5:

Available Harvest Area for SDG County Forest by Forest Unit and Treatment Type for 2022-2026 Operating Plan

Forest Unit	Treatment Type	Productive Area (ha)	Eligibility	Cutting Cycle	Annual Harvest (ha)	AHA - Five Year (ha)
Red Pine	Thinning or Uniform Shelterwood	108.6	60%	15	4.3	21.5
White Pine	Thinning or Uniform Shelterwood	115.8	40%	15	3.1	15.5
White Spruce	Thinning	338.4	50%	20	8.5	42.5
Other Conifer (Plantation)	Thinning	83.5	As encountered			
Other Conifer (Natural)	Selection or Group Shelterwood	357.1	20%	25	2.9	14.5
Intolerant Hardwood	Clear-cut	423.5	15%	60	1.1	5.5
Hybrid Poplar	Thinning or clear-cut	55.0	As encountered			
Lowland Hardwood	Selection or Uniform Shelterwood	1,042.6	15%	25	6.3	31.5
Tolerant Hardwood	Selection	606.8	15%	25	3.6	18.0
Total					**29.8**	**149.0**

C-2.2 Selection of Harvest Areas

Harvest records, aerial photographs and field investigation were used to select the harvest areas for the 2022-2026 operating period. Matching actual harvest allocations to planned harvest area for each forest unit is difficult on a small, fragmented forest like the SDG County Forest. Adding to the challenge, plantations and natural forests in the same compartment typically contain multiple stands with different species and forest units. As a result, although the AHA is broken down into nine forest units, it is impractical to allocate the harvest areas into each forest unit, although they are used for guidance. For the purposes of allocation, the AHA is amalgamated for all plantations (red pine, white pine, white spruce and other conifer) and for lowland and upland hardwood forests. The large number of forest units will be reviewed during preparation of the next Management Plan.

The SDG County Forest has been managed by South Nation Conservation since 2002 (in partnership with Domtar until 2005). After a twenty-year history the forest managers have a clear understanding of the stands eligible for harvest. A long-term harvest schedule has now been completed. A summary is included as Appendix “A”, the full document is maintained at the SNC office. There is a 20-year harvest schedule for eligible conifer plantations, cedar and poplar forests, and a 30-year harvest schedule for eligible hardwood forests. The schedule provides for ongoing verification of the AHA level and the sustainability of forest management and financial returns. With successive operating plans, this schedule will be reviewed and updated to reflect the development of forest stands. The area of conifer plantations is anticipated to be relatively stable unless new properties are added. With time and forest growth additional hardwood forests will develop into eligible stands which will expand the eligible harvest area.

Priority was given to areas that have not received treatment in the past, but most eligible areas have been thinned previously during the tenure of SNC/ Domtar and are ready for another harvest. Operational feasibility has influenced where and when the harvest areas should be prepared as well as the total harvest amount by forest unit and treatment type. Harvest scheduling has been adjusted so that harvests on geographically close compartments can occur in the same Operating Plan period.

The annual scheduling of harvest will occur during the operating plan period based on market demand and availability of harvest contractors. Standing timber will be sold through tender in accordance with SDG policy.

Many of the eligible lowland hardwood and tolerant hardwood areas are stocked with polewood (10-24 cm) and small sawlog (26-36 cm) trees. These stands would benefit from a thinning operation that would release future crop trees and increase the rate of growth. These stands will produce only fuelwood and/or pulpwood providing limited return in the short-term, but this investment will significantly increase returns over the long-term.

Table 6 compares the selected harvest areas to the five-year AHA target. Once the AHA are aggregated for plantations and lowland and tolerant hardwoods, the selected areas are very close to the AHA for the main forest units of the SDG Forest. This includes an analysis of both the current Operating Plan and over a full cutting cycle (Appendix A). A balance of tree species and products has been allocated. Although the Forest Unit totals indicate that more tolerant hardwood than lowland hardwood stands are allocated, many of the stands classed as tolerant hardwood are actually growing on wet mesic soils. There are small differences for cedar and poplar forests but the overall area impacts are minor in these small forest units.

Table 6: Area allocated by Forest Unit

Forest Unit	AHA Five year Harvest (Ha)	Allocated area (Ha)	Difference (Ha)
Red pine	21.5	20.3	
White pine	15.5	5.1	
White spruce	42.5	48.9	
Other conifer- plantation	As encountered	7.8	
All Plantations	79.5	82.1	+2.6
Other conifer- natural	14.5	9.5	-5.0
Intolerant hardwood (Po)	5.5	9.1	+3.6
Hybrid poplar	As encountered	N/A	N/A
Lowland hardwood	31.5	8.5	
Tolerant hardwood	18.0	37.0	
Low and Tol Hardwoods	49.5	45.5	-4.0
Total	149.0	146.2	-2.8

C-2.2.1 Salvage Operations: Emerald Ash Borer

The emerald ash borer (EAB) is a wood boring insect that was introduced to North America from Asia, most likely in wood packaging materials. It was first discovered in Ontario in 2002 in Essex County and has since spread throughout the southern range of ash in Ontario and Quebec. It was discovered in SDG County in 2014.

The Canadian Food Inspection Agency (CFIA) regulates the movement of ash material and firewood from areas under Ministerial Order. These areas are known as “Regulated Areas”, see Figure 1 EAB Regulated Areas in Canada, 2021. Ash material and firewood may move within and between Regulated Areas. SDG is within a Regulated Area.

This insect poses a significant threat to the SDG County Forest. Ash is an important colonizing species on abandoned agricultural lands that make up the majority of the SDG County Forest. In fact, ash is present on every SDG Forest compartment. The FRI indicates 53% of the Forest (2,012.3 ha or 3,942 acres) contains at least 10% ash and 11 % of the Forest (416.3 ha or 1,028 acres) contains at least 30% ash.

Ash salvage is planned for three blocks (50.4 hectares) with greater than 40% ash composition and potential for commercial operations. Once harvested, these forests will not be eligible again for harvest for 40 to 50 years. The remaining ash-dominated stands are young and/or poorly stocked or on treed wetlands. These areas will be impacted by EAB, but in most cases these stands have little if any potential from a forest products standpoint. There would be little value in a harvest operation on these sites since most of the trees are not of merchantable size.

Monitoring the spread of EAB populations is key to making appropriate management decisions. It is not recommended to perform proactive salvage operations, especially in stands where ash dominates. Broad scale removal of ash in these situations can result in long-term alterations of the site (e.g. water table fluctuations, invasive plant establishment, etc.) that would prevent or delay the re-establishment of a forest community. It is recommended that stands with an ash component greater 10% be managed according to management guidelines based on Williams and Schwan (2011) and Streit, Scarr and Farintosh (2012).

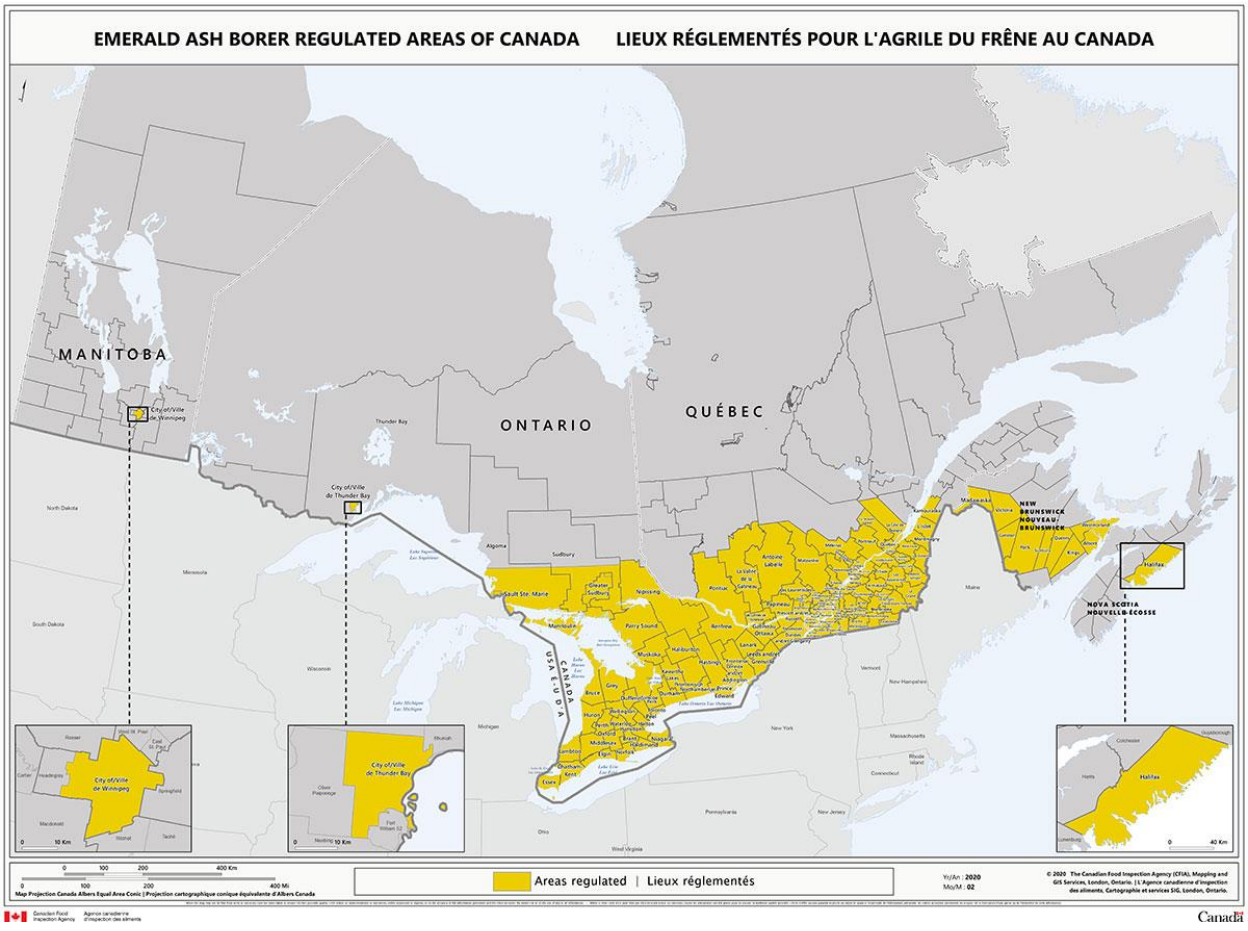


Figure 1: EAB Regulated Areas in Canada, 2021.

Source*: https://inspection.canada.ca/plant-health/invasive-species/insects/emerald-ash-borer/areas-regulated/eng/1347625322705/1367860339942/*

C-2.2.2 Salvage Operations: Conifer

There is one scheduled conifer salvage operation scheduled for the 2022-2026 operating period at SDG 25, stand 13, a 2.1 hectare red pine plantation. This can be carried out in conjunction with the thinning of other plantations on the property. This stand underwent a thinning operation in 2007 and partial salvage operation in 2014. The red pine were exhibiting signs of decline and pockets of mortality since 2007. The decline and mortality is due to nutrient deficiency and poor drainage.

Natural regeneration of hardwoods, primarily green ash, exists in this stand but tree planting is recommended to fill in gaps in stocking and to add diversity to the regeneration. The following silvicultural operations are recommended:

- Planting bur oak and white spruce,
- Herbicide control of competition either prior to harvest or after planting, and
- Monitoring of the planted stock for survival and growth.

C-2.2.3 Potential Salvage Operations: Beech Bark Disease

Beech Bark Disease is another invasive species that has recently become well established in Ontario, including in SDG County. BBD is a pest complex caused by initial infestation of an insect, the beech scale followed by the arrival of a neo-nectria fungus. The insect predisposes the trees to infestation, but it is the fungus which kills the tree. BBD first arrived in Halifax in the 1890s and has slowly worked its way across the native range of Beech.

Because of the relatively long history with BBD, there is a great deal of experience with the impacts of the disease. Most trees are killed, although there is some evidence of a few trees which are either resistant to the scale insect or tolerant to the disease. Prior to tree death, beech trees have the ability to send up suckers from their roots, which can cause vast areas of beech thickets which prevent the regeneration of other species like sugar maple.

Beech is not a common species in the SDG County forests, but a few stands like those at the Whipperwill Forest which will have to be monitored for infestation by BBD and potential salvage operations. No salvage operations for BBD are planned at this time.

C-2.2.4 Contingency Harvest Sites

Periodically a forest allocated for harvest is deemed no longer acceptable due to changes in forest condition or markets. Likewise, an area currently not allocated for harvest may become a priority due to a forest health issue like an insect infestation. In either instance, a contingency area with similar size and forest composition can now be identified from the long-term harvest schedule and substituted for a currently allocated forest. Changes to selected areas will be posted on the SDG County website and reviewed by the SNC Forestry Committee.

C-2.2.5 Summary of All Harvest Operations

Table 7 is a summary of compartments that were selected for harvest operations during the 2022-2026 operating period, salvage areas, and those that will be carried forward from previous operating period. Table 8 is a detailed stand listing. An overview map of the scheduled harvest areas including salvage and carry forward areas is in Appendix B and individual compartment maps for harvest areas are in Appendix C.

Markets for hardwood will remain a challenge in this Operating Plan, and have been an ongoing issue since the closure of the Domtar pulp and paper mill in 2005. This has resulted in the large area of hardwood carried forward from the previous plan. The causes include both a shortage of loggers and markets for products. One potential approach could be to offer a Request for Proposal for all hardwood allocations in the 5 Year Operating Plan. Conifer prices have been stable, but the County should attempt to attract bids from a greater number of harvesters to ensure competition.

Two additional young forests are identified in the long-term harvest schedule as potential pre-commercial thinning operations should work crews become available to carry out the work. In these forests limited commercial material would be recovered. SDG 38, stands 19, 22 and 23, 10 hectares, has long-term potential for maple tapping. SDG 49, stand 2, 13.1 ha is 40% ash. These stands are not shown on the harvest operating map or tables as they are strictly silviculture operations.

Table 7: Summary of All Harvest Operations

Compartment	Township	Forest Type	Area (Hectares)
New Allocations			
9, 10	Finch	Plantation	26.9
24	Lochiel	Plantation	11.3
25	Kenyon	Plantation	2.5
57,58	Kenyon	Plantation	10.5
73	Charlottenburgh	Plantation	10.3
93	Lochiel	Plantation	20.6
57, 58	Kenyon	Hardwood and Cedar	64.1
		Total New	**146.2**
Salvage Operations			
23	Roxborough	Ash	21.6
32	Charlottenburgh	Ash	3.9
35-63	Williamsburgh	Ash	24.9
25	Kenyon	Plantation	2.1
		Total Salvage	**52.5**
Carry Forward			
88,91	Kenyon, Roxborough	Hardwood	73.2
90	Lochiel	Maple Sap Thinning	44.9
		Total Carry-Forward	**118.1**
		Total All	**316.8**

Table 8: Areas Selected for Harvest

COMPARTMENT	TOWNSHIP	STAND	WG	SPECIES COMPOSITION	MINOR SPP	MINOR SPP	YR_ORG	HEIGHT	CROWN CLOSURE	MOISTURE	SITE CLASS	FOREST UNIT	HECTARES	ACRES
Plantations														
9	Finch	3	SW	SW 5SN 5			1960	18	100	WM	X	White Spruce	2.10	5.19
9	Finch	6	SW	SW 5SN 2LW 1PW 1			1949	16	100	WM	X	White Spruce	3.00	7.42
9	Finch	7	PR	PR 10			1946	22	100	M		Red Pine	1.08	2.66
9	Finch	19	PR	PR 10			1945	16	100	M	1	Red Pine	1.93	4.78
9	Finch	18	LE	LE 7PW 3			1954	23	100	WM	X	OC Plantation	3.18	7.85
9	Finch	17	PW	PW 3PR 3SW 2CE 2			1949	13	100	WM	1	White Pine	1.48	3.66
9	Finch	14	PW	PW 5SW 3L 1PR 1			1949	17	100	WM		White Pine	1.83	4.44
9	Finch	9	SW	SN 10			1946	20	80	WM	X	OC Plantation	1.12	2.76
9	Finch	8	PR	PR 8SW 2			1954	17	100	WM		Red Pine	1.26	3.11
9	Finch	15	SW	SW 10			1949	12	90	WM	X	White Spruce	3.23	7.36
9	Finch	10	PO	PO 5SW 3EW 2			1956	18	70	WM	1	Intolerant Hardwood	1.61	3.98
10	Finch	11	PR	PR 10			1945	16	100	M	1	Red Pine	1.59	3.92
10	Finch	12	SW	SN 5SW 3PW 2			1952	16	100	WM	X	OC Plantation	3.49	5.99
												Plantation	**26.9**	
24	Lochiel	1	SW	SW 10			1961	8	100	M		White Spruce	1.59	3.92
24	Lochiel	4	PR	PR 10			1961	14	100	M	1	Red Pine	0.28	0.69
24	Lochiel	5	PR	PR 10			1961	14	100	M	1	Red Pine	0.43	1.06
24	Lochiel	3	SW	SW 10			1961	8	100	M		White Spruce	5.06	12.50
24	Lochiel	15	PW	PW 9SW 1			1956	11	90	WM	1	White Pine	0.37	0.92
24	Lochiel	18	PR	PR 10			1956	14	90	M	1	Red Pine	0.73	1.80
24	Lochiel	20	SW	SW 10			1961	8	100	M		White Spruce	2.86	7.07
												Plantation	**11.3**	
25	Kenyon	9	PR	PR 10			1957	14	100	M	1	Red Pine	1.43	3.53
25	Kenyon	8	SW	SW 9CE 1			1966	8	100	M		White Spruce	1.03	2.54
25	Kenyon	13	PR	PR 9AW 1			1966	9	90	M	2	Red Pine (Salvage)	2.10	5.19
												Plantation	**2.5**	
												Plantation Salvage	**2.1**	
57	Kenyon	15	SW	SW 10			1977	2	30	M		White Spruce	0.22	0.53
58	Kenyon	5	SW	SW 9PO 1			1969	4	70	M		White Spruce	2.70	6.67
58	Kenyon	1	SW	SW 10			1977	2	30	M		White Spruce	6.07	15.01
58	Kenyon	3	SW	SW 10			1977	3	50	M		White Spruce	1.47	3.64
												Plantation	**10.5**	
73	Charlottenburgh	6	SW	SW 10			1976	3	50	M		White Spruce	3.91	3.15
73	Charlottenburgh	8	SW	SW 10			1976	3	40	M		White Spruce	6.34	14.62
												Plantation	**10.3**	
93	Lochiel	9	PR	PR 9PS 1			1961	12	100	M	1	Red Pine	6.97	17.23
93	Lochiel	2	SW	SW 10			1961	8	100	M		White Spruce	6.57	16.24
93	Lochiel	4	PW	PW 8CE 2			1961	10	100	M	1	White Pine	1.40	3.45
93	Lochiel	13	SW	SW 10			1961	8	100	M		White Spruce	1.11	2.75
93	Lochiel	7	PR	PR 10			1976	4	50	M	1	Red Pine	4.59	11.34
												Plantation	**20.6**	
										Totals		**Red Pine**	**20.3**	
												White Pine	**5.1**	
												White Spruce	**48.9**	
								All Species	**82.1**			**Other Conifers**	**7.8**	

Table 8: Areas Selected for Harvest

COMPARTMENT	TOWNSHIP	STAND	WG	SPECIES COMPOSITION	MINOR SPP	MINOR SPP	YR_ORG	HEIGHT	CROWN CLOSURE	MOISTURE	SITE CLASS	FOREST UNIT	HECTARES	ACRES
Hardwood/ Poplar/ Cedar														
57	Kenyon	1	H	EW 2BD 2PO 2BW 2MS 2			1951	14	90	W		Lowland Hdwd	2.23	5.18
57	Kenyon	10	MS	MS 4BY 2AW 2B 1BD 1			1941	18	90	WM	X	Tolerant Hardwood	2.56	6.30
57	Kenyon	16	PO	PO 2CE 2B 1HE 1BY 1BD 1MS 1EW 1			1951	17	80	WM	2	Intolerant Hardwood	2.58	6.37
57	Kenyon	17	CE	CE 5PO 2SW 2EW 1	MS		1951	10	100	WM		Other Conifer	0.43	1.05
57	Kenyon	7	H	EW 2MS 2CE 1PO 1BY 1AB 1BD 1SW 1			1941	16	90	WM	1	Lowland Hdwd	6.25	14.15
57	Kenyon	11	CE	CE 5MS 1PO 1EW 1AW 1SW 1			1926	12	90	WM		Other Conifer	3.63	8.98
57	Kenyon	14	PO	PO 5EW 2MS 1CE 1AW 1			1951	16	70	WM	2	Intolerant Hardwood	1.41	3.49
57	Kenyon	12	A	AW 6BD 1MS 1EW 1BY 1	MH	PO	1942	19	90	WM	X	Tolerant Hardwood	1.72	4.24
57	Kenyon	13	A	AW 6BD 1MS 1EW 1BY 1	MH	PO	1942	19	90	WM	X	Tolerant Hardwood	0.49	1.21
57	Kenyon	3	MH	MH 3BD 3AW 2MS 1EW 1			1946	16	90	WM	X	Tolerant Hardwood	3.91	6.76
57	Kenyon	2	MH	MH 3AW 3BD 2IW 1EW 1			1946	18	100	M	X	Tolerant Hardwood	9.49	23.12
58	Kenyon	9	CE	CE 5PO 2SW 2EW 1			1951	10	100	WM		Other Conifer	2.11	5.21
58	Kenyon	11	PO	PO 3AW 2EW 2BD 1BY 1HE 1			1951	18	80	WM	2	Intolerant Hardwood	4.31	10.65
58	Kenyon	15	CE	CE 4MS 2B 1BD 1BY 1EW 1			1931	13	100	WM		Other Conifer	3.29	8.14
58	Kenyon	16	MS	MS 3EW 1BY 1HE 1AW 1MH 1CE 1BD 1			1951	17	100	WM	X	Tolerant Hardwood	3.37	8.34
58	Kenyon	2	PO	PO 5EW 2MS 1CE 1AW 1			1951	16	70	WM	2	Intolerant Hardwood	0.22	0.55
58	Kenyon	6	PO	PO 3B 2CE 2BD 1EW 1MS 1			1951	16	90	WM	2	Intolerant Hardwood	0.53	1.32
58	Kenyon	14	MS	MS 3BY 2EW 2HE 1AW 1BD 1			1946	17	100	WM	X	Tolerant Hardwood	8.54	20.08
58	Kenyon	19	A	AW 8PO 1BD 1			1951	13	90	WM		Tolerant Hardwood	0.95	2.34
58	Kenyon	21	MS	MS 3EW 2AW 2HE 1BN 1BY 1			1946	17	80	WM	X	Tolerant Hardwood	2.92	5.91
58	Kenyon	18	MH	MH 4AW 4BD 2			1951	19	100	WM	X	Tolerant Hardwood	3.06	6.68
										Totals		**Hardwood**	**45.5**	
												Intolerant Hardwood	**9.1**	
												Cedar	**9.5**	
												All	**64.1**	
Hardwood: Ash Salvage														
23	Roxborough	4	A	AW 5MS 2EW 1BY 1AB 1			1936	21	100	WM		Lowland Hdwd	10.09	24.92
23	Roxborough	3	A	AW 5MS 3EW 1BY 1			1936	20	80	M		Lowland Hdwd	4.11	10.17
23	Roxborough	2	MS	MS 4AW 2BY 1SW 1PO 1EW 1			1946	17	80	WM		Lowland Hdwd	7.41	18.30
												Hardwood: Ash Salvage	**21.6**	
32	Charlottenburgh	4	A	AW 4BD 3MH 2EW 1			1926	22	100	M	X	Tolerant Hardwood	3.86	9.55
												Hardwood: Ash Salvage	**3.9**	
35	Williamsburgh	3	A	AW 5MS 3EW 2			1931	21	70	W		Lowland Hdwd	0.50	1.24
35	Williamsburgh	4	A	AW 5MS 3EW 2			1931	21	70	W		Lowland Hdwd	0.31	0.78
35	Williamsburgh	2	MS	MS 5AW 2EW 2BD 1			1951	16	100	WM		Lowland Hdwd	2.81	6.94
63	Williamsburgh	6	H	EW 4AB 1HE 1BY 1BD 1AW 1MS 1			1956	12	70	W	1	Lowland Hdwd	2.64	6.53
63	Williamsburgh	7	CE	CE 3BD 2HE 2EW 1AW 1BY 1			1943	9	100	M		Tolerant Hardwood	4.96	11.96
63	Williamsburgh	4	A	AW 4MS 3CE 1EW 1BY 1			1941	18	80	WM		Lowland Hdwd	2.84	6.75
63	Williamsburgh	2	A	AW 5MS 3EW 2			1931	21	70	W		Lowland Hdwd	3.97	9.80
63	Williamsburgh	1	A	AW 7EW 2MS 1			1931	23	80	WM	X	Tolerant Hardwood	6.87	16.01
												Hardwood: Ash Salvage	**24.9**	
										Total		**Hardwood: Ash Salvage**	**50.4**	

Table 8: Areas Selected for Harvest

COMPARTMENT	TOWNSHIP	STAND	WG	SPECIES COMPOSITION	MINOR SPP	MINOR SPP	YR_ORG	HEIGHT	CROWN CLOSURE	MOISTURE	SITE CLASS	FOREST UNIT	HECTARES	ACRES
Hardwood: Carry over from 2016-2021														
88	Kenyon	4	MS	MS 5MH 3PO 1AW 1			1931	21	100	WM	X	Tolerant Hardwood	1.97	4.86
88	Kenyon	1	MH	MH 8PO 1MS 1			1931	21	100	M	X	Tolerant Hardwood	3.31	8.18
88	Kenyon	9	MS	MS 7BY 1AW 1MH 1			1946	21	100	WM		Lowland Hdwd	5.52	13.64
88	Kenyon	8	MH	MH 5AW 2MS 2BY 1			1946	17	70	WM	X	Tolerant Hardwood	4.38	10.83
88	Kenyon	10	MH	MS 7AW 3			1941	20	30	WM	1	Lowland Hdwd	4.04	9.98
88	Kenyon	2	MS	MS 3AW 3BY 1AB 1MH 1PO 1			1941	18	60	W		Lowland Hdwd	0.29	0.73
88	Kenyon	6	MS	MS 5AW 2MH 2BY 1	BD		1931	20	70	WM	X	Tolerant Hardwood	0.41	1.01
88	Kenyon	7	MS	MS 5AW 2MH 2BY 1	BD		1931	20	70	WM	X	Tolerant Hardwood	1.93	4.77
88	Kenyon	12	MS	MS 7BY 1AW 1MH 1			1946	16	100	WM		Lowland Hdwd	4.14	8.71
88	Kenyon	11	MS	MS 8AW 2			1946	18	80	W		Lowland Hdwd	1.30	2.65
88	Kenyon	5	MS	MS 3AW 3BY 1AB 1MH 1PO 1			1941	18	60	W		Lowland Hdwd	0.31	0.76
88	Kenyon	3	MH	MH 3MS 3AW 1BD 1EW 1PO 1			1931	18	90	WM		Tolerant Hardwood	6.44	15.91
91	Roxborough	3	MS	MS 7AW 2BY 1			1941	20	100	WM		Lowland Hdwd	1.99	4.92
91	Roxborough	2	MH	MH 5MS 2AW 2BY 1			1941	18	90	WM	X	Tolerant Hardwood	0.34	0.83
91	Roxborough	6	MH	MH 3MS 3AW 1BD 1EW 1PO 1			1931	18	90	WM		Tolerant Hardwood	1.96	4.84
91	Roxborough	8	MS	MS 8BY 1AW 1			1946	19	100	WM		Lowland Hdwd	3.92	9.69
91	Roxborough	11	MS	MS 5PO 2AW 1EW 1 MH 1			1956	13	100	WM		Lowland Hdwd	2.82	3.92
91	Roxborough	1	MS	MS 3AW 3BY 1AB 1MH 1PO 1			1941	18	60	W		Lowland Hdwd	0.47	1.16
91	Roxborough	4	MH	MH 6AW 2MS 1BY 1			1941	18	90	WM	X	Tolerant Hardwood	1.57	3.88
91	Roxborough	12	CE	CE 5PO 3MS 1EW 1			1931	12	80	WM		Other Conifer	7.47	9.18
91	Roxborough	13	SW	SW 10			1961	10	100	WM	X	White Spruce	0.63	0.72
91	Roxborough	9	MS	MS 8BY 2			1941	20	100	WM		Lowland Hdwd	1.36	3.36
91	Roxborough	5	PO	PO 6MH 2MS 1AW 1			1941	20	100	WM	2	Intolerant Hardwood	3.19	7.89
91	Roxborough	7	MS	MS 4AW 2MH 2EW 1BY 1			1941	17	90	WM	X	Tolerant Hardwood	13.46	33.25
												Hardwood: Carry over	**73.2**	
90	Lochiel	5	MH	MH 6HI 3AW 1			1916	22	100	M		Tolerant Hardwood	5.41	13.37
90	Lochiel	7	MS	MS 5AW 2HI 1EW 1MH 1			1921	22	100	M	X	Tolerant Hardwood	7.17	17.72
90	Lochiel	4	MH	MH 6AW 2BD 1HI 1			1931	20	100	M	X	Tolerant Hardwood	5.95	14.69
90	Lochiel	2	MH	MH 5AW 2MS 1BD 1HI 1			1911	23	80	M		Tolerant Hardwood	8.64	21.22
90	Lochiel	3	MS	MS 7AW 2HI 1			1901	23	80	M	1	Lowland Hdwd	11.19	27.54
90	Lochiel	8	H	HI 6MH 1AB 1BD 1EW 1			1931	20	80	M	X	Tolerant Hardwood	6.12	15.13
90	Lochiel	1	MH	MH 4AW 2BD 1CE 1HI 1MS 1			1931	18	100	M		Tolerant Hardwood	0.40	0.12
												Hardwood: Carry over	**44.9**	

C-2.3 Harvest Plans

A harvest plan is prepared by a member of the OPFA prior to tree marking and harvest. Final harvest boundaries are established at that time and may vary slightly from the mapped harvest area presented in the Operating Plan. The harvest plan provides direction to the tree markers on access, boundary marking, the tree marking prescription, and values and areas of concern. Two additional items are now included in harvest plans:

C-2.3.1 Invasive Plants

Invasive plants have become an impediment to forest management throughout southern Ontario. In the SDG and SNC Forests common and glossy buckthorn have become established in several forests and plantations, most notably in the Warwick Forest. Both species can create dense thickets which preclude the regeneration of natural tree species. The long-term result can be the complete loss of forest cover. All forest operations prescriptions will note the presence of invasive plant species and recommend strategies for control of invasives and maintenance of forest health and regeneration.

C-2.3.2 Forest Renewal

As the plantations of the SDG Forest mature (the oldest plantings are now over 70 years old), forest managers must assess the type of forest that is developing in the understory. In many instances, natural regeneration of a diversity of hardwood species like sugar and red maple, basswood and oak are present and ongoing thinning will result in the gradual transition to a natural hardwood forest.

In situations where the understory is dominated by invasives like buckthorn, or native hardwoods which are subject to disease mortality like ash, elm or beech, site preparation and artificial regeneration will be required. This process is already ongoing in the white pine plantations at SDG 20, 21 which were harvested in 2019-2020, and is planned after harvest in portions of SDG 9 and 10 in this Operating Plan.

C-2.4 Maple Tapping Stands

Currently a number of community forests throughout Ontario lease maple stands for the purpose of sap production. Locally these include the United Counties of Prescott and Russell, South Nation Conservation, and Lanark County. The leasing of maple stands for sap production provides an additional annual source of revenue for the Forest, while contributing to a growing demand for maple products across Ontario and provide local producers with an opportunity to increase production (Economic Impacts of the Maple Syrup Industry in Ontario, January 2013).

During the previous Operating Plan, seven compartments with sugar maple forests greater than seven (7) hectares were assessed for tapping potential. The information for each site is listed below in Table 9. SDG has entered into an agreement for maple tapping and harvest of firewood on the Doctor Mitchell property, SDG 90, Lochiel. There is tapping potential at three other properties which are older than 80 years although access, power availability and/or other forest uses present challenges for each of these sites. Individual requests for maple tapping at these properties will be evaluated by SDG and SNC for suitability. There are three other compartments with younger maple forests with longer term potential. At SDG 38, these stands are of good quality and directly beside a township road, so pre-commercial thinning is recommended to increase the development of the sugar maple trees.

Table 9:

Potential Maple Tapping Stands in the SDG Forest					
Comp.	**Township**	**Stands**	**Estimated Area (ha)**	**Forest**	**Comments**
27	Kenyon	8, 10	20	30% Mh age 60-70	Remote site
38	Kenyon	19,22,23	10	40% Mh, age 40-50	Access Kenyon 8 Road **Precommercial thinning recommended**
39, 40, 41	Charlottenburgh	39-4,7 40-6,7 41-8,9	25	50% Mh, age 90-100	Summerstown Forest Potential conflicts with trail use
44	Kenyon	4	12	50% Mh, age 90-100	Frog Hollow Forest Access is green road
, 49, 64	Osnabruck	49-3 64-1	15	60% Mh, age 100 +	Whipperwill Forest Access is Whipperwill Road
90	Lochiel	1,2,3,4,5, 7,8	45	50% Mh, age 90-100	Doctor Mitchell Forest Access is Cailloux Lane **Tapping Agreement Signed**
94	Williamsburg		25	30% Mh, age 30-40	Access is green road Forest clearcut before sale to County.

C-2.5 Values and High Conservation Value Forests

The Community Forest contains a diversity of natural and cultural values. SDG County maintains a values inventory map which is used for information purposes and for planning of forestry operations. The current version of the Values Map is included as Appendix D.

High Conservation Value Forests (HCVFs) are defined as forests of outstanding and critical importance because of their high environmental, biodiversity, or landscape values. The purpose of identifying HCVFs is to ensure these rare or unique ecosystems are maintained/enhanced within forests certified through the Eastern Ontario Model Forest (EOMF) Forest Certification Program.

Each stand within the Forest is assessed for presence of HCVFs and monitoring is undertaken on a regular basis as outlined in Auditing, Monitoring and Assessments - Standard Operating Procedures 5.0. New HCVFs are added and updated as new information becomes available. Maintenance and enhancement of HCVFs generally occurs during silvicultural activities, through modified harvest prescriptions and no-cut areas of concern.

Appendix E provides the 2020 HCVF assessment for the SDG Forest.

C-2.6 References

EcoRessources Inc. 2013. Economic Impacts of the Maple Syrup Industry in Ontario. Ontario Maple Syrup Producers Association.

Hunter, Stever. 2011. Maple Syrup in Larose Forest: Feasibility Study. South Nation Conservation.

McLaughlin, John and Sylvia Greifenhagen. 2012. Beech Bark Disease in Ontario: A Primer and Management Recommendations. Ontario Ministry of Natural Resources.

Streit, Scarr and Farintosh. 2012. Preparing for Emerald Ash Borer, A Landowner's Guide to Managing Ash Forests. Ontario Ministry of Natural Resources.

Williams and Schwan. 2011. Managing Ash in Farm Woodlots; some suggested prescriptions.

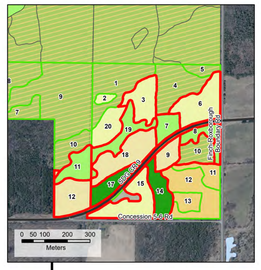
Appendix A – Long-Term Harvest Schedule

SDG County Forest: Long-Term Harvest Schedule																					
		Property Name	**Notes**	**Conifer**		**Hardwood**		**Maple Tapping**			**Salvage**		**Poplar**		**Hypop**		**Cedar**	
				(Sw/Pw/Pr/OC)		**(LH/ TH)**		**Harvest**	**Tap**		**(>=40% ash)**							
1		Sanfield				19.1												
2		Sanfield		25.9														
3, 4		Sanfield		13.7		17.8												
9-10		Berwick		26.9														
14-19		Alvin Runnalls Forest	**Limited access and site sensitivity, remove from harvesting landbase**	0														
22-23		Monkland	Cut in 2012-13, 50% ash								21.6	(>=40% ash)						
24		Little Russia		11.3					1.13	Potential								
25		Kenyon 1	Area only operable if combined with SDG 73	2.5							2.1	Pr dieback						
27		Fiskes Corners Road	Upland Hardwoods (Access ?)			23.3												
30-32, 39-42		Summerstown	Group Plantations with SDG 1-4, SDG 96	7.9	(Net)	23.3					3.9	(>=40% ash)						
33		Green Field area				9.45			9.45	Potential			11.47					
35-63		Beckstead Road	Group Plantations with SDG 64 (36-37)	7.6	(Net)						24.9	(>=40% ash)						
38		Kenyon Con 8	Sw Operable Area Too Small (4.77 ha)	0														
			Hardwoods Precommercial, target maple tapping in 15-20 years					10	10	(Pre-commercial)								
44		Frog Hollow		15.19		12.6												
47		Green Field area (Domtar)				46.4	(Net)											
57-58		Green Field area (Domtar)		10.5		45.5							9.1				9.5	
49		Whipperwill east side	Precommercial ash salvage								13.1	(Pre-commercial)						
64 (36-37)		Whipperwill	Group Plantations with SDG 35-63	8.6	(Net)													
67		Hunters Road	Lowland Hardwoods (**Ms-Ag-By**): long-term potential. **HCVF (large Pw)**			18.1												
69		Monkland area	Lowland hardwoods (**Ms-By**): low stocking due to 1998 ice storm, long-term potential			18.1												
73		Loch Garry	Sw (low stocking, access across private land)	10.3														
75		Ferguson Road		11.5	(Net)													
80		417 Campbell Road									3.4	(Advanced EAB)	15.21					
86		Church Road	Lowland Hardwoods (**Ms-By-Ab**)			10.0	(Net)											
90		Breadalbane	Maple Bush (15 Year pipeline cycle)					44.9	44.9								10	(Net)
93		Breadalbane	2009 Sw and Pr thinning - advance re-entry to group with SDG 90 Sw	20.6														
94		Pages Corners Road	Heavy cut prior to County purchase, long-term potential			24.6			24.6	Long-term								
95 (D4)		Osnabruck Centre	Smaller area, group with SDG 45-46-50 and SDG 75	6.9	(Net)										6.1	(Net)	10	(Net)
96 (D7)		Island Road	Group with SDG 1-4, SDG 31	5.3		23.1												
97 (D9)		North Lunenburg Road west	**HCVF: Pw mineral swamp**, sensitive site			0												
98 (D10)		North Lunenburg Road west	Potential future cedar harvest (requires further assessment)														10	(Net)
99 (D75)		Riverside				22.5												
Recent Harvests, Long-term projections																		
7-8		Berwick	Pr	20.9														
11-13		Berwick	Pr-Pw-Sw	26														
20-23		Monkland	Sw	23.1														
			Pw	20.2														
26		Berwick	Pr-Sw	16.6														
45-46-50		Edwards Road	Sw	19.5														
64		Whipperwill Road	Mh-Be			16.5												
88-91		Maxville	Mr, Ag, Mh	.		73.2												
90		Dalkeith	Sw	9.9														
					AHA		**AHA**							**AHA**				**AHA**
	Ops Plan		Time until next harvest	**320.89**	**Balance**	**309.7**	**Balance**				**69**		**35.78**	**Balance**			**39.5**	**Balance**
	2022-2026		2-7 Years	**82.1**	**2.6**	**45.5**	**-4.0**		**44.9**		**52.5**		**9.1**	**3.6**			**9.5**	**-5**
	2027-2031		7-12 Years	**84.19**	**4.69**	**45.8**	**-3.7**		**44.9**				**15.21**	**9.71**			**10.00**	**-4.5**
	2032-2036		12-17 Years	**75.4**	**-4.1**	**46.4**	**-3.1**	**44.9**	**54.9**					**-5.5**	6.1		**10.00**	**-4.5**
	2037+		(Conifer: 5 Years, Hdwd 15 Years)	**79.2**	**-0.3**	**171.95**	**23.5**		**54.9**				**11.47**	**5.97**			**10.00**	**-4.5**
2022-2026 AHA				**79.5**		**49.5**			**N/A**		**N/A**		**5.5**		**As encountered**		**14.5**	
														Martin Streit, R.P.F. November 27, 2021				

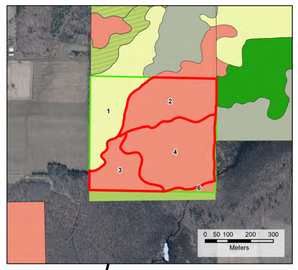
Appendix B – Overview Map of Areas Selected For Harvest Operations for the 2022-2026 Operating Period

SDG County Forest
Harvest Operating Plan
2022 - 2026

Compartment 9 & 10

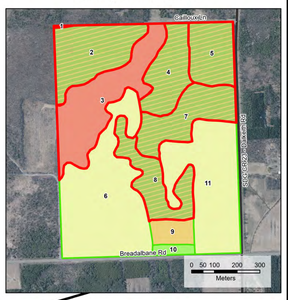


Compartment 23

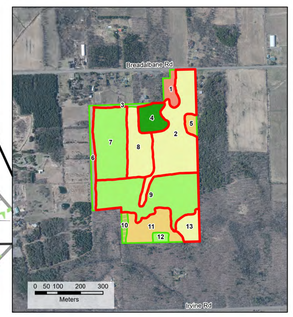


Compartment 25

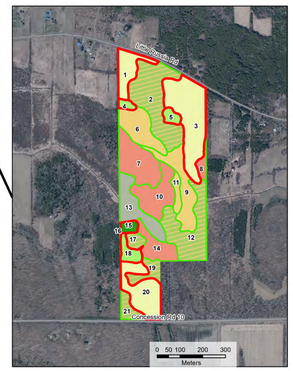
Compartment 90



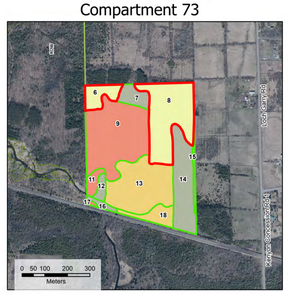
Compartment 93

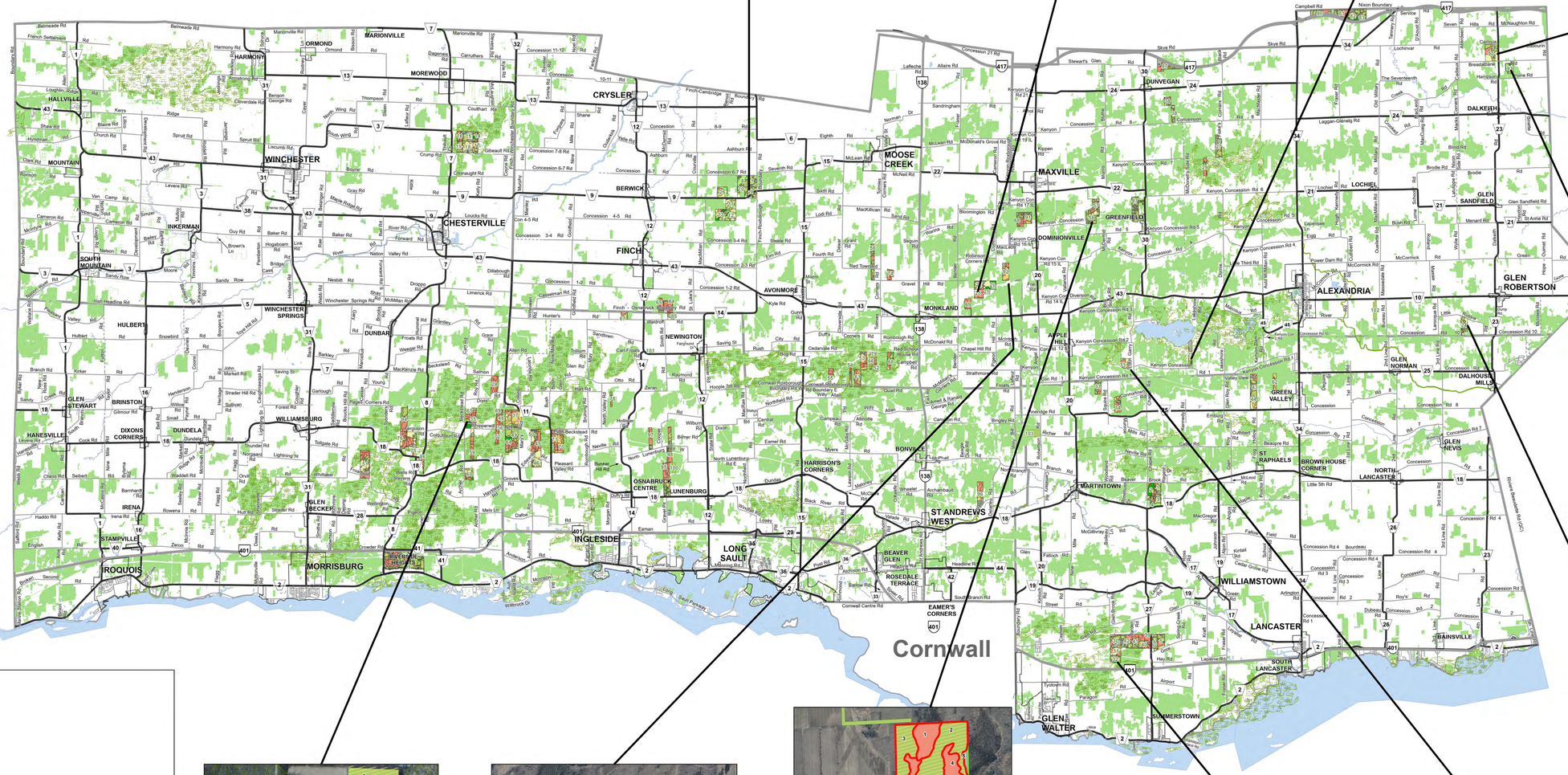


Compartment 24

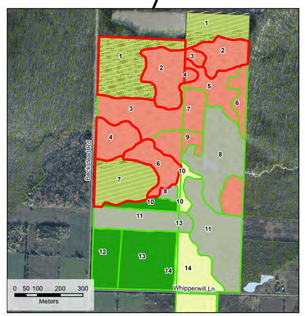


Compartment 73

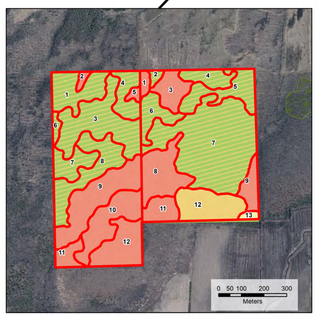




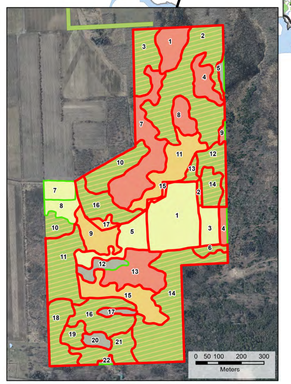
Compartment 63 & 35



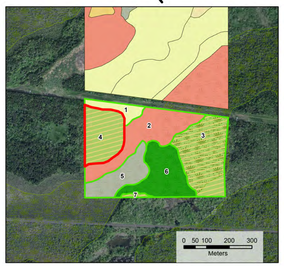
Compartment 88 & 91



Compartment 57 & 58



Compartment 32



LEGEND

- Areas selected for Harvest
- Highway
- Municipal Road
- County Road
- Evaluated-Provincial Wetlands
- Waterbody
- County Forest
- Significant Woodlands (2016)
- Township Boundary
- Cornwall Boundary

1:110,000

0 1.5 3 6 9
Kilometers

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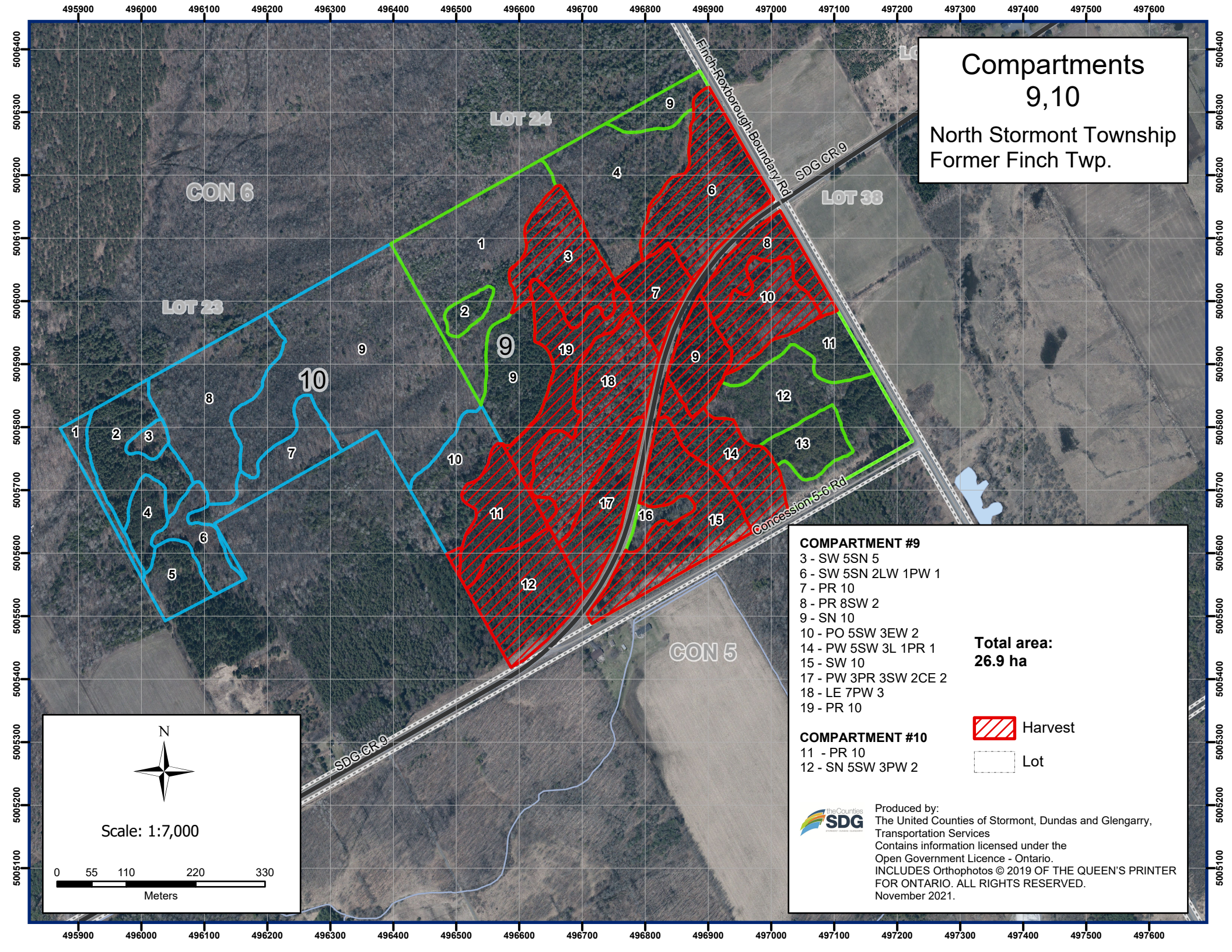
Authors: Mantra Trivedi, Sabina Ade and Martin Streit
File: HarvestOperatingMap
Location: Z:\Projects\LongTerm\Forestry\HarvestOperatingMap

Appendix C – Compartment Maps for Harvest Areas for the 2022-2026 Operating Period


Compartments
9,10
North Stormont Township
Former Finch Twp.
LOT 24
CON 6
LOT 23
LOT 38
CON 5
Finch-Roxborough Boundary Rd
SDG CR 9
Concession 5-6 Rd
COMPARTMENT #9
3 - SW 5SN 5
6 - SW 5SN 2LW 1PW 1
7 - PR 10
8 - PR 8SW 2
9 - SN 10
10 - PO 5SW 3EW 2
14 - PW 5SW 3L 1PR 1
15 - SW 10
17 - PW 3PR 3SW 2CE 2
18 - LE 7PW 3
19 - PR 10
COMPARTMENT #10
11 - PR 10
12 - SN 5SW 3PW 2
Total area:
26.9 ha
Harvest
Lot
N
Scale: 1:7,000
0 55 110 220 330
Meters
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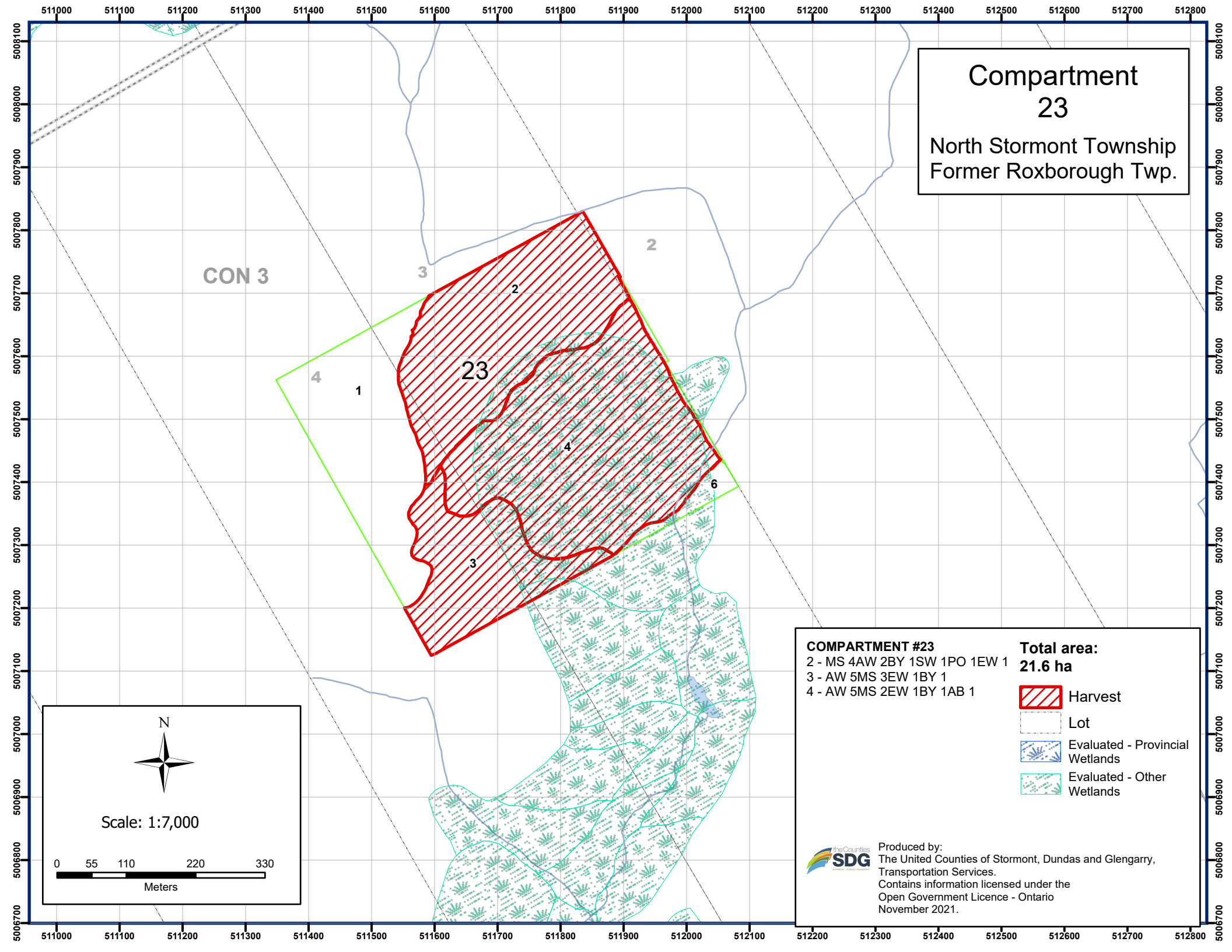
Compartment
23
North Stormont Township
Former Roxborough Twp.
CON 3
23
1
2
3
4
6
COMPARTMENT #23
2 - MS 4AW 2BY 1SW 1PO 1EW 1
3 - AW 5MS 3EW 1BY 1
4 - AW 5MS 2EW 1BY 1AB 1
Total area:
21.6 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
N
Scale: 1:7,000
0 55 110 220 330
Meters
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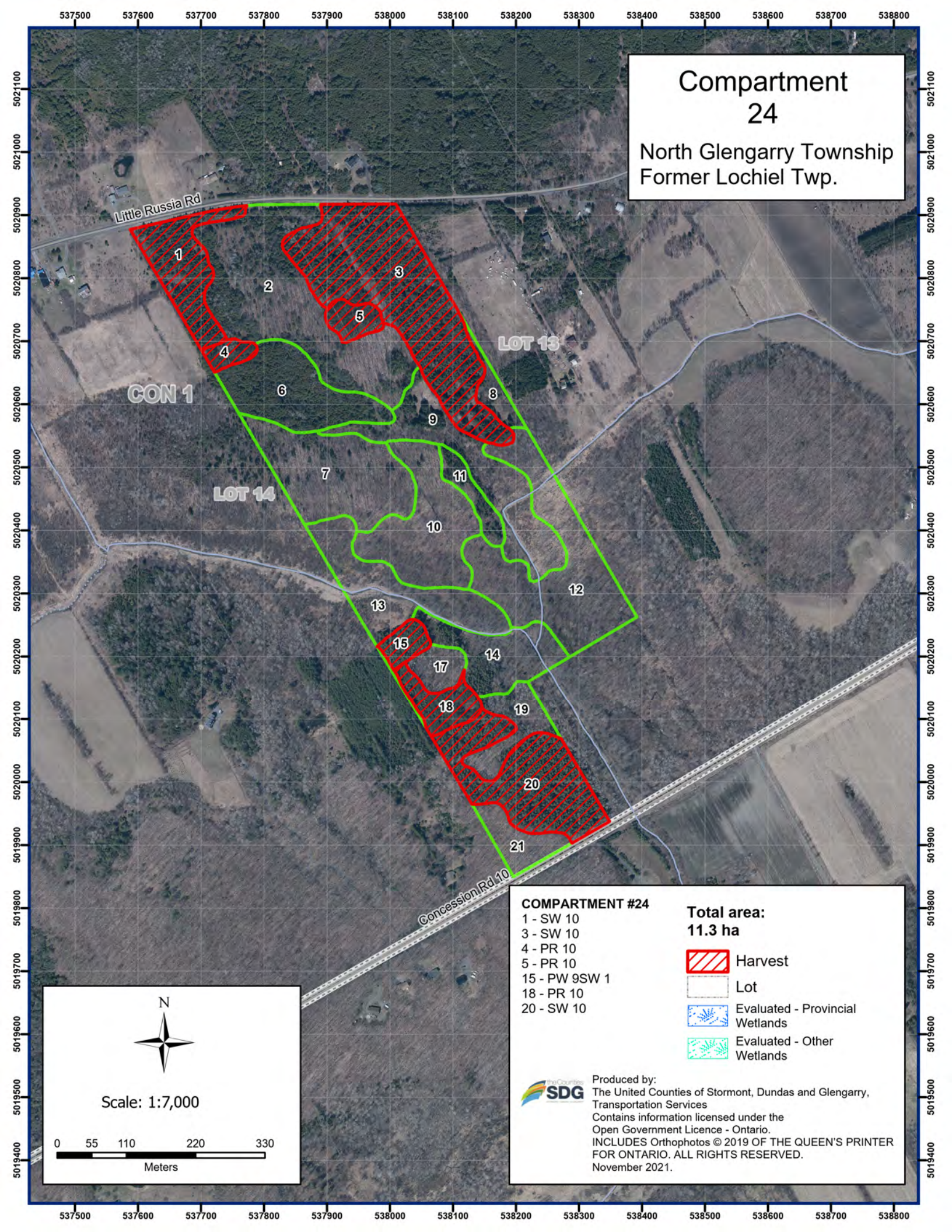
Compartment
24
North Glengarry Township
Former Lochiel Twp.
Little Russia Rd
CON 1
LOT 13
LOT 14
Concession Rd 10
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
17
18
19
20
21
N
Scale: 1:7,000
0 55 110 220 330
Meters
COMPARTMENT #24
1 - SW 10
3 - SW 10
4 - PR 10
5 - PR 10
15 - PW 9SW 1
18 - PR 10
20 - SW 10
Total area:
11.3 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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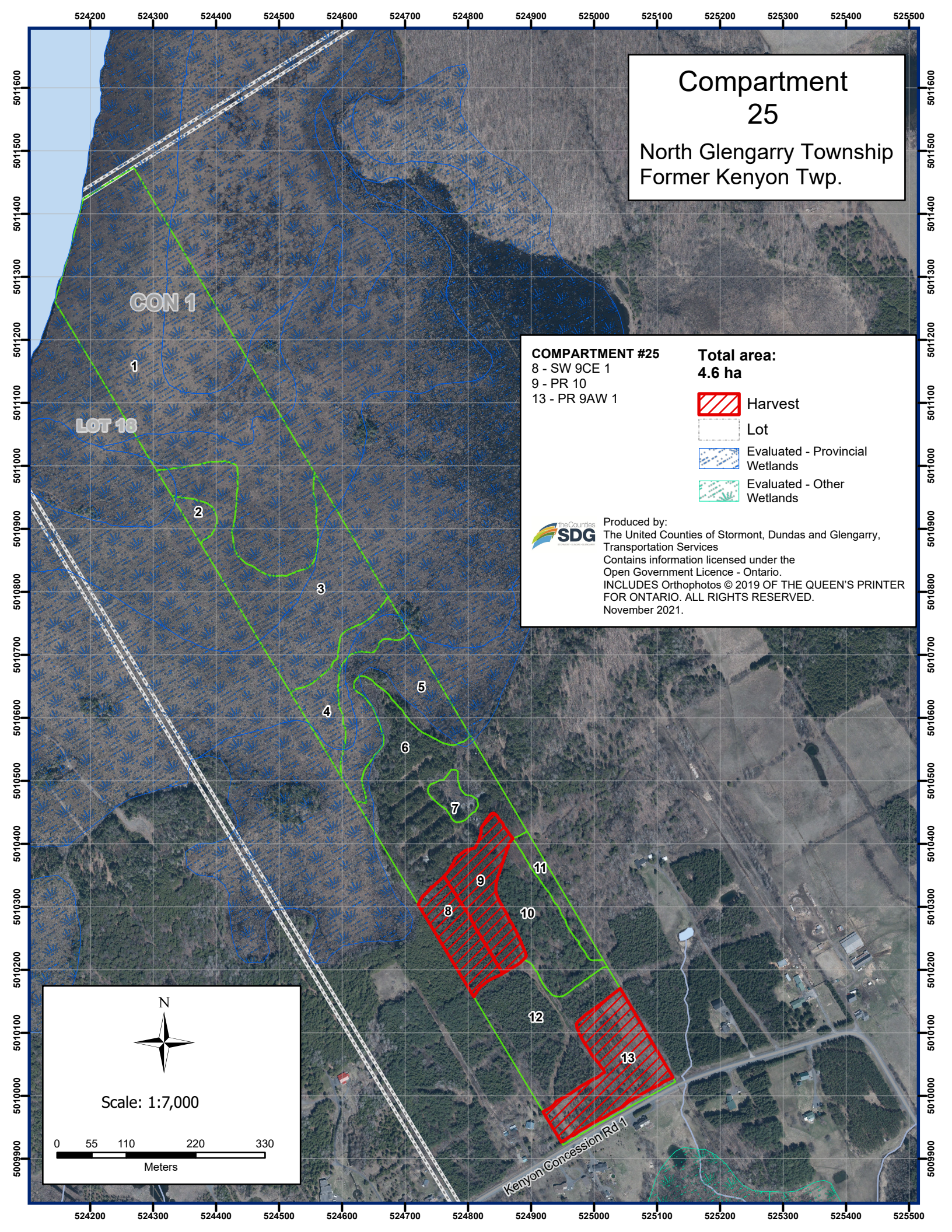
Compartment
25
North Glengarry Township
Former Kenyon Twp.
CON 1
LOT 18
1
2
3
4
5
6
7
8
9
10
11
12
13
COMPARTMENT #25
8 - SW 9CE 1
9 - PR 10
13 - PR 9AW 1
Total area:
4.6 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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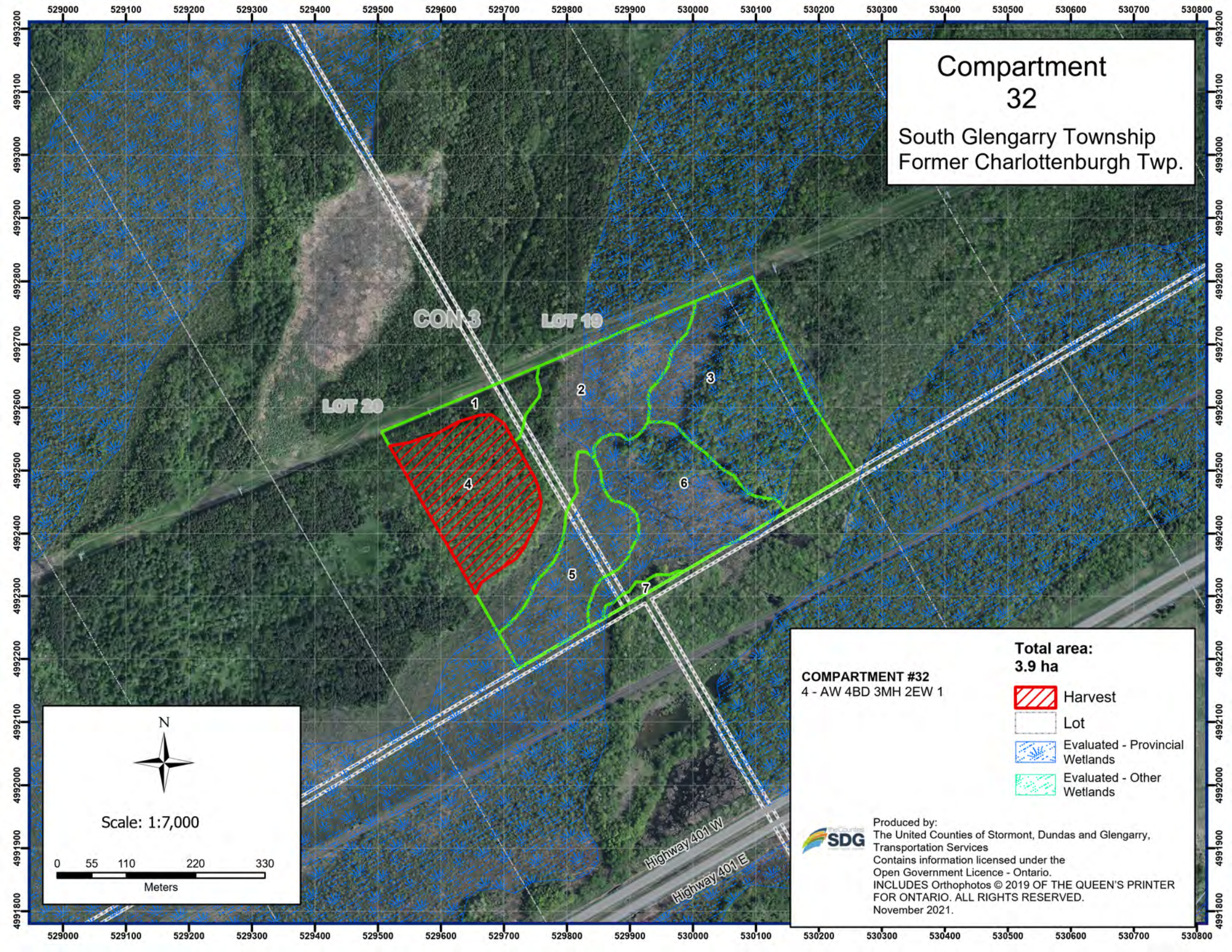
N
Scale: 1:7,000
0 55 110 220 330
Meters
Kenyon Concession Rd 1
524200 524300 524400 524500 524600 524700 524800 524900 525000 525100 525200 525300 525400 525500
5011600 5011500 5011400 5011300 5011200 5011100 5011000 5010900 5010800 5010700 5010600 5010500 5010400 5010300 5010200 5010100 5010000 5009900


Compartment
32
South Glengarry Township
Former Charlottenburgh Twp.
CON 3
LOT 19
LOT 20
1
2
3
4
5
6
7
Highway 401 W
Highway 401 E
N
Scale: 1:7,000
0 55 110 220 330
Meters
COMPARTMENT #32
4 - AW 4BD 3MH 2EW 1
Total area:
3.9 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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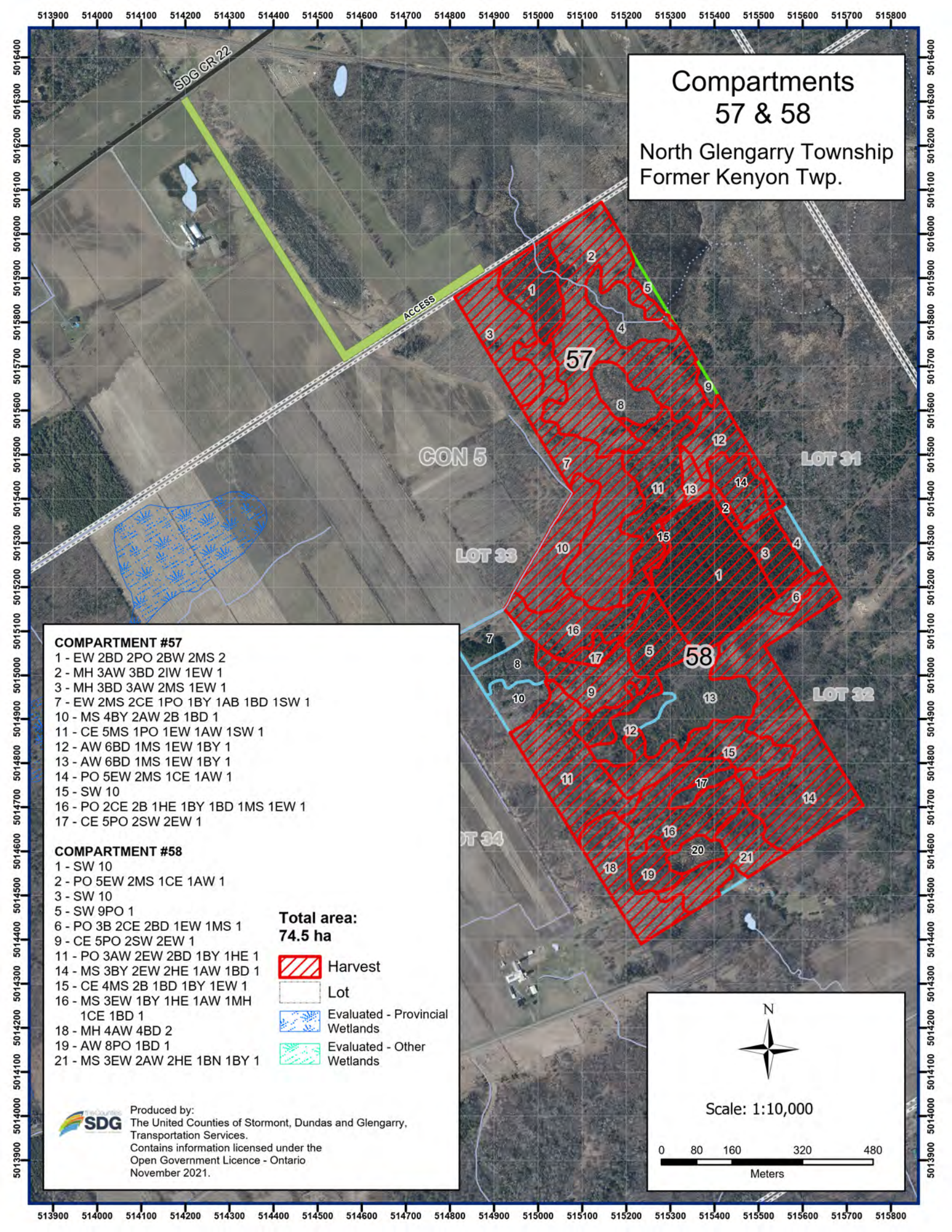
Compartments
57 & 58
North Glengarry Township
Former Kenyon Twp.
SDG CR 22
ACCESS
57
58
CON 5
LOT 31
LOT 33
LOT 32
LOT 34
COMPARTMENT #57
1 - EW 2BD 2PO 2BW 2MS 2
2 - MH 3AW 3BD 2IW 1EW 1
3 - MH 3BD 3AW 2MS 1EW 1
7 - EW 2MS 2CE 1PO 1BY 1AB 1BD 1SW 1
10 - MS 4BY 2AW 2B 1BD 1
11 - CE 5MS 1PO 1EW 1AW 1SW 1
12 - AW 6BD 1MS 1EW 1BY 1
13 - AW 6BD 1MS 1EW 1BY 1
14 - PO 5EW 2MS 1CE 1AW 1
15 - SW 10
16 - PO 2CE 2B 1HE 1BY 1BD 1MS 1EW 1
17 - CE 5PO 2SW 2EW 1
COMPARTMENT #58
1 - SW 10
2 - PO 5EW 2MS 1CE 1AW 1
3 - SW 10
5 - SW 9PO 1
6 - PO 3B 2CE 2BD 1EW 1MS 1
9 - CE 5PO 2SW 2EW 1
11 - PO 3AW 2EW 2BD 1BY 1HE 1
14 - MS 3BY 2EW 2HE 1AW 1BD 1
15 - CE 4MS 2B 1BD 1BY 1EW 1
16 - MS 3EW 1BY 1HE 1AW 1MH 1CE 1BD 1
18 - MH 4AW 4BD 2
19 - AW 8PO 1BD 1
21 - MS 3EW 2AW 2HE 1BN 1BY 1
Total area:
74.5 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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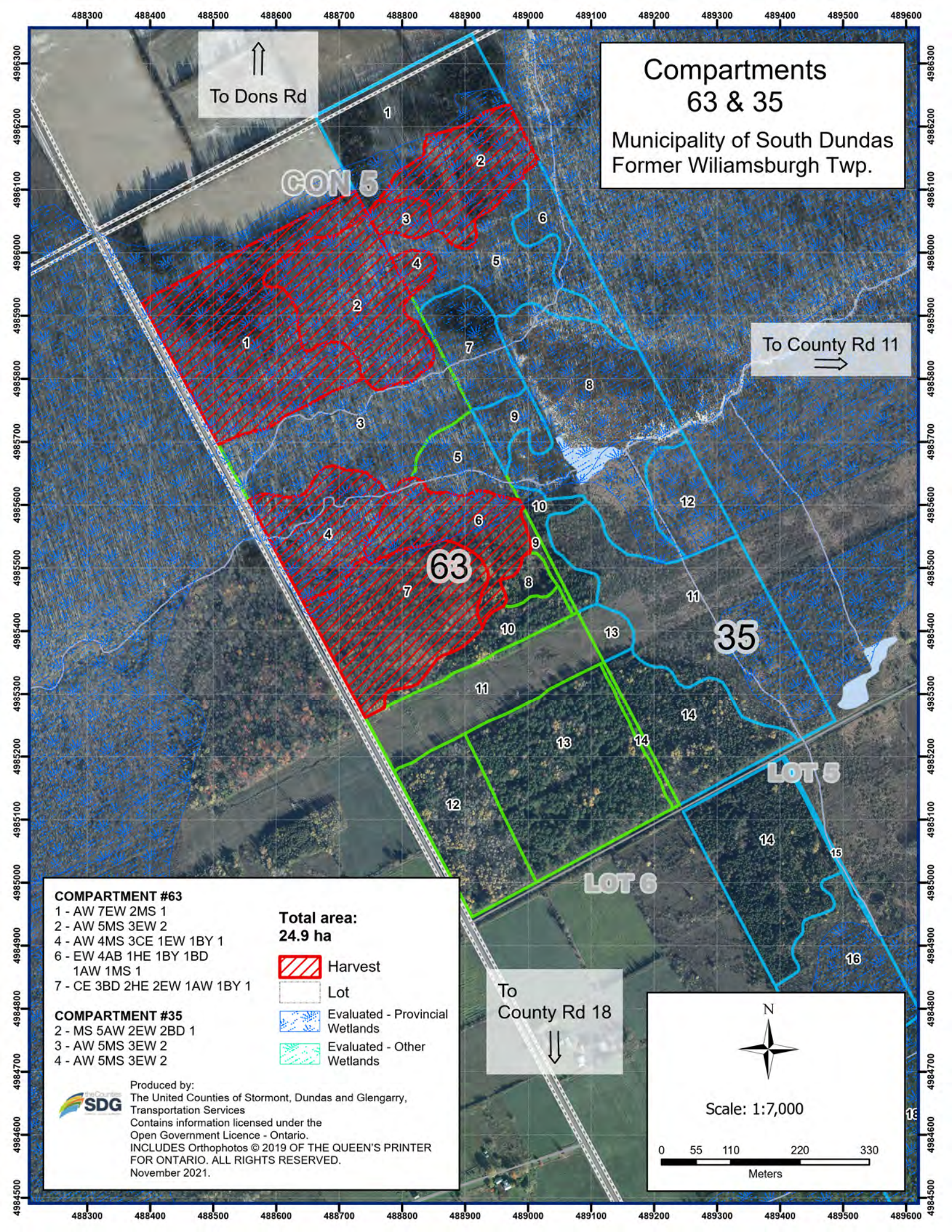
N
Scale: 1:10,000
0 80 160 320 480
Meters


Compartments
63 & 35
Municipality of South Dundas
Former Wiliamsburgh Twp.
To Dons Rd
To County Rd 11
To
County Rd 18
CON 5
63
35
LOT 5
LOT 6
COMPARTMENT #63
1 - AW 7EW 2MS 1
2 - AW 5MS 3EW 2
4 - AW 4MS 3CE 1EW 1BY 1
6 - EW 4AB 1HE 1BY 1BD
1AW 1MS 1
7 - CE 3BD 2HE 2EW 1AW 1BY 1
COMPARTMENT #35
2 - MS 5AW 2EW 2BD 1
3 - AW 5MS 3EW 2
4 - AW 5MS 3EW 2
Total area:
24.9 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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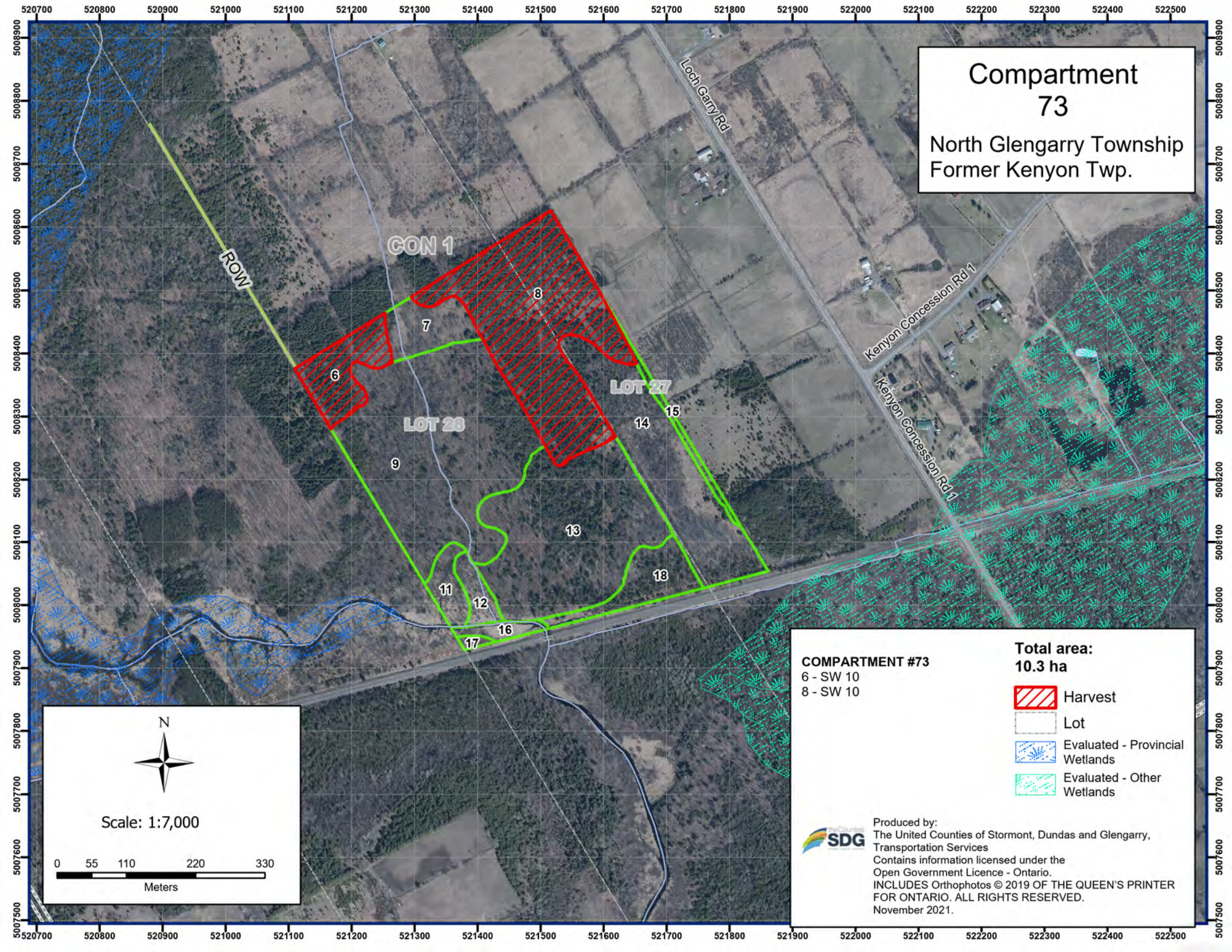
N
Scale: 1:7,000
0 55 110 220 330
Meters


Compartment
73
North Glengarry Township
Former Kenyon Twp.
Loch Garry Rd
Kenyon Concession Rd 1
Kenyon Concession Rd 1
ROW
CON 1
LOT 26
LOT 27
6
7
8
9
11
12
13
14
15
16
17
18
N
Scale: 1:7,000
0 55 110 220 330
Meters
COMPARTMENT #73
6 - SW 10
8 - SW 10
Total area:
10.3 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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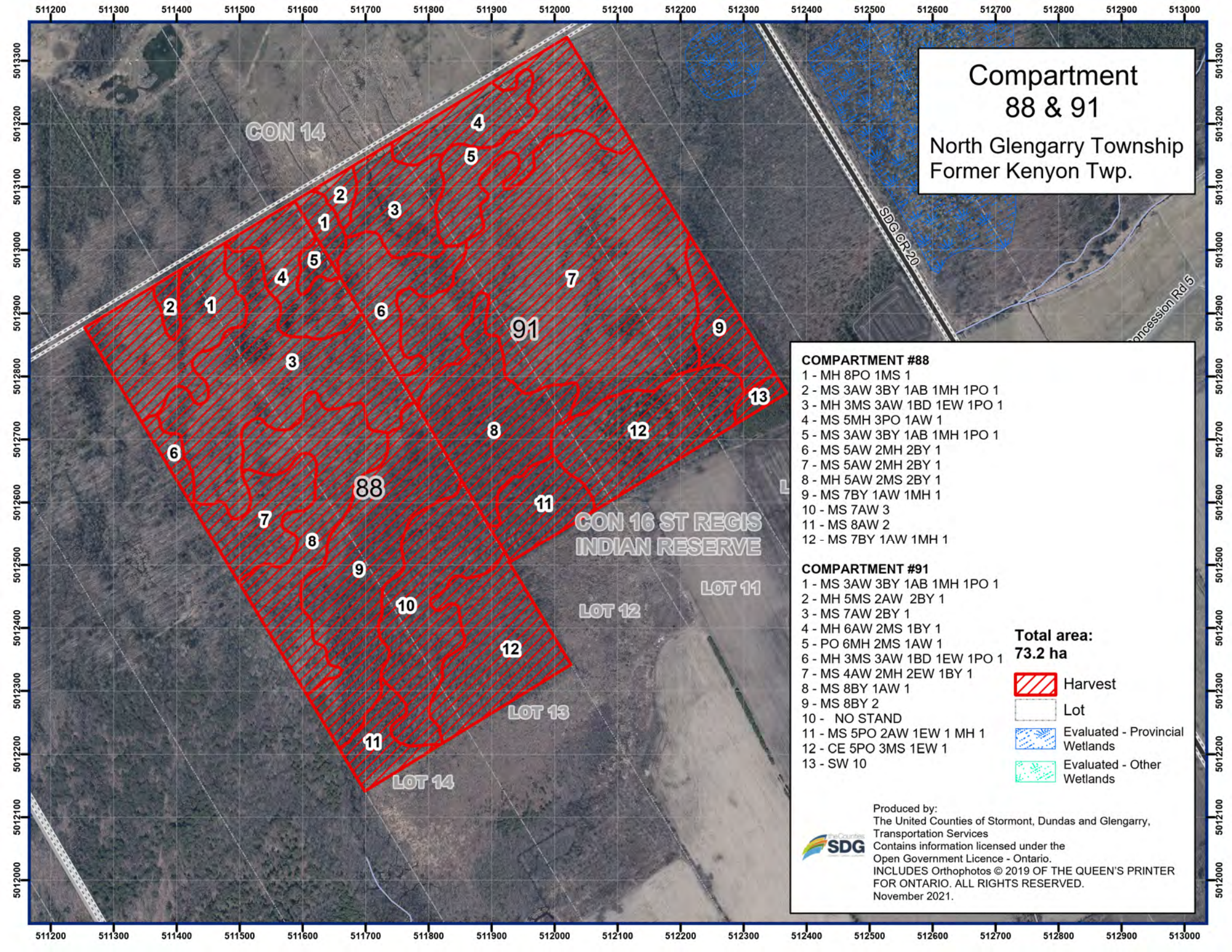
Compartment
88 & 91
North Glengarry Township
Former Kenyon Twp.
CON 14
SDG CR 20
Concession Rd 5
91
88
CON 16 ST REGIS
INDIAN RESERVE
LOT 11
LOT 12
LOT 13
LOT 14
COMPARTMENT #88
1 - MH 8PO 1MS 1
2 - MS 3AW 3BY 1AB 1MH 1PO 1
3 - MH 3MS 3AW 1BD 1EW 1PO 1
4 - MS 5MH 3PO 1AW 1
5 - MS 3AW 3BY 1AB 1MH 1PO 1
6 - MS 5AW 2MH 2BY 1
7 - MS 5AW 2MH 2BY 1
8 - MH 5AW 2MS 2BY 1
9 - MS 7BY 1AW 1MH 1
10 - MS 7AW 3
11 - MS 8AW 2
12 - MS 7BY 1AW 1MH 1
COMPARTMENT #91
1 - MS 3AW 3BY 1AB 1MH 1PO 1
2 - MH 5MS 2AW 2BY 1
3 - MS 7AW 2BY 1
4 - MH 6AW 2MS 1BY 1
5 - PO 6MH 2MS 1AW 1
6 - MH 3MS 3AW 1BD 1EW 1PO 1
7 - MS 4AW 2MH 2EW 1BY 1
8 - MS 8BY 1AW 1
9 - MS 8BY 2
10 - NO STAND
11 - MS 5PO 2AW 1EW 1 MH 1
12 - CE 5PO 3MS 1EW 1
13 - SW 10
Total area:
73.2 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
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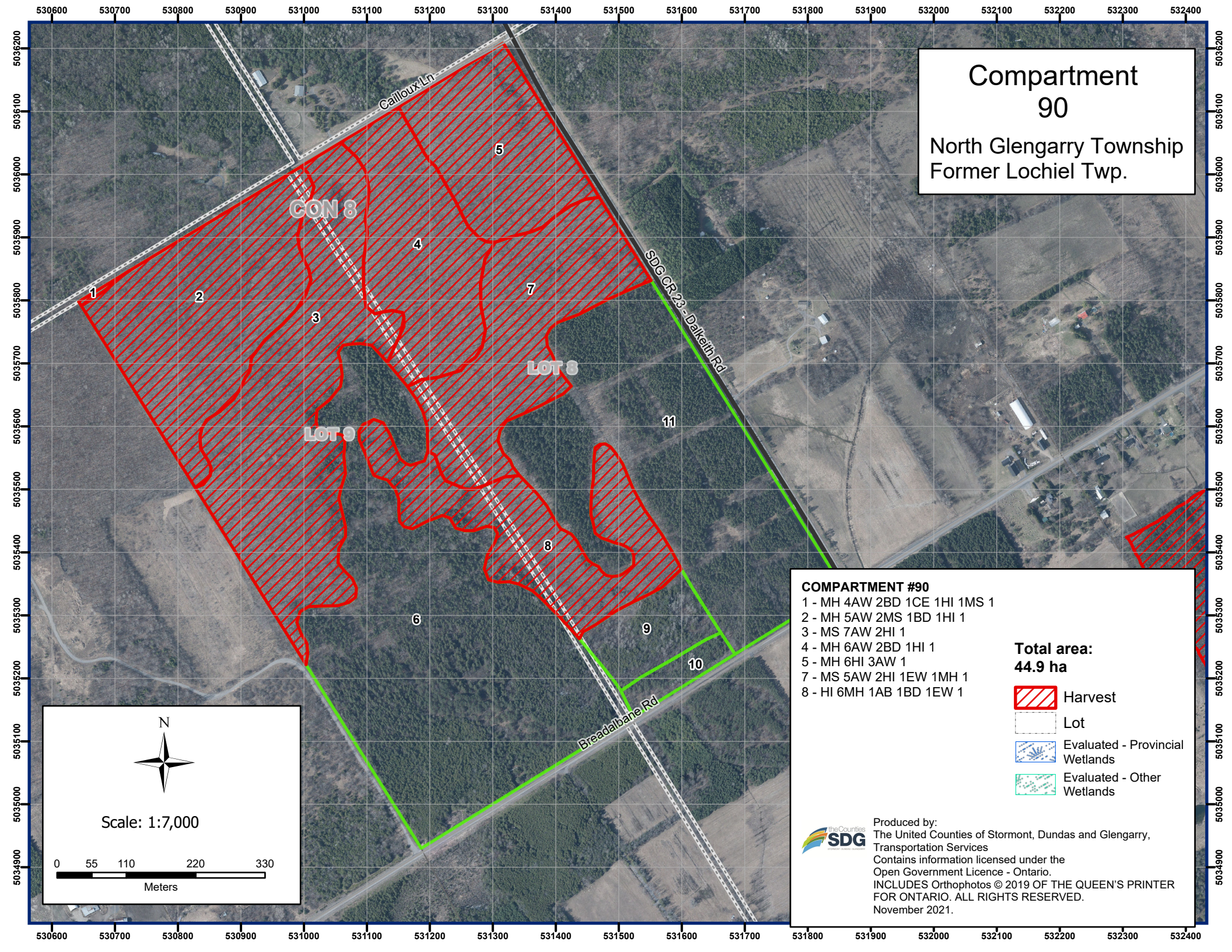
SDG


Compartment
90
North Glengarry Township
Former Lochiel Twp.
Cailloux Ln
SDG CR 23 - Dalkeith Rd
Breadalbane Rd
CON 8
LOT 8
LOT 9
1
2
3
4
5
6
7
8
9
10
11
COMPARTMENT #90
1 - MH 4AW 2BD 1CE 1HI 1MS 1
2 - MH 5AW 2MS 1BD 1HI 1
3 - MS 7AW 2HI 1
4 - MH 6AW 2BD 1HI 1
5 - MH 6HI 3AW 1
7 - MS 5AW 2HI 1EW 1MH 1
8 - HI 6MH 1AB 1BD 1EW 1
Total area:
44.9 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
N
Scale: 1:7,000
0 55 110 220 330
Meters
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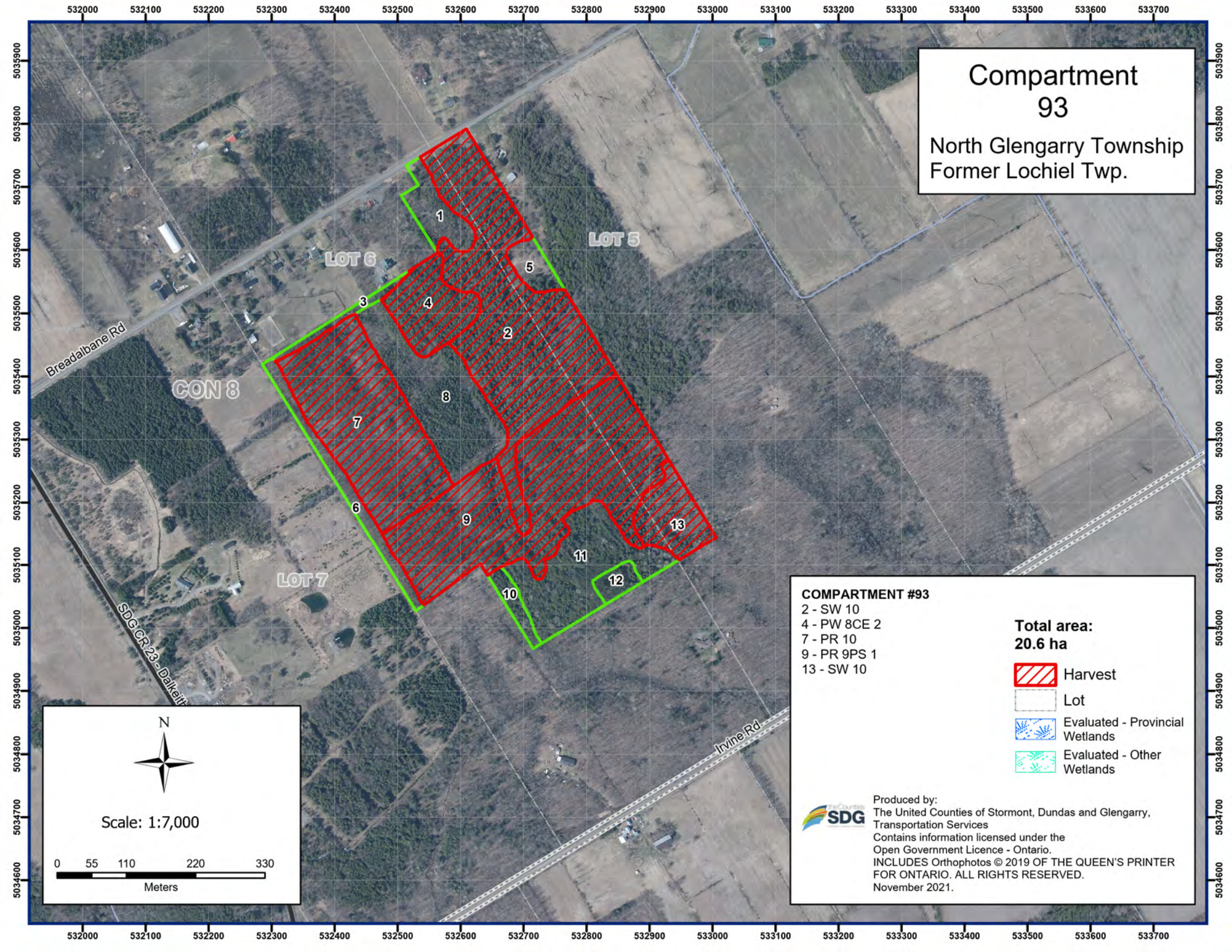
530600 530700 530800 530900 531000 531100 531200 531300 531400 531500 531600 531700 531800 531900 532000 532100 532200 532300 532400
5036200 5036100 5036000 5035900 5035800 5035700 5035600 5035500 5035400 5035300 5035200 5035100 5035000 5034900


Compartment
93
North Glengarry Township
Former Lochiel Twp.
LOT 5
LOT 6
LOT 7
CON 8
Breadalbane Rd
SDG CR 23 - Dalkeith
Irvine Rd
1
2
3
4
5
6
7
8
9
10
11
12
13
COMPARTMENT #93
2 - SW 10
4 - PW 8CE 2
7 - PR 10
9 - PR 9PS 1
13 - SW 10
Total area:
20.6 ha
Harvest
Lot
Evaluated - Provincial Wetlands
Evaluated - Other Wetlands
N
Scale: 1:7,000
0 55 110 220 330
Meters
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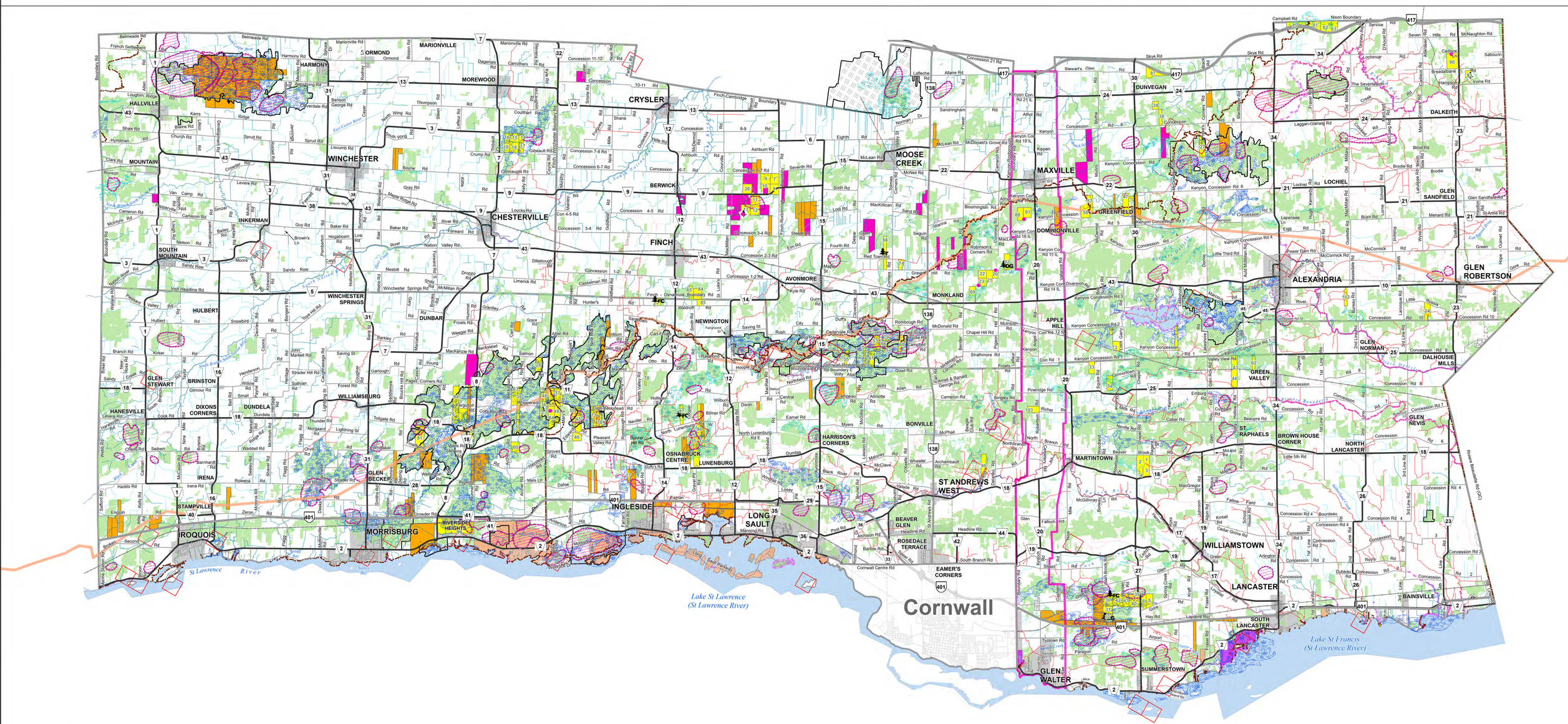
Appendix D – United Counties of SDG

Values Map

VALUES MAP

UNITED COUNTIES OF STORMONT, DUNDAS & GLENGARRY



LEGEND

- Highway
- County Road
- Municipal/Other Road
- Township Boundary
- Cornwall Boundary
- Settlement Boundary
- SDG Forest Compartment
- SNC Land
- RRCA Land
- St Lawrence Parks Commission Land
- Crownland
- Algonquins of Ontario Settlement Area
- Nutfield Tract Treaty 57, 1847
- Significant Woodlands (2016)
- Evaluated-Provincial
- Evaluated-Other
- ANSI
- Conservation Authority Boundary
- Uncommon Forest Community
- Old Growth Forest
- Uncommon or Endangered Tree Species
- Rare Species
- PSP
- Raptors
- Deer Yard
- Spawning Area
- Trail

Drain Description

- Intermittent
- Permanent, Cold/Cool, No Trout or Salmon
- Permanent, Warm, Baitfish
- Permanent, Warm, Top Predators
- Unknown

1:100,000

0 1.75 3.5 7 10.5

Kilometers

theCounties SDG

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Conservation Forest, uncommon or endangered tree species, raptors, PSP, Rare Species are older data from 2007 maps. Other data has been updated as needed.
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Authors: Sabina Ade, Mantra Trivedi and Martin Streit
File: valuesmap.aprx
Location: Z:\Projects\LongTerm\Forestry\Forestry_Values_Map\PRO_PRJ

Appendix E –

High Conservation Value Forests (HCVF): SDG County Forest 2020

Summary

The United Counties of Stormont, Dundas and Glengarry (UCSDG) owns 3 816 hectares of forested land in 2020. The location of these properties can be found on the UCSDG geoportal website at http://sdgcounties.ca. The UCSDG also maintains a detailed GIS inventory of the forests and natural heritage values for each property. The County Forest is managed according to the principles of the Forest Stewardship Council (FSC). FSC certification provides the assurance that the forests are sustainably managed to a international-recognized standard.

FSC principle 9 addresses High Conservation Value Forests. It states that "Management activities in High Conservation Value Forests shall maintain or enhance the attributes which define such forests." The UCSDG, as a community forest owner, has evaluated the County Forest using a framework which identifies six potential categories of HCVF. Sources of information for identifying HCVF include the OMNRF's Forest Resource Inventory, Provincial Mapping Unit, and Natural Resources and Values Information System (NRVIS) (1997, 2012, 2013). HCVF are also identified using the observation 2019 data from the Natural Heritage Information Centre (NHIC) (https://www.ontario.ca/page/natural-heritage-information-centre), Endangered Species Act (2007), (https://www.ontario.ca/laws/statute/07e06), Land Information Ontario (LIO) (https://www.ontario.ca/page/land-information-ontario), and the knowledge of the forest manager and members of the community. The HCVF report has been reviewed by the SDG County Forest Management Plan Committee, the EOMF Certification Working Group and peer reviewed by an independent expert. The Forest Management Plan provides guidance for conservation of HCVFs when a timber harvest operation is planned and are consistent with OMNRF habitat guidelines, (https://www.ontario.ca/page/forest-management-guides). HCVF include a mapped area of 2 924 hectares, and additional unmapped areas of species at risk habitat. The full HCVF report is available for review at South Nation Conservation, 38 Victoria Street, Finch, Ontario. The results are summarized in the following table.

Appendix E High Conservation Value Forest Assessment Framework – GLSL

This framework is designed to be used to help identify potential High Conservation Value Forests (HCVF) in the context of achieving certification to FSC Canada's Great Lakes/St. Lawrence Standard. It is based on a framework originally developed by ProForest and since that time it has been applied in many forest regions around the world.

The framework is organized as a table covering six categories derived from the definition of HCVFs from the FSC standards. The six categories are:

Category 1: Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g., endemism, endangered species, refugia);
Category 2: Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;
Category 3: Forest areas that are in or contain rare, threatened or endangered ecosystems;
Category 4: Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control);
Category 5: Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health); and,
Category 6: Forest areas critical to local communities´ traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Each category has a question or questions (the left-hand column below) that aim to identify whether the management unit contains any of the values relevant to each category. Negative answers

to these questions mean that the forest operation likely does not include High Conservation Values (HCV) in that category. Positive answers lead to further investigation. The second column explains the rationale for the conservation of the value. The third column provides sources of information on these values (e.g., COSEWIC lists in Canada, Conservation Data Centre lists, etc.). The fourth column provides further guidance to help determine whether an area might be considered a HCVF.

Scale and diversity in the Great Lakes/St. Lawrence region: This toolkit is designed to be used across the GLSL region, and applied in small private forests, on community forests and in large public forests. The manager may be operating in a highly fragmented landscape, where the stands with exceptionally HCV may be very small and require a high degree of protection, or in a much more intact landscape, where the HCVF toolkit can help to identify relatively broad features across the landscape in which the changes to management activities may be relatively modest although nevertheless significant at the landscape level. Furthermore, these diverse management regimes occur across a range of ecosystem types, from the Carolinian forests of southwestern Ontario through the mixed wood forests of southern Ontario and Québec and northwards to forests that are in the boreal transition zone. This diversity means that HCVF assessments will be carried out differently on these various forests and will produce vastly different results. In developing a toolkit that is intended to apply across this diversity it is not possible to provide specific thresholds or numerical responses to questions such as “What is the minimum size of a HCVF area?” or “What percentage of a management unit should be designated as HCVFs?”.

“Critical habitat” and “Essential Habitat.” In this Toolkit, and elsewhere in this standard, the term “Critical habitat” is used only in the context of Species at Risk that have been listed by federal or provincial agencies. It is used in this narrow sense to align the use of the term in this Standard with the legal requirements that exist in federal and provincial legislation pertaining to maintaining and restoring critical habitat for species at risk. “Essential habitat” has the same meaning as “critical habitat,” but applies to all wildlife species, and not only to rare (r), threatened (t), endangered (e), or special concern (sc) species.

UCSDG Forest
Summary of High Conservation Values (HCV)

HCV SUMMARY FOR THE UNITED COUNTIES OF STORMONT, DUNDAS AND GLENGARRY (UCSDG) FORESTS		Total Area (hectares)
HCV1	Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	2 661
HCV2	Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.	-
HCV3	Forest areas that are in or contain rare, threatened or endangered ecosystems.	34.9
HCV4	Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	72.3
HCV5	Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).	81.2
HCV6	Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).	75.0
	Total Area	**2 924**

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 1) Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values				Comp. No.	Value	Year	Stakeholder	Management Guidance	Monitoring	Area (ha)
Forest contains concentration of Species at Risk	Endangered Species Act (2007)	Natural Heritage Information Center (NHIC) observation data base (2019)	SNC Species at Risk Specialists SDG County Forest Forest Management Plan 2007-2026 Algonquin First Nations	Confidential	American Eel (e) American Ginseng (e) Bank Swallow (t) Barn Swallow (t) Black Tern (sc) Bobolink (t) Butternut (e) Canada Warbler (sc) Cutlip Minnow (t) Eastern Meadowlark (t) Eastern Wood Pewee (sc) Grass Pickerel (sc) Least Bittern (t) Northern Longear Sunfish (sc) Peregrine Falcon (sc) Snapping Turtle (sc) Western Chorus Frog (-) Wood Thrush (sc) Yellow Rail (sc)	2019	OMNRF	Specie Recovery Strategy COSEWIC Assessment and Status Report COSSARO Candidate Species at Risk Evaluation	Monitoring not required unless work is undertaken in the area.	N.A.
Forest contains legally designated Provincial conservation area Forest contains conservation area designated in regional land use or conservation plan	Provincially Significant Wetland (PSW)	SDG County Forest Forest Management Plan 2007-2026 Land Information Ontario (LIO) OMNRF - Provincial Mapping Unit	Natural Heritage Information Centre (NHIC) County Official Plans Ontario Wetland Evaluation System (OWES)	5, 6, 30, 31, 32, 39, 40, 41, 42 14, 15, 16, 17, 18, 19 25 27, 29 28, 35, 36, 37, 45, 48, 49, 50, 51, 59, 63, 64, 70, 75, 76,	Summerstown Swamp Morewood Bog Loch Garry Marsh Black Lake Swamp Hoasic Creek Wetland	2013	OMNRF Municipalities	Consultation with OMNRF Species at Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	Monitoring not required unless work is undertaken in the area.	1131

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 1) Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values				**Comp. No.**	**Value**	**Year**	**Stakeholder**	**Management Guidance**	**Monitoring**	**Area (ha)**
(*Continued…*)				86, 89, 94 52, 53, 54, 55, 61, 66, 68, 71, 72, 79 60 77 99	 Newington Bog Froatburn Swamp Osnabruck Swamp Williamsburgh Swamp					
	Candidate Area on Natural & Scientific Interest (CANSI)	SDG County Forest Forest Management Plan 2007-2026 Land Information Ontario (LIO) OMNRF - Provincial Mapping Unit	Natural Heritage Information Centre (NHIC) County Official Plans Ontario Wetland Evaluation System (OWES)	27, 29 28, 35, 36, 37, 45, 48, 49, 50, 51, 59, 63, 64, 70, 75, 76, 86, 89, 94 52, 53, 54, 55, 61, 66, 68, 71, 72, 79 85	Black Lake Swamp Hoasic Creek Wetland Newington Bog Osnabruck Swamp	2012	OMNRF Municipalities	Consultation with OMNRF Species at Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	Monitoring not required unless work is undertaken in the area.	897
Forest supports regionally significant seasonal concentration of species	Deer Yard	SDG County Forest Forest Management Plan 2007-2026 OMNRF - Provincial Mapping Unit	Natural Heritage Information Centre (NHIC) County Official Plans Mohawks of Akwesasne and Algonquin First Nations	6, 11, 12, 13, 14, 29, 30, 39, 40, 41, 42, 45, 50, 51, 52, 53, 60, 66, 68, 79, 95, 98, 99	Deer Yard	1997	OMNRF Local Communities	White-tailed Deer Management Policy for Ontario Quality Deer Management	Monitoring not required unless work is undertaken in the area.	348
Forest supports concentrations of species at the edge	Addresses wildlife habitat requirements	SDG County Forest Forest Management Plan 2007-2026	Mohawks of Akwesasne and Algonquin First Nations	56	Eastern Cottonwood	2007	OMNRF	Consultation with OMNRF Species at	Monitoring not required unless work is	10.1

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 1) Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values				**Comp. No.**	**Value**	**Year**	**Stakeholder**	**Management Guidance**	**Monitoring**	**Area (ha)**
of their natural ranges or outlier population	critical to maintaining population viability (regional 'hot spots')							Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	undertaken in the area.	
Forest contains a locally significant conservation area	Locally Significant Wetland (LSW)	SDG County Forest Forest Management Plan 2007-2026 Land Information Ontario (LIO) OMNRF - Provincial Mapping Unit	Natural Heritage Information Centre (NHIC) County Official Plans Ontario Wetland Evaluation System (OWES)	23, 69 34 43, 62 80, 81, 82, 83 92 95, 97, 98, 100 96	Monkland Swamp Munroe Mills Swamp Concession 1 Bog Highway 417 Marsh Dominionville Swamp Osnabruck Swamp Island Road Swamp	2013	OMNRF Municipalities	Consultation with OMNRF Species at Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	Monitoring not required unless work is undertaken in the area.	275

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 2) Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance				**Comp. No.**	**Value**	**Year**	**Stakeholder**	**Management Guidance**	**Monitoring**	**Area (ha)**
N.A.	-	-	-	-	**-**	**-**	-	**-**	-	-

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 3) Forest areas that are in or contain rare, threatened or endangered ecosystems.				**Comp. No.**	**Value**	**Year**	**Stakeholder**	**Management Guidance**	**Monitoring**	**Area (ha)**
Forests contains naturally rare ecosystem type	Remnants of old growth forest	SDG County Forest Forest Management Plan 2007-2026	Mohawks of Akwesasne and Algonquin First Nations Old Growth Forest Definitions for Ontario	32 92	White pine Hemlock, Cedar	2007	OMNRF Municipalities Local communities SNC EODAC	Consultation with OMNRF Species at Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	Monitoring not required unless work is undertaken in the area.	16.7
Forests contains naturally rare ecosystem type	Mature upland hardwood	SDG County Forest Forest Management Plan 2007-2026	Mohawks of Akwesasne and Algonquin First Nations Old Growth Forest Definitions for Ontario	30 42	Hard maple and Hemlock	2019	OMNRF Municipalities Local communities SNC EODAC	Consultation with OMNRF Species at Risk Biologist and/or District Ecologists as required OMNRF Habitat Protection Guidelines	Monitoring not required unless work is undertaken in the area.	18.2

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 4) Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control).				**Comp. No.**	**Value**	**Year**	**Stakeholder**	**Management Guidance**	**Monitoring**	**Area (ha)**
Forest provides a significant source of drinking water	Addresses wellhead areas important for the protection of drinking water	SDG County Forest Forest Management Plan 2007-2026	SNC	7, 8, 65 9	Wellhead protection areas zone C and D Wellhead protection areas zone D	2019	Municipalities Local communities	Source Protection Policies	Monitoring not required unless work is undertaken in the area.	72.3

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 5) Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health).				Comp. No.	Value	Year	Stakeholder	Management Guidance	Monitoring	Area (ha)
Forest is fundamental to meeting basic needs of local First Nation community	Traditional territory and land claim	Mohawks of Akwesasne and Algonquin First Nations	Ministry of Culture and the Mohawks of Akwesasne SDG County Forest Forest Management Plan 2007-2026	88, 91	Nutfield Tract	2019	SNC Private landowners	St. Regis Purchase (Treaty 57): Nutfield Tract	Monitoring not required unless work is undertaken in the area.	67.0

Item	Rationale	Sources of information	Further Guidance	SDG HCV:						
Category 6) Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).				Comp. No.	Value	Year	Stakeholder	Management Guidance	Monitoring	Area (ha)
Forest is critical to the cultural identity of local First Nation community	Habitat loss critical to supply of natural resources to preserve culture and traditions	Strategy for the Sustainable Management of Black Ash. SNC. 2006 Culturally significant species	Forest Manager Mohawks of Akwesasne Algonquin First Nations	37, 49, 56, 69, 74, 75, 92, 88, 91	Basket Quality Logs	2006	Local communities OMNRF SNC	Black Ash Strategy	Periodic	70.0
Archeological sites, non-First Nations and First Nations	Protection of site in accordance with the Ontario Heritage Act	First Nations, South Nation management plans and the Archaeology Umbrella Protocol	Ministry of Culture and the Algonquin First Nation Mohawk First Nation	Confidential	Archeological sites	2015	Local Historians	Consultation with OMNR Partnership Specialist as well as the Ministry of Culture	Ongoing	5.00

ONTARIO REGULATION 230/08

species at risk in ontario list

Consolidation Period: *From August 1, 2018 to the e-Laws currency date.*

Last amendment: 404/18.

Legislative History: 56/09, 332/09, 72/10, 373/10, 224/11, 4/12, 25/13, 139/14, 66/15, 200/16, 167/17, 404/18.

This is the English version of a bilingual regulation.

Extirpated species

1. The species listed in Columns 3 and 4 of Schedule 1 according to their common and scientific names, and belonging to the species grouping referred to in Column 2 opposite the listed species, are classified by COSSARO as extirpated species. O. Reg. 139/14, s. 1.

Endangered species

2. The species listed in Columns 3 and 4 of Schedule 2 according to their common and scientific names, and belonging to the species grouping referred to in Column 2 opposite the listed species, are classified by COSSARO as endangered species. O. Reg. 139/14, s. 1.

Threatened species

3. The species listed in Columns 3 and 4 of Schedule 3 according to their common and scientific names, and belonging to the species grouping referred to in Column 2 opposite the listed species, are classified by COSSARO as threatened species. O. Reg. 139/14, s. 1.

Special concern species

4. The species listed in Columns 3 and 4 of Schedule 4 according to their common and scientific names, and belonging to the species grouping referred to in Column 2 opposite the listed species, are classified by COSSARO as special concern species. O. Reg. 139/14, s. 1.

Geographical limitations

5. If the classification of a species applies only to a specified geographic area in Ontario, the area is described in a footnote to the relevant Schedule. O. Reg. 230/08, s. 5.

6. Omitted **(**provides for coming into force of provisions of this Regulation**). O. Reg. 230/08, s. 6.**

SCHEDULE 1
EXTIRPATED SPECIES

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
1.	Mosses	Incurved Grizzled Moss	*Ptychomitrium incurvum*
2.	Vascular Plants	Illinois Tick-trefoil	*Desmodium illinoense*
3.	Vascular Plants	Spring Blue-eyed Mary	*Collinsia verna*
4.	Insects	American Burying Beetle	*Nicrophorus americanus*
5.	Insects	Eastern Persius Duskywing	*Erynnis persius persius*
6.	Insects	Frosted Elfin	*Callophrys irus*
7.	Insects	Karner Blue	*Lycaeides melissa samuelis*
8.	Fishes	Gravel Chub	*Erimystax x-punctatus*
9.	Fishes	Paddlefish	*Polyodon spathula*
10.	Amphibians	Blanchard's Cricket Frog	*Acris blanchardi*
11.	Amphibians	Eastern Tiger Salamander	*Ambystoma tigrinum*
12.	Amphibians	Spring Salamander	*Gyrinophilus porphyriticus*
13.	Reptiles	Eastern Box Turtle	*Terrapene carolina*
14.	Reptiles	Timber Rattlesnake	*Crotalus horridus*
15.	Birds	Eskimo Curlew	*Numenius borealis*
16.	Birds	Greater Prairie-Chicken	*Tympanuchus cupido*

O. REG. 200/16, S. 1.

SCHEDULE 2
ENDANGERED SPECIES

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
0.1	Lichens	Golden-eye Lichen (Great Lakes population)	*Teloschistes chrysophthalmus*
1.	Lichens	Pale-bellied Frost Lichen	*Physconia subpallida*
2.	Mosses	Spoon-leaved Moss	*Bryoandersonia illecebra*
3.	Vascular Plants	American Chestnut	*Castanea dentata*
4.	Vascular Plants	American Columbo	*Frasera caroliniensis*
5.	Vascular Plants	American Ginseng	*Panax quinquefolius*
6.	Vascular Plants	Bent Spike-rush	*Eleocharis geniculata*
7.	Vascular Plants	Bird's-foot Violet	*Viola pedata*
8.	Vascular Plants	Bluehearts	*Buchnera americana*
9.	Vascular Plants	Blunt-lobed Woodsia	*Woodsia obtusa*
10.	Vascular Plants	Butternut	*Juglans cinerea*
11.	Vascular Plants	Cherry Birch	*Betula lenta*

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
12.	Vascular Plants	Colicroot	*Aletris farinosa*
13.	Vascular Plants	Cucumber Tree	*Magnolia acuminata*
14.	Vascular Plants	Drooping Trillium	*Trillium flexipes*
15.	Vascular Plants	Eastern Flowering Dogwood	*Cornus florida*
16.	Vascular Plants	Eastern Prairie Fringed-orchid	*Platanthera leucophaea*
17.	Vascular Plants	Eastern Prickly Pear Cactus	*Opuntia humifusa*
18.	Vascular Plants	Engelmann's Quillwort	*Isoetes engelmannii*
19.	Vascular Plants	False Hop Sedge	*Carex lupuliformis*
20.	Vascular Plants	Few-flowered Club-rush	*Trichophorum planifolium*
21.	Vascular Plants	Forked Three-awned Grass	*Aristida basiramea*
22.	Vascular Plants	Four-leaved Milkweed	*Asclepias quadrifolia*
23.	Vascular Plants	Gattinger's Agalinis	*Agalinis gattingeri*
24.	Vascular Plants	Heart-leaved Plantain	*Plantago cordata*
25.	Vascular Plants	Hoary Mountain-mint	*Pycnanthemum incanum*
26.	Vascular Plants	Horsetail Spike-rush	*Eleocharis equisetoides*
27.	Vascular Plants	Juniper Sedge	*Carex juniperorum*
28.	Vascular Plants	Large Whorled Pogonia	*Isotria verticillata*
29.	Vascular Plants	Lowland Toothcup	*Rotala ramosior*
30.	Vascular Plants	Nodding Pogonia	*Triphora trianthophoros*
31.	Vascular Plants	Ogden's Pondweed	*Potamogeton ogdenii*
32.	Vascular Plants	Pink Milkwort	*Polygala incarnata*
33.	Vascular Plants	Red Mulberry	*Morus rubra*
34.	Vascular Plants	Scarlet Ammannia	*Ammannia robusta*
35.	Vascular Plants	Showy Goldenrod (Great Lakes Plains population)	*Solidago speciosa*
36.	Vascular Plants	Skinner's Agalinis	*Agalinis skinneriana*
37.	Vascular Plants	Slender Bush-clover	*Lespedeza virginica*
38.	Vascular Plants	Small White Lady's-slipper	*Cypripedium candidum*
39.	Vascular Plants	Small Whorled Pogonia	*Isotria medeoloides*
40.	REVOKED: O. Reg. 404/18, s. 1 (2).		
41.	Vascular Plants	Virginia Goat's-rue	*Tephrosia virginiana*
42.	Vascular Plants	Virginia Mallow	*Sida hermaphrodita*
43.	Vascular Plants	Western Silvery Aster	*Symphyotrichum sericeum*
44.	Vascular Plants	White Prairie Gentian	*Gentiana alba*
45.	Vascular Plants	Wood-poppy	*Stylophorum diphyllum*
46.	Molluscs	Broad-banded Forestsnail	*Allogona profunda*
47.	Molluscs	Eastern Banded Tigersnail	*Anguispira kochi kochi*
48.	Molluscs	Fawnsfoot	*Truncilla donaciformis*
49.	Molluscs	Hickorynut	*Obovaria olivaria*
50.	Molluscs	Kidneyshell	*Ptychobranchus fasciolaris*
51.	Molluscs	Northern Riffleshell	*Epioblasma torulosa rangiana*
52.	Molluscs	Proud Globelet	*Patera pennsylvanica*
53.	Molluscs	Rayed Bean	*Villosa fabalis*
54.	Molluscs	Round Hickorynut	*Obovaria subrotunda*
55.	Molluscs	Round Pigtoe	*Pleurobema sintoxia*
56.	Molluscs	Salamander Mussel	*Simpsonaias ambigua*
57.	Molluscs	Snuffbox	*Epioblasma triquetra*
58.	Insects	Aweme Borer Moth	*Papaipema aweme*
59.	Insects	Bogbean Buckmoth	HEMILEUCA sp.
60.	Insects	Gypsy Cuckoo Bumble Bee	*Bombus bohemicus*
61.	Insects	Hine's Emerald	*Somatochlora hineana*
62.	Insects	Hoptree Borer	*Prays atomocella*
63.	Insects	Hungerford's Crawling Water Beetle	*Brychius hungerfordi*
64.	Insects	Laura's Clubtail	*Stylurus laurae*
65.	Insects	Mottled Duskywing	*Erynnis martialis*
66.	Insects	Nine-spotted Lady Beetle	*Coccinella novemnotata*
67.	Insects	Northern Barrens Tiger Beetle	*Cicindela patruela*
68.	Insects	Pygmy Snaketail	*Ophiogomphus howei*
69.	Insects	Rapids Clubtail	*Gomphus quadricolor*
70.	Insects	Riverine Clubtail	*Stylurus amnicola*
71.	Insects	Rusty-patched Bumble Bee	*Bombus affinis*
71.1	Insects	Transverse Lady Beetle	*Coccinella transversoguttata*
72.	Fishes	American Eel	*Anguilla rostrata*
73.	Fishes	Eastern Sand Darter	*Ammocrypta pellucida*
73.1	Fishes	Lake Sturgeon (Great Lakes - Upper St. Lawrence populations)	*Acipenser fulvescens*
74.	Fishes	Northern Madtom	*Noturus stigmosus*
75.	Fishes	Redside Dace	*Clinostomus elongatus*
76.	Fishes	River Darter (Great Lakes - Upper St. Lawrence populations)	*Percina shumardi*
77.	Fishes	Shortnose Cisco	*Coregonus reighardi*
78.	Fishes	Spotted Gar	*Lepisosteus oculatus*
79.	Fishes	Warmouth	*Lepomis gulosus*
80.	Amphibians	Allegheny Mountain Dusky Salamander	*Desmognathus ochrophaeus*
81.	Amphibians	Fowler's Toad	*Anaxyrus fowleri*
82.	Amphibians	Jefferson Salamander	*Ambystoma jeffersonianum*
83.	Amphibians	Northern Dusky Salamander	*Desmognathus fuscus*
84.	Amphibians	Small-mouthed Salamander	*Ambystoma texanum*
85.	Amphibians	Unisexual Ambystoma (Jefferson Salamander dependent population)	*Ambystoma laterale – (2) jeffersonianum*
86.	Amphibians	Unisexual Ambystoma (Small-mouthed Salamander dependent population)	*Ambystoma laterale – texanum*
87.	Reptiles	Blue Racer	*Coluber constrictor foxii*
88.	Reptiles	Butler's Gartersnake	*Thamnophis butleri*
89.	Reptiles	Common Five-lined Skink (Carolinian	*Plestiodon fasciatus*

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
		population)	
90.	Reptiles	Eastern Foxsnake (Carolinian population)	*Pantherophis gloydi*
91.	Reptiles	Gray Ratsnake (Carolinian population)	*Pantherophis spiloides*
92.	Reptiles	Massasauga (Carolinian population)	*Sistrurus catenatus*
93.	Reptiles	Queensnake	*Regina septemvittata*
94.	Reptiles	Spiny Softshell	*Apalone spinifera*
95.	Reptiles	Spotted Turtle	*Clemmys guttata*
96.	Reptiles	Wood Turtle	*Glyptemys insculpta*
97.	Birds	Acadian Flycatcher	*Empidonax virescens*
98.	Birds	Barn Owl	*Tyto alba*
99.	Birds	Golden Eagle	*Aquila chrysaetos*
100.	Birds	Henslow's Sparrow	*Ammodramus henslowii*
101.	Birds	King Rail	*Rallus elegans*
102.	Birds	Kirtland's Warbler	*Setophaga kirtlandii*
103.	Birds	Loggerhead Shrike	*Lanius ludovicianus*
104.	Birds	Northern Bobwhite	*Colinus virginianus*
105.	Birds	Piping Plover	*Charadrius melodus*
106.	Birds	Prothonotary Warbler	*Protonotaria citrea*
107.	Birds	Red Knot rufa subspecies	*Calidris canutus rufa*
108.	Birds	Yellow-breasted Chat	*Icteria virens*
109.	Mammals	American Badger (Northwestern Ontario population)	*Taxidea taxus taxus*
110.	Mammals	American Badger (Southwestern Ontario population)	*Taxidea taxus jacksoni*
111.	Mammals	Eastern Small-footed Myotis	*Myotis leibii*
112.	Mammals	Little Brown Myotis	*Myotis lucifugus*
113.	Mammals	Mountain Lion or Cougar	*Puma concolor*
114.	Mammals	Northern Myotis	*Myotis septentrionalis*
115.	Mammals	Tri-colored Bat	*Perimyotis subflavus*

O. REG. 167/17, S. 1; O. REG. 404/18, S. 1.

SCHEDULE 3
THREATENED SPECIES

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
1.	Vascular Plants	American Water-willow	*Justicia americana*
2.	Vascular Plants	Blue Ash	*Fraxinus quadrangulata*
3.	Vascular Plants	Branched Bartonia	*Bartonia paniculata*
4.	Vascular Plants	Deerberry	*Vaccinium stamineum*
5.	Vascular Plants	Dense Blazing Star	*Liatris spicata*
6.	Vascular Plants	Dwarf Hackberry	*Celtis tenuifolia*
7.	Vascular Plants	False Rue-anemone	*Enemion biternatum*
8.	Vascular Plants	Goldenseal	*Hydrastis canadensis*
9.	Vascular Plants	Hill's Thistle	*Cirsium hillii*
10.	Vascular Plants	Houghton's Goldenrod	*Solidago houghtonii*
11.	Vascular Plants	Kentucky Coffee-tree	*Gymnocladus dioicus*
12.	Vascular Plants	Lakeside Daisy	*Tetraneuris herbacea*
13.	Vascular Plants	Pitcher's Thistle	*Cirsium pitcheri*
14.	Vascular Plants	Purple Twayblade	*Liparis liliifolia*
15.	Vascular Plants	Round-leaved Greenbrier	*Smilax rotundifolia*
16.	Vascular Plants	Showy Goldenrod (Boreal population)	*Solidago speciosa*
17.	Vascular Plants	Small-flowered Lipocarpha	*Lipocarpha micrantha*
17.1	Vascular Plants	Spotted Wintergreen	*Chimaphila maculata*
18.	Vascular Plants	White Wood Aster	*Eurybia divaricata*
19.	Vascular Plants	Wild Hyacinth	*Camassia scilloides*
20.	Vascular Plants	Willowleaf Aster	*Symphyotrichum praealtum*
21.	Molluscs	Lilliput	*Toxolasma parvum*
22.	REVOKED: O. Reg. 404/18, s. 2 (3).		
23.	Molluscs	Threehorn Wartyback	*Obliquaria reflexa*
24.	Molluscs	Wavy-rayed Lampmussel	*Lampsilis fasciola*
25.	Insects	Lake Huron Grasshopper	*Trimerotropis huroniana*
26.	Fishes	Black Redhorse	*Moxostoma duquesnei*
27.	REVOKED: O. Reg. 404/18, s. 2 (5).		
28.	Fishes	Cutlip Minnow	*Exoglossum maxillingua*
29.	Fishes	Lake Chubsucker	*Erimyzon sucetta*
30.	REVOKED: O. Reg. 404/18, s. 2 (5).		
31.	Fishes	Lake Sturgeon (Saskatchewan - Nelson River populations)	*Acipenser fulvescens*
32.	Fishes	Pugnose Minnow	*Opsopoeodus emiliae*
33.	Fishes	Pugnose Shiner	*Notropis anogenus*
34.	Fishes	Shortjaw Cisco	*Coregonus zenithicus*
35.	Fishes	Silver Chub	*Macrhybopsis storeriana*
36.	Fishes	Silver Shiner	*Notropis photogenis*
37.	Reptiles	Blanding's Turtle	*Emydoidea blandingii*
38.	Reptiles	Eastern Foxsnake (Georgian Bay population)	*Pantherophis gloydi*
39.	Reptiles	Eastern Hog-nosed Snake	*Heterodon platirhinos*
40.	Reptiles	Gray Ratsnake (Frontenac Axis population)	*Pantherophis spiloides*
41.	Reptiles	Massasauga (Great Lakes - St. Lawrence population)	*Sistrurus catenatus*
42.	Birds	American White Pelican	*Pelecanus erythrorhynchos*
43.	Birds	Bank Swallow	*Riparia riparia*
44.	Birds	Barn Swallow	*Hirundo rustica*
45.	Birds	Bobolink	*Dolichonyx oryzivorus*

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
46.	Birds	Cerulean Warbler	*Setophaga cerulea*
47.	Birds	Chimney Swift	*Chaetura pelagica*
48.	Birds	Eastern Meadowlark	*Sturnella magna*
49.	Birds	Eastern Whip-poor-will	*Antrostomus vociferus*
50.	Birds	Least Bittern	*Ixobrychus exilis*
51.	Birds	Louisiana Waterthrush	*Parkesia motacilla*
52.	Mammals	Algonquin Wolf	CANIS sp.
53.	Mammals	Caribou (Boreal population)	*Rangifer tarandus*
54.	Mammals	Gray Fox	*Urocyon cinereoargenteus*
55.	Mammals	Polar Bear	*Ursus maritimus*
56.	Mammals	Wolverine	*Gulo gulo*

O. REG. 167/17, S. 1; O. REG. 404/18, S. 2.

SCHEDULE 4
SPECIAL CONCERN SPECIES

Column 1 Item	Column 2 Species Grouping	Column 3 Common Name	Column 4 Scientific Name
0.1	Vascular Plants	American Hart's Tongue Fern	*Asplenium scolopendrium var. americanum*
1.	Vascular Plants	Broad Beech Fern	*Phegopteris hexagonoptera*
2.	Vascular Plants	Climbing Prairie Rose	*Rosa setigera*
3.	Vascular Plants	Common Hoptree	*Ptelea trifoliata*
4.	Vascular Plants	Crooked-stem Aster	*Symphyotrichum prenanthoides*
5.	Vascular Plants	Dwarf Lake Iris	*Iris lacustris*
6.	Vascular Plants	Green Dragon	*Arisaema dracontium*
7.	REVOKED: O. Reg. 404/18, s. 3 (2).		
8.	Vascular Plants	Hill's Pondweed	*Potamogeton hillii*
9.	Vascular Plants	Riddell's Goldenrod	*Solidago riddellii*
10.	Vascular Plants	Shumard Oak	*Quercus shumardii*
11.	Vascular Plants	Swamp Rose-mallow	*Hibiscus moscheutos*
12.	Vascular Plants	Tuberous Indian-plantain	*Arnoglossum plantagineum*
12.1	Molluscs	Eastern Pondmussel	*Ligumia nasuta*
12.2	Molluscs	Mapleleaf	*Quadrula quadrula*
13.	Molluscs	Rainbow	*Villosa iris*
14.	Insects	Monarch	*Danaus plexippus*
15.	Insects	West Virginia White	*Pieris virginiensis*
16.	Insects	Yellow-banded Bumble Bee	*Bombus terricola*
17.	Fishes	Blackstripe Topminnow	*Fundulus notatus*
18.	Fishes	Bridle Shiner	*Notropis bifrenatus*
18.1	Fishes	Channel Darter	*Percina copelandi*
19.	Fishes	Grass Pickerel	*Esox americanus vermiculatus*
20.	Fishes	Lake Sturgeon (Southern Hudson Bay - James Bay populations)	*Acipenser fulvescens*
21.	Fishes	Northern Brook Lamprey	*Ichthyomyzon fossor*
22.	Fishes	Northern Sunfish (Great Lakes - Upper St. Lawrence populations)	*Lepomis peltastes*
23.	Fishes	River Redhorse	*Moxostoma carinatum*
24.	Fishes	Silver Lamprey (Great Lakes - Upper St. Lawrence River population)	*Ichthyomyzon unicuspis*
25.	Fishes	Spotted Sucker	*Minytrema melanops*
26.	Fishes	Upper Great Lakes Kiyi	*Coregonus kiyi kiyi*
27.	Reptiles	Common Five-lined Skink (Southern Shield population)	*Plestiodon fasciatus*
28.	Reptiles	Eastern Musk Turtle	*Sternotherus odoratus*
29.	Reptiles	Eastern Ribbonsnake	*Thamnophis sauritus*
30.	Reptiles	Lake Erie Watersnake	*Nerodia sipedon insularum*
31.	Reptiles	Northern Map Turtle	*Graptemys geographica*
32.	Reptiles	Snapping Turtle	*Chelydra serpentina*
33.	Birds	Bald Eagle	*Haliaeetus leucocephalus*
34.	Birds	Black Tern	*Chlidonias niger*
35.	Birds	Canada Warbler	*Cardellina canadensis*
36.	Birds	Common Nighthawk	*Chordeiles minor*
37.	Birds	Eastern Wood-Pewee	*Contopus virens*
37.1	Birds	Evening Grosbeak	*Coccothraustes vespertinus*
38.	Birds	Golden-winged Warbler	*Vermivora chrysoptera*
39.	Birds	Grasshopper Sparrow	*Ammodramus savannarum*
40.	Birds	Horned Grebe	*Podiceps auritus*
41.	Birds	Olive-sided Flycatcher	*Contopus cooperi*
42.	Birds	Peregrine Falcon	*Falco peregrinus*
43.	Birds	Red-headed Woodpecker	*Melanerpes erythrocephalus*
44.	Birds	Red-necked Phalarope	*Phalaropus lobatus*
44.1	Birds	Rusty Blackbird	*Euphagus carolinus*
45.	Birds	Short-eared Owl	*Asio flammeus*
46.	Birds	Wood Thrush	*Hylocichla mustelina*
47.	Birds	Yellow Rail	*Coturnicops noveboracensis*
48.	Mammals	Beluga	*Delphinapterus leucas*
48.1	Mammals	Caribou (Eastern Migratory population)	*Rangifer tarandus*
49.	Mammals	Eastern Mole	*Scalopus aquaticus*
50.	Mammals	Woodland Vole	*Microtus pinetorum*

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