

Simcoe County Forest 2022 Annual Report



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Simcoe County Forest - 2022

Established in 1922, the Simcoe County Forest (SCF) is the oldest and largest municipal forest in Ontario. Although many of the objectives have remained consistent since its inception, the current management plan for the period 2011-2030 renewed the goals, objectives, and strategies designed to balance the substantial environmental, social, and economic benefits the SCF provides. This report documents annual activities and provides a basis to track progress toward long-term objectives within the plan.

2022 was a significant milestone for Simcoe County, marking 100 years since the inception of the Simcoe County Forest and Ontario's Agreement Forest Program. The Canadian Institute of Forestry also recognized Simcoe County as the Forest Capital of Canada; the only jurisdiction in Canada to be awarded on two occasions. To celebrate, a full range of initiatives and community events were conducted. A marketing effort included a dedicated web page, regular community outreach, billboard advertising, and video creation. Events included a spring ceremonial tree planting event at the Drury cairn located off Old Barrie Road. Warden George Cornell and several County Councillors attended the event as well forestry staff and descendants of the E.C Drury family. Forestry tours were conducted by staff in County Forests throughout the County during National Forestry Week. Finally, a public celebration was held at the 'Red Pine House' Forestry Interpretive Centre which included guided tours and a BBQ lunch. Demonstrations of modern mechanical harvesting equipment was also provided by Breen's Lumber.

1. Property

The total area under management at end of 2022 totals 13,479 ha (33,313 acres). Some fluctuation in reported area from previous years is a result of data inaccuracies.

1.1 Acquisitions

One of the side effects of the COVID-19 pandemic was a significant elevation in real estate values which included vacant lands. As a result, significant land acquisition efforts were paused, with only one minor addition made to the Tiffin Tract of 9.7 ha (24.1 acres).

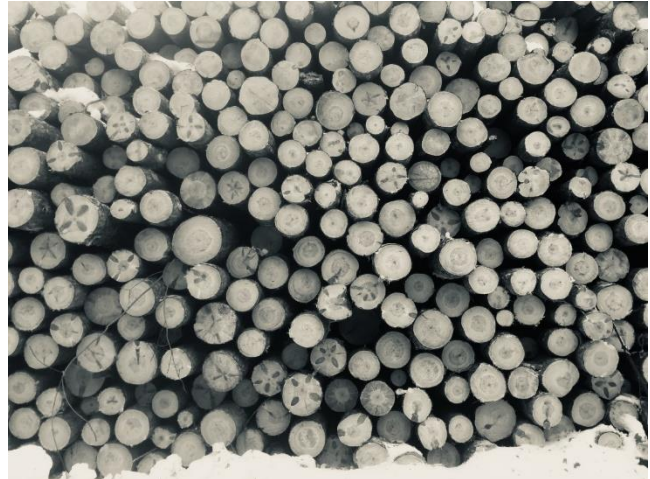
2. Silvicultural Operations

Simcoe County has long recognized that forests and their many benefits and resources are essential to the continuing well-being of our environment, communities, and economy. The sustainable management of our forests is therefore critical, not only to balance competing uses in the short term, but to ensure that the many benefits of our forests are available for generations to come. Good long-term planning is key to ensuring continued growth and success, which is anchored by the 20-year forest management plan (Simcoe County Forests 2011 – 2030). Monitoring is conducted at the individual forest stand level, collated into annual reporting, and a further assessment is conducted at five-year intervals. Commercial timber harvesting is just one of the treatments utilized to achieve the environmental, social, and economic objectives identified in the management plan. Other treatments may include tree

planting, invasive species management, controlled burning, pre-commercial thinning, etc. All treatments are designed with ecological principles and the long-term sustainability of the SCF as critical elements of the decision-making process.

Approximately 1,000 hectares of the SCF are inventoried annually. Each forest compartment identified in the operating plan is assessed by Forestry staff and, if warranted, a prescription is prepared detailing the way it is to be treated. If harvesting is prescribed, trees are marked and tallied according to the prescription, and volume is estimated to provide detailed information to prospective buyers. The standing timber is then sold to the highest bidder as per County policy.

Timber sales encompass approximately 700 to 800 hectares annually, which is divided into 25 to 40 individual sales. Primarily conducted through an open tendering process, in some circumstances additional sales are conducted by quotation, and negotiated sales may also occur where no bids are received or opportunities arise to salvage low value, declining or storm damaged timber. Staff attempts to distribute the volume of timber as evenly as possible throughout the year and include a variety of sizes and types in each lot to ensure that local operators have an opportunity to purchase a relatively constant supply. All operations are conducted in accordance with the management plan.



Compliance monitoring of each harvesting operation is conducted regularly to ensure health and safety guidelines are followed, site impacts are minimized, silvicultural objectives are met and to ensure sensitive natural or cultural heritage features are identified and protected. This information is reviewed annually to provide feedback on current processes and to ensure that long range objectives remain on target.

2.1 Timber Sales Summary

Forest Type	Sales	Area (ha)	Volume (m ³)	Revenue
Conifer	26	603.8	33,336.3	\$1,845,536.75
Hardwood	4	89.1	4,326.4	\$417,065.00
Total	30	692.9	37,662.7	\$2,262,601.75

As described earlier, the pandemic resulted in significant swings of demand for County timber. Prices received for hardwood sales were exceedingly high however, and the significant demand for mature, high quality red pine has continued throughout with exceptional values attained. As detailed in the management plan, an increasing percentage of these highly valuable stands of timber are nearing the end of their rotation age. As the final harvests are occurring and conversion to mixed natural forest increases, a reduction in timber volume and associated revenue will occur within the next 10 to 20 years.

With 2021 at the midpoint of the management plan cycle, work commenced on a ten-year Plan update. The following table projecting harvest rates through the next ten years has been revised accordingly. Additionally, to complement the 10-year update to the management plan, work was completed on a long-range projection forest harvest area, volume, and value. This Forecast of Wood Supply is discussed in more detail in section 8.3.

Estimated Annual Volume Growth 2021-2030

Production Forest Unit	Total Productive Area	Available Area ^(a)	Avg Growth Rate (m3/ha/year)	Estimated Volume Growth (m3/year)
Red Pine	3,769	3,586	7.7	29,023
White Pine	1,262	1,200	7.5	9,463
Spruce and Larch	350	350	7.5	2,623
Jack and Scot's Pine	132	75	7.5	990
Other Conifer ^(b)	205	182	7.5	1,540
Total Conifer	5,718	5,393		43,640

Tolerant Hardwood ^(c)	2,315	2,205	3.9	9,030
Intolerant Hardwood ^(d)	577	530	3.9	2,249
Upland Oak ^(e)	1,148	1,011	4.4	5,050
Lowland Hardwood ^(f)	288	234	3.9	1,124
Other Hardwood ^(g)	273	146	3.9	1,064
Total Hardwood	4,601	4,126		18,518

^(a) Estimated growth is calculated from 'Total Productive Area'. 'Available Area' does not include productive stands that are <25 for conifer and <40 for hardwood and is for information purposes only.

^(b) Other Conifer includes Bf, C, Cw, He working groups

^(c) Tolerant Hardwood includes Mh working group

^(d) Intolerant Hardwood includes Po, Bw working groups

^(e) Upland Oak includes Or working group

^(f) Lowland Hardwood includes Ag, Mr, Ms working groups

^(g) Other Hardwood includes Aw, By, Cb, H working groups

* See Appendix 3 for species code table

2.2 High Conservation Value Forests

High Conservation Value (HCV) forests are those that possess one or more environmental or cultural attributes which is generally of higher significance than timber values. Adjustments are made to HCV mapping on an ongoing basis as latest information becomes available such as the discovery of a rare species. Harvesting prescriptions must employ a precautionary approach, and if harvesting operations are conducted, monitoring takes place to ensure that the feature or value is not adversely impacted. Recreational uses, including the development of additional trails, may be directed away from these locations. The criteria and designation of all HCV's are reviewed at each five-year renewal of the management plan.

Operations within High Conservation Value Forests Completed in 2022:

Tract	Comp	HCV Type	HCV Notes	Contract
Patterson	285CD	Species at Risk / Regionally Rare Species	Butternut within stand	20-10-029
Baxter	251C	Area of Natural or Scientific Interest	Nottawasaga River Provincial Life Science	22-07-015
O'Neil	325B	Species at Risk / Regionally Rare Species	Butternut within stand	21-12-038
Tosorontio	267AB	Area of Natural or Scientific Interest	Oak Ridges South Slope Forests Provincial Life Science	22-10-042
Sandford / Hardwood Hills	140B 141A / 445C	Cultural	Exclusive Use Agreement for recreational use	22-10-022

2.3 Reforestation

40,540 tree seedlings were planted in 2022 within the Simcoe County Forest. The majority were planted as an afforestation project to establish new forest cover on recently acquired non-forested land in Rathburn tract. The other plantings were planting under already established forest to bolster areas with inadequate natural regeneration. There was also a small planting conducted in Coughlin Tract to restore a stream riparian area.

Species	Rathburn	Liscombe	Packard	Hickling	Orr Lake	Drury	Coughlin
Red Pine	21100	-	-	400	-	-	-
White Pine	3900	6300	1750	400	1250	300	150
Tamarack	1650	-	-	-	-	-	-
Red Oak	750	500	130	350	70	-	-
Bur Oak	200	25	25	-	-	-	-
Black Cherry	250	25	25	-	-	-	-
Hemlock	-	-	-	-	-	-	50
Bitternut Hickory	-	-	-	350	-	-	-
Red Maple	-	-	-	-	-	-	50
Sugar Maple	-	-	-	-	-	-	20
Silver Maple	-	-	-	-	-	-	100
Balsam Fir	-	-	-	-	-	-	50
Dogwood	-	-	-	-	-	-	150
Nannyberry	-	-	-	-	-	-	70
Cranberry	-	-	-	-	-	-	150
TOTAL	27850	6850	1930	1500	1320	300	790

2.4 Site Preparation

Successful reforestation efforts depend upon the proper planning and orchestration of several key steps beyond just tree planting. Assessing and preparing the site in advance of planting or other silvicultural practices designed to facilitate natural regeneration is key.

Hickling tract was prepped for planting by plowing the previous agricultural field area which made hand planting the tree seedlings easier. The Rathburn site was prepared for planting by entering into an agreement with an area farmer to temporarily utilize the fields for soybeans which were harvested in 2021.

2.5 Tending / Pre-commercial Thinning

Young forests which would benefit from thinning before it is commercially viable, or other kinds of tending may be prescribed to enhance long-term stand quality, productivity, diversity or to mitigate damage or disease. This could include thinning a noticeably young, dense hardwood stand to favour a particular species, or reducing competitive trees from overtaking a young plantation.

During summer of 2022 significant tending was conducted at the newly planted Rathburn site to control competing vegetation. This is necessary to ensure the small seedlings do not get overly suppressed from competing vegetation. The primary species of competition was Queen Annes lace, evening primrose, horseweed, and vetch.

3. Invasive Species Management

3.1 Invasive Plants

Management of invasive plants continues to focus on prevention, detection, control, and adaption. Prevention includes educating the public with appropriate signage and other methods to communicate the importance of not spreading organic material from urban gardens into a natural forest ecosystem. Yard waste dumping is a large contributor to new invasive species introductions within the SCF. Invasive plant detection is completed throughout the year by Forestry staff and by leveraging partnerships and information sharing with the public, user groups and other forestry workers. Current processes enable staff to efficiently detect and map new outbreaks and problem areas and to quickly initiate control. New detections are ranked on priorities from the SCF invasive plant strategy. These priorities are based on the size of the new detection, ecological impact, high conservation value, and how common the species is within SCF. If staff deem the new detection a priority a control response will be carried out. While eradication is generally the goal, this is not always feasible. Adaptive management is employed to prioritize, reduce populations, and contain spread. Annual herbicide applications are conducted within known outbreak areas mostly for species such as Buckthorn, Dog Strangling Vine, and Garlic Mustard.

Significant investments have been made over the last decade to locate, track, and manage the most impactful invasive plants. The total area managed annually is approximately 100-150 hectares. The table below summarizes the high priority species managed by the number of locations.

Species Managed	Tracts
Dog Strangling Vine	19
Garlic Mustard	10
Japanese Knotweed	8
Buckthorn	7
Manitoba Maple	7
Periwinkle	6
Honeysuckle	4
Black Locust	4
Yellow Archangel	3
Lilly of the Valley	2
Himalayan Balsam	2
Scots Pine	1
Norway Maple	1
Goutweed	1
Giant Hogweed	1
Autumn Olive	1
Phragmites	0

3.2 Invasive Insects

Spongy Moth

Spongy moth, (formerly known as Gypsy Moth) is a non-native insect that caused its first widespread defoliation event in Ontario in 1981. Cyclical outbreaks have occurred every 5-10 years since, with the most recent event from 2019 to 2021 being one of the most significant ever in Simcoe County and Ontario generally. Staff conducted egg mass sampling in 2019, 2020 and 2021, both to monitor and predict defoliation levels and to provide information to local municipalities and other partners. County Council Report CCW 2021-255 provided background and details on 2021 egg mass survey results, which indicated that the peak of the outbreak had passed. A complete population collapse ensued in 2022 with little to no detectable defoliation noted. No egg mass surveys were conducted in 2022 and there are no plans for further monitoring at this time.



Emerald Ash Borer

Emerald Ash Borer (EAB) has been well established throughout the County since 2017. Few areas remain free of ash mortality, although management of the SCF currently still prioritizes stands where opportunities exist to salvage merchantable ash, and to identify and remove potential hazards along designated trails and forest access roads.

3.3 Invasive Pathogens

Heterobasidion Irregulare

Heterobasidion irregulare is a non-native fungus that infects coniferous trees (pine) and causes Annosus Root Rot. The fungus spreads by releasing basidiospores in summer/fall and can travel long distances by wind. Once the spore lands on a wound or freshly cut pine stump it begins to colonize and spread down to the roots. The fungus then spreads to other nearby pines by growing along roots that have been grafted together, which is particularly problematic in plantation-grown pine and can cause significant decline and mortality. Efforts to mitigate the effects of this pathogen have been made for decades. The current management technique is to apply another fungus known as *Phlebiopsis gigantea* onto freshly cut stumps, which is a native fungus and works by quickly colonizing the stump and roots leaving little room for *Heterobasidion* to establish. *Phlebiopsis gigantea* comes as the active ingredient in Rot Stop C, a fungicide which is applied to stumps when the tree is cut either mechanically with a forest harvester, or manually by forestry staff with a backpack sprayer. Simcoe County Forest has required that Rot Stop C be applied seasonally to cut stumps within a conifer plantation setting since 2016. Approximately 150-250 hectares of plantations are treated annually to reduce the long-term impacts.

3.4 Other Invasive Species Concerns

There are many other invasive plants, insects and pathogens that already exist, or are potential future threats to the SCF and area woodlands. Some of these have been endemic for decades, such as Dutch Elm Disease, White Pine Blister Rust, Chestnut Blight, and others which have impacted forest health and, in some cases, reduced biodiversity by essentially eliminating some formerly common native species.

Beech Bark Disease (BBD) was officially confirmed in Ontario in the 1990's. It occurs because of an insect-fungus complex where an invasive beech scale insect feeds on the bark of the tree which produces cracks that allow a native canker fungus to enter. With the mortality of 85% of infected trees within 10 years, healthy Beech trees have become an uncommon presence in local forests. Stressed and dying trees also result in excessive sprouting of young beech trees, changing the structure and diversity of future forests. Staff have utilized techniques to identify and retain mature Beech that appear resistant to the disease, while managing to reduce the impacts of excessive re-sprouting.

Emerging threats that staff are currently paying close attention to include Oak Wilt, and Hemlock Woolly Adelgid. Oak Wilt is a fungus that grows on the outer sapwood and restricts the flow of water and nutrients through the tree, leading to eventual mortality. Oak Wilt is not currently found in Canada, although it is documented within 24 US States and within 2km of the Ontario border.

Hemlock Woolly Adelgid (HWA) is a small aphid-like insect that damages and kills Hemlock trees. This insect is widespread south of the border from Georgia to Maine. It has been found in Ontario several times in the last few years but efforts to date have been able to eradicate or contain the insect. In 2022 there was a new infestation of HWA found in Grafton Ontario. A regulated area has been established and no parts of hemlock trees are to be moved from this area.

Staff continue to remain informed and engage with experts on other invasive plant, insect and pathogens which could have potential impacts on area forests.

4. Recreation

Residents of Simcoe County are quite familiar with our County Forests spread throughout the community and they have become integral to the high quality of life that we enjoy. One of the primary roles of the County Forests is to provide for a range of recreational pursuits for County residents and tourists alike. Many studies have shown substantial benefits to the health and well-being of those who spend time in our natural environment; be it more active pursuits or simply enjoying nature.



A Recreation Policy, first established in 2006 and updated in 2018, was developed to ensure that all responsible users of the forest are able to continue to enjoy their pursuits. Many positive partnerships have evolved, and opportunities for enhanced access through recreational trail development has grown dramatically. While balancing economic and environmental benefits, the SCF also supports some of the largest networks of hiking, mountain biking, snowmobiling, ATV and off-road motorcycling trails in Ontario. Efforts have also been made to limit trail development in more sensitive / remote locations and to continue to provide for hunting opportunities and more passive pursuits such as bird watching.

4.1 Property Use Agreements

As the County has not historically developed or maintained trails, trail construction has been enabled through partnerships with organizations as per the Recreation Policy. Property Use Agreements are renewed annually to ensure roles and responsibilities are clearly defined and County liability is minimized. Primarily driven by volunteerism through not-for-profit groups, recreational opportunities are enhanced for many different types of users. Organized events also require similar agreements.

Non-Profit Agreements

Organization	Activity
Central Ontario ATV Club	ATV Trails
Ganaraska Hiking Trail Association	Hiking Trails
Simcoe County Mountain Bike Club	Mountain Biking Trails
TeamVanGo	Mountain Biking Trails
Halton Off-Road Rider Association	Off-Road Motorcycle Event
Ontario Federation of Trail Riders	Off-Road Motorcycle Trails
Ontario Federation of Snowmobile Clubs	Snowmobile Trails
Dufferin Simcoe Land Stewardship Network	Guided Walk

Commercial Agreements

Organization	Activity
Leo St. Croix	Horse Drawn Sleigh Rides
RDC Stables	Horse Drawn Sleigh Rides
Hardwood Ski and Bike	Mountain Biking Trails
Smart Adventure Program	Motorized Off-Road Vehicle Training

Municipal Trail Agreements

Township	Forest Tract
Clearview	Lawden
Essa	Rippon

5. Unauthorized Activity / Property Monitoring / Enforcement

5.1 Unauthorized Activity

The control of unauthorized and illegal activity on SCF property is accomplished through a range of measures, which begins with establishing permitted uses through the approved Recreation Policy and enabling enforcement with the associated by-law. Information is provided to the public through the website, direct notifications, and through signs installed at standard locations on all properties. Ensuring the visibility of property boundaries is also key to reduce both incidences of trespass onto neighbouring private land and to limit encroachment.

The most common infraction is related to unauthorized motorized use; ATV's, off-road motorcycles, and snowmobiles are all permitted provided they are operating on club operated trails that are open and have permits in place.

Property damage continues to most commonly occur to gates during attempts of forced entry. In some instances, gates are destroyed and must be replaced entirely. Dumping of garbage and yard waste occurs throughout the County, from very minor amounts to significant illegal dumping events requiring substantial resources to remove. There were fewer significant dumping occurrences in 2022, which may be due to increased public use.

5.2 Property Monitoring

Due to the scale and distribution of properties, staff utilize all available means to monitor activity in the SCF including help from neighbours, contractors, and recreation partners. In addition to ongoing staff visits when completing a range of forestry activities, formal property checks are also completed at regular intervals which includes an assessment of the condition of all infrastructure. Efforts to ensure a minimum level of inspections are completed are ongoing along with improved record retention procedures.

5.3 Enforcement

An educational approach has primarily been taken to improve compliance since the approval of the first Recreation Policy in 2006, however enforcement is required and has been increased in recent years.

To ensure police support, all major illegal occurrences of property damage and dumping are reported. Required repairs and removal of debris are completed as quickly as possible to reduce reoccurrence. In problem areas, surveillance cameras may be utilized, and photos are provided to police if evidence is obtained which may support laying charges.

A highly effective partnership has been in place for several years between the County, Simcoe County Off-Road Riders Association and Central Ontario ATV club to improve compliance with respect to off-road motorized vehicles. Off-duty OPP Officers are hired to conduct patrols in the attendance of one or more club members.

This year, with a need to have an increased presence and more consistent enforcement, a dedicated Forestry By-Law Enforcement Officer was added to the Forestry team to patrol the forests and follow up with complaints pertaining to the Recreation By-Law. Working with club stewards, off-duty OPP and the OPP's S.A.V.E unit, presence throughout the SCF has improved and patrols have been increased particularly outside of normal office hours.

Prior to the hiring of the Forestry By-Law Enforcement Officer, a private security firm was also contracted to complete weekend patrols from April to May. In total, 25 weekend patrols were completed with OPP and By-Law, with a total of 78 tickets issued for non-compliance. Non-compliance of the Recreation By-law was also enforced through Notices of Violation letters with 15 being sent for vehicle operation, improper refuse/debris disposal, target practice and encroachment.

6. Infrastructure Improvements / Maintenance

6.1 Entrances

Limiting vehicular access continued in 2022 to reduce illegal dumping and other unauthorized activities. Repair and replacement of infrastructure is needed throughout the year due to damage from illegal activity, as well as logging operations. A total of 19 gates were repaired/ replaced/ and installed in 2022.

6.2 Signage

Ongoing replacement and repairs occurred throughout the year due to vandalism, deterioration, and theft. 60 signs were repaired or replaced.

6.3 Parking

Increasing use throughout the County continues to necessitate expanded parking to ensure user safety. Parking areas were enhanced and expanded in the following County Forests, Ward, Patterson, Waverly, Sturgeon River, Hickling, Slessor, and Williams tracts.

Winter maintenance was first initiated in 2019 to provide safe parking in high use areas. In 2022 the number of plowed lots continue to increase thanks to the assistance from both County Roads and local municipalities.

Tract	Municipality	Snow Removal by Contractor	Snow Removal by County	Snow Removal by Local Municipality
Amos	Oro-Medonte			X
Oro	Oro-Medonte	X		
Strachan (2)	Oro-Medonte	X	-	X
Orr Lake	Springwater	X		
Williams	Springwater	X		
Hendrie (2)	Springwater		X	
Hickling	Springwater		X	
Smith	Springwater		X	
Martin's Valley	Midland			X
Sinclair	Bradford West Gwillimbury			X
Hodgson	Bradford West Gwillimbury			X
Webb	Innisfil	X		

Ongoing assessments will be made and discussions with other partners will follow to enable safe winter access to other locations as needed.

6.4 Internal Access Roads

Significant access road improvements were completed with assistance from the Roads Department within the Ward, Patterson, Orrock Creek South, Rathburn, Orr Lake, Caston, Williams, Train, and Stoney tracts to facilitate access for planned harvesting operations.

6.5 Garbage

The total volume of garbage removed was 15,600 kg which is lower than previous years. This is potentially due to several factors including the continued increase in recreational users, additional enforcement, and the continued addition of access controls.

6.6 Hazardous Tree Removal

Through regular forestry activity, potentially hazardous trees within striking distance of designated trails and access roads are marked and removed during harvesting operations. Other hazards are identified by users or adjacent landowners and are inspected by forestry staff. When a tree is identified as an increased risk to person or property, they are removed by staff or outside contractors if warranted. In 2022, contractors were retained to remove hazardous trees at 5 locations.

7. Research

7.1 Permanent Sample Plots (PSP's)

Forestry researchers have utilized 'permanent sample plots' for decades to provide crucial information on the growth and development of our forests over time. This involves the detailed measurement of trees, and in some cases associated soils and other data, in the exact same location over a period of decades. The data gathered and collated from these plots has been

used to develop information critical to foresters to predict growth and make informed management decisions.

Although extremely valuable, the very long-term nature of this work has created challenges as staff and priorities have changed over the years. In 2008, County staff began working collaboratively with the Ministry of Northern Development, Mines, Natural Resources & Forestry (MNDMNR) to assess research plots, refresh and retain those which remain valuable and integrate the locations into the County database. All retainable plots have now been measured at least once with County assistance.



In 2022, 10 permanent sample plots were re-measured, and staff also contributed to data entry and management. The data collected is used to update growth and yield forecasting, which is integral to forest management planning.

7.2 Surveillance of Black-Legged Ticks (Carrier of Lyme Disease)

The County has been assisting the Simcoe Muskoka District Health Unit by providing survey locations to update Public Health Ontario's Lyme Disease Map. Estimated risk areas are identified through active surveillance led by the local health unit by conducting 'tick dragging.' These areas are calculated from the location where black-legged ticks are found and include communities within a 20-kilometer radius surrounding that location. Tick dragging was not performed in SCF in 2022.

Additional signage was provided and placed at various high-use locations to educate users on the potential risk associated with ticks.

7.3 Rotstop C Efficacy Study

The County has been treating coniferous stumps with Rotstop C since 2016. Rotstop C is a stump treatment used to prevent the introduction and spread of Heterobasidion Root Disease (HRD) in conifer plantations. A biological fungicide, Rotstop C contains spores of the naturally occurring wood decay fungus *Phlebiopsis gigantea*, which grows into the stump and prevents HRD from becoming established. In 2021 a study was started to look at the efficacy of how Rotstop C is working within our conifer plantations. Stumps were excavated to check on the level of decay in the root system to determine how well and how fast the Rotstop C was spreading, and decaying. Continuation of the study in 2022 included felling red pine and spraying Rotstop C on the stump after various amounts (immediately, and 2 days) after cutting. The treatments were replicated in different seasons (spring, summer, fall) to better understand the efficacy of Rotstop C under different conditions.

7.4 Biocontrol Release to Manage Dog Strangling Vine

Hypena opulenta is a moth that has been approved for release as a biological control to manage the invasive plant Dog Strangling Vine. The larva of *Hypena opulenta* was approved for release in Canada in 2013 and has since been released at many sites in Ontario. The larvae feed only on dog strangling vine. It is anticipated that the population of the Larvae will

eventually become self-sustaining and over time will spread to control the plant in other areas. As success will not be achieved for many years however, other management practices to control Dog Strangling Vine will continue.

A three-year trial began in the Fitzgerald Tract in 2021 with the release of *Hypena*, and in 2022, approximately 1300 larvae were released. Unfortunately, there is no evidence to date of successful overwintering from the 2021 release.

8. Special Projects

8.1 Forest and Habitat Restoration - Kirtland's Warbler Reintroduction Effort

Simcoe County's land acquisition and afforestation efforts are also helping to restore rare habitat types. The County has embarked on unique forest restoration projects and joined an international effort to reintroduce the Kirtland's Warbler, a globally endangered migratory bird, to its natural range in Simcoe County. These are the first projects of their kind in Canada, which further demonstrates the County's strong commitment to forestry and habitat stewardship.

2022 was the 4th year of the second such project within the Packard Tract. This project is being funded by Ganawenim Meshkiki - Henvey Inlet First Nations through The Eastern Georgian Bay Initiative and with the cooperation of the Ontario Heritage Trust and the Nottawasaga Valley Conservation Authority. The first project, within the Museum Tract, was a joint international effort between the County of Simcoe, The Canadian Wildlife Service (CWS), American Forests, Forests Ontario, Savanta Environmental Consultants, the US Fish and Wildlife Service and the US Forest Service.

With the bulk of the restoration work complete, 2022 focused on vegetation management, invasive species control, encroachment, and enforcement. Bird callback devices were also installed to attract migrating birds to the area. These devices are set up on a timer to emit the calls of several bird species that will use this habitat type.

On June 9, 2022, the restoration team confirmed that no fewer than four male Kirtland's Warbler's were now using some areas of the restoration site at the Packard Tract.

8.2 Coughlin Stream Crossing and Rehabilitation

A project was initiated in 2021 and completed in 2022 to restore a more natural stream corridor within the Coughlin Tract. A crossing location was decommissioned in 2021, and another crossing was enhanced with a hard bottom. The main access road, which also serves as a designated ATV and snowmobile trail, was rerouted away from the stream. In spring of 2022, 790 tree seedlings were planted and native wildflower seed mix was broadcast on the former access road adjacent to the stream.

8.3 Wood Supply Forecast

Utilizing data and analysis from the 10-year management plan update, a project was completed in 2022 to forecast the long-term wood supply of the forest. As the high value

conifer plantations of the early to mid-1900's age and transition into naturally regenerated hardwood forests, there will be impacts to harvest volumes and revenues from the forest. There was some uncertainty of when timber volumes and values would start to decrease from this transition and what the longer-term impacts would be. Using past data and current trends, a forecast model was created to help project future harvest area, volume, and values on several timescales with projections completed for up to 50 years. Projections show that the area of red pine plantations within the county forest are decreasing. However, the timber remaining in these stands is of a high quality and high value and these stands have the potential of producing larger harvest volumes due to 'final overstory removals.' This helps mitigate the continued decrease in total red pine plantation area. Despite this continued decline in the overall area of red pine, volumes and revenues decrease at a slower rate, at least for the next 20 years or so. The model also illustrates that the continued growth and improvement of existing hardwood stands will offset some of the decreasing volume and values from the original red pine plantations.

9. Fire Protection

In 1996, the former agreement between the County and the Ministry of Natural Resources (MNR) to manage the Simcoe County Forest ended, as did provincial support for forest firefighting services in Southern Ontario. As a result, 'Wildland Firefighting Agreements' were formalized with local municipalities in 1999 and updated in 2019. Under this agreement, the County Forestry Dept. purchased five 'Wildland Equipment Caches' which are a collection of specialized firefighting equipment used to extinguish wildland fires. These caches have been stored and maintained at municipal fire departments with equipment replacement funded through the Forestry Dept.



Fire prevention measures were much more important and prevalent in the early years in the development of the SCF. The extensive young, primarily coniferous plantations originally established were highly susceptible to fire; as a result, the installation of fire breaks was standard, and maintenance occurred annually. As these plantations mature, however, the influx of primarily deciduous species means that over time, fire risk declines.

In 2022, several incidents required a response from local fire departments including medical, off-road vehicle injuries and reports of fire. One major fire occurred in the North Barr tract which is believed to have started from lightning. Approximately 12 ha burned on November 6th, with only leaf layer impacted and therefore no major damage. Springwater and Oro Medonte Fire attended to extinguish the blaze and follow up spot checks were conducted by forestry staff.

10. Partnerships / Extension Services

10.1 Planting Partnership

One of the objectives of the County Forest has always been to 'encourage private landowners in their reforestation efforts'. The Simcoe County Tree Planting Program was initiated in 2007, with funds provided annually through the Forestry Dept. budget to increase reforestation on private lands by offsetting the cost of tree seedlings and/or tree planting services. The 'Delivery Partners' include the Nottawasaga Valley and Lake Simcoe Region Conservation Authorities, Severn Sound Environmental Association, and the Dufferin South Simcoe Land Stewardship Network.

57,100 trees were planted or distributed resulting in thirty-one hectares reforested in 2022. Program funding provided since 2007 totals \$396,559 which has been leveraged with contributions from many other organizations and landowners resulting in a full project value of \$2,129,867. This has culminated in 910,157 trees planted on 561 hectares over the previous 16 years.



Private landowners will continue to contact the appropriate agency directly to determine eligibility. The subsidy level varies depending upon the type of planting and the environmental benefit provided as per the guidelines within the MOU.

10.2 Forestry Services Provided to Member Municipalities

Staff have traditionally provided woodlot management expertise and assistance to local municipalities upon request. This generally includes initial site assessments, detailed inventories and completion of silvicultural prescriptions, tree marking, tendering, and forest operations supervision. Initiated in 2021, the second of two timber sales were completed on behalf of Essa Township. Preliminary work was also completed on a municipal property at the request of Adjala Tosorontio.

10.3 Invasive Species Monitoring and Information Transfer

Forestry staff continue to update and manage a webpage and work with local municipal staff and other partners to share information on emerging invasive species issues. Collaboration with other partners including Conservation Authorities and Severn Sound Environmental Association ensures a consistent approach and reduces duplication. The website also provides an updated and consistent information source for residents.

10.4 Forestry Assistance Provided to Other County Departments

Forestry staff assist other County departments upon request within the limits of staffing resources. In addition to minor requests, assistance was provided to Solid Waste Management on the Bradford Landfill redevelopment project.

10.5 Extension Services

Staff respond to public enquiries on an ongoing basis pertaining to the Forest Conservation By-law, good forestry practices, and forest insect and disease issues. Information or advice is provided but no site visits are conducted.

The County continues to support the involvement of Forestry staff in extension and outreach in the community, resulting in productive working relationships with a wide range of organizations and an increased understanding of the many benefits realized through the sustainable management of our forests. Efforts also continue to work collaboratively with the full range of recreational interests utilizing the County Forest, and to improve the understanding and respect between groups.

Tours were conducted for the public in association with National Forestry Week. Two tours at each of the Hendrie, Packard, Sinclair, Sutherland, Slessor, and Martin's Valley Tracts were conducted in the evening and on weekends. Designed to be accessible to residents in various parts of the County and to highlight the various work and objectives of management activities, most were well attended, and positive feedback was received.

The following presentations were conducted by SCF staff

Organization	Subject
Forest History Society	A changing climate through 100 years
St. Peter's Catholic Secondary School	County Forest history and current objectives
County of Simcoe PFP Department	County Forest history and current objectives
Canadian Federation of University Women	SCF – A century of growth and commitment
Huronian Probus Club	SCF – A century of growth and commitment
Community Forest Managers	Preliminary Carbon Project Assessment
County Take Your Kids to Work Day	County Forest history and current objectives
Twin Lakes Secondary School	Tour of Slessor Tract
Huronian Woodland Owners	SCF – A century of growth and commitment

The following organizations were supported or sponsored

Organization	Purpose
Forests Ontario	Sponsorship of AGM and Conference

The following meetings were organized and hosted

Organization	Purpose
SCF Property Use Agreement Holders	Annual meeting of recreation representatives

Staff provided input and/or support

Organization	Purpose
Ontario Professional Foresters Assoc.	Awards Committee (G. Davis)
Tree Marking Certification Program	Steering Committee (B. Dixon)
Community Forest Managers group	Annual Meeting Steering Committee (B. Dixon)
Forests Ontario	Simcoe County District School Board Envirothon Forestry Section Expert (B. Dixon)

Appendix 1 – Timber Sales Summary

The following softwood contracts were tendered and awarded in 2022:

Contract	Tract	Municipality	Purchaser	Volume (m3)	Price
2022-03-001	Lawden	Clearview	Robert Ritchie Forest Products	962.8	\$32,601.51
2022-03-002	Orrock Creek S	Springwater	Penguin Poles	1,774.2	\$146,555.00
2022-03-003	Hendrie	Springwater	Robert Ritchie Forest Products	1,284.8	\$97,726.02
2022-03-004	Allen	Penetanguishene	No Bids	-	No Bids
2022-03-005	Drury	Oro-Medonte	Robert Ritchie Forest Products	4,454.0	\$345,271.59
2022-03-006	Drury	Oro-Medonte	Robert Ritchie Forest Products	831.7	\$54,096.26
2022-03-007	Drury	Oro-Medonte	Penguin Poles	1,005.3	\$73,555.00
2022-07-014	Foster	Essa	Moggie Valley Timber	2,046.4	\$63,000.00
2022-07-015	Baxter	Essa	Moggie Valley Timber	815.9	\$17,000.00
2022-07-016	Charlebois Allen	Tiny Penetanguishene	Moggie Valley Timber	786.0	\$17,000.00
2022-07-017	Hendrie	Springwater	Hayes Timber Inc.	551.2	\$16,079.00
2022-07-018	Orrock Creek S	Springwater	Robert Ritchie Forest Products	1,279.9	\$92,211.99
2022-07-019	Rathburn	Ramara	Robert Ritchie Forest Products	2,078.8	\$51,063.87
2022-07-020	Wright	Springwater	Robert Ritchie Forest Products	1,182.9	\$30,661.52
2022-07-021	Orrock Creek N	Springwater	Breen's Lumber Inc.	1,036.0	\$62,930.00
2022-10-022	Sandford	Oro-Medonte	Breen's Lumber Inc.	1,686.0	\$52,500.00
2022-11-023	Marrin	Oro-Medonte	Timber Talent Tree Harvesting	917.4	\$29,414.00
2022-11-024	DRI	Oro-Medonte	Robert Ritchie Forest Products	1,238.7	\$37,619.12
2022-11-025	Phelpston	Springwater	Breen's Lumber Inc.	1,255.0	\$102,500.00
2022-11-026	North Barr	Oro-Medonte	Breen's Lumber Inc.	1,941.0	\$135,504.00
2022-11-027	North Barr	Oro-Medonte	Breen's Lumber Inc.	1,628.9	\$116,788.00
2022-11-028	Brentwood	Clearview	Robert Ritchie Forest Products	871.1	\$43,482.51

2022-11-029	Gratrix	Tay	Shawn Kelly	663.0	\$3,013.36
2022-11-030	Orr Lake	Springwater	Penguin Poles	1,007.3	\$81,255.00
2022-11-031	Cummings	Springwater	Penguin Poles	607.4	\$46,755.00
2022-11-032	Marrin	Oro-Medonte	Breen's Lumber Inc.	1,126.7	\$80,754.00
2022-11-033	Orr Lake	Springwater	Timber Talent Tree Harvesting	304.0	\$16,200.00

The following hardwood contracts were tendered and awarded in 2022:

Contract	Tract	Municipality	Purchaser	Volume (m3)	Price
2022-06-008	Baxter	Essa	Bauman Sawmill	514.0	\$71,410.00
2022-06-009	North Barr	Oro-Medonte	Bauman Sawmill	1,171.0	\$132,315.00
2022-06-010	Strachan	Oro-Medonte	Bauman Sawmill	247.0	\$26,520.00
2022-06-011	Caston	Springwater	Bauman Sawmill	2,394.4	\$186,820.00
2022-06-012	Barton	Oro-Medonte	No Bids	-	No Bids

Appendix 2 – Timber Volume Summary

The following table shows 2022 total volume (m3) harvested by species:

Conifer		Hardwood	
Species	Volume (m3)	Species	Volume (m3)
Red Pine	25,787.70	Hard Maple	570.3
White Pine	4,812.00	Red Oak	18.7
Spruce	1,175.50	White Ash	782.8
Larch	680.30	Basswood	23.1
Jack Pine	92.40	Black Cherry	22.1
Scots Pine	2.90	Poplar	268.6
Balsam Fir	8.00	Soft Maple	47.8
White Cedar	7.00	Fuelwood	3,363.50
Total Conifer	32,565.80	Total Hardwood	5096.9

* Fuelwood includes volume from tops of sawlogs

** Total conifer and total hardwood volume are slightly different from the table in 2.1 due to the way sales are tendered. The total volume remains the same at 37,662.7 m3.

Appendix 3 – Tree Species Codes

Balsam Fir	Bf
Balsam Poplar	Pb
Basswood	Bd
American Beech	Be
Bitternut Hickory	Hb
Black Ash	Ab
Black Cherry	Cb
Black Spruce	Sb
Black Walnut	Wb
Bur Oak	Ob
Butternut	Bn
American Chestnut	Cd
Eastern Hemlock	He
Eastern Red Cedar	Cr
Eastern White Cedar	Cw
European Larch	Le
Green Ash	Ag
Ironwood	Id
Jack Pine	Pj
Largetooth Aspen	Al
Norway Spruce	Sn

Pine Cherry	Cp
Poplar	Po
Red Ash	Ar
Red Maple	Mr
Red Oak	Or
Red Pine	Pr
Red Spruce	Sr
Scots Pine	Ps
Shagbark Hickory	Hs
Silver Maple	Ms
Sugar Maple (Hard)	Mh
Tamarack	La
Trembling Aspen	At
White Ash	Aw
White Birch	Bw
White Elm	Ew
White Oak	Ow
White Pine	Pw
White Spruce	Sw
Willow	Wi
Yellow Birch	By