

REPORT TO COUNTY COUNCIL

2024 Managed Forest Plan Update

To: Warden and Members of County Council

From: Director of Public Works

RECOMMENDATION

1. That County Council receive Report PW 2025-11 entitled “Managed Forest Plan Update: 2024 Review and Operational Activity Forecast” for information.

REPORT HIGHLIGHTS

- This report provides an update on 2024 Managed Forest Plan undertakings, including, but not limited to:
 - Commercial timber harvesting generating close to \$7,000 in revenue, including harvests on 18.2 ha across the Hall and Lakeside Tracts in addition to 11.5 ha of non-commercial timber harvesting across the Drumbo Tract and Thornton Wellfield, Hodges Pond parcel ‘P’;
 - Afforestation plantings of 12,500 trees across 7.4 ha of fallow land;
 - Reforestation plantings of 830 trees across 2.2 ha of existing woodland/wetland; and
 - Invasive species management across 32.8 ha and competition management across 4 properties.
- Details of the proposed upcoming operational activity forecast associated with the active management of both the Agreement Forests and forested sections of other County-owned rural properties are also highlighted.

IMPLEMENTATION POINTS

Implementation of the recommended activities included within the 20 year Managed Forest Plan (MFP) began in 2018. County-managed forest properties consist of parcels of land acquired as Agreement Forests in accordance with the provisions of the *Forestry Act, 1990*, as well as parcels of land acquired for other purposes such as source water protection, wastewater lagoon operations and the monitoring of closed landfills.

In previous years, a primary focus of forest management has been the salvage/harvest of ash and beech trees on affected properties. Presently, the percentage and quality of ash trees is severely declining and subsequently so is the demand for logging this species.

In accordance with the MFP, secondary and tertiary thinning of conifer plantations in Agreement Forests, as well as tree planting, invasive species management and wetland rehabilitation initiatives are currently the driving forces behind active management. In future years, activities will be selected based on priorities listed within the Plan, new priorities based on the current state of County woodlands, funding availability, specialized contractor availability and workload.

Financial Impact

Revenue generated from the 2024 harvesting activities totalled approximately \$7,000 (2024 budgeted revenue = \$15,000) as follows:

- Hall Tract generated ~ \$3,700 from a final removal of declining red pine; and,
- Lakeside Tract generated ~ \$3,100 from a final removal of declining red pine.

The total revenue from commercial harvesting in 2024 fell short of the budget due to the contractor being assigned additional responsibilities. In addition to logging, the contractor was tasked with clearing and leveling the main access lane at the Lakeside Tract, which had become impassable due to overgrowth. The contractor also worked on creating natural barriers along the west boundary of the Lakeside Closed Landfill to help reduce illegal motorized vehicle access. The combined cost of these additional tasks amounted to approximately \$7,500, which was deducted from the harvesting revenue owed to the county.

The 2024 Woodlands Conservation total net operating expenses were \$227,459. 2024 operating expenses included the management of County owned forested properties and wetlands (\$143,921) and activities associated with landowner engagement, enforcement of the County's Woodlands Conservation and Weed Control By-laws (\$83,538).

Communications



The County's forest management work is outlined for the public in the [Managed Forest Plan](#) as posted on the County's website. The MFP is planned to be updated in 2027 and implemented in 2028. Closer to the 2027 update, Public Works will share the program's progress in the most recent 10-year period.

A copy of Report PW 2025-11 will be made available to the Ontario Woodlot Association, Woodland Owners Association, Ducks Unlimited, Upper Thames River Conservation Authority, Grand River Conservation Authority, Long Point Region Conservation Authority, Catfish Creek Conservation Authority and the Ministry of Natural Resources and Forestry. Highlights from the Managed Forest Plan Update will also be shared on social media.

2023-2026 STRATEGIC PLAN

Oxford County Council approved the [2023-2026 Strategic Plan](#) on September 13, 2023. The Plan outlines 39 goals across three strategic pillars that advance Council's vision of "Working together for a healthy, vibrant, and sustainable future." These pillars are: (1) *Promoting community vitality*, (2) *Enhancing environmental sustainability*, and (3) *Fostering progressive government*.

The recommendation in this report supports the following Strategic Plan Pillars and Goals:

PILLAR 1	PILLAR 2	PILLAR 3
		
Promoting community vitality	Enhancing environmental sustainability	Fostering progressive government
	<p>Goal 2.1 – Climate change mitigation and adaptation</p> <p>Goal 2.2 – Preserve and enhance our natural environment</p>	

See: [Oxford County 2023-2026 Strategic Plan](#)

DISCUSSION

Background

In August 2017, County Council adopted Report [CAO 2017-11](#), "County Managed Forest Properties Review." The Report recommended the continued public ownership and active management of the forest tracts owned by the County, in accordance with good forestry practices and for staff to consider partnership opportunities to advance the forest properties' natural environment and public value.

As per Report [PW 2019-26](#), staff retained a forestry consulting services to develop a 20-year Managed Forest Plan (MFP). The MFP covers the period from 2018 to 2037 and concentrates resources on commercial harvesting, tree planting and invasive species management. The MFP included a detailed 10-year Operational Work Schedule for the first ten-year period (2018 to 2027) in which 14 parcels were identified as a priority for commercial harvest.

While the MFP identifies 14 parcels for management, it should be noted that harvesting activities are not strictly limited to these parcels. Several other parcels from both Agreement Forests and Source Water Protection forests are assessed for harvesting on a yearly basis based on ideal tree stocking, weather conditions and contractor availability.

Tree planting and invasive species management, while included in the MFP, were not associated with any specific timeline. The MFP recognized that a tree planting and invasive species management program would be established gradually and increased year-over-year. Only a general framework and parcel management recommendations were given. Review and evaluation of the work related to these tasks in the first ten-year period will be used to inform the work schedule for the second ten-year period (2028 to 2037).

Comments

Summary of 2024 Managed Forest Plan Undertakings

Several projects and/or programs were undertaken in 2024 in support of the active management of the County's forested properties. These activities are detailed below.

i) Tree Harvesting

Four parcels not initially included in the 2024 MFP commercial harvest schedule (Hall Tract, Lakeside Tract, Drumbo Tract and Thornton Wellfield, Hodges Pond parcel 'P') were added to the 2024 undertakings. The Tillsonburg Closed Landfill was scheduled for 2024 in the MFP; however, commercial harvesting in that parcel was put off for the foreseeable future as the steep ravines along Big Otter Creek present highly challenging topography for heavy equipment to access. The parcel is also home to several documented species at risk (SAR) as well as a handful of Natural Heritage Information Centre (NHIC) "rare species", so the parcel is managed passively to minimize disturbance in such an ecologically sensitive habitat.

The Hall Tract harvest was not originally planned in the MFP, as the red pine plantation had been in noticeable decline since the plan's inception. The final removal of the red pine was intended to occur once natural regeneration reached an adequate stem density. However, due to challenges in regeneration under the rapidly deteriorating canopy, the decision was made to proceed with the final removal. Plans were then set in place to gradually reforest areas lacking natural regeneration through the planting of seedlings.

Similar to the Hall Tract, the red pine plantation at the Lakeside Tract was also showing signs of significant decline. However, in this instance, natural regeneration was thriving, with a healthy and well-stocked understory. The regeneration was so robust that the remaining red pine canopy needed to be selectively removed in order to sustain the growth of the black cherry and sugar maple that were present throughout the area.

The hybrid poplar stand at the Drumbo Tract was not initially identified or included in the Management Forest Plan (MFP), as this species generally holds limited commercial value. In December 2023, a partial harvest was conducted on 2 of the 6 hectares of the plantation, but the operation was temporarily halted due to deteriorating ground conditions. Harvesting resumed in January 2024, and the remaining trees were selectively thinned. Healthy specimens were retained to continue growing and maintaining the canopy height. Established in the 1970s by the Ministry of Natural Resources (MNR), this section was one of several trial plantations for hybrid poplar and stood out as the best example of growth rate and biomass production for this

varietal. While hybrid poplar is not typically considered commercially valuable, in this instance the trees were sold at a break-even price and processed into lightweight pallet material.

Considered more like site preparation than a commercial harvest, a 5.5 ha parcel of 25 year-old white spruce and white pine in the northern section of Thornton Wellfield, Hodges Pond parcel 'P' was thinned as part of an oak savannah restoration project. Between 30% and 50% of the canopy was removed with the intention of replanting the openings with a variety of oak, hickory and unique Carolinian tree and shrub species.

In accordance with the MFP, the 2024 harvesting activities were focused primarily on conifer plantation thinning as well as stand improvement harvesting in hardwood parcels. Hardwood forests require stand improvement to remove trees with major defects, undesirable species and unacceptable growing stock in order to improve the overall quality of the stand.

Conifer plantations, while primarily intended as a nurse crop for shade tolerant deciduous hardwoods, function as a valuable habitat type and source of quality timber. Periodic thinning is required to allow the diameter and timber quality of the conifers to increase as well as increase the amount of natural regeneration and the number of trees in the future forest. Trails and access points used by logging equipment in turn allow for greater access for the public to enjoy hiking and hunting. Wildlife habitat quality increases dramatically in the years following a timber harvest as new growth establishes.

A summary of 2024 tree harvesting activities by property is shown below in Table 1.

Table 1: Tree Harvesting Projects/Programs Undertaken in 2024

Operation	Objective	Hectares	MFP Timeframe	Actual Timeframe Completed
Hall Tract (agreement forest)	Final removal of failed red pine plantation	10.1 ha	No given timeframe	May 2024
Lakeside Tract (agreement forest)	Final removal of red pine in mixed wood stand	8.1 ha	No given timeframe	July 2024
Drumbo Tract (agreement forest)	First (and final) thinning of white pine; and, first (and final) thinning of hybrid poplar	6.0 ha	No given timeframe	Poplar harvest completed February 2024; white pine harvest delayed to 2025
Thornton Wellfield, Hodges Pond parcel 'P'	Non-commercial thinning of pine and spruce parcels	5.5 ha	No given timeframe	January 2024

ii) **Tree Reforestation and Afforestation**

Afforestation is the planting of trees in an area not previously forested. Afforestation projects in 2024 included 12,500 trees across 7.4 ha of fallow land. Reforestation plantings of 830 trees occurred across 2.2 ha of previously harvested woodland and immature conifer plantations. Overall, a total of 13,200 seedlings were planted. The 2024 afforestation effort focused on several smaller parcels located across the County as shown in Table 2.

The first phase of reforestation was undertaken at the Drumbo tract where dead-standing pine and spruce was cut down and piled with a large shear mounted to an excavator. Reforestation efforts are set to continue through 2025 and 2026.

A summary of tree planting activities by property is shown below in Table 2.

Table 2: Tree Afforestation and Reforestation Undertaken in 2024

Operation	Objective	Hectares	MFP Timeframe	Actual Timeframe Completed
Drumbo Tract: Rehabilitation project	Hand plant and install tube shelters: bur oak and red oak seedlings within dead-pine clear cuts (830 seedlings with tall grass prairie seed)	2.2 ha	No given timeframe	May 2024
Thames River Wetlands Parcel 'D': afforestation (seedlings)	Hand plant coniferous seedlings and deciduous seedlings with stakes and shelters: standard density (3,000 seedlings)	1.6 ha	No given timeframe	May 2024
Thornton Wellfield, Hodges Pond parcel 'L' (seedlings)	Hand plant coniferous seedlings: low density (2,150 seedlings)	1.3 ha	No given timeframe	May 2024
Drumbo Tract: road allowance (seedlings)	Hand plant coniferous and deciduous seedlings: standard density (1,200 seedlings with tall grass prairie)	0.8 ha	No given timeframe	May 2024

Table 2: Tree Afforestation and Reforestation Undertaken in 2024 (Continued)

Operation	Objective	Hectares	MFP Timeframe	Actual Timeframe Completed
Thornton Wellfield, Hodges Pond parcel 'G' (seedlings and potted stock)	Hand plant deciduous seedlings with stakes and shelters: standard density (1,400 seedlings)	0.8 ha	No given timeframe	May 2024
Tavistock Lagoons: woodland edge	Hand plant coniferous and deciduous seedlings: low density (500 seedlings, oaks installed with tree shelters)	0.2 ha	No given timeframe	May 2024
Thornton Wellfield, Hodges Pond parcel 'C' (seedlings)	Hand plant coniferous seedlings: standard density (1,800 seedlings)	1.2 ha	No given timeframe	May 2024
Thornton Wellfield, Hodges Pond parcel 'B' (seedlings)	Hand plant coniferous seedlings: standard density (1,200 seedlings)	0.7 ha	No given timeframe	May 2024
Thornton Wellfield, Hodges Pond parcel 'P' (seedlings)	Hand plant coniferous seedlings: standard density (1,250 seedlings)	0.8 ha	No given timeframe	May 2024

iii) Invasive Species Management

Management of invasive species in County woodlands is often guided by commercial logging activity. The rationale being that heavy equipment activity and the change of canopy density have the greatest influence on the spread of seed and the growth rate of established plants. Invasive species management is not strictly limited to non-native plants. Within woodlands, European buckthorn (invasive shrub) and American beech root clones (native plant displaying qualities of an invasive species) are of greatest concern. In woodland edges and open ground, Japanese knotweed and *Phragmites Australis* (phragmites) are of greatest concern. In a planting site, reed canary and other grass species pose the greatest concern.

Much of the phragmites present on rural County properties has been, or is in the process of being, eradicated. Therefore, the focus has started to move toward other non-native grasses that form monocultures. Reed canary grass presents many of the same concerns as phragmites as they both form dense monocultures that prevent the establishment of native species. Reed

canary grass is often eradicated in anticipation of tree planting or seeding of native wildflowers and prairie grasses the following year.

The only foliar herbicide application for 2024 was an overspray of the planting compartment at the Thames River Wetlands Parcel 'D', to reduce grass competition with the recently planted tree seedlings in addition to an overspray in Parcel 'C', in anticipation of planting in spring 2025. The herbicide application covered approximately 14.6 ha.

In County-managed woodlands, efforts are underway to eradicate invasive species such as European buckthorn, Tatarian honeysuckle, beech root clones, and other less desirable understory plants. Heavy equipment, often a key vector for spreading invasive species, is being carefully managed in these areas. Approximately 18.2 hectares across two properties were treated using brush saws to control competition from undesirable tree and shrub species, helping to reduce their impact on newly planted seedlings. This management approach will facilitate the establishment of native hardwoods and herbaceous species in the understory, with the potential for a commercial harvest in the future.

A summary of invasive species management activities by property is shown below in Table 3.

Table 3: Invasive Species Management Activities Undertaken in 2024

Operation	Objective	Hectares	MFP Timeframe	Actual Timeframe Completed
Thames River Wetlands Parcel 'C'	Glyphosate application on cool-season grasses competing with new seedling trees	5.6 ha	No given timeframe	April 2024
Thames River Wetlands Parcel 'D'	Glyphosate application on cool-season grasses competing with new seedling trees	9.0 ha	No given timeframe	April 2024
Drumbo Tract	Brushsaw dogwood shrubs, ash saplings growing immediately adjacent to planted seedlings	8.1 ha	No given timeframe	August 2024
Hall Tract	Brushsaw beech root suckers, ash saplings where quality bur oak regeneration is present	10.1 ha	No given timeframe	August 2024

iv) **Planned 2025 Managed Forest Plan Undertakings**

Overall, as per the 2025 budget, 13.6 ha of woodland are planned for non-commercial thinning. Tree seedlings will be planted across 3 compartments totalling 10.3 ha, as well as approximately 22 ha of prairie grass will be planted as part of the Thornton Naturalization project. Invasive species management will be carried out on three properties totalling 15.5 ha. The projects and/or programs planned to be initiated in 2025 are detailed below in Table 4.

Table 4: Planned 2025 Undertakings

Operation	Objective	Hectares	MFP Timeframe	Anticipated Timeframe
Tree Harvesting				
Hall Tract (agreement forest)	First thinning of mixed pine plantation (if access route is dry enough)	1.0 ha	No given timeframe	March 2025
Lakeside Tract (agreement forest)	First thinning of black walnut plantation	3.4 ha	No given timeframe	January 2025
Creditville Tract (agreement forest)	Second thinning of mixed pine plantation	5.1 ha	No given timeframe	March 2025
Vance Tract (agreement forest)	First thinning of scattered pine plantations	4.1 ha	No given timeframe	April 2025
Invasive Species Management				
Thames River Wetlands parcel 'D'	Garlon RTU application on European buckthorn	6.4 ha	No given timeframe	Summer 2025
Thames River Wetlands Parcel 'D'	Glyphosate application on cool-season grasses competing with new seedling trees	4.7 ha	No given timeframe	2-3 applications throughout 2025
Drumbo Tract (agreement forest): competition management	Brushsaw trees and shrubs competing with planted seedlings	4.4 ha	No given timeframe	August 2025

Table 4: Planned 2025 Undertakings (Continued)

Tree Reforestation and Afforestation				
Drumbo Tract: Rehabilitation project	Hand plant and install tube shelters: bur oak seedlings within patch clear cuts (1,000 seedlings)	2.2 ha	No given timeframe	May 2025
Thames River Wetlands Parcel 'D'	Machine plant coniferous and deciduous seedlings: standard density (10,000 seedlings)	4.7 ha	No given timeframe	May 2025
Lakeside Tract (agreement forest)	Hand plant deciduous trees (with stakes and tube shelters) and shrubs in black walnut harvest block (300 potted stock and 1000 seedlings)	3.4 ha	No given timeframe	May 2025
Thornton Wellfield Parcel 'B' and 'C': Naturalization Project	Establish prairie grasses and forbs in initial phase of the project (direct seeding in field)	22 ha	No given timeframe	October 2025

The Hall, Lakeside, Creditville, and Vance Tracts were not included in the MFP's harvest schedule due to challenges in accurately predicting when these sites would be ready for commercial harvesting. The red pine stand at the Hall Tract is primarily landlocked by a wetland to the north and east. Although it is a small compartment, the red pine has matured and is suitable for harvest, provided access from the road allowance to the south remains dry during late winter. Reforestation efforts for the Hall Tract are planned for 2026 and 2027.

At the Lakeside Tract, a black walnut plantation sustained damage from a windstorm in late summer 2024. Given the high value of black walnut timber, a salvage operation will be conducted while the ground is frozen in January 2025, minimizing the loss of this quality resource. Although the salvage area is relatively small compared to typical pine plantation management, the value of the 39 black walnut trees marked for removal significantly exceeds that of most other tree species. Reforestation of this compartment is scheduled for spring 2025.

The Creditville Tract was also excluded from the MFP's harvest schedule. The pine plantation in the southern portion of the property was thinned in 2020, while thinning in the northern half was delayed until the pine stand at the Vance Tract became suitable for harvest. Neither compartment alone had enough volume to justify a commercial harvest; however, because the

Vance Tract is located nearby, both areas will be thinned concurrently to optimize harvest efficiency.

v) Challenges

As no detailed inventory of County-owned forest tracts has been completed and historical management data is limited, many smaller-scale timber harvesting activities have not been given a specific timeframe for completion. Many woodland tracts are seasonally flooded restricting the window for harvest opportunity to persistent sub-zero winter temperatures or dry summer weather. Ideal winter conditions are becoming less common with the change in climate, adding additional challenges to harvesting on schedule. The window for offsetting the impacts of Emerald Ash Borer and Beech Scale through commercial harvesting is narrowing as a result of timber quality decline.

By breaking down large tracts into smaller parcels, actively monitoring each property and maintaining high level communication with logging contractors, mills and local forestry professionals, staff are able to operate under shorter timeframes. This allows for a larger percentage of forest stands to be actively managed under ideal conditions and presents the opportunity to eradicate invasive species and reforest cut-over areas with greater efficacy.

CONCLUSIONS

The Managed Forest Plan serves as a framework to guide the activities associated with active management of County owned forested lands. The ultimate goal is not restricted to maximizing the revenue generated over the short term, but rather the long-term sustainable supply of forestry products.

The operational activities identified will improve the overall health of the forest lands and has the potential to serve as a role model for sustainable environmental management practices through habitat enhancement and good forestry practices.

SIGNATURES

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