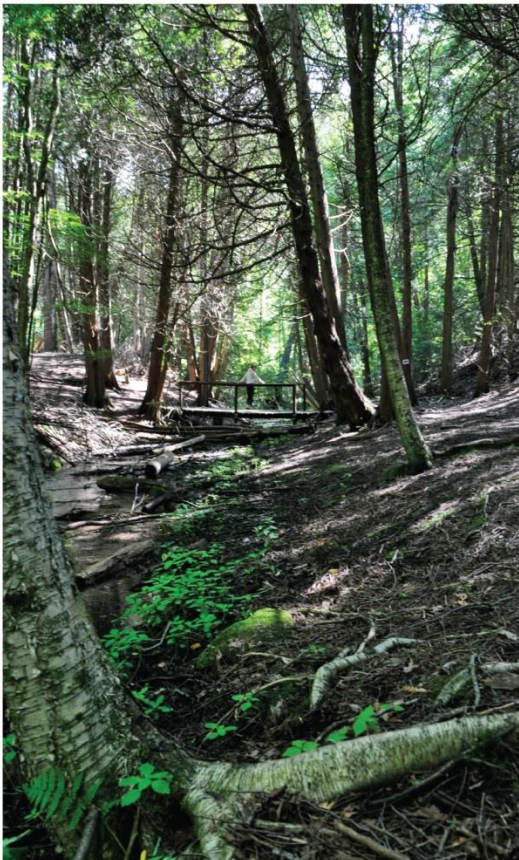




Ganaraska Forest Management Plan

2018 - 2038





The Ganaraska Forest Management Plan 2018-2038 was written to provide guidance and recommendations for the sustainable use and conservation of the Ganaraska Forest. Recommended management actions are based on scientific data collected as part of a forest inventory, as well as municipal, stakeholder and public input. Further, this Plan satisfies requirements of the Managed Forest Tax Incentive Program (MFTIP) and forms the bases for Forest Stewardship Council (FSC) Certification.

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The Ganaraska Forest Management Plan 2018-2038 is dedicated to Bob Penwell, RPF who devotedly managed the Ganaraska Forest for over 35 years.

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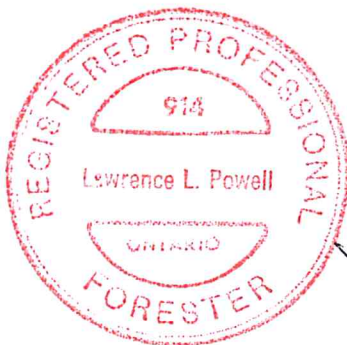
Forest Management Plan

For

The Ganaraska Forest

For the period

August 1 2018 until July 31 2038




Lawrence Powell


Date

Registered Professional Forester

Approved by the Ganaraska Region Conservation Authority Board
Resolution Number FA 31/17
September 21, 2017

EXECUTIVE SUMMARY

The Ganaraska Forest is a wonderful forest. It provides a wide range of benefits to many sectors of society and will continue to do so for many years to come. In the winter of 2017, a new forest inventory was completed and this permitted the writing of an updated Forest Management Plan for the Ganaraska Forest. The inventory determined that there were over 2,500 hectares (ha) of conifer forest units and over 1,400 ha of hardwood forest units within the Ganaraska Forest.

The Ganaraska Forest, at 4,443 ha, is one of the largest contiguous forests in southern Ontario. In a landscape where much of the original forest cover has been lost or fragmented, large woodlands are particularly valuable for conserving biodiversity. The Ganaraska Forest provides protection for plants and wildlife in addition to the protection of the headwater recharge areas of the Ganaraska River watershed.

At the same time, the Ganaraska Forest is a multi-use forest where forestry is only one part of the many benefits. Outdoor education programming offered by the Ganaraska Region Conservation Authority sees over 9,000 school children visiting the Ganaraska Forest Centre each year. The Ganaraska Forest is an integral component of the education program, offering a superb and unique outdoor classroom for programs such as orienteering, pond and stream studies, outdoor survival skills, habitat and animal adaptations, entomology, biodiversity, and Oak Ridges Moraine study, as well as physical activities such as snowshoeing and cross-country skiing on the groomed and track-set trails.

An important aspect of the Ganaraska Forest is recreation. Many of the recommendations provided through the extensive consultation on the Forest Management Plan that was undertaken in 2016-17, were in regards to recreational use. Public meetings were held with all stakeholders and in March of 2017 a Synopsis Report was delivered. The Synopsis Report provides excellent input on the multi-use nature and value of the Ganaraska Forest. It also provided suggestions on how the protection of forest ecology should be one of the Forest Management Plan's most important strategies for the future. Although the Ganaraska Forest Management Plan is not able to fully address all recreational use opportunities and concerns, it is recommended that GRCA staff continue to work towards a resolution of matters brought forward during public consultation.

The Forest Management Plan is to provide a direction for the future. The Plan was written to provide guidance and recommendations for the sustainable use and conservation of the Ganaraska Forest. Based on this guidance, the Plan establishes forestry principles to follow which are directed by the Ganaraska Region Conservation

Authority Strategic Plan 2015-2020. The Ganaraska Forest Management Plan meets this direction laid out in the Strategic Plan by:

Employing an “ecology first approach”, thereby ensuring that all values are protected during harvesting and that the diversity of plants and animals are maintained and increased. The natural values of the Ganaraska Forest are identified and measures to protect them are provided.

The Ganaraska Forest Management Plan provides an estimate of the annual growth of the Ganaraska Forest for each forest unit and then recommends an available annual harvest level. These calculations help to ensure that the Ganaraska Region Conservation Authority is not over harvesting while providing guidelines for the level of harvest the Ganaraska Forest could sustain. These guidelines include:

- Forest management guidelines including plantation management. These guidelines provide detail direction on short and long term management for each of the forest units.
- Recommended harvesting systems that are to be used to harvest each forest unit. The Plan outlines the selection and shelterwood management systems that are the systems of choice for the Ganaraska Forest. Clear cutting is an option that would only be used under very special circumstances such as clearing on an area for a tallgrass prairie restoration.
- Technically sound forest management practices. Under both selection and shelterwood harvesting systems, tree marking by trained staff is an essential component of good management. Tree markers follow a detailed prescription and are trained to adjust to conditions on the ground, to ensure that all values within the Ganaraska Forest are protected as they are encountered.
- Specific descriptions contained in the operating work plan for the first 10 years of the management period to ensure the work of managing the forest continues based on the principles of the Plan.
- Providing directions to ensure communication with the general public, so that the community is engaged in the sustainable management of the Ganaraska Forest.

The 2017 update of the Ganaraska Forest Management Plan uses best science to provide recommendations that are sustainable and beneficial to the Ganaraska River watershed. It is through sound environmental management that the Ganaraska Forest can continue to be a treasure that the community cares for and uses.

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1.0 INTRODUCTION

1.1 Ganaraska Region Conservation Authority

The Ganaraska River Watershed survey and the subsequent report entitled *Ganaraska Watershed: A study in land use with recommendations for the rehabilitation of the area in the post-war period* by A.H. Richardson (1944) provided the necessary first step for managing the Ganaraska River watershed. With the enlarging of the Ganaraska River Conservation Authority, which was formed in 1946, in the 1960s and 1970s to 935 km² the Authority was renamed the Ganaraska Region Conservation Authority (GRCA).



A. H. Richardson

Today, the GRCA is overseen by a Board of Directors made up of elected municipal officials. The GRCA's overall goal is the conservation, restoration, development and management of the natural resources on a watershed basis while providing for the public enjoyment of the lands it oversees. This area includes seven municipalities in whole or in part: Township of Cavan-Monaghan, Town of Cobourg, Township of Alnwick/Haldimand, Township of Hamilton, Municipality of Port Hope, City of Kawartha Lakes, and Municipality of Clarington.

1.2 Ganaraska Region Conservation Authority Strategic Plan

The Ganaraska Region Conservation Authority's Strategic Plan: 2015-2020 *A Roadmap for the Future* (GRCA 2015) defines the following strategic actions that specifically relate to management of the Ganaraska Forest.

- Strengthen science, knowledge and decision making
- Value the watershed through protection and restoration
- Strengthen existing partnerships
- Build new partner opportunities
- Create connections
- [Be] responsible watershed-based advocates
- Foster support and improved understanding

1.3 Ganaraska River Watershed Plan

The Ganaraska River watershed is recognized for its fisheries, aquatic habitat, terrestrial natural heritage and recreational opportunities. The Ganaraska River Watershed Plan was developed in 2010 to conserve, enhance and manage the watershed and its resources for current and future generations (GRCA 2010); and is founded on science and community input (GRCA 2009). The purpose of the Ganaraska River Watershed Plan includes the following:

- Fulfill the watershed planning requirements of the Oak Ridges Moraine Conservation Plan.
- Create community awareness and ownership of the Ganaraska River watershed and its plan.
- Encourage land and resource uses that maintain, improve or restore the ecological and hydrological functions of the watershed.
- Provide recommendations that maintain or improve the elements that contribute to the ecological and hydrological functions of the watershed, including the quality and quantity of water and aquatic and terrestrial resources.

1.4 Legislation

Forest operations and the development of the Ganaraska Forest Management Plan have considered many government acts, regulations and policies. A summary of these instruments can be found in Appendix 1.

1.5 Planning Process

The forest management planning process is one step in the ongoing responsible management of the Ganaraska Forest and the Ganaraska River watershed. Publically owned forests within southern Ontario are facing increasing pressures, ranging from invasive species, increased use, and climate change. As a result there is an ever increasing need to actively manage forests in a sustainable manner to ensure ongoing benefits for the environment and human health and wellbeing.

In order to address growing pressures on forest resources, the Ganaraska Forest management planning process needs to be adaptive and locally relevant. Generally environmental management planning follows an adaptive and cyclical approach that is comprised of four steps (Figure 1).

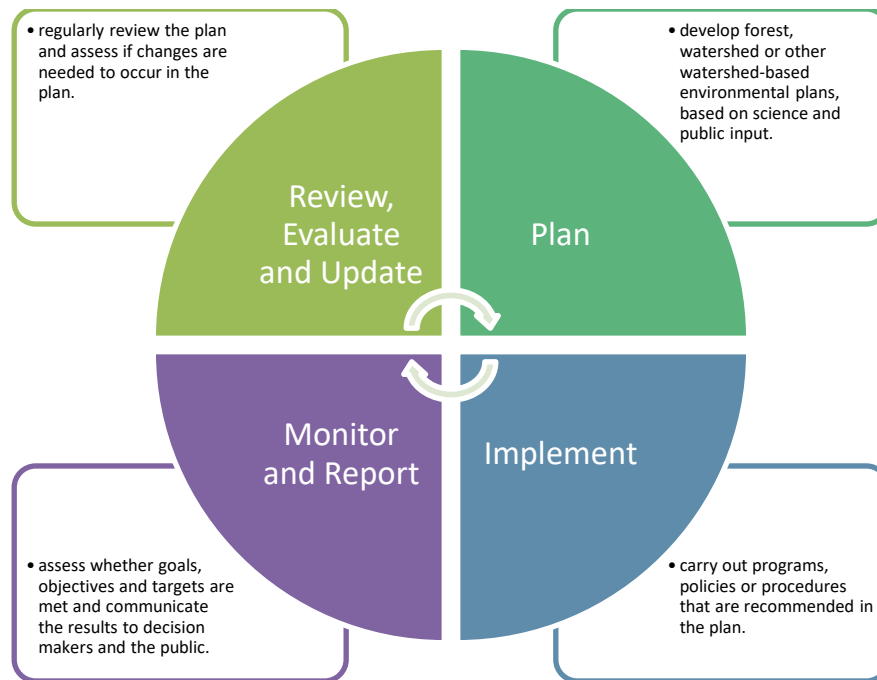


Figure 1: Adaptive management process

The Ganaraska Forest Management Plan 2018-2038 was written to provide guidance and recommendations for the sustainable use and conservation of the Ganaraska Forest. Further, this Plan satisfies requirements of the Managed Forest Tax Incentive Program (MFTIP) and forms the bases for Forest Stewardship Council (FSC) Certification. Specific MFTIP requirements are found in Appendix 2.

A public consultation process around the development of the Ganaraska Forest Management Plan was commissioned in 2016-2017. This process was intended to solicit input and discussion from forest stakeholders on all elements of the management of the Ganaraska Forest. It must be noted that many of the comments provided through the consultation were regarding recreational uses. Public meetings were held with all stakeholders and in March of 2017 the “Toward an Updated Ganaraska Forest Management Plan: stakeholder and public engagement – synopsis report” (Wianecki 2017) was delivered (Appendix 5). One of the recommendations made within the synopsis report was:

“The new FMP for the Ganaraska Forest will be developed by relying in part on the advice and guidance contained in this Synopsis Report. This Report will be used to provide GRCA staff who are responsible for writing the Ganaraska Forest Management Plan with important community and stakeholder insight about the issues, challenges and opportunities facing the Ganaraska Forest. This Report will also provide important direction for the plan author(s) concerning the inclusion of forest management

practices that promote the safe and sustainable enjoyment of the Ganaraska Forest for generations to come.”

And one of the general conclusions of the synopsis report was:

“The Ganaraska Forest is not your ordinary forest. It is, as many have stated, a gem – a jewel in southern Ontario. It is a unique and special place that is enjoyed by hikers and mountain bikers, dirt bikers, cross-country skiing and snowshoe enthusiasts, photographers and those who appreciate and enjoy nature as well as horseback riders, members of the ATV community, adjacent neighbours and visitors from away.”

The synopsis report provides excellent input on the multiple-use nature and value of the Ganaraska Forest. It also provided suggestions on how the protection of the ecology of the Ganaraska Forest should be one of the Ganaraska Forest Management Plan’s most important strategies to provide for the future.

While a number of the other recommendations and concerns expressed within the synopsis report could be dealt with in a Recreation Plan for the Ganaraska Forest, a number of the concerns directly relate to the Ganaraska Forest Management Plan. These recommendations are:

- *The Ganaraska Forest must remain as a sustainable, multi-purpose and multi-use forest. It is a stabilizing influence on the land.*
- *Promote responsible resource use and conservation.*
- *GRCA needs to encourage sustainable forest management and the new FMP needs to integrate timber production with the environmental, socio-cultural, spiritual and recreational benefits sought by society as a whole.*
- *The Forest Management Plan needs to address existing but also emerging issues.*
- *The key to preserving the forest and managing the forest sustainably is to create a personal connection to the forest so that it becomes ‘part of who we all are.’*
- *The objective of the Forest Management Plan should be to maintain the forest as a sound ecosystem.*
- *Developing the Plan is important but implementing the Plan is critical. A resourcing commitment (funding and staffing) is needed.*
- *There are different demands placed on the forest. Education and engagement is critical from the perspective of plan development but also forest management and use.*
- *Focus first and foremost on the viability and sustainability of the forest.*

- *Make recreational use a priority and establish a communication and collaboration process that supports protection and enjoyment of the forest.*
- *Maintain/improve the ecology of the forest while allowing recreational use.*
- *Invasive's in general and dog-strangling vine in particular, are issues that needs to be addressed.*
- *Logging in the forest and the need to better communicate silviculture practices and protocols.*
- *There are a number of environmental issues that require attention including the management of invasive species and addressing erosion.*

The synopsis report suggested a set of Management Objectives:

Ecological Objectives:

- *To maintain and enhance a healthy, sustainable forest ecosystem*
- *To conserve native species and habitats*
- *To restore plantations with low ecological function to healthy woodlands consisting of representative native species*
- *To carry out active management activities including ecological restoration and where feasible implement measures to control or eradicate introduced species that threaten the health and integrity of the Ganaraska Forest.*

The synopsis report suggested a set of Guiding Principles:

- *The forest is a shared resource.*
- *Focus on forest sustainability. The forest must be maintained in a healthy and safe condition through ongoing risk management and in keeping with sustainable forest practices.*
- *This Plan needs to be based on an adaptive management approach that allows for changes in response to new information and/or new circumstances.*

2.0 HISTORY OF THE FOREST

2.1 First Nations

Prior to European settlement numerous aboriginal groups inhabited the region in and around the Ganaraska River watershed. During this time, the Ganaraska River watershed was a densely wooded area with massive stands of oak and pine trees. The Hurons resided in the region from Lake Ontario to Georgian Bay until the late 1600s, when the Iroquois forced the Hurons to move as far north as Lake Superior (Martin et al. 1986). After 1660, the Cayuga tribe of the Iroquois established outposts in the Rice

Lake area and at Ganaraske (Port Hope), thus controlling the fur trade in the area. The Iroquois named the river Ganaraske, meaning the “spawning place” referring to the historical abundance of Atlantic salmon (*Salmo salar*). In the early 1700s, the Iroquois were forced out of the surrounding area by the Mississaugas, a stem of the Ojibwa-Algonkins from the Lake Superior region (Martin et al. 1986). The Mississaugas did not settle in any one place, and were nomadic in the area (Schmid and Rutherford 1975).

The Ganaraska River was a major trade route and had several small encampments along the river. In the watershed, there were three main walking paths that were similar to the present Walton Street in downtown Port Hope, County Road 2, and County Road 28 (Richardson 1944). The Ganaraska River watershed contained many beaver swamps, allowing First Nations Peoples to trade furs at the mouth of the river, one of four villages on the north shore of Lake Ontario (Calverley 1971). The watershed was completely forested except for tallgrass prairie in the headwaters. The mouth of the river was a large coastal wetland that supported a variety of Lake Ontario fishes such as Atlantic salmon and lake sturgeon (*Acipenser fulvescens*) that entered the river to spawn (Richardson 1944).

2.2 European Settlement

The French entered the area soon after “New France” became a Royal Province of France in 1663 (GRCA 1981). The French harvested oak and pine timber for building Royal Navy vessels. Interest in the white pine (*Pinus strobus*) resource grew after Lower Canada became a British Colony in 1763 after the signing of the Treaty of Paris. Permanent settlement in the Ganaraska River watershed did not occur until 1793 near the mouth of the river (Richardson 1944). Settlement increased rapidly after the founding of Port Hope in 1798. By the 1840s, communities were created all the way north to the present 8th Concession. Between 1860 and 1880, many of the communities in the watershed doubled in population (Richardson 1944). Communities that had settled along all the tributaries of the Ganaraska River were centred on waterpower structures such as grist mills, saw mills, and woollen mills.

2.3 Ganaraska River Watershed and Mills

Dams and waterpower structures were constructed as saw mills, grist mills and woollen mills. The first waterpower dam was built in 1795 near the present Mill Street on the east side of the river. The number of dams built on the river continued to increase and peak in the 1860s with 37 active waterpower structures operating (Figure 2; Richardson 1944). During this period, saw mills were the most common waterpower industries.

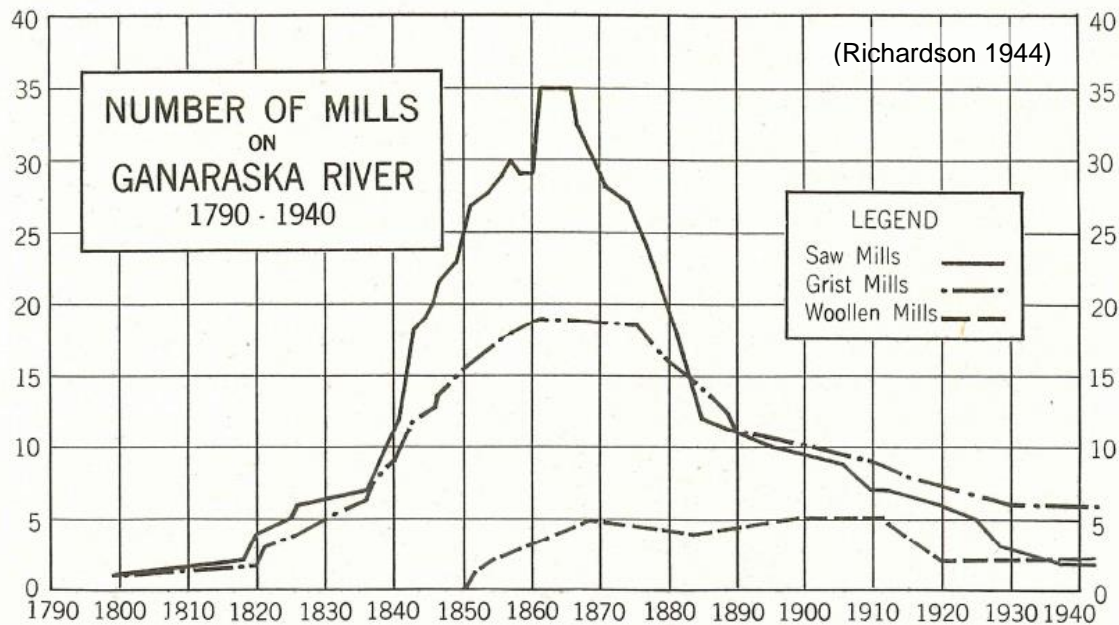


Figure 2: Mills on the Ganaraska River, 1790 to 1940

At this time, much of the old growth forests were actively being harvested. As the settlement moved northward, the watershed was clearcut and converted to agricultural use. It was reported that by the 1860s, the lower reaches of the watershed were completely cleared and by the 1890s, the entire watershed was completely deforested (Richardson 1944). The fertile soils in the headwater quickly deteriorated into large areas of barren sandy soils. The watershed experienced increased periods of drought and frequent flooding events.



The aquatic ecosystem shifted during this period of severe degradation of the landscape and a high presence of barriers on the river. The drastic changes to the landscape and watercourse negatively affected the Atlantic salmon and brook trout (*Salvelinus fontinalis*) populations. Atlantic salmon populations in the early 1800s and prior to watershed degradation were reported to be so abundant that in 1807, James Sculthorpe and his uncle J.D. Smith caught 300 salmon in one evening (Reeve 1967). Along with salmon and trout, sturgeon (Richardson 1944), suckers (*Catostomus* sp.), mullet (*Mugilidae*, family) and smelt (*Osmeridae*, family) were also frequently caught in the river and the river mouth (Reeve 1967).

Shortly after the first dam was built, residents began noticing a decline in Atlantic salmon populations. By the early 1860s, the decline was so evident that Samuel Wilmot, a resident of Wilmot Creek, started operating a hatchery to rear young Atlantic salmon. Samuel Wilmot obtained some adult fish from the Ganaraska River for the hatchery stock and later tried stocking the river with the offspring. However, despite the efforts to sustain the dwindling Atlantic salmon population, they had completely disappeared from the Lake Ontario basin by 1895 (Department of Energy and Resources Management 1966). Currently, a large provincial initiative is occurring to restore the native Atlantic salmon to Lake Ontario by stocking Lake Ontario tributaries. Stocking is occurring in the Ganaraska River, Cobourg Creek, Duffins Creek and the Credit River.

Brook trout populations were also declining in considerable numbers during this period. The range of brook trout was originally reported throughout the river. The Richardson Report (1944) documented that “...residents of the district [stated] that native trout were, by 1880, gone from the southern waters of the rivers and were, by 1890, very scarce in the northern reaches.”

Along with fish, game birds, fur-bearers and game mammals were plentiful throughout the watershed. Passenger pigeons (*Ectopistes migratorius*), migrant ducks (*Anatidae*, family) and geese (*Anatidae*, family), and native grouse (*Phasianidae*, family) were frequently hunted (Richardson 1944). There was also a great abundance of deer (*Odocoileus virginianus*), bear (*Ursus americanus*) and hares (*Sylvilagus floridanus*). Records in 1796 indicated that the Eastern timber wolf (*Canis lycaon*) existed in the watershed and remained in the area into the 1830s (Richardson 1944). Other wildlife inhabiting the Ganaraska River watershed include beaver (*Castor canadensis*), fox (*Vulpes vulpes*), porcupine (*Erethizon dorsatum*), skunk (*Mephitis mephitis*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), woodchuck (*Marmota monax*), weasel (*Mustela*, sp.), squirrels (*Sciuridae*, family), rats (*Rattus*, sp.) and mice (*Rodentia*, order), moles (*Talpidae*, family) and shrews (*Soricidae*, family), and bats (*Chiropter*, order) (Reeve 1967). There have also been documented sightings of moose (*Alces americanus*) and bobcat (*Lynx rufus*).

2.4 Reforestation

Richardson (1944) recommended the reforestation of large tracks of land in the headwaters of the Ganaraska River. This was accomplished through the hard work and dedication of the local community, including veterans returning from WWII. The land on which the reforestation occurred was acquired from local property owners by the province. In 2017, the Ganaraska Forest is 10,978 acres (4,443 ha) in size and is a tribute to the foresight of past community leaders.



Richardson (1944) not only recommended reforestation of the headwaters of the Ganaraska River in order to combat soil erosion, it was also necessary to improve water resources. As determined through subsequent studies, many of his predictions were realized. Reforestation of marginal land since the mid-1940s has resulted in decreased total runoff, reduced peak flows and increased low flows (Buttle 1994). Rogers (1989) concluded that peak discharges related to snowmelt decreased due to slow snow melts caused by shading and because the [Ganaraska] Forest composition prevented some ground accumulation of snow by trapping snow in the forest canopy. Minimum monthly streamflows have increased, with reduced variability as a result of increased water storage in aquifers beneath the forest.

Buttle (1995) linked the reduction of peak flows and the likely reduction of sediment yields to changes in stream channel structure. Flood channel width was noted to have declined since 1928, along with a decrease in channel width/depth ration between 1960 and 1975. In addition, channel sinuosity was also noted to have decreased (Buttle 1995). These studies have indicated that reforestation in the watershed has improved the variable form and function of the river. Today, the Ganaraska Forest is a leading example of how reforestation and management of marginal lands can form a landscape-level prescription for degraded lands.

2.5 Forest Management



The management of the Ganaraska Forest was the responsibility of the Ministry of Natural Resources (MNR) under the *Agreement Forest Act* up until the year 2000. Under this program, Ministry staff provided all support for the Ganaraska Forest including forest management planning, operational plans, tree marking services, timber sales, cut inspections, and follow up treatments as required. GRCA staff organized and maintained any trails within the Ganaraska Forest in the early 1980s. After the

year 2000, the responsibility for the management of all aspects of the forestry operations in the Ganaraska Forest were transferred to the GRCA.

3.0 ABIOTIC, BIOTIC AND CULTURAL CHARACTERISTICS OF THE GANARASKA FOREST

3.1 Regional Climate

Climatic elements such as precipitation (rain and snow), evaporation and temperature have a dominant effect on various components of the hydrologic cycle. Understanding these elements and their patterns plays a key role in understanding how natural systems function and respond to changes in climate (e.g., extreme variability in precipitation). The climate of an area depends on its location within the worldwide circulation of the atmosphere. Local climates may also be profoundly affected by the proximity of an area to large water bodies and local topographic relief.

Topography influences local temperature and precipitation. Temperature and precipitation tends to vary minimally across the GRCA due to the small geographic scale. The climate in the GRCA is continental, with cold winters and warm summers. Along the Lake Ontario shoreline, cooler air temperatures occur in the spring and early summer and milder temperatures occur in early winter due to the moderating effect of the lake temperatures, which lag behind the seasonal changes in air temperature. This local moderation of the climate diminishes as you move away from the shoreline and is dependent on the wind direction and the variance between water and air temperatures.

On the Oak Ridges Moraine, where the Ganaraska Forest is located, precipitation can be higher than along the Lake Ontario shoreline and snow will remain on the ground much longer due to the cooler weather and significant amount of shading from trees. Snow accumulates to a greater depth and generally remains until early spring, when much of the snowpack melts slowly and infiltrates into soils to replenish the groundwater.

Regional climate characteristics can be summarized by looking at data from Environment Canada stations in Cobourg and Peterborough (Figures 3 and 4).

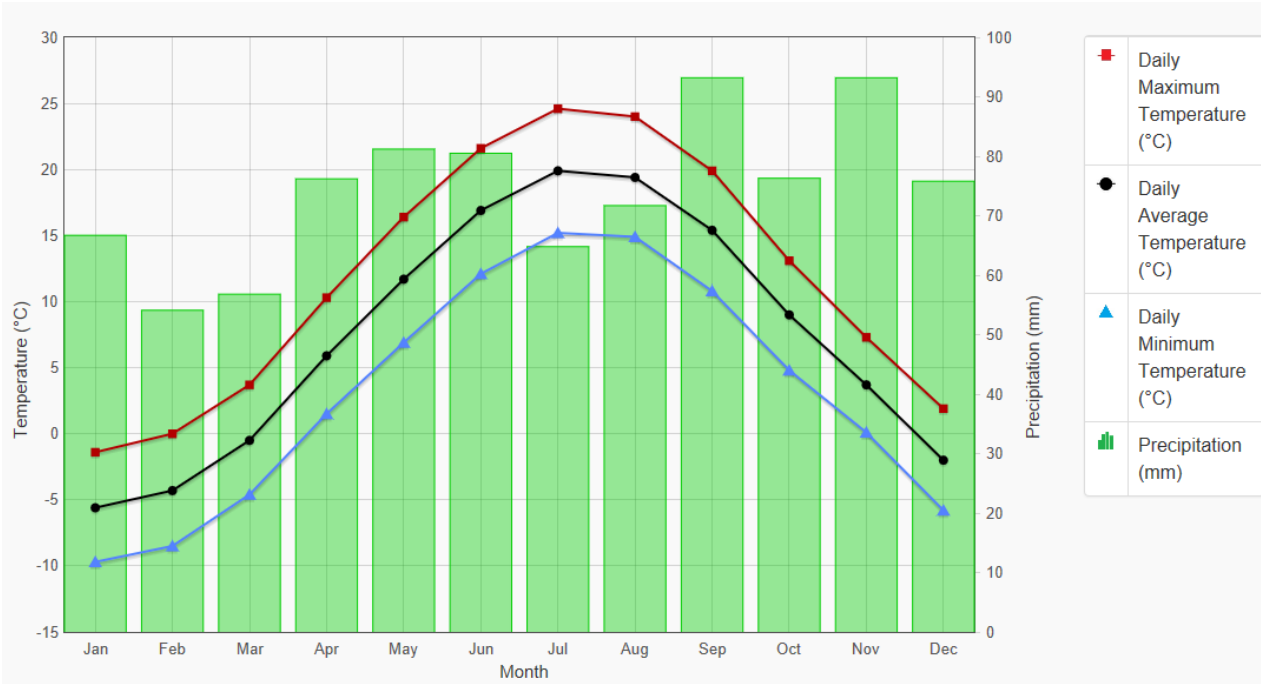


Figure 3: Cobourg STP meteorological station (6151689), 1981 to 2010

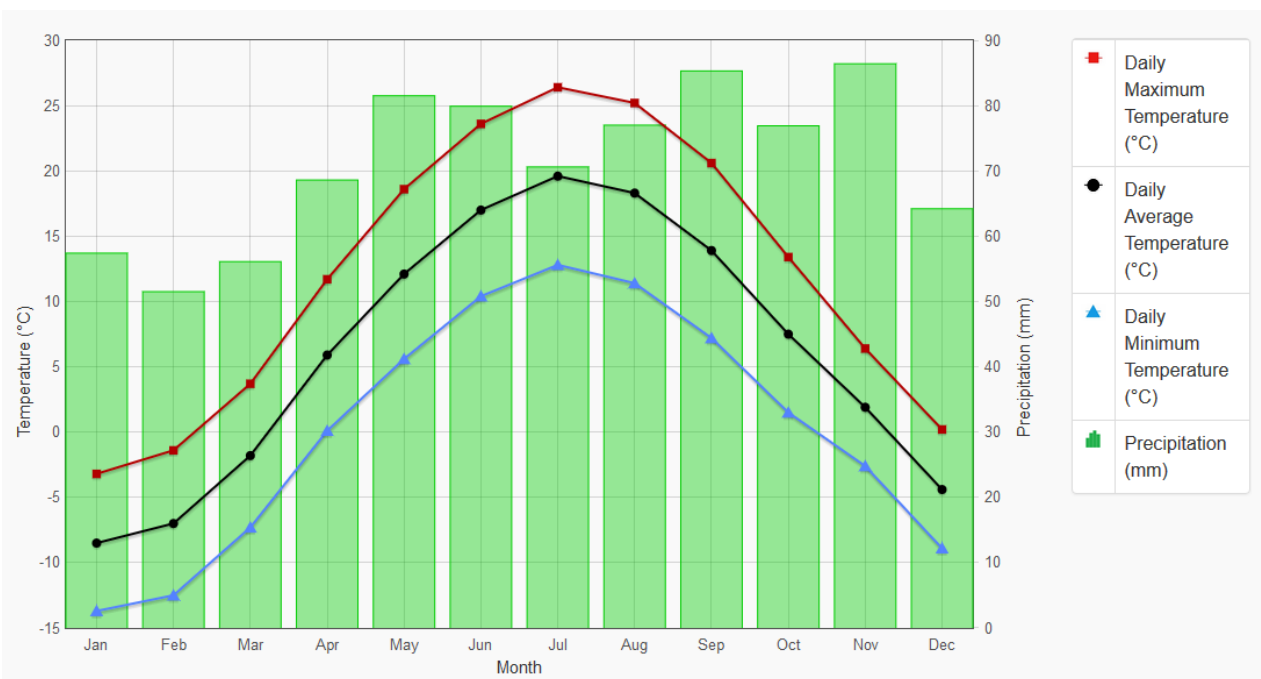


Figure 4: Peterborough Airport meteorological station (6166418), 1981 to 2010

3.2 Geology and Topography

Topography refers to the shape, form and physical features of the Earth's surface. In the Ganaraska Forest, the land generally slopes from north to south and south-east (Ganaraska River and Rice Lake watersheds) and south-west to north-east (Baxter Creek, Squirrel Creek and Cavan Creek watersheds) (Figure 5), but is also quite hummocky (knoll and mound) with closed topographic depressions. The maximum topographic elevation is approximately 380 meters above sea level (masl) and it declines to an elevation of less than 200 masl in the East Forest (Figure 5). Hummocky topography, undulating in nature, is the major physical feature in the Oak Ridges Moraine in the northern part of the Ganaraska River watershed. Topographic features are important in promoting groundwater recharge and reducing surface water runoff.

The Oak Ridges Moraine (geological starting point) extends regionally over 160 km from the Niagara Escarpment to the Trent River. As described in Chapman and Putnam (1966), the Oak Ridges Moraine is hilly with a knob-and-basin relief comprised of sandy or gravelly materials. This coarse, permeable material provides for recharge areas in the Ganaraska River watershed. Water drains vertically through the sand and gravel, moving laterally once it reaches less pervious material, and reappears as springs along the lower elevation slopes of the moraine (Chapman and Putnam 1966). In the Ganaraska River watershed, the Oak Ridges Moraine has a hummocky irregular surface and closed depressions, with glaciofluvial sands and gravels making up the surficial deposits.

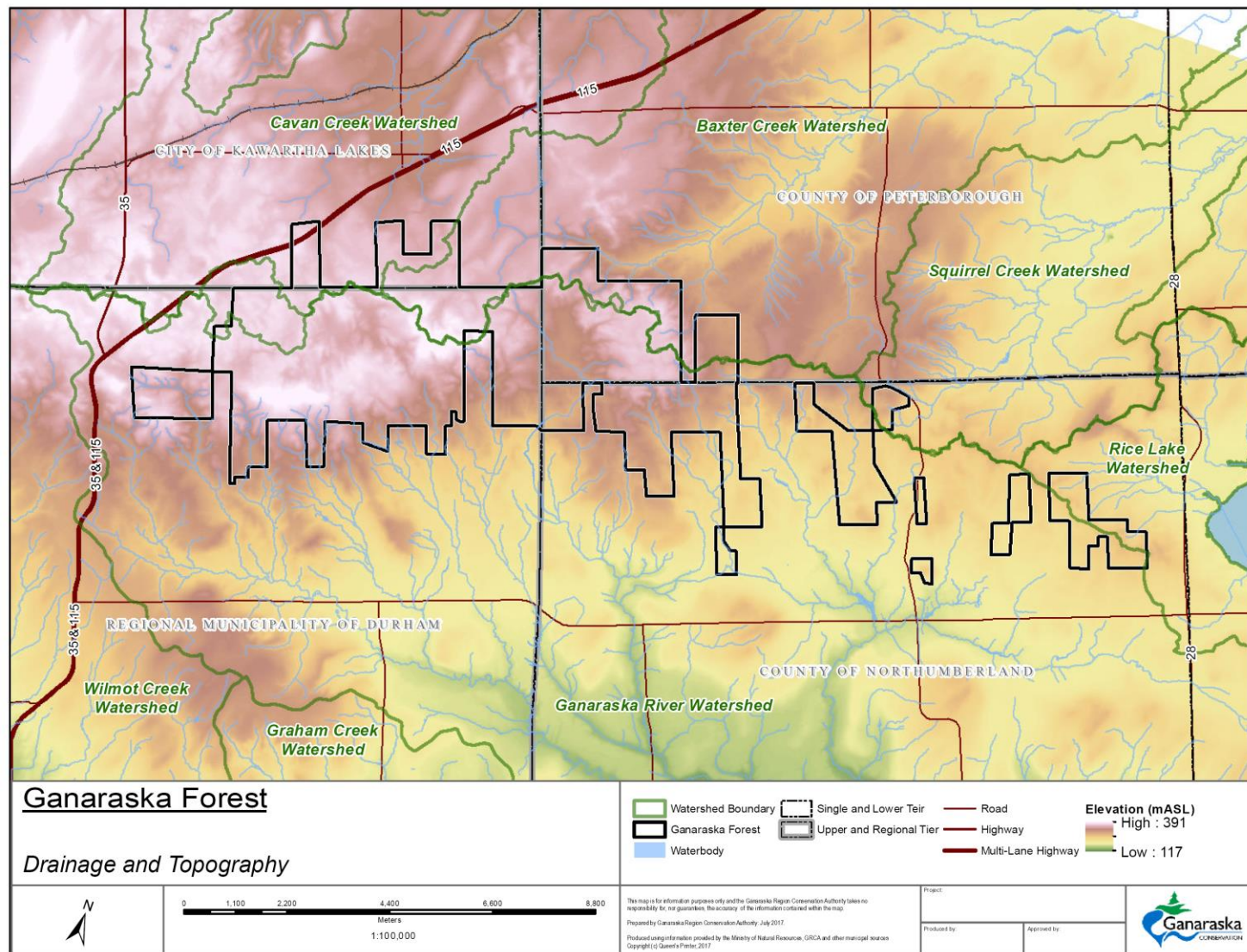


Figure 5: Drainage and topography within the Ganaraska Forest

3.3 Forest Soils

Soils are found in the upper most layer of the earth and are comprised of minerals, organic materials, air and organisms needed to support vegetative growth. The till deposits in certain areas of the Oak Ridges Moraine are covered by 3 to 4.6 m of sand and sandy gravels, and the soils are mainly derived from the sand-gravel strata. The most typical soil of the Moraine is the Pontypool Series that consists of sand and sandy loams, with the almost-pure sands located on hilltops and the more loamy soils in the drainage channels where they were formed during the period of glacial activity (Chapman and Putnam 1966). Grey-brown podzol, belonging to the Fox soil family, is found in the Oak Ridges Moraine (McGregor 1977). This soil family is characterized by good drainage and susceptibility to erosion.

In 1944, Richardson identified eight severe erosion sites on the Oak Ridges Moraine. Approximately 50 years later, Bainton (1995) visited these sites to study and determine if erosion was mitigated. The eight sites were comprised solely of a combination of Pontypool sand, Otonabee loam, Bridgman sand and Brighton sand. Of the five sites in the Ganaraska Forest that were visited, erosion had been drastically reduced or eliminated as a result of reforestation. The other three sites on private land and evaluated by aerial photography showed only reduced erosion in pasture lands.

Land uses in the Ganaraska River watershed reflect the predominant soil series found throughout the area. Heavily forested areas in the northern part of the watershed, predominantly the Ganaraska Forest, reflect the sandy soils of the Oak Ridges Moraine, and agricultural activities in the South Slope and Iroquois Plain reflect the sandy loam soils found within these regions. As a result of the differing soil types and corresponding land use capabilities, the South Slope and Iroquois Plain are favourable for agricultural practices over the Oak Ridges Moraine. Superior soils in the near shore Lake Ontario area have meant that historic settlement has occurred in this area.

3.4 Groundwater Recharge

Recharge is the process by which groundwater is replenished, and it occurs by the vertical seepage of water through soil and unsaturated soils to an area of saturation. Rain and snowmelt are the major sources of recharge. However amounts of recharge and the rate at which it occurs depend on surficial soil composition, land use, and topography. Within the Ganaraska Forest a large portion of the watershed does provide significant groundwater recharge (Figure 6).

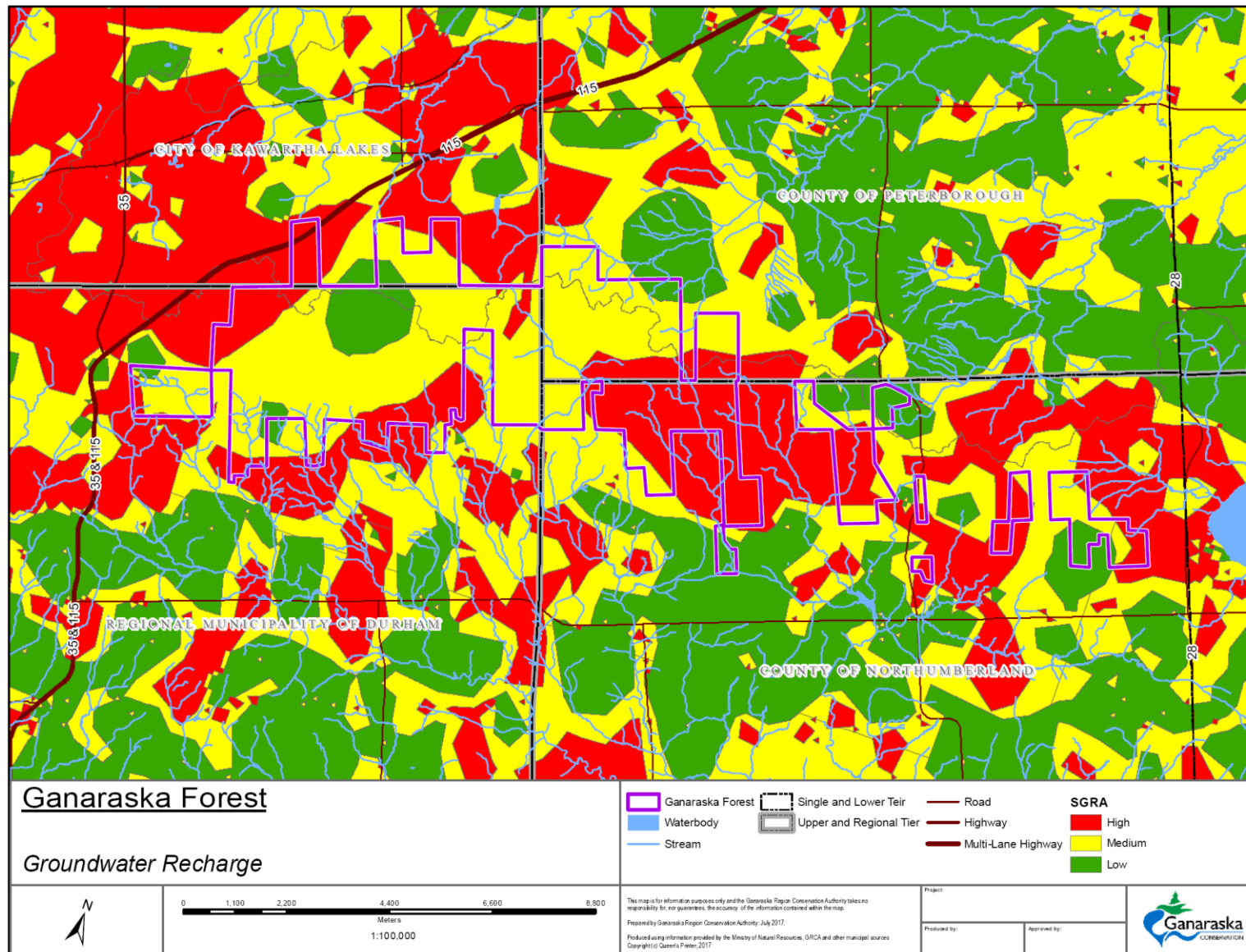


Figure 6: Groundwater recharge in the Gananaska Forest

3.5 High Conservation Value Forests

High Conservation Value Forests (HCVF) are those forests that possess one or more of the following attributes:

- Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values.
- Forest areas that are in or contain rare, threatened, or endangered ecosystems.
- Forest areas that provide basic services of nature in critical situations (i.e., watershed protection and/or control).

There are two attributes that define the Ganaraska Forest as a High Conservation Value Forest:

1. Tallgrass prairie restoration: the project to enhance and expand the Ganaraska Forest's largest prairie remnant was initiated in 2005. The project is ongoing and is called the Ochonski prairie project.
2. Groundwater recharge areas: areas have been identified and mapped, *Ganaraska River Background Report Abiotic, Biotic, and Cultural Features* (GRCA 2009). In the past, there were no specific measures in place for forestry operations to deal directly with helping to sustain groundwater recharge areas.



3.6 Areas of Natural and Scientific Interest and Provincially Significant Wetlands

The Ministry of Natural Resources and Forestry (MNRF) is responsible for defining Areas of Natural and Scientific Interest (ANSI) and Provincial Significant Wetlands (PSW). There are no approved ANSIs or PSW within the Ganaraska Forest.

3.7 Aquatic Community

The Ganaraska River watershed and its abundance of forest cover, which is primarily a result of the presence of the Ganaraska Forest, supports a healthy coldwater ecosystem, consisting of species such as brook trout, rainbow trout (*Oncorhynchus mykiss*), mottled sculpin (*Cottus bairdii*), and American brook lamprey (*Lethenteron appendix*).

Four fish communities were identified within the Ganaraska River watershed: rainbow trout and minnow species; brown trout (*Salmo trutta*) and minnow species; brown trout and sculpin; and brook trout and sculpin. Migratory jumping fish are able to access upstream habitat from Lake Ontario through the Corbett's Dam Fishway.

A stream's ability to support a diverse and sustainable aquatic community depends on the in-stream habitat characteristics that include stream temperature, dissolved oxygen, food types, cover, stream bottom type, and spawning areas.

Riparian Areas occur as transitional areas between aquatic and terrestrial habitats. The role and importance of riparian areas varies greatly and includes sediment retention, nutrient removal before entry into the waterbody, streambank stabilization, and the regulation of stream temperature.

3.8 Wildlife Within the Forest

The Ganaraska Forest supports a diverse and healthy wildlife population. Mammals include White-tailed deer, coyote (*Canis latrans*), red fox, raccoon, fisher (*Martes pennant*), weasels, skunk, porcupine, grey squirrel (*Sciurus carolinensis*), red squirrel (*Tamiasciurus hudsonicus*), and flying squirrels (*Glaucomys*, sp.), and the occasional black bear among others.

Game birds include ruffed grouse (*Bonasa umbellus*) and wild turkey (*Meleagris gallopavo*). The Ganaraska Forest is important for breeding populations of many songbird species and supports numerous birds of prey. Reptiles include eastern milk snake (*Lampropeltis triangulum*), eastern gartersnake (*Thamnophis sirtalis sirtalis*), northern redbelly snake (*Storeria occipitomaculata occipitomaculata*), smooth green snake (*Opheodrys vernalis*) and at least two species of turtles. Several frog and salamander species are also found here. The importance of the Ganaraska Forest for insect diversity has not been assessed.

White-tailed deer are common and highly valued within the Ganaraska Forest. During deep snow conditions, winter yards play an important part in deer survival. Early and mid-aged red pine (*Pinus resinosa*) areas are utilized for cover in local deer yards. A mosaic of heavily stocked, pure conifer pockets (80% crown closure to provide shelter, travel corridors, and bedding sites) with small, open browse production areas provides ideal winter deer habitat for winter deer yard areas. Common browse species include red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), dogwood (*Cornus*, sp.), beaked hazel (*Corylus cornuta*), yellow birch (*Betula alleghaniensis*), white birch (*Betula papyfera*), and cherry (*Prunus serotina*), as well as cedar (*Cupressaceae*, family) and white pine.

3.9 The Forest and the Landscape

The Ganaraska Forest is one of the largest forest blocks in southern Ontario, and can be seen clearly in aerial photography (Figure 7). In a landscape where much of the original forest cover has been lost or fragmented, large woodlands are particularly valuable for conserving biodiversity. For example, the larger the woodland, the more likely it will encompass a diversity of geophysical features such as different soil types,

drainage patterns, slopes and slope aspect (e.g., north facing versus south facing). These in turn allow for the development of a higher diversity of vegetation community types such as oak dominated woodland in areas with dry sandy soils versus maple-beach hardwood forest in areas with moist soils.

Vegetation types have been mapped by GRCA using the Ecological Land Classification (ELC) System for southern Ontario (Lee et al. 1998) (Figure 8) which allows for monitoring changes in community type and area and in determining potential habitat for species of conservation concern. Although much of the Ganaraska Forest is plantation, large areas of natural hardwood and mixed hardwood-coniferous forest exist, while older plantations nearing the end of their harvest cycle are reverting to these natural forest types. Coldwater streams, tallgrass prairie remnants, swamps and open water wetlands contribute further to the vegetation community diversity found in the Ganaraska Forest.

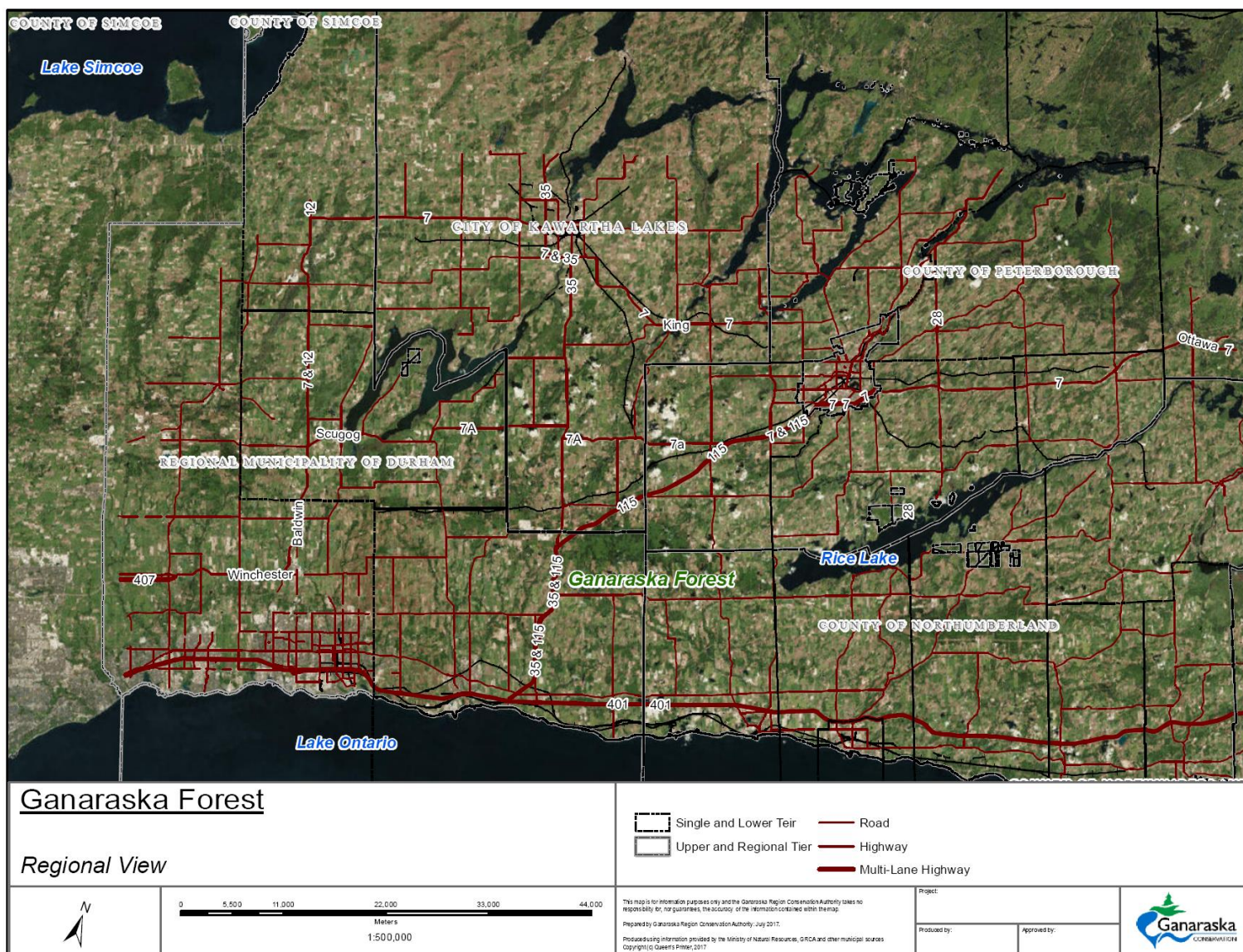


Figure 7: Regional view of the Ganaraska Forest

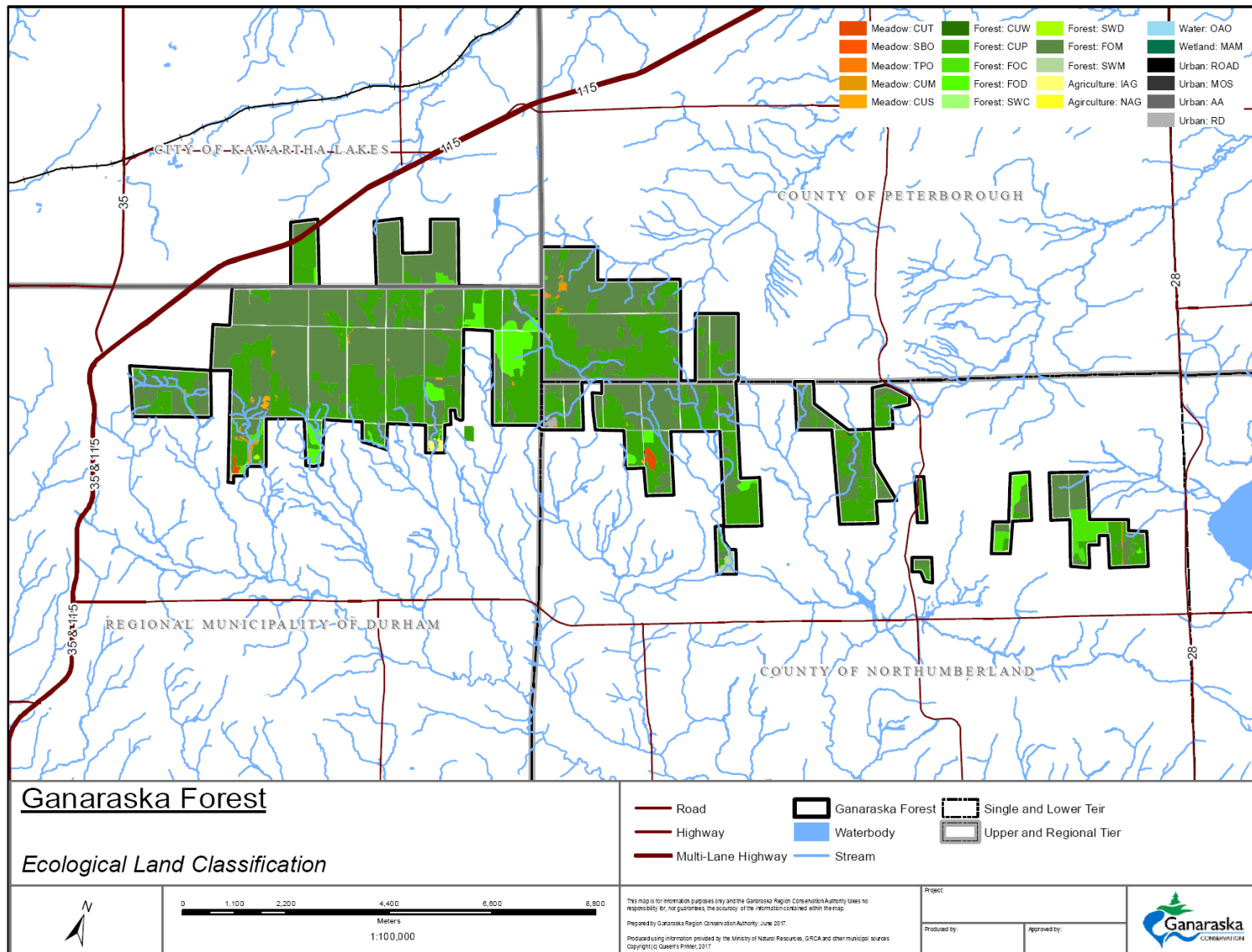


Figure 8: Ecological Land Classification of the Ganaraska Forest

3.10 Outdoor Education

The GRCA has been delivering facilitated outdoor education programming to students since 1978. In 2009, a new, much larger Ganaraska Forest Centre opened its doors. Three Ontario-certified teachers deliver over 25, Ontario Ministry of Education, curriculum-linked programs for students in grades JK to 12. All of the programming is science and nature-based and connects to the geography, science, social studies, and physical education curriculum strands.

The outdoor education programs at the GRCA are currently delivered to over 9,000 school children annually, serving eight Catholic and Public school boards in a geographic area, ranging from Kingston to Lindsay and west to Toronto and York Region.



The Ganaraska Forest is an integral component of the education program, offering a superb and unique outdoor classroom for programs such as orienteering, pond and stream studies, outdoor survival skills, habitat and animal adaptations, entomology, biodiversity, and Oak Ridges Moraine study, as well as physical activities such as snowshoeing and cross-country skiing on groomed and track-set trails.

Many like-minded educational institutions and government agencies use the Ganaraska Forest and the Ganaraska Forest Centre for research projects and meeting spaces. Groups such as the Ontario Invasive Plant Council, the Ministry of Natural Resources and Forestry, the Conservation Ontario Stewardship Group, Trent University, Fleming College, and Ontario Nature are all partners in learning and sharing valuable information about our natural environment.

3.11 Recreation

Recreation is an important part of the Ganaraska Forest. The use of the Ganaraska Forest by a diverse group of trail users endorses the philosophy of the GRCA for a multi-use forest. Trail users include hikers and bird watchers, cross country skiers, hunters, horseback riders, as well as motorized users including snowmobilers. The Ganaraska Forest Recreation Users Committee (GFRUC) carries out work and provides advice to the GRCA Full Authority Board on recreational use occurring in the Ganaraska Forest. The GFRUC is comprised of representatives from various recreational organizations and municipalities bordering the Ganaraska Forest.

4.0 CURRENT FOREST CONDITION

4.1 Forest Inventory and Forest Units

A new forest inventory was initiated in 2016 and completed in March of 2017. Appendix 3 shows a field data sheet and a sample of a "query sheet" that the inventory can produce. All forest compartments were visited and information was collected from each compartment including suggestions for compartment objectives and management:

- Basal area
- Range of diameters
- Tree species
- Distribution of tree regeneration
- Tree regeneration species
- Species composition percentage
- Other vegetation: species, quantity, distribution
- Wildlife habitat, natural heritage, wildlife species observed
- Invasive species observed
- Soils, physical features, drainage

Using this information, forest units were defined to help design a management program for that particular forest unit. Please note that forest units can be comprised of multiple forest stands, both of which can cross forest compartment boundaries. Forest units were defined based on the following criteria:

- Red pine: greater than 60% of the trees within this forest unit are red pine.
- White pine: greater than 60% of the trees within this forest unit are white pine.
- Pine Mixedwood: greater than 60% of the trees within this forest unit are red pine or white pine.
- White spruce: greater than 60% of the trees within this forest unit are white spruce (*Picea glauca*).
- Larch: greater than 60% of the trees within this forest unit are larch (*Larix*, sp.).
- Other conifer: All other conifer species.
- Poplar: greater than 40% of the trees within this forest unit are poplar (*Populus*, sp.).

Definitions

Forest compartment: A management area of the Ganaraska Forest defined by a division such as a road or lot/concession.

Forest unit: A group of trees defined by the dominant species within that group (e.g., white pine forest unit includes other species such as red pine, and white cedar, but where white pine is the dominant species).

Forest stand: A continuous community of trees uniform in composition that permits delineation from the bordering trees (e.g., age, species and/or grouping of species).

- Red oak: greater than 60% of the trees within this forest unit are red oak (*Quercus rubra*).
- Upland hardwood: greater than 60% of the trees within this forest unit are red oak, soft maple (*Acer rubrum*), or hard maple (*Acer saccharum*) and may contain black cherry, hickory (*Carya*, sp.), beech (*Fagus americana*), white birch, white elm (*Ulmus americana*).

The inventory determined that the whole of the Ganaraska Forest could be considered productive, meaning that there were no significant areas of barren and scattered unproductive forest (e.g., shallow soils areas). The largest forest unit within the Ganaraska Forest is red pine, followed by red oak (Table 1).

Table 1: Area of forest units

Forest Unit	Criteria	Area (Hectares)
Red Pine	Pr >60%	1,339
White Pine	Pw >60%	582
Pine Mixedwood	Pw+Pr >60%	610
White Spruce	Sw >60%	20
Larch	L >60%	8
Other Conifer	Ps, Pj, Ce, He, L	8
Poplar	Po >40%	125
Red Oak	Or >60%	1,059
Upland Hardwood	Or+Mr+Mh >60%	273

Pr = red pine, Pw = white pine, Sw = white spruce, L = larch, Ps = scotch pine, Pj = jack pine, Ce = Eastern white cedar, He = Eastern hemlock, Po = poplar, Or = red Oak, Mr = red maple, Mh = sugar maple

4.2 Forest Health

Forest Fires

On occasion fires do occur in the Ganaraska Forest as a result of natural and human causes. Fortunately, no significant fires have occurred. Management of the Ganaraska Forest will not use prescribed burns as a timber management tool, with the exception of prescribed burns to restore tallgrass prairie. The Ganaraska Forest Wildland Fire Emergency Plan is in place to prepare for and respond to wildfires in the Ganaraska Forest (see Section 7.2)



Insect Pests

Insect pests such as various pine sawfly(s) (*Hymenoptera*, order) and the European gypsy moth (*Lymantria dispar*) are a potential threat to the forests of southern Ontario, including the Ganaraska Forest. Other insects and diseases are common, may be aesthetically unpleasant, and may degrade localized timber potential and other forest values, but generally do not pose a significant threat to the Ganaraska Forest resource at this time. However, insect and disease problems are dynamic and change is constant.

There is currently an epidemic of emerald ash borer (*Agrilus planipennis*) sweeping across southern Ontario. This is an introduced pest from China for which no natural predators exist to control its population and/or spread. Hopefully after the initial wave of insects pass through, some trees will be able to survive and continue to provide an ash component in various forest stands. Most of the ash (*Fraxinus*, sp.) in the Ganaraska Forest is a minor component of many hardwood stands. Although as of the date of this plan there is no evidence the borer has reached the Ganaraska Forest, annual monitoring of this pest and all others will be implemented to provide for early warning detection and response if required.

In 1992 there was an outbreak of pine false webworm (*Acantholyda erythrocephala*). It was mostly restricted to the hill tops within the pine stands where the trees were under stress due to the dry conditions. The outbreak lasted for 10 years and did involve salvage harvests and small clearcuts, to control the outbreak and salvage the timber.

Diseases

Two diseases, *Fomes annosus* root rot and a European race of *Scleroderris* canker has potential to damage or destroy large segments of the pine stands in southern Ontario. Both diseases are monitored for their presence and impact; actions will be taken as warranted.

Other diseases within the Ganaraska Forest that warrant attention are beech bark disease and pine bark adelgid (Pine *adelgid*). Beech bark disease is devastating to beech trees with no known cure in sight. Pine bark adelgid is under observation throughout southern Ontario with actions to be taken as we know more about the damage that it can cause in the future.

Invasive Species

Dog-strangling vine (*Cynanchum rossicum*) is a harmful invasive species that forms dense stands that overwhelm and crowd out native plants. Dog-strangling vine was first recorded in Toronto as early as the late 1800s. It is now found throughout southern Ontario, Quebec, and several American States. This invasive plant has a firm foothold with the Ganaraska Forest and action to control this plant is difficult and costly.

Garlic mustard (*Alliaria petiolata*) is an invasive herb from Europe. It was introduced in the early 1800's and has now spread to southwestern and eastern Ontario. This herb can reproduce under a wide range of soil and light conditions and outcompetes native plants for water and space within a forest.

Two other invasive plants that are a concern due to their potential human health impacts are giant hogweed (*Heracleum mantegazzianum*) and wild parsnip (*Pastinaca sativa*). Both are often found along the sides of roads and trails. These plants can compete with native plants for space in low wet areas and along ditches and both can cause serious blistering if the sap comes into contact with skin. Neither is in the Ganaraska Forest at this time, however they may arrive soon.

While poison ivy (*Toxicodendron radicans*) is not an invasive plant, it is a concern for visitors to the Ganaraska Forest. It is a health concern for many, and control of this plant is undertaken as encountered within areas where there is heavy recreation use.

Climate Change

An overwhelming amount of scientific evidence supports the existence of rapid, human-induced global climate change. At the local and regional scales, changing climatic patterns have the potential to drastically influence forest structure and health in southern Ontario.

Shifts in precipitation and temperature averages are expected to bring a variety of challenges for forest managers, including: declining health of native species and their suitability to changing conditions, increased frequencies of extreme weather, increased susceptibility to forest fires and a greater prevalence of invasive species, pests and diseases. Many of these impacts also influence one another, making the role of sound forest management planning all the more important.

There are a number of potential directions that could be followed to deal with the implications of climate change in management of the Ganaraska Forest. The following are some suggestions based on Johnston (2009):

In relation to maintaining forest tree productivity:

- maintain a diversity of age classes and species to avoid increase in susceptibility to insects, disease or fire,
- control plant species that are, or are likely to become competitive, including invasive plant species, and
- focus management on currently productive sites and those likely to remain productive in future climate scenarios.

To conserve genetic diversity of forest species in general:

- Create and maintain corridors that facilitate migration of tree and other species and genotypes. The GRCA Natural Heritage Strategy (GRCA 2013) can help advise on where these corridors exist or may be created.

To maintain forest health:

- Focus harvest activities on stands that are most susceptible to pests, and remove trees that are already infected.
- Use prescribed burns to reduce fire risk and vulnerability to insect outbreak.
- Incorporate knowledge of species vulnerability to climate change and its consequences in reforestation plans.

Adaptive management is equally important for the sustainable management of the Gananaska Forest; and as such the GRCA has created a Climate Change Strategy in order to further understand and promote actions that adapt to or mitigate climate change (GRCA 2014). Using detailed climate models, GRCA staff can evaluate the suitability of forest conditions for local species at various future timescales. Not only would this help to increase local genetic diversity, but it would also allow for the trial of new species that are expected to have their climate ranges migrate into the Gananaska region in the future (e.g., bur oak (*Quercus macrocarpa*)). Both of these outcomes are recommended by those at the forefront of climate-adaptive forest management, such as the Forest Gene Conservation Association.

5.0 LONG TERM MANAGEMENT AND STRATEGIC DIRECTION

5.1 Guiding Management Documents

The Gananaska Forest Management Plan will be guided by and support the following:

- Gananaska Region Conservation Authority Strategic Plan: 2015-2020
- Gananaska River Watershed Plan, 2010
- Gananaska Region Conservation Authority Natural Heritage Strategy, 2013
- Gananaska Region Conservation Authority Climate Change Strategy, 2014

5.2 Gananaska Forest Management Goal

Through public consultation, the following goal was developed to guide the management of the Gananaska Forest:

To conserve, enhance and where feasible restore the forest ecosystem to reflect the native biodiversity of the Gananaska Forest while at the same time embracing recreational, education and social activities that support the health and sustainability of the forest.

5.3 Forestry Principles

The long term preservation of the ecological health of the Ganaraska Forest is paramount. Social benefits, cultural history, and economic benefits of the Ganaraska Forest all flow from a healthy Forest. All forest management will be focused on the following principles.

- Ensuring that the health and integrity of all native ecosystems and species associated with the Ganaraska Forest are maintained.
- Managing for the maintenance of diverse native ecosystems.
- Providing for the next forest, through the protection and promotion of natural native regeneration.
- Ensuring that the multiple-use nature of the Ganaraska Forest is recognized and protected during all forestry operations and that all forest uses are compatible with maintaining the ecological health of the Ganaraska Forest.
- Preserving and honouring the cultural history of the Ganaraska Forest by supporting the protection of historic structures and by documenting and preserving past and present work within the GRCA.
- Ensuring that the Ganaraska Forest provides a sustainable economic benefit to the GRCA, without compromising the ecological health of the Ganaraska Forest.

5.4 Sustainable Forest Management

Sustaining the Ganaraska Forest and all the benefits that it provides is the top priority of the Ganaraska Forest Management Plan. There are two aspects to sustaining the Forest:

1. Estimating the total amount the Ganaraska Forest is growing and ensuring that harvest levels do not exceed that amount.
2. Controlling and monitoring the harvest. Control has to involve ensuring that all values within the Ganaraska Forest are protected and the amount of productive forest land is maintained and increased over time.

Growth Rate

Estimating growth of a forest is complicated; each site has its own characteristics and potential for growth. The light soils of the Ganaraska Forest provide unique challenges. A number of sites are productive but they do not contain enough nutrients to sustain continual growth for a number of species like red pine. Growth on other sites becomes complicated by competition between competing species for a limited number of nutrients.

Research both in Ontario and in the northeastern United States indicates that an acceptable range of growth for red pine plantations would be between 5.9 to 8.8

m³/ha/year. For hardwood forest units, the growth estimates would be between 500 to 1000 fbm (foot board measure)/ha/year (2.2 to 4.4 m³/ha/year).

Using these conservative estimates as guidelines for growth, the annual estimated growth volume would be 12,221 m³/year for the conifer forest units (Table 2). The estimated growth volume for hardwood stands would be 728,500 fbm/ha/year (Table 2). In conclusion, as long as annual tenders are less than 12,221 m³/year for conifers and 728,500 fbm/ha/year for hardwoods, the Ganaraska Forest will not be over harvested.

Productive Forest and Available Annual Harvest

Given the estimated annual growth of the Ganaraska Forest as described above, the available annual harvest level can be calculated using figures from the forest inventory. The forest inventory has provided an area for each forest unit. If it is assumed that conifer forest units would be managed on a 10 year cutting cycle and that the average annual harvest is 36.6 m³/ha, then the results are that over 9,300 m³ should be available each year for harvest (Table 3). For hardwoods forest units, the total would be over 230,000 fbm/year for harvest (Table 3). The harvest cycle for poplar is 20 years and for other hardwoods 25 years.

Table 2: Estimated growth for the Ganaraska Forest

Forest Unit	Area (hectare)	Average Growth Rate (m ³ /ha/year)	Estimated Growth (m ³ /year)
Red pine	1,339	5.0	6,695
White pine	582	4.5	2,619
Pine Mixedwood	610	4.5	2,745
Other conifer	36	4.5	162
Total conifer			12,221
Forest Unit	Area (hectare)	Average Growth Rate (fbm/ha/year)	Estimated Growth (fbm/ha/year)
Poplar	125	500	62,500
Red oak	1,059	500	529,500
Upland hardwood	273	500	136,500
Total hardwood			728,500

Table 3: Available annual average harvest

Forest Unit	Total Area (hectare)	Cutting Cycle (years)	Available Annual Area (hectare)	Average Annual Harvest (m ³ /hectare)	Available Annual Harvest (m ³ /year)
Red pine	1,339	10	133.9	36.6	4,900
White pine	582	10	58.2	36.6	2,130
Pine mixedwood	610	10	61	36.6	2,232
Other conifer	36	15	3.6	25.0	90
Total conifer	2,567				9,352
Forest Unit	Total Area (hectare)	Cutting Cycle (years)	Available Annual Area (hectare)	Average Annual Harvest (fbm/hectare)	Available Annual Harvest (fbm/year)
Poplar	125	20	6	4,000	24,000
Red oak	1,059	25	42.4	4,000	169,600
Upland hardwood	273	25	10.9	4,000	43,600
Total hardwoods	1,457				237,200
Total Productive Forest	4,024				

5.5 Forest Management Guidelines

Following the forest management principles outline in section 5.3, the following general guidelines will ensure that the sustainable management of the Ganaraska Forest will allow it to regenerate and grow into the future.

- Manage the densely stocked compartments to ensure that these areas will remain healthy and continue to play a role in a productive forest.
- Manage for a diverse forest that supports a wide range of native species.
- Manage for natural regeneration providing adequate light and spacing to support natural succession within the Ganaraska Forest.
- Manage for the natural regeneration of white pine and red oak, while supporting the protection and enhancement of other native species.
- Manage for the sale of timber to be balanced over the term of this Forest Management Plan and to respect the ecological requirements of this Forest Management Plan.

5.6 Plantation Management Guidelines

Plantations are the dominant configuration of trees within the Ganaraska Forest, resulting from past tree planting goals to stabilize fragile soils in a systematic and managed approach. As a result, these stands require specific management techniques to ensure they contribute to a productive and sustainable forest. Additional guidelines specific to the dominant tree species of the plantation (forest unit) can be found in section 6.3.

- Red pine polewood compartments (younger stands of plantation) are all to be thinned within the next 5 years.
- White pine polewood compartments are all to be thinned within the next 5 years.
- Red pine and white pine sawlog compartments that have a basal area measured in 2017 of greater than 32 m²/ha are all to be thinned within the next 10 years.
- Ensure that the mixed pine compartments are being managed and that the compartments greater than 32 m²/ha are being thinned and regenerated over the next 10 years.
- Ensure that the larch and white spruce compartments are being managed and they are regenerating to white pine or white spruce and all are thinned within the next 5 years.
- Ensure that the average annual allowable harvest for all conifer plantations is less than 235 ha/year for the next 10 years.
- Ensure that all hardwood stands are being managed to move towards an all aged stand structure. Ensure that the development and protection of species diversity and late stage successional species are major objectives for this management. The harvest area target for hardwood will not exceed a total of 500 ha over the next 10 years.
- Wherever and whenever possible, remove poplar from stands. Poplar will always be part of the Ganaraska Forest but in most cases it is competing with and overtopping white pine and hardwood regeneration. As markets develop, thin and remove poplar as a competing force within these stands.

5.7 Recreation Within the Forest

The Ganaraska Forest will be maintained, enhanced and restored over the long term in recognition of the many ecological, economic and social benefits that it provides. The Ganaraska Forest Management Plan will support access to the Ganaraska Forest by families and individuals recognizing the value of the Ganaraska Forest from a human health, wellness and active living perspective. Forestry operations will be integrated into the multi-use program for the Ganaraska Forest, and road and trail closures will only be implemented when and if there are public safety concerns between harvest operations and users. Other trail closures will only occur when ecological attributes of the forest are being significantly impacted by continued trail use.

6.0 FOREST MANAGEMENT PROGRAM

6.1 Silviculture

The *Forestry Act (1990)* defines Good Forestry Practices as: “*the proper implementation of harvest, renewal and maintenance activities known to be appropriate for the forest and environmental conditions under which they are being applied and that minimize*

detriments to forest values including significant ecosystems, important fish and wildlife habitat, soil and water quality and quantity, forest productivity and health and the aesthetics and recreational opportunities of the landscape.” This definition will be adopted by the GRCA in planning for operations within the Ganaraska Forest.

6.2 Silvicultural Systems

Selection System

Selection silviculture refers to the periodic partial harvesting of shade tolerant to mid-tolerant hardwood stands. When applying the selection silvicultural system in the Ganaraska Forest, staff’s prescription and the Ontario Tree Marking Guide (OMNR 2004) will be used as guiding documents.

Shelterwood System

The shelterwood system refers to the removal of the overstory trees through a series of harvesting operations. A large portion of the Ganaraska Forest will be managed using this silvicultural system. The major objective of this system is to provide the correct light conditions so that native seeds can generate and grow into the next forest. White pine and red oak would be the target species under the shelterwood system.

Clearcut System

The traditional clearcut system has historically been only occasionally used in the Ganaraska Forest to address areas where insect outbreak, disease, or severe weather decimates a stand to such an extent that restarting the management cycle is the only prudent option. One exception to this is in areas where tallgrass prairie habitat was incorrectly planted with nursery stock. In this situation, a small clearcut of the planted pine with a follow up prescribed burn has been implemented.

Clearcutting of any area within a forest is considered a drastic treatment. A number of factors have to be considered when weighing the pros and cons of this forestry system. Clearcutting will only be considered within the Ganaraska Forest when conditions are such that there is no alternative and the area is small (less than 2 ha) or it is in the best interests for the restoration of a species or group of species that could be at risk (i.e., tallgrass prairie).

6.3 General Guidelines for Harvesting Within Forest Units

All harvesting will require a detailed prescription for each compartment. Each prescription will be unique to that compartment or a group of compartments and will provide for the unique mixture of both species and field conditions for that compartment. The development of the prescription will be guided by the direction within the Ganaraska Forest Management Plan (Appendix 4) and the following general guidelines:

Red Pine, White Pine, and Mixed Pine

- All forest units are eligible to be thinned when the density within the stand is greater than 32 m²/ha.
- For the younger stands, like red pine polewood, they should be thinned by taking out every 3rd or 4th row and then thinning the remaining rows taking out 1/3 of the smaller trees within the rows, provided that no more than 50% of the stems are removed and the retained basal area is no less than 60% of the original basal area.
- For the older stands, selective thinning should occur within the compartment under the shelterwood harvesting system. Thinning should occur by selecting trees that will provide adequate spacing so that the remaining trees have room to grow and expand their crowns; and that any advanced regeneration within the stand is provided with enough light (up to a maximum of 50% light) to continue to grow.
- Support the diversity of species within the compartment by retaining a mix of other species that are present within the compartment.
- Ensure that all other values are protected within the compartment as per the Area of Concern Guidelines (see Section 6.4).

Poplar

Poplar should be harvested as encountered within all forest units. When markets permit, poplar forest units should be harvested with the objective of regenerating that area into pine or oak. Harvesting should be done under the shelterwood harvesting system. Poplar would be the forest cover crop that would be providing the shade to help control light to prevent pioneer species like itself and white birch from regenerating and will create the right light conditions to encourage the regeneration of white pine and red oak.

Depending upon demand and whether there is a market for poplar pulp and/or poplar sawlogs, poplar thinnings could be either; take one row, leave two rows; take one row, leave one row; or strip clearcuts. In all of these harvesting systems, the objective is to manage shade. A maximum of 50% light on the forest floor would encourage the regeneration of desirable species and discourage poplar and white birch from regenerating.

Red Oak and Mixed Hardwoods

Red oak and mixed hardwoods are to be managed under the selection and/or the shelterwood harvesting systems. Where the stands are more than 50% red oak, the stands should be managed under the shelterwood management system. Where the stands are more of a mix of hardwood species, they can be managed selectively.

Larch, White Spruce and Other Conifers

Larch, white spruce and other conifer plantation areas are to be thinned in order to open up the stands to encourage regeneration. No more than 50% light to the forest floor should be allowed to encourage white pine and red oak regeneration. Thin from below saving the larger plantation trees so that they remain part of the stand.

6.4 Forest Succession

Succession is the natural replacement of plant communities in areas over time. Forest succession is the natural replacement of tree species or tree associations (a forest stand of different trees species) over a period of time. Each stage of succession creates the conditions for the next stage. In a managed forest, plant communities are replaced by more stable and longer lived plant communities. The Ganaraska Forest started with very unstable and fragile grass and shrub communities that were subject to erosion due to the light soils.

With the establishment of plantations throughout the area, the soils were stabilized and plant communities began to evolve. Young pine and spruce plantations, with periodic thinnings, turned into mature plantations, with natural regeneration of white pine and hardwood seedlings advancing into the plantations.

As management continues, what is the goal? What should our forest stands look like? How do they function and continue to provide benefits to both the ecology of the area, and continue to provide benefits to both residents and visitors?

The late successional Ganaraska Forest will be made up a wide variety of native tree species where hardwoods will dominate but softwood tree species will be part of the forest stand. There will be all ages of trees represented within the forest stand. Periodic harvesting will be used to ensure that forest openings will be scattered throughout these forest stands and the forest is healthy and continues to grow and regenerate.

6.5 Areas of Concern

An Area of Concern (AOC) is a standard forestry term, and is a location that requires specific prescriptions to protect their values. Some of the AOC's are mapped and eventually all AOC's will be mapped as information becomes available.

Within the Ganaraska Forest, primary silvicultural systems used are the shelterwood and selection systems, although patch clearcutting may also be used in minor working groups. These partial harvest systems rely heavily on tree marking by qualified staff. This allows unidentified AOC's to be located before harvest begins. Prescriptions can then be applied to protect the AOC's values. This will allow the addition of new locations for AOCs as the Ganaraska Forest Management Plan is being implemented. The prescriptions for these additional locations will reflect those for the general AOC's (Section 10.5), as well as the following:

Species at Risk

All native wildlife and plant species are important within the Ganaraska Forest. No forestry operations will in any way deliberately affect long term presence of any native species within the Ganaraska Forest. Forestry operations will be modified to provide for the protection of all species at risk. Where possible, forestry operations will provide an expansion of the necessary habitats required for rare wildlife and plant species.

Cultural and Historical Values

The forested and plantation areas of the Ganaraska Forest may contain the remnants of settlement farms. Other than old wells that have will be properly abandoned for safety reasons, all evidence of these old settlements and farms will be protected. Historical, archaeological and cultural sites will be protected as they are encountered.

Areas of Natural and Scientific Interests

GRCA staff are aware of candidate ANSIs locations and values within the Ganaraska Forest, and will avoid any conflicts with these values during forestry operations.

Wildlife Habitat

For white-tailed deer, winter yarding areas are to be identified. In both core and general yard areas, winter operations are encouraged as packed trails and residual limbs/tops are beneficial for wintering deer. The retention of sufficient oak and beech for mast production is important in yard areas, as is, encouraging regeneration of conifer forest types. All other wildlife will be respected and the nests and dens of migratory birds or other sensitive species will not be disturbed.

Migrating and Nesting Birds

No forest operations will take place within the spring and summer period (April 1st to July 31st), to ensure that no birds are disturbed during their breeding cycle. Forest operations include harvesting and hauling.

Forest Nesting Hawks and Stick Nests

A variety of raptor species use the Ganaraska Forest both during migration and as their breeding habitat. For all stick nests found within or around forested areas, activities, including forest operations, will be adjusted within a 300 m AOC around the nest. If the nest is active, no activity will occur within 300 m of the nest during the breeding cycle. If the nest is not active, the nest tree is to be protected both from felling and felling disturbance with a 50 m modified reserve around the nest.

Osprey

All activities are restricted within a 300 m AOC around all active osprey (*Pandion haliaetus*) nests. The AOC is comprised of two zones: a 150 m no-cut reserve and a 150 m modified management area where activities are permitted as long as the nest is

vacant. For harvesting normal selection or shelterwood, harvest is permitted outside of the critical breeding cycle (see Section 10.5).

Bald Eagles

The bald eagle (*Haliaeetus leucocephalus*) is identified in the Ontario as has having a “special concern” status. If a bald eagle is spotted nesting in or around the Ganaraska Forest, there will be no activity in a 400 m area around an active nesting area. For inactive eagle nests, a 100 m reserve around the tree or structure is recommended (see Section 10.5).

Fisheries Habitat and Riparian Areas

Forestry operations will provide adequate buffers on all streams within the Ganaraska Forest to ensure that all fisheries habitat is protected (see Section 10.5 for details on buffers along streams). Forestry operations will ensure that riparian areas are recognized and protected from any disturbance, to help maintain and enhance, where possible, the quality and quantity of water flow.

Wetlands

All identified wetlands will be given an appropriate buffer, as per the AOC guidelines (see Section 10.5), and any wet areas will be given a minimum 10 m no disturbance buffer with larger buffers given to wet areas where the 10 m buffer will not be adequate to prevent any disturbance to the wet area.

6.6 High Conservation Value Forest Areas

High conservation value areas are important locations within the Ganaraska Forest. Tallgrass prairie areas will be given priority within forest operations such that they can be protected and expanded whenever and wherever possible.

The protection of groundwater recharge areas is important to maintaining the quality and quantity of water resources within the Ganaraska Forest. All seeps, springs, intermittent streams, and wet low areas will be identified and mapped. Each prescription for harvesting of an area will ensure that adequate measures are taken to provide for the protection of groundwater which includes machine maintenance procedures.

6.7 Recreation Program

The Ganaraska Forest will remain a sustainable, multi-purpose and multi-use forest. Forestry operations will support recreation and will ensure that all potential conflicts between forest users and forest operators/operations are dealt with early in the planning process.

The ecology of the Ganaraska Forest will be maintained and improved while allowing for and guiding safe recreation use within the Ganaraska Forest.

Forestry operations wherever possible will support trails within the Ganaraska Forest through a “no damage to trails” and “no forestry debris to be left on the trails” approach. Forest operators will also communicate in the field to ensure that all users of the Ganaraska Forest are aware of forestry operations.

6.8 Forest Stewardship Council (FSC)

Forest Management Certification is a voluntary certification system available to forestry organizations who want to demonstrate responsible forest management by having forest management planning and practices independently evaluated against FSC forest management standards.

The Ganaraska Region Conservation Authority will be pursuing FSC certification. To meet the terms of the FSC standard some adjustments may have to be made but these adjustments will be made over the first Operating Period of the FMP.

7.0 FOREST PROTECTION

7.1 Invasive Plants

Dog-strangling vine is currently the invasive plant species that poses the greatest threat to health and the ecology of the Ganaraska Forest. Although dog-strangling vine is challenging to control at a minimum this species presence and distribution in the Ganaraska Forest should be monitored, and in priority areas options for control and/or eradication identified and carried out.

Other species such as garlic mustard will be monitored and controlled where feasible. Giant hogweed and wild parsnip will be controlled when they provide a risk to public health. To help with the control/limit the spread of invasive species, forestry operations will adhere to the Clean Equipment Protocol (Halloran et al. 2013).

7.2 Fire Protection

The need for the Ganaraska Forest Wildland Fire Emergency Plan stems from the redeployment of responsibility for fires in forests other than Crown Land from the province to the local level. The Ministry of Natural Resources and Forestry (MNRF) placed the responsibility for fires in the Ganaraska Forest with the neighbouring municipalities including the Township of Cavan Monaghan, the Municipality of Port Hope, the Municipality of Clarington and the City of Kawartha Lakes.

The intent of the Ganaraska Forest Wildland Fire Emergency Plan is to ensure that, in the event of a fire in the Ganaraska Forest, the neighbouring municipalities that share the responsibility for fire protection are prepared to address the occurrence. The Plan ensures that municipalities have the necessary training, equipment and resources to address initial response. Specifically, the Plan outlines the operational concepts, roles

and responsibilities, and procedures that would support municipal prevention, mitigation, preparedness, response and recovery from a wildlands fire emergency. Incidents of a major fire will require the assistance of other agencies, including but not limited to the MNRF as well as further neighbouring municipalities. The Plan is managed through the Ganaraska Forest Fire Management Committee which is made up of staff from the GRCA and neighbouring municipalities.

7.3 Insects and Diseases

Pesticides and herbicides may be employed on occasion as an important component of silvicultural systems using integrated pest management (IPM). IPM is a process that uses a range of mechanical, biological, physical, cultural, behavioral, or chemical control techniques to suppress pests and invasive species effectively, economically and in an environmentally sound manner. IPM involves planning and managing ecosystems to prevent organisms from having a detrimental effect on overall ecosystem health. This requires identifying potential pest problems through monitoring and recording weather and population levels and establishing thresholds to make decisions to reduce pest populations to acceptable levels.

The use of pesticides or herbicides are only considered when non-chemical products are not available, are ineffective to attain the silvicultural objectives, are cost-prohibitive, or are inadequate, in light of the risks and environmental and social benefits. Chemical pesticides shall only be used when their use is essential to attain one or more of the following objectives: where necessary the regeneration or restoration of sensitive lands (e.g., tall grass prairie); the regeneration of species such as red oak or white pine; the control of invasive species; the control of major insect outbreaks; and the control of species that pose a threat to human health and safety. For example, the use of certain pesticides will be avoided as the collateral threat to beneficial organisms outweighs the potential benefit provided.

7.4 Wildlife Damage

Wildlife can and does affect the regeneration of the Ganaraska Forest (i.e., white-tailed deer and their browsing of young pine regeneration). Wildlife damage to trees and regeneration will be accepted unless there is an exceptional area where the damage could do harm to the ecology of the Ganaraska Forest.

8.0 FORESTRY OPERATION AND ACCESS

8.1 Guidelines

The following will guide forestry operations in regards to access:

- All forestry operations (harvesting and hauling) will be conducted between August 1st and March 31st.

- All forestry operations will ensure that the roads and trails used during the operation will be left in the same or improved condition that they were found.
- No brush or debris from the logging will be left on the trails.

8.2 Shared Trails and Road Use

All forestry operations for the next operating year will be proposed one year in advance of the operations starting in the Annual Forestry Operating Plan (see section 9.4). During the development of the Annual Forestry Operating Plan any potential conflicts with trails and roads will be identified and addressed.

9.0 FOREST OPERATIONS

9.1 Past Timber Sales

Timber sales have occurred each year for the last fourteen years. Over an eight year period the average area harvested from all forest units was 194 ha/year (Table 4).

Table 4: Ganaraska Forest harvesting record

Year	Species	Area (hectare)	Product	Volume	Average Volume/hectare
2008	red pine	100	utility poles	1,529 m ³	15.3 m ³
2008	red pine	298	sawlogs	5,464 m ³	18.3 m ³
2009	red pine	28	utility poles	1,111 m ³	39.7 m ³
2009	red pine	146	sawlogs	5,453 m ³	37.3 m ³
2012	red oak	32	sawlogs	99,516 fbm	3,109 fbm
2012	red pine	118	sawlogs	6,499 m ³	55.1 m ³
2013	red pine	57	utility poles	3,107 m ³	54.5 m ³
2013	red pine	34	sawlogs	1,652 m ³	48.6 m ³
2014	red oak	12	sawlogs	67,300 fbm	5,608 fbm
2014	red pine	105	sawlogs	4,516 m ³	43.0 m ³
2014	red pine	70	sawlogs	2,769 m ³	39.6 m ³
2015	red pine	142	sawlogs and utility poles	6,681 m ³	47.0 m ³
2015	red pine	20	sawlogs and utility poles	1,578 m ³	78.9 m ³
2016	red pine/larch	122	sawlogs and poles	5,488 m ³	53.1m ³
2016	red pine	66	sawlogs and poles	1,913 m ³	29.0 m ³
2016	mixedwood	56	sawlogs and firewood	202,974 fbm	3,624 fbm
2017	red pine	64	sawlogs and utility pole	3,231 m ³	50.5 m ³
2017	red pine and white pine	118	sawlogs	4,995 m ³	42.3 m ³
2017	red oak and poplar	12	sawlogs	43,660 fbm	3,638 fbm

A number of attempts were made during the past 10 years to thin young red pine polewood compartments with moderate success. The markets for small dimension sawlogs and pine pulpwood are so variable that demand for this small material is a controlling factor.

9.2 Timber Sales in the Next 10 Years

Priority Areas

There are over 600 ha of younger, small diameter red pine and white pine polewood compartments that are too dense for reasonable growth (over 32 m²/ha) and these stands need to be thinned. If they are not thinned within the next 10 year period they could be lost or become a less productive portion of the land base.

A large portion of the older red pine and white pine compartments do have advanced white pine regeneration started within that compartment. In all cases, this regeneration has to have enough light to continue to grow. In many cases, this means that the overtopping canopy has to be managed and light thinnings should occur to remove a portion of the canopy over the period of the Ganaraska Forest Management Plan.

Due to changing market conditions, it may be difficult to attract contractors to bid on thinnings of the younger stands, where the products are pine pulpwood and small dimension sawlogs. A number of different tendering options will be considered:

- Grouping the thinnings of polewood compartments together with the planned older stands that do contain larger dimension material.
- Multiple year contracts for the thinning of the polewood material, where the contractor would be still eligible to bid on other contracts within the Ganaraska Forest. The multiple year polewood contracts are awarded well in advance of the other contracts.
- Changing the area of thinnings and selective harvest to include a variety of forest products. Assigning a specific set of goals for each area within a contract (i.e., release white pine regeneration along or opening up other areas for additional regeneration). Multi-year contracts for this type of harvesting will be considered.

9.3 Sustainability and Long Term Trends

To ensure that the forest management program meets the direction contained within this Forest Management Plan specific direction for each forest unit (Table 5) has been provided.

For the pine forest units (total area 2,531 ha) it is assumed that:

- All the area is available for management minus a portion of the area for road expansion, landings, and the protection of AOCs.
- On average each compartment should be available for a thinning or removal harvest every 10 years.
- All harvested products from the pine compartments are marketable.
- All the harvested and/or thinned compartments will naturally regenerate to white pine and/or red oak.
- The older red pine plantations (planted in the 1930's and 1940's) will be going through the final removal harvests under the shelterwood management system within the first ten year operating plan and converted to young white pine and red oak stands.

For the larch forest units:

- The larch or white spruce compartments will be thinned and converted to young white pine stands, while maintaining these species as part of the Ganaraska Forest.

For the other conifer forest units:

- The other conifer areas will be harvested selectively ensuring that these species remain as part of the Ganaraska Forest.
- The maximum average annual targets for conifer plantations would be 235 ha/year this includes in the first 10 year period with 50 ha/year at a minimum of younger pine plantations.

For the upland hardwood and red oak forest units:

- Both of these units would be managed under the selection and/or shelterwood management systems.
- The average annual targets for the hardwood forest would be 50 ha/year.

Table 5: Productive forest area

Forest Unit	Area (hectare)
Red pine	1,339
White pine	582
Pine mixedwood	610
White spruce	20
Larch	8
Other conifer	8
Poplar	125
Red oak	1,059
Upland hardwood	273

9.4 Annual Forestry Operating Plan

An Annual Forestry Operating Plan (AFOP) will be written outlining operations for the following year (April through to the end of March). The AFOP will be issued in April of the preceding year and will include:

- Where harvesting operations are planned for that year.
- Where tending and regeneration programs are planned for that year.
- Where any road or trail improvements are planned for that year.
- Identification of specific areas of concern or features that will need protection or justify modifications to prescriptions.

9.5 Monitoring

Harvest Inspections

All harvest operations will be visited at least once per week. A written inspection report will be completed and stored. Non-compliance with the terms of the harvesting contract will be dealt with immediately.

Tree Health and Forest Health

A Ganaraska Forest health monitoring plan will be developed that will measure the success of harvesting on regenerating the forest stands, the effects that harvesting has on the other values within the Forest, and on the health of trees within the Forest including forest insect pest and disease.

Research

All research projects have to be approved by the GRCA CAO/Secretary-Treasurer or designate before work commences and a copy of the final report must be provided to GRCA staff. The approved project plan will provide the GRCA the opportunity to monitor project progress and impacts to the forest.

10.0 OPERATING PLAN

10.1 Operational Guidelines for 2018 to 2028

Building on the forest management principles and guidelines described in section 5.3, 5.5 and 5.6, the following guidelines need to be considered during the operational period of 2018 to 2028.

- White pine and red oak are the target species to regenerate and grow to maturity.
- The ecological health, of all stands that are to be treated, is the primary objective.

- Maintaining and enhancing the diversity of species within the Ganaraska Forest is a major objective.
- Promoting natural regeneration within the forest is paramount to the future of the Ganaraska Forest.
- Thinning of stands that have not yet been managed or have been thinned but are too dense for good growth, are priority stands for management.
- Older compartments with basal areas greater than 32 m³/ha are the priority stands to be thinned.

10.2 Operations Proposed for 2018 to 2028

The annual available target is 235 ha (Table 6) which includes 50 ha of thinning of younger plantations (Table 7).

Table 6: Compartments proposed for thinning

Priority Ranking: Compartment(s)	Area (hectare)	Priority Ranking: Compartment(s)	Area (hectare)
1. 112	45	17. D13, 22	36
2. 104	30	18. 137, 148	32
3. 118, 117	59	19. 5, 6	21
4. 113, 114	52	20. 126	18
5. 139, 140	77	21. 119, 120, 121	51
6. 143, 144	60	22. 107, 108	41
7. 141, 142	73	23. 122, 123, 124	55
8. 128, 127	18	24. 130	47
9. 129	29	25. 136, 147	24
10. D1	37	26. 149	23
11. D10, D9	63	27. 115, 116	28
12. 17, 18, 19, D5	30	28. 125	35
13. 25, 24	47	29. 109, 103	66
14. 23	41	30. 110	40
15. 41, 26	33	31. 133, 132	75
16. 145, 146, 134	59	32. 3, 7	75

Table 7: First or second thinning of younger pine stands

Priority Ranking: Compartment(s)	Area (hectare)
1. 151, 102 a, b, c	38
2. 108	9
3. 11	26
4. 44 c, d, e, g	12
5. 43	20
6. 13b, D3d, D2a	40
7. 4c	14
8. 8c	19
9. 152, 45, 44a	69
10. 10 a, b, c	25
11. 47, 46	20
12. 31, 30, 29, 39	83
Total	375

10.3 Tending Operations for 2018 to 2028

Supplementing Natural Regeneration

Helping of stands that are not regenerating to white pine or red oak through under planting with nursery stock will be done in this operating period. GRCA staff will assess various areas throughout the Ganaraska Forest with the objective of determining what areas may need assistance, developing a project proposal to be considered, and following through with the project once it is approved.

Tallgrass Prairie Restoration

There are potential candidate areas for tallgrass prairie restoration within the Ganaraska Forest. Within this operating period these areas will be identified/assessed, budgets developed, and projects approved for a tallgrass prairie restoration.

10.4 Trails and Roads

All new trails and roads that are to be used for forestry purposes will be proposed in the Annual Forestry Operating Plan. Any roads and/or trails that are to be temporarily closed for public safety are to be announced in the Annual Forestry Operating Plan.

10.5 Areas of Concern

The following tables (Tables 8 to 13) outline operation prescriptions for Areas of Concern to be followed during the timeframe of this plan (2018 to 2038) within the Ganaraska Forest. These prescriptions are in addition to details provided in section 6.4. When creating the prescriptions, the following definitions have been provided:

- Harvesting refers to the activities associated with cutting and removing/hauling forest products.
- Renewal refers to the activities associated with regenerating the forest (e.g., tree planting, site preparation, spraying).
- Maintenance refers to the activities associated with sustaining infrastructure (e.g., bridges and roads).
- Access refers to the road and landing infrastructure needed for the harvesting operations.

Table 8: Operational prescriptions for streams, wet areas and marshes

AREA OF CONCERN	PRESCRIPTION			ACCESS
Name/Location/Description	Harvest	Renewal	Maintenance	
Streams, Wet areas, Marshes Reserve widths vary from 10 to 90 m <u>Slope Reserve</u> 0-15% 10 m 16-30% 20 m 31-45% 30 m 46%+ 50 m Or a modified reserve to ensure that the slope and at least 10 m of forested area is protected.	No harvesting within reserve. If patch shelterwood cutting is being done for silvicultural or wildlife reasons, it is to be done in strips or patches outside the reserve at least an additional 10 m beyond the stream reserve.	No herbicide or pesticide spraying within the following distances of water bodies: 30 m of any stream reservation.	Normal maintenance sequence.	No new roads or landings within AOC. No new construction or replacement of stream crossings unless special approval is granted.

Table 9: Operational prescriptions for wetlands

AREA OF CONCERN	PRESCRIPTION			ACCESS
Name/Location/Description	Harvest	Renewal	Maintenance	
Wetlands Reserve of 30 m Modified of 90 m for a total AOC width of 120 m In areas of steep slopes where the wetland boundary is adjacent to fish habitat, the water quality reserve outlined under coldwater/warmwater lakes /streams will apply	No harvesting within reserve. Within the modified area, normal selection and shelterwood systems will be undertaken. No patch shelterwood cutting within the AOC.	Normal silvicultural treatment within the modified area. No aerial or mist blower herbicide application within AOC.	Normal maintenance sequence. No aerial or mist blower herbicide application within AOC.	No new access to be created within AOC except where it can be demonstrated that alternate alignments are not available.

Table 10: Operational prescriptions for deer

AREA OF CONCERN		PRESCRIPTION			ACCESS
Name/Location/Description	Harvest	Renewal	Maintenance		
White-tailed Deer Winter Range General Deer Yard	Harvest in winter when possible to maximize the browse benefit to deer. Encourage oak and beech mast and regeneration. Also, encourage the regeneration of conifer forest types. In areas where pure conifer stands exist ($\geq 70\%$ conifer) harvest 1 to 2 ha blocks of these stands as to maintain at least 80 % crown closure. In the remainder of the conifer areas, maintain at least 20 to 30 % of the conifer area with a residual crown closure of at least 60 %.			Within general deer yard areas, roads are permitted. Specific locations of new or maintenance construction to be approved prior to construction.	
Core Deer Yard	<p>Patch shelterwood cutting of up to 2 ha are encouraged in non-conifer forest types in order to maximize browse availability next to cover.</p> <p>Maintain travel corridors/cover strips between conifer stands</p>	<p>Normal silvicultural treatment sequences.</p> <p>No chemical herbicides used where deciduous food supply is limited.</p>	<p>Normal silvicultural treatment sequences.</p> <p>No chemical herbicides used where deciduous food supply is limited.</p>	Within core deer yard areas, tertiary roads are to be minimized. Secondary roads will be permitted where alternative options do not exist.	

Table 11: Operational prescriptions for raptors

AREA OF CONCERN		PRESCRIPTION			ACCESS
Name/Location/Description	Harvest	Renewal	Maintenance		
No forest operations will take place within the spring and summer period (April 1 st to July 31 st), to ensure that no birds are disturbed during their breeding cycle. Forest operations include harvesting and hauling.					
Nesting Sites	Reserve – no harvest	Reserve - no renewal.	Reserve - no maintenance.		No new access to be created within the Reserve.
	Modified – selection and shelterwood harvesting allowed but not during the breeding cycles.	Modified - Normal silvicultural treatment sequences.	Modified - Normal silvicultural treatment sequences.		No road construction in the modified during the breeding cycle if nests are active.
Osprey	Osprey (nest active within past 5 years) – 150 m Reserve, additional 150 m modified.	No mechanized equipment during the breeding cycle.	No mechanized equipment during the breeding cycle.		Roads within the AOC are not to be used during the breeding cycle unless approval is granted.
Great Blue Heron	Great Blue Heron – 150 m Reserve, additional 150 m modified.				
Bald Eagle	Reserve – no harvest February 15 to March 31 modified 1, March 15 to March 31 modified 2, 100 m Reserve, additional 100 m modified 1, additional 200-400 m modified 2.	Reserve - no renewal	Reserve - no maintenance.		Reserve - no new access to be created.
Active Raptor Nests	Reserve – 300 m normal harvest methods but no during breeding cycle.	Reserve - no renewal except understory prescribed burning may be permitted on a case by case basis.	Reserve - no maintenance treatments.		No new roads or landings permitted within the reserve.
Sharp-shinned Red-tailed Broad-winged Merlin Barred Owl Great Horned Owl Goshawk Coopers Hawk	For Great Horned and Barred Owl no harvesting from February 1 to July 31. Modified reserve - 50 m no cut, additional 100 m modified.	Modified - normal renewal treatments but no heavy equipment to operate during the breeding cycle.	Modified - normal maintenance treatments but no heavy equipment to operate during the breeding cycle.		Tertiary roads are allowed within the modified but no road construction or maintenance is to take place during the breeding cycle.
Inactive Raptor Nests Reserve – one tree length					

Table 12: Operational prescriptions for cultural and historical sites

AREA OF CONCERN Name/Location/Description	PRESCRIPTION			ACCESS
	Harvest	Renewal	Maintenance	
Historical, Archaeological, Cultural and Natural Heritage Sites Reserve – 30 m 90 m – modified harvesting area	No harvesting in the reserve of designated sites unless consistent with resource values as identified.	No treatment within reserve unless consistent with resource values identified.	No treatment within AOC unless consistent with resource values identified.	New roads and landings not permitted within reserve.

Table 13: Operational prescriptions for recreational features

AREA OF CONCERN Name/Location/Description	PRESCRIPTION			ACCESS
	Harvest	Renewal	Maintenance	
Recreation Features Ski Trails Hiking Trails Modified – 30m	No reserve Modified – selection or shelterwood systems including patch shelterwood cutting. Trails to be kept free of debris. Scheduling timing of operations to minimize conflicts.	Normal renewal treatments	Normal maintenance treatments	Old roads and trails to be utilized while maintaining the integrity of the trail network. Crossings permitted at locations where visual impacts are kept minimal and resource values can be protected. Snow banks and earth banks to be levelled at trail crossings to allow passage.

AREA OF CONCERN Name/Location/Description	PRESCRIPTION			ACCESS
	Harvest	Renewal	Maintenance	
Snowmobile Trails and ATV Trails Width of Trail 3 - 7 m Reserve - N/A	Normal silvicultural treatment sequences. Operations to be scheduled to minimize conflicts with user groups.	Normal silvicultural treatments.	Normal silvicultural treatments.	Timing of operations will try to minimize disruptions to the trail system. When this is not possible the following conditions will apply to minimize the impacts: Trail will be kept clear of debris and maintained to the same or better standard than currently. Warning signs to be installed.

10.6 Land Acquisition

Richardson (1944) recommended the establishment of a 20,000 acre forest on marginal and submarginal lands at the north end of the Ganaraska River watershed. Additional lands, especially those that would link current parcels of the Ganaraska Forest and/or contain significant environmental features and functions, may be acquired by the GRCA. This may occur through the purchase of land, donation of land, and acquisition of land rights through instruments such as conservation easements and land use covenants. It is recommended that the Ganaraska Forest land acquisition plan contained in Richardson (1944) be revisited and used and expanded upon to create a GRCA Land Acquisition Strategy.

10.7 Finances

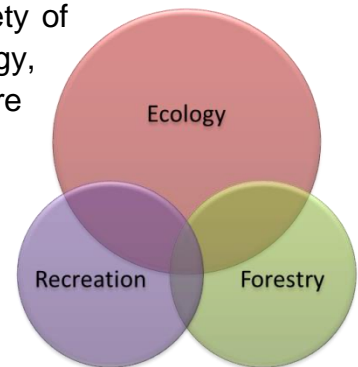
Financial considerations are based upon the following assumptions:

- The market conditions and demand that presently exist for forest products will continue for this operating period.
- There is room within existing markets for small dimension material to be harvested assuming there is a variety of innovative tendering initiatives available.

For this operating period, the average combined tenders for plantation material should be over \$200,000.00 per year. At the end of this operating period, the next set of tenders for the second operating should be reassessed and predictions made on the finances for that operating period.

11.0 MANAGING FOREST INTERACTIONS

The Ganaraska Forest is always changing; there are a variety of factors interacting each day. How interactions between ecology, forestry, and recreation are managed will determine the future of the Ganaraska Forest.



11.1 Managing Interactions between Ecology and Forestry Operations

- Ensure that the diversity of plant species within the Ganaraska Forest is at a minimum maintained and where possible enhanced.
- Ensure that wildlife and their habitats are protected and where possible enhanced.
- Ensure that all water resources are protected during and after harvesting operations.
- Ensure that all identified HCVF areas and Areas of Concern are protected during and after harvesting operations

11.2 Managing Interactions between Ecology and Recreation

- Ensure that all trails and trail-use does not impact the ecological features and functions within the Ganaraska Forest.
- Assess trails to ensure that existing and future trails do not impact ecological features and functions.
- Change trail layout where necessary to ensure that ecological features and functions are protected both in the short and long term.

11.3 Managing Interactions between Forestry Operations and Recreation

- Ensure that there is an open line of communication between GRCA staff, forestry operators and recreational users. In advance of forestry operations adequate notice is given to all trail users and operational area is posted.
- Ensure that no debris from forestry operations is left on trails.
- Ensure that forestry operations adhere to the terms of the harvest contract and that the contracts reflect the value of recreation within the Ganaraska Forest.
- Ensure that the timing of forestry operations adjusts to the seasonal recreational use of the Ganaraska Forest.

12.0 COMMUNICATIONS

12.1 Technical Experts to Advise

A contact list of experts in a variety of fields related to forestry will be developed. If required, advice will be sought on:

- Projects applications to do research on the Ganaraska Forest.
- Projects put forth by GRCA staff members to conduct new environmental projects within the Ganaraska Forest.
- Changes to environmental legislation, species at risk eligibility, and on any other technical or environmental items that could affect the Ganaraska Forest and advise on how these changes may affect GRCA and/or its management of the Ganaraska Forest.
- Ganaraska Forest health issues.
- The protection of values (ecological, recreational, forest management) within the Ganaraska Forest.

12.2 Annual Forestry Operating Plan

An Annual Forestry Operation Plan (AFOP), forestry operations planned for the following operating year (April through to the end of March), will be issued in April of the preceding year. Following internal review by GRCA staff, the AFOP will be released to the GRCA Full Authority Board, general public and the Ganaraska Forest Recreation Users Committee.

12.3 Year End Reporting

Annually the following reports will be produced and provided to the GRCA Full Authority Board outlining the past years operations:

- Report on the previous year's harvesting operations.
- Summary of all cut inspections completed for that year.
- Report on tending and road maintenance projects for the past year.
- Report on any on-going research projects.
- Report on any outbreaks of disease or forest insect pests.

12.4 Dispute Mechanism

Any disputes concerning forestry operations will be referred to GRCA staff dealing directly with the party or parties involved. If the party(ies) is not satisfied with the resolution being proposed, the matter will be referred to the GRCA CAO/Secretary-Treasurer.

13.0 CONCLUSION AND SUMMARY OF RECOMMENDATIONS

The GRCA owns and operates a treasured asset – the Ganaraska Forest. It provides recreation for a wide range of people and provides revenue from a variety of sources to help support all activities within the Ganaraska Forest.

The Forest Management Plan directs and guides forestry activities through operational plans and recommendations for the sustainable use and conservation of the Ganaraska Forest. The forest today was re-instated back in the early 1920's with plantings to help stabilize abandoned fields and an eroding landscape. The plantings were successful and many forest stands are now approaching a late succession stage in their growth. The role of the GRCA, among others, is now to manage all forest stands to ensure that they reach the late succession stage and that the forest is both diverse and healthy and continues to provide support to all its users.

The following is a summary of recommendations grouped by theme (that are not listed in order of priority).

General Recommendation

- Ganaraska Forest will be maintained, enhanced and restored over the long term in recognition of the many ecological, economic and social benefits that the forest provides.

Forestry Operations Recommendations

- Annual harvesting within the Ganaraska Forest will not exceed the estimated annual growth.
- The available annual harvest provides an outline of what the Ganaraska Forest can produce over a 10 year period following the principles of the Plan. This calculation will be done every 10 years.
- The plantation priorities are to ensure that the plantations are healthy and continue to grow and that the average annual harvest is less than 235 ha/year.
- The hardwood stands are managed using the selection and shelterwood harvesting systems and that the average annual harvest level is less than 50 ha/year.
- Clearcutting will only be considered within the Ganaraska Forest, when conditions are such that there is no alternative and the area is small (less than 2 ha) or it is in the best interests for the restoration of a species or group of species that could be at risk (i.e., tallgrass prairie).
- Prescribed burning will not be used within the Ganaraska Forest unless there are special circumstances where burning will be to assist with restoration (e.g., tallgrass prairie).

- Forestry operations will concentrate on ensuring that younger pine plantations are thinned within the first 5 years of the Plan.
- All harvest operations will be monitored at minimum weekly.
- A forestry health monitoring program will be developed that monitors the resource health of the Ganaraska Forest (regeneration, seed quality, and presences of disease and pests).

Ecological Recommendations

- Climate change is real and forest management will aim to understand these changes and adapt to help maintain and improve the species diversity and health of the Ganaraska Forest.
- High Conservation Value Forest areas are important within the Ganaraska Forest and tallgrass prairie restoration and groundwater recharge areas will be supported and protected.
- Candidate ANSI's within the Ganaraska Forest will be considered such that the values upon which the ANSI was defined will be protected and conserved.
- The long term ecological health of the Ganaraska Forest is paramount and all forest management will first consider ecological health in its development and delivery.
- Through the development of specific harvesting prescriptions for each forest compartment, the inventory of the Ganaraska Forest will be continually updated. This work can be expanded to address requirements to understand ecological features and functions within the Ganaraska Forest.
- All research projects have to be approved by the GRCA CAO/Secretary-Treasurer or designate before work commences and a copy of the final report must be provided to GRCA staff.
- All Areas of Concern (AOCs) identified within the Ganaraska Forest will be honoured and protected.
- All invasive plants, forest insects, and diseases will be monitored within the Ganaraska Forest and action taken as required.
- All wildlife values will be protected within the Ganaraska Forest and with wildlife nesting further protected with no harvesting or hauling to occur within the Ganaraska Forest between April 1 and July 31.

Recreational Recommendations

- The Ganaraska Forest Management Plan will support access to the forest by families and individuals recognizing the value of the forest from a human health, wellness and active living perspective.
- The Ganaraska Forest is a multi-use forest and where possible forest management will adjust its prescriptions and operations to ensure that recreation is supported.

- Although the Ganaraska Forest Management Plan is not able to fully address all recreational use opportunities and concerns, it is recommended that GRCA staff continue to work towards a resolution of matters brought forward (see Appendix 5).
- Forestry operations will be integrated into the multi-use program of the Ganaraska Forest and road and trail closures will only be implemented when and if there are public safety concerns.

Educational Recommendations

- Outdoor education is a valued program within the Ganaraska Forest and forest management will support and accommodate Outdoor Education programs whenever possible.
- Increased public education in the Ganaraska Forest will be supported where it does not interfere with the sustainable management of the Ganaraska Forest.
- Educational opportunities associated with sustainable forest management, harvest operations and ecology will be supported.

Administrative Recommendations

- The Annual Forestry Operating Plan for the Ganaraska Forest will be produced one year in advance and will include all proposed forestry operations.
- Annually reports will be produced and provided to the GRCA Full Authority Board outlining the past years operations.
- The Ganaraska Forest land acquisition plan contained in Richardson (1944) will be revisited and used to create a new GRCA Land Acquisition Strategy.
- A list of technical experts will be developed that will advise on a variety of forestry related topics when required.
- Any disputes concerning forestry operations will be referred to GRCA staff dealing directly with the party or parties involved. If the party(ies) is/are not satisfied with the resolution being proposed, the matter will be referred to the CAO/Secretary-Treasurer of the GRCA for resolution.

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15.0 GLOSSARY

Advanced regeneration: trees that have become established naturally under a mature forest canopy and are capable of becoming the next crop after the mature crop is removed.

Age class: one of the intervals into which the range of age classes of trees in a stand are divided into for classification and use. Individual trees measured in diameter at breast height (1.3 m from ground level) and separated as follows: seedlings = tiny sprouts, saplings = 1-9 cm , polewood = 10-25 cm (4-10"), small sawlogs = 26-37 cm (11-15"), medium sawlogs = 38-49 cm (16-20"), large sawlogs = ≥ 50 cm (≥ 21 ").

Allowable cut: the total volume of wood that may be harvested, under management, for a given period.

ANSI - areas of natural and scientific interest: Areas of land and water containing natural landscapes or features that have been identified by the Ontario Ministry of Natural Resources and Forestry as having life science or earth science values related to protection, scientific study or education.

Available annual harvest: the total net area that would be available for harvest (i.e., reductions for items like AOCs) within a year.

Basal area:

- of a tree: the cross-sectional area of the bole of a tree, 1.3 m above the ground. Basal area = diameter of tree (cm) squared, times 0.00007854. (Expressed in m^2).
- of a stand of trees: the sum of all the individual tree basal areas for a given land area. Commonly expressed as m^2/ha .

Biodiversity: the variety and variability (in time and space) among living organisms

Clearcut: an area on which the entire timber stand has been harvested.

Climax Forest: A late successional stage of forest management. The Forest has matured and now contains the final makeup of species and age classes.

Co-dominant trees: trees with crowns forming the general level of the crown cover and receiving full light from above, but comparatively little from the sides; usually with medium size crowns.

Conifer: a tree belonging to the order Coniferae, usually evergreen with cones, needle-shaped leaves and producing wood known commercially as 'softwood.'

Conservation: the wise use of natural renewable resources.

Crown closure: the time at which the available crown space has become fully occupied.

Cutting cycle: the planned interval between major harvesting operations in the same stand. A 20-year cutting cycle indicates a harvest is done once every 20 years.

DBH - diameter at breast height: the diameter of a tree outside of the bark at roughly breast height.

Deciduous: a term applied to trees (commonly broad-leaved trees) that drop all their leaves sometime during the year.

Dominant trees: trees with crowns extending above the general level of the crown cover and receiving full light from above and partly from the side; larger than the average trees in the stand, with crowns well developed.

Ecology: the science that deals with the interaction of plants and animals with their environment.

Ecosystem: a functional unit consisting of all the living organisms (plants, animals and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow.

Fish habitat: spawning grounds and nursery, rearing food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.

Forestry: the science and art of managing a forest and all the resources within that forest.

Forest compartment: A management area of the Ganaraska Forest defined by a division such as a road or lot/concession.

Forest unit: A group of trees defined by the dominant species within that group (e.g., white pine forest unit includes other species such as red pine, and white cedar, but where white pine is the dominant species).

Forest stand: A continuous community of trees uniform in composition that permits delineation from the bordering trees (e.g., age, species and/or grouping of species).

Genetic diversity: the diversity of genes among members of the same species or population.

Hectare (ha): an area measure of 10,000 square meters. Basic unit of land area.

Invasive species: an invasive species is a non-native plant or animal that threatens the survival of native species.

Landscape: all the natural features, such as fields, hills, forests and water that distinguish one part of the Earth's surface from another part.

Natural regeneration: the renewal of a forest stand by natural seeding, sprouting, suckering, or layering of seeds that may be deposited by wind, birds, or, mammals.

Old growth: an older forest that pre dates settlement and shows little or no evidence of human disturbance.

Polewood: trees with a DBH between 10 and 25 cm.

Prescribed burn(ing): the knowledgeable application of fire to a specific unit of land to meet predetermined resource management objectives.

PSW - Provincially Significant Wetland: are those areas identified by the Ministry of Natural Resources and Forestry as being the most valuable determined by a science-based ranking system known as the Ontario Wetland Evaluation System.

Raptor: a bird of prey.

Reforestation: the natural or artificial restocking of an area with forest trees.

Release: freeing a tree or group of trees from competition by cutting or otherwise eliminating growth that is overtopping or closely surrounding them.

Removal cut: one or more cuts in the shelterwood system that releases established seedlings. The last removal cut is called the final removal cut.

Residual basal area: the basal area per hectare of trees left standing after harvest.

Riparian area: the area adjacent to rivers and streams identified by vegetation, wildlife and other qualities unique to these locations.

Selection silvicultural system: a periodic partial-cutting, controlled by basal area, using vigor and risk characteristics to determine individual tree selection. An uneven-aged silvicultural system.

Shade tolerance: the capacity of a tree or plant species to develop and grow in the shade of and in competition with other trees or plants.

Shelterwood: the cutting method that describes the silvicultural system in which, you are managing the shelter or shade within a stand of trees. The present stand is removed in two or more successive shelterwood cuttings. The first cutting is ordinarily the seed cutting, though it may be preceded by a preparatory cutting and the last is the final cutting. Any intervening cutting is termed removal cutting. An even-aged stand results.

Silviculture: the art and science of producing and tending a forest; the theory and practice of controlling forest establishment, composition, growth and quality of forests to achieve the objectives of management.

Tallgrass: native prairie or savanna habitat that is characterized by tall grasses.

Thinning: partial harvesting in an immature stand to increase the growth rate of the leave trees. The goal is to foster quality growth, improve composition, promote sanitation and recover and use material that would otherwise be lost to mortality.

Tolerance: the capacity of a tree or plant to develop and grow in the shade of (and in competition with) other trees or plants; a general term for the relative ability of a species to survive a deficiency of an essential growth requirement (light, moisture, nutrient supply).

Tree marking: selecting and marking trees to be harvested and trees to be left to grow. Selected trees are usually identified with coloured paint on the tree trunk at DBH and at the stump. Normal colours used in Ontario are: orange/yellow for stem removal and blue for retention of residual stems.

Wetland: land that is seasonally or permanently covered by shallow water or land where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favored the dominance of either hydrophytic or water-tolerant plants.

APPENDIX 1: INFLUENTIAL FEDERAL, PROVINCIAL AND MUNICIPAL LEGISLATION

Federal – Fisheries and Oceans Canada

Fisheries and Oceans Canada (DFO) has ultimate responsibility for the management of fisheries resources in Canada. DFO has lead response to potential *Fisheries Act* violations relating to physical fish habitat changes, while Environment Canada maintains its national role in enforcing the pollution prevention provisions in the *Fisheries Act*. Other regulatory functions related to the management of fish populations (such as setting angling limits, fishing seasons and fish stocking) are administered through the Ontario Ministry of Natural Resources and Forestry.

In addition to the above functions, DFO has been given the responsibility for the administration of the federal *Species at Risk Act* (SARA), as it relates to aquatic species. Section 32 of SARA protects the habitat and individuals that are extirpated, endangered or threatened species from negative impacts resulting from human activities or works.

Federal – Environment and Climate Change Canada

Environment and Climate Change Canada (ECCC) has responsibility for the responsibility for the administration of the federal *Species at Risk Act* (SARA), as it relates to terrestrial species. Section 32 of SARA protects the habitat and individuals that are extirpated, endangered or threatened species from negative impacts resulting from human activities or works.

Canada seasonally hosts approximately 450 species of native birds, the majority of which are protected under the *Migratory Birds Convention Act* and are collectively referred to as “migratory birds”. It is the responsibility of ECCC to develop and implement policies and regulations to ensure the protection of migratory birds, their eggs and their nests.

Provincial – Ontario Ministry of Natural Resources and Forestry

The Ontario Ministry of Natural Resources and Forestry (MNRF) is the provincial agency responsible for the protection and management of Ontario’s natural resources. The *Forestry Act* permits the Minister of Natural Resources and Forestry to enter into agreements with owners of land, Conservation Authorities, for the management and improvement of these lands for forestry purposes.

The MNRF has primary administration and enforcement responsibilities for a considerable number of provincial statutes. The *Lakes and Rivers Improvement Act* plays a specific role in contributing to the protection of fish habitat. Other legislation that

considers the protection of habitats includes the *Public Lands Act* and the *Aggregate Resources Act*.

The *Fish and Wildlife Conservation Act* enables the MNR to provide sound management to fish and wildlife. Further to this, the *Endangered Species Act* ensures the conservation, protection, restoration or propagation of flora and fauna species that are threatened with extinction in Ontario.

Provincial - Ontario Ministry of the Environment and Climate Change

The Ontario Ministry of the Environment and Climate Change (MOECC) is the provincial agency responsible for enforcing the *Environmental Protection Act*, *Environmental Assessment Act*, *Pesticide Act*, *Ontario Water Resources Act* and the *Clean Water Act*.

The *Environmental Protection Act* prohibits the discharge of anything that causes or has the potential to cause an adverse environmental effect. The *Environmental Assessment Act* provides for the protection, conservation and best management of the environment.

The *Pesticides Act* and its regulations provide the regulatory framework for pesticide management to protect human health and the natural environment. The MOECC, through the legislation, regulates the sale, use, transportation, storage and disposal of pesticides. The *Ontario Water Resources Act* prohibits the discharge of any substance that may impair the quality of any water. Section 34 of the same Act requires a person to obtain a water taking permit if they are taking more than 50,000 litres of water per day from any watercourse.

The *Clean Water Act* was created to protect municipal drinking water sources (surface water and groundwater) from contamination and overuse, currently and for the future. It was also ensured through the Act that communities are able to identify potential risks to their supply of drinking water and take action to reduce or eliminate these risks on a local scale.

Provincial - Ontario Ministry of Municipal Affairs and Housing

The Ontario Ministry of Municipal Affairs and Housing (MMAH) identifies and protects provincial interests and promotes sound infrastructure planning, environmental protection, economic development and safe communities. To achieve this MMAH is responsible for several statutes that legislate acceptable land use direction in Ontario including the *Planning Act*, *Greenbelt Act* and the *Oak Ridges Moraine Conservation Act*.

The *Planning Act* establishes the foundation for land use planning in Ontario and describes how land uses may be controlled and by whom. To promote provincial interests, such as protecting farmland, natural resources and the environment, the provincial government has released a *Provincial Policy Statement* under the authority of

the *Planning Act*. It provides direction on matters of provincial interest related to land use planning and development, and promotes the provincial “policy-led” planning system.

The *Greenbelt Act* purpose is to protect key environmentally sensitive land and farmlands from urban development and sprawl. The *Oak Ridges Moraine Conservation Plan* governs specific land uses to protect the ecological and hydrological integrity of the Oak Ridges Moraine and to ensure a continuous natural environment for future generations, while providing compatible social and economic opportunities. *The Oak Ridges Moraine Conservation Act* directs municipalities to bring their official plans into conformity with the Plan and to ensure that the decisions they make on development applications conform to the Plan. As such, the Plan will be implemented mainly at the municipal level. However, where municipal official plans or zoning by-laws conflict with the provincial policy, the provincial policy will prevail.

Conservation Authorities

Ontario’s Conservation Authorities are empowered by the *Conservation Authorities Act* to undertake programs to further the conservation, restoration, development and management of natural resources on a watershed basis. The *Conservation Authorities Act* allows for regulations that address the following:

- [Actions that] Pertain to the use of water
- Prohibit or require permission to interfere in any way with the existing channel of a watercourse or wetland
- Prohibit or require a permit to undertake development (construction, structural alterations, grading, filling) in areas where the control of flooding, erosion, dynamic beaches, pollution or the conservation of lands may be affected.

Conservation Authorities have responsibility to participate in aquatic habitat management through the *Conservation Authorities Act*, particularly Section 28. This regulation requires a permit from the Conservation Authority prior to various works taking place (e.g., altering a watercourse, constructing any building in the floodplain or placing fill in a regulated area). Conservation Authorities are also responsible for watershed planning and stewardship and play an important role by providing “first on the scene” support and by referring potential occurrences to primary agencies.

Conservation Areas within the GRCA are regulated under *Ontario Regulation 105*, 1990. This regulation governs activities, animals and vehicles that are allowed within Conservation Areas.

Municipalities

At the municipal level watersheds receive protection through official plan designations and policies, zoning and other by-laws, stormwater management, site plan and subdivision approval, and through development reviews and requirements. Municipalities work closely with local Conservation Authorities through watershed planning, the development of watershed-level fisheries management plans, the plan review process, and through support of Authority policies and programs.

Municipal Official Plans regulate land use in the Ganaraska River watershed under the authority of the *Planning Act*. An official plan sets out local or regional council's policies on how land in a community should be used and developed. It is prepared with input from citizens and helps to ensure that future planning and development will meet the specific needs of the community. The *Provincial Policy Statement* requires that planning decisions (official plans) be consistent with the provincial directives.

APPENDIX 2: MANAGED FOREST TAX INCENTIVE PROGRAM REQUIREMENTS

The following section outlines specific information required for the application to the Managed Forest Tax Incentive Program (MFTIP).

Additions and Changes to the MFTIP program

- Garden Hill Conservation Area – purchased June 1959 (53 acres) and donated May 1967(1.24 acres).
- Ball's Mill Conservation Area – purchased in November 1974 (7.03 acres) and unused road allowance from Township of Hamilton in 1974.
- Ball's Mill Conservation Area – purchased in June 1971(23.19 acres) and purchased in October 1975 (15.67 acres).
- Carr's Marsh – purchased in November 1985 (40.55 acres).
- Administration Office lands – purchased in September 1966 (0.723 acres) and from Province February 1964 (86.27 acres) and (4.42 acres). From Town of Port Hope (9.32 acres- Administration Building lands) in March 1980 and unopened road allowance in July 1975.
- Port Hope Conservation Area – from Province February 1964 included in 86.27 acres.
- Kidd/Berck – donated December 2010 (9.70 acres).
- 14 23 223 060 25200 – this roll number now includes the (5 acres) Railway Right of Way – September 1965.
- 15 09 010 010 11700 – Vanhaverbeke property donated December 2010 (95.74 acres).
- 16 51 008 010 06500 – removed from CLTIP in 2016 (216 acres).
- 18 17 030 040 18500 – purchased May 1964 (15 acres).
- 18 17 030 070 05000 – September 1977 (214 acres) changed from CLTIP in 2016.

Conservation Lands

The following lands will be applied for a change in status from MFTIP lands to Conservation Lands.

Garden Hill Conservation Area: a donated parcel of land with the Garden Hill pond included within the parcel. A small parcel that at one time was a family camping area. Today the parcel houses nature trails and a parking area. Plans are to maintain the walking trails with annual inspections to ensure the small woodlot remains healthy and free of invasive plants and insects.

Balls Mill Conservation Area: a small parcel of land that includes the Mill pond, two parking areas and walking trails throughout the property. A noteworthy British beech (*Fagus sylvatica*) occurs close to one of the parking areas. Plans are to maintain the trails and parking areas.

Carr's Marsh: A remote area of wetlands associated with the Lake Ontario Shoreline. There are currently no recreational facilities, nor are their plans to create trails or parking.

Ganaraska Millennium Conservation Area: An active conservation area that includes a variety of walking trails. Plans would be to maintain and expand the existing trails system to neighbouring walking trails.

Landowner Objectives Specific to MFTIP

1. Environmental protection of all the resources within the Ganaraska Forest
2. Providing for the expansion and growth of the Ganaraska Forest
3. Supporting Recreation within the Ganaraska Forest
4. Revenue from good forestry practices
5. Protecting and reserving the historical and cultural values within the Ganaraska Forest

Priority of Objectives

Management Objective	Importance of the Objective				
	Low				High
Environmental protection					x
Forest products				x	
Investment	x				
Recreation				x	
Wildlife					x
Other: Managing water resources					x

Aquatic and Terrestrial Communities

The aquatic community within the Ganaraska Forest is described in Section 3.7. The Ganaraska River watershed and its abundance of forest cover, supports a healthy coldwater ecosystem, consisting of species such as Brook Trout, Rainbow Trout, Mottled Sculpin, and American Brook Lamprey.

Four fish communities were identified within the Ganaraska River watershed; Rainbow Trout and minnow species, Brown Trout and minnow species, Brown Trout and sculpin,

and Brook Trout and sculpin. Migratory jumping fish are able to access upstream habitat from Lake Ontario through Corbett's Dam fishway.

Wildlife within the Ganaraska Forest is described in Section 3.8. Terrestrial species at risk in or potentially in the GRCA watershed include the following:

Common Name	Latin Name	Provincial Status	Federal Status
Henslow's Sparrow	<i>Ammodramus henslowii</i>	END	END
Short-eared Owl	<i>Asio flammeus</i>	SC	SC
Whip-poor-will	<i>Caprimulgus vociferous</i>	THR	THR
Chimney Swift	<i>Chaetura pelagica</i>	THR	THR
Snapping Turtle	<i>Chelydra serpentine</i>	SC	SC
Black Tern	<i>Chlidonias niger</i>	SC	
Common Nighthawk	<i>Chordeiles minor</i>	SC	THR
Northern Bobwhite	<i>Colinus virginianus</i>	END	END
Eastern Wood Pewee	<i>Contopus virens</i>	SC	SC
Yellow Rail	<i>Coturnicops noveboracensis</i>	SC	SC
Monarch	<i>Danaus plexippus</i>	SC	SC
Cerulean Warbler	<i>Dendroica cerulean</i>	SC	SC
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR
Blanding's Turtle	<i>Emydoidea blandingii</i>	THR	THR
Peregrine Falcon	<i>Falco peregrinus</i>	THR	THR
Northern Map Turtle	<i>Graptemys geographica</i>	SC	SC
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	
Eastern Hog-nosed Snake	<i>Heterodon platyrhinos</i>	THR	THR
Barn Swallow	<i>Hirundo rustica</i>	THR	THR
Wood Thrush	<i>Hylocichla mustelina</i>	SC	THR
Least Bittern	<i>Ixobrychus exilis</i>	THR	THR
Butternut	<i>Juglans cinerea</i>	END	END
Eastern Milk Snake	<i>Lampropeltis Triangulum</i>	SC	SC
Loggerhead Shrike	<i>Lanius ludovicianus</i>	END	END
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	SC	THR
Little Brown Myotis	<i>Myotis lucifugus</i>	END	END
Northern Myotis	<i>Myotis septentrionalis</i>	END	END
American Ginseng	<i>Panax quinquefolius</i>	END	END
Eastern Prairie Fringed Orchid	<i>Platanthera leucophaea</i>	END	END
Western Chorus Frog	<i>Pseudacris triseriata</i>		THR
King Rail	<i>Rallus elegans</i>	END	END
Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR
Northern Ribbonsnake	<i>Thamnophis sauritus</i>	SC	SC
Eastern Musk Turtle	<i>Sturmethernus odoratus</i>	THR	SC
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	SC	THR
Canada Warbler	<i>Wilsonia Canadensis</i>	SC	THR
Hooded Warbler	<i>Wilsonia citrina</i>	SC	THR
Bank Swallow	<i>Riparia riparia</i>	THR	THR
Eastern Small-footed Myotis	<i>Myotis Leibii</i>	END	
Eastern Cougar	<i>Puma concolor</i>	END	

APPENDIX 3: FMP INVENTORY SYSTEM

GRCA staff created a new forest compartment inventory record (Figure A1), which was entered into a database to allow for queries related to various compartment information (Figure A2). This inventory system is adaptable as data collection and query needs evolve during plan implementation.

Field Section 7 *114*

Parcel #: *114a* Comp. #: *114a*
 Cruised by: *Travis* dd/mm/yyyy: *11/11/17*
 Access: *Trail* Roll #: *114a*
 History: *pre-thinning*

Prism Tally: *1* *2* *3* *4* *5* *6* *7* *8* *9* *10*
12 *28*

Species	Age	Height	Diam dbh	POLES (10-24 cm)		SMALL (26-36 cm)		MEDIUM (38-48 cm)		LARGE 50+ CM	
				AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
PW	45	70'	12"								
OR	60+	65'	14"								
OR											
OR											
Total Trees											

of 8" Sawlogs: *20* Hardwood (>30cm dbh): *28* Softwood (>26cm dbh): *28* Utility Poles (see below): *28*

Utility Poles: >33cm dbh (>41" circ @ 6'), <8" knot dia/1' section for <50' pole, <10" knot dia/1' section for <50' pole, straight line through bole

Tree Regeneration Assessment Table: (average dbh less than 10 cm.; opt. if comp. has dbh greater than 10 cm.)
 Note: Quantity *little<10 percent; *some 11-30 percent; *ample 31-60 percent; *heavy>60 percent
 Note: Pattern of distribution *scattered; *uniform; *patchy

Stage of Development	Species	Quantity (percent cover)	Pattern of Distribution
Early (<0.5 m tall)	PW	ample	SC
	OR	some	SC
Advanced (>0.5m tall)	PW	ample	SC
	OR	little	SC

Compartment Information Table:
 Species Composition (%): *PW 40 OR 40* Average Age: *45* Average Height: *70'*
 Basal Area (m²/ha): *20* and/or Tree Density (stems/ha or acre): *28*

Silvicultural Recommendations:
 Rec. System: *Selective Thinning of PWR* Desired Regen: *OR PW*
 Next Harvest: *2017* Regen stage: *seedling*

Figure A1: Inventory Record Sheet

First 10 Years

CompartmentID	WorkingGroup	BA, Brkdn, Total	BA, Brkdn, Pole	SppComp1_Type	SppComp1_Number	SppComp2_Type	SppComp2_Number
23d	White Pine	33	17 Pw		8 Pr		1
136e	White Pine	35	20 Pw		7 Po		2
114a	Red Pine	35	23 Pw		7 Or		2
145a	White Pine	38	18 Pw		8 Mr		2
102d	White Pine	42	42 Pw		10		
125d	White Pine	44	17 Pw		8 Pr		1
144b	White Pine	46	31 Pw		10		
112h	White Pine	47	21 Pw		9 Cb		1
10b	White Pine	50	17 Pw		6 Po		3
14b	White Pine	51.33333333	26 Pw		9 OH		1
14a	White Pine	51.33333333	26 Pw		9 OH		1
13b	White Pine	51.33333333	26 Pw		9 OH		1
D1d	White Pine	54	26 Pw		8 Ab		1
26e	White Pine	76	36 Pw		10		

Second 10 years

CompartmentID	WorkingGroup	BA, Brkdn, Total	BA, Brkdn, Pole	SppComp1_Type	SppComp1_Number	SppComp2_Type	SppComp2_Number
107e	White Pine	23	20 Pw		9		
111h	White Pine	28	10 Pw		7 Bw		1
118a	White Pine	28	18 Pw		8 OH		2
113b	Red Pine	28	17 Pw		7 Pr		2
105b	White Pine	30	10 Pw		8 Pr		2
114d	White Pine	32	11 Pw		7 Pr		3
23d	White Pine	33	17 Pw		8 Pr		1
133c	White Pine	34	13 Pw		8 Po		2
113c	White Pine	34	15 Pw		6 Pr		1
136e	White Pine	35	20 Pw		7 Po		2
114a	Red Pine	35	23 Pw		7 Or		2
117a	White Pine	37	10 Pw		6 Or		2
132c	White Pine	38	14 Pw		9 OH		1
145a	White Pine	38	18 Pw		8 Mr		2
125g	White Pine	40	15 Pw		6 Po		3
129d	Early Successional						
102d	Hardwood	40	11.33333333 Pw		6 Po		2
102d	White Pine	42	42 Pw		10		
110a	Red Pine	42	9.33333333 Pw		6 Pr		2
06b	White Pine	42	12 Pw		6 Mr		2
20c	White Pine	44	12 Pw		7 Po		1
1d	White Pine	44	10 Pw		8 Or		2
19f	White Pine	44	12 Pw		7 Po		1
128e	Red Pine	44	10 Pw		6 Pr		3
125d	White Pine	44	17 Pw		8 Pr		1
19c	White Pine	44.5	10.5 Pw		7 Cb		2
10d	White Pine	44.5	10.5 Pw		7 Cb		2
18c	White Pine	44.5	10.5 Pw		7 Cb		2
144b	White Pine	46	31 Pw		10		
122f	White Pine	46	12 Pw		8 OH		2
122c	White Pine	46	12 Pw		8 OH		2
32b	White Pine	47	10 Pw		6 Pr		3
112h	White Pine	47	21 Pw		9 Cb		1
31h	White Pine	49	13 Pw		7 Or		3
34h	White Pine	50	13 Pw		6 Pr		3
10b	White Pine	50	17 Pw		6 Po		3
13b	White Pine	51.33333333	26 Pw		9 OH		1
14a	White Pine	51.33333333	26 Pw		9 OH		1
14b	White Pine	51.33333333	26 Pw		9 OH		1
47c	White Pine	52	10 Pw		10		
D1d	White Pine	54	26 Pw		8 Ab		1
26e	White Pine	76	36 Pw		10		

Figure A2: Database query example

APPENDIX 4: GENERAL PRESCRIPTIONS FOR THINNING

Plantations

Species presence: red pine, white pine, white spruce, jack pine, scotch pine, larch.

Overall objective: to manage these areas under a uniform shelterwood system with the objective of promoting the health within the plantation and preparing the stand for the regeneration of native species.

A. Red Pine Plantations

Red Pine First Thinning

First thinning usually occurs when the planted area is about 25 to 27 years old and the basal area is over 40 m²/ha. The target residual basal area is between 25 and 28 m²/ha. In general, no more than 40% to 45% of the basal area should be removed from any one thinning, unless in the first thinning the crowns of the residual trees make up more than 25% of the height of the tree. If this is the case then up to 50% of the basal area can be removed in one thinning.

Example:

Initial average basal area across the plantation 62 m²/ha. The target basal area would be 34 to 37 m²/ha.

Harvesting patterns

Two rows left, third row removed (2+1) with selection in the “leave” rows.

- Every third row is removed to provide access to the stand.
- In the “leave” row about 20% of the trees are removed depending on the voids within the stand and the target basal area. The selection would target for removal of smaller suppressed trees; trees with poor crowns; or trees with that would provide space for the dominant and co-dominant trees.

Three rows left, fourth row removed (3+) with selection in the “leave” rows.

- Every fourth row is removed to provide access to the stand.
- In the “leave” row about 30% of the trees are removed depending on the voids within the stand and the target basal area. The selection would target for removal of the smaller suppressed trees; trees with poor crowns; or trees with that would provide space for the dominant and co-dominant trees.

Four rows left and two rows removed (4+2) with selection in the “leave rows”.

- Used where the rows are narrow, less than 6 ft., or where there are large voids within the stand. Selection would concentrate on thinning in the middle rows (rows two and three) and will attempt remove about 30% of the stems. The selection would target for removal of the smaller suppressed trees; trees with poor crowns; or trees with that would provide space for the dominant and co-dominant trees.

Red Pine Second Thinnings

Second thinnings usually occur about 7 to 10 years after the first thinning.

- Target basal area for optimum growth is 25 to 28 m²/ha. Providing half to full crown spacing for each crop tree.
- Generally a plantation should be thinned for the second time when the basal area is greater than 37 m²/ha.
- Harvesting should be based on selection removal, favouring retention of the dominant and co-dominant trees with the better crowns.

Red Pine Third and Fourth Thinnings

- Harvesting is to be based on a shelterwood management system where operations favour the retention of dominant and co-dominant trees with the better crowns.
- Spacing of the residual trees would try to ensure that there is thought given to either the under planting of the area to the next forest (i.e., white pine) or to providing openings within the area to encourage the natural regeneration of native species.
- Special consideration has to be given to the regeneration and maintenance of red pine as a component of the Gananaska Forest. Residual spacing may have to be managed to ensure that there is enough light to support the regeneration of red pine.

Other Pine Plantations:

Plantations showing poor growth and/or quality such as jack pine, scotch pine, and off site plantations of white pine or red pine. Generally within the Gananaska Forest there are very few jack pine and scotch pine plantations that have displayed good growth and form. There are also a number of white pine plantations that have done poorly because of heavy weevil damage in their early years. Poor red pine plantations are usually due to initial planting sites consisting of very sandy areas that are poor in nutrients.

For these plantations it may be necessary to modify the harvesting patterns to 2+2 or 2 +3 row removal. The objective of the harvest would be to salvage some value from the plantation and to use the residual trees to help manage shade to start the next forest.

B. White Pine Plantations

Species presence: white pine, red pine, white spruce, poplar, white birch, balsam fir, red oak, white cedar, hemlock, hard maple, soft maple, basswood.

Overall Objectives:

- To manage the harvest to support the growth and regenerate of white pine under the two or three stage shelterwood management system.
- To harvest in such a way to provide adequate light for the regeneration of target species: white pine, white spruce, red pine and red oak.
- To provide adequate space for the continued growth and development of dominant trees: white pine, white spruce, red pine and red oak.

- To manage the residual shade after harvest to discourage the growth of competing vegetation: poplar, white birch, hazel, dogwood, etc.

Management Guidelines:

- All harvesting to be based on tree marking directions with trees to be cut marked with yellow or trees to be retained marked with blue.
- Harvesting would be based on a shelterwood management system where operations favour the retention of dominant and co-dominant trees with the better crowns.
- Spacing of the residual trees would try to ensure that there is thought given to either the under planting of the area to the next forest (i.e. white pine) or to providing openings within the area to encourage the natural regeneration of native species.
- Special consideration has to be given to the regeneration and maintenance of the diversity within the stand. In natural stands, white pine is not the only species present. Residual spacing may have to be managed to ensure that there is enough light to support the regeneration of other species that require more light like red pine and red oak. This spacing may have to be supplemented with the planting of white spruce, red oak, white cedar and white pine.

APPENDIX 5: TOWARD AN UPDATED GANARASKA FOREST MANAGEMENT PLAN: STAKEHOLDER AND PUBLIC ENGAGEMENT – SYNOPSIS REPORT

MARCH 1, 2017



Photo Credit: Linda Givelas.

TOWARD AN UPDATED GANARASKA FOREST MANAGEMENT PLAN

STAKEHOLDER & PUBLIC ENGAGEMENT - SYNOPSIS REPORT

PREPARED FOR: GANARASKA REGION CONSERVATION AUTHORITY

PREPARED BY: K.R. WIANECKI

PLANNING SOLUTIONS INC.

Ajax, Ontario Canada

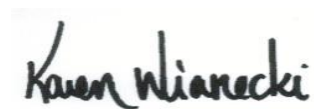
Acknowledgements

I would like to express my thanks to all who took the time to share their ideas and their thoughts throughout the engagement process. I would be particularly remiss if I did not extend a note of gratitude to those who took the time to speak with me directly by telephone as well as forward emails citing their suggestions for the updated Forest Management Plan. To the landowners and neighbours who attended the face-to-face meetings, to those who completed the comment cards (and dropped them off in person or forwarded them electronically to Ganaraska Region Conservation Authority (GRCA)), to those who responded to the survey with their thoughtful suggestions, concerns and advice as well as the forest patrollers, recreational users and interested members of the public, your input has resulted in an extensive volume of insight and wisdom that will be used in the development of a new FMP for the Ganaraska Forest.

While this Report contains a synopsis of the comments that have been received, it must be understood that this is not a verbatim account of the interviews, meetings or the input received through the surveys and comment cards. This Synopsis Report has been prepared to summarize at a high level, the input received and to the range of ideas and suggestions that have been forthcoming. While there are diverging opinions on whether trails should be single purpose or multiple-use, a clear message has emerged: the Ganaraska Forest is a jewel and part of the inherent value is that it is a multi-use forest that supports not only active silviculture but a broad array of motorized and non-motorized recreational activity. Moving forward, it was clear from the input received that the emphasis needs to be first and foremost on the health and sustainability of the forest and to this end, many exceptional suggestions were made about the importance of education, stewardship, effective conflict management, collaboration and partnership. Importantly, respecting the forest, respecting the rights (and the voice) of neighbours and landowners and their quality of life, respecting other uses and users will enable all of us to continue to enjoy this remarkable regional asset for generations to come.

To all who participated in the process, it is my sincere hope that you know how very grateful I am to you for your time, commitment, guidance and safe advice. Last but certainly not least, it is my hope that I have done justice to your suggestions and that this document honours the input that you have taken the time to share with me.

Respectfully Submitted,

A handwritten signature in black ink that reads "Karen Wianecki". The signature is written in a cursive, flowing style.

Karen R. Wianecki
Director of Practice
Planning Solutions Inc.

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Appendices

Appendix A: Face-to-Face Meetings (Agendas)

Appendix B: RUC Terms of Reference

Appendix C: Photo Gallery of Issues (Photo Credit: Dave Grant)

Foreword

Public input and engagement are essential to any plan's success. The Forest Management Plan is no different. Engaging with those who enjoy the forest is fundamental, not only to successful plan implementation but importantly, to successful plan development. Those of us who subscribe to the notion of engagement believe in the power of collective intelligence. Moreover, we believe that there is a vital role to be played by those most directly affected. In the case of the Ganaraska Forest – the largest contiguous block of private forest in southern Ontario – there are many who have an interest in the forest and importantly, there are many who enjoy different aspects of the forest, in different ways. Effective engagement and plan development must be premised on the notion that the voices of all must be heard and critically, that the suggestions offered and the input shared must be used to shape the Plan.

This is a Synopsis Report that highlights the engagement process and importantly, the guidance and advice that has been forthcoming from members of the Ganaraska Forest community. Developed as a stand-alone document, this Synopsis Report should be viewed as a companion document to the Forest Management Plan, once the updated Plan has been developed and approved by the GRCA Board of Directors.

The development of a new Ganaraska Forest Management Plan supports the Managed Forest Tax Incentive Program (MFTIP). It is approved by the GRCA Board of Directors. The intent and purpose of this Synopsis Report is to support the development of a new updated Forest Management Plan for the Ganaraska Forest. By developing this companion document, the reader will be able to understand the perspectives of those who participated in the plan's development and importantly, will be able to discern how their input has been used to shape the final document. As such, this Synopsis Report will be used by the author(s) of the Ganaraska Forest Management Plan to develop elements of the policy direction and approach for the forest.

This is an important document as it provides a formal record of the comments received and early input provided by a range of stakeholders, individuals and organizations including landowners, business operators, recreational users, and forest patrollers. This Report is not as a verbatim record of the input received from all sources, but rather a synopsis or summary document that highlights key points of convergence as well as areas where opinions and perspectives varied. The Report also includes a reference to the issues raised that were beyond the scope of the Forest Management Plan but that play an important role in the effective ongoing management of the Ganaraska Forest and, in varying degrees, to the successful implementation of the Forest Management Plan.

Executive Summary: Key Findings & Recommendations

The Ganaraska Forest is not your ordinary forest. It is, as many have stated, a gem – a jewel in southern Ontario. It is a unique and special place that is enjoyed by hikers and mountain bikers, dirtbikers, cross-country skiing and snowshoe enthusiasts, photographers and those who appreciate and enjoy nature as well as horseback riders, members of the ATV community, adjacent neighbours and visitors from away.

The Ganaraska Region Conservation Authority (GRCA) manages the 12,000 acres (48.5 km²) that comprise the Ganaraska Forest – southern Ontario's largest contiguous block of forested land. The most recent Forest Management Plan (FMP) expires on December 31, 2017.

A new Forest Management Plan is needed to support Forest Stewardship Council (FSC) certification and importantly, to ensure that the Ganaraska Region Conservation Authority adheres to the requirements of (and remains eligible to benefit from) the Ontario Managed Forest Tax Incentive Program (MFTIP). Given the nineteen years that have passed since the FMP was initially prepared, a new FMP is also needed to address a number of gaps in the previous plan.

The new FMP for the Ganaraska Forest will be developed by relying in part on the advice and guidance contained in this Synopsis Report. This Report will be used to provide GRCA staff who are responsible for writing the Ganaraska Forest Management Plan with important community and stakeholder insight about the issues, challenges and opportunities facing the Ganaraska Forest. This Report will also provide important direction for the plan author(s) concerning the inclusion of forest management practices that promote the safe and sustainable enjoyment of the Ganaraska Forest for generations to come.

At the outset, an unwavering commitment was made to engage those most directly affected. The engagement process was managed by a Steering Committee consisting of GRCA staff and a consultant specializing in stakeholder and community relations. A multi-modal approach to engagement was developed and a focused but flexible approach was implemented. The engagement process was iterative and evolutionary and a number of changes in approach were made during the process, largely in response to the interests and suggestions of community members and organized stakeholders. More than 1,300 individuals participated in the early stages of the plan development by: completing on-line surveys, participating in face-to-face meetings, completing comment cards and providing direct input via email to GRCA and/or the consultant.

The engagement included landowners and neighbours, members of the GRCA Recreational Users Committee (RUC) as well as other recreational users (both motorized and non-motorized recreational users), forest patrollers and interested members of the public as a whole. All meetings were convened during the month of November 2016, with the first meeting held on November 2nd and the last public meeting held on November 22nd. Comment cards were distributed to 200 landowners, distributed personally to forest users by Forest Patrollers, uploaded electronically to the Ganaraska Forest Centre/GRCA website for easy download and shared across social media platforms. An electronic survey was developed and remained open throughout October, November and December. The e-survey closed on January 1st, 2017. Regular newsletters were issued to keep interested parties apprised of progress and these were uploaded to the website for ready access and easy download, and were also shared on social media.

In few words, the process was well received and generated an outpouring of interest from landowners, recreational users in particular, forest patrollers as well as members of the public.

The views expressed were diverse but many common messages emerged. Some of the more salient messages that emerged during the engagement process included the following:

1. The Ganaraska Forest is a special place, unlike any other. It is the largest contiguous forest in southern Ontario and it needs to be valued and cared for. Our vision needs to put the forest first.
2. This is a multi-use forest and the principle of **responsible multiple use and experience** needs to continue. The forest however also needs to be multi-generational – experienced by a dynamic demographic and available not only for our children and grandchildren but their children and grandchildren.
3. Shared use has tremendous benefits. This is about relationship building. We need to find better ways to work together.
4. At the same time, we need to find ways to address forest use quality of life and property enjoyment issues for all of us.
5. Greater emphasis on enforcement is needed to ensure that use of the forest is sustainable and responsible. Use technology to advantage (e.g. drones for surveillance). Stronger enforcement – work with the OPP and Durham Police to develop a consistent Enforcement Strategy.
6. There is a tremendous opportunity to capitalize on partnerships as a way of building capacity across the forest (e.g. trail signage, maintenance). Build a community of practice among volunteers. More partnerships and more empowerment of volunteers to help.
7. More education and awareness of the importance of respectful and responsible use. Rely on the forest to promote the philosophy of ecological literacy – this is our ecological legacy – we all have a role to protect it.
8. There are issues that need to be addressed that are beyond the scope of the Forest Management Plan. These include the following:
 - Landowners need to have a voice in the management of the forest and forest use. Landowners need to have a voice that is heard by the GRCA Board of Directors.
 - The interests of a broader array of recreational users need to be taken into account as use is increasing but so too are the types of users (different equipment, etc. not seen in the forest before).
 - The mandate and terms of reference for the Recreational Users Committee (RUC) are outdated and need to be revisited. Better alignment with the GRCA Board of Directors is needed.

- The GRCA Board of Directors should tour the Ganaraska Forest to see first-hand what the issues area. (Note: this tour took place on Sunday, November 20th, 2016.)
 - The commitment and capacity to implement the FMP is critical
9. Investing in ongoing and regular trail maintenance needs to be a focus moving forward, particularly in the West Forest. Better signage is also needed.
 10. A more formal mechanism for resolving conflicts is needed. Consider a code of conduct for all users and a mediation process that first empower users to work together to resolve issues.
 11. Champions and advocates for the Ganaraska Forest are needed. Consider trail captains and/or other opportunities to build partnerships, enhance capacity and promote forest advocacy through collaboration.
 12. A common vision and a set of broadly supported management goals are needed.
 13. Broad consensus for many of the details and recommendations around trail standards, use and management as articulated in the 1997 Marsh Report (A Ganaraska Forest Trails Project).
 14. Ensure that policies developed in the Plan do not produce unintended consequences.

Perhaps most importantly, we heard that collectively there is a solid base of community support to manage the Ganaraska Forest sustainably. The Ganaraska is not your ordinary forest. It is a gem, a jewel of southern Ontario that remains unique and special. It is a place that needs to be part of our future and the new Forest Management Plan needs to put the interests of the forest and the sustainable management of this special place front and centre.

Public interests and concerns play an important role in the decision-making process. Public input and engagement are essential to any plan's success.

1.0 Introduction

1.1 Background and Context

The Gananaraska Region Conservation Authority manages the 12,000 acres (48.5 km²) that comprise the Gananaraska Forest – southern Ontario's largest contiguous block of forested land.

A new Forest Management Plan is needed to support Forest Stewardship Council (FSC) certification and importantly, to ensure that the Gananaraska Region Conservation Authority (GRCA) adheres to the requirements of (and remains eligible to benefit from) the Ontario Managed Forest Tax Incentive Program (MFTIP). Given the nineteen years that have passed since the FMP was initially prepared, a new FMP is also needed address a number of gaps in the previous plan.

The current Gananaraska Forest Management Plan was prepared in 1998 and has a sunset date of December 31, 2017. A new plan must be prepared to guide the future management of the Gananaraska Forest from January 1, 2018 until December 31, 2027.

In the nineteen (19) years since the original Forest Management Plan was prepared, there have been seismic changes in forest management planning in Ontario. Over the past two decades, forest management planning in Ontario has evolved from managing for timber, to managing the forest for all values. Traditionally, forests were viewed (and managed) for their economic values: timber, maple syrup, game. Such values could be easily and readily quantified. Today, particularly in the urbanized Greater Toronto Area, forests are now understood to be valued in terms of the ecosystem services that they provide. These intrinsic and perhaps less tangible benefits associated with our forests include their ability to enhance ecological resilience by buffering noise, cleaning the air, moderating temperature and wind and providing shade and supporting passive and active recreational opportunities. Forests also help to define our settlement fabric. They are frequently special spaces and places to which we are drawn and they include aesthetically pleasing views and vistas and frequently, offer a respite from the frantic pace of urban living. Forests, like green spaces in general, support the conservation of biodiversity and as a result, support healthy populations and healthy communities. The benefits of forests are becoming increasingly evident and there are many studies that document the connection between green spaces and human health and well-being. In few words, forests in general and the Gananaraska Forest in particular, offers multiple tangible and intangible benefits and thus, the management of the Gananaraska Forest must take into account the important economic returns that accrue from following good forest management practices but also the many social, cultural, spiritual and ecological benefits that derive from the forest.

1.2 The Engagement Process

Like other forest management plans, the new Forest Management Plan for the Ganaraska Forest must follow a prescribed process and importantly, must be written by a Registered Professional Forester and submitted to the Ontario Ministry of Natural Resources & Forestry for approval. The Plan, once developed, will enable landowners who are good stewards of their forested property to secure a reduction in property taxes under the Ontario Managed Forest Tax Incentive Program (MFTIP) by recognizing the value of the forest and the importance of tax and other incentives that support effective environmental decision making, resource management and stewardship. For these reasons, it is imperative that forest management planning be premised on a solid base of science and public/stakeholder engagement. Engaging those who are interested in and importantly, affected by forest management policies and practices must be considered as a fundamental first step in plan development; but designing an effective engagement process is just the beginning. Valuing the input received and moreover, weaving the input received into the fabric of the Forest Management Plan is the real key. Inclusion – of people and ideas – instils trust and confidence and importantly, creates meaning and shared purpose.

It was against this backdrop of meaningful engagement that the Ganaraska Region Conservation Authority retained the services of a professional facilitator to assist in designing an approach that would support meaningful input for those interested in the management, use and enjoyment of the Ganaraska Forest. The GRCA also established a Steering Committee consisting of the Consultant, CAO/Secretary Treasurer, Ganaraska Forester, Forest Recreation Technician, GRCA Marketing & Communications Officer and at the beginning of 2017, the Director, Watershed Services joined the Steering Committee to assist during the transition from one Registered Professional Forester to another.

From the outset, GRCA acknowledged that ‘process is as important as product’ and set out to ensure that the process was inclusive, iterative, and adaptive. The following fundamentals framed the process from the outset:

- There was an unwavering commitment to work with constituents to develop a plan for the Ganaraska Forest and to consider the perspectives and insights of all.
- There was an emphasis on equitable and inclusive engagement and early involvement, well before any plan was developed or initial plan principles were conceived.
- There was a commitment to provide multiple opportunities to share input and suggestions, including direct face-to-face meetings and workshops as well as digital surveys and the completion of comment card templates both in hard copy and in electronic format.



From the outset, there was a recognition that:

- ✓ **Process Is As Important As Product**
- ✓ None of us have all of the answers but...all of us have some of the answers
- ✓ **This is an exercise that focuses on developing input into a new Plan but it is also an opportunity to advance ‘community building’**
 - Community-based planning
 - Collaborative visioning and priority setting
 - Collective ownership

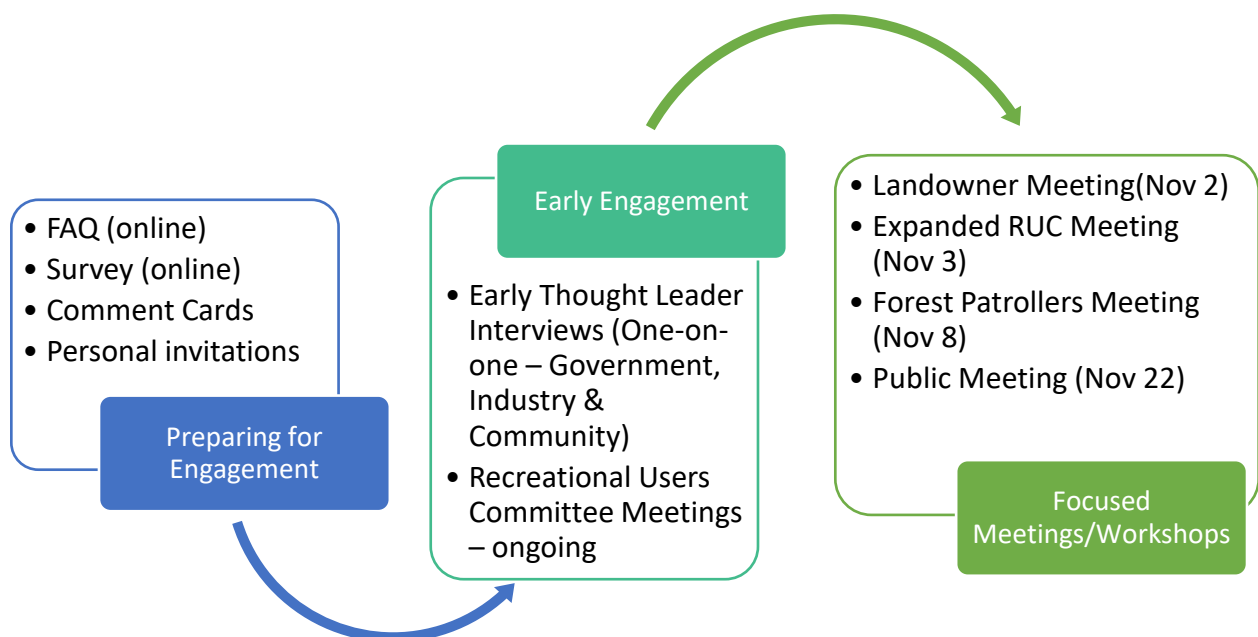
In developing the engagement approach, it was agreed by the Steering Committee that the process would be:

- Logical
- Straightforward
- Evolutionary and iterative
- Focused but managed
- Innovative and creative; and finally
- Multi-dimensional and multi-modal



From GRCA's perspective, the process needed to support meaningful engagement but it also needed to inspire confidence in the product that would emerge. For this reason, an effective, valued and valuable forest management planning process was viewed as an important initial project deliverable. A decision was made at the outset to ensure that GRCA 'cast a wide net' in considering who should be engaged and how.

The forest management planning process was designed based on an iterative three-stage process, as follows:



To set the stage for effective and productive engagement, several documents were prepared by GRCA at the outset of the process including the development of a Frequently Asked Questions (FAQ) document and the development of an initial Community Survey. An electronic newsletter was also developed and several newsletter updates were prepared as the process unfolded. The distribution of regular newsletters was well received by community members and the only

suggestion through the engagement process was the value of distributing more newsletters at regular intervals (e.g. monthly rather than a key milestone dates.)

The proposed approach was shared first with the members of the Recreational Users Committee (RUC) and then with landowners, an expanded recreational users group, forest patrollers and finally with members of the public. This logical, iterative approach proved particularly beneficial as the RUC made a number of important suggestions and observations not the least of which included the value of convening a landowner and neighbor meeting early in the process and convening a second meeting of the recreational use community to include a broader diversity of recreational interests.

Participants were invited to share their ideas for making the process even more valuable, robust and relevant. Several process-related refinements were suggested and these included the following:

- Ensure that the process recognizes the value of engaging landowners and adjacent neighbours at the outset of the forest management planning process;
- Engage with a wider recreational audience than that which is provided through the GRCA's Recreational Users Committee, as there are users and uses that are not represented on the RUC and their voices need to be heard;
- Ensure that the process provides opportunity for comments to be provided in both written/hard form as well as in electronic format;
- Follow up and follow through. Ensure that the process honours the input by building in appropriate feedback loops and follow up sessions to demonstrate how input has helped to shape the plan – show us how our suggestions have been used to develop the document;
- Ensure that the process not only engages community members and stakeholders but that Board Members attend to hear the concerns of the community first-hand;
- Ensure that the process includes a site visit for Board Members to be able to see the forest 'up close and personal'. The site visit should be convened as soon as possible to ensure that all who be approving the FMP have a solid understanding of the issues facing the Ganaraska Forest; and
- Ensure that those who are interested are provided with an opportunity to see a draft of the Forest Management Plan before it proceeds to the GRCA Board of Directors for approval; and last but certainly not least;
- Ensure that the process acknowledges the range of issues that are raised including those that may extend beyond the scope of the FMP, including issues of governance, the composition of the Recreational Users Committee and the active involvement of landowners in the long-term management of the Ganaraska Forest.

In each instance, changes were made to the process to reflect the suggestions offered:

- The process commenced with a landowner meeting on November 2nd and more than 100 individuals attended the session;
- Meetings were convened with members of the Recreational Users Committee on November 3rd, 2016 and a meeting was held with broader, more diverse recreational interests on November 3rd, 2016. A Forest Patrollers Meeting was held on November 8th, 2016;

- Comment cards were hand delivered by GRCA to adjacent property owners as well as being uploaded to the GRCA website for easy electronic access and download;
- A commitment was made to share the Synopsis Report as well as the draft Forest Management Plan and GRCA staff also committed to issuing regular status updates using the Newsletter format to keep interested parties engaged and informed;
- Board Members were invited to attend the meetings and some Members actively attended some of the Meetings
- A site visit was arranged for November 20th, 2016 and six (6) Full Authority Board Members attended along with the members of the FMP Steering Committee. The site visit commenced at the Ganaraska Forest Centre and continued to the Dell and on to the grassy triangle. The tour included a visit to West Forest 16, West Forest 18 and Lookout Hill, West Forest 11, West Forest 4 to the closed parking lot at P4 and then back to West Forest 11 to West Forest 7 and West Forest 9. The site visit concluded back at the Ganaraska Forest Centre.

2.0 What We Heard: A Summary of the Input Received

Perhaps it is because of a broader recognition that human health is closely tied to the health of the environment or perhaps it is an enlightenment that has emerged in response to a growing public environmental consciousness but whatever the reason, large tracts of forest reserves like the Ganaraska generate tremendous enjoyment and use. The management of a forest such as the Ganaraska similarly generates considerable interest from a diverse array of interested parties.

This Chapter highlights some of the general comments and observations about the Ganaraska Forest that were shared by landowners and adjacent neighbours, recreational users, forest patrollers and interested members of the broader Ganaraska community.

2.1 General Comments & Observations: Common Concerns & An Alignment of Thinking on Critical Issues

The Ganaraska Forest is a special place that is valued by and valuable to many:

- landowners and adjacent neighbours value the quality of life that living next to this unique area offers;
- passive and active recreational users value the many different experiences that the forest supports and provides;
- business owners and operators value the social, cultural, and economic benefits that are derived from the forest;
- others, nemophilists¹ among them, enjoy a range of values including the spiritual, socio-cultural, and ecological benefits associated with the forest.

Those who enjoy the Ganaraska Forest are in agreement that this area is singularly unique, a jewel of southern Ontario and while there are some who support more restricted access to and use of the forest, the majority of those engaged in the process support maintaining the Ganaraska Forest as a multi-use forest. Many were

¹ According to Webster's Revised Unabridged Dictionary, a Nemophilist is 'one who is fond of forest or forest scenery; a haunter of the woods.'

MAINTAIN THE GANARASKA AS A MULTI-PURPOSE AND MULTI-USE FOREST

The focus of the new Forest Management Plan needs to be on the forest directly.

The Ganaraska Forest is singularly unique and special. It needs to be sustainably managed and protected for the next generations who will come to enjoy all that it has to offer.

The Ganaraska Forest is facing increased use because the population is growing, the accessibility of the forest has improved as a result of Highway 407 and there are only a small number of multi-use forests in all of southern Ontario.

The uses in the forest are changing as a result of new technology and new users.

The forest is fragile; there is a need to ensure that it is managed sustainably and protected so that future generations can continue to enjoy the benefits that it offers.

This is not about using the forest; it is about caring for and protecting the forest.

It is important to listen to and carefully consider the perspectives of all.



strongly opposed to any form of restricted access, particularly for motorized recreational use.

For many, the most critical issue facing the Ganaraska Forest is the potential for **overuse**. This potential for overuse is the result of a number of important facts:

- more people live in southern Ontario and the numbers are continuing to grow;
- the Ganaraska Forest is more accessible as a result of the 407 construction;
- there are fewer green places and open spaces within an easy commute of the Greater Toronto Area;
- the number of multi-use recreational forests in Ontario has declined and the Ganaraska is seeing increased use as a result
- a decline in the number of open spaces and green spaces in the Greater Golden Horseshoe (making the Ganaraska even more attractive) as well as the introduction of new technologies that support not only new uses but new users emphasis of the FMP needs to focus critically on the sustainability of the forest.

2.2 Early Thought Leader Interviews

At the start of the engagement process, GRCA developed a list of ‘Early Thought Leaders’ – individuals who have worked closely with GRCA and who are strategic, visionary and insightful in their own right. Drawing from three spheres – Government, Industry and Community – eleven (11) individuals were invited to participate in a one-on-one interview with the consultant. A total of six questions were used to frame the interviews:

1. What is your vision for the Ganaraska Forest?
2. What has changed in the last five years that would suggest we need to focus on a renewed set of forest management planning priorities?
3. What are the key issues that you believe the updated Forest Management Plan should address?
4. How in your view can these issues be addressed?
5. If you had one big idea for the new Forest Management Plan, what would that one big idea be?
6. Any additional comments, thoughts or suggestions?

The individual one-on-one interviews were confidential and the results of the interviews have been assessed and summarized without attribution.

Vision for the Ganaraska Forest:

- Keep the forest the way it is
- Don't lose any uses
- Promote responsible resource use and conservation
- “We need a plan for sustainable management of the forest”
- Retain the multi-use focus now and into the future
- Preservation is critical
- A place where recreation and silviculture are practices in an economically and environmentally sustainable manner
- Emphasis on quality trails, stewardship and restoration
- Stronger emphasis on collaboration between user groups and partnerships

Changes in the last five years

- Uses and users have increased

- Increase in population
- Decrease in open spaces
- Greater access to the forest as a result of infrastructure improvements

Key Issues to be addressed in the new Plan:

- Funding for recreational use of the forest – more staff and more funding is needed
- More enforcement; a stronger police presence and more consistent enforcement across the forest; more patrollers with greater authority to take action (Forest Patrollers need to be more than Ambassadors of the Forest)²
- Address the multiple points of entry
- Address environmental degradation
 - Erosion and sedimentation
 - Invasive species in general and dog strangling vine in particular
 - Noise
- More investment in the forest (trail grooming, etc.); better quality trails (quality over quantity)
- Trail damage, trail safety, transition policies for trail renewal
- More public education and stronger stewardship role
- Managing user expectations
- Increases in user fees
- Decision making transparency - providing justification regarding the allocation of fees – demonstrating clearly how the monies collected have been used to benefit the forest
- Logging practices
- Effectiveness of the Recreational Users Committee and the governance model generally

How to address the key issues:

- Cap the number of users; consider quotas to ensure carrying capacity of the forest is not impacted negatively
- Better signage and wayfinding throughout the forest
- Updated mapping
- More transparency in decision making by GRCA (how fees are used to improve and enhance the forest, etc.)
- More enforcement and consistent enforcement
- Impose noise restrictions (e.g. require electronic bikes and/or vehicle inspections)
- Require all users to participate in 'Trail Etiquette' training
- Commit to implementation and allocation of resources over the short and long term
- Consider the 'good practices' from other jurisdictions (e.g. Vermont)
- Foster an environment that supports and encourages voluntarism; consider opportunities to partner with the community on issues such as trail maintenance and management and monitoring
- Revisit the Recreational Users Committee Terms of Reference
- Include a section in the new FMP to address the issues and interests, role and responsibilities of commercial users of the forest
- Include a section in the new FMP to address landowner and adjacent neighbor concerns and interests
- Include a more formal mechanism to address intra and inter-use conflicts

² At the present time, the Ontario Provincial Police police the East and Central forests and Durham Regional Police are responsible for enforcement in the West Forest.

Big Ideas for the Plan:

- Make the Ganaraska Forest a 'destination draw'
- Promote the Ganaraska as a community asset
- Make the forest better, stronger; enhance what we already have
- Strengthen the role of the Recreational Users Committee (RUC) and create a stronger alignment with GRCA Board of Directors and decision makers – take RUC recommendations to heart
- Build on applicable and appropriate best practices from around the globe – make the Ganaraska an even brighter jewel than it is currently
- More direct and active engagement by user groups
- Base the new Plan on a model of shared and collaborative decision making
- Create a Forest Refurbishment Foundation for recreational purposes; work with the community to seek community-based funding and promote forest betterment
- Give a voice to landowners
- A community based model of governance is needed – More engagement by landowners and support from an array of users. "Staff need to conduct the orchestra and the orchestra is comprised of community members."
- Tie the new FMP to a Trail Symposium to bring 'thought leaders' together and showcase/profile the great work that is underway to improve the forest.

Many important messages emerged from the Early Thought Leaders. These included the following:

Key Messages from Early Thought Leaders

The Ganaraska Forest must remain as a sustainable, multi-purpose and multi-use forest. It is a stabilizing influence on the land.

Promote responsible resource use and conservation.

GRCA needs to encourage sustainable forest management and the new FMP needs to integrate timber production with the environmental, socio-cultural, spiritual and recreational benefits sought by society as a whole.

The Forest Management Plan needs to address existing but also emerging issues.

The key to preserving the forest and managing the forest sustainably is to create a personal connection to the forest so that it becomes 'part of who we all are.'

The objective of the Forest Management Plan should be to maintain the forest as a sound ecosystem.

Developing the Plan is important but implementing the Plan is critical. A resourcing commitment (funding and staffing) is needed.

There are different demands placed on the forest. Education and engagement is critical from the perspective of plan development but also forest management and use.

Focus first and foremost on the viability and sustainability of the forest.

2.3 Comment Card Responses

In an effort to encourage input from those who live adjacent to the Ganaraska Forest, GRCA hand-delivered comment cards to more than 200 individual properties located around the perimeter of the Ganaraska Forest. Hard copies of the comment cards were made available at the Ganaraska Forest Centre, Ganaraska Forest Centre Gatehouse, at Main Office and were also personally distributed to users in the forest by Forest Patrollers. In addition, an electronic version of the comment card template was also uploaded to the GRCA website for ready access and submission to the GRCA.

In total, almost 100 comment cards were received from both members of the Ganaraska Forest as well as non-members. Many comments that were shared focused on the need to maintain a healthy, natural ecosystem and to promote sustainable forest harvest management as well as public access to the forest. Making recreational use more of a priority with proper funding for forest staff, equipment, signage, up-to-date maps and digital trail maps for cell phone access, electronic day passes and increased police patrols were also referenced by many who took the time to share their thoughts. The ecology of the forest and ensuring forest sustainability was also referenced by many who noted the importance of protecting sources of water and addressing erosion as well as preserving habitat and wildlife in the West Forest and elsewhere. Addressing invasive plant species was also noted with reference to the proliferation of dog strangling vine in particular.

Concerns with trail reconstruction, road grading, maintenance and enforcement were top of mind. Indiscriminate building of new trails up the face of steep hills in the forest was also raised and Lookout Hill and Thorpe Hill were offered as two examples where erosion is particularly concerning. Many suggestions were made around trail maintenance and the importance of promoting collaboration between user groups and strengthening partnerships between GRCA and those who enjoy the forest. A number of excellent sign-specific suggestions were made for colour coding trails and there was a suggestion made to learn from other jurisdictions about the trail marking systems that they have used – Dufferin/Simcoe forest in particular was referenced. Better in-forest mapping was suggested along with “You Are Here” signs on trail maps.

Concerns were expressed about the impact of motorized use and also the impact of logging, particularly in the West Forest. There were some who suggested that ATVs and motorcycles should be banned from the forest or that they should be restricted to a limited part of the West Forest so other passive use users can enjoy the trails. While these divergent views were expressed, they were not expressed by the majority who supported the notion of multi-use trails and a multi-purpose forest.

There were a number of issues raised in relation to fees. Some suggested that there should be reduced fees for seniors. Reference was made by some to the fact that many hiking areas are free and that GRCA should consider cancelling fees for hikers to promote consistency. The issue of connectivity to other green spaces and places was also mentioned as was the need to consider not only the Ganaraska Forest as a natural refuge for people to enjoy nature, but the inherent benefits that connected corridors of green offer to wildlife.

The issue of public education, engaging with volunteers and promoting a stewardship culture were suggestions that came from those who took the time to share their thoughts through the comment cards.

Comment Card Key Messages

Expand the boundaries of the forest to meet the original goal set in the 1944 Ganaraska Watershed report for the establishment of a 20,000 acre forest...It is critical to expand the forest now before the 407 and the pressures of the PPS (Provincial Policy Statement) increase exploitation of surrounding lands.

Better engagement and education with surrounding landowners.

Continue all user groups.

Better interaction between user groups.

Power returned back to the Ganaraska Forest User Group Committee.

Improve communications between user groups.

Maintain and preserve multi-use trails.

Educating users, preventing conflict, allowing equal access to all user groups.

Separate motorized/non-motorized corridors.

Single track trails for off-road motorcycles.

One way trails where possible.

Keep the trails safe for all users.

Enforce user rules (permits, sound, speed).

Make recreational use a priority and establish a communication and collaboration process that supports protection and enjoyment of the forest.

Consider a climate change adaptation demonstration project in the forest such as an assisted tree migration trial.

Complete reassessment/realignment of user fees and how they are managed. Significantly reduce user fees for organizations that have land use agreements.

Connect the forest to become a larger block such as the private Haliburton Forest. Use their model so as to become more self-sustaining.

Maintain trails for horseback riders.

Consider passive use of the forest. Introduce eco-tourism (e.g. horse camping sites.)

Increase the forest's profile as a destination for athletics. Add an online purchasing system for permits.

Make recreational use more of a priority with proper funding for forest staff, equipment, signage, up to date maps, digital trail maps for cell phones, electronic day passes, increased police patrols.

More amenities for users (e.g. picnic sites, park benches, hitching rails, improved signage).

Securing corridors for wildlife to Lake Ontario and other regional forests.

Set a length of term requirement for the Recreational Users Committee and the Board.

2.4 Electronic Survey Response

In total, 733 responses were received to the online survey. Of those who responded:

- 88.78% were familiar with the Gananaska Forest;
- 10.26% were 'somewhat familiar' with the Gananaska Forest; and
- .96% were not familiar with the Gananaska Forest.

Interestingly, only 15.73% of those who responded were landowners/residents living in or near the Gananaska Forest; 84.27% were not. Just over 65% indicated they were not members of the Gananaska Forest with 94.52% identifying themselves as recreational users of the forest. The following chart summarizes the responses received by recreational user group:

Primary Recreational Use	Total Number of Responses	Percentage of Total
Motorized Use (ATV, Dirk Biking, Snowmobiling)	549	75.62
Horseback Riding	72	9.92
Mountain Biking	56	7.71
Hiking	24	3.31%
Cross-Country Skiing	10	1.38
Hunting	8	1.10
Nature Appreciation	6	.83
Snowshoeing	1	.14%
Total	726	100%

Of those who responded, 70.22% indicated they were not familiar with the Gananaska Forest Management Plan. One of the most commonly referenced issues cited in the survey responses (perhaps a result of the large number of responses received from the motorized recreational use community) is the need to ensure continued access for recreational vehicle use. Respondents however, suggested there were several key issues facing the Gananaska Forest, including:

General Issues:

- User conflicts
- Lack of enforcement

Environmental/Ecological Issues:

- Deterioration of trails from overuse and pollution and from logging
- Lack of maintenance
- Sustainability and access
- Diverging interests (biodiversity versus recreational management)
- Climate change
- Conflict with surrounding land uses
- Effective noise control
- Erosion
- Better signage is needed
- Control of invasive species (e.g. dog strangling vine)
- Management of poison ivy

- Illegal dumping

Economic Issues:

- Rising membership costs
- Remaining financially stable

Social/Cultural Issues:

- Mechanism to address conflicts between user groups
- Better engagement of landowners and community members
- Need to include all users of the forest
- User safety

Electronic Survey - Notable Notes & Quotable Quotes...

“To ensure that the forest is utilized as a multi-use area and respected by its users.”

“Increasing pressure from multiple users. Sustaining and protecting forest to allow all, whether by foot, horseback, bike, or dirt bike, and hunters equal and fair access to the forest”

“Preserving and maintaining multi use trails for all members and visitors. We have a beautiful resource. Let's work together to protect and preserve the natural beauty of the forest in order for many future generations to enjoy as well. Forests such as the Ganaraska are becoming more and more rare. Work to protect the forest should/can be done together with the efforts/input of members/users. We need to all work together.”

Maintaining a safe wilderness environment for recreational users of all types, so that they can have access to the network of trails and roads in the forest. Segregating the Central forest specifically for hiking, mountain biking and horse riding is a good idea. Allowing the East and West forest to be used by responsible motorized users is also a good idea, to allow them to enjoy the forest while riding on a well maintained trail system with access to parking at various ORV lots.

“Responsible forest management. Limiting the number of people using the forest at any given time.”

I think the Ganaraska is great as it is. My big fear as a motorized user is that the motorized vehicles will get banned from the forest.

Key Messages from the Survey Respondents

Maintain/improve the ecology of the forest while allowing recreational use.

Maintain a balance between the different uses of the forest so that everyone can enjoy it.

Continued conservation, trail maintenance, collaboration and educational initiatives are needed.

Enhanced enforcement is needed along with better communication and information sharing.

Those who responded to the survey suggested that there are a number of ways in which the new Ganaraska Forest Management Plan could address the key issues. Those responding to the survey suggested the following:

- Eliminate certain uses
- More communication between different user groups to address issues before they become escalated
- Promote a trail maintenance model that is premised on inter-group collaboration
- Assign more trails to individual uses/users (e.g. bikes) or more non-motorized single track trails
- Increased enforcement
- Maintain fair and shared use
- Impose and enforce noise and speed restrictions
- A more effective governance model (e.g. Ganaraska Forest User Group Committee to have a stronger voice)
- Impose one way roads (e.g. fire roads)
- Address the issue of Dog Strangling Vine and other invasive plants
- Consider a forest users Code of Conduct that promotes acceptable behavior and responsible use
- Consider appropriate activity boundaries
- Implement a Trail Warden system to ensure ongoing inspection and maintenance of trails as this would guard against any trails become unsafe

“Multi-use must be a priority! There is room for everyone.”

Notable Notes & Quotable Quotes from Survey Respondents:

“Maybe some simple signage that says 'Riding loud motorcycles and being a jerk will get all motorcycles banned from this forest. Don't be that guy. Take it easy when around other people you see here. Signed, your fellow dirt bikers.’”

“Enhance the participation of the Forest Users Group - and possibly give it primacy - in management and planning, and use their members for maintenance, development and enhancement of the Forest”

“Keep it the way it is.”

“Maintaining open access. Being extremely clear with signage, expectations, regulated areas, etc. - a smart and modern way to self-police, communicate, etc. through an app or a cultural code of conduct. Rules are rules, but often what is considered acceptable falls within unspoken cultural norms - these should be taught and communicated to all - maybe through a culture guide or something.”

“Please try to find a way for all uses to be accommodated (including motorized).”

“Give side by side vehicles their own section of the forest. Keep them segregated from motorcycle and ATV users.”

“The current plan is obviously working. Individuals' respect for the environment and others is the key.”

“Ensure that the forest continues to be available to a wide variety of users. This is one of the few high-quality forests with well-maintained trails suitable for motorized trail riding. Ensure that user fees adequately reflect the cost of maintaining the trails for these purposes.”

“Recreational use of the forest us a powerful vehicle for increasing awareness around preservation issues. It is critical to be inclusive of motorized rec use as well as non-motorized rec use to educate all users on preservation and demonstrate a working model for responsible use of forest for motor sports.”

“Identify ecologically sensitive/rare/unique areas within the forest. Increase monitoring to determine existing ecological baseline and changes over time. Use monitoring data to inform management on what appropriate uses within the forest are.”

Those responding to the survey shared a number of 'Big Ideas' for the updated Forest Management Plan. While it is not possible to reference all of these stellar ideas, some of the more notable suggestions follow:

- Snowmobile tours and rentals
- More mountain bike trails
- Reduce the footprint of users through better trail building and management
- Shovels along the trails
- Yearly race or festival
- Put in a moto track
- Consider a single track in the East Forest east of Regional Road 10
- Use drones for surveillance
- Partner with the Off-Road Riders Association
- Market the forest as a 21st Century Forest Ecosystem
- Open the entire forest up for all uses and all users
- "There is no one big idea. Careful, balanced coordination of the management of all three areas: timber removal, recreational use and habitat preservation is imperative."
- More youth education
- Eliminate hunting
- Stop logging
- Deal with illegal dumping

2.5 Face-to-Face Meetings

Five (5) face-to-face meetings were held with different constituent groups, as follows:

- October 13th, 2016: Ganaraska Forest Recreational Users Committee (RUC)
- November 2nd, 2016: Ganaraska Forest Landowners/Neighbours Meeting
- November 3rd, 2016: Expanded Recreational Users Committee (RUC) Meeting
- November 8th, 2016: Ganaraska Forest Patrollers Meeting
- November 22nd, 2016: Public Information Session

The meetings were structured in a similar manner and were designed to meet several key objectives:

- To provide an overview of the work currently underway at Ganaraska Region Conservation Authority to update the Ganaraska Forest Management Plan;
- To provide an opportunity for interested participants to identify concerns relating to the Ganaraska Forest;
- To provide an opportunity for participants to provide input to the Forest Management Plan including providing advice on a Vision, Mission, Management Objectives, Guiding Principles and/or strategies to address the impact of forest use on property enjoyment and quality of life;
- To identify additional opportunities for engagement; and
- To discuss next steps.

Each meeting was structured to allow information about the FMP update to be shared by GRCA staff and, at the same time, to allow input, advice and guidance to be provided to GRCA by attendees. An overview of forest management planning was provided and the GRCA Forester

spoke about the need for a new plan. He made reference to the sunset date of the current Plan; he spoke about the significant policy, program and legislative changes that have been introduced since the Plan was prepared in 1998 and he spoke about the need to have an updated Plan in place to enable GRCA to be eligible to participate in the Managed Forest Tax Incentive Program. Importantly, he also indicated that the current Plan consists of three (3) volumes of site-by-site inventory data and noted that the current Plan lacks a vision, a goal, a set of management objectives and contains no reference to recreational uses in the forest or to recreational users. The new Plan, as was noted during these meetings, will articulate a long-term vision for the forest and will identify important issues to be addressed.

The purpose of a Forest Management Plan was explained to participants. As a roadmap for managing the forest for the next ten-year planning cycle, the FMP is signed by a Registered Professional Forester and approved by the GRCA Board of Directors. Forest Management Plans in general include an overall vision and mission statement as well as a set of management objectives (e.g. what is to be achieved), silvicultural specifics (e.g. where and how much harvesting can occur how much of the forest will be renewed, etc.), access and use specifics (e.g. uses, users, roads, trails) as well as methods to manage conflicts. Typically, Forest Management Plans include the following:

In The Plan

- Management history
- Management philosophy
- Management direction for the forest (vision, management objectives, strategies) Management objectives and/or priorities (timber management, wildlife management, recreational use, aesthetics, soil conservation, etc.)
- Description of the physiography – land base, forest and ecology specifics as well as forest operation details)
- General and overarching information to guide management of the forest over the planning period

Forest Management Plans do not include any reference to:

- Fees;
- Governance (e.g. Recreational Users Committees, etc.);
- Individual trails; and/or
- Specific matters of corporate policy that rest with the GRCA Board of Directors.

Not in

the Plan

In each of the face-to-face meetings, an opportunity was provided to participants to offer their thoughts on the trail system and trail standards, trail design, maintenance and restoration and trail use as well as conflict management and governance. The Marsh Report was used as a platform for all dialogue and the recommendations contained in the Marsh Report formed the basis for focused discussion.

http://grca.on.ca/Ganaraska_Forest_Trails_Project_-_Final_Report.pdf

A summary of the meeting outcomes and key messages for each of these face-to-face meetings follows.

2.5.1 Ganaraska Forest Recreational Users Committee (RUC)

Members of the Ganaraska Forest Recreational Users Committee (RUC) met on October 13th, 2016 to learn about the FMP process and the proposed engagement approach.

Recommendations were made to convene a special meeting with an expanded group of recreational users and in addition, it was recommended that a special meeting of landowners and neighbours also be convened. Both recommendations were acted upon. RUC members were invited to share their views concerning the issues/challenges facing the Ganaraska Forest and the specific inclusions that should be incorporated into the FMP to address the challenges. In addition, some time was spent developing a Vision Statement for the forest. The key messages emerging from the first meeting of the RUC are captured below:

Biggest Issue Facing the Ganaraska Forest:³

Participants were invited to share their concerns and to identify, from their perspective, the key issues/challenges facing the Ganaraska Forest. The following reflect some of the comments offered:

- Capacity (staffing and resources) at the Ganaraska Forest Centre to manage and maintain the trail network.
- Increase use from an escalating number of uses and users. This is no longer a quiet forest. Increasing population growth has placed demands on the forest and new infrastructure (e.g. 407) has increased access to the forest. As a result, new users and new types of uses are placing demands on the forest.
- Governance is an issue. The Recreational Users Committee (RUC) is not effective; consideration is not given to the recommendations of the RUC. In addition, there are users who are not represented on the RUC – the Terms of Reference for the RUC needs to be revisited. There needs to be a stronger alignment between the GRCA Board and the Recreational Users Committee.
- Increased fees are a concern and this in turn will result in decreased Memberships and decreased revenues. Value for service must be offered.
- Compliance and enforcement are key.
- Noise and other impacts that affect the quality of life for those who live near the forest is an issue.
- Invasives in general, and Dog Strangling Vine in particular, are issues that needs to be addressed.
- Erosion of trails by users.
- Absence of collaboration between GRCA and user groups and between user groups generally. This is compounded by difficulties in communicating and sharing information.
- Logging in the forest and the need to better communicate silviculture practice and protocols.

Areas of Opportunity:

A number of suggestions and areas of opportunity were noted. Some of the more salient suggestions are captured below:

- Automated Permits. Use technology to advantage and make it easy for users to secure the requisite permits.
- Partner more effectively with user groups. Make better use of volunteers. Listen to volunteers and engage with volunteers more effectively.
- Implement a refreshed and relevant governance model that is more inclusive and more effective.
- Learn from others. Explore good practices and approaches in other areas (e.g. Somerville Forest has a self-governance model; Simcoe Forest)
- Promote inter-user group collaboration and partnerships.

³ These issues have been captured in the order in which they were shared and are not listed in any priority order or ranking.

- Encourage better communications.
- Develop a formal dispute resolution/issue resolution process to handle conflicts within and between user groups as well as between GRCA and user groups. Consider empowering the RUC to handle disputes.
- Consider developing a Charter for all Members of the Ganaraska Forest (e.g. a Common Use Protocol)

Recreational Users Committee Members – Key Messages

1. Identify opportunities to enhance capacity, particularly as it relates to trail maintenance.
2. Governance model is an issue – the RUC Terms of Reference need to be revisited and a stronger alignment created with the GRCA Full Authority Board of Directors.
3. Increased fees are a concern.
4. Enforcement is key.
5. There are a number of environmental issues that require attention including the management of invasive species and addressing erosion.
6. Collaboration and partnerships are key.
7. A meeting should be convened of landowners and neighbours.
8. A meeting should be convened with a broader recreational users group.
9. Consider a Charter for all members of the Ganaraska Forest.

2.5.2 Ganaraska Forest Landowners/Neighbours Meeting

A meeting of landowners and forest neighbours was held on November 2nd, 2016. The meeting was structured to invite both individual input to the FMP (a workbook was prepared and made available to attendees) and collective input to the FMP. The meeting provided important context for the FMP update but invited participants to share their concerns and issues through an open mic process as well as a large group facilitated dialogue to identify protocols to address landowner and neighbor concerns regarding the impact of use of nearby property enjoyment and quality of life. There were many who took the opportunity to share their thoughts. A synopsis of the salient points raised during the meeting follow:

Landowner & Neighbour Meeting Key Messages

1. Landowner representation is needed on the Recreational Users Committee. RUC Terms of Reference and composition require revision. Landowners need to have a voice on the RUC.
2. Recognize that we have a truly remarkable asset in the form of the Ganaraska Forest.
3. We need to work together collaboratively – this is about relationship building.
4. Need an effective mechanism to address forest use, quality of life and property enjoyment for all of us.
5. Be as broad as possible in the FMP and include education and awareness as a key tenet and focus of the Plan.
6. Focus on decreasing conflicts.
7. Make key management decisions and manage the risks and the impacts through direct enforcement (e.g. adjacent parking lots for recreational use),
8. Dog Strangling Vine and other invasive species need to be addressed as this is top-of-mind for landowners and neighbours.
9. Cultivate Ganaraska Forest Ambassadors to promote the exceptionally beautiful environment and make it a treasure chest for others to enjoy and value. This is a huge gap that GRCA needs to fill moving forward.
10. Consider sustainable funding of the forest.
11. Address concerns pertaining to the respectful use of the forest (e.g. littering, noise).
12. Ganaraska Forest needs to be an integral part of Municipal Tourism Plans and Strategies.
13. We need to improve what we have. Consider segregation of uses. Consider finding a better way to get along. Focus on fixing the degradation that has occurred. More trail maintenance in the West Forest is needed. GRCA has an important role to play in grooming trails.
14. The issue of enforcement is critical.
15. Need to guard against unintended consequences. One of the benefits of the Ganaraska Forest is that it is a multi-use forest.
16. We need to recognize that the forest is important to all of us. We need to work better together; the forest deserves that.

2.5.3 Expanded Recreational Users Committee (RUC) Meeting

On November 3rd, 2016, a meeting of the expanded group of recreational users was held at the Ganaraska Forest Centre (GFC). It was important for all recreational users to have an opportunity to participate in the development of the new Forest Management Plan and, as was noted by the RUC, there were a number of users not represented directly on the RUC whose input should be secured. While the meeting was limited to recreational users, an observation gallery was established to allow interested members of the public to listen to the dialogue.

The expanded RUC meeting was structured on the basis of a Global Café, with participants rotating through six work stations. The six work stations included the following:

- 1. The Trail System & Trail Standards**
- 2. Trail Design, Maintenance & Restoration**
- 3. Trail Use**
- 4. Conflict Management**
- 5. Administration, Implementation & Governance**
- 6. Forest Management Plan Vision & Guiding Principles**

A Global Café is designed to capture ‘collective intelligence.’ Individuals contribute their ideas and build on the ideas of others. The following reflects the key points and suggestions that emerged through the Global Café conversations:

1. The Trail System & Trail Standards

Trail System

- Totally in favour of trail link to Millbrook Valley Trail.
- Be careful regarding closing trails close to houses, some already closed but if use does not affect landowner don't close trails – should be based on use and individual assessment.
- How much buffer between houses and trail is enough? – should be considered.
- What does “close” mean”? Shouldn't be done in a blanket fashion. The RUC should be involved in which trails are closed and how.
- Entrances to the forest are too numerous and too open. At least more information is needed at all entrances if they are to remain but they should be limited. Have to make it obvious that they are entering the forest.
- The non-motorized system is not well linked.
- Need online system to purchase passes.
- Look at letting user groups sell passes.
- All user web sites could have links.
- Need single track trail south of Carmel Line from east to west.
- Encourage more use of the east forest as the west forest is over used.
- Use scannable codes in forest to determine location with interactive trail map – app could be linked to web.
- Trails are generally quite long – should look at some shorter loops for a variety of users.
- An objective should be to get from east to west end of forest without being on roads – issue with private ownership maybe should purchase land or rights to make this happen.
- Don't agree with every section of the forest being available for all users – maybe should look to be even more restrictive than just having the central forest as non-motorized – more thinking needed on this.
- May have to create more areas for specific uses.

- Work with municipality to get better mobile coverage in the forest – projects are working on better coverage so don't reinvent the wheel.
- Do better communications with users – people don't know the size and extent of the forest.
- Must respect and appreciate the forest – users.
- Fire fighters need to be trained to fight fires in the forest – individuals know fire fighters don't have training.
- Need to figure out how to address the few who do not respect the forest – very hard.
- Keep no overnight camping approach for the forest.
- Marsh report was very good but not fully implemented – need to put volunteers back into the forest.
- Use people to implement forest plan – engage people in clean ups and patrols to name a few examples.
- Don't call people patrollers – call them ambassadors.
- Get the user groups together in a coordinated maintenance program and mix them up – go out with someone you don't know – currently user groups work in isolation – not best approach.
- Roads that are available for public use are an issue – talk to municipalities about getting ownership of roads so they can be managed. Roads are currently not safe enough for mix of automobiles and forest users.

Forest Standards

- Some trails are sensitive – there is currently too much impact to some trails – specific standards are needed and trails should be designated for specific standards.
- Some trails should be moved.
- Integrity of trails have to be maintained.
- Current eroded or rutted trails should be moved or repaired.
- Currently trail standards are ad hoc and should be formalized with the RUC.
- May require separation of users.
- Standards should be created using user group standards and addressing user group needs.
- Safety is most important consideration.
- Use volunteers to develop trail standards and maintain them.
- Standards are needed for trails and should reflect user standards.
- All trails should be evaluated.
- Use sustainable standards.
- Linking of trails is important.
- Maintenance issue in central forest as trails are growing in.
- Trails will die if volunteers aren't used to maintain them.
- Poison ivy a huge issue and standards need to address this.
- Some trails are over used and some are under used – a plan needs to address evening out the use of the trail system.
- Trails need more management – a better plan and better implementation.
- Signage is important to standards.
- Need more enforcement to make this happen.

2. Trail Design, Maintenance and Restoration

- How trails are constructed today is different and better than 20 years ago.
- General agreement with the need to either close trails or take special measures to lessen environmental impacts on trails in sensitive areas such as steep slopes or wetland areas. Measures include use of switchbacks, water bars, installation of culverts, bridges etc.
- Most people will respect the closure of trails.
- There is a need to spread use out more evenly across the forest. Encourage people using the West Forest to use the East Forest.
- General agreement that existing use of trails should continue.
- Some felt that the number of forest users should not be limited; others felt there will be a saturation point. All felt that trying to implement a limit on the number of users will be challenging.
- All user groups (not just motorized) should be held more accountable for the environmental damage that they cause.
- More enforcement should occur in the forest.
- General agreement that a sign manual should be developed and that there should be an inventory of all signage in the forest.
- Should guard against over signing the forest.
- Use of technology and apps such as Trail Forks will become more common and should be embraced by the GRCA.
- Need better ways of informing the public about what special events are going on in the forest and what trails will be used during those special events.

3. Trail Use

- Restricting, planning and separating, recreational use based on broad types & areas (as in non-motorized and motorized + everything else in Central Forest vs. West Forest) is a good approach and should be maintained
- Shared use has benefits. There was unanimous agreement that there was a benefit for having different users (within the geographic delineations mentioned above) interacting on the same trails, learning about different uses, and taking part in a multi-use forest.
- There was agreement, especially among non-motorized users, that the municipal roads running through Central Forest (Carmel Line, 10th Concession Port Hope, and “Angle Road”) created some confusion for Forest Patrollers, recreational users, and especially motorized users who end up in Central Forest not knowing that the road they just left was municipal property and a motorized corridor between West and East Forests. Signage on these routes is often confused with snowmobile signage, leading to infractions. More enforcement and better signage suggested.
- Different signage to designate trail type:
- It was felt that some signage at the ends of trails should clearly define the trail type, rather than the intended use (for example, signage in West Forest for single track should indicate trail widths and standards, rather than saying “dirt bikes only, no ATVs”)
- GRCA should align signage with Northumberland County Forest as most recreational users use both Community Forests, and general consensus was that NCF was doing a very good job on communications in this regard.
- GRCA should develop a signage manual in line with NCF for all future signage.

- Design for accessibility. Currently, Ganaraska Forest has no trails that are considered accessible. With a Forest Centre designed to meet Accessibility for Ontarians with Disabilities Act, this should extend into the forest from that point as well.
- Enforcement and policing. There was unanimous consensus that enforcement and policing was lacking. Users felt that off-duty patrols are too infrequent, cost prohibitive, and largely ineffective. Staff resources dedicated to this would likely be cost-neutral with trail passes sold to users. Also, suggestions were made to capitalize on the Conservation Officer training program through Fleming College in the Forest, as well as Volunteer Fire Fighters at a heavily discounted rate over police.
- Later groups identified that destinations such as picnic areas, benches, and cabins would be beneficial as seen in most other community forests.
- Finally, the last group identified the desire for a non-motorized corridor from East to West ends of the forest for connectivity.

4. Conflict Management

- There will be conflict no matter what the rules and regulations state.
- Conflict has decreased over the years.
- Mitigate the program before it starts.
- Dedicate trails to specific uses (full time and/or set-out times).
- Too many signs in central section and not enough throughout rest of forest.
- Use volunteers and RUC reps more - educate and bring awareness to users specific to their activity.
- Host more volunteer weekends (trail clean-ups, patrolling, selling passes, greeting at parking lots to educate).
- Have more staff on throughout weekends.
- Develop FAQ brochure for each use (currently only motorized and equestrian).
- Develop formal process through RUC – Issues directed to each rep to handle, rather than putting onus on GRCA staff all of the time.
- Develop more of a connection between Federations and user groups.
- Increase motorized-use age – meet regulations of vehicles.
- Have collaborated events between user groups (i.e. Bike and Beast – mountain biking and horseback riding rally/scavenger hunt).
- Let the reps be part of the solution.
- Self-governance.
- GPS mapping tools for whole forest and divided sections; highlighting uses in each section. Use this tool for education and awareness – saves CA \$.
- Develop standards and guidelines for sound tests (best practices) for patrollers /volunteers/users.
- Host educational/awareness weekends, focusing on different rec uses.
- More education for day users not only members.
- Better communication between RUC and Full Authority Board.
- Address night riding/forest use in educational materials.
- Developing over-arching respect between groups and users – post signage throughout forest reminding users of it.
- Offer on-line forum for users to voice concerns/suggestions/ideas - build off of each other.

5. Administration, Implementation & Governance

- Need more staff; Need more money to hire more staff; Need 3 Steve's.
- Start up a "Friends" group again.
- Develop a good volunteer base - users who are vested in the forest. Volunteers can be used for trail design and other tasks to relieve the burden on staff. Need to reach out more to the users to help with the trails.
- There is a disconnect between the RUC and the Full Authority (FA) Board. The Full Authority Board does not realize that the RUC feels the way they do. Maybe staff reports and minutes that go into the FA Board are not as thorough as they should be. RUC should make delegation to the FA Board to let them know how they feel and their concerns. Some feel that because the FA Board has a responsibility to their councils and constituents, the RUC should have limited input. There needs to be more transparency- have the RUC minutes on line and decisions by the FA Board circulated to all RUC members. RUC may come up with great ideas but FA Board members may be hand cuffed due to financial constraints, perhaps if this happens the decision should be articulated back to the RUC or perhaps it could be phased in. FA Board needs to provide more feedback to RUC. Need to hear the voice of the RUC and the terms of reference need to be updated and enhanced. Ideas that are brought forward at the RUC are not implemented nor are they brought forward. The representatives on the RUC need to represent the users groups and their identity needs to be known among the respective user groups. This way any information or communications from those users can be fed back to the RUC through the respective representative. Right now there is no way we get the feedback to the representative. RUC group needs to be communicated back to all users - not currently happening. Perhaps put the RUC members on the membership forms so users know who they can contact with regards to conflicts, etc. RUC members and contact information should be listed on the website.
- Need to get the non-conforming users in line.
- Instead of using OPP for enforcement patrols, use municipal bylaw staff - they would not cost money.
- There seems to be a "suck and blow" action - want to promote the forest and also keep it pristine.
- There are about 1,200 motorized users and 800 non-motorized users. There are multiple entrances which can lead to problems.
- The patrollers are not being used to the full extent of their potential - use them more.
- Where GRCA is lacking resources look at utilizing municipal staff - fire and bylaw.
- Need staff working on weekends when usage is highest. There are no staff working on holidays. There should be full time staff available on weekends - that is the busiest time when the forest has many users. Staff need to be out in the forest more.
- Gate house should be open on holidays and should be open longer hours.
- Trails need to be groomed during Christmas - can volunteers be utilized - if not, why not?
- Ambassadors of the forest are needed and could be utilized.
- If there is a user conflict, it should be directed back to the RUC and those representatives on the committee - does not need to be handled by staff.
- When the Marsh Report was written 20 years ago, it was probably not predicted that the forest users would grow to the numbers that they are today, more resources and volunteers are needed. Look more to volunteers to be involved and utilized for trail design and other areas to offset the lack of staff. Organize more volunteer days in the forest and

involve all user groups so they are mingling and working together, helping each other and building community.

- RUC should tape record meetings so minutes can capture more.
- On-line payments for permits and memberships - will help work of the gatehouse.
- Need to build capabilities from funding through the user group associations. Various groups have access to funding that could help out with projects in the forest.
- User fee money could help with making signs.
- Create a business plan for the forest. There may be expertise within the volunteers that could help with that and the creativity.
- What is the benefit to becoming a volunteer - recognition, reduce membership rate. Forest Patrollers get a complimentary membership.
- Needs to be recognition for those who do the work.
- Patrollers sell passes; it was a surprise to some around the table that they can bring in as much as \$300.00 a day when out on patrol.
- Place students at certain times of the day on weekends, such as 10 - 1, at the various entry points in the forest to check and sell passes.
- Selling passes on line will alleviate a lot of problems.
- A marketing plan should be developed on selling passes and marketing the GFC and corporate use of the Forest and GFC - may be done through a volunteer with the expertise.
- Make a donation app.

6. Forest Management Plan Vision & Governing Principles

A New Vision:

The original function of the Ganaraska Forest was to restore degraded farmland through plantation plantings that would be harvested and allow a natural forest to emerge over time. Today, the Ganaraska Forest is the largest contiguous forest in southern Ontario offering a forest experience as well as hundreds of kilometres of trails that provide year-round opportunities for a variety of passive and active recreational activities. Motorized activities are permitted in the West Forest and East Forest only while the Central Forest is maintained as a passive use. In considering a new vision for the forest, participants were invited to answer the following key questions:

1. When you think about the history of the Ganaraska Forest and present day use, what is your long-term vision for the Ganaraska Forest?
2. What words or phrases come to mind when you think about the Ganaraska Forest of the future?

A number of suggestions were made for a new vision statement. Key thoughts and key words that were suggested for a vision statement included the following:

- A shared resource
- A critical regional asset
- Sustainable; a resource for my grandchildren
- Healthy
- Multi use; harmonious use by all users
- Community based
- Important and valued
- Clean and safe
- The forest provides a quality of life

- Connecting – connected to the community
- Native species protected
- An important ecosystem for wildlife
- An educational resource – “Lets Kick It Up A Notch”
- Recognition and reflection of non-human species
- Focused on the forest directly; respecting the resource
- Opportunity to connect people with nature and the environment
- Promoted as a jewel in southern Ontario
- Recognize that the plan needs to address new conditions and circumstances as they arise – premise the plan on the principle of adaptive management
- Original vision was for a 20,000 acre forest – advance acquisition as appropriate

The following suggestions were made for a new Vision Statement:

- A quality forest, one that is honoured and respected, valued and valuable; a forest that is ecologically health, sustainable, clean and safe, accessible, an important conduit at the community level; inclusive, open and multi-use; promoted as a jewel in southern Ontario.
- Protected for all of us today and in the future. (Recognize that a healthy forest is one that is used and enjoyed). It is not a museum.
- Supporting healthy and active families.

Suggested Vision Statement

The Ganaraska Forest is a unique natural landmark in southern Ontario that provides economic benefit and supports multi-use recreation, nature appreciation, education and stewardship. It is a healthy, safe and ecologically intact working forest, protected and enjoyed by residents and visitors alike.

Mission Statement:

A Mission Statement describes an organization’s mandate or purpose. A suggestion was made to include a new Mission Statement in the FMP as follows:

- A sustainable multi-use system that respects the forest itself as well and those who experience the forest.

Additional suggestions were made respecting the role of GRCA and the need for GRCA to partner effectively with its partners and community members to focus on forest health and to recognize and protect the Ganaraska Forest as a critical regional asset. Based on the suggestions, the following Mission Statement emerged:

Suggested Mission Statement

The Ganaraska Forest will be maintained, enhanced and restored over the long term in recognition of the many ecological, economic and social benefits that the forest provides. GRCA will work with its partners and the community to ensure that this regional asset is managed sustainably to maximize tree cover and health, improve natural biodiversity, minimize risks to public safety and property damage and promote an exemplary quality of life for all.

Suggestions were made about the need for the FMP to focus on:

- increasing awareness
- promoting engagement and stewardship
- transitioning away from reactive to proactive management of the forest
- anticipating problems before they arise
- ensuring the forest is recognized as a critical regional asset – make a long term commitment to protective management, adequate resource allocation and stewardship.
- promoting a quality of life for residents and visitors alike.

Management Goal & Objectives:

Participants were invited to consider whether there were specific management goals, objectives and/or guiding principles that should be included in the FMP and whether specific direction could be provided regarding same.

Expanded RUC - Suggested Management Goal

To conserve, enhance and where feasible restore the forest ecosystem to reflect the native biodiversity of the Ganaraska Forest while at the same time embracing recreational, education and social activities that support the health and sustainability of the forest.

Expanded RUC - Suggested Management Objectives:

Ecological Objectives:

- To maintain and enhance a healthy, sustainable forest ecosystem
- To conserve native species and habitats
- To restore plantations with low ecological function to healthy woodlands consisting of representative native species
- To carry out active management activities including ecological restoration and where feasible implement measures to control or eradicate introduced species that threaten the health and integrity of the Ganaraska Forest.

Social and Educational Objectives

- To use the forest to promote greater understanding and awareness as well as appreciation of woodland ecosystems by the public at large
- To provide for effective public engagement in the development of management objectives
- To promote safe enjoyment and respectful use by a range of uses and users
- To support access to the forest by families and individuals recognizing the value of the forest from a human health and wellness, and active living perspective

Legal Objectives

- To ensure that management activities in the Ganaraska Forest conform to applicable federal, provincial and municipal legislation and policy

Economic Objectives

- To develop realistic capital and operating budgets for the forest system
- To obtain a fair economic return from the sale of any forest products or other services

Guiding Principles

Although not part of the Agenda, it became evident as conversation progressed in small groups that a set of guiding principles and FMP goals were beginning to emerge. A number of observations were made by those in attendance including the fact that the forest is a shared resource but also an important regional asset. There is a need to ensure that the forest is maintained in a healthy and safe condition through risk management and in keeping with sustainable forest practices. The Plan should place an emphasis on increased education, focused engagement and stewardship. There should be an emphasis on proactive (rather than reactive) management of the forest so that problems are anticipated before they arise. There is a need to think about and focus on building resilience to existing and anticipated stressors. The forest needs to be recognized as a regional asset and GRCA needs to make a long-term commitment to proactive management, adequate resource allocation and stewardship. The quality of life of residents and visitors alike and the long-term sustainability of the forest depends on this.

Expanded RUC – Suggested Guiding Principles

The forest is a shared resource.

Collaboration/partnership is key. GRCA, landowners and stakeholders need to work together to improve the forest and the quality of life for those who have and will invest in the community.

Focus on forest sustainability. The forest must be maintained in a healthy and safe condition through ongoing risk management and in keeping with sustainable forest practices.

This Plan needs to be based on an adaptive management approach that allows for changes in response to new information and/or new circumstances.

Key Messages – Expanded Recreational Users Group

1. A multi-use and multi-experience needs to continue to be a prominent focus moving forward. Multi-use keeps all of us honest.
2. The Terms of Reference for the Recreational Users Committee (RUC) needs to be revisited from the perspective of composition, mandate, role and responsibilities. A stronger alignment with the GRCA Board of Directors and the RUC is needed. There is a real opportunity to be more effective.
3. A number of suggestions for a Vision Statement have emerged and are premised on access, forest health and enjoyment. A new Mission Statement is recommended. A more positive Management Goal and Objectives are needed.
4. Capacity (resources and resourcing) and a commitment to implement the Plan will be critical to move the FMP forward.
5. Stronger partnerships are needed to increase capacity to address operational issues (e.g. trail maintenance) and enforcement.
6. Build a community of practice among volunteers.
7. More transparency and accountability is needed with respect to how fees are allocated and used for the benefit of the forest.
8. More empowerment is needed – place a stronger reliance on volunteers.
9. Greater need for education and awareness. Consider collaborative education of users.
10. Use the forest as the basis to promote ecological literacy – we all have a role to play in stewarding the forest.
11. Confirmation received of the ongoing need for restoration and a number of suggestions around spatially distributing forest use across the entire forest.
12. Broad consensus and support for the recommendations contained in the Marsh Report around trail use, standards and trail design.
13. Shared use has tremendous benefit. It is important that the forest is accessible (physically and economically) to all who have an interest in enjoying it.

2.5.4 Ganaraska Forest Patrollers Meeting

The Ganaraska Forest Patrollers held a meeting on November 8th, 2016. An opportunity was provided to each participant to share their ideas for a new Vision, Management Goal, Objectives, Guiding Principles as well as Conflict Management and Trail Use. Forest Patrollers were also invited to consider multiple-use, what it means for them individually and what it should look like on the ground. A facilitated dialogue followed, with an emphasis on the following five key questions:

- What changes if any are needed to...
 - The Trail System & Trail Standards
 - Trail Design, Maintenance & Restoration
 - Trail Use
- Can conflicts between uses and users be better addressed how?
- What suggestions do you have for FMP implementation, administration and governance?
- What are your thoughts pertaining to a Vision for the Ganaraska Forest & Guiding Principles?
- Are there other issues that the FMP should address?

The following thoughts were shared by the Forest Patrollers in attendance:

The Trail System:

- In agreement with the recommendations contained in the Marsh Report regarding the trail system
- Consider including something to address emerging new technologies

Trail Standards, Trail Design, Maintenance & Restoration:

- In agreement with the recommendations contained in the Marsh Report
- Need to collaborate and partner with user groups and others on matters involving trail maintenance
- The issue regarding trail standards is one of enforcement; there is a need to follow through
- User groups need to be consulted more on trail standards
- The issue of degraded trails needs to be addressed.
- Much of the issue is funding and having resources available to carry out trail maintenance

Conflict Management

- A more formal process is needed to address conflicts
- Information sharing between users is critical

Implementation, Governance & Administration:

- There are issues of capacity and authority
- Issues around littering and proper trail etiquette were identified
- Forest Patrollers need more authority
- A more consistent police presence is needed, particularly at high-use times (e.g. weekends); also the issue of an inconsistency associated with police enforcement needs to be addressed – a comprehensive Enforcement Strategy is needed
- Consider Special Constable Status for Forest Patrollers
- Consider opportunities to increase a volunteer presence
- Explore new and different resourcing opportunities (e.g. Trail Custodians)

Forest Patrollers – Key Messages & Lessons Learned

1. Follow up and let us know how our input has been used to establish the Plan.
2. Consider new innovative approaches (e.g. dedicated non-motorized; dedicated use trails).
3. Identify opportunities to publish the Rules of Recreational Use & Etiquette. What are the opportunities to increase education and improve awareness? Use the FMP to share the rules.
4. Enforcement and compliance are key issues. More funding is needed for a weekend police-based presence and to this end, a sustainable funding model is needed.
5. Develop an Enforcement Strategy collaboratively with the Police.
6. Explore opportunities to make existing parking areas more secure and consider screening points (e.g. funnel locations) and/or limit the number of day passes that are issued.
7. With respect to the Trail system, we agree the recommendations in the Marsh Report but there is a need to consider what might be coming in terms of emerging technologies and plan accordingly.
8. With respect to Trail Standards, user groups need to be more fully consulted on the issue of standards. There needs to be follow through regarding maintenance, restoration and rehabilitation. Degraded trails exist that need to be closed. There needs to be a mechanism in the FMP to address degraded trails.
9. A formal mechanism and process is needed for issue identification and resolution. Enhanced communication and information sharing among users is needed.
10. Consider exploring opportunities to engage volunteers for trail maintenance that don't increase or negatively affect GRCA liability (e.g. Trail Custodians)
11. The issue of Forest Patroller authority in the forest needs to be addressed. Identify opportunities to consider Special Constable Status for Forest Patrollers.
12. GRCA Board of Directors should conduct a tour of the Ganaraska Forest to see the issues and challenges first-hand.
13. Littering and drinking is a huge issue in the forest. A plan is needed to address littering.
14. With respect to a vision for the forest, consider including wording to reflect the following: a sense of contentment, sustainably funded and ecologically health; a gem and a jewel; capitalize on what we have and make it better; build ecotourism.
15. The goal should focus on conservation and sustainable use. Anticipate and address the issues of access.

2.5.5 Public Information Session

A Public Information meeting was held on November 22nd, 2016. The Public Information Meeting was structured as a Meeting Marketplace with six (6) working stations established to allow participants to share their thoughts and offer their input on the follow topics:

- **Station 1: Trail System & Trail Standards**
- **Station 2: Train Design, Maintenance & Restoration**
- **Station 3: Trail Use**
- **Station 4: Conflict Management**
- **Station 5: Forest Management Plan Implementation, Administration & Governance**
- **Station 6: Other Issues**

Participants were invited to share their thoughts in relation to a set of specific questions. These key conversation questions and the input received has been summarized in the tables below:

Station 1: Trail System & Trail Standards	
The Ganaraska Forest Trail Project Final Report (also known as “The Marsh Report”) prepared in 1997 by John Marsh and Janice Warfield (Trent University) included a number of management recommendations pertaining to the trail system and trail standards. (Pages 45-46 of The Marsh Report)	
Question	Responses Received
<ul style="list-style-type: none">• Do you agree with these? Are they still valid?• Are changes needed? If so, what changes would you recommend?	<ul style="list-style-type: none">• Possibly more signage that is clearly visible. As trees grow some signage is hidden.• Multi-user forest – there are areas for everyone to enjoy; if you don't like motorized, use Central Forest• Multi--use trails are valuable; I agree with Marsh; non-motorized corridor would be difficult to police• We have to allow multi-use trails to keep everyone happy. No user has more right on any trails than another. Clearly identified markers on the trail are appreciated, especially if there is an emergency.• It is an enforcement issue. They have been closed your users do not know how to read• Marsh Report – yes agree. Would the ability be there to apply ideas?

Station 2: Train Design, Maintenance & Restoration

The Ganaraska Forest Trail Project Final Report (also known as “The Marsh Report”) prepared in 1997 by John Marsh and Janice Warfield (Trent University) included a number of management recommendations pertaining to trail design, maintenance and restoration. (Pages 46-47 of The Marsh Report)

Question	Responses Received
<ul style="list-style-type: none">• Do you agree with these? Are they still valid?• Are changes needed? If so, what changes would you recommend?	<ul style="list-style-type: none">• Agree just do not see information about how restoration of logging trails will be done• Yes, these trails should be reviewed and modified• Still valid. More volunteers from all user groups to work on maintenance of trails.• Protect Thorpe Hill area from more dirt bike and ATV riders creating new trails – such erosion there. And the “pyramid” hill north of the Carscadden Road parking lot.

Station 3: Trail Use

The Ganaraska Forest Trail Project Final Report (also known as “The Marsh Report”) prepared in 1997 by John Marsh and Janice Warfield (Trent University) addressed the issue of “Conflicts in the Ganaraska Forest” and identified a number of perceptions of solutions to reduce recreational conflicts as follows:

- Separate trails for each activity.
- Separate trails for some activities.
- Designate one part of the Forest for motorized use and one part for non-motorized use.
- Establish a policing system.
- Educate users to behave more responsibly.
- Limit the number of people who can use the Forest.

The Report put forward a number of conclusions and management recommendations including:

- restricting the use of trails in the Central Forest to non-motorized activities, namely: hiking, horseback riding, mountain biking, cross-country skiing, snowshoeing, hunting;
- no recreation group, even if it contributes to the development and maintenance of trails should be given exclusive use of these trails;
- in the East and West Forest all trails should be multiple-use trails though some should be designated primarily intended for a particular use (e.g. snowmobiling and dirt biking)
- consideration should be given to designating a trail from the east end to the west end of the Forest as a non-motorized trail that would constitute part of the proposed Oak Ridges Moraine Trail;
- consideration should be given to providing some trails accessible to people with disabilities.

Question	Responses Received
<ul style="list-style-type: none"> • Are you in agreement with the recommendations contained in the Marsh Report? • Are there changes that you believe are needed? If so, what are these changes that you would recommend? 	<ul style="list-style-type: none"> • Top 3 are working, why reinvent the wheel? Would only cause confusion. • East to West non-motorized trail. I do not agree with that. The Forest is a multi-use forest and there are many choices and areas individual users can go to. • Disabled should be considered with special uses or areas. • I do not think that the horseback riding and mountain biking can share the same trails. I believe there have already been incidents. • Don't agree with an East to West separate trail. • 1-5 in the Marsh Report all work. • #6: limit the number of people to use the forest – NO • Don't limit the number of people. • No separate trails for each activity. Yes for some activities as it is now. • No to a stronger policing system than what we have now. • Central Forest is good as non-motorized other than Angle Road and the other one (?) • #1: Yes • #2: greater emphasis needs to be placed on education. • Cannot agree with #6: Forest cannot become a privilege for those who arrive first or who retain membership from year to year. • Not sure how trail use would be enforced • Ideas are good but how would it work? • Multi-use is indeed imperfect but needs to be considered within the context of safety, and mountain biking and dirt biking presents a safety concern for horseback riders. • The rules need to be enforced. You should have to attend a class where all of these items were presented before you get your pass. Motorized vehicles need to have numbers that can be seen from a distance.

Station 4: Conflict Management

The Ganaraska Forest Trail Project Final Report (also known as “The Marsh Report”) prepared in 1997 by John Marsh and Janice Warfield (Trent University) stated the following:

“Today, trails are shared by a wide variety of recreationists travelling by many different modes of transportation. In studying the relations among the different users of the Forest, there is an apparent and reoccurring irritation among some users causing conflict to arise.” (p. 37)

Question	Responses Received
<ul style="list-style-type: none">• Is conflict/issues management still an issue in the Ganaraska Forest?• Should the FMP articulate a ‘formal’ method of conflict resolution? If so, what would you recommend? How should conflicts (e.g. between uses, between users, with adjacent property owners, with the GRCA) be resolved?• Can conflicts be better managed? How?<ul style="list-style-type: none">– Within user groups– Between user groups– Between user groups and landowners– Between user groups, landowners and GRCA	<ul style="list-style-type: none">• Conflicts are still a huge issue. Most users as they meet seem to get along. When they don’t, escalates to a much larger issue and hard feelings. It is a privilege to use the forest.• I think there is an opportunity for pre-conflict through education. Increased sensitivity to the safety and enjoyment of different user groups. “Rules of Encounter.”• Most people care about being safe and polite, they need to know how.• Yes conflict remains an issue and indications are it is increasing.• Yes the FMP should identify a conflict resolution process, probably a stepped process perhaps ending with presentation to a Tribunal type body.• FMP should also provide a mechanism to review user demand – i.e. to address decline in demand for a certain use and address increase in demand for a new sport (i.e. fat tire cycling)• Educate all user groups so that conflicts may not rise too high• Yes – lack of respect for other user groups.• Education• Last year with the high fire warnings everywhere you did not even put out warnings.• Yes we need a formal path to deal with complaints. If you want to be a good neighbour you have to deal with the complaints.

Station 5: Forest Management Plan Implementation, Administration & Governance	
Question	Responses Received
<ul style="list-style-type: none"> • Are there issues that pertain specifically to the administration and implementation of the FMP that are top of mind for you? • Are there governance issues that need to be addressed? What are these and what recommendations are you suggesting? 	<ul style="list-style-type: none"> • Greater consideration at GRCA Full Authority Board level needs to be given to recommendations from user groups and landowners. • Staffing needs to be increased. Funding is limited – any chance of increasing? • More volunteers to pitch in (i.e. trail maintenance, clean-up) on a more regular basis. • Landowners to be included in the RUC – voices are important. • Staffing is an issue. • Funding is an issue. • Landowners to have a voice. • Landowners need to be part of all committees. We have been giving out ideas for 30 years – still waiting. • Membership should be limited to people who qualify: <ul style="list-style-type: none"> • Bikes (noise levels, speed, etc.) • Horses (vaccinated, insurance) • People (garbage, respect for private property) • All users should have to volunteer hours to maintain trails in forest. • A whole lot more enforcement of the rules. • More authority presence at parking areas and on weekends. • Contact numbers of Township reps should be made available to landowners. • How about a curfew for forest use – dawn to dusk – all users. • People bringing horses into area should have proof of vaccination and also proof of insurance. Also proof of parasite control to protect our wildlife and landowners livestock.

Station 6: Other Issues	
Question	Responses Received
<ul style="list-style-type: none"> • Are there other issues that are top of mind for you? • What are these 'other issues' and what recommendations are you suggesting? 	<ul style="list-style-type: none"> • None received

Vision for the Ganaraska Forest

- Do you have a vision?
- What words come to mind?



Share your ideas

Management objectives

- What should we be focusing on?
- What are we trying to achieve through the FMP?



Share your ideas

Share your ideas



Building On Your Great Ideas...

TABLE OF CONTENTS

Those who attended the Public Information Session were also invited to share their ideas and thoughts on the draft FMP Table of Contents as well as the Vision, Mission, Management Goals & Objectives.

Vision, Mission & Management Goals & Objectives:

General Comments:

- Never ever sell the water! Our aquifers should not be sold off to companies like Nestle.

Vision:

- That the Forest is maintained so that all future generations can enjoy nature at its finest.”
- Integrity of the “forest” is priority. “Forest” from my perspective is understood to include prairie ecosystem.

Mission:

- Agree with the Mission Statement

Goal & Objectives:

- A goal statement is a must. So many people, organizations have no idea about the Forest – what it has to offer. Also, Ganaraska Forest Centre needs more awareness. Lovely building; should be used more.
- Education of user groups
- Agree with management goals – we do not want to lose this forest; promote this for our own health
- Care of the forest is very important; maintain the beauty; agree with goal 1 and 2

2.6 Other Engagement Initiatives

In addition to the formal engagement process led by the Consultant, the GRCA Forester convened meetings on his own in the Fall of 2016. A summary of some of these meetings follows.

Alderville First Nation:

On September 14th, 2016, an informal meeting was convened with the Ganaraska Forester and with Skye Anderson of the Alderville First Nation. This was a meeting of partners and was not considered by GRCA to constitute formal consultation; it was simply an opportunity to meet to discuss the process and share information. In fact, the meeting was convened before the forest management planning process had commenced and was an opportunity for GRCA to share information about the FMP update but importantly to hear from the First Nation about how they would like to be engaged.

The GRCA Forester was the only staff person in attendance. This meeting provided an early opportunity for the Alderville First Nation to learn about the Forest Management Plan and the

forest management planning process. It also provided a forum to share information about the basics of Red Pine management and selection silviculture in mixed hardwood stands. Questions were raised about invasive species and herbicide use, whether specific activities including hunting are permitted in the Ganaraska Forest and whether Prescribed Burns are carried out by GRCA. As reported by the Ganaraska Forester, the following reflects a synopsis of the issues discussed and the suggestions that were forthcoming:

- GRCA views the Alderville First Nation as an important partner and the sentiment as expressed by Skye, was mutual;
- Alderville First Nation will be particularly interested to ensure that their history is 'present' in the Forest Management Plan and that their history is accurately referenced. It is vital to 'get the history right'.
- The Ganaraska Forest is located within the treaty territory of the Mississauga Nations (Scugog, Hiawatha, and Curve Lake) under Treaty 20 and Williams Treaty. Alderville does not speak for the other First Nations.

It was recommended that the next step in an effective engagement process would be to meet with the members of the Mississauga First Nations through a Roundtable that has been created. Skye suggested GRCA contact Dave Mowatt who sits on the Roundtable Committee for Curve Lake First Nation as he has tremendous knowledge of trade and travel and may be able to assist in writing the First Nations history component. It was also suggested that GRCA collaborate with Northumberland County forester to ensure that the First Nation history is captured consistently and accurately in both Forest Management Plans.

Mississauga Roundtable:

On November 10th, 2016, the GRCA Forester met with the members of the Mississauga Roundtable. Four First Nations were represented including Alderville, Curve Lake, Scugog and Hiawatha. The Ganaraska Forester attended the meeting. Also in attendance was the forester from the Northumberland County forest. The meeting reaffirmed the interest by the First Nations in ensuring that their cultural history was accurately reflected in the Forest Management Plan and further that this history should be correctly captured in both the Northumberland County Forest Management Plan as well as the Ganaraska Forest Management Plan.

2.7 West Forest Tour

A tour of the west section of the Ganaraska Forest took place on the morning of Sunday, November 20th, 2016. The tour was arranged to allow members of the GRCA Board of Directors and FMP Steering Committee members to witness first-hand some of the issues facing the Ganaraska Forest. The tour commenced at the Ganaraska Forest Centre and continued to the Dell and on to the grassy triangle. From there, it proceeded to WF16⁴, WF18 and Lookout Hill. The tour then visited WF11 and WF4 to the closed parking lot at P4 and then back to WF11 to WF7 and WF9. The tour concluded back at the Ganaraska Forest Centre. Six Full Authority GRCA Board Members participated along with the full FMP Steering Committee. Several photos of the tour follow:

The tour commences:

⁴ As noted previously in this Report, WF refers to West Forest.



First Stop:



Evidence of active forest harvesting.



Multi-use Trails:



Heading to Lookout Point:



Lookout Point & Evidence of Erosion:



More photos from Lookout Point:



An Encounter with a group of ATVers Enjoying the Forest (permits in hand) but looking for directions.



Signage:



Erosion & Trail Maintenance Issues:



2.8 Compilation of Key Messages and Important FMP Direction

While opinion is diverse on a range of issues, a number of consistent key messages emerged from landowners, neighbours, forest patrollers and those who have come to experience the forest in different ways. There are some who hold the view that the forest should be restricted to non-motorized use; that perspective however is not shared among the majority who participated in the engagement process. Most uphold the view that the forest is a shared resource and that there is a need for GRCA, landowners and stakeholders to work together to improve the forest and the quality of life for those who have and will invest in the community. The forest, as most have noted, needs to be maintained in a healthy and safe condition through ongoing risk management and in keeping with sustainable forest management practices. The Plan should be premised on an adaptive management approach that allows for changes in response as new information becomes available and/or new circumstances and challenges arise.

The recreational use of the Ganaraska Forest is top of mind for all. Landowners and neighbours are facing quality of life issues that have resulted from heightened use. User conflicts and trail conflicts need to be addressed. Issues of noise and speed and trespass need to be addressed as does disrespectful behavior toward adjacent private property owners. There is an overwhelming need for consistent enforcement throughout the forest. There is also a need for more enforcement throughout the forest. Several suggestions around a Code of Conduct or Rules of Encounter or Charter of Use were suggested.

In addition to issues affecting quality of life, there were a significant number of concerns that focused on impeded environmental quality. Issues of erosion, invasives - Dog Strangling Vine in particular and Red Pine decline, pollution, garbage, and illegal dumping were also raised. The need to protect the biodiversity of the forest was raised by many as was the need to protect sources of drinking water and to support species protection and diversity.

From an operational perspective, the issue of resourcing (staffing and funding) was noted as a top of mind issue for effective forest management. Many trails have not been maintained and there were a number of suggestions to address capacity through partnerships and collaboration. Wayfinding and signage needs to be improved throughout the forest and a uniform standard needs to be applied.

Finally, a number of important issues pertaining to governance were raised; most notably, the need for landowners to have a voice in the management of the Ganaraska Forest and the importance of ensuring that the Recreational Users Committee is not only relevant and effective but reflective of the diversity of recreational users who enjoy the forest. There is a need for stronger alignment with recreational users, landowners and neighbours and the GRCA Full Authority Board of Directors.

The following key messages offer a high level alignment of thinking from those who participated in the process:

- **The Ganaraska Forest is a special place, unlike any other. It is the largest contiguous forest in southern Ontario and it needs to be valued and cared for.**
- **Our vision needs to put the forest first.**
- **This is a multi-use forest and the principle of responsible multiple use and experience needs to continue. The forest however also needs to be multi-**

generational – experienced by a dynamic demographic and available not only for our children and grandchildren but their children and grandchildren.

- **Shared use has tremendous benefits. This is about relationship building. We need to find better ways to work together.**
- **At the same time, we need to find ways to address forest use quality of life and property enjoyment issues for all of us.**
- **Greater emphasis on enforcement is needed to ensure that use of the forest is sustainable and responsible. Use technology to advantage (e.g. drones for surveillance). Stronger enforcement – work with the OPP and Durham Police to develop a consistent Enforcement Strategy.**
- **There is a tremendous opportunity to capitalize on partnerships as a way of building capacity across the forest (e.g. trail signage, maintenance). Build a community of practice among volunteers. More partnerships and more empowerment of volunteers to help.**
- **More education and awareness of the importance of respectful and responsible use. Rely on the forest to promote the philosophy of ecological literacy – this is our ecological legacy – we all have a role to protect it.**
- **There are issues that need to be addressed that are beyond the scope of the Forest Management Plan. These include the following:**
 - **Landowners need to have a voice in the management of the forest and forest use. Landowners need to have a voice that is heard by the GRCA Board of Directors.**
 - **The interests of a broader array of recreational users need to be taken into account as use is increasing but so too are the types of users (different equipment, etc. not seen in the forest before).**
 - **The mandate and terms of reference for the RUC are outdated and need to be revisited. Better alignment with the GRCA Board of Directors is needed.**
 - **The GRCA Board of Directors should tour the Ganaraska Forest to see first-hand what the issues area. (Note: this tour took place on Sunday, November 20th, 2016)**
 - **The commitment and capacity to implement the FMP is critical**
 - **Investing in ongoing and regular trail maintenance needs to be a focus moving forward, particularly in the West Forest. Better signage is also needed.**
 - **A more formal mechanism for resolving conflicts is needed. Consider a code of conduct for all users and a mediation process that first empower users to work together to resolve issues.**
 - **Champions and advocates for the Ganaraska forest are needed. Consider trail captains.**

- **A common vision and a set of broadly supported management goals are needed.**
- **Broad consensus for many of the details and recommendations around trail standards, use and management as articulated in the 1997 Marsh Report.**
- **Ensure that policies developed in the Plan do not produce unintended consequences.**

3.0 Collaborating on the FMP: Toward a New Vision, Mission, Management Goals & Objectives

Landowners, recreational users, forest patrollers, community members, community leaders and interested members of the public were invited to share their ideas for a Vision Statement for the Ganaraska Forest. A number of important management goals and objectives were also identified through the engagement process. A summary of these suggestions has been captured below.

3.1 Toward A New Vision for the Ganaraska Forest

Considering the input received from landowners and neighbours, members of the Recreational Users Committee and an expanded group of motorized and non-motorized recreational users, forest patrollers and interested landowners as well as input received from the electronic surveys and comment cards, it was apparent that the focus of the plan should emphasize the ecological sustainability of the forest. While the principles of multi-use were broadly supported, an emphasis on forest ecology and ensuring that the forest is managed and protected for future generations was a recurring theme.

The following draft vision is recommended for inclusion in the Ganaraska Forest Management Plan:

Draft Proposed Vision Statement

The Ganaraska Forest is a unique natural landmark in southern Ontario that provides economic benefit and supports multi-use recreation, nature appreciation, education and stewardship. It is a healthy, safe and ecologically intact working forest, protected and enjoyed by residents visitors alike.

VISION – KEY WORDS

**Multi-use
Community-based
Peaceful
Sustainable
Clean
Safe
Well-maintained
Healthy forest atmosphere
Accessible
Progressive
Sustainably Funded
Loyalty to the Forest
A Destination**

“That the forest is maintained so that all future generations can enjoy nature at its finest.”

“We do not want to lose this forest. Promote this for our health.”

“Care for the forest. This is very important.”

“Integrity of the forest.”

“To have continued access to safe, well maintained, shared use trails in a large nature preserve as it transitions into a naturalized mixed deciduous and coniferous forest.”

“Continued evolution to ensure multi-use satisfaction.”

“An expanded forest.”



3.2 Toward a New Mission for the Ganaraska Forest

Considering the input received from landowners and neighbours, members of the Recreational Users Committee and an expanded group of motorized and non-motorized recreational users, forest patrollers and interested landowners as well as input received from the electronic surveys and comment cards, the following Suggested Mission Statement is recommended for inclusion in the Ganaraska Forest Management Plan:

Suggested Mission Statement

The Ganaraska Forest will be maintained, enhanced and restored over the long term in recognition of the many ecological, economic and social benefits that the forest provides. GRCA will work with its partners and the community to ensure that this regional asset is managed sustainably to maximize tree cover and health, improve natural biodiversity, minimize risks to public safety and property damage and promote an exemplary quality of life for all.

3.2 Toward a New Set of Management Goals & Objectives

The input received from landowners and neighbours, recreational users, forest patrollers and interested members of the public strongly suggested that the ecology of the forest needs to be a prominent focus for the updated Plan. Putting the needs of the forest first; considering the ecological sustainability of the forest and identifying importantly a set of management goals to reflect this sustainability and conservation focus came through very prominently throughout the engagement process. Input offered at face-to-face meetings, through Early Thought Leader interviews as well as electronic input received through the survey and comment cards suggested that the intent of the FMP is to balance the needs associated with public access and recreation while conserving and enhancing nature flora and fauna. Many suggested that while the forest can support trails, events and facilities, it is critical that the ecological health of the forest be protected.

Suggested Management Goal

To conserve, enhance and where feasible restore the forest ecosystem to reflect the native biodiversity of the Ganaraska Forest while at the same time embracing recreational, education and social activities that support the health and sustainability of the forest.

Suggested Management Objectives

Ecological Objectives:

- To maintain and enhance a healthy, sustainable forest ecosystem
- To conserve native species and habitats
- To restore plantations with low ecological function to healthy woodlands consisting of representative native species
- To carry out active management activities including ecological restoration and where feasible implement measures to control or eradicate introduced species that threaten the health and integrity of the Ganaraska Forest.

Social and Educational Objectives

- To use the forest to promote greater understanding and awareness as well as appreciation of woodland ecosystems by the public at large
- To provide for effective public engagement in the development of management objectives
- To promote safe enjoyment and respectful use by a range of uses and users
- To support access to the forest by families and individuals recognizing the value of the forest from a human health and wellness, and active living perspective

Legal Objectives

- To ensure that management activities in the Ganaraska Forest conform to applicable federal, provincial and municipal legislation and policy

Economic Objectives

- To develop realistic capital and operating budgets for the forest system
- To obtain a fair economic return from the sale of any forest products or other services

3.3 Additional Direction - The Marsh Report

As referenced in Chapter 2, there was a great deal of support for the ideas and recommendations contained in The Marsh Report. Many were of the view that the recommendations in relation to the trail system, trail standards, trail design, maintenance and restoration and trail use remained relevant. The key issue for many is that the recommendations in the Marsh Report have not been fully implemented. There were concerns raised about limiting the number of visitors to the Forest and some concerns expressed about the ability to implement and enforce a non-motorized East to West Trail.

Those who participated in the face-to-face meetings suggested a more formalized process is needed to resolve conflicts between user groups, within user groups and between GRCA staff and recreational users. Several suggestions were made in relation to a more formalized dispute resolution process. Some suggestions included making better use of the RUC in mediating disputes and there were suggestions made around the importance of empowering users to first attempt to resolve concerns before they are formally escalated.

Issues around governance were raised. These are discussed more fully in the section to follow.

4.0 Ancillary Issues & Concerns

In any engagement process, there are issues – important issues – that are beyond the scope of the project. The engagement process associated with the Ganaraska Forest Management Plan is no different and there were important issues that were raised that need to be documented so that they can be addressed by the appropriate forum.

While these issues have been identified as ‘ancillary’ to the Forest Management Plan, they are related to the successful implementation of the Plan and to the successful long-term engagement of landowners and neighbours, recreational users, forest patrollers and members of the public who will come to enjoy the forest.

Perhaps the single biggest issue that emerged in the engagement process was that of governance. There are two critical issues that emerged under the governance umbrella: the first relates to the effectiveness of the Recreational Users Committee and the second relates to the voice of landowners and neighbours in the management of the Ganaraska Forest.

A Stronger Voice for Landowners:

Impacts on property enjoyment and quality of life have been documented in Chapter 2. One of the clearest messages that emerged during the engagement process is the need to ensure that landowners have a voice in forest management moving forward. Considering the investment they have made in the community, it is critical that they be engaged in discussions concerning the Ganaraska Forest moving forward. Having a voice on the RUC or a Landowner Advisory Committee would ensure that issues can be brought to the attention of the GRCA and addressed collaboratively.

A More Effective & Reflective Recreational Users Committee:

As has been captured in Chapter 2, a more effective and importantly, more reflective Recreational Users Committee is needed. As was expressed by RUC members and non-members alike, there is a need to revisit the RUC Terms of Reference and to reassess the composition, role and mandate of the RUC. Importantly, there is a need to consider the opportunity to create a stronger alignment between the RUC and the GRCA Board of Directors.

A Stronger Emphasis on Enforcement

In addition to governance concerns, enforcement was noted as a top of mind priority. Concerns were raised about enforcement and the need for a stronger police presence. In particular, suggestions were made to consider opportunities to enhance the authority of Forest Patrollers and to explore the opportunity to grant Special Constable Status to those who patrol the forest. Making better use of volunteers to encourage more ‘eyes on the forest’ was also suggested, noting of course the issue of GRCA liability that would have to be addressed. Importantly, it was suggested that a comprehensive Enforcement Strategy be developed collaboratively with the Police to address infractions and to ensure that the forest remains a safe and enjoyable place for all.

5.0 Summary & Conclusions

The Gananaska Region Conservation Authority embarked on a process of community and stakeholder engagement to support its efforts to update the Forest Management Plan for the Gananaska Forest. More than 1,300 individuals took the opportunity to participate in the early stages of forest management planning and offered many suggestions for the FMP in terms of the issues to be addressed as well as areas of opportunity. Many contributed to a new Vision, Mission, Goal and Management Objectives; all of which have been captured herein.

Despite the diversity of opinion and perspective, it is clear that those who were engaged in the engagement process care deeply about the future of the Gananaska Forest. In fact, one of the most salient messages to emerge is the need to focus first on the forest and to ensure that it remains healthy, safe and sustainable for future generations.

The Marsh Report, prepared in 1997 was used as the platform for dialogue on trail standards, use, design, maintenance and restoration. As was confirmed by the input received, the Marsh Report continues to be relevant and reflective of the issues and the management opportunities. While there are some who feel motorized use should be banned or restricted, the vast majority of those who shared their views support a multi-use forest that offers economic, socio-cultural and environmental benefit to those who have chosen to live adjacent to it or have come to enjoy the many passive and active recreational opportunities that the forest supports.

Appendix A: Face-to-Face Meetings – Agendas

Ganaraska Forest Management Plan 2016

LANDOWNERS MEETING

Date: Wednesday, November 2nd, 2016

Time: 4:00 – 8:00 p.m. – **Formal Meeting & Presentations at 6:00 pm**

Location: Ganaraska Forest Centre - 10585 Cold Springs Camp Rd, Port Hope Cold

AGENDA

Meeting Purpose:

1. To provide an overview of the work currently underway at Ganaraska Region Conservation Authority to update the Ganaraska Forest Management Plan;
2. To provide an opportunity for nearby landowners to identify concerns relating to the Ganaraska Forest;
3. To enable landowners to provide input to the Forest Management Plan including providing advice on protocols and/or strategies to address the impact of forest use on property enjoyment and quality of life;
4. To identify additional opportunities for landowner engagement; and
5. To discuss next steps.

Time	Agenda Details	Lead
4:00 – 6:00: Drop In - Meet Staff, Share Individual Comments & Concerns; Provide Individual Input & Feedback (Table of Contents, Vision, Management Objectives, Guiding Principles)		
6:00	Official Welcome & Introductory Remarks	Linda Laliberte, CAO/Secretary Treasurer
6:10	Meeting Purpose & Objectives	Karen Wianecki, Facilitator
6:20	Forest Management Planning: An Overview <ul style="list-style-type: none">• Forest Management Planning in General• The Need for a New Forest Management Plan• Questions & Comments from Participants	Fraser Smith, Forester
6:30	The Engagement Process <ul style="list-style-type: none">• The Engagement Process Thus Far (Comment Cards, FAQ, Survey, One-on-one Interviews)• Questions & Comments from Participants	Amy Griffiths, Marketing and Communications Officer
6:45	Open Mic – Landowner Issues, Concerns	All in Attendance
7:20	FMP Protocols to address forest neighbor concerns regarding the impact of use on nearby property enjoyment and quality of life <ul style="list-style-type: none">• Protocols?• Enforcement?• Others?	Karen Wianecki & Attendees
7:50	Recap, Review & Next Steps Staying Engaged...	Karen Wianecki
8:00	Meeting Concludes...Safe Journey Home	Linda Laliberte

Ganaraska Forest Management Plan 2016

“EXPANDED” RECREATIONAL USERS COMMITTEE (RUC) MEETING

Date: Thursday, November 3rd, 2016

Time: 5:45 – 8:30 p.m. – **Meeting Begins at 6:00 pm**

Location: Ganaraska Forest Centre - 10585 Cold Springs Camp Rd, Port Hope Cold

AGENDA

Meeting Purpose:

1. To provide an overview of the work currently underway at Ganaraska Region Conservation Authority to update the Ganaraska Forest Management Plan;
2. To provide an opportunity for individuals to offer input on a proposed FMP Table of Contents, Vision Statement and Guiding Principles for the updated Forest Management Plan;
3. To collectively discuss the inclusion of strategies for planning and managing for multiple recreational use in the Ganaraska Forest;
4. To identify additional opportunities for recreational user engagement; and
5. To discuss next steps.

Time	Agenda Details	Lead
5:45: Coffee & Tea		
6:00	Official Welcome & Introductory Remarks	Linda Laliberte, CAO/Secretary Treasurer
6:05	Meeting Purpose and Participant Introductions	Karen Wianecki, Facilitator
6:15	Context Setting: <ul style="list-style-type: none"> Why A New Forest Management Plan is Needed Purpose & Intent of the FMP Questions & Comments from Participants 	Fraser Smith, Forester
6:25	The Engagement Process <ul style="list-style-type: none"> The Engagement Process Thus Far (Comment Cards, FAQ, Survey, One-on-one Interviews) Questions & Comments from Participants 	Amy Griffiths, Marketing and Communications Officer
6:30	Recreational Users – Open Mic - General Comments, Questions, Concerns	All in Attendance
7:00	Small Working Groups – Global Café Conversations (Six Work Stations) <p>Key Question: What does multiple recreational use mean to you and what should it look like on the ground?</p> <p>Work Station 1: The Trail System & Trail Standards</p> <p>Work Station 2: Trail Design, Maintenance & Restoration</p>	Karen Wianecki & Attendees

Time	Agenda Details	Lead
	Work Station 3: Trail Use Work Station 4: Conflict Management Work Station 5: Administration, Implementation & Governance Work Station 6: Forest Management Plan Vision & Guiding Principles	
8:25	Recap, Review & Next Steps Staying Engaged...	Karen Wianecki
8:30	Meeting Concludes...Safe Journey Home	Linda Laliberte

Ganaraska Forest Management Plan 2016

FOREST PATROLLERS MEETING

Date: Tuesday, November 8th, 2016

Time: 6:30 – 8:30 p.m. – **Meeting Begins at 6:00 pm**

Location: Ganaraska Forest Centre - 10585 Cold Springs Camp Rd, Port Hope Cold

AGENDA

Meeting Purpose:

1. To provide an overview of the work currently underway at Ganaraska Region Conservation Authority to update the Ganaraska Forest Management Plan;
2. To provide an opportunity for Forest Patrollers to offer input on a proposed FMP Table of Contents, Vision Statement and Guiding Principles for the updated Forest Management Plan;
3. To collectively discuss the inclusion of strategies and protocols to address identified issues pertaining to a multiple use forest;
4. To identify additional opportunities for Forest Patroller engagement; and
5. To discuss next steps.

Time	Agenda Details	Lead
6:15: Coffee & Tea		
6:30	Official Welcome & Introductory Remarks	Linda Laliberte, CAO/Secretary Treasurer
6:05	Meeting Purpose and Participant Introductions	Karen Wianecki, Facilitator
6:10	Context Setting <ul style="list-style-type: none">• Forest Management Plan Update• Engaging Others	Fraser Smith, Forester Amy Griffiths, Marketing and Communications Officer
6:30	Forest Patrollers – Open Mic <ul style="list-style-type: none">- General Questions- Comments & Concerns	All in Attendance
7:00	Focused Dialogue Key Questions: What does multiple use mean to you and what should it look like on the ground? What changes if any are needed to... <ul style="list-style-type: none">• The Trail System & Trail Standards• Trail Design, Maintenance & Restoration• Trail Use	Karen Wianecki & Attendees

Time	Agenda Details	Lead
	<p>Can conflicts between uses and users be better addressed how?</p> <p>What suggestions do you have for FMP implementation, administration and governance?</p> <p>What are your thoughts pertaining to a Vision for the Ganaraska Forest & Guiding Principles</p> <p>Are there other issues that the FMP should address?</p>	
8:25	Recap, Review & Next Steps Staying Engaged...	Karen Wianecki
8:30	Meeting Concludes...Safe Journey Home	Linda Laliberte

Ganaraska Forest Management Plan 2016

PUBLIC OPEN HOUSE

Date: Tuesday, November 22nd, 2016 - Time: 4:00 – 8:00 p.m.

Formal Meeting & Presentations at 6:30 pm

Location: Ganaraska Forest Centre - 10585 Cold Springs Camp Rd, Port Hope

AGENDA

Meeting Purpose:

1. To provide an overview of the work currently underway at Ganaraska Region Conservation Authority to update the Ganaraska Forest Management Plan;
2. To provide an opportunity for interested members of the public to identify concerns relating to the Ganaraska Forest;
3. To provide an opportunity for members of the public to provide input to the Forest Management Plan including providing advice on a Vision, Mission, Management Objectives, Guiding Principles and/or strategies to address the impact of forest use on property enjoyment and quality of life;
4. To identify additional opportunities for public engagement; and
5. To discuss next steps.

Time	Agenda Details	Lead
4:00 – 6:30: Drop In - Meet Staff, Share Individual Comments & Concerns; Provide Individual Input & Feedback (Table of Contents, Vision, Management Objectives, Guiding Principles)		
6:30	Official Welcome & Introductory Remarks	Linda Laliberte, CAO/Secretary Treasurer
6:35	Meeting Purpose & Objectives	Karen Wianecki, Facilitator
6:40	Forest Management Planning: An Overview <ul style="list-style-type: none"> • Forest Management Planning in General • The Need for a New Forest Management Plan • Questions & Comments from Participants 	Fraser Smith, Forester
6:50	The Engagement Process <ul style="list-style-type: none"> • The Engagement Process Thus Far (Comment Cards, FAQ, Survey, One-on-one Interviews) • Questions & Comments from Participants 	Amy Griffiths, Marketing and Communications Officer
7:00	Open Mic – Comments, Concerns & Suggestions	All in Attendance
7:20	Meeting Marketplace – Individual Work Stations Members of the public are invited to visit various Work Stations to offer their input on: The Trail System & Trail Standards Trail Design, Maintenance & Restoration Trail Use Conflict Management Forest Management Plan Implementation Other Issues	All In Attendance
7:50	Recap, Review & Next Steps Staying Engaged...	Karen Wianecki
8:00	Meeting Concludes...Safe Journey Home	Linda Laliberte

Appendix B

Ganaraska Forest Recreational User Committee (Original Terms of Reference)

Purpose

The purpose of the Ganaraska Forest Recreation Users Committee is to carry out work and provide advice to the Ganaraska Region Conservation Authority (GRCA) on:

1. development of standards and guidelines for each recreation use occurring in the Ganaraska Forest,
2. monitoring and assessing the impacts of users of the Forest on the resource function of the Forest, subject to the availability of funds,
3. user conflicts within the Forest,
4. use conflicts with landowners of property abutting the forest, and
5. approval of groups use of the Forest in an effort to reduce conflicts, ensuring safe use and reducing liability.

The Committee will also assist with:

1. the identification of property boundaries,
2. 2. informing users of their responsibilities and the regulations regarding their use,
3. promotion of co-operation among the various users of the forest, and

4. the development of recreation programs and/or events in the forest subject to approval of the Conservation Authority.

The Chair

The chair is appointed by the GRCA and is a non-voting member of the committee

Recording Secretary

A staff member of the GRCA will be appointed by the Chief Administrative Officer and is a non-voting member of the Committee. In the absence of the Chair, the Recording Secretary will assume the Chair.

4) Reporting Function

The Ganaraska Forest Recreation Users Committee shall report to the GRCA on its activities over the previous year by December 1 of each year.

Appendix C

Photo Gallery Issues Facing the Gananaraska Forest

Photos provided by Dave Grant to demonstrate some of the issues/challenges facing the Gananaraska Forest.



Issue: Access to the Gananaraska Forest at multiple locations and municipal 'ownership' of road allowances.

Issue: The need for better signage.



and what could be considered – Lafarge sign below:



Positive Change: New Reference Markers (130 in total) have been introduced.

Old Marker (Hard to See):



New Marker:

