

FOREST MANAGEMENT PLAN

McGann Property

Town of Altona, Clinton County, New York

220.2 acres

Parcel IDs:

NA

Deed (Liber/Pages): NA

480-a certification number: 09-047

Original certification date: NA

Prepared by:



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Introduction

This plan covers the fifteen year period from 2019 to 2034. It lays out the near- and medium-term actions that should guide the development of the McGann forest. It also qualifies portions of the property for continued enrollment in the 480-a Forest Tax Law program and commensurate reduction in property taxes.¹ Owners participating in the program are obliged to manage enrolled portions of their property according to their approved forest management plan and to make any reasonable investments for improvement that the plan recommends. Its recommendations were developed in accordance with the principles and practices of scientifically sound forestry, as described in the relevant management guidelines, textbooks and academic journals.

¹ Further information about 480-a can be found at the New York Department of Conservation's website: <https://www.dec.ny.gov/lands/5236.html>.

Property Description

The McGann forest represents a well-managed resource positioned to continue generating value on a sustainable basis. NA percent of the 220.2 acre property is productive forestland to be managed according to this plan. The property is located in the Adirondack Park in the Town of Altona, Clinton County, New York. The property is accessed via the Jerusalem Road, a former town road that was formally abandoned. The road is passable but has not been well maintained. Internal access to the property is provided by an extensive network of skid trails established during recent harvesting operations. Property-wide, elevations range from 1250 to 1460 feet above mean sea level. The primary water resources on the property are an unnamed stream the flows to the north and roughly bisects the property. This stream has its headwaters in a neighboring lot, roughly half a mile to the south. A few small, intermittent tributaries originate on the property and join the stream as it follows a shallow, curving channel before crossing the boundary line to the north. From there it meanders another three miles until it enters the Great Chazy River in Alder Bend. There is also a smaller, intermittent stream in the eastern side of the property. This stream joins the larger stream off the property, about halfway along its course to the Great Chazy. The Great Chazy River flows northeast, entering Lake Champlain near Rouses Point, eventually reaching the sea via the Richelieu and St. Lawrence Rivers. Three areas

of forested wetlands are present in the eastern half of the stand, covering an area of less than five acres in aggregate. The property's boundaries are well established and clearly marked. The southern boundary is defined by Jerusalem Road. The property abuts state land to the west, with the boundary very clearly blazed with yellow paint and posted with Forest Preserve signs. To the north, the property abuts a separate lot also owned by the McGanns but cleared delineated with red painted blazes. The property abuts one private parcel to the east and the shared boundary is discernable and marked with red paint. Soils, forest health, and other pertinent topics are discussed in the individual stand area descriptions that follow.

Principles, Goals & Strategies For Forest Management

Conservation

The ecological functioning, productive capacity and biological diversity of the forest resource should be maintained or improved over time so as to provide opportunities for the current or future landowners to continue to enjoy and use the property. A management strategy that is sustainable in the long-term and viable in the short- and medium-terms offers a strong measure of protection against future development or conversion.

Timber management

Management should provide regular returns from timber harvesting. Long-term value growth is provided by maintaining full site occupancy with healthy trees capable of producing high quality sawtimber or veneer. Tree species which yield sought-after, high-value wood should be promoted within each stand or, when regenerating a new stand, attention should be paid to creating stand conditions that favor the establishment of those species. At a property-wide scale, a variety of species should be maintained, providing options for seizing future market opportunities and a hedge against species-specific market depreciation. Among desired species, additional preference should be given to individual trees of sufficient vigor and grade-potential for strong future value growth. Consideration of economic efficiency should inform the timing and coordination of infrastructure investments and stand maintenance, improvement and harvest operations.

Stand Descriptions & Management Recommendations

Presented below are detailed stand-by-stand descriptions of the forest, the long-term structural, compositional and functional goals for each stand, and the near-term silvicultural treatments or management activities that have been prescribed to advance each stand toward those goals. The data presented in the following pages was obtained from a thorough inventory of the property in November of 2019. General conditions were assessed qualitatively in conjunction with quantitative sampling. Observational notes and sample summary statistics together provide the basis for the stand descriptions and management recommendations. All sampling was done using a systematic sample and variable radius plots. In stands with uneven-aged structures, all trees 6" in diameter at breast height (dbh) and larger were measured in each plot. In stands with even-aged structures, all main-canopy trees were measured in each plot.

When contractors are used to implement silvicultural prescriptions, they should be highly skilled, properly equipped, fully insured, and closely supervised. A professional forester should prepare and administer commercial treatments, and logging operations should be timed to coincide with favorable weather conditions (working on wet soils only when they are frozen, for instance) and favorable timber markets. The dates assigned to timber harvests and other management activities prescribed in this plan are intended to guide, rather than constrain, forest management. To accommodate dynamic markets and variable weather, scheduled timber harvests may be advanced or delayed by one year from the date identified in this plan; if operational or economic conditions change substantially, the management schedule may be further revised by an ammendment to this plan.

The property should be reassessed in 2024 and the findings brought to bear on a reassessment of the goals and strategies proposed in this plan, leading to a formal management plan update.

Management Schedule

2020 - Full management plan revision; boundary line maintenance; Stand 1: Group selection harvest; Stand 2: Group selection harvest

2021 - No scheduled activity

2022 - No scheduled activity

2023 - No scheduled activity

2024 - No scheduled activity

2025 - Management plan update; boundary line maintenance

2026 - No scheduled activity

2027 - No scheduled activity

2028 - No scheduled activity

2029 - No scheduled activity

2030 - Management plan update; boundary line maintenance

2031 - No scheduled activity

2032 - No scheduled activity

2033 - No scheduled activity

2034 - Full management plan revision; boundary line maintenance

Area 1

Northern hardwood

NA acres total

0.00 acres ineligible wetlands

0.00 acres ineligible roads and landings

Site-specific information

- **Soils:**
Becket-Tunbridge-Skerry complex
- **Site Class:**
II (determined from soil mapping and field assessment)
- **Access:**
Frontage on Jerusalem Rd
- **Stand history:**
Stand 1 occupies land that has almost certainly been continuously forested since pre-settlement times. The area appears to have been burned over in the 1908 fires, which would have been quickly followed by establishment of an even-aged hardwood stand. Timber harvests were likely conducted on a periodic and largely opportunistic basis over the course of the 20th century, resulting in non-uniform stocking in the overstory cohort, scattered patches of regeneration, and an increasingly irregular stand structure as the century progressed. Heavy harvests in the mid-1990's and again around 2005 created the residual structure that now defines the stand. Demographically, the stand is multi-aged, in that trees from multiple age-cohorts are present. Structurally it somewhat resembles a two-aged stand, with a distinctive older cohort, originating following various mid-century partial harvests, overtopping a younger cohort of approximately 25 year old trees. No harvesting or other management activities appear to have taken place over the past decade.

Current forest information

- **Age Class Structure:**
Uneven-aged
- **Species (% stocking):**
hard maple (44%), beech (14%), paper birch (12%), ash (10%), black cherry (6%), soft maple (6%), yellow birch (4%), basswood (2%)
- **Regeneration:**
Sapling- and pole-sized regeneration is abundant throughout the stand. Desirable species such as sugar maple, yellow birch and black cherry are well represented among these stems.
- **Forest health:**

Diameter distributions for common species

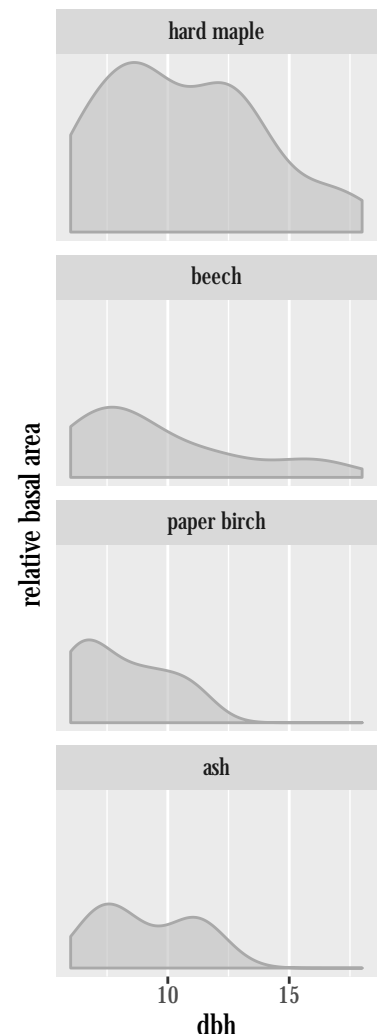


Figure 1: Distributions are approximated with kernel density estimation. Common species are those that account for at least 8 percent of the total stocking and areas under each curve represent species basal areas.

Few forest health issues were observed on this portion of the property. Beech bark disease is present and affects older beech trees. Some maple borer and black knot of cherry damage was also noted but does not pose a major threat to long-term stand productivity.

- **Size class structure (%BA):**

6-10": 62% | 11-16": 34% | 17-22": 4% | 23"+: 0%

- **Standing dead wood (BA by size class):**

6-10": 1.8 ft²/ac | 11-16": 0 ft²/ac | 17-22": 0 ft²/ac | 23"+: 0 ft²/ac

Inventory information

- 11 points, 10 BAF, November, 2019

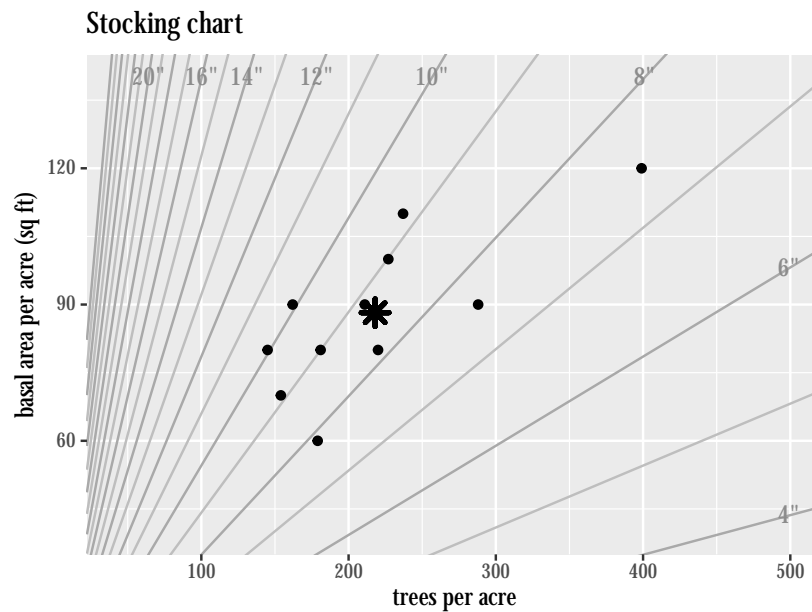


Figure 2: Points represent individual plots. Asterisk represents stand average. Radial lines are quadratic stand diameters.

Table 1: Measures of stocking for all live trees (total) and acceptable growing stock.

| | Total | Acceptable |
|----------------------|-------|------------|
| Basal area (sqft/ac) | 88 | 71 |
| QSD (in) | 9 | 9 |
| Stems/ac | 218 | 178 |

Silvicultural prescription

Groups between 0.25 and 5 acres should be established throughout the stand; in aggregate, the area of group openings should not exceed 50% of the total stand area. Groups should be located so as to: (1) release patches

or contiguous areas of desirable sapling- and pole-sized regeneration, (2) remove concentrations of unacceptable growing stock or economically mature stems, and (3) provide a variety of site conditions and light environments for the establishment of a diverse new regeneration cohort. Some larger group openings may be structured as group shelterwoods, with up to 40 sqft. of residual basal area retained to favor shade-intermediate to shade-tolerant species. Crop trees in the matrix between group openings should be fully released. Where sufficient crop tree quality stems are present, selection should achieve a target density of 70 trees per acre (25 ft. square spacing), though most areas of the stand are not currently stocked with enough potential crop trees to achieve this target. Crop tree selection should emphasize on retention of high-value stems of hard maple, yellow birch and black cherry; secondarily, high-quality soft maple and paper birch may be selected. Disease-free beech should also be retained (unless within around 10-15 feet of a designated crop tree) and can be released or partially released if competitors are of low- to average-quality.

Area 2

Northern hardwood

NA acres total

0.00 acres ineligible wetlands

0.00 acres ineligible roads and landings

Site-specific information

- **Soils:**
Becket-Tunbridge-Skerry complex
- **Site Class:**
II (determined from soil mapping and field assessment)
- **Access:**
Frontage on Jerusalem Rd
- **Stand history:**

Stand 2 also appears to have been continuously forested since pre-settlement times, though it may not have been affected by the 1908 fires. This may account for the historically higher proportions of beech in this stand and in the eastern portion of the adjacent lot to the north. In any case, a similar pattern of partial logging over the course of the 20th century largely obscured the possibly distinctive land-use histories of Stands 1 and 2. Unlike Stand 1, this stand appears not to have been harvested in the 1990's, though the subsequent harvest in the early-2000's seems to have been more intensive. This pattern again resulted in a multi-aged stand with a 'lumpy' age-class distribution and a residual structure functionally similar to a two-aged stand. No harvesting or other management activities appear to have taken place over the past decade.

Current forest information

- **Age Class Structure:**
Uneven-aged
- **Species (% stocking):**
hard maple (35%), beech (21%), yellow birch (15%), soft maple (11%), black cherry (5%), paper birch (4%), ash (3%), basswood (3%), other hardwood (2%), aspen (1%)
- **Regeneration:**
Sapling- and pole-sized regeneration is abundant throughout the stand. Desirable species such as sugar maple, yellow birch and black cherry are well represented among these stems.
- **Forest health:**
Few forest health issues were observed on this portion of the property. Beech bark disease is present and affects older beech trees. Some maple borer and black knot of cherry damage was also noted but does not pose a major threat to long-term stand productivity.

Diameter distributions for common species

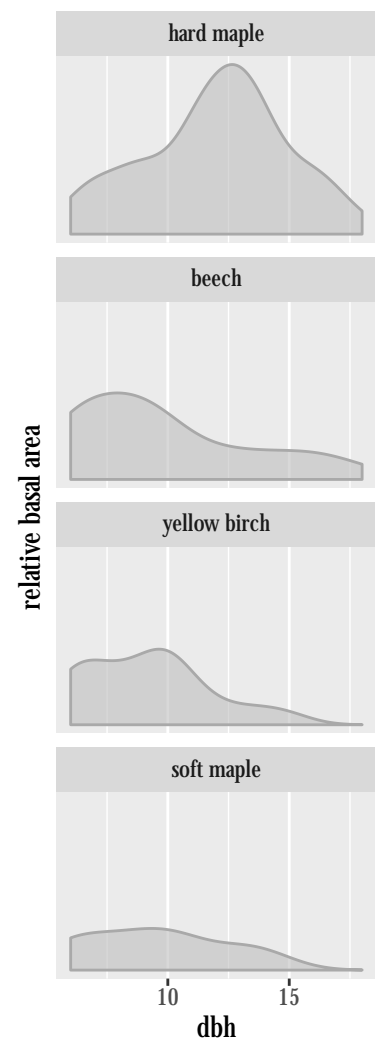


Figure 3: Distributions are approximated with kernel density estimation. Common species are those that account for at least 8 percent of the total stocking and areas under each curve represent species basal areas.

- **Size class structure (%BA):**
6-10": 56% | 11-16": 41% | 17-22": 3% | 23"+: 0%
- **Standing dead wood (BA by size class):**
6-10": 1.7 ft²/ac | 11-16": 2.1 ft²/ac | 17-22": 0 ft²/ac | 23+": 0 ft²/ac

Inventory information

- 24 points, 10 BAF, November, 2019

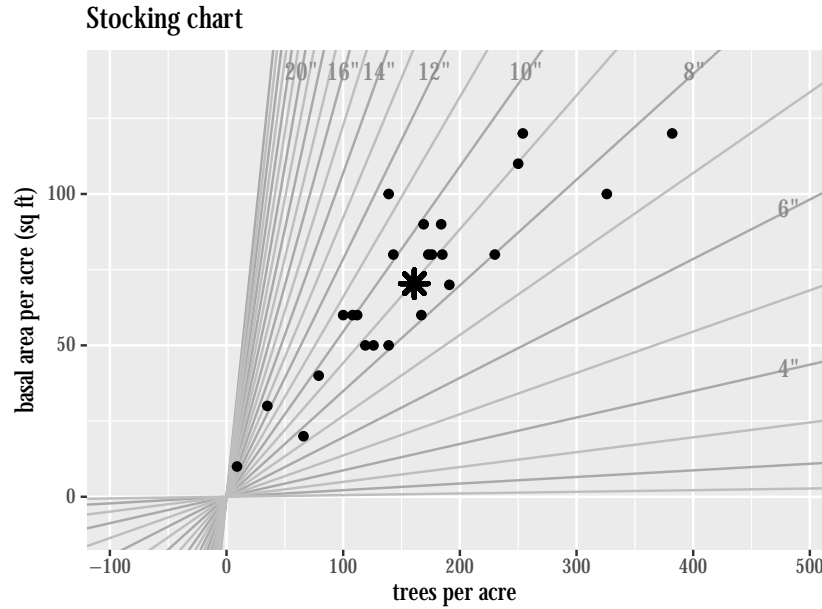


Figure 4: Points represent individual plots. Asterisk represents stand average. Radial lines are quadratic stand diameters.

Table 2: Measures of stocking for all live trees (total) and acceptable growing stock.

| | Total | Acceptable |
|----------------------|-------|------------|
| Basal area (sqft/ac) | 70 | 48 |
| QSD (in) | 9 | 9 |
| Stems/ac | 161 | 103 |

Silvicultural prescription

Groups between 0.25 and 5 acres should be established throughout the stand; in aggregate, the area of group openings should not exceed 50% of the total stand area. Groups should be located so as to: (1) release patches or contiguous areas of desirable sapling- and pole-sized regeneration, (2) remove concentrations of unacceptable growing stock or economically mature stems, and (3) provide a variety of site conditions and light environments for

the establishment of a diverse new regeneration cohort. Some larger group openings may be structured as group shelterwoods, with up to 40 sqft. of residual basal area retained to favor shade-intermediate to shade-tolerant species. Crop trees in the matrix between group openings should be fully released. Where sufficient crop tree quality stems are present, selection should achieve a target density of 70 trees per acre (25 ft. square spacing), though most areas of the stand are not currently stocked with enough potential crop trees to achieve this target. Crop tree selection should emphasize on retention of high-value stems of hard maple, yellow birch and black cherry; secondarily, high-quality soft maple and paper birch may be selected. Disease-free beech should also be retained (unless within around 10-15 feet of a designated crop tree) and can be released or partially released if competitors are of low- to average-quality.