

# LEELANAU CONSERVATION DISTRICT

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October 20, 2003

Bob Krist  
P.O. Box 230  
Omena, MI 49674

Dear Bob,

I am writing in reference to our meeting of October 13, 2003 at which time we examined the forested properties owned by the Omena Woods Association Inc. The purpose of the site visit was to evaluate the condition of the forest and discuss management options.

The property owned by the Association contains several forest types. The predominant type is the northern hardwood forest and it dominates the southern end of the property. Tree species present include sugar maple, beech, basswood, white ash, hemlock, ironwood, black cherry, and yellow birch. Though many of the trees have large diameters, they are second growth trees.

Presently, the stand is overstocked with poletimber (4-10" diameter at 4.5' above the ground) and sawtimber (10"+ diameter) size trees. The crown canopy is closed resulting in a dark understory with very few seedling-size trees present due to the lack of sunlight reaching the forest floor.

The following management suggestions are based on the premises that the management objectives include forest management for forest health, wood products, recreation, and wildlife habitat.

As mentioned above, this forest is overstocked, and many of the trees have large diameters. The existing trees have reached a size and density where they are now competing with each other for available sunlight, water, and nutrients. Therefore, they are no longer growing at an optimal rate. This can be seen in the growth rings of the trees where in the tree we examined, very little diameter growth has occurred in the past 20 to 30 years.

Having an overstocked stand is not necessarily bad. If left, the trees will continue to grow at a very slow rate. As the stand ages, individual large trees will die creating gaps in the canopy which in turn allow sunlight onto the forest floor. Where this occurs,

young trees will begin to grow. The types of animals that will occupy a forest like this would be woodland songbirds, woodpeckers, porcupines, raccoons, and squirrels.

The above paragraph describes one of the management options in the northern hardwood portion of the property, that being no active management. No active management will result in a forest with a park-like appearance which is something many people find aesthetic. Though the forest will not be unhealthy, the trees will not be vigorous. Few young trees will regenerate, and no income will be realized.

Another management option would be to actively manage a portion of the northern hardwood forest area. Perhaps ten acres could be designated for active management. The goal here would be sustainable forestry to maintain vigorous tree growth and generate income while providing more diverse wildlife habitat, and continued recreational opportunities. Timber harvests would be done every 10 – 18 years as stand conditions dictate.

During our site visit I took one basal area measurement which gave me a reading of 140 sq. ft./acre. In brief, basal area is an indication of the number of trees per acre (stocking density) with the size of the trees taken into account. As the basal area of a stand of timber approaches 120 – 130 sq. ft./acre, it is too crowded for optimum tree growth. At that time a harvest should be conducted to reduce the stocking density back to 85 or 90 sq. ft./acre. Following the harvest, the stand is left alone for 10 – 18 years. At the time the basal area again reaches 120 -130 sq. ft./acre, another selective harvest is done. These stocking levels result in optimum tree quality and diameter growth rate.

With each timber harvest, the mature and poor quality trees are removed. By doing this, the quality and value of the trees in the stand increases. Where at present we have primarily poletimber and sawtimber size trees of approximately the same age class, our harvesting scheme will result in a stand with seedlings and saplings as well as poletimber and sawtimber size trees. Our age and size distribution will be much better allowing for long-term management.

From a wildlife perspective, this management scenario will provide cover and food in the understory as young trees grow. This in turn will provide habitat for additional bird species, deer, and possibly grouse.

Once the designated trees are cut and removed, the tops could be removed by a firewood producer. This will maintain the aesthetics of the stand which I believe are part of the recreation appeal and trail system of this property.

A third option would be to follow the above recommendations, but expand it to cover the entire northern hardwood portion of the property.

As you proceed north on the property, the forest type gradually changes from northern hardwood to a mix of red oak, red maple, hemlock, and white pine, with a component of northern hardwood species. This area is overstocked, and many of the trees are in the sawtimber size class.

Management in this area should be somewhat different than that of the northern hardwood area. The presence of oak increases the value of this area for wildlife. This area could also be managed for sustainable forestry.

Management here should focus on the red oaks as both a valuable timber and wildlife tree species. Oak is a shade intolerant species and therefore requires sunlight to regenerate. To encourage new oak trees, fairly large openings would have to be created in the crown canopy. Selective tree harvesting on 10 – 20 year rotations would be the preferred approach.

This area to the north also contains the hemlock forest type. There is an almost pure stands of hemlock with very little understory. Hemlock is a very shade tolerant tree. It has a tendency to create its own microclimate as once established, the only tree species that can grow beneath its heavy shade is hemlock. It is a species with low timber value, but high aesthetic value, and somewhat high wildlife value. I would recommend no active management in these areas.

At the extreme northern end of the property the forest type becomes oak, red maple, aspen, white pine, and white birch. The stocking density and quality of timber is such that again I would recommend no active management. Aesthetics and wildlife habitat are perhaps the highest values here.

In summary, the northern hardwoods at the southern end of the property offer the greatest management potential. Due to the size of the trees and the percentage of sugar maple, there is good value here with the possibility of much higher value with proper management. I believe if this area is managed correctly with conservative numbers of trees being cut and the tops being cleaned up following cutting, that the aesthetics of the stand, though it will change, can still be maintained.

I realize that as an association there will be many different views on the management of this area. If I can be of any assistance or answer any questions, please call. In the event you decide to pursue active management, I can also assist you with that.

Sincerely,

Rick Moore, District Forester