



Crowe Forest Management, LLC

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Barbara Kessie Estate
c/o Schrader Real Estate
950 Liberty Drive
Columbia City, IN 46725

BARBARA KESSIE ESTATE WOODLAND APPRAISAL – 7 Acres

Location: The woods is located on the west side of County Road 450 West just north of the Kessie home at 953 North 450 West and south of US 30 in section 1 of Richland Township, Whitley County, Indiana

Acreage: This woods measures approximately 9.8 acres although only around 7 acres are suitable to grow trees. The northwest wetland below 910 feet in elevation (approximately 2.3 acres) and the southeast wetland below 912 feet above sea level (approximately 0.5 acres) have been excluded from the appraisal because they are too wet to support trees.

SOILS AND TERRAIN

Soil Types: The main soils types are Morley loam and clay loam – 3 to 12 percent slopes with a small amount of Glynwood loam and Pewamo silty clay loam in the lower areas nearest the two wetlands. The soil shown as Pewamo soil between the wetlands is likely Morley soil.

Soil Descriptions: The Morley and Glynwood soils are deep, moderately well to well drained, moderately rolling, productive, upland forest soils. The Pewamo soil (estimate at less than a half acre) located adjacent to the wetlands is a deep, poorly to very poorly drained, hydric soil that is limited to water tolerant species due to excessive wetness.

Soil Productivity: The site index for the Morley and Glynwood soils are 80 for red and white oak. The site index for the Pewamo soil is 86 for pin oak and 66 for red maple. The site index is a measure of the height of the dominant stand of trees at 50 years. In general the higher site indexes produce taller trees and more volume growth per acre per year hence the site is more productive.

WOODLAND DESCRIPTION

Grazing: Both of these woods, like most woods in Indiana were grazed by livestock. The grazing was likely the heaviest in the North Woods but the South Woods also shows evidence of the damage. The livestock was likely removed over 50 years ago from the South Woods and at least 30 years ago from the North Woods. The species composition was impacted with an increase in the number of distasteful trees like hickory and walnut and the thorny honey locust but the main damage was to the root systems due to compaction from the animal's hooves. This damage resulted in hollow trunks, especially in the shallow rooted sugar maple. Many of the defective sugar maple were removed in the earlier timber harvest

Timber Harvest: In 1991 Gerald Kessie indicated that no timber had been harvested in the nearly 40 years in which he owned the property. **In 1992** we conducted the a timber harvest in the woods. The light improvement harvest included 45 tallied trees plus 11 "X" trees with an estimated volume of 11,634 board feet. The harvest included 19 elm plus 1 "X" (4,203 board feet), 14 sugar maple plus 5 "X" (3,877 board feet), 4 red oak (1,760 board feet), 3 hickory plus 1 "X" (489 board feet), 2 white ash (829 board feet), 2 hackberry, 1 honey locust, and 3 "X" cottonwood and 1 "X" black cherry. The trees were sold to Arlo Smith and harvested during the fall / winter of 1992.

Future Value: Because many of the walnuts are relatively small (45 trees were 22 inches, DBH or less) they should increase in value considerably over the next ten to twenty years. The estimated growth and value increase is estimated to be as follows assuming management.

2033 Value	Trees	sawlog BF	veneer BF	total BF	\$ Sawlogs	\$ Veneer	Total \$
Walnut sawtimber	42	12129	0	12129	\$ 43,671	\$ -	\$ 43,671
Walnut veneer	14	3589	2742	13767	\$ 13,767	\$ 28,110	\$ 41,877
Totals	56	15718	2742	25896	\$ 57,437	\$ 28,110	\$ 85,547
Other species							\$ 10,000
Grand Totals							\$ 95,547

MANAGEMENT RECOMMENDATIONS

Potential Timber Harvest: This woods should be harvested on a regular schedule, typically at 10 year intervals. Harvesting at this interval maintains trees until they have reached their biological and economic maturity to maximize the long-term returns from the woods while maintaining the flexibility to move up or delay a harvest should the need arise due to storm or drought damage, new pathogens, or economic necessity. **The next harvest could be held at any time, but most of the walnut should be grown for another 10 or more years as most are increasing in value at over 10 percent annually.** The timing of the harvest will depend on your objectives, the timber markets and the condition of the woods. **Walnut prices tend to be higher in the fall and are influenced by the economy and the export markets.**

All harvests should be marked by a forester to ensure the correct trees are selected for harvest and should be sold on as a competitive bid sale with all companies bidding on the same trees under the same terms to ensure a fair price is obtained for the timber. The harvests should use a combination of group selection to create the conditions to promote desirable regeneration and single tree selection to commercially thin less desirable trees and salvage any trees that develop problems. In addition all harvest should concentrate on improving the future condition and long-term productivity of the woods. In general, if a tree will decline before the next harvest it should be taken at this time assuming it does not adversely affect other trees or the regeneration. Conversely if a tree will improve at an acceptable rate it should be left, especially if it is a high quality tree of a desirable species. A common analogy would be to always cull the herd, maintain your high quality stock therefore and producing the best quality possible. It is likely timber stand improvement (weeding) will be beneficial after each subsequent timber harvest.

Tree Selection: Although this may seem redundant this is one of the most important aspects to the long term management of the forest and where many decisions negatively impact the woods. As a general rule, trees should be selected for harvest based on their problems or risks or because they are adversely affecting better, future crop trees. Trees that have reached their peak should be selected and trees that have good potential or are providing a good return on their investment should be left to be harvested in the future. High quality, high valued species or trees are the most valuable and they also provide the best return on investment (often over 10 % annually), therefore the decision to harvest these trees should take this into account. For example a walnut tree can easily have a current value greater than \$500, but it is likely increasing in value at over 10 % annually, especially for high quality and fast growing trees.

Selling Timber: The marketing of the trees can significantly impact the price obtained for these trees. The timber should be sold using a sealed competitive bid sale open to reputable timber companies from this region (a walnut sale would usually attract from a much larger area including mills from the

surrounding states). It is important to understand that each species of tree has a different value, (often significantly different) and the quality of the tree also significantly impacts the trees value. Often the top ten percent of the trees bring half the total value associated with a timber sale and a single walnut tree could bring \$1000's or tens of thousands, but the only way to get that value is to have left those \$1,000 trees or those \$5,000 trees in the woods in previous harvests, which has historically been done in this woods. The key is to let the condition of the trees and the potential returns, dictate the tree selection. The first step in conducting the harvest is the tree selection and the marking of the trees. When this is done a 100 percent inventory of the marked trees is created, summarized and provided to the landowner before it is advertised to the timber companies. We provide the marking service and the marketing service, along with the contract and the over site of the logging operation to ensure compliance with the contract.

Additional information regarding the how to sell timber can be found in Purdue FNR –138 publication – “Tips On How To Get The Most From Your Timber Harvest” by William Hoover and Jack Siefert.

Income Tax: Because timber is considered real estate, it would be possible to avoid much of the income tax on a timber sale by depleting the value of the property. The cost basis of the property including timber likely had a new cost basis established thru the estate. A forester or tax accountant familiar with timber taxation can advise you on how this is accomplished. Further information may be obtained at: www.timbertax.org

Additional Information: Additional information on how to properly manage your woods to maximize its long term productivity is available on websites from Purdue University and the Woodland Steward Institute, a nonprofit group made up of representatives from various forestry groups such as Purdue, the Indiana Division of Forestry, the Society of American Foresters, the Soil and Water Conservation Districts, the Association of Consulting Foresters, the Indiana Woodland Owners Association and The Nature Conservancy etc. The Websites are:

www.inwoodlands.org

www.fnr.purdue.edu

If you have any questions regarding the general condition of the woods, potential timber harvest, or the estimated value of the walnut trees don't hesitate to contact me. The best time to reach me is during the evening on my cell phone 260-704-1655.

Sincerely,

Tom Crowe,
Crowe Forest Management, LLC

Statement of Assumptions and Limited Conditions:

No responsibility has been assumed for legal matters, nor title opinion rendered on this property or its timber in the appraisal. Liens and encumbrances have been disregarded in the appraisal. The sawtimber has been appraised as though free of indebtedness.

Location of property lines and acreage were established from the best available information. No land surveying was contemplated or conducted during the appraisal project. Therefore, no responsibility is assumed for correct location of parcels or land area.

It is assumed that legal rights-of-way are in existence or can be obtained to all parcels included in this appraisal.

Although all information contained in this report is believed to be correct, no guarantee or assumption of liability regarding the information is intended.

Delivery of this report concludes this specific work assignment from the client requesting the appraisal.

Possession of this report does not include the right of publication. Its use is not intended for any other purpose than those of the client requesting the appraisal without written consent of the appraiser, and in any event, only in its entirety. If values in this report are used in making appraisals by a combination of values produced by other persons, then this appraisal becomes invalid.