



White Township
950 Indiana Springs Rd.
Indiana, PA 15701

White's Woods Timber Valuation

Tax Parcel:
Total Acres: 245
Cruise size: 240 Acres

Overview

Millstone Land Management completed a prism cruise February, 2019 on Whites Woods for White Township to have an up to date timber assessment. The cruise was done with a 20 BAF prism and included 47 plots randomly placed across the property. The following information was collected from the cruise to give the current assessment:

Table 1: Timber valuation prior to cut/skid/haul and road work deductions

Species	Volume	% Volume	\$ /MBF	Total
Poplar	3,722,297	67.6%	0.400	\$1,488,918.80
Red Oak	1,010,747	18.3%	0.600	\$606,448.20
Soft Maple	252,072	4.6%	0.540	\$136,118.88
Cherry	173,769	3.2%	0.750	\$130,326.75
Black Oak	92,070	1.7%	0.500	\$46,035.00
Chesnut Oak	97,987	1.8%	0.600	\$58,792.20
Hickory	48,742	0.9%	0.300	\$14,622.60
White Oak	35,956	0.7%	0.800	\$28,764.80
Black Birch	19,431	0.4%	0.250	\$4,857.75
Beech	42,851	0.8%	0.200	\$8,570.20
Ash	13,979	0.3%	0.435	\$6,080.87
Total	5,509,901			\$2,529,536.05

Recommendation for Management

Millstone Land Management would like to make the following recommendations for the timber management of White Wood's. The current timber stand is heavily stocked with mature standing timber. This stand is currently not allowing any sun to reach the forest floor, which is causing a stagnant understory. There is currently no new regeneration on the forest floor,

Michael.Lawer@MillstoneLandManagement.com

MillstoneLandManagement.com

T: (724) 388-4460

which is needed for the forest to maintain a healthy status and to begin a new generation of trees.

A shelterwood timber harvest is the recommended harvest prescription to be done to this forest stand. A shelterwood harvest is a series of cuttings used to establish a new generation of seedlings for growth without planting. This prescription is done in mature forest that have either been thinned or where no thinning is needed. The average basal area (BA) of the current stand is 150.6 per acre. A shelter wood harvest would reduce the BA to about 65 BA per acre, which would create openings and allow the sunlight to hit the forest floor for the new seedlings to grow. We recommend that the tops of felled trees be left and lopped down to 3 feet. This would create shelter for new seedlings from deer browsing, habitat for wildlife, and an aesthetically appealing finished harvest for the public.

This type of harvest would be done by marking the trees to be harvested and the unmarked would remain leaving a natural look to the stand without paint on the trees. This would involve taking about half of said volume. We would recommend doing this in a 3-5 harvest plan. This would depend on landing locations, natural areas, and accessibility to harvest locations. All trees to be harvest would be marked with blue paint at diameter breast height (DBH) with stumps marked to prevent timber theft. This will all be done by qualified foresters.

Table 2 shows the approximate volume to be harvested through the multiple first harvests and the possibly current day revenue that would be generated. These numbers would also include the deductions of approximate road work cost, cut, skid, and haul.

Table 2: Timber valuation after all first entry shelterwood harvests are complete

Species	Volume	% Volume	\$ /MBF	Total
Poplar	1,861,148.50	33.8%	0.205	\$381,535.44
Red Oak	505,373.50	9.2%	0.405	\$204,676.27
Soft Maple	126,036.00	2.3%	0.345	\$43,482.42
Cherry	86,884.50	1.6%	0.555	\$48,220.90
Black Oak	46,035.00	0.8%	0.305	\$14,040.68
Chesnut Oak	48,993.50	0.9%	0.405	\$19,842.37
Hickory	24,371.00	0.4%	0.105	\$2,558.96
White Oak	17,978.00	0.3%	0.605	\$10,876.69
Black Birch	9,715.50	0.2%	0.055	\$534.35
Beech	21,425.50	0.4%	0.005	\$107.13
Ash	6,989.50	0.1%	0.240	\$1,677.48
Total	2,754,951			\$727,552.68

These numbers are an estimation. There will be an accurate amount and volume given once a 100% tally and cruise is performed on the harvest unit. This is also based off of current markets and is

susceptible to change. The cut and skid (C/S) rate is at \$125/MBF (1000 bd ft.) and the Haul (H) rate is \$70/MBF. This brings the total C/S/H deduction to \$195/MBF. Roadwork to be done should be around \$30,000. This will depend on landing locations, trails, and any crossing that may need to be done.

Services

Millstone Land Management will be able to provide a vast array of service to White Township, pending approval. We would like to provide the following services throughout the timber harvesting:

- Timber sale administration
 - PA 1 Call for Utility checks. This will also allow us to talk to the service providers on any area we need to avoid or precautions that may need to be taken during harvest.
 - Property boundary check and marking by an approved surveyor
 - Roadwork layout and subcontractor hire (to be approved by township)
 - Oversee construction of trails and landings
 - Approve stone to be used for stability and precautionary areas
 - Review invoices for accuracy in completed work before payment
 - Reclamation of harvest site
 - Oversee the reclamation of trails and landings to the townships approval
 - Seed landing with a custom native seed mix as an alternative food source for wildlife and for aesthetic value
 - Lime, fertilize the haul road, and lime, fertilize, and mulch the landings
 - Possible pre/post harvest invasive plant treatment as needed (pending approval after a formal recommendation)
- Oversee the invoices from purchaser of material for the C/S/H of all material from site.
 - Calculate the amounts to be paid to all subcontractors for their services and then given to the township for approval and payment.
- Native plantings and streambank restoration/improvement (pending approval after formal recommendation)
 - Site specific species plantings
 - Native pollinator patches
 - Native thicket plantings to establish buffers against invasive species intrusions and improve site use for wildlife and aesthetics
 - Native grass plantings to improve habitat diversity and stabilize soil
 - Improving stream stability with the use of native shrub planting to slow erosion

All services will be done at Millstone Land Management's Hourly Forestry rate of \$85/hr. The estimated cost for above said services by Millstone Land Management comes to a total of \$54,000.

It has been an honor to supply White Township with this data on the timber management and assessment of White's Woods. If there are any further questions please contact Michael Henry Lawer. Millstone Land Management is looking forward to sustain Whites Woods for our community and future generations to enjoy.