

Heartwood Forestland Fund III, LP

Buffalo Property

Executive Summary of the 10-Year Management Plan
The Forestland Group, LLC

I Description of Property

- i) 35,318 acres in southwestern West Virginia in Logan, Mingo, Lincoln and Wayne Counties.
- ii) Acquired in 4Q99 from Buffalo Properties, which acquired the property from Columbia Natural Resources in 1998.
- iii) Property lies in a largely rural area where forest products, along with coal mining and gas development are the major industries.
- iv) Dominated by hardwood species, in particular, yellow poplar and upland oaks.

II Conservation Value

- i) There are no conservation easements on the Buffalo property.
- ii) There are no High Conservation Value Forests on the property.
- iii) The West Virginia Department of Natural Resources administers a 5,000-acre public Wildlife Management Area called the Big Ugly WMA.
- iv) Rare, Threatened or Endangered Species

**According to West Virginia Natural Heritage, the following species' habitats are found in this area; however, a Phase I environmental assessment found no RTE species.*

<u>Federal/State</u>	<u>Status</u>	<u># of species</u>	<u>Example</u>
ANIMALS			
Federal	Rare	0	---
	Threatened	0	---
	Endangered	1	Mottled Duskywing
State	Rare	1	Diana Fritillary
	Threatened	1	Allegheny Woodrat
	Endangered	1	Indiana Bat
PLANTS			
Federal	Rare	0	---
	Threatened	2	Virginia Spiraea
	Endangered	0	---
State	Rare	0	---
	Threatened	0	---
	Endangered	1	Virginia Spiraea

- If an RTE issue arises, TFG will
 1. Manage as if the species is present until a survey is completed to verify presence of the species.
 2. If present, necessary modifications will be made to the harvest prescription (details included in the 10-year management plan).
 3. Conservation zones will be created.

- v) Wildlife Resources: Common wildlife species include whitetail deer, wild turkey, cottontail rabbit, ruffed grouse, black bear and grey squirrel. The West Virginia Department of Natural Resources manages whitetail deer in Logan and Mingo Counties under an “Archery Only” hunting season.
- vi) Indigenous/Cultural issues:
 - (1) According to the federal Bureau of Indian Affairs, there are no populations of indigenous people on or near the Buffalo property.
 - (2) There are a few known isolated cemeteries, abandoned structures, chimneys, houses and barns on the property. As management proceeds on the property, these locations will be identified on management maps.
- vii) FSC Certification status and issues
 - Managed according to FSC principles and criteria and subject to regular FSC audits
 - Operates under an active Forest Management Chain of Custody Certificate (COC)
 - Has a completed 10-year management plan
 - Gilbert Forest Products, LLC and Columbia Forest Products both provide local FSC COC certified markets for stumpage sales from the Buffalo property.

III Timber Resource

- i) 32,000 acres forested; 3,318 acres non-forested
 - Non-forested acreage largely due to active coal mining and mine reclamation and natural gas development. Afforestation and reforestation occurs on these sites.
- ii) Overall forest cover type proportions

<u>Forest Type</u>	<u>Proportion</u>
Birch/Sycamore bottomland type	6%
Yellow-poplar, white oak, northern red oak type	35%
White oak, black oak, northern red oak type	45%
Pine – Oak type	5%
Non-Forest	9%

- iii) General Forest Management Objectives are:
 - (1) Maintain a diffuse canopy cover by harvesting a high percentage of financially mature stems of commercial species

- (2) Release crowns of well formed stems with the potential for accelerated growth in both size and value by removal of stems through all diameter classes, grades and species
- (3) Release of advanced regeneration of desirable species by small patch clearcuts
- (4) Provide for the desirable regeneration in areas where stocking is below full occupancy or would become so as a result of removals
- (5) Maintain adequate and appropriate wildlife habitat
- (6) Avoid, as knowledge permits, the taking of any state threatened or endangered species
- (7) Avoid impairment of water quality in streams and rivers by any management activity
- (8) Create no significant or enduring reduction of the scenic attractiveness of the property
- (9) In sum, the overall objective is to sustain or improve the biological characteristics of the site, while earning an acceptable return for our investors.

iv) Most common species

By Volume:

- (a) Yellow Poplar, 23%
- (b) Chestnut Oak, 22%
- (c) Black Oak, 15%

By Value:

- (a) Yellow Poplar, 18%
- (b) Chestnut Oak, 21%
- (c) Black Oak, 15%

v) Average Annual TFG Removals: Approximately 60% of annual allowable cut

vi) Operations Plan

1. Statement of General Harvest Strategy - The goal of timber management is to maximize the value, quality, and growth potential of the entire forest. Harvest strategies will focus on capturing the value of financially mature timber through regeneration cuts. By concentrating treatments on stands having a substantial element of mature timber, TFG will ultimately create a better distribution of size classes, higher quality sawtimber, and substantial in-growth from small to large sawtimber. The overall quality of the forest will be improved over the ownership of the property.
2. Description of Harvest Methodologies
 - A. Partial Cuts - Recognized harvesting practices that remove only part of the overstory canopy are known to include: (1) uneven-aged Management, (2) even-aged shelterwood, (3) removal of older age class in a two-aged stand, and (3) timber stand improvement (TSI).
 - B. Uneven-aged management is well suited for the regeneration of valuable shade-tolerant species where both value and merchantable volume can economically support the removal of a limited portion of the forest canopy. Hard maple is both very shade-tolerant and relatively valuable for adapting to uneven-aged management. Other valuable species such as northern red oak, black oak, white oak, and yellow poplar require more sunlight and do not adapt well to the traditional implementation of uneven-aged management.
 - C. Even-aged shelterwood management is well suited for the regeneration of mid-intolerant species and temporarily creates a two-story stand. The shade produced from the residual stand impacts the most intolerant species to some degree.

Economically, this technique requires a significant original basal area to allow a partial harvest while retaining enough trees to justify returning to harvest them a few years later. This return harvest is considered the removal of the older age class in a two-aged stand and is sometimes considered an overstory removal harvest.

- D. Complete canopy removal will be recommended where a minimum of 300 stems per acre of acceptable advanced regeneration at least four feet in height are present. This stocking will be determined during the pre-sale inventory cruise. Stands that contain less than 300 desirable stems per acre of sufficient height may be treated with the appropriate partial canopy removal treatment with retained residual basal area or with a full canopy removal covering areas of less than 10 contiguous acres.
- E. In the case of a full canopy removal, the typical presence of mature mixed oak, soft maple, hard maple, and yellow poplar within the harvest area, around the perimeter of the stand, and within the retention corridors, will promote the regeneration potential of the various species following harvest. Natural seeding and coppice from existing sources within the cutting unit will add significantly to the post harvest regeneration count and species mix. The irregular layout of clearcuts along with the inclusion of the retention corridors will encourage the intermediate shade-tolerant species while further promoting the seeding process. Therefore, perceived limitations derived from advanced regeneration stem counts will likely be more than made up for by natural seeding from existing seed sources and from root and stump sprouting following harvest.

3. Description of desired harvest equipment

- A. **Conventional** methods including manual felling, rubber-tire skidding, and decking and loading with knuckle boom loaders. Essentially all of the logging contractors working on the Buffalo property use strictly conventional methods.
- B. **Modified Conventional** methods include **shovel logging** that involves the use of a modified excavator to “bunch” and position the felled timber for easier accessibility for the grapple skidder. A **feller-buncher** is a mechanical harvesting machine that both fells trees and gathers them into groupings for more efficient handling of the material.
- C. **Non-conventional** systems such as **cable logging** are used in areas considered inoperable for conventional systems. A suspended aerial cable system is strung from the top of a hillside to the bottom and felled logs are pulled uphill along the cable. The log is suspended partially or completely off the ground to minimize soil disturbance. The need for constructed skid trails is greatly reduced. Currently, there are no logging companies with this equipment that are operating on the Buffalo property.

IV Climatic and Biological Risks

- i) Currently, the risk of insects and disease are minimal; therefore, no measures have been taken in preventing disease or insects on the tracts. Hemlock wooly adelgid offers a threat to the small eastern hemlock population on the property. The spread of the gypsy moth is not expected to reach the property for the next few years.
- ii) There are several invasive plants that threaten forest health and productivity: ailanthus, kudzu, multi-flora rose, Japanese stilt grass, Japanese knotweed and autumn olive.
 - Extensive chemical control will be required to significantly reduce these threats. At this time, an on-going monitoring program is in place to keep track of the status of these threats. If herbicide treatment is determined to be employed, then a written prescription will be prepared prior to any chemical use, including application objectives, rate and method, risks and benefits of the chemical used and alternatives considered.
 - Areas of highest threat from these invasive species are on timber harvest areas or surface mine operations.

V HBU and Leases

- i) The highest and best use of the Buffalo property is timberland management.
- ii) About 9,000 acres are leased for hunting.
- iii) About 5,000 acres are under a public Wildlife Management Agreements with the West Virginia Department of Natural Resources: the Big Ugly WMA.

VI Agreements and Contracts

- i) Managed by Landmark Forestry, LLC in Horner, West Virginia.
- ii) No formal timber supply agreements exist on the property.

VII Energy

- i) TFG did not acquire the oil and gas rights with the Buffalo property. Columbia Natural Resources, now Chesapeake Gas owns, controls and operates the gas and oil rights on the property.
 - Each well application is reviewed by the Regional Director and field reviewed by the Property Manager for operations concerns related to surface disturbance compensation, timber availability, access and pipeline location.
- ii) TFG did not acquire the coal rights with the Buffalo property. These rights are owned/controlled or operated by several different companies including: Argus Energy, Massey Energy and others.
 - The operators are responsible for giving TFG advance notice of surface operation.
 - Surface mine reclamation now utilizes the 'Forest Reclamation Approach' that requires fertile topsoil to be segregated during the excavation process. These soils are later loosely re-applied into the approximate original contour configuration, stabilized with non-competing native ground cover and planted with native hardwood species that will more quickly reproduce a new forest that is similar to the natural forest that was removed during the mining operation. Former reclamation methods produced a hardened, compacted soil surface that impeded tree establishment and growth.