

## Timber Resources

### Introduction

A total of 12,455 hundred cubic feet (ccf) of timber was offered for sale and awarded through timber sale contracts, forest products permits, and stewardship contracts in 2010. The Ridge West Stewardship Contract on the Gauley Ranger District, the second stewardship contract from the Lower Williams Vegetation EIS Record of Decision, was awarded to Collins Hardwood Company LLC of Richwood, WV, on July 1. The contract contained an estimated 3,194 ccf of hardwood timber bid at \$616,402.00; and included stewardship projects totaling 188 acres of timber stand and wildlife habitat improvements bid at a total cost of \$387,026. The Fernow 11-1 Timber Sale, 280 ccf of hardwood sawtimber harvested as a part of research done on the Fernow Experimental Forest on the Cheat-Potomac Ranger District, was awarded to Dingess Lumber Company of Belington, WV, on September 24. That company was the highest bidder (of three), with a sealed-bid value of \$35,580.67. Hogback 1 Timber Sale on the Cheat-Potomac Ranger District, the first sale to be advertised from the Hogback Environmental Assessment Decision Notice, was awarded to Allegheny Wood Products, Inc., of Petersburg, WV, on September 30. That company provided the higher of two sealed bids, with a bid value of \$318,255.00 for the estimated 6,414 ccf of timber involved.

The expected completion and publication of a decision for the Upper Greenbrier North Vegetation Management Analysis on the Greenbrier Ranger District was delayed due to the additional analysis required as a result of the re-listing of the West Virginia northern flying squirrel under the Endangered Species Act by the U.S. Fish and Wildlife Service. The Decision Notice is now expected in 2011. Data collection and surveys continued and development of a proposed action began on the Big Mountain Project on the Cheat-Potomac Ranger District.

Associated activities with timber sales include stocking surveys, site preparation for natural regeneration, planting tree seedlings, protection of tree seedlings, and timber stand improvement. These activities must be monitored and evaluated to ensure the forest remains healthy and diverse, in both species and ages of trees, so that it may be continuously managed on a sustainable basis for the enjoyment and use of future generations.

Stocking surveys are mandated by the Forest and Rangeland Renewable Resources and Planning Act of 1974. The purpose is to ensure national forest lands that have been treated with a regeneration harvest method, or lands that have otherwise been deforested, are re-growing or reforested with adequate stocking.

Site preparation activities that enhance the natural regeneration of hardwood trees include, but are not limited to: 1) using herbicide for control of competing vegetation; 2) cutting residual (usually non-commercial trees of low quality or small size) trees during or immediately after a timber harvest to encourage sprouting and improve the quality of the future stand; 3) vine control to improve potential growth of young tree seedlings and sprouts; and 4) prescribed burning to enhance regeneration of trees such as oak and hickory.

Timber stand improvement activities include, but are not limited to crop tree release, pre-commercial thinning, and vine control.

Fill-in planting with tree seedlings usually is done on this Forest to ensure a certain species that may be difficult to regenerate remains a component of the stand or to restore certain species that are currently not as prevalent as they were historically. Protection of tree seedlings is necessary in certain areas where deer browsing may inhibit the survival or growth of tree seedlings. Protection may include, but is not limited to fencing, individual tree shelters, and application of chemical deer repellent.

## 2010 Accomplishments

Timber Program accomplishments for 2009 included:

- Budget and work planning, including out-year planning for the next 5 years.
- Surveys and data collection to develop a proposed action for the Big Mountain project area on the Cheat/Potomac Ranger District.
- Developing alternatives to the proposed action, analyzing effects, and describing mitigating measures to reduce or eliminate potential adverse effects for the Upper Greenbrier River project area on the Greenbrier Ranger District.
- Preparing, advertising, and awarding the Ridge West Stewardship Contract on the Gauley Ranger District.
- Preparing, advertising, and awarding the Fernow 11-1 Timber Sale on the Fernow Experimental Forest.
- Preparing, advertising, and awarding the Hogback 1 Timber Sale on the Cheat-Potomac Ranger District.
- Preparing the Fernow 11-2 Timber Sale on the Fernow Experimental Forest and the South Williams and Red Oak North Stewardship Contracts on the Gauley Ranger District for advertisement and award in 2011.
- Offering and awarding a total of 12,455 CCF of timber through timber sale contracts, stewardship contracts, and forest products permits.
- Harvesting approximately 7,700 CCF of timber sale and stewardship contract volume, in addition to 1,675 CCF of permit volume.
- Administering the following active timber sales:
  - Fernow 10 and 11-1 Timber Sales on the Cheat/Potomac Ranger District,
  - Louk Run on the Greenbrier Ranger District,
  - Desert Branch, Middle Horse, and West Cherry on the Gauley Ranger District, and
  - Upper Sawyer and Ridge West Stewardship Contracts on the Gauley Ranger District.
- Completing the following timber-related work:
  - 318 acres of timber harvest, with 63 acres of regeneration harvest (without Fernow),
  - 14 acres of regeneration harvests were fenced to reduce deer browsing effects,
  - 843 acres of timber stand improvement,
  - 197 acres of site preparation, and
  - 376 acres of stocking surveys.
- Monitoring and evaluation efforts as described below.

## Monitoring and Evaluation

The Monongahela National Forest Land and Resource Plan (2006) outlines required timber resource monitoring on page IV-7. Changes to some monitoring questions were made in 2008 to better capture what was actually being monitored on the Forest and what was driving the need to monitor. See Administrative Correction 7 for the changes that were made.

*Item 7 - Are regeneration harvest units adequately restocked after five years?*

*Item 8 - To what extent is commercial harvest occurring on lands suited or not suited for timber production? Is there any need to adjust the suitable timberlands on the Forest?*

*Item 9 - Are even-aged harvest units, particularly clearcuts, exceeding the 40-acre size limit established under the NFMA? If they are, is there a need to adjust the size limit to better accommodate Forest Plan management objectives and practices?*

Monitoring results for these questions are reported below.

### **Monitoring Item 7. Are regeneration harvest units adequately restocked after five years?**

The purpose of this monitoring is to ensure that lands are adequately stocked within 5 years of a regeneration harvest, as required by the National Forest Management Act (NFMA) of 1976. Monitoring is accomplished through stocking surveys conducted after the first and third growing seasons following the completion of the site preparation for natural regeneration activity initiated during or immediately after the regeneration harvest. The expected precision and reliability of this monitoring is considered very high.

Forest personnel conducted stocking exams on 376 acres of regeneration harvest in 2010. The North Zone (Greenbrier, Cheat, and Potomac Ranger Districts) continue to be plagued with extensive deer browsing, which is affecting the diversity, height, growth, and quality of the regenerating stand. The Forest has made changes in an attempt to overcome these problems, including shelterwood cutting, leaving large quantities of slash on ground, fencing, herbicide applications, prescribed burning, and proposed road gate management (to improve hunter access).

### **Monitoring Item 7. Evaluation, Conclusions, and Recommendations**

As mentioned in previous annual monitoring reports, the effects of deer browse on tree regeneration are still apparent. In some parts of the Forest a browse line is developing where little or no vegetation palatable to deer is growing on the forest understory. Districts are currently taking steps to increase regeneration success with fill-in planting and deer enclosure fencing projects in regeneration units where excessive deer browsing is threatening the growth of tree seedlings and sprouts. In 2010, 14 acres in were fenced to protect regeneration. Stocking surveys will continue to monitor the effects of deer browse on the vegetation within regeneration harvest units and the effects of protection methods.

**Recommendations:** It is highly recommended that pre-harvest surveys be completed prior to or during project analysis to determine where those areas are that are experiencing heavy deer browsing. If regeneration harvests are planned in these areas, deer exclosure fences should be installed immediately, where practical and feasible, after a unit is cut to ensure the unit regenerates with adequate stocking of acceptable tree species. In those areas where there is a potential for regeneration failure due to excessive deer browse and fencing is not practical or feasible, timber harvesting should be deferred until the deer population decreases. For example, in 2009 the Forest requested that WVDNR re-instate a doe harvest season in counties with national forest land, initiate special deer hunts, and/or allow the Forest to open roads for hunters during the fall deer hunting seasons in areas where deer browsing is a chronic problem to our regeneration efforts. However, these requests were not granted.

Additional site preparation for natural regeneration or other cultural treatments such as snag creation may be needed to reduce the amount of shading by residual trees in two-age harvest units. In many of the two-age harvest units too many trees were left in the residual stand. Creating snags or doing additional site preparation for natural regeneration would increase the amount of sunlight reaching the forest floor, which should increase the growth of shade-intolerant regeneration, which should also increase tree species diversity.

Another tool that could be used during the planning process is to increase the size and number of regeneration units. A large regeneration unit of 30 to 40 acres has a better chance of success, if deer browse is a concern, than smaller regeneration units of 5 to 15 acres. If a larger percentage of a project area is regenerated, the deer will not be able to have as much of an impact because the browsing will not be concentrated in small areas. The revised Forest Plan signed in 2006 allows up to 40 acres to be regenerated in a single unit and up to 25 percent of the area to be in young stands between 0-19 years of age. In the 1986 Forest Plan, the maximum size of a regeneration unit was 25 acres and MP 6.1 (the management prescription that contains the most acres of suitable timber land) allowed up to maximum of 8 percent of a project area to be in regeneration. Although 25 acres was allowed as a maximum size of a regeneration unit, many regeneration harvests of less than 10 acres were planned. Also, even though the 1986 Forest Plan allowed up to 8 percent of an area to be regenerated, usually less than 5 percent was chosen for regeneration in the decision document and even fewer acres were actually marked for regeneration on the ground.

**Monitoring Item 8. To what extent is commercial harvest occurring on lands suited or not suited for timber production? Is there any need to adjust the suitable timberlands on the Forest?**

This monitoring item is derived from the NFMA requirement to identify lands not suited for timber production every 10 years, roughly the Forest planning horizon. MNF lands considered not suited for timber management were determined as part of the recent Forest Plan revision process that culminated with the revised 2006 Forest Plan. The suitability analysis can be found in the Timber Supply section of Chapter 3 in the Final EIS for Forest Plan Revision (2006). The Forest Plan revision analysis identified an estimated 329,400 acres of land considered suitable for timber production on the Forest, which means that there are roughly 589,700 acres on the Forest that are not suited for timber production.

We recognize that the Forest Plan revision suitability analysis was done at a very broad scale and that refinements may be needed as lands are scrutinized more closely, typically during project-level analysis or timber stand compartment examination. All sorts of factors may influence potential refinements, including stream buffer delineation, the discovery of federally listed plants or animals, new special area designations, pockets of land that are extremely steep or susceptible to erosion, or areas that are just not economically feasible to commercially harvest. These refinements, either individually or collectively, can be used to adjust suitable timberlands through Forest Plan amendments or revision.

It is important to note, however, that trees may be cut or harvested in areas that are considered not suited for timber production—if that activity is designed to achieve goals or objectives in the Forest Plan other than timber production, such as enhancing wildlife habitat, treating insect and disease infestations, or reducing hazards to Forest visitors. For example, there are several habitat enhancement projects scheduled on the Forest’s Five Year Plan; however, they have not yet reached the layout or implementation stage to determine how much of the timber-related activity would occur on suited vs. non-suited lands.

#### **Monitoring Item 8. Evaluation, Conclusions, and Recommendations**

Virtually all of the commercial timber harvest on the Forest in FY 2010 occurred on lands considered suitable for timber production in the 2006 Forest Plan. Furthermore, there were no reports of specific changes needed to timberland suitability. There were trees harvested in small or isolated instances—for example, to provide a needed stream crossing, road access under a special use authorization, or development of mineral/gas exploration and gas pipeline sites—but these activities were allowed under Forest Plan management direction, and they did not necessitate any change in suitability classification.

**Recommendations:** The Forest will continue to examine the issue of suited vs. not suited timberland during analysis for upcoming timber sale projects. Minor land classification changes may be made based on field reviews and stand examinations. Major changes due to stand conditions, environmental restrictions, or legislative actions affecting the suitability of lands for timber production should be addressed in Plan amendments or during Plan revision. Changes should also be recorded in the Natural Resource Information System (NRIS) vegetation inventory FSVeg (Field Sampled Vegetation) and FSVeg Spatial databases. Currently there is not a need to adjust the suitable timberland base.

#### **Monitoring Item 9. Are even-aged harvest units, particularly clearcuts, exceeding the 40-acre size limit established under the NFMA? If they are, is there a need to adjust the size limit to better accommodate Forest Plan management objectives and practices?**

The purpose of this monitoring is to evaluate whether we are meeting the NFMA-imposed 40-acre size limit for even-aged timber harvest, particularly clearcutting. If we are not meeting this limit, we need to evaluate why we are exceeding it, and whether there may be a need to change the size limit to better accommodate our Forest management objectives and practices.

Even-aged silvicultural system harvest methods are defined on page A-2 in Appendix A of the 2006 Forest Plan. The 25-acre even-aged harvest size limit from the 1986 Forest Plan was replaced in the 2006 Forest Plan with the 40-acre size limit in the National Forest Management Act. Exceptions to this size limit could be allowed on a case-by-case basis with Regional Forester approval.

There are no harvest size restrictions when using uneven-aged silvicultural harvest methods, although individual group selection cuts are generally considered to be less than 2 acres in size.

### **Monitoring Item 9. Evaluation, Conclusions, and Recommendations**

The Hogback Environmental Assessment and Lower Williams River Environmental Impact Statement are two of the first NEPA analyses for timber sales that will be completed under the 2006 Revised Forest Plan. Proposed even-aged harvest units in the Hogback analysis average an estimated 31 acres per unit. Unit size ranges from 11 acres to the maximum of 40 acres. An estimated 1,256 acres are clearcuts with reserve trees and 88 acres are shelterwood harvest. In the Lower Williams project, even-aged harvest unit size averages an estimated 27 acres per unit, with a range from 10 acres to 37 acres. An estimated 887 acres of the planned harvest units are regeneration cuts with residuals and 38 acres of shelterwood harvest.

In conclusion, none of the proposed, completed, or sold timber sales in FY 2010 had even-aged harvest units that exceeded the maximum size limit of 40 acres in the NFMA, which applies to the 2006 MNF Forest Plan.

**Recommendations:** Continue to monitor the size of regeneration units of even-aged silvicultural harvest treatments to ensure the layout of the unit does not exceed the maximum 40-acre size limit. If units do exceed the 40-acre limit, ensure that the rationale is documented in project decisions and evaluated in future monitoring reports to determine if there is a need to adjust Forest management practices or Forest Plan direction. Currently, there is not a need to adjust the even-age harvest unit size limit.