



Harvest Definitions and Guidelines for Sustainable Harvesting

This document is intended to further define some of the terms and conditions of sustainable timber management across the State Forest System. For more specific information pertaining regarding the following topics and for specific harvest locations, volumes, and prescriptions; please refer to the individual Annual Work Plans and Five Year Plans for the forest of interest.

Definitions of importance:

Board Foot Volume (bdft):

Equivalent to a 1 foot square plank of wood that is 1 inch thick. 1 bdft contains 144 cubic inches of wood. Although there are many ways to calculate tree mass, this figure is the most common expression of volume in the professional field of forestry.

Annual Growth:

This estimate represents the total amount of bdft growth that the entire State Forest system will have in a designated year.

The Division of Forestry has estimated the above figures based on Forest Inventory and Analysis (FIA) data and on a statistical inventory within the State Forest system conducted in 2009. Board foot volume, annual growth, and other statistics are maintained through ongoing statistical inventory of the forests. This inventory is calculated, entered, and processed through a scientific growth modeling database (Forest Vegetation Simulator, FVS) and is kept up to date to track and monitor harvest levels, annual growth, and total volume. The calculation was “constrained” by only including manageable acreage only (Zone 3B and 3C). For smaller forests not inventoried in the 2009 inventory project, an estimate of inventory was obtained using the USFS FIA (Forest Inventory and Analysis) data set for the surrounding counties in proximity to the selected forest.

Inventory:

Total bdft volume of standing trees minus the bdft volume of annual growth. *See Figure 2.*

Available Acres:

This calculation includes Zones 3b and 3c only; which excludes the Wilderness Area, Recreation and Administrative Areas, High Conservation Value Forests, Administrative Areas, and Resource Protection Areas.

Overall, 75% - 80% of State Forest acreage is oak / hickory, 20-80 yrs old, sawtimber size, and has complete crown closure. A decline in oak / hickory regeneration has also been well documented and has a broad range of implications. In order to further increase the levels of biodiversity, create a mosaic of habitat types, and enhance the level of oak / hickory regeneration, the Division of Forestry utilizes professional management techniques and focuses on a multiple use / sustained yield philosophy.

The following biodiversity goals were developed to guide forest management to achieve the desired future condition and were formulated based on the Statewide Forest Resource Assessment and Strategy (FRAS).

Biodiversity Goals:

- 1. Maintain and promote regeneration of oak-hickory forests**
 - Enhance oak regeneration in appropriate forest types in zone 3.
 - Favor oak and hickory in pre-commercial treatments
 - At a minimum, preserve an oak component in oak-hickory stands where oak regeneration is unlikely.
- 2. Protect Ohio's unique or rare forest plant species and biological communities**
 - Protect high conservation value forests by either prohibiting extraction or by restoration efforts.
 - Assess potential impacts to unique or rare forest plant species and communities for each forest management activity and mitigate as necessary.
- 3. Maintain habitat for a diversity of forest-associated wildlife**
 - Manage for a diversity of forest wildlife by maintaining a sustainable distribution of successional stages.
 - Increase the area of early-successional forest habitat (age class < 20 years old in zone 3) and old forests (over 100 years old in High Conservation Value Forests)
 - Ensure that critical habitat requirements for rare forest wildlife species are being met.

To address these challenges in achieving the desired future condition, in Fiscal Year 2012, the Division of Forestry will begin to increase the harvest levels utilizing the following guidelines:

- Across the State Forest system, the Division will implement an allowable harvest target of 40% of the *annual growth* volume. This figure is calculated based on *available acres* only. The allowable harvest will not exceed 40% of annual growth over a 5-year rolling average. The 5-year cycle coincides with our 5-year management planning cycle. Individual forests harvest levels will be adjusted in order to meet the "systemwide" 40% goal over the 5-year cycle.
- On individual large State Forests, defined as forests greater than 5,000 acres, the 5-year harvest average may be as high as 50% of the annual growth over

that same period. Individual large forests may harvest up to 50% of the annual growth in any given year.

- On individual small State Forests, defined as having less than 5,000 acres, the 5-year harvest average may be as high as 100% of the annual growth over that same period. Individual small forests may harvest up to 100% of the annual growth in any given year. On small forests, site conditions, silvicultural needs, or other operational or ecological considerations may warrant harvesting 100% of the annual growth in a single timber sale. Any proposed timber sale over 100% of annual growth must have additional approval by the District Manager and the Chief and must ensure that the harvest volume systemwide will still meet the 40% target over the 5-year planning period.
- To ensure the health and sustainability of the entire state forest system, the Division will respond to catastrophic events, weather events, or other *force majeure* situations which may or may not exceed the 40% of annual growth target. These situations will be case-by-case.

The intent of the three guidelines above is to ensure that the Division will be able to meet its stated harvest level goals while simultaneously protecting sensitive resources. Further, the Division is employing these guidelines to ensure a balance of harvesting activities across state forests so that each individual state forest is managed sustainably while allowing for operational or ecological considerations.

Following are the projected inventory levels:

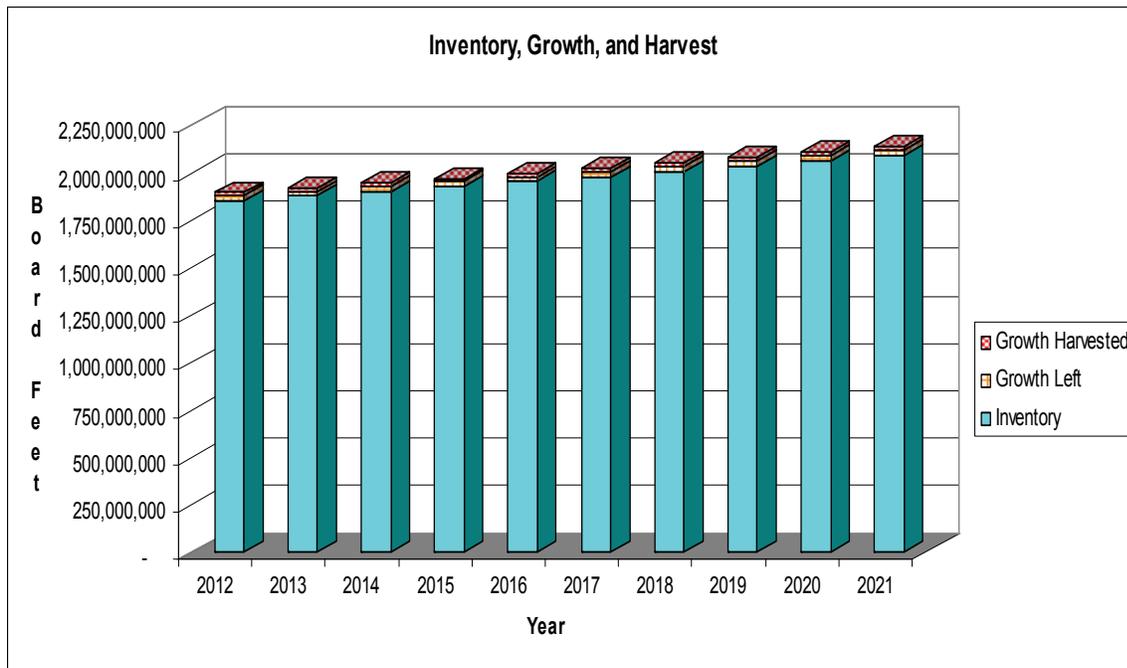
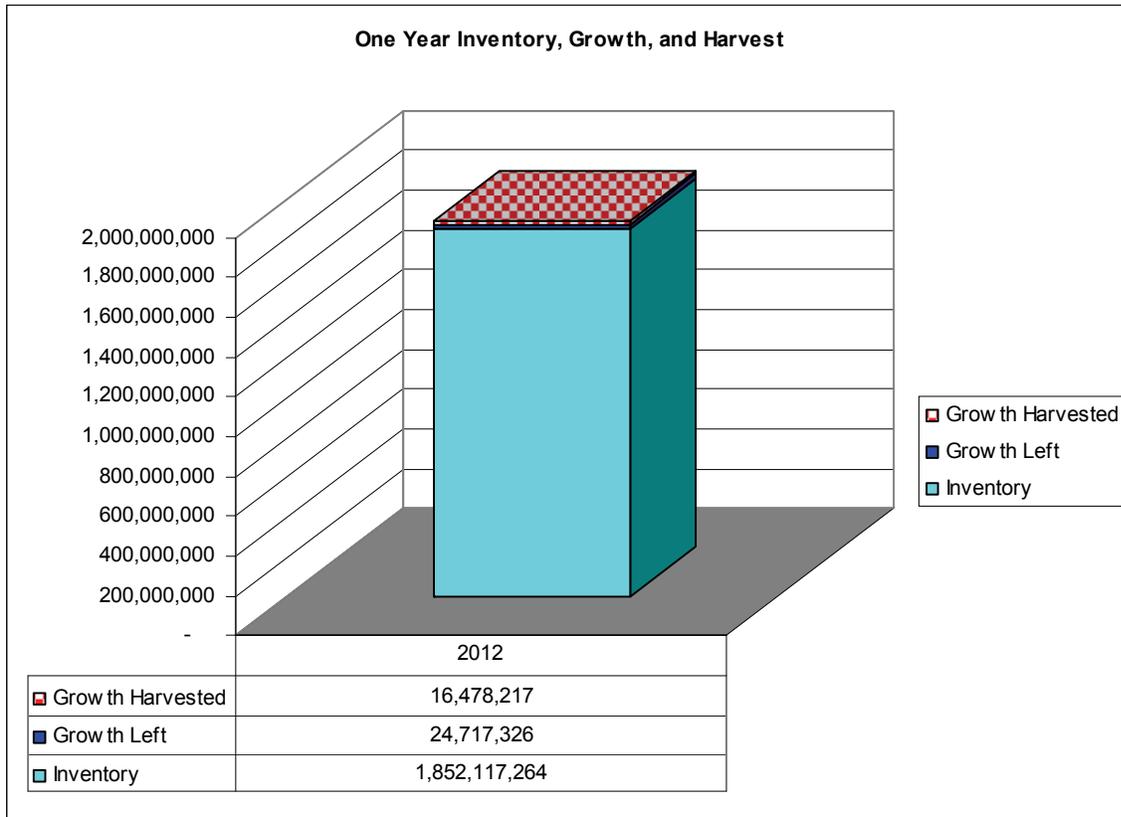


Figure 2

It should be noted that the inventory over time continues to increase even as 40% of the annual growth is harvested. This is due to retaining 60% of the annual growth, allowing the forest system to continue to add volume. These calculations take mortality, harvesting, and in-growth into consideration as well.

Following is a projection for the year 2012:



These figures are estimates only and are intended to be a timber sale layout goal. Actual harvest levels will be determined during the sale preparation process and will be utilized in the annual and five year harvest level evaluations outlined above.

The decision to increase harvesting is derived from biodiversity needs across the landscape and focuses on obtaining a healthy variety of size and age classes throughout the forest system. It should also further decrease the probability of the forest system becoming overstocked and unhealthy.

*In the fall of 2010, the Division of Forestry achieved certification by two independent, third party certification bodies. The Sustainable Forestry Initiative and Forest Stewardship Council will continue the certification process by conducting annual verification audits and certification every 5 years.