

REGENERATION STANDARDS

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INTRODUCTION

The purpose of establishing regeneration standards is to bring consistency to measuring our progress toward achieving our stand establishment and planning objectives. The standards will better formalize our efforts to monitor and measure the effectiveness of our stand prescriptions. The standards include a quality measure thereby providing a different measure of how well we are progressing toward attaining our objectives. Establishing standards in which to measure our progress against gives us credibility and better holds us accountable for our regeneration efforts.

The standards are a snapshot in time and serve as a benchmark to judge whether or not our regeneration efforts are leading to meeting the stand objectives. It needs to be understood that stand objectives defined during planning take precedence over meeting the regeneration standards. Therefore, standards should always be viewed in light of the objectives for the stand. When standards conflict with stand objectives, that fact should be documented. For example, if stand objectives include areas of the stand to be carried as non-stocked or understocked, then the stocking standard may not be attained. In this example, the reason for not attaining the standard is legitimate. The reason should be recorded and become part of the site documentation.

Sound silvicultural planning employing all the tools including ECS classification will be used when regenerating and managing our stands. Focusing on the use of sound silvicultural approaches should prevent us from trying to meet the standards at any cost. Large expenditures in time and money should not be made to ensure that standards are met. When standards are not met, evaluation of the site and practices should be made, and the cause of not attaining the standards should be documented and made a part of the site history. In the end, evaluation and documentation are more critical than meeting the standards.

STANDARDS

PLANTATIONS and UNDERPLANTINGS

1 year after planting:

- 75% of **TREES** ORIGINALLY PLANTED¹ are surviving, AND
- 75% of the planted area is STOCKED² with planted trees.

5 years after planting:

- 90% of planted area is stocked with CROP TREES³, AND
- 50% of the number of **SPECIES ORIGINALLY PLANTED**⁴ are present, AND
- 50% of planted area is stocked with **SPECIES ORIGINALLY PLANTED**, AND
- 75% of all CROP TREES that are not purposely underplanted or grown as an understory tree are FREE TO GROW⁵

SEEDING

5 years after seeding

- 90% of area is stocked with CROP TREES, AND
- 50% of area is stocked with the **SPECIES ORIGINALLY SEEDED**⁴, AND
- 75% of all CROP TREES are FREE TO GROW

NATURAL REGENERATION

5* years after harvest or disturbance

- 90% of REGENERATION AREA⁶ is stocked with CROP TREES, AND
- 75% of all CROP TREES that are purposely not grown as an understory tree are FREE TO GROW

* EXCEPTIONS:

(1) Natural regeneration surveys traditionally conducted 3 years after harvest/disturbance will be acceptable and can be used as a surrogate for the 5-year natural regeneration survey.

(2) In the Southern Region where natural oak regeneration does not attain a free-to-grow condition within 5 years, a longer regeneration period up to 10 years is acceptable.

REGENERATION STANDARDS: SUMMARY of STANDARDS and TIMING							
	Timing	TREES ¹		SPECIES ⁴		CROP TREES ³	
Regen Method	Years	Trees	Stocking ²	Trees	Stocking	Stocking	FTG ⁵
Plantation	1	75%	75%				
Plantation	5			50%	50%	90%	75%
Seeding	5				50%	90%	75%
Natural	5*					90%	75%

DEFINITIONS

¹ **TREES ORIGINALLY PLANTED:** Self-explanatory. However, volunteers of the same species that existed before planting or came in after planting are not included in this category.

² **STOCKED:** The percentage of plots that have at least 1 crop tree.

³ **CROP TREES:** All tree species that are ecologically appropriate for the site and are acceptable in meeting the objectives of the site.

⁴ **SPECIES ORIGINALLY PLANTED (SEEDED):** These are trees of the same species that were originally planted or seeded. The trees may be volunteers but are of the same species as those originally established. There is no attempt here to distinguish between what was artificially established and what has naturally established as long as the species is the same.

⁵ **FREE TO GROW:** A tree is free to grow if 3/4ths of the circumference of a 3-foot radius circle around the tree does not contain any woody vegetation that is equal or greater in height to the crop tree or acceptable tree species.

⁶ **REGENERATION AREA:** This refers to the area of the site in which the original objective was to establish trees with a stocking of 50% or greater. Areas that are purposely left understocked or free of trees should not be included in the survey and do not impact the standards.

ACCOUNTABILITY and ACTION REQUIRED

When an Area has less than 75% of the number of regenerated sites not meeting the standards for crop trees for three consecutive years, the Regional Forest Development Program Leader will review the Area's regeneration program. The review will document why standards were not met and develop recommendations to better meet the standards.

Area will develop a plan of action to implement the recommendations.

Regional Forest Development Program Leader will evaluate implementation of plan of action and report results to the Forest Development Supervisor.

Copies of the documentation of why standards were not met, recommendations made to meet the standards, Area plan of action, and follow up evaluation of plan implementation will be forwarded to the Forest Development Supervisor.

REGENERATION SURVEYS: MEASURING STANDARDS

Conducting regeneration surveys can serve many purposes. Measuring regeneration standards is just one of the purposes. **These standards make mandatory surveys at 1 and 5 years to measure performance against the standards.** This timing may or may not meet other purposes for conducting the surveys. The Regional Forest Development Program Leader should be consulted to determine when additional surveys should be undertaken.

During any regeneration survey, if survival is 50% or less notify the Regional Forest Health Specialist and be prepared to forward a copy of the regeneration survival form if requested to do so. When the Regional Forest Health Specialist is contacted, the Regional Forest Development Program Leader should also be notified.

PLANTATIONS and UNDERPLANTING

1-Year Survey

This survey will be conducted between the end of the first growing season and before the start of the second growing season after planting.

5-Year Survey

This regeneration survey should be conducted after the end of the 5th growing season after planting and before the start of the 6th growing season after planting.

When standards are not met, condition and cause should be documented and become part of the permanent record for this site.

SEEDINGS

5-Year Survey

This regeneration survey should be conducted after the end of the 5th growing season after seeding and before the start of the 6th growing season after seeding.

When standards are not met, condition and cause should be documented and become part of the permanent record for this site.

NATURAL REGENERATION

5* -Year Survey

This regeneration survey should be conducted after the end of the 5th* growing season after harvesting is completed or disturbance is sufficient that natural regeneration is an objective on the site and before the start of the 6th* growing season.

* See EXCEPTIONS to this timing.

When standards are not met, condition and cause should be documented and become part of the permanent record for this site.

REPORTING the RESULTS

Regeneration survey results will be summarized and reported annually. When FORIST is fully operational, data to construct these regeneration summaries should be readily attainable at all levels of the Division. However, the expectation is even when FORIST is fully functional, the Regional Forest Development Program Leader will be responsible for:

- Insuring that the regeneration survey data has been collected and entered into FORIST AND
- Completing a regional summary.

REPORT TIMING

November 1 (following the 2nd and 6th growing seasons)

Area summary of regeneration checks entered into FORIST

December 1

Regional summary and analysis of regeneration checks sent to Forest Development Program Supervisor.

REPORT FORMATS

Plantation Summary							
Timing: End of first growing season & before the start of next growing season							
MEET STANDARDS				NOT MEET STANDARDS			
Species	# Plantations	Acres		# Plantations		Acres	
Plantation Summary							
Timing: End of 5 th growing season & before the start of next growing season							
Crop Trees				Tree Species Originally Planted			
Meet Standards		Not Meet Standards		Meet Standards		Not Meet Standards	
# Plant...	Acres	#Plantations	Acres	# Plant...	Acres	#Plantations	Acres
Seeding Summary							
Timing: End of 5 th growing season & before the start of next growing season							
Crop Trees				Tree Species Originally Planted			
Meet Standards		Not Meet Standards		Meet Standards		Not Meet Stand...	
# Sites	Acres	# Sites	Acres	# Sites	Acres	# Sites	Acres
Natural Regeneration Summary							
Timing: End of 5 th growing season & before the start of next growing season							
Meet Standards				Not Meet Standards			
# Stands		Acres		# Stands		Acres	