Silviculture Trial Template

Project Subject/Title: Yellow Birch Gap Regeneration

Contact Person: Jeremiah Oftedahl, Asst. Forest Administrator, 715-479-5160.

Abstract: Regenerate yellow birch and create a new northern hardwood cohort each stand entry. Sixty-foot clearcut gaps were chosen in this stand to promote establishment of mid tolerant species such as yellow birch. The decision to convert the even-aged northern hardwood stand to an uneven-aged stand was based on the poor-quality hardwood overstory that developed due to past logging practices, followed by the removal or shorter-lived species, such as white birch and resulting retention of a sparse, poor quality maple overstory. Consequently, eutepella and nectria canker, as well as maple borer, is also prevalent in areas of this stand.

Trial Location: Nearest Town Road – Baker Lake Road.

County: Vilas

Township: 42N **Range:** 9E **Section:** 32

GPS Coordinates: Lat: N/A **Long:** N/A

Property Name: Vilas County Forest

Site Map: *5-13 Champion Birch*

Baseline Stand Data:

Presale Stand Data **2011**
WisFIRS Property Code: 6400
Compartment/Stand number: 22/10
Primary Type: NH 15+^4
Secondary Type: NH 5-11^2
Age: 0
Acres: 17
Soil Type: Sayner-Rubicon complex
Habitat Type: ATD
Presale Stocking: 145 sq.ft./acre
Residual Stocking: 88 sq.ft./acre

Prescription and Methods: Eighteen large gaps of approximately 60' each were systematically established along a grid. Gap location was determined by evaluating

current conditions and taking advantage of natural gaps created by snag trees or releasing of established regeneration. Larger gap size was necessary to promote mid tolerant species such as yellow birch. Gaps were established on approximately 7% of the stand. After gaps were established crop trees were identified for crown release and even-aged thinning guidelines were applied on the remainder of the stand.

After the sale was cut in 2012 the site was scarified by DNR Brush Rake.

Results: Survival/acre, 2014 - OR 178, BY 35, MX 2400.
Survival/acre, 2015 – MH 3021, MR 831.
Survival/acre, 2016 - MX 14533, BY 18900, AQ 3800.
Survival/acre, 2017 – BY 9902, MH 6625, MR 5236, AQ 2555, OR 486, PW 319, SW 69, F 27.
Survival/acre, 2018 - BY 13330, MH 667, OR 722, AQ 1556, MR 1333, PW 583.

Discussion/Recommendations: Yellow birch can be regenerated by the gap clearcut method. I would recommend establishing fewer gaps, but larger in size to aid scarification operators. Recommend 120' gaps. Stumps also have to be cut low to efficiently operate equipment inside regeneration gaps. Anchor chain and skidder may navigate gap scarification more efficiently than a dozer and brush rake.

This area of the forest is primarily old pine and hardwood stands (100 years old) with little edge, except for roads and trails. Deer numbers are low in this area. Herbivory is not a concern for regeneration gaps at this time.

Vilas County Forestry Department Planting and Cultural Report

Project Number: 5-13 - Champion Birch - Brush Rake Gaps Acres - 17
Year Planted: 2013: Species Planted and Stock Age: Northern Hardwoods - Natural Seed
Estimated Trees/Acre: /ac; Total #Trees Planted:
Estimated Trees/Acre Replanted: /acre
Percent Survival : 1st Year: 3rd Year: 5th Year:

Legal Description: NWNE & SWNE, Section 32, T42N, R9E
Compartment/Stand Number: 22/10
Soil Type: Padus - Pence Complex
Habitat Type: ATD

Date:	Cultural Practices:	Acres:	Cost/Acre:	Total Cost:
10-13	Brush Rake - Scarification	17	$21.53	$365.95

Additional Remarks: October 2013 - Brush Rake Scrafication in Canopy Gaps. 18 - Gaps - 60 foot diameter gaps.
7-2-14 Gaps Survival/acre- OR 178/acre, BY 35/acre, and MX 2400+/acre.
5-27-15 Suvival/acre - MH 3021, MR 831.
6-27-16 Survival/acre - MX 14533, Yellow Birch 18900, AQ 3800.
2017 Survival/acre - BY 9902, MH 6625, MR 5236, AQ 2555, OR 486, PW 319, SW 69, F 27.
6-7-18 Survival/acre - BY 13330, MH 667, OR 722, AQ 1556, MR 1333, PW 583.

Map Scale: 1:15,840