Project Subject/Title: White Birch Regeneration
County: Oneida
TRS:T37N R4E Sec. 10

Contact Person: Tim Friedrich, 715-358-9201
Type of Prescription: Shelterwood/Scarification
Year Initiated: 1991 harvest and scarification in 8/92

Abstract/Prescription:
The objective of this project was to promote/enhance white birch regeneration in a stand in Oneida county. A shelterwood harvest was conducted on a 50 acre stand in 1991 (40-50% crown closure). Harvest included 1-5" trees and stump height did not exceed 6" and no aspen harvested. The stand was scarified logging with a Tomahawk rake on the blade later summer following.
After treatment, 13 random permanent plots (1/1000 acre) and 1 control plot (no scarification) were established. Scarification %, seedling/ac., crown closure, competition were assessed. Monitoring was conducted in late summer for 2 years.

Results:
- 1st year (1993) = 36,000 BW seedlings/ac and 1" in avg. height. Scarification avg 40%, crown closure 47% and sedge and hazel competition.

- 2nd year (1994) = 13,000 BW seedling/ac and 6" avg. height. Crown closure remained at 47% and scarification (suitable seedbed remaining) 20%. Competition was sedge mainly followed by rubus and hazel.

- 3rd year (1995) = 11,000 seedlings/ac and 6" average height. Crown closure 49% and scarification 11%.

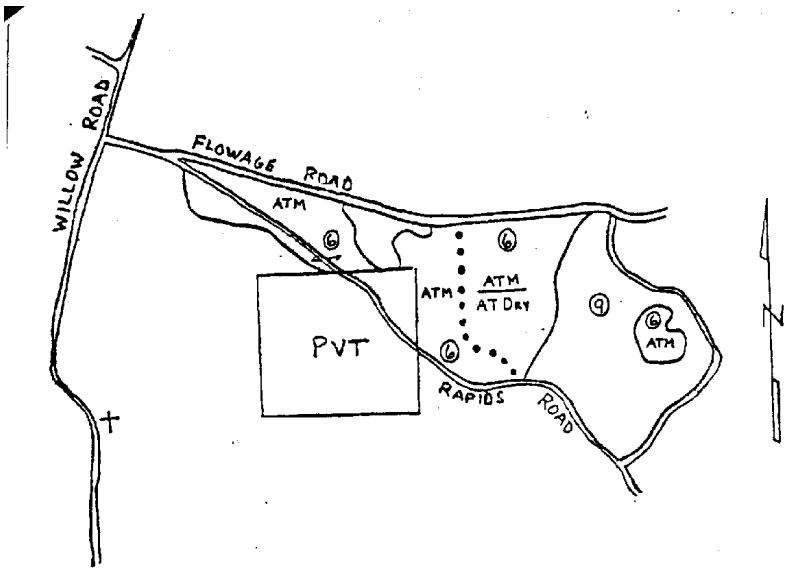
- 4th year (1996) = 4,800 seedlings/ac and 2 feet tall. Crown Closure 48% and plot scrification 1%

Discussion/Recommendations:
- Competition from aspen (beaver and wind damage triggered aspen sprouting). Never cut aspen or try to eliminate.
- Leave red maple (also severe competitors).
- Leave at least 6-12 BW seed trees/ac.
- BW seedling kept pace with rubus competition.
- Expose soil with JD 450 tractor/plow, discing, or double discing at right angles.
- Reduce overstory 30-40%, only 6-12 birch seed tress/ac are necessary for regen.
- Cut residual 1-5" and stump height < 6".
- Remove overstory in 2-4 years.

Site/Conditions:

Habitat Type: ATM
Covertype: Aspen
Site Index: 60
Little advanced regen and hazel understory
Tomahawk rake rental $10/ac for 1 ½ hours/ac
Stand Volume = 15-20 cords/ac (total volume 20-25 cords/ac)

Enclosed Data Document



COMPARTMENT 109

Oneida County Forest

Habitat Classificatio
Stand # 6

Scale: 1:15,840

NARRATIVE - Habitat Classification Analysis

Stand #6 is located in a high aesthetic area between Flowage and Rapids Roads. Flowage Road is a designated ATV trail with much use for the area. Additionally, these two roads access a picnic area and a boat landing as well.

Terrain is gently rolling. White birch predominates the overstory timber type in the west two-thirds of the stand; sugar maple is predominantly in the east one-third. The habitat in general is ATM.

Based on habitat types, recommendations for the stand is as follows:

1. The eastern one-third of the stand (ATM/AT DRY) should be managed for northern hardwood. Only 20 ft.^{2} per acre BA is white birch, with average dieback less than 10%. I suggest this area be lumped in with Stand #3.
2. Three options exist for the remainder of the stand.
   a. Clearcut and replant. Potential for red pine on an ATM Site is excellent, white spruce is very good with moderate to strong competition.
   b. Shelterwood cut and manage for hardwood. Intolerant hardwoods like red maple and basswood have excellent potential on an ATM Site.
   c. Shelterwood cut and disc to manage for white birch. Birch has excellent potential with strong competition likely on an ATM Site. Because of the aesthetic implications, this is the alternative that I favor. It gives a good opportunity for us to "showcase" forestry as well as to regenerate a highly aesthetic species in a highly aesthetic area.

Immediate treatment <u>is</u> necessary in the western two-thirds of this stand. Dieback ranges from 20% - 50%, averaging 30%. Total stand volume is 20-25 cords/acres; the white birch component is 15-20 cords/acre.