

Aspen

Project Subject/Title: Willow Flowage Aspen Thinning

Contact Person: Tom Shockley, 715-356-5211 WDNR Forester

Abstract:

An aspen thinning was established in 2001 in a 35 acre stand near the Willow Flowage. Typically, forest managers have implemented coppice as the most effective and practical way to manage aspen stands. The objective of the thinning was to produce aspen sawtimber at a younger age by reducing the basal area of the stand to 50 square feet per acre. Results that were studied 11 years after the thinning showed that thinning aspen in this particular habitat type is not a productive option for speeding up growth in aspen stands.

Trial Location:

County: Oneida

Township: 37N **Range:** 05E **Section:** 10, 11

GPS Coordinates: Lat: 45°43'2.6" **Long:** -89°50'18.4"

Property Name: Oneida County Forest

Baseline Stand Data

- *Cover Type:* Aspen
- *Acres:* 35
- *Habitat Type:* ParV-ParVAa
- *Soil Type:* Keweenaw sandy loams
- *Year of Origin:*
- *Total Height:*
- *Site Index Species and Site Index:* 70
- *Mean Stand Diameter:*
- *Total Basal Area per Acre:*
- *Other stand Condition:* Harvested in frozen conditions

Prescription and Methods:

- *Type of Prescription:* Thinning
- *Year Initiated:* 2001
- *Establishment Methods:*

Stand was marked down to a residual basal area of 50 square feet/acre. The harvest occurred in frozen conditions to prevent damage and compaction. The thinning objective was to produce aspen sawtimber. A partial harvest occurred in 2001 and then was completed in 2003.

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- *Data Collection Methods:*

The stand was revisited in 2014, 11 years after the completion of the harvest. Five plots were established randomly throughout the stand. In each plot, basal area, DBH of all “In” trees, number of sticks per tree, regeneration in a 1/1000 fixed radius plot, and core samples were taken and recorded. A visual assessment of the stand was also taken, noting viability and overall quality.

Results:

The stand’s average basal area was 58 square feet/acre. The only two species that fell within the variable plots were quaking aspen and bigtooth aspen. The average number of sticks per tree throughout the stand was 5.38 to a 4” top. In the regeneration plots, red maple was the dominant species along with a smaller number of aspen and black cherry. Raspberry and blackberry were also present in the stand.

Discussion/Recommendations:

There was some dieback throughout the stand which caused quite a bit of variability throughout the site. As a whole, basal area went down in the stand from the 50 square feet/acre it was originally cut to. The aspen along the road appeared to be more vigorous and healthy than the aspen further away from the road. This could be because the basal area was kept higher for aesthetic reasons.

This type of treatment would be better suited for habitat types that are more productive for aspen, such as ATM. Soil compaction and rutting can have a serious, negative impact on tree roots and needs to be avoided.