

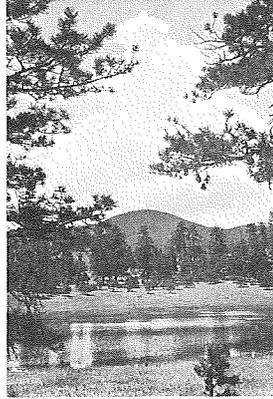
Technical Notes Woodland Conservation



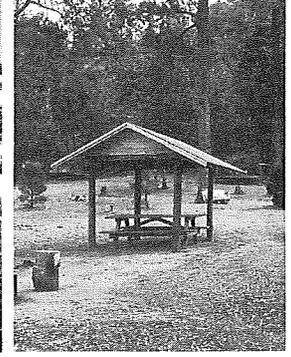
FOREST MANAGEMENT



WINDBREAKS



WATERSHEDS



FOREST RECREATION

U. S. DEPARTMENT OF AGRICULTURE NEW MEXICO SOIL CONSERVATION SERVICE

WOODLAND NOTE NO. 3

July 17, 1964

SUBJECT: THINNING RESPONSE IN PONDEROSA PINE

Growth of 70-year-old ponderosa pine in the Black Hills, thinned to 475 trees and 71 square feet of basal area per acre in 1957, was better in several ways than that of an unthinned stand that contained 2,838 trees and 187 square feet of basal area.

For four growing seasons - 1958 to 1961, trees in the thinned stand have averaged 2 1/2 times more diameter growth (breast height) than trees in the unthinned stand.

Diameter growth of thinned trees commonly started earlier each spring and continued later into the fall.

Despite a progressive decline in annual precipitation for the four years, average diameter growth of the thinned trees increased each year. Average diameter growth of unthinned trees decreased.

Height growth was the same for trees in thinned and unthinned stands in 1958 and 1961, but was greater in the thinned stand in the intervening years. Height growth appears to be closely related to the amount of precipitation that reached the ground under each stand.

This stand averaged 5.2 inches diameter breast height after thinning in 1957, at 70 years of age. Such would indicate a site index of about 53 feet. This would compare with much of the ponderosa pine in New Mexico.

Source: Rocky Mountain Forest and Range Experiment Station, 1962 Annual Report.