

T I M B E R M A N A G E M E N T

G U I D E

F O R T H E H U R O N - M A N I S T E E

J A C K P I N E

T Y P E

M A Y 1 9 7 9

P R E P A R E D B Y : J A M E S E . M C C U M B E R

A P P R O V E D B Y



F O R E S T S U P E R V I S O R

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INTRODUCTION

Regeneration of jack pine in managed stands by natural seeding or direct seeding has historically been uncertain. Natural jack pine stands are usually found on coarse textured droughty soils. To obtain adequate regeneration requires favorable climatic conditions in addition to favorable site conditions. An analysis of the climatic data from Mio, for the last 22 years, showed a moisture deficit in the top 4.5 feet of the soil during 50% of the years.

Natural regeneration is often too dense or too sparse and a waiting period of several years is usually necessary to obtain adequate stocking. The unevenaged, variable density stand is the type of stand that the jack pine budworm will infest. When adequate natural stocking does not result, the stand must be planted. The natural regeneration that is present then becomes a problem and a potential source for future budworm infestations.

Regeneration by planting is the most successful method of reforesting a stand after harvesting. Spacing and stocking are controlled and yield at rotation age should be close to the biological yield for the site. Preliminary cost-benefit comparisons indicate that from a timber management standpoint, poor and medium stocked stands should be regenerated by planting. Other resource considerations may modify the prescription to plant. Critical Kirtlands Warbler habitat, land use Class 605 - Special Component, may be managed under different guidelines.

Preliminary data from a jack pine - red pine growth comparison study indicates that red pine will produce more wood fiber than jack pine, over a wide range of sites. Jack pine may make faster height growth on poor sites but diameter growth is much slower than red pine.

The following silvicultural prescription key should be used for land use Class 500 - Standard Component. If different cultural activities are prescribed they must be fully described and the reasons documented in the Compartment Environmental Analysis Report.

A recent publication, Managers Handbook for Jack Pine in the North Central States, General Technical Report NC-32 can be used for reference material. In the event of a conflict, the Huron-Manistee guide will be followed.

SILVICULTURAL PRESCRIPTION KEY

JACK PINE TYPE

1. Stand high risk ... CLEAR-CUT AND PLANT pp. 17, 22
1. Stand not high risk ... (2) p. 1
2. Stand sparse ... CLEAR-CUT AND PLANT pp. 17, 22
2. Stand not sparse ... (3)
 3. JP mixed with RP or hardwoods ... (4) p. 28
 3. Pure JP ... (12) p. 18
 4. Mixture of JP and RP ... (5)
 4. Mixture of JP and hardwoods ... (7)
 5. RP less than 40 sq. ft. or 280 well spaced trees/acre ... (12)
 5. RP more than 40 sq. ft. or 280 well spaced trees/acre ... (6)
 6. JP not mature ... RE-EXAMINE IN 10 YEARS
 6. JP mature ... THIN TO MINIMUM STOCKING LEVEL IN RP GUIDE
 7. JP Site index below 55 ... (8)
 7. JP Site index 55 or above ... (10)
 8. JP less than 45 years ... RE-EXAMINE IN 10 YEARS
 8. JP 45 years or older ... (9) p. 26
 9. Reproduction adequate ... REGENERATE TO REPRODUCTION TYPE
Reproduction inadequate ... CLEAR-CUT AND FILL-IN PLANT PINE
 10. Hardwood stocking below "C" level ... (12)
 10. Hardwood stocking above "C" level ... (11)
 11. JP 45 years or older ... CUT ALL JP, CONVERT TO HARDWOODS
 11. JP less than 45 years ... RE-EXAMINE IN 10 YEARS
 12. JP under 10 years of age or 5 ft. in height... (13)
 12. JP over 10 years of age or 5 ft. in height... (16)
 13. Over 2000 stems/acre ... PRE-COMMERCIAL THINNING p.16
 13. Under 2000 stems/acre ... (14)
 14. Overstory no problem ... RE-EXAMINE IN 10 YEARS
 14. Overstory needs removal ... (15)
 15. Overstory operable ... REMOVAL CUT p.27
 15. Overstory inoperable ... RELEASE p.9
 16. Jack Pine less than 45 years... RE-EXAMINE IN 10 YEARS
 16. Jack Pine 45 years or older ... (17)
 17. JP less than 70 sq. ft. BA ... CLEAR-CUT AND PLANT
 17. JP 70 sq. ft. or more ... (18) p.19
 18. Less than 30 sq. ft. BA of desirable trees to be retained ... CLEAR-CUT AND PLANT
 18. More than 30 sq. ft. BA of undesirable trees to be retained ... (19)
 19. Less than 10 sq. ft. BA open-cone trees ... CLEAR-CUT AND PLANT p. 23
 19. More than 10 sq. ft. BA open-cone trees ... SHELTERWOOD p.19

