

United States Forest Mio Ranger 401 Court Street
Department of Service District Mio, MI 48647
Agriculture

Caring for the Land and Serving People!

Reply to: 2670 Kirtland's Warbler

Date: August 3, 1994

Subject: Forest Plan Amendment

To: Kirtland's Warbler Amendment Team
HMNF Management Team
Kirtland's Warbler Habitat Management Team

The Huron-Manistee National Forests and the Michigan Department of Natural Resources are currently in the process of revising the current Kirtland's Warbler Habitat Management Plan. According to the current plan, it is to undergo scrutiny for general revision every 10 years and was to be revised in 1990. Obviously, we are a few years behind.

The good news is all of our Kirtland's Management Areas are now in a GIS (geographic information system), and a new habitat management plan can be completed soon. The next task at hand is to schedule habitat development areas for the next 50 years, and make adjustments in designated Kirtland's warbler essential habitat using the best information we have available at this time. Recent census observations have made it apparent to biologists and other resource managers involved in KW management that our current habitat management strategy may not be the best we can do for the Kirtland's warbler, the jack pine ecosystem, and our limited budgets.

A Forest Service interdisciplinary team (Paul Erler, Rebeca Franco, Joe Gates, Phil Huber) was formed to address a number of critical issues (identified in **bold** letters) and develop a draft proposed action. **The draft proposed action follows the issues discussed below and is subject to modification based on your comments.**

Issues Related to the Kirtland's Warbler Habitat Management Plan Revision

Stand Size is Important!

A recent analysis of Kirtland's warbler biogeography (Probst and Donnerwright) suggests that warblers prefer larger stands (>500 acres), and duration of use of is much higher for larger stands.

Stand Size	Avg. Duration of Use
< 200 acres	3.6 years
200-500 acres	4.6 years
500-1000 acres	7.5 years
>1000 acres	8.3 years

Under the current KW management plan, the current average stand size is approximately 260 acres. Stands in this category are likely to have lower densities of Kirtland's warblers and duration of occupancy is low.

HM Forest Plan Limits Stand Size...

The current Forest Plan reads as follows (IV-142):

II. The following Standards and Guidelines apply only to the even-aged silvicultural system.

A. Create temporary openings by the application of the even-aged silvicultural system.

1) The height of reestablished stands in Kirtland's warbler management units should be 5 feet or higher before an adjacent block is cut.

2) Temporary openings created by even-aged management will be 40 acres or less, except that in jack pine stands managed for Kirtland's warbler will be 370 acres or less.

Under the current standard and guidelines, adjacent stands will almost never be occupiable at the same time, and stands suitable for Kirtland's warbler occupancy will never exceed 370 acres. Therefore, no contiguous block of plantation habitat will ever be more than 370 acres in size.

Following the Mack Lake Fire, annual habitat development goals on the Huron National Forest has shifted to the other 6 management areas. **Habitat development has accelerated in these areas and it is increasingly difficult, if not impossible to meet the adjacency requirement in the Forest Plan standards and guidelines.**

KW Management Plan Limits Stand Size...

The current Kirtland's Warbler Management Plan divides each management area into management units. Each management unit is divided into five habitat development blocks. This strategy was originally designed to benefit the warbler by minimizing the potential for catastrophic losses of birds on the nesting grounds due to wildfire. However, **this strategy has created isolated "islands" of habitat for the KW, unlike habitat that would have been created by natural wildfires.**

Essential Habitat Adjustments are Needed...

On the Huron National Forest, over 277,000 acres (64%) are classified as dry outwash sand plains. 53,500 acres (19% of outwash plains) are designated essential habitat for the Kirtland's warbler in the current Management Plan (see attached LTA/KWMA map). Most of the difference is either in red pine plantation or in jack pine not managed for the Kirtland's warbler.

After field verification of the original essential habitat, it was found that **some of the habitat is not on ecological land type phases suitable for the development of nesting habitat, while some non-essential habitat within the sand plains is suitable.** For example, the Tawas Kirtland's Warbler Management Area is made up of isolated islands of essential habitat and will most likely never provide a sustainable supply of good nesting habitat. **Some essential habitat in all 7 management areas needs to be relocated or better consolidated.**

There's More Habitat Out There...

An opportunity exists to increase and/or consolidate acres of essential habitat for the Kirtland's warbler. The Mack Lake Opportunity Area analysis recommended adding approximately 5000 acres of essential habitat as a direct result of the Mack Lake Fire. This and other essential habitat could be added with or without increasing the number of acres harvested and planted. From an ecological perspective, additional acres could be identified as essential habitat to better manage the outwash sand plains in the future should our capacity to regenerate jack pine increase.

Draft Proposed Action Developed by the Interdisciplinary Team

Develop nesting habitat in larger blocks, adjacent to each other where feasible. Habitat development in adjacent blocks should be approximately 5 years apart to create optimum nesting habitat for the Kirtland's warbler.

Specifically, amend the Forest Plan as follows:

Under 1900 Planning (IV-140),

I. Vegetation Management

A. Essential habitat is designated on appropriate ecological land type phases (ELTP's) as prescribed in the Habitat Conservation Strategy for the Kirtland's Warbler in Michigan. Essential habitat designation attempts to maximize other resource values including visual

quality, recreation, and fire prevention. Minor essential habitat adjustment can be recommended by an interdisciplinary team and approved by the District Ranger.

Under 2400 Timber Management (IV-142).

II. The following Standards and Guidelines apply only to the even-aged silvicultural system.

A. Develop nesting habitat using even-aged silviculture and reforestation techniques as prescribed in the Habitat Conservation Strategy for the Kirtland's Warbler in Michigan.

1) Design habitat blocks to best mimic the effects of natural wildfire as prescribed in the Habitat Conservation Strategy.

2) Temporary openings created by even-aged management in jack pine stands managed for Kirtland's warbler should be 500 acres or less, unless otherwise approved by the Forest Supervisor.

3) Blocks in Kirtland's warbler management areas should be reestablished (planted, seeded and regenerated, or naturally regenerated) before an adjacent block is sold.

These new standards and guidelines would have the following effect on the management program:

1) Average stand size would increase, significantly increasing the duration of Kirtland's warbler occupancy. Adjacent stands would both be occupiable for approximately 5 years, which could increase effective stand size up to 1500 acres. This large area complex could increase duration of occupancy from 4.6 to 8.3 years. However, past management will limit opportunities to increase stand size in the immediate future. Most blocks will still be under 370 acres in size. District rangers would still have the decision space to harvest less than 500 acres, for aesthetic or other reasons.

2) New standards and guidelines will allow harvest of some stands adjacent to blocks of habitat in the process of regeneration. This will allow managers to continue accelerated habitat development that is necessary as a result of the Mack Lake fire.

3) Minor adjustments would be made to better consolidate essential habitat.

The Habitat Conservation Strategy will provide more detailed information regarding essential habitat designation and nesting habitat development (visual considerations, leave strips, leave areas, snags, etc.).

Attached are notes from the first interdisciplinary team meeting. These notes identify issues, concerns, and opportunities related to the Kirtland's Warbler program.

Please send me your comments on this draft proposed action, along with issues, concerns, opportunities. Our next step is to develop a final proposed action and a scoping letter to send to the public. If you have ideas regarding this next step, we would appreciate those also.

Sincerely,

A handwritten signature in cursive script that reads "Philip W. Huber". The letters are fluid and connected, with a prominent loop on the 'P' and a long tail on the 'H'.

Philip W. Huber
Wildlife Biologist

KW PROPOSED PLAN AMENDMENT TEAM

March 22, 1994

In attendance: Paul Erler, Rebecca Franco, Phil Huber
(Joe Gates could not attend)

A. Proposal

1. Modify cutting strategy
2. Shift essential habitat acres
3. Adding essential habitat acres in Mack Lake to increase from 53,500 to 60,000 acres

B. Purpose of the team to put together Proposed Actions and Issues/Concerns/Opportunities

C. Phil went over management areas and current management strategy

D. KW Research

1. Probst data supports the idea that the larger an area, the more likely the KW will inhabit it longer (see attached document)
 - a. KW's are colonial nesters
2. Consequently, it could save money by:
 - a. significantly increasing the length of time KW's use habitat
 - b. possibly increasing KW territories/acre? (check with Probst)
 - c. dealing with more acreage at one time rather than smaller units at different times

E. Issues/Concerns/Opportunities

1. Are large clearcuts more or less visually impacting than a greater number of scattered cuts of the same acreage?
2. Could cut immature trees (ex. Mack Lake) on fewer acres, but timber industry might object to cutting younger trees: below cost sales, less revenue than current KW sales.
3. To increase occupiable acreage, sell adjacent acres every 5 years or so to achieve larger sizes (as soon as adjacent stand has been planted).
4. Cost for KW management is higher than return from timber sales: cannot cover planting costs
5. Fire would create habitat of different sizes which would be more natural: fire mgmt is an alternative or mechanically cut
6. Maintain current essential habitat at 53,500 acres or increase essential habitat up to 60,000 acres to incorporate additional acres as a result of the Mack Lake Fire, as recommended in the Mack Lake OA. Could increase essential habitat without increasing annual cut.
7. It is less costly to manage jack pine that has been excluded from essential KW habitat for timber or other objectives than to manage for the Kirtland's warbler.
8. Modern fire suppression is the cause of the natural KW habitat shortage
9. Red Pine was planted by the CCC's on jack pine sites that would have otherwise been suitable as essential habitat
10. Now that red pine is growing on jack pine sites, what do we do when it reaches rotation?

11. Should we convert some red pine areas to jack pine (ecosystem management?)?
12. Need to do a better job of providing habitat by changing the current KW management strategy (larger cuts, adjacent cuts)
13. Recreationist and adjacent landowners may object to visual impacts of larger cuts.
14. Recreation trails will have to be relocated more often because of larger and adjacent cuts?
15. Occupiable habitat will be closed to the public for a greater number of years if cuts are larger and adjacent to each other.

E. A Proposal Possibility

1. Shorten rotation age, using less acreage, improving visuals--would not be cost efficient

F. Preferred Proposed Action

1. Cut larger blocks adjacent to each other, and cut each adjacent block approximately 5 years apart to mimic a large fire (closer to ecosystem management).
2. Blocks adjacent to a proposed cutting unit should be planted before the cutting unit is sold.
3. Drop unit boundaries and manage areas as a whole
4. Do not increase the annual harvest in the near term
5. Remove 5 ft. limitation
6. Mitigate visual impacts by leaving areas or reserve trees (reserve trees and areas should not affect habitat) according to standards and guidelines.
 4. Cuts should generally not exceed 500 acres (two 500-acre adjacent cuts would maximize KW duration of occupancy).
 5. Stands should be delineated to natural features such as creeks, topographic features, etc. Roads are not natural features.
 6. Adjust essential habitat to occur on ecological land types suited to KW and will minimize impacts of social values including visual quality, recreation, fire hazard/risk, etc.

H. Next Steps

1. Circulate proposed action internally for comments
2. Check NFMA requirements
3. Talk to John Probst about other data to support proposal

Decision Notice
and
Finding of No Significant Impact
for

Kirtland's Warbler Habitat Management Amendments

USDA FOREST SERVICE
HURON-MANISTEE NATIONAL FORESTS
1755 S. MITCHELL ST., CADILLAC, MI 49601

This notice documents the decision for the Kirtland's Warbler Habitat Management Amendments to the Huron-Manistee National Forests' Plan. Public comments for this project were solicited by letters sent to interested groups and individuals on January 17, 1995. Subsequent to the letters, four local newspapers published articles describing the proposed action and solicited comments from readers. The public was notified by letter dated July 30, 1996 that the Environmental Assessment (EA) was available for a 30-day comment period. A legal notice, stating the same, was published in the Cadillac Evening News on August 8, 1996.

Decision

After reading the Environmental Assessment (EA) and in accordance with direction given in the Forest Land and Resource Management Plan and its Final Environmental Impact Statement, it is my decision to implement the **Proposed Action** as follows:

Amend the Huron-Manistee National Forests' Plan by:

- 1) adding a standard and guideline directing the design and configuration of treatment blocks that mimic the regeneration results of wildfire by harvesting and planting jack pine as described in the Kirtland's Warbler Habitat Management Strategy;
- 2) modifying an existing standard and guideline allowing treatment blocks (temporary openings or clearcuts) in essential habitat for the Kirtland's warbler to be up to 550 acres in size;
- 3) modifying an existing standard and guideline relating to the treatment of adjacent blocks. If the temporary opening created by adjacent treatment blocks exceeds 550 acres, one block will be stocked before the other is sold. A block is considered stocked when it is planted to a stocking density of 1600 or more trees per acre over 75% of the area. If a block is seeded or regenerates naturally, it will be considered stocked if it has a stocking density of 1600 or more trees per acre over 75% of the area after the third-year stocking survey.

4) adjusting the locations of ecologically-suited lands to be managed as essential habitat in Management Areas 4.2 and 4.5. The net effect will increase the amount of essential habitat to a minimum of 53,500 acres and a maximum of 68,000 acres. The proposed stand adjustments are illustrated on the maps in Appendix A, and listed in the tables in Appendix B of the environmental assessment.

The Proposed Action is described in detail in Section I.D, on pages 8 and 9 of the EA.

Reasons for the Decision

My decision to implement the proposed action is based on its effectiveness in achieving the stated purpose and need, which improves management of jack pine essential habitat for the endangered Kirtland's warbler. In evaluating the effects of the proposed action and alternatives as stated in section IV of the EA, in my judgement, the proposed action is the most effective alternative to achieve the stated purpose and need for the action since it best accomplishes the following:

- 1) The proposed action meets the purpose and need for action while Alternative 1 (No Action) does not. Alternative 2 (Larger Treatment Blocks) meets the purpose and need for action, but could produce very large treatment blocks that are not as acceptable to the public.
- 2) The proposed action addresses all issues, concerns, and opportunities raised during the scoping process.
- 3) The proposed action improves management of the jack pine ecosystem by better mimicking the regeneration effects of wildfire.
- 4) The proposed action improves habitat for the Kirtland's warbler and other species of the jack pine ecosystem.
- 5) The proposed action improves management of the jack pine ecosystem by adjusting the locations of ecologically-suited lands to be managed as essential habitat.

In making this decision, I have taken into account public concerns and comments about the proposed project. I have evaluated the adequacy of the EA to resolve issues, formulate alternatives to the Proposed Action, determine mitigation or coordinating measures, and evaluate effects of the alternatives. I also took into account the disposition of issues raised during the notice and public comment period.

Based on all factors, it is my judgement that the proposed action provides for the greatest net benefit to the public. No single factor determined this decision.

Alternatives Considered

Two alternatives to the proposed action were considered in detail:

Alternative 1 is the no action alternative. This alternative would not change the maximum clearcut size (370 acres) or adjacency requirement from what is currently in the Forest Plan. This alternative would not change the location or amount of essential habitat (53,500 acres) in Management Area 4.5 that was identified in the Kirtland's Warbler Management Plan.

Alternative 2 is the same as the proposed action except that the maximum clearcut size is increased to 1070 acres.

Finding of No Significant Impact

I have determined that these actions are not a major federal action, individually or cumulatively, and will not significantly affect the quality of the human environment. Therefore, an environmental impact statement is not needed. This determination is based on the following factors:

1. Public health and safety are minimally affected by the proposed action;
2. There are no known significant irreversible resource commitments or irretrievable loss of timber production, wildlife habitats, soil productivity, or water quality (EA pages section IV);
3. The physical and biological effects are limited to Kirtland's Warbler Management Areas and adjacent areas. There are no unique characteristics of the geographical area that would be significantly affected by the actions of this project;
4. The effects on the quality of the human environment are not likely to be highly controversial;
5. There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks;
6. These actions do not set precedent for other projects that may be implemented to meet the goals and objectives of the Forests' Plan. These actions are not connected to future actions that may have significant effects;
7. There are no known significant cumulative effects between this action and other projects implemented or planned in the Kirtland's Warbler Management Areas or adjacent areas;
8. There will be no significant effects on cultural resources. Surveys for cultural resources are conducted prior to activities on National Forest lands. Any sites found will be protected;
9. All current and proposed federally threatened and endangered species will not be affected by the actions; and
10. The actions do not threaten a violation of federal, state or local laws imposed for the protection of the environment.

Administrative Review of Appeal

Appeal Rights : This decision is subject to appeal pursuant to the provisions of 36 CFR 217. A notice of appeal of this decision, pursuant to 36 CFR 217, must be submitted in duplicate to the Regional Forester within 45 days following the date of publication of this decision in the Cadillac Evening News at:

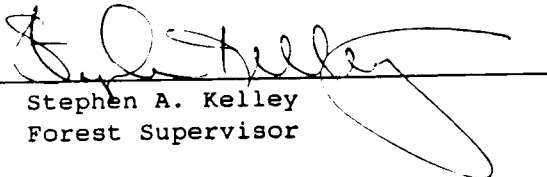
USDA Forest Service, Eastern Region
ATTN: Appeals Deciding Officer
310 West Wisconsin Avenue
Milwaukee, WI 53203

If no appeal is received, implementation of this decision may not occur before 7 business days from the close of the appeal filing period.

Questions regarding this decision should be directed to the deciding officer:

Stephen A. Kelley
Forest Supervisor
Huron-Manistee National Forest
1755 S. Mitchell St.
Cadillac, MI 49601
(616) 775-2421

10/16/96
Date


Stephen A. Kelley
Forest Supervisor

United States
Department of
Agriculture

Forest
Service

Huron-Manistee
National Forests

Manistee Ranger District
401 Court Street
Manistee, MI 49847

Caring for the Land and Serving People!
Telephone (517) 826-3252 TTY and Fax (517) 826-3179

Date: January 17, 1995

Dear Friend of the Huron National Forest:

The Forest Service would like you to help us better manage the National Forest by providing input on some changes we are considering.

The Forest Service manages jack pine on the Huron National Forest for the Kirtland's Warbler, a federally endangered bird. Stands of mature jack pine trees are harvested by clearcutting and young trees are planted to provide nesting habitat. Without this type of management, the Kirtland's Warbler would likely become extinct.

Background

Prior to modern fire suppression, large natural wildfires frequently burned **thousands** of acres of jack pine forest on the dry sand plains. Most jack pine wildfires killed the older trees and caused millions of seeds to be released. In just a few years, these burned over areas were covered with young pine trees. These new stands¹ of young jack pine provided plenty of natural habitat for the Kirtland's Warbler. However, modern fire suppression has substantially decreased the frequency of wildfire, significantly reducing the amount of nesting habitat naturally produced for this bird.

While fire suppression is necessary to protect human life and property, it eliminates a natural disturbance factor from the jack pine ecosystem on which many species of animals, plants and insects depend. The Forest Service attempts to mimic the effects of natural wildfire by harvesting and planting jack pine. Management of National Forest system lands for the Kirtland's Warbler is guided by the Kirtland's Warbler Management Plan and the Huron-Manistee National Forests' Plan. **The Kirtland's Warbler Habitat Management Plan is more than ten years old and is presently being revised.**

New Information

Examination of our Kirtland's Warbler census data suggests that these birds prefer to nest in large stands (1000 acres +) of young jack pine. **It appears that birds nest in higher densities in larger stands, and these large stands are used for a longer period of time than smaller stands** (see Figure 1). The ecological attributes of large stands are more closely aligned with the habitat objectives of the Kirtland's Warbler Habitat Management Plan.

Proposal

Our current Forest Plan limits the size of jack pine clearcuts to 370 acres or less. In addition, two or more adjacent stands cannot be cut if their combined size would exceed 370 acres (see Figure 2a). These guidelines need to be changed to allow managers to best mimic the effects of natural jack pine wildfires and provide habitat that is best suited for all wildlife species of the jack pine ecosystem (Figure 3).

A proposed Forest Plan amendment was developed by a multi-disciplinary team to improve the design of Kirtland's Warbler habitat projects, with considerations for social values including visual quality, recreation, and fire protection. **We propose to amend the Forest Plan to allow a clearcut stand to be up to 500 acres. In addition, trees would have to be growing in this recently harvested stand before an adjacent stand is sold** (the actual proposed amendment can be found in Figure 2b).

To best manage the jack pine ecosystem, **we would like to reselect which stands are designated for Kirtland's Warbler management. In addition, we would like to designate additional stands of jack pine for Kirtland's Warbler management, while keeping the annual harvest level the same.** We have found that some of the stands that were originally proposed for Kirtland's Warbler management are not ecologically adapted to provide quality nesting habitat. These stands are better suited to grow tree species other than jack pine, or remain open as prairie. We would exclude these stands from Kirtland's Warbler management, while including others on the dry sand plains that are better suited for growing jack pine (Figure 4).

What are the advantages/disadvantages of the amendment?

The amendment would allow us to better simulate the effects of natural jack pine wildfires, significantly increasing use of this artificial habitat by the Kirtland's Warbler and other species of wildlife including the Upland Sandpiper, American Kestrel, and the

¹ A stand is an area of trees or other vegetation with similar characteristics.

Short-eared Owl. Large openings could provide an opportunity to bring back a significant number of Sharp-tailed Grouse. These birds were common in the northeast Lower Peninsula until the 1950s.

The amendment would provide us the opportunity to cluster acres, creating fewer but larger stands of nesting habitat. For example, instead of harvesting and planting five scattered 300-acre stands to attain 1500 acres of nesting habitat, we could harvest and plant three 500-acre stand in the same vicinity. Clustering clearcuts would reduce the number of scattered clearcuts (see Figure 3).

Designating additional stands of jack pine for Kirtland's Warbler management would give us a greater flexibility in the location and design of nesting habitat in the landscape. This would improve the productivity of nesting habitat, while providing for social values like visual quality.

The proposed amendment would not change the average 1100 acres harvested and planted each year on the Huron National Forest.

Visually, a clearcut of 500 acres won't look significantly different from a clearcut of 370 acres. Individual or clumps of large trees will still be retained to improve the visual quality of large clearcuts.

Purchasing and planting jack pine for the Kirtland's Warbler is costly. The Forest Service is attempting to create nesting habitat in an efficient and effective manner. Increasing the productivity of nesting habitat will greatly improve the economic efficiency of this program.

Warblers may use the improved nesting habitat for a longer period of time, potentially increasing the number of years an area is closed to public entry. If a stand of nesting habitat is occupied, it will be closed during the nesting season (May 1 to August 15 or September 10).

Larger jack pine stands, along with current efforts to restore dry sand prairies within the jack pine ecosystem, would improve implementation the Forest Service policy of ecosystem management.

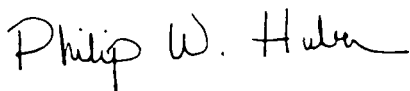
Each Kirtland's Warbler habitat project would still require site specific environmental analysis and documentation, which includes public involvement. Public involvement includes sharing your ideas on the specifics of each proposed project. Each project is then customized to best balance the needs of people, the Kirtland's Warbler and the jack pine ecosystem.

We want your opinion and ideas!

If you have any questions, please contact me or Connie Chaney (District Ranger) at the address above, or by telephone at 517-826-3252. You can also talk to Rex Ennis (Forest Biologist) at 1-800-821-6263. We are more than happy to meet with anyone interested in this proposal.

Thank you for taking the time to read about this project and I hope to here from you soon. We would like to have your responses back by February 17, 1995, so that we can move forward with this Forest Plan amendment and the revision of the Kirtland's Warbler Habitat Management Plan.

Sincerely,

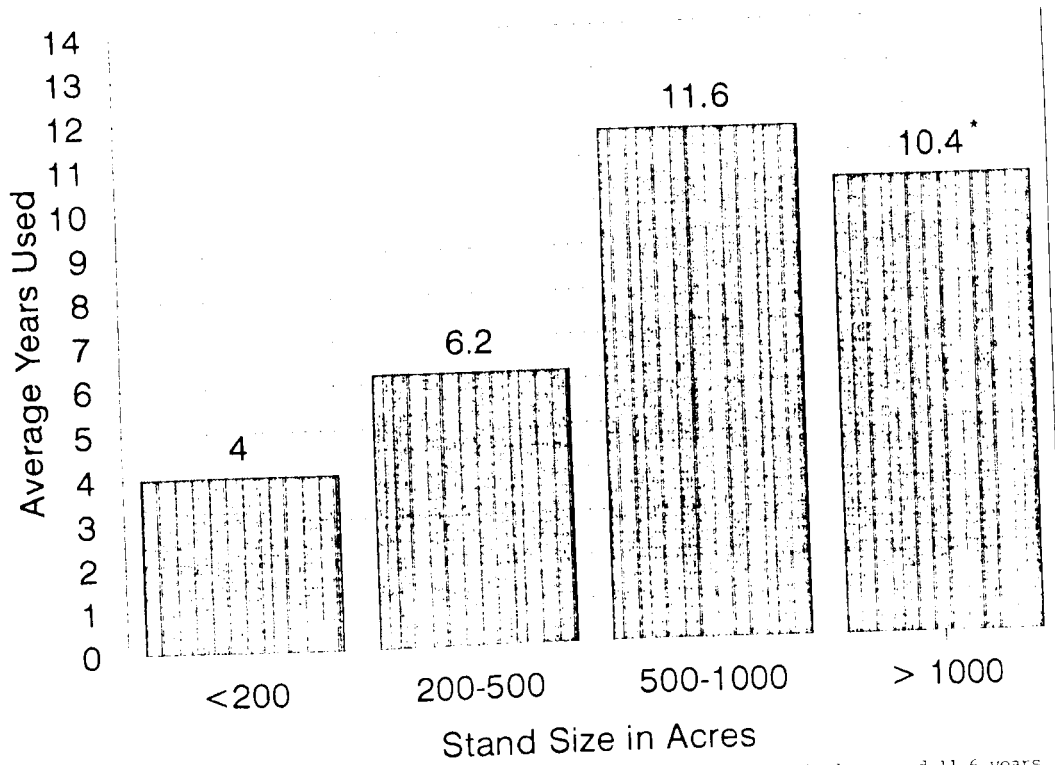


Philip W. Huber
Wildlife Biologist
Mio Ranger District

Enclosures
PWH.pwh

Figure 1.

Kirtland's Warbler Stand Use



* Stands in this category are currently occupied and will most likely exceed 11.6 years.
(Data from USFS, North Central Forest Experiment Station, Probst et. al.)

Density of Kirtland's Warblers by Stand Size

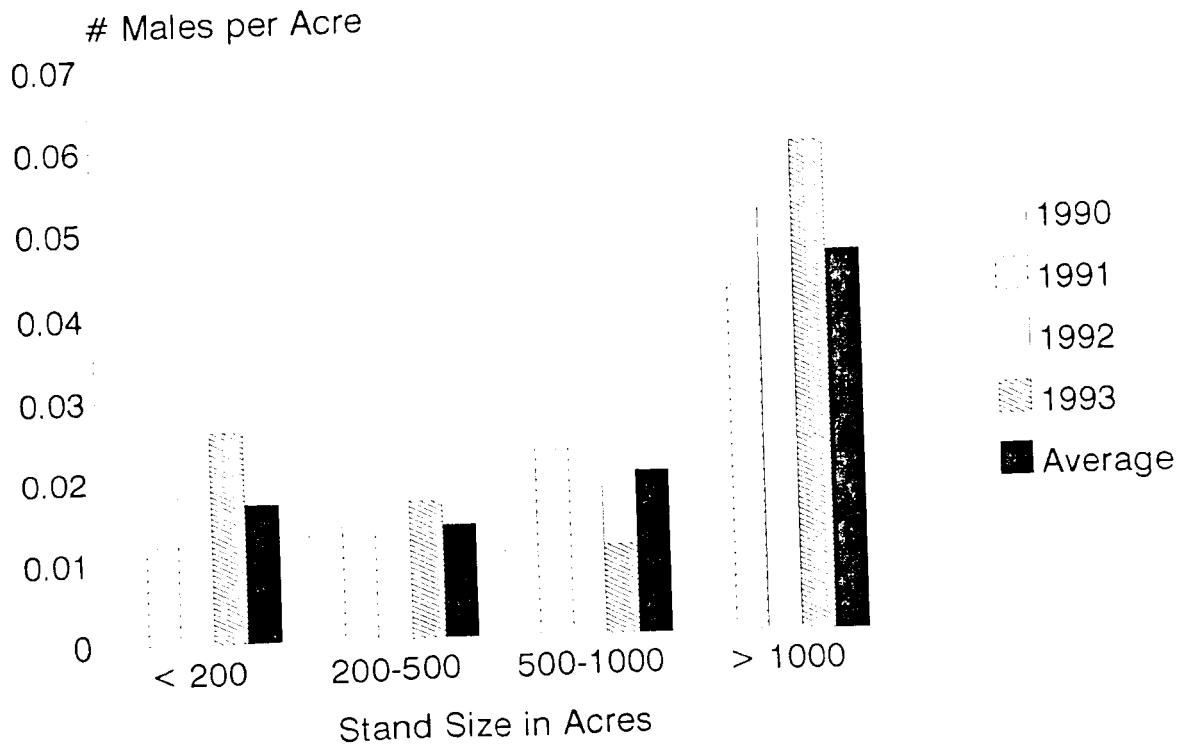


Figure 2. Current and Proposed Forest Plan Standards and Guidelines (IV-142).

Figure 2a. Current Forest Plan Standards and Guidelines (IV-142).

- II. The Following Standards and Guidelines apply only to the even-aged silvicultural system.
- A. Create temporary openings by the application of the even-aged silvicultural system.
- 1) The height of reestablished stands in Kirtland's warbler management units should be 5 feet or higher before an adjacent block is cut.
 - 2) Temporary openings created by even-aged management will be 40 acres or less, except that in jack pine stands managed for Kirtland's warbler will be 370 acres or less.

Figure 2b. Proposed Forest Plan Standards and Guidelines (IV-142).

- II. The Following Standards and Guidelines apply only to the even-aged silvicultural system.
- A. Develop Kirtland's Warbler nesting habitat using even-aged silviculture and reforestation techniques as prescribed in the Habitat Management Strategy for the Kirtland's Warbler.
- 1) Design treatment blocks to replicate the effects of natural wildfire as prescribed in the Habitat Management Strategy.
 - 2) Treatment blocks will be 500 acres or less, unless otherwise approved by the Regional Forester.
 - 3) Treatment blocks will be reestablished (planted, seeded, or naturally regenerated) to 1000 or more trees per acre before an adjacent block is sold.

Figure 3 Various Configurations of Kirtland's Warbler Habitat

Figure 3a
Natural Wildfire

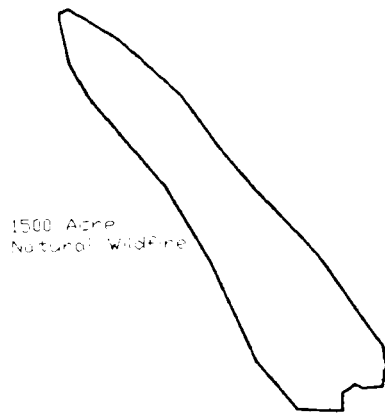


Figure 3b
Inherent Management Scenario

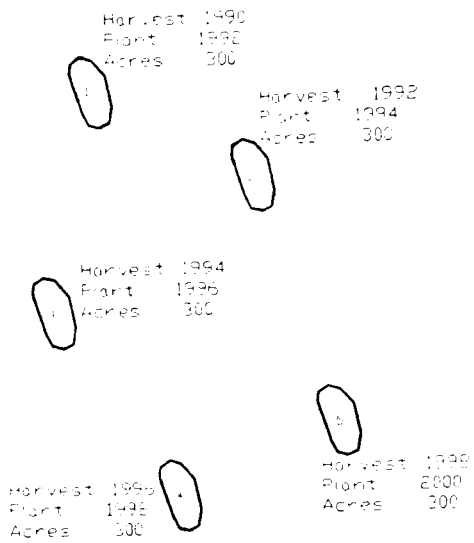


Figure 3c
Proposed Management Scenario

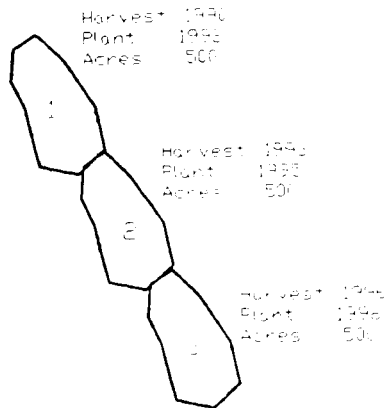
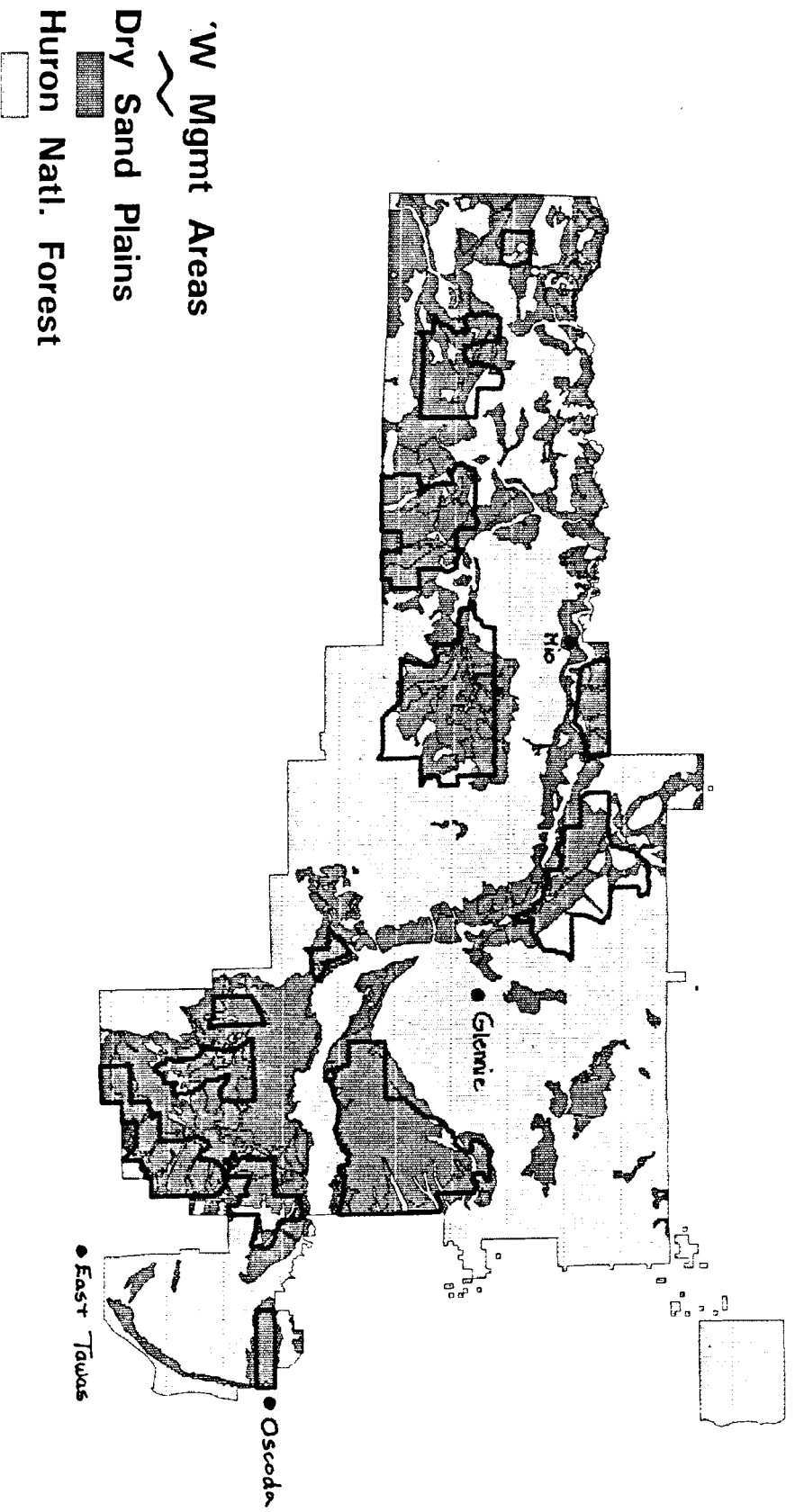


Figure 4. Kirtland's Warbler Management Areas and Dry Sand Plains on the Huron National Forest



ENVIRONMENTAL ASSESSMENT
FOR
KIRTLAND'S WARBLER HABITAT MANAGEMENT
AMENDMENT
HURON-MANISTEE NATIONAL FORESTS

Interdisciplinary Team Members

Philip Huber	Wildlife Biologist (Team Leader)
Sandy Caveney	Recreation Planner
Paul Erler	Timber Management Assistant
Joseph Gates	Soils Specialist

Huron-Manistee National Forests
Mio Ranger District
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ENVIRONMENTAL ASSESSMENT

for

Kirtland's Warbler Habitat Management Amendments

Huron-Manistee National Forests

I. PURPOSE AND NEED FOR ACTION

A. Introduction

The Forest Service manages jack pine within Management Area 4.5 of the Huron-Manistee National Forests' Forest Plan for the Kirtland's warbler (KW), a federally endangered bird. Stands of mature jack pine trees are harvested by clearcutting and young trees are planted to provide nesting habitat. Without management, the Kirtland's warbler may become extinct.

Prior to modern fire suppression, large natural wildfires frequently burned thousands of acres of jack pine forest on the dry sand plains in northeastern lower Michigan. Most jack pine wildfires killed the older trees and caused millions of seeds to be released. In just a few years, these burned areas were covered with young pine trees. These new stands of young jack pine provided natural habitat for the Kirtland's warbler. However, modern fire suppression efforts have substantially decreased the frequency and size of wildfire, significantly restricting the amount of nesting habitat naturally produced for this bird.

While fire suppression is necessary to protect human life, property and valuable natural resources, it eliminates a natural disturbance factor from the jack pine ecosystem on which many species of animals, plants and insects depend. The Forest Service attempts to mimic the regeneration effects of wildfire by harvesting and planting jack pine.

The following documents provide the foundation for the overall management of Kirtland's warbler habitat:

Kirtland's Warbler Recovery Plan (1976, revised 1985)

The primary objective of the Kirtland's Warbler Recovery Plan is to "reestablish a self-sustaining Kirtland's warbler population throughout its known range at a minimum level of 1,000 pairs." One of the secondary objectives is to "manage 127,600 acres of state and federal lands for the Kirtland's warbler" and to "develop and maintain 38,000 acres of breeding habitat at all times."

Kirtland's Warbler Management Plan for Habitat in Michigan (1981)

The Kirtland's Warbler Management Plan for Habitat in Michigan (Kirtland's Warbler Management Plan) identified 135,000 acres of essential habitat¹ on State and National Forest system lands. On the Huron National Forest, 53,500 acres of essential habitat were identified to be managed on a 50-year rotation; this amounts to an average of 1070 acres of to be harvested and planted annually.

In this plan, each management area was divided into management units containing between 1,000 and 2,000 acres of essential habitat. Units were subdivided into cutting blocks, with each block containing 200 or more acres of contiguous stands of habitat. By design, one block in each unit was to be developed as nesting habitat each decade.

Land and Resource Management Plan for the Huron-Manistee National Forests (1986)

Currently, the standards and guidelines in the Huron-Manistee National Forests' Plan provide direction for management activities in Management Prescription Area 4.5 - Kirtland's Warbler. The plan states that these management activities should "maintain and develop essential nesting habitat for the Kirtland's warbler in compliance with the provisions of section 7 of the Endangered Species Act (P.L. 93-205) and as outlined in the Kirtland's Warbler Management and Recovery Plans." The most significant direction in this plan relates to habitat development through timber management. Timber management standards and guidelines specifically limit the size of jack pine clearcuts to

¹ Essential habitat - areas designated by the Regional Forester that meet the following habitat requirements for the Kirtland's warbler: relatively flat, grayling sand soils which are low in productivity; vegetative cover of young jack pine, northern pin oak, and a small component of red pine with a ground cover of blueberry, sedge, grasses and other forbs; and large expanses (greater than 160 acres) of breeding habitat consisting of 1600 trees per acre covering 75% of the area between 5 and 24 feet tall.

370 acres or less. In addition, the guidelines state that two or more adjacent stands cannot be harvested if their combined size would exceed 370 acres. Only after a stand reaches 5 feet in height can an adjacent stand up to 370 acres in size be harvested. As a result, adjacent stands are almost never occupiable nesting habitat at the same time (Figure 1a).

The plan also states that "wildfires will be suppressed" (page IV-50). Therefore, fire suppression inhibits development of nesting habitat through natural means.

B. Purpose and Need

The purpose is to amend the Huron-Manistee National Forests' Forest Plan standards and guidelines, and to adjust Management Area boundaries in regards to providing essential habitat for the Kirtland's warbler. The need is based on the following new information:

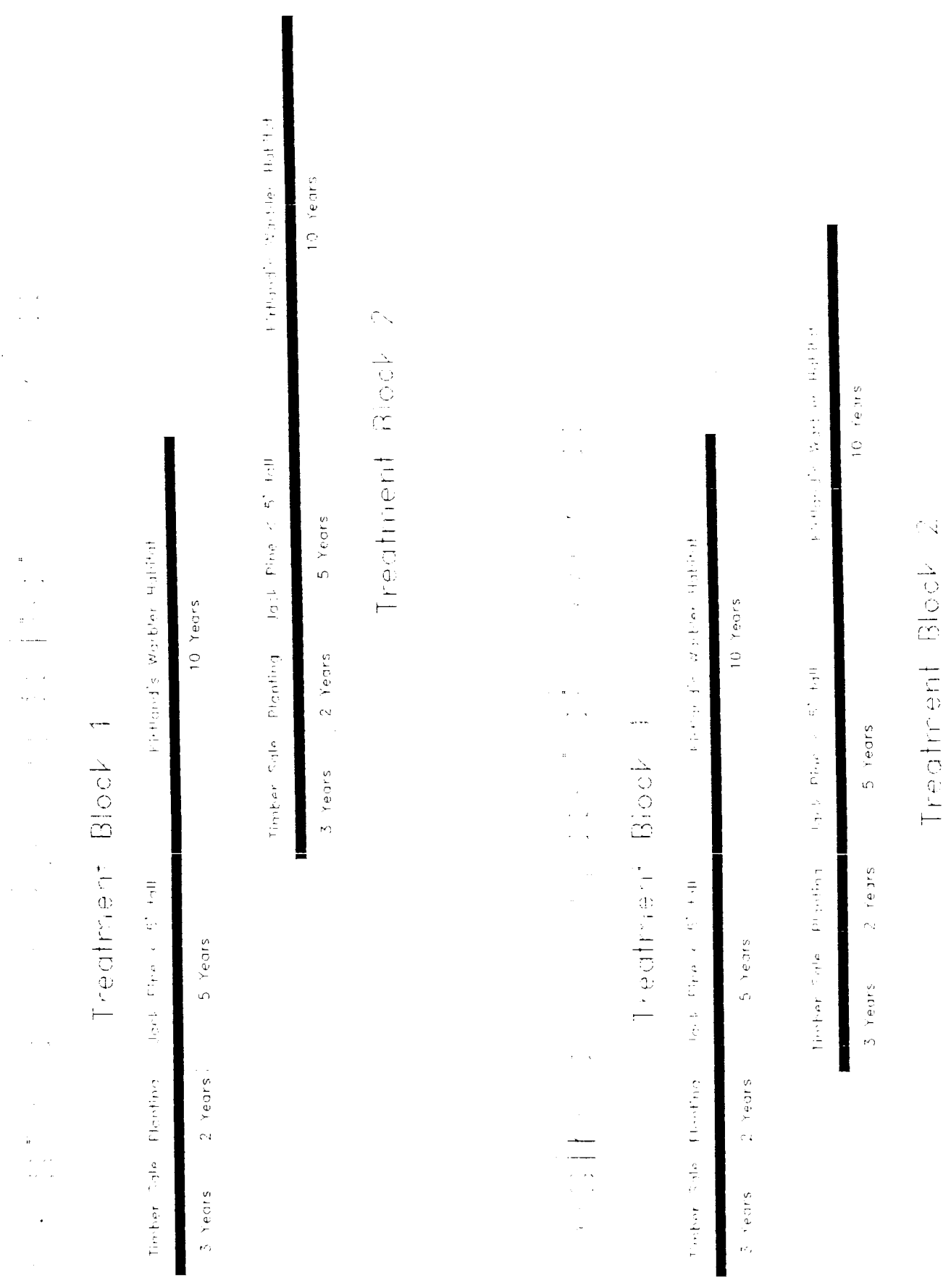
The Kirtland's Warbler Management Plan is now more than ten years old and is presently being revised in cooperation with the Michigan Department of Natural Resources, US Fish and Wildlife Service and the Department of Military Affairs at Camp Grayling. The new "Kirtland's Warbler Habitat Management Strategy" will incorporate an ecosystem management approach to managing jack pine for the Kirtland's warbler and many other species of animals and plants. Research results, data analysis, monitoring and evaluation has provided updated information on the biology of Kirtland's warbler:

Recent examination of Kirtland's warbler biogeography (Probst et al, 1995) suggests that the birds prefer to nest in large stands (1000+ acres) of young jack pine. Kirtland's warblers nest in higher densities in larger stands, and these large stands are used for a longer period of time than smaller stands (Figure 2). The current timber management standards and guidelines in the Forest Plan prevent managers from creating these large contiguous blocks of breeding habitat. The maximum clearcut size and adjacency requirements only allow managers to create blocks that are a maximum of 370 acres in size.

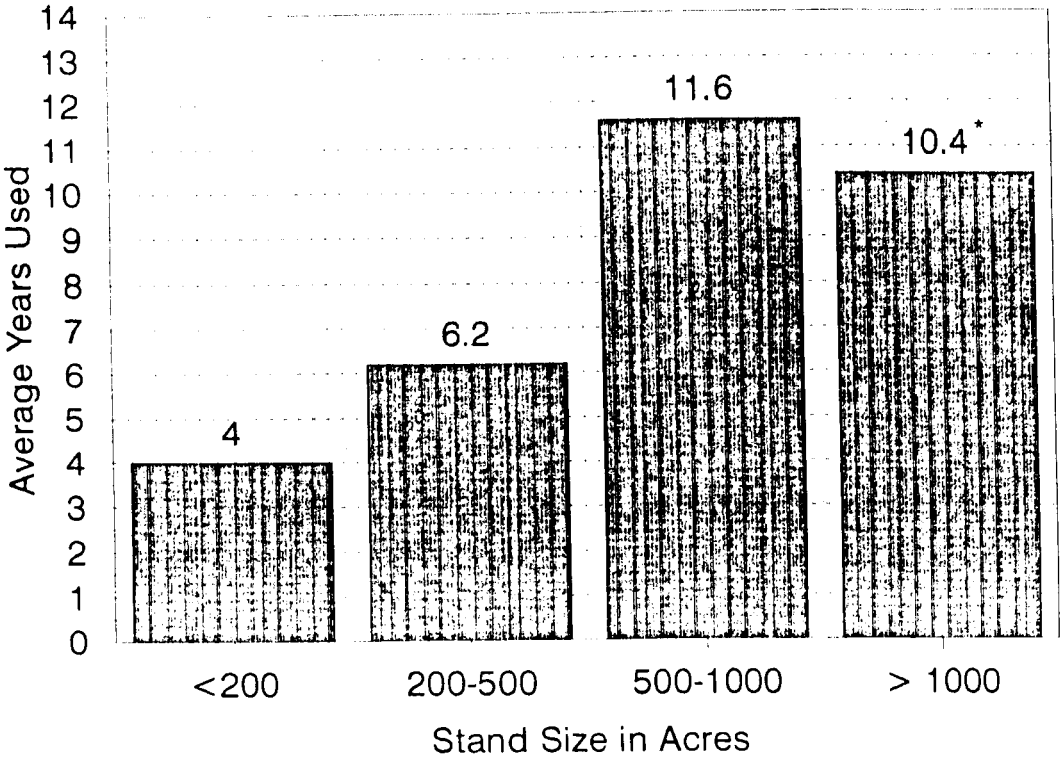
Managers now know that existing direction in the Kirtland's Warbler Management Plan tends to fragment nesting habitat into small scattered blocks, providing less than optimum landscape configuration for breeding warblers (Figure 3). Analysis of census results support this sentiment.

Some of the stands originally proposed for Kirtland's warbler habitat management need to be removed because they are not ecologically suited to provide quality nesting habitat. Some stands are too small or isolated to meet habitat

Figure 4.

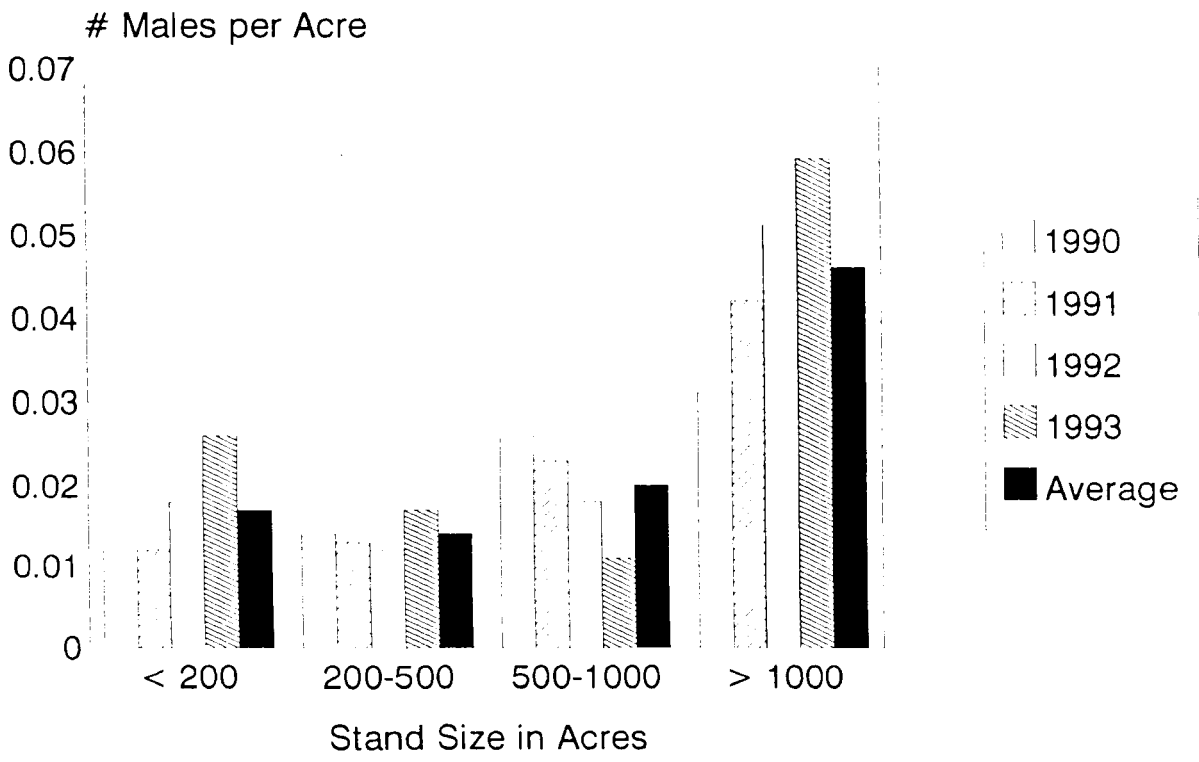


Kirtland's Warbler Stand Use



* Stands in this category are currently occupied and will most likely exceed 11.6 years.
 (Data from USFS, North Central Forest Experiment Station, Probst et. al.)

Density of Kirtland's Warblers by Stand Size



(Data from USFS, North Central Forest Experiment Station, Probst et. al.)

Figure 3. Various Configurations of Kirtland's Warbler Habitat

Figure 3a.

Natural Wildfire

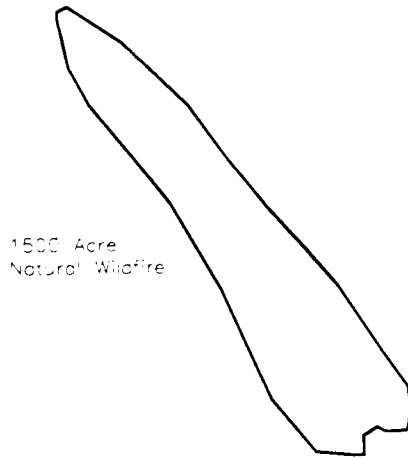


Figure 3b.

Current Management Scenario

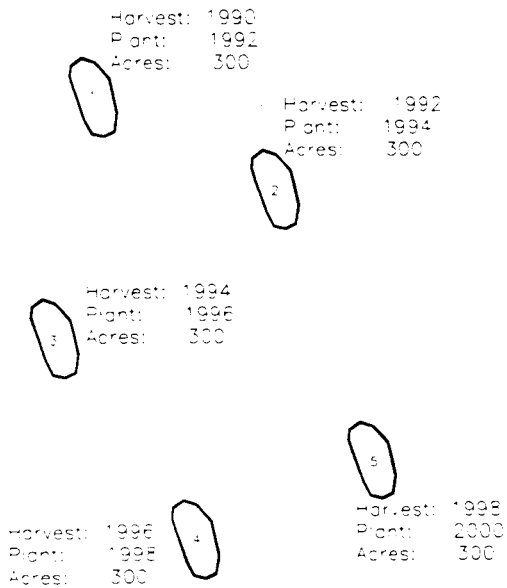
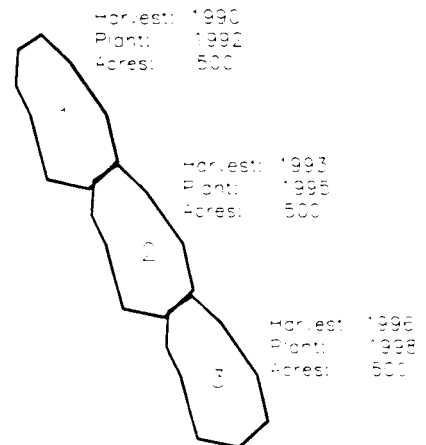


Figure 3c.

Proposed Management Scenario



management objectives and should also be removed from habitat management or expanded. Other stands that could provide prime nesting habitat were not included in the Kirtland's Warbler Management Plan and could be added.

As the current Kirtland's Warbler Management Plan and its acreage allocation is designed, every acre of essential habitat has to be managed to meet the annual habitat development objective. This leaves little flexibility to modify projects for visual or other objectives, which are a part of the plan's management direction.

C. Decision to Be Made

The decision to be made is whether or not to amend the Forest Plan that increases the pool of essential Kirtland's warbler habitat, increases the size of the treatment block and allows for adjacent block to be treated as soon as they are regenerated to improve habitat conditions.

D. Proposed Action

The following describes the proposed action:

Amend the Huron-Manistee National Forests' Plan by:

- 1) adding a standard and guideline directing the design and configuration of treatment blocks that mimic the regeneration effects of wildfire by harvesting and planting jack pine as described in the Kirtland's Warbler Habitat Management Strategy;
- 2) modifying an existing standard and guideline allowing treatment blocks (temporary openings or clearcuts) in essential habitat for the Kirtland's warbler to be up to 550 acres in size;
- 3) modifying an existing standard and guideline relating to the treatment of adjacent blocks. If the temporary opening created by adjacent treatment blocks exceeds 550 acres, one block will be stocked before the other is sold. A block is considered stocked when it is planted to a stocking density of 1600 or more trees per acre over 75% of the area. If a block is seeded or regenerates naturally, it will be considered stocked if it has a stocking density of 1600 or more trees per acre over 75% of the area after the third-year stocking survey.
- 4) adjusting the locations of essential habitat in Management Areas 4.2 and 4.5. The net effect will increase the amount of essential habitat to a minimum of 53,500 acres and a

