

STATUS REPORT ON KIRTLAND'S WARBLER PLANNING

ENDANGERED SPECIES ACT OF 1973 (PL. 93-205)

+ Amended in 1978.

C. Critical Habitat = those areas essential to the conservation of the species + which require special management consideration or protection.

In brief summary, the basic provisions of the Act are as follows:

- (1) Provides for two categories of species listing - endangered and threatened.
 - a. endangered species - any species which is in danger of extinction throughout all or a significant portion of it's range.
 - b. threatened species - any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of it's range.
- (2) Provides for acquisition of critical habitat through Land and Water Conservation Funds. *ESAA = SoFA for NF's*
- (3) Provides for State cooperation and participation in the endangered species program through cooperative agreements, grants-in-aid funding, and other incentives. - *ESAA = plants*
- * (4) Calls for participation where appropriate by all federal agencies and directs that no federal funds can be utilized for an activity that would be detrimental to an endangered species.

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Most of the Forest Service responsibilities fall under Section 7 of the Act, dealing with interagency cooperation. The major Forest Service obligations under Section 7 follow:

- (1) Utilize our authority to carry out conservation programs for listed species.
- (2) Insure that our activities or programs do not jeopardize the continued existence of a listed species.
- (3) Insure that our activities or programs do not result in the destruction or adverse modification of critical habitat.
- (4) Insure that emphasis on habitat protection for endangered and threatened species be considered number one priority.

Consultation

Under Section 7 of the Act, the Forest Service must go into consultation with the USFWS if we identify an activity or program that will affect (positively or negatively) the listed species or it's habitat. The Forest Service is responsible for conducting a competent review of each program or activity which it funds, aughorizes, or carries out for determining whether it may affect a listed species. If in doubt on the issue of "may affect", we are to initiate consultation! This request should be issued to the Regional Director of the USFWS region involved. Authority to request consultation is retained by the Regional Forester but may be delegated to the Forest Supervisor.

The Regional Director of the USFWS can also call for consultation if he identifies any activity or program of a federal agency that has not received prior consultation and that may affect listed species or their habitat.

Informal consultation can also be utilized at the field level between the USFWS and USFS personnel but is supplemental to, not a substitute for, the formal consultation process.

Upon completion of formal consultation, a biological opinion will be issued by the Director of USFWS. This opinion represents the Government's position on the action relevant to enforcement of the Endangered Species Act. If the biological opinion concludes that the activity or program consulted upon is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat, four alternative courses of action are possible by the Forest Service (or any other federal agency).

- (1) Halt the action;
- (2) Defer the action pending some anticipated change in the situation or the status of the species which might permit continuing with the activity or program;
- (3) Modify the action as recommended or as otherwise compatible with conservation of the species; or
- (4) Proceed in spite of the adverse opinion. This alternative is not recommended. Proceeding contrary to the biological opinion incurs the strong probability of a lawsuit. Only the Chief, Regional Foresters, Station Directors, and Area Directors may approve a decision to override an unfavorable biological opinion (and then only under very specific conditions)

 This may not be an option but ESAA-1978 does provide an exemption process. Agency may apply for exemption within 90 days of completion of consult. process.

Review board:
 Secy - Pres. - Ad. Law Judge.
 1. Consultation integrity
 2. Prepare a report to ES Comm.
 ES Council
 Sec of Ag, Army, & Nat. Ad.
 10A.A. & Pres. Appointed
 1. No reasonable alternative or prudent alternative clearly outweighs benefits which are consistent with
 3. Regional or Nat. Sec. -
 B. Mitigation.

Procedure No. 1
CONSULTATION PROCEDURES FOR CONSTRUCTION PROJECTS
after November 10, 1978

Federal agency may choose to informally consult and exchange information with FWS Area Manager concerning Federal action or non-Federal action requiring Federal approval.

Agency requests from Regional Director, FWS, identification of listed or proposed threatened or endangered species which may be in project area.

Regional Director responds with list: maximum 30 days, but usually within 10 days.

Agency conducts biological assessment on all listed or proposed species within 180 days, unless mutual agreement for delay. Agency determines:

May affect

No effect

Biological assessment report with cover letter to Regional Director requesting initiation of consultation on listed species only (FWS cannot formally consult on proposed species).

Biological assessment report with cover letter to Regional Director indicating no consultation necessary.

Process Terminated

Consultation initiated on receipt of request (or response) from agency. FWS reviews biological assessment and other available data and renders biological opinion normally within 90 days after receipt of request.

Regional Director may still choose to request consultation with agency if deemed necessary.

Agency responds to request by Regional Director.

Biological opinion gives summary of data used in opinion and indicates:

1. Action will promote conservation of listed species or critical habitat.

Agency will determine final course of action in accordance with its Endangered Species Act obligations.

OR

2. Action is not likely to jeopardize listed species or destroy or adversely modify critical habitat.

OR

3. Action will likely jeopardize listed species or destroy or adversely modify critical habitat.

Biological opinion will also suggest feasible alternative actions, if any.

OR

4. Insufficient information to make one of 3 conclusions above. Regional Director notifies agency; mutually agree on time extension needed to complete consultation.

Biological opinion provided in accordance with 1, 2, or 3 above.

Procedure No. 2
CONSULTATION PROCEDURES FOR
OTHER PROJECTS AND ACTIONS

Federal agency may choose to informally consult and exchange information with FWS Area Manager concerning Federal action or non-Federal action requiring Federal approval.

If agency determines action may affect listed threatened and endangered species agency requests consultation with FWS Regional Director. Agency should furnish any info which will aid FWS in rendering a biological opinion.

If agency determines actions will not affect listed threatened and endangered species no consultation request is made.

Process Terminated.

Regional Director may still choose to request consultation with agency if deemed necessary.

Agency responds to request by Regional Director.

Consultation initiated on receipt of request (or response) from agency. FWS reviews all available data and renders biological opinion normally within 90 days after receipt of request.

Biological opinion gives summary of data used in opinion and indicates:

1. Action will promote conservation of listed species or critical habitat.

OR

2. Action is not likely to jeopardize listed species or destroy or adversely modify critical habitat.

OR

3. Action will likely jeopardize listed species or destroy or adversely modify critical habitat.

OR

4. Insufficient information to make one of 3 conclusions above. Regional Director notifies agency; mutually agree on time extension needed to complete consultation.

Agency will determine final course of action in accordance with its Endangered Species Act obligations.

Biological opinion will also suggest feasible alternative actions, if any.

Biological opinion provided in accordance with 1, 2, or 3 above.

KIRTLAND'S WARBLER RECOVERY TEAM - 1975

Sections 2(c) and 7 of the Act direct all federal agencies to utilize their authorities to protect and restore endangered and threatened species and their habitats. The procedures selected by the Fish and Wildlife Service to implement coordinated recovery programs for such designated species was to utilize groups of three to seven people known as recovery teams to prepare and oversee (coordinate) the implementation of a recovery plan for a specified species. A workshop to develop recovery team organization and planning guidelines was held in January, 1975, with these guidelines being issued May 20, 1975, and updated July 13, 1976.

The Kirtland's Warbler Recovery team was appointed by the FWS director under authority delegated by the Secretary of the Interior in the spring of 1975. The membership consisted of two persons each from the Michigan DNR, USFS, and USFWS, and one person from the private sector. These selections were made on the basis of organizational responsibilities, expertise and involvement with the species.

State participation and leadership was encouraged. However, the team works independently of agency control except for the indirect direction of the FWS through appointment and replacement of team members, its authority to approve the recovery plan and subsequent amendments, and through instructions to FWS team members. The other agencies involved have control only through the control exercised over their representative.

KIRTLAND'S WARBLER RECOVERY PLAN - 1976

The purpose of a recovery plan is to serve as a guide that justifies, delineates, and schedules those actions required for securing an endangered species a viable self-sustaining member of its ecosystem. The primary objective of the Kirtland's Warbler Recovery Plan is to: "re-establish a self-sustaining wild Kirtland's Warbler population throughout its known former ranges at a minimum level of 1,000 (breeding) pairs." Actions to overcome the limiting factors necessary to meet this objective were identified, divided into specific assignments, and placed in suggested time frames and priority sequences for handling by those organizations participating in the Plan's implementation. The plan identifies three areas where there are existing and/or potential limiting factors, and defines those steps needed to overcome those limitations. It also deals with monitoring the population and evaluating the responses to management and other changes. Another phase of the plan deals with experimentally expanding the present breeding range.

Approval - The following quote from the ENDANGERED AND THREATENED SPECIES RECOVERY TEAM AND PLANNING GUIDELINES - 7/13/76, explains the approval procedure for a recovery plan:

"Hopefully, a recovery plan that is acceptable to each recovery team member and cooperating agency concerned can result. This is not always possible because of conflicting views, interests and responsibilities of the individuals and agencies involved. No attempt is, therefore, made to require each team member and cooperating agency to sign plans. Letters of comment and concurrence as to their

respective responsibilities are sought by Regional Directors from affected or cooperating agencies and placed in the appendix of the plans before they are submitted to the Director for approval. It is acknowledged that agencies cannot commit funds in advance, but they can indicate intent on a basis of anticipated funding."

An outline of the plan as approved by the FWS in October, 1976, follows:

KIRTLAND'S WARBLER RECOVERY PLAN OUTLINE

PRIMARY OBJECTIVE: REESTABLISH A SELF-SUSTAINING WILD KIRTLAND'S WARBLER POPULATION THROUGHOUT ITS KNOWN FORMER RANGE AT A MINIMUM LEVEL OF 1,000 PAIRS.

1. MAINTAIN AND DEVELOP SUITABLE NESTING HABITAT FOR THE KIRTLAND'S WARBLER THROUGHOUT ITS FORMER KNOWN RANGE.
 - 1.1 Determine total acreage suitable for managing for Kirtland's Warbler nesting habitat.
 - 1.11 Prepare maps of suitable areas on Grayling soils by size class and density.
 - 1.111 Locate areas of potential habitat on public lands with use of vegetation and soil maps. Field check data.
 - 1.112 Locate areas of potential habitat on private lands with use of soil maps and air photos. Field check data.
 - 1.2 Protect, improve and where possible, expand areas that are now or will become usable within 7 years by Kirtland's Warbler.
 - 1.21 Protect existing nesting habitat.
 - 1.211 Fire control.
 - 1.212 Insect and disease control.
 - 1.22 Develop habitat potential of existing jack pine reproduction, particularly those areas adjacent to or within occupied habitat.
 - 1.221 Spot burning.
 - 1.222 Create openings in dense stands.
 - 1.223 Sanitation treatments in reproduction (remove oak sprouts, etc.)
 - 1.224 Overstory removal.
 - 1.23 Provide informational services for:
 - a. Public review and comment.
 - b. Public acceptance.

- 1.3 Provide nesting habitat for 1,000 breeding pairs of Kirtland's Warbler. Incorporate into forest management plans on public lands the management of 120 - 135,000 acres of jack pine for Kirtland's Warbler. Provide 36 - 40,000 acres of suitable habitat on a sustained basis. Achieve goal by 1990.
 - 1.31 Utilize commercial logging where feasible (clearcuts or seed trees) to create suitable habitat.
 - 1.311 Cut and prescribe burn; followed by:
 - a. Natural regeneration
 - b. Seeding
 - c. Planting
 - 1.312 Mechanical treatment with seeding or planting where burning is not feasible.
 - 1.311-1 and 1.312-1 Undertake sanitation treatment of stands, if needed.
 - 1.32 Undertake non-commercial treatments where desirable.
 - 1.321 Treat non-merchantable stands (prescribed burning, cutting, etc.).
 - 1.322 Rehabilitation of burns (wildfire).
 - 1.323 Rehabilitation of previously cut or burned areas not adequately regenerated.
 - 1.33 Provide information service for:
 - a. Public review and comment.
 - b. Public acceptance.
 - 1.331 Prepare Environmental Impact Assessment and, if required, Environmental Impact Statement.
- 1.4 Manage suitable jack pine stands on private lands, where feasible, utilizing the same techniques as for public land; or acquire key tracts.
 - 1.41 Purchase or lease key tracts for habitat management.
 - 1.411 Acquire key tracts using state endangered species funding.
 - 1.412 Acquire key tracts using Land and Water Conservation Funds.
 - 1.42 Develop a cooperative program with private landowners to manage Kirtland's Warbler habitat.

- 1.421 Provide technical services.
- 1.422 Provide financial aid.
- 1.423 Offer tax incentives.
- 1.424 Direct habitat work on private lands with State-owned equipment and manpower.
- 1.43 Provide information service for:
 - a. Informing public of programs available.
 - b. Informing public of management needs on private lands.
- 1.5 Meet research needs and habitat evaluation.
 - 1.51 Evaluate the results of habitat management.
 - 1.511 Identify stocked areas and areas needing planting and sanitation.
 - 1.511-1 Make stocking surveys of treated areas.
 - 1.52 Improve cultural treatments for habitat development.
 - 1.521 Develop improved guidelines for cultural treatments to produce better plant communities most productive as nesting habitat.
 - 1.521-1 Refine knowledge of soil and vegetative structures of Kirtland's Warbler nesting habitat.
- 2. PROTECT THE KIRTLAND'S ON ITS WINTERING GROUNDS AND ALONG THE MIGRATION ROUTE.
 - 2.1 Provide and protect adequate wintering habitat to support the nesting populations (Bahama Islands).
 - 2.11 Locate and monitor wintering populations to determine mortality factors and identify habitat.
 - 2.111 Evaluate and follow-up reliable sightings on the wintering grounds.
 - 2.111-1 Develop system for reporting sightings of Kirtland's Warbler on wintering grounds.
 - 2.112 Develop inventory techniques, including radio telemetry, to inventory the wintering population.
 - 2.113 Establish a cooperative winter survey for the Kirtland's Warbler.

- 2.12 Protect the Kirtland's Warbler and its critical wintering areas.
 - 2.121 Establish cooperative programs with other countries to protect critical wintering habitat of the Kirtland's Warbler.
 - 2.121-1 Develop cooperative programs with foreign countries and International conservation organizations, such as the World Wildlife Fund, to protect the Kirtland's Warbler and its wintering habitat.
 - 2.121-2 Establish a cooperative agreement between National Audubon Society and Bahamas National Trust to protect the Kirtland's Warbler and its habitat.
 - 2.122 Delineate critical wintering habitat.
 - 2.123 Identify and monitor land use changes on known wintering grounds.
 - 2.123-1 Classify and map the vegetation of known historical wintering areas.
 - 2.123-2 Map the broad vegetation zones of the Bahamas using ERTS or high level photos.
 - 2.124 Reduce mortality on wintering grounds.
 - 2.124-1 Determine factors affecting wintering mortality of the Kirtland's Warbler.
- 2.2 Protect the Kirtland's Warbler during migration.
 - 2.21 Protect key habitat components along the migration route.
 - 2.211 Define the migration route of the Kirtland's Warbler.
 - 2.211-1 Establish procedure to accumulate and verify sighting records of Kirtland's Warbler during migration.
 - 2.211-2 Initiate research program (radio telemetry) to determine migration route.
 - 2.22 Eliminate or reduce adverse environmental factors during migration.
 - 2.221 Determine hazards adverse to Kirtland's Warbler during migration. Monitor major weather conditions.
 - 2.222 Monitor pesticide levels along known migration routes.

3. REDUCE KEY FACTORS ADVERSELY AFFECTING REPRODUCTION AND SURVIVAL OF KIRTLAND'S WARBLER.

3.1 Control human activities which may be detrimental to Kirtland's Warbler population.

3.11 Provide an Information and Education Program for protection on the breeding and winter range and during migration.

3.111 Publish notice of land closures and all other public restrictions in all news media.

3.112 Provide informational material on protection.

3.112-1 Printed material.

3.112-2 Audio visual programs.

3.112-3 Film and photo library to meet public demands.

3.113 Provide visitor informational program at the field level.

3.113-1 Conduct guided tours on pre-selected routes.

3.113-2 Provide other public informational programs (talks, displays, etc.).

3.12 Provide protection of the Kirtland's Warbler and its breeding habitat.

3.121 Protect occupied nesting areas.

3.121-1 Close State and National forest lands from May 1 - August 15.

3.121-11 Post and enforce regulations on closed lands.

3.121-2 Encourage cooperative agreement in closure of private lands to conflicting uses.

3.121-21 Post and enforce regulations on closed lands.

3.121-3 Regulate Michigan National Guard use of nesting areas.

3.121-31 Revise Cooperative Agreements between public agencies involved.

3.122 Eliminate taking of the Kirtland's Warbler as defined in Public Law 93-205.

3.122-1 Post and enforce regulations.

- 3.122-2 Develop guidelines on activities which may adversely affect the Kirtland's Warbler, including pesticide use.
- 3.132 Coordinate all land use plans and policies involving critical habitat.
- 3.2 Control factors other than man which adversely affect the Kirtland's Warbler.
 - 3.21 Reduce all predators and parasites adversely affecting Kirtland's Warbler production.
 - 3.211 Control avian predators and parasites on selected critical habitat.
 - 3.211-1 Monitor effects of cowbird removal on Kirtland's Warbler nesting success.
 - 3.211-11 Trap and remove cowbirds.
 - 3.211-2 Transport bluejays, captured in cowbird traps, to areas where they will not adversely affect Kirtland's Warblers.
 - 3.211-3 Determine if avian predators adversely affect Kirtland's Warblers on the breeding range.
 - 3.212 Reduce stresses caused by animals other than birds to a level that will not adversely affect Kirtland's Warbler nesting success.
 - 3.212-1 Determine what other animals are adversely affecting Kirtland's Warblers' nesting success.
 - 3.22 Identify habitat modifications which will reduce parasitism and predation on Kirtland's Warblers.
- 4. MONITOR BREEDING POPULATIONS OF THE KIRTLAND'S WARBLER TO EVALUATE RESPONSES TO MANAGEMENT PRACTICES AND ENVIRONMENTAL CHANGES.
 - 4.1 Determine overall population level on nesting range by counting singing males annually.
 - 4.11 Evaluate census data, prepare reports.
 - 4.111 Conduct surveys.
 - 4.111-1 Develop census procedures and establish time schedules.
 - 4.111-2 Recruit, train and assign personnel.
 - 4.111-3 Prepare report forms and instructions.

5. REINTRODUCE KIRTLAND'S WARBLERS INTO AREAS IN THE UPPER PENINSULA OF MICHIGAN OR IN OTHER STATES IN AN ATTEMPT TO ESTABLISH INDEPENDENT SELF-SUFFICIENT POPULATIONS.
 - 5.1 Implement research to develop reintroduction methods to establish an independent population of Kirtland's Warblers, using a species of similar nesting behavior.
 - 5.2 Monitor production of fledged Kirtland's Warblers and return of yearlings.
 - 5.21 Transport Kirtland's Warbler eggs and substitute for eggs of host.
 - 5.211 Monitor Kirtland's Warbler nests for a source of supply of eggs.
 - 5.212 Concurrently, monitor host species' nests in reintroduction areas to select potential foster parents.
 - 5.213 Determine location of suitable habitat, preferably centering on lands in public ownership.

ENVIRONMENTAL ASSESSMENT FOR MANAGEMENT OF THE KIRTLAND'S WARBLER - 1977

Upon conditional approval of the Kirtland's Warbler Recovery Plan a Draft Environmental Assessment was written to evaluate the affects of the proposed Warbler Management Program (in accordance with N.E.P.A. of 1969). The assessment was developed by MDNR personnel in 1977. The Huron-Manistee National Forest had opportunities for review of this document between May 13 and June 10, 1977. Mio, Harrisville, and Tawas Districts each received a copy for review at this time. Comments were received from the District's prior to the deadline of June 10. All comments received on the assessment were placed on file with the assessment in the DNR, Lansing Office. There was no significant objections raised, and no subsequent environmental impace statement was deemed to be needed. There has been some question as to how much further we should go with the EAR/EIS process. It might be necessary that an EAR or EIS be made for the habitat management and protection plan. This will have to be resolved by the administrators of each agency.

KIRTLAND'S WARBLER HABITAT MANAGEMENT PLAN (1975-1978)

Utilizing a list of specific criteria developed by the Kirtland's Warbler Recovery Team, the task of identifying essential Warbler habitat was initiated in 1975. The process involved the integration of soils maps, timber type maps, and historical nesting records to initially identify potential nesting habitat. Thorough field inspection followed this initial survey, and a substantial amount of acreage was deleted (for a variety of reasons) from the initial habitat listing. The Forest Service

has identified 54,600 acres of essential habitat as a result of this inventory. The Michigan DNR has identified 77,000 acres of essential habitat on State lands.

Separate habitat management plans have been developed for the essential habitat on State and National Forest lands. The habitat identified on the Huron National Forest divides into seven more or less discrete areas of the Forest. These areas were divided into 40 management units varying in size from 916 acres to 1,869 acres. (The Mack Lake Unit, which contains the dedicated area, has 3988 acres of critical habitat.)

The habitat plans are designed to provide guidance to the land manager for the next 50 year management period. The plans outline the existing habitat condition and provide recommendations for achieving a sustained even flow of suitable Warbler nesting habitat in the future. The Plans also provide recommendations for integration of special uses and other resources on essential Warbler habitat. The following is a list of general guidelines for Kirtland's Warbler habitat management and protection that will be included in the Habitat Management Plan.

KIRTLAND'S WARBLER BREEDING HABITAT DIRECTIONS

A. Habitat Development and Improvement

1. Management plans will be developed for each discrete area of designated Kirtland's Warbler essential habitat.
2. Each area will be divided into management units containing some 1,000 to 2,000 acres of designated essential habitat.

3. Each management unit will be subdivided into five treatment blocks. Each block will contain some 200 or more contiguous acres of essential habitat. (A few blocks will, by necessity, be smaller than 200 acres.)
4. The jack pine stands on each block will be regenerated at the same time, so as to produce an even-aged stand. Blocks will be cut and regenerated at 10 year intervals in each unit.
5. The silvicultural method for regenerating the stands will be:
 - a. Clearcut, burn and plant jack pine seedlings, or,
 - b. Seed tree cut (leaving about 25 jack pine seed trees per acre) and prescribed burn to prepare the site for natural regeneration and seed release.
 - c. Proposals to regenerate a block using any other method must be reviewed by the Kirtland's Warbler Recovery Team for recommendations.
6. Planting will be done in such a manner as to produce a suitable configuration for nesting habitat. General guides are:
 - a. Spacing of trees will be by 6' x 6' or less.
 - b. Approximately 25% of the area will be left unplanted in small, well-dispersed openings.
7. Cultural treatments such as the development of openings, over-story removal, thinning, interplanting, etc. are not to lessen the quality of the habitat for Kirtland's Warblers and are to be done prior to occupation by these birds. No further cultural treatments are to be made until the stand is abandoned by the

Kirtland's Warbler. Any post use treatment shall be consistent with the management objectives for essential habitat.

8. The rotation age for the stands designated as essential habitat will be from 45 to 50 years. However, because of unequal age distribution within the units, it will be necessary to cut some stands that are younger than 45 years, hold some stands beyond 50 years of age for later cutting, and treat some stands before they are merchantable.

B. Habitat Protection

Every possible effort will be made to insure maximum potential of presently occupied breeding habitat by protecting it from destruction or degradation.

Fire management plans will call for the vigorous suppression of wild fires which threaten to burn over presently occupied breeding habitat and areas that will become usable in seven years. (As additional breeding habitat comes into production, and if the Kirtland's Warbler populations respond favorably, this practice may be modified in order to use wildfire management as a habitat development tool.)

A factor directly affecting the Kirtland's Warbler is cowbird parasitism. Bird traps will be maintained on all major nesting areas to remove this threat to reproduction. Concurrently, avian predators such as blue jays may be removed and transported to areas where they are not a threat.

Animals other than cowbirds and blue jays also may be a significant retardant to warbler nesting success when the warbler population is at an endangered level. This will be determined so that the necessary control measures can be implemented. Insects and diseases which may threaten occupied breeding habitat will be controlled, if the control can be effected without adverse influence to the breeding population either directly or indirectly.

In an effort to reduce human activities on the breeding and winter range and during migration, a basic information and education program will be conducted. Guided tours along with informational material will be provided to the public. All types of media should be used to disseminate information on the need for protecting the Kirtland's Warbler and the actions being taken.

Protection must be afforded the breeding bird and its habitat by closing state and federal lands to all conflicting use. All developments such as campgrounds, ORV trails, highways, etc., will be banned in and near occupied breeding habitat on public lands and vigorously discouraged on private lands. Specific attention will be given to limiting military activity on the Michigan National Guard land which holds the largest concentration of breeding birds. All lands will be posted to public entry during the nesting season and other adverse human activities such as the use of tape recorders and cameras which may be detrimental to the Kirtland's Warbler will not be permitted.

Mineral development will be permitted with restrictions appropriate to protecting the birds and their habitat, and where it does not preclude the management of the habitat. This can be accomplished through seasonal restrictions and the proper placement of developments, etc.

All proposals for activities within the designated essential habitat shall be reviewed to determine the potential effects and the need for consultation with the U.S. Fish and Wildlife Service as required by law.

PROGRESS ON HABITAT MANAGEMENT
PLANNING FOR KIRTLAND'S WARBLER 3/31/79

Michigan State Forests

- | | |
|----------------------------------------------------------------------|---------------------|
| 1. Jack pine stands examined and selected
as essential habitat - | 66,000 acres |
| 2. Jack pine stands to be examined and
estimated to be selected - | <u>11,000 acres</u> |
| Estimated acres of essential habitat - | 77,000 acres |

Huron National Forest:

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1. All jack pine stands of potential essential
habitat examined - Seven area plans developed
and 40 unit plans completed 3/31/79 | 54,740 acres |
| 2. Kirtland's Warbler habitat on adjacent
private lands - | <u>2,207 acres</u> |
| Estimated Total Essential Habitat - public lands | 131,740 acres |

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To date (April, 1979) the narratives and treatment schedules have been completed to the rough draft stage. The Area maps have been completed and the Unit maps should be back from the Regional Office by May 15. As soon as we receive the remaining maps, the Districts will have an opportunity for final review of the Plan before final typing. Upon completion and approval of the final habitat management plan, the Area maps and a list of the proposed essential habitat (by legal description) will be sent to the Secretary of the Interior for official designation as critical habitat.

Two members of the recovery team, one from the Forest Service and one from the Michigan Department of Natural Resources, are in the process of writing an introduction and management guideline section of the plan.

Depending on the preparation of the unit maps by the R.O., the plan should be ready for review by June 1, 1979.

GEORGE W. IRVINE/DAVE J. SORENSON
4/10/79

Summary of acreages of stands identified as critical Kirtland's Warbler habitat by areas and management units on the Huron National Forest:

	<u>District</u>
<u>Big Creek KWMA (8,040 acres)</u>	
Briggs Road Unit - 1,428 ac.	Mio
County Line Unit - 1,618 ac.	Mio
Mapes Road Unit - 1,074 ac.	Mio
Power Line Unit - 1,355 ac.	Mio
Union Corners Unit - 1,242 ac.	Mio
West Branch Unit - 1,323 ac.	Mio
<u>Eldorada KWMA (5,133 acres)</u>	
Douglas Creek Unit - 1,007 ac.	Mio
Hunter's Lake Unit - 1,394 ac.	Mio
Meridian Unit - 1,390 ac.	Mio
Rock Cemetary Unit - 1,342 ac.	Mio
<u>Mack Lake KWMA (10,423 acres)</u>	
Crane Lake Unit - 1,224 ac.	Mio
Eggleston Road Unit - 1,271 ac.	Mio
Emley Lake Unit - 976 ac.	Harrisville
Fowler Road Unit - 1,260 ac.	Mio
Mack Lake Unit - 4,051 ac.	Mio
Vaughn Road Unit - 1,641 ac.	Mio

District

McKinley KWMA (9,713 acres)

Blockhouse Unit - 1,334 ac.	Harrisville
Byron Lake Unit - 1,373 ac.	Harrisville
Comins Flat Unit - 1,995 ac.	Mio
Game & Forest Unit - 947 ac.	Harrisville
Hardy Grade - 1,416 ac.	Harrisville
Old Roadhouse Unit - 1,326 ac.	Harrisville
Reed Road Unit - 1,322 ac.	Harrisville

Pere Cheney KWMA (2,713 acres)

Chase Bridge Unit - 1,546 ac.	Mio
Pere Cheney Unit - 1,167 ac.	Mio

Pine River KWMA (12,886 acres)

Unit I - 1,217 ac.	Harrisville
Unit II - 1,294 ac.	Harrisville
Unit III - 905 ac.	Harrisville
Unit IV - 945 ac.	Harrisville
Unit V - 1,482 ac.	Harrisville
Unit VI - 1,035 ac.	Harrisville
Unit VII - 1,367 ac.	Tawas
Unit VIII - 1,576 ac.	Tawas
Unit IX - 1,782 ac.	Tawas
Unit X - 1,283 ac.	Tawas

	<u>District</u>
<u>Tawas KWMA (5,832 acres)</u>	
Buck Creek Unit - 1,175 ac.	Tawas
Monument Road Unit - 1,043 ac.	Tawas
Oscoda Unit - 1,294 ac.	Tawas
Silver Creek Unit - 1,207 ac.	Tawas
Vaughn Creek Unit - 1,113 ac.	Tawas
<u>Totals:</u>	
Mio Ranger District - 27,328 ac.	
Harrisville Ranger District - 15,572 ac.	
<u>Tawas Ranger District - 11,840 ac.</u>	
Huron National Forest - 54,740 ac.	

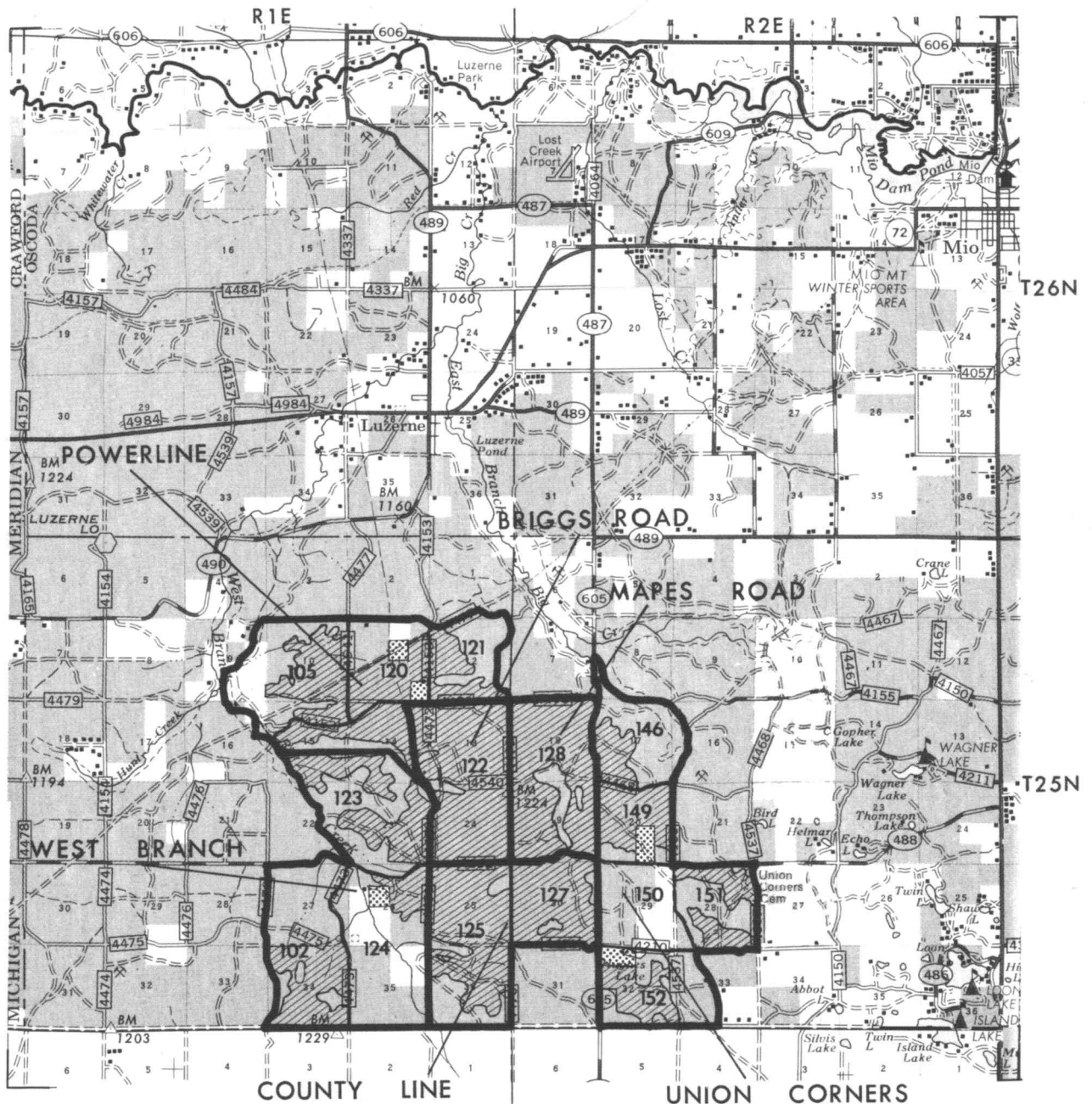
HURON-MANISTEE NATIONAL FOREST

KIRTLAND'S WARBLER MANAGEMENT AREA

BIG CREEK

OSCODA COUNTY, MICHIGAN

1978



LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- RANGER DISTRICT BOUNDARY
- CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- CRITICAL HABITAT IN PRIVATE OWNERSHIP

SCALE 1/2" = 1 MILE

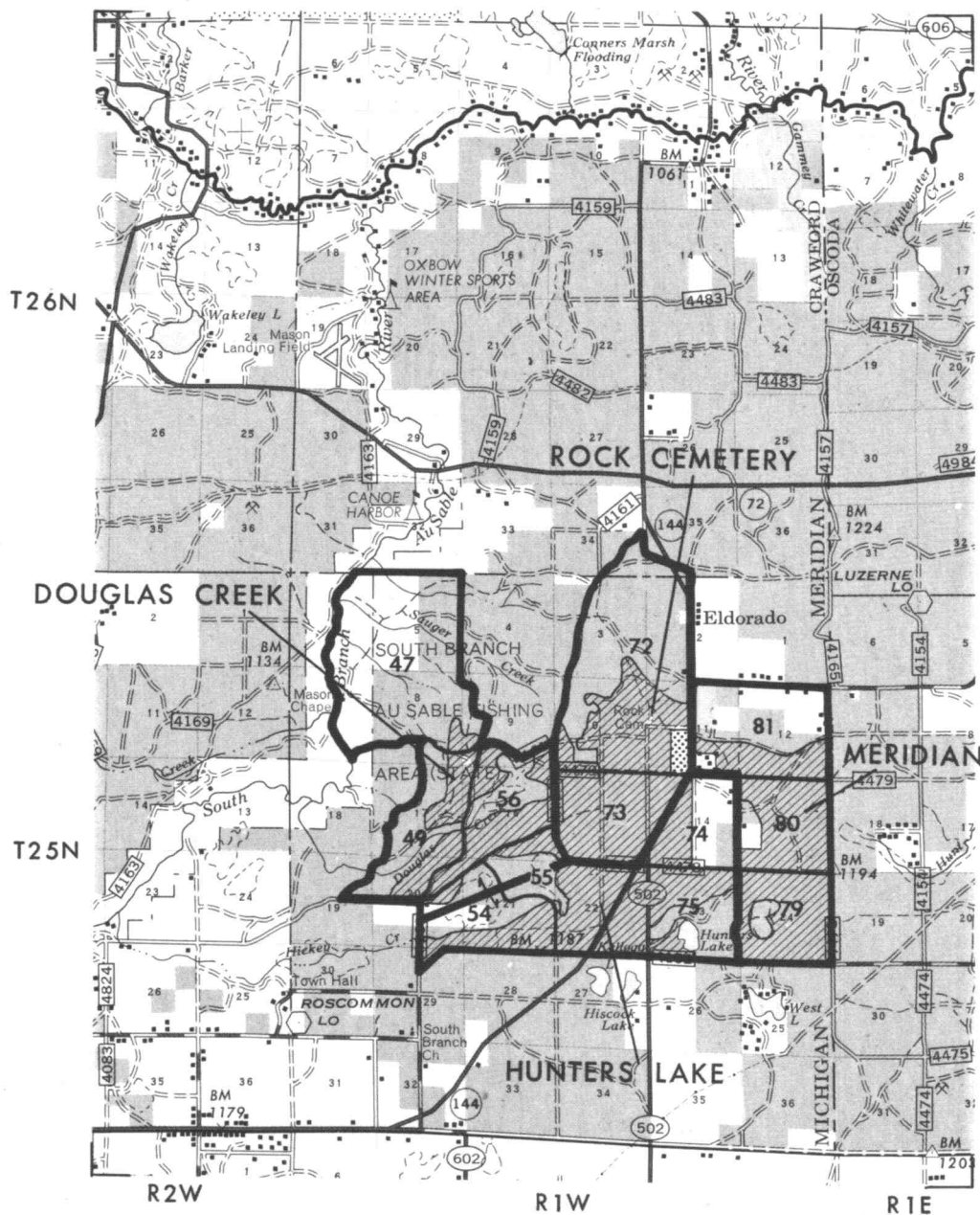
HURON-MANISTEE NATIONAL FOREST

KIRTLAND'S WARBLER MANAGEMENT AREA

ELDORADO

CRAWFORD COUNTY, MICH.

1978



LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- - - RANGER DISTRICT BOUNDARY
- ▨ CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- ▩ CRITICAL HABITAT IN PRIVATE OWNERSHIP

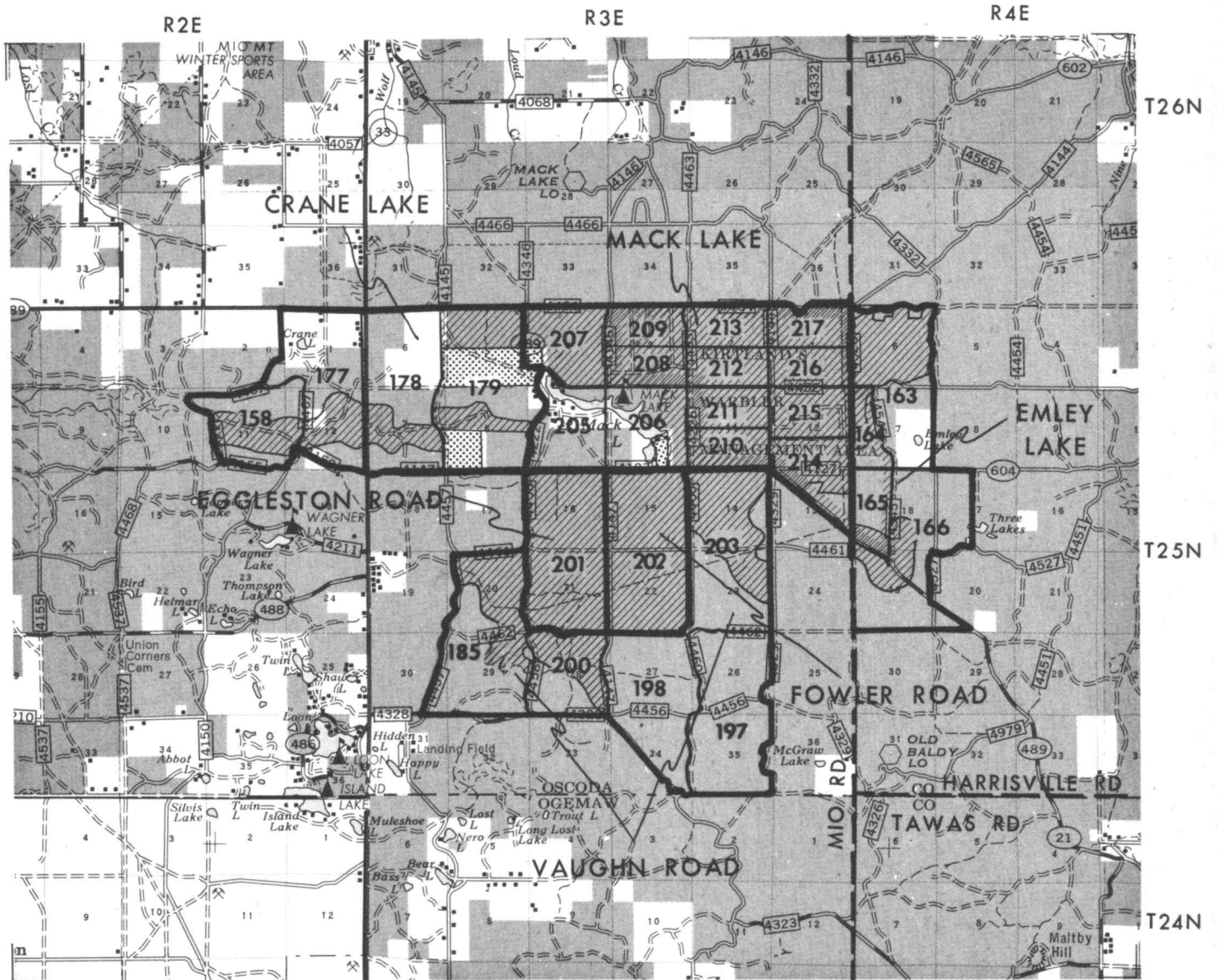
SCALE 1/2" = 1 MILE

HURON-MANISTEE NATIONAL FOREST

KIRTLAND'S WARBLER MANAGEMENT AREA
MACK LAKE

OSCODA COUNTY, MICH.

MARCH, 1978



LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- - - RANGER DISTRICT BOUNDARY
- ▨ CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- ▩ CRITICAL HABITAT IN PRIVATE OWNERSHIP

SCALE 1/2" = 1 MILE

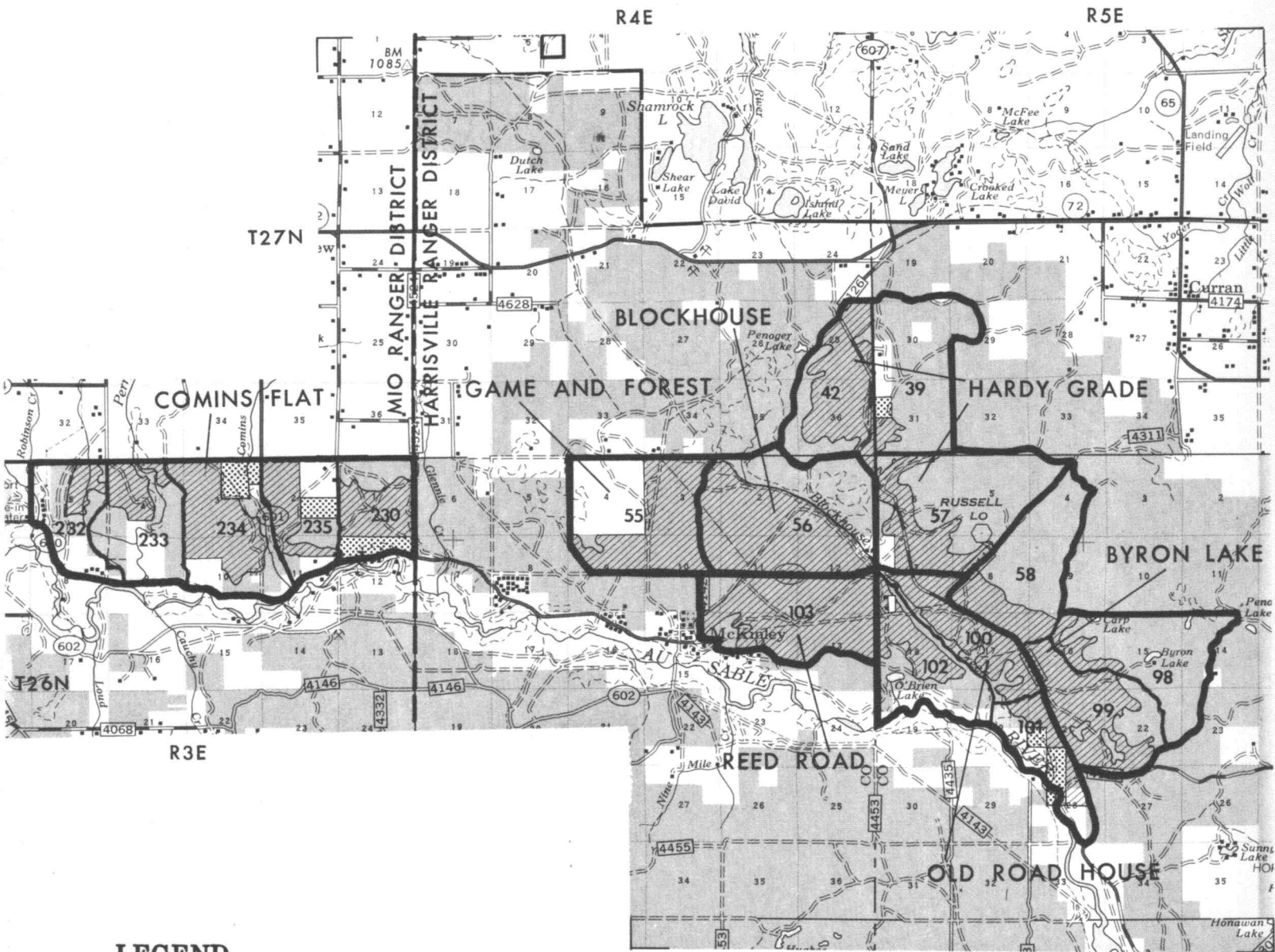
HURON-MANISTEE NATIONAL FOREST

KIRTLAND'S WARBLER MANAGEMENT AREA

McKINLEY

OSCODA & ALCONA COUNTIES, MICH

1978



LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- RANGER DISTRICT BOUNDARY
- CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- CRITICAL HABITAT IN PRIVATE OWNERSHIP

SCALE 1/2" = 1 MILE

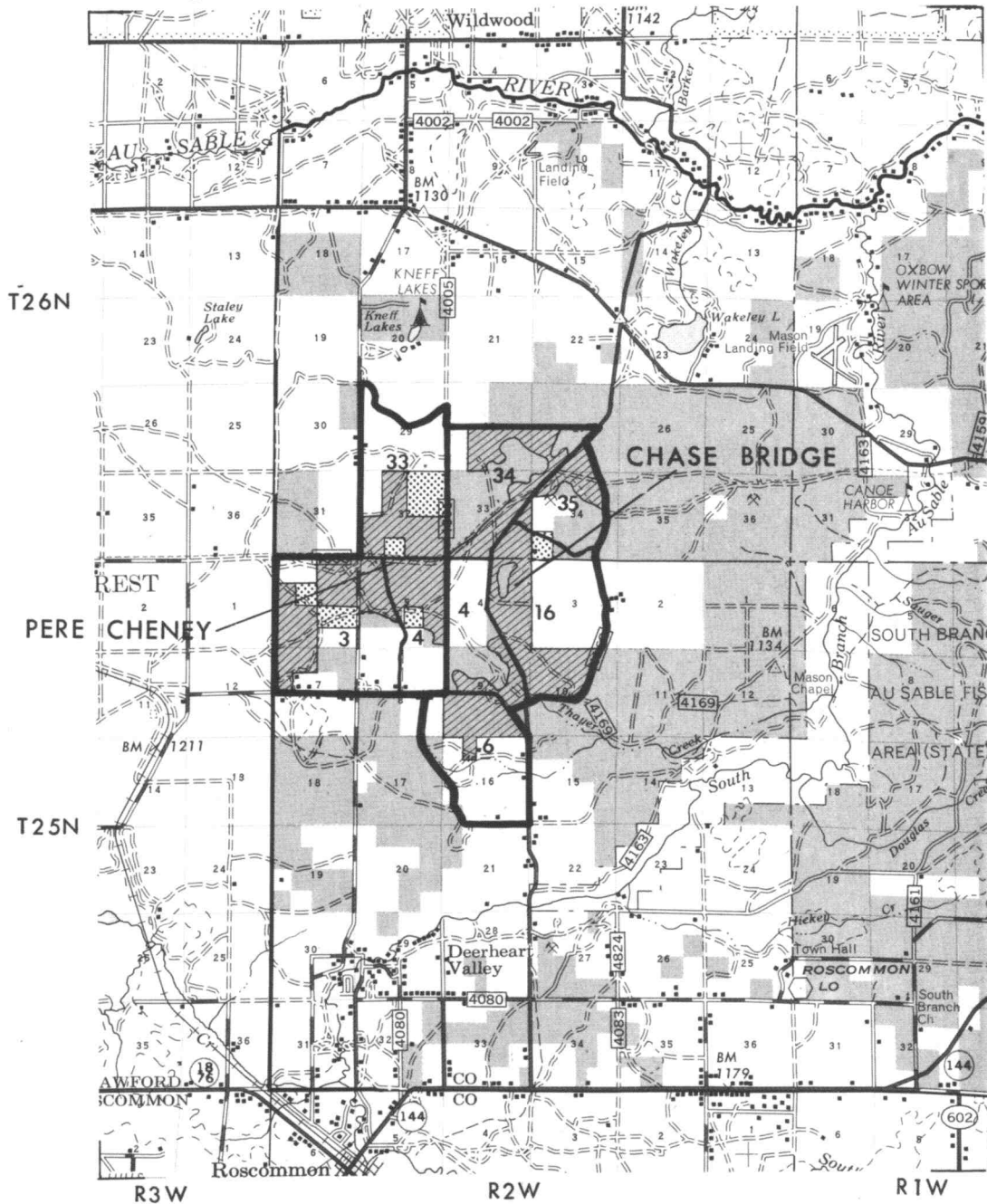
HURON-MANISTEE NATIONAL FOREST

KIRTLAND'S WARBLER MANAGEMENT AREA

PERE CHENEY

CRAWFORD COUNTY, MICH.

1978



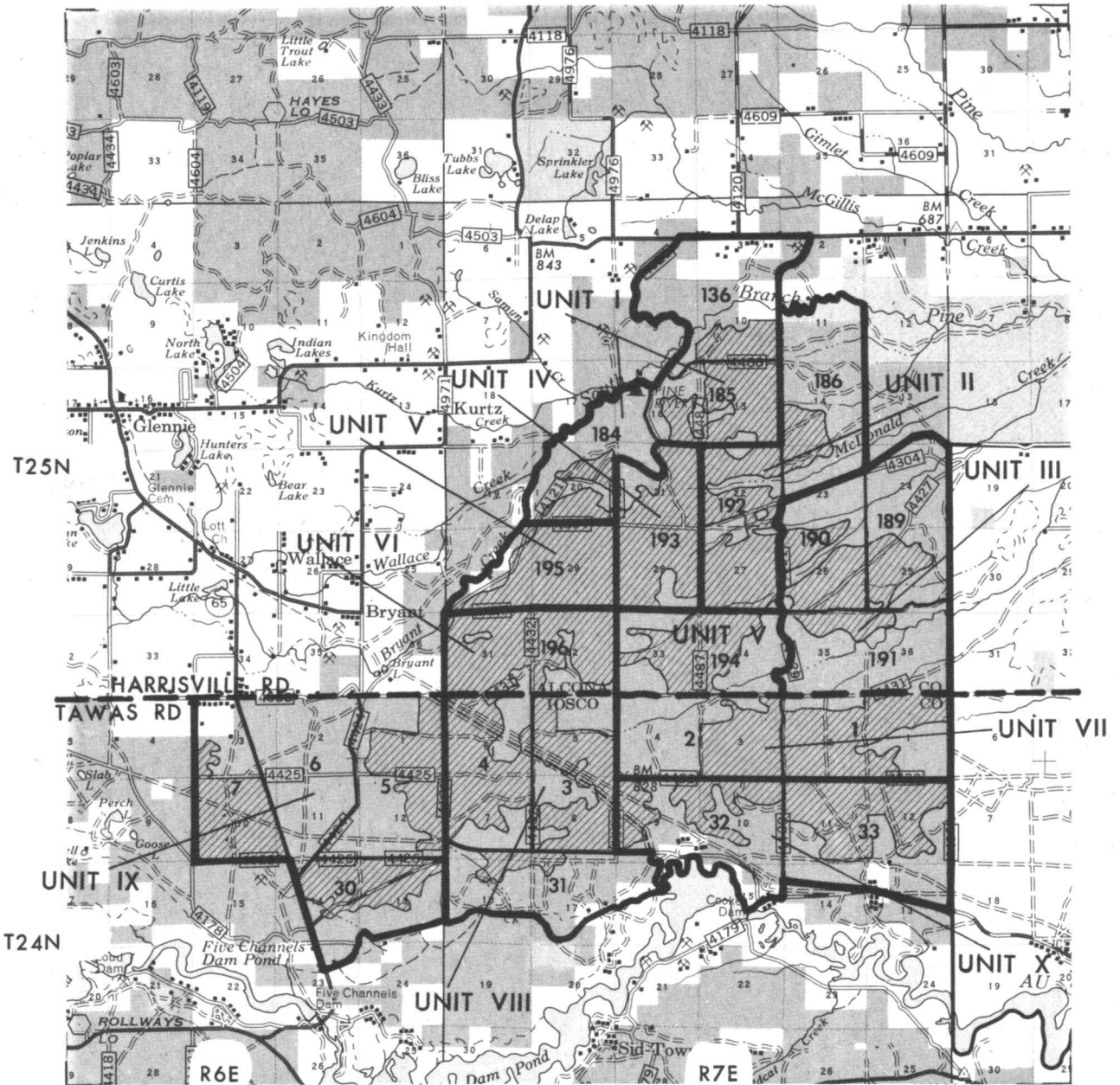
LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- RANGER DISTRICT BOUNDARY
- CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- CRITICAL HABITAT IN PRIVATE OWNERSHIP

SCALE 1/2" = 1 MILE

HURON-MANISTEE NATIONAL FOREST
KIRTLAND'S WARBLER MANAGEMENT AREA
PINE RIVER
ALCONA & IOSCO COUNTIES, MICH.

1978



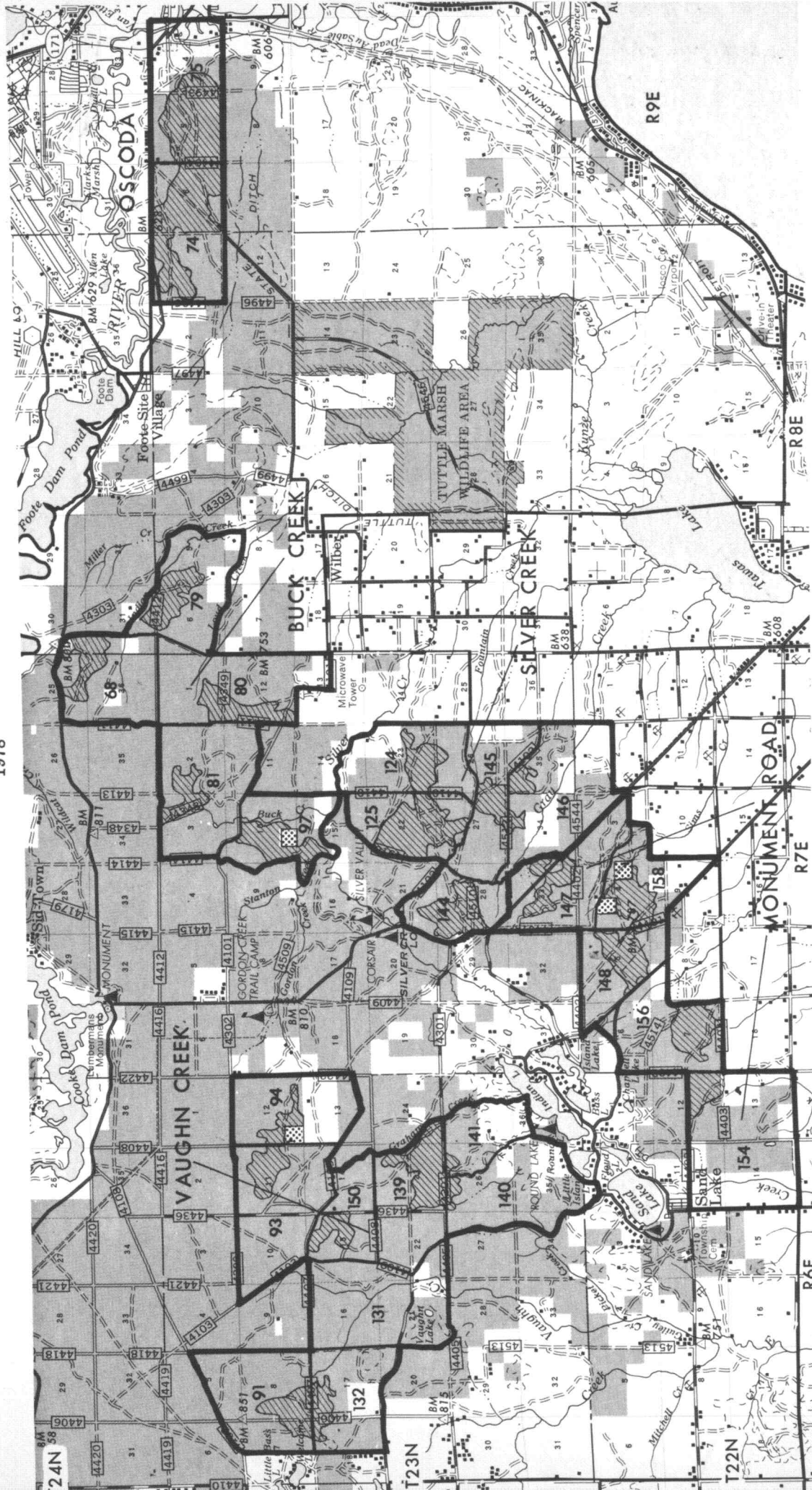
LEGEND

- UNIT BOUNDARY
- COMPARTMENT BOUNDARY
- RANGER DISTRICT BOUNDARY
- CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
- CRITICAL HABITAT IN PRIVATE OWNERSHIP

SCALE 1/2" = 1 MILE

HURON-MANISTEE NATIONAL FOREST KIRTLAND'S WARBLER MANAGEMENT AREA TAWAS

IOSCO COUNTY, MICH.
1978



LEGEND

- UNIT BOUNDARY
 - COMPARTMENT BOUNDARY
 - RANGER DISTRICT BOUNDARY
 - CRITICAL HABITAT IN NATIONAL FOREST OWNERSHIP
 - CRITICAL HABITAT IN PRIVATE OWNERSHIP
- SCALE 1/2"=1 MILE