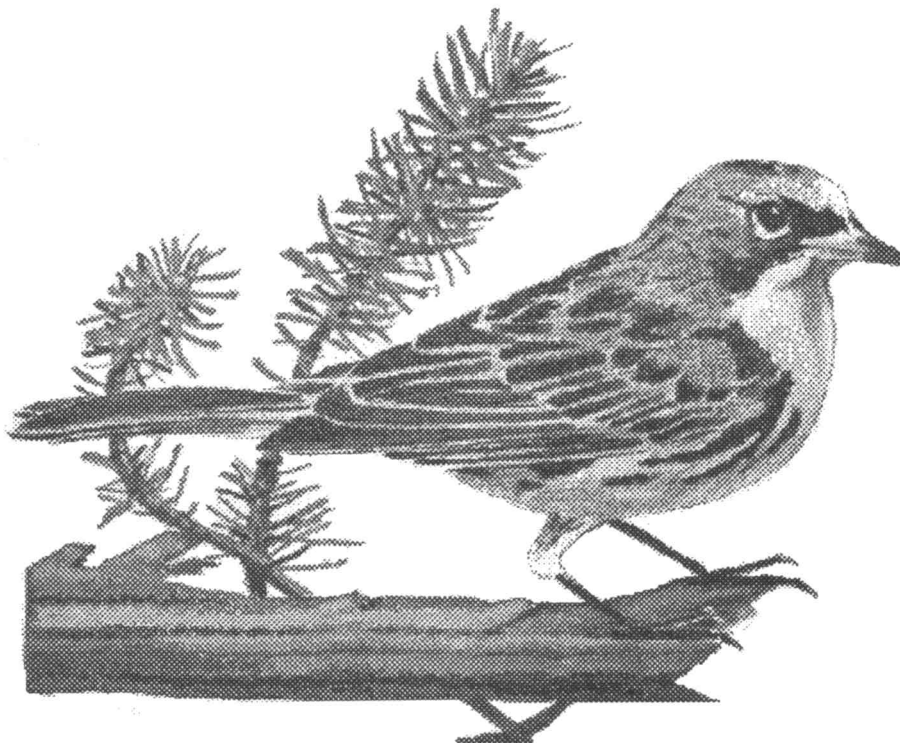


**SUMMARY OF RECOVERY EFFORTS
KIRTLAND'S WARBLER 1999**



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INTRODUCTION

The Kirtland's warbler, one of our nation's rarest songbirds, was one of the first species to be placed on the endangered species list in 1973. This highly specialized blue and yellow sparrow-sized bird nests nowhere in the world but northern Michigan. The warbler prefers stands of jack pine trees 6 to 20 years old, which are the natural result of forest fires. Modern forest fire suppression, necessary to protect human life and property, prevents natural regeneration. Intensive management of the forested lands in Michigan is necessary to provide sufficient breeding habitat for this bird. The U.S. Fish and Wildlife Service (Service), U.S. Forest Service (USFS), Michigan Department of Natural Resources (MDNR)

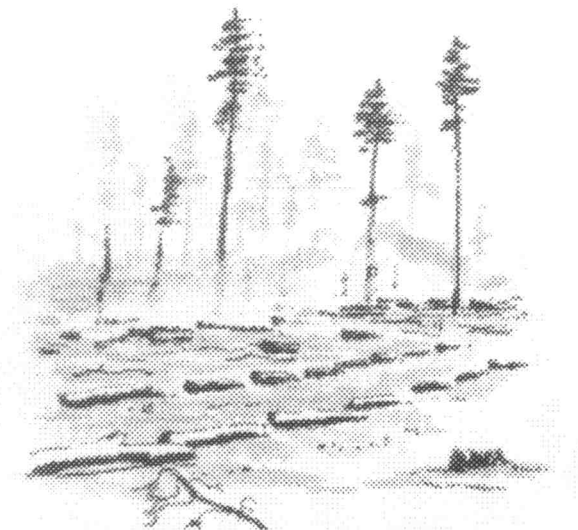
HABITAT MANAGEMENT

There are approximately 157,000 acres of jack pine stands designated for Kirtland's warbler nesting habitat on 24 management areas within state and federal lands. The management areas consist of 68,000 acres in the Huron-Manistee National Forests, 78,000 acres within the AuSable, Mackinac, and Pere Marquette State Forests, 4,000 acres of state military land, and 6,684 acres of Service land interspersed throughout the state forest areas. These areas are considered essential habitat and are being managed to provide a sustained, even flow of suitable nesting habitat. Management of warbler habitat consists of logging, burning when possible, and planting designated tracts of land on a 50 year rotation to provide about 30,000 acres of productive nesting habitat at all times.

The MDNR received \$58,125 in Endangered Species Act Section 6 funds in FY99 from the Service. In addition to funding, the Service purchased a TTS Sigma Seeder for \$9,350 for the MDNR to use. Further

and the Michigan Audubon Society have been cooperating since 1971 to ensure the future of the Kirtland's warbler. Department of the Interior recovery efforts include cowbird control, habitat management and an education and outreach program for the local communities situated in and around the Kirtland's warbler nesting area. This report will summarize the recovery efforts conducted by the four cooperating agencies during fiscal year 1999 (FY99). The East Lansing Field Office spent \$109,338 in FY99 to carry out activities relating to the recovery of the Kirtland's warbler. The approximate cost of project efforts are given when available.

contributions from Detroit Edison, through the U.S. Department of Energy carbon sequestration program, helped offset funding shortages. Funds were used to cover the cost of purchasing jack pine seedlings, maintaining tree planting equipment, and hiring short-term workers to work on tree planting crews.



The MDNR's Division of Wildlife planted trees on 3,120 acres of state forested lands designated as Kirtland's warbler management units (KWMU) (Table 1). The TSS Sigma seeder helped MDNR directly seed 2,550 acres of state land and 200 acres of Service land. The MDNR crews hand planted an additional 46 acres of Service land with fill-in trees. The MDNR conducted a prescribed burn on 50 acres and logged approximately 2,500 acres of Kirtland's warbler nesting habitat. A total of 8,220 acres of state land was managed for Kirtland's warbler nesting habitat in FY99.

In FY99, the USFS seeded 379 acres, logged 1,511 acres and had a wildfire on 300 acres (Table 1). Certified natural revegetation occurred on 312 acres for a total of 2,502 managed acres on USFS land.

Service lands are administered by Seney National Wildlife Refuge and cooperatively managed by the Refuge and MDNR. In addition to the 200 acres of direct seeding and 46 acres of fill-ins planted by the MDNR, 280 acres of Service land were logged and 616 acres of trees were planted (Table 1). Total managed Service land in FY99 was 1,142 acres.

Table 1. Federal and state Kirtland's warbler nesting habitat management practices. (Numbers in parentheses indicate acres treated).

	Michigan DNR (82,000 acres)	US Forest Service (68,000 acres)	US Fish and Wildlife Service (6,684 acres)
Logging	2500	1,511	280
Plant	3120	0	616
Fill-in Plant	0	0	46
Trench	2550	379	200
Prescribed Burn	50	0	0
Wildfire	0	300	0
Natural Revegetation	0	312	0
Totals	8,220	2,502	1,142

