

A Kirtland's Warbler Assessment for the Hiawatha NF (With a specific example for the Raco Plains LTA)

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Introduction

The purpose of this document is to provide information on Kirtland's Warbler populations and management on the Hiawatha, list pertinent issues and opportunities for KW management on the Hiawatha, provide suggestions on how the Forest can support KW recovery, meet ESA requirements, and describe an example KW management scenario for the Raco LTA.

The objective of the Forest Service's Threatened and Endangered Species program is to "*Manage National Forest System habitats and activities for TES to achieve recovery objectives so that special protection measures provided under the ESA are no longer necessary*" (FSM 2670.21). It is Forest Service policy to "*Place top priority on conservation and recovery of endangered, threatened and proposed species and their habitats*" and to "*Establish through the Forest planning process objectives for habitat management and/or recovery of populations, in cooperation with States, the FWS, and other Federal agencies*" (FSM 2670.31).

The Hiawatha Forest Plan provides clear objectives to manage habitat for KW. The Plan states that "*Forest Managers will cooperate with approved Recovery Plans for TES species.....cooperate with the MDNR in identifying potential KW breeding areas within the Forest boundary....emphasize restructuring the vegetative management plans, creating better coordination between management of the wildlife resource and other resources....increase habitat improvements that occur as a result of the timber sale program, including improvements in the size, shape, age and distribution of regenerated stands*" (IV-8). However, the Forest Plan does not address specific standards and guidelines relative to KW.

Assessing the ecological capability of the Hiawatha to provide KW habitat is important since viability can best be assured if suitable ecological conditions are broadly distributed or of high abundance within the planning area and the disjunct areas of suitable ecological conditions are typically large enough and close enough to permit dispersal among subpopulations. Lacking Forest Plan intervention, the SVE process for Forest Plan revision described the future habitat outlook for KW on the Forest as existing at very low abundance (outcome "E"). The Forest has the ecological capacity to support a viable KW population and with adequate new standards and guidelines the SVE outcome for KW on the Hiawatha can be improved (Outcome "C" or better).

To assist in species recovery and maintain KW viability on the Forest, stand-specific KW management guidelines are needed for the major sand-outwash ecosystem LTA's on the Hiawatha National Forest; Whitefish Delta, Indian River Uplands/Steuben Outwash (old Beaton Lake Outwash), Raco Plains, and Wetmore Outwash. Table 1 and Map 1 illustrate the landscape distribution of most of the potential KW habitat (jack pine) across the Forest. There may be suitable habitat outside of these 4 outwash LTA's but the highest priority for KW would be jack pine on the 4 major outwash sand ecosystems. Please note that LTA boundaries on the Hiawatha were recently updated and the following figures and maps are based on the previous LTA edition. The major change is that the new Indian River Upland LTA and Steuben Outwash LTA were previously combined into the Beaton Lake Outwash LTA. The following table and map describe the ecological capability of the Forest to produce KW habitat.

Map 1. Outwash sand ecosystems of the U.P. with Hiawatha NF boundary and 4 major outwash LTA's on the Forest. The 2 southern LTA's on the west unit currently provide KW breeding habitat.

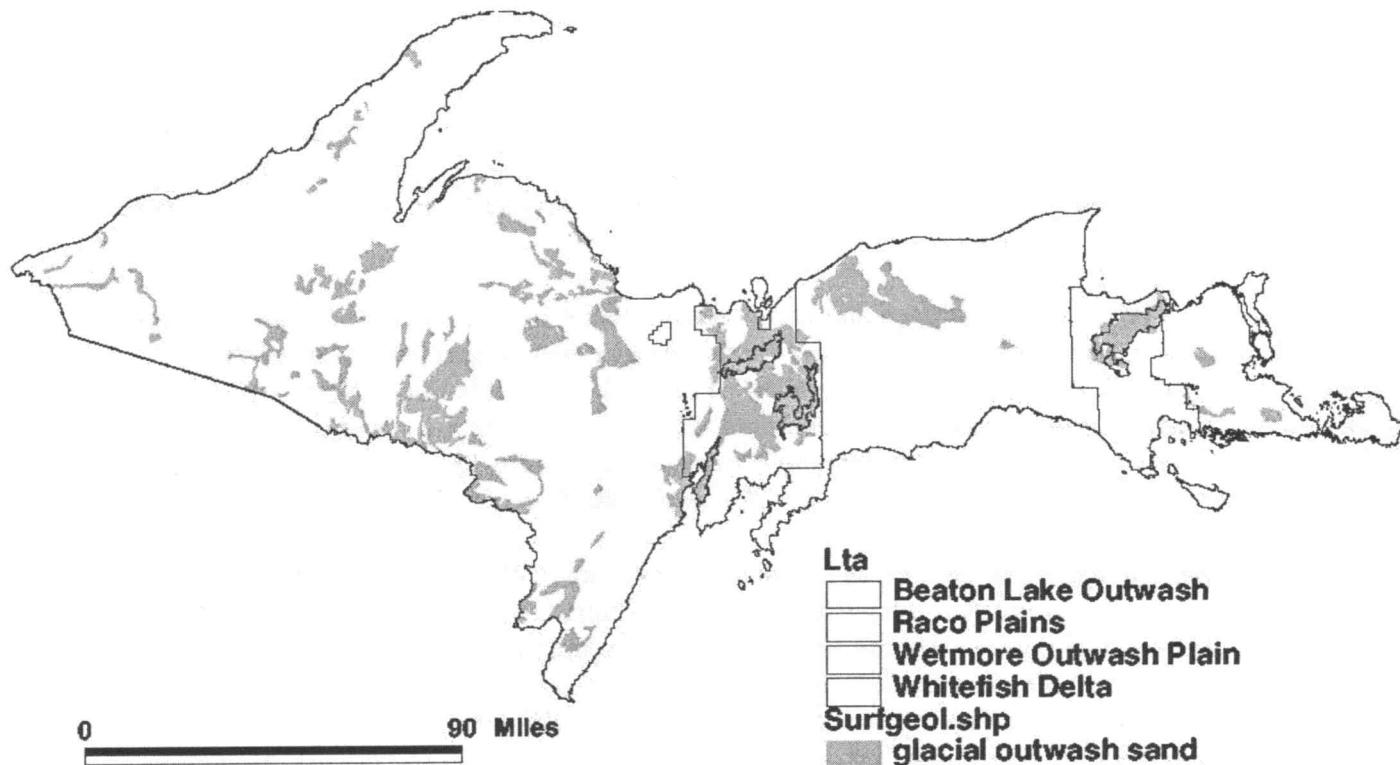


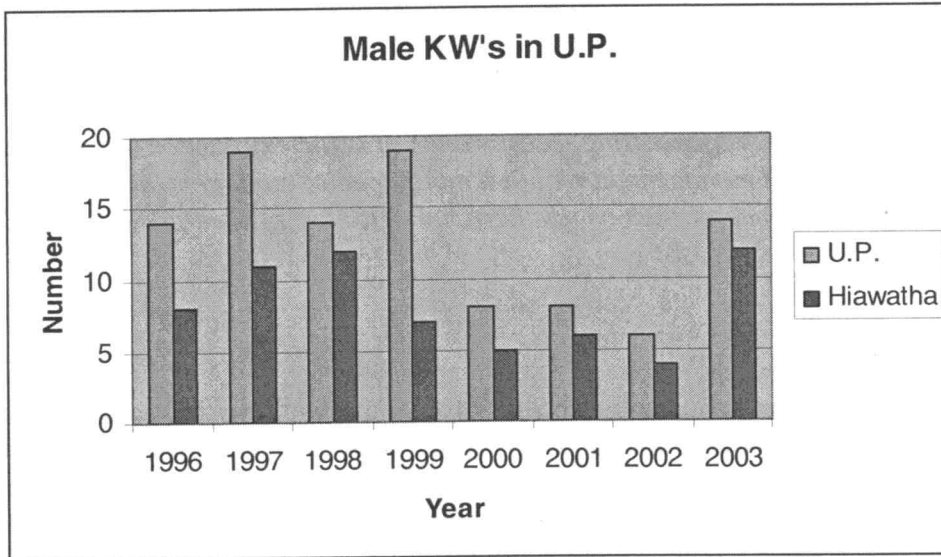
Table 1. Distribution by LTA of jack pine on the Hiawatha

LTA Name	Total acres	Total jack pine acres
Beaton Lake Outwash (includes Steuben Outwash and Indian River LTA's)	39,862	9,291
Whitefish Delta	13,571	4073
Wetmore Outwash (south)	32,914	8,611
Raco Plains	63,000	27,845
Totals	149,347	49,820*

*there are currently about 70,000 acres of jack pine on the Forest

The Hiawatha NF currently provides habitat for most of the breeding KW's in the U.P. (chart 1).

Chart 1: Total males counted in the U.P. compared to males counted on the Hiawatha NF between 1996 and 2003.



Section 7 (a)(1) of the ESA directs “all Federal Agencies to, in consultation with the U.S. Fish and Wildlife Service, proactively conserve listed species by carrying out programs aimed at their recovery. Moreover, section 7(a)(1) allows for Federal agencies to prioritize the conservation and recovery of listed species along with other traditional agency mandates or missions. To this effect, section 7(a)(1) imposes on each Federal agency an affirmative duty to conserve listed species.”

KW Habitat and the UP

The following 3 paragraphs provide a good brief introduction to KW biology and habitat requirements as they relate to the U.P. of MI. They are excerpted from a recent publication titled; Kirtland's Warbler Population Trends and Summer Range Expansion to WI and MI Upper Peninsula. (Probst et al 2003);

“The Kirtland's warbler is an endangered species that breeds in large (100 ac) stands of young (5-23 years old) jack pine growing on extremely well-drained soils in northern Michigan. The density and patchy distribution of the jack pine comprising suitable habitat regenerates naturally after wildfire, and can be mimicked imperfectly by plantations and natural regeneration following site preparation with and without seeding, which can have a similar percent cover of trees but at lower densities than produced by wildfires. Plantations created specifically for Kirtland's warbler breeding habitat have more trees than in stands resulting from standard forestry prescriptions or by the natural regeneration that follows tree harvesting. Female Kirtland's warblers frequently place their nests on the ground at the edge of thickets and openings in these young jack pine stands.

There is a need to develop more habitat for Kirtland's warbler for peripheral populations, but there are practical barriers to expensive, single-species land management objectives. Based on historical breeding densities, 500 to 1000 acres of high-density jack pine on suitable sites would be required on a sustained basis to support each 25 pairs of Kirtland's warblers. Assuming 50 years of commercial forest rotation and a 10-year warbler occupancy of a habitat patch, 2500-5000 ac

