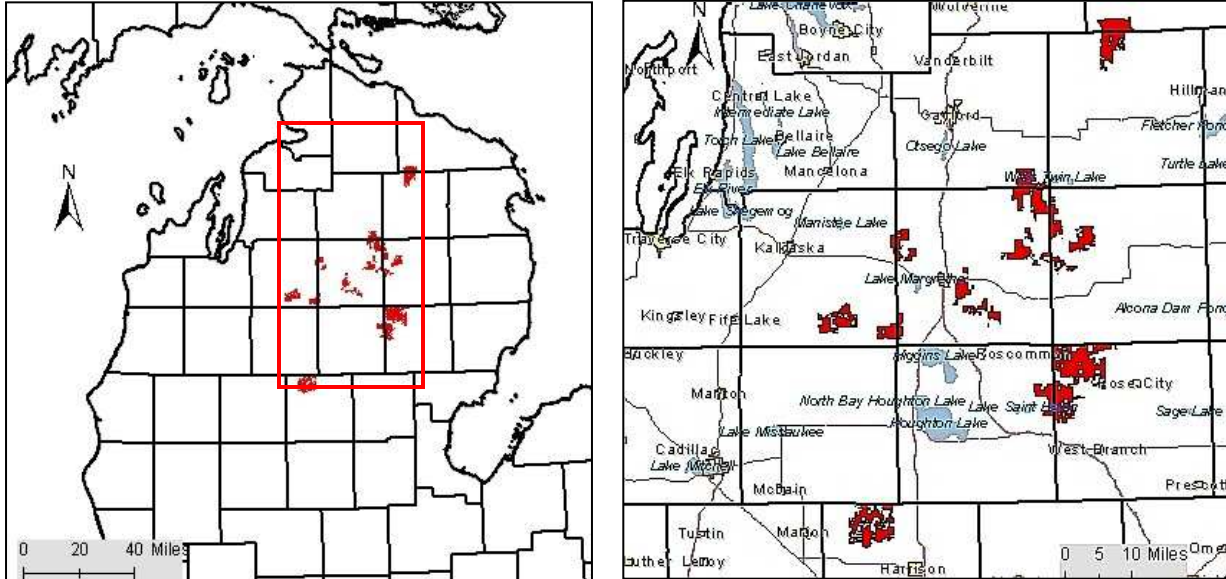


Kirtland’s Warbler Management Area



Attributes

This management area, located at various locations throughout the Northern Lower Peninsula, contains lands that are managed for the federally endangered Kirtland’s warbler. The Kirtland’s Warbler Management Area has historically been divided into distinct units. They currently include the Big Creek, Clear Lake, Crapo Lake, Damon, Down River, Fletcher, Leota, Lovells, Manistee River, Muskrat Lake, Ogemaw/St. Helen, Pere Cheney, Sharon, Staley Lake, and Warbler Monument Management Units. The majority of these units were delineated in the 1970s as a result of the Kirtland’s Warbler Recovery Plan. The MA includes approximately 150,000 acres of State Forest land, 90,000 acres of which is “essential habitat” for the Kirtland’s warbler. The Kirtland’s Warbler Recovery Plan (1985) states that:

“Habitat for the Kirtland’s warbler is considered essential where its destruction, disturbance, modification, or subjection to human activity might be expected to result in a further reduction in numbers of this species, or in a reduction in its potential for expansion or recovery. “Essential habitat” is defined to mean areas that are presently occupied by nesting pairs, and areas that can be expected to be utilized at some future time.”

“Essential habitat” was identified based on the occurrence of jack pine dominated, broad outwash plains underlain by Grayling sands. Almost without exception, the Kirtland’s warbler nests in young jack pine stands occurring on these sites. Management of essential habitat is guided by the Kirtland’s Warbler Habitat Management Plan. The primary focus of the plan is to assure the annual creation of approximately 2,000 acres of Kirtland’s warbler essential habitat within State of Michigan.

Major Cover Types

- **Jack Pine** – There is about 90,000 acres of jack pine in the MA, the majority of which is “essential habitat” for the Kirtland’s warbler. Most mature stands are of fire-origin, while the majority of younger stands are plantation origin. Through the 1970s and 80s, planted stands were managed as near monocultures, where pos-harvest oak and red pine removal was a common practice. In recent years, managers have incorporated more retention.

- Aspen – There are nearly 13,000 acres of aspen with about 11% of the aspen aged 60 years or older. Most aspen occurs in on the edges of the MA along the margins of the outwash plains. The operable age class distribution is fairly balanced, with the exception of the 0-9 and 50-59 year age classes and a slight spike in the 40-49 year age class.
- Oak – There are approximately 12,000 acres, mostly in older age classes. As a whole the oak communities are trending toward mixed communities. The age class distribution reflects some aggressive management in recent years. In addition, much of older 80-89 year age class spike has been subject to shelterwood treatments. There is young oak in many of the jack pine stands.
- Red Pine – About 80% of the 1,500 acres are over age 50. There has been little red pine regeneration over the past 50 years.

Kirtland's Warbler			Age Class (Years)											Uneven Aged
Cover Type	Acres	%	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100+	
Jack Pine	90,262	58%	15,213	19,862	16,007	6,313	9,854	8,043	7,100	5,384	1,001	321	8	660
Aspen	12,899	8%	557	1,873	2,882	2,248	3,516	373	331	745	276	0	9	24
Oak	11,771	8%	1,023	1,332	1,034	457	269	109	411	1,519	3,305	1,754	367	191
Red Pine	11,542	7%	281	265	335	45	1,374	2,046	1,986	3,611	842	264	219	274
Marsh	5,608	4%												
Grass	1,993	1%												
Upland Brush	1,941	1%												
Water	1,526	1%												
Other Types	16,917	11%												
Total		154,459												

Other Types include: Cedar, Mixed Swamp Conifers, Lowland Brush, Swamp Hardwoods, Marsh, White Pine, Lowland Poplar, Black Spruce, Upland Hardwoods, Bog, Tamarack, Spruce-Fir, Hemlock, Sand Dune and White Birch.

Concepts of Management

- Jack Pine (58% of the MA) – Most of the jack pine acres fall within the Kirtland’s Warbler Habitat Management Plan where harvests and regeneration are tightly scheduled to provide a continuous supply of potential nesting habitat. For stands not included as “essential habitat”, follow management objectives.
- Aspen (8% of the MA) – Seek opportunities to harvest stands before reaching rotational age to accelerate balancing of the age class distribution, with particular emphasis on the 40-49 year age class. Where accessible harvest 60+ year age classes. Older and inaccessible stands will be allowed to succeed to other cover types.
- Oak (8% of the MA) – Manage oak for a balanced age-class distribution based on site conditions (this includes a wide range of oak quality). Consider inter-planting red pine or jack pine on sites with poor natural regeneration.
- Red Pine (7% of the MA) – For stands not included as “essential habitat”, follow the Red Pine Management Guidelines, addressing the age class spike of red pine. Following the Within Stand Retention Guidelines allow selected individual red pines in other cover types to become super canopy trees.