



Grassland: Fence row

Description

Fence rows are a linear area of idle vegetation that interrupts large blocks of continuous grassland (e.g., hedge row adjacent to pasture or row crop).

General Condition of Feature

About half of the fence row area in the Southern Lower Peninsula is considered to be in fair or good condition as wildlife habitat. Most of the remaining areas are considered degraded or very degraded.

Associated Natural Communities

N/A – no native natural communities

Associated Species of Greatest Conservation Need

INSECTS

- woodland camel cricket (*Ceuthophilus silvestris*)
- woodland meadow katydid (*Conocephalus nemoralis*)

REPTILES

- blue racer (*Coluber constrictor foxii*)
- black rat snake (*Elaphe obsoleta obsoleta*)
- copperbelly water snake (*Nerodia erythrogaster neglecta*)
- eastern massasauga (*Sistrurus catenatus catenatus*)

BIRDS

- Northern Bobwhite (*Colinus virginianus*)
- Cooper's Hawk (*Accipiter cooperii*)
- Northern Flicker (*Colaptes auratus*)
- Eastern Kingbird (*Tyrannus tyrannus*)

BIRDS cont.

- Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*)
- Northern Mockingbird (*Mimus polyglottos*)
- Brown Thrasher (*Toxostoma rufum*)
- Yellow-breasted Chat (*Icteria virens*)
- Field Sparrow (*Spizella pusilla*)
- Vesper Sparrow (*Pooecetes gramineus*)
- Dickcissel (*Spiza americana*)
- Eastern Meadowlark (*Sturnella magna*)
- Evening Grosbeak (*Coccothraustes vespertinus*)

MAMMALS

- least shrew (*Cryptotis parva*)
- red bat (*Lasiurus borealis*)
- least weasel (*Mustela nivalis*)
- prairie vole (*Microtus ochrogaster*)
- woodland vole (*Microtus pinetorum*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Grazing and mowing patterns: Lack of maintenance results in succession to forested landscape features.
- Altered fire regime

HABITAT CONVERSION

- Industrial, residential, and recreational development: Agricultural land is easily developed for residential use with a concomitant loss of fence rows.
- Conversion to agriculture: Changes in intensity and methods of agriculture surrounding the fence row may impact the quality and availability of the fence row for wildlife. The potential for increased cultivation encourages farmers to eliminate fence rows or reduce their size.

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Species such as autumn olive (*Elaeagnus umbellata*) and glossy buckthorn (*Rhamnus frangula*) may be found in fence rows.
- Other biological interactions: Fence rows act to fragment grassland landscape features and act as corridors between landscape features. Fence rows concentrate prey species and increase vulnerability to predation.

Conservation Actions Needed [Threats addressed]

LAND, WATER & SPECIES MANAGEMENT

- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals; Other biological interactions]

LAW & POLICY

- Work with municipalities to promote planning and zoning insuring adequate protection for farmland or its conversion to features that have greater value to wildlife. [Industrial, residential, and recreational development; Conversion to agriculture]

EDUCATION & AWARENESS

- Educate landowners in residential areas about the value of fence rows to wildlife. Promote retention of fence rows during residential development construction. [Industrial, residential, and recreational development; Conversion to agriculture, Grazing and mowing patterns; Invasive plants and animals]

ECONOMIC & OTHER INCENTIVES

- Provide incentives through State and federally funded private land conservation programs to farmers to maintain and preserve fence rows where they provide benefits to wildlife. [Grazing and mowing patterns; Altered fire regime; Industrial, residential, and recreational development; Conversion to agriculture]

Research and Survey Needs

- Examine how the width of fence rows and their vegetative species composition affect their value to wildlife. Are there other variables of fence row condition that influence their value to wildlife? Does the feature type or species composition of the surrounding matrix have a significant effect on the value to wildlife?
- Determine the effects of management and maintenance of fence rows on wildlife within fence rows and in the surrounding matrix.
- Examine both the positive and negative values of fence rows to wildlife. These systems contribute to fragmentation but may also provide travel corridors or patches of necessary habitat. Is there an optimal amount of fence row which balances these effects? Increased field size and cultivation on agricultural land generally results in fewer and smaller fence rows. Is there a combination of fence row and cultivation which optimizes the value to wildlife and economic return?
- Determine whether fence rows function as sinks. Determine how this varies by species?
- Inventory fence row management methodologies. How prevalent are these techniques? What are the impacts of each technique on wildlife?
- Evaluate the impacts of fence rows on invasive and non-invasive species. Quantify the role of fence rows as corridors for invasive species. Quantify the role of fence rows as barriers to native species.
- Develop a functional definition of fence row. At what point (size, configuration, etc.) does a fence row become a patch or does it become the surrounding matrix? Is a fence row adjacent to a right-of-way functionally different than a fence row isolated within a grassland matrix?

Monitoring

- Track acreage and distribution of fence rows across the landscape.
- Track changes in the floristic composition of fence rows.
- Analyze changes in agricultural practices and their impact on the abundance and distribution of fence rows.