



Grassland: Right-of-way

Description

Rights-of-way are linear features associated with roadways, railways, powerlines, pipelines, etc. Generally they contain grassland communities that run linearly through another feature (e.g., forests, row crop).

General Condition of Feature

Most of the rights-of-way in the Southern Lower Peninsula are considered to be in fair condition as wildlife habitat (~70%). Much of the remaining area is degraded (~20%).

Associated Natural Communities

N/A – no native natural communities

Associated Species of Greatest Conservation Need

INSECTS

great plains spittlebug (*Lepyronia gibbosa*)
red-legged spittlebug (*Prosapia ignipectus*)
a tiger beetle (*Cicindela limbalis*)
wild indigo duskywing (*Erynnis baptisiae*)
persius duskywing (*Erynnis persius persius*)
ottoe skipper (*Hesperia ottoe*)
dusted skipper (*Atrytonopsis hianna*)
pipevine swallowtail (*Battus philenor*)
northern hairstreak (*Fixsenia favonius ontario*)
Karner blue (*Lycaeides melissa samuelis*)
frosted elfin (*Callophrys irus*)
tawny crescent (*Phyciodes batesii*)
three-staff underwing (*Catocala amestris*)
golden borer (*Papaipema cerina*)
silphium borer moth (*Papaipema silphii*)
phlox moth (*Schinia indiana*)
leadplant flower moth (*Schinia lucens*)

AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)
smallmouth salamander (*Ambystoma texanum*)

REPTILES

blue racer (*Coluber constrictor foxii*)
smooth green snake (*Liochlorophis vernalis*)

REPTILES cont.

copperbelly water snake (*Nerodia erythrogaster neglecta*)
queen snake (*Regina septemvittata*)
eastern massasauga (*Sistrurus catenatus catenatus*)
wood turtle (*Glyptemys insculpta*)

BIRDS

Northern Bobwhite (*Colinus virginianus*)
Barn Owl (*Tyto alba*)
Eastern Kingbird (*Tyrannus tyrannus*)
Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*)
Field Sparrow (*Spizella pusilla*)
Vesper Sparrow (*Pooecetes gramineus*)
Dickcissel (*Spiza americana*)
Eastern Meadowlark (*Sturnella magna*)
Western Meadowlark (*Sturnella neglecta*)

MAMMALS

northern bat or northern myotis (*Myotis septentrionalis*)
eastern pipistrelle (*Pipistrellus subflavus*)
prairie vole (*Microtus ochrogaster*)
woodland vole (*Microtus pinetorum*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Climate change
- Altered fire regime: The presence of fire along railroad rights-of-way aid in the retention of prairie remnants in those systems.
- Grazing and mowing patterns: Lack of maintenance results in succession to forested landscape features.

HABITAT CONVERSION

- Industrial, residential, and recreational development: Maintenance of the developed contents of the right-of-way (e.g., power lines and supporting structures, gas pipelines, etc.) may impact the surrounding natural communities.
- Incompatible natural resource management: Maintenance of rights-of-way may entail use of techniques that have dramatic effects on community composition such as mowing and herbicide use.

POLLUTION

- Urban, municipal, and industrial: Illegal dumping may be locally common due to ease of access.
- Pesticides and herbicides: Herbicides may alter the species composition of a right-of-way but may also be used to maintain the successional stage of the right-of-way.

NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE

- Non-consumptive recreation: ATV and ORV use may impact rights-of-way. Foot traffic along easements may also have an impact.

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: Rights-of-way may act as corridors for travel of invasive species.
- Other biological interactions: Rights-of-way act to fragment forested landscape features and act as corridors between landscape features.

MICHIGAN'S WILDLIFE ACTION PLAN
TERRESTRIAL SYSTEMS: SOUTHERN LOWER PENINSULA

EDUCATION

- Social attitudes: Governmental regulations and the economics of right-of-way maintenance, rather than conservation needs, may dictate the timing and type of management used by the owning organization to maintain conditions.
- Lack of scientific knowledge: A lack of understanding of the value to wildlife of rights-of-way may lead to inappropriate management decisions.

Conservation Actions Needed [Threats addressed]

LAND, WATER & SPECIES MANAGEMENT

- Work with landowners to ensure there is a commitment to maintenance of rights-of-way where they are beneficial to wildlife. [Industrial, residential, and recreational development, Grazing and mowing patterns, Social attitudes]
- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]

LAW & POLICY

- Enforce ordinances pertaining to illegal dumping where present and work with local authorities to create ordinances where they are lacking. [Urban, municipal, and industrial pollution]
- Work with landowners to develop and implement lower impact recreational vehicle access and use of rights-of-way. [Non-consumptive recreation, Social attitudes]

EDUCATION & AWARENESS

- Develop best management practices which minimize disruption of vegetation and wildlife while performing utility and structural maintenance and vegetation management in rights-of-way. [Grazing and mowing patterns; Industrial, residential, and recreational development, Incompatible natural resource management; Pesticides and herbicides]

Research and Survey Needs

- Determine optimal disturbance patterns to maintain rights-of-way without degrading their value to wildlife.
- Examine how the width of rights-of-way and their vegetative species composition affect their value to wildlife. Are there other variables of right-of-way condition that influence their importance to wildlife? Does the feature type or species composition of the surrounding matrix have a significant effect on the importance of rights-of-ways to wildlife?
- Determine the impacts of development (gas pipelines, electrical lines, etc.) of rights-of-way. Is this a function of disturbance or fragmentation?
- Examine both the positive and negative effects of rights-of-way to wildlife. These systems contribute to fragmentation but may also provide travel corridors or patches of necessary habitat. Is there an optimal amount of right-of-way which balances these effects?
- Determine whether rights-of-way function as sinks. Determine how this varies by species?
- Inventory right-of-way management methodologies. How prevalent are these techniques? What are the impacts of each technique on wildlife?
- Evaluate the impacts of rights-of-way on invasive and non-invasive species. Quantify the role of rights-of-way as corridors for invasive species. Quantify the role of rights-of-way as barriers to non-invasive and native species.

Monitoring

- Track the acreage and distribution of rights-of-way across the landscape.
- Track changes in floristic composition within rights-of-way.