



# EARLY SUCCESSIONAL GRASSLANDS

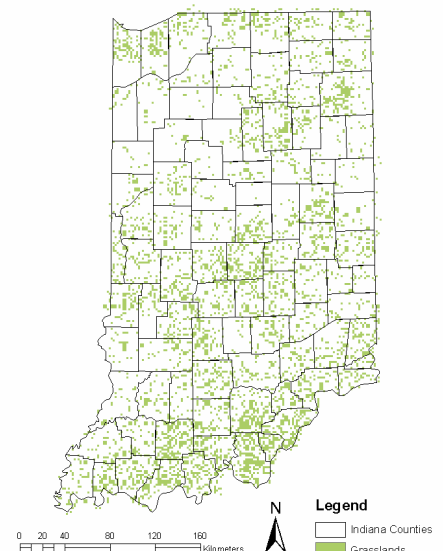
## HABITAT SUMMARY



*Early successional grasslands are areas maintained by natural or anthropogenic means in vegetation dominated by grasses, annual and perennial forbs with a poorly developed tree and shrub component.*



*Over 15% of Indiana is in grasslands, constituting prairies and reclaimed mine lands. Those areas are primarily in southern, central and extreme northern parts of the state. Grasslands comprise more than 5,800 miles<sup>2</sup> or 3.7 million acres.*



## Indiana's State Wildlife Action Plan

### Representative Species of Early Successional Grasslands

The habitat guild for early successional grasslands is represented by several species. These representative species “paint a reasonable mental picture” of early successional grasslands.

Cottontail Rabbit  
Franklin's Ground Squirrel

Short-Tailed Shrew  
Grasshopper Sparrow



From left to right: *Grasshopper sparrow*  
and *cottontail rabbit*

### Species of Greatest Conservation Need (SGCN) in Grasslands

SGCN are animal species whose populations are rare, declining or vulnerable.

Franklin's Ground Squirrel



*Franklin's Ground Squirrel*

## Threats to Early Successional Grasslands

- Commercial or residential development (sprawl)
- Successional change
- Habitat fragmentation
- Counterproductive financial incentives or regulations
- Stream channelization
- Habitat degradation
- Invasive/non-native species
- Agricultural/forestry practices
- Drainage practices (stormwater runoff)
- Nonpoint source pollution (sedimentation and nutrients)

## High-Priority Conservation Actions for Early Successional Grasslands

### Selective use of functionally equivalent exotic species in place of extirpated natives

- Investigate the impact of intentionally deployed exotic plants and animals on grassland SGCN.

### Succession control (fire, mowing)

- Implement controlled burning regimes to maintain functional and desirable components and processes of grassland habitats.

### Habitat protection on public lands

- Incorporate management for grassland-dependent SGCN such as the Franklin's ground squirrel on Fish & Wildlife Areas and other public lands.

### Habitat restoration incentives (financial)

- Promote the enrollment of private lands into Farm Bill Wildlife Conservation
- Programs and similar programs to benefit SGCN dependent on early successional stage grassland habitats.

### Corridor development/protection

- Work with railroad, highway transportation, and energy agencies to provide wildlife habitat on linear corridors where feasible.

### Technical assistance

- Develop and distribute BMPs and other technical information on the development and management of early successional grasslands for the benefit of SGCN.

### Habitat restoration on public lands

- Incorporate management for grassland-dependent SGCN such as the Franklin's ground squirrel on Fish & Wildlife Areas and other public lands.

### Cooperative land management agreements (conservation easements)

- Develop cooperative agreements with transportation agencies for management and restoration of grassland habitats on railroad ROWs to benefit Franklin's ground squirrels.

### Habitat protection incentives (financial)

- Support farm programs that convert row-crop areas to early successional grasslands to benefit Franklin's ground squirrel.
- Acquire suitable land and develop large-scale grassland restoration projects and assess their effectiveness for providing habitat for Franklin's ground squirrel.

### Land use planning

- Work with public land managers and other land managers to ensure adequate distribution and abundance of early successional grassland habitat to benefit Franklin's ground squirrel.

### Adaptive Management

- Modify survey and monitoring, research and other conservation actions and activities in response to new information to improve habitat conservation efficiency for SGCN.

# Indiana's State Wildlife Action Plan

## Threats to SGCN in Early Successional Grasslands

- Habitat loss (breeding range)
- Habitat loss (feeding/foraging areas)
- Invasive/non-native species
- Predators (native or domesticated)
- Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)
- Unintentional take/ direct mortality (e.g., vehicle collisions, power line collisions, by catch, harvesting equipment, land preparation machinery)
- Viable reproductive population size or availability
- Diseases/parasites (of the species itself)
- Regulated hunting/fishing pressure (too much)

## High-Priority Conservation Actions for SGCN in Early Successional Grasslands

### Habitat protection

- Determine habitat needs for early successional stage grassland species such as the Franklin's ground squirrel.
- Support early successional grassland management (e.g. burning) and the control of invasive exotic plant species.

### Population management

- Determine distribution and relative abundance of SGCN dependent on early successional stage grasslands such as Franklin's ground squirrel.
- Develop surveys and monitoring programs for SGCN dependent on early successional stage grasslands such as the Franklin's ground squirrel.

### Exotic/invasive species control

- Support programs to identify and control the adverse impacts of exotic, invasive plant and animal species on early successional grassland SGCN.

### Food plots

- Promote the inclusion of an appropriate diversity of grasses and forbs in the establishment of early successional grassland habitat for the benefit of SGCN.

### Native predator control

- Investigate the impact of predation, especially raccoon predation, on vulnerable populations of grassland SGCN, especially turtles (eggs).

### Threats reduction

- Determine threats to existing colonies of Franklin's ground squirrels.

### Adaptive Management

- Modify survey and monitoring, research and other conservation actions and activities in response to new information to improve conservation efficiency for SGCN.

