

The Grand Prairie Natural Division

Characteristics

The Grand Prairie Natural Division of central and east-central Illinois is a vast plain formerly occupied primarily by tallgrass prairie, now converted extensively to agriculture. Natural drainage of the fertile soils was poor, resulting in many marshes and potholes. Bison, Blanding's turtles, and Franklin's ground squirrels are distinctive animals of the Grand Prairie, but are now extirpated or imperiled as is the native prairie.

Major Habitats & Challenges

Grasslands - Much of the area that was historically prairie is presently in row crops. Most of the prairie remnants are small and do not provide many of the functions of a real prairie. Many prairie restorations lack forbs or are choked by too much big bluestem or Indiangrass. Much of the area is relatively flat and does not qualify for farm programs which focus on highly erodible lands. The former prairie soils are very fertile. Even if sites do qualify for the Conservation Reserve Program, participation is usually low because there is little financial benefit for producers to take acres out of production. Other grassland habitat is also scarce, and typically dominated by tall fescue. Succession/lack of management, inadequate juxtaposing, fire suppression and recreational mowing are further challenges.

Forests - The forests in the Grand Prairie have suffered from lack of management or poor management. They are commonly formerly-pastured wood lots that have been "high graded" for valuable timber, and invaded by bush honeysuckle, multiflora rose, osage orange, garlic mustard and other exotic plants. Species composition is shifting to sugar maple and other mesophytic species due to fire suppression, lack of professional forestry assistance, and uneven-age timber management. The forests are highly fragmented, and deer browsing is problematic in many areas.

Open Woodland/Savanna - The little that remains of this habitat is being invaded by autumn olive and other exotics, and changing into forest in the absence of proper management.

Wetlands - Much of the historical wetlands have been drained and are presently farmed. The function of many of the existing wetlands are threatened by reed canary grass and other invasive species, sedimentation, and eutrophication. Ephemeral/vernal wetland types are poorly represented, but critical.

Streams - Many of the streams have been channelized and uplands tilled, causing a loss of natural function, in-stream erosion problems and pesticide run-off.

Lakes/Ponds - Nearly all backwater lakes have been eliminated; sedimentation and nutrient loading of impoundments is problematic.

Opportunities

The Grand Prairie Division was formerly dominated by tall-grass prairie ecosystems. Poor drainage created marshes and potholes. Forests bordered many riparian corridors, with sporadic groves on moraines and other glacial features. Today, the vast majority of the land within the Grand Prairie Division is under private ownership and devoted to row crops or development, with occasional habitat patches dotting the landscape. Wildlife habitat within the division is diminutive, highly fragmented and often poorly managed.

State and federal private lands programs, including the Conservation Reserve Program, Wetland Reserve Program, Environmental Quality Incentives Program, Landowner Incentives Program, and Vermilion County's North Fork Habitat Enhancement Program, have contributed to restoration of habitat and decreasing erosion and run-off into streams. These programs can continue to be utilized to achieve many of the Grand Prairie Division's habitat goals.

A number of excellent conservation partners are active in the natural division, including Pheasants Forever, National Wild Turkey Federation, White-Tails Unlimited, Soil and Water Conservation Districts, U.S. Department of Agriculture (Farm Service Agency, Natural Resources Conservation Service, U.S. Forest Service), Illinois Department of Natural Resources, C2000 partnerships, Grand Prairie Friends, Prairie Friends Network, Quail Unlimited, The Nature Conservancy, Parklands Foundation, Friends of Kankakee, The Conservation Foundation, and Ducks Unlimited.

Management Guidelines

Landscapes

The primary goal is to restore the rich mosaic of plant and wildlife that was typical of the Grand Prairie by development and management of grassland ecosystems capable of maintaining viable populations of grassland species, including both permanent and migrant residents; buffering streams and waterways with at least 50 feet of ecologically-beneficial habitat; and increasing early seral richness within our forests.

Grasslands - Grassland landscapes larger than 20,000 acres in the Grand Prairie Division should contain at least 60% grassland cover (over 90% in patches larger than 200 acres), less than 10% fescue and no more than 2% combined wooded and urban land covers. By 2025, restore and manage an additional 400,000 acres of grassland, with emphasis on focal areas with >1,000 acres of mosaic and contiguous grasslands; convert >4,000 acres of fescue-dominated roadsides to quality grassland habitat; improve the quality of Conservation Reserve Program grasslands on >4,000 acres. A system to estimate avian use of Pheasant Habitat Areas is needed, and long-term evaluation of the Conservation Reserve Program must be refined.

Wetlands - Wetlands currently in agriculture should be buffered with upland habitat equal or greater than the wetland area. Bottomland wetland complexes should be buffered with bottomland habitat equal or greater than the wetland area; corridors connecting wetland complexes should be at least 50 m wide. Restored wetlands should be concentrated within focal areas. A net increase of at least 5,000 acres is needed to begin meeting wildlife objectives.

Streams - Restore 1,000 acres of backwater habitat. Buffer >1,000 miles of stream bank with no less than 50 m of habitat.

Lakes & Ponds - Establish aquatic vegetation on 10-20% of the littoral zone on all impoundments.

Open Woodland/Savanna - Managed savannas should contain at least 95% native species. An increase of 150,000 acres is needed to begin meeting wildlife objectives.

Forest - Upland forests will have a basal area of >35% for oak and hickory species combined, a basal area of <20% sugar maple, and fewer than 200 stems/ha of invasive shrubs. Bottomland forests should have a basal area of >20% early successional hard mast producing tree species and fewer than 200 stems/ha of invasive shrubs. Strive to reduce fragmentation. A net increase of 54,000 acres is needed to begin meeting wildlife objectives.

Natural communities

Coolwater streams	Sedge meadow	Bottomland forest
Sand savanna	Sand Prairie	Tall grass prairie
Wetland's	Seep's	Shrub Prairie
Fens	Upland forest	Hill prairie
Oak savanna		

Critical Species

Mussels: snuffbox, sheepsnose, salamander mussel, slippershell mussel, purple wartyback, spike, black sandshell, kidneyshell, elktoe

Insects: regal fritillary, northern sedge grasshopper, Indian skipper, *Catocala amestris*, *C. praeclara*, *Gabara subnivosella*, *Oligia obtusa*, *Hyparpax aurora*, *Paraphlepsius electus*, *P. carolinus*, *P maculosus*, *Scaphytopius abbreviatus*, bracken borer moth

Fishes: American eel, brown bullhead, western sand darter, eastern sand darter, largescale stoneroller, highfin carpsucker, brook stickleback, gravel chub, lake chubsucker, northern pike, bluntnose darter, harlequin darter, banded killifish, starhead topminnow, bigeye chub, northern brook lamprey, silver lamprey, American brook lamprey, redspotted sunfish, ribbon shiner, smallmouth bass, spotted bass, river redhorse, black redhorse, greater redhorse, bigeye shiner, ironcolor shiner, blacknose shiner, rosyface shiner, silverband shiner, weed shiner, slender madtom, pugnose minnow, yellow perch, trout-perch, southern redbelly

dace, blacknose dace, sauger, central mudminnow

Amphibians: four-toed salamander, Illinois chorus frog

Reptiles: Blandings turtle, ornate box turtle, eastern massasauga, Kirtland's snake, western hognose snake, smooth green snake, lined snake

Birds: northern harrier, short eared owl, Henslow's sparrow, grasshopper sparrow, bobolink, LeConte's sparrow, Nelson's sharp-tailed sparrow, stilt sandpiper, piping plover, black tern, marsh wren, yellow rail, prairie warbler, willow flycatcher, loggerhead shrike, black rail, American woodcock, short-billed dowitcher, red-headed woodpecker, savannah sparrow, dickcissel, field sparrow, greater yellowlegs, buff-breasted sandpiper, upland sandpiper, American bittern, Wilson's phalarope, king rail, red-shouldered hawk, brown creeper, least bittern, northern bobwhite, American golden plover, Smith's longspur

Mammals: American badger, gray bat, Indiana bat, Rafinesque's big-eared bat, red squirrel, franklin's ground squirrel

Emphasis Game Species

Fishes: northern pike, largemouth bass, smallmouth bass, spotted bass, warmouth, yellow bass, green sunfish, pumpkinseed, bluegill, longear sunfish, redear sunfish, rock bass, white crappie, black crappie, channel catfish, flathead catfish, black bullhead, yellow bullhead, brown bullhead, yellow perch, freshwater drum

Birds: ring-necked pheasant, wild turkey, mourning dove, American woodcock, Canada goose, wood duck, mallard

Mammals: white-tailed deer, eastern cottontail, fox squirrel, gray squirrel, coyote, raccoon, red fox, mink, beaver

Non-game Indicator Species

Open Woodland/Savanna - black rat snake, red-headed woodpecker, summer tanager, American robin, eastern kingbird, Baltimore oriole, white-footed mouse

Grasslands - prairie king snake, fox snake, common garter snake, bobolink, northern harrier, dickcissel, vesper sparrow, horned lark, eastern meadowlark, kestrel, song sparrow, American goldfinch, sedge wren, prairie vole

Forests - eastern box turtle, black rat snake, northern cardinal, black-capped chickadee, red-tailed hawk, wood thrush, tufted titmouse, Carolina wren, American redstart, Kentucky warbler, deer mouse

Wetlands - twelve spotted skimmer, chorus frog, spring peeper, painted turtle, northern water snake, great blue heron, river otter

Streams - sand shiner, bluntnosed minnow, spotfinned shiner, orange throated darter, blackstriped topminnow, creek chub, green frog, spiny soft shell, northern water snake, spotted sandpiper, prothonotary warbler, river otter

Lakes/Ponds - crayfish, whirligig beetle, water boatman, twelve spotted skimmer, painted turtle, common musk turtle, great blue heron

Recreational Opportunities

Upland game (ring-necked pheasant) hunting, forest game (white-tailed deer, wild turkey) hunting, waterfowl hunting, fishing (walleye, smallmouth bass, bluegill), furbearer hunting and trapping, grassland bird viewing, "Big Sky," Magnolia Morel Festival, Wildlife Prairie State Park, Rock Island Trail

Educational/Interpretive

The Illinois Natural History Survey, University of Illinois, Illinois State University, Illinois State Museum, Early American Museum, Henson Robinson Zoo, Miller Park Zoo, Scovill Zoo, Douglas Hart Nature Center, Sugar Grove Nature Center, Illinois Department of Natural Resources main offices, Kankakee River State Park, Wildlife Prairie State Park, Weldon Springs State Park, Illinois and Michigan Canal State Trail, Hennepin Canal Parkway State Trail, cemetery prairies

Natural Resource Commodities

Upland, forest and waterfowl hunting opportunities; fishing opportunities, furs, timber harvest, Illinois-ecotype prairie seeds

Conservation Opportunity Areas

Prairie & Grassland Restoration Areas (locations to be determined)

Protected lands - Establishment of 3 grassland Bird Conservation Areas (>3,000 acres of ecologically-patterned' grassland; see Fitzgerald et al. 2000) in the Grand Prairie Division will require restoration in areas where little habitat currently exists. Management of areas of this size will need to accommodate the conservation of grassland Species in Greatest Need of Conservation and provide recreational opportunities, including ring-necked pheasant hunting. Pheasant Habitat Areas, patches of 80-640 acres (typically <120 acres) managed by the Illinois Department of Natural Resources for public hunting, are sometimes the only significant habitat patch on the landscape. These locations may be a starting point for influencing grassland habitat on a landscape scale. Additional incentives for landowners adjacent to Pheasant Habitat Areas's may promote larger contiguous grassland habitat on private lands, particularly in areas with concentrations of highly-erodible soils.

Goal - Establish and manage grassland landscapes, as described above, for the benefit of grassland Species in Greatest Need of Conservation and offering compatible, high-quality, wildlife-recreation opportunities

Key actions - identify locations with highest restoration potential; modify existing programs to encourage restoration of grassland on private lands

Partners - Illinois Department of Natural Resources, Pheasants Forever, U.S. Department of Agriculture (Natural Resources Conservation Service, Farm Service Agency), Grand Prairie Friends, C2000 Ecosystem Partnerships

Midewin - Des Plaines - Goose Lake Prairie Macrosite

Protected lands - Located in Will county, Midewin is the first tallgrass prairie to be established under federal control. Encompassing over 19,000 acres, it is the largest tallgrass prairie complex in the state, and is second only to Prairie Ridge State Natural Area in the number of nesting area-sensitive grassland bird species. Goose Lake Prairie is the largest native tallgrass prairie remnant in Illinois. Des Plaines Conservation Area provides 2,000 acres of additional grassland habitat.

Key Actions - Restoration and management of tallgrass prairie vegetation are on-going; unnecessary legacy infrastructure (Midewin) and invasive woody vegetation are being removed. The surrounding landscape is vulnerable to exurban and suburban development because of its proximity to Chicago. Preserving open space would help ease the impact of land lost to development and increase an already ecologically important grassland ecosystem.

Partners - U.S. Forest Service, Illinois Department of Natural Resources, The Nature Conservancy

Kankakee Sands - Pembroke Savannas - Kankakee River - Momence Wetlands Area

Protected Lands - Iroquois County State Fish & Wildlife Area, The Nature Conservancy properties

Objectives - Restore and manage an additional 10,000 acres of black oak sand savanna, sand prairie and sand flatwoods within the Kankakee Sands Section; restore and manage 2,000 acres in the Momence Wetlands; restore in-stream habitat and natural process in the Kankakee River in Illinois and Indiana, especially issues of sand bed and sediment load

Key Actions - work across state boundaries to restore channelized streams, stabilize stream banks, manage drainage practices to moderate water flows, and develop minimum flow standards; protect and restore remnant savanna, sand prairie and wetland habitat

Partners - Illinois Department of Natural Resources, State of Indiana, The Nature Conservancy, Illinois Nature Preserves Commission, Northern Illinois Anglers Association

Green River

Lower Fox River

Contributors: Kim Roman, Tom Gargrave, Joe Rogus, Bob Massey, Trent Thomas, Stan Etter, Dan Newhouse, Jay Hayek, Eric Smith, Mike Wefer, and Wade Louis