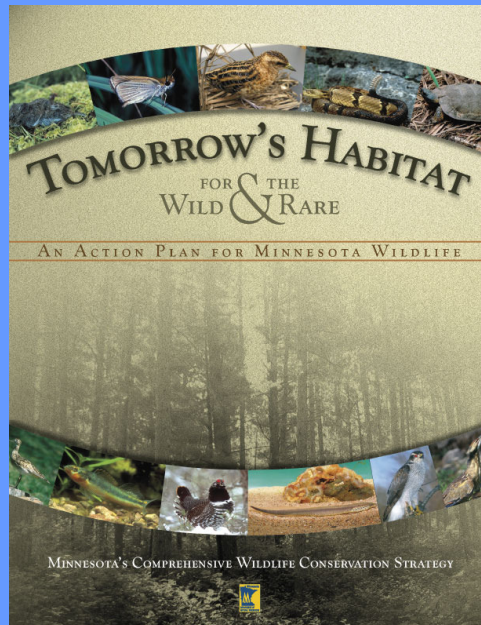


Presentation to Outdoor Heritage Council January 26, 2009



- In 2002, Congress established the State Wildlife Grants (SWG) program to help states fund the unmet needs of wildlife.
- In order to continue to be eligible for SWG funding, states were required to develop a comprehensive wildlife plan that considered all wildlife species and to provide a state match.
- Collectively these plans represent an historic effort to address unmet wildlife conservation needs.
- In Minnesota, over 100 individuals representing more than 40 organizations collaborated in the development of this strategic plan (organizations included TNC, Audubon, NRRI, USGS, USFWS, U of M, DNR).
- Minnesota's plan was completed in September 2005 and approved by USFWS; this plan is also referred to as the State Wildlife Action Plan (SWAP).
- Approval of the plan allowed MN to continue to participate in the program, which has provided MN about \$1.1 million/yr to implement the plan.
- This is not just a rare species plan or nongame wildlife plan, but a comprehensive plan that cuts across all species and habitats in the state.
- Online link to the State Wildlife Action Plan: www.mndnr.gov/cwcs



State Wildlife Action Plan

Focusing on Species
in Greatest Conservation Need
(SGCN) and their habitats.

- Each state developed their own definition and list of species in greatest conservation need (SGCN).
- Minnesota's definition: *Species whose populations are rare, declining, or vulnerable in Minnesota.*
- Nearly 1,200 wildlife species assessed.
- 292 (almost 25%) met the definition.
- Approximately one-half of the SGCN are state-listed species.
- One goal of the SWG program is to keep additional species from reaching listed status.
- Recovery of listed species is much more costly than addressing habitat needs before a species reaches the need for listing.

Minnesota River Prairie

SUBSECTION OVERVIEW

The Minnesota River Prairie is a large subsection that includes part of northwestern Iowa and spreads across southwestern Minnesota into eastern South Dakota. The Minnesota River forms a broad valley, dividing the area in half. This valley once had a continuous band of floodplain forest that extended upstream as far as Lac Qui Parle, with highly unique bedrock exposures. There are 150 lakes larger than 160 acres in the subsection, most of which are shallow. Before settlement by people of European descent, the predominant vegetation was tallgrass prairie and wetlands. Fire was once a common natural disturbance and critical to maintaining native prairie communities.

Today, row-crop agriculture is the predominant land use, and prairie remnants and floodplain forests are rare. A major concern is impacts on water quality from intensive agricultural activities, including use of fertilizers and pesticides, expanding use of pattern tiling, and ditching and draining of small wetlands. Continued loss of the small amount of native upland habitat and over-intensive grazing remain a concern.

SPECIES IN GREATEST CONSERVATION NEED

116 Species in Greatest Conservation Need (SGCN) are known or predicted to occur within the Minnesota River Prairie. These SGCN include 52 species that are federal or state endangered, threatened, or of special concern. The table, SGCN by Taxonomic Group, displays by taxonomic group the number of SGCN that occur in the subsection, as well as the percentage of the total SGCN set represented by each taxon. For example, 10 mammal SGCN are known or predicted to occur in the Minnesota River Prairie, approximately 46% of all mammal SGCN in the state.

SGCN BY TAXONOMIC GROUP

Taxa	# of SGCN	Percentage of SGCN Set by Taxon	Examples of SGCN
Amphibians	1	16.7	Common noddypuppy
Birds	65	67.0	Black tern
Fish	6	12.8	Blue sucker
Insects	11	19.6	Poweshiek skipper
Mammals	10	45.5	Western harvest mouse
Mollusks	12	30.8	Fluted-shell
Reptiles	8	47.1	Five-lined skink
Spiders	3	37.5	Jumping spider (<i>M. grato</i>)

SPECIES SPOTLIGHT


Creek hellgrammite (*Leptogona compressa*)

Distribution: Widespread but spotty distribution in the Mississippi River drainage north of St. Anthony Falls, MN, with sporadic occurrences in other MN river systems, including the Pomme de Terre and Chippewa rivers in western MN.

Abundance: Rare. Present in low numbers in a variety of sites from SW to NE MN, but pollution and siltation of small streams and rivers have greatly reduced suitable habitat.

Legal Status: State list-Special Concern

Comments: Host species include yellow perch, black crappie, slimy sculpin, and ugotin shiner. Management efforts for this mussel need to include consideration of the host species.



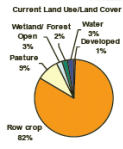
Quick facts

Acres: 9,321,888 (17.3% of state)

Ownership: Public 3.8%, Private 97.2%, Tribal 0.9%

Population density (people/mi²): Current 31.7, Change (2000-2010) +6.5

Current Land Use/Land Cover



HIGHLIGHTS

- The remaining wetlands and grasslands offer excellent habitat for bald eagles, prairie chickens, marbled godwits, upland sandpipers, Richardson's ground squirrels, regal fritillaries, swainson's hawks, Forster's terns, dickcissels, and macket and elitoe martlets.
- This is an important nesting area for prairie ducks and is also a major migratory corridor in the Mississippi Flyway.
- The Minnesota River provides habitat for paddlefish, muskies, and softshell turtles, while associated dry grasslands provide habitat for bullsnakes and western hognose snakes, and four-toed shrews in upland riparian forests.
- Areas important for SGCN include Lac qui Parle and Swan Lake WMA, Big Stone NWR, Sibley, Monson Lake, Upper Sioux Agency, and Lac qui Parle SPs; The Nature Conservancy's Chippewa Prairie, and many SNAs and WPAs.

25 Subsection profiles

The subsection profiles are the heart of the State Wildlife Action Plan

- 6 pages of rich, accessible information:
 - Overview
 - Species found in the subsections
 - Key habitats in the subsections
 - Conservation actions specific to the subsections

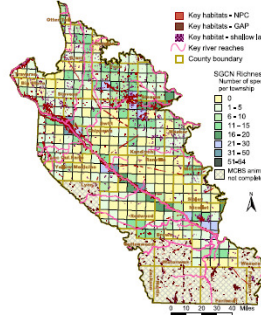
- Plan focuses on habitats rather than individual species.
- Plan organized around the 25 ecological subsections in the state, consistent with an ecological systems and landscape level approach.
- Analyses were conducted to determine how habitats have changes in the last 100 years and the most important or key habitats for SGCN in each subsection.
- Combining species distribution and habitat change information, the plan identified priority conservation actions within each subsection.

Key Habitats in this subsection:

- Prairie
- Non-forested wetlands
- Shallow lakes
- Rivers – Very large (Minnesota River)
- Shoreline/rock outcrops

Minnesota River Prairie

DISTRIBUTION OF KEY HABITATS AND SPECIES RICHNESS BY TOWNSHIP



This map depicts key habitats and the number of species of SGCN per township based on the sources listed below. It suggests there is often a relationship between key habitats and species richness (i.e., the variety of species of SGCN in a township).

Sources:

Major River-Camellia Trees in Minnesota, 1984

MCB's Shoreland Committee (SCS), 2003

MCB's Railroad Right-of-Way Prairie

MD DNR MCB Rivers and Streams, 2005

MD DNR County Biological Survey (CBCS), 2003

MD DNR Fish Database, 2003

MD DNR Wetland Inventory, 2003

MD DNR Wetland Inventory, 2003

MD GAP Landcover, 1993

Shallow Lakes in Minnesota, 2003

The Minnesota Game and Fish Commission, 2003

For more information on how this map was constructed, please see the [Minnesota Prairie Overview in Chapter 3](#).

SUBSECTION HABITAT PERCENTAGES AND HABITAT USE BY SGCN TAXA

This table presents information on the percentages for each habitat in the subsection (showing changes in coverage between the mid- to late 1800s and the 1990s), as well as habitat use by SGCN taxonomic group. Habitats are listed in ranked order for percent coverage within the subsection in the 1990s. Key habitats for the subsection (as identified on previous page) are listed in **BOLD**. SGCN habitat use is broken down by taxonomic group, with a total number of species for all taxonomic groups listed at the far right of the table.

HABITAT	Percentage of Subsection (1890s)	Percentage of Subsection (1990s)	SGCN BY TAXONOMIC GROUP						
			Amphibians	Birds	Fish	Insects	Mammals	Reptiles	Total Number of Species
Cropland	N/A	83.0		7		5	1		13
Grassland	N/A	9.0		20	1	10	6	1	38
Lake-Shallow	N/A	2.1		14	1		2		17
Wetland-Nonforest	13.0	1.9		34	1	2	2		41
Forest-Upland Deciduous (Hardwood)	1.5	1.6		14		4	3		21
Developed	N/A	0.8		4		3	1		8
Oak-Savanna	1.9	0.5		15	1	7	5		28
Lake-Deep	N/A	0.4		1	2	3	1		7
Forest-Lowland Deciduous	1.5	0.4		14		2	1		17
Forest-Lowland Coniferous	0.0	0.2		8			1		9
Forest-Upland Deciduous (Non-hardwood)	0.8	0.1		12		2			14
Prairie	77.6	0.0		19	10	10	7	3	49
Forest-Upland Coniferous	0.0	0.0		13		3	3		19
Shoreline-dune/cliff talus	N/A	N/A		11		3	2		16
Shrub-Lowland	N/A	N/A		15		3	1		19
River-Headwater to Large	N/A	N/A		1	2	4	8	2	17
River-Very Large (Minnesota River)	N/A	N/A		1	1	2	10	2	16

N/A: Insufficient data available to determine percent coverage within subsection. We have no data to indicate the existence of cropland, prairie, or developed land prior to settlement by people of European descent, although these land uses likely did occur at very low levels.

NOTE: 0.0 indicates less than 0.05 percent coverage.

Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife

217

- Minnesota River Prairie Subsection key habitats: prairie, nonforested wetlands, shallow lakes, rivers, shorelines and rock outcrops.
- Many key habitats occur on SNAs, WMAs and other protected sites and are critical to maintaining and increasing populations of SGCN and other wildlife species.
- An example of a priority conservation action in this subsection is: use of fire and other management actions to maintain prairie.

Implementation

- Prairie and savanna
- Wetlands
- Rivers and streams
- Lowland conifer forest
- Upland conifer forest
- Lake shorelands



•DNR is using the information from TH to help guide its work; six key habitats were identified (listed above).

•Focusing efforts at a systems level to affect on-the-ground benefits for SGCN and other wildlife.

Examples include:

-Restoration of the Red River Watershed – dam removals and modifications, fishways, and stream channel restoration have increased fishing opportunities and enabled the reintroduction of lake sturgeon.

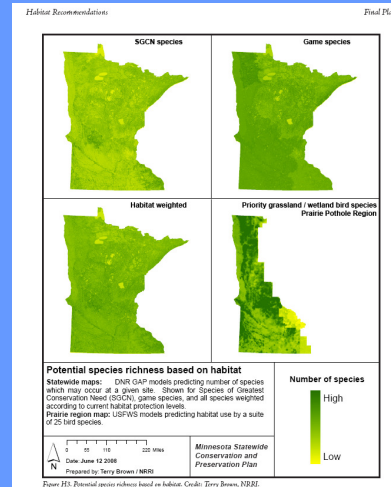
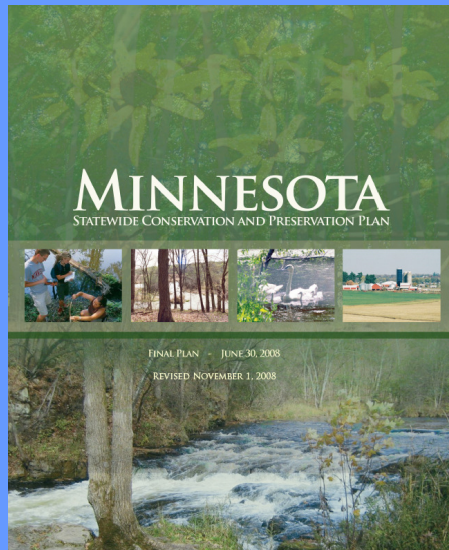
-Reconnecting prairie – in partnership with The Conservation Fund and the Doris Duke Charitable Foundation, DNR acquired a 218-acre Native Prairie Bank parcel to help link two parts of The Nature Conservancy's Plover Prairie Preserve, completing a corridor of protected wildlife habitat stretching from Big Stone National Wildlife Refuge in the west to the Lac Qui Parle Wildlife Management Area in the east. The entire complex, totaling more than 42,500 acres, supports SGCN such as greater prairie chicken, marbled godwit, upland sandpiper and the poweshiek skipper, a rare butterfly.

Protection, Enhancement and Restoration Potential FY10 - 13

Acquisition	Restoration/Enhancement
<ul style="list-style-type: none"> • Scientific and Natural Areas - 6000 acres - \$25 M • Native Prairie Bank Easements - 7000 acres - \$12M 	<ul style="list-style-type: none"> • Prairie/ savanna restoration - 25,000 acres - \$30 M • Forest & peatlands (SNA) - 14,000 acres - \$9 M • Stream restoration - 21 projects - \$17 M

- Using the key habitat information from the Plan is one criterion the LOHC might use for prioritizing proposals.
- Focusing on protecting and restoring key habitats provides broad benefits to wildlife because it promotes biodiversity and resiliency in our ecosystems.
- Resilient and diverse ecosystems are best able to adapt to major disturbances such as climate change and invasive species.

Links to other plans: Statewide Conservation and Preservation Plan



- Info from the plan was used in the development of the Statewide Conservation and Preservation Plan.
- SGCN and key habitat data used by the State Conservation and Preservation Plan aquatic and terrestrial analysis groups to develop priority maps, and habitat protection recommendations.
- Map on the right shows how information from the plan was used to help develop models of where the priority grasslands are for wetland bird species in the prairie pothole region.

Links to other plans:



- Species of Greatest Conservation Need (SGCNs) will have healthy and sustainable population levels.

Strategies:

Habitat protection and restoration work should focus on key habitats of prairie, lowland hardwood forests and wetlands. Some of the region's distinctive species that will benefit include the:

American avocet	Marbled godwit
Dunlin	Semi-palmated sandpiper
Franklin's ground squirrel	Swainson's hawk
Lesser scaup	White-rumped sandpiper

Protect and establish wildlife corridors and connect existing conservation areas where possible.

Coordinate the habitat plans listed below to ensure maximum gains for habitat that benefits Species of Greatest Conservation Need.

- Info from plan used at regional Campaign for Conservation workshops which resulted in specific goals for SGCN and habitats being developed at regional levels.

Other efforts that could help the LOHC:

- Minnesota's County Biological Survey identifies sites of high and outstanding biodiversity.
- These areas often represent key habitats for SGCN and other wildlife species.

Summary Points

- 1) The plan provides information on key habitats and priority conservation actions that can help the LOHC prioritize funding recommendations.
- 2) This is a comprehensive wildlife plan representing the collaborative efforts of a diverse cross section of conservation interests.
- 3) This plan is consistent with and provided information for the Minnesota Statewide Conservation and Preservation Plan and the Campaign for Conservation's Fifty-Year Vision.

A Tool to Help Prioritize Conservation of Minnesota's Fish and Wildlife Habitat

Prairies

Key habitats for conservation investments
-Native prairie & savanna
-Working grasslands

- Protect and manage native prairie and adjacent grasslands.
- Manage invasive species
- Use prescribed fires and rotational grazing to enhance native prairie habitats
- Prioritize acquisition and easement efforts that reconnect important habitats



Poweshiek skipper



Greater prairie chicken

Reconnecting a Prairie: In partnership with The Conservation Fund and Doris Duke Charitable Foundation, acquired a 218-acre Native Prairie Bank Easement that links The Nature Conservancy's Plover Prairie Preserve and a habitat corridor from Big Stone National Wildlife Refuge to the Lac Qui Parle Wildlife Management Area. The entire complex, totaling more than 42,500 acres of protected land, supports greater prairie chicken, marbled godwit, Wilson's phalarope, upland sandpiper, and two rare butterfly species: the regal fritillary and poweshiek skipper.

Restoring Bluffland Prairie Habitat: Known for remnant goat prairies, steep bluffs, and cold-water trout streams, the blufflands of southeastern Minnesota are home to the richest complement of rare species in the state. In partnership with the National Wild Turkey Federation, the Minnesota Land Trust, and private landowners, critical habitats are being restored and protected for timber rattlesnake, wild turkey, and other species.



Wild Turkey



Timber Rattlesnake

Wetlands & Waters

Key habitats for conservation investments:
-Shorelines & riparian areas
-Key river reaches

- Enforce the Wetland Conservation Act
- Restore natural flow regimes and channel shapes
- Reconnect channels and riparian habitats
- Manage invasive species and enhance native vegetation in shoreline and wetland habitats

Reconnecting a River – Dam Removal: Removal of the East Grand Forks dam now allows upstream passage of an important fish species, lake sturgeon. Once thriving in the Red River basin, populations have suffered from spawning disruptions due to structural barriers such as dams.



Lake sturgeon



restoration showing meandering stream



habitat improvement in meander

bird species, including western grebe, red-necked grebe, and Forster's tern. A whole-lake treatment was implemented in 2003 to improve the deteriorated condition characterized by poor water quality, a sparse community of submerged plants, and limited suitability for diving ducks and other wildlife species. Over 300 western grebe nests were counted in 2005, presumably responding to suitable prey fish. Lake signals were identified to help anticipate when the lake is entering a transition from a clear to a turbid water state.

Restoring Shape and Flow – ditch conversion: The springbrook channel in northwestern Minnesota was a perennial road ditch in a flood-prone area. Restoration of the meandering stream provides flood protection for both the road and fields, and provides important habitat for sharp-tail grouse, wood duck and many other species.

Enhancing Habitat in a Shallow Lake: A 3,949-acre shallow lake in west-central Minnesota, Lake Christina is nationally recognized as a critical staging area for migrating canvasbacks, and as a breeding spot for many

Forests

Key habitats for conservation investments
-Upland conifer forest
-Lowland conifer forest

- Use silvicultural practices to maintain or enhance key habitats while providing sustainable timber harvest
- Manage with a landscape level perspective to maintain a diversity of forest habitats, avoid habitat fragmentation, and address invasive species
- Prioritize acquisition and easement efforts that protect key forest habitats
- Manage forests to maintain or improve water quantity and quality

Managing a Forest System: An ecological report on the 40,000-acre Headwaters region is informing a public-private collaborative on how to manage forests at a landscape scale that incorporates biodiversity values. The site is the headwaters of four rivers: the St. Louis, the Stony, the Dunka, and South Branch Partridge. Managing this large tract of forests, fens, and waters as an integrated system will conserve the valuable fishery and protect habitat for wildlife and rare plant populations.

Protecting and Restoring a Forest Corridor: The Franconia-Scandia Corridor Project encompasses 6,700 acres located within the St. Croix National Scenic Riverway. It contains the full range of riverway native plant communities, from floodplain forests, cliffs, seepage swamps, and prairies to pine forests. Wildlife includes Louisiana waterthrush, wood turtle, and the gilt darter, a rare fish that occurs in Minnesota only in the St. Croix River. Partners in protection and habitat restoration include: Franconia Township, City of Scandia, Chisago and Washington counties, Trust for Public Land, MN Land Trust, St. Croix River Association, St. Croix Scenic Coalition, St. Croix Conservation Collaborative, Audubon Society, Sierra Club, Great River Greening, Carnelian Marine Watershed District, and the National Park Service.



upland conifer forest



lowland conifer forest



wood turtle



gilt darter