

Identifying and Prioritizing Crucial Wildlife Habitats and Migratory Corridors in the Northern Great Plains

3rd Annual Nebraska Wind Power Conference
Kearney, Nebraska
November 10, 2010

Rachel Simpson
Nebraska Natural Heritage Program
Nebraska Game and Parks
Commission



Overall Goal

Develop informational tools to guide siting of wind energy and transmission development such that impacts to wildlife are minimized



Western Governors' Association

19 western U.S. States and
3 U.S. Flag Pacific Islands



*Western Governors' Association
Wildlife Corridors Initiative*



2007: Policy adopted to identify key migration corridors, crucial habitats

2008: Western Governors' Wildlife Council formed

June 2008 Report

Western Governor's Association Wildlife Council Activities

2009: focus on task of developing state-based, compatible regionally 'decision-support systems' (DSSs).

- Landscape-scale wildlife information for proactive use by all decision-makers.
- MOU signed by Western Governors and Secretaries of Agriculture, Energy & Interior: agencies to assist WGA in developing state-based DSSs that integrate data about wildlife, corridors and crucial habitat

Western Governor's Association Wildlife Council Activities

2010: Department of Energy funds 2-year pilot efforts towards creation of DSSs.

- 8 multi-state/multi-jurisdictional projects



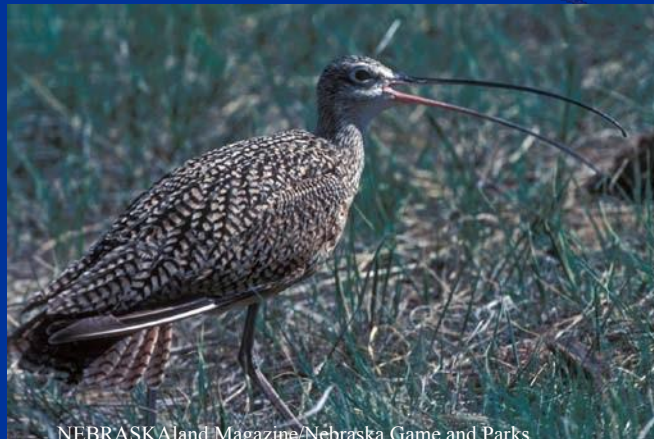
State Wildlife Pilot Projects

- GIS-based and publically available
- Transparent information on crucial habitat and corridors produced
- Allows states to develop a regional picture of crucial habitat and corridors across jurisdictions
- Not a substitute for on-ground site evaluations



State Wildlife Pilot Projects

- What is being piloted?
 - ability of state wildlife agencies to map shared habitat across political boundaries
 - development of consistent protocols (e.g., standards for defining/collecting data for shared use)
 - scales most useful for showing data, models and analyses for use in proposed energy or other land use projects



NEBRASKAland Magazine/Nebraska Game and Parks
Commission

Northern Great Plains Pilot

Pilot Leads: Nebraska Game and Parks Commission; South Dakota Department of Game, Fish and Parks; North Dakota Game and Fish Department

Partners include Rainwater Basin Joint Venture and South Dakota State University

-
- Develop informational tools to guide siting of wind energy and transmission development such that impacts to wildlife are minimized.
 - Focus on selected species.

Species and Habitats

- Whooping Crane
- Greater Prairie-chicken
- Sharp-tailed Grouse
- Sage Grouse
- Ferruginous Hawk
- Golden Eagle



NEBRASKAland Magazine/Nebraska Game and Parks
Commission



NEBRASKAland Magazine/Nebraska Game and Parks
Commission

Species and Habitats cont'd

- Burrowing owl
- Long-billed Curlew
- Several bat species
- Migratory corridors: whooping crane migratory central corridor, flyway, woodlands along Missouri River
- Habitats: Wetland complexes (prairie playas); potholes, native grasslands; sagebrush, and others

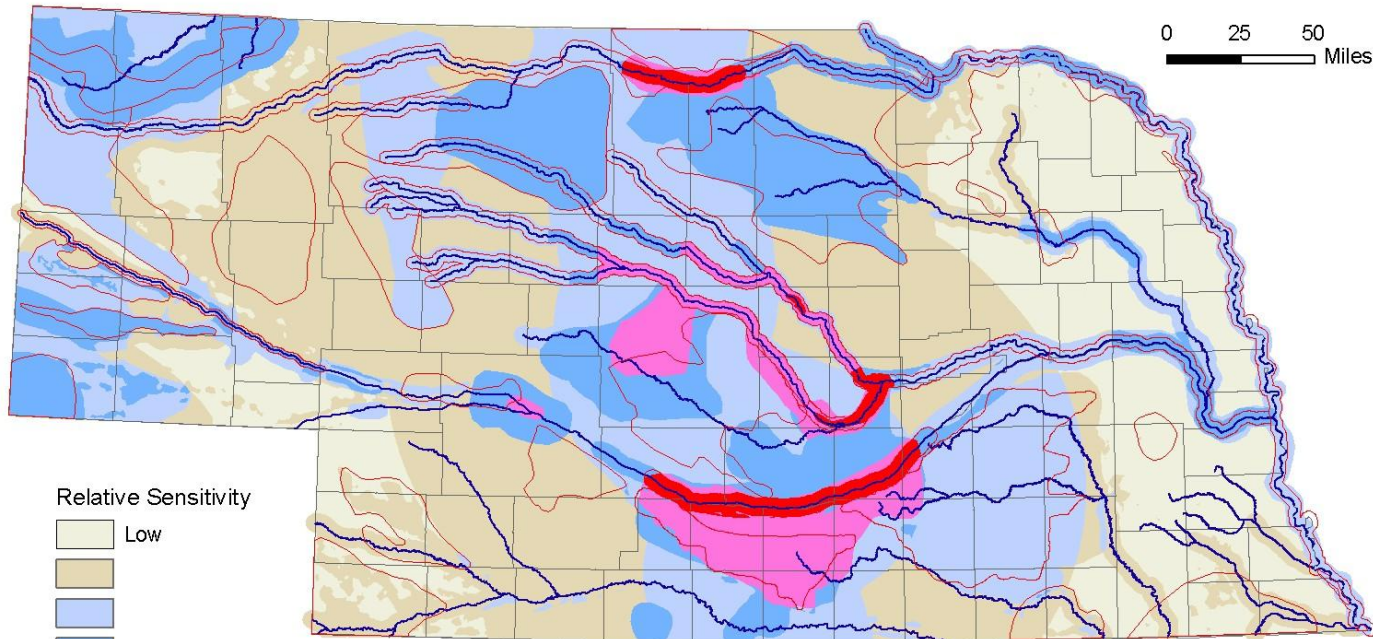


Methods for Data Development

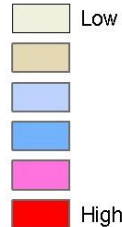
- Because of incomplete species survey data, predictive distribution models will be used.
- Models can be refined as additional information is available.
- Modeling techniques will depend on available data



DRAFT: Wind power and Nebraska's wildlife:
An index of the sensitivity of wildlife habitats to wind power development,
based on selected at-risk species



Relative Sensitivity



Biologically Unique
Landscapes



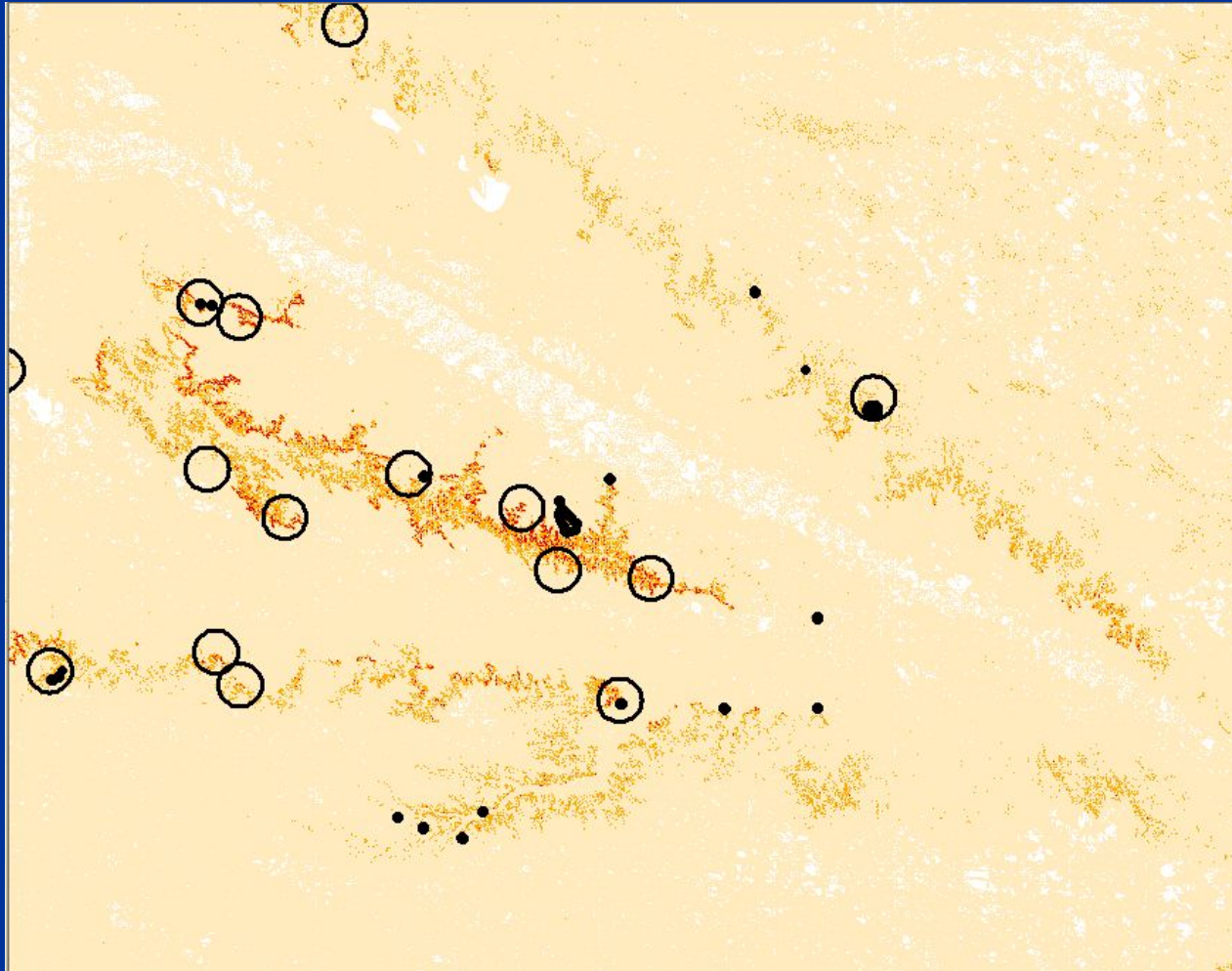
This map was designed to aid in planning for wind power development by identifying areas that are considered relatively more sensitive or less sensitive to such development, with respect to species of concern. This map is not designed to evaluate wind farm siting at specific locations. Even in "low sensitivity" areas shown, there will be specific locations where siting of wind power infrastructure can negatively impact significant biological resources (e.g. remnant tallgrass prairie, listed plant species, etc.). Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service for potential site-specific impacts and potential conservation measures to avoid "take" under the state Nongame and Endangered Species Conservation Act and the federal Endangered Species Act.

See attached document for a description of the information used to develop this map.

Map version date: April 30, 2009

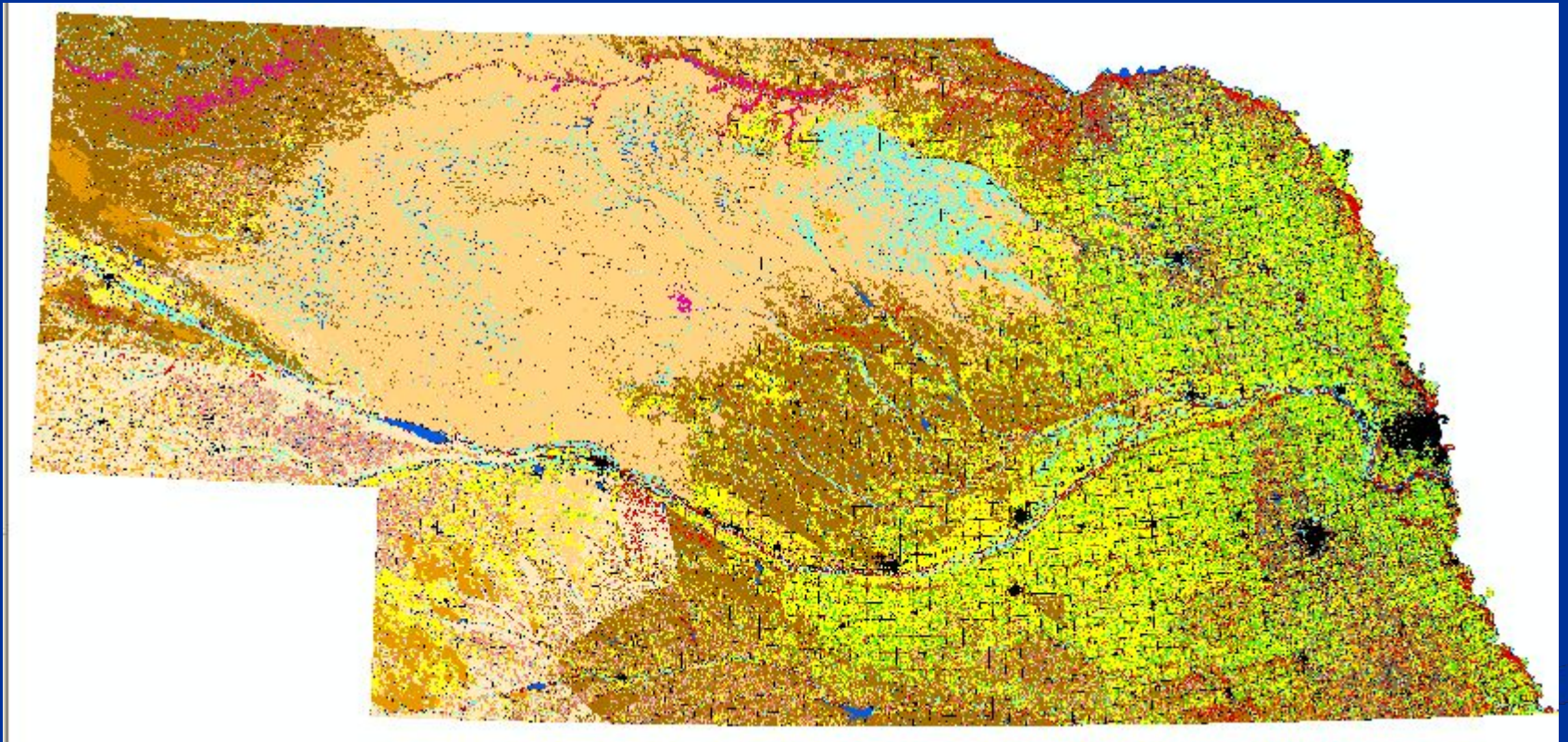


Example of a species-environment association

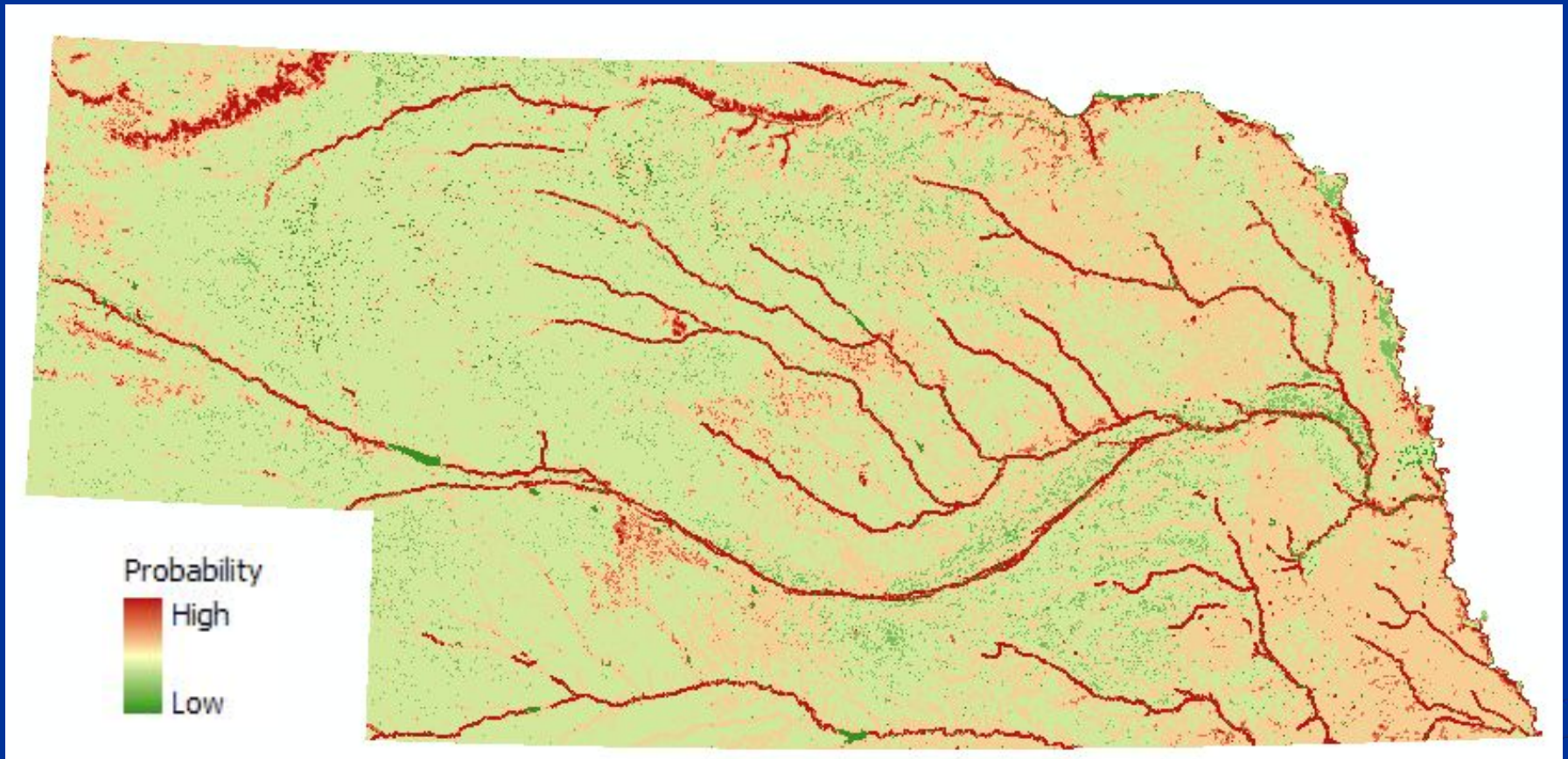


Nebraska Landcover Data

Bishop, Liske-Clark, and Grosse 2009



Example



Project Contacts

Northern Great Plains Pilot

Nebraska:

Rick Schneider (state lead) rick.schneider@nebraska.gov

Rachel Simpson rachel.simpson@nebraska.gov

North Dakota:

Steve Dyke (state lead) sdyke@nd.gov

South Dakota:

Tom Kirschenmann (project lead) tom.kirschenmann@state.sd.us

Silka Kempema (state lead) silka.kempema@state.sd.us

Western Governors' Association and pilot projects

Madeleine West mwest@westgov.org

Paul Orbuch porbuch@westgov.org

WGA website: www.westgov.org