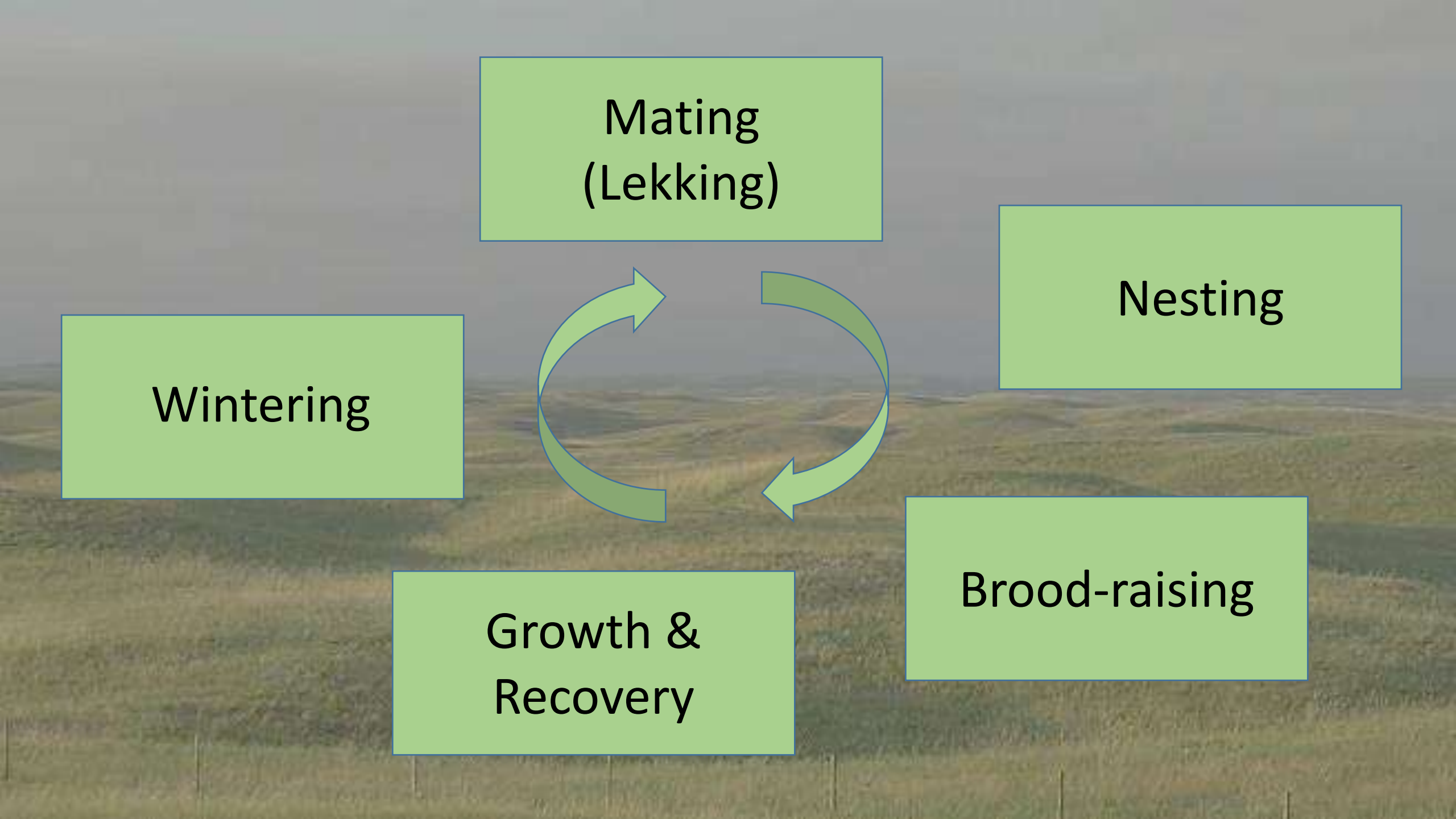
A year in the life of a prairie-chicken in the Sandhills


Mating
(Lekking)
Nesting
Wintering
Brood-raising
Growth &
Recovery

NEBRASKA GAME PARKS

WILDLIFE RESTORATION

Management: lek sites

Management of Lek Sites:

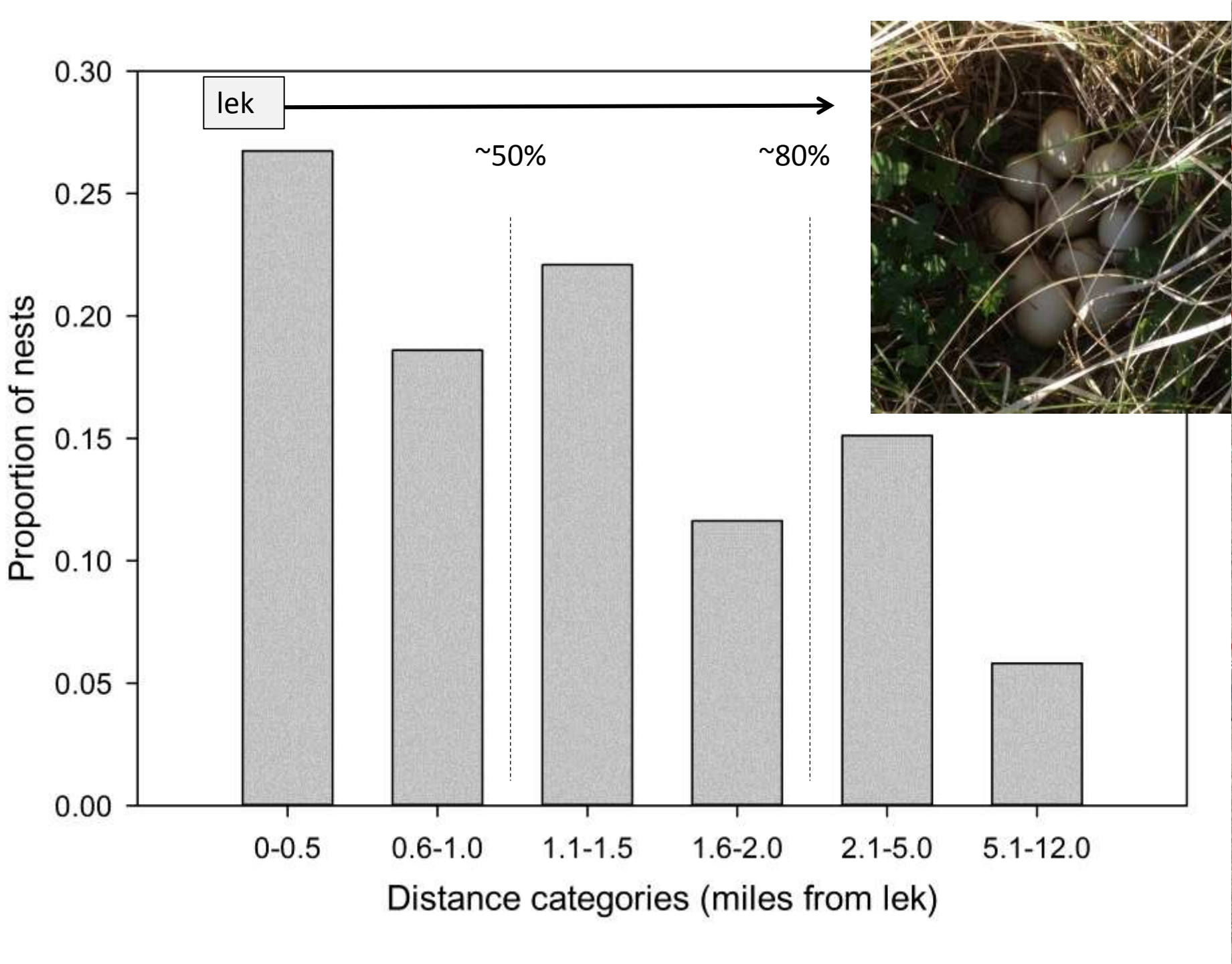
- About ¾ of all leks can be found on subirrigated sites
- Vegetation is short in lek areas—near windmills or hay meadows
- Avoid daily disturbances to the lek.
- Consider removing large trees or poles in the immediate vicinity of the lek if predators harass the birds.

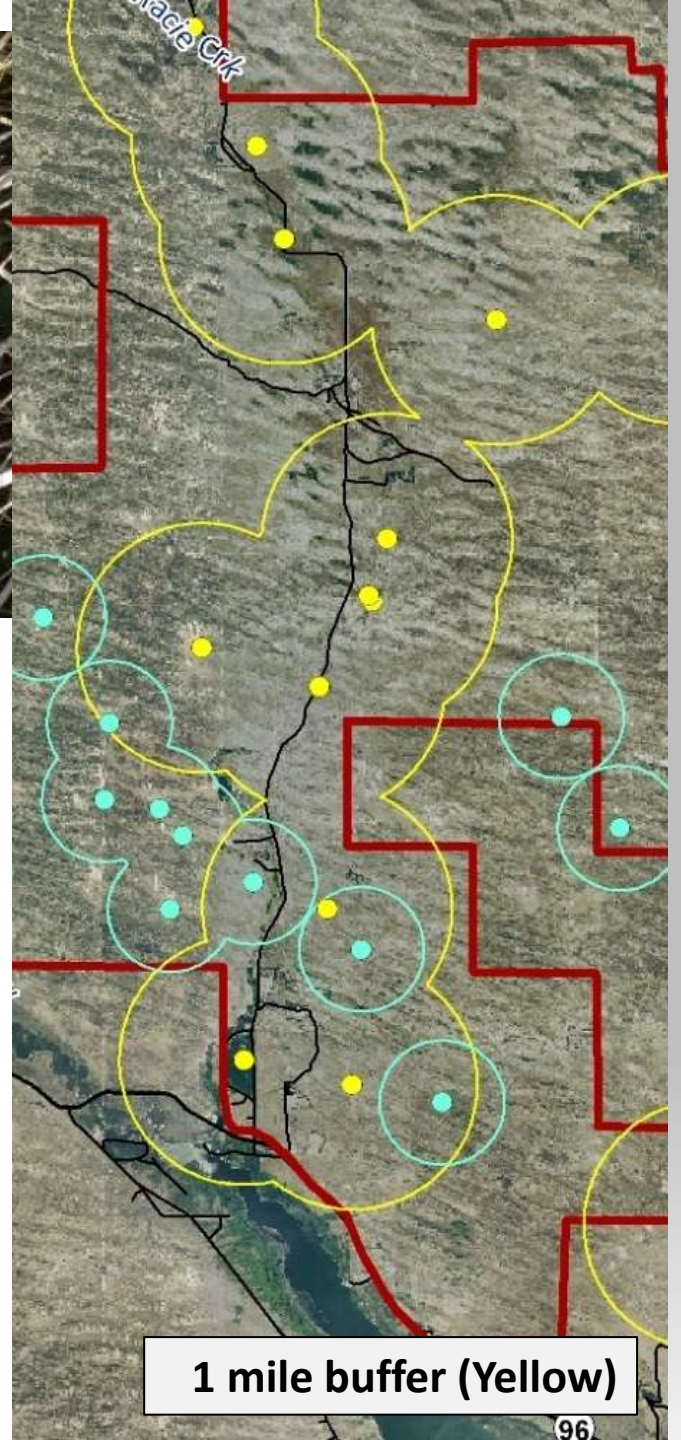
- Keep the vegetation short-cropped by haying and/or heavy grazing.

Prairie Chicken Data Sheet

		Number of Males Counted			
Booming Ground	Location Description	2015	2016	2017	2018
1					
2					
3					
4					
5					

Management: nest sites


lek
~50%
~80%
Proportion of nests
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0-0.5
0.6-1.0
1.1-1.5
1.6-2.0
2.1-5.0
5.1-12.0
Distance categories (miles from lek)

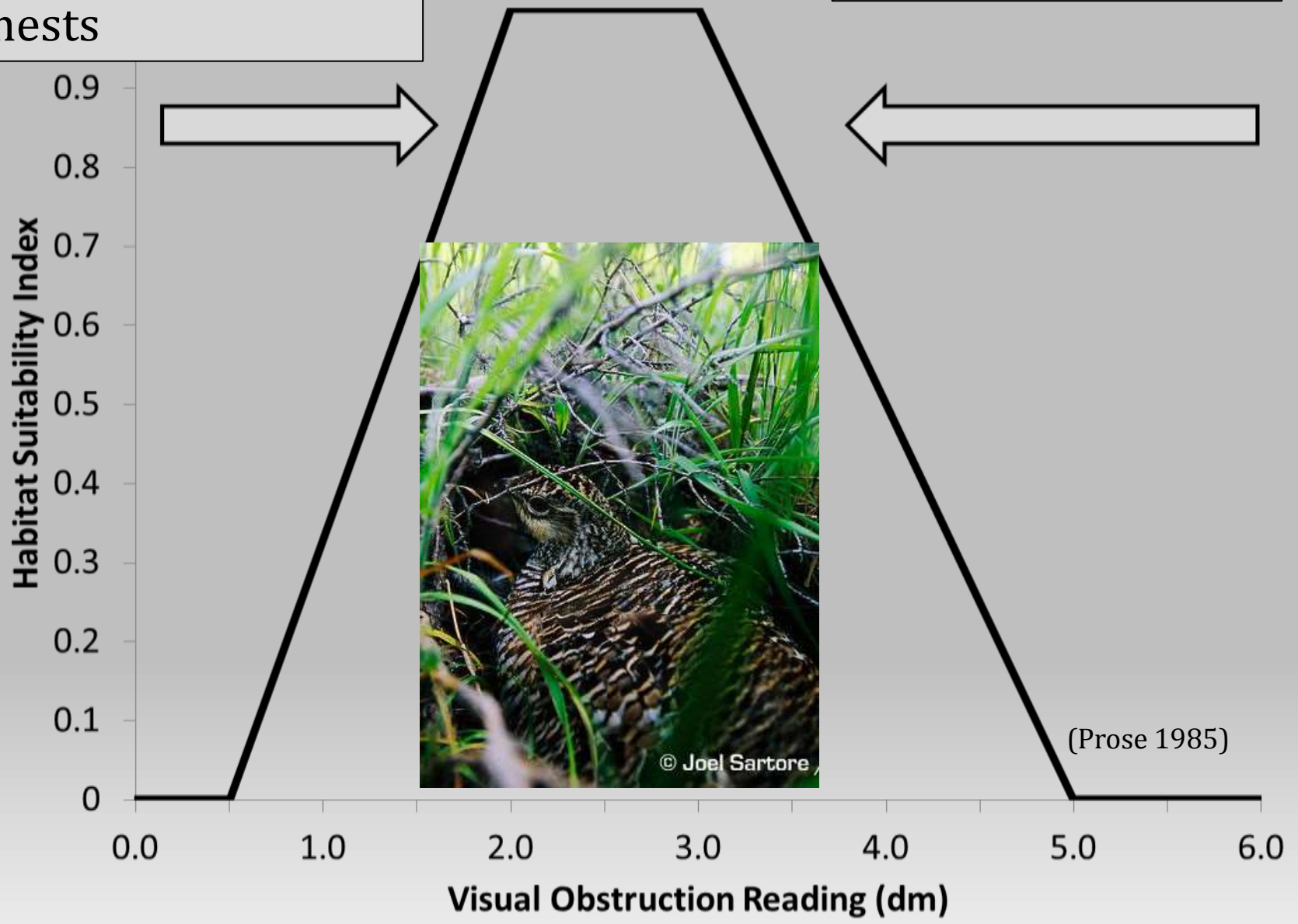

1 mile buffer (Yellow)

Prairie-chicken Breeding Season Facts:

Clutch size: ~10 eggs
Hatch Date: June 13
Nest success: 22%
 # Nests: 1-4
Brood success: ~40%
Hunter Bag: 1.8 juv/ad
Hen Survival (3-wk):
lekking: 0.793
nesting: 0.760
brooding: 0.979

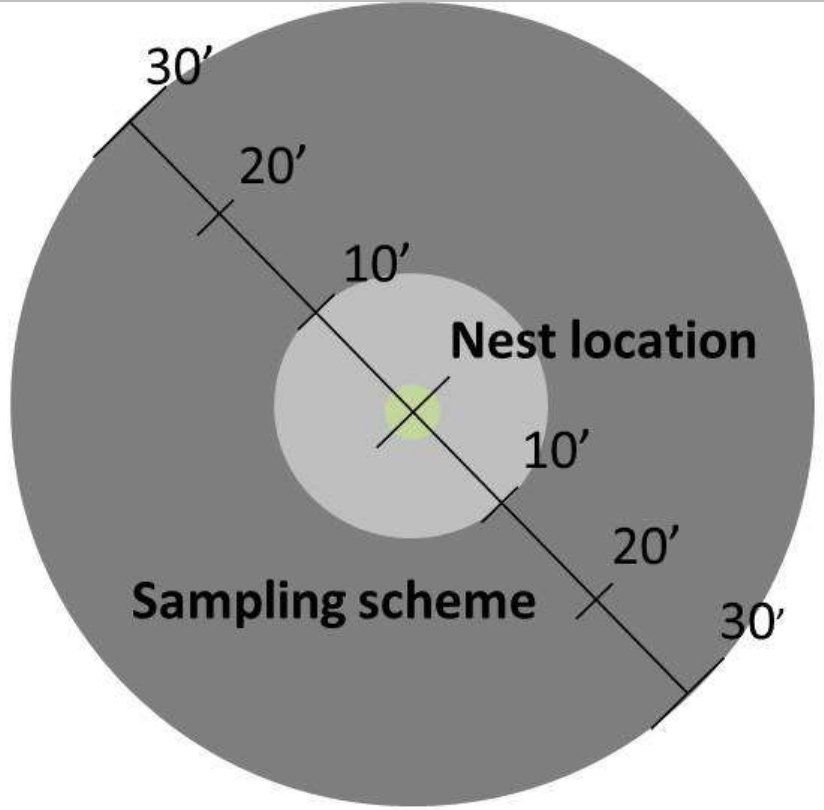
Productivity: concealment of nests

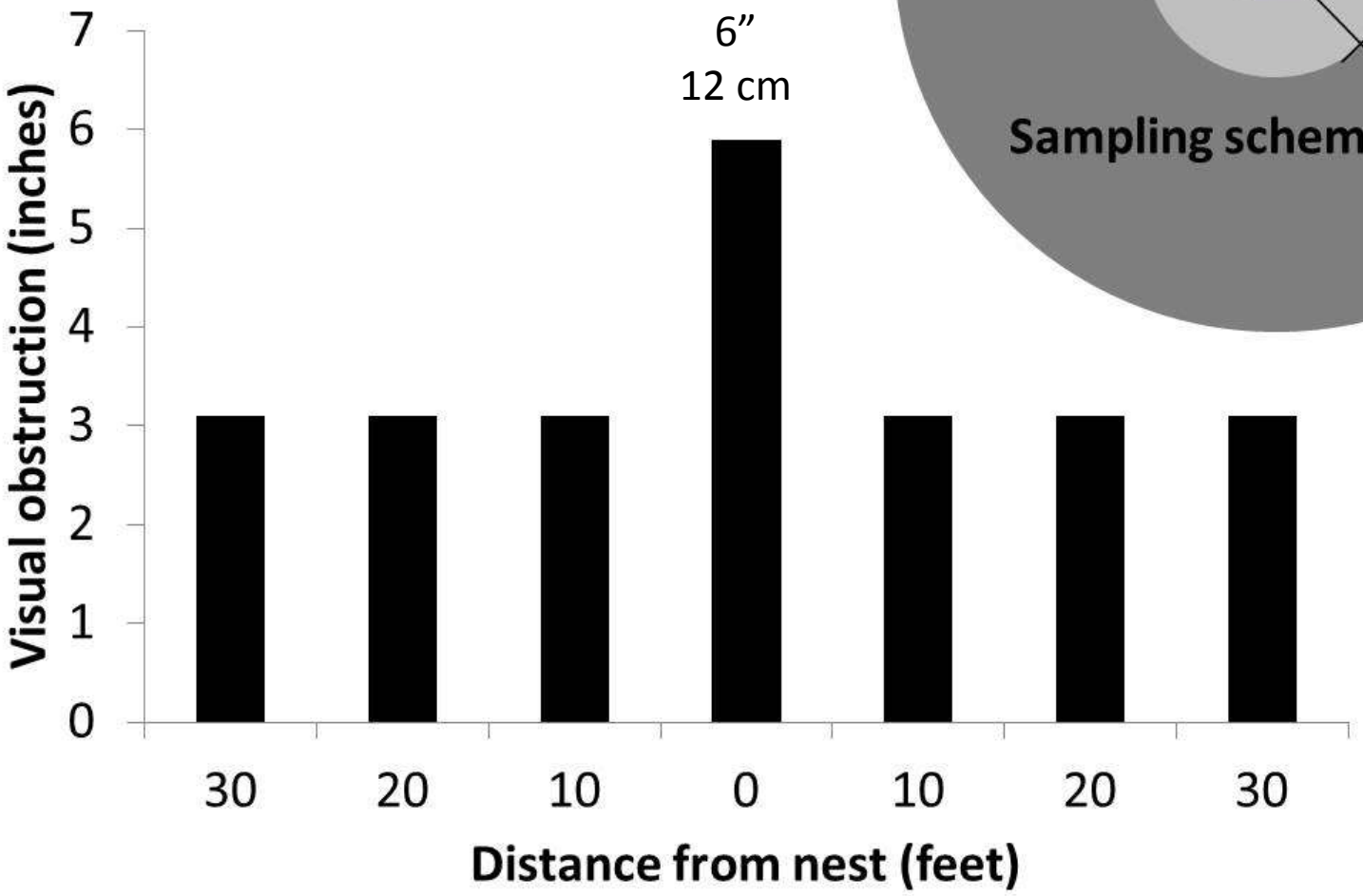
Adult survival: escape of hen

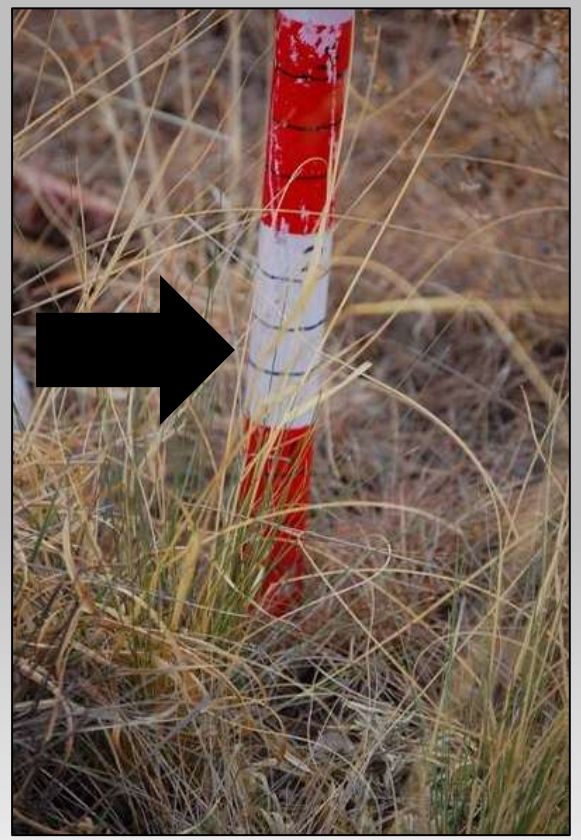


(Prose 1985)

Vegetation measurements: *Prairie-chickens in the Sandhills use sites for nests that have a small patch of vegetation that is taller and denser than the surrounding area.*







Management of Nest Sites:

- Nests commonly in uplands: *sands* or *sandy* sites
- Nesting hens find cover from the previous year's vegetation
- Hens stay near lek sites
- Stock pastures at low-to-moderate rates to leave patchy cover
- Clumps of plants are important--bluestems, rose, and leadplant

- Leave standing dead vegetation through the winter to help females choose their upcoming nests.

Management: brood-rearing sites

Management of Brood-Rearing Sites:

- Chicks die from starvation, chilling, and predation
- Vegetation must be dense to provide shelter but thin enough to allow chicks to move
- Forbs provide food (insects)
- Broods used sands ecological sites
- Females with broods seem to avoid lowlands—probably because of high plant density and the greater abundance of predators (especially snakes).

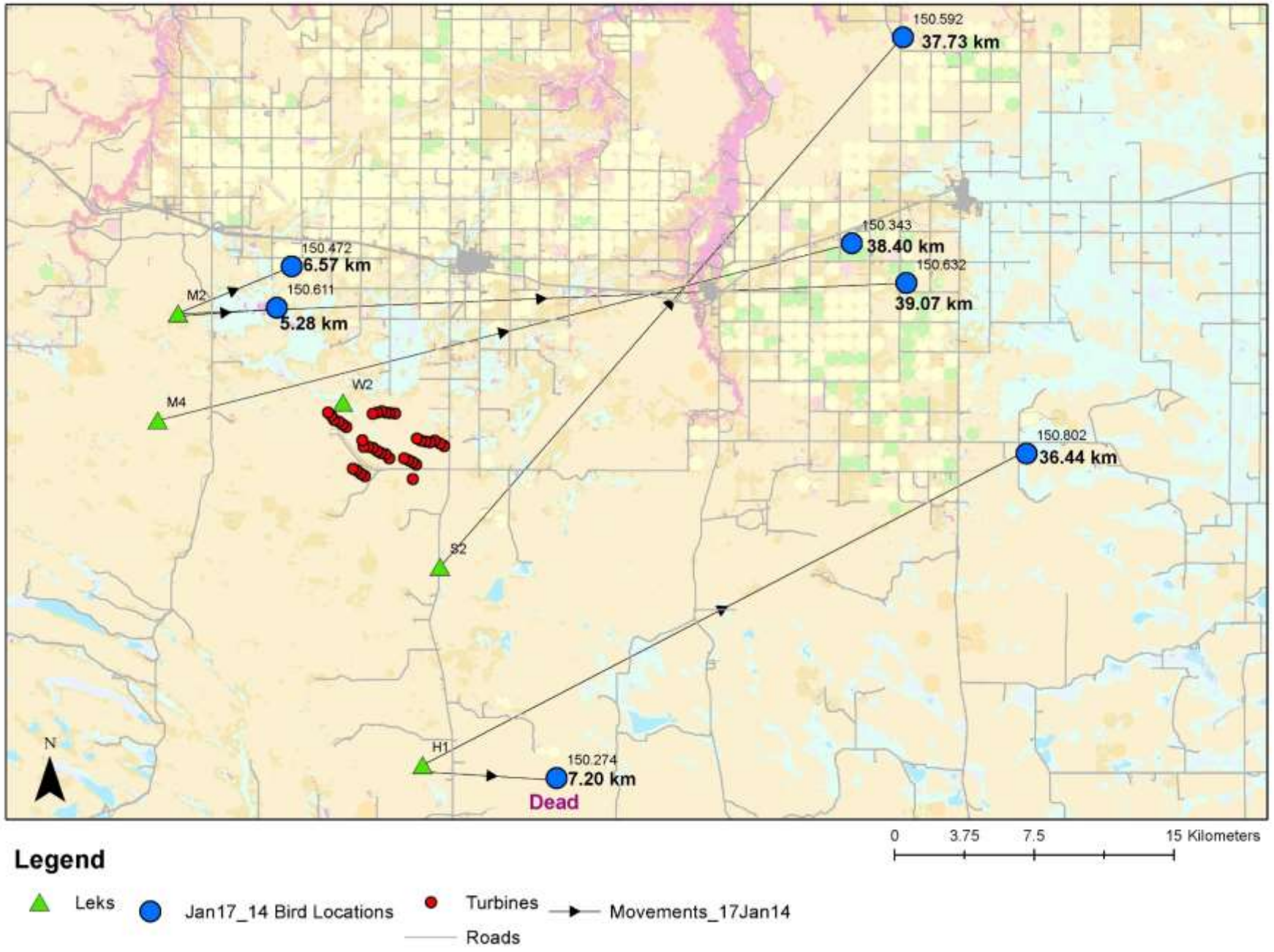
- Graze upland sites so that they have a patchy VOR of about 4 inches.
- Remove smooth bromegrass from brooding sites

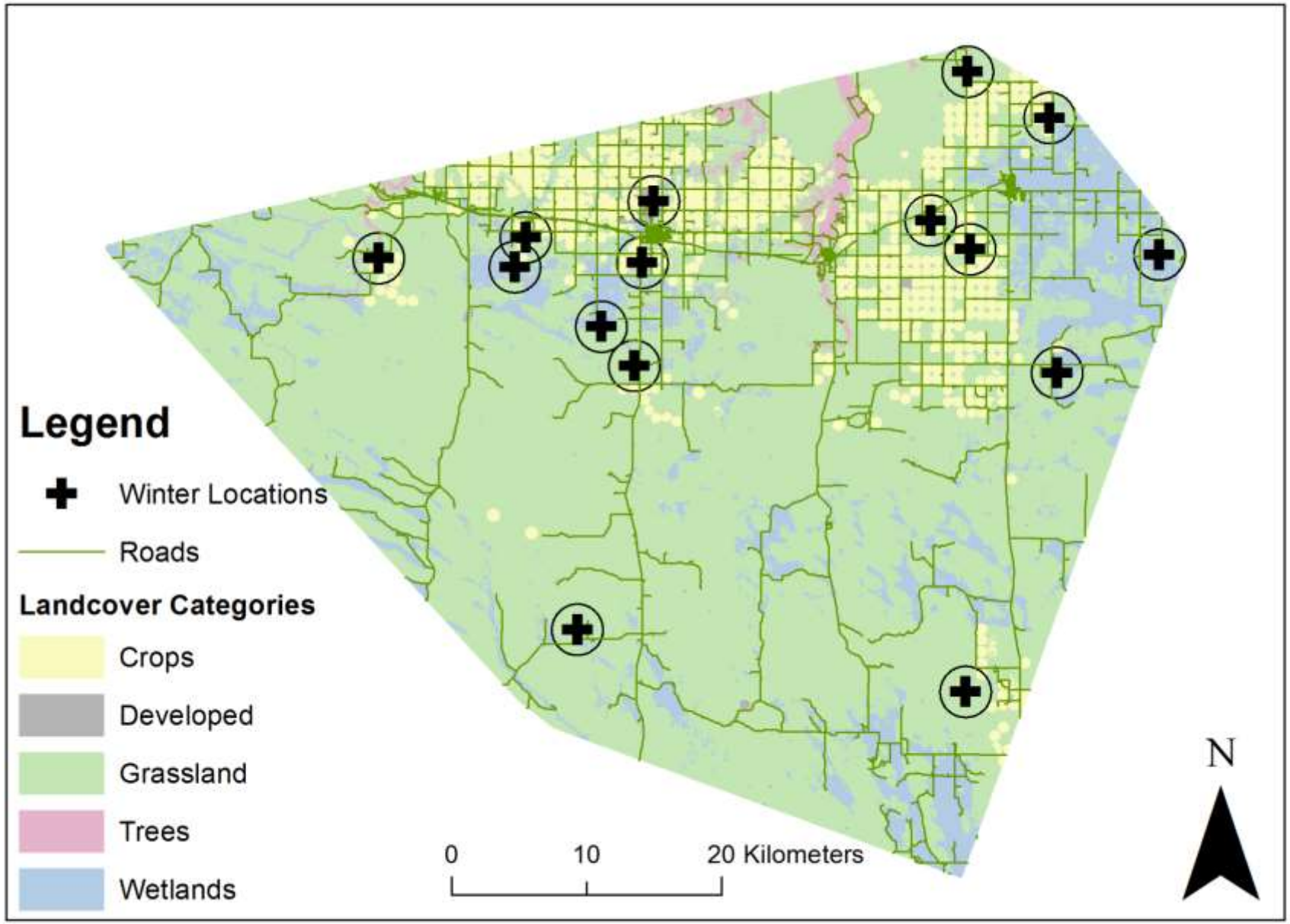
Wintering: closer to crops

Trade-off: Cover vs. food stability

Female Transition: from hills to pivot areas in late October

Males: stay ‘home’?




Legend
Winter Locations
Roads
Landcover Categories
Crops
Developed
Grassland
Trees
Wetlands
0
10
20 Kilometers
N

ECOLOGICAL SITES AND GREATER PRAIRIE CHICKEN MANAGEMENT ZONES

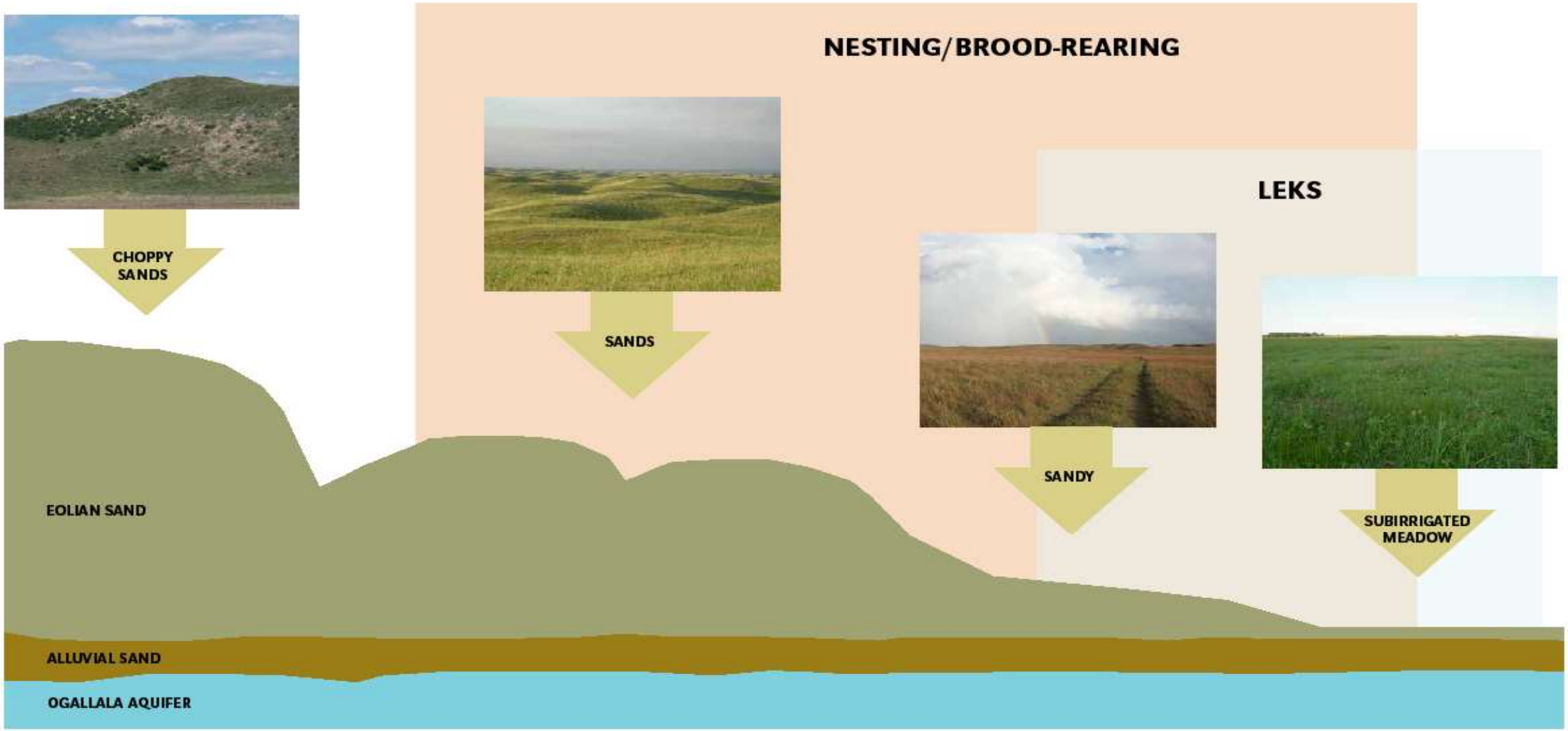


FIGURE 5. Position of ecological sites in the Sandhills of Nebraska in relation to one another and to topographic features.

Summary

- Easy management on uplands of Sandhills with moderate stocking
- Consider the annual cycle and basic needs of these impressive birds
  - Large landscapes needed to support populations
- Landowners can benefit from presence of prairie-chickens

Managing Sandhills Rangelands for Greater Prairie-Chickens

- Habitat guidelines for greater prairie-chicken in the Nebraska Sandhills
  - **Larkin Powell**, Professor, UNL
  - **Walter Schacht**, Professor, UNL
  - **Lars Anderson**, range ecologist, American Prairie Reserve, Montana
  - **Bill Vodenahl**, certified wildlife biologist, NGPC, Bassett
- Funding: Nebraska Game and Parks Commission