

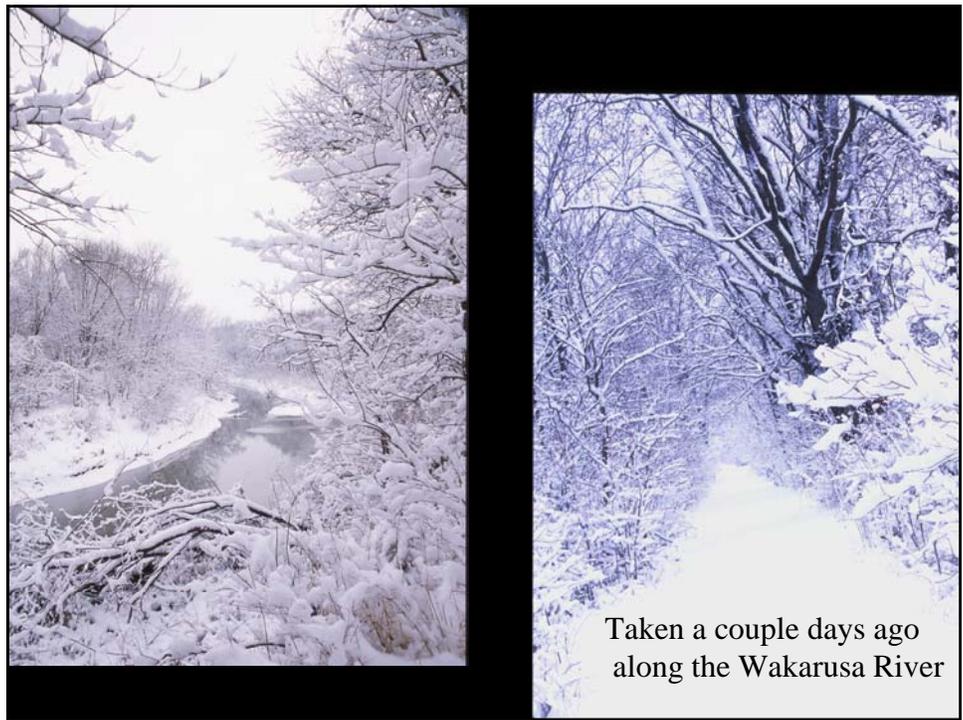
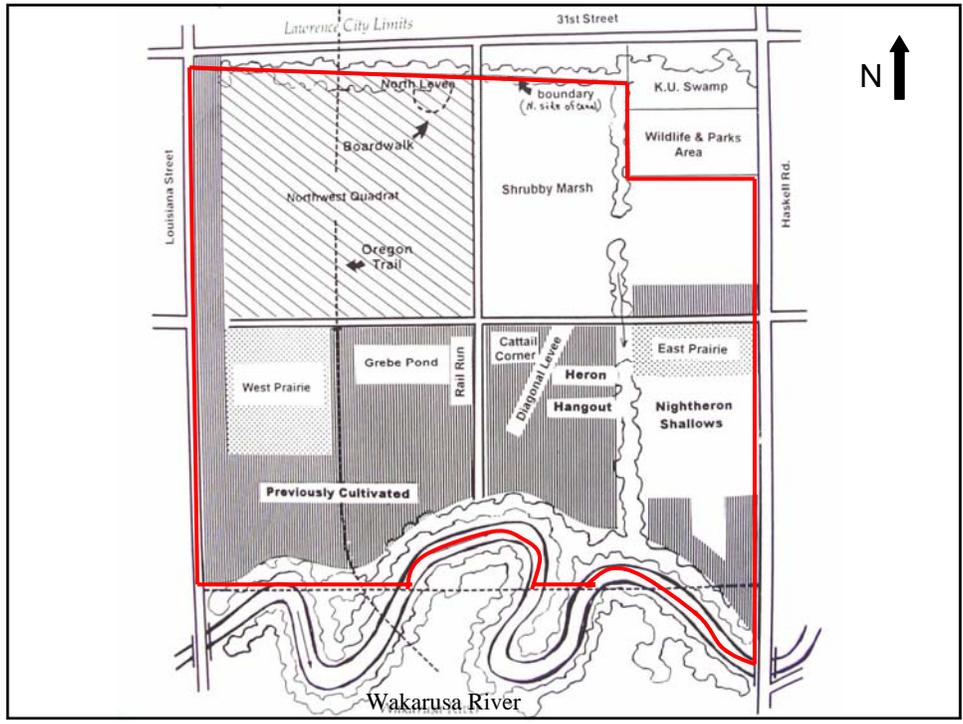
# Welcome to the Baker Wetlands

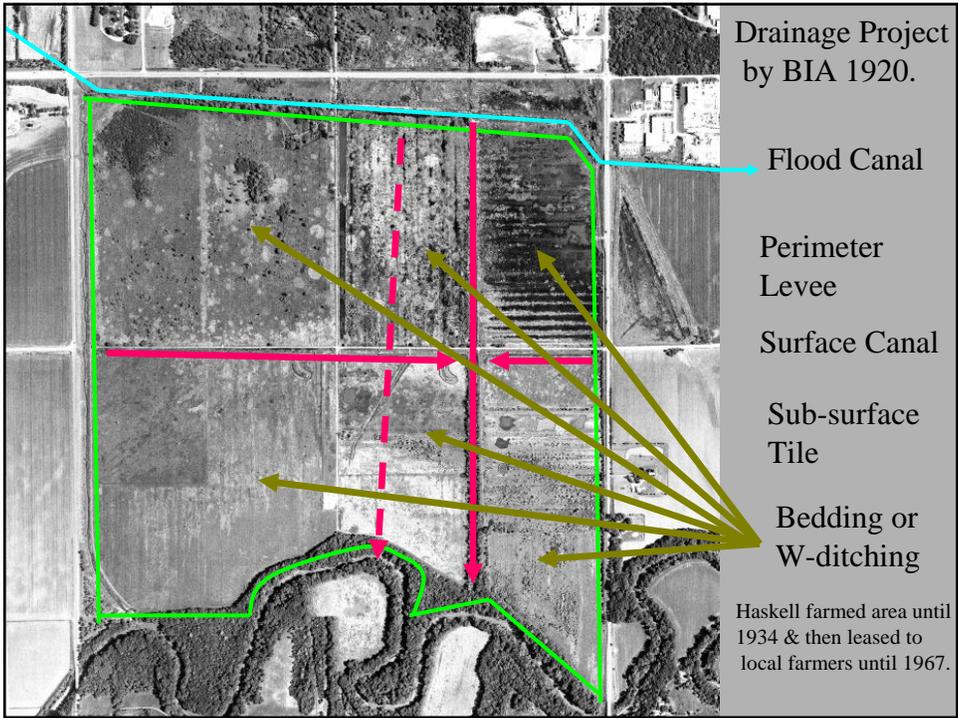
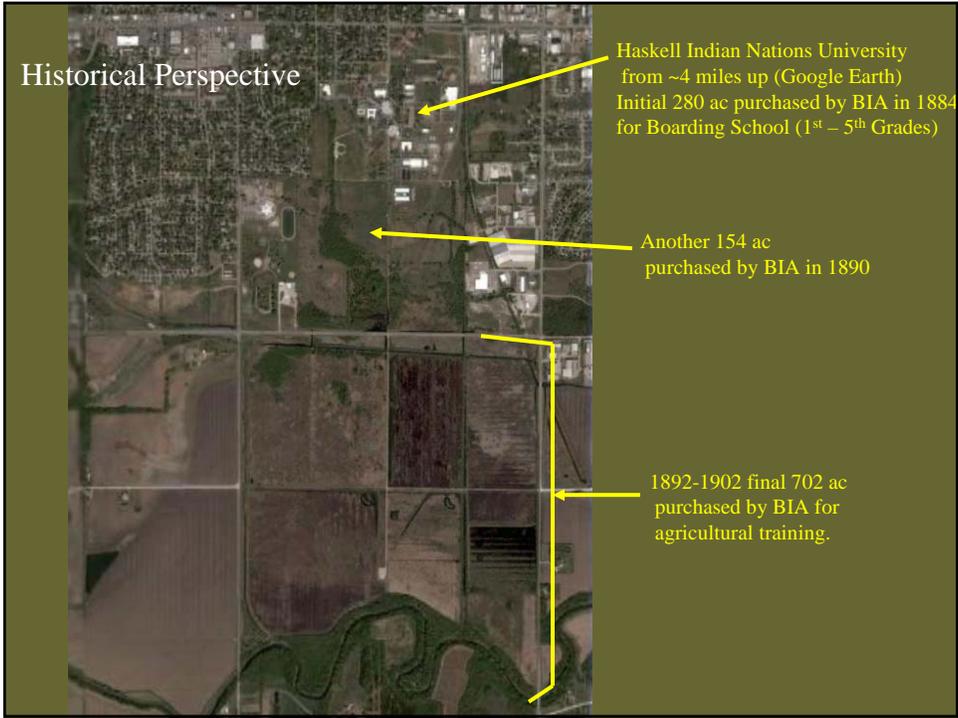
*By Dr. Roger Boyd  
Director of Natural Areas  
Baker University  
Baldwin City, KS*

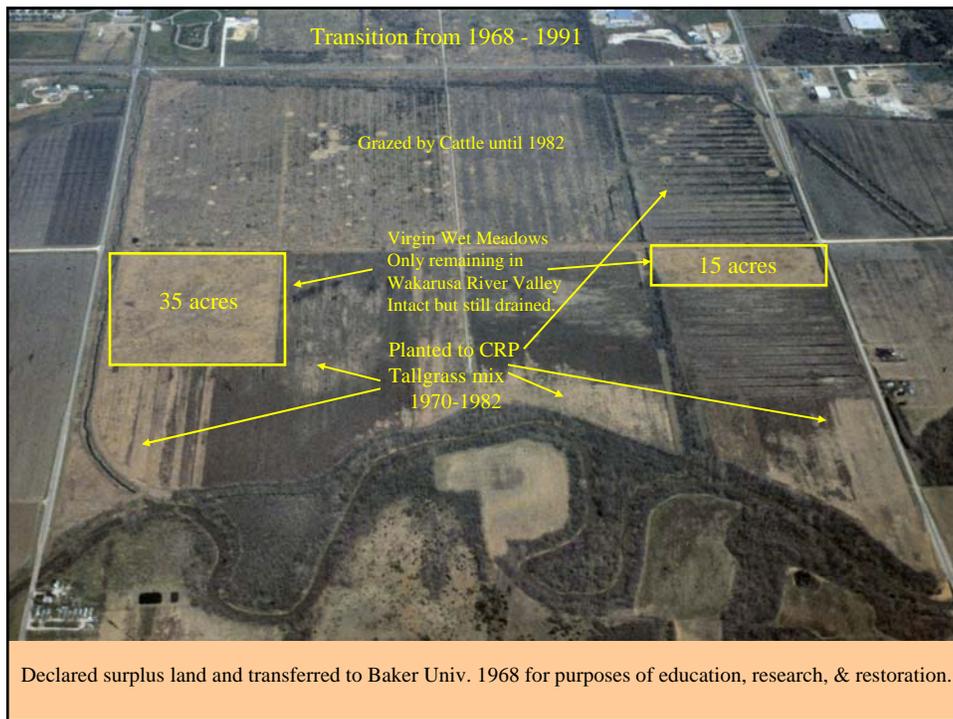
Photos by Ken Highfill  
& R. Boyd unless noted.











Between 1991 and present there have been 12+ projects aimed at restoring native vegetation, re-hydrating the area, and interpretation.

❖ Elevate center road as levee with 3 water control structures

❖ Repair breaks in levee

❖ Install new water control structures

❖ Plug sub-surface drainage system

❖ Create pools and nest boxes

❖ Build ¼ mile boardwalk and information Kiosk

❖ Build observation blind





## Monitoring Techniques

- ❖ Observation wells were installed to monitor water table.



- ❖ Surveys of rodents, birds and herps were conducted to assess diversity and abundance in order to monitor changes.



- ❖ Vegetation was sampled at 64 grid stakes in NW quadrat and compared with SW Virgin Wet Meadow.







Garter Snake &  
Leopard Frog (having a bad day)

Prairie and Speckled Kingsnake  
have decreased while these  
have increased:  
Common Garter Snake  
Ribbon Snake  
Graham's Crayfish Snake  
Northern Watersnake



Western Painted Turtle  
has increased primarily  
due to beaver dams on  
the north canal.

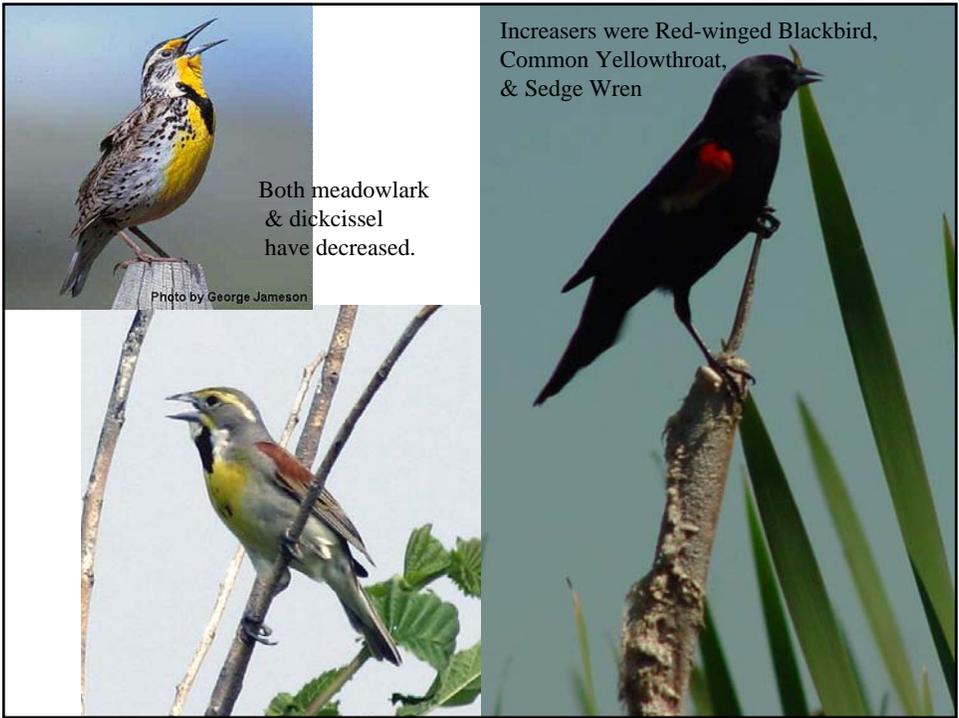


Blue-winged Teal mating

Duck migration and breeding has increased dramatically.

Bald Eagles often visit during waterfowl migration

Young Wood Ducks



Both meadowlark & dickcissel have decreased.

Increases were Red-winged Blackbird, Common Yellowthroat, & Sedge Wren

Photo by George Jameson



Sora Rail

Great Egrets at fishin' hole

Increases with seasonal pools and hydrophytic vegetation.



Young Barn Owls

Barn Owl Pellets are used to assess rodent diversity.

Prairie Voles have stayed the same but Southern Bog Lemmings increased.



B.L. Clauson



S. Holt

Mink



K. Zyskowski

Beaver

Muskrat

All increased with bodies of open water.



E.R. Hall

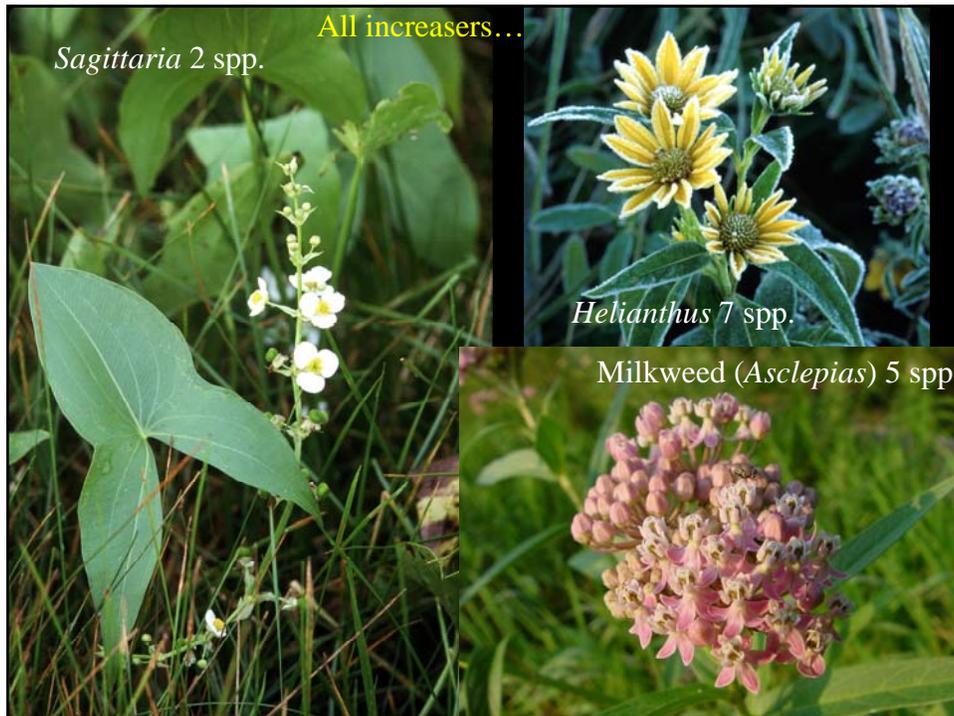
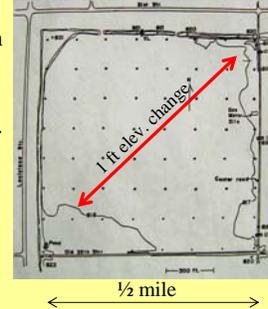
## Vegetation monitoring during restoration in NW Quadrat.

❖ The first assessment made in 1991 before restoration began and repeated every 5 years since.

❖ Quadrat was divided into 49 hectares with 8x8 grid system.

❖ At each grid point there were four assessments made:

1. TWO m<sup>2</sup> surveys were made at randomly chosen distances E & W of stake.  
Survey recorded % coverage by each species present.  
Voucher samples were collected at many locations.
2. Third measure was a 10 m chain sample to the SW of each grid point.  
The area along the chain that had contact with each species was estimated.  
This was to increase probability of assessing plant diversity present.
3. A 1/10 acre circle around the grid point was surveyed for woody species and number. (37 ft radius)



Numerous native herbaceous plants increased with increased hydration of soils and burning. No plantings were done in NW. Presence is believed to be due to decrease of invasive competition, seed bank, or wind dispersal from virgin tract.



*Lythrum alatum*



*Scirpus* 6 spp.



*Juncus* 5 spp.



*Carex* 23 spp.



*Alisma triviale*



*Eleocharis* 7 spp.



*Cyperus* 5 spp.

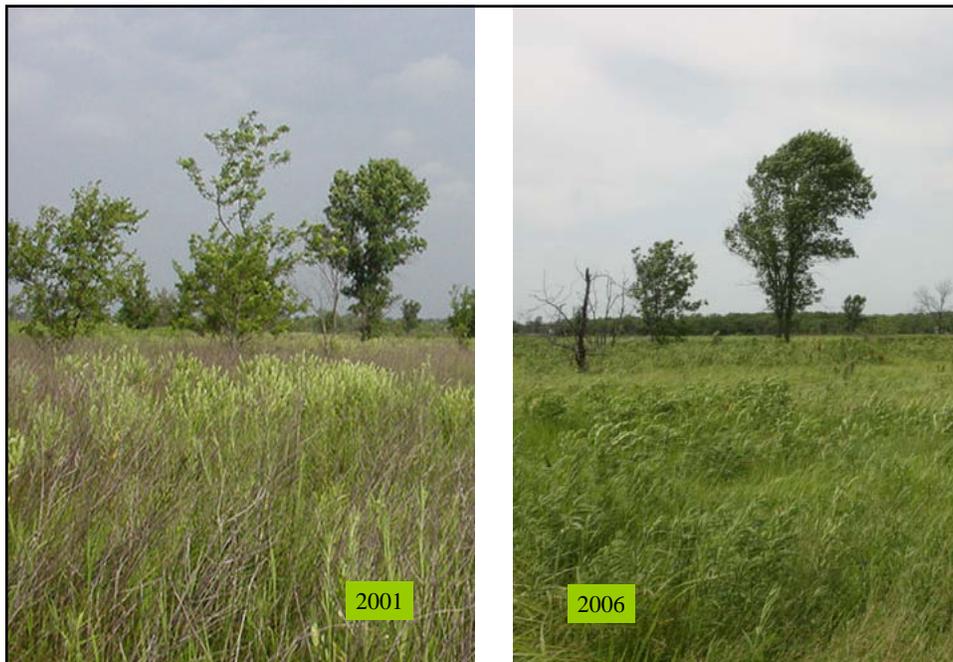


**Big Bluestem**  
*Andropogon gerardi*  
decreased...



**Eastern Gamagrass**  
*Tripsacum dactyloides*  
increased.

Management is primarily by fire with selective cutting of woody vegetation.



Same views showing increased diversity of herbaceous vegetation and decreased woody growth.



Bur Marigold (*Bidens polylepis*) is definitely an increaser with increasing soil moisture



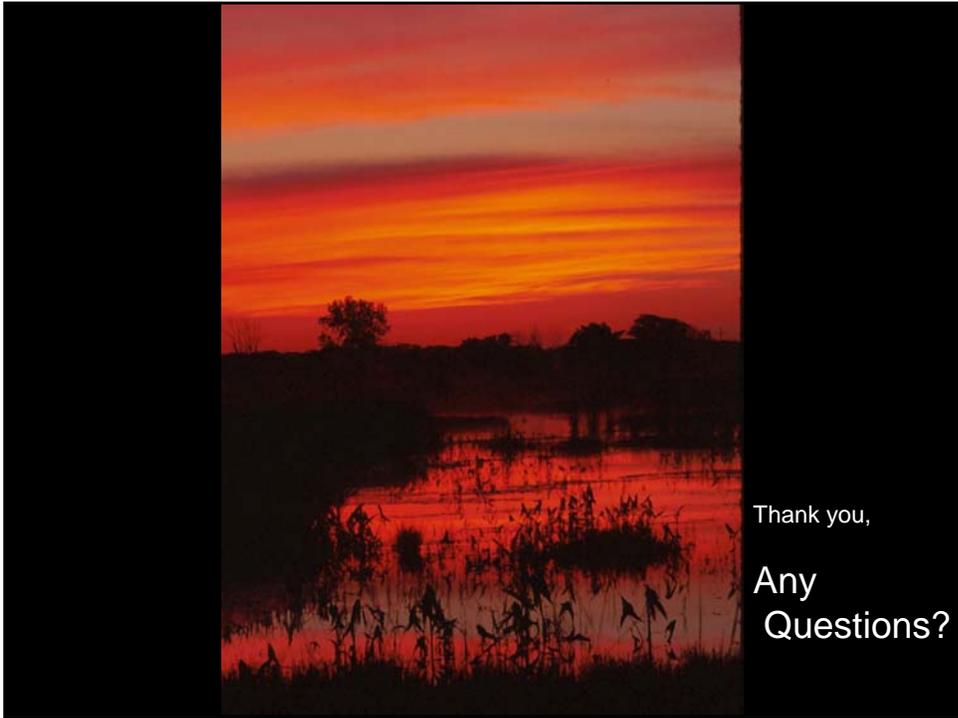
Monarchs during Migration  
depend heavily on Bur Marigold



Funding for many of these projects was provided by a wide range of agencies, organizations, and benefactors including the following:

- U.S. Fish and Wildlife Service
- USFWS Partners for Fish and Wildlife Fund
- USDA Natural Resources Conservation Service
- Environmental Protection Agency
- Jayhawk Audubon Society
- Sierra Club – Wakarusa Group
- Ducks Unlimited
- Quail Unlimited
- KS Dept. of Wildlife and Parks
- Westar Energy – Green Team
- Hey Machinery Company and many private donors





Thank you,  
**Any  
Questions?**