



Wetlands Are Wonderful!

Bill Vodehnal

Nebraska Game and Parks Commission

“Grazing for Wildlife” Field Day

June 24, 2015

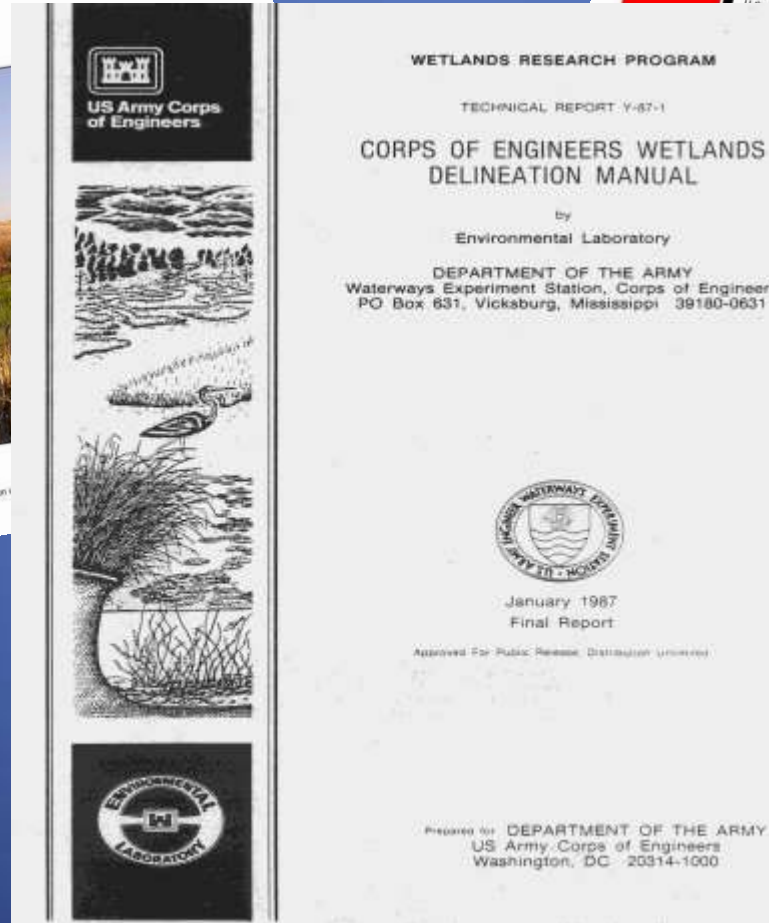






WETLAND

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.



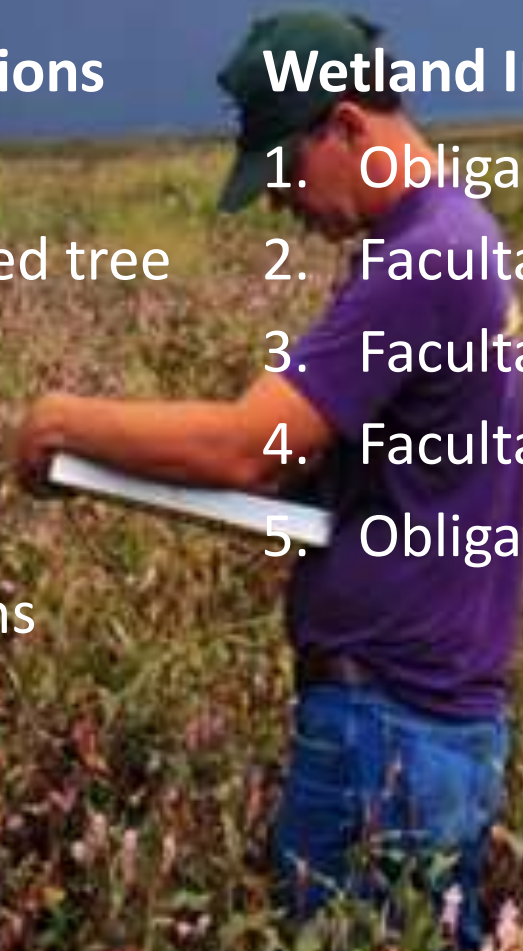
Vegetation

Morphological Adaptations

1. Floating leaves
2. Buttressed and fluted tree trunks
3. Multiple trunks
4. Aerenchyma
5. Shallow root systems

Wetland Indicator Status

1. Obligate (OBL)
2. Facultative wetland (FACW)
3. Facultative (FAC)
4. Facultative upland (FACU)
5. Obligate upland (UPL)



Hydrology

A photograph of a flooded field. A winding stream of water flows through dark, saturated soil. The background shows a flat, green landscape under a clear blue sky.

- Field Indicators
 1. Inundation
 2. Saturation within 12" soil surface
 3. Water marks
 4. Drift lines
 5. Sediment deposits
 6. Drainage patterns
- Biochemical Changes in Saturated Soils

Hydric Soils



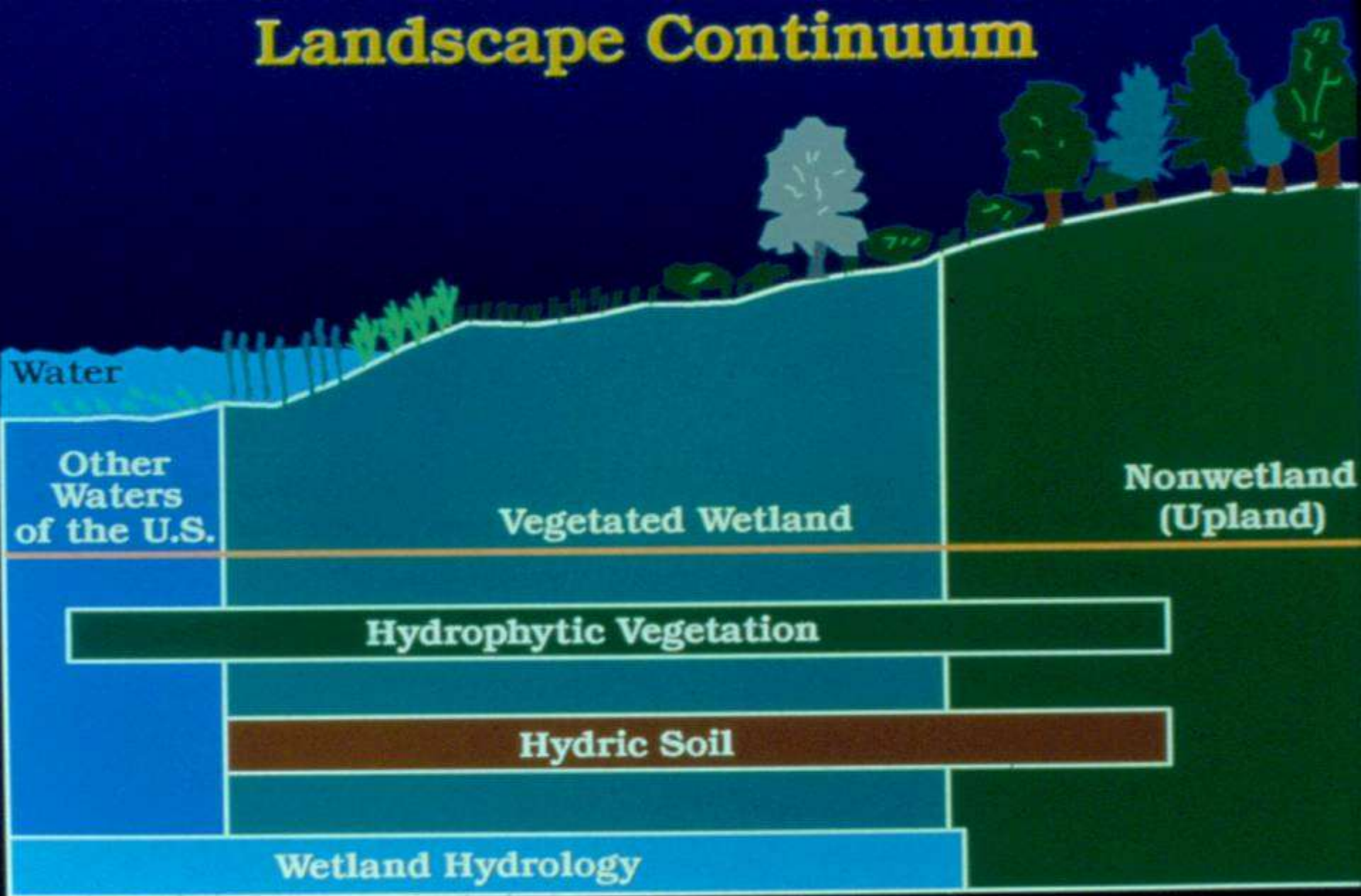
Non-Sandy Soils

1. Organic soil (> 16" OM)
2. Histic epipedon (8-16" OM)
3. Sulfidic material
4. Soil colors (glayed)
5. Fe and Mn concentrations
 - Redox concentrations

Sandy Soils

1. High OM content in the surface horizon
2. Streaking of subsurface horizons by OM

Landscape Continuum



Wetland Functions

- **Improve Water Quality**
- **Reduce Flooding and Soil Erosion**
- **Supply Water**
- **Produce Food and Fiber**
- **Provide Habitat for Fish, Wildlife, and Plants**
- **Provide Recreation and Education**

Improve Water Quality



Reduce Flooding and Soil Erosion



Supply Water



Produce Food and Fiber



Provide Habitat for Fish, Wildlife, and Plants

Wetlands are the most productive natural system in Nebraska

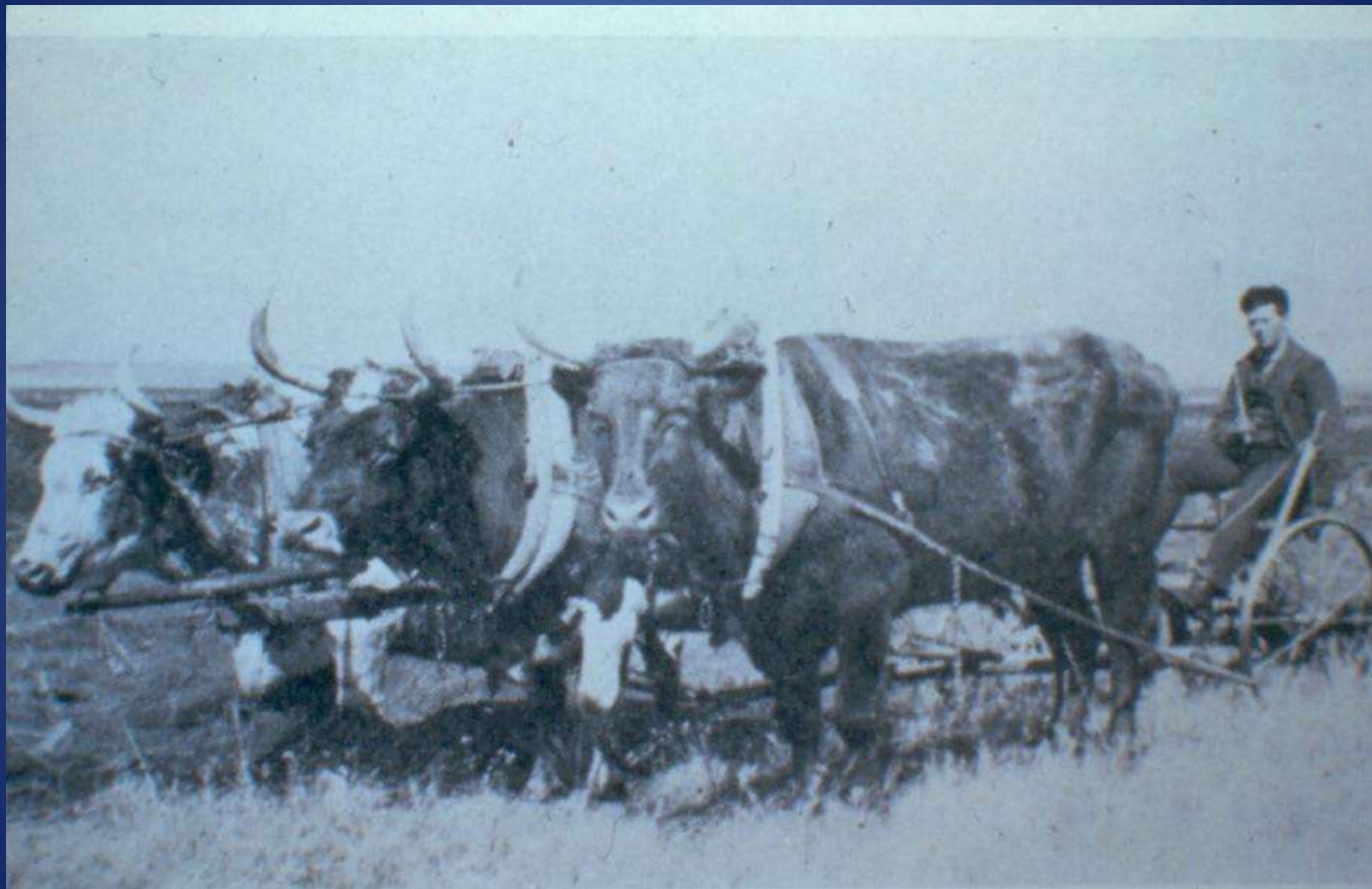


Nebraska Wetland Plants and Wildlife

	Plants	Amphibians	Reptiles	Birds	Mammals
Number of species using wetlands	990	13	18	176	29
Number of species occurring in Nebraska	2,000	13	47	352	80
Percent of all Nebraska species that use wetlands	50%	100%	38%	50%	36%

**75% of the Endangered and Threatened species
depend on wetlands**





Restoration Challenges





Questions?