Adaptive Approaches to Managing Prairies on Conservation Lands in the Prairie Pothole Region

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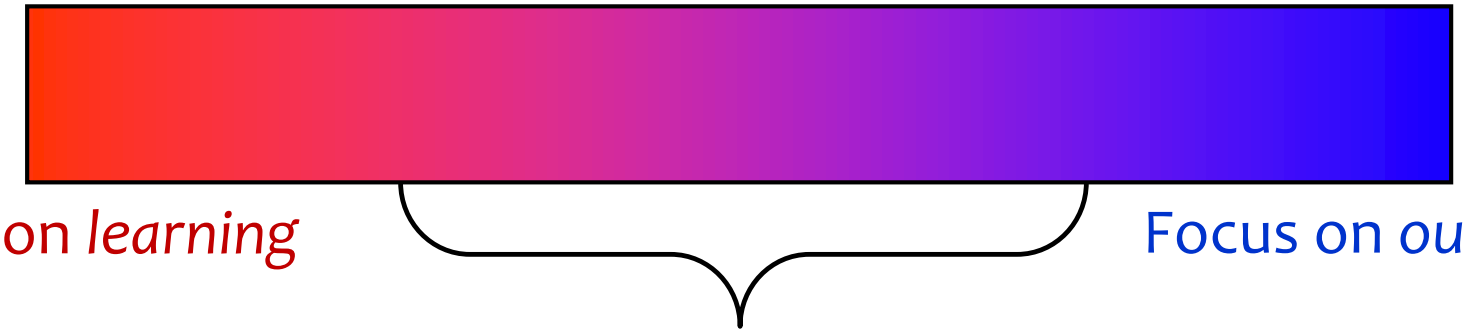
Background

- Prairie losses
- Prairie degradation
- Questions
  - Current state
  - Restoration potential

Adaptive Management

Research

Management



Focus on *learning*

Focus on *outcomes*

Adaptive Management

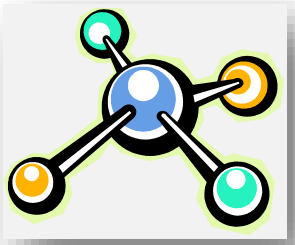
Focus on outcomes, on a
path illuminated by learning

Adaptive Management

Management

Management Recommendations

Model



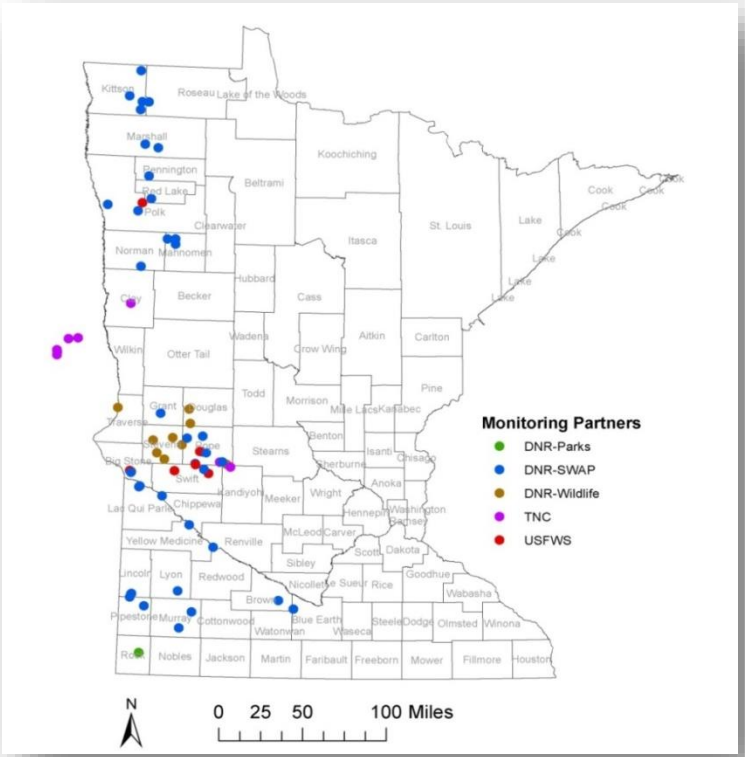
Monitoring

Database

Adaptive Approach Example #1:
Grassland Monitoring Team

Objectives:

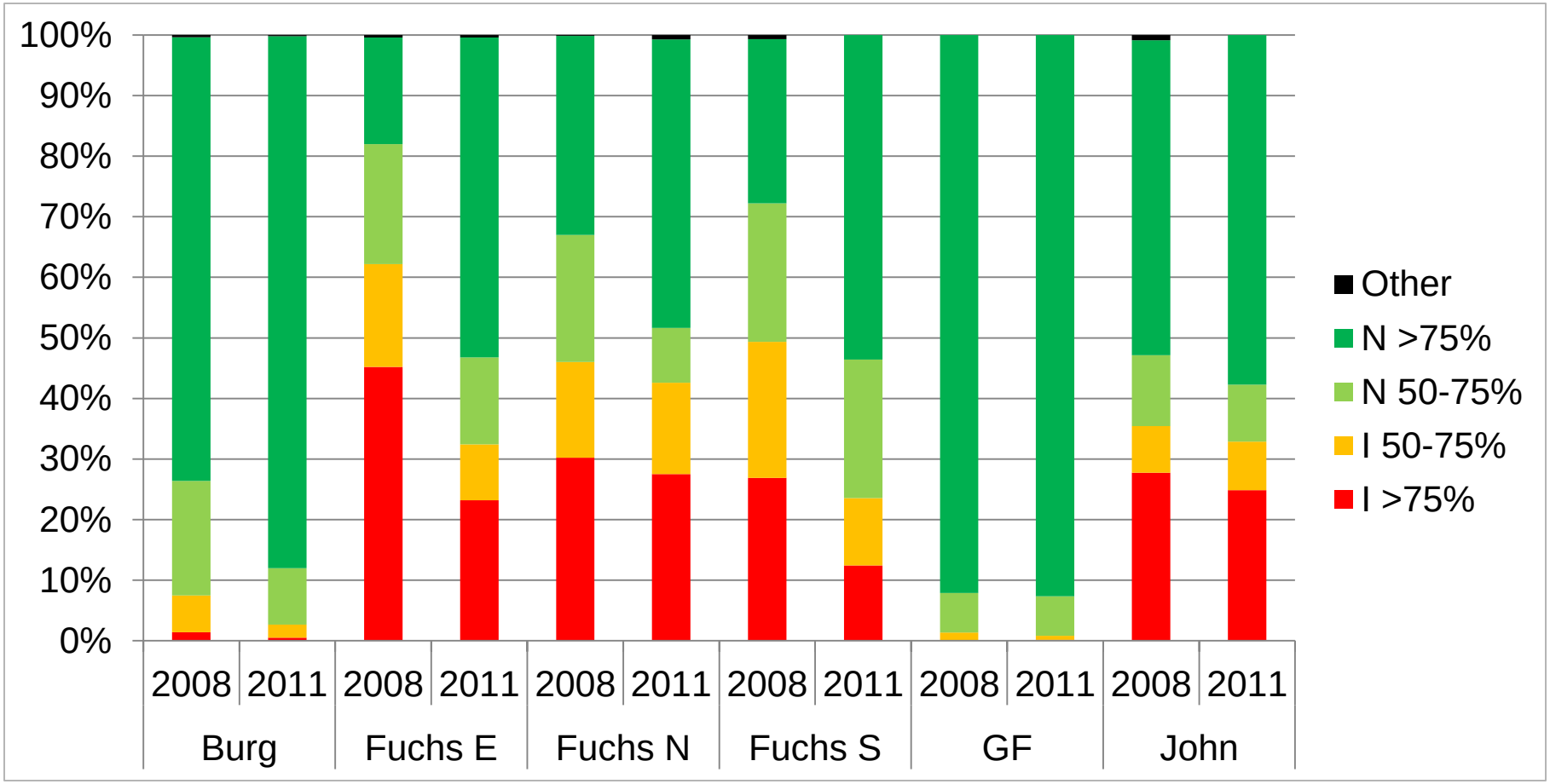
- Increase cover of native plants
- Maintain or improve native diversity
- Minimize woody vegetation



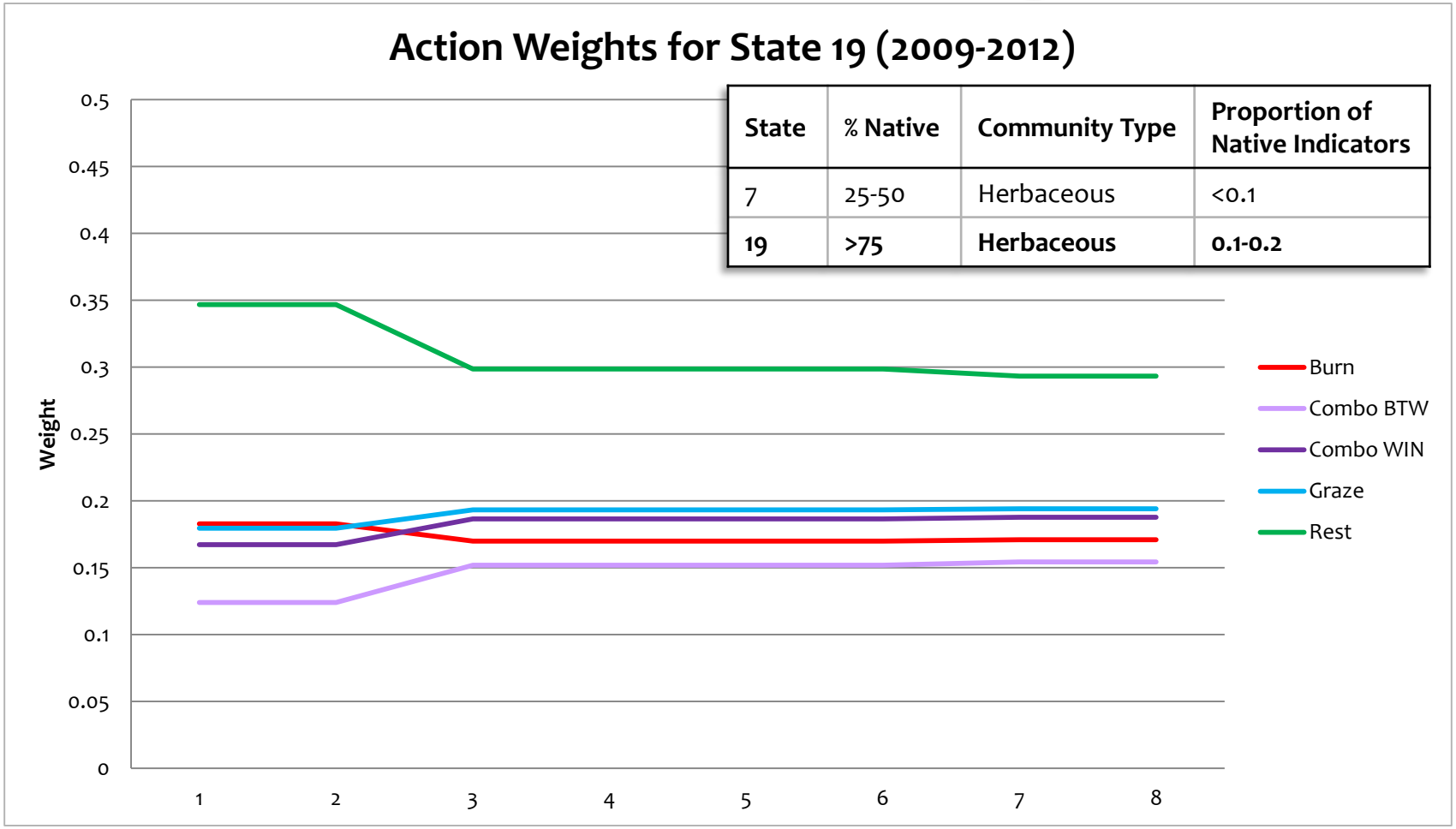
GMT – Three Year Cycle

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Set Up										Monitor		
1	Apply Treatments to Management Unit											
2	Apply Treatments to Management Unit											
3	Apply Treatments to Management Unit									Monitor		
1	Recommended Rest			Apply Treatments to Management Unit								
2	Apply Treatments to Management Unit											
3	Apply Treatments to Management Unit									Monitor		
1	Recommended Rest			Apply Treatments to Management Unit								
2	Apply Treatments to Management Unit											
3	Apply Treatments to Management Unit									Monitor		

GMT – Summary Data



GMT – Learning

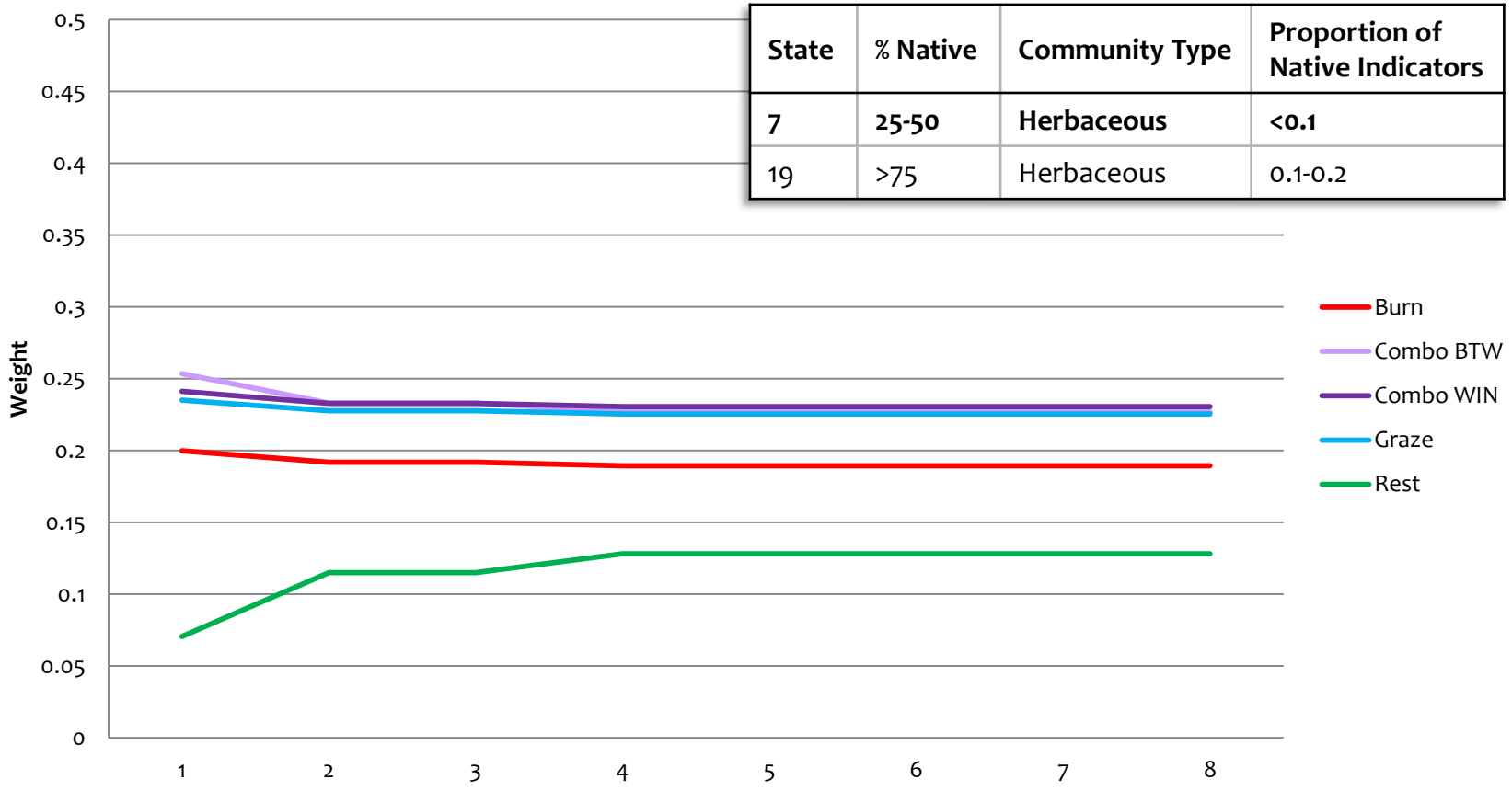


State	% Native	Community Type	Proportion of Native Indicators
7	25-50	Herbaceous	<0.1
19	**>75**	**Herbaceous**	**0.1-0.2**

GMT – Learning

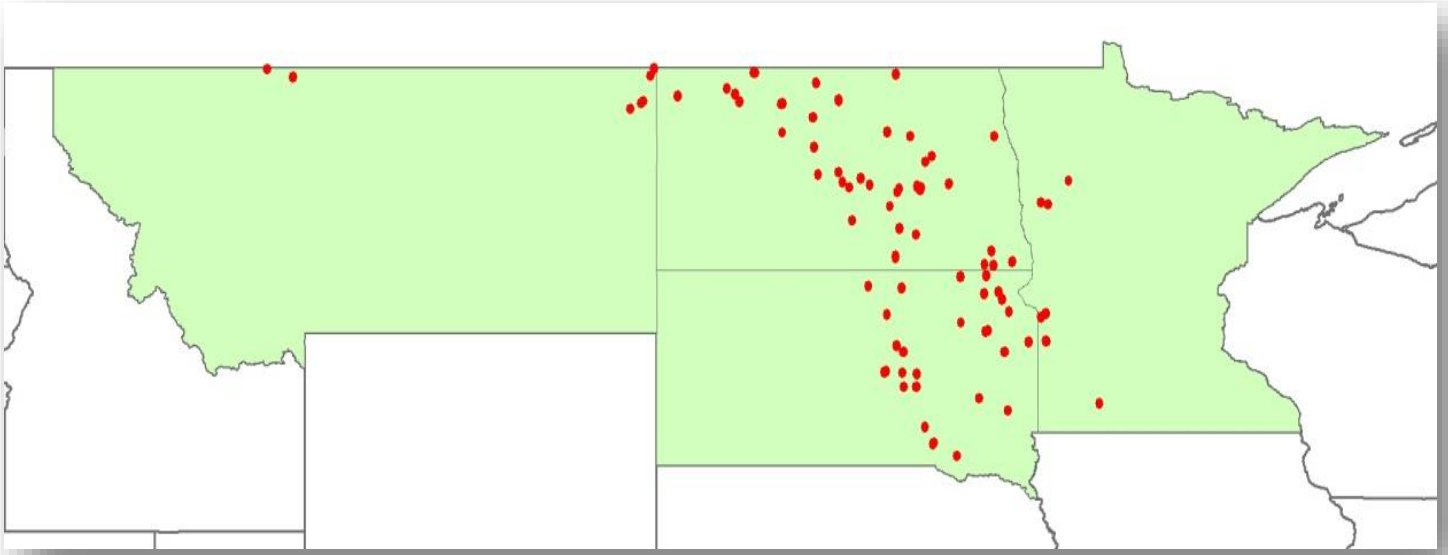
Action Weights for State 7 (2009-2012)

State	% Native	Community Type	Proportion of Native Indicators
7	25-50	Herbaceous	<0.1
19	>75	Herbaceous	0.1-0.2

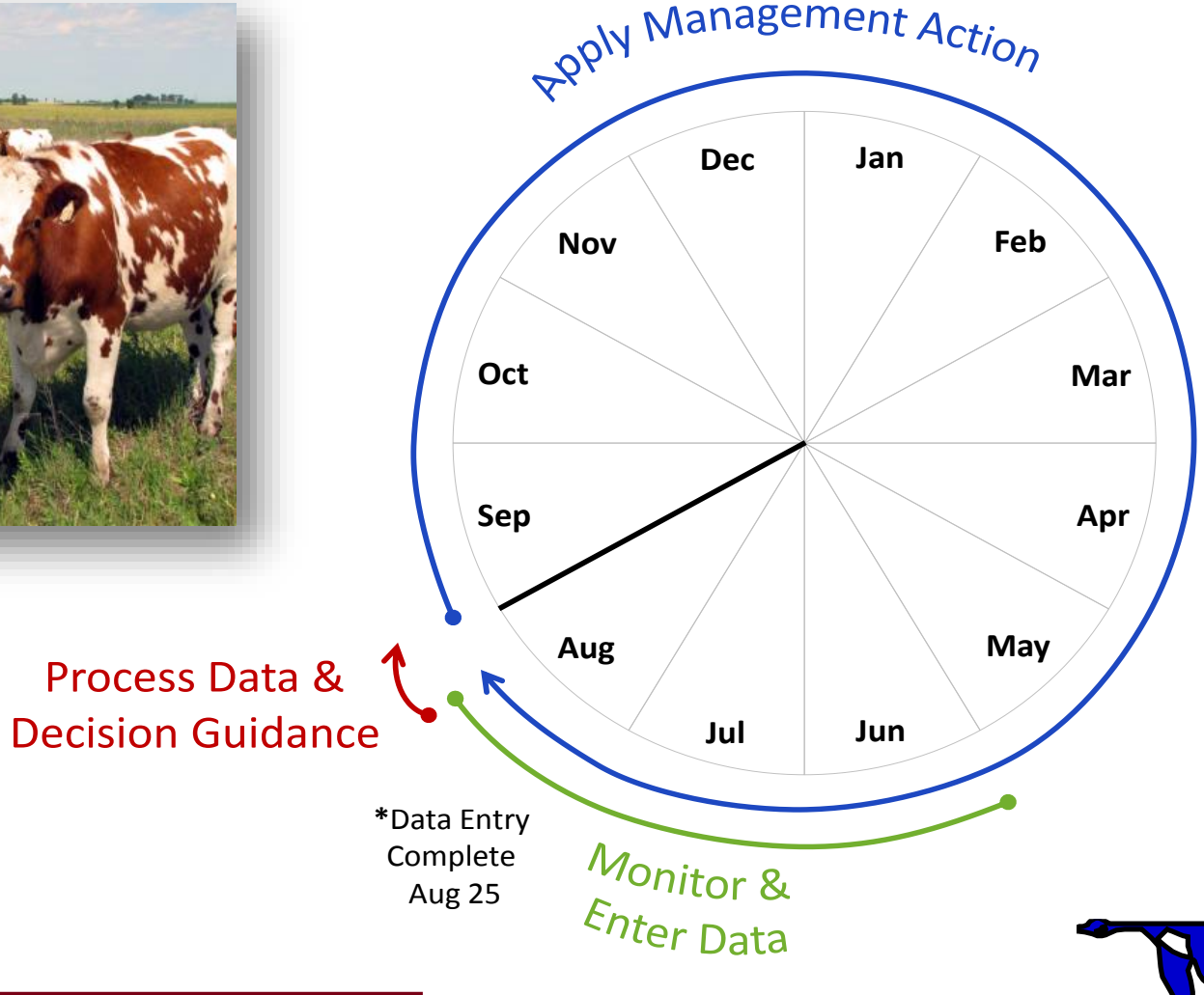


Adaptive Approach Example #2:
Native Prairie Adaptive Management

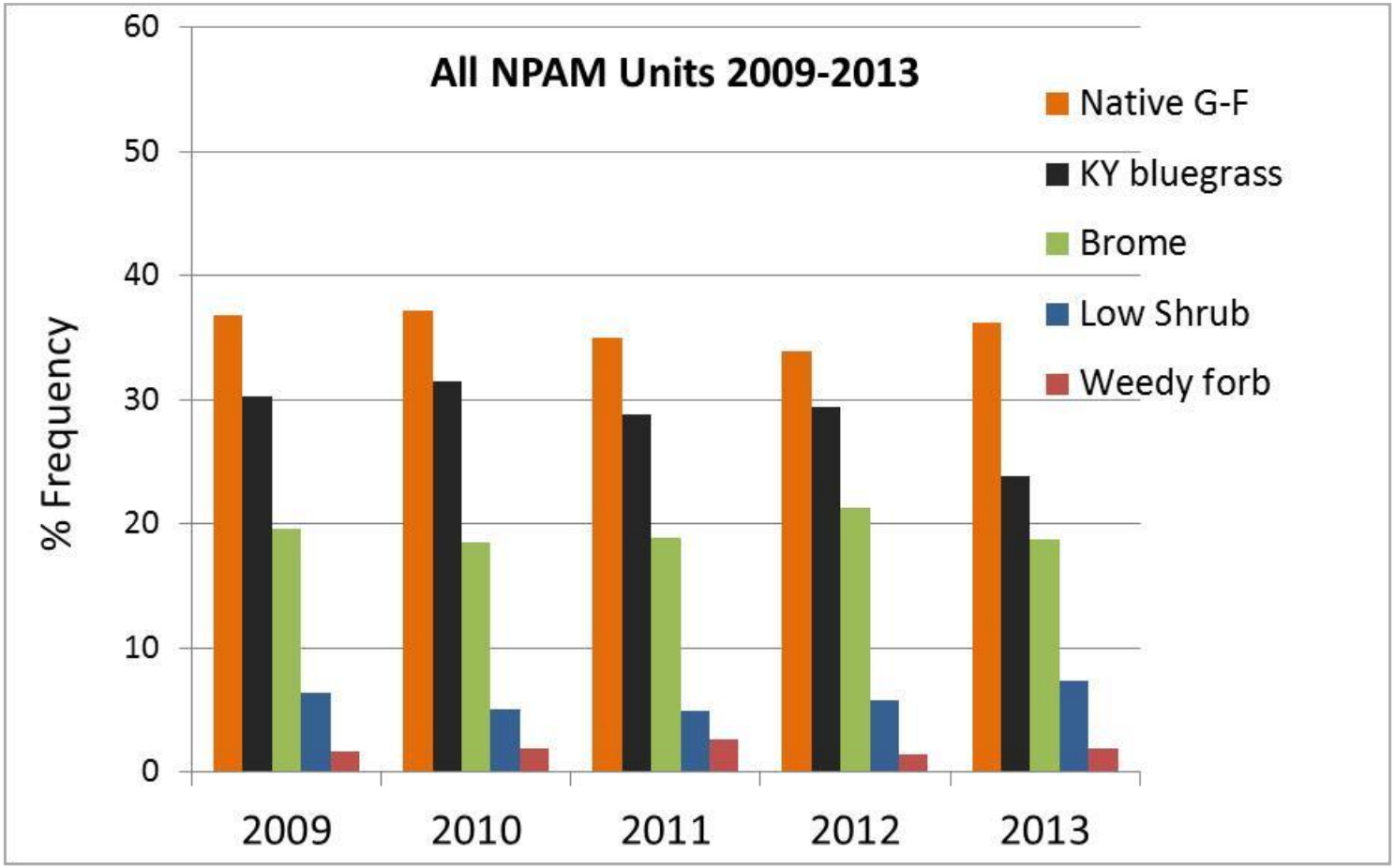
Objective: Increase native composition on USFWS prairies while minimizing cost.



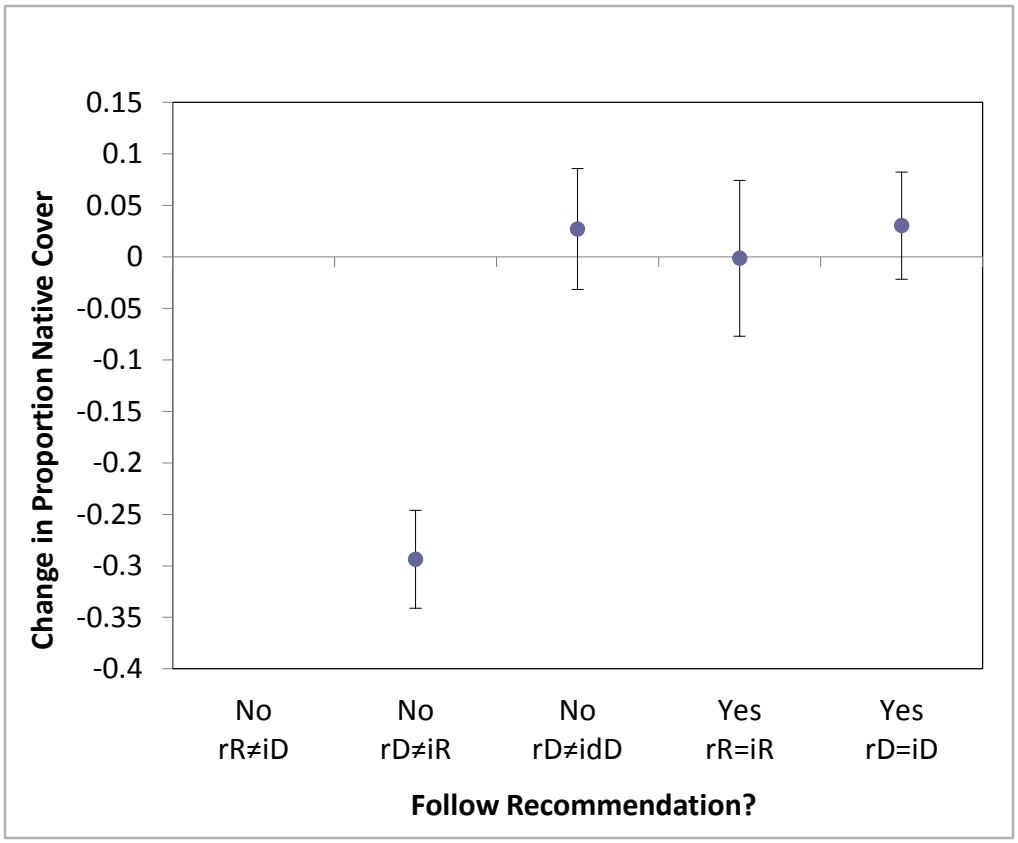
NPAM – Annual Cycle



NPAM – Summary Data



NPAM – Learning



Recommended (r)	Implemented (i)	Sample Size
Rest	Defoliation	0
Defoliation	Rest	49
Defoliation	Different Defoliation	25
Rest	Rest	2
Defoliation	Defoliation	27

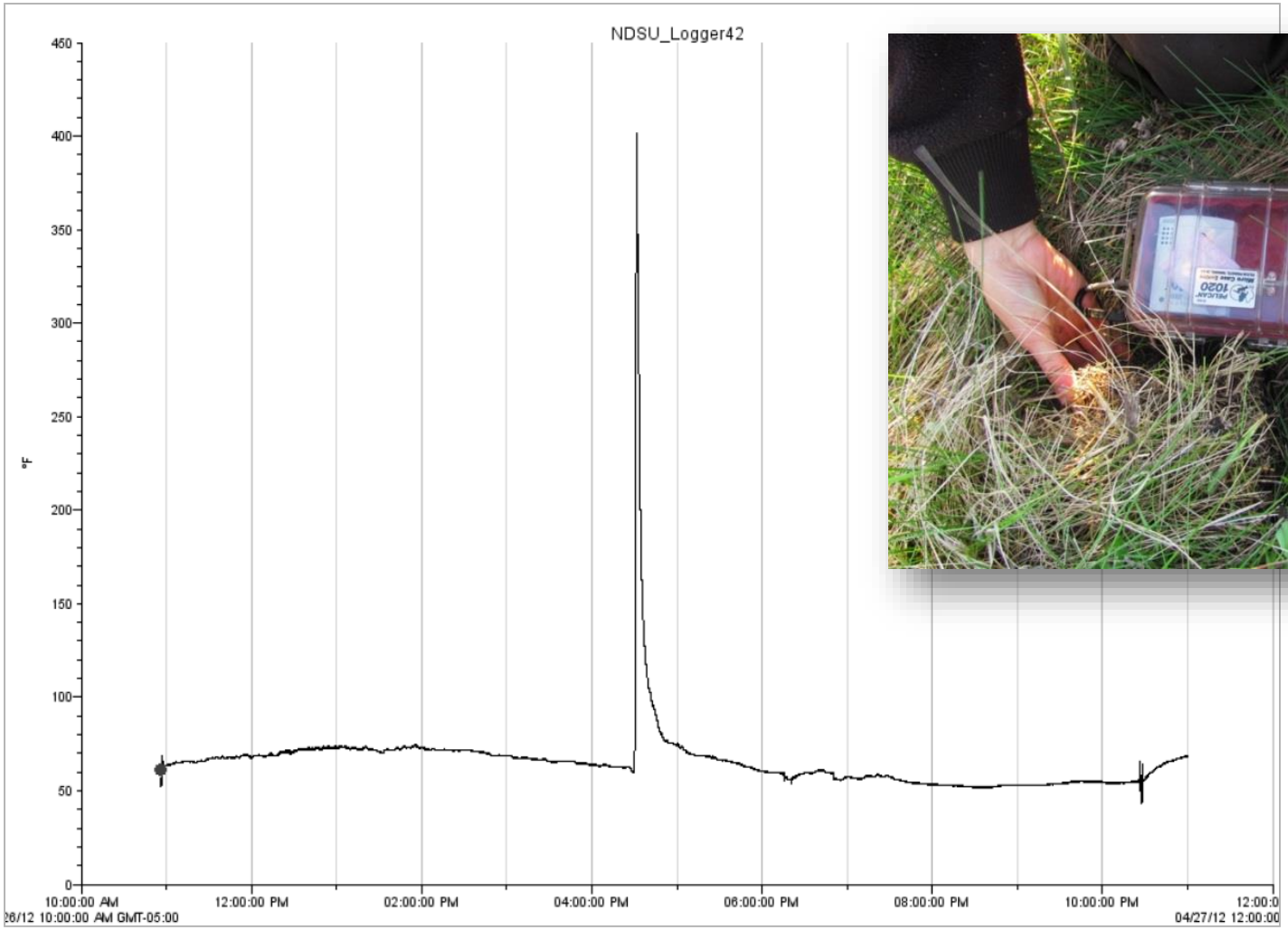
NPAM – Add-on Research

- Smooth brome phenology
- Grassland Birds
- Kentucky bluegrass management response
- Kentucky bluegrass and fire behavior
- Kentucky bluegrass genetics

USGS science for a changing world

NDSU

NPAM – Fire Behavior Study



Expected Benefits

- Improved future decisions
- Well defined issue statements
- Power of partnerships and collaboration
- Transparency and accountability