



## What is a Habitat Management Plan




## and Where Does Habitat Monitoring Fit In?

A Presentation for the CMR Working Group





## What is a Habitat Management Plan?

- A step-down management plan of the CMR Comprehensive Conservation Plan.
- It provides guidance for the management of refuge habitat and a long-term vision with continuity, and consistency for habitat management on refuge lands.
- Each plan incorporates the role of refuge habitat in international, national, regional, tribal, State, ecosystem, and refuge goals and objectives and how it fits into the landscape
- Guides analysis and selection of specific *habitat management strategies* (*prescribed fire, grazing, grass planting, restoration*) to achieve habitat goals and objectives
- Utilizes key data, scientific literature, expert opinion, and staff expertise




## Habitat Management Plan The Process and Document

- Chapter 1 – Introduction
- Chapter 2 – Background
- Chapter 3 – Resources of Concern
- Chapter 4 – Habitat Goals and Objectives
- Chapter 5 – Habitat Management Strategies

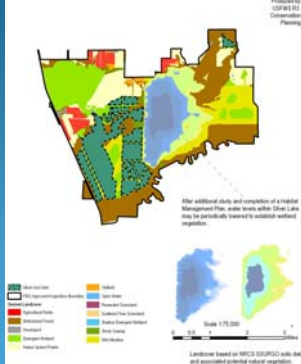
## Chapter 1 - Introduction

- Scope and rationale
- Legal mandates
  - Refuge purpose (Reason for Establishment)
  - System mission
  - Other mandates that drive management
- Relationships to other plans
  - National (ex. Migratory Bird Plans)
  - Regional
  - State (ex. Sage Grouse Management Plans)
  - Refuge
    - CCP
    - Inventory/Monitoring Plans
    - Other Step Down Plans




## Chapter 2 - Background

- Location
- Break Refuge up into Management Units
- Physical and geographic setting
  - Historic condition
  - Current condition
  - Habitat changes over time
- Know your habitat and how you want to describe and classify it.



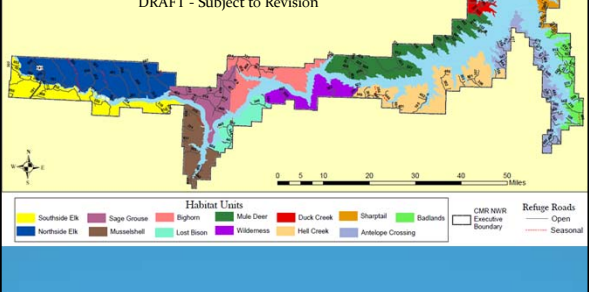
Map additional study and comparison of a Habitat Management Plan, water trends within 50km. Lines may be vertically oriented to location without vegetation.

Scale 1:75,000  
Landscape based on NRCS SURSO2 v4.0.0 and converted to natural color palette.



## Charles M. Russell National Wildlife Refuge Proposed Habitat Units - Option B


DRAFT - Subject to Revision



Habitat Units: Southside Elk, Sage Grouse, Bighorn, Mule Deer, Duck Creek, Sharp-tail, Badlands, Northside Elk, Musselshell, Lost Bison, Wilderness, Hell Creek, Antelope Crossing, CMO NWR, Executive Boundary, Refuge Roads: Open, Seasonal

### Chapter 3 – Resources of Concern

- Primary focus of the HMP
- Ties together refuge purpose, System mission, regional conservation needs, and capabilities to support the other factors
- Basis for refuge goals, objectives, and strategies
- Core content of the chapter is a series of tables outlining the district's habitats, resources of concern, and the processes that maintain, enhance, and threaten them.



### Determining Resources of Concern

Overview of the Process to Prioritize Resources of Concern and Management Priorities for Your Refuge

**Start with Mandates for Management on Refuges**

- Step 1. Identify your refuge's purposes
- Step 2. Identify Refuge System Resources of Concern
- Step 3. Identify elements of biological integrity, diversity, and environmental health

### CMR Establishing Purpose

- Executive Order 7509
- "That the natural forage resources therein shall be first utilized for the purpose of sustaining a healthy condition of 400,000 sharp tailed grouse and 1,500 pronghorn, the primary species and such non-predatory species in such numbers as may be necessary to maintain a balanced wildlife population.....provided further, that all the forage resources within this range or preserve shall be available unless otherwise provided with respect to wildlife, for domestic livestock...."

### Determining Resources of Concern

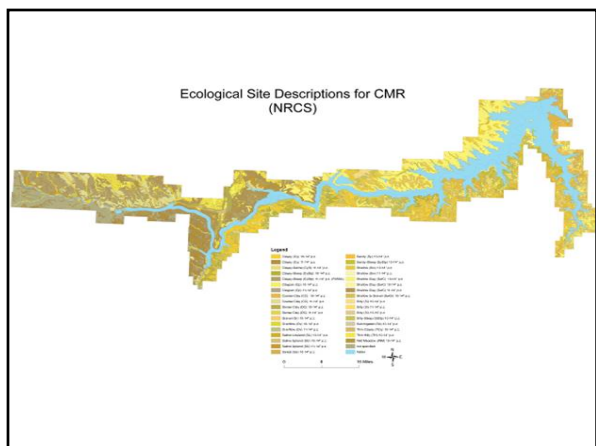
**Identify Refuge Resources of Concern and Management Priorities**

- Step 4. Compile comprehensive list of your refuge's Resources of Concern

Filters:

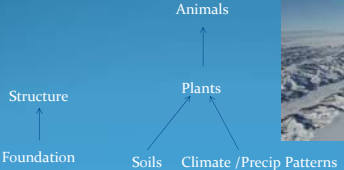

- site capabilities/limiting factors
- response to management
- best science/ professional judgement
- ecological and ecosystem processes

- Step 5. Identify priority Refuge Resources of Concern
- Step 6. Identify priority habitats



### Ecological Site Conditions



- Development and Ground-truthing Ecological Site Descriptions
- Understanding the soils and the potential for supporting plants






## Ecological Site Conditions Help Land Managers

- Understand the potential plant production and species composition
- Set Realistic Goals and Objectives for managing that land
- Understand the value of the land relative to wildlife and other animals
- Produce a "Roadmap" (State and Transition Model) for management
- State and Transition Models can help the manager understand
  - The condition of the land
  - The investment needed to either restore or manage that land




## The USFWS Inventory and Monitoring Program

- What is this program?
  - Inventory – The process of inventorying or assessing the current conditions and species status within the habitat units of the Refuge.
  - This information is foundation for developing the Resources of Concern
  - Used to develop the management strategies to improve the status of those resources of concern.

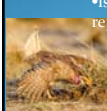



## The USFWS Inventory and Monitoring Program

- Objectives
  - Obtain basic inventory of plants and animals on refuge lands as fundamental to developing framework for ecosystem management
  - Focus limited resources on data collection pertinent to management objectives on refuge.
  - To promote the use of coordinated, standardized, cost effective, and *defensible* methods for gathering and analyzing scientific data.
  - To balance species specific and refuge specific monitoring efforts with the collection of data in a broader context such as landscape/ecosystem level information.




## The USFWS Inventory and Monitoring Program

- What Species or Groups of Species?
  - Is the species or group cited in the refuge's enabling legislation, establishing documentation, CCP, or NWRS goals?
  - Are the species federally listed as endangered/threatened or has the state identified it as a species of concern?
  - Does the Refuge population of that species occur across a broader area?
  - Is the species an indicator of ecosystem function? Does it represent the health of the habitat?

## The USFWS Inventory and Monitoring Program

- Survey Types
  - Type I – Species Lists on Refuge Lands (Cursory surveys that determine presence of species)
  - Type II – Qualitative Data collected (Mainly observational in structure but not able to withstand statistical analyses)

## The USFWS Inventory and Monitoring Program

- Type III – Quantitative Surveys
  - These surveys are conducted on species or groups of species of particular management concern.
  - This info will provide quantified data that will be statistically analyzed to determine population trends and or response to management actions.
  - Product of survey/study undergoes peer review at varying levels.
- Type IV – Special Cooperative Surveys
  - Developed and coordinated with Govt./Academic partners
  - Represent a variety of activities that undergo a varying degree of statistical analyses and scientific rigor.
  - Work with partners to develop surveys that address ecosystem/landscape management concerns regarding species
  - Survey/study protocols preset by Refuge

## Determining Resources of Concern

**Establish Management Agenda for the Refuge**

**Step 7. Write Goals**

↓


**Step 8. Write Objectives**

## Chapter 3 – Additional Components

- **Conflicting habitat needs** of the ROCs under optimal management strategies
  - Document rationale and discussion on the resolution
  - Utilize relative importance of the ROCs given the purpose, System mission, and legal obligations
- **Adaptive management** opportunities can be highlighted where expected in light of management need and information available.


## Chapter 4 – Goals and Objectives

- State the Goal
- State (or Refine) the Objective(s)
  - Develop rationale on support of the goal, priority ROCs, purpose, and mission from
    - literature review
    - HMP process discussions
    - CCP (pertinent information)
    - IMP (how does the objective relate)
  - Add detail and updated information beyond the CCP where needed.



## Chapter 5 – Objectives and Strategies

- State the Objectives
  - (Over 15 years, increase both the population viability and 10-15 percent increase in coverage by purple prairieclover, purple coneflower and other sentinel forb species as appropriate to restore diversity.....)
- State the Strategies to achieve the objective
  - (Restore historic fire return intervals and the fire grazing interaction including concentrated herbivory to increase the abundance of sentinel plant species)
- Breakout strategies into different timeframes including
  - “Continue to”
  - “Within X years”
- Develop rationale for management strategies
- Prescriptions are more detailed information regarding a strategy
- Tie in monitoring component into objective and relate it to ROCs either directly or indirectly



## So Where’s the Monitoring?

- Definition of Monitoring by the USFWS/Refuges
- Information Collected is Used for Assessing Progress Toward the Stated Objectives

*Habitat Management Units receiving livestock grazing should retain at least 70% of the residual grass cover*

Sharp-tailed Grouse (Establishing legislation)  
 Grassland Nesting Birds (FWS Trust Species)  
 Greater Sage Grouse (Candidate ESA Species)

HDP annual monitoring provides the information to demonstrate whether we are meeting the 1986 EIS habitat objectives.

## So what about “Monitorfest?”

1. **Baseline Info – Inventory Biological Info, Numbers, locations, densities, and distributions**
2. Ecological Site Descriptions – Used to determine current habitat conditions and chart the course for management
3. Develop Strategies for Resources of Concern
4. Produce Habitat Management Plan
5. Implement Strategies and Include Adaptive Management Strategies (If this then that scenarios)
6. **Monitor for success/failure of implemented actions.**
7. Be prepared to implement adaptive management strategies.

