

# DAKOTA PRAIRIE GRASSLANDS GRASSLANDS PLAN MONITORING PROGRAM

**Updated – July 2016**

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## INTRODUCTION

This document modifies the Dakota Prairie Grasslands Land and Resource Management Plan's monitoring program to transition to the requirements of the 2012 Planning Rule (the Rule) (36 CFR 219.12). The Rule requires that an existing Plan's monitoring program be updated for consistency with the new Rule within 4 years of the Rule's May 9, 2012 effective date or as soon as practicable.

The DPG current monitoring program has been reviewed and modifications made to address information that is critical for informed management of resources in the plan areas, within the financial and technical capabilities of the Grasslands.

## OBJECTIVES OF PLAN MONITORING

Effective land and resource management plan monitoring and evaluation fosters adaptive management and more informed decisions. It helps identify the need to adjust desired conditions, goals, objectives, standards and guidelines as conditions change. Monitoring and evaluation helps forests, grasslands, the agency and the public determine how a land and resource management plan is being implemented, whether plan implementation is achieving desired outcomes, and whether assumptions made in the planning process are valid. Monitoring and evaluation are conducted at several scales and for many purposes, each of which has different objectives and requirements. Monitoring requirements and tasks are developed to be responsive to the objectives and scale of the plan, program, or project to be monitored. Monitoring and evaluation are separate, sequential activities required by NFMA regulations to determine how well objectives have been met and how closely management standards and guidelines have been applied. Monitoring generally includes the collection of data and information, either by observation or measurement. Evaluation is the analysis of the data and information collected during the monitoring phase. The evaluation results are used to answer the monitoring questions, determine the need to revise management plans, change how the plans are implemented, and form a basis for adaptively managing the national grasslands. Monitoring and evaluation keep the Revised Land and Resource Management Plan up-to-date and responsive to changing issues by verifying the effectiveness of management plan standards and guidelines and anticipated program and project effects on resources, and providing information for amendments to the management plan.

Monitoring provides the information necessary to determine whether the Revised Management Plan is sufficient to guide management of the national grasslands for the subsequent year or whether modification of the plan is needed.

Monitoring is continuous and provides feedback by testing relevant assumptions, tracking relevant conditions over time, and measuring management effectiveness (36 CFR 219.12).

**Biennial monitoring evaluation reports** help determine if and where changes are needed in plan components, other plan content, and project activities. (36 CFR 219.5). Monitoring also

provides feedback to prioritize and improve the plan monitoring program and broader-scale monitoring strategy.

## **REQUIRED 2012 PLANNING RULE MONITORING ITEMS**

The Forest Service has discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the administrative unit. However, they are required to include one or more monitoring question(s) and associated indicator(s) for the eight items set out in the Planning Rule at 36 CFR 219.12(a)(5) as follows:

- i. *The status of select watershed conditions.*
- ii. *The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.*
- iii. *The status of focal species to assess the ecological conditions required under 36 CFR 219.9.*
- iv. *The status of a select set of the ecological conditions required under 36 CFR 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.*
- v. *The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.*
- vi. *Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.*
- vii. *Progress toward meeting the desired conditions and objectives in the plan, including providing for multiple use opportunities.*
- viii. *The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)). (36 CFR 219.12(a)).*

Social, economic, and cultural sustainability must also be addressed in the monitoring program (FSH 1909.12 Section 32.13f).

As part of this transition, the DPG have reviewed the monitoring items of the 2001 monitoring program to determine whether the above questions have been considered. Table 1 displays how the updated monitoring program address these questions.

## **DAKOTA PRAIRIE GRASSLANDS PLAN MONITORING PROGRAM**

To meet the requirements of the 2012 Planning Rule, the following updates to plan monitoring program are proposed in the tables below. In some cases, monitoring items have been modified, added, combined or dropped where they were determined to be: 1) ineffective for addressing plan components, 2) duplicative in nature, 3) economically infeasible, 4) needed to address a plan component, or 5) new science or technology supports monitoring with a different tool or scale.

## Table 1. PLAN MONITORING PROGRAM

### GEOLOGY and PALEONTOLOGY (GEO)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<b>Goal 2.c; Geologic and Paleontological - Objective 1</b> - Within 15 years, provide interpretation for at least 20 percent of important geological and paleontological sites, consistent with the conservation plans.	<b>MON-GEO-01:</b> To what extent are geologic and Paleontological resources being made available for the education, use or enjoyment of the general public?  * <b>Required questions: v, vii</b>	• <b>Visitor use</b> (Number of people learning from, using, or enjoying geologic and paleontological resources)	• Supervisor's Office records (Annual)
		• <b>Interpretation sites</b> (Number of sites where interpretation is occurring)	• State Heritage Center (Annual)
		• <b>Partnerships</b> (number and types of partnerships fostered)	• Supervisor's Office records (Annual)

### SOIL INTEGRITY (SOIL)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	<u>Modified</u> Monitoring Question	<u>Modified</u> Indicators (Measure)	<u>Modified</u> Data Source/Storage (Interval of data collection)
<b>Goal 1a Objective 1.</b> Within 10 years, identify watershed conditions to provide baseline data sufficient to meet the following objectives: <ul style="list-style-type: none"> <li>• Achieve a 20 percent reduction in acres of eroded or disturbed soils caused by Forest Service permitted or management actions.</li> </ul>	<b>MON-SOIL-01:</b> To what extent have soils been disturbed and restored?  * <b>Required questions: ii, viii, vi</b>	As proxy for soil health conditions  <u>By allotment or pasture:</u> <ul style="list-style-type: none"> <li>• <b>Similarity index</b> (weight of plant species within dominant sites in a pasture/allotments) – same indicators as <b>MON-VEG-01</b></li> <li>• <b>State transition</b> (acres of each state/transition per ecological site) – same indicators as <b>MON-VEG-01</b></li> </ul>	• Supervisor's Office records (Annual, approx. 75 plots/yr, each plot read every 5-15 yrs depending on NEPA decisions)

Selected 2002 Plan Components	<u>Modified</u> Monitoring Question	<u>Modified</u> Indicators (Measure)	<u>Modified</u> Data Source/Storage (Interval of data collection)
		<ul style="list-style-type: none"> <li>• <b>Rangeland infrastructure</b> (<i>acres of</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• WIT</li> <li>• INFRA</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Rangeland Improvements</b> (<i>acres and numbers of actions that contribute towards improvement</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> <li>• WIT</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Oil and gas well pad development</b> (<i>acres of</i>)</li> <li>• <b>Road development</b> (<i>acres of</i>)</li> <li>• <b>Reclamation</b> (<i>acres of reclaimed lands</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> </ul>

## AQUATIC (AQU)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 1a Objective 2.</b> Move at least 80 percent of riparian areas and woody draws toward self-perpetuating plant and water communities that have desired diversity and density of understory and overstory vegetation within site capability.</p> <p><i>Note: Only riparian aspect of OBJ 2 is addressed here. The Question for woody draw is in MON-VEG-03.</i></p> <p><b>Goal 1a Objective 3.</b> Meet or move toward Proper Functioning Condition (PFC) on at least 80% of perennial streams.</p>	<p><b>MON-AQU-01:</b> What is the condition of perennial and intermittent streams and high value springs and high value wetlands?</p> <p><b>Required questions: i, ii, iv, vi</b></p>	<p><b>17 indicators of PFC to determine:</b></p> <ul style="list-style-type: none"> <li>• <b>Miles of intermittent and perennial streams in:</b> <ul style="list-style-type: none"> <li>• Proper functioning condition</li> <li>• Functioning at risk (upward, not applicable, downward)</li> <li>• Non-functioning</li> </ul> </li> <li>• <b>Acres of wetlands and springs in:</b> <ul style="list-style-type: none"> <li>• Proper functioning condition</li> <li>• Functioning at risk (upward, not applicable, downward)</li> <li>• Non-functioning</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (10 yr interval)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 1a Objective 1.</b> Within 10 years, identify watershed conditions to provide baseline data sufficient to meet the following objectives:</p> <ul style="list-style-type: none"> <li>• Improve 20 percent of 6th Hydrologic Unit Code (sub-watershed) level watersheds from Class II to Class I or from Class III to Class II. Maintenance of unimpaired watersheds and restoration of impaired watershed are high priorities.</li> <li>• Utilize criteria of geomorphic integrity, water quality integrity, biotic information, watershed vulnerability, and potential partnerships to prioritize watershed improvement projects</li> </ul> <p>Improve the water quality associated with 20 percent of degraded water bodies.</p>	<p><b>MON-AQU-02:</b> What is the water quality condition?</p> <p><b>* Required questions: i, ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Watershed Condition Class</b> (number of watersheds moved from one Class to a higher functioning Class; e.g. 3 to 2 or 2 to 1)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>WCATT</b> (access with completion of watershed actions plans)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>303d streams</b> (miles of impaired streams)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>North Dakota Department of Health</b> (2-3 yr)</li> <li>• <b>South Dakota Department of Environment and Natural Resources</b> (2-3 yr)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Water quality</b> (levels of pH, conductivity, total dissolved solids, sulfate, chloride, sodium)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Supervisor's Office records</b> (5 yr)</li> </ul>
	<p><b>MON-AQU-03:</b> What is the effectiveness of Best Management Practices in preventing degradation to water bodies?</p> <p><b>* Required questions: i, ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Best Management Practices -BMP</b> (total number of activities that BMPs have been prescribed and implemented)</li> <li>• <b>BMP implementation ranking</b> (sampling of total are checked for implementation)</li> <li>• <b>BMP effectiveness ranking</b> (sampling of total are checked for effectiveness)</li> <li>• <b>BMP composite ranking</b> (sampling of total implementation and effectiveness rankings)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>BMP national database</b> (annual sampling)</li> </ul>
<p><b>Goal 1a Objective 5.</b> Prevent contamination of surface water, sub-surface flows, and aquifers.</p>	<p><b>MON-AQU-04:</b> To what extent have surface water, sub-surface flows, and aquifers been protected from contamination by management actions?</p> <p><b>* Required questions: i, ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Decommissioned wells</b> (number of oil and water wells properly decommissioned)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Hazardous spills and clean actions</b> (number of)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> </ul>
		<p>Same indicators for MON-AQU-03.</p> <ul style="list-style-type: none"> <li>• <b>Best Management Practices -BMP</b> (total number of activities that BMPs have been prescribed and implemented)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>BMP national database</b> (annual sampling)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
		<ul style="list-style-type: none"> <li>• <b>BMP implementation ranking</b> (sampling of total are checked for implementation)</li> <li>• <b>BMP effectiveness ranking</b> (sampling of total are checked for effectiveness)</li> <li>• <b>BMP composite ranking</b> (sampling of total implementation and effectiveness rankings)</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Decommissioned wells</b> (number of oil and water wells properly decommissioned)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>

## BOTANY (BOT)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 1.b Objective 2.</b> Within 15 years, for threatened, endangered, sensitive, and MIS, demonstrate positive trends in population viability, habitat availability, habitat quality, and population distribution within the planning area.</p> <p><b>Goal 1.b Objective 4.</b> Within 15 years, conserve populations of species at risk and rare communities by demonstrating positive trends in habitat availability and quality or any other applicable factors affecting species at risk.</p> <p><b>Goal 1.b Objective 6.</b> Establish scientifically credible monitoring</p>	<p><b>MON-BOT-01A</b> - What is current population status of <i>Platanthera praeclara</i> (<b>western prairie fringed orchid</b>)?</p> <p>* Required questions: ii, iv</p>	<ul style="list-style-type: none"> <li>• <b>Occurrences</b> (number of flowering stems, number of pods that set seed per flowering plant, and the number of viable seeds incorporated into the seedbank)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Surveys</b> (number of pastures and allotments surveyed for flowering orchids)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
	<p><b>MON-BOT-01B</b> - What is the current and potential habitat capability for <i>Platanthera praeclara</i> (<b>western prairie fringed orchid</b>)?</p> <p>* Required questions: ii, iv</p>	<ul style="list-style-type: none"> <li>• Potential habitat (acres of)</li> <li>• Current habitat (acres of)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p>programs, develop survey methods, and initiate baseline and trend surveys for populations, habitats, and/or ecological conditions to contribute to viability of threatened and endangered species, species at risk, and MIS.</p>	<p><b>MON-BOT-01C</b> - What management actions and naturally occurring events have influenced change to <i>Platanthera praeclara</i> (<b>western prairie fringed orchid</b>) status and/or its habitat?</p> <p><b>* Required questions: ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Grazing activities</b> (acres grazed and not grazed overlapping with orchid occurrences, acres of orchid occurrences rested between 6/1-9/15 within each core allotment.</li> <li>• Supervisor's Office records</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Vegetation treatments</b> (e.g, acres treated for leafy spurge within core and satellite area, acres burned or mowed in core and satellite areas, including rested areas (See appendix N).</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> </ul>
<p><b>Goal 1.b Objective 4.</b> Within 15 years, conserve populations of species at risk and rare communities by demonstrating positive trends in habitat availability and quality or any other applicable factors affecting species at risk.</p> <p><b>Goal 1.b Objective 5.</b> As rare plant and wildlife communities are identified, inventory them and develop associated management strategies to conserve them.</p> <p><b>Goal 1.b Objective 9.</b> Conduct target surveys for globally rare plant species and other rare plant species with viability concerns.</p>	<p><b>MON-BOT-02</b> - What is the status of rare plants?</p> <p><b>* Required questions: ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Occurrences</b> (number of stems, acres of occupancy)</li> <li>• <b>Surveys</b> (presence/absence)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul> <p><b>Note:</b> Not all occurrences will be visited every year. Selection of interval of visits dependent on life history of plants.</p>



## WILDLIFE (WLD)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 1.b Objective 2.</b> Within 15 years, for threatened, endangered, sensitive, and MIS, demonstrate positive trends in population viability, habitat availability, habitat quality, and population distribution within the planning area.</p> <p><b>Goal 1.b Objective 4.</b> Within 15 years, conserve populations of species at risk and rare communities by demonstrating positive trends in habitat availability and quality or any other applicable factors affecting species at risk.</p> <p><b>Goal 1.b Objective 6.</b> Establish scientifically credible monitoring programs, develop survey methods, and initiate baseline and trend surveys for populations, habitats, and/or ecological conditions to contribute to viability of threatened and endangered species, species at risk, and MIS.</p>	<p><b>MON-WLD-01A</b> - What is current population status <b>black-tailed prairie dog</b> (<i>Cynomys ludovicianus</i>)?</p> <p>* <b>Required questions: ii, iii, iv</b></p> <p><b>FOCAL SPECIES</b> –Indicates the integrity of grassland ecosystems, aerating and fertilizing the soil, creating habitat islands for many other species as well as serving as food source for many larger predators.</p>	<ul style="list-style-type: none"> <li>• <b>Prairie dog locations</b> (mapped locations and acres or prairie dogs)</li> <li>• <b>Complexes</b> (number of complexes - collection of colonies)</li> <li>• <b>Active colonies</b> (total acreage and number of active colonies)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office prairie dog maps (3-year interval)</li> </ul>
	<p>* <b>MON-WLD-01B</b> – What is the current <b>black-tailed prairie dog</b> occupancy? <b>FOCAL SPECIES</b></p> <p>* <b>Required questions: ii, iii, iv</b></p>	<ul style="list-style-type: none"> <li>• Habitat availability (acres of current prairie dog occupancy)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office prairie dog maps (3-year interval)</li> </ul>
	<p><b>MON-WLD-01C</b> – What management actions and naturally occurring events have influenced change to <b>black-tailed prairie dog</b> status and/or its habitat?</p> <p>* <b>Required questions: ii, iii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Damage Control</b> (acreage of prairie dog towns controlled)</li> </ul>	<ul style="list-style-type: none"> <li>• South Dakota State Wildlife control office (annually compile)</li> <li>• North Dakota – DPG contract reports (annually compile)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Prescribed fires</b> (acres of)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Vegetation exclosures</b> (numbers of)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> </ul>
	<p><b>MON-WLD-02A</b> – What is current population status of 1) <b>sage grouse</b> (<i>Centrocercus urophasianus</i>), 2) <b>sharp-tailed grouse</b> (<i>Tympanuchus</i></p>	<p><b>By each grouse species:</b></p> <ul style="list-style-type: none"> <li>• <b>Leks</b> (number of)</li> <li>• <b>Gender ratio</b> (number of males and females within each lek)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
	<p><i>phasianellus</i>), and 3) <b>greater prairie chicken</b> (<i>Tympanuchus cupido</i>)?</p> <p><b>* Required questions: ii, iv</b></p>		
	<p><b>MON-WLD-02B</b> - What is the current and potential habitat capability for 1) sage grouse, 2) sharp-tailed grouse, and 3) greater prairie chicken?</p> <p><b>* Required questions: ii, iv</b></p>	<p><b>By each grouse species:</b></p> <ul style="list-style-type: none"> <li>• Robel Pole/Visual obstruction readings (<i>vegetation height and density on sites dominated by herbaceous vegetation. percentage of Low %:Medium %:High % by each block or by geographic area</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
	<p><b>MON-WLD-02C</b> - What management actions and naturally occurring events have influenced change to the status and/or habitat for 1) sage grouse, 2) sharp-tailed grouse, and 3) greater prairie chicken?</p> <p><b>* Required questions: ii, iv.</b></p>	<p><b>By each grouse species:</b></p> <ul style="list-style-type: none"> <li>• <b>Habitat improvements</b> (<i>number and acres of actions that improve habitat</i>)</li> <li>• <b>AM at the 17 blocks</b> (<i>actual use</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> <li>• INFRA</li> <li>• WIT</li> <li>• from billing information</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Annual precipitation</b></li> </ul>	<ul style="list-style-type: none"> <li>• State weather gauges <a href="https://ndawn.ndsu.nodak.edu/">https://ndawn.ndsu.nodak.edu/</a></li> <li>• <a href="http://www.cocorahs.org/">http://www.cocorahs.org/</a></li> </ul>
	<p><b>MON-WLD-03</b> – What is the population and habitat status of the <b>Dakota skipper</b> (<i>Hesperia dacotae</i>) in high potential habitat?</p> <p><b>* Required questions: ii, iv</b></p>	<ul style="list-style-type: none"> <li>• <b>Suitable habitat</b> (<i>acres of modeled habitat determined to be suitable</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Occurrences</b> (<i>number of individuals</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Forage use</b> (<i>landscape appearance protocol</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Oil and gas activity</b> (<i>Acres/number of activities in critical habitat</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> <li>• INFRA</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Habitat improvements</b> (<i>number or acres of habitat improvement actions</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• NRIS</li> </ul>
	<p><b>MON-WLD-04</b> - What is the distribution and status of Northern long-eared bat (<i>Myotis septentrionalis</i>)?</p>	<ul style="list-style-type: none"> <li>• <b>Occurrences</b> (presence/absence)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
	* Required questions: ii, iv		
	<b>MON-WLD-05</b> – What is presence of Poweshiek skipperling ( <i>Oarisma poweshiek</i> ) during Dakota skipper surveys? * Required questions: ii, iv	<ul style="list-style-type: none"> <li>• <b>Occurrences</b> (presence/absence of Poweshiek skipperling during Dakota skipper surveys <b>MON-WLD-0.3</b>)</li> </ul>	See MON-WLD-03
<b>Goal 1.b Objective 2.</b> Within 15 years, for threatened, endangered, sensitive, and MIS, demonstrate positive trends in population viability, habitat availability, habitat quality, and population distribution within the planning area.  <b>Goal 1.b Objective 4.</b> Within 15 years, conserve populations of species at risk and rare communities by demonstrating positive trends in habitat availability and quality or any other applicable factors affecting species at risk.	<b>MON-WLD-06</b> - Are management actions effective in protecting golden eagle nests? * Required questions: ii, iv, vii	<ul style="list-style-type: none"> <li>• <b>Active territory</b> (presence/absence within half mile following implementation)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Survey as needed, post implementation)</li> </ul>
	<b>MON-WLD-07</b> - Are management actions effective in protecting bighorn sheep lambing? * Required questions: ii, iv, vii	<ul style="list-style-type: none"> <li>• <b>Timing restrictions</b> (number of projects/permits with timing stipulations)</li> <li>• <b>Lambing periods</b> (during year of activity)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> <li>• State Wildlife records for lambing periods</li> </ul>

## TERRESTRIAL NOXIOUS WEEDS (NOX)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<b>Goal 1.c Objective 4</b> - Within 5 years, develop and maintain cooperative noxious weeds and invasive species management plans in	<b>MON-NOX-01</b> - To what extent has the integrated prevention and pest control management for noxious weeds being implemented?	<ul style="list-style-type: none"> <li>• <b>Acres of treatment types</b> (Biocontrol , Herbicide Cultural – Sheep Grazing, or other types)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS (treatment data)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p>consultation with appropriate partners and agencies.</p> <p><b>Goal 1.c Objective 6</b> - Within 10 years, limit further expansion of areas affected by noxious weeds.</p> <p><b>Goal 1.c Objective 7</b> - Within 10 years, implement an integrated prevention and pest control management program for noxious weeds and invasive plant species.</p>	* <b>Required questions: ii, iv, vii</b>	<ul style="list-style-type: none"> <li>• <b>Partners</b> (<i>number of partners with cooperative agreements</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records IWEB (grants and agreements)</li> </ul>

## VEGETATION (VEG)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 1.c</b> - Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from disturbance processes, both natural and human-controlled.</p> <p><b>Goal 2.c</b> - Improve the capability of the Nation's forests and grasslands to provide a desired sustainable level of uses, values, products, and services.</p>	<p><b>MON-VEG-01</b> What is the status of rangeland conditions relative to site potential?</p> <p>* <b>Required questions: ii, iv, vi</b></p>	<p><u>By allotment or pasture:</u></p> <ul style="list-style-type: none"> <li>• <b>Similarity index</b> (<i>weight of plant species within dominant sites in a pasture/allotments</i>) – same indicators as <b>MON-VEG-01</b></li> <li>• <b>State transition</b> (<i>acres of each state/transition per ecological site</i>) – same indicators as <b>MON-VEG-01</b></li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual, approx. 75 plots/yr, each plot read every 5-15 yrs depending on NEPA decisions)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<b>Goal 1.c Objective 1</b> - Within 10 years, implement management practices, including prescribed fire, that will move landscapes toward desired vegetation composition and structure as described in Geographic Area direction. (Moved	<b>MON-VEG-02</b>  What management action have occurred that contribute t to ability of plant communities to retain function or regain function after disturbance?  <b>* Required questions: ii, iv</b>	<ul style="list-style-type: none"> <li>• <b>Prescribed fire</b> (acres of Rx fires that maintain or improve community function)</li> <li>• <b>Mowing</b> (acres of)</li> </ul>	<ul style="list-style-type: none"> <li>• FACTS</li> </ul>
<b>Goal 1.c</b> - Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from disturbance processes, both natural and human-controlled.  <b>Goal 1a Objective 2.</b> Move at least 80 percent of riparian areas and woody draws toward self-perpetuating plant and water communities that have desired diversity and density of understory and overstory vegetation within site capability.	<b>MON-VEG-03</b> - What is the status of woody draw conditions relative to site potential?  <b>* Required questions: ii, iv</b>	<ul style="list-style-type: none"> <li>• number woody draws in each state/transition per ecological site (by project)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (interval of visits dependent on project NEPA decision)</li> </ul>

## RECREATION (REC)

**\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)**

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<b>Goal 2.a Objective 1.</b> Annually, maintain or reconstruct 20% of national grassland trails to regional standards.  <b>Goal 2.a Objective 6.</b> Provide nonmotorized and motorized trails for	<b>MON-REC-01:</b> To what extent are trails managed to meet regional standards.  <b>* Required questions: v, vii</b>	<ul style="list-style-type: none"> <li>• <b>Trails maintained</b> (miles of)</li> <li>• <b>Trails improve</b> (miles of)</li> </ul>	<ul style="list-style-type: none"> <li>• INFRA</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Maintenance needs</b> (number or miles of needing maintenance)</li> </ul>	<ul style="list-style-type: none"> <li>• INFRA</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Trail regional standards</b> (miles of trails meeting and not meeting regional standards)</li> </ul>	

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
a wide variety of uses and experiences.		<ul style="list-style-type: none"> <li>• <b>Non-motorized trials</b> (<i>miles of</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• INFRA</li> </ul>
<b>Goal 2.a.</b> Improve the capability of the Nation's forests and grasslands to provide diverse, high-quality outdoor recreation opportunities.	<b>MON-REC-02:</b> To what extent are recreational opportunities meeting public interests? <b>* Required questions: v, vii</b>	<ul style="list-style-type: none"> <li>• <b>Visitor use</b> (number and type of visits)</li> </ul>	<ul style="list-style-type: none"> <li>• National Visitor Use Monitoring (NVUM) surveys (5 yr. interval)  <a href="http://www.fs.fed.us/recreation/programs/nvum/">(http://www.fs.fed.us/recreation/programs/nvum/)</a> </li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Fee collections</b> (number or amount of fees collected)</li> </ul>	<ul style="list-style-type: none"> <li>• Point of service sale (POSS) system</li> </ul>
		<ul style="list-style-type: none"> <li>• Recreation use and needs</li> </ul>	North Dakota State Comprehensive Outdoor Recreation Plan (SCORP) <a href="http://www.parkrec.nd.gov/information/departmentscorp.html">http://www.parkrec.nd.gov/information/departmentscorp.html</a>
		<ul style="list-style-type: none"> <li>• <b>Social media hits</b> (<i>comments and suggestions from website on how to improve or new needs</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Public outreach events</b> (<i>number of</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> </ul>
<b>MA – 1.2A Standards and Guidelines</b> 1. Allow uses and activities only if they do not degrade wilderness characteristics.	<b>MON-REC-03:</b> To what extent are management activities influencing the features important of suitable wilderness (MA-2.1A) <b>* Required questions: v, vii</b>	<ul style="list-style-type: none"> <li>• <b>Non-conforming uses</b> (<i>number of permits/authorizations that are non-conforming to characteristics of suitable wilderness</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (Annual)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Permit applications</b> (<i>number of permit applications received/denied within the suitable wilderness</i>)</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Permitted roads</b> (<i>number of off road permits authorized in suitable wilderness</i>)</li> </ul>	
<b>Goal 2.c Scenery Objective 1.</b> Implement practices that will meet, or move the landscape character toward, scenic integrity objectives consistent with Geographic Area direction.	<b>MON-REC-04:</b> To what extent have scenery integrity objectives been met? <b>* Required questions: v, vii</b>	<ul style="list-style-type: none"> <li>• <b>Scenic Integrity Objectives</b> (<i>number of projects that are number meeting or not meeting SIO</i>)</li> <li>• <b>Actual scenic integrity</b> (<i>acres and location of desired versus actual scenery integrity condition</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Goal 4.a Objective 1.</b> Within 5 years, identify travel opportunities and restrictions; including designating motorized travel-ways and areas, to meet land management objectives.</p> <p><b>Goal 4.a Objective 2.</b> Provide reasonable access for use of the national grasslands.</p> <p><b>Goal 4.a Objective 4.</b> Identify the minimum Forest Service road system for administration, utilization, and protection of national grasslands resources using a science-based roads analysis process. Provide safe and efficient travel and minimize adverse environmental effects.</p>	<p><b>MON-REC-05:</b> To what extent is off-road vehicle use (permitted and unpermitted) damaging grassland resources and causing erosion, sedimentation, and vegetation loss?</p> <p><b>* Required questions: v, vii</b></p>	<ul style="list-style-type: none"> <li>• <b>Unauthorized use</b> (<i>numbers of and acres of incidents</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (<i>opportunistic reports as observed</i>)</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Cited incidents</b> (<i>number of unpermitted incidents</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• LEO incident reports</li> </ul>
		<ul style="list-style-type: none"> <li>• <b>Photo interpretation</b> (<i>Change in resource conditions as seen in phot points</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (<i>as needed</i>)</li> <li>•</li> </ul>

## HERITAGE (HRT)

\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<p><b>Legal – National Historic Preservation Act</b></p> <p><b>Goal 2.b Heritage Sites Objective 2.</b> Within 5 years, assess identified sites eligible for the National Register of Historic Places (NRHP) in conjunction with SHPO and THPO and provide interpretation for National Register of Historic Places sites where appropriate</p>	<p><b>MON-HRT-01:</b> Are the National Register sites and districts being identified and managed?</p> <p><b>* Required questions: v, vii, and cultural (FSH 1909.12 Section 32.13f)</b></p>	<ul style="list-style-type: none"> <li>• <b>National registered eligible sites</b> (<i>total number of number of new</i>)</li> <li>• <b>National registered properties</b> (<i>number of listed</i>)</li> <li>• <b>Priority heritage asset</b> (<i>number assessed as needing further management</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor's Office records (3-5 yr interval)</li> </ul>

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
and consistent with developed preservation plans.			
<b>Goal 2.b Heritage Sites Objective 5.</b> In partnership with American Indian tribes and/or others, educate and interpret, to increase public awareness, protect heritage resources, and further the goals of research.	<b>MON-HRT-02:</b> Are tribes being consulted on sites of religious and cultural significance?  <b>* Required questions: v, vii, and cultural (FSH 1909.12 Section 32.13f)</b>	<ul style="list-style-type: none"> <li><b>Tribal consultations</b> (number of tribal consultation visits)</li> </ul>	<ul style="list-style-type: none"> <li>Annual tribal relation reports</li> </ul>

## COMMUNITY RELATIONS (CMR)

**\*2012 Planning Rule Required questions element 1-8 [36 CFR 219.12(a)(5)] or (FSH 1909.12 Section 32.13f)**

Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
<b>Goal 2.c</b> - Improve the capability of the Nation's forests and grasslands to provide a desired sustainable level of uses, values, products, and services.	<b>MON-CMR-01:</b> What multiple use services have been provided?  <b>* Required questions: v, vii, and cultural (FSH 1909.12 Section 32.13f)</b>	<ul style="list-style-type: none"> <li>Federal payments</li> <li>Revenue sharing with State &amp; Local Governments</li> </ul>	<ul style="list-style-type: none"> <li>Headwater Economics Tools: (<a href="http://headwaterseconomics.org/tools/economic-profile-system/about">http://headwaterseconomics.org/tools/economic-profile-system/about</a>) – (data compiled and evaluated every two years by Regional Office at region by forest/grassland scales)</li> </ul>
		<ul style="list-style-type: none"> <li>Number AUMs</li> </ul>	<ul style="list-style-type: none"> <li>Grazing Statistical Report: (<a href="http://www.fs.fed.us/rangelands/reports/">http://www.fs.fed.us/rangelands/reports/</a>)</li> </ul>
		<ul style="list-style-type: none"> <li>Number oil and gas permits</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>
		<ul style="list-style-type: none"> <li>Number of special use permits</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>
		<ul style="list-style-type: none"> <li>Number of Person at one time (PAOT)</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>
		<ul style="list-style-type: none"> <li>Recreation/Visitor Use/Purpose of Use</li> </ul>	<ul style="list-style-type: none"> <li>National Visitor Use Monitoring (NVUM) surveys (5 yr. interval) (<a href="http://www.fs.fed.us/recreation/programs/nvum/">http://www.fs.fed.us/recreation/programs/nvum/</a>)</li> </ul>
		<ul style="list-style-type: none"> <li>Developed Recreation sites available</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>



Selected 2002 Plan Components	Monitoring Question	Indicators (Measure)	Data Source/Storage (Interval of data collection)
		<ul style="list-style-type: none"> <li>Miles of non-motorized recreational trails available</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>
		<ul style="list-style-type: none"> <li>Interpretive sites available</li> </ul>	<ul style="list-style-type: none"> <li>Supervisor's Office records</li> </ul>
<b>Goal 4.b Public &amp; Organizational Relations</b> <b>Objective 2</b> - Work in cooperation with federal, state, and county agencies, individuals, and nongovernment organizations for control of noxious weeds, invasive species, and animal damage.	<b>MON-CMR-02:</b> To what extent is cooperation with external interested parties occurring for control of animal damage?  <b>* Required questions: v, vii, and cultural (FSH 1909.12 Section 32.13f)</b>	<ul style="list-style-type: none"> <li><b>Damage Control</b> (acreage of prairie dog towns controlled)</li> </ul>	<ul style="list-style-type: none"> <li>South Dakota State Wildlife control office (<i>annually compile</i>)</li> <li>North Dakota – DPG contract reports (<i>annually compile</i>)</li> </ul>
		<ul style="list-style-type: none"> <li><b>Damage Control</b> (number and locations of damage control – by species)</li> </ul>	<ul style="list-style-type: none"> <li>APHIS Damage Control Report Annual report</li> </ul>