



Oak Lake Sandhills & Wetlands - Adaptive Grazing Management Plan

Province/Region: Manitoba

Natural Area/Preserve/Site: Oak Lake Sandhills & Wetlands

Management Unit Number/Name: Oak Lake Sandhills & Wetlands Grazing Unit

Date Prepared: January 29, 2018

Date Expires: January 31, 2023

Species At Risk Permit #: TBD

1.0 BACKGROUND

1.1 Test Projects

Several different NCC staff teams have developed grazing plans for various NCC properties. Each team is using an open standards-linked planning approach (linking decision making to biodiversity targets and setting measurable objectives) but there are differences in the way each team is approaching. These differences are great and essentially represent a few simultaneous pilot projects.

This Strategy is one of the pilot projects that will be used to develop the regional methodology to develop a prescribed grazing strategy. The various projects will help inform a more standard regional 'prescription' or 'how to' document for grazing system decision-making.

1.2 Team

Jordan Becker

Julie Pelc

Josh Dillabough

Ashley Greenly

Rebekah Neufeld

1.3 Methods

Miradi planning software and the Open Standards were utilized to facilitate the use of best practises in conservation planning for the management unit. Team members met a number of times early in the planning process in a workshop setting to review the management unit in terms of its biodiversity targets, threats to biodiversity and identify ways that grazing management could impact those factors.

Upon identifying major management considerations, a workplan and monitoring plan were then developed in Miradi to ensure that the plan is enacted and effective at achieving identified biodiversity goals.

2.0 UNIT DESCRIPTION

2.1 Treatment Area and Site Description

The management unit includes two parcels in the Oak Lake Sandhills and Wetlands Natural Area, and is managed by the Nature Conservancy of Canada. The unit has been managed using cattle grazing since NCC securement.

2.2 Grazing infrastructure

There is limited grazing infrastructure on the property. The two parcels have a boundary barbed wire fence, but there is currently no cross fencing separating the parcels. A large dugout is located in centre of the southern parcel, which has grown in recent years to resemble a small pond due to wet conditions.

An offsite watering system has been installed on the dugout. A functioning well is located on the yardsite in the northern parcel.

2.3 Vegetation and Grazing History

The southern parcel is dominated by tame grassland and ephemeral, semi-permanent and permanent wetlands. Grassland-obligate birds have been observed on the property (Bobolink) and in the direct vicinity of the property (Sprague's Pipit). Some small areas with relict mixed-grass prairie are found scattered throughout the tame grassland, although the viability of mixed grass prairie is currently rated as poor.

The northern parcel is a mosaic of sandhill prairie and woodland. A small area of tame grassland is present in the southwest corner and wetlands are uncommon (or even absent in dry years) on the parcel.

2.4 Targets, Threats and Viability

Priority property targets were identified based on those that were included in the Property Management Plan. Target viability was assessed and the threats they faced in the absence of targeted grazing management were ranked (see tables 1 and 2, below). The priority targets for the property were identified as Grassland-endemic birds, Sandhill prairie & blowouts, and Ephemeral, semi-permanent and permanent wetlands. These targets have the potential to be greatly impacted by grazing management, were considered viable in the long run, and were at the highest risk of being detrimentally affected by incompatible grazing.

Mixed-grass prairie, which was confirmed only recently on the property, was rated as having poor viability, which could not increase in a meaningful way through grazing management. The Sandhill Woodland target was already rated as Good and is less impacted from grazing management, so Conservation Planners decided not to manage grazing on the property to directly impact this target.

Table 1. Biodiversity targets and assessed viability

Biodiversity Targets	Viability
TARGET: Grassland-endemic birds <i>Nested target: Bobolink</i> <i>Nested target: Sprague's Pipit</i>	Fair
TARGET: Sandhill Prairie & Blowouts	Fair
TARGET: Mixed-grass Prairie	Poor
TARGET: Ephemeral, Temporary and Semi-permanent Wetlands	Good
TARGET: Sandhill Forest	Good

Table 2. Threat of Incompatible Grazing ranked by target

	Grassland-endemic birds	Sandhill Prairie & Blowouts	Mixed-Grass Prairie	Ephemeral, Temporary and Semi-permanent Wetlands	Sandhill Forest
Incompatible Grazing	Medium	Medium	Low	Medium	Low

3.0 GOALS AND OBJECTIVES

Property Goals:

- All wetlands on the property are maintained at a condition of Good or better through to 2023
- By 2023, over 75% of assessed sandhill prairie is rated Good or higher
- By 2023, Bobolink are observed on the property at least twice within five years.
- By 2023, Sprague's Pipit are observed on the property at least once within 5 years.

Property Objectives:

- Through to 2023, average graminoid height in tame grassland maintained between 20-40cm
- By 2023, the extent of sandhill blowouts is maintained at 2018 extent

4.0 WORKPLAN

Table 3. Workplan outlining activities related to grazing management, effectiveness monitoring, and baseline monitoring.

Activity	Year	Required staff and expenses
 ACTIVITY - Implement offsite watering system	Year 1-5	 Josh Dillabough
 ACTIVITY - Manage cattle - Adjust timing	Year 1-5	 Julie Pelc
 ACTIVITY - Manage cattle - Adjust stocking rate	Year 1-5	 Julie Pelc
 ACTIVITY - Manage cattle - rest for one year	Year 5	 Julie Pelc
 ACTIVITY - Install fencing to divide unit into paddocks	Year 1	 Josh Dillabough  Fencing materials and labour
 ACTIVITY - Preparation of well infrastructure in north paddock	Year 1	 Josh Dillabough  Capital costs for upgrading well infrastructure (troughs, etc)
 EM - Monitor wetland condition	Year 5	 Biologist
 EM - Monitor grassland structure (height)	Year 1 and 5	 Biologist
 EM - Monitor extent of sandhill blowouts	Year 5	 Biologist
 EM - Monitor condition of sandhill prairie	Year 5	 Biologist
 EM - Opportunistically monitor grassland bird presence	Year 1-5	 Biologist
 BASELINE - Determine condition of wetlands on northern parcel	Year 1	 Biologist
 BASELINE - Determine condition of sandhill prairie on northern parcel	Year 1	 Biologist
 BASELINE - Determine extent of sandhill blowouts on mgmt unit	Year 1	 Biologist

5.0 GRAZING PRESCRIPTION

The priority targets on the property are roughly divided on a north-south basis (Grassland-endemic birds and wetlands occur in the south, while sandhill prairie and blowouts occur in the north). Different management requirements for these targets facilitated the need to separate the management unit into two separate paddocks, along the habitat lines, as outlined in Map 1.

Division of the property into two paddocks created the issue of not having a water source in the northern paddock. This issue is to be mitigated in Year 1 of this plan, by establishing a watering side in the northern parcel (see location on Map 1).

The division of the unit into two paddocks allows for control over two main factors that will mitigate threats and increase the viability of targets:

1. Temporal separation of the paddocks
 - Allows for grazing in the southern paddock to be delayed until mid-summer, when most grassland-endemic birds have fledged from their nests and when most of the ephemeral wetlands and saturated grasslands will have dried out, preventing damage to the sensitive soils during this time.
2. Grazing intensity
 - In order to achieve suitable habitat for the nested grassland birds identified for the project, a moderate rate of grazing intensity is required in the southern paddock
 - The northern paddock, dominated by sandhill prairie, would benefit from a moderate-high grazing intensity in order to help prevent succession of the prairie to forest and revegetation of sandy blowouts.

The overall aim of grazing management on the unit is to have the north paddock grazed earlier in the season at a higher intensity (relative to its available forage) and the south paddock grazed after mid-summer at a moderate intensity (relative to its available forage).

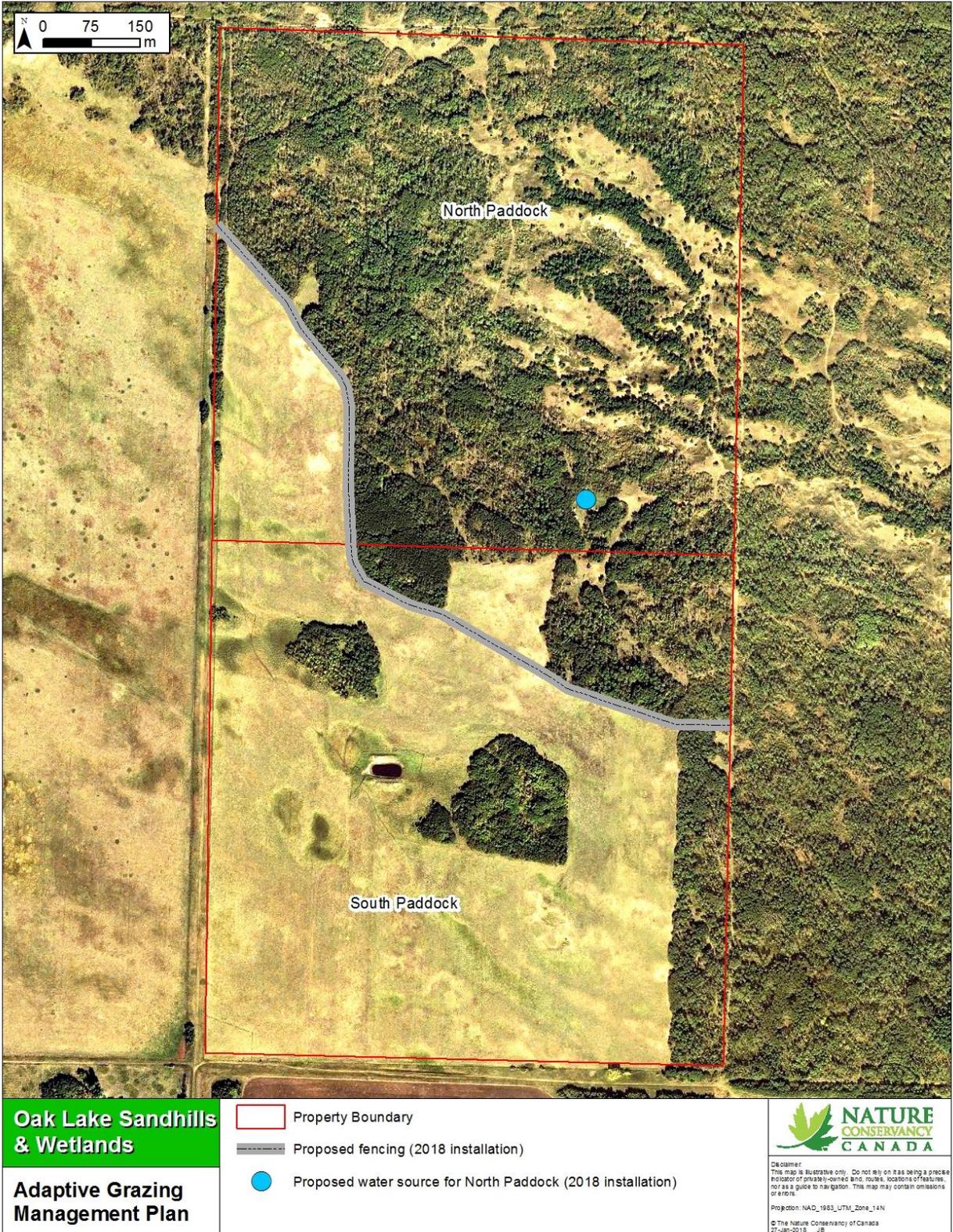
Recommended Grazing Schedule:

June 1 - July 15th: North Paddock Grazing (25 AUEs)

July 15 - September 15th: South Paddock Grazing (25 AUEs)

September 15 - October 15th: Both Paddocks (25 AUEs)

Map 1. Property Overview.



6.0 POST GRAZING OBSERVATIONS AND MONITORING

Effectiveness Monitoring

A monitoring plan has been developed in Miradi that includes two types of monitoring activities: Baseline and Effectiveness. Baseline monitoring activities are those that address gaps in knowledge, particularly gaps that exist in regards to the northern parcel. The effectiveness monitoring activities have been developed as a direct way to measure our progress towards goals and objectives, and mostly incorporate monitoring activities that are already standard procedure for the regions (e.g. conducting condition assessments on grasslands and wetlands).

A traditional grazing assessment (as utilized in the past by the region), is not required to assess our progress towards objectives/goals, and it is recommended that they be discontinued on the management unit.

Progress towards goals and objectives will be reassessed at the end of the 5-year plan and changes can be made as deemed appropriate.

7.0 KNOWLEDGE GAPS

1. Stocking rate and carrying capacity of sandhill prairie.
2. Effectiveness of grazing to expand the extent of sandhill blowouts.
3. The role of fire, in cooperation with grazing, as a management tool to manage the property