Environment Act Proposal

for a peatland development at Julius Lake West

March, 2024

sungro HORTICULTURE

Our Expertise is Growing®

Presentation Outline

1. Our Process
2. Overview of Peatland Development
3. Who is Sun Gro Horticulture?
4. The Projects
5. The Environmental Assessment Process
6. Typical Environmental Issues and Mitigation Measures
7. Questions?

Our Process

- KGS Group is:
  - preparing seperate Environment Act Proposal (EAP) for the following peatland development site:
    i. Julius Lake West (JLW) sub-area

Our Process

- The EAP process will consider biophysical environmental effects of the project (3km radius surrounding the sub-area)
- The EAP process will consider Socio-Economic effects of the project (10km radius surrounding the sub-area)
- We want to hear your comments and feedback as part of the EAP process

Spring 2024
Submit Environment Act Proposal

Fall 2024
(Anticipated) Obtain Environment Act Licence

Winter 2024/2025
Begin site preparation, begin harvesting

2038
End of peat harvesting, begin site recovery

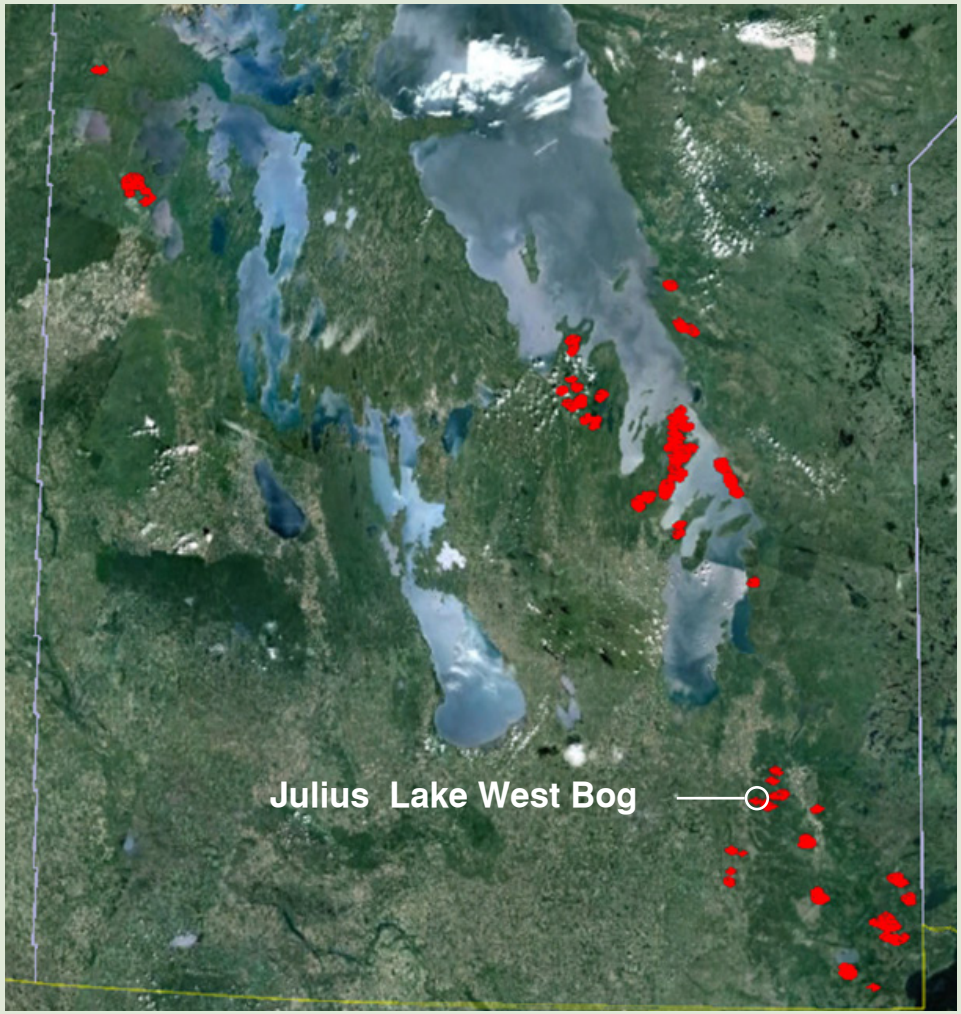
Peatlands in Canada & Manitoba

Canada

- covers 113 million ha (25% of global peatlands)
- 70 million tonnes of new peat created per year
- < 0.03% has been harvested to date
- more peat is created than is harvested (60 times more)

Manitoba:

- covers 20 million ha (or 17% of Canada's peatlands)
- peat harvesting started in 1940 at Julius Bog
- Manitoba = 13% of national production
- see map for active peat producers



Current Manitoba Peat Harvest Licences (April 2015)

How is Peat Harvested?

1
Remove existing surface vegetation

2
Construct drainage to lower water content of peat

3
Levelling, crowning, harrowing, and drying of harvest area

4
Dried surface peat is vacuum harvested, screened, baled, packaged, and shipped

Why is Peat Harvesting Important?

Improves Growing Conditions

- regulates moisture, air, and nutrients around plant roots.
- loosens heavy soils which enables proper root growth.
- helps bind and retain moisture and nutrients in sandy soils.

Improves Green Spaces

Plants are nurtured by peat moss, which helps improve our environment.

Saves Water During Growing

Peat moss retains up to 20 times its weight in moisture and releases water slowly as seeds and plants need it.

Food Production

Commercial growers rely on high quality peat moss and peat based growing media to produce food.

Industries Sun Gro's Peat Products Support

Growing Medium

Herbs and Vegetables

Mushrooms

Flower Horticulture

Tree Plantations

Who is Sun Gro Horticulture?

History:

Formed in 1929, Sun Gro currently operates 22 production facilities across North America and handles thousands of tons of peat per year.

Mission:

To be an industry leader in soilless growing mixes, serving horticultural professionals, retailers, and gardeners with superior quality, branded growing mixes that yield exceptional results.

A commercial grower leader:

Sun Gro has created the highest quality, most advanced mixes, and peat products for consumers and professional growers across North America.

Sun Gro's Values

Environment:

- maintain Canadian peatlands as an abundant renewable resource
- employ the newest research, development, and management practices to ensure peatlands remain plentiful and renewable
- only select bogs that can be restored as soon as possible after harvesting

Local Communities:

- committed to training and hiring local residents for jobs that are safe and pay a fair wage (82 employees in the Interlake and Southeastern Manitoba are locally hired).

Sharing Knowledge:

- Sun Gro finds ways to improve business for the benefit of all by learning from others and sharing knowledge

Long-Term Thinking:

- frames our decision-making to help secure a brighter future

Sun Gro's Values

Sun Gro is Committed to Supporting On-Going Research Aligning With Their Values

- **Environment**
- **Local Communities**
- **Sharing Knowledge**
- **Long-Term Thinking**

1


BRANDON UNIVERSITY

RESEARCH CONNECTION

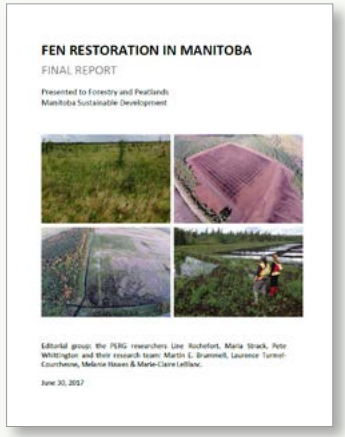
Fen peatland restoration and ecotone creation in south-eastern Manitoba

Fen peatland restoration and ecotone creation in south-eastern Manitoba

By Pete Whittington, PhD, & Maria Strack, PhD

Conducted at Sun Gro's Elma bog area

2


FEN RESTORATION IN MANITOBA

FINAL REPORT

Presented to Forestry and Peatlands Manitoba Sustainable Development

Fen restoration in Manitoba

By Peatland Ecology Research Group (PERG)

Conducted at Sun Gro's South Julius, Moss Spur and Elma bog areas

The Julius Lake West Bog Project

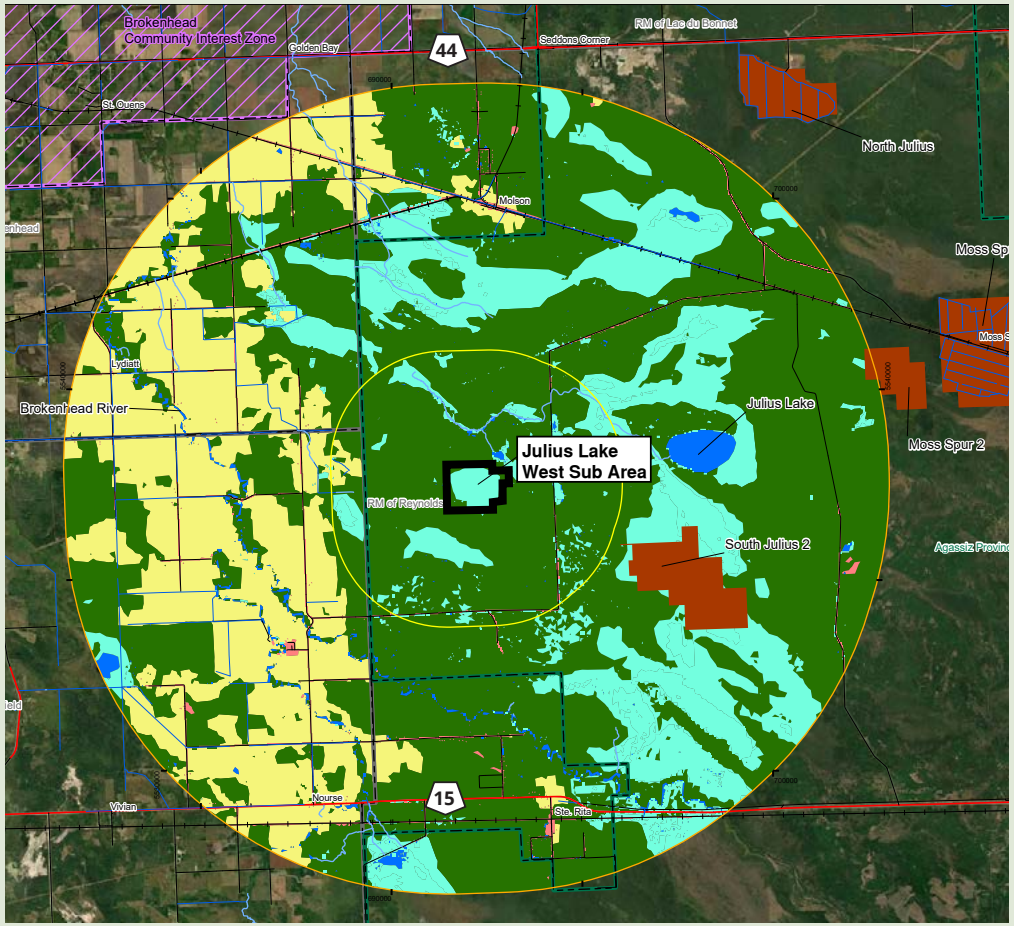
Context

Location:

- Provincial Crown land within the Rural Municipality of Reynolds and Agassiz Provincial Park, north of Highway 15, south of Highway 44, and east of the Brokenhead River
- within an existing Sun Gro Peat Harvest Licence (PHL) 3 area
- near existing peat harvesting operations (South Julius 2 Sub-Area)

Existing Conditions:

- 177ha total, up to 124ha of peat will be harvested at maximum (due to sub-area boundary buffers)
- no water bodies within the sub-area boundary



Julius Lake West Bog Sub-area: Regional Landcover

LEGEND:

- Agriculture
- Undeveloped Upland Forest
- Wetland/Bog Areas
- Peat Harvest Area
- Water Body
- Built Environment

Sun Gro Peat Harvesting Projects

Description

Typical development includes the following components:

1. site preparation and access
2. water management
3. harvesting and shipping
4. recovery

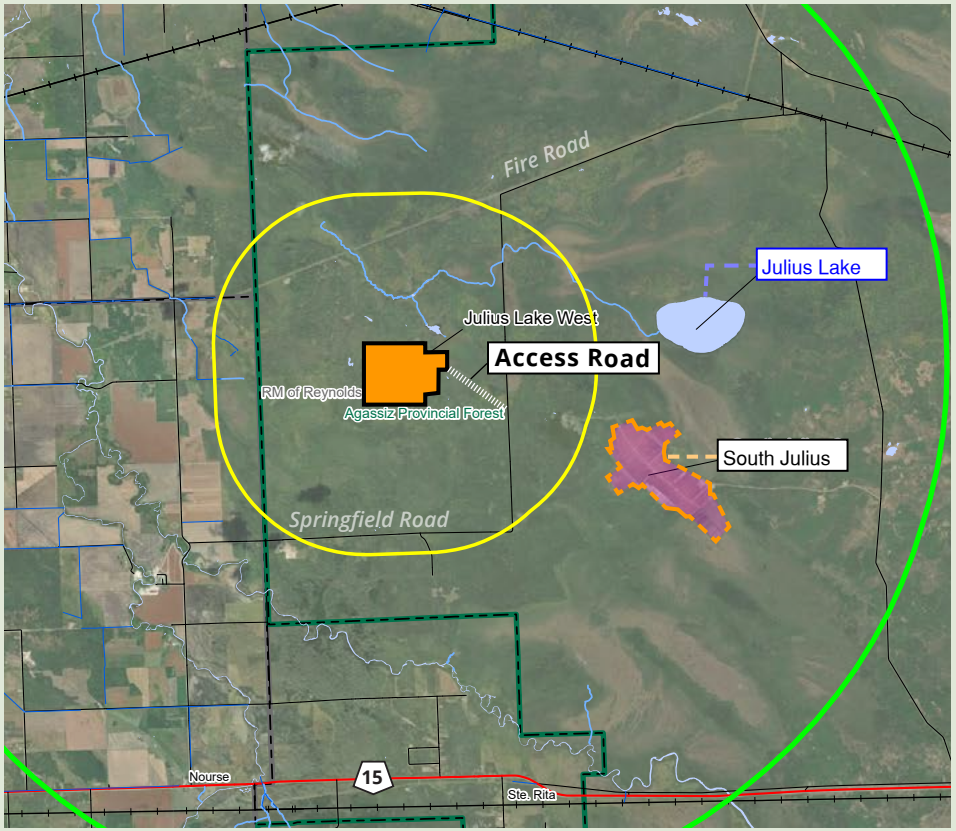
Julius Lake West Bog Site Preparation and Access

Site Preparation:

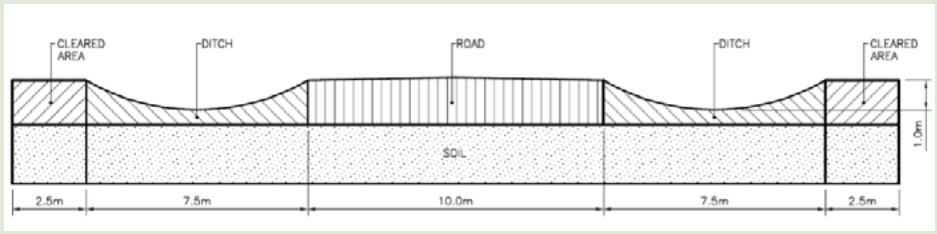
- the full 124 ha area to be harvested will be cleared at the same time

Access Roads:

- an approximately 1.3km road will be constructed from the staging area to an existing fire road east of the sub-area
- portions of the Fire Road and Springfield Road may require upgrades
- ditching on each side of the access road will be installed outside of bog area only
- culverts will be installed, where required, to maintain existing drainage



Julius Lake Bog Sub-Area: Site Access



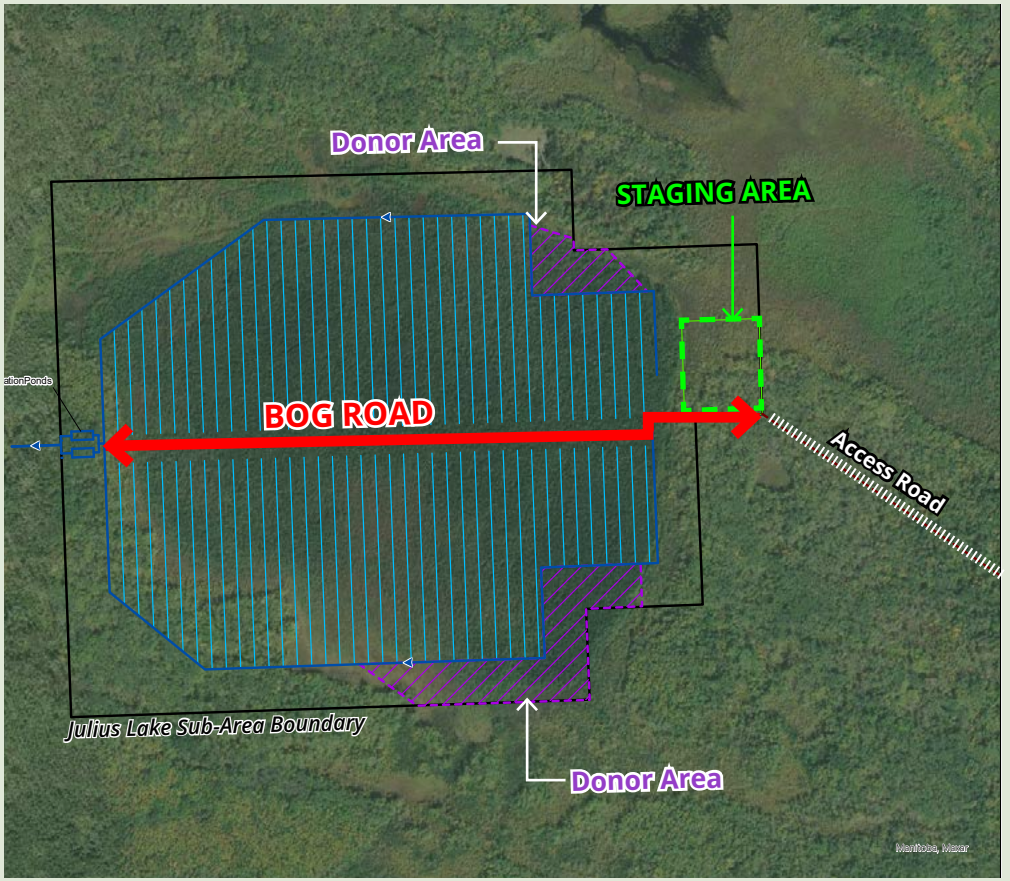
Road Cross-section

Julius Lake West Bog Site Preparation and Access

Staging area of 4 ha in size will be developed along the east side consisting of:

- shop / office / lunchroom building (one building) - for equipment maintenance, refueling and for employees
- gravel surface
- no groundwater wells will be installed

Site Preperation



Julius Lake Bog Sub-Area: Site Preparation

Water Management

Ground and surface water management requires:

- field drainage ditches
- main drainage ditches
- overland flow siltation

Example of sedimentation ponds

Field Drain Construction with Typical Profile of 1.5m x 1.5m at ~33m Intervals

Harvesting and Shipping

Four phases:

1. field harrowing
2. harvesting
3. on-site stockpiling and transport to the processing plant near:
   - Elma, MB for Julius Lake West Bog
4. shipped to customers

Peat Harvesting at Existing Sun Gro Sites

Peat Harvesting at Existing Sun Gro Sites

Recovery

Process:

- Peatland Restoration Plan under the Peatland Stewardship Act
- recovery plan to replace elements lost due to peat harvesting (e.g. vegetation)
- recovery is progressive and based on research and guidelines

North Moss Spur Shortly After Restoration (1996)

North Moss Spur Nine (9) Years After Restoration (2005)

Environmental Assessment Process

Under *The Environment Act*, an EAP is required for all environmentally significant projects in MB.

1

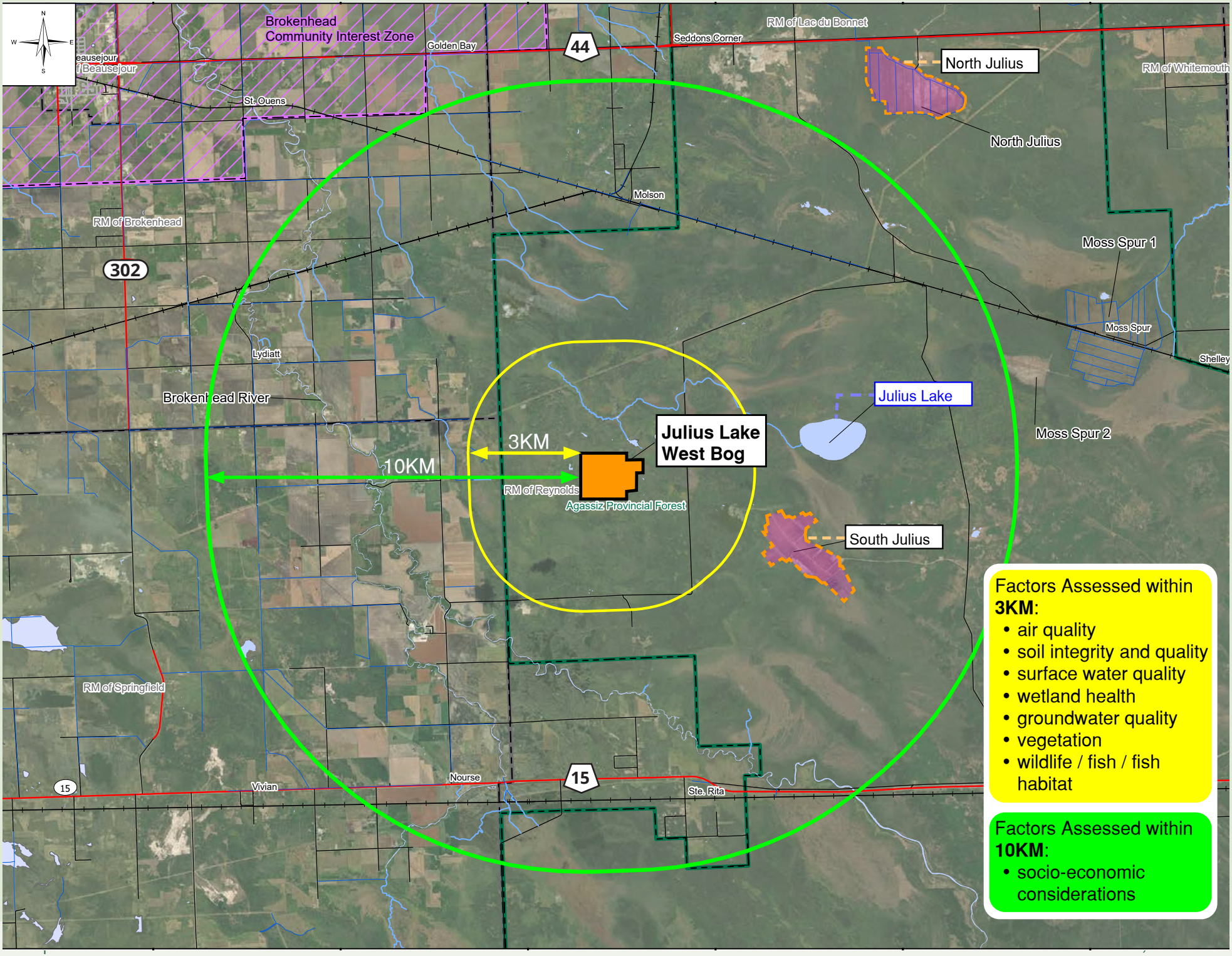
Prepare a project description:

- types and quantities of materials
- harvesting operation methods
- harvesting schedule
- site layout (drainage management)
- environmental controls (e.g. noise)
- resource usage (e.g. water)
- waste management (e.g. sewage)

2

Assess environmental factors

- air quality
- soil integrity and quality
- surface water quality
- wetland health
- groundwater quality
- vegetation
- wildlife / fish / fish habitat
- socio-economic considerations


Brokenhead
Community Interest Zone
Golden Bay
44
Seddons Corner
RM of Lac du Bonnet
North Julius
RM of Whitemouth
North Julius
St. Ouens
Molson
RM of Brokenhead
302
Moss Spur 1
Moss Spur
Shelley
Lydiatt
Brokenhead River
Julius Lake
Julius Lake
West Bog
3KM
10KM
RM of Reynolds
Agassiz Provincial Forest
Moss Spur 2
South Julius
RM of Springfield
15
Vivian
Nourse
15
Ste. Rita
Factors Assessed within
3KM:
• air quality
• soil integrity and quality
• surface water quality
• wetland health
• groundwater quality
• vegetation
• wildlife / fish / fish habitat
Factors Assessed within
10KM:
• socio-economic considerations

Environmental Assessment Process (contd.)

3. **Engage the public, stakeholders and Indigenous communities:**
   - letters and factsheets sent by email and regular post on January 17, 2024

4. **Assess effects:**
   - effects of the project on the environment and vice versa

5. **Identify mitigation measures:**
   - to eliminate or reduce adverse project effects to acceptable levels

6. **Assess residual effects after mitigation**

7. **Prepare and file the Final EAP Report** to Manitoba Environment and Climate Change (MECC) Environmental Approvals Branch for review / approval

8. **Monitor the effectiveness of the mitigation measures** during project implementation

Typical Environmental Issues and Mitigation Measures

Concerns:

- accidents
- soil loss
- surface water contamination
- dust emissions
- noise
- drainage changes
- wildlife / habitat loss
- loss of wetlands / vegetation
- CO_2 emissions
- public opposition

Mitigation Measures:

- operations-maintenance/emergency manuals
- harvested area
  - Julius Lake West: (124ha) < Sub-Area (177 ha)
- project drainage
- peat creation > peat harvesting
- progressive recovery plans
- reduce dust (e.g. moisten stockpiles)
- local jobs / economic development

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Thank You

Questions?