COUNCIL MEETING - MAY 26th

Presented by Frédéric Caron, André Fafard & Robert Durant

2026.05.26

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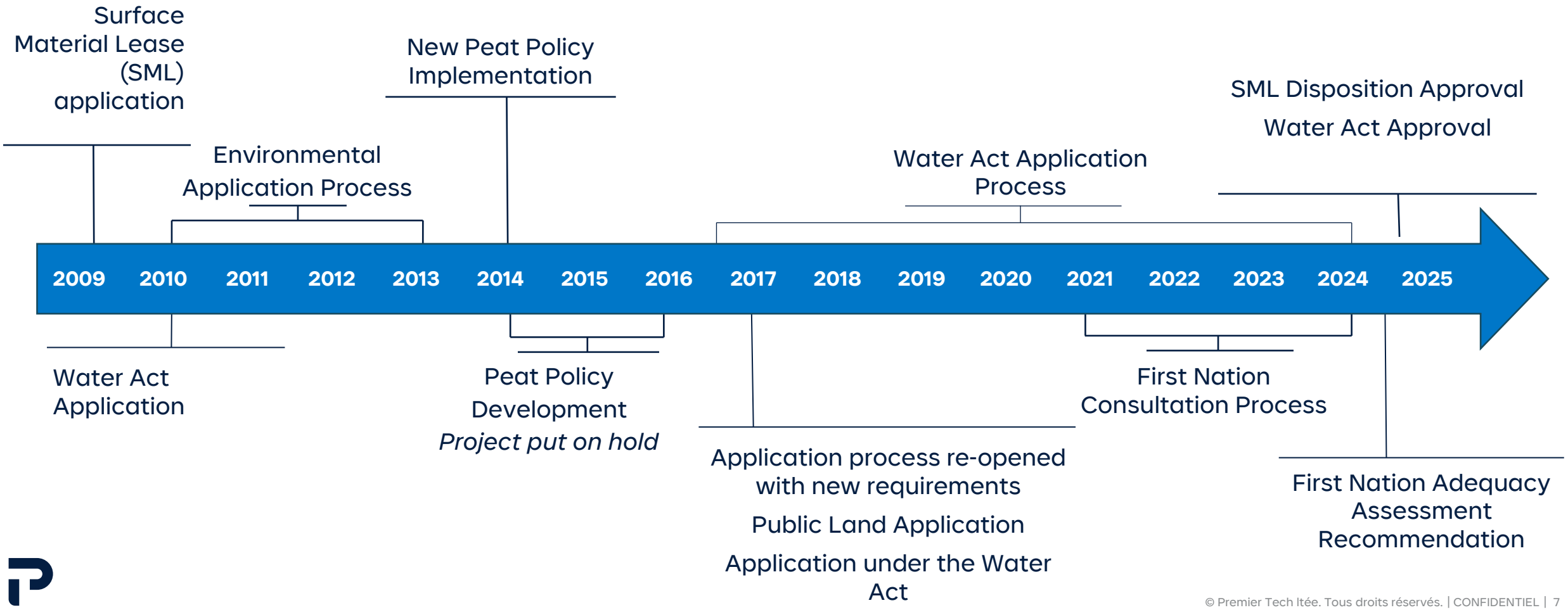
Peat vs. Aggregate vs. Agricultural

Nuisance Vector	Typical Gravel / Aggregate Operation (DC-AE typical use)	Premier Tech Sphagnum Peat Moss Harvesting (Clearwater Project)	Typical Agricultural Operation (Adjacent land use context)
Noise	Crushing, screening, blasting — continuous heavy industrial noise; 85–100 dB at source	Agricultural tractors, harrows, vacuum harvesters — seasonal, daylight hours only; 5 documented mitigation measures (WSP 2024, s.3.2.5)	Agricultural tractors, combines, grain augers — seasonal, daylight only ✓ Equivalent level
Dust	Silica crystalline dust — IARC Group 1 carcinogen; continuous generation during operations	Organic peat particles — non-toxic, biodegradable; operations stop at 50 km/h wind; 40m treed buffer; stockpiles covered (WSP 2024, s.3.2.5)	Topsoil dust during tillage, seeding and harvest — organic, non-toxic ✓ Comparable or greater during dry seasons
Odour	Mineral dust, intensive diesel exhaust; potential chemical processing agents	Mild natural organic scent from peat — does not extend beyond immediate harvest area; no chemical processing on site	Manure application, silage, livestock — common and recurring ✓ Typically more pronounced and more frequent
Fire Risk	Blasting, fuel storage, hot equipment near dry materials — continuous risk	Managed under Fire Prevention Plan (WSP 2024, App. F); 50 km/h wind operational stop; firefighting equipment on site	Dry crop residue, fuel storage, equipment — common seasonal risk ✓ Comparable or greater risk in dry conditions

Sources: WSP Canada Inc., Biophysical Report and Peat Development and Operations Plan — 2024 Update (CA0039367.0187); Bylaw 25-050, Section 11.21; IARC (dust classification).

REGULATORY PROCESS OVERVIEW

Since 2009, Premier Tech invested 0.5M$ of consultant and over 12.5k$ in taxes to the Clearwater County.



PROVINCIAL REGULATORY FOR PEATLANDS

APPLICABLE STATUTES, REGULATIONS & POLICIES, AMONGST OTHERS:

- Public Lands Act
- Public Lands Administration Regulation
- Guide to Surface Materials Lease Information Requirements for Peat Operations, 2017
- Process for the Administration and Maintenance of Applications and Dispositions for Peat Operations on Public Land, 2018
- Allocation and Sustainable Management of Peat Resources on Public Land, 2016
- PLAR Formal Disposition Directive, 2014
- Master Schedule of Standards and Conditions, April 2021
- Water Act
- Guide to Water Act Application Requirements for Surface Water Quality Monitoring for Peat Operations in Alberta, 2018.
- Alberta Wetland Policy
- Alberta Wetland Regulatory Requirements Guide
- Alberta Wetland Identification and Delineation Directive, June 2015
- Alberta Wetland Classification System, June 1, 2015
- Alberta Wetland Assessment and Impact Report Directive, June 2017
- Alberta Wetland Restoration Directive
- Directive for Permittee-Responsible Wetland Construction in Alberta
- Code of Practice for Wetland Replacement Works
- Historical Resources Act
- Surface Materials Historical Resources Act Compliance, 2014
- Standard Requirements under the Historical Resources Act: Reporting the Discovery of Historic Resources, October 2022
- Standard Conditions under the Historical Resources Act, October 2022
- Environmental Enhancement and Protection Act, Part 6 (reclamation)
- Conservation and Reclamation Regulation
- Activities Designation Regulation
- Requirements for Conservation and Reclamation Plans for Peat Operations, 2016
- Government of Alberta's Policy on Consultation with First Nations on Land and Natural Resource Management, 2015
- Government of Alberta's Guidelines on Consultation with First Nations on Land and Natural Resource Management, July 28, 2014
- Government of Alberta Proponent Guide to First Nation and Metis Settlements Consultation Procedures, December 2019
- Alberta Land Stewardship Act
- Land Use Framework

REGULATED BY THE PROVINCIAL WETLAND POLICY

The allocation of public land for the purpose of commercial peat harvesting shall be consistent with and guided by the following principles:

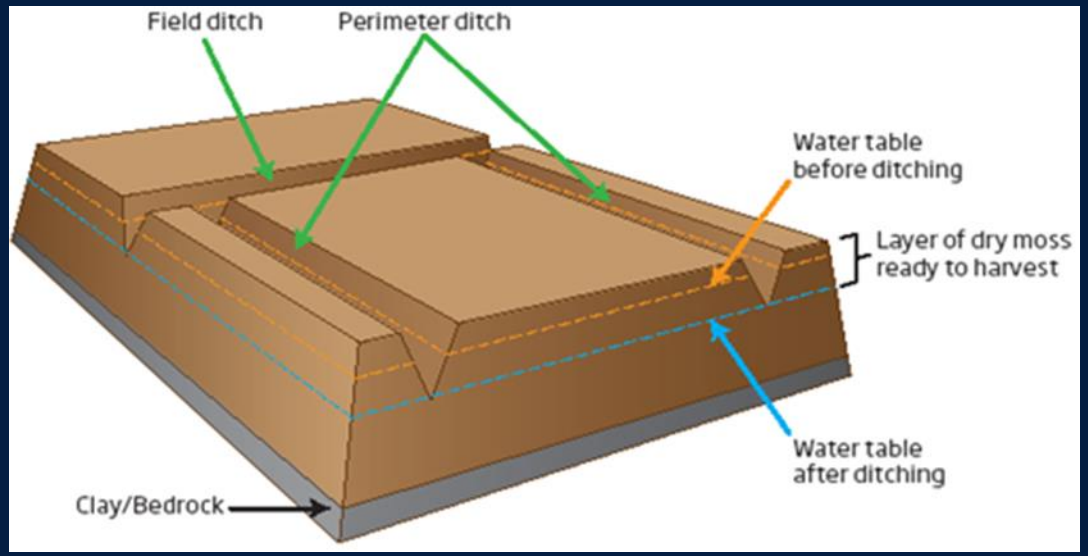
1. Alberta is committed to the conservation of wetlands through the implementation of the **Provincial Wetland Policy**, including the protection of peatlands with high ecological value.
2. Peatlands that can be allocated for peat harvesting and can be sustainably managed provide opportunities for responsible economic diversification and development, particularly in rural areas.
3. Where there are competing uses for the use of peat resources for commercial purposes, the choice of land use should be governed by the greatest return to Albertans.
4. Where peat operations are an acceptable land use, the allocation of peat resources will occur in a fair, transparent, and orderly manner that promotes the sustainable management of land and water resources.
5. Peat operations will be sited and allocated utilizing an integrated resource management systems approach that takes into account cumulative impacts on biodiversity, land and water resources, and manage those resources in a manner to ensure their long-term sustainability.
6. The allocation of peat resources will be managed in such a way that maintains the resilience of sensitive ecosystems including sustainable populations of fish and wildlife, and species at risk.
7. Areas for peat operations are sited to avoid conflicts with adjacent non-compatible land uses.
8. The allocation, drainage and development of peat resources do not adversely affect the local supply of water, health, safety, and general welfare of Albertans.
9. Albertan's exposure to long-term reclamation liabilities will be minimized, and are assured that sufficient security is in place to offset reclamation liabilities.
10. Disturbed peatlands from peat operations will be reclaimed to an early trajectory peatland community ensuring the ecological goods and services of the peatland are available for future generations of Albertans.

Source: Allocation and Sustainable Management of Peat Resources on Public Land, AEP, Public Land Management, 2016, No.9. 2016 Government of Alberta

PEAT HARVESTING

PREPARATION

Water's level is lowered inside the bog, and peat fields are profiled to help dry the surface before harvesting.



PEAT HARVESTING

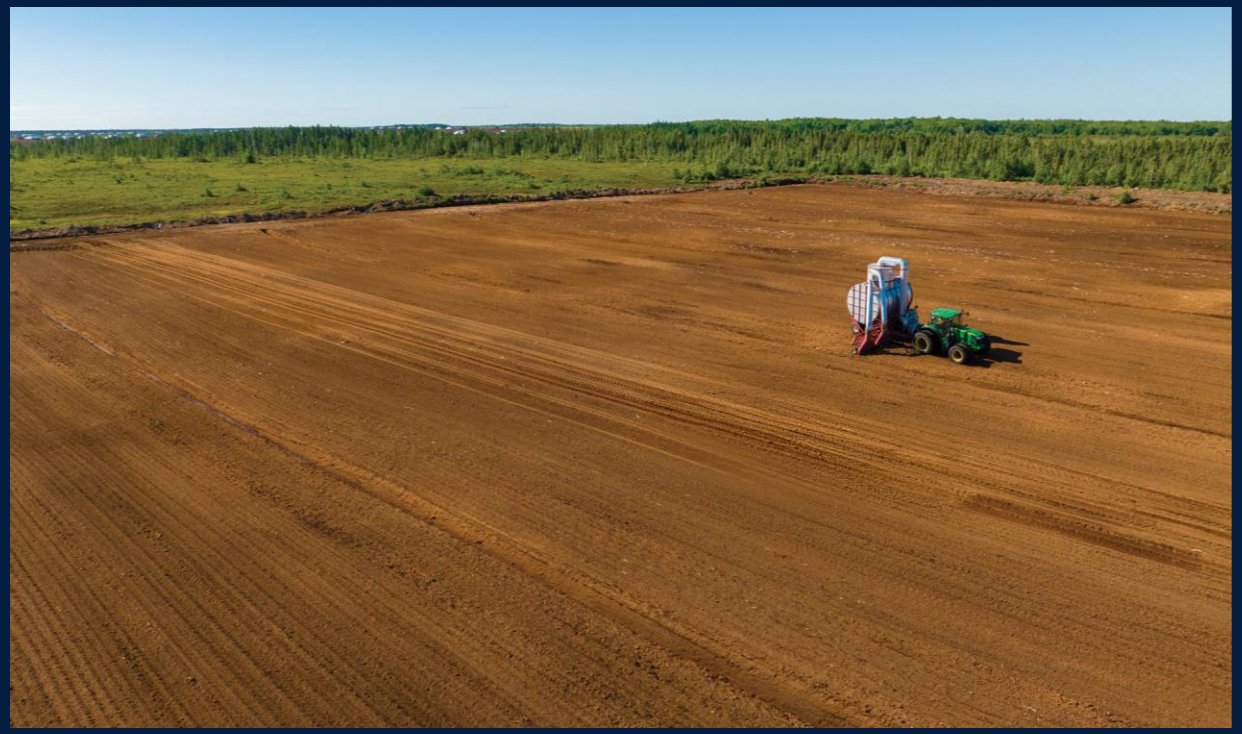
HARROWING

Peat moss is loosened from the peat bog surface by using different types of harrows

PEAT HARVESTING

VACUUMING

When peat is dry enough, the large vacuum harvester picks up a thin peat layer of about 1/8 of an inch



Harvest is not every day

PEAT HARVESTING BUC average 33 days

SPHAGNUM PEAT MOSS

- In Canada, peat moss is harvested solely for horticultural purposes
- Yearly harvest volume is weather-related – around 70 days

PETITION

Petition text	Facts
Residents have been given no meetings with Premier Tech about the proposed project.	During the life of the project development, Premier Tech holds two (2) Open House and participate to the Government of Alberta consultation.

PETITION

Petition text	Facts
This will impact a considerable Wildlife habitat	WSP conducted a complete wildlife survey. They studied Ungulates, Mammals, Raptors, Amphibians and Breeding Birds. Looking at the change in habitat availability, in wildlife movement patterns and abundance. WSP conclude that "Application of effective mitigation is expected to keep effects within the resilience and adaptability limits of wildlife VCs [Valued Components]." This conclusion is repeated for every interaction type — habitat loss, water/hydrology changes, sensory disturbance, traffic, chemical spills, wildfire, and closure. It is not a "no effect" finding, but rather a finding that effects remain within acceptable ecological thresholds.

PETITION

Petition text	Facts
There is a probability of flooding due to the removal of said peat at the headwaters of the Mud Creek including private property.	WSP conducted a lot of scenarios. The maximum Flow Increase in Mud Creek is 1.8%. The WSP predicted Residual Effect is that flow regimes and flood risk are anticipated to be negligible once proposed mitigation measures are implemented.

PETITION

Petition text	Facts
There will be a significant change to the Mud Creek effecting wide array of natural inhabitants.	The Project will result in a minor, temporary and carefully controlled change to drainage patterns in the vicinity of Mud Creek, with a predicted maximum flow increase of 1.8% during full operations and less than 0.1% at the 100-year flood event. Comprehensive mitigation measures — including six engineered sedimentation ponds, a mandatory 100-metre vegetated buffer, and a binding TSS threshold of 50 mg/L — ensure that residual effects on Mud Creek and its aquatic and terrestrial inhabitants are negligible, as concluded by WSP Canada Inc. (2024) and confirmed by AEPA through the Water Act Approval."

PETITION

Petition text	Facts
This is home T Beaver, Coyotes, Cougar, Moose, Deer, Bear, Cranes, Herron and an array of other wildlife.	Field surveys conducted by WSP Canada Inc documented a diverse and abundant wildlife community using the Local Study Area (LSA) and Regional Study Area (RSA). Notwithstanding the ecological value of the site, WSP concludes that – with the implementation of the documented mitigation measures – all predicted residual effects on wildlife valued components are expected to remain within the resilience and adaptability limits of each species and population in the RSA.

FLOOD RISK

Quantified Hydrological Analysis

WSP conducted a detailed quantitative hydrological assessment to predict Project-related flow increases in Mud Creek under all operational scenarios (WSP 2024, Section 3.3.5, Tables 3.3-5, 3.3-6 and 3.3-7):

Scenario	Maximum Flow Increase in Mud Creek
Winter construction (sedimentation pond dewatering)	≤1.3%
Spring — initial ditch network fill release (staggered)	≤1.3% per outlet location
Full operations — all 5 harvest areas active (Years 5-17)	Maximum 1.8%
100-year flood peak discharge	<0.1% increase

Predicted Residual Effect (WSP Canada Inc., 2024)

Effects to flow regimes and flood risk are anticipated to be negligible once proposed mitigation measures are implemented (WSP 2024, Table 3.3-8).

MITIGATION MEASURES

5225. The Approval Holder shall not allow the combination of natural flow and the released water to overbank the existing, natural water body banks.

- The peat is not all removed. The residual peat depth would be 1m. Peat depth average vary per section from 2.16m to 3.75m. The retention function is still active.
- The water will be directed to sedimentation pond and stored.
- The water will be release to an amount equivalent to 100 mm of rain per year. The area precipitation is approximatetl 632 mm per year.
- By regulation, “The approval Holder shall not allow the combination of natural flow and the released water to overbank the existing, natural water body banks”.

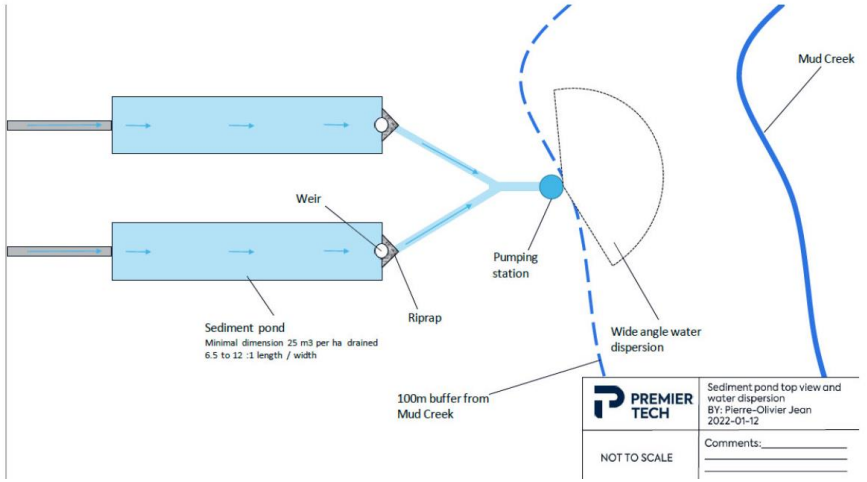
MITIGATION MEASURES

The Clearwater peat harvesting operations' water management strategy is unique due to the Continuous Monitoring Program, the 100-Meter Buffer, and sedimentation pond pump-out. The impacts on the Mud Creek and unnamed tributary are expected to be negligible based on the 100 m buffer.

100-Meter Buffer and Sedimentation Pond Pump-Out

A 100-meter vegetation buffer and sedimentation pond pump-out will help maintain water quality, and there will be no direct discharge into the watercourses, ensuring minimal effects from drainage. As shown in the figure below, there is no direct discharge into Mud Creek or its unnamed tributary, and the buffer will act as a filtration system. This will prevent any direct footprint of the project or disturbance to the bed and banks of Mud Creek.

Figure 1. Conceptual approach for water dispersion within a 100 m protection buffer



MITIGATION MEASURES

Monitoring Program

Table 1: Required Parameters for the Clearwater Project

Water Parameter Grouping	Constituents of Potential Concern
Physico-chemical Field Measurements	in situ pH, temperature, dissolved oxygen, and specific conductivity
Conventional Parameters	hardness, total alkalinity, total suspended solids, total dissolved solids, turbidity, 5-day biological oxygen demand, dissolved organic carbon, and specific conductivity
Major Ions	calcium, sulphate, magnesium, sodium, potassium, chloride
Nutrients	total ammonia, total Kjeldahl nitrogen, nitrate, nitrite, nitrate and nitrite, total phosphorus, dissolved phosphorus[(a)]
Total and Dissolved Metals	aluminum, arsenic, cadmium, chromium, iron, lead, manganese, mercury, molybdenum, vanadium

Note: Parameters listed are consistent with Table 1 in GOA (2017) and Table 1 in GOA (2018a).

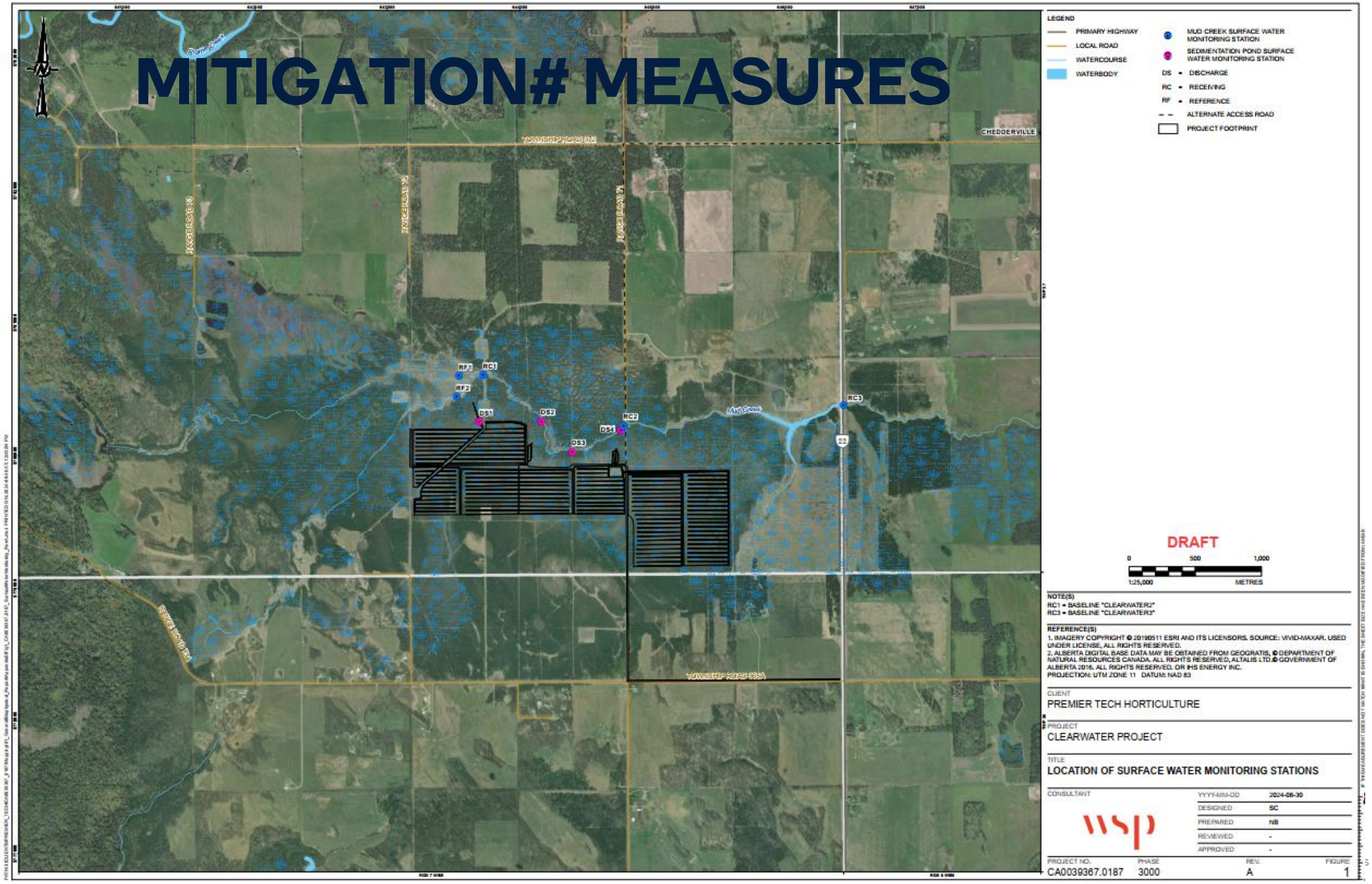
(a) In the GOA 2017 Guide, phosphate was also listed as a recommended parameter; dissolved phosphorus (as recommended in GOA [2018a]) was used to assess the dissolved fraction of phosphorus instead of phosphate.

MITIGATION MEASURES

Monitoring Program

Parameter	Location	Frequency (during open-water conditions)
Water temperature	In Mud Creek RC2	Continuous Measurements (hourly)
Water temperature & total suspended solids	Three sedimentation pond outlet	Continuous Measurements (hourly)
Water Quality sample (see table 2: Required Parameter for the Clearwater Project)	• In Mud Creek (RC2) • Upstream (RC1) • Downstream (RC3)	At least three times per year: • Spring freshet • Mid-Summer • Fall during seasonal low flow conditions

MITIGATION# MEASURES



MITIGATION MEASURES

2.4.2 Measurement of Pumping at the Outlet Locations

The flows from the drainage network will be routed through six planned sedimentation ponds and drain via channels to pumping stations at three outlet locations. Pumping volumes will be monitored at the three outlet locations whenever discharge occurs by monitoring the pumping rate and duration, or another appropriate method. Water collected at the outlet channels will be pumped to the peat surface and dispersed. The outlet channels at the pumping locations will be located outside the 100 m setback from the downstream watercourses as follows:

- The East Outlet drains water from the Harvest Areas 1 and 2 and will be located the furthest downstream in the Mud Creek watershed. On Figure 1, the East Outlet pumping station is located at or near DS3.
- The Central Outlet drains water from Harvest Areas 3 and 4 and will be further upstream/west along Mud Creek than the East Outlet. On Figure 1, the Central Outlet pumping station is located at or near DS2.
- The West Outlet drains water from Harvest Area 5 and will be located on the east side of the unnamed tributary near its confluence with Mud Creek. On Figure 1, the West Outlet pumping station is located at or near DS1.

Surface water quantity monitoring is not required at DS1 or DS2 until the drainage ditch network and sedimentation pond is constructed for these peat harvest areas. Pumping volumes should be documented on an ongoing basis and including in Project monitoring reports (a minimum of once annually).

(WSP 2024, page 6)

MITIGATION MEASURES

2.5.3 Sampling Frequency

Following the guidance from AEP (GOA 2017; GOA 2018a), monitoring at each sampling location will be conducted at least three times per year, during the following seasons:

- Spring freshet
- Mid-summer
- Fall during seasonal low flow conditions

The time period during or immediately after storm events will be avoided when possible for mid-summer sampling events.

In addition to seasonal sampling in Mud Creek, continuous measurements of water temperature will be collected in Mud Creek and its unnamed tributary during open-water conditions at the same locations where water quality sampling is proposed. Continuous measurements of water temperature and total suspended solids (TSS) or turbidity, which is an indicator of TSS, will also be collected at the sedimentation pond outlet stations during open-water conditions.

(WSP 2024, page 9)

MITIGATION MEASURES

5225 The Approval Holder shall not allow the combination of natural flow and the released water to overbank the existing, natural water body banks.

5780. The Director reserves the right to:

(a) amend any term or condition of the Approval;

(b) add a term or condition to the Approval; or

(c) delete a term or condition from the Approval;

based on evidence of adverse effects in the Annual Primary Monitoring Program Summary Report conducted by the Approval Holder.

(Water Act, R.S.A. 2000, c. W-3, as amended, April 4, 2025)

ENVIRONMENT

FIRE PREVENTION

SEDIMENTATION POND

- Water sampling
- Dustfall monitoring

RESTORATION

DONOR MATERIAL AREA

PROPAGULE HARVESTING

PROPAGULE SPREADING

STRAW SPREADING

FERTILIZER (IF NEEDED)

MONITORING

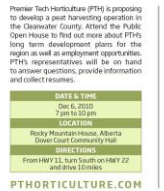
PREMIER TECH PUBLIC CONSULTATIONS & COMMUNICATIONS

Premier Tech held two public open houses to present the project, answer questions and address concerns.

Invitations were sent directly to adjacent landowners.

Notices of meeting were published in The Western Star and The Mountaineer.

2010



2025

GOV. OF ALBERTA CONSULTATION

During the Water Act application, GOA held one public consultation, 9 Statements of Concerns were received and addressed by Premier Tech and by WSP.

PUBLIC NOTICE

PREMIER HORTICULTURE LTD.

WATER ACT

NOTICE OF APPLICATION

Notice is given that **Premier Horticulture Ltd.** has filed an application under the provisions of the *Water Act* for an Approval to construct, operate, maintain and reclaim a 205 hectare peat harvesting operation in a wetland locally known as the "Clearwater Bog" located on SW 01 portions of Section 2 and portions of E ½ of Section 3 all within 037-07-W5. The proposed system will outlet into Mud Creek, a tributary to the Clearwater River. The proposed development area is shown on the related map.

Any person who is directly affected by this application may submit a written statement of concern to within **30** days of the date of this notice to:

Environment and Parks
Regulatory Approvals Centre
5th Floor, South Petroleum Plaza
9915 108 Street
Edmonton, Alberta T5K 2G8
Phone: 780-427-6311
Fax: 780-422-0154
Email: aep.waapplications@gov.ab.ca

The written statement of concern should include the following:

- the application number: **001-00403446**
- describe concerns that are relevant to matters regulated by the Water Act
- explain how the filer of the concern will be directly affected by the activity and/or diversion of water proposed in the application
- provide the legal land location of the land owned or used by the filer where the concerns described are believed to be applicable
- state the distance between the land owned or used by the filer and the site in the application
- contact information including the full name and mailing address of the filer. Please provide the telephone number and/or email address for ease of contact.

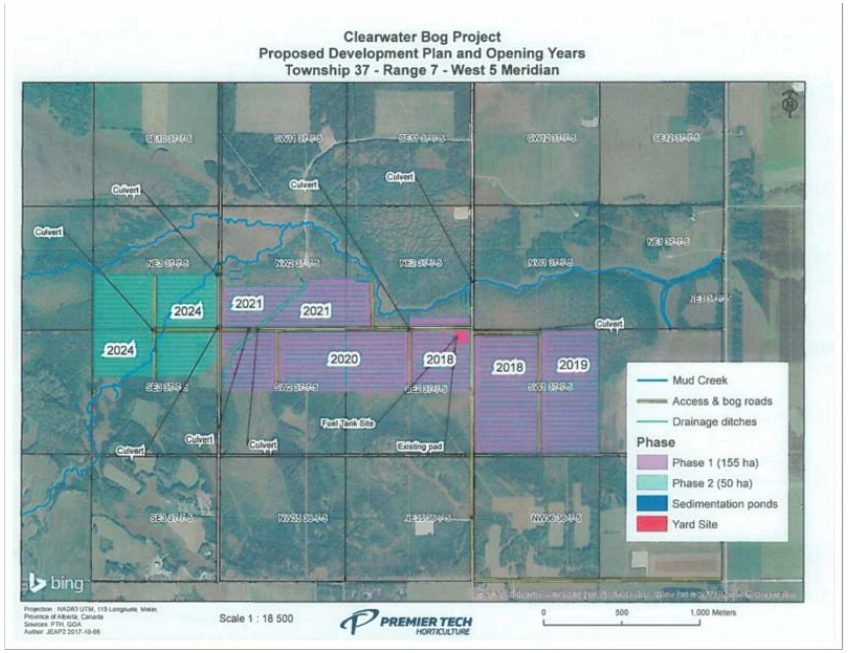
Environment and Parks will review each written statement of concern, seek more information if needed, and notify each filer by letter of the decision to accept or reject their written submission as a valid statement of concern. The Public Notice of this application will also be posted on the Department's website at https://avw.alberta.ca/PublicNoticesViewer.aspx .

Please quote file number: **00403446**

Statements of concern submitted regarding this application are public records which are accessible by the public and the applicant. Failure to file a statement of concern may affect the right to file a Notice of Appeal with the Environmental Appeals Board.

Copies of the application and additional information can be obtained from:

André Fafard
Premier Horticulture Ltd.
1-4803 – 60 Street
Olds AB T4H 1V1
Phone: 403-556-7328 ext. 29
Email: fafa@premiertech.com
www.pthorticulture.com



REGULATIONS FOR PEATLANDS

Federal

No license, permit, authorization, or approval required

Provincial

Several regulations & policies apply

Approvals:

Surface Material Lease (“SML”)
2025/03/04

Approval under the Water Act
2025/04/04

ACO consultation adequacy assessment
2024/12/02

Heritage Resources approval
2022/04/07

Reclamation Certificate
End of project life

Municipal

Development permit required

Process is governed by

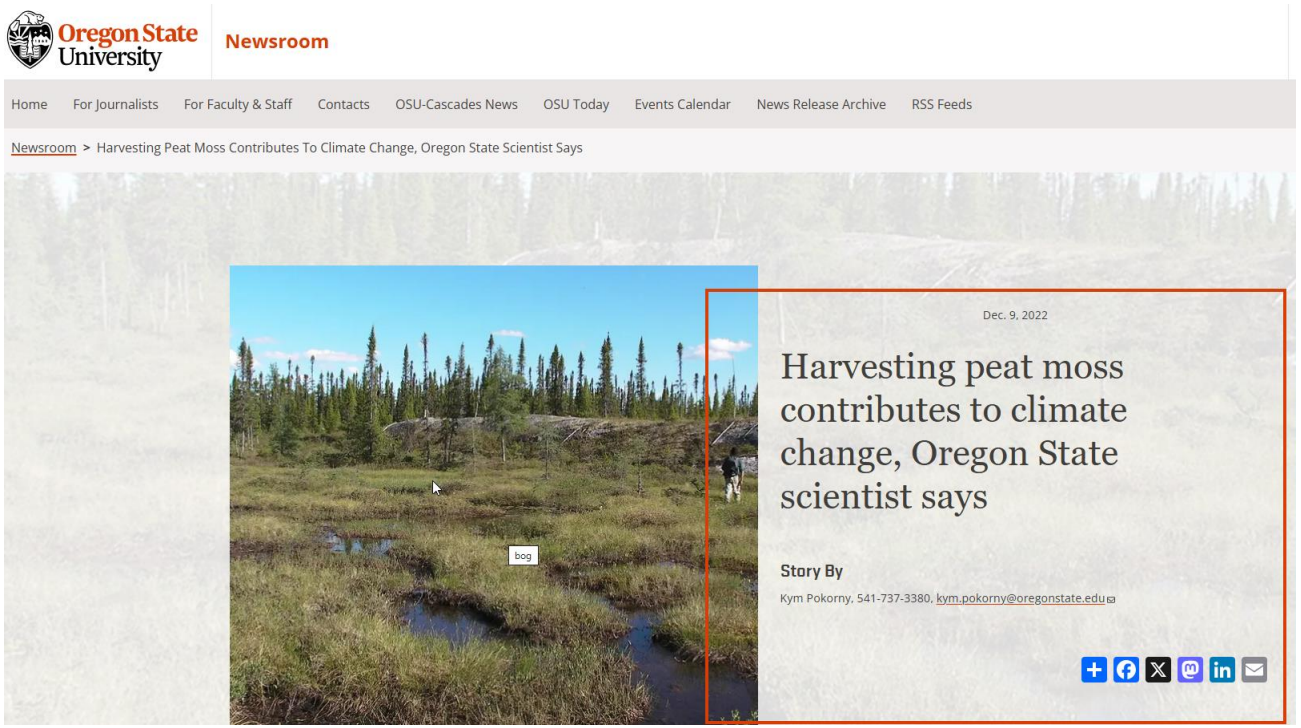
Municipal Government Act &

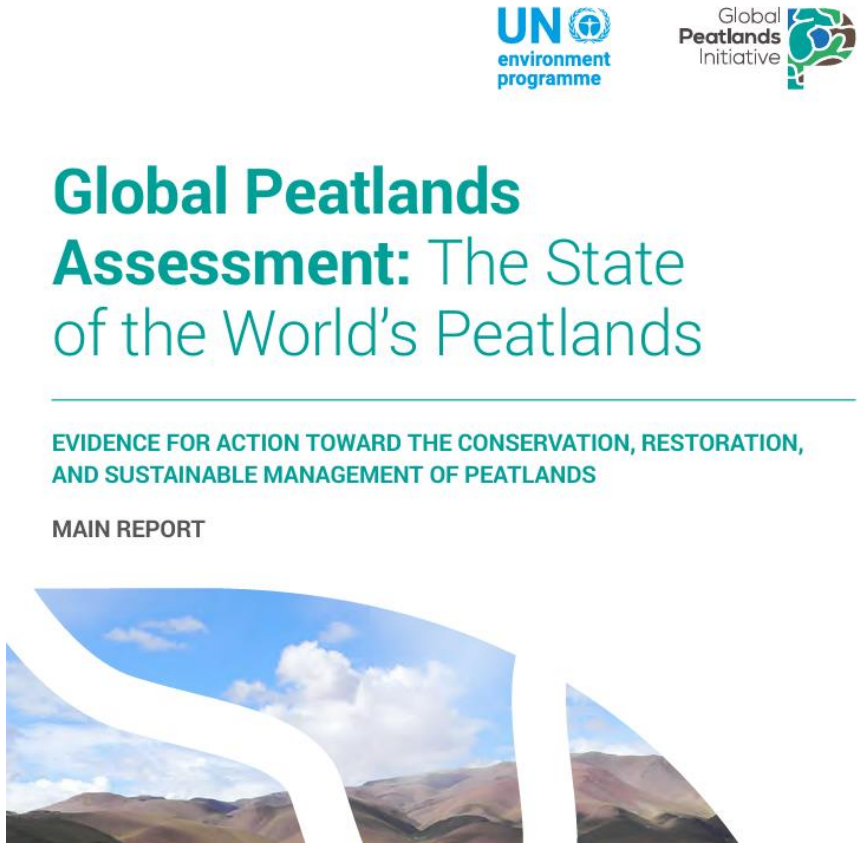
County’s applicable bylaws and policies

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON CLIMATE CHANGE?

Public outreach document, not a peer-reviewed scientific study.





How does the project GHG impacts compare to beef cattle production in Clearwater County?

Clearwater Peat Harvest Project — GHG Emissions in Context

A local comparison using beef cattle | Application No. 51/25 | Clearwater County, Alberta

Comparison	Result
Project annual GHG emissions	1,248 to 3,010 tonnes CO_2e per year (over 21 years of peat harvesting)
Equivalent beef cattle herd	450 to 1,087 beef cattle head (~2,770 kg CO_2e/head/year — Canada NIR)
A single medium-sized ranch (500 cows)	Already produces ~1,385 t CO_2e/year ≥ the project's minimum annual footprint
Project vs. Clearwater County cattle herd (~69,486 head)	Equivalent to 0.6% to 1.6% of the county's entire cattle herd
Project vs. Alberta total GHG emissions (256.4 MT CO_2e, 2020)	0.0005% to 0.0012% of Alberta's total annual GHG emissions

Sources:

[1] Project GHG range: Greenhouse gas emissions calculator for the peat moss industry, Version 2.0 — cited in Premier Tech Horticulture, Reply to IAAC Section 9(3) request, January 17, 2023 (Section A-4).

[2] Beef cattle GHG: Canada's National Inventory Report (NIR) — beef cow emission factor ~2,770 kg CO_2e/head/year (enteric fermentation CH_4 + manure CH_4 & N_2O + soil N_2O).

[3] Clearwater County cattle population: Statistics Canada, 2021 Census of Agriculture (69,486 head).

[4] Alberta total GHG: Canada Energy Regulator, Provincial and Territorial Energy Profiles — Alberta (2020: 256.4 MT CO_2e).

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON NATURAL FAUNA, WILDLIFE, WATERSHED, AND WETLAND?

Portions of the fen contain significant open water that could be used as waterfowl staging areas during migration. Peat harvesting affects the harvest zone by removing vegetation and lowering the water table.

However, **wildlife habitat in the surrounding area is expected to remain sufficient to meet the needs of mammals, avians, and amphibians**.

Mitigation Measures

Use of **buffer zones** to protect surrounding biodiversity.

Progressive harvesting and restoration to minimize long-term effects.

Restoration Plan

Restoration with the **Moss Layer Transfer Technique** begins immediately after the site is closed.

Within 15 years post-restoration, the site should boast **similar levels of biodiversity** (i.e., flora and fauna) compared to the reference ecosystem and become a carbon sink.

Proven Success

Similar restoration efforts have been **successfully implemented** in other projects **across Canada**, including several sites in Alberta.

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON WATER QUALITY, FILTERING CAPACITY AND FLOW OF THE MUD CREEK?

Peat Harvesting Method

The fen will be drained using ditches.

Ditches' water will be directed into sedimentation ponds.

Water Release Strategy

Ponds' water will be slowly released using agricultural sprayers into a 100-meter vegetative buffer zone near Mud Creek.

Monitoring

Surface Water Monitoring Plan has been submitted as part of regulatory applications.

Predicted Impacts

Minimal changes to downstream water flow (less than 2%).

During a typical flood event, minimal changes to Mud Creek's flow (0.5% or less).

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON GROUNDWATER AND WATER WELLS?

Operations would only drain a portion of the surface water. The drainage ditches would not affect the groundwater, as the water drained from a peat fen is not part of the aquifers.

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON GREENHOUSE GAS EMISSIONS?

Peat extraction as an industry contributes less than 1% of the national total annual greenhouse gas emissions.

This project's maximum annual greenhouse gas emissions are expected to contribute less than 0.1% of the provincial total and less than 0.001% of the national total.

Estimated emissions

Between 1,248 and 3,010 tons of CO_2e per year over 21 years.

Yearly emissions vary depending on the size of the harvested area.

Proximity Considerations

The site is ~65 km from Premier Tech's facility, greatly reducing transport-related emissions.

Regulatory Status

The peat industry is not classified as a major emitter under the Federal Greenhouse Gas Pollution Pricing Act; and the Alberta's Technology, Innovation and Emissions Reduction Regulation.

Broader Benefits

Peat supports plant growth, food security, and well-being, offering economic and environmental benefits.

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS ON CARBON SEQUESTRATION?

Temporary Halt

Carbon sequestration stops during harvesting operations.

Estimated Loss

The project, over its lifetime, will impede the sequestration of approximately 2,130 tons of CO2e.

Mitigation Strategy

Progressive harvesting limits the duration of halted sequestration by gradually opening areas.

Immediate restoration after site closure.

Long-Term Recovery

Sites are expected to become carbon sinks within 15 years following restoration using the Moss Layer Transfer Technique (MLTT).

WHAT WE'VE HEARD

WHAT ARE THE IMPACTS?

Noise, traffic, dust and Community and recreational

Noise

Loader back up alarm is the loudest sound on site.

Harvesting operation are on approximatel 70 days during the season of about 168 days

Traffic

The estimated yearly hauling volume is 1,000 trucks.

Third-party contractors, mandatory yearly safety training

Dust

In Athabasca work with the County to apply calcium on specific road sections.

Community and Recreational

Peat extraction operations are similar to agriculture operations.

No smell coming from the operation.

WATER MANAGEMENT & MITIGATION PLAN

Ditch and Sedimentation Pond Construction

There will be five harvest areas, which are divided by secondary ditches connected to the larger perimeter ditch that leads into the sedimentation ponds.

The sedimentation ponds' design is based on the Guidelines for Peat Mining Operations, considered a best practice reference in the industry.

Sedimentation ponds' design

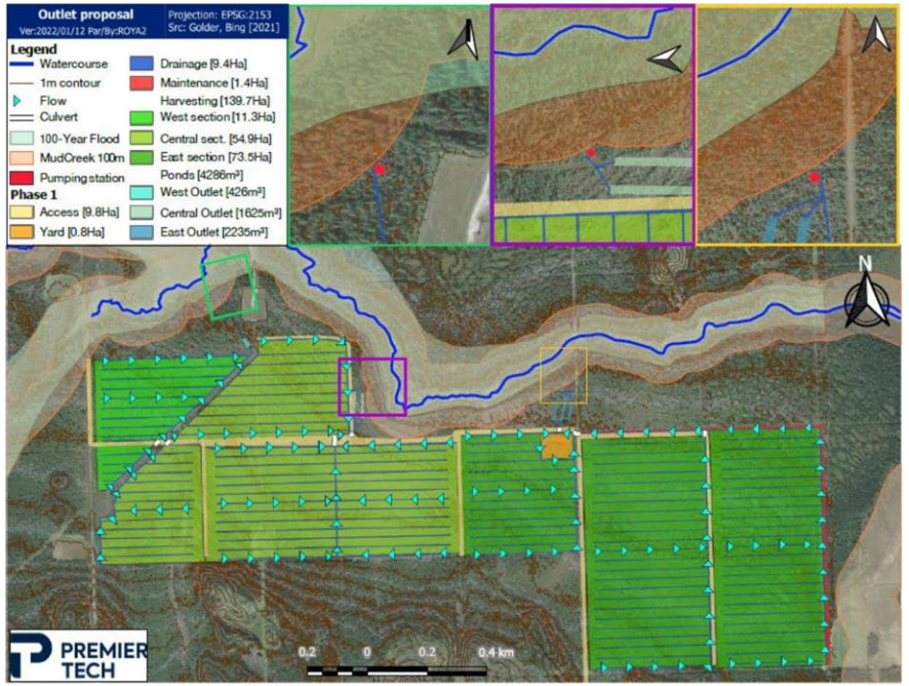
- Industry best practice and science-based design calculations
- The shape of the ponds is tailored to maximize sediment retention
- Prevent organic material (peat dust measured as Total Suspended Solids (TSS)) from entering the watercourse.

Mitigation Plan to Reduce Impacts on Water Quality and Aquatic Life

Drainage from the ditches routes through the sedimentation ponds and into the pumping stations at 3 designated outlet locations (see Figure 1).

Any sedimentation deposit in the drainage ditches or sedimentation ponds will be cleaned and disposed of on the harvesting fields, to be harvested later.

Figure 1. Outlet proposal



WATER MANAGEMENT & MITIGATION PLAN

MITIGATION PLAN TO REDUCE IMPACTS ON WATER QUALITY AND AQUATIC LIFE

- **Decontamination of all equipment and gear** that has been in contact with water, sediment, and/or aquatic organisms according to AEP requirements, including, but not limited to, clothing, footwear, hand tools, meters, boats, and motors.
- **No direct Project footprint** or disturbance will occur within the bed and banks of Mud Creek.
- **Small slopes** throughout the drainage network will reduce peak flows and the potential for erosion.
- **Erosion control practices** will be implemented in disturbed areas to eliminate the potential for erosion and sediment transport resulting from the Project.
- **Drainage ditches** and **sedimentation ponds construction completed during winter** to reduce the risks of runoff events that could carry sediment loads to Mud Creek during construction.
- **Follow the reporting requirements for releases of substances into the environment** that could cause an adverse effect as per the Guide to Release Reporting (Alberta Environment 2005).

WATER MANAGEMENT & MITIGATION PLAN

MONITORING WATER QUANTITY & QUALITY THROUGHOUT THE LIFE OF THE PROJECT

The proposed monitoring includes a sampling plan for water quality (temperature and TSS) and flows in Mud Creek.

- Monitoring stations at specific locations according to protocols.
- Regular data recovery and verification to identify unusual deviations from the average and expected data.
- Field data analysis, description, and summary using statistical techniques.

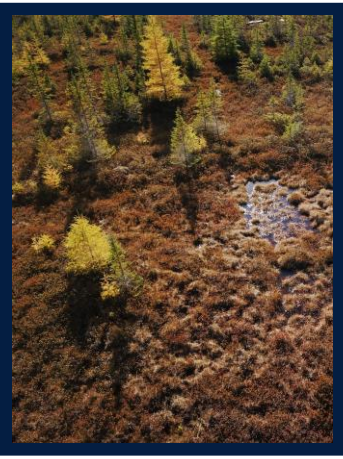
PEATLAND RESTORATION

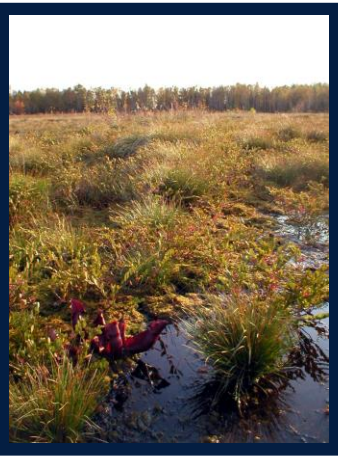
Goal and Objectives

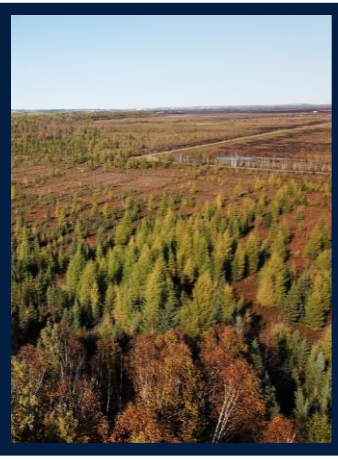
- Supporting the renewal of an ecosystem to restore its natural balance and health.
- Re-establishing self-regulatory mechanisms that will lead back to naturally functioning peat-accumulating ecosystems.
- Re-establishing typical peatland plant cover and hydrological regime to maintain the system and restore the long-term carbon sequestration function.

Restoration Approach

Developed in Canada, the “Moss-Layer Transfer Technique” is based on active reintroduction of peatland plant species and hydrological management to re-wet and stabilize the onsite water levels.







PEATLAND RESTORATION

SURFACE PREPARATION

A leveller is used to flatten the domed field, refresh the peat surface, and build berms.

PLANT COLLECTION AT DONOR SITE

Shred surface vegetation to a maximum depth of 4 inches. Collect and transport plant fragments to restoration site. The donor site recovers quickly and is reusable sustainably.

PLANT REINTRODUCTION

Spread the plant fragments over the restoration site with a manure spreader. Using a 10:1 ratio, 1 acre of donor material will restore 10 acres of closed harvest area.

APPLICATION OF A PROTECTIVE STRAW MULCH COVER

Shredded straw is applied to protect the newly introduced plant fragments, especially Sphagnum mosses.

FERTILIZATION (OPTIONAL)

Depending on site conditions, a phosphate rock fertilizer may be used to encourage plant establishment and growth.

REWETTING BY DITCH BLOCKING

Block drainage ditches to rewet the peatland, encouraging the regrowth of Sphagnum and other native wetland species.

RESTORATION MONITORING

Essential step to assess the restoration success.
The most important characteristics to monitor are:

Vegetation

Typical peatland plant cover establishes within a few years following restoration and is dominated by Sphagnum mosses.

The accumulation of organic matter has reached values similar to those in natural systems.

Hydrology

Water table rises quickly after ditch blocking, improving hydrological conditions necessary for moss establishment.

Water table fluctuates more than in a natural peatland.

Research suggests that it takes 10 to 15 years to accumulate a thick enough moss layer to regulate the water again.

Carbon cycle

Research suggests that annual carbon balance can be returned to near-natural conditions within 7 to 14 years following restoration.

PEATLAND RESTORATION

At Premier Tech, we collaborate with academic institutions, industry, government, and community stakeholders to drive continuous improvements and uphold high standards in peatland management and restoration.
We provide researchers access to the restored fields to test emerging techniques and methods, to further drive innovation.

Veriflora® Certification

Our Veriflora®-certified peatlands follow the highest standards of sustainable development, with annual GHG emissions inventories setting the benchmark for the industry. This certification is also a testament to our responsible peatland management, continuous improvement efforts, and biodiversity promotion.

Responsible Peatland Management:

The Heart of Our Environmental Stewardship

Managing peatlands since our early beginnings, we are looking forward to many more years of stewardship. As one of the founders of the Peatland Ecology Research Group (PERG) and as members of the Canadian Sphagnum Peat Moss Association (CSPMA), we actively promote practices that support both environmental and economic well-being.

Eco-Responsible Practices

Sustainability is embedded in our innovation process through eco-design, ensuring our products are environmentally considerate throughout their lifecycle.
For over 40 years, we have been at the forefront of researching biologicals, resulting in environmentally-friendly solutions.

Precision Sourcing and Manufacturing

From peat to coir, to bark, every material is meticulously chosen to meet our high standards. Our advanced production methods ensure consistent quality and sustainable practices year after year.

MAKING A DIFFERENCE WITH OUR

MATERIALS EXPERTISE

IR&D
PRODUCTION
FORMULATION
QUALITY CONTROL
MULTI-MATERIALS

"While many alternatives show potential, particularly as partial components or as stand-alone media under certain conditions, ***no single material currently offers a fully viable replacement for peat****."*

Source: The persistent challenge of alternatives to peat in container-based horticulture: a historical review of the field of growing media, 2025