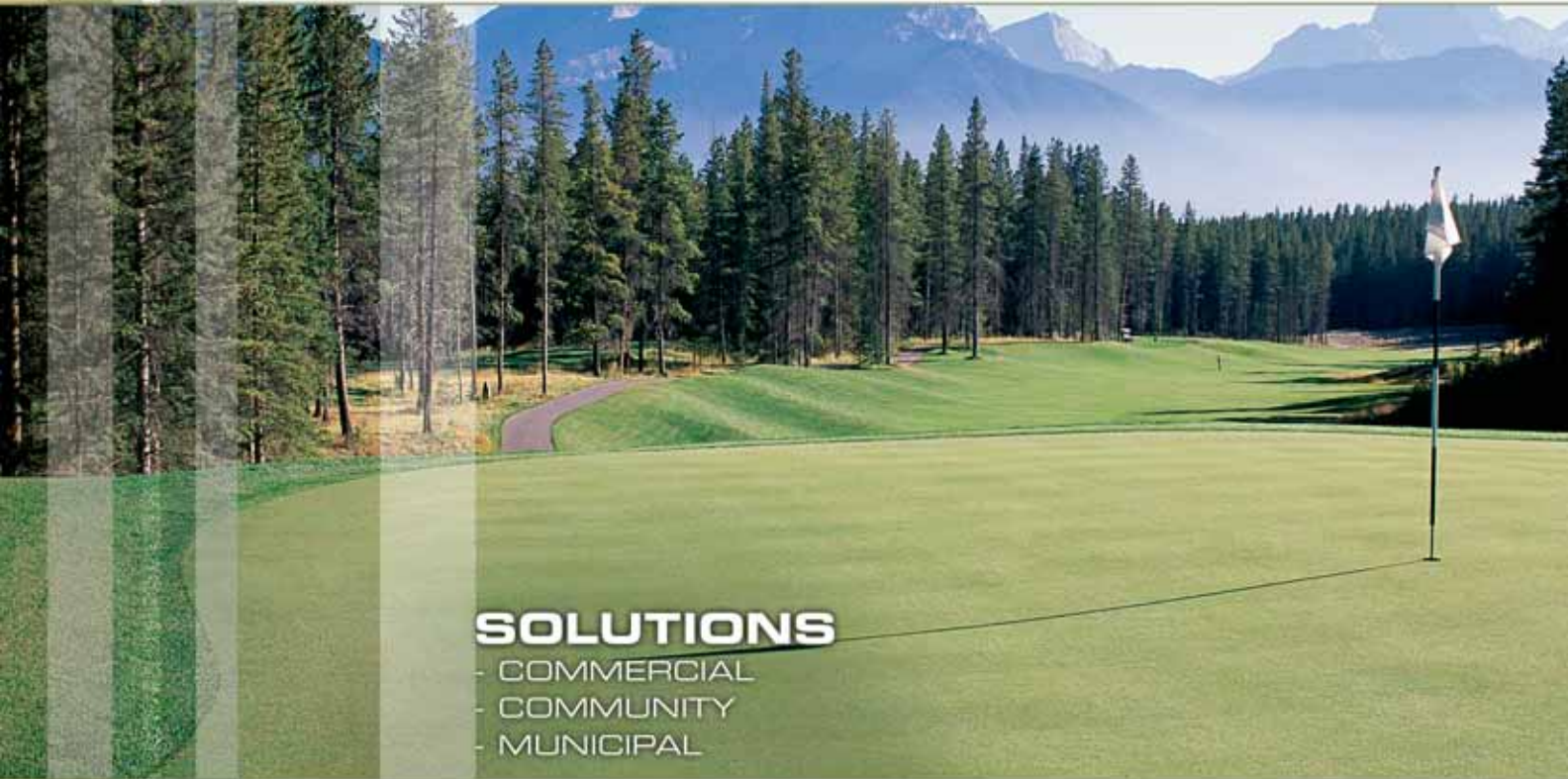


Peatland™



SOLUTIONS

- COMMERCIAL
- COMMUNITY
- MUNICIPAL

THE 100% NATURAL AND ECOLOGICAL PEATLAND™ SYSTEM OFFERS AN OPTIMAL TREATMENT LEVEL FOR SENSITIVE AREAS



Premier Tech
Environment

DESCRIPTION

The **Peatland™** system offers two treatment zones: a peat filter with vertical flow in aerobic condition and a subsurface constructed wetland with horizontal flow under facultative condition.

The **Peatland™** consists of compacted layers of a special mix of sphagnum peat moss over a layer of granular media.

The constructed wetland consists of a layer of select granular porous media deep enough to create anaerobic conditions, populated with fast-growing native plants with a good root system.

A PASSIVE SYSTEM THAT COMBINES PEAT MOSS AND A CONSTRUCTED WETLAND

PTE offers a complete line of decentralized wastewater treatment products and services. The **Peatland™** treatment system offers an optimal treatment for nitrogen and phosphorus removal and complete disinfection. With a low-cost installation and operation, the **Peatland™** is very economical, on top of blending easily into the environment.

SIMPLE AND EFFICIENT OPERATING PRINCIPLE

Effluent from the primary treatment unit, which is, in general, a septic tank, is evenly dispersed over the surface of the peat filter by a gravity-flow (perforated pipes) or low pressure distribution system. It then percolates down through the peat and granular media to a collection system installed in a layer of crushed stone. The collection system carries the treated effluent to the constructed wetland.

Treatment processes that occur within the peat filter include filtration, bacterial disinfection, absorption and chemical microbiological degradation of organic pollutants in an aerobic environment.

The constructed wetland extends the treatment process that begun in the peat filter by enhancing removal efficiency for the key parameters- BOD₅, TSS, fecal coliforms, total nitrogen (denitrification) offsetting peat filter performance variations and neutralizing.

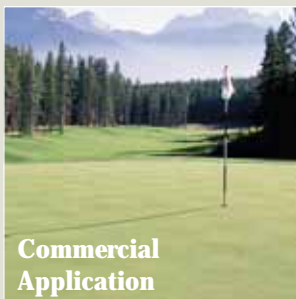
APPLICATIONS

Commercial

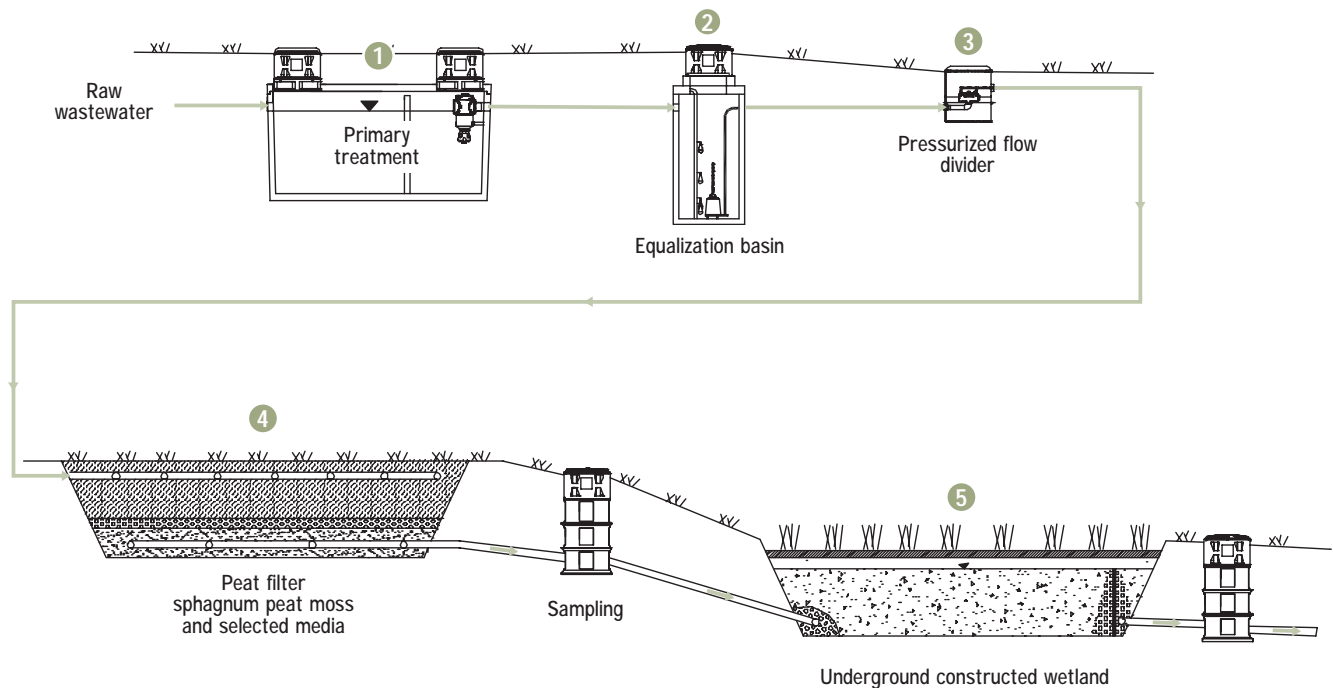
- Office building
- Hotel
- Rest area
- Resort
- Forest camp
- Shopping mall
- Golf club

Municipal and community

- Residential development
- Indian territory
- Trailer park
- School
- Nursing home
- Retirement home



PEATLAND™ TREATMENT SYSTEM



- 1 Primary treatment usually composed of a septic tank equipped with one or more effluent filters and providing a minimal hydraulic retention time (HRT) of 36 hours at mean daily flow.
- 2 An equalization tank providing 12 hours HRT for commercial applications and 8 hours HRT for community applications.
- 3 Pressurized flow divider allowing a uniform distribution of the wastewater to the distribution pipe network located in the upper part of the peat filter.
- 4 Peatland™ first treatment zone: peat filter consisting of compacted layers of hemic sphagnum peat lying on an aggregate layer. The wastewater percolates vertically through the peat media to an underdrain, which leads to the wetland. The main treatment processes in the peat filter are physical filtration, bacterial disinfections, adsorption and aerobic microbiological conversions.
- 5 Peatland™ second treatment zone: wetland constructed with a granular, porous media at a sufficient depth to provide generally anaerobic conditions. The wetland complements the peat filter by: providing additional treatment for most parameters, compensating for the seasonal and natural variability of the processes in the peat filter, neutralizing the low pH and reducing total nitrogen through denitrification.
- 6 Effluent final disposal towards an area bed, a watercourse or a ditch.

TREATMENT PERFORMANCES

PARAMETERS	RAW WASTEWATER	SEPTIC TANK EFFLUENT	TYPICAL PEATLAND™ EFFLUENT
BOD ₅ (mg/l)	200-300	115-225	< 10
TSS (mg/l)	300-500	80-120	< 5
NH ₄ (mg/l)	20-30	20-40	< 2
Total phosphorus (mg/l)	4-8	4-8	< 1 ¹
Nitrite/Nitrate (mg/l)	40-60	0	< 10 ²
Fecal coliforms (UFC/100 ml)	-	1 000 000	< 200

¹ This parameter has principally been analyzed for the first 3 years of the system's operation. Long-term removal efficiency is still to validate (studies are under way).

² Total nitrogen removal average rates between 60 and 90% have been observed with the Peatland™.



SO MANY MORE ADVANTAGES

- TREATS 10 TO 100 M³/D (2,600 TO 26,000 US GAL/D) WASTEWATER
- GOOD TOTAL NITROGEN REMOVAL
- BLENDS EASILY INTO THE ENVIRONMENT, WITHOUT ODOUR OR NOISE
- LOW-COST INSTALLATION AND OPERATION (PASSIVE SYSTEM)
- FLEXIBLE, MODULAR DESIGN
- COMPLETE BIOLOGICAL DISINFECTION
- NATURAL PHOSPHORUS REMOVAL WITHOUT CHEMICAL AGENTS
- NO MECHANICAL COMPONENTS OTHER THAN THE SUPPLY PUMPS



IT'S GUARANTEED: THE BEST SERVICE ON THE MARKET

When you buy a PTE solution, you don't just buy a product, you get true piece of mind. In addition to offer reliable and efficient technologies, PTE assures you an incomparable technical support before and after the purchase of a technology. A specialized team of engineers, agents, technicians and coordinators is available to answer all your questions and give you the technical support needed for your commercial and community projects: choice of appropriate technology (recommendation following the study of flow and charges to treat), collaboration to plans and quotes, presence on the field to assure installation quality, unparalleled after-sales service, required environmental follow-ups carried out by our team or local partners and many more.

The components of the **Peatland™** treatment system are guaranteed for a period of 2 years against all manufacturing fault.



Premier Tech Environment (PTE) is a business unit of Premier Tech, a company with over 80 years of experience and more than 1,600 team members, of which 175 work for PTE.

Internationally renowned in America, Europe and Asia, PTE operates in the field of decentralized wastewater treatment for the residential, commercial, community, municipal and industrial sectors. With more than 30,000 systems installed and maintained, PTE is considered a reference in its field through its innovative approach and its superior technologies commercialized for the last 30 years.

PTE coordinates its activities around three divisions:

- The **Residential division** offers an array of solutions for small flow rate applications for individual homes. This division supports a network of over 1,000 service providers through a complete training and marketing program, a multidisciplinary technical support and quality assurance team.
- The **Municipal, Commercial, Community and Industrial division (MCI)** concentrates on larger flow rate and higher strength applications with its team of engineers specialized in advanced biological treatment technologies; this division competes on the national and international markets by offering cost-effective solutions.
- The **Service division** is responsible for the entire technical support of all PTE technologies, including Residential and MCI divisions. This division surpasses the competition with its "integrated management program".

To learn more, to plan your construction or your renovation or to contact your local installer, contact us.



**Premier Tech
Environment**

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