

Environmental Features of the Ganaraska Forest Centre



A showcase of environmentally friendly design, the Ganaraska Forest Centre features state-of-the art technology in its construction.

Green Roof

The GFC is roofed with an advanced technology membrane system that allowed for the installation of a green roof. A growing medium was placed on the roofing membrane and drought-resistant indigenous grasses were planted on the roof. Water falling on the roof is collected in the growing medium and grasses and is used to sustain the living roof. This limits the discharge of storm water from the roof and any water moving off the roof has now been filtered and cleaned by the grasses. This demonstration roof shows how a new approach to roofing could go a long way to protecting our streams and the animals that live in them.

Environmental benefits include temperature regulation of the building, water conservation, creation of habitat, sound insulation, energy conservation, cleaner air and waste reduction and can be used as an education tool for visiting students.

Solar Power Generation (Solar Tracking Array)

Using 12 panels on a sun-positioning tracker, the STA has a nameplate capacity of 2.1 Kilowatts, or approximate generation of 3,780 Kilowatts per year. Power is produced for the Ganaraska Forest Centre and unused power is sold to the Ontario power grid for profit.

Weather Station:

Measures wind speed, temperature, sun's rays intensity and barometric pressure and can be used as an educational tool for visiting students.

Rain Water Harvesting System:

This collection system feeds the toilets in the facility with properly filtered ground or roof water. A buried holding tank and pump are filled with untreated well water and allows the potable domestic water system to be separated from water used to flush toilets, limiting discharges of chlorinated water to the leaching bed and conserving water. Excess water can also be used for irrigation purposes in the 100% indigenous species gardens.

Composting Toilet:

The composting toilet converts waste into organic compost and reusable soil through the natural breakdown of organic matter and its essential minerals.

Water Treatment System:

An ultra filtration system is the core technology in the GFC water treatment system. Hollow fibre membranes remove sediment, bacteria and viruses from the water.

Radiant Floor Heating:

Heat radiates upward from the floor, using water that is warmed in a boiler. The warm water is circulated through tubing located under the floor throughout the building and turns the floor into an efficient, low temperature radiator. Benefits include, increased room comfort, sound insulation, energy savings of up to 40%, reduced dust and germs and less drying effects.