

# Sewage system success; Long-term care building among sites treating its waste in a natural way

■ BY GARY KEAN

## THE WESTERN STAR

While the City of Corner Brook (Newfoundland & Labrador) has a long-term view of establishing sewage treatment, the new long-term health care building is already doing its share.

Anyone approaching the new building located behind Sir Wilfred Grenfell College will notice a large, fenced-off field of reeds.

It may appear to be a garden of some sort, but it is actually an engineered wetland designed to treat the sewage produced by the state-of-the-art building in a chemical-free manner.

The technology is actually a system provided by Abydoz Environmental, a firm based in Mount Pearl.

Similar systems are in use to treat municipal sewage in Stephenville, Appleton/Glenwood and Marystown, in addition to a number of single-dwelling residences throughout the province.

The sewage from the long-term care building first flows into three septic tanks where the solids settle. The effluent, or liquid waste, is then delivered to a series of treatment beds below the crushed stone surface of the engineered wetland, which is lined to prevent any leeching of effluent.

The roots of the reeds planted in the wetland help oxygenate bacteria which treats the effluent below the ground.

By the time the wastewater is returned to the City of Corner Brook's sewer system, about 97 per cent of it has been treated.

"This system is expected to last between 60 and 100 years and there is little maintenance, other than cleaning out the septic tanks every year," said Carlson Way, Western Health's support services manager for long-term care facilities in Corner Brook.

The engineered wetland is just one of the environmentally-friendly features of the new building which is hoped to help it achieve Leadership in Energy and Environmental Design (LEED) standard.

"The provincial government has mandated that all new building construction has to be built to a silver LEED standard," said Way.

"We are going for silver and possibly gold, depending on how our points work out."

The system is designed such that the warmth of the wastewater from usage such as the building's kitchen and laundry will be enough to keep the bacteria working during winter months when the reeds are dormant.

In summer, the system should be super-efficient.

Western Health will be installing informative signs about the system around the perimeter of the wetland, which does not create any odour and does not attract insects or waterfowl.

Stephenville Mayor Tom O'Brien said the 20,000-square metre engineered wetland his town began operating next to the airport about three years ago has worked like a charm. In fact, there are some plans to expand it.

"It is already handling the entire municipality,



The engineered wetland system at the new long-term health care facility in Corner Brook, Newfoundland. (Photo: Gary Kean/The Western Star)

but on days we get heavy rains, not everything passes through it and the (rain) water pools up, so we're looking at expanding on the reed beds," said O'Brien. "But we are very happy with it."

Christine Campbell, a professor of environmental science at Sir Wilfred Grenfell College said the facility in Corner Brook is great to see.

"Small-scale, constructed wetlands have been used successfully in other parts of the world and

it is exciting to see this environmentally friendly technology being put into place in Corner Brook," she said. "Grenfell environmental students can now get a first-hand look at this system, gaining practical exposure to material covered in lectures.

"Once the wetland is functioning, it will give everyone in Corner Brook an idea of some options for sewage treatment in the region."

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