

# Field Notes

Oak Hammock Marsh Interpretive Centre

May 2007

## An Environmentally-sensitive Building

The Oak Hammock Marsh Conservation Centre was designed in an environmentally-sensitive manner to blend with the natural landscape and have a low visual and ecological impact. It has many environmentally friendly features which are highlighted in this issue

### Windows that minimize bird strikes

- Low, ground-hugging design
- 18" overhang above windows to reduce reflection
- Round walls with each window facing a slightly different direction, few corner windows and see-through spots
- Vertical blinds that can be drawn and partially closed to present a visual obstacle to birds
- Nets to cover all windows if hotspots develop (these have never been needed) – grommets to hold the nets can be seen on the capstone around the edge of the roof



## Natural wastewater treatment

- 3-cell lagoon system rather than a standard 2-cell system
- Effluent meets or surpasses all federal and provincial standards before it enters the third compartment (a constructed wetland) for extra purification
- The lagoon cells and borrow pit attract many birds – including night-herons, pelicans, cormorants, shorebirds, and ducks
- Lagoon water and marsh water (cell 1) is tested regularly as part of the annual environmental monitoring program
- The addition of salts to the lagoon effluent is minimized by adding softeners to the building's hot water only rather than to the total water supply
- To prevent water pollution, steps are taken to minimize the use of harsh chemicals on-site



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## Natural landscaping

- Landscape plan designed to enhance species diversity using native plant species
- New ponds were constructed to increase habitat diversity, edged with native grasses not sod
- Upland areas disturbed during construction were planted with native prairie grasses and wildflowers
- Tall-grass species were selectively planted within the right microhabitats to provide a more natural appearance
- Prairie wildflowers and grasses were planted on the berms at the front of the building, in the flower bed in the centre of the drop-off loop, and in the beds around the visitor parking lots
- Native trees and shrubs were planted around the parking lots to increase habitat diversity and provide windbreaks.



## Green Roof

- Prairie wildflowers (forbs) and grasses were planted in the rooftop flower beds
- The rest of the roof was also planted with a native grass mixture
- Species selected for the roof have relatively short roots and shoots
- Many animal species use the rooftop as habitat (jackrabbits, voles, short-tailed weasels, songbirds, cormorants and ducks) for feeding, shelter, resting, and/or nesting. Ducks nest on the roof each year



- Prescribed burns are conducted on the roof every few years to manage the prairie (control weeds and shrubs, enhance prairie grasses, etc.)

## Other Features

- Berms help insulate the building and reduce heat loss in winter
- Building is heated using electricity, cooled using groundwater
- The building uses artesian groundwater which makes for good drinking water
- Boardwalk and observation blinds are made from untreated cedar
- Floating boardwalk is supported using recycled pop bottles
- Office encourages car-pooling (15-passenger vans) – a leader in Manitoba
- On-site recycling (aluminum, glass, paper) – including composting of yard wastes and some food scraps
- All test wells dug during building construction were sealed properly to prevent contamination of groundwater
- To blend with the natural environment, the building has no chimneys and vents on the rooftop
- Odours from the café are minimized (no greasy fried foods)
- Snow clearing is planned so that piles of snow with debris from the roads and parking lots melt into “decanting ponds” that are not linked directly to the marsh
- New computer system (CONTRO-LEC) has been installed to save energy by regulating temperature. It reduces demands during peak times, and ensures a constant temperature. The computer can now control the energy flow to heaters, power outlets and water heaters.