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Swollen lake slowly killing wetland

People and vegetation disappearing, too

By: **Bartley Kives**
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PHOTOS BY HADAS PARUSH / WINNIPEG FREE PRESS **Enlarge Image**

Dennis Anderson trudges through mud in the Netley-Libau Marsh where he grew up. The marsh has been flooded recently by water flowing in from Lake Winnipeg.

SANDY POINT, Man. -- On a narrow strip of sand and trees that divides Lake Winnipeg from Netley-Libau Marsh, a towering cottonwood has recently lost one of its massive limbs.

For more than a century, this enormous tree has served as a navigational aid for hunters, trappers and fishers who've lived alongside the northeastern reaches of what ranks as the largest coastal marsh in Canada as well as one of the most significant wetlands of any sort on the continent.

Enlarge Image

Dennis (left) and brother Jim Anderson investigate the rising water levels while on their boat near the Netley-Libau wetland.

Now, this signal tree shows signs of stress caused by a swollen Lake Winnipeg. A tangle of driftwood is piled at the base of the tree, along with the detached branch as thick as an offensive lineman. Further out toward the water, century-old ash trees lie upended by recent storms, their root balls standing four metres above the sand that's washed up over the soil.

"This is a metaphor for what's happening to the marsh," said Dennis Anderson, a former Brandon University president who grew up on a subsistence farm north of the town of Libau and still owns a cottage on property his family first settled in 1900.

Netley-Libau Marsh, arguably Manitoba's most important wetland, is disappearing, along with the people who used to live alongside it.

In the 1950s, Dennis and his brother Jim Anderson, a retired policy analyst, grew up virtually within Netley-Libau Marsh, where their family eked out a living trapping muskrats, spearing carp, raising cattle and setting up duck blinds for hunters from Winnipeg.

Relatively few people now derive a livelihood from this marsh, whose vegetative cover has receded over the decades due to the absence of low water periods that allow marsh plants to expand by exposing the mud banks where seeds can germinate.

Along with the trees on the eroding beach ridge, the aquatic vegetation has diminished. The proportion of the 260-square-kilometre marsh that's covered by plants declined from 65 per cent in 1979 to 51 per cent in 2001, according to a study conducted by University of Manitoba aquatic ecologist Gordon Goldsborough, Ducks Unlimited researcher Dale Wrubleski and Richard Grosshans, now with the International Institute of Sustainable Development.

This decline is deeply troubling to freshwater scientists, as Netley-Libau Marsh's plants help clean Lake Winnipeg by taking up the phosphorus and nitrogen that fuel the growth of algae, which in turn deprive the lake of oxygen when they die and decompose.

Decades of high water have robbed the marsh of its power to act as a filter, the researchers contend. "Netley Marsh resembles a shallow, turbid lake more than a healthy coastal wetland," they wrote in their oft-cited 2004 report. "Any benefits to the lake which the marsh could provide, as wildlife and fisheries habitat, and in removing and storing nutrients that would otherwise enrich the lake, have probably been degraded or lost."

Since 1974, water levels on Lake Winnipeg have been regulated by Manitoba Hydro, which attempts to keep the level between 711 and 715 feet above sea level. This week, the level is 716.5 feet.

Academics are divided over what role Manitoba Hydro plays in the degradation of Netley-Libau Marsh. While most agree the Crown corporation is not responsible for lake flooding -- a Hydro channel at the northern terminus of the lake actually allows more water to drain from Lake Winnipeg during the winter than would have been possible before regulation began in 1974 -- most also agree the utility is responsible for the absence of low periods that allow marsh vegetation to spread.

Hydro is currently attempting to renew its regulatory licence. People living around the lake say the upper

limit should never have been set above 713 feet in order to create some storage capacity on Lake Winnipeg -- and mitigate the effects of storms.

"If you're setting the level at 715 feet and you get a 10-metre wind effect, it's too late," said Dennis Anderson, referring to the combined effect of waves and seiche, also known as wind tide. "The old-timers, their thinking was, the level was two feet too high."

Making matters worse, the vegetation that remains in Netley-Libau Marsh is now dominated by a single species of cattail, a hybrid between the native North American species and a European cattail introduced in the 1800s.

In many areas of the marsh, a hybrid cattail monoculture has replaced a mix of vegetation that used to include bulrushes, sedges and reed grasses. This reduced diversity has also led to less varied wildlife, as insects, amphibians and birds tend to rely on a variety of plants.

"This doesn't begin to include many other species of plants outdone by hybrid cattails," said Jim Anderson. Invasive species such as carp and loosestrife have also played ecological havoc.

But some life remains in the marsh. On a sunny August day, grebes, pelicans and cormorants fish on the open water, kingfishers and ducks dart above the cattails and blue herons, bald eagles and turkey vultures patrol the lake-bottom ridge.

The Anderson brothers fear a couple of more seasons of high water will destroy what's left of this beach, which supported cottages until the 1950.

"You can see where the water is flowing when the wind blows from the north," said Dennis, pointing to a fledgling channel in the sand that extends part way from the lake side of the ridge to the marsh. "When that happens, it's game over."

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