

Researching 'the emerald jewel of the North'

Study shows Peace-Athabasca Delta may be drying up

By SHAWN BELL

Until Jeff Shatford flew over the Peace-Athabasca Delta, he'd not yet decided to work at Wood Buffalo National Park. After that flight, he couldn't imagine working anywhere else.

"It was mindblowing, just the sheer size of it. You see these unfettered rivers careening across the landscape, finding old channels, making new ones. It's all so green. Lake Claire is so big and flat. You see these big, dynamic processes going on, things you never really see anywhere else. I was overwhelmed just from the natural wonder of it."

Shatford, a Parks Monitoring Ecologist at Wood Buffalo, spent the summer of 2008 studying the Delta. He was wet nearly the entire time, though the sun was out 20 hours a day. The Peace-Athabasca Delta, at 4000 square-kilometres, is one of the largest freshwater wetlands in the world.

World Wetlands Day

February second was World Wetlands Day. The theme was "Upstream-Downstream: wetlands connect us all." It couldn't be more fitting for the people who live around Wood Buffalo National Park, home to two internationally recognized wetlands of significance. One, in the northeast corner of the park, is the nesting grounds of whooping cranes. The other, the Peace-Athabasca Delta, is the connecting point for the entire Mackenzie water basin and the closest, most affected section of the basin to the development of Alberta's oilsands industry.

Stress on the Delta
That the Peace-Athabasca Delta would be under stress from southern development is obvious to anyone with a map. Fort Chipewyan lies just to the northeast. The health problems associated with contaminants in the water there are well documented. Oilsands development along the Athabasca River are only a raft-ride upstream. Major urban centers, pulp and paper mills, large-scale farming and the Bennett Dam are all upstream on the Peace River. Wetlands are natural



The incredible Peace-Athabasca Delta, one of the world's largest freshwater wetlands.

sponges, absorbing silt and contaminants at one end, and sending clean water back to the rivers at the other.

Contaminant study underway

An extensive study of contaminants in the Peace-Athabasca Delta is underway. Environment Canada expects to release results in a month or two. But in the meantime another study of the Delta is causing a different kind of concern. Water levels in the rivers seem to be low, and a lack of flooding – the lifeblood of a wetland – may be causing the ecosystem to dry up.

Shatford was indirectly studying water levels last summer. Officially the study was on



Photo courtesy of Parks Canada

Jeff Shatford pushes his way through cattails and bulrushes in the Delta.

vegetation, specifically the types of plant life found along 36 transects that are monitored once every five years. Depending on the type of vegetation, researchers can

determine water levels for that specific area of the Delta.

"This study is one of the most extensive efforts to look at long-term changes in the Delta," Shatford said. "Each type of plant community is tolerant of water in different degrees, so the water level determines which plants can occupy the basin."

Is the Delta drying up?

Shatford's conclusions are surprising. The water levels in the Athabasca River, the essential feeder for the oilsands industry, appear to be relatively normal. In the north end, however, around the Peace River, the Delta has seen significant reduction in water levels, and therefore a significant loss of wetland, since the last major flood in 1997.

Shatford is reluctant to give reasons why that might be. He says there are many factors and to point to one or two is impossible. He claims the reduction in flooding could be a natural cycle that will not be realized for many years. But if the drying trend seen for the past 11 years continues, the loss of the wetland could have serious impacts on a huge range of wildlife and habitat, from bison to fish, whooping cranes and the thousands of migratory waterfowl that stop over in the Delta each year on their way to the high Arctic.

'Emerald jewel of the North'

"The importance of wetlands to the region is undisputed," Shatford says. "For both the incredible diversity of plant and wildlife habitat and for the traditional link to lifestyles of the people who have always lived here. It's an extremely productive place for this Northern landscape. If you stick a shovel in the ground you get this rich black soil, with lots of nutrients and water."

Shatford starts to describe the Delta as being like a rice paddy, because of the incredible amount of nutrients and the low levels of water. But then he pauses.

"No, saying it's like a rice paddy makes it sound too mundane. I call the Delta the emerald jewel of the North."

NORTHERNERS WORKING TOGETHER

Reducing the Cost of Living

Managing This Land

Maximizing Opportunities

Building Our Future

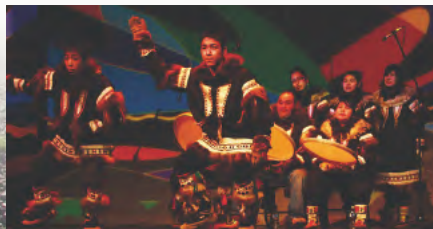
Refocusing Government

Challenges and Opportunities

These are challenging times. Like the rest of Canada, we're affected by the global economy. We need to respond to these challenges and pursue the opportunities open to us by investing in our economy, our environment and our people.

The Government of the Northwest Territories spends over \$1.3 billion every year to deliver programs and services for our people, develop our infrastructure and

■ Developing skills programs and partnerships with industry will ensure that NWT students and residents have job opportunities.



■ Supporting programs like the Arctic Winter Games ensures our culture and traditions are sustained.

2008 ARCTIC WINTER GAMES/THE CITY OF YELLOWKNIFE

improve our communities. The dollars we spend will benefit our economy now and help create a better future for our children.

We'll continue upgrading healthcare facilities across the territory, and building new schools, housing, roads and bridges.

We will continue to refocus government to ensure the right programs are delivered in the right places for the people that need them the most.

And we will continue to protect our beautiful lands and resources in balance with development and invest in new ways to produce and conserve energy.



PWB/SINWT ARCHIVES

■ The investments in new building and renovations across the territory will stimulate the economy through job creation and construction.

We must deal with today's challenges while keeping both eyes on tomorrow's opportunities.

This is all possible with the right balance. It's part of our plan to deliver the results you said were most important to you, your family, and your community.

Northerners Working Together!



www.gov.nt.ca