



SPECIAL FEATURES IN THE NORTHWEST TERRITORIES

DELTA



Photo credit: Kelly Stein

DELTA

What are deltas?

Deltas are freshwater landforms created when a fast-moving body of water, such as a river, flows into a comparatively still body of water, such as a lake or ocean. The flow rate of the river decreases as it hits the still water, causing the sediment in the river to drop out. Over time, the sediment and associated nutrient deposits build up in elevation (*aggrades*) and expand into the still body of water (*progrades*).

Often, rivers in large, flat valleys separate into multiple channels and deposit sediment as they meet the ocean or other still body of water. These deltas can shift and alter shape as water levels change, making their boundaries hard to define. Larger deltas are mosaics of many deltas of various ages and degrees of activity. Deltas at the ocean are known as marine deltas and are associated with estuaries, the zones where delta freshwater and ocean saltwater merge.

Deltas provide important ecosystem services, such as filtering water. They are renowned for their high levels of ecological productivity, dynamism and importance to fish, waterfowl and mammals. They are attractive to wildlife because the nutrient-rich waters lead to increased plant growth and food availability.

Deltas in the NWT

There are many well-known examples of deltas in the Northwest Territories (NWT) that are identified as ecologically and culturally important. One of the most well-studied deltas in the NWT, the Mackenzie River Delta, is over 210 km in length with an average width of 62 km.

A Migratory Bird Sanctuary was created at the Anderson River Delta east of Tuktoyaktuk on the Arctic Ocean because of its recognized importance for the breeding, moulting and staging of many species of waterfowl, including brants (*Branta bernicla*), tundra swans (*Cygnus columbianus*), snow geese (*Chen caerulescens*) and the endangered eskimo curlew (*Numenius borealis*). Several deltas have been identified as important habitat for many may-be-at-risk plants in the NWT.

Deltas are sensitive to disturbance and prone to contaminant accumulation with the high sediment deposition.

How can we protect deltas?

To minimize impacts on deltas and associated conservation features, developers are asked to observe the following recommended best practices:

- If you are conducting land use activities, make sure you obtain current information and survey for deltas in your area of interest.
- Identify any impacts of your proposed activities, and determine appropriate mitigation measures to minimize impacts on deltas.
- Monitor and adapt your land use activities and mitigation efforts to make sure there are minimal impacts on deltas.
- Conduct a general biophysical survey, including a rare plant and waterfowl survey, for land use activities within the vicinity of a known delta.

Where Can I Get More Information?

Visit the Conservation Network Planning **webpage** for other information sheets, reports and most recent maps.

Email Conservation Network Planning at conservationplanning@gov.nt.ca

