

# Big Island Ecological Values

## Overview

Big Island is a Crown-owned parcel located within the Woodbend planning area in the North Saskatchewan River valley in southwest Edmonton, an area known in Cree as amiskwaciywâskahikan (amisk-WA-chee wass-skag-N). Big Island contains mature balsam poplar stands but the majority of the site is low-lying and within the floodway, separated from the lands above by steep slopes and a seasonally flooded back channel. The Woodbend area stretches along both sides of the river and is made up of private, municipal and Crown land. While the entire Woodbend area is important for conservation, the focus of this establishment proposal is on the Crown-owned Big Island.

## Ecological significance

Big Island and the surrounding Woodbend area are situated within the Central Parkland Natural Subregion which is part of the Parkland Natural Region, the most densely populated Natural Region in Alberta and has been extensively cultivated since the late 1800s. The Natural Subregion is important for migratory waterfowl, shorebirds, and landbirds, but contains less than 5% of native vegetation and intact landscapes, with those that remain found predominantly in parks and along water courses.



Tansy, a non-native invasive plant species.

## What is a Natural Region and Subregion?

Alberta is divided into six natural regions (Boreal Forest, Rocky Mountains, Foothills, Canadian Shield, Parkland, and Grassland), each representing a unique ecological unit within the bigger picture of Alberta's landscapes. Each one contains its own mix of landscape patterns, vegetation, soils, and landform features. Natural regions are further subdivided into 21 natural subregions with similar but distinct landscape patterns.

Big Island and the North Saskatchewan River Valley are identified as a Provincial Key Wildlife and Biodiversity Zone due to its importance in supporting wildlife movement and biodiversity. This area is also part of a Sensitive Raptor Range for bald eagle as well as a sharp-tailed grouse range.

Wildlife species of concern have been observed in Big Island and the surrounding Woodbend area, including bald eagle, great blue heron, common nighthawk, and fisher. Other species observed include deer, moose, coyote, beaver, porcupine and red-sided garter snake.

Non-native invasive plant species have taken root throughout Big Island as a result of human disturbance and periodic natural disturbances like flooding and ice push.

The City of Edmonton is currently undertaking a detailed ecological assessment of Big Island to increase awareness and understanding about the site's ecological values that will be used to inform ongoing site planning.



Red-sided garter snake.

# River Dynamics

Big Island was once much bigger until natural river processes led to the island being split into two smaller islands between 1909 and 1929 (Figure 1). The river will continue to shape Big Island and the surrounding landscape.

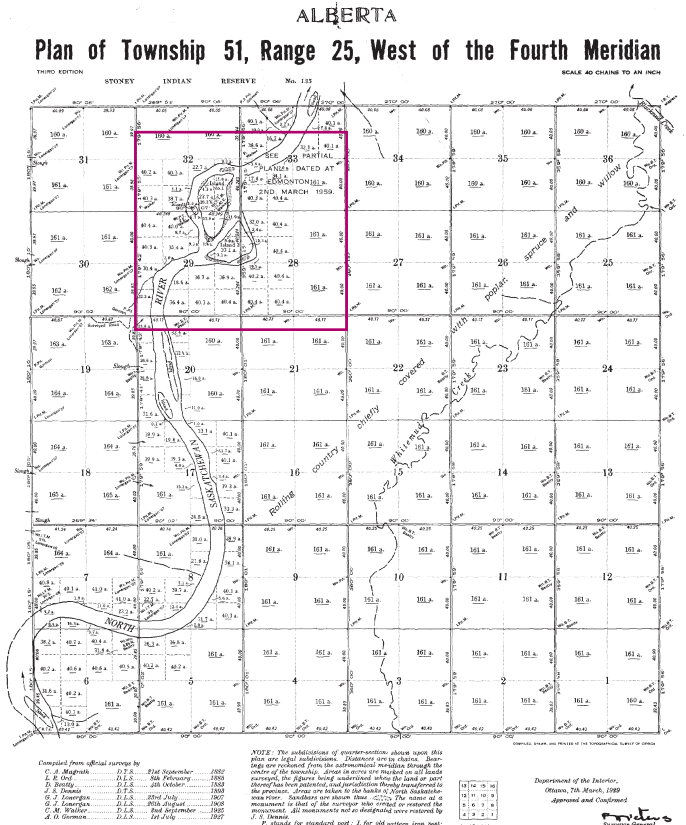
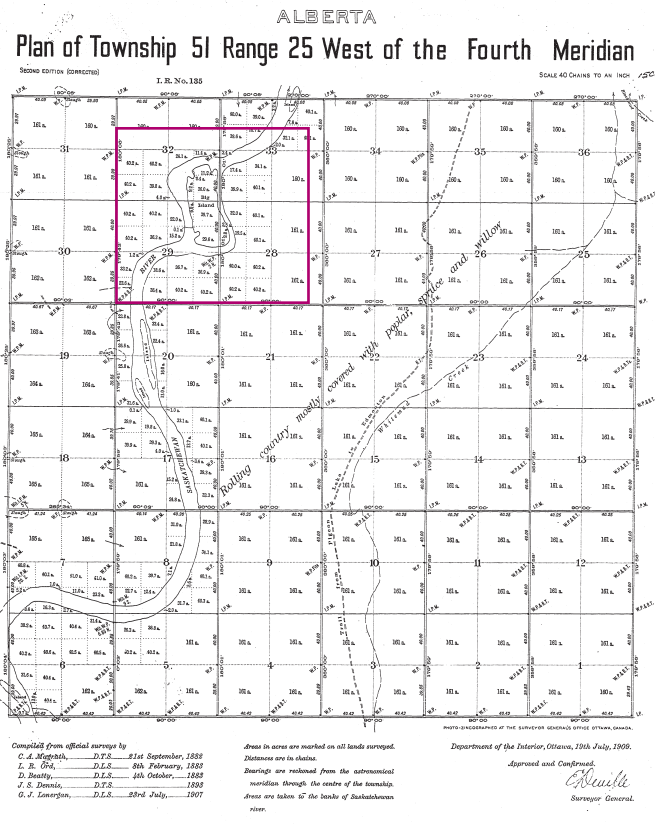


Figure 1 Surveys of Big Island 1909 (left) and 1929 (right)