

BIODIVERSITY

A close-up photograph of several bright orange lily flowers in full bloom, set against a blurred green background. The flowers have six petals each and prominent stamens. The image is positioned in the upper half of the page, partially overlapping the "BIODIVERSITY" header.

Our environmental programs and initiatives aim to ensure our actions today do not have a long-term permanent impact on local ecosystems. As well, through our reclamation activities, we re-establish native vegetation and wildlife habitats similar to those that existed prior to disturbance and are consistent with the natural variability found in the region.

Syncrude uses pre-development conditions as a guide in closure planning and towards creating a landscape for wildlife to return. A number of inputs guide our reclamation, including the range of vegetation diversity prior to disturbance. We also use Habitat Suitability Index modelling a tool to compare the capability of the pre-development landscape to that of our reclaimed sites for key indicator species.

CREATING THE WORLD'S LARGEST PROTECTED BOREAL FOREST AREA

Syncrude recognizes the value of multi-stakeholder approaches to monitor and mitigate industry impacts on the environment and, in 2018, joined the governments of Alberta and Canada, the Nature Conservancy of Canada and the Tallcree First Nation to create the world's largest protected area of boreal forest.

Syncrude contributed \$2.3 million to the Nature Conservancy of Canada, which made a payment for a timber quota held by the Tallcree First Nation. This enabled the quota to be cancelled by the Government of Alberta, which then created the Birch River Wildland Provincial Park, a conservation area of 3,300 km². This new area sits next to Wood Buffalo National Park as well as several new and existing provincial parks. Taken together, the parks form a protected boreal forest area of more than 67,000 km², an area roughly twice as large as Vancouver Island. It protects key habitat for 68 species of conservation concern and three species at risk – wood bison, woodland caribou and the peregrine falcon.

CREATING THE WORLD'S LARGEST PROTECTED BOREAL FOREST AREA (Cont'd)

Syncrude's investment provides a land disturbance offset for future mining development, such as our Mildred Lake Extension (MLX) Project, in addition to other commitments to mitigate and reduce our environmental impacts.

WILDLIFE AND WATERFOWL PROTECTION

Syncrude operates within a large wilderness area in northern Alberta's boreal forest and employs a number of strategies to deter wildlife from our sites. These include our waterfowl and bird deterrent system, and protocols for the handling of food and food waste.

In 2019, we experienced 32 bird and waterfowl mortalities due to oiling. Thirty-three additional losses, avian and non-avian, were recorded related to natural or unknown causes. We are required by law to report to regulators sightings and wildlife incidents occurring on our site. In situations where distressed wildlife is found, the animal is assessed and action is taken under the guidance of Fish and Wildlife officials from Alberta Environment and Parks.

Wildlife Incidents	2015	2016	2017	2018	2019
Avian ¹ (#)	51	39	49	60	32
Other Wildlife ² (#)	8	8	13	14	14

1 Includes all bird and waterfowl mortalities related to oiling. Incidents are reported to the Alberta Government Environment and Parks department. An additional 39 bird mortalities were reported related to natural or unknown causes.

2 Includes all wildlife mortalities, regardless of cause, including those in which the cause was natural, due to predation or unknown.

WILDLIFE MONITORING

It is important to demonstrate that our land reclamation practices are creating productive habitats for local species to return, including those of traditional value to Indigenous communities. This is done through monitoring techniques such as visual observations, capture and release of birds, acoustic recordings, motion-activated cameras and track plates that detect a diversity of wildlife. Some methods are completed at both reclaimed and natural sites within and around our lease boundaries.

Wildlife monitoring activities include the Institute for Bird Populations' Monitoring Avian Productivity and Survivorship (MAPS) program. Through this continent-wide bird banding program, researchers effectively monitor bird reproduction, survivorship and habitat use of reclaimed, disturbed and natural sites. Information collected contributes to a large database that is managed by the institute.

WILDLIFE MONITORING

During the 2019 MAPS program, about 1,900 birds of 59 species were captured and released at eight stations, of which approximately 1,300 birds of 54 species occurred at six stations on reclaimed land. Since wildlife monitoring began in 2011, 156 species have been detected on our reclaimed areas, including 34 species of concern.

Automated audio and ultrasonic recordings collected over the years also adds to the evidence that wildlife are returning to reclaimed areas. These have recorded the calls of borealis chorus frogs, wood frogs and Canadian toads, as well as those of silver-haired, hoary, northern long-eared, little brown and red bats.

Stations equipped with motion-detection cameras recorded the presence of 14 mammal species on our reclamation areas in 2019. Over the years, we've observed an abundance of wildlife species returning to reclaimed lands including coyote, black bear, gray wolf, Canada lynx, moose, fisher, mink, muskrat, white-tailed and mule deer, red fox, snowshoe hare, red squirrel, American marten, weasel, beaver and elk. Monitoring continues in order to understand population demographics and to ensure our reclaimed land is progressing towards a productive and sustainable ecosystem.



WILDLIFE CORRIDORS

We recognize the development and operations of a mine have a localized impact on wildlife habitat. Wildlife monitoring helps to identify those species that may be using an area and strategies are established to mitigate the impact wherever possible. For example, at our Mildred Lake Extension (MLX) project, we have committed to creating wildlife corridors on either side of the MacKay River. This includes a 100-metre-wide corridor starting from the top of the escarpment. No mining or any industrial activity will occur in this area. The only disturbances will be at a water outfall facility and a bridge across the MacKay River. Wildlife movement for moose and other large mammals was taken into consideration in bridge design and reviewed in consultation with the nearby Fort McKay First Nation.

SPECIES AT RISK

Wildlife monitoring and research programs occur on both active and reclaimed sites, as well as in areas surrounding our lease areas. Syncrude's leases are located outside of prescribed Boreal Caribou recovery zones and their presence has not been detected on our sites. There are indications or observations of other species of concern, including wolverine, lynx, Canada warbler and the Canadian toad.

To help mitigate impacts on species, regardless of status, we restrict clearing activities during key periods, such as calving or nesting. When possible, we will also relocate wildlife prior to clearing of large areas and will use fencing or deterrents, where appropriate, to reduce wildlife use along roads, pits or industrial areas.

Wildlife monitoring on reclaimed lands has already recorded the return of some species of concern, including the Canada lynx and fisher – both listed by the Alberta government as sensitive – and the short-eared owl and common nighthawk – listed as special concern and threatened respectively by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and Species at Risk Act (SARA).

BEAVER CREEK WOOD BISON RANCH

In 1993, in collaboration with the neighbouring Fort McKay First Nation, Syncrude introduced wood bison to a reclaimed area to assess the capability of the landscape to support large mammals. Today, the ranch numbers around 300 head and is co-managed with the First Nation. The herd is prized for its genetic purity, winning several prizes at livestock exhibitions and fetching a premium at livestock sales. It has also contributed to a genetic preservation project led by scientists from the University of Calgary, the University of Saskatchewan, the Canadian Food Inspection Agency, Parks Canada, the Government of the Northwest Territories and the Calgary Zoo.

The bison graze on three reclaimed areas within our operation. Two are predominantly grassland, while the third incorporates more ecological characteristics – such as coniferous and deciduous trees, as well as shrubs and grasses – associated with the local boreal forest.



*Wood bison
grazing on
land reclaimed
from mining
operations.*