



Local environmental impacts

GRI: 1031-1; 103-2; 103-3; 303-1; 303-3; 303-4; 303-5; 305-7; 306-2 | SASB: EM-MD120a.1; EM-MD-160a.1

We work hard to minimize and mitigate our impact on the environment and respect the natural resources of the communities we serve.

Business context and our approach

Energy development is vital for economic growth and prosperity. As energy development grows to meet the needs of our society, we must be aware of how natural resources and habitats may be impacted by this development. At Enbridge, we are committed to minimizing our impacts, reducing habitat disturbances, and integrating conservation efforts while complying with all applicable laws and regulations.

We work with local and Indigenous communities and other stakeholders and invest in projects and initiatives that promote environmental values and priorities that are mutually important and create benefits for the communities in which we operate. We recognize some of our operations are located near environmentally-sensitive habitats and ecosystems. We work toward safeguarding the land and protecting the local habitats, land, water and air. Our decision to operate in these areas are made only after careful consideration.

Our actions

Our commitment to the environment is guided by the Enbridge Management System Structure (MSS), which provides consistent expectations, standards and levels of discipline across our enterprise – and across asset lifecycles. This structure has built in all dimensions of safety and reliability, including risk management and process safety. The development and implementation of these risk management frameworks is informed by industry-leading protocols including, but not limited to, ISO 14001.

Each Enbridge business unit must establish, implement and maintain an Integrated Management System and Environmental Protection Program (EPP) for its defined assets and business processes that meet the enterprise minimum requirement and ensure regulatory and permit compliance. The goal of the EPP is to anticipate, prevent, manage and mitigate environmental risk and conditions that could adversely affect the environment. This allows our local teams to focus on environmental risks, opportunities and compliance.

Land use and biodiversity

Our EPPs include Land Management and Wildlife Management plans to support both project development and operations and to identify and monitor any potential impact to land or wildlife. For each project, we develop unique Species at Risk plans that include identification and avoidance measure for at-risk species, as well as all necessary mitigation steps. We also utilize an enhanced electronic Environmental Screening Checklist during environmental planning in relation to projects in our GDS business.

Our engineering operations and technical services teams integrate biodiversity considerations into the design, construction, maintenance and operation of our assets to balance the protection of land, plant sensitivities and animal life with project requirements. Accordingly, we:

- Conduct environmental and cultural assessments to identify sensitive areas and use pre-existing ROW where possible
- Work with landowners and regulatory agencies to address the spread of invasive species that threaten valuable native species and natural plant and animal diversity
- Monitor wetland and watercourse crossing sites regularly following construction, to ensure they are fully restored to their previous function and value
- Restore pipeline ROW through rural areas so agricultural activities can resume promptly following construction
- Use appropriate vegetation management methods at our facility and pipeline ROW locations
- Employ habitat restoration methods including reclamation, environmental monitoring and mitigation and follow-up landowner outreach

We work cooperatively with regulatory agencies such as the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service, the Bureau of Land Management, U.S. Army Corps of Engineers, National Parks Service, Environment and Climate Change Canada and Fisheries and Oceans Canada, as well as state and local permitting and wildlife management agencies. Our philosophy is to meet, if not exceed, expectations set by any state, provincial or federal regulator. We fund environmental research projects with universities and other research agencies, including topics such as habitat preferences that inform restoration activities. We invest in projects that support environmental initiatives and create benefits for the communities in which we operate and serve.

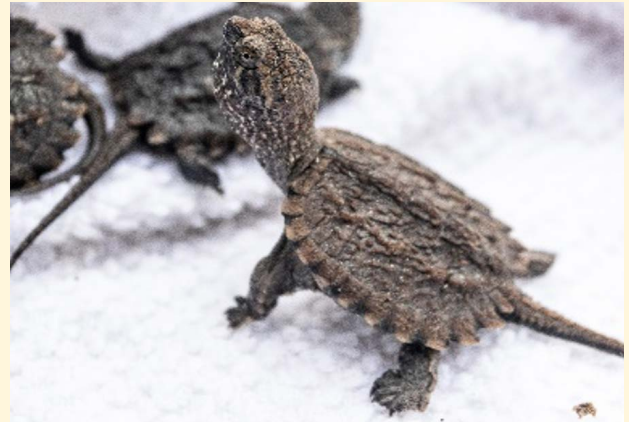
“ Enbridge has been an industry thought leader and premier partner to Texan by Nature in our mission to bring conservation and business together. In 2019, Enbridge’s support of the TxN Conservation Wrangler program helped bring over 200 leaders across Texas together to build public-private partnership, resulting in collaborative efforts that yield positive return on conservation—benefiting people, prosperity and natural resources. Enbridge’s leadership and commitment to conservation is deeply appreciated and has helped replicate and maximize the impact of our program’s science-based projects.”



Joni Carswell, CEO
Texan by Nature



In 2019, we continued the [Line 3 Replacement Program \(L3RP\)](#) Canada reclamation work to return the land to its former and agreed-upon conditions. We conducted more than 348 miles (560 km) of topsoil replacement on the Line 3 ROW that was not reclaimed in 2018, due to wet or frozen conditions. Proper topsoil handling is imperative to prevent compaction and support ROW revegetation. Straw crimping was used to protect the soils from wind and water erosion in all agricultural areas. Reclamation activities also included noxious weed spray programs and ongoing environmental inspection across all nine spreads to identify and repair construction deficiencies.



SPOTLIGHT: Snapping Turtle hatchling release

Snapping Turtles are a wildlife species at risk due to high predation rates of their nests and road mortality they face when trying to find a suitable habitat. As a result, very few of them reach maturity, with as few as 1% of the eggs hatching and hatchlings surviving to maturity. On June 20, 2019, a Snapping Turtle nested and laid eggs at our Kingsville East Take-off Station construction site in Ontario. To protect the turtles, the team retained a biologist to collect the eggs and take them to the Hobbitstee Wildlife Refuge in Jarvis, ON for incubation. On September 10, 22 baby Snapping Turtles hatched and were relocated to a suitable habitat near the nest location.



SPOTLIGHT: Caribou Habitats Restoration Program

Caribou is one of the most vulnerable boreal forest species in Canada. Changes on land use have the potential to greatly impact caribou habitats negatively.

To help restore caribou habitats, several reclamation programs were completed for multiple projects in northeast British Columbia in 2019, including the High Pine Expansion Project. The High Pine Expansion Project is one of the first where we planted conifer tree seedlings within the ROW in an effort to restore caribou habitats. Some areas on the ROW had uneven terrain and terraces that presented significant logistical challenges for the team to overcome. To access remote and inaccessible parts of the ROW, the team used helicopters to transport tree seedlings. Enbridge seeded approximately 17 miles (27 km) of the ROW through the reclamation program on the Wyndwood Project and our plan is to leave it un-mowed and minimally maintained, to allow the seedlings to grow.

The project team committed to put measures in place to deter off-road vehicles to protect the reestablishment of vegetation, and to slow down predators and protect the caribou. The team also installed specially designed screens to limit predators' lines of sight down straight stretches of the ROW to further protect the caribou from predation.

This reclamation project helped us understand the ecology of these species and helped inform other project activities and protect the pipeline ROW.

Managing water resources

Water is a fundamental societal, environmental and economic resource and we are committed to using it in a responsible and sustainable way. Primary risks include impacts to water quality as a result of spills or hydrostatic testing, increased sediment loading due to flooding or heavy rainfall, withdrawing water from water-stressed areas and implications for marine wildlife.

Our primary water use is for hydrostatic pressure testing and Enbridge's operations and engineering groups carefully manage water used for this purpose. Our teams have detailed procedures in place to evaluate water quality prior to release or disposal – either returning it to the original source or via other approved disposal methods. Our water usage fluctuates year over year driven by the number of hydrostatic pressure testing we need to perform. On average, over 99% of water used in the hydrostatic pressure testing was returned to its natural environment.

Enbridge has robust operational practices focused on the protection of water quality and extensive experience in protecting water resources when pipeline infrastructure crosses a waterway. When pipelines are submerged, such as Line 5 beneath the Straits of Mackinac, we employ divers to inspect the infrastructure at select locations.

Air emissions

Local air quality is increasingly of interest to communities, regulators and other stakeholders, driven mainly by environmental and public health concerns. We design all Enbridge facilities to ensure we keep air emissions from our operations in line with regulations and guidelines designed to protect the environment and the health of local communities.

The air emissions released from our facilities include carbon monoxide, nitrogen oxides and volatile organic compounds. Other contaminants released in much smaller quantities include sulfur dioxide, hydrogen sulfide and particulate matter. Industrial processes and fuel combustion result in these types of air emissions. We have established management programs that define our roles, responsibilities and timelines for managing and reporting emissions to government agencies in both Canada and the U.S.

Hazardous and non-hazardous waste

Waste minimization, source reduction and recycling offer both environmental and economic benefits. We look for opportunities to reuse or recycle construction materials, utilize recycled steel in construction projects and implement waste recycling and compost programs at our office locations, where possible.

We follow all applicable regulations to manage waste from our operations, including placing waste in labeled containers; maintaining waste storage areas; and proper disposal and removal of waste. Common types of waste from our assets and operations include construction debris, commercial waste and contaminated soil.

In our corporate office and several of our major office locations we recycle items such as paper, plastic, cans and batteries. We continue to seek practical opportunities to reduce waste from our offices and field operations.

Our performance

Reducing air emissions

We continue to make significant investments in equipment to reduce air emissions associated with our operations and to meet regulatory requirements. In 2019, we kicked off a five-year modernization program on some of our U.S. pipeline assets where we'll be investing over US\$1 billion to reduce air emissions at several of our compressor stations. This modernization program is, in effect, an environmental benefit above and beyond the Reasonable Available Control Technology requirement and will result in 80% lower emissions than required by regulations. We continue to review our reporting methodology and are developing a harmonized plan for criteria air contaminants (CAC) reporting. We plan to provide our CAC numbers after third-party assurance is complete.

Engaging our employees

GTM's Market Innovation Team launched their first ever Shark Tank Challenge in 2019. The purpose of this challenge was to engage our talented employees to discover the next great business idea on how to improve our operations and reduce our environmental footprint. One of the winning ideas selected was "The Path to Zero Waste Office Culture." Several waste management initiatives were initiated in various office locations in response, including installing additional dishwashers, upgrading to eco-friendly coffee machines and working to continually reduce the use of single-use cups across all locations.

Waste

We continue to conduct recycling and organics collections programs to divert solid waste from landfills. The number and scale of construction and maintenance projects undertaken within the past year drives – and contributes to the fluctuation of – our waste generation volume. In GDS, we diverted 59% of waste from landfills through recycling and organics collection in 2019. The waste reduction within GTM in 2019 was largely a result of the divestment of Canadian gathering and processing assets. Details can be found in the [Appendix](#).