



# What pipeline companies are doing to protect the environment.

## BY THE NUMBERS Environmental stewardship



**INCIDENTS**  
Zero incidents  
is our goal.



**MEMBERS**  
Canada's transmission  
pipeline companies  
working together to  
continuously improve.



**SPECIES**  
Animal and plant  
species listed under  
the Species at Risk  
Act that CEPA  
members are working  
to protect.

Transmission pipeline operators are responsible for a wide network of pipelines spread across Canada, from urban centres to remote regions. Protecting all aspects of the environment at every stage in the pipeline life cycle is one of our most important priorities. CEPA members work together to continuously improve environmental stewardship, minimizing impact on the water, wildlife, habitat and climate.

### **Protecting water**

When pipelines are near rivers, streams, lakes and other bodies of water, operators take special care to protect the area. To choose the most effective, least impactful route, pipeline operators may study the location of the route for several seasons before construction begins.

### *Crossing bodies of water*

Operators carefully assess the potential impacts to wildlife, vegetation and soil to avoid any disruption during construction. This includes reviewing the environmental risk, crossing methods and meeting with landowners and the local stakeholders to understand any additional risks.

Thicker pipe walls, special pipeline coatings, and in some cases, special cables, bolts and weights are used to secure the pipeline. For major bodies of water, such as a lake, operators also use block valves (which stop the flow of the product in the pipeline). The block valves may be a fair distance away from the water crossing to reduce the risk of an accidental leak or spill.

### **Protecting wildlife**

Environmental specialists begin by conducting an environmental assessment to identify the types of wildlife along a proposed route. Where pipelines could impact sensitive species, such as caribou or migratory birds, specific mitigation and monitoring plans are developed to minimize potential impacts.



## About Pipelines ENVIRONMENTAL STEWARDSHIP

Planning construction for a particular season is another way companies minimize the impact on wildlife. They are also careful to ensure there are no features bordering the pipeline that may disrupt animal movements.

As soon as a pipeline is completed, work begins to restore the land to its original condition.

### Protecting the land

Pipeline operators conduct an environmental assessment of proposed pipeline routes that includes studying habitat and vegetation. During construction, pipeline operators use a variety of methods to reduce impacts to vegetation. This can include avoiding sensitive areas and restricting activities to times when the area is the least vulnerable. In addition to protecting the native plants, every effort possible is made to avoid introducing plants that shouldn't be there.

After construction, the land along the pipeline is restored, using plans with the input of biologists and agrologists. The original soil is replaced, vegetation is replanted and the right-of-way is re-seeded. Pipeline companies monitor the reclaimed land for years afterward to ensure that the plants have been regrown and the reclamation has been successful.

### Reducing emissions

Canada contributes less than two per cent of the world's greenhouse gas emissions; CEPA members, who operate Canada's transmission pipelines, are responsible for only one per cent of the country's total emissions.

#### Natural gas pipelines

There are three main ways natural gas pipelines emit greenhouse gases: from burning fossil fuels at compressor stations and methane from small leaks or maintenance activities. Companies use a variety of techniques to limit the amount of greenhouse gases released, including:

- Upgrading equipment to be more energy-efficient.
- Adopting technologies that divert or capture the release of natural gas during maintenance.
- Using technologies that detect small leaks, including portable gas detectors and ultrasonic detectors.

#### Liquids pipelines

Greenhouse gas emissions from liquids pipelines are very small compared with natural gas pipelines. Storage tanks are the primary source for emissions in liquids pipelines, and operators are reducing emissions through tank design, vapour control or recovery systems and regular inspection.



### Trenchless drilling

A path is drilled underneath a watercourse and the pipeline is threaded underneath.

This leaves fish habitat and riverbanks undisturbed.

Read the blog post: [bit.ly/1v9THKs](http://bit.ly/1v9THKs)



### Thousands of experts

Building a pipeline takes an army of expertise. Engineers and environmental specialists, like biologists, agrologists, hydrologists and wildlife experts, work together for years to develop a route plan that minimizes impact.



### Mutual emergency assistance agreement

If an incident occurs, all CEPA members have pledged to come to the aid of other members, providing resources and expertise as required.



Surveying the right-of-way in advance of construction.

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