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## **Pipeline Construction and Operation**

### **Position**

Alberta Wilderness Association (AWA) believes pipelines pose significant risks to human and environmental health. Pipelines must be built to the highest possible standards of safety. Pipelines must be routed to avoid impacts to environmentally significant areas including regionally designated areas, protected areas, critical wildlife habitat, intact fragments of grasslands and parklands natural landscapes, and AWA areas of concern, as depicted on our Wild Alberta map. The use of best management practices to minimize disturbance is essential and corridor access must be monitored and controlled through locked gates. Effective monitoring and harsh penalties for noncompliance or environmental damage is imperative.

AWA believes the public needs more evidence that Alberta's older pipelines are safe, that important ecosystems are preserved through appropriate route planning and best management practices (BMPs) and that approvals are being given with public and ecological health and best interests in mind.

### **Points of Emphasis**

Central to the advocacy work of AWA is the protection and preservation of intact, representative ecosystems across Alberta.

Alberta is criss-crossed by more than 400,000 kilometres of pipeline, of which 85% are oil and gas pipelines.

A pipeline corridor (or right-of-way) is the area cleared to accommodate pipe diameter, and construction, maintenance and regulation activities. These corridors generate a significant developmental footprint upon the landscape. Typical corridors are between 15 and 18 metres in width, while larger pipelines may require corridors up to 45 metres wide.

Pipeline systems play a vital role in delivering the energy demanded by North Americans—due to their sheer number and distance covered as well as the considerable environmental and human health risks, pipelines must be better planned, managed and regulated.

Potential environmental impacts associated with pipeline construction and operations include the following:

- Land and water contamination from oil and gas, or saltwater releases (spills)
- Loss and fragmentation of wild habitat
- Loss and fragmentation of natural vegetation and rare species- prairie, mountain, forest, wetland, parkland
- Loss of soils through mixing or erosion
- Soil compaction
- Reduced land capability and productivity in agricultural, prairie and forested areas
- Increase in weeds and invasive plant species
- Greater access for public and off-road vehicles to natural areas
- Increased exposure of wildlife to humans
- Stream sedimentation
- Impairment of fish habitat



Pipelines must be routed to avoid environmentally significant areas (ESAs) as much as possible. Where a pipeline route does unavoidably intersect ESAs or important wildlife habitats, adequate mitigation measures must be developed and agreed to through public consultation at the time of project approval, before the damage occurs.

Full-field life-cycle planning must be required for all new pipeline proposals including phase-out, remediation, and reclamation. Reclamation of disturbed areas must include appropriate re-contouring of landscape, use of native vegetation when replanting. Adequate reclamation liability must be assessed on a per-project basis that accounts for all remediation and reclamation costs, and does not leave Albertan's vulnerable to major financial risks.

Though some best management practices (BMPs) have been developed to address concerns, the environmental impact resulting from pipeline construction and operation remains substantial. The cascade of ecosystem effects resulting from habitat fragmentation are of particular concern, as habitat loss and fragmentation can be attributed to the rapid decline of our most sensitive species. Specific requirements must be attached to all development approvals (whether in wilderness or not) with the ultimate goal of an overall reduction of linear disturbance density throughout the province. All approvals must be subject to a "no new net surface disturbance" rule, and there must be provisions in place to regulate access along industry roads. Similarly, pipeline rights-of-way and associated surface disturbances must be minimized and controlled. Operators should use and/or share existing rights-of-way for pipelines and infrastructure wherever possible.

Wherever possible, pipeline infrastructure should be buried underground.

Roads not in regular use for more than two months should be deactivated, and reclamation of roads should take place within one year of last use.

Wherever feasible, horizontal directional drilling methods should be used to cross watercourses under all fish bearing streams and environmentally significant areas. Measures must be implemented to ensure minimal damage is inflicted upon both drilling and target areas throughout the construction process.

Better regulation and enforcement are necessary to ensure pipeline integrity.

- The risk of failure (such as a rupture) in a pipeline increases substantially with pipeline age. More than 40% of Alberta's pipeline system was built before 1990.
- According to the Energy Resource Conservation Board (an independent, quasi-judicial agency of the Government of Alberta responsible for pipeline regulation), for every 1,000 km of pipeline in Alberta 1.7 failures occur each year, based on 2009 data (ERCB).
- Considering our landscape is fragmented by over 400,000 km of pipeline, this predicts approximately 680 failures per year.
- Though some may be small-scale "releases", the number of large-scale failures that occur each year indicates the monitoring and regulatory regime of the ERCB is unable to prevent significant releases resulting in extensive damage.

