

# The Southern Corridor Through Eastern Ontario:

Federal Species at Risk Act (SARA) and UNESCO Biosphere  
Reserve Implications for the Alto High-Speed Rail Project

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Prepared by the ALTO HSR Citizen Research Initiative for submission to the ALTO HSR  
Consultation

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This document is intended for use during the Alto public consultation period and for ongoing policy  
engagement. It may be freely distributed and cited

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## Executive Summary

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The ALTO high-speed rail project is currently evaluating two corridor options between Ottawa and Peterborough in eastern Ontario. A route through the southern corridor would traverse two areas of exceptional ecological and legal significance: the Frontenac Arch UNESCO Biosphere Reserve, one of only 19 UNESCO Biosphere Reserves in Canada and home to the most biodiverse region in the country; and critical habitat supporting multiple endangered and threatened species protected under the federal Species at Risk Act (SARA) and the provincial Endangered Species Act, 2007 (as amended by Bill 5, with the Species Conservation Act, 2025 enacted but not yet proclaimed in force). The list of endangered and threatened species includes reptiles and amphibians like the Spotted Turtle (endangered), Blanding's Turtle (threatened), Grey Ratsnake (threatened), Western Chorus Frog (threatened federally); birds like the Cerulean Warbler (endangered), Red-headed Woodpecker (endangered), Loggerhead Shrike (endangered), Least Bittern (threatened), Louisiana Waterthrush (threatened), Bobolink (threatened), Eastern Meadowlark (threatened), Eastern Whip-poor-will, Golden-winged Warbler; plants like Eastern Prairie-fringed Orchid, Small White Ladyslipper, American Ginseng, Toothcup, Blunt-lobed Woodsia, Butternut, Black Ash, and Pale-bellied Lichen; fish such as American Eel (E), Pugnose Shiner (T) and Channel Darter (E); and mammals including four of Ontario's eight bat species, all four Endangered under SARA (Little Brown Myotis, Northern Myotis, Tri-colored Bat, and Eastern Small-footed Myotis). This list does not include the number of species of special concern which do not receive protections under SARA or the ESA/SCA but do receive protections under the Planning Act, Provincial Planning Statement (such as Northern Map Turtle, Musk Turtle, Common Nighthawk and Evening Grosbeak).

This assessment finds that selecting a route through the southern corridor would trigger a cascade of federal legal obligations under both the SCA and SARA that could substantially delay and complicate the project; risk undermining Canada's UNESCO Biosphere Reserve designation for the Frontenac Arch at its next periodic review; create direct contradictions between the project's stated environmental objectives and its actual ecological impacts; and generate significant legal exposure to challenge from environmental organizations, Indigenous communities, and affected municipalities.

These risks are not abstract or speculative. South Frontenac Township, Rideau Lakes Township, the City of Belleville, Tyendinaga Township, and Stone Mills Township have already passed motions opposing a route through the southern corridor. The City of Kingston has passed a motion opposing the project without a Kingston-area stop and called on Alto to seek a route more closely aligned with Highway 401. MPP Steve Clark (Leeds-Grenville-Thousand Islands and Rideau Lakes) has publicly opposed the southern route. MP Shelby Kramp-Neuman (Hastings, Lennox and Addington, Tyendinaga) has formally opposed both routes. The Frontenac Arch Biosphere Network has publicly flagged concerns about impacts to the UNESCO-designated site. Public consultation comments are overwhelmingly negative regarding the southern alignment.

### **Key Finding**

The southern corridor through Eastern Ontario presents a significant concentration of environmental regulatory risk that has not been adequately addressed in public consultation materials. The convergence of SARA-listed species, identified critical habitat, and UNESCO Biosphere designation makes this alignment subject to binding federal obligations that require thorough assessment before any corridor selection is finalized.

## **Introduction and Purpose**

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Alto, the federal Crown corporation responsible for delivering high-speed rail between Toronto and Quebec City, has proposed two corridor options for the segment between Ottawa and Peterborough. The northern corridor generally follows the Highway 7 alignment including more remote terrain. The southern corridor swings through Perth, Smith Falls, Rideau Lakes and South Frontenac before reaching Peterborough, passing through or adjacent to the Frontenac Arch Biosphere Reserve.

This policy assessment examines the legal, environmental, and diplomatic implications of the southern corridor choice, focusing on two intersecting regulatory frameworks that create binding obligations for any federal infrastructure project in this region: the federal Species at Risk Act (SARA) and Canada's commitments under the UNESCO Man and the Biosphere Programme.

The assessment is primarily intended for Alto's project planners and corridor selection teams, and for Transport Canada and the Minister of Transport, as the entities responsible for route selection decisions.

### **The ALTO Project Context**

ALTO was established as a Crown corporation to deliver approximately 1,000 kilometres of dedicated high-speed rail infrastructure at speeds exceeding 300 km/h. The first announced segment connects Ottawa to Montreal. The Ottawa–Peterborough segment is part of the broader Toronto–Ottawa link. Ontario stops are currently planned for Ottawa, Peterborough, and Toronto, with no station planned for Kingston.

Public consultation opened January 15, 2026 and closes April 24, 2026. Alto's website identifies that minimizing impacts on natural areas and sensitive ecosystems is one of the several factors "guiding the development of the corridor".

Bill C-15, part of the 2025 federal budget, grants Alto enhanced expropriation powers and development holds along proposed corridors, and together with Bill C-5, allows the Minister of Transport to exempt the project from certain environmental protections. The project has been identified as a "nation-building" initiative eligible for fast-tracking.

## The Southern Corridor's Environmental Footprint

The southern corridor would leave Ottawa, swing southwest through Perth and Smiths Falls, cut through portions of Lanark County, Frontenac County, Lennox and Addington County, and Hastings County before reaching Peterborough. This path would traverse or border:

- The Frontenac Arch UNESCO Biosphere Reserve (2,700 km<sup>2</sup>, designated 2002)
- Confirmed regulated habitat for many or critical habitat for many endangered and threatened species under SCA and SARA (Schedule 1 species), including Red-headed Woodpecker, Cerulean Warbler, American Ginseng, Blunt-lobed Woodsia, Toothcup, Loggerhead Shrike, Western Chorus Frog, Spotted Turtle, Blanding's Turtle, and Grey Ratsnake - to name a few.
- Thousand Islands National Park buffer zones and associated protected areas
- Frontenac Provincial Park and Charleston Lake Provincial Park ecosystems
- Thousands of hectares protected under the International Biodiversity Framework Target 3 to protect 30% of Canada's lands and waters by 2030 including Queen's University Biological Station, Nature Conservancy of Canada lands, Rideau Canal parks lands, and local land trusts such as the Thousand Islands Watershed, Rideau Waterway and Kawartha Conservancy Land trusts.
- Agricultural lands, wetland complexes, and rural communities with no planned Alto station

## Part I: Species at Risk Act (SARA) Implications

### SARA-Listed Species in the Southern Corridor

The southern corridor intersects with confirmed or probable habitat for the following species listed on Schedule 1 of the federal Species at Risk Act. Each listing carries automatic legal prohibitions and triggers mandatory recovery planning obligations.

Species	SARA Status	ESA Status	Relevance to Southern Corridor
<i>Spotted Turtle (Clemmys guttata)</i>	<b>Endangered</b>	<b>Endangered</b>	Inhabits bogs, fens, and shallow wetlands throughout eastern Ontario. Occurs in isolated patches in Ontario. Largest threats are habitat loss and illegal pet trade. Recovery strategy identifies critical habitat in both the southern and northern corridor area. Population declining significantly.
<i>Blanding's Turtle (Emydoidea blandingii)</i>	<b>Threatened</b>	<b>Threatened</b>	Inhabits wetlands and open water. Makes the largest overland movements of any Ontario turtle. Extremely vulnerable to linear barriers such as roads, but biggest threat is habitat fragmentation and loss. Delayed maturity with only 10% of the population reproducing means adult mortality has severe population impacts.
<i>Grey Ratsnake (Pantherophis spiloides) Frontenac Arch population</i>	<b>Threatened</b>	<b>Threatened</b>	Canada's largest snake, found only in two Ontario locations, one being the Frontenac Arch. Inhabits forested landscapes. Individuals travel up to 4 km between hibernation and summer habitat. Strong site fidelity (meaning it returns to same locations - even the same tree year after year). Over 30% population decline in three generations. Largest threats are habitat loss, road mortality and persecution. A fenced rail line would permanently sever movement corridors.
<i>Red-headed Woodpecker</i>	<b>Endangered</b>	<b>Endangered</b>	Inhabits woodlands and forests feeding on acorns and beechnuts. Largest threats are loss of habitat and nesting sites and collisions with vehicles, buildings, utility towers and power lines causing harm or death.
<i>Cerulean Warbler</i>	<b>Endangered</b>	<b>Endangered</b>	Inhabits deciduous forests with an open understory. This bird requires large tracks of forest that can be found in the Frontenac Arch. Largest threats are habitat loss and forest fragmentation.

<i>Least Bittern</i>	<b>Threatened</b>	<b>Threatened</b>	A wetland specialist, this species is the smallest heron in Canada. Habitat fragmentation is the largest threat, however they do not tolerate human disturbance well (including loud noises) and will leave marshes if human activity or habitat alteration becomes too great.
<i>Western Chorus Frog</i>	<b>Threatened</b>	<b>n/a</b>	Inhabiting wetlands this small frog is one of the first frogs you hear in the spring. Because of their low mobility and high site fidelity they do not tolerate habitat fragmentation or a reduction in habitat quality, making habitat loss and linear features such as roads their biggest threats.
<i>Additional species at risk in the corridor</i>	Various	Various	The Frontenac Arch region also supports Least Bittern (Special Concern), Eastern Whip-poor-will (Threatened), Eastern Musk Turtle (Special Concern), 7 out of 8 bat species (four Endangered: Little Brown Myotis, Northern Myotis, Tri-colored Bat, Eastern Small-footed Myotis), and numerous plant species. A comprehensive SARA species inventory for the corridor has not yet been published by Alto.

## SARA Legal Framework and Obligations

### Automatic Prohibitions (Sections 32, 33, 58)

SARA’s prohibitions are not discretionary, they attach automatically when a species is listed on Schedule 1. Under Sections 32 and 33, it is an offence to kill, harm, harass, capture, or take an individual of any species listed as extirpated, endangered, or threatened. Permits may be issued in special circumstances with avoidance of impact always the first preferred method, then through the mitigation of activities. Section 58 prohibits the destruction of any part of the critical habitat of a listed endangered or threatened species where the critical habitat is on federal land, the species is aquatic, or the species is a migratory bird protected under the Migratory Birds Convention Act, 1994.

For any Endangered or Threatened species any construction activity in or adjacent to their critical habitat that results in harm to individuals or destruction of critical habitat would constitute a federal offence. An Impact Assessment would be required to assess if these impacts could be mitigated (see section below).

### Critical Habitat Protection and the Safety Net

SARA contains a “safety net” provision for critical habitat located on non-federal lands. If the competent minister forms the opinion that critical habitat is not effectively protected under provincial laws, SARA requires the minister to recommend that the Governor in Council make

an order prohibiting its destruction. This provision means that even on private land through which the southern corridor would pass, federal critical habitat protection can be triggered.

### **Impact Assessment Obligations (Section 79)**

Section 79 of SARA imposes additional requirements on any project undergoing an impact assessment where Schedule 1 species may be affected. The proponent must identify all adverse effects the project could have on listed species and their critical habitat, and if the project proceeds, must ensure that measures are taken to avoid or lessen those effects and to monitor them. This is not optional and applies regardless of any exemptions under Bill C-15 or Bill C-5, as SARA's Section 79 obligations operate independently of the Impact Assessment Act.

### **Permitting Requirements**

Any activity that would otherwise contravene SARA's prohibitions requires a permit from the competent minister. The minister may only issue such a permit if three conditions are met: all reasonable alternatives to the activity that would reduce the impact on the species have been considered; all feasible measures will be taken to minimize the impact of the activity on the species, its critical habitat, or residences; and the activity will not jeopardize the survival or recovery of the species.

As demonstrated in the table above for most of these species the greatest threats are habitat loss and linear infrastructure, making the impact of the ALTO rail trail higher than most single site-specific projects.

The third condition, the "no jeopardy" test, is particularly significant for species with very small Canadian populations, such as the Spotted Turtle whose population has been declining significantly, and the Grey Ratsnake's Frontenac Arch population being one of only two in Canada, both at risk, demonstrating that satisfying the no-jeopardy test, that is, showing the project will not jeopardize the survival or recovery of these species, would be extremely challenging.

#### **Regulatory Implication**

The "all reasonable alternatives" test under SARA permitting creates a direct obligation to evaluate whether alternative alignments could avoid or reduce impacts to these species. This legal test requires the proponent to demonstrate that all reasonable alternatives have been considered and that feasible measures to minimize impact have been taken before any permit can be issued.

### **Interaction with Ontario's Bill 5 Reforms**

Ontario's 2025 Bill 5 (Protect Ontario by Unleashing our Economy Act) significantly amended the provincial Endangered Species Act, 2007 (effective June 5, 2025) and enacted the Species Conservation Act, 2025, which will replace the ESA once proclaimed in force (enabling

regulations are pending as of March 2026). Key immediate changes under the amended ESA include a narrowed habitat definition and a streamlined permitting process. Under the forthcoming SCA, Ontario will cease regulating aquatic species and migratory birds that are already protected under federal SARA, to reduce duplication. This reform has the paradoxical effect of making SARA the primary, rather than supplementary, layer of protection for several species in the southern corridor. Where previously a proponent might have dealt primarily with provincial regulators, SARA now becomes the binding framework for species like the Cerulean Warbler or Red-headed Woodpecker, migratory birds for which Ontario will no longer require separate provincial authorization. Cerulean Warbler or Red-headed Woodpecker .

### **Bill C-15 and Fast-Tracking: The Legal Tension**

Bill C-15 grants the Minister of Transport authority to exempt Alto from certain environmental review requirements and provides enhanced expropriation powers. However, SARA's prohibitions under Sections 32, 33, and 58, and the Section 79 impact assessment obligations, are not and should not be provisions that can be overridden by the Minister of Transport. They are standalone federal offences and obligations that persist regardless of project exemptions.

This creates a significant legal tension: if Bill C-15 is used to fast-track the project through the southern corridor while SARA obligations remain unmet, the project would face legal challenge. Environmental organizations have standing to bring SARA-related judicial review applications, and precedent exists for courts halting or modifying federal projects that fail to comply with SARA requirements.

## Part II: UNESCO Biosphere Reserve Implications

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### The Frontenac Arch Biosphere Reserve

The Frontenac Arch Biosphere Reserve was designated by UNESCO in 2002 under the Man and the Biosphere (MAB) Programme. It is one of only 19 UNESCO Biosphere Reserves in Canada and part of a global network of over 700 sites in more than 130 countries. The reserve encompasses approximately 2,700 km<sup>2</sup> from Brockville to Kingston, extending north to Verona and Perth.

The Frontenac Arch itself is an ancient granite ridge connecting the Canadian Shield to the Adirondack Mountains in New York State. Where this ridge intersects with the St. Lawrence River, it forms the Thousand Islands. The Arch is recognized as the last remaining intact forest corridor in eastern North America and the most biodiverse region in Canada, where five separate forest regions converge. First Nations call the Frontenac Arch the “backbone of the mother.”

The area is structured in three concentric zones as required by UNESCO a core area, buffer zones and transition areas. The Frontenac Arch has a core area of 5,073 hectares of strictly protected ecosystems; buffer zones of 15,900 hectares used for activities compatible with ecological conservation; and transition areas of 200,000 hectares where communities pursue sustainable economic and cultural activities. This zonation system is fundamental to the designation.

Globally, UNESCO World Heritage sites generally have protection, as signatory nations are required to ensure the safeguarding, management, and conservation of designated sites through national laws, policies, and management plans.

### UNESCO Designation Criteria and Periodic Review

Under Article 4 of the Statutory Framework of the World Network of Biosphere Reserves, a site must meet specific criteria to maintain its designation. These include: encompassing a mosaic of ecological systems representative of major biogeographic regions; being of significance for biological diversity conservation; providing an opportunity to demonstrate approaches to sustainable development; having appropriate size to serve the three core functions (conservation, development, logistic support); and including these functions through appropriate zonation.

Article 9 requires periodic review every ten years. If a biosphere reserve no longer satisfies the Article 4 criteria, the MAB International Coordinating Council may recommend that the member state take corrective measures. If the site still fails to meet criteria within a reasonable period, it will no longer be referred to as a biosphere reserve within the World Network. The MAB Committee can also recommend voluntary withdrawal.

This is not a theoretical risk. A total of 61 sites have been withdrawn from the World Network by 14 countries. In 2017 alone, the United States withdrew 17 sites. Reasons for withdrawal

include inability to ensure balanced fulfilment of the three functions of the biosphere reserve, failure to establish adequate zonation, and inability to guarantee proper stakeholder participation.

## **How a route chosen through the Southern Corridor Threatens the Designation**

### **Severing the Ecological Corridor Function**

The fundamental basis for the Frontenac Arch's international significance is its role as a continental-scale ecological corridor, a land bridge connecting habitats between the Canadian Shield and the Adirondack Mountains, enabling migration of plants and animals across the Great Lakes and St. Lawrence region. A permanently fenced, grade-separated high-speed rail line bisecting this corridor would divide it into two fragments. In fact, habitat fragmentation and linear fragmentation and linear features are listed as two of the highest threats for the Frontenac Arch. The Arch would no longer function as an intact corridor. This directly undermines the ecological rationale that justified the UNESCO designation.

### **Degrading the Zonation System**

UNESCO requires a functioning system of core, buffer, and transition zones. A rail corridor cutting through any of these zones, particularly buffer zones that insulate core protected areas from disturbance, would compromise the zonation framework. High-speed rail infrastructure (including tracks, fencing, access roads, maintenance facilities, and cleared safety zones) is not compatible with the ecological practices required within buffer zones under the MAB Programme.

### **Contradicting the Three Core Functions**

The Frontenac Arch Biosphere Reserve integrates three mandated functions: conservation of biodiversity and cultural diversity; economic development that is socio-culturally and environmentally sustainable; and logistic support through research, monitoring, education, and training. A federally imposed infrastructure project that fragments habitat for SARA-listed species directly contradicts the conservation function. The absence of a local station means no sustainable development benefit to biosphere communities, only disruption. And the potential loss of the Biosphere Reserve's integrity would undermine ongoing research and monitoring programs.

### **Undermining Stakeholder Participation**

The UNESCO framework requires meaningful local participation in biosphere reserve governance. The following municipalities have passed formal council motions opposing the southern corridor: South Frontenac Township (unanimous), Rideau Lakes Township (unanimous), the City of Belleville (unanimous, specifically citing the Moira watershed), Tyendinaga Township, and Stone Mills Township (Lennox and Addington). The City of Kingston has passed a motion opposing the project without a Kingston-area stop, calling on Alto to seek a route more closely aligned with Highway 401. MPP Steve Clark (Leeds-Grenville-Thousand Islands and Rideau Lakes) has publicly opposed the southern route, stating he shares

constituents' serious concerns about impacts on rural communities, farmland, and heritage areas. MP Shelby Kramp-Neuman (Hastings, Lennox and Addington, Tyendinaga) has formally opposed both routes. Property owners and elected officials reported being caught off guard by the southern proposal. If the project proceeds through Bill C-15's fast-tracking provisions over this level of local opposition, it would directly contradict UNESCO's requirement for participatory governance of biosphere reserves.

### **Economic Value at Risk**

New research underscores the economic significance of protected areas nationally. A February 2026 white paper by the Canadian Parks and Wilderness Society (CPAWS), peer-reviewed by the C.D. Howe Institute and Simon Fraser University, found that in 2023–24, visitor-driven economic activity in Canada's protected and conserved areas contributed \$10.9 billion to GDP, supported 150,000 jobs, generated \$6.6 billion in labour income, and returned \$1.4 billion in tax revenue. Every dollar spent by governments and non-profits in these areas generated \$3.62 in visitor spending. Over the past 15 years, as public spending on protected areas increased by 50%, corresponding tax revenues grew by up to 250%. The CPAWS report concluded that conservation should be treated as a core pillar of economic policy, finding that protected areas contribute up to 1.6% of rural GDP nationally.

The Frontenac Arch region is a significant contributor to this national picture. According to Regional Tourism Organization 9 (RTO 9), South Eastern Ontario recorded \$1.8 billion in tourism spending in the first nine months of 2024, with domestic growth of 11% and international growth of 15%. Kingston alone welcomed 2.6 million visitors who spent \$512 million in 2024. Domestic visitor spending in the region reached \$1.3 billion in the first seven months of 2025. Water-oriented recreation, ecotourism, and nature-based experiences — activities directly supported by the Biosphere Reserve's ecological integrity and UNESCO brand — are identified as major economic sectors throughout the region.

The UNESCO Biosphere designation functions as an internationally recognized quality mark for nature-based tourism. Loss of that designation would not only diminish the region's marketing position but signal a degradation of the ecological values that attract visitors. The Frontenac Arch Biosphere Network, a non-profit with over 100 regional partners, actively leverages the designation to coordinate sustainable tourism development. Federal investment in Eastern Ontario tourism — including \$3.7 million through the Tourism Growth Program for 27 organizations in 2024 — is premised on the ecological and heritage assets that the Biosphere Reserve helps protect. Proceeding with an alignment that risks the designation would undermine the public investment rationale for this ongoing tourism development.

The economic case extends beyond tourism. Ecosystem services including water filtration, flood attenuation, carbon sequestration, and biodiversity maintenance generate value that is not captured in standard economic accounts but would be costly to replace if degraded. A peer-reviewed ecosystem services assessment of the Manicouagan-Uapishka Biosphere Reserve in Quebec estimated a total economic use value of approximately \$1.3 billion per year for a single Canadian biosphere reserve. Additionally, CPAWS found that nationally, protected and conserved areas store approximately 51,400 gigatons of carbon dioxide equivalent, holding

\$51.1 trillion worth of potential global economic damages at bay based on the federal government's social cost of carbon.

### **Economic Value at Risk**

Canada's protected areas generated \$10.9 billion in GDP in 2023–24, with a return of \$3.62 for every \$1 invested (CPAWS, 2026). South Eastern Ontario recorded \$1.8 billion in tourism spending in the first nine months of 2024 alone. Degrading the ecological or conservation values of the Frontenac Arch puts measurable economic returns at risk alongside environmental ones.

### **Designation Risk Assessment**

At the next periodic review, Canada would need to demonstrate that the Biosphere Reserve continues to meet Article 4 criteria. A rail corridor bisecting the reserve would make it very difficult to argue that the site still provides an intact mosaic of ecological systems, effectively conserves biodiversity through its zonation, and demonstrates sustainable development rather than imposed industrial infrastructure.

The most likely outcomes would be a UNESCO recommendation for corrective action, or a recommendation for voluntary withdrawal. Losing a UNESCO Biosphere designation would be internationally damaging to Canada's credibility in conservation commitments, including obligations under the Kunming-Montreal Global Biodiversity Framework.

## **Part III: Compounding Risks — The Intersection of SARA and UNESCO Obligations**

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The SARA and UNESCO frameworks are not independent risks, they compound each other in ways that significantly increase the overall regulatory, legal, and reputational exposure of the southern corridor.

### **Mutually Reinforcing Legal and Diplomatic Obligations**

The species that trigger SARA's most stringent protections are the same species that underpin the Frontenac Arch's UNESCO significance. The Grey Ratsnake is specifically cited by UNESCO as a characteristic species of the Biosphere Reserve. The Spotted Turtle's bog and wetland habitats are part of the mosaic of ecological systems that justify the designation. Impacts to these species under SARA therefore simultaneously degrade the ecological values that sustain the UNESCO designation.

Conversely, loss or degradation of the UNESCO designation would signal internationally that Canada is failing to protect the biodiversity it has committed to conserve — undermining the credibility of SARA recovery strategies that depend on intact habitat in the Frontenac Arch region.

## **The Carbon Paradox**

Alto is promoted partly on its environmental credentials: electrified rail reducing transportation carbon emissions. Routing through the Frontenac Arch creates a profound paradox. The Biosphere Reserve's intact ecosystems, including peatlands and wetlands, function as significant [Nature-based Climate Solutions](#), sequestering or storing large amounts of carbon. Fragmenting these systems would convert carbon storage into carbon release, while simultaneously destroying habitat for species whose protection is part of Canada's international biodiversity commitments. The project's climate narrative cannot withstand the contradiction of destroying one of the most ecologically significant landscapes in eastern Canada to build "green" infrastructure.

## **Cumulative Effects with Provincial Regulatory Changes**

Ontario's Bill 5 reforms to species-at-risk protection are creating a period of regulatory transition and uncertainty. The province is narrowing its habitat definitions, narrowing its habitat definitions to cover only a species' immediate dwelling place (rather than all areas relied on for key life processes), and deferring to federal SARA for aquatic and migratory bird species — effectively removing separate provincial protection for those groups. In this context, any weakening of federal environmental review through Bill C-15 creates a compounding gap in protection. The southern corridor would pass through this regulatory gap at precisely the moment when oversight is most needed.

## **Litigation and Delay Risk**

Environmental organizations in Canada have demonstrated willingness and capacity to bring SARA-related judicial review applications against major infrastructure projects. The convergence of an endangered species (Spotted Turtle), a UNESCO-designated landscape, strong municipal opposition, and potential procedural shortcomings through fast-tracking creates favourable conditions for legal challenge. Even if such challenges do not ultimately succeed in court, they would introduce significant delay and uncertainty into the project timeline.

## Part IV: Recommendations

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The following recommendations are directed at Alto and Transport Canada as the entities responsible for corridor selection. They are designed to be actionable within the current consultation timeline and consistent with both federal law and Canada's international commitments.

### For Alto and Transport Canada

1. **Conduct a full comparative risk assessment of all corridor options.** The concentration of SARA obligations and UNESCO designation risk in the Frontenac Arch raises serious questions about the southern corridor that have not yet been publicly addressed. Any assessment of corridor options must account for the full regulatory, legal, and reputational costs of each alignment, not only construction costs. All corridor options should be evaluated against SARA obligations with equal rigour, and the results of those evaluations must be made public before the consultation period closes.
2. **Publish a comprehensive SARA species inventory for both corridors.** Alto has not yet publicly released a full inventory of SARA-listed species and identified critical habitat in either corridor. This information is essential for informed public consultation and should be published before the April 24, 2026 consultation deadline.
3. **Commission an independent assessment of impacts to the Frontenac Arch Biosphere Reserve.** This assessment should be conducted in consultation with the Frontenac Arch Biosphere Network and should specifically address how the project would affect the reserve's ability to meet Article 4 criteria at its next periodic review.
4. **Engage with UNESCO's MAB Secretariat.** Before any southern corridor decision, Alto and Transport Canada should formally consult with UNESCO regarding the potential implications for the Frontenac Arch designation. Early engagement is preferable to a reactive response after construction begins.

## Conclusion

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The southern corridor through eastern Ontario is not simply a more expensive or politically difficult route. A route chosen this corridor would cut through the heart of one of only 19 UNESCO Biosphere Reserves in Canada, fragment confirmed habitat for federally protected species including an endangered turtle found in only 6% of its global range within Canada, trigger a dense web of federal legal obligations that cannot be overridden by fast-tracking legislation, risk the loss of an internationally recognized conservation designation, and contradict the environmental narrative on which the entire Alto project is premised.

These are not trade-offs to be managed through mitigation measures. A permanently fenced, grade-separated high-speed rail line is a permanent barrier. Its impacts to ecological connectivity, species movement, and landscape integrity are irreversible. The Frontenac Arch has been a continental-scale ecological corridor for millennia. The decision to sever it should not be taken without full understanding of the legal, ecological, economic, and diplomatic consequences documented in this assessment.

The southern corridor uniquely concentrates regulatory, legal, diplomatic, and ecological risk in a way that has not been adequately disclosed or assessed during the current consultation period. These risks are not trade-offs to be managed but potential barriers to project completion that demand thorough, transparent evaluation. The same scrutiny must be applied to all corridor options: every alignment should be subjected to comprehensive SARA species inventories, critical habitat assessments, and analysis of impacts to protected and designated areas. The full costs identified in this assessment must be weighed alongside engineering and construction considerations before any alignment is selected.

## References and Legal Authorities

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Species at Risk Act, S.C. 2002, c. 29 (SARA)

Impact Assessment Act, S.C. 2019, c. 28, s. 1

Migratory Birds Convention Act, 1994, S.C. 1994, c. 22

Fisheries Act, R.S.C. 1985, c. F-14

Bill C-15, Fall Economic Statement Implementation Act, 2025

Bill C-5, An Act respecting environmental assessments (as referenced in Transport Action analysis)

### Provincial Legislation

Endangered Species Act, 2007, S.O. 2007, c. 6 (ESA)

Bill 5, Protect Ontario by Unleashing our Economy Act, 2025, S.O. 2025, c. 4 (Royal Assent June 5, 2025; Schedule 2 amending ESA in force immediately; Schedule 10 enacting SCA not yet proclaimed)

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### International Framework

UNESCO Statutory Framework of the World Network of Biosphere Reserves (1995)

Seville Strategy for Biosphere Reserves (1995)

UNESCO MAB Technical Guidelines for Biosphere Reserves (2021)

Kunming-Montreal Global Biodiversity Framework (2022)

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