

## POLICY BRIEF

# The Eastern Loggerhead Shrike and ALTO's Southern Corridor

*Environmental Risks and Regulatory Conflicts if the Southern Route is Selected*

<b>Prepared by</b>	ALTO HSR Citizens Research Initiative
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At a Glance	
<b>Species</b>	Eastern Loggerhead Shrike ( <i>Lanius ludovicianus migrans</i> )
<b>Federal SARA Status</b>	Endangered, listed 2003; COSEWIC assessment 2000
<b>Ontario Breeding Pairs (2022)</b>	22 confirmed province-wide; total wild Canadian population ~40 individuals (WPC, 2023)
<b>Napanee Plain</b>	One of only two core breeding areas remaining in Canada
<b>Federal Recovery Targets</b>	Napanee-specific: 10 pairs short-term, 20 pairs medium-term. Ontario-wide short-term: 35 pairs. Only 22 confirmed in 2022 — below even the province-wide minimum.
<b>Nest Disturbance Buffer</b>	Sensitive to disturbance within 400 m of nest sites (April–August)
<b>Provincial Protection Status</b>	ESA 2007 as amended by Bill 5 (June 2025); Species Conservation Act, 2025 pending — will remove provincial protections for SARA-listed migratory birds including ELOSH

## EXECUTIVE SUMMARY

The Eastern Loggerhead Shrike (ELOSH) is Canada's most endangered songbird. The total wild Canadian population is estimated at approximately 40 individuals (Wildlife Preservation Canada, 2023), all in Ontario, concentrated in two limestone plain habitats. The Napanee Limestone Plain lies directly within or immediately adjacent to the study footprint for ALTO's proposed southern corridor. When Ontario's Species Conservation Act, 2025 comes into force, the ELOSH will be removed from provincial statutory protection entirely, leaving federal SARA as the sole remaining legal backstop. A federal Crown corporation will then be proposing to build infrastructure through the critical habitat of a species that only federal law protects, with the same level of government administering both the project and the statutory protection.

## Section 1 — Species Profile: Eastern Loggerhead Shrike

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### 1.1 Status and Distribution

The ELOSH has been designated Endangered by COSEWIC since 2000 and listed under SARA Schedule 1 since 2003. The Canadian population has declined catastrophically over the past 50 years. As of 2022, Wildlife Preservation Canada confirmed 22 breeding pairs province-wide, representing the entire national breeding population of this subspecies. The total wild Canadian population is estimated at approximately 40 individuals (Wildlife Preservation Canada, 2023). This figure falls below the federal Recovery Strategy's own short-term target of 35 pairs across all Ontario core areas combined, meaning the species has not achieved its minimum population objective after more than two decades of active recovery effort. Breeding records are concentrated in two core areas: the Carden Plain (approximately 12–18 pairs in peak years) and the Napanee Limestone Plain (approximately 9–15 pairs in recent years). Over 70% of Ontario breeding records originate from these two areas. The federal Recovery Strategy sets a short-term target of at least 10 pairs on the Napanee Plain specifically, and at least 35 pairs across all Ontario core areas combined.

### 1.2 Habitat Requirements

The ELOSH has highly specific habitat requirements that make it acutely vulnerable to large-scale linear infrastructure: open, short-grass alvar or limestone plain habitat with scattered trees and shrubs; Eastern Red Cedar (*Juniperus virginiana*) and hawthorn as preferred nest trees on the Napanee Plain; territory sizes of 2.9–11.7 hectares per pair; sensitivity to disturbance within 400 m of active nest sites during the breeding season (April to August); and dependence on unbroken pasture, alvar, and hedgerow connectivity for foraging and dispersal between territories. The Napanee Limestone Plain provides some of the highest-quality remaining ELOSH habitat in Canada. There is no substitute for this habitat elsewhere in the country at a scale that could sustain a breeding population.

The same alvar grassland system supports Bobolink (Threatened federally under SARA; downlisted to Special Concern provincially by COSSARO 2021 — federal SARA is the operative protection) and Eastern Meadowlark (Threatened federally and provincially), Grasshopper Sparrow and Short-eared Owl (both Special Concern), and historically the Henslow's Sparrow (Endangered). The Salmon River Alvar is also home to the sole Canadian population of Juniper Sedge (*Carex juniperorum*), an internationally rare plant. Destruction of this habitat through corridor construction would therefore simultaneously trigger SARA obligations for multiple listed species, and would constitute the national extirpation of Juniper Sedge from Canada.

#### COSEWIC 2014 — CRITICAL POPULATION CONTEXT

The Canadian population numbers fewer than 110 mature individuals. Ontario recorded a 26% reduction in mature individuals over the ten years prior to the 2014 assessment. Pastureland in Ontario dropped from approximately 2.7 million hectares in 1921 to 660,000 hectares by 2011 — a 75% decline. Further habitat loss cannot be compensated at any timescale relevant to species recovery planning.

## Section 2 — The Southern Corridor and the Napanee Plain

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ALTO's southern corridor runs through or immediately adjacent to the geographic extent of the Napanee Limestone Plain, passing through alvar and agricultural terrain that constitutes designated and candidate critical habitat under the federal Recovery Strategy. The fenced rail right-of-way is approximately 30 metres wide, but the construction footprint, drainage catchment modifications, access roads, laydown areas, and operational noise envelope are substantially broader. For a species requiring contiguous open grassland with a 400-metre disturbance buffer around active nest

sites, a fully fenced, electrified, 300 km/h rail corridor presents a qualitatively different and more severe form of habitat destruction than any existing infrastructure in the same landscape.

The 2015 SARA Recovery Strategy for the ELOSH identifies critical habitat on the Napanee Limestone Plain based on a decade of occupancy data. Section 58 of SARA prohibits any person, including federal Crown corporations and their private partners, from destroying any part of that designated critical habitat. SARA also contains a “safety net” provision: if the competent minister forms the opinion that critical habitat on non-federal lands is not effectively protected under provincial law, SARA requires the minister to recommend that the Governor in Council make an order prohibiting its destruction. As Ontario’s Species Conservation Act progressively strips provincial protection from SARA-listed migratory birds including the ELOSH, this safety net becomes increasingly applicable. The federal government cannot simultaneously withdraw provincial protection via inaction on the safety net and advance federal infrastructure through the critical habitat that protection was meant to secure.

## **Section 3 – Six Categories of Environmental Harm**

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### **3.1 Direct and Permanent Habitat Destruction**

Construction will permanently convert alvar, pasture, and hedgerow habitat. Alvar is a globally rare ecosystem type formed by geological and pedological processes operating over millennia. Once destroyed, it cannot be recreated. No habitat offset or compensation payment has ever successfully replaced alvar habitat. Given that Napanee Plain territory sizes reach as small as 2.9 hectares, a single rail corridor could sever multiple territories and render them functionally uninhabitable.

### **3.2 The Linear Corridor Predation Effect**

Federal ELOSH recovery documents identify a documented hazard specific to linear infrastructure: shrikes nesting adjacent to linear habitats face elevated predation risk because predators such as raccoons, crows, feral cats, and raptors actively use linear features as travel and foraging corridors. Research by Yosef (1994) and DeGeus (1990), both cited in the federal recovery strategies, establishes this as a documented threat. A fully fenced, continuously maintained high-speed rail embankment with cleared sight lines and mowed verges on both sides creates an optimal linear predator corridor through the heart of the Napanee Plain.

### **3.3 Vehicle Strike Mortality**

Vehicle collision is already identified as a significant cause of ELOSH mortality in Ontario. Shrikes habitually perch on fence lines and utility structures adjacent to roads. A 300 km/h rail service operating multiple times per hour represents a vastly higher-velocity, higher-frequency collision risk. With a Napanee Plain population that has not yet achieved the recovery strategy’s short-term minimum target of 10 pairs, the loss of even one or two breeding adults to rail strike could materially delay recovery by years.

### **3.4 Acoustic and Vibration Disturbance During Breeding Season**

The ELOSH breeding season runs from April through August, overlapping entirely with the period of maximum sensitivity to disturbance. The species is documented as sensitive to disturbance as far as 400 m from active nest sites. High-speed rail at 300 km/h generates substantial acoustic and vibration disturbance extending well beyond the physical right-of-way. Construction activities — blasting, grading, pile-driving, heavy equipment operations — would occur across multiple breeding seasons. The cumulative disturbance over a multi-year construction window on a population of fewer than 15 pairs represents an existential risk to the Napanee Plain population.

### 3.5 De-icing Chemicals and Bioaccumulation

The ELOSH, as a top predator of large insects, small mammals, and lizards, is acutely vulnerable to bioaccumulation of environmental contaminants. DDE, a persistent DDT metabolite, was still detectable in ELOSH eggs collected in Ontario in 2010. The Napanee Plain alvar ecosystem has extremely shallow soils over impermeable limestone with limited drainage capacity; introducing novel chemical inputs carries a high risk of concentrated chemical deposition in precisely the foraging habitat the species depends on.

### 3.6 Invasive Species Introduction and Spread

Rail corridors are established vectors for the introduction and spread of invasive plant species. Invasive species that alter vegetation height, density, or structure — replacing open short-grass cover with dense shrub or tall herb communities — directly degrade ELOSH foraging and nesting habitat. Construction traffic, ballast material sourcing, and the linear maintenance corridor itself each represent ongoing invasion vectors.

#### THE ALLEE EFFECT — POPULATION COLLAPSE RISK

Federal recovery documents explicitly identify the Allee effect as a risk for the ELOSH: populations that fall below a minimum threshold lose the density-dependent benefits of mate-finding and social cohesion, accelerating decline even when habitat conditions appear adequate. With only approximately 9–15 breeding pairs on the Napanee Plain — a population that has not yet achieved the recovery strategy’s short-term minimum target — any additional mortality, displacement, or territory loss risks triggering a population collapse that no captive breeding program can reverse at a meaningful timescale.

## Section 4 — Regulatory and Legal Problems

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### 4.1 Federal SARA — Non-Negotiable Obligations

The following provisions of SARA apply directly to any infrastructure development within or adjacent to the Napanee Limestone Plain and cannot be waived or avoided by the federal proponent:

- Section 32: Prohibits killing, harming, harassing, capturing, or taking an individual of a listed endangered species.
- Section 33: Prohibits damaging or destroying the residence of an individual of a listed endangered species. Active nest sites and nest trees within the corridor footprint or disturbance buffer are specifically protected.
- Section 58: Prohibits any person, including federal Crown corporations, from destroying any part of designated critical habitat. There is no administrative exemption for infrastructure projects at this stage.
- Section 79: Requires any federal authority that funds, permits, or carries out a project that may affect a listed species to apply the precautionary principle and notify the competent minister. This obligation is mandatory, not discretionary.

A permit under s. 73 requires satisfaction of all three conditions: all reasonable alternatives have been considered; all feasible measures will be taken to minimise the impact; and the activity will not jeopardize the survival or recovery of the species. For a species whose total wild Canadian population is estimated at approximately 40 individuals and whose Napanee Plain population has not achieved its recovery minimum target, demonstrating ‘no jeopardy’ for a permanently fenced rail corridor through its critical habitat would be an extraordinarily high evidentiary burden.

## 4.2 Migratory Birds Convention Act, 1994

The ELOSH is a migratory songbird protected under the MBCA. The MBCA prohibits the killing, injuring, taking, or disturbing of migratory birds, their nests, and their eggs, except under permit. Both the MBCA and SARA prohibitions apply concurrently, regardless of whether SARA compliance is separately addressed.

## 4.3 Provincial Framework: A Deteriorating Regulatory Backstop

Bill 5 (Protect Ontario by Unleashing our Economy Act, 2025; Royal Assent June 5, 2025) made immediate amendments to Ontario's ESA including: revision of the Act's purpose to expressly incorporate social and economic considerations alongside species protection; removal of "harass" from the list of prohibited activities; narrowing of habitat definitions to focus on core protections; removal of mandatory requirements to develop and publish recovery strategies; and closure of the Species at Risk Conservation Fund.

### **CRITICAL — LOSS OF PROVINCIAL PROTECTION FOR THE EASTERN LOGGERHEAD SHRIKE**

Under the forthcoming Species Conservation Act, 2025, species protections will not apply to SARA-protected aquatic species and migratory birds. The Eastern Loggerhead Shrike is a SARA-listed Endangered migratory bird. When the SCA comes into force, the ELOSH will be removed from provincial species-at-risk protection entirely. Federal SARA will become the sole statutory protection for this species at any level of government in Ontario.

## 4.4 Bill C-15 and the Fast-Tracking Legal Tension

Bill C-15 grants the Minister of Transport authority to exempt ALTO from certain environmental review requirements and provides enhanced expropriation powers. This creates a direct legal tension: SARA's prohibitions under ss. 32, 33, and 58, and its s. 79 impact assessment obligations, are standalone federal offences and obligations that operate independently of the Impact Assessment Act. They cannot be waived or overridden by the Minister of Transport. Environmental organisations have standing to bring SARA-related judicial review applications against federal projects, and precedent exists for courts halting or modifying federal infrastructure that fails to comply with SARA requirements.

## Section 5 — Formal Requests

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<b>1</b>	<b>Release ELOSH-specific habitat mapping overlaid on the southern corridor footprint</b> Has ALTO conducted ELOSH-specific habitat mapping? If so, the results must be publicly released as part of the consultation record before April 24, 2026.
<b>2</b>	<b>Confirm designated ELOSH critical habitat has been mapped against the southern corridor boundaries</b> The 2015 SARA Recovery Strategy identified critical habitat on the Napanee Limestone Plain. Alto must confirm this has been mapped against the corridor footprint and make the results public.
<b>3</b>	<b>File and disclose the SARA Section 79 notification</b> Confirm whether the mandatory notification to the competent minister has been filed. If not, state when it will be.
<b>4</b>	<b>Formally consult Wildlife Preservation Canada’s Eastern Loggerhead Shrike Recovery Team</b> Confirm that the ELOSH Recovery Team has been formally consulted and that their comments will be publicly released as part of the consultation record.
<b>5</b>	<b>Demonstrate SARA Section 58 compliance approach for the southern corridor</b> Specifically: what evidence of ‘no feasible alternative’ will be produced, and how will the ‘no jeopardy’ standard be met for a population of approximately 40 individuals?
<b>6</b>	<b>Disclose MBCA compliance approach for multi-year construction across the Napanee Plain breeding season</b> The ELOSH breeding season runs April–August. What is ALTO’s approach to MBCA compliance during multi-year construction on the Napanee Plain?

## Key References

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