to

Recovery Strategy for the Chimney Swift in Ontario

1 Chimney Swift

2 Ontario Government Response Statement

3 Protecting and Recovering Species at Risk in Ontario

- 4 Species at risk recovery is a key part of protecting Ontario's biodiversity. The
- 5 Endangered Species Act, 2007 (ESA) is the Ontario government's legislative
- 6 commitment to protecting and recovering species at risk and their habitats.
- 7 Under the ESA, the government must ensure that a recovery strategy is prepared for
- 8 each species that is listed as endangered or threatened. A recovery strategy provides
- 9 science-based advice to government on what is required to achieve recovery of a
- 10 species.
- 11 Generally, within nine months after a recovery strategy is prepared, the ESA requires
- the government to publish a statement summarizing the government's intended actions
- and priorities in response to the recovery strategy. The response statement is the
- 14 government's policy response to the scientific advice provided in the recovery strategy.
- 15 In addition to the strategy, the government response statement considers (where
- available) input from Indigenous communities and organizations, stakeholders, other
- 17 jurisdictions, and members of the public. It reflects the best available local and scientific
- 18 knowledge, including Indigenous Knowledge where it has been shared by communities
- and Knowledge Holders, as appropriate, and may be adapted if new information
- 20 becomes available. In implementing the actions in the response statement, the ESA
- 21 allows the government to determine what is feasible, taking into account social, cultural
- 22 and economic factors.
- 23 The Recovery Strategy for the Chimney Swift (Chaetura pelagica) in Ontario was
- 24 completed on July 9, 2024.
- 25 Chimney Swift is a small dark gray-brown bird (12 to 14 cm long) with a cigar-shaped
- body, long curved wings and a short tail. They are aerial insectivores meaning they feed
- 27 | almost exclusively on airborne insects while in flight. Chimney Swift give a distinctive
- 28 chittering call when in flight.

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Protecting and Recovering Chimney Swift

- 30 Chimney Swift is listed as a threatened species under the ESA, which protects both the
- 31 species and its habitat. The ESA prohibits harm or harassment of the species and

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32 33 34 35 36	damage or destruction of its habitat without authorization or complying with the requirements of a regulatory exemption. Chimney Swift is also listed under Schedule 1 of the federal <i>Species at Risk Act</i> and receives protection under the <i>Migratory Birds Convention Act, 1994</i> , which protects adults and young birds, as well as their nests and eggs in Canada.
37 38 39 40 41 42 43 44	The Chimney Swift breeds in central and eastern North America and migrates south in the fall to overwinter in South America. In Canada, Chimney Swift breed in the provinces of Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick and Nova Scotia. Chimney Swifts are sparsely distributed across central Ontario and the southern border of northern Ontario, but relatively common and widely distributed across southern Ontario having readily adapted to human-made habitats such as chimneys. The Chimney Swift population in Canada is estimated to be between 20,000 and 70,000 mature individuals.
45 46 47 48 49 50 51 52 53 54 55 56	Chimney Swifts spend most of their time in flight feeding on flying insects. They perch exclusively on vertical surfaces and require rough materials to cling to, roost and attach their nest. Chimney Swifts are not associated with a particular habitat type but favor areas with abundant flying insects and the availability of suitable nesting and roosting sites. Chimney Swifts forage over a variety of habitats including urban areas, rural and agricultural areas, aquatic and wetland environments and forests. Prior to European settlement Chimney Swifts mainly nested in caves, cliff faces and in hollow trees or tree cavities. Today Chimney Swifts are more likely to be found in and around urban and rural areas, where they nest and roost in chimneys or occasionally other human-made structures with vertical spaces, such as barns, silos, wells or abandoned buildings. The Chimney Swift breeding period in Ontario begins around the end of April and ends around the middle of October, the exact dates vary according to the area of the province in which the Chimney Swift are located and the climate conditions of each year.
58 59 60 61 62	Chimney Swifts gather at roosting sites, which are typically larger than the chimneys used for nesting. These sites are primarily used during migration but in breeding areas can be used at night or during bad weather, after the breeding period before birds migrate south, or by non-breeding or failed breeders. Flocks of Chimney Swifts at roosting sites can range in size from several dozen to more than 1,000 birds.
63 64 65 66 67	North American populations of aerial insectivores, including Chimney Swift, have declined significantly over the past 40 to 50 years. Long-term monitoring programs such as the Breeding Bird Survey show declines in Chimney Swift populations of close to 90 % across the species' breeding range since the surveys began in 1970. Declines over the past three generations (2005–2018) of Chimney Swift in Ontario were estimated to

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68 be 57 %. Data collected during Breeding Bird Atlas surveys also demonstrate evidence 69 of population decline in Ontario, as Chimney Swifts were more likely to be observed 70 during the first (1981 – 1985) Breeding Bird Atlas than the second (2001 – 2005). 71 Chimney Swift were recorded in 61 % fewer survey squares in the second atlas, despite 72 a 25 % increase in survey effort. 73 As a migratory species, Chimney Swift may be impacted by a combination of threats, 74 within their breeding areas in Ontario, and along their migratory (Central America) and 75 overwintering (South America) habitat outside the province. What happens in each of 76 these regions can influence the species' survival. The main threats to Chimney Swift in 77 Ontario include the reduction in insect prey populations and habitat loss and 78 degradation. Other potential threats include climate change and severe weather events. 79 There is growing evidence that insecticides such as neonicotinoids could be impacting 80 aerial insectivores like Chimney Swift due to direct toxicity to the birds and indirectly as 81 a result of an overall reduction in their food supply of insects. Declines in insect prey 82 populations have also been attributed to loss and degradation of their foraging habitat 83 due to draining or filling wetlands or changes in agricultural practices. 84 Loss of Chimney Swift nesting and roosting habitat, due to demolition, replacement or 85 modification of human-made structures, such as chimneys, is also an ongoing threat. 86 The availability of nest sites may be reduced as old structures are replaced, capped or 87 lined with metals that no longer allow access or are less suitable for nest establishment. 88 Chimney sweeping or use of chimneys during the breeding season can also impact 89 populations. This species shows high fidelity to breeding sites (high probability that 90 individual birds will return to their previous nesting sites), therefore permanent or even 91 temporary loss of these sites may have negative impacts on their reproduction. While 92 the creation of artificial chimneys (e.g., Chimney Swift towers) has had some success in 93 attracting breeding Chimney Swifts in Canada, further research is required into 94 increasing their use. 95 Loss of natural nesting and roosting sites, through removal of old-growth forests or large 96 hollow trees also presents a challenge to the species. Large-diameter hollow trees in 97 parks or urban areas may sometimes be removed for safety reasons which reduces 98 suitable natural habitat for the species. Forestry practices that result in forest clearing or 99 favour short harvesting cycles can reduce the number of trees of an age and suitable 100 size for the species; however, forest management guidance for Crown lands in Ontario 101 provides direction for cavities used by nesting or communally-roosting Chimney Swifts, 102 providing protection for already known or suspected nests and those found during 103 forestry operations.

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Greater frequency and severity of weather extremes, as may be seen with climate

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105 106 107	change, may also threaten the species throughout its range and increase mortality during migration. These events may also impact the presence and abundance of the Chimney Swift's insect prey.
108	To recover Chimney Swift in Ontario, the rate of population decline must be slowed to a
109	halt, and the population will need to become stable and self-sustaining. It is difficult to
110	estimate how much time is needed to slow the population decline and achieve a stable
111	population given uncertainties with respect to known and potential threats and our ability
112	to mitigate them; however, aiming to maintain a stable, self-sustaining population within
113	20 years is thought to allow sufficient time to fill knowledge gaps which in some cases
114	will require extensive multi-year research studies and take appropriate action. In the
115	short-term, implementing recovery actions will help manage the population and
116	contribute to slowing the rate of decline. It is acknowledged that further reduction in the
117	current size of the Ontario Chimney Swift population is inevitable until the rate of decline
118	is halted. Through implementation of a comprehensive suite of protection and recovery
119	actions, establishing a self-sustaining population throughout the species' current known
120	range in Ontario is considered to be achievable. However, as research into the sources
121	and magnitude of threats progresses over the next 10 years, the government's goal for
122	the recovery of Chimney Swift may be re-evaluated to better reflect an improved
123	understanding of the factors driving the decline and our ability to mitigate them.
124	Government's Recovery Goal
125	The government's recovery goal is to achieve and then maintain a stable, self-
126	sustaining population throughout the species' current known range in Ontario by 2044
127	(within 20 years).
128	Actions
129	Protecting and recovering species at risk is a shared responsibility. No single agency or
130	organization has the knowledge, authority or financial resources to protect and recover
131	all of Ontario's species at risk. Successful recovery requires inter-governmental co-
132	operation and the involvement of many individuals, organizations and communities. In
133	developing the government response statement, the government considered what
134	actions are feasible for the government to lead directly and what actions are feasible for

the government to support its conservation partners to undertake.

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37 38 39 40 41 42 43 44 45 46 47	In government published a species-specific habitat description for Chimney Swift in July 2013. The habitat description is a technical document that provides greater clarity on the area of habitat protected for a species based on the general habitat definition found in the ESA. In July 2013, a regulation came into effect, which conditionally exempts individuals who are maintaining, repairing, modifying, replacing or demolishing an existing structure that provides Chimney Swift habitat from sections 9 and 10 of the ESA (Ontario Regulation 242/08 section 23.8). Individuals seeking exemption must meet all eligibility criteria, register with the Ministry prior to beginning their activity, and fulfill all other conditions required by the regulation. These conditions include undertaking beneficial actions for the species, such as creating and monitoring replacement habitat, keeping monitoring records, and reporting Chimney Swift observations to the Natural Heritage Information Centre.	
I50 I51	Government-led Actions	
152 153	To help protect and recover Chimney Swift, the government plans to undertake the following actions:	
154	 Protect Chimney Swift and its habitat through the ESA. Continue to implement	
155	the <u>species-specific habitat description</u> and <u>conditional exemption</u> for Chimney	
156	Swift.	
157	 Review and assess the effectiveness of actions undertaken by proponents to	
158	minimize adverse effects while carrying out the maintenance, repair, modification,	
159	replacement or demolition of chimneys that provide Chimney Swift habitat. This	
160	may include reviewing actions undertaken in accordance with current ESA	
161	requirements such as Ontario Regulation 242/08 section 23.8.	
162	 Undertake communications and outreach to increase public awareness of	
163	species at risk in Ontario (e.g., through Ontario Parks Discovery Program, where	
164	appropriate).	
165	 Continue to monitor populations and mitigate threats to the species and its	
166	habitat in provincially protected areas, where feasible and appropriate.	
167	 Educate other agencies and authorities involved in planning and environmental	
168	assessment processes on the protection requirements under the ESA.	

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Encourage the submission of Chimney Swift data to Ontario's central repository through the NHIC (Rare species of Ontario) project in iNaturalist or directly through the Natural Heritage Information Centre.
 Continue to support conservation, agency, municipal and industry partners, and Indigenous communities and organizations to undertake activities to protect and recover Chimney Swift. Support will be provided where appropriate through

funding, agreements, permits and/or advisory services.

- Work with partners and stakeholders to support beneficial insects in Ontario through actions such as education and promoting integrated pest management and best management practices.
- Continue to manage Crown forests in a manner that minimizes adverse impacts to species at risk and their habitats.
- Conduct a review of progress toward the protection and recovery of Chimney Swift within 10 years of the publication of this document.

Government-supported Actions

The government endorses the following actions as being necessary for the protection and recovery of Chimney Swift. Actions identified as "high" may be given priority consideration for funding under the Species at Risk Stewardship Program. Where reasonable, the government will also consider the priority assigned to these actions when reviewing and issuing authorizations under the ESA. Other organizations are encouraged to consider these priorities when developing projects or mitigation plans related to species at risk.

Focus Area:	Habitat Management
Objective:	Work collaboratively with landowners and land managers to
	mitigate threats to Chimney Swift and its habitat and to maintain or
	improve the amount and quality of available habitat.

The species is closely associated with, and dependent on, human-made structures. Projects that involve repairing, maintaining or removing structures that are habitat for Chimney Swift are common, and implementing best management practices and effective mitigation are required to reduce threats to the species. Use of best management practices in natural nesting, roosting and foraging habitat are also necessary to minimize habitat loss and threats that result in reduced insect availability.

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201			icial actions that individuals and organizations can take proactively to
202	enhance and secure habitat is also encouraged.		
203204	٨	ctio	ne:
204			ligh) Collaborate with municipalities, landowners, land managers,
206		•	digenous communities, the forestry sector, agricultural producers,
207			dustry and other organizations to develop, promote, implement and
208			valuate the effectiveness of best management practices and techniques
209			mitigate impacts of activities on the species and its habitat. This may
210		in	clude:
211		i.	developing tools and guidance for landowners and land managers to
212			maintain, repair, modify or replace existing human-made structures
213			(e.g., chimneys) while maintaining their suitability for Chimney Swifts
214		ii.	assessing options and where feasible and appropriate, develop best
215			management practices to promote successful designs for artificial
216			chimneys (e.g., Chimney Swift towers) for both short-term and long-
217			term nesting and roosting habitat. Monitor effectiveness and adapt
218			structures as appropriate
219		iii.	planning for the transition from existing human-made structures
220			(nesting and roosting) to natural habitat or Chimney Swift towers (if
221			found to be fully effective)
222	2	. (H	ligh) Develop, promote and implement best management practices to
223			inimize threats to Chimney Swift natural nesting and foraging habitats
224		ar	nd maintain or improve habitat quality and availability, such as:
225		i.	encouraging the presence of large hollow trees in forests, woodlots
226			and parks
227		ii.	maintaining and enhancing hedgerows, riparian buffers and wetlands
228			to encourage insect diversity and abundance
229		iii.	promoting integrated pest management
230		iv.	reducing pesticide use, where possible
231	3	. In	collaboration with landowners, land managers, municipal governments
232		ar	nd environmental organizations identify existing human-made structures
233			at need to be maintained over time, or that have been closed off but
234		CC	ould be reopened, to provide suitable habitat for Chimney Swift.

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235 236 237	4.	As opportunities arise, identify and protect lands suitable for Chimney Swift habitat through land securement in collaboration with existing partners and initiatives.
238	Focus Area:	Research and Monitoring
239 240 241	Objective:	Increase knowledge about the species' distribution and abundance, habitat preferences, and ongoing and emerging threats to inform mitigative and management actions.
242 243 244 245 246 247 248 249 250 251 252 253 254	there have be environmental knowledge gas Chimney Swift with respect to areas is sufficient contributions a communities of Traditional Knowledge gas areas is sufficient to the contributions of the contributions of the contributional Knowledge gas areas in the contributions of the contribution of the contr	eclines in aerial insectivore species have raised concern as to whether en large-scale changes in insect populations due to insecticides, I contaminants, habitat degradation, climate change or other factors. Many ps must be addressed to understand the most significant threats to t survival and inform recovery planning. Important information gaps exist its habitat preferences and use and whether habitat availability in natural ient to support a stable population of the species. Encouraging and the sharing of perspectives and information from Indigenous will ensure that conservation efforts are culturally sensitive and inclusive of owledge. Further understanding of the species' needs will help focus ts where they will have the most benefit to the species. Ongoing d continuation of citizen science programs are key for tracking recovery effectiveness of recovery activities.
256	Δc	tions:
257 258 259	5.	(High) Identify and describe the key characteristics of natural nesting, roosting and foraging habitat used by Chimney Swift in Ontario to inform habitat protection, management and enhancement.
260 261 262	6.	(High) Increase knowledge of the characteristics of human-made (e.g., chimneys) and artificial (e.g., Chimney Swift towers) structures and of methods for increasing their usefulness and success.
263 264 265 266	7.	Encourage coordinated research into the link between insect availability, foraging habitat and population declines in Chimney Swift and other aerial insectivore species that breed in Ontario, which may include evaluating:
267 268		 i. Chimney Swift diet and factors (e.g., landscape, habitat, land use) affecting seasonal food availability (quantity and quality)
269 270		ii. the extent that environmental contaminants (e.g., pesticides) are directly or indirectly affecting productivity and/or survival rates, and

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271 272 273		iii.	possible direct and indirect links between climate change and/or severe weather events and changes related to timing of insect availability and Chimney Swift populations.
274 275	8.		nitor Chimney Swift population trends in Ontario to track short-term long-term changes. This may include:
276 277 278 279		i.	implementing inventories at regular intervals across the species' distribution in both natural and human-made environments using established monitoring methods such as the Breeding Bird Survey program
280 281 282 283		ii.	encouraging the documentation of Chimney Swift nesting and roosting sites, reporting on the species' abundance and distribution through established provincial and national citizen science initiatives (e.g., <u>eBird, SwiftWatch</u>)
284 285 286		iii.	monitoring reproductive success, clutch size, survival rates and population trends in Ontario to track changes in species' distribution, abundance and habitat use.
287 288 289 290	9.	Tra com	appropriate, encourage the recording, sharing and transfer of ditional Knowledge on Chimney Swift, where it has been shared by nmunities, to increase knowledge of the species and support future overy efforts.
291 292 293 294	10.	und thre	brdinate efforts and share information with other jurisdictions to derstand the relative degree to which Chimney Swift is impacted by eats that occur within Ontario versus threats that occur outside the vince (e.g., on wintering grounds).
295 296 297	Focus Area: Objective:		Stewardship and Awareness Increase public awareness of Chimney Swift, its habitat and threats, and promote stewardship of the species in Ontario.
298 299 300 301 302	supporting the of Chimney Sy the species, a	rece wift to nd h	eadership by Ontario landowners and organizations are essential for overy of Chimney Swift. Raising awareness about the beneficial value o humans and the environment, as well as how to reduce threats to ow to enhance or maintain its habitat and reduce risk to the species, e and encourage protection of the species and its habitat in Ontario.
303 304 305			elop and deliver strategic communications and outreach efforts used on educating key audiences (e.g., owners of human-made

306 307 308 309	structures used by Chimney Swift, chimney sweeps, building contractors, agricultural producers, forestry sector and other organizations) on ways to minimize threats and promote the protection and enhancement of Chimney Swift nesting, roosting and foraging habitat.
310 311 312 313	12. Develop programs to facilitate and encourage good stewardship and implementation of best management practices by landowners and land managers with existing habitat for Chimney Swift, including for example developing and implementing awards and recognition programs.
314	Implementing Actions
315 316 317 318 319 320 321 322 323 324 325	Financial support for the implementation of actions may be available through the Species at Risk Stewardship Program. Conservation partners are encouraged to discuss project proposals related to the actions in this response statement with Ministry of the Environment, Conservation and Parks staff. The Ontario government can also provide guidance about the requirements of the ESA, whether an authorization or regulatory exemption may be required for the project and, if so, the authorization types and/or conditional exemptions for which the activity may be eligible. Implementation of the actions may be subject to changing priorities across the multitude of species at risk, available resources and the capacity of partners to undertake recovery activities. Where appropriate, the implementation of actions for multiple species will be co-ordinated across government response statements.
326	Performance Measures
327 328 329	Progress towards achieving the government's goal for the recovery of Chimney Swift will be measured against the following performance measures:
330 331	 The rate of decline in the Ontario population has halted by 2044, and the population trend is stable thereafter.
332	The distribution of Chimney Swift in Ontario is maintained or increased by 2044.
333	Reviewing Progress
334 335 336	The ESA requires the Ontario government to conduct a review of progress towards protecting and recovering a species no later than the time specified in the species' government response statement, which has been identified as 10 years. The review will

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337 338	help identify if adjustments are needed to achieve the protection and recovery of Chimney Swift.
339	Acknowledgement
340	We would like to thank all those who participated in the development of the Recovery
341	Strategy and Government Response Statement for the Chimney Swift (Chaetura
342	pelagica) in Ontario for their dedication to protecting and recovering species at risk.
343	For Additional Information:
344	Visit the species at risk website at ontario.ca/speciesatrisk
345	Contact the Ministry of the Environment, Conservation and Parks
346	1-800-565-4923
347	TTY 1-855-515-2759
348	www.ontario.ca/environment