

# Gray Fox

## Ontario Government Response Statement



### Protecting and Recovering Species at Risk in Ontario

Species at risk recovery is a key part of protecting Ontario's biodiversity. The *Endangered Species Act, 2007* (ESA) is the Government of Ontario's legislative commitment to protecting and recovering species at risk and their habitats.

Under the ESA, the Government of Ontario must ensure that a recovery strategy is prepared for each species that is listed as endangered or threatened. A recovery strategy provides science-based advice to government on what is required to achieve recovery of a species.

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 government's policy response to the scientific advice provided in the recovery strategy. In addition to the strategy, the government response statement considered (where available) input from Indigenous communities and organizations, stakeholders, other jurisdictions, and members of the public. It reflects the best available local and scientific knowledge, including Traditional Ecological Knowledge where it has been shared by communities and Knowledge Holders, as appropriate and may be adapted if new information becomes available. In implementing the actions in the response statement, the ESA allows the government to determine what is feasible, taking into account social, cultural and economic factors.

The Recovery Strategy for the Gray Fox (*Urocyon cinereoargenteus*) in Ontario was completed on July 22, 2019.

Gray Fox is a medium-sized member of the canid (dog) family. It has peppered grey fur with reddish undersides and a black stripe running down its back to the tip of its tail. There are patches of white or tan fur on its ears, face, throat, belly and hind legs.

## Protecting and Recovering Gray Fox

Gray Fox is listed as a threatened species under the ESA, which protects both the animal and its habitat. The ESA prohibits harm or harassment of the species and damage or destruction of its habitat without authorization. Such authorization would require that conditions established by the Ontario government be met. In addition to protection under the ESA, Gray Fox is prescribed as a species of furbearing mammal under the *Fish and Wildlife Conservation Act, 1997 (FWCA)*. There is no open season for hunting or trapping of Gray Fox in Ontario.

Gray Fox has a broad distribution and is found in both North and South America. Its range stretches from northern Venezuela and Colombia to northwestern Ontario in Canada. The species is believed to be adapted to warmer climates, and its current range may be defined by its ability to tolerate colder temperatures. In Canada, Gray Fox has been reported from Alberta, Manitoba, Ontario, Québec and New Brunswick; however, only Ontario is thought to support a breeding population. The Gray Foxes recorded in most other Canadian jurisdictions are thought to be young, non-breeding individuals that are dispersing in search of new territories. There is some evidence to suggest that Gray Fox may also be breeding in Québec.

Gray Fox is considered at risk in Ontario due to its small population size. Although Ontario's Gray Fox population is now thought to be less than 110 individuals, evidence suggests Gray Fox were historically common in southern Ontario. The species became extirpated around the time European settlers arrived in the province and subsequently reappeared in the late 19th century. The reasons for the species' historic extirpation are not well-understood but may have been related to land-use changes associated with European settlement or due to historic changes in climate that resulted in cooler temperatures that were unsuitable for the species. The reappearance of the species in Ontario is thought to result from relatively recent increases in range and abundance of Gray Fox in the United States and natural dispersal to Canada. The range increases may result, in part, from a warming climate that favours Gray Fox.

At the time the recovery strategy was written, Gray Fox sub-populations were known to exist in two widely separated areas in Ontario: Pelee Island in the south and northwestern Ontario from the Rainy River area to the area just east of Thunder Bay. Gray Foxes were first recorded on Pelee Island in the early 1980s. The Island is the only location in Canada where the species has been confirmed breeding (e.g., kits observed); this sub-population is currently thought to be stable and is estimated at fewer than 60 mature individuals. It is unclear if individual foxes travel between Pelee Island and adjacent populations in U.S. jurisdictions. Given its small size and relative

isolation this sub-population may be more vulnerable to unpredictable events such as disease and extreme weather. Gray Foxes were first recorded in northwestern Ontario in the early 1940s; however, observations (including the potential evidence of breeding (e.g., a lactating female, male-female pair observed in breeding season)) have increased in recent years. This is thought to be a result of the expansion of adjacent Gray Fox populations in northeastern Minnesota and subsequent immigration of foxes to Ontario. Although strong evidence exists to suggest that this is a breeding sub-population; this is yet to be confirmed. The northwestern Ontario sub-population is estimated at less than 50 mature individuals; however, these foxes are thought to move between Ontario and the adjacent U.S. population.

Since the publication of the recovery strategy, breeding evidence (e.g., lactating females, young kits) has been documented in southern Ontario in the central Lake Ontario region. This new evidence suggests that the species may have further expanded its range; however, it is still considered relatively rare in this area.

Gray Foxes have occasionally been reported outside of the three areas where evidence of breeding sub-populations has been documented, including in areas along the shores of lakes Erie and Ontario as well as the St. Lawrence River and north to Lake Huron; however, these animals are considered non-breeding individuals.

Gray Foxes are omnivores and eat insects, birds, small mammals, and vegetation such as fruit and seeds. They have been found to use a variety of habitat types; however, they tend to use forested areas more than other fox species. The species prefers deciduous forest and areas with a mix of forested and open areas. Their preferred habitat is widely available in northwestern Ontario, and sufficient habitat to allow for natural increases in abundance and distribution is thought to be present. Habitat is more limited in southern Ontario. Given that much of the forested habitat on Pelee Island is located within protected areas, habitat for the Pelee Island sub-population is likely stable; however, continued conservation and stewardship actions are important to maintain its suitability. Information on potential habitat availability in the central Lake Ontario region is not yet available as the breeding evidence was only recently observed in the area. Given that populations in other jurisdictions are thought to play a key role in maintaining the Ontario population, habitat connectivity is likely to have an important role in promoting continued dispersal.

Gray Fox is thought to breed in the late winter or early spring and uses dens for raising pups, as well as resting. A variety of different features, including wood and brush piles, hollows in trees, and rock crevices, can be used as denning sites, but dens are generally located in dense brush with a water

source nearby. Dispersal to new areas primarily occurs in the fall. Dispersing individuals can travel over large distances, commonly moving distances up to 50 km, with a few individuals known to have moved over 80 km.

Hunting and trapping of Gray Fox is currently not legally permitted anywhere in Ontario, although it occurred in the past. Although Gray Fox cannot be targeted, the species is occasionally incidentally captured in traps legally set for other species. Additional analysis of trapping information undertaken after the publication of the recovery strategy indicates that rates of incidental capture are likely significantly lower than initially reported as a result of errors in identification (e.g., mistaking Red Fox (*Vulpes vulpes*) exhibiting a different colour phase for Gray Fox). However, given the low abundance of Gray Fox in Ontario, incidental trapping is considered to be a threat to the species. It is possible the resulting mortality could limit the species' expansion within the province; however, the severity of this threat warrants further investigation. Gray Fox may also be threatened by road mortality and by diseases such as canine distemper and rabies. Areas with high Eastern Coyote (*Canis latrans* var.) density may also limit range expansion and establishment of new sub-populations. It is likely that the abundance and distribution of the species in surrounding jurisdictions has an impact on the Ontario population; however, the degree to which the provincial population may rely on outside populations is currently unclear.

Gray Fox abundance in Ontario has been slowly increasing since its historical extirpation. The Pelee Island sub-population is currently considered stable and is important as it is the only confirmed breeding sub-population in Canada; however, there is also strong evidence of a breeding sub-population in northwestern Ontario where sufficient habitat is thought to be available to support natural increases in abundance and distribution. Recent breeding evidence from the central Lake Ontario region suggests the possibility of a third sub-population and requires further investigation. The prospect for continued natural increases in abundance and distribution of Gray Fox in Ontario is considered good due to the likelihood of continued (and perhaps increased) immigration to Ontario from adjacent jurisdictions. Warming temperatures resulting from climate change may also further improve conditions for Gray Fox in Ontario. As the species' condition is likely to improve in Ontario, the government will focus its efforts on maintaining the existing sub-populations and supporting natural increases in the Ontario population.

### **Government's Recovery Goal**

**The government's goal for the recovery of Gray Fox is to maintain the current distribution in Ontario and support natural increases in abundance and distribution by filling knowledge gaps, reducing threats and maintaining or enhancing suitable habitat and habitat connectivity.**

## Actions

Protecting and recovering species at risk is a shared responsibility. No single agency or organization has the knowledge, authority or financial resources to protect and recover all of Ontario's species at risk. Successful recovery requires inter-governmental co-operation and the involvement of many individuals, organizations and communities. In developing the government response statement, the government considered what actions are feasible for the government to lead directly and what actions are feasible for the government to support its conservation partners to undertake.

## Government-led Actions

To help protect and recover Gray Fox, the government will directly undertake the following actions:

- Continue to protect Gray Fox and its habitat through the ESA.
- Undertake communications and outreach to increase public awareness of species at risk in Ontario.
- Educate other agencies and authorities involved in planning and environmental assessment processes on the protection requirements under the ESA.
- For the Pelee Island sub-population, explore opportunities to work collaboratively with the Township of Pelee, including the Pelee Island Environmental Advisory Committee, the federal government and local partners to integrate approaches to stewardship, implement recovery actions and explore integrated approaches to managing species at risk.
- Encourage the submission of Gray Fox 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 Gray Fox. Support will be provided where appropriate through funding, agreements, permits (including conditions) and/or advisory services.
- Continue to manage Crown forests in a manner that minimizes adverse impacts to species at risk and their habitats.
- Continue wildlife disease research and surveillance activities in partnership with provincial and municipal partners and implement control measures (e.g., distribution of bait vaccines) as necessary.
- Continue to manage Ontario canid species, including Gray Fox, through the FWCA.
- Conduct a review of progress toward the protection and recovery of Gray Fox within five 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 Gray Fox. 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: Research and Monitoring

**Objective:** Increase understanding of Gray Fox population levels and trends, habitat use and movement, and the threats impacting the species in Ontario.

Understanding the status of existing sub-populations of Gray Fox in Ontario, including any new potential sub-populations identified (e.g. central Lake Ontario region), will further our knowledge about the species and help to guide recovery efforts, as well as allow for evaluation of the effectiveness of these efforts over time. Investigating the role populations in other jurisdictions play in maintaining the Ontario population, the frequency and severity of threats, and how these factors impact the long-term viability (ability to persist) of the species, will help determine the best ways to support the continued existence of Gray Fox in Ontario. Exploring potential options to reduce trapping by-catch of Gray Fox will increase understanding of approaches to minimize this threat while allowing for the legal harvest of other species.

#### Actions:

1. **(High)** Develop and implement a standardized population monitoring method for Ontario sub-populations, including any new sub-populations identified, to determine population size, breeding status, demographics, and habitat use as well as to document population trends over time.
2. **(High)** Investigate the availability of Gray Fox habitat in the central Lake Ontario region.
3. **(High)** Evaluate threats that may affect Gray Fox in Ontario, including their frequency, severity and potential impact on the viability of Ontario sub-populations. This action may include investigating threats such as:
  - incidental trapping;
  - genetic isolation for the Pelee Island sub-population; and,
  - road mortality.
4. Investigate methods to reduce by-catch of Gray Foxes in traps set for other species.
5. Monitor and evaluate the threat of diseases and parasites on Gray Fox, including through the study of any animals found dead (i.e., via necropsy).

6. Collaborate with other jurisdictions to assess connectivity between the Ontario Gray Fox population and populations in other jurisdictions, including the potential role those populations play in maintaining the Ontario population.

**Focus Area: Awareness**

**Objective:** Increase level of public awareness of and engagement in protecting and recovering Gray Fox in Ontario.

Breeding sub-populations of Gray Fox are thought to occur in three widely separated areas in Ontario, although the species has also been occasionally reported in other locations in the province. The areas where the species occurs include publicly and privately-owned lands used for a variety of purposes including for agriculture, recreation and forestry. As a result, the involvement of several groups and organizations will be necessary to implement recovery actions and promote awareness of the species and its threats. Collaboration between organizations will support coordinated implementation of actions, improve efficiency and prevent duplication of efforts. Improved reporting of observations of the species (including diseased animals) will further awareness, contribute to filling knowledge gaps, and help to monitor potential threats such as disease.

**Actions:**

7. **(High)** Collaborate with organizations, landowners, land managers, and Indigenous communities and organizations to promote awareness of Gray Fox among people engaged in hunting and trapping, forestry, agricultural and stewardship activities in Ontario by sharing information on:
  - how to identify the species and distinguish it from other similar species (e.g., Red Fox);
  - the species' habitat requirements;
  - how to report observations of the species, including reporting animals killed on the road;
  - protection afforded to the species and its habitat under the ESA; and,
  - actions that can be taken to avoid or minimize impacts to the species and its habitat.
8. Encourage reporting of suspected rabid animals to the Ministry of Natural Resources and Forestry Rabies Information Line (1-888-574-6656).

**Focus Area: Stewardship and Conservation**

**Objective:** Reduce threats to the species and maintain or enhance suitable habitat and connectivity between populations.

The results of research on reducing by-catch in traps (see Action 3 above) will allow for the informed development and promotion of best management practices to reduce by-catch of Gray Fox. These actions are expected to reduce threats to the Gray Fox while allowing the legal harvest of other species to continue.

On Pelee Island, much of the suitable forest habitat for Gray Fox is located within protected areas; conservation organizations and local partners have been actively involved in the ongoing maintenance and restoration of these areas. In addition, many private landowners have undertaken efforts to preserve natural habitat on the island. The continuation of these efforts is important to maintain habitat suitability and availability for the Pelee Island sub-population. It is also important to maintain healthy forest ecosystems in areas of Ontario that may support additional sub-populations, such as northwestern Ontario and the central Lake Ontario region, in order to ensure suitable habitat is available for the species. Given that populations in other jurisdictions are thought to play a key role in maintaining the Ontario population, maintaining or improving suitable habitat in potential dispersal areas is expected to promote continued connectivity between jurisdictions.

**Actions:**

9. Support development and promotion of best management practices to reduce by-catch of Gray Fox in traps set for other animals. This action should be informed by the results of research conducted under Actions 2 and 3 above.
10. Encourage continued conservation and stewardship of forest in areas occupied by Gray Fox (particularly on Pelee Island) as well as in areas where the species is thought to disperse between Ontario and other jurisdictions.



## Implementing Actions

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 advise if any authorizations under the ESA or other legislation may be required to undertake the project.

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.

## Reviewing Progress

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, or not later than five years after the government response statement is published. The review will help identify if adjustments are needed to achieve the protection and recovery of Gray Fox.

## Acknowledgement

We would like to thank all those who participated in the development of the Recovery Strategy and Government Response Statement for the Gray Fox (*Urocyon cinereoargenteus*) in Ontario for their dedication to protecting and recovering species at risk.

### For additional information:

Visit the species at risk website at [ontario.ca/speciesatrisk](http://ontario.ca/speciesatrisk)  
Contact the Ministry of the Environment, Conservation and Parks  
1-800-565-4923  
TTY 1-855-515-2759  
[www.ontario.ca/environment](http://www.ontario.ca/environment)