

Pests & Diseases



What causes an increase in pests and diseases?

- Warmer temperatures expand the range of pests and diseases and increase their survival during winter months
- Changes in precipitation influence the level of moisture in the atmosphere, creating favourable conditions for the growth and spread of pathogens
- Extreme weather events can damage ecosystems, creating conditions for pests and diseases to grow

What are some types of pests and diseases?

- Invasive species can include examples such as:
 - buckthorn (shrub),
 - garlic mustard (flowering plant), and
 - phragmites (grass)
- Diseases can include examples such as:
 - West Nile Virus (infectious disease spread through mosquitos)
 - Lyme Disease (infectious disease spread through ticks)

By 2070, Brampton is expected to see:

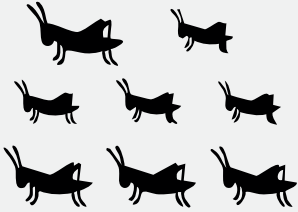
- **Greater pest and disease prevalence** – warming temperatures, longer growing seasons, and less frost days will exacerbate the transmission of pests and diseases.

- **Amplified climate impacts** – Pests and diseases increase vulnerability to climate hazards like flooding and extreme heat. For example, increasing pests and diseases can cause greater tree loss and a higher demand on health services. Invasive species will also have a significant impact on ecosystems, making it difficult for native species to thrive, causing a potential decline in native species and habitats.

What can we do?

- Pests and diseases pose a significant threat to Brampton's ecosystems, public health, and biodiversity. Efforts across the community are essential to reducing pests and diseases and building resilience. Some example adaptation actions to help reduce pests and diseases include:
- Developing an Invasive Species Management Strategy (currently in progress)
 - Building healthy soils
 - Planting native species that are climate resilient
 - Personal protection, including wearing protective clothing in areas where there is the potential for pests and diseases

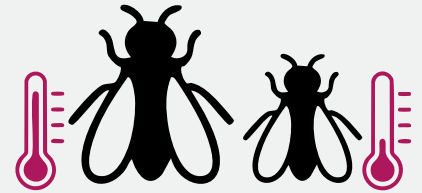
How Does Climate Change Affect Pests?



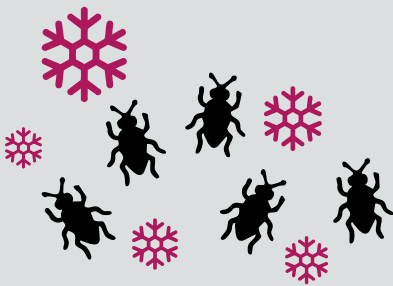
Insects experience additional generations



Increased resistance to insecticides



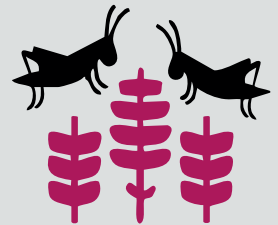
Some insects grow bigger in warmer temperatures



Higher survival rates during winter months



Poleward spread of pests towards cooler climates



Impact of attacks on crops and people is worsened