Invasive Species and Infrastructure
PROTECTING MUNICIPAL ASSETS

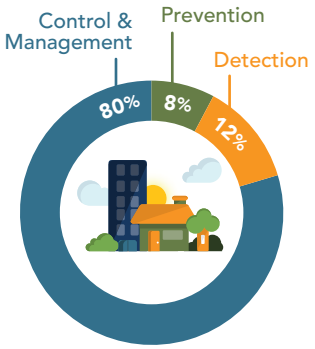
When invasive species are introduced to urban environments, they can impact infrastructure, urban ecosystems, the economy, and community well-being. Investments in prevention can have long-term economic benefits and help protect municipal assets.

Municipal assets at risk include:

GREEN INFRASTRUCTURE
Urban trees
Wetlands
Grasslands and forests
Parks and gardens

GREY INFRASTRUCTURE
Roads and sidewalks
Public buildings
Stormwater management
Drinking and
waste water treatment

The cost of invasive species monitoring and management falls heavily on municipalities and conservation authorities.

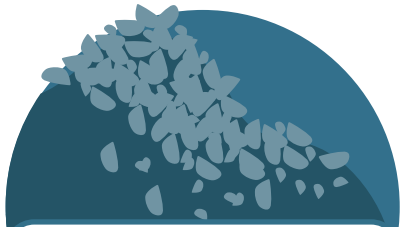


A 2019 study estimates that 80% of invasive species expenditures by Ontario municipalities and conservation authorities are on control & management.[1] **Greater investments in prevention can help reduce longterm costs.**

In Ontario, municipalities and conservation authorities are estimated to spend **$50.8 million/year**[1] on invasive species.

Japanese knotweed

The strong roots and shoots of this plant can damage concrete and asphalt, posing a threat to buildings, sidewalks, and roads. Manual control of this plant is costly and labour-intensive.



Zebra and quagga mussels

Zebra and quagga mussels cause significant impacts to municipal water intakes. In 2019, Ontario municipal expenditures on zebra and quagga mussels were estimated at $8.9 million/year.[1]

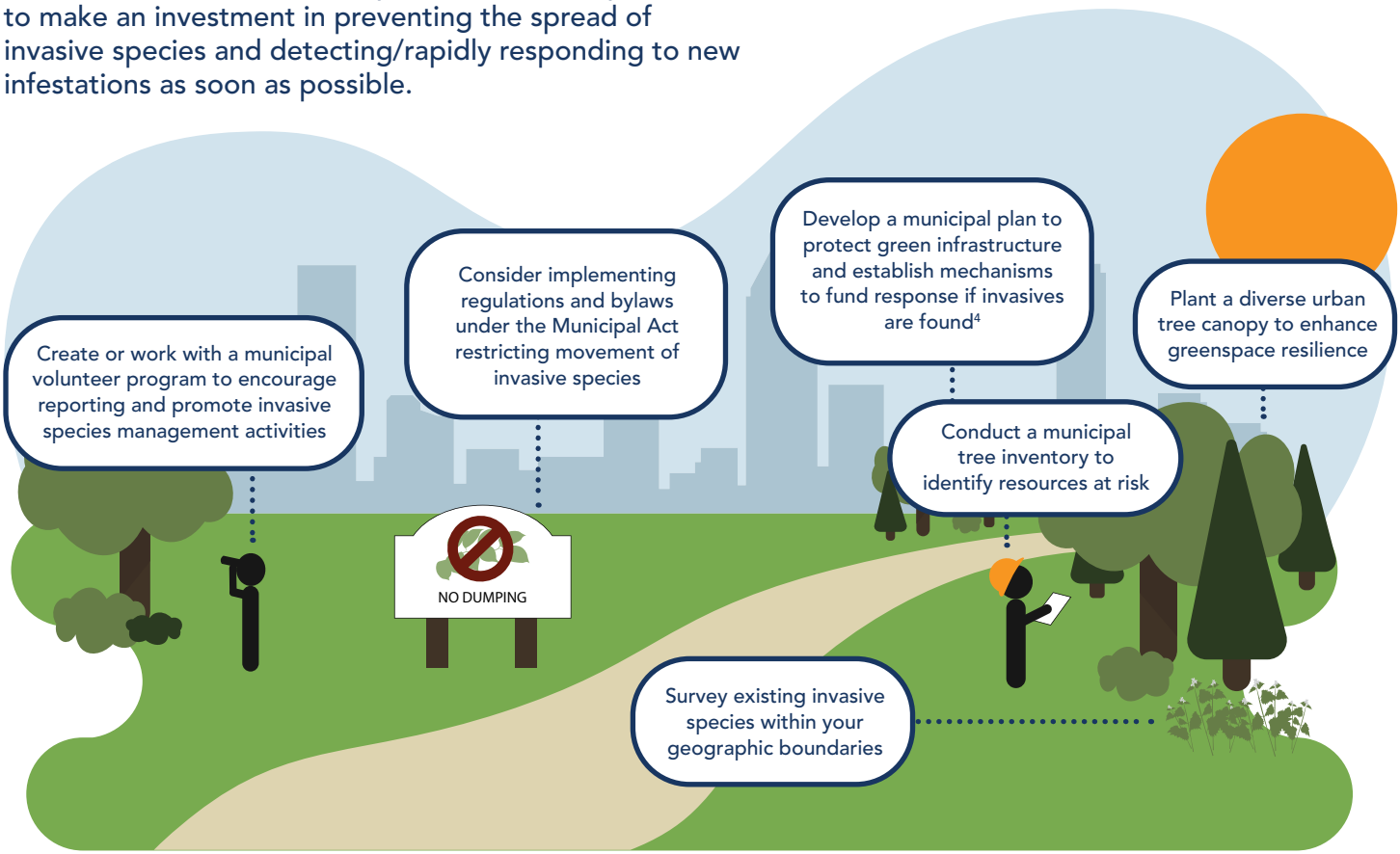
Emerald ash borer

The cost of damage to Canadian private and municipal ash trees is an estimated $451 million over 30 years.[2] In 2019, Ontario municipal expenditures on EAB were estimated at $22 million/year.[1]

Invasive species can threaten urban ecosystems and community safety.

Invasive Phragmites is an invasive perennial grass, commonly found along roadside ditches, that forms dense monocultures and can reach heights of up to 5 m. Invasive Phragmites reduces biodiversity and threatens critical habitat and species at risk. Its dense root system can impede drainage infrastructure, causing flooding, while the height of the stalk can impact visibility at intersections and around corners, putting drivers at risk. Invasive Phragmites control projects can cost between $865-$1,112 per hectare[3]. In 2019, municipal spending for Phragmites control in Ontario was estimated at over $2.8 M[1]. Preventing the arrival of invasive Phragmites and prioritizing control of small, manageable patches are essential to reducing annual costs.

WHAT YOU CAN DO: It's important for municipalities to make an investment in preventing the spread of invasive species and detecting/rapidly responding to new infestations as soon as possible.



[1] Vyn, R. (2019). Estimated expenditures on invasive species in Ontario 2019 survey results. Report prepared for the Invasive Species Centre.

[2] McKenney, D. W., Pedlar, J. H., Yemshanov, D., Barry Lyons, D., Campbell, K. L., & Lawrence, K. (2012). Estimates of the potential cost of emerald ash borer (*Agrilus planipennis Fairmaire*) in Canadian municipalities. *Arboriculture and Urban Forestry, 38(3)*, 81.

[3] Ontario Biodiversity Council. (2012). Ontario's Biodiversity Strategy.

[4] Humble, L. M. & Allen, E. A. (October, 2004). *6th Canadian Urban Forest Conference.* Kelowna, B.C.

Invasive Species Centre

The **INVASIVE SPECIES CENTRE** is a non-profit organization that connects stakeholders, knowledge and technology to prevent and reduce the spread of invasive species that harm Canada's environment, economy, and society.

For more information and to sign up for invasive species news, visit www.invasivespeciescentre.ca.