

Credit Valley Conservation's Invasive Species Program

What are Invasive Species?

Invasive species are most often non-native species that out-compete native species for resources and dominate space. They may directly kill others (predate or release toxins) or introduce disease and/or hybridize (genetic contamination). Typically, non-native invasive species (e.g. zebra mussels, garlic mustard) prefer disturbed habitats, are aggressive, have high reproductive rates, lack natural predators, travel easily and far by humans, wildlife, wind and water.

Why do we need a program?

Invasive species have far reaching effects on the economy, environment, biological diversity and on human health. They can negatively affect:

- **Resource-based sectors.** Forestry (e.g. emerald ash borer) and fishing (e.g. sea lamprey) are two examples.
- **Human health.** Some species can be poisonous (e.g. giant hogweed) or degrade water quality (e.g. zebra mussel waste promotes the growth of the native algae *Cladophora* which can form dense near-shore mats that can harbor dangerous *E. coli* or *E. botulinum* bacteria).
- **Biodiversity.** Invasive species can hybridize with native species (e.g. the native tree red mulberry is now endangered because it hybridizes with the introduced white mulberry). They can replace native species (e.g. common reed is implicated in the destruction of rare dune ecosystems along the Lake Huron shore) or directly predate on native species (e.g. round goby implicated in the decline of sport fish populations).

The impacts of invasive species are often only realized over a long time period. They often go unnoticed until it

is too late to do anything about them, or costs of control become too prohibitive. This has been changing as scientists explore the impacts, knowledge increases and public education grows. CVC is uniquely positioned to contribute to this growing science and to create the awareness necessary to prevent new invasions and to spur efforts where successful control is still feasible.



Garlic mustard



Emerald ash borer



Zebra mussel



Common reed

Unknown consequences ... complex relationships

Our understanding of the impacts of invasive species is growing. We now know that invasive European buckthorn is a winter host of the invasive crop pest, soybean aphid. This aphid is in turn fed on by another crop pest, the Asian ladybeetle which damages grape crops and can be a household nuisance, as well as causing allergies in sensitive people. The soybean aphid can also be a disease-transmitting organism for many crop viruses such as the soybean mosaic virus. This is just one example of how a single species can trigger a host of negative environmental and economic effects.

What is CVC's program?

Program priorities

- Prioritizing invasive species control efforts in areas high in native biodiversity.
- Prioritizing invasive species for management.
- Developing and applying appropriate control measures that are effective and cost efficient.
- Monitoring and mapping the spread and control of invasive species.
- Providing support and educational resources for land management to conservation agencies, landowners and municipal partners.

What does the program do?

The program works at many levels:

- Creating awareness with the hope that this will lead to action because CVC cannot tackle this problem alone.
- Monitoring reports of invasive species to either direct immediate action or to monitor trends.
- Taking or prompting direct removal of invasive species where a priority is identified.
- Developing tools for implementers and conducting research, such as the best methods of control.

How is it being implemented?

Outreach and Education

- CVC works with and participates on the Ontario Invasive Plant Council and works with municipal partners and other non-government organizations where opportunities arise to create awareness of the issue.

- CVC has developed many publications, attends community events to promote awareness and delivers workshops and workday events on the topic.

Conservation Lands Program

- CVC develops and implements priority invasive species control projects across its land holdings and develops invasive species-specific management plans for select properties. Adjacent lands may also be covered in these strategies. Projects often involve CVC staff or assistance by volunteers or the Conservation Youth Corps (CYC).



Conservation Youth Corps

This CVC program provides a volunteer opportunity for kids between the ages of 14-17 seeking to complete their community hours by engaging in various environmental projects within the CVC watershed.

Private and Public Lands

- Through its Conservation Lands program, CVC works with private and public landowners, like municipalities, to provide assistance with invasive species management where a priority is identified.
- CVC will provide technical assistance and support to landowners who express an interest in managing invasive species on their property.
- CVC may provide fee for service support to landowners on invasive species removal projects, depending on scope and timelines.

Restoration



Removing invasive species often requires direct restoration of affected lands. CVC has many programs that address restoration on both public and private lands. The following are ways to seek restoration guidance or funding:

Public or Private Lands

- CYC
- Aquatic and Wetland Restoration Program
- Naturalization and Reforestation Planting Program
- Urban Outreach Program

Conservation Area Lands

- As above
- CVC Lands and Natural Heritage Department

Who to Contact

The CVC Invasive Species Program is an integrated program of all CVC departments and serves as a one window contact for questions related to information in this fact sheet.

For more information, please contact CVC at 905-670-1615 or cvc@creditvalleyca.ca or visit the CVC Invasive Species Program portal at www.creditvalleyca.ca/invasives.