

Invasive Plants in Alaska:

- Reduce natural biodiversity
- Alter water flow
- Cause soil erosion
- Damage infrastructure
- Out-compete native species
- Cause loss of quality food for fish and wildlife

European bird cherry: toxic to moose and displaces native plants.



Elodea: can clog water bodies, impacting recreation and habitat.



Knotweed: displaces salmonberry plants and other vegetation.

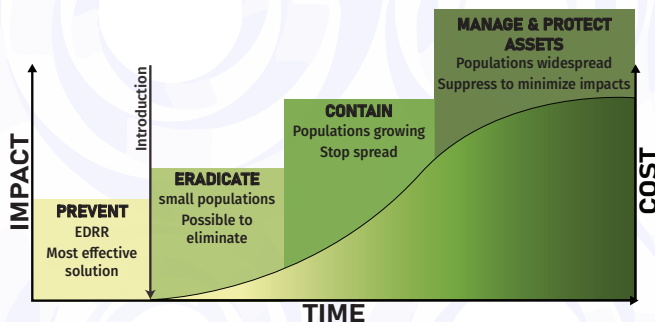


Reed Canary Grass: alters stream banks, reducing salmon spawning habitat.

WHY ACT?

Invasive species are considered the second greatest threat to biodiversity after habitat loss worldwide!

The longer we wait, the greater impact they cause. If we do not respond quickly, we must figure out how to manage the species we can't eradicate.



The invasion curve illustrates the increasing impacts and costs of invasive species over time and options for management.

LOOKING FOR MORE INFORMATION?

DEC's Pesticide Control Program:

<https://dec.alaska.gov/eh/pest>

EPA pesticides info:

<https://www.epa.gov/pesticides>

National Pesticide Information Center:

<http://www.npic.orst.edu/> or

1-800-858-7378

UAF Cooperative Extension Service:

<https://www.uaf.edu/ces/invasives/>

Help keep Alaska wild and free of invasive species by reporting any sightings at 1-877-INVASIV or using the AK Invasives ID App.

AK Invasive Species Partnership:

<https://alaskainvasives.org/>

DNR noxious and prohibited weeds list:

<https://plants.alaska.gov/invasives/pdf/noxious-weeds.pdf>



Invasive Plant Management in Alaska



We Alaskans love our wild lands. Our wild spaces are treasured as the cornerstones of our communities: we rely on them for subsistence, cultural practices, our livelihoods, and recreation.

INVASIVE SPECIES are any species not native to a particular place and cause harm to humans, the environment, or the economy.

If we take action to prevent further effects of invasive species, we can help protect our abundant natural resources!

INTEGRATED PEST MANAGEMENT (IPM)!

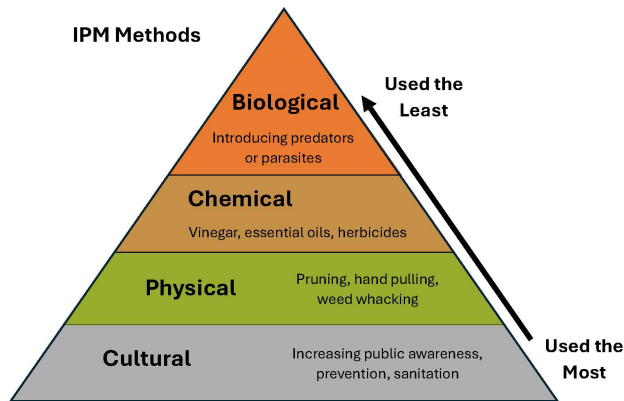
What is the IPM approach?

- Preventing invasive species introduction and spread
- **Early Detection** of new infestations and **Rapid Response (EDRR)** increase management success
- Understanding the species and environment to target weaknesses and reasons for invasion
- Understanding species biology and the environment to identify vulnerabilities

How are control methods selected?

Thoughtfully, by considering:

- Impacts to plants, animals, and people from both the pest and from the treatment options
- The biology of the pest; what would remove and discourage it most effectively
- Whether a single or combination of control methods will achieve the greatest benefit and least harm to the environment



Does IPM include pesticides?

Yes. A pesticide is any substance that controls a pest; an herbicide is a pesticide that kills plants. **Herbicides sometimes have the least negative impact to the environment with the greatest control of harmful invasive species.**

Who is applying herbicides?

Applicators must be certified through the Alaska Dept. of Environmental Conservation (DEC). Usually, invasive species applications are conducted by biologists, ecologists, botanists, and land managers who do a large variety of conservation work!



How are herbicides regulated?

The **Alaska DEC Pesticide Control Program** regulates the use, disposal, storage, and sale of pesticides approved by the US Environmental Protection Agency (EPA), which extensively studies and regulates them for safety.

How are herbicides used responsibly?

Application techniques depend on the species, the size of the infestation, the proximity to sensitive resources, and the timing of the application. Whenever possible, spot spraying or a direct application method is used.

Applicators assess the surrounding sensitive resources and choose the application method and chemical formulation to ensure no adverse effects. If spraying, applicators are required to monitor wind speeds and spray droplet size to minimize the possibility of herbicide off-target drift. Every herbicide has a label outlining all requirements for use, which by law must be followed.

Herbicides are not intended to be used indefinitely at any site. The amount of herbicide needed should decrease over time, although it may take several years of targeted applications to control infestations. If applications are not effective, another control method should be implemented.

What does this look like in the real world?

An infestation of Orange Hawkweed was discovered in a 60-acre area near Camp Island on Kodiak in 2002. Since then, the Kodiak National Wildlife Refuge and Kodiak Soil and Water Conservation District have implemented intensive on-site IPM. In 2011, **2,983 fl. oz** of herbicide (aminopyralid) was applied to the infestation, whereas in 2023, only **0.098 fl. oz**, about a half teaspoon, was needed. As a result of IPM efforts, the amount of herbicide used in 2023 was **96%** less than in 2011. The success of the work can be seen in how native plants have rebounded, increasing biodiversity and available forage for the dense Kodiak Brown Bear population.



Why don't you just let nature take its course?

Human introduced species have already begun to upset the balance of nature in Alaska. If we do nothing, invasive plants will continue to spread and overrun native plant communities, disrupting ecosystems and degrading natural resources causing a loss of biodiversity and harm to fish and wildlife.



Orange Hawkweed taking over an alpine wildflower meadow in Chugach State Park.