



## How to get more information

**Learn more:** Visit the DNR's website for more information about prevention actions, species, laws, contacts, resources and more.



[mndnr.gov/invasives](https://mndnr.gov/invasives)



[mndnr.gov/purple-loosestrife](https://mndnr.gov/purple-loosestrife)

**Contact us:** You can reach a conservation officer to report a potential violation, contact a DNR Invasive Species Specialist, or get more information by contacting the DNR Information Center at 888-MINNDNR or (651) 296-6157 or email [info.dnr@state.mn.us](mailto:info.dnr@state.mn.us)



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888-MINNDNR or 651-296-6157  
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## Why is purple loosestrife a problem?

Purple loosestrife (*Lythrum salicaria*) is a nonnative, invasive wetland plant. It was unintentionally introduced to the United States from Europe and Asia. Purple loosestrife was also intentionally introduced as seeds and sold as a decorative plant. Through these introductions, and because of its prolific seed production, purple loosestrife spread rapidly across Minnesota.



Purple loosestrife can cause recreational, economic and ecological damage because it:

- Grows densely along shoreland areas making it difficult to access open water.
- Overtakes habitat and outcompetes native plants.
- Provides unsuitable shelter, food, and nesting habitat for native animals.
- Impacts wetland hydrology because of its dense roots.

## Regulations

Purple loosestrife (*Lythrum salicaria*, *L. virgatum* and any combination thereof) is listed as a Minnesota Department of Agriculture prohibited control noxious weed and a Minnesota Department of Natural Resources prohibited invasive species, which means it is unlawful (a misdemeanor) to possess, import, purchase, transport or introduce this species except under a permit for disposal, control, research or education.

## What can you do about purple loosestrife?

- Learn how to identify it.
- Avoid spreading it. Clean your gear to remove mud and seeds before leaving an area.
- Never plant it.
- Report it.
- Control it. Use approved methods such as digging, cutting, approved herbicides or biological control.



## How to report purple loosestrife

To manage purple loosestrife in the state we need to know where it is.

Everyone is encouraged to report locations of purple loosestrife to the Minnesota DNR via [www.eddmaps.org](https://www.eddmaps.org) or follow the steps below.

1. Note the exact location on a map—a GPS point provides the most helpful data.
2. Take clear photos of the plant's key features:
  - a. Close-ups of the flowers and flower stalk.
  - b. Close-ups of the leaves and stem.
  - c. From a distance to show population size.
3. Share the photos with the DNR:
  - a. Report online via [www.eddmaps.org](https://www.eddmaps.org), or
  - b. Contact a DNR Invasive Species Specialist ([mndnr.gov/aiscontacts](https://mndnr.gov/aiscontacts)), or
  - c. Call 651-259-5100.

# PURPLE LOOSESTRIFE

What you should know  
What you can do



# Take action to prevent the spread of invasive species

## How do you identify purple loosestrife?

Purple loosestrife is a perennial plant found in moist soil including wetlands, lakeshores and roadside ditches. It has a thick root system and reaches 3 to 7 feet tall. Plants can form dense thickets and are especially noticeable when in bloom (July-September).

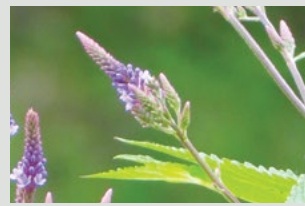
- Stem is hard and squared (four to six sided). Plants have multiple stems and dead stems stand through spring.
- Flowers have five or six pink petals surrounding a small yellow center and are arranged on a spike growing up to 1 foot tall.
- Leaves have smooth edges, usually arranged in pairs opposite each other on the stem and rotated 90 degrees from the pair below.



## What are some native look-alikes and planting alternatives?

There are many native plants that look similar to purple loosestrife. Use the identification features listed above and below to tell the difference.

Native plants such as blue vervain, fireweed, joe-pye weed, and swamp milkweed are good landscaping alternatives—they provide similar features while benefiting the environment.



Blue vervain has leaves with toothed edges.



Fireweed has a round stem.

PAUL SKAWINSKI,  
UW-STEVENS POINT  
EXTENSION LAKES

## How do you control purple loosestrife?

The goal of invasive plant management is to minimize harmful effects caused by invasive plants while protecting natural resources and their use in the state.

Complete eradication of purple loosestrife plants from sites where dense populations exist is not possible. Instead, managing purple loosestrife plants to a point where they no longer cause harm is a desirable goal. The number of plants, the age of the stand, surrounding environmental conditions, access to the plants, and time of year determine which management actions can help.

### Management actions

#### Obtain permits

You need a permit from the Minnesota Department of Natural Resources (DNR) to possess or transport purple loosestrife or to use herbicides to control purple loosestrife growing in public waters. Permits can be obtained for free from a DNR Invasive Species Specialist ([mndnr.gov/aiscontacts](http://mndnr.gov/aiscontacts)).

#### Time it right

The best time to manage purple loosestrife is in late June through early August, when it is flowering and plants are easily recognized, but before it goes to seed.

#### Dispose of it properly

It is illegal in Minnesota to dispose of plants in a landfill. Composting or moving plant parts could spread purple loosestrife to new areas. Plant parts must be left on site, in a dry area away from water, to naturally degrade.

#### Prevent the spread

Thoroughly brush off your clothes, boots, and tools before leaving the site.

#### Minimize site disturbance

Purple loosestrife spreads easily in disturbed areas. Take care not to trample or damage native plants.



## Guidelines for control

Density	Method for less than 1 acre	Method for more than 1 acre
1-50 plants		
50-1,000 plants		
More than 1,000 plants		

**Digging and hand pulling:** can be used in small low-density areas. Pulling by hand is easiest when plants are young. Older plants can be eased out with a garden fork.



**Cutting:** can be used to prevent seed production. Flower spikes can be cut off and left on site.



**Chemical control:** can be used in small areas using approved herbicides applied directly to the plants using a backpack sprayer. Only use herbicides which are labeled for use in aquatic habitats. Formulations of glyphosate and imazapyr have been successful.



**Biological control:** can be used in large areas by adding biological control beetles. This is done either by collecting and moving beetles or by rearing and releasing them.



## Purple loosestrife biological control: a success story



Before biocontrol insects released: Purple loosestrife infested wetland near Winona, MN, 1987.



After biocontrol insects released: Defoliated purple loosestrife wetland near Winona, MN, 2002.

A search for potential biocontrol agents in Europe, purple loosestrife's native range, found four potential insects. Many years of laboratory and field testing were done in Europe and in North America under quarantine to answer two key questions: Are they selective, and can they control purple loosestrife?

Two leaf-eating beetles, *Galerucella pusilla* and *G. calmariensis* were found to damage purple loosestrife by eating leaves and new shoots of the plants. Studies found that under quarantine conditions the larvae of the beetles did not survive on any other plants.



Starting in 1992, the DNR worked with cooperators to rear and release more than eight million leaf-eating beetles on more than 700 purple loosestrife infestations statewide. These leaf-eating beetles established at more than 90% of the sites where they were released. Overall, purple loosestrife abundance was significantly reduced in many areas, so it became only a small part of the plant community, not a dominant one. The beetles spread from release sites and established at new sites. As is expected, over time, beetle populations declined as there was less purple loosestrife. In areas where purple loosestrife is becoming dominant again, the DNR is working with cooperators to rear beetles and release them in those areas.



[mndnr.gov/loosestrife-biocontrol](http://mndnr.gov/loosestrife-biocontrol)