

Invasive Plants:

A Landowner's Guide to Managing Invasive Plants

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Top Invaders:

Japanese Knotweed	Invades forest edges, stream banks and open or disturbed areas
Purple Loosestrife	Invades wetlands, wet fields and roadsides
Garlic Mustard	Invades forest understories and roadsides
Swallow-wort Spp.	Invade forests, fields and edges of low lying marshy areas.
Common Reed Grass	Invades wet areas and roadsides

Management Strategies

Invasive plants are non-native species that cause environmental or economic harm or harm to human health. Having invasive plants on your property can be overwhelming, but there are strategies to remove them and restore desirable vegetation.

Pulling or digging – effective for some terrestrial invasive plants and recommended for small infestations (<50 plants).

Herbicide – effective for some terrestrial invasive plants and recommended for large or dense infestations.

Removing invasive plants can be a long and difficult process. Resources should be allocated for at least three years of annual monitoring and management. Large infestations may require maintenance management in perpetuity. However, with persistent effort, you can take back your property. Species-specific management information is listed in this guide.



Thank you!

Thank you for your interest in managing invasive plants on your property. Your efforts help protect our lands and waters from invasive species.



Strategies for Plant Removal

Japanese Knotweed

Mowing or cutting is not advised, as it can cause regrowth due to fragmentation.

Small infestations - Dig or pull up the entire plant including all roots and runners using a digging tool. Extreme care must be taken to remove the entire root system, as new plants can sprout from residual fragments. Bag and remove all plant parts from site. Solarize by placing bagged plant material in the sun for at least two-weeks and then dispose of in an approved landfill.

Large infestations – Apply a selective application of glyphosate-based herbicide via stem injection or foliar spray. Applications are most effective when performed in late summer (August- September). Read and abide by the herbicide product label. **Be patient post treatment.** Herbicide requires time to take effect; immediate plant decline may not be observed for 2– 3 weeks following treatment.

Garlic Mustard

Small and large infestations - Dig or pull up each plant by the base to ensure the entire root system is removed. Management should occur May to June, prior to seed set. Tamp down soils after removal to minimize disturbance. Bag and remove all plant parts from site. Solarize by placing bagged plant material in the sun for at least two-weeks and then dispose of in an approved landfill.

Purple Loosestrife

Small infestations - Dig or pull up each plant by the base to ensure the entire root system is removed. management should occur before plants set seed in late summer. Bag and remove all plant parts from site. Solarize by placing bagged plant material in the sun for at least two-weeks and then dispose of in an approved landfill.

Large infestations – Apply a selective application of glyphosate or triclopyr-based herbicide. Biological control can be utilized for infestations beyond the point of mechanical or chemical control. For more information on whether your plants are eligible for biocontrol please contact your local Department of Environmental Conservation office.

Common Reed Grass

Small infestations - Dig or pull up the entire plant including all roots and runners using a digging tool. Extreme care must be taken to remove the entire root system, as new plants can sprout from residual fragments. Bag and remove all plant parts from site. Solarize by placing bagged plant material in the sun for at least two-weeks and then dispose of in an approved landfill.

Large infestations - Apply a selective application of glyphosate-based herbicide via clip & drip or foliar spray. Applications are most effective when performed in late summer (August- September). Read and abide by the herbicide product label. Non-certified applicators may *not* apply herbicide in or near wetlands.

Swallow-wort spp.

Small infestations - Dig or pull up each plant by the base to ensure the entire root system is removed. Management should occur May to June, prior to seed set. Tamp down soils after removal to minimize disturbance. Bag and remove all plant parts from site. Solarize by placing bagged plant material in the sun for at least two-weeks and then dispose of in an approved landfill.

Large infestations - Apply a selective application of glyphosate or triclopyr-based herbicide. Applications should be performed prior to seed set, typically by July. Read and abide by the herbicide product label.

Mowing is an effective suppression strategy when repeated consistently to prevent the production of seed pods. However, mowing will not affect rhizome growth.

Tips for using herbicide:

Use the Minimal Tool Approach. Pesticide application is only one tool in the management toolbox. Evaluate all available control options before resorting to chemical means.

Safety first! Always take appropriate safety precautions; wear suitable clothing and personal protective equipment and follow all safety instructions on the pesticide label.

Not near water! General use pesticides that are available to homeowners are NOT approved for use in or near water.

Read the label. All herbicide must be applied in strict accordance with the manufacturers label.

Things You Should Know About Herbicide:

- **The Label is the Law.** Read and abide by the herbicide product label. It will provide guidance on mixing, application techniques, and safety precautions.
- **Know Your Limits.** Homeowners may only apply general use pesticide products to their own property. Restricted use products or applications to other properties requires commercial pesticide certification/licensing.
- **Exercise Caution When Using Pesticides Near Water.** General use pesticides that are available to homeowners are NOT approved for use in or near water. Aquatic applications must be performed by a certified applicator.
- **Be Patient.** Systemic herbicide such as glyphosate and triclopyr may require up to two weeks to take effect. Do not waste pesticide, money or effort by spraying more than necessary.

Application Techniques

Foliar Spray

Foliar spray utilizes a backpack or handheld sprayer to apply a diluted solution of herbicide the leaves of a target plant. It is best suited for large or dense infestations. Applications should be performed during periods of low wind to prevent herbicide spray drift and off-target impacts.



Reference the herbicide product label to determine the optimal dilution rate for your target pest.

Stem Injection

Stem injection a highly selective herbicide application technique used to treat hollow stemmed species such as Japanese knotweed. It utilizes a specialized injection tool to deliver a small dose of concentrated herbicide into the hollow stem of an invasive plant. This technique is resource intensive but presents very little risk for off-target impacts and is the most effective treatment option for Japanese knotweed.

Stem injection most often utilizes a 100% concentrate of glyphosate-based herbicide.



Herbicide Product

Glyphosate-based products (ex: RoundUp) are widely available for purchase by non-certified individuals. They are effective for controlling many types of invasive species. Be aware that glyphosate is a broad-spectrum product, meaning it will kill all types of vegetation. Use herbicide with caution and always follow the product label.

Glyphosate products used for invasive species control should contain *at least* 40% active ingredient. Weaker products may not provide effective control of tough species such as Japanese knotweed.



Herbicide Application Guide:



Purple Loosestrife

Apply a foliar spray 1 - 2 % glyphosate solution between July and early August, before seed set. General use herbicides may not be applied in wetland areas.



Garlic Mustard

Apply a foliar spray of 1 – 3% glyphosate solution. Second-year plants should be treated before seed set occurs in July. Rosettes can be treated in the early spring or fall when most native species are dormant, reducing the likelihood for non-target impacts.



Japanese Knotweed

Apply a foliar spray of 2 – 5% glyphosate solution when the plants near peak growth and flower. Repeat applications will be necessary for several consecutive years.

Plants may also be treated via stem injection. Apply 2-5ml per stem of a 100% glyphosate-based herbicide.



Common Reed

Apply a foliar spray of 1-2% glyphosate when plants near peak growth and begin producing seed heads/tassels.

After initial treatment, return to the site early the next season to remove dead stalks, encouraging growth of suppressed vegetation. General use herbicides may not be applied in wetland areas.



Swallow-wort spp.

Apply a foliar spray of 1-2% glyphosate or triclopyr before plants produce seeds in July.

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