

HELP PROTECT OUR LANDS FROM INVASIVE SPECIES

Best Management Practices for Moving Topsoil and Fill

Invasive species are spread in ways as varied as the invasive species themselves. Although invasive species can be spread naturally, such as by plant seeds attaching to an animal's fur, many are spread by human activities.

Invasive species are often spread in excavated materials such as topsoil, gravel, and other types of fill. These excavated materials can be contaminated with seeds or fragments of invasive plants and animals. Moving contaminated excavated materials can introduce invasive species to new areas, harming the native plants and animals that live there and causing significant economic and ecologic harm.

Moving even small amounts of excavated materials on equipment—such as in tire treads—can transport eggs, seeds, or fragments of invasive species to a new area. Invasive species are difficult and costly to eradicate once introduced. Following these best management practices is the most cost-effective way to prevent the spread of invasive species.

At the Site of Excavation

The excavation site is any location where topsoil, gravel, or other fill is to be disturbed. Excavated materials can be replaced back on site or can be moved to a new location.

- Ensure staff and equipment operators are informed about the importance of preventing the spread of invasive species. Your local Partnership for Regional Invasive Species Management (PRISM) may be able to provide guidance on where to find information for this training.

- Prior to beginning work, inventory invasive plants in both the excavation and buffer areas, including ditches, rights-of-way, or temporary roads. Ensure sufficient time remains between the inventory and the start of excavation to allow for invasive species management to take place.

- Develop a control plan if invasive species are present. If possible, do not work in the area until the invasive species are managed. Note that invasive seeds and fragments may still be present in the soil even after plants are removed, and that follow-up monitoring will be required to ensure new plants that emerge are managed in a timely manner.

Important elements of a control plan

- Clearly mark areas where invasive species are present and avoid parking

or driving equipment in those areas.

- Ensure excavation areas, storage piles, and staging areas are free of invasive plants.

- * Regularly monitor excavated material storage piles for the presence of invasive species and manage any new invasive plants that emerge in a timely manner.

- Do not use contaminated excavated materials off site until all viable plant material, including the seed bank, is destroyed (see "Disposing Contaminated Excavated Materials").

- * If contaminated excavated materials are to be used on site, ensure that the excavated materials will be stockpiled in a location adjacent to the removal site and, following construction, will be returned to their original location to prevent the spread of invasive species.

- If excavation and/or construction in areas of the site containing invasive species cannot be avoided, ensure that the movement of equipment is from areas of the site that are not infested into areas that are infested. Above-ground invasive plant material should be removed prior to the start of work to help limit unintentional movement of plant fragments.



Japanese knotweed can grow in many conditions, including sandy fill.

Invasive Species Are:

- Plants or animals that are not native to the local ecosystem; and,
- Plants or animals that are likely to cause harm to the environment, economy, or public health

Impacts of Invasive Species:

- Loss of biodiversity
- Alteration of nutrient cycling
- Alteration of hydrology
- Loss of food and habitat for wildlife
- Increase in human health risks such as chemical burns from toxic plant sap
- Costs of removing invasive species
- Costs of repairing and maintaining infrastructure



Soil disturbance activities such as ditching can facilitate invasive species spread.

For more information contact the Adirondack Park Invasive Plant Program

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When invasive species are not managed prior to construction, they can flourish once projects are completed.



At the Site of Fill Placement

- Stabilize disturbed soil as soon as possible via seeding and/or mulching using native seeds and/or weed-free mulch.
- After the project is complete, monitor for invasive species emergence at sites where excavated materials were

used. Sites should be monitored for a minimum of two years.

- * If invasive species do emerge, swift action should be taken to develop and implement a control plan to manage them.

When Moving and Maintaining Equipment

- Maintain equipment in an invasive species-free state during the duration of work.
- Work in areas that are free of invasive species first, then move to areas where invasive species are present. Clean equipment before moving it out of the invaded area.
- Inspect equipment, including trailers, before moving off site to ensure it is free of soil and debris containing seeds or plant fragments. Only bring clean equipment to a site.
- Remove soil and plant fragments

from boots and gear. Boot brushes work well.

Remove soil and plant fragments from equipment by:

- Washing at a portable wash station that includes a system for containing the runoff from washing equipment. Note: Containment must be in compliance with state and federal discharge regulations.
- Cleaning with high-pressure air.
- Cleaning with a brush, broom, or other hand tool.

Disposing Contaminated Excavated Materials

Contaminated excavated material that cannot be reused within the limits of the known infestation should be stockpiled on an impervious surface and treated on site to destroy any viable plant material or disposed of using one of the following methods.

Burying

Plant material can be buried a minimum of 3-5 feet below ground. The appropriate depth is dependent on the species.

Herbiciding

Plants can be managed with herbicides. Herbicides are regulated pesticides and applications must be carried out by a licensed pesticide applicator or technician. Permits may be required.

Burning

Burning can be effective, but only burn if it is allowed under local ordinances and if the species does not create harmful fumes.

Transporting

Soil and other materials containing invasive plants or plant parts must be covered during transport.

Solarizing

Plant material can be placed in plastic "contractor" bags or on an impervious surface and covered with plastic until it is partially decomposed (very slimy or brittle). At this point the seeds or plant fragments are no longer viable and can be disposed of in a landfill.

Drying

Plants without fruit or seeds present can be piled on site to dry out. Care should be taken to ensure that roots, or plant fragments for species such as phragmites and knotweed, are not in contact with the ground.



Department of Environmental Conservation

