

Manual and Mechanical Control Methods for Common Invasive Species in Weston – March 2022

Please note that control recommendations may change over time with new information.

Species	Biology	Manual & Mechanical Control Methods	Monitoring Period
Autumn Olive <i>Elaeagnus umbellata</i>	Flowers May to July. Sets seed August to October. Seeds are dispersed by birds and mammals. Adults produce less seed in the shade than the sun. Reproduces primarily by seed with some vegetative spreading.	Seedlings can be hand-pulled. Bigger plants can be removed with a weed wrench. Care should be taken to get entire root system. Plants re-sprout vigorously when cut or mown unless treated with herbicides after cutting. Prioritize removal of heavily-fruited plants.	3 years Seeds do not persist in seed bank, but quickly-germinating berries spread easily from nearby plants. Monitor for re-sprouting.
Black Swallowwort <i>Cynanchum louiseae</i> syn: <i>Cynanchum nigrum</i>	Flowers June to August. Seeds released August to October and spread long distances by wind. Local spread and establishment is frequently through clonal growth from rhizomes.	Plants can be dug up with a shovel. Care should be taken to remove entire root system to prevent re-sprouting. Mowing, even several times a year, will not eradicate plants but is useful for preventing a seed crop. Cutting early in the season to mid-July (when there are small, immature pods on the plants) is effective at preventing a mature seed crop.	6 years Seeds remain viable up to 5 years. Monitor for re-sprouting.
Burning Bush <i>Euonymus alatus</i>	Flowers late April to June. Seeds dispersed September to October by birds. Reproduces by seed and vegetatively.	Small plants can be hand-pulled. Bigger plants can be removed with a weed wrench. Pulling is best done when there is enough moisture to ensure the full root is removed. Mowing, cutting, and burning are not recommended, as they promote vigorous regrowth. Care should be taken to remove entire root system to prevent re-sprouting.	5 years No data available on seed viability over time. Monitor for re-sprouting.

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Bush Honeysuckles <i>Lonicera maackii</i> , <i>Lonicera morrowii</i> , <i>Lonicera tatarica</i> , <i>Lonicera x bella</i>	Flowers April to June. Fruits prolifically and is highly attractive to birds, which widely disseminate seeds. One of the earliest plants to leaf out in the spring and one of the latest to drop its leaves in the fall, allowing it to outcompete other plants. The berries are mildly poisonous if eaten.	Small plants can be hand-pulled. Bigger plants can be removed with a weed wrench. Care should be taken to remove entire root system to prevent re-sprouting and not to spread berries. Alternatively, cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth. Herbaceous stems will re-sprout in compost or brush piles; burn or bag to prevent spreading during disposal.	3 years Few seeds viable for more than 1 year. Monitor for re-sprouting.
Common Reed <i>Phragmites australis</i>	Inflorescences develop in late June. Reproduces by seed and vegetatively. Each plant may produce thousands of seeds annually, which are dispersed by wind. Along rivers and shorelines, fragments of rhizomes may be washed down to new sites where they can become established.	In summer, cut stems beneath the lowest leaf, before the flowers produce seed. In loose or sandy soil, hand cut individual stalks below the soil surface. In water, cut below water surface level and deep enough that new shoots cannot reach the surface – this cuts off access to oxygen. Smothering can be effective. Herbaceous stems will re-sprout in compost or brush piles; burn or bag to prevent spreading during disposal.	2 years Seed viability is typically low, although it may vary year to year. Monitor for re-sprouting.

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Garlic Mustard <i>Alliaria petiolata</i>	Flowers April to May, sets seed in June. A biennial plant. After spending the first half of the two-year life cycle as a rosette of leaves ("basal rosette"), plants develop rapidly the following spring into mature plants that flower, produce seed and die by late June. A single plant can produce thousands of seeds, which scatter as much as several meters from the parent plant.	Basal rosettes and full plants can be hand-pulled. Plants should be pulled at base near ground to ensure that the entire taproot is removed. At minimum, cut plants to ground before or during spring bloom to prevent seed production (since seeds are viable for many years).	10 years Seeds remain viable for 5 or more years.
Glossy Buckthorn <i>Frangula alnus</i>	Flowers May to September, fruits late July to September. Seeds are dispersed by birds and small mammals. Reproduces by seed.	Small plants can be hand-pulled. Bigger plants can be removed with a weed wrench. Care should be taken to remove entire root system to prevent re-sprouting. Alternatively, cut plants back at any time of year, then wrap with thick plastic; check and cut back any new growth (google "Buckthorn Baggie" for more information).	7 years Seeds remain viable for 5-7 years. Monitor for re-sprouting.
Japanese Barberry <i>Berberis thunbergii</i>	Flowers April to June, fruits July to October. Spreads by seeds and vegetatively. The seeds have a 90% germination rate. Seeds are dispersed by birds and small mammals.	Small plants can be removed by hand-pulling or using a weed wrench. Care should be taken to remove entire root system to prevent re-sprouting. Alternatively, cut stumps back in fall or winter, then wrap with thick plastic; check and cut back any new growth.	2 years Seeds do not persist in seed bank. Monitor for re-sprouting

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<p>Japanese Knotweed</p> <p><i>Fallopia japonica</i></p>	<p>Flowers mid-August for approximately 3 weeks, then sets seed. Pollinated by bees, which visit the plants in copious amounts when flowering; chemical applications can impact pollinating bees. Can regrow full plants from cuttings as well as from rhizomes. Often transported to new sites as a contaminant in fill-dirt.</p>	<p>Hand-pull or uproot young plants in spring. Cut stalks repeatedly throughout the growing season each time they reach 12" high, being careful not to scatter fragments that might re-sprout. Smothering can be effective. New treatment involving mesh wire has potential: https://vtinvasives.org/news-events/news/a-new-way-to-treat-knotweed. Herbaceous stems will re-sprout in compost or brush piles; burn or bag to prevent spreading during disposal.</p>	<p>4 years</p> <p>Seeds do not remain viable beyond 1 year, but rhizomes and other plant parts can sprout up to 3 years after treatment.</p> <p>Monitor for re-sprouting.</p>
<p>Japanese Stiltgrass</p> <p><i>Microstegium vimineum</i></p> <p>(not a Sour 16 species but an Early Detection species that has been located in Weston)</p>	<p>Flowers late summer, fruits early fall. By mid-fall, the stems turn purplish—this is when the plant is most recognizable. Seeds sticks to animal fur, clothing, boots, tires, and other surfaces. Wind and water currents also spread the seed. During the growing season, sprawling stems root at the nodes, sending up new shoots.</p>	<p>Small patches can be hand-pulled and bagged or weed-whacked repeatedly each year before flowering and seeding. When pulling, care should be taken to remove entire root system to prevent re-sprouting.</p>	<p>7 years</p> <p>Seeds remain viable for 5-7 years.</p> <p>Monitor for re-sprouting</p>
<p>Multiflora Rose</p> <p><i>Rosa multiflora</i></p>	<p>Flowers April to June, fruits July to December. Reproduces by seed and by forming new plants that root from the tips of arching canes that contact the ground. Seeds dispersed by birds. Average plants may produce a million seeds per year, which remain viable for up to twenty years.</p>	<p>Plants can be hand-pulled, easiest in spring. Use a weed wrench on large plants. Repeated cutting 3-6 times a growing season for several years can be effective. When pulling, care should be taken to remove entire root system to prevent re-sprouting. Herbaceous stems will re-sprout in compost or brush piles; burn or bag to prevent spreading during disposal.</p>	<p>20 years</p> <p>Seeds remain viable for up to 20 years.</p> <p>Monitor for re-sprouting</p>

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Oriental Bittersweet <i>Celastrus orbiculatus</i>	Flowers May to June, fruits later summer through fall. Reproduces prolifically by seed, which is readily dispersed to new areas by many species of bird. Seeds germinate in late spring. Also spreads vegetatively.	Seedlings are easy to hand-pull. Bigger vines can be removed by cutting as high up as you can reach, then unwinding the bottom section from its host and using a weed wrench to uproot it. Care should be taken to remove entire root system to prevent re-sprouting. Alternatively, cut stems close to root collar every two weeks throughout entire growing season (spring to fall). Herbaceous stems will re-sprout in compost or brush piles; burn or bag to prevent spreading during disposal.	5 years Seeds remain viable for several years. Monitor for re-sprouting.
Purple Loosestrife <i>Lythrum salicaria</i>	Flowers June to September, sets seed in late July or August. A mature plant may produce three million seeds per year. Also readily reproduces vegetatively through underground stems at a rate of about one foot per year.	Plants can be removed by hand-pulling or using a garden fork to remove the deep roots of older plants. Care should be taken to remove entire root system to prevent re-sprouting. Some beetle species (<i>Galerucella</i> and others) are recommended as biological control agents; useful if a beetle source can be found.	Ongoing Produces nearly inexhaustible seed bank. Monitor for re-sprouting
Spotted Knapweed <i>Centaurea stoebe</i>	Flowers July to September, sets seed mid-August. Reproduces by seed. Most seeds are dispersed near the parent plant but can be transported by people, wildlife, livestock, vehicles, and in soil, crop seed, and contaminated hay.	Plants can be hand-pulled and bagged. Care should be taken not distribute seeds if present when pulling and disposing. Mowing can be effective with multiple mows/year; be sure to mow prior to seed-set.	10 years Seeds remain viable for 8 or more years.

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<p>Tree of Heaven <i>Ailanthus altissima</i></p>	<p>Flowers May to June, fruits July. Individual trees may produce an estimated 325,000 seeds per year. Reproduces by seed and vegetatively with vigorous re-sprouting at cutting.</p>	<p>Small plants can be removed by hand-pulling or using a weed wrench. Care should be taken to remove entire root system. Spring or early summer cutting will slow growth, but may not inhibit flower, fruit, and seed production. Repeated cutting of big plants or mowing seedlings on a monthly cycle will be more effective at stunting the plant and inhibiting fruit and seed production. Targeting large female trees for control will help reduce spread by seed.</p>	<p>2 years</p> <p>Few seeds remain viable after 1 year.</p> <p>Monitor for re-sprouting.</p>
<p>Water Chestnut <i>Trapa natans</i></p>	<p>Aquatic plant. Emerges in June, sets seed July to August. Spreads by leaf rosette and seed. The fruit can detach from the stem and float to another area on currents or by clinging to birds and other floating objects.</p>	<p>Small patches can be hand-pulled in canoes and kayaks. Important to pull before seed-set. Complete removal of plants is important, as floating, uplifted plants and plant parts can spread the plant to new locations.</p>	<p>15 years</p> <p>Seeds remain viable for 12 or more years.</p>