

Noxious Weed Identification Guide

SOURCES:

From <http://www.mtweed.org/manual-weed-control/>

Washington State Noxious Weed Board - <http://www.nwcb.wa.gov/>

2012 Noxious Weed List - http://www.nwcb.wa.gov/siteFiles/2012%20State%20Weed%20List_Common_Name.pdf

Botanical Bullies - http://www.nwcb.wa.gov/publications/botanical_bullies.pdf

Invasive Ornamentals - http://www.nwcb.wa.gov/publications/invasive_ornamentals.pdf

Western Field Guide - <http://www.nwcb.wa.gov/publications/WesternFieldGuide2009.pdf>

Best Management Practices on Weed Control by Weed - <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-control-practices/bmp.aspx>

Weed identification photos - <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification.aspx>

More from King County - www.kingcounty.gov/weeds

BACKGROUND INFORMATION:

What is a noxious weed?

'Noxious weed' is the traditional, legal term for any invasive, non-native plant that threatens agricultural crops, local ecosystems or fish and wildlife habitat. The term 'noxious weeds' includes non-native grasses, flowering plants, shrubs and trees. It also includes aquatic plants that invade wetlands, rivers, lakes and shorelines. About half of all invasive, noxious weeds are escapees from gardens; the rest are plants accidentally introduced to Washington through human travel and trade.

Where are they a problem?

Invasive plants disrupt many natural habitats. They are most threatening in ecosystems such as wetlands, sand dunes, fire prone areas, and serpentine barrens where rare native plants are found. Invasive plant species thrive where the continuity of a natural ecosystem is breached and are abundant on disturbed sites like construction areas and road cuts. Even foot traffic can create a temporary void that is quickly invaded—some national parks have restricted the areas where visitors are allowed to walk with the warning, "we can watch purple loosestrife grow from people's footsteps."

Why are they a problem?

It's a matter of ecology. In many cases, plants from other parts of the world are welcomed, manageable additions to our gardens. However, in some situations these non-native species cause serious ecological disturbances. In the worst cases, invasive plants like mile-a-minute, purple loosestrife, and kudzu ruthlessly choke out other plant life. This puts extreme pressure on native plants and animals, and threatened species may succumb to this pressure. Ultimately, invasive plants alter habitats and reduce biodiversity.

Where do they come from?

In some cases, invasive plants arrive purely by accident, as seed in agricultural products, or on shipments from overseas. In other cases, invasive plants are selected for their horticultural attributes. Beautiful, unusual, exceptionally hardy, drought-tolerant, or fast-growing plants are sought by gardeners the world over. Unfortunately, plants selected for their resilience may be invasive because of their adaptable nature. Plants selected for their aesthetic value may be hard to banish from your garden even after their invasive tendencies are revealed.

How do noxious weeds spread?

About half of the noxious weeds in Washington are "escapees" from gardens, and that explains why so many of them are quite beautiful.

Others came to Washington as “stowaways” on ships, as seeds accidentally included in packing material, or on the wheels or shoes of travelers. The more people travel – and the more globally connected our world becomes – the more we spread seeds and plant fragments from place to place. Sue Winterowd, Stevens County NWCBW-3

So What?

Over \$100 million a year is spent in the U.S. combating invasive plants in wetlands alone. Rich, diverse plant communities can become barren, inhospitable expanses of invasive plants with little value to wildlife. Invasive plants may even deplete groundwater resources. Plants introduced to North America from other parts of the world have come to dominate millions of acres of forest, desert, prairie, and wetlands. Choosing plants wisely and controlling potentially invasive plants in your garden and on your property are the best ways to preserve healthy native plant habitats. Garden responsibly and control invasive plants while they are still in your garden.

Why are there laws about noxious weeds?

Weed laws establish all property owners’ responsibility for helping to prevent and control the spread of invasive plants. Since plants grow without regard to property lines or political jurisdictions, everyone’s cooperation is needed to combat them. City gardeners, farmers, public land owners, foresters, and ranchers all have a role to play in this effort. Washington’s first noxious weed law was passed in 1881 to combat the spread of invasive plants that threatened farmers’ fields. For many decades, the agricultural community led efforts to combat the spread of invasive plants.

More recently, people have recognized the harm invasive plants cause to native ecosystems and wildlife. For instance, when spotted knapweed spreads in mountain meadows, it can reduce the native plants elk eat by 90%. Washington’s state weed law (RCW 17.10) established the State Noxious Weed Control Board, and authorized counties to establish County Noxious Weed Control Boards. Many County Noxious Weed Control Boards are financed with a small assessment included in property tax statements.

Class A Noxious Weeds

Class A noxious weeds are non-native species whose distribution in Washington State is still limited. Eradicating existing infestations and preventing new infestations are the highest priorities. Eradication of all Class A plants is required by law.

Class B Noxious Weeds

Class B noxious weeds are nonnative species whose distribution is limited to portions of Washington State. Species are designated for control in state regions where they are not yet widespread. Prevention of new infestations in these areas is the primary goal. In regions where a Class B species is already abundant, control is decided at the local level. Containment of these weeds is the primary goal so that they do not spread into un-infested regions. Please contact your County Weed Board to learn which species are designated in your area, or [click here](#) to see a map of Regions with links to the Class B Designates for each Region.

Class C Noxious Weeds

Class C noxious weeds are either already widespread in Washington or are of special interest to the agricultural industry. The Class C status allows a county to enforce control if it is beneficial to that county. (for example: to protect crops). Other counties may choose to provide education or technical support for the removal or control of these weeds. Bull Thistle, common ivy, Common Tansy, Himalayan Blackberry, Reed Canary Grass, Yellow Flag Iris, Canada Thistle,

Purple Loosestrife (*Lythrum salicaria* and *L. virgatum*) <http://www.mtweed.org/purple-loosestrife/>

Common Names - purple lythrum, bouquet-viole, spiked loosestrife

Class B Noxious Weed - Control Required



Description

Purple loosestrife is a perennial that can grow up to ten feet in height and typically prefers moist or riparian habitat. Due to the numerous four-sided stems that are green to purple in appearance, this plant appears woody and bush-like in appearance. Clasping leaves have smooth margins, are lance shaped, and are heart-shaped or rounded at the base. Purple loosestrife leaves and stems are covered by downy fine hairs, and leaves are whorled or alternate on the stem. In autumn with dehydration, the leaves of purple loosestrife turn red in color. The showy purple to magenta colored flowers are clustered on a long spike that can extend two inches to three feet down the stem called a raceme. Each flower has five to seven petals and blooms from June to September. Seeds burst at maturity around late July or early August, with each stem producing up to three million tiny seeds per year. Purple loosestrife has a dense, woody, and extensive root system. This root system and the prolific seed production results in rapid spread of loosestrife. In addition, stems of the plant that are broken off or disturbed often grow shoots. Square or octagonal stems, the red leaves if the plant gets dried out in the fall, and the long clusters of showy purple to rose colored flowers.

Habitat

As a general rule, moisture is required for growth and reproduction, however, well-established plants can persist on dry sites. It is well suited to seasonal wetlands, and is capable of invading wet meadows, river and stream banks, pond edges, reservoirs, and ditches, irrigation canals, and marshes. The seeds of this plant easily wash into waterways, and can be carried in the mud on the feet of waterfowl. Stands of loosestrife spread exponentially in wetlands and along stream beds.

Impact

Purple loosestrife displaces large areas of riparian and wetland native plants needed by waterfowl and other wildlife for food, nesting, and groundcover. This invasive wetland species changes the nutrient cycle, affecting the food web. It also clogs irrigation canals and drainage ditches.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:

http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/purple_loosestrife-control.pdf

Tansy Ragwort - (*Senecio jacobaea*) <http://www.mtweed.org/tansy-ragwort/>

Common Names - tansy ragwort, tansy butterweed, ragwort, stinking willie

Class B Noxious Weed in Washington State and control is required in selected counties in the state, including King County.



Description

A beautiful plant, tansy ragwort is a biennial plant or short-lived perennial in the sunflower family. This plant germinates in the fall or early winter, lives through the following year as a rosette, then dies the next year after producing flowers and seeds. Rosettes of this plant have ten to twenty leaves with cottony, web-like hairs that are directly attached to the main stem. Lower leaves can be up to ten inches long, are irregularly lobed into leaflets with the leaflets being lobed again. Leaves are alternate, appear ruffled, have rounded tips, and decrease in size up the stem. Tansy generally grows from one to three feet in height, but with the right conditions, may grow up to six feet. The ray, daisy-like flowers can be a half an inch long, and the flower heads have a disk with thirteen petals (usually). Flowers are clustered at the end of the stems. Seeds have a white pappus and can be carried along by the wind, resulting in rapid spread. A single large tansy ragwort plant can produce up to 200,000 seeds. The root system consists of extensive light-colored roots that spread and produce shoots when stimulated by mechanical treatment. Daisy-looking flower heads with thirteen petals, ruffled leaves and cottony web-like hairs that attach from the leaves to the stems.

Habitat

Tansy Ragwort prefers to grow in disturbed areas; it is often found on waste places, roadsides, pastures, hayfields, creek bottoms, pastures, after forest fires and forest clear-cuts.

History and Impact

An invader from Europe, tansy ragwort was first seen in seaports in the early 1900's and is often spread in contaminated hay. When prevalent, tansy ragwort is one of the most common causes of poisoning in cattle and horses, caused by consumption of the weed found in pasture, hay or silage. Milk produced by affected cows and goats can contain toxins. Stock does not reject or avoid it in hay or silage; its poisonous alkaloids are unaffected by drying. Honey from tansy ragwort also contains the alkaloids.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices

<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/common-tansy-control.pdf>

http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/tansy_ragwort-control.pdf

Canada Thistle - (*Cirsium arvense*) <http://www.mtweed.org/canada-thistle/>

Common Names - California thistle, creeping thistle, field thistle

This Class C noxious weed is widespread throughout the state that is much more difficult to control than Bull Thistle. In King County control is recommended, but not required.



Description

Canada thistle is a familiar perennial in Montana as it is found in every county in the state. It can reach heights of four feet and forms deep and extensive root systems, making it difficult to control. Creeping horizontal roots sprout new plants and can reach more than nineteen feet in one season. These roots can also go as deep as twenty two feet. Rosettes are smooth, have irregular lobes and have spine tipped edges. Thistle leaves are distinctive as they are thorny, alternate and deeply lobed. Leaves are lance-shaped and the edges have yellowish spines, making hand pulling a thorny proposition. Stems can grow tall, are often branched, slightly hairy, and lack spines. Flowers resemble spotted knapweed in that they are pink to purple and ray-like. Canada thistle produces both female and male flowers and both genders must be present for the plant to go to seed. Male flower heads are globe-shaped while female flower heads are flask-shaped. Canada thistle flowers tend to be smaller than other thistle species. Each female flower produces a single, tan curved seed which has a papery covering and is easily tossed about by the wind. One plant is capable of producing over 3,000 seeds annually. This plant reproduces by both seed and root, but primarily from the roots. Roots that are creeping, extensive and deep, spines on the tips of the leaves, and pink flowers that resemble spotted knapweed.

Habitat

Canada thistle is found in open areas with a moderate amount of moisture but does poorly on wet soils lacking sufficient oxygen. It can grow on many different soil types but it does not grow well in shade and is rarely found within wooded sites, except in clearings. It is commonly found in abandoned fields or lots, abandoned gravel pits, pastures, right-of-ways, roadsides, railway embankments, lawns, gardens, and agricultural fields. It also invades wet areas with fluctuating water levels such as stream banks or irrigation ditches and sloughs.

Impact:

Like other invasive thistles, these species reduce forage quality of rangeland and pastures. Dense infestations of Canada thistle can severely damage croplands.

Control

For small patches, dig up and discard slenderflower thistle before flowers set seed. Selective herbicides can be effective for larger populations. Canada thistle's extensive root system produces numerous shoots, making control difficult. For small infestations, frequent tilling or mowing can be effective. Larger infestations may be more effectively controlled with selective herbicides or with biocontrol.

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:

<http://www.nwcb.wa.gov/detail.asp?weed=35>

Bull Thistle - *Cirsium vulgare* <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/bull-thistle.aspx> and <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/Brochures/Bull-Thistle-factsheet.pdf>

Class C Noxious Weed - Rosaceae Control Recommended. It is on the Non-Regulated Noxious Weed List for King County, Washington. Control of bull thistle in King County is recommended but not required.



Impacts and History

A common weed of roadsides, pastures, vacant fields, burned areas, and logged areas. Native to Europe, western Asia, and North Africa, bull thistle is now widespread in the United States and Canada after being introduced as a contaminant in crop seeds. Common in overgrazed pastures where it may form dense stands that reduce productivity and stocking levels. May dominate forest clear cuts and reduce growth of tree seedlings.

Description

As a biennial, bull thistle has a two - year life cycle. Plants grow vegetatively their first year as rosettes of green, sparsely hairy leaves. The flowering stems elongate and flower in the second year. The plants die after flowering or after the first frost. Flowering stems reach 2 - 5 ft in height. The heads of purple flowers are 1.5 - 2 in wide and are located at the branch ends. The flower head bases are covered in spine - tipped bracts. The upper leaf surfaces are sparsely hairy with short prickles on the leaf surfaces and cottony hairs on the leaf undersides. There are sharp spines on the leaf margins and leaf tips.

Habitat

Prefers full sun and cannot tolerate shade. Common in recently or repeatedly disturbed areas, especially pastures, overgrazed rangelands, roadsides and logged areas. Can become a dominant species following disturbance.

Reproduction and Spread

Plants can flower from June until the first frost. Mature plants can produce up to 4,000 seeds per plant. Seeds are capped with a circle of white hairs and can be windblown for long distances; however, most fall within only a few feet of the parent plant. Bull thistle reproduces only by seed. Seeds usually germinate in the spring and fall. The seeds are short - lived and most on or near the soil surface do not remain viable for more than a year. Seeds buried at a depth of 5 inches may remain viable for up to three years. Tilling, grazing or other soil disturbance may cause these seeds to germinate.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices: <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/bull-thistle-control.pdf>

Yellow-Flag Iris - (*Iris Pseudacorus*) <http://www.mtweed.org/yellowflag-iris/>

Common Names

Yellow flag iris, yellow iris, water flag, pale yellow iris, European yellow iris
Class C Noxious Weed; Not Designated for Control



Description

Yellowflag iris is a perennial or aquatic perennial that grows up to 4 feet in height. It likes wetland areas and as it is a beautiful plant, it has been introduced as an ornamental. The leaves resemble cattails; they are sword-shaped, broad, flat and stiff and are a grayish-blue in color. The flower is the distinguishing characteristic with a large, bright yellow, showy flower. Often the flower has brown or purple veins at the base and stems may have multiple flower heads. Flowers bloom from April to June. Seed pods are egg shaped and each of the six pods formed by a fruit capsule produces around 120 seeds. These seeds fall into the water, remain buoyant and can spread over long distances by waterways. This plant also spreads by its incredibly dense and extensive root system.

Habitat

Yellow flag prefers moist soils and full sun. It grows in fresh or brackish water and often occupies habitats that have low oxygen. It can be found along shorelines, ditches, stream-banks, floodplain forests, areas of shallow water, low-lying wetlands, wet meadows, and fish ponds.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:
<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/yellow-flag-iris-control.pdf>

Japanese Knotweed (*Polygonum cuspidatum*)/**Giant Knotweed** (*P. sachalinense*) <http://www.mtweed.org/knotweed-complex/>

Common Names - Mexican bamboo, fleeceflower, Mexican bamboo, huzhang, Sakhalin knotweed

The four knotweed species - giant, Japanese, Bohemian, and Himalayan - are all tall, shrub-like, perennial, herbaceous plants.



Description

Japanese and Giant knotweeds are members of the buckwheat family and were introduced into Montana as ornamentals. These knotweeds are shrub-like perennials that can grow over ten feet in height. Young shoots grow from spreading rhizomes that can reach sixty five feet in length, and shoots are fat and red or red and green speckled. The stems are smooth and swollen at the joint where the leaf meets the stem and resemble bamboo. Leaf size is around six inches long by three to four inches wide, they are broadly oval to heart-shaped, and leaves are alternate on the stem. From August to September, the small pale green to white flowers occur in attractive sprays about four inches long. Seeds are triangular, shiny and about 1/10 inch long. As with many invasives, the knotweeds reproduce by seed and by extensive root systems. Japanese and Giant knotweeds easily hybridize. The plant does not tolerate frost and after the first hard frost, rapidly turns brown and dies for the season.

Key Features

Large, broad heart-shaped leaves, bamboo type stems and white-ish green, showy flowers. Also look for a great deal of height from this plant.

Habitat

Knotweeds tolerate a variety of conditions. They prefer full sunlight, but can tolerate full shade as well. They thrive in the warm weather and riparian areas and wetlands, but will tolerate dry soil and salt as well. Knotweeds can often be found near water sources, such as streams and rivers, floodplains, low-lying areas, and wetlands. Knotweeds are also found in abandoned fields, forest edges, disturbed soils, roadsides, right-of-ways, vacant lots, waste places, and around old home sites.

Impact

The knotweeds' greatest impact is along streams and in riparian areas where they can completely displace native vegetation, erode stream banks, and change the nutrient cycle at the expense of salmon and other animals. Knotweed roots can grow so vigorously that they erupt through blacktop and damage foundations and other infrastructure.

Control

Knotweed's extensive roots and vigorous growth makes it extremely difficult to control. Although small patches can be dug up, it may take several years to eradicate, and most stands require repeated applications of herbicide over several years. County noxious weed control boards can provide advice and assistance. Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:

<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/Knotweed-Control.pdf>

Tall Buttercup - (*Ranunculus acris*) <http://www.mtweed.org/tall-buttercup/>
<http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/tall-buttercup.aspx>

Common Names - blister plant, butter flower, butterrose, common buttercup, crazy weed, field buttercup, gold cup, meadow buttercup, tall crowfoot, tall field buttercup, upright meadow crowfoot.



Description

Tall buttercup is a perennial that resembles the native buttercup, but grows much taller in height. Long erect stems can be from one to three feet in height and emerge from short, thick rootstocks. Stems are hollow and hairy and often branched near the top of the plant. Leaves of tall buttercup are palmately divided. Lower leaves have long petioles and are hairy on all surfaces. Upper leaves are smaller, farther apart and usually three lobed. Flowers are bright yellow with five rounded petals and have a glossy appearance. Each flower produces yellowish, egg-shaped, flat seeds with a short, tipped hook on the ends. Tall buttercup is toxic to livestock while on the stem. One inch, bright yellow flowers look as if they have been dipped in shellac; long, erect, hairy stems; palmately-divided, hairy leaves.

Habitat

Tall buttercup can be found in a variety of habitats, but prefers heavy, moist soils including wet lowlands and rich woodlands. If it has enough moisture, it will also grow in sandy or gravelly soils. It is a common weed in pastures, meadows, open areas, and along roadsides. It usually does not persist in cultivated fields. Infestations will decrease greatly in very dry years, but rebound and expand in wet years.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:
<http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/tall-buttercup.aspx>

English Ivy

<http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/english-ivy.aspx>

The four cultivars of English Ivy that have been shown to be the most invasive in the Pacific Northwest are listed as Class C noxious weeds in Washington State: *Hedera helix* 'Baltica', *Hedera helix* 'Pittsburgh', *Hedera helix* 'Star', *Hedera hibernica* 'Hibernica' (see below for pictures). *Hedera hibernica* is also called Atlantic or Irish Ivy but is very similar to English Ivy and is generally called English Ivy by most people.



Description

This woody, evergreen perennial grows as a vine (climbing or creeping) or as a shrub. English ivy can photosynthesize year-round, and is capable of growth for 9 to 10 months of the year. Older vines can grow over 90 feet long with stems reaching one foot in diameter. English ivy is long-lived with reports of one plant over 400 years old. Adventitious roots are formed at the leaf nodes of immature plants, and they help ivy climb by adhering or anchoring to surfaces – they do not penetrate the surface. Ivy tolerates a wide range of light conditions but growth is stimulated by light. The entire plant contains slightly toxic compounds. Berries and leaves are toxic to people or livestock if eaten in a large quantity. *Hedera* is native to Europe and Asia, and was widely introduced into temperate parts of the world. Introductions to the Pacific Northwest date back to at least the 1890's. There are two distinct forms and growth stages of English ivy – the juvenile and the mature form.

Reproduction And Dispersal

During the juvenile stage ivy only spreads vegetatively. Any stem fragments in contact with the soil can regenerate growth. Mature plants continue with a slower vegetative spread, but they also produce flowers and spread by seed. Clusters of small greenish-white flowers are usually produced in the fall. Given a foothold, English ivy suppresses and excludes other vegetation to form a dense monoculture groundcover, unsuitable as wildlife habitat, except perhaps for rodents. In the Pacific Northwest, English ivy invades the forest floors. Its evergreen leaves smother other native forest plants by denying them light. Interestingly, English ivy only reaches maturity and goes to seed after it has grown up a vertical surface.

Impacts

When English ivy escapes from landscaped plantings it often establishes and spreads in shaded forested lands or natural areas. There it can impact all three zones of a deciduous or conifer plant community – the forest floor, the shrub layer and the canopy.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:

<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/english-ivy-control.pdf>

<http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/english-ivy.aspx>

Reed Canarygrass - *Phalaris arundinacea* http://dnr.wi.gov/invasives/fact/reed_canary.htm

Class C Noxious Weed



Description

Reed canary grass is a large, coarse grass that reaches 2 to 9 feet in height. It has an erect, hairless stem with gradually tapering leaf blades 3 1/2 to 10 inches long and 1/4 to 3/4 inch in width. Blades are flat and have a rough texture on both surfaces. The leaf ligule is membranous and long. The compact panicles are erect or slightly spreading (depending on the plant's reproductive stage), and range from 3 to 16 inches long with branches 2 to 12 inches in length. Single flowers occur in dense clusters in May to mid-June. They are green to purple at first and change to beige over time. This grass is one of the first to sprout in spring, and forms a thick rhizome system that dominates the subsurface soil. Seeds are shiny brown in color.

Both Eurasian and native ecotypes of reed canary grass are thought to exist in the U.S. The Eurasian variety is considered more aggressive, but no reliable method exists to tell the ecotypes apart. It is believed that the vast majority of our reed canary grass is derived from the Eurasian ecotype. Agricultural cultivars of the grass are widely planted.

Reed canary grass also resembles non-native orchard grass (*Dactylis glomerata*), but can be distinguished by its wider blades, narrower, more pointed inflorescence, and the lack of hairs on glumes and lemmas (the spikelet scales). Additionally, bluejoint grass (*Calamagrostis canadensis*) may be mistaken for reed canary in areas where orchard grass is rare, especially in the spring. The highly transparent ligule on reed canary grass is helpful in distinguishing it from the others. Ensure positive identification before attempting control.

Distribution and Habitat

Reed canary grass is a cool-season, sod-forming, perennial wetland grass native to temperate regions of Europe, Asia, and North America. Reed canary grass is likely to have been introduced from Eurasia, as were most of our weedy grasses. Considered a good forage plant in Sweden as early as 1749, it has been used for pasture, silage, and hay as well as filtration for water pollution control. The seed is used for birdseed. The Eurasian ecotype has been selected for its vigor and has been planted throughout the U.S. since the 1800's for forage and erosion control. It has become naturalized in much of the northern half of the U.S., and is still being planted on steep slopes and banks of ponds and created wetlands.

Reed canary grass can grow on dry soils in upland habitats and in the partial shade of oak woodlands, but does best on fertile, moist organic soils in full sun. This species can invade most types of wetlands, including marshes, wet prairies, sedge meadows, fens, stream banks, and seasonally wet areas; it also grows in disturbed areas such as berms and spoil piles.

Life History and Effects of Invasion

Reed canary grass reproduces by seed or creeping rhizomes. It spreads aggressively. The plant produces leaves and flower stalks for 5 to 7 weeks after germination in early spring, then spreads laterally. Growth peaks in mid-June and declines in mid-August. A second growth spurt occurs in the fall. The shoots collapse in mid to late summer, forming a dense, impenetrable mat of stems and leaves. The seeds ripen in late June and shatter when ripe. Seeds may be dispersed from one wetland to another by waterways, animals, humans, or machines.

This species prefers disturbed areas, but can easily move into native wetlands. Reed canary grass can invade a disturbed wetland in less than twelve years. Invasion is associated with disturbances including ditching of wetlands, stream channelization, deforestation of swamp forests, sedimentation, and intentional planting. The difficulty of selective control makes reed canary grass invasion of particular concern. Over time, it forms large, monotypic stands that harbor few other plant species and are subsequently of little use to wildlife. Once established, reed canary grass dominates an area by building up a tremendous seed bank that can eventually erupt, germinate, and recolonize treated sites.

Control

Integrated pest management practices, manual, chemical, mechanical removal and summary of best management practices:

<http://www.kingcounty.gov/environment/waterandland/lakes/plants/weed-identification/reed-canary-grass.aspx>

Common Reed – *Phragmites australis* <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/phragmites.aspx>
Due to its aggressive tendencies and impact to waterways, the non-native strain or haplotype is a Class B designate weed in Washington State.
Class B Noxious Weed - Poaceae Control Required



Description

Clonal, perennial grass species with woody hollow culms (stems) that can grow up to 15 feet in height. Primarily grows in coastal and interior wetlands, lake margins, and roadside ditches but can also be found in dry areas. Stems are tan, rough and rigid. Leaves are flat, stiff and lanceolate, ranging from 8 - 16 inches long and 0.5 - 2.0 inches wide at the base. Foliage is gray - green during the growing season. Seed head plumes are purple - brown - silver and are 6 – 20 inches long and up to 8 inches broad. These plumes form at the end of the stalk and flower in July through October. It's good to be aware of morphological variation between the native and the invasive phragmites.
<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/common-reed-phragmites-control.pdf>

Impacts and History

The species *Phragmites australis* has been a native wetland inhabitant to the United States for over 3,000 years. However, recent research has shown that in the late 19 th century, several European genotypes of *Phragmites australis* were introduced and had a competitive advantage over native strains as well as other native species. The introduced genotypes now have a widespread distribution in the United States and can be found in every state. The invasive strains of phragmites create tall, dense stands, up to 15 feet tall, which degrade wetlands and coastal areas by competing with native vegetation, (including the native phragmites), for space and resources, creating a monoculture. Elimination of native plant diversity and alterations in hydrology affect the food sources and habitat functions for a wide range of fish and wildlife species.

Both the native and non - native genotypes are found in Washington State, therefore careful identification by an expert is needed before any eradication measures are taken. *Phragmites* spreads rapidly due to its vigorous rhizomes (horizontal roots that produce new shoots) which can exceed 60 feet in length, grow more than six feet per year, and readily grow into new plants when fragmented. The roots form a dense mat underground that can reach a depth of up to 6 feet. The rhizomatous roots of phragmites have an allelopathic effect on other plants, inhibiting root growth in the soil thereby weakening the growth neighboring plants. *Phragmites* can invade a new site by wind dispersal of seeds, however, it spreads more readily by rhizomes.

Himalayan Blackberry – *Rubus armeniacus* (syn. *Rubus discolor*) and *Rubus laciniatus* - <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/blackberry-control.pdf>

Class C Noxious Weeds - Himalayan and evergreen blackberry are European species that are highly invasive and difficult to control.



Description

Himalayan blackberry is a robust, sprawling perennial with stems having large stiff thorns. Main canes up to 10 feet long with trailing canes reaching up to 40 feet. Trailing canes typically take root at the tips. Leaves are large, round to oblong and toothed typically come in sets of three (trailing canes) or five (main stems). Individual canes can reach a density of 520 canes per square meter. Flowers are white to pink, about one inch in diameter and borne in clusters of about 5 to 20 blooms. Develops edible black fruit that clings to the center core when picked.

Evergreen blackberry is a robust trailing evergreen shrub that grows into impenetrable thickets. Ribbed reddish stems up to 10 feet in length with large curved thorns. Young canes arch as they grow longer, eventually reaching the ground and rooting at the nodes. Palmately compound leaves with 3 to 5 deeply lacerated leaflets. Flowers are white to pink about one inch in diameter borne in clusters. Develops edible black fruit that clings to the center core when picked.

Habitat

Blackberry can be found in a myriad of habitats such as vacant lands, pastures, forest plantations, roadsides, creek gullies, river flats, riparian areas, fence lines, and right-of-way corridors. Does not grow well in wetland areas, will grow if cane tip roots.

Reproduction and Spread

Reproduces vegetatively by root and stem fragments and by seed. Plants begin flowering in spring with fruit ripening in midsummer to early August. Daughter plants can form where canes touch the ground. Seeds can remain viable in the soil for several years

Impacts and History

Highly invasive and can be found throughout Washington State. Can be very difficult to control. Outcompetes native under story vegetation and prevents the establishment of desirable native shade intolerant trees such as Pacific Madrone, Douglas Fir and Western White Pine. Can limit movement of large animals when forming large impenetrable thickets.

Control

Manual, mechanical, chemical, and biological means are used to control and eradicate blackberry.
<http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/blackberry-control.pdf>