



Priority Invasive Plants for the West Coast FSP

(Effective April 25, 2017)

The following document provides information to be used to identify priority invasive plants in the above FSP. These plants do not occur naturally in British Columbia and their presence can cause environmental and/or economic harm, and some species can harm human health. The purpose of the Measures in the FSP is to reduce the introduction and spread of the following priority invasive plants:

- **Gorse**
- **Scotch Broom**
- **Purple Loosestrife**
- **Marsh Thistle**
- **Japanese and Giant Knotweed**
- **Yellow Iris**

WHAT TO DO:

1. Where new incidences of priority invasive plants are noted in the field, notify your BCTS representative.
2. Where invasive plants are likely to be introduced or spread as a result of the activities being carried out, seed contiguous areas of exposed soil that that exceed 0.25 ha within 2 growing seasons of completing the activity. Where readily available and comparable in cost, preference must be given to grass seed that is:
 - o High sod-forming content, except in areas that are planted with tree seedlings;
 - o Has been certified by the Canadian Seed Growers Association that the seed;
 - Meets the standards for varietal purity established by the Canadian Seed Growers Association for seed of that species (Seeds Act, Seeds Regulation s.2(1)); and
 - Is of native origin.
3. Revegetate previously rehabilitated temporary access structures with legumes within 2 growing seasons of completing the activity.



Gorse (*Ulex europaeus*)

Identification:

Flowers – bright yellow and pea-like; single; 1.5-2 cm long; found on hairy stalks; fragrant.

Stems – Dense evergreen shrub with single upright stem; 1-3m tall; heavily branched and mostly 5-angled; hairs sparse.

Leaves – young plants have trifoliate leaflets; mature plants have scales or spines. Spines are branched and grooved; 1.5-2.5cm in length.

Fruits – black hairy seedpods; 1.5-2cm in length.

Habitat: prefers clearing such as sandy or rocky areas, roadsides, fields, pastures, bluffs, cutblocks and cutbanks. Prefers full sun and is adapted to low soil fertility. Seeds are released explosively by splitting pods; can also be carried by water, animals, humans, machinery and ants.

Impacts: can hinder re-growth of harvested areas and recreational use of land; can increase fire hazard, invades pastures and rangelands, replacing forage plants; displaces native vegetation.

Control: Gorse expands rapidly in its first 15 years and may live up to 45 years. Seeds may be dispersed by wildlife, water and machinery. Gorse can be controlled by

- hoeing or digging up small infestations, including all plant roots,
- pulling seedlings,
- cutting plants and applying herbicide to the stumps following cutting,
- repeated mowing,
- fire,
- applying herbicides

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/gorse>

Source: Invasive Species Council of BC



Source: Coastal Invasive Species Committee



Source: Invasive Species Council of BC

Japanese and Giant Knotweed (*Fallopia japonica*, *Fallopia sachalinensis*)

Identification:

Flowers – small, white/green flowers that grow in showy, plume like, branched clusters along the stem.

Stems – green stems are hollow, upright, and bamboo-like with reddish-brown/red speckles; 1.5-6m tall

Leaves – large, heart-shaped (Giant knotweed), or smaller leaves that are flat at the base with a pointed tip (Japanese knotweed).

Fruits – seeds are dark, glossy, 3mm long and enclosed in a papery capsule (Giant knotweed).

Habitat: often found in riparian areas, but can establish in a wide variety of ecosystems and site types, including road and railway right of ways, transmission lines, yards, forest edges. Prefers moist soil and full or partial sun and can tolerate a wide range of soil types.

Small pieces of root and stem fragments can regenerate – making knotweeds very easy to spread!

Impacts: can grow through concrete and asphalt, damaging infrastructure. Grow rapidly and out-compete native species. Can lead to erosion and stream sedimentation along banks of creeks and rivers where it has become established.

Control: Eradicate new infestation where feasible. Contain or control existing populations. Once established, knotweeds are extremely difficult to control; the rhizomes extend meters beyond the clones and they can regenerate from tiny fragments. Digging or hand-pulling can result in plants re-sprouting. Cutting, moving, grazing or foliar herbicides can reduce top growth but repeated treatments are required for long-term control.

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/knotweed>



Photo: Alison Millham

Source: Coastal Invasive Species Committee

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/scotch-broom>

Scotch Broom (*Cytisus scoparius*)

Identification:

Flowers – yellow and pea-like; may have a red marking in the middle.

Stems – woody and 5-angled; 1-3m tall shrub.

Leaves – stalked lower leaves are composed of three leaflets; un-stalked upper leaves are simple.

Fruit – flat, hairy seedpods that are initially green and turn brown to black in colour.

Habitat: Invades exposed, well-drained mineral soil and is shade intolerant. Plant can be spread to new disturbed areas through seed transport by vehicles and machinery.

Impacts: This seemingly harmless ornamental is aggressive and damaging to our natural environment. It invades forest land, preventing forest succession, increases risk of high intensity wildfire, obstructs sight lines on roads, can produce dense, impenetrable thickets that impact sensitive ecosystems, limits the movement of larger wildlife, leads to displacement of native plants.

Control: Small seedlings (less than a pencil width) can be pulled when the soils is moist, taking care not to disturb the soil. Larger plants must be cut down at the base or just below ground height, preferably between march to June, when the flowers are out but have not yet gone to seed. It is also important to remove cut plant material from desirable areas as these old plant parts will release toxins into the soil that prevent the re-establishment of desirable plants.



Source: Invasive Species Council of BC

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/purple-loosestrife>

Purple Loosestrife (*Lythrum salicaria*)

Identification:

Flowers – showy flowers are purple with 507 petals arranged in long vertical racemes.

Stems – annual stems arise from a perennial rootstock; square; 0.5-2.0m tall; plants become taller and bushier over the years.

The best way to identify purple loosestrife is by its square stems and opposite leaves

Leaves – simple, entire, opposite or whorled.

Fruits – many-seeded capsules, seeds are small and ovoid.

Habitat: can be found growing in open riparian areas and wetlands throughout Vancouver Island and surrounding coastal communities. Each plant is capable of producing up to 2.5 million seeds that can be dispersed by wind, water, wildlife, and humans. Plants can also reproduce from root fragments.

Impacts: Introduced as a garden ornamental, due to its vibrant purple flowers perched on top of a tall stem, this beautiful plant aggressively crowds out native vegetation, impacting native plants, amphibians, birds and other wetland species

Control: If you have purple loosestrife in your garden, remove it immediately. Pull or dig the plants out and ensure that all root fragments are removed to prevent re-growth. For large patches, there are relatively effective biocontrol agents, *Hylobius transversovittatus*, *Galerucella californiensis* and *G. pusilla*. These beetles feed loosestrife shoots, foliage and flower heads.



Source: Invasive Species Council of BC

Marsh Plume Thistle (*Cirsium palustre*)

Identification:

Flowers – purple, found clustered at end of stem and branches

Stems – spiny; usually single un-branched stem; 0.3-2.0m in height. Purple in colour as plants mature and flower.

Leaves – spiny and hairy

Fruits – Seeds are parachute-like for dispersal by wind.

Habitat: Prefers moist to wet, naturally-open, or disturbed habitats, roadsides, right-of-ways and other disturbed areas. Seeds are spread by wind, water and birds.

Impacts: Can form dense clumps in cutblocks, competing for moisture and nutrients with tree seedlings. Tall stems can lead to snow press, permanently damaging tree seedlings. Replaces native vegetation.

Control: Mechanical control of infestations can be effective, especially if done before flowering to prevent seed-set. Plants can be hand-pulled or cut/mowed and left on site to decompose. If mechanical treatment is performed while flowers are present on stems, the flowers must be bagged and removed from the site.

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/marsh-plume-thistle>



Source: Invasive Species Council of BC

Yellow Flag-Iris (*Iris pseudacorus*)

Identification:

Flowers – showy, yellow flowers with 3 sepals that curve backward and 3 petals pointing upwards.

Leaves – fold and clasp the stem at the base in a fan-like fashion; stand erect or bent at the top, with long sword-like leaves toward toward the outside of the plant; can be 1.5m tall.

Habitat: ditches, irrigation canals, marshes, stream and lake shorelines, shallow ponds.

Impacts: excludes native wetland species threatening plant and animal diversity, can reduce carrying capacity of water storage in temperate wetlands, can block irrigation canals and flood control ditches.

Control: since yellow flag iris patches are still limited in the region, report any sightings of this species to the Coastal Invasive Species Council.

More information: <http://bcinvasives.ca/invasive-species/identify/invasive-plants/yellow-flag-iris>