Restricted invasive plant

Hygrophila

Hygrophila costata

Hygrophila is an emerging problem for waterways in Queensland. It forms dense infestations that can replace native aquatic plants. Glush weed and gulf swamp are other common names for Hygrophila.

Legal requirements

Hygrophila is a category 3 restricted invasive plant under the *Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. The Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control.

This is called a general biosecurity obligation (GBO). This fact sheet gives examples of how you can meet your GBO.

At a local level, each local government must have a biosecurity plan that covers invasive plants in its area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws. Contact your local government for more information.

Queensland Government

Description

Hygrophila is a perennial, amphibious marsh plant generally 0.5–1 m tall, but up to 2.5 m tall when scrambling up through taller vegetation. The square stem is reddish brown. While it is generally an erect plant when grown in isolation, specimens that are growing close together often have stems that grow along the ground, with roots produced at the point where nodes touch the ground. Hygrophila can grow either fully submerged or above water level on nearby moist ground.

The leaves grow in opposite pairs, 3–18 cm long, 1–5 cm wide, oblong to elliptic, up a square stem. The leaves are coarse in texture and have prominent veins and a distinct midrib.

The flowers are bisexual, tiny, 9–11 mm wide, papery, white or rose pink whorls borne in the axils of the leaves and turn brown upon maturity.

Fruit is a two-valved capsule, 14–17 mm long. Each capsule has 12–18 seeds. The seeds are pale brown, round, flattened, smooth, 0.3–1 mm long.

Life cycle

Hygrophila flowering and fruit production occurs from December to March.

Methods of spread

Hygrophila readily propagates from cuttings or from severed leaves. Leaves can be left floating on the water surface where they will soon form roots. Wild specimens growing in marshy areas can produce new plants downstream if floodwaters break off sections of stems or leaves.

Habitat and distribution

Hygrophila is native to Mexico and Argentina. It is found along fresh water dams, lakes, creeks and river systems. Hygrophila is naturalised in New South Wales.

Infestations have been found in the south east and further north along coastal Queensland.

Control

Managing hygrophila

The GBO requires a person to take reasonable and practical steps to minimise the risks posed by hygrophila. This fact sheet provides information and some options for controlling hygrophila.

Physical control

Small infestations can be manually removed either by hand or chipped out with a mattock. Care needs to be taken to remove all root material. Follow up will be required regually as new plants germinate.

All removed plant material should be placed in a sealed plastic bag, left in the sunlight to decompose and then disposed of at a council-approved landfill tip. Alternatively, the material should be removed and left in the sun to dry, and then burnt. Care must be taken not to leave broken plant pieces in the area.

Herbicide control

Herbicides are very effective on Hygrophila but need repeat spot spray follow up applications

Permit PER14729 allows the use of glyphosate and metsulfuron-methyl for hygrophila control in aquatic and semi-aquatic situations by persons trained or experienced in the preparation and use of agricultural herbicides. See Table 1 for herbicide control details.

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit biosecurity.qld.gov.au.

Table 1. Herbicides for the control of hygrophila

Situation	Herbicide	Rate	Registration details	Comments
Aquatic and semi-aquatic situations (non potable water areas only)	Glyphosate 360 g/L (numerous products)	1 L product/ 100 L water	PERMIT 14729 (expires 30/06/2024) (consult label)	• DO NOT continue spraying if any adverse effects on non-target organisms such as fish • DO NOT spray directly onto water surface and/or non-target species • Apply spray directly onto the target weed • DO NOT broadcast spray over the water **Metsulfuron-methyl only:** DO NOT apply more than three times per year. Applications should be 30 days apart. Minimise off target damage and water pollution by spraying towards the bank. Care must be taken when mixing to avoid soil contamination that may lead to surface or ground water contamination
	Metsulfuron-methyl 600 g/kg	5–10 g product/100 L water		

Read the label carefully before use. Always use the herbicide in accordance with the directions on the label.

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