

# 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 measures to minimise the biosecurity 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 hygrophila. 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 high, but up to 2.5 high 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 are 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 and 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 can be found along fresh water dams, lakes, creeks and river systems.

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 measures to minimise the biosecurity 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 regularly 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 it is necessary to repeat spot spray 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.

Prior to using the herbicides listed under this permit you must read or have read to you and understand the conditions of the permit. To obtain a copy of this permit visit [apvma.gov.au](http://apvma.gov.au).

### More information

For more information contact your local government or visit [biosecurity.qld.gov.au](http://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 (e.g. Roundup Bioactive Herbicide)	1 L per 100 L water	PERMIT 14729 (expires 30/06/2024)	DO NOT continue spraying if any adverse effects on non-target organisms such as fish are noticed. DO NOT spray directly onto water surface and/or non-target species. Apply spray directly onto the target plant. Metsulfuron-methyl: 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 (e.g. Macspred Metmac 600 Herbicide)	5–10 g per 100 L water		

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







Fact sheets are available from [biosecurity.qld.gov.au](https://biosecurity.qld.gov.au). The control methods recommended should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, the department does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

