Weed Fact Sheet

Melbourne Water *Weed Management Fact Sheet*

Reed Sweet Grass *Glyceria maxima*

formerly Poa aquatica, Glyceria aquatica

Melbourne Water is working to protect and improve the health of our waterways. We invest over $23 million each year on our Healthy Waterways Program. We have produced this Fact Sheet to provide more information on weeds in our waterways, and how you can help us to improve our environment.

Reed Sweet Grass – *Glyceria maxima*: What to look for

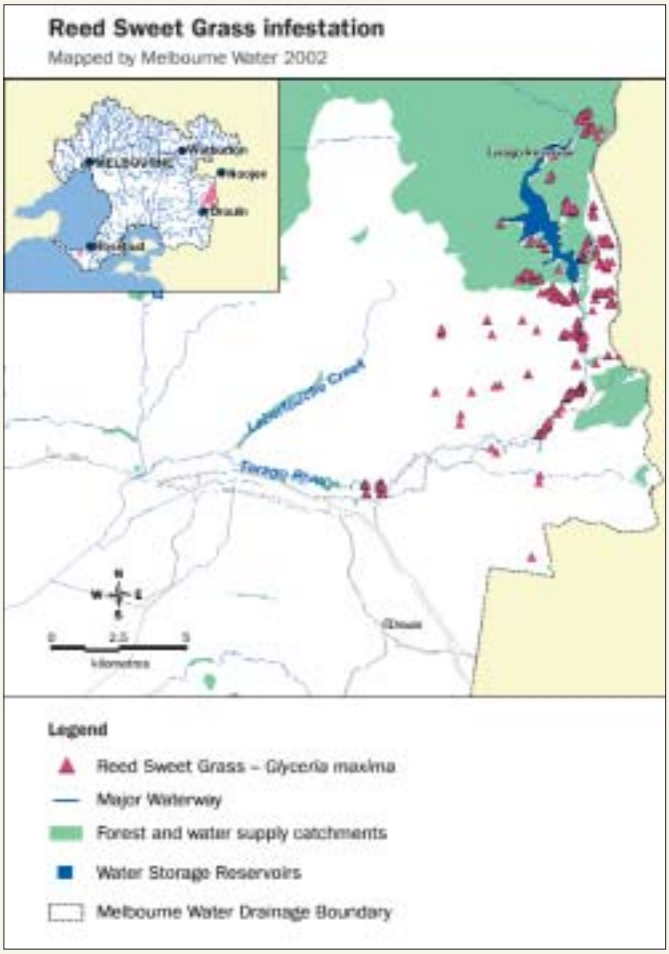
Reed Sweet Grass or *Glyceria maxima* – is a robust, perennial grass that grows 90-250cm in height. Leaves are bright green, 30-60cm long by 0.7-2cm wide, held on stout, unbranched, erect stems.

Leaf blades are flat with a prominent midrib and rough margins. Flowers appear in spring in many-branched 15-45cm long panicles that are either loosely contracted and symmetrical, or open. Roots are fibrous, growing from nodes on the rhizomes and may reach a depth of 1 metre.

Reed Sweet Grass flower

Origin

Reed Sweet Grass is native to Europe and temperate Asia. It has been previously known as *Poa aquatica* and *Glyceria aquatica*. Reed Sweet Grass has been introduced to North America, Australia and New Zealand. In Victoria, it has been recorded in northern and western regions and parts of Gippsland. It is a declared weed in Tasmania. A weed-mapping project completed in 2001 for Melbourne Water shows a high degree of infestation in the Tarago catchment area and some small infestations in the Woori Yallock Creek catchment and on the Mornington Peninsula.



Why is it a problem?

On the farm: Reed Sweet Grass is considered a valuable stock fodder in Europe, however in New Zealand and Tasmania it has been identified as a cause of cyanide poisoning in livestock.

In Tasmania, it is a major agricultural weed in vegetable growing districts. Dense infestations of Reed Sweet Grass can impede the flow of irrigation canals, drainage channels and streams, and may cause local flooding. In some instances waterway channel definition may be lost and a permanent bog may form, reducing the area of productive land. Infestations in dams reduce holding capacity by increasing siltation. In the Neerim region (West Gippsland) infestations have affected water quality, requiring pumps to be relocated when putrid water has become unpalatable to livestock. Livestock have also become bogged when attempting to reach water through dense Reed Sweet Grass infestations.

For the environment: Reed Sweet Grass is a major threat to the health of waterways and wetlands. Infestations of Reed Sweet Grass may destroy native aquatic and riparian plants by smothering living plants, altering drainage and preventing natural regeneration. Native fauna may be at risk through the loss of food resources and habitat. Dense infestations have the ability to alter flow rates, destroy channel definition and increase siltation and local flooding.

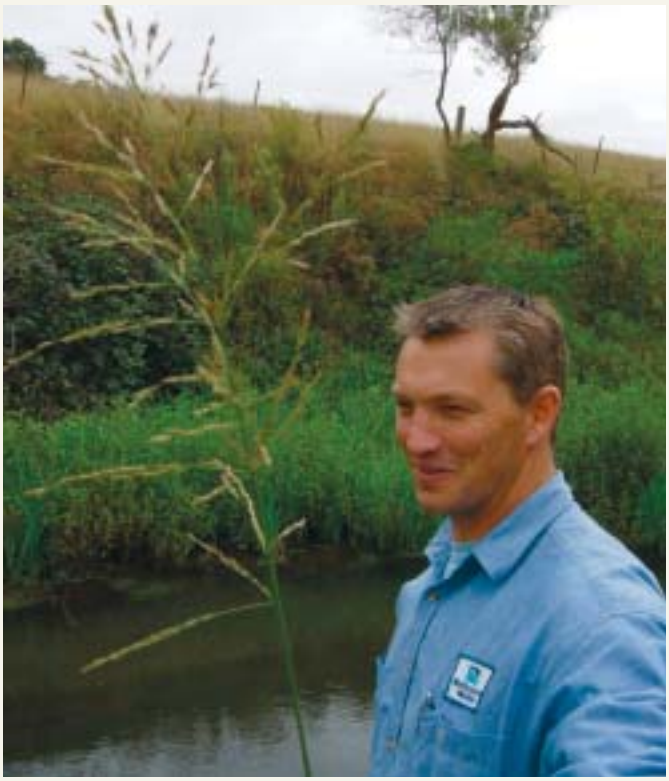
How it grows

Seed germination occurs in spring and is followed by vigorous development of vegetative shoots and a creeping mat of rhizomes during summer and autumn of the first year. Growth slows and may cease over winter, resuming with the production of vegetative and flowering shoots in the second spring. Plants flower from their second year onwards. Initially growth is usually vigorous and new infestations may expand rapidly – a single plant is capable of producing up to 100 shoots and 30m of rhizome in its first two years of growth. As the colony matures, the rate of growth slows.

Habitat

Reed Sweet Grass thrives in wet, marshy or seasonally inundated areas where summer moisture is adequate. Typical habitats include the banks of slow-moving rivers, creeks, spring-fed gullies and seepage areas, canals, ditches, farm dams, wetlands and the margins of lakes.

Reed Sweet Grass is sensitive to anaerobic conditions and prefers water less than 75cm deep, however growth will continue in depths of at least 1.5m. In large bodies of water Reed Sweet Grass may grow out over open water as a vast floating mat, attached to the bank by its roots.



Waterway Coordinator with Reed Sweet Grass (Top).
River channel weed infestation at Rokeby (Above).

How to prevent spread to other sites

Reed Sweet Grass can reproduce both from seed and through the spread of broken rhizomes. Dispersal may occur when propagules are transported by flowing water, or in mud attached to machinery, vehicles, footwear or animal hooves and fur. Fresh seeds germinate readily, but viable seeds may persist in soil for several years.

Where possible isolate the infestation from dispersal mechanisms, for example by erecting permanent or temporary fencing around the area to exclude livestock.

Make sure you clean farm machinery and vehicles thoroughly to prevent the spread of propagules.

Control

Typically Reed Sweet Grass invades gullies, waterways, drainage lines, floodplains and wetlands. The control approaches adopted for such situations may vary slightly, however, some general principles apply to all situations:

- A combination of control options is likely to enhance its eradication from a site.
- A long-term control option for Reed Sweet Grass is re-instatement of a tree and shrub canopy. Reed Sweet Grass seems to prefer open sites to heavy shade.
- Persistence is required in control of Reed Sweet Grass and follow-up control is critical to ensure its eradication.

General control approaches

Herbicide application
An off-label treatment using an aquatic formulation of Glyphosate for the control of Reed Sweet Grass in aquatic situations may sometimes be appropriate, but advice for your particular circumstances can be obtained from Nigel Ainsworth, Department of Primary Industries, Frankston on 03 9785 0184.

Do not use surfactant additives as no surfactants are currently registered for use in Victoria in aquatic situations.

If herbicide application is authorised, it may need to be followed by the physical removal of the decaying vegetation in dams and wetlands to prevent the water from becoming polluted.

Herbicide application, a short term control method.

Excavation or physical removal / drainage works
In certain situations Reed Sweet Grass can be controlled through physical removal and through improved drainage. Small outbreaks may be removed by hand, but care must be taken to ensure the complete removal of rhizomes. Larger infestations will require the use of earth moving machinery, however many infested areas will be too boggy to support heavy machinery.

In open water cutting and towing away floating rafts of Reed Sweet Grass has been used as a temporary method for reducing mass.

Slashing Reed Sweet Grass up to three times during the growing seasons, Spring and Summer, has been found to inhibit growth.

It is critical that machinery hygiene is practiced so that any propagules are removed from machinery prior to leaving the site.

Removal of Reed Sweet Grass on steep sites may require the introduction of some stabilisation measures to avoid gully or channel erosion.

Plastic Shading
Covering with black plastic can achieve 100 per cent control. This may be suitable for small infestations where the plastic can be securely fixed in place.

Revegetation, a long term control method

Revegetation

Reed Sweet Grass is sensitive to shade and appears to be out competed once there is an adequate cover of overstorey vegetation. Suitable indigenous species for revegetation in greater Melbourne will include Blackwood (*Acacia melanoxylon*), Silver Wattle (*Acacia dealbata*), Hazel Pomaderris (*Pomaderris aspera*), Burgan (*Kunzea ericoides*) and Eucalypt species (*Eucalyptus spp.*).

Summary of control options

Site/ control option	Herbicide application*	Excavation	Drainage control	Shading	Revegetation
Gullies	•	•	•	•	•
Waterways and drainage lines	•	•		•	•
Floodplains	•		•	•	•
Wetlands	•	•			•

* Care must be taken when applying herbicides in aquatic situations as they may contaminate water, move off-site and may be toxic to aquatic organisms. Before applying herbicide, advice must be sought from Nigel Ainsworth, Department of Primary Industries, Frankston on 03 9785 0184. Do not use surfactant additives as no surfactants are currently registered for use in Victoria in aquatic situations.

Further Advice / Assistance

Stream Frontage Management Program

Funding assistance for Reed Sweet Grass control and rehabilitation of the infested sites may be available through Melbourne Water's Stream Frontage Management Program. The Stream Frontage Management Program operates in targeted catchments to assist landowners to protect, improve and manage private freehold and leased stream frontages.

The program targets degraded rural waterway frontages across the Port Phillip & Westernport drainage basins. Participating landowners are offered funding assistance, technical advice and educational opportunities. Funding may be ongoing for several years if a project needs to be done in stages. Information on the Stream Frontage Management Program is available on www.melbournewater.com.au or by calling 03 9235 7231 or 03 9235 2528.

If you would like information on any aspect of Melbourne Water's role in managing our waterways and the environment please call 131 722 or visit the Melbourne Water website www.melbournewater.com.au

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December 2003