

# Hornwort

## *Ceratophyllum demersum*

### Notify Council

Although this species is not currently known to be a problem, we would like to know if you've come across it in the wild. Please report any sightings to Environment Southland.

### What does it look like?

Hornwort is a perennial submerged aquatic plant. It doesn't form true roots, but may be anchored to sediment by stems, or forms free-floating mats. Stems are up to approximately 7m tall, and branched. Leaves are 10-40mm long, narrow, branched and whorled forming complex architecture. Flowers are minute, and there is no evidence of viable seed set in New Zealand. Vegetative spread is via stem fragments.

Freshwater bodies, including drainage channels, lakes and farm ponds. Prefers shallow shorelines and sediment accumulation, therefore less problematic in steep-sided reservoirs. Tolerates range of lake nutrient levels, from oligotrophic to hypertrophic. Tolerates wide temperature range (5-30°C optimal, but capable of tolerating ice cover). Occupies a range of water depths, down to 15.5m.

### Why is it a problem?

Vegetative spread only. Establishes from stem fragments moved between water bodies. Human movement is the main vector between water bodies. May be spread accidentally, as fragments attach to nets, boats and other gear, or intentionally as habitat for co-released pest fish. Risk factors for infestation of lakes include proximity to areas of dense human habitation, proximity to highways, and large lake areas. There is also a natural dispersal by downstream or flood-mediated movement of fragments.



### Control methods

Freshwater weeds are difficult to eradicate once established, but are possible to control. Before you start thoroughly check the waterway's adjacent areas and inflows to see if the infestation has spread.

As most aquatic weeds grow from fragments, start control at the upstream end of the infestation. In narrow waterways you can reduce the growth of aquatic weeds with riparian planting to reduce light levels.

#### Physical control (small infestations)

- Physical control: Remove the weeds by digging and raking them up. Dispose of them on land so they dry out and die. Follow up regularly to remove growth.
- Bottom lining (small ponds): If possible, lower the water level and cover the infestation with black polythene or weedmat (weighted down) for about three months.

#### Herbicide (large infestations)

- Herbicide: These are available for some freshwater weeds, and can be an effective control option. Check with your local council's biosecurity team before spraying, as spraying in or over water may require resource consent.

**CAUTION:** When using herbicide, PLEASE READ THE LABEL THOROUGHLY and follow ALL instructions and safety requirements.

- Biological control: Grass carp can be used as a weed control agent in some cases. This requires a permit - contact the Department of Conservation for more information.

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### Related links

Ministry for Primary Industries <http://apps.mpi.govt.nz/applications/nzpests-view/Article/1006/Hornwort>  
Unwanted Organisms Register [https://www1.maf.govt.nz/uor-cgi/uor.pl/show?species\\_id=26102](https://www1.maf.govt.nz/uor-cgi/uor.pl/show?species_id=26102)  
Weedbusters <http://www.weedbusters.org.nz/weed-information/ceratophyllum-demersum/59/>  
New Zealand Plant Conservation Network [http://www.nzpcn.org.nz/flora\\_details.aspx?ID=3666](http://www.nzpcn.org.nz/flora_details.aspx?ID=3666)  
NZ Flora <http://www.nzflora.info/factsheet/Taxon/Ceratophyllum-demersum.html>  
Check, Clean, Dry <http://www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/>

### Summary of rules

No person can sell, propagate, breed, distribute or otherwise spread any Hornwort.

For full rules please see Sections 52 and 53 of the [Biosecurity Act 1993](#).

### Management programme

National Pest Plant Accord

### Request info

<https://eservices.es.govt.nz/online-services/new/BiosecurityRFS/step/1?Subject=PlantPests&Species=68>