

5.2. PEST MANAGEMENT STRATEGY FOR AQUATIC WEEDS



Description of the Pest

The plants included in this Strategy are:

Alligator weed (*Alternanthera philoxeroides*)



Oxygen weeds (*Egeria densa*, *Lagarosiphon major* and *Ceratophyllum demersum*)



Parrot's feather (*Myriophyllum aquaticum*)

This group of plants invade waterbodies. They all reproduce rapidly by vegetative means with fragmentation of floating mats and regrowth of stem nodes being the main means of spread and dispersal.

Alligator weed is a perennial emergent aquatic plant which can also grow in terrestrial situations. Its leaves are green, hairless, waxy and have a conspicuous midrib. The flowers resemble those of white clover but are smaller and each cluster is produced on a long stalk. The plant will not root in water deeper than 2-3 m, however a marginal weed bed can support a floating mat of vegetation in deeper water.

The three oxygen weeds are all bottom rooted, submerged aquatic plants. *Ceratophyllum* or hornwort has stems of up to 1 metre long with finely divided leaves. *Egeria* grows up to 5 metres in length. Its leaves are arranged in groups (whorls) of 4 or 5. *Lagarosiphon* also grows up to 5 metres in length with its leaves bent backwards and arranged spirally around the stem.

Parrots feather is a bottom-rooted plant. It has blue-green feathery foliage with trailing stems of up to 6 metres in running water.

Distribution of the Pest

Lagarosiphon is the most common of these plants being widespread in waterways. *Egeria* and hornwort are less common. Alligator weed is widely distributed in rivers, streams and ponds throughout the Region. It also occurs in terrestrial situations, especially in low lying areas with clay soils. Parrots feather is found in many of the Region's waterways and is more common in peat swamps.

Problems Caused

All these plants obstruct waterways, impeding drainage, causing flooding and affecting water quality. They block water intakes and make boating, fishing and

swimming very difficult. Alligator weed can also cause illness in stock. The plants grow rapidly over summer and are capable of forming dense impenetrable masses. They are easily spread by diggers or on outboard motors. The plants have a biological success rating of 17 out of 21 and a weediness rating of 18-19 out of 24 on the Esler, Liefing and Champion index. Decay of exposed plants during periods of low water level deoxygenates water bodies and smells badly.

Parties Affected

All users of waterbodies are affected by the plant, particularly people drawing water or undertaking fishing and recreation.

Impact Evaluation

<u>Impact</u>	<u>Current</u>	<u>Potential</u>
Cultural	Medium	High
Ecological	Medium	High
Human Health	-	-
Soil & Water	Medium	High
Production	Medium	High
Public Infrastructure	Low	Medium
Public Safety	Low	Medium
Recreation	Low	Medium
Trade (International)	-	-
Overall Regional	Medium	High

Regional Effects

The plants are currently significant pests in the Region and have the potential to become even more so. Their aggressive, invasive nature means they can seriously detract from the use and enjoyment of the Region's numerous lakes, rivers and streams. Their establishment in the Kai Iwi Lakes and other major recreational waterbodies would have serious consequences. Once established, the plants are very difficult and expensive, if not impossible, to eradicate.

Need to Intervene

The plant's widespread distribution and ability to further spread and colonise new habitats make them an ongoing threat to the Region. A Regionally coordinated approach is required to minimise the plants' effect on the cultural, recreational and water quality values of waterbodies. It is considered necessary to provide information and educate the public on all aspects of the plants' potential effects and how to prevent their spread.

Goal (Long Term)

- To prevent the spread of aquatic weeds, particularly into lakes and rivers with high ecological, cultural and recreational values.

Objectives (Five Year)

- To increase public awareness of the threat from aquatic weeds to the Region's water bodies.
- To identify at-risk lakes and rivers and to maintain them in their current weed-free state.

Tactics and Technical Methods to be Used

Education Advice to land owners, water users and other interested parties.
Code of practice for contractors and water users.
Community meetings and field days.

Research (biological and chemical control options).

Regulation Rule 6.4.2.9 Prohibition on Distribution and Sale of Pest Plants

Failure to comply with these rules constitutes an offence under section 154 (r) of the Biosecurity Act 1993.

Tactics and Technical Methods Rejected

Economic Subsidies on herbicides (not effective).

Services Regional Council eradication service (pest too widespread).
Inspections of all boats and earthmoving equipment (not feasible, that is, random inspections only will be made).

Effects of the Strategy

Beneficial Enhancement of the ecological and recreational values of waterbodies.

Cost of Strategy

The Strategy is estimated to cost the Regional Council approximately \$8,000 each year.

Funding

The Strategy is funded from a Land Management Rate. The cost of controlling aquatic weeds on individual properties will be borne by landowners.

Management Agency

Northland Regional Council is responsible for managing the Strategy.

Relationship of Strategy to other Pest Management Strategies

The Auckland Regional Council has a similar Strategy for aquatic weeds in that Region.

Monitoring and Reporting

The waterbodies identified as being at risk from aquatic weed invasion will be inspected regularly and information on their weed status recorded along with any actions taken. Progress towards objectives set in the Strategy will be reported in the Council's Annual Plan or LTCCP as appropriate.

Term of Strategy

5 years

Rules

6.4.2.9 Prohibition on Distribution and Sale of Pest Plants

- (i) No person shall distribute to other persons or offer for sale, or hold in a premises where plants are offered for sale, any pest plant which is subject to a Northland Regional Council Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (ii) No person shall distribute or offer for sale to other persons any agricultural lime, roading aggregate, sand or fill material which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Northland Regional Council

Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.

- (iii) No person shall transport or use any equipment, machinery or product which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (iv) No person shall plant, transplant or re-distribute any pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.