

## 4. STRATEGY POWERS

To achieve the purpose of the Strategy and to give effect to its objectives and means of achievement, the Council will use the statutory powers presented in Table 2. Many of these powers will be exercised by authorised persons on behalf of the Council. The Chief Executive of the Council will appoint authorised persons and may delegate powers, subject to sections 103 and 105 of the Biosecurity Act, to any authorised persons.

Authorised persons will have the power to request information from occupiers under section 43 of the Biosecurity Act.

<b>Powers</b>	<b>Reference in the Biosecurity Act</b>	<b>Level of Delegation</b>
The appointment of authorised and accredited persons Delegation to authorised persons	Section 103(3) to 103(7) Section 105	Chief Executive Officer of the West Coast Regional Council
Undertake small-scale management of unwanted organisms Power to act on default Liens Declare a controlled area Options for cost recovery Failure to pay Offences	Section 100  Section 128 Section 129 Section 131 Section 135 Section 136 Section 154	Management Agency (West Coast Regional Council)
Duty to provide information Power to require assistance Power of inspection  Power to record information General powers Use of dogs and devices Power to seize evidence Power to seize abandoned goods Power to intercept baggage, etc. Power to examine organisms Other powers in respect to risk goods	Section 43 Section 106 Sections 109, 110 and 112  Section 113 Section 114 Section 115 Section 118 Section 119 Section 120 Section 121 Section 122	Authorised person

**Table 2: Powers under the Act to be used by the Regional Council**

## **5. FUNDING OF THE STRATEGY**

The main funding principle from the Biosecurity Act is that those who benefit from control, or those who exacerbate a pest problem, should be required to pay. Generally, where pests are of very low incidence, regional benefits accrue following control as the pests have been prevented from occupying all of their potential habitat. For most pests the immediate beneficiary of control is the individual who undertakes control.

Land occupiers (urban and rural ratepayers and the Crown) are both beneficiaries and exacerbators, to varying degrees. Consequently, land occupiers will fund the direct cost of pest plant management on their property.

### **5.1 Funding Sources**

The Council has determined that achieving the purpose and objectives of this strategy benefits land occupiers collectively, and is a 'public good' (that is, the regional community generally benefits from the implementation of the Strategy). The Strategy involves a number of activities like distributing information and advice, increasing knowledge of the effects of pest plants, and research into biological control, for example. A large number of people can use these services at little or no extra cost and the beneficiaries are very difficult to identify and charge as users. The dominant public good aspects of the Strategy benefits therefore favour the use of a uniform rate to charge for these services.

#### **Ratepayers-Occupiers**

The Strategy will be funded primarily by means of a general rate levied on every separate rateable property in the West Coast region pursuant to section 33 of the Rating Powers Act 1988. It is considered that a uniform rate is the most appropriate method of charging ratepayers for services provided by a regional pest plant management strategy.

Crown agencies that manage non-rateable land will also be asked to contribute to the Strategy. Crown land accounts for approximately 84% of the Region. Central government agencies occupying the Crown estate have been identified as being significant beneficiaries or exacerbators to pest plant management in the Region. They are identified as follows:

#### **Department of Conservation**

The Department can be an exacerbator when various pests on its estate are a source of infestation for adjacent land occupiers. It can also be a beneficiary where a pest on neighbouring property can pose a significant threat to the conservation values of the DoC estate. In the West Coast region DoC administers 1.911 million hectares of Crown land, of which 1,884,430 hectares is non-rateable.

In accordance with section 87(2) of the Biosecurity Act, a Regional Strategy cannot bind the Crown, however, an agreement will be sought with the Department of Conservation to comply with the relevant rules.

#### **Land Information New Zealand**

Land Information New Zealand (LINZ) administers 1382 hectares of land in the Region, of which 268 hectares is non-rateable. Much of this land is likely to contain pests, therefore LINZ is both an exacerbator and a beneficiary of this Strategy.

#### **New Zealand Railways Corporation**

The New Zealand Rail Corporation is the owner of land on which railway tracks and adjacent reserves lie. There is approximately 1571 hectares of rateable railway land in the West Coast region and 839 hectares of non-rateable land.

#### **New Zealand Transport Agency**

New Zealand Transport Agency is the occupier of land on which the state highways lie, plus the verge or road reserve extending to adjacent property boundaries, including 173 hectares of non-rateable land.

## **5.2 Estimated Cost of the Strategy**

Costs of the Strategy for the next five years can be estimated from actual costs over recent years. This cost has been approximately \$10,000 per year, excluding any costs of Strategy review. The estimated costs of the Strategy do not include the cost to individual occupiers of complying with the strategy in terms of pest control work undertaken on the ground.

## **5.3 Cost Recovery**

Section 135 enables regional councils to recover the costs of administering the Act and performing the functions, powers, and duties under a pest plant management strategy. These involve user charges and cost recovery in the event of non-compliance with a legal direction (refer Chapter 6).

Fixed charges can be set under Section 135 for specific activities such as officer visits to land infested with plant pests. Note that actual and reasonable costs, pursuant to S135(3)(d) of the Biosecurity Act, will be charged to land occupiers who fail to comply with a Notice of Direction issued by a Council Officer. This approach is expected to provide a further incentive for timely compliance with the Strategy rules.

## **5.4 Compensation**

No compensation shall be payable by the Council with regard to losses incurred by land occupiers as a direct result of this Strategy's implementation, including the removal of pests as required under Strategy rules.

## **6. REGULATORY PROCEDURES**

### **6.1 Notice of Direction**

If an occupier does not take appropriate control action and there is a continuing breach of the rules under this Strategy, or other matters under section 122, an authorised person may issue a notice directing the occupier under section 122 of the Biosecurity Act. The notice shall include:

- (a) A description of the land on which the works or measures are to be undertaken,
- (b) The pest for which the works or measures are required,
- (c) The works or measures to be undertaken to meet the occupier's obligations,
- (d) The time within which the works or measures are to be undertaken,
- (e) The action that will be taken by the Council if the occupier fails to comply with any part of the direction.
- (f) The name of the authorised person issuing the direction. And
- (g) The contact address and telephone and fax numbers of the authorised person issuing the direction.

### **6.2 Failure to comply**

Where a notice has been given to an occupier under section 122 of the Act and the occupier has not complied with its requirements within the time specified, the Council will consider enforcement action. Depending on the individual circumstances of the case the Council may undertake one or both of the enforcement options:

- (a) Prosecute under section 154 of the Act
- (b) Undertake **default action** under section 128 of the Act. Default action involves the Management Agency either undertaking or causing to have undertaken, the works or measures specified in the Notice of Direction and recovering the costs of that work from the occupier to whom that Notice was given.

### **6.3 Recovery of costs incurred**

Under section 128(3) of the Biosecurity Act the Council can recover the costs and expenses reasonably incurred by it carrying out such works or taking action (such as the enforcement process, follow up, and works) as a debt due from the occupier to whom the Direction was given.

### **6.4 Extension or variation of direction**

Where, on the representation of an occupier issued with a direction under section 122 of the Act, an authorised person is satisfied that:

- a) Steps have been taken to comply with the direction; and/or
  - b) The occupier has been prevented by reasonable cause from completing the necessary work;
- the authorised person may extend the time specified for a further period, or vary the requirements of the Direction as appropriate.

### **6.5 Offences**

Any person who, without reasonable excuse, fails to comply with a reasonable direction given to that person, or a reasonable requirement made of that person in accordance with and for the purposes of the Biosecurity Act and this Strategy by an authorised person or the assistant of an authorised person, commits an offence against section 154 of the Act.

It is an offence to breach a Strategy rule without reasonable excuse. There are other criminal offences set out in section 154 of the Act.

### **6.6 Cancellation of Directions**

Where an authorised person is satisfied that:

- a) Works and measures have been undertaken to meet the occupier's obligations; or
  - b) For some other reason it is no longer appropriate to enforce the direction;
- the authorised person may cancel that Direction.

The Council will in appropriate cases bring prosecutions against persons who commit an offence against section 154 of the Biosecurity Act.

## **6.7 Malicious or Vexatious Complaints**

Where an authorised person is satisfied that a complaint is or has become malicious or vexatious, the complainant may be charged the cost of undertaking the inspection that their complaint instigated. This S135 charge will apply on 2<sup>nd</sup> and subsequent visits instigated by the complainant.

## **6.8 Exemption Provisions**

The Council may upon a written request of a land occupier, exempt any person from any requirement in any Strategy rule included in Chapter 3 of this Strategy.

In accordance with section 80D of the Act, before granting an exemption from any specified requirement in any rule in the strategy the council shall be satisfied that in the circumstances of each case that:

- (a) The requirement has been substantially complied with and that further compliance is unnecessary; or*
- (b) The action taken or provision made in respect of the matter to which the requirement relates is as effective or more effective than the actual compliance with the requirement; or*
- (c) The prescribed requirements are clearly unreasonable or inappropriate in the particular case; or*
- (d) Events have occurred that make the prescribed rule unnecessary or inappropriate in the particular case,-*  
*and that the granting of the exemption will not significantly prejudice the attainment of the objectives of the Strategy.*

When granting an exemption, the Council may place certain conditions on it. Applications for exemptions should be directed to the Council's Chief Executive Officer.

## **7. OTHER METHODS**

### **7.1 The Council will Provide Advice and Education**

The Council will provide information relating to the pest plants in the Strategy, to land occupiers and the wider community in order to:

- Promote greater public awareness of the potential adverse effects associated with pest plants;
- Promote greater awareness of peoples responsibilities for pest control under the Strategy;
- Promote effective pest plant control or the adoption of management techniques that will avoid, minimise, or remedy the adverse effects associated with pest plants in the Region; and
- Promote greater awareness among contractors for best practice in cleaning machinery, diggers and mowers to avoid the spread of pest plants.

The Council will consider using the following procedures in relation to its advisory and educational programmes:

- Responding to public requests for information in relation to the identification of pest plants;
- Providing information to land occupiers when undertaking property inspections and other pest plant management activities;
- Preparing and distributing educational material in relation to pest plant management;
- Undertaking or supporting public awareness campaigns;
- Undertaking/facilitating, on request, presentations to interested groups; and
- As appropriate, organise timely and relevant media and publicity programmes to highlight particular pest plant management issues.

### **7.2 The Council will work with the community, agencies, and groups in order to help manage pest plant problems of particular concern to specific groups.**

Pest plant management is not solely the responsibility of the Council. Crown agencies, other councils and community groups can carry out additional pest control operations, and the Council will encourage such operations where appropriate. Crown agencies will be encouraged to lead the effort in progressive control areas.

### **7.3 The Council will work with the District Councils and the community to discourage the practice of weed dumping.**

Weed dumping and in particular the dumping of pest plant weeds is recognised as a problem on the West Coast. Liaison with District Councils will discuss education of the community.

### **7.4 Regulation and enforcement will be used:**

- (i) To require control of boundary control pest plants where neighbouring land occupiers fail to comply with Strategy rules;**
- (ii) To require control of total control pest plants; and**
- (iii) To implement the National Pest Plant Accord.**

Regulation will primarily be used to protect land occupiers who are carrying out control and are being adversely affected by a neighbour who is not. This will be triggered by complaint from the affected neighbour. Other rules in the Strategy for total control pest plants may need to be enforced from time to time, and the Government has declared a list of plants that cannot be sold, distributed or propagated (Appendix 1) which will be enforced.

### **7.5 Council will advocate and encourage other authorities and operators (e.g. roading authorities, spray contractors, quarry operators) to adopt policies, practices, or measures that will avoid, remedy, or mitigate adverse effects associated with pest plants.**

## **7.6 Monitoring**

The Council shall monitor the extent to which the objectives set out in Chapter 3 of the Strategy are being achieved by:

- a) Mapping the extent of pest plants, where appropriate, and reporting on changes in distribution;
- b) Recording the number of public complaints pertaining to individual pest plants and instances of non-compliance with Strategy rules and their resolution; and
- c) Recording the number of public enquiries in relation to individual pest plants, in regard to requests for information.

## **7.7 Surveillance Plants (see Appendix 2)**

In addition to the rules in Section 3, there are several problem plants that the Council have not declared as 'pest plants', but some action may be needed to ensure they do not become a major problem in the future. Council may become actively involved in surveillance of two specific plants whose continued spread would become cause for concern. Asiatic Knotweed (*Reynoutria japonica*) is found in many locations in the Buller and Grey districts, but fewer sites occur in Westland. Council may decide to undertake mapping of the extent of this plant in order to monitor its spread. Currently it is not felt to meet the Section 72 tests that would be needed to declare it a pest plant region-wide. The other plant is reed sweet grass (*Glyceria maxima*) which is much less prevalent, being known from only 8 locations between Waitaha and Kokatahi; plus 4 locations in northern Buller. An extent mapping approach may be particularly useful for this plant, which has been known to cause serious problems in other regions.

The invasive lake weed Lagarosiphon has been present on the West Coast for some time. The first records were collected from Cobden Lagoon and Barrytown Flat dredge ponds, with subsequent records collected from dredge ponds in the Grey Valley, as well as for Jones Creek and Birchfield Swamp near Westport, and numerous garden ponds. None of these sites are used to any extent for recreation or boating, and the risk of lagarosiphon being spread from these sites to any major lake on the West Coast is relatively low. It is considered more of a risk that lagarosiphon would be spread to a West Coast lake from an infested boat accessible lake in another region, or from the recently infested Lake Paringa in South Westland. Traditionally, management efforts have been directed at improving public awareness of the risks of lagarosiphon, with newspaper articles in local papers, factsheets, and signage erected at lake boat launching sites throughout the West Coast. The Department of Conservation are now preparing a Management Plan for Lagarosiphon which may also look into risk of spread from Otago lakes, via boats travelling between the regions.

## **7.8 Biological Control Programmes**

The Council will promote biological control of pests, where appropriate, throughout the region. For pests that are well established, biological control, in conjunction with other control methods, may provide an effective option for long-term control. As a control method, biological control has high initial research and establishment costs, but can be the most cost-effective option in the long-term.

The benefits of biological control accrue more widely than to just the individual land occupier. Consequently the Council believes that there may be a regional benefit in their investing in appropriate biological control programmes. The Council may, where appropriate, provide financial support for biological control work.

## 8. GLOSSARY

All definitions in italics are taken from the Biosecurity Act 1993.

<b>Authorised Person</b>	<i>means a person for the time being appointed an authorised person under section 103 of the Act.</i>
<b>Destroy</b>	Means to pull, break down, demolish, make useless, kill, cause to cease to exist.
<b>Distribute</b>	Means to propagate, offer for sale or sell, transport, or in any way spread a pest plant.
<b>Effectively Clear</b>	To have no plants able to set seed in that season.
<b>Eradicate</b>	In relation to an organism, means to completely remove it from the region, or a defined area of the region.
<b>Exacerbator</b>	A person, who by their activities or inaction, contributes to the creation, continuance, or aggravation of a pest plant management problem.
<b>Occupier</b>	<i>(a) In relation to any place physically occupied by any person, means that person; and (b) In relation to any other place, means the owner of the place; and (c) In relation to any place, includes any agent, employee, or other person acting, or apparently acting in the general management or control of the place.</i>
<b>Person</b>	<i>includes the Crown, a corporation sole, and a body of persons (whether corporate or unincorporate).</i>
<b>Pest Plant</b>	A plant which has been declared a pest in this Strategy.
<b>Plant</b>	Any grass, tree, shrub, herb, flower, nursery stock, culture, vegetable, or other vegetation; and also includes the fruit, seed, spore, portion or product of any plant. Includes all aquatic plants.
<b>Place</b>	<i>includes any building, conveyance, craft, land, or structure, and the bed and waters of the sea and any canal, lake, pond, river, or stream.</i>
<b>Road</b>	<i>includes all bridges, culverts, and fords forming part of any road.</i>
<b>Sell</b>	Includes barter; and also includes offering, exposing, or attempting to sell, or having in possession for sale, or sending or delivery for sale, causing or allowing to be sold, offered, or exposed for sale, and also includes any disposal whether for valuable consideration or not; and "sale" has a corresponding meaning.
<b>Treatment</b>	The application to any thing of any approved method, or approved combination of methods, intended to reduce to an approved extent the risk of introduction or spread of any pest or unwanted organism suspected to be present in the thing.

## Appendix One: National Pest Plant Accord List

To follow is the Second Schedule of the National Pest Plant Accord following the 2006 revision (posted September 2006), plus some inclusions since then. All plants on the list are designated as Unwanted Organisms, and are banned from sale, propagation and distribution throughout New Zealand. Additional plant species may be added periodically, after review by the Technical Working Group. To check for further additions visit the MAF web site:

<http://www.biosecurity.govt.nz/files/pests/plants/nppa/nppa-accord.pdf>.

Scientific Name	Common Name/s
<i>Acmena smithii</i>	Monkey apple
<i>Ailanthus altissima</i>	Tree of heaven
<i>Akebia quinata</i> (added in 2007)	Akebia, chocolate vine, five-leaved akebia
<i>Alternanthera philoxeroides</i>	Alligator weed, Pigweed
<i>Anredera cordifolia</i>	Madeira vine, Mignonette vine
<i>Araujia sericifera</i>	Mothplant, Cruel plant, White bladder flower
<i>Aristea ecklonii</i> (added in 2007)	Aristea, Wild iris, Blue iris
<i>Arundo donax</i>	Giant reed, Arundo grass
<i>Asparagus asparagoides</i>	Smilax, Bridal creeper
<i>Asparagus densiflorus</i> (excluding cultivar "Myersii")	Bushy asparagus, Fern asparagus, Emerald feather, Sprengeri fern, Sprenger's asparagus, Foxtail fern, Possum tail.
<i>Asparagus scandens</i>	Climbing asparagus
<i>Berberis darwinii</i>	Darwin's barberry
<i>Bomarea caldasii</i> (added in 2008)	Bomarea, Climbing alstromeria
<i>Bomarea multiflora</i> (added in 2008)	Bomarea, Climbing alstromeria
<i>Bryonia cretica</i>	White bryony
<i>Calluna vulgaris</i> (excluding double flowered cultivars)	Heather, Ling
<i>Cardiospermum grandiflorum</i>	Balloon vine
<i>Cardiospermum halicacabum</i>	Small balloon vine
<i>Carpobrotus edulis</i> and hybrids	Iceplant
<i>Celastrus orbiculatus</i>	Climbing spindle berry, Oriental bittersweet
<i>Ceratophyllum demersum</i>	Hornwort, Coontail
<i>Cestrum parqui</i>	Green cestrum
<i>Chrysanthemoides monilifera</i>	Boneseed
<i>Clematis flammula</i> (added in 2008)	Clematis, Fragrant virgin's bower, Plume clematis
<i>Clematis vitalba</i>	Old man's beard
<i>Cobaea scandens</i>	Cathedral bells
<i>Cortaderia jubata</i>	Purple pampas
<i>Cortaderia selloana</i>	Pampas
<i>Cotoneaster simonsii</i>	Khasia berry
<i>Cotyledon orbiculata</i> (added in 2008)	Pig's ear
<i>Crassula multicava</i>	Fairy crassula
<i>Cyathea cooperii</i> (added in 2008)	Australian tree fern, Lacy tree fern
<i>Dipogon lignosus</i>	Mile-a-minute
<i>Drosera capensis</i>	Cape sundew
<i>Eccremocarpus scaber</i>	Chilean glory creeper, Chilean glory vine, Glory vine, Chilean glory flower
<i>Egeria densa</i>	Egeria, Oxygen weed, Brazilian elodea
<i>Ehrharta villosa</i>	Pyp grass
<i>Eichhornia crassipes</i>	Water hyacinth
<i>Eomecon chionantha</i>	Snow poppy, Poppy of the dawn, Chinese bloodroot
<i>Equisetum</i> (all species)	Horsetail
<i>Eragrostis curvula</i>	African love grass
<i>Erigeron karvinskianus</i>	Mexican daisy

Scientific Name	Common Name/s
<i>Euonymus japonicus</i> (does not include small-leaved cultivars such as Microphylla and Emerald Gem)	Japanese spindle tree
<i>Ficus rubiginosa</i>	Port Jackson fig
<i>Fuchsia boliviana</i>	Bolivian fuchsia
<i>Galeobdolon luteum</i>	Artillery plant , Aluminium plant
<i>Gunnera tinctoria</i>	Chilean rhubarb
<i>Gymnocoronis spilanthoides</i>	Senegal tea, Temple plant, Costata
<i>Hedychium flavescens</i>	Yellow ginger
<i>Hedychium gardnerianum</i>	Kahili ginger
<i>Heracleum mantegazzianum</i>	Giant hogweed, Cartwheel flower, Wild parsnip, Wild rhubarb
<i>Hieracium</i> (all species)	Hawkweed
<i>Homalanthus populifolius</i>	Queensland poplar, Bleeding heart tree, Poplar leaved omalanthus
<i>Homeria collina</i>	Cape tulip
<i>Houttuynia cordata</i>	Chameleon plant
<i>Hydrilla verticillata</i>	Hydrilla
<i>Hydrocleys nymphoides</i>	Water poppy
<i>Hypericum androsaemum</i>	Tutsan, Sweet amber
<i>Ipomoea indica</i>	Blue morning glory
<i>Iris pseudacorus</i>	Yellow flag iris
<i>Jasminum humile</i>	Italian jasmine
<i>Lagarosiphon major</i>	Lagarosiphon, Oxygen weed
<i>Lantana camara</i> (all varieties)	Lantana
<i>Ligustrum lucidum</i>	Tree privet
<i>Lilium formosanum</i> (added in 2007)	Formosa lily, Trumpet lily, St Joseph's lily, Taiwan lily
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Ludwigia peploides</i> subsp. <i>Montevidensis</i>	Primrose willow, Floating primrose willow, Water primrose
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Macfadyena unguis-cati</i>	Cat's claw creeper, Cat's claw vine, Cat's claw ivy, Yellow trumpet vine
<i>Menyanthes trifoliata</i>	Bogbean
<i>Myoporum insulare</i> (and hybrids)	Tasmanian ngaio
<i>Myrica faya</i>	Fire tree, Candle-berry myrtle
<i>Myricaria germanica</i>	False tamarisk
<i>Myriophyllum aquaticum</i>	Parrot's feather, Thread of life, Brazilian watermilfoil
<i>Nassella</i> (all species)	Nassella
<i>Nephrolepis cordifolia</i>	Tuber ladder fern
<i>Nuphar lutea</i>	Yellow water lily, Spatterdock, Cow lily, Brandybottle
<i>Nymphaea mexicana</i>	Mexican water lily, Banana water lily
<i>Nymphoides geminata</i>	Marshwort, Entire marshwort
<i>Nymphoides peltata</i>	Fringed water lily
<i>Ochna serrulata</i>	Mickey Mouse plant
<i>Osmunda regalis</i>	Royal fern
<i>Panicum maximum</i>	Guinea grass, Green panic, Buffalo grass
<i>Passiflora caerulea</i>	Blue passion flower
<i>Passiflora tarminiana</i>	Northern banana passionfruit
<i>Passiflora tripartita</i> ( all subspecies)	Banana passionfruit
<i>Pennisetum</i> (all species but excluding <i>P. clandestinum</i> and <i>P. glaucum</i> )	Pennisetum (excluding kikuyu grass and pearl millet)
<i>Phragmites australis</i>	Phragmites
<i>Pinus contorta</i>	Lodgepole pine, Contorta pine
<i>Pistia stratiotes</i>	Water lettuce
<i>Pittosporum undulatum</i>	Sweet pittosporum, Victorian box, Australian cheesewood, New Zealand daphne
<i>Plectranthus ciliatus</i>	Plectranthus, Blue spur flower

<b>Scientific Name</b>	<b>Common Name/s</b>
<i>Polygala myrtifolia</i> (excluding <i>Grandiflora</i> cultivar)	Sweet pea shrub, Sweet pea bush, Myrtle leaf milkwort
<i>Potamogeton perfoliatus</i>	Clasped pondweed
<i>Prunus serotina</i> (added in 2008)	Rum cherry, Wild black cherry, Mountain black cherry, Black cherry
<i>Pyracantha angustifolia</i>	Firethorn, Orange firethorn, Yellow firethorn
<i>Reynoutria japonica</i> (and hybrids)	Asiatic knotweed, Japanese knotweed, Mexican bamboo
<i>Reynoutria japonica x sachalinensis</i>	
<i>Reynoutria sachalinensis</i> (and hybrids)	Giant knotweed
<i>Rhamnus alaternus</i>	Rhamnus, Evergreen buckthorn
<i>Rhododendron ponticum</i> (added in 2008)	Wild rhododendron, Pontic rhododendron, Pontian rhododendron
<i>Sagittaria montevidensis</i>	Arrowhead, Sagittaria, Californian arrowhead
<i>Sagittaria platyphylla</i>	Sagittaria, Delta arrowhead
<i>Sagittaria sagittifolia</i>	Arrowhead, Hawaiian arrowhead
<i>Salix cinerea</i>	Grey willow, Pussy willow, Grey sallow
<i>Salix fragilis</i>	Crack willow
<i>Salvinia molesta</i>	Salvinia, Kariba weed
<i>Schinus terebinthifolius</i>	Christmas berry, Brazilian pepper tree
<i>Schoenoplectus californicus</i>	Californian bulrush
<i>Selaginella kraussiana</i>	African club moss, Selaginella
<i>Solanum marginatum</i>	White edged nightshade
<i>Solanum mauritianum</i>	Woolly nightshade, Tobacco weed, Wild tobacco tree
<i>Tradescantia fluminensis</i>	Wandering Jew
<i>Tropaeolum speciosum</i>	Chilean flame creeper
<i>Tussilago farfara</i>	Coltsfoot
<i>Typha latifolia</i>	Great reedmace, Cumbungi, Common cattail

## Appendix Two: Surveillance Plants

### **Lagarosiphon (*Lagarosiphon major*)**

Lagarosiphon is also known as oxygen weed. It is a larger oxygen weed than Egeria. It is a perennial plant, which grows fully submerged in water to depths of 6 metres. The plant has spiralled, green leaves on slender, brittle stems up to 5 metres long. It forms large mats of interwoven stems below the water surface. It has an exceptional ability to reproduce and spread. The plant is spread by vegetative fragmentation. Dispersal of fragments is by water flow, or by people transporting fragments on their boats, trailers and fishing nets.

Lagarosiphon is an aggressive freshwater weed that shades out native aquatic plants. It modifies habitats and smothers native aquatic species. Dense stands will impede water flow and interfere with recreational uses. Heavy infestations can diminish oxygen available to fish by reducing water circulation and through the decomposition of dead plant material. For control methods contact the Regional Council or the Department of Conservation.



### **Reed Sweet Grass (*Glyceria Maxima*)**

A native of Europe and Asia, Reed Sweet Grass typically grows in wetter locations up to 1.8m tall with leaves up to 50cm long either upright or floating. Flowerheads appear in November and are open with many branched spikelets, 15 – 45 cm long, seeding in February or March. It spreads by rhizomes which densely mat and sprout many shoots. It can impede drainage, cause silt accumulation and flooding and will replace native plants. It has been implicated in cyanide poisoning of stock. It is a particular threat to wetlands as it can choke up open water areas that may be important habitat for native birds.



### **Asiatic Knotweed (*Reynoutria japonica*)**

Asiatic Knotweed and its larger relative Giant Knotweed are perennials which die back over winter, and grow rapidly in spring to reach up to 1.5m tall (Giant Knotweed can top 2m). The leaves are similar size to dock leaves but brighter green. The numerous flowers are small and creamy white. The plant spreads both by rhizome and seeds and is very difficult to eradicate once well established.

