This fact sheet was prepared by Barbara Mitcalfe in conjunction with the Department of Conservation. 2002.

Native plants for streamsides in Wellington Conservancy

Introduction

Streamsides provide important habitat for a large number of our native plants and animals. Drainage, culverting and other actions including planting non-native species such as willow and poplar have led to the local extinction or reduction of many native plant species that used to occur naturally beside streams. You can help reduce further loss of indigenous biodiversity by planting native plants appropriate to the conditions and to the region.

Streamsides vary according to the topography. Some are swampy, some are steep banks, some are well-drained flats or gently sloping terraces. Each type of streamside site has its own typical vegetation. The plants listed below are all indigenous and characteristic of streamsides in Wellington Conservancy (excluding Chatham Islands), which is the area of the lower North Island that is south of a line from Manawatu in the west to just north of Castlepoint in the east.

Advantages of indigenous streamside plantings

Streamside vegetation of any kind is valuable because it:

- Maintains water quality and clarity by reducing sediment and nutrient run-off from land.
- Maintains low water temperatures by providing shade.
- Increases soil stability and minimises stream bank erosion.
- Provides breeding areas for birds and fish, and linear habitats that support a diversity of plant species.
- Provides habitat (leaf litter and woody debris) for aquatic wildlife.
- Reduces flood peaks by increasing water retention times and evapo-transpiration rates.

The use of native species instead of exotic species has additional advantages. For example, natives will not become serious weeds; they provide important habitat for native animals and they convey an aesthetic that is uniquely New Zealand.

Suitable streamside plants for use in Wellington Conservancy

This list is not definitive. Many other native plants such as small ferns and herbaceous plants are not listed because they usually establish by themselves once the larger plants have created a suitable environment.

Not all plants in this list are suitable for all streamside sites as different areas have their own distinctive plants. Some plants such as raupō, many rushes and some sedges, are adapted to growing beside, or in, the water. Some grow further back where the site is always moist but not permanently inundated. Others, like tōtara and kanuka, grow on well-drained riparian flats. Before starting work, look around the district to see what grows where. Where each species should be planted is described below, and also whether it should be used as a pioneer species early in the planting or as a secondary species later on.

Department of Conservation
Te Papa Atawhai

	PIONEER PLANTINGS	SECONDARY PLANTINGS	SUITABLE SITES: WATER'S EDGE (WE), SLOPE (SL), WELL-DRAINED FLATS (FL), FURTHER BACK (FB)
Trees and shrubs			
Alectryon excelsus (tītoki)		●	SL
Aristotelia serrata (makomako/wineberry)	●		SL
Brachyglottis repanda (rangiora)		●	SL
Coprosma propinqua	●	●	WE, SL
Coprosma robusta (karamū)		●	SL
Coprosma tenuicaulis (hukihuki/swamp coprosma)	●	●	WE, SL
Cordyline australis (tī kōuka/cabbage tree)	●		WE, SL, FB
Dacrycarpus dacrydioides (kahikatea)	●	●	WE, SL
Dracophyllum longifolium (inanga)		●	SL
Elaeocarpus hookerianus (pōkaka)		●	SL
Fuchsia excorticata (kōtukutuku/tree fuchsia)	●	●	SL
Hebe stricta var. *atkinsonii* (koromiko)	●		WE
Kunzea ericoides (kānuka)	●		FL
Laurelia novae-zelandiae (pukatea)		●	SL
Leptospermum scoparium (mānuka)	●		WE, FL, SL, FB
Olearia virgata (twiggy tree daisy)		●	WE, SL
Pennantia corymbosa (kaikōmako)*	●		WE
Plagianthus regius (manatu/lowland ribbonwood)*	●	●	WE, SL
Podocarpus totara (tōtara)		●	FL
Prumnopitys ferruginea (miro)		●	SL
Pseudopanax arboreus (whauwhaupaku/five-finger)	●	●	SL
Rhopalostylis sapida (nīkau)		●	SL
Sophora microphylla (kōwhai)		●	SL
Schefflera digitata (patē/seven-finger)		●	SL
Syzygium maire (maire tawake/swamp maire)		●	WE, SL
Ferns			
Blechnum minus (swamp kiokio)		●	WE, SL
Blechnum novae-zelandiae (kiokio)		●	WE, SL
Cyathea medullaris (mamaku/black tree fern)		●	SL
Dicksonia squarrosa (whekī)	●	●	WE, SL
Pneumatopteris pennigera (pākau/gully fern)		●	WE, SL
Grasses			
Chionochloa rubra (wī/red tussock)	●		SL
Cortaderia fulvida (toetoe)	●		FL
Cortaderia toetoe (toetoe)	●		WE, SL

* salt-tolerant species.

	PIONEER PLANTINGS	SECONDARY PLANTINGS	SUITABLE SITES: WATER'S EDGE (WE), SLOPE (SL), WELL-DRAINED FLATS (FL), FURTHER BACK (FB)
Sedges			
Baumea articulata (twig sedge)	●		WE
Bolboschoenus caldwellii *		●	WE
Bolboschoenus fluviatilis *	●		WE
Bolboschoenus medianus *	●		WE
Carex buchananii (Buchanan's sedge)		●	WE, SL
Carex comans (Longwood tussock)	●	●	SL
Carex dipsacea	●	●	SL
Carex dissita		●	SL
Carex geminata (rautahi/cutty grass)	●	●	WE
Carex flagellifera (mānaia/Glen Murray tussock)	●	●	SL
Carex lessoniana (rautahi)	●	●	WE
Carex litorosa (sea sedge) *		●	WE
Carex maorica	●	●	WE
Carex secta (pūrei)	●	●	WE
Carex solandri *	●	●	WE, SL
Carex testacea (pūrei/speckled sedge)	●	●	SL, FB
Carex virgata (pūrei/swamp sedge)	●	●	WE
Cyperus ustulatus (upoko tangata/giant umbrella sedge) *	●		WE
Eleocharis acuta (sharp spike sedge)	●	●	WE
Gahnia xanthocarpa (tupari maunga)	●	●	WE
Isolepis nodosa (wī/knobby club rush) *	●	●	SL, FB
Isolepis prolifer (three-square)	●	●	WE
Schoenoplectus pungens *	●		WE
Schoenoplectus tabernaemontani (kāpūngāwhā/leafless rush) *	●		WE
Rushes			
Apodasmia (=*Leptocarpus*) *similis* (oioi/jointed wire rush)*	●		WE
Juncus gregiflorus (wī/leafless rush)	●		SL
Juncus kraussii var. *australiensis* (sea rush)*	●		WE
Juncus pallidus (wī/giant rush)	●		WE
Juncus sarophorus (wī/leafless rush)	●		SL
Herbaceous plants			
Astelia fragrans (kakaha/bush lily)	●	●	SL
Astelia grandis (swamp astelia)		●	FB
Phormium tenax (harakeke/swamp flax)	●		WE
Typha orientalis (raupō)	●		WE

* salt-tolerant species.

More information and advice about planting streamsides

The Wellington Conservancy of the Department of Conservation and the Wellington Regional Council both provide information about restoring streamside ecosystems. The New Zealand Ecological Restoration Network also provides information through its web site. Staff at local plant nurseries may also be able to advise on plant selection. Contact details are:

Department of Conservation
P.O. Box 5086
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Tel: 04 472 5821
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www.doc.govt.nz

Wellington Regional Council
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Wellington
New Zealand
Tel: 04 384 5708
Fax: 04 384 6960
www.wrc.govt.nz

New Zealand Ecological Restoration Network
www.bush.org.nz

Other sources of information

1. Johnson, P. , Brooke, P.1998: Wetland Plants in New Zealand. DSIR field guide, Manaaki Whenua Press, Christchurch, New Zealand.

2. Sheridan, A.; Holmes, J. 1999: Wellington Regional Native Plant Guide. Wellington Regional Council, Wellington (Price $2-50)