

Native Plants Recommended for Effluent Fields (ETS Field).

Compiled by

Alter-Natives Wholesale Nursery. www.alter-natives.co.nz

571 Ormiston Road, Waipu, ph 09 4321333

The two main reasons for putting plants on effluent fields are:

1. To soak up the wastewater and transpire (*the plants version of perspiring*) it out through the plants foliage.
2. To absorb nutrients out of the wastewater so that it does not make its way into the underground water table and so on into stream systems.

Thus, plants that have a high transpiration rate, vigorous growth and are tolerant of wet soil conditions are best.

Plant spacings will vary depending upon species and mature size, but it's generally calculated at 1 plant per square metre of field. Thus a 200m square field should have 200 plants and so-on. When planting smaller grasses or lilies you may space them at 50-75cm while medium sized trees may be spaced at 1.2-1.5m, so overall with a mixed species planting it is typically 1 plant per metre.

The key differences between the two common types of effluent fields are:

1. Underground pipes (*usually 100mm diameter pipes with small seepage holes along its length and buried 600mm underground*)
2. Dripper lines on the ground surface (*usually 15mm diameter hoses with drippers laid under mulch*).

The biggest concern for the fields with underground pipes is the possibility of damage from large tree roots or blockage of the seepage holes along the pipes. Blockage is most likely to happen with deep rooting trees, or trees that will put out masses of feeder roots into water.

Many of the plants listed below can be viewed on our website. www.alter-natives.co.nz
Or by visiting our nursery: Alter-Natives Wholesale Nursery, 571 Ormiston Rd, Waipu

Sources of information:

Auckland Regional Council Technical Sheet G-1: List of water tolerant plants suitable for on-site wastewater disposal systems.

Northland Regional Council: Looking after your household sewage system.

Above documents have been used by most engineers around Whangarei and Northland.

Plants that are highly recommended. (Suitable for both sorts of effluent fields).**Grasses, Grass-like or Flaxes, Flax-like**

| Botanical name | Maori Name | Common Name | Typical height |
|--------------------------------|-----------------------|----------------------|----------------|
| <i>Arthropodium cirratum</i> | Rengarenga | Rock lily | 20-40cm |
| <i>Astelia grandis</i> * | | Swamp Astelia | 1.5-2m |
| <i>Carex dissita</i> * | | | 40-90cm |
| <i>Carex flagellifera</i> | | | 50-70cm |
| <i>Carex germinate</i> | | | 50cm-1m |
| <i>Carex lessoniana</i> | | | 70cm-1.2m |
| <i>Carex maorica</i> * | | | 50cm-1m |
| <i>Carex secta</i> | Purei, Pukio | | 70cm-1m |
| <i>Carex tenuiculmis</i> | | | 50-70cm |
| <i>Carex virgata</i> | | | 70cm-1m |
| <i>Cortaderia fulvida</i> | Toetoe, Kakaho | Cutty Grass | 1-1.5m |
| <i>Cortaderia toetoe</i> | Toetoe, Kakaho | Cutty Grass | 1.5-2m |
| <i>Cyperus ustulatus</i> * | Toetoe upokotangata | Giant umbrella sedge | 60cm-1m |
| <i>Dianella nigra</i> | Turutu | NZ blue berry | 30-60cm |
| <i>Juncus gregiflorus</i> * | Wiwi | Common rush | 50cm-1.5m |
| <i>Leptocarpus similis</i> | Oioi | Jointed Rush | 50-70cm |
| <i>Machaerina sinclairi</i> * | Pepepe, Toetoe tuhara | | 50cm-1m |
| <i>Phormium tenax</i> | Harakeke | Flax | 1.5-2m |
| <i>Phormium tenax purpurea</i> | | Purple Flax | 1.5-2m |
| <i>Uncinia unciniata</i> * | | Hook Grass | 20-40cm |

Spreading ground covers

| Botanical name | Maori Name | Common Name | Typical height |
|--------------------------------|-------------|---------------|----------------|
| <i>Coprosma acerosa</i> | Tatarakeke | Sand Coprosma | 30-40cm |
| <i>Coprosma atropurpurea</i> * | | | 5-10cm |
| <i>Coprosma 'Hawera'</i> | | | 10-20cm |
| <i>Coprosma kirkii</i> | | | 30-50cm |
| <i>Coprosma 'Poor Knights'</i> | | | 30-50cm |
| <i>Coprosma prostrata</i> | | | 30-50cm |
| <i>Coprosma 'Taiko'</i> | | | 20-30cm |
| <i>Elatostema rugosum</i> * | parataniwha | | 40-70cm |
| <i>Fuchsia procumbens</i> | | | 10-20cm |

Shrubs and small trees (typically less than 5m)

| Botanical name | Maori Name | Common Name | Typical height |
|--|-------------------|----------------------|----------------|
| <i>Brachyglottis repanda</i> * | Rangiora | | 3-4m |
| <i>Carpodetus serratus</i> | Putaputaweta | Marble leaf | 3-5m |
| <i>Coprosma arborea</i> * | Mamangi | | 3-4m |
| <i>Coprosma areolate</i> * | | Thin-leaved coprosma | 3-4m |
| <i>Coprosma cultivars which are coloured (lots of options)</i> | | | 1-3m |
| <i>Coprosma propinqua</i> | Mingimingi | | 1-3m |
| <i>Coprosma repens</i> | Taupata | Mirror Plant | 2-4m |
| <i>Coprosma rhamnoides</i> * | | | 1-2m |
| <i>Coprosma robusta</i> | Karamu | | 2-4m |
| <i>Clianthus puniceus</i> | Kowhai ngutu-kaka | Kaka Beak | 2-3m |
| <i>Fuchsia excorticata</i> * | Kotukutuku | Tree Fuchsia | 3-5m |
| <i>Geniostoma rupestre</i> * | Hangehange | | 1-2m |
| <i>Hebe stricta</i> | Koromiko | | 1-3m |
| <i>Macropiper excelsus</i> | Kawakawa | | 1-3m |

Trees (typically 5m or more)

| Botanical name | Maori Name | Common Name | Typical height |
|-------------------------------|------------|----------------|----------------|
| <i>Kunzea ericoides</i> | Kanuka | White Tea-tree | 6-10m |
| <i>Cordyline australis</i> | Ti kouka | Cabbage Tree | 5-10m |
| <i>Leptospermum scoparium</i> | Manuka | Tea-tree | 4-8m |

Ferns

| Botanical name | Maori Name | Common Name | Typical height |
|-----------------------------------|------------|-------------|----------------|
| <i>Blechnum novaezealandiae</i> * | kiokio | | 1-2m |
| <i>Dicksonia squarrose</i> | wheki | tree fern | 3-5m |
| <i>Hypolepis dicksonioides</i> * | | | 1-1.5m |

Large trees that are recommended for effluent fields using dripper lines; or only for on the fringe of underground systems (3m or more away from pipes because of the potential for the plant roots damaging your pipes).

Trees (typically 5m or more)

| Botanical name | Maori Name | Common Name | Typical height |
|----------------------------------|------------|--------------|----------------|
| <i>Laurelia novae-zealandiae</i> | Pukatea | | 10-20m |
| <i>Corynocarpus laevigata</i> | Karaka | | 8-15m |
| <i>Dacrycarpus dacrydioides</i> | Kahikatea | White pine | 20-30m |
| <i>Pittosporum eugenoides</i> | Tarata | Lemonwood | 6-10m |
| <i>Aristotelia serrata</i> | Makomako | Wineberry | 6-10m |
| <i>Pittosporum tenuifolium</i> | Kohuhu | | 5-8m |
| <i>Plagianthus regius</i> | Manatu | Ribbonwood | 8-12m |
| <i>Hoheria populnea</i> | Houhere | | 6-8m |
| <i>Melicytus ramiflorus</i> | Mahoe | Whiteywood | 4-6m |
| <i>Rhopalostylis sapida</i> | Nikau | | 6-12m |
| <i>Pennantia corymbosa</i> * | Kaikomako | | 6-10m |
| <i>Schflera digitata</i> | Pate, Pata | Seven finger | 4-6m |
| <i>Vitex luscens</i> | Puriri | | 10-20m |

Note: Plants marked with a * can sometimes be hard to find in nurseries around Northland.

Good luck. From the team at Alter-Natives Nursery.

