

Salinity Sites.

Salinity discharge areas are very difficult to deal with successfully. The key thing is to achieve complete plant cover and to avoid bare areas. If the soil does not support plant cover the capillary action of soil moisture will pull salt to the surface. However, plant cover does not include Spiny Rush (*Juncus acutus*).

Several areas in the Woody catchment have been treated in different ways.

Jim Boyle at Rokewood has several saline discharge sites on his property. In 1981 he prepared the areas with a cultivator and harrows to make a shallow seed bed. In April 1981 the areas were sown with Demeter Fescue, Tall Wheat Grass, Phalaris, Strawberry Clover and White Clover with added fertiliser.

One area was planted with Tamarisk cuttings pushed into the ground during winter and spring and round the edge of the area Bracelet Honey Myrtle, Cross Leafed Honey Myrtle, Swamp Paperbark and Kangaroo Island Paperbark were planted. This area has not been grazed since.

Another area is grazed but the grazing is managed carefully so that the ground is not bared out at all. Both areas have a good covering of grass.

Daniel Laffan at Mt Mercer planted out a saline soak area in 1990. He did not use any sprays but planted on the edges of the soak using species such as River Red Gums, Blackwoods, Mahogany and Melaleucas. The trees are still surviving but Daniel feels it would have been better if the area was mounded first. There is grass cover over the soak.

Mounding would commonly be recommended as part of the site preparation for tree planting in salinity discharge sites. Most salt tolerant plants have a greater tolerance of salinity as mature plants compared to their tolerance as young seedlings. The mounding at least enables them to establish.

Troy Missen at Werneth, influenced by Kevin Blake's efforts near Shelford, planted out a saline soak in 1996 with predominantly River Red Gums and some Golden Wreath Wattle and Swamp Honey Myrtle. He planted straight into the area in rows spaced four metres by four metres. The trees have done well and have dried the area out as well as providing some shelter and habitat for birds.

Tree and shrub planting to tackle salinity would normally be recommended in the recharge areas (if known) rather than the discharge sites. If planting in discharge areas, selecting species with known salinity tolerance is critical.



River Red Gums on Troy Missen's saline soak

A good list is included in the book *Trees for Saltland: a guide to selecting native species for Australia*, Nico Marcar et al, CSIRO Australia, 1995.

Local native species on this list noted as having tolerance of moderate to severe salinity levels in the root zone are Wirilda (*Acacia retinodes*), River Red Gum (*Eucalyptus camaldulensis*), Yellow Gum (*Eucalyptus leucoxylon*), surprisingly, Yellow Box (*Eucalyptus melliodora*) and Drooping Sheoak (*Allocasuarina verticillata*).

Non-local species with the highest tolerance (extreme salinity) include River Cooba, Eumong (*Acacia stenophylla*), Small Cooba (*Acacia ampliceps*), Swamp Sheoak (*Casuarina obesa*), Stocking Gum (*Eucalyptus kondininensis*), Salt Paperbark (*Melaleuca halmaturorum*).

Other non-local species on the next level of tolerance (severe) include Swamp Yate (*Eucalyptus occidentalis*), Belah (*Casuarina cristata*), Grey Sheoak (*Casuarina glauca*) and a number of paperbarks (*Melaleuca decussata*, *M. lanceolata*, *M. squarrosa*, *M. uncinata*, *M. leucadendra*, *M. quinquenervia*).



Good plant cover on Jim Boyle's ungrazed salinity area.



Sheep grazing with good pasture cover on Jim Boyle's saline area.

The information and opinions expressed in Fact Sheets represent actual experiences as described by those interviewed and are not to be interpreted as recommended treatments of Alcoa World Alumina Australia or Greening Australia and may not be appropriate for all situations. Seek local area advice.
Compiled by C. Dennis.

Some of the species used are not indigenous to the Woody Yaloak catchment and may be environmental weeds. It is recommended to follow the species guidelines in the Corangamite Native Vegetation Plan and use indigenous species of the ecological vegetation class occurring in that area.