

Salinity – non-watertable (magnesia patches)

Minimising erosion risk by livestock exclusion is one of very few management options available for magnesia patches

Non-watertable salinity (also known as [dry saline land](#)) is land where soils contain elevated levels of soluble salts which are not associated with a watertable. The salts have presumably accumulated in the soil either from wind-blown deposition (of marine aerosols) and subsequent leaching, or via ancient saline groundwater influences that are no longer manifest at the land surface. Salts generally occur as subsoil 'bulges', which reflect either the extent of leaching (i.e. salt cannot be leached any further than the depth of the seasonal wetting front), or an impermeable deep subsoil layer which prevents flushing of the salts into substrate materials.

Where high salt concentrations extend to the soil surface, salt crystals may form and surface vegetation is severely degraded or absent. These land features are commonly called **magnesia patches** (or magnesia ground). Most soils of lower rainfall districts have elevated salt levels in their subsoils, but magnesia ground is mostly found on Eyre Peninsula.

There are no practicable methods of "desalinating" dry saline land. On grazing properties, some productivity gains may be made through planting salt tolerant plants such as salt bush. Protecting the soil surface to prevent erosion is possibly more pressing. This inevitably involves exclusion of livestock during critical periods.

Land assessment in southern South Australia

The proportion of land affected by magnesia patches is estimated for each soil landscape map unit.

Soil properties can vary across the landscape in a subtle or dramatic fashion. [Mapping at a regional scale](#) is not able to display this level of variability, however proportions of each *Salinity – non-watertable (magnesia patches)* class (e.g. V1234, V7) have been estimated for each map unit.

Further information can be found in [Assessing Agricultural Land](#) (Maschmedt 2002).



Magnesia ground on far western Eyre Peninsula

Area statistics

Land affected by magnesia patches	Area	Cleared land	Class*
Land not affected by magnesia patches	98.46%	98.19%	V1234
Land affected by magnesia patches	0.14%	0.13%	V7
Not applicable	1.40%	1.68%	VX
TOTAL HECTARES	15,765,460	10,439,300	

* The letter 'V' denotes classes that are specific to *Salinity - non-watertable (magnesia patches)*

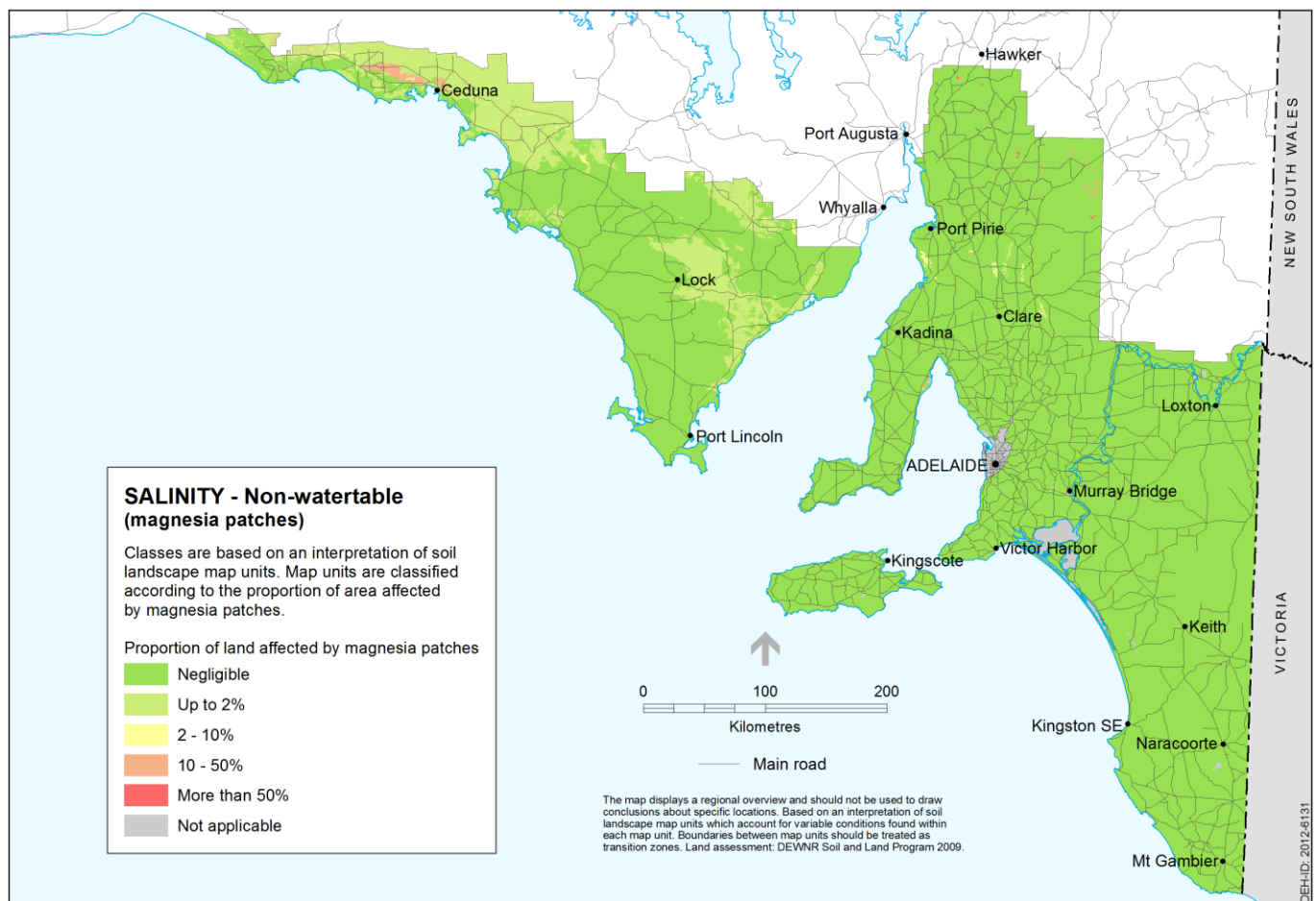


Displaying data in soil maps

Soil and land attribute maps display a simplified version of the underlying data. Mapping classes are based on an interpretation of soil landscape map units, which are classified according to the area proportion affected by magnesia patches.



Non-watertable salinity magnesia patch



Further information

- View data on [NatureMaps](#) (→ Soils)
- Read the [metadata](#) for this layer
- Read more about [soil attribute mapping](#)
- Contact [Mapland](#)

Download from Enviro Data SA:

- [Statewide map](#) and [spatial dataset](#)
- [Assessing Agricultural Lands](#) (Maschmedt 2002)
- Soils of Southern SA book [Part 1](#) and [Part 2](#)



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