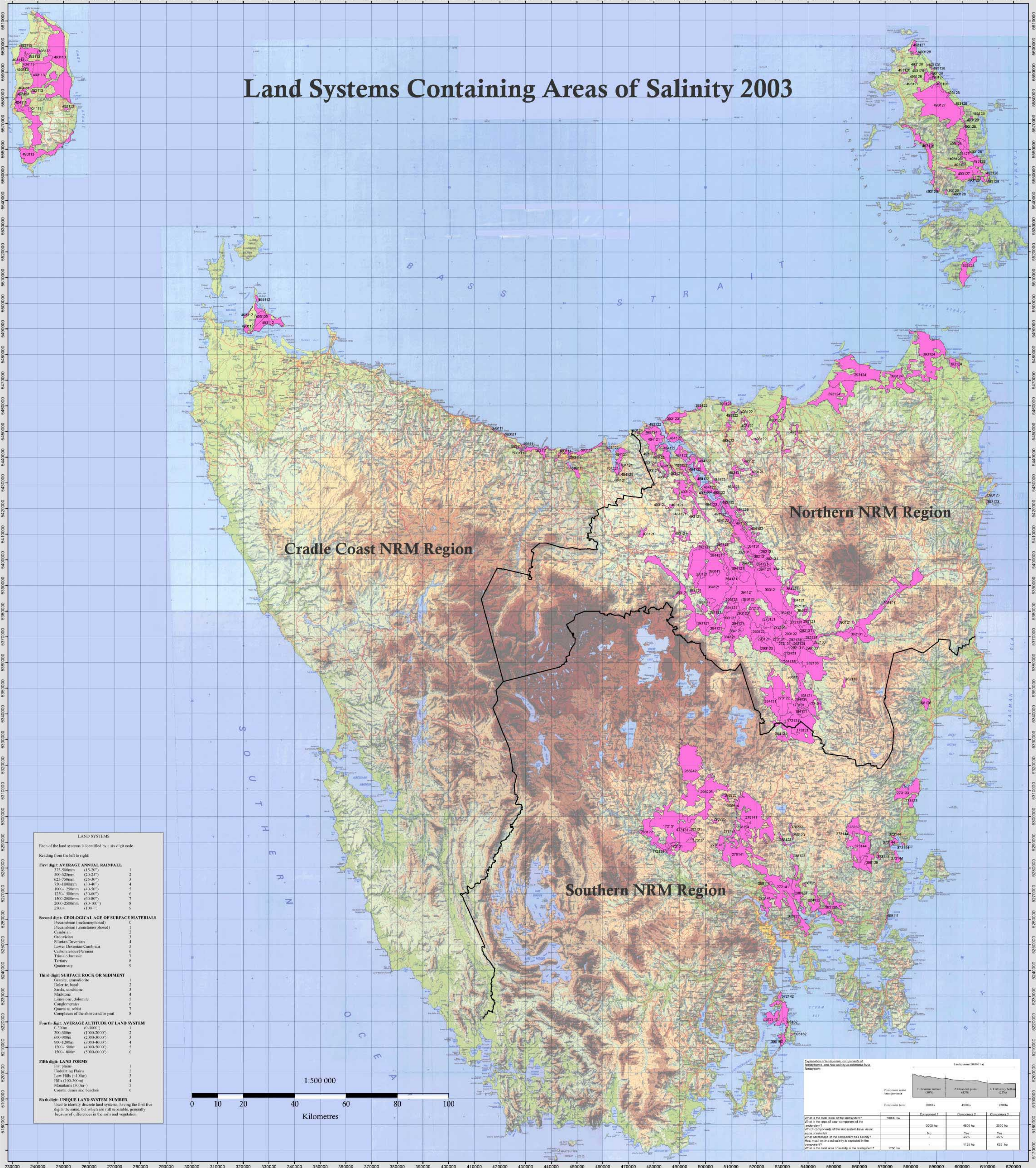


# Land Systems Containing Areas of Salinity 2003



**LAND SYSTEMS**

Each of the land systems is identified by a six digit code.

Reading from the left to right:

**First digit: AVERAGE ANNUAL RAINFALL**

375-500mm (15-20")	1
500-625mm (20-25")	2
625-750mm (25-30")	3
750-1000mm (30-40")	4
1000-1250mm (40-50")	5
1250-1500mm (50-60")	6
1500-2000mm (60-80")	7
2000-2500mm (80-100")	8
2500+ (100"+)	9

**Second digit: GEOLOGICAL AGE OF SURFACE MATERIALS**

Proterozoic (metamorphosed)	0
Proterozoic (metamorphosed)	1
Cambrian	2
Ordovician	3
Silurian-Devonian	4
Lower Devonian-Cambrian	5
Carboniferous-Permian	6
Triassic-Jurassic	7
Tertiary	8
Quaternary	9

**Third digit: SURFACE ROCK OR SEDIMENT**

Granite, gneiss/diabase	1
Dolerite, basalt	2
Sand, sandstone	3
Mudstone	4
Limestone, dolomite	5
Complexities	6
Quartzite, schist	7
Complexes of the above and/or peat	8

**Fourth digit: AVERAGE ALTITUDE OF LAND SYSTEM**

0-300m (0-1000')	1
300-600m (1000-2000')	2
600-900m (2000-3000')	3
900-1200m (3000-4000')	4
1200-1500m (4000-5000')	5
1500-1800m (5000-6000')	6

**Fifth digit: LAND FORMS**

Flat plains	1
Undulating Plains	2
Low Hills (<100m)	3
Hills (100-300m)	4
Mountains (>300m)	5
Coastal dunes and beaches	6

**Sixth digit: UNIQUE LAND SYSTEM NUMBER**

Used to identify discrete land systems, having the first five digits the same, but which are still separable, generally because of differences in the soils and vegetation.

**Explanation of land system components of land systems and how salinity is estimated in a land system**

Component name	Area (hectares)	1. Residual salinity (CPS)	2. Observed plus (CPS)	3. Flat saline heath (CPS)
Component 1	248ha	487ha	298ha	
Component 2	1000ha	3000ha	4532ha	2503ha
Component 3			27%	20%
Component 4			1125ha	625ha
<b>Total</b>	<b>1348ha</b>		<b>5125ha</b>	<b>625ha</b>

**Tasmania - Land Systems Containing Areas of Salinity in 2003**

**Land systems**  
Land systems are areas of land which have similar rainfall, geology, altitude and gross topography defined by a six number code (see Land systems code above). They are sub-divided into components which have uniform soils, vegetation and slopes. A land system may have up to five components. A component may comprise only 3% of the total area of a land system.

**Salinity**  
Saline soils are those where plant growth is limited by salt in the root zone or where the salinity impacts on built assets.

Salinity can only result if a saline ground water system receives extra water, a salt store is mobilised, or a new source of salt is added to soil or water. Where there is a salt store or a saline groundwater, any process that increases the available water in the soil can increase the leakage of water to groundwater, and flush salt out into surface waters or soil systems. Evaporative processes can also bring salt to the surface. Where salt reaches the surface it concentrates and over time salt sensitive plants are replaced by salt tolerant ones. In extreme situations all vegetation is killed and a bare area of soil results (a scald). These visual symptoms can be mapped.

If poorly managed, conversion of land from perennial vegetation to exotic pastures, cropping, irrigation, recycling of effluent water, dam construction, drainage and urban development, can all increase salinity. In the extreme circumstance all vegetation can be killed, this makes it possible to estimate salinity extent by field observation of these vegetation changes as well as visual signs of salt crystals.

**Dryland Salinity Audit**  
This map is an updated version of a map originally produced for the National Land and Water Audit 2000. It shows the land systems containing salinity (not actual salinity extent) as estimated in 2003.

The map was developed from:  
\*Land System Reports published by the Department of Agriculture (1978-1989)  
\*Survey information collected by Grice (1992)  
\*Field observations made by Finigan (1996-2000)  
\*National Land and Water Audit 2000  
\*Additional field information collected by DPIW officers and others between 2000-2003

In 1992, Grice used land systems as the mapping unit and reported visual symptoms of salinity. In 2000, Finigan used reports of emerging salinity and field observations made between 1996-2000 to locate areas with symptoms of salinity not reported in 1992. The land systems containing these areas were then identified and added to those previously reported by Grice. In 2003 Bastick and Lynch updated the 2000 information using new field information collected by various organisations involved in salinity.

**Limitations**  
The boundaries of all the land systems containing salinity as well as their codes are shown on this map. It is assumed that if salinity has been observed and recorded in a land system it may only be small areas of a land system or a component of that land system (see example shown in figure 2). However the whole land system has been mapped as being degraded because mapping of land system components was not available.

**Refer to this map as:**  
Bastick, C. Lynch, S. Land Systems Containing Areas of Salinity in 2003. Department of Primary Industries and Water

**For details of methodology used to derive map refer to:**  
Bastick, C. and Walker, M.G. 2000  
Extent and Trends of Dryland Salinity in Tasmania. National Land and Water Audit  
Department of Primary Industries, Water and the Environment, Tasmania, Australia

**Legend**

- Land system containing salinity (salinity varies between 5-25% of any landsystem)
- NRM regions

**Elevation Layers**

- 0-100m
- 100-300m
- 300-600m
- 600-900m
- 900-1200m
- 1200-1500m
- 1500m+

**Disclaimer**  
The Crown, in the right of the State of Tasmania, does not accept any responsibility for the loss or damage which may result to any person arising from reliance on all or any part of this information, whether or not that loss or damage has resulted from negligence or any other cause.

**Data Sources**  
Base data supplied by Information & Land Services, DPIW.  
Salinity data supplied by DPIW Land Conservation Branch.

