Flooding susceptibility

Flooding susceptibility is one of the most subjective landscape assessments—local knowledge is vital for more informed on-site predictions

Flooding susceptibility imposes a serious limitation on land, especially where structures are required. Apart from the obvious damage to buildings and other infrastructure, and the danger to livestock, flooding has some specific impacts on soils, crops and pastures. Flash flooding with high energy is potentially disastrous from a soil erosion and plant damage point of view. Plants can be uprooted, buried or suffer foliar damage. Inundation flooding is less of a soil erosion problem and is unlikely to cause physical damage to plants, apart from siltation effects. However, plants sensitive to waterlogging will be affected, so the degree of damage is related to the duration of inundation. Weed seed dispersal is a further problem commonly associated with flooding. For some land uses, floods can be beneficial, by boosting the water reserves of the soil profile, laying (often nutrient rich) sediment on the surface, and flushing salts from the soil.

Land assessment in southern South Australia

This assessment of *Flooding susceptibility* is subjective in that flooding will generally not be observed during routine field investigations. Land is assessed from observations and inference and given a simple rating whether flooding is likely or unlikely. A positive rating for flooding susceptibility indicates there is a potential risk, however this is only intended to be a general guide. Decisions involving specific action on the ground should be based on independent site inspection.

Flooded land

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 *Flooding susceptibility* class (e.g. F1, F2, etc.) have been estimated for each map unit.

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

Area statistics

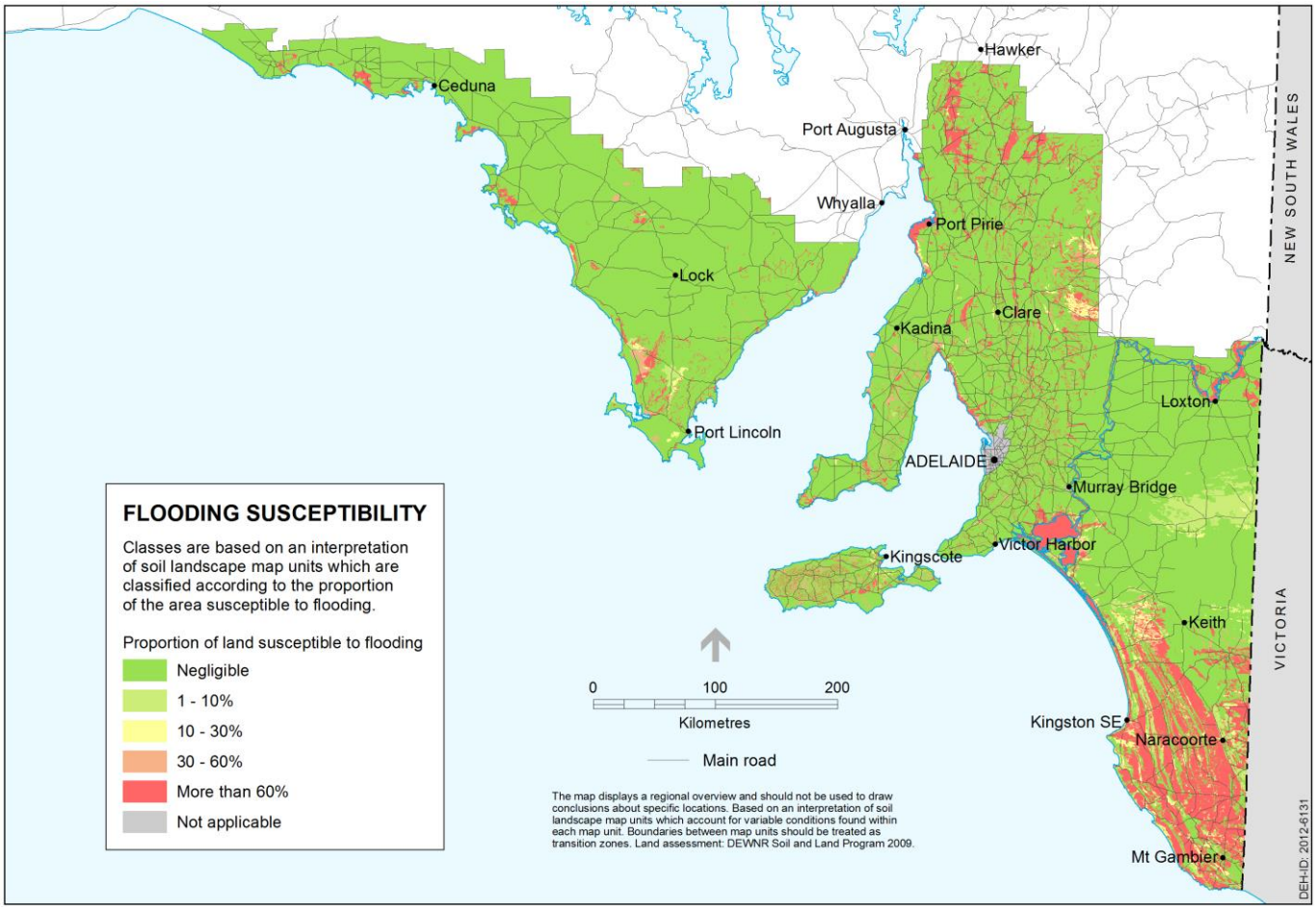
Susceptibility to flooding	Area	Cleared land	Class*
Not susceptible	86.65%	86.01%	F1
Susceptible	12.88%	13.33%	F2
Not applicable	0.47%	0.67%	FX
TOTAL HECTARES	15,765,460	10,439,300	

* The letter 'F' denotes classes that are specific to *Flooding susceptibility*

Displaying data in soil maps

Land and soil attribute maps display a simplified version of the underlying data. This is because, at the scale of mapping, a number of landscape elements and both *Flooding susceptibility* classes (susceptible or not susceptible) may be captured within a single map unit. Map units are assigned legend categories according to the proportion of each map unit area deemed susceptible to flooding.

Vineyard on fertile floodplain clay loam soils at Langhorne Creek



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