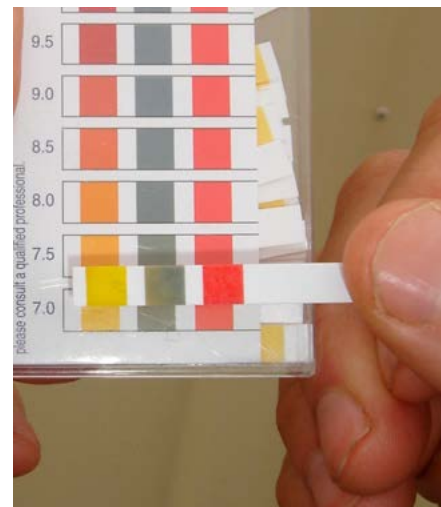


Water testing

SALINITY AND PH



If you rely on water from dams or groundwater sources such as soaks, bores and wells, it is important to regularly check your water quality. Salinity is one aspect of water quality that should be regularly tested as a minimum and good records maintained. It is good practice to test important water sources twice per year. For example, a test once in February/March and another in August/September would be ideal.

The Eyre Peninsula Landscape Board can test your samples for salinity if you follow the steps listed below.

How do I collect good water samples?

1. Use a clean plastic or glass container with a good sealing lid that can hold at least 500ml of water. Washed drink bottles are fine.

Mark the container or attach the following details:

- your name
- phone number or postal address
- date of sample taken
- well, dam, or water source name/ID

2. Rinse the container three (3) times with the water to be sampled before filling the container to take the final sample.

3. Wells and bores not pumped recently will need to be purged before taking a water sample, this means pumping the well for a period of time to remove at

least three (3) well volumes of water to get a non contaminated water sample.

4. Call the EP Landscape Board if further advice is needed.

How do I get my water samples tested?

1. Deliver your water sample(s) for salinity and pH testing to a Landscape Board Office located at:

Port Lincoln

T: 8688 3200

Tumby Bay

T: 8688 2610

Elliston

T: 8687 9330

Streaky Bay

T: 8626 1108

Ceduna

T: 0428 252 442

Cleve

T: 0428 282 077

Wudinna

T: 8680 2653

2. If you require water testing for other factors such as bacteria levels, algae or levels of other minerals, the sample will need to be sent to a professional laboratory.
3. If you have any questions or want to discuss your water test results, contact a landscape officer.

This is a general guide to ONE aspect of water quality, which is salinity, and must be used as a guide only. It is possible for situations to occur that lead to higher or lower salt tolerance levels in plants and animals such as feed types, temperatures and soil conditions.

For stock, poor-quality water can reduce production, impair fertility and lactation and, in extreme cases cause animal deaths.

Water sources can have issues of salinity, pH, algal growth, pollution, faecal contamination and toxic elements all contributing to the suitability of water for stock and other uses.

Water quality issues can be the direct result of poor management at the water source and in certain cases can be avoided and water quality improved by simply adopting better management.

Speak to your local landscape officer about how you might be able to improve the management of your water sources.

Always have your water routinely tested and protect your water sources with proper management.

Need more information?

www.landscape.sa.gov.au/ep/water

E: ep.landscapeboard@sa.gov.au

Water quality – guideline to salinity tolerances

SALINITY AND PH

Salinity tolerances for stock animals in TDS (PPM).

Stock	Desirable maximum concentration for healthy growth	Maximum concentration at which good condition might be expected*	Maximum concentration that may be safe for limited periods*
		Water being used for stock in these 2 categories should be used with caution and/or expert advice sought.	
Sheep (dry)	5000	5000 – 10 000	10 000 – 13 000
Sheep (lambs, pregnant, lactating)**	3800	3800 – 5000	5000 – 6400
Beef cattle	4000	4000 – 5000	5000 – 10 000
Dairy cattle	2500	2500 – 4000	4000 – 7000
Horses	4000	4000 – 6000	6000 – 7000
Pigs	4000	4000 – 6000	6000 – 8000
Poultry	2000	2000 – 3000	3000 – 4000

* The level depends on the type of feed.

** Figures compiled from various information sources as NWQMS 2000 did not contain this information.

Tolerance of plants to salinity in irrigation water (Figures derived from NWQMS 2000)

Table Figures = TDS (PPM) / EC (µS/cm) TDS estimated by 'EC x 0.56 = PPM

Common Name	Average root zone salinity threshold	Threshold for crops growing in soils:		
		Sand	Loam	Clay
Olive	2240 / 4000	2856 / 5100	1624 / 2900	952 / 1700
Peach	1792 / 3200	2632 / 4700	1512 / 2700	896 / 1600
Grapefruit	1008 / 1800	1680 / 3000	952 / 1700	560 / 1000
Orange	952 / 1700	1624 / 2900	952 / 1700	560 / 1000
Grape	840 / 1500	1848 / 3300	1064 / 1900	616 / 1100
Apple	560 / 1000	1120 / 2000	672 / 1200	392 / 700
Zucchini	2632 / 4700	4088 / 7300	2352 / 4200	1344 / 2400
Broccoli	1568 / 2800	2744 / 4900	1568 / 2800	896 / 1600
Cucumber	1400 / 2500	2352 / 4200	1344 / 2400	784 / 1400
Peas	1400 / 2500	1792 / 3200	1008 / 1800	616 / 1100
Tomato	1288 / 2300	1960 / 3500	1120 / 2000	672 / 1200
Potato	952 / 1700	1792 / 3200	1008 / 1800	616 / 1100
Capsicum	840 / 1500	1568 / 2800	896 / 1600	504 / 900
Lettuce	728 / 1300	1512 / 2700	840 / 1500	504 / 900
Onion	672 / 1200	1288 / 2300	728 / 1300	448 / 800
Beans	560 / 1000	1064 / 1900	616 / 1100	336 / 600
Carrot	560 / 1000	1232 / 2200	672 / 1200	392 / 700

Reference: NWQS 2000, National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality.