



How much water do I need for my rural property?

The table provided over the page can help you estimate the volume of water required for your annual stock, domestic and general farming water needs. Information on assessing irrigation requirements can be obtained from an agriculture officer of the local Department of Primary Industries. For specific industrial water uses you should obtain advice from the relevant industry body.

Assessing annual water needs

The annual water needs for a rural property will vary depending on where the property is located, the type and number of livestock held and the number of people dependent on the supply. Other factors such as fire fighting and crop spraying and general farming applications will also affect the volume needed.

What size storage do I need?

The total provided in the table and converted to megalitres is an estimate of your nett annual water requirements if you are pumping water from a permanent creek or river or from groundwater for direct use. If you want to store the water extracted in an open storage or excavation, you will have to adjust your estimates to account for evaporation losses.

If you want to capture rainfall runoff in a farm dam to meet your requirements you will need to account for both evaporation losses and the length of time between replenishments. For example in the Far Western parts of NSW, any farm dam you build may need to be twice the capacity of your nett annual water requirement because of very high evaporative losses. It is recommended that you seek expert advice before constructing such a dam. Under the farm dams policy, you are allowed to construct a farm dam on a hillside or minor stream, up to a certain maximum capacity (known as, the maximum harvestable rights dam capacity) without the need for a licence (see the information sheets on Farm Dams). The maximum harvestable rights dam capacity is sufficient to meet basic domestic and stock requirements for most rural properties.

Estimating your annual water needs

The following table is designed to assist you to estimate your nett annual water requirements. To convert your nett annual water requirement into a volume (ie megalitres) use the following equation:

$$\underline{\hspace{2cm}} \text{ m}^3 \div 1000 = \underline{\hspace{2cm}} \text{ ML}$$

One megalitre is a million litres or 1,000 kilolitres of water. As a comparison, 1 megalitre is:

- equal to 219, 969 gallons
- roughly equivalent to an Olympic sized swimming pool.
- more than 5 rainwater tanks - as a standard 40,000 gallon rainwater tank is approximately 180,000 litres or 0.18 of a megalitre.
- equivalent to 14.5 hours of pumping using a 100 millimetre pump.

Where do I get more information?

Contact the water licensing officer at your local Department of Water and Energy office

26 Honeysuckle Drive
Newcastle West

t (02) 4904 2500

e information@dwe.nsw.gov.au

Note: This information does not constitute legal advice.

Table for estimating annual water needs

To assist in estimating the annual water needs for your rural property, complete the following table:

STOCK WATER	Description	1. Consumption rate (m ³ / head)	2. Your stock numbers	1. x 2. = Sub total m ³
Cattle	Lactating, Dairy	22		
	Dry dairy, Beef	15		
	Feedlot	28		
	Calves	8		
Sheep	Type of pasture being grazed	Quality of drinking water (Total dissolved salts)		
	Irrigated	Soft water	0.8	
	Low salt	0 to 2000 parts per million	1.3	
	Low salt	2000 to 5000 ppm	1.9	
	Low salt	5000 to 10000 ppm	3.6	
	High salt	0 to 6000 ppm	3.6	
Lambs	(adopt half the sheep rate)			
Goats		3.6		
Horses	Working	17		
	Grazing	13		
Pigs	Sow	8		
	Pig (allow 10 per sow)	3		
Poultry	Table bird to 10 weeks	0.08		
	Layers	0.13		
	Turkey	0.24		
Other	eg Wildlife	3.6 – 4.8		
DOMESTIC WATER	Description	m ³ /person or area	Persons/ Area	Sub total m ³
Household	House – without septic	51		
	House – with septic	64		
	Septic only	13		
House Garden	For each 1000 m ² or 0.1 ha			
	- Coastal / Tablelands	200		
	- Slopes	400		
	- Plains	600		
	- Western	800		
FARMING	Description	m ³ / unit	Number of units	Sub total m ³
Dairy	For each m ² of wash down area	5		
Piggery	For each sow – includes sow & progeny. drinking & wash down	90		
Dip	Based on 2 events per year: - Plunge per 100 head	0.6 – 1.4		
	- Spray per 100 head	0.6 – 2.0		
Crop spraying	Based on 2 events per year: - Herbicide/ insecticide per ha of crop	0.4		
Firefighting	Based on a single event: - Buildings per m ²	0.125		
	- Grass per m ²	0.075		

Note: This table provides an estimate of your nett annual water requirement and is not recommended for designing farm reticulation schemes which are based on peak daily requirements.

Total Nett Annual Water Requirement

m³