



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 is available from Industry and Investment NSW. For specific industrial water uses you should obtain advice from the relevant industry body.

ASSESSING ANNUAL WATER NEEDS

The annual water needs for a property will vary depending on where it 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 following table and converted to megalitres is an estimate of your net 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 run-off in a 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 dam you build may need to be twice the capacity of your net annual water requirement because of very high evaporative losses. It is recommended that you seek expert advice before constructing such a dam.

You are allowed to construct a dam on a minor stream, up to a certain maximum capacity (known as the maximum harvestable rights dam capacity under the harvestable rights order) without the need for a licence. The maximum harvestable rights dam capacity is sufficient to meet basic domestic and stock requirements for most rural properties.

BASIC WATER RIGHTS

Under section 52 of the *Water Management Act 2000*, landholders who own or occupy land on a riverbank, lakefront or overlie an aquifer can take water (without a licence) from the river, lake or aquifer for domestic purposes (eg cooking, washing, watering house gardens), and to water stock on the property (but **not** intensively housed animals), under a domestic and stock right.

MORE INFORMATION

Find out more about water licensing at www.water.nsw.gov.au. Contact a water licensing officer at a local office listed on our website, free call the licensing information line on 1800 353 104 or [email information@water.nsw.gov.au](mailto:information@water.nsw.gov.au)

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

| STOCK WATER | Description | | 1. Consumption rate (m³ / head) | 2. Your stock numbers | 1. x 2. = Sub total m³ |
|---|---|---|---|------------------------------|--|
| 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 | | m³/person or area | Persons/ Area | Sub total m³ |
| 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 | | m³ / unit | Number of units | Sub total m³ |
| 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 | | |
| Total Net Annual Water Requirement | | | | | m ³ |

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

What is this as a volume? To convert net annual water requirement into a volume (ie megalitres) use the following equation:

$$\text{_____ m}^3 \div 1000 = \text{_____ Megalitres (ML)}$$

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