



# Farm dams - where can they be built without a licence?

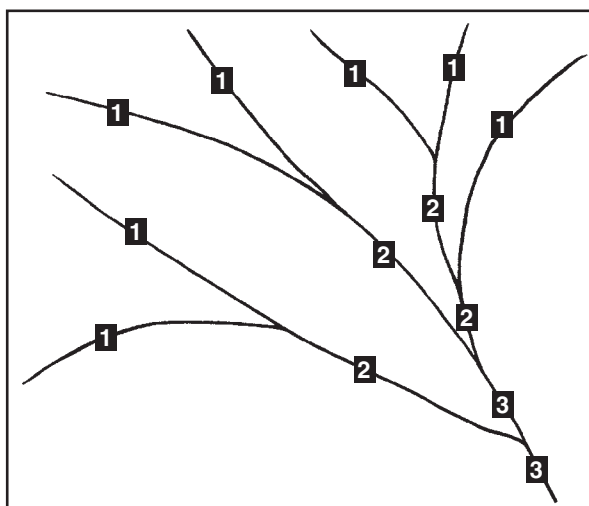
Farm dams that are part of the harvestable right of your property can be located on hillsides, gullies and minor watercourses (for more information on harvestable rights see *Farm dams - when do you need a licence?*)

## What is a minor watercourse?

Minor watercourses are defined by the Strahler stream ordering method (Figure 1) as 1st or 2nd order watercourses that do not permanently flow. The Strahler system is explained as follows.

- Starting at the top of a catchment, any watercourse that has no other watercourses flowing into it is classed as a 1st order watercourse (1).
- Where two 1st order watercourses join, the watercourse becomes a 2nd order watercourse (2).
- If a 2nd order watercourse is joined by a 1st order watercourse - it remains a 2nd order watercourse.
- When two or more 2nd order watercourses join they form a 3rd order watercourse (3).
- A 3rd order watercourse does not become a 4th order watercourse until it is joined by another 3rd order watercourse and so on.

Figure 1: Strahler stream ordering



## How do I work out the stream order of a river on my property?

The harvestable rights stream order can only be determined from a topographic map which has been defined under the harvestable rights regulations. Watercourses are shown on topographic maps as broken or continuous blue lines and are deemed to be continuous even if they lose definition and then reappear.

The current and most detailed map available at 1 January 1999 **must** be used. For the coast, tablelands and part of the slopes, this is a 1:25 000 scale map. Further inland it is 1:50 000. The Department of Natural Resources (DNR) can assist you in determining which map to use.

Topographic maps are generally available throughout NSW at newsagencies, Tourist Information Centres and other stores, and show watercourses, contours, towns, roads, portion boundaries and other information. They can also be viewed at DNR offices.

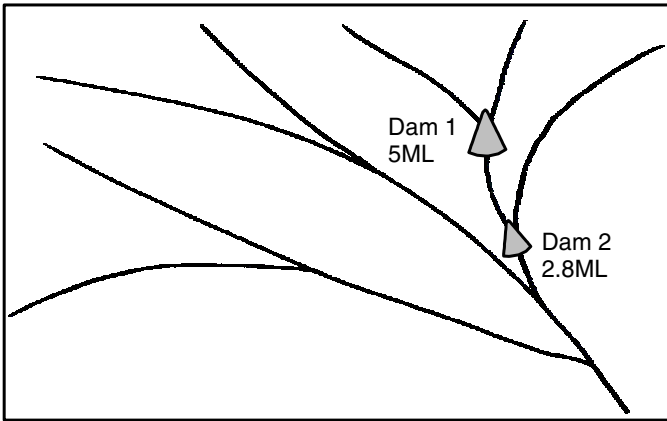
**Example:** Geoff owns a 60 hectare property near Kangaroo Valley NSW. Geoff would like to build two farm dams using his harvestable right. The following examples show where and how large Geoff's proposed dams could be.

**Step 1:** Geoff needs to calculate his **Maximum Harvestable Rights Dam Capacity** (MHRDC). For information on the MHRDC see *Farm dams – what size dam you can build without a licence*.

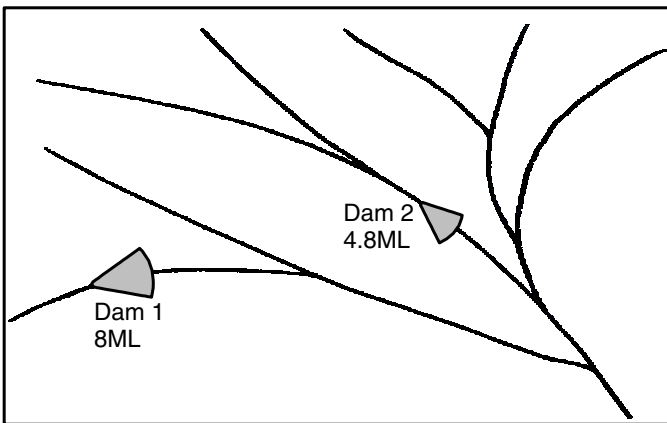
MHRDC Multiplier	=	0.13 ML/ha
Property area	=	60ha
MHRDC	=	7.8 ML

Geoff can build dams with a combined volume of 7.8 ML or less, using his harvestable right.

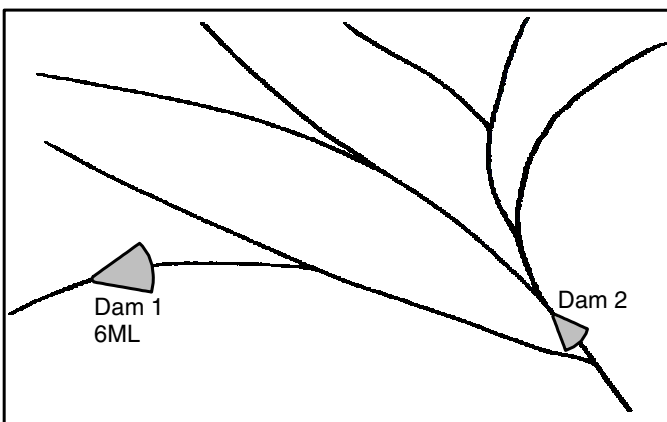
**Step 2:** Geoff needs to work out where to construct his harvestable rights dams on his property. He has a few alternatives to assess.



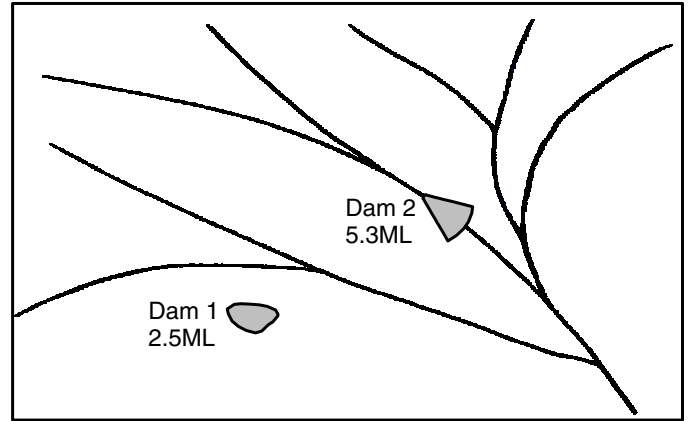
- ✓ Dams 1 and 2 are located on 2<sup>nd</sup> order streams.
- ✓ The total dam capacity of dams 1 and 2 is 7.8 ML, which is equivalent to the MHRDC for the property.



- ✗ Dam 1 is located on a 1<sup>st</sup> order stream, BUT is 8 ML i.e. it is bigger than the permissible MHRDC of 7.8 so it is not allowed under the harvestable rights provisions.
- ✓ Dam 2 is located on a 2<sup>nd</sup> order stream and is 4.8 ML. It is permissible since it is less than the MHRDC of 7.8ML. Geoff could build both dams 1 and 2 if the combined volume was 7.8 ML eg. dam 1 could be reduced to 3ML.



- ✓ Dam 1 is located on a 1<sup>st</sup> order stream and is 6 ML, which is less than the MHRDC of 7.8 ML.
- ✗ Dam 2 is located on a 3<sup>rd</sup> order river. Harvestable rights **do not apply** here. If Geoff wishes to build a dam at this location, he must obtain a licence/approval from DNR before commencing construction.



- ✓ Dam 1 is **not located on a watercourse** (i.e. it is on a "hillside") and is 2.5 ML.
  - ✓ Dam 2 is located on a 2<sup>nd</sup> order stream and is 5.3 ML.
- The total dam capacity of dam 1 and 2 is 7.8 ML, which is equivalent to the MHRDC for the property.

**Step 3:** Geoff must decide which of the locations (or combination of locations) he will use to construct his harvestable rights dams.

### Where do I get more information?

Contact the water licensing officer at your local Department of Natural Resources office (contact details are available separately and on the website), or phone 1800 353 104, or e-mail [wma.info@dnr.nsw.gov.au](mailto:wma.info@dnr.nsw.gov.au)

More information sheets on dealings and water management in NSW are available on our website [www.naturalresources.nsw.gov.au](http://www.naturalresources.nsw.gov.au)

There are several more information sheets on water management in NSW.

Note: This information does not constitute formal legal advice.