



Dams in NSW

Where can they be built without a licence?

Dams that are part of the harvestable right of your property can be located on minor watercourses. For more information on harvestable rights see *Dams in NSW – do you need a licence?*

What is a minor watercourse?

Minor watercourses are defined by the Strahler stream ordering method (Figure 1) as first-order or second-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 first-order watercourse (1).
- Where two first-order watercourses join, the watercourse becomes a second-order watercourse (2).
- If a second-order watercourse is joined by a first-order watercourse - it remains a second-order watercourse.
- When two or more second-order watercourses join they form a third-order watercourse (3).
- A third-order watercourse does not become a fourth-order watercourse until it is joined by another third-order watercourse and so on.

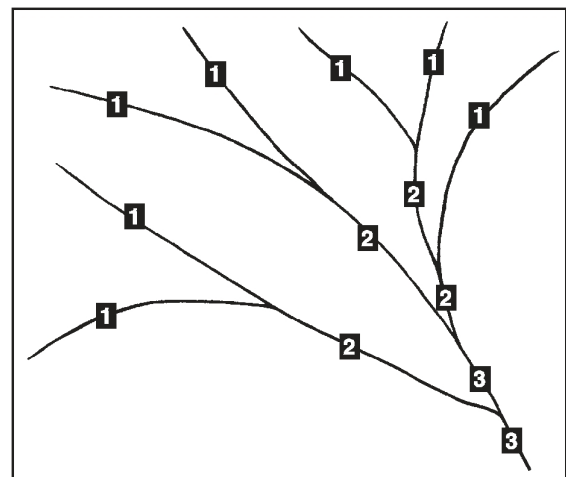


Figure 1: Strahler stream ordering

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 order. 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. Contact the NSW Office of Water to determine which map to use.

Topographic maps show watercourses, contours, towns, roads, portion boundaries and other information and are generally available throughout New South Wales at news agencies, tourist information centres and other stores. They can also be viewed at NSW Office of Water offices.

Example: Geoff owns a 60 hectare property near Kangaroo Valley NSW. Geoff would like to build two 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 *Dams in NSW – what size dam you can build without a licence*.

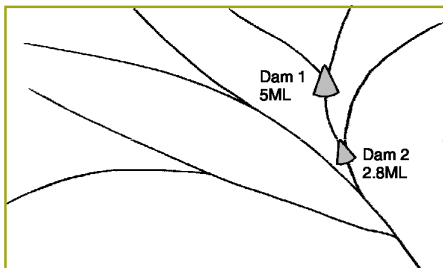
MHRDC Multiplier = 0.13 ML/ha

Property area = 60ha

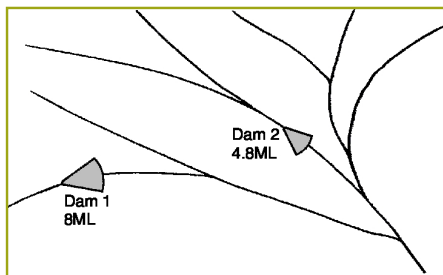
MHRDC = 7.8 ML

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

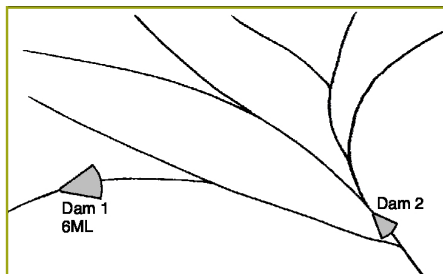
Step 2: Geoff needs to work out where to construct his harvestable rights dams on his property. He has a few alternatives to assess.



- ✓ Dams 1 and 2 are located on second-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 first-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 second-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 first-order stream and is 6 ML, which is less than the MHRDC of 7.8 ML.
- ✗ Dam 2 is located on a third-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 the Office of Water before commencing construction.

MORE INFORMATION

Find out more about water licensing at www.water.nsw.gov.au

Contact us

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