DAMS IN NSW

Where can they be built without a licence?

June 2014

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](image)

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, go to the calculator provided at www.water.nsw.gov.au under Water
licensing > Basic water rights > Harvesting runoff. (Note that a harvestable rights dam can only
be constructed where the Harvestable Rights Orders apply. More information on requirements
for a harvestable rights dam is provided with the calculator.)

Using the calculator, Geoff works out he can build dams with a combined volume of up to 7.8
ML, using his harvestable right on his property.

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 would be located on second-order streams.
- The total dam capacity of dams 1 and 2 would be 7.8 ML, which is equivalent to the MHRDC for the
  property.

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

- Dam 1 would be located on a first-order stream and would be 6 ML, which is less than the MHRDC of 7.8 ML.
- Dam 2 would be 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 an approval from the Office of Water before commencing
  construction. Geoff would also need to hold a water access licence for this dam.

More information
Find out more about water licensing and compliance at www.water.nsw.gov.au

Contact us
Contact Advisory Services on 1800 353 104 or email information@water.nsw.gov.au

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