Determining buffer distances from water bodies

This fact sheet defines the different water body types and provides guidance to landholders on how to determine buffer distances around a water body when proposing to clear native vegetation under the *Land Management (Native Vegetation) Code 2018* (the Code).

Overview

Clearing native vegetation within the buffer distances of water bodies is restricted, or in some cases not permitted when applying parts of the *Code* under the *Local Land Services Act 2013*.

Water bodies refer to a stream, local wetland, important wetland or estuarine area and are defined in the Code as a:

- Stream – defined as an incised watercourse that exhibits features of a defined channel with bed and banks.
- Wetland – defined as a natural body of water such as marsh, billabong, swamp or sedgeland, other than a floodplain, that is inundated cyclically, intermittently or permanently with water, and vegetated with wetland plant communities.
- Estuarine area -- meaning any part of a river whose level is periodically or intermittently affected by coastal tides, or any lake or other partially enclosed body of water that is periodically or intermittently open to the sea. It is important to retain native vegetation in and around water bodies because native vegetation in these areas:
- Maintains water quality by stabilising soil
- Preserves biodiversity in and around the water body and
- Provides important corridors of vegetation for biodiversity to other parts of the landscape.

Determining buffer distances around water bodies

It is important for you to determine distances (or buffers) around water bodies where clearing of native vegetation is not permitted. To do this, you need to understand the stream 'ordering' of a water body because the non-clearing buffer changes with the 'order' of a stream.

Stream order means the stream order as defined in Part 1 of Schedule 2 of the Water Management (General) Regulation 2011.

The method of determining the stream order of a watercourse shown on a topographic map is the Strahler system as shown below. The Strahler system is applied to the watercourses shown on the topographic maps.

The Strahler system:

- Starting at the top of a catchment, any watercourse which has no other watercourses flowing into it is classed as a first order stream (1).
- If two first order streams join, the stream becomes a second order stream (2).
- If a second order stream is joined by a first order stream, it remains a second order stream.
- If two second order streams join they form a third order stream (3). A third order stream does not become a fourth order stream until it is joined by another third order stream. Figure 1 shows an example of how the Strahler stream ordering system would be applied across a river and stream system. The thick blue line (annotated as 4) would be an example of a major river like the Murrumbidgee River.

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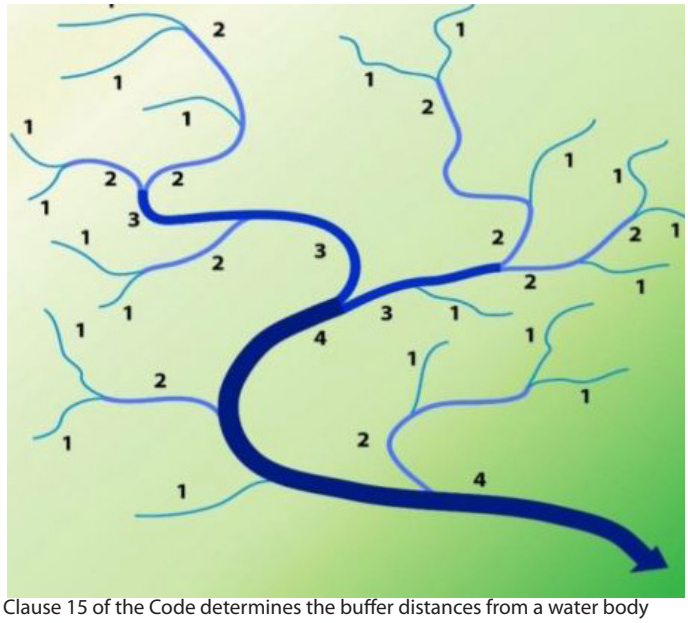
Figure 1: Water body (stream) ordering example



Clause 15 of the Code determines the buffer distances from a water body type (see Table 1).

Measuring distances from incised watercourses, estuaries or wetlands

The distance from a stream is measured from the top of the bank. If there is no visible channel, it is not considered an incised watercourse for the purposes of the *Land Management Code*. However, in some upland streams, the 'stream' may be considered a wetland as it may be comprised of a series of marsh, swamps or sedgelands e.g. a chain of ponds system.

Table 1: Prescribed buffer distances from a water body under the *Land Management (Native Vegetation) Code 2018*

Water body type	Distance within which clearing is not permitted (metres)
Unmapped and 1st order streams	10
2nd order streams	20
3rd order streams	30
4th and 5th order streams	40
6th order streams and above	50
Local wetland	20
important wetland	50
Estuarine area	50

The distance from a wetland is measured from the edge of the wetland. The edge of a wetland that is cyclically or intermittently inundated can be difficult to determine. Wetlands are typically described by their ability to support animals and plants that need water to complete all or part of their lifecycle. Many wetlands also contain hydric soils, which are soils that have formed in the presence of water. When considering the position of the edge of a wetland, you should consider the extent of water inundation, the presence of indicator vegetation species, and also the soil type.

Note: Certain types of activities and developments along waterfronts (for e.g. rivers, lakes or estuaries) may be considered 'controlled activities' under the Water Management Act 2000 and require an approval under this Act.

For further information on whether an approval under this Act may be required see: https://www.industry.nsw.gov.au/

Need more help?

Contact Local Land Services for assistance in determining the stream order of your stream or how to determine the edge of the watercourse located on your property.

Call us: 1300 795 299 and ask for an officer to advise you on land management

Email us: slm.info@lls.nsw.gov.au