

Factsheet: What is a weir?

Water Discovery



A weir is a small barrier built across a stream or river to control and raise the water level slightly on the upstream side, essentially a small-scale dam.

Did you know?
WaterNSW is responsible for and maintains more than 350 weir structures in New South Wales.



Balranald Weir
Photo: J. Griffiths, WaterNSW

What is the difference between a weir and a dam?

A weir generally allows the water to flow over the crest (which is the top) or sometimes underneath some sections.

In comparison, dams mainly allow water flow to be regulated (controlled) by gates or spillways. A dam usually does not allow water to go over the crest.

What is the purpose of a weir?



A weir is used to prevent flooding, measure water flow, and hold water. This water can be used in towns, homes, industry, or irrigation.

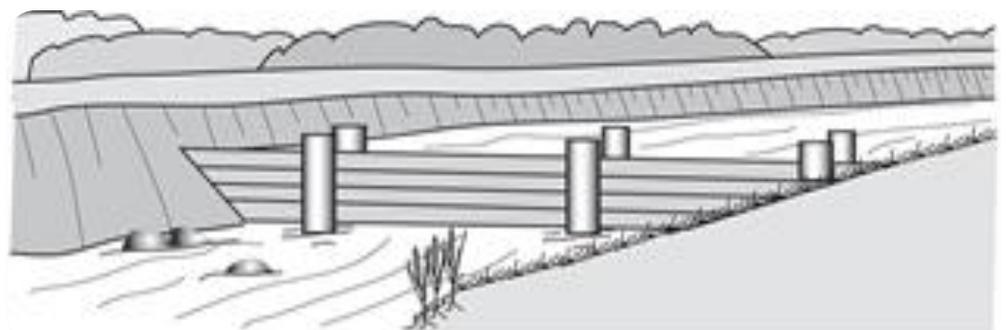
What types of weirs are there?

Weirs are usually made of concrete or steel.

Some older weirs were also made from natural rock and compacted soil-fill to create a barrier to hold water.

Safety around weirs

Although weirs are commonly used for recreation activities including fishing, swimming, and kayaking, the downstream side of weirs can be extremely dangerous.



Historical Fact
The word weir comes from the old English word "wer" and means "to defend or dam."

Water coming out of the weir can cause a circulation of water known as a hydraulic jump. The hydraulic jump can hold swimmers or canoeists under the water.



Fishways on weirs

The Nepean weir on the Hawkesbury-Nepean River near Penrith, has a fishway to help fish move back upstream. Some fish move upstream and downstream for breeding or migration.

Fish can rest in each pool as they move up the fishway. This fishway is used for tiny gudgeons to large Australian Bass.



Empire gudgeon
Photo: Photo: G. Schmida



An example of maintenance

Ongoing maintenance ensures weirs are operating efficiently and safely.



WaterNSW completing maintenance on Yanco Weir.
Photo: M. Legge, WaterNSW

Did you know?

- There are more than 3000 weirs in NSW.
- One of the oldest weirs in New South Wales are the ancient stone fish traps made by the Ngaemba People of Brewarrina on the Barwon river.

These weirs are called Ngunnhu.

The design of these dry-stone rock weirs allowed fish to be herded and caught.



Photo: Circa 1880
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