



August 2021

Regulating floodplain harvesting in practice



Licensing floodplain harvesting will allow us to manage this form of take within legal limits. The proposed account management rules have been developed to control current and future growth and to improve environmental and downstream outcomes.

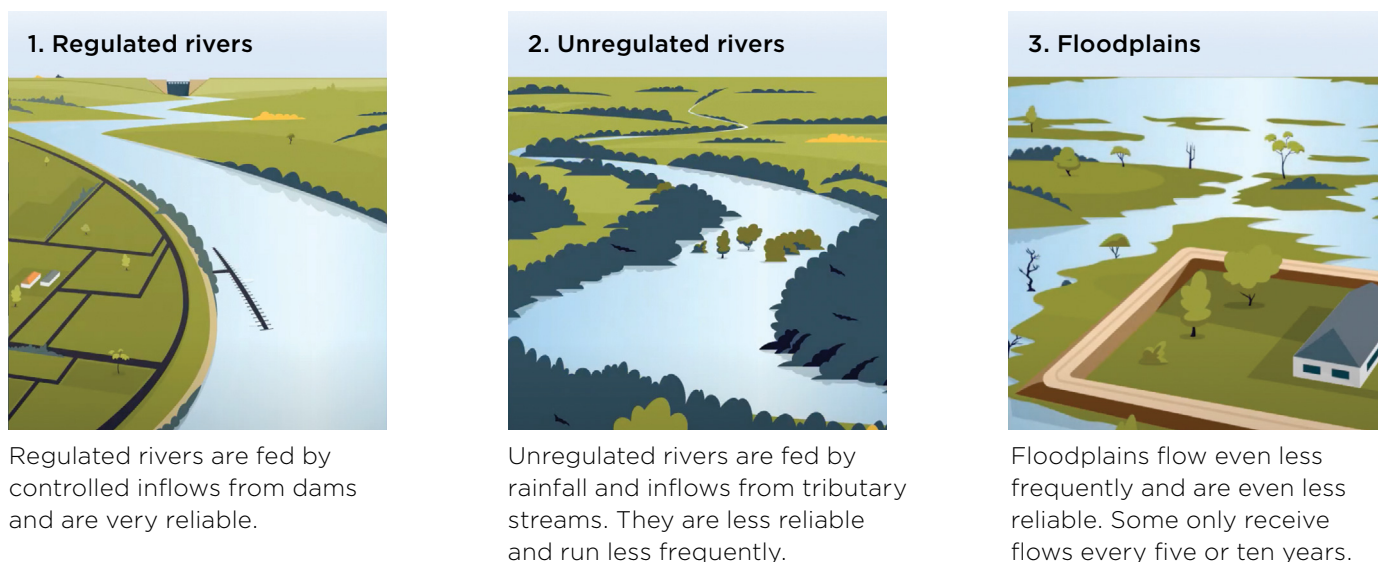
Account rules and reliability of access

Account management rules are different for each licence type. The rules are tailored to the type of water being taken and how reliable access is for that type of take. An example of the differences in security between regulated rivers, unregulated rivers, and the floodplain is shown in Figure 1.

Annual accounting is used for types of water take that are very reliable, such as in regulated rivers. This type of accounting allows smaller volumes to be taken frequently.

Three-year accounting is used for less reliable water, such as that seen in unregulated rivers. This type of accounting allows for larger volumes to be taken less frequently as river conditions allow.

Figure 1. Reliability – regulated rivers, unregulated rivers, and floodplains





Aerial shot of flooding in Tamworth, in country NSW, Australia

Floodplain harvesting is the **least reliable** type of water take. Some properties only get access to flood flows every five years.

Account rules and entitlement size

Account rules influence the size of floodplain harvesting entitlement that will be issued

Under annual accounting rules there is no ability to 'save' allocated water during dry years. Licence holders forfeit any unused water each year. This is best applied in a reliable system such as a regulated river. Floodplain harvesting is the most unreliable form of take. If annual accounting is applied to these licences, their size would need to be adjusted to reflect this unreliability and the need to take a large volume infrequently.

Entitlement sizes will need to be three times larger under annual accounting than under five-year accounting to give the same long-term volume.

Applying annual accounting and issuing large entitlements poses a risk to compliance with legal limits in the future. This risk will be realised when the large volume of unused entitlement is activated by a landholder through either development or behaviour changes or through trade.

Conversely, the application of 5-year accounting to floodplain harvesting results in more moderate entitlement sizes that do not carry the same risks. Under 5-year accounting, unused water can be saved between years, accumulating over a 5-year period. Accounts have limits and once that limit is reached, no more water can be saved. Just as a bucket can only be filled to the top before spilling over, 5-year accounting with associated smaller entitlements poses much less risk to compliance with legal limits than annual accounting.

Large entitlement sizes with annual accounting or smaller entitlements with 5-year accounting give the exact same amount of take over the long term. The two key differences are entitlement size and impact on annual water take.

- **Accounting and behaviour** — account rules will change the pattern of water take - shorter accounting periods only impact in the wettest of years, longer accounting periods impact in a cluster of wet years i.e. long accounting periods deliver restrictions in small and medium-sized floods as well as the larger floods.
- **Account rules cannot be used to improve low flows** — floodplain harvesting only happens during very wet to flood conditions. This form of take only impacts on higher flow periods rather than low flow periods.

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