Basin Plan implementation—LTDLE factors Community Consultation Outcomes

How floodplain harvesting relates to LTDLE factors

There were many similar themes and commonly asked questions during the recent call for submissions relating to amended long-term diversion limit equivalence (LTDLE) cap factors. The responses below are provided in relation to the issues raised.

Why didn't we calculate factors for floodplain harvesting?

As at August 2018, there were no water entitlements associated with floodplain harvesting and there is no long-term data on this type of use. Therefore, the department is unable to calculate a factor that represents use per unit share at the present time.

To meet the goals of the Basin Plan, the Commonwealth Government buys water entitlements to reduce the long-term diversions within the Basin and meet the water recovery target. When the government buys an entitlement, the LTDLE factor indicates the long-term average volume of water the entitlement represents and that contributes to the recovery goal.

In NSW, a water entitlement doesn't give the holder access to a fixed volume of water each year. Instead, it gives the holder a right to a share of the available water resources that exist at any point in time.

The entitlement is expressed as a 'unit share' of the water resource, and water is allocated against each unit share based on a process known as the 'available water determination'. The determination reflects the amount of water available in the system, based on a range of factors including dam storage levels, river flows and the current catchment conditions. The cap factors describe the long-term average use of these allocations, which is the long-term average volume that the Basin Plan seeks to adjust.

The water entitlements and the respective unit shares are assets that the Commonwealth Environmental Water Holder will own, as would any irrigator.

When will we calculate factors for floodplains?

The Commonwealth-funded Healthy Floodplains program will bring all floodplain harvesting activities within the NSW water licensing framework. One part of the project is to issue water entitlements for flood harvesting take.

The models that determine the floodplain harvesting entitlements will also estimate the long-term average use of the entitlements. They will be issued at the time the entitlements are made and become available for purchase from the Commonwealth.

For more information on the Healthy Floodplains project see: industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project

Isn't this whole process, and the Basin Plan more generally, invalid because you have ignored floodplain harvesting?

The Basin Plan and the 2750 gigalitre recovery target both include explicit estimates of some of the long-term average floodplain harvesting diversions. These diversions were included in the NSW hydrologic models supplied to the Murray–Darling Basin Authority (MDBA), and so incorporated into the MDBA's modelling system.

The models also include an implicit representation of all the unknown diversions that occur. All NSW models are calibrated using a water balance technique that compares recorded flows and upstream and downstream gauges, and calculates a loss after other water balance components are accounted for, including metered diversions, evaporative losses, and tributary inflows.

This measurement of 'loss' includes some genuine loss, for example through seepage, but also represents other unknowns in the system— where we know the water has gone, but not necessarily where it went.

The floodplain harvesting estimates account for some of this water, and bring it into the existing licensing framework so it can be actively managed in the future. The new entitlements do not allow anyone to extract any more water than they have been to date, but represent better tracking of the existing diversions.

This also means that decisions and plans based on our earlier measurements of flows won't change once floodplain harvesting is included in the modelling. The water has already been accounted for. The 'loss' component of the model hasn't changed, but can now be separated into known diversions and other forms of loss.