

Annual Volume Limits – Reply from Andrew Barton

1. The questions from Commissioners raised concern that removing annual volume limits from surface water takes may allow for 'flat-lining' of a river.
2. Annual volume limits are required by the NPSFM. An annual volume limit can encourage the efficient use of water for irrigation and may also prevent flat-lining of a river.
3. In some catchments, flat-lining of a river will be prevented by the minimum flow regime that has been imposed. For example, a 1:1 flow sharing regime may be sufficient to reduce the risk of flat-lining. In other cases, a flow gap between A/B/C blocks may be an appropriate mitigation measure. In some rivers there may not need to be any such measures because of the frequency of flood flows down the river is high enough to avoid the risk of flat-lining.
4. Where no Regional Plan minimum flow regime is in place, an applicant may choose to limit the annual volume of water taken as mitigation against flat-lining. However, as an alternative, the applicant may propose a minimum flow regime with flow sharing or some other measure.
5. The annual volume limit to be placed upon consents is limited by Policy 4.66 to the volume estimated in Schedule 10 (9 in 10 reliability). In my view, where the potential for flat-lining does not exist or has been avoided by a minimum flow regime, then the only reason for placing an annual volume limit on a consent is to ensure the use of water is efficient.
6. An annual volume limit calculated using Schedule 10 will result in there being insufficient water to meet soil moisture deficits 10% of the time. Where the environmental flow requirements of the river are met, then I consider that water can be able to be taken to meet a soil moisture deficit without adversely affecting instream values, provided that the user can demonstrate that water has been used efficiently. This can be achieved through the use of soil moisture and climate data measurements.
7. An annual volume limit that exceeds 9/10 year reliability can be justified provided:
8. The minimum flow regime for the river addresses flow variability and instream values
9. The water user can demonstrate through ASM and regular reporting that the use of water has been efficient.
10. It is important to recognise that there will be some years that there will be soil moisture deficits that cannot be met because environmental flows have been breached. Where the instream values of a river have been addressed through a minimum flow regime, I believe that there is a basis for considering an annual volume limit that is higher than that required to provide 9/10 year reliability.
11. Appropriate changes to Policies relating to annual volumes are attached.