

Water and Native Forest Logging

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Most of Melbourne’s forested water catchments are conserved in National Parks closed to human activity. However, about 13%— mostly within the Thomson Dam catchment - is available for sustainable harvesting by the timber industry. About 0.2% of the total catchment area is currently logged and regenerated each year.

With Victoria in the grip of long term drought, concerns have been raised that this annual timber harvest is denying Melbournians access to significant quantities of water because post-logging regrowth uses excessive volumes that would otherwise flow into storages.

Whilst it is well known that fast growing regrowth uses more water than older mature forests, predictions that ending logging will increase flows into storages are dubious because they are based on all catchment forests reaching maturity and staying that way forever. However, given Victoria’s history of severe stand replacement wildfire, it is almost certain that Melbourne’s catchments will always contain substantial areas of fire regrowth that will prevent attainment of theoretically optimum levels of water production, regardless of whether or not logging continues.

Advanced regrowth from the January 1939 ‘Black Friday’ bushfires already occupies about 40% (~65,000 ha.) of Melbourne’s catchments. It will continue to have a far greater impact on stream flows into storages than the relatively small amount of regrowth from logging staggered across decades.

Severe wildfires that burn everything in their path over huge areas are unquestionably the greatest threat to Australian water supplies. They can initiate massive regrowth events that reduce stream flows for decades and can dramatically degrade water quality. The most stunning recent example was the 2003 fires that burnt 1.3 million hectares of alpine and mountain forest in southern NSW and NE Victoria over just a two month period. It has been estimated that regrowth initiated in the areas most severely burnt by this fire will absorb 430 billion litres of water per annum for the next 50 years – water that would otherwise have flowed into headwater tributaries of the Murray River. In addition, hugely increased sediment loads entering streams in the years following the fires significantly reduced the quality of town and city water supplies, including Canberra’s.

Despite being portrayed as a villain, timber harvesting in the form of thinning can substantially counteract the impact of fire regrowth on water yield. The benefits of regrowth thinning have been widely studied throughout Australia. In Melbourne’s catchments, strip thinning trials have shown that up to 2.5 million litres per year of additional run-off can be generated from each hectare of thinned regrowth. It is apparent that a program of thinning the 1939 regrowth could add billions of litres of water to our storages.

Western Australia has been quicker to take advantage of thinning as a water management tool. In early 2006, a \$20 million, 12 year thinning program was initiated in a substantial segment of Perth’s catchment following four years of exhaustive public and stakeholder consultation. Every 1,000 hectares thinned is expected to deliver an additional 1 billion litres of run-off into the Wungong Dam per year. Although this involves substantial public expenditure because of forests mostly unsuited to timber production, the thinning of older and larger regrowth would most sensibly involve the production of timber that can fund the operation.

Compared to simply ‘locking up’ catchments, active management of fire regrowth to increase water flows potentially offers a range of other benefits including stronger imperatives for fire protection and improved stream health. In view of expectations of a hotter and drier future, management authorities across all public land tenures may need to seriously consider undertaking substantial programs of regrowth thinning in regions badly affected by fire. For example, future thinning of regrowth in NE Victorian catchments burnt in 2003 could substantially improve Murray River flows compared with the alternative of doing nothing.

Undoubtedly, there are good reasons why it is desirable to restrict human activity in water catchments, but it should be acknowledged that carefully regulated active management within parts of catchments can play an important role and on this basis it would be counterproductive to ban timber harvesting.

The debate about logging in Melbourne’s catchments should not be about whether or not it is permitted, but how and where it could best be utilised as a self-funded water management tool. Hopefully, the community will acknowledge that severe fire is by far the greatest determinant of catchment water yield and adopt a more rational attitude to timber harvesting in keeping with its potential to substantially improve storage in-flows by reducing the impact of fire regrowth.

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