

The Institute of Foresters of Australia

ABN 48 083 197 586



7th November 2008

Hon. C.J. Barnett, MLA
Premier; Minister for State Development
24th Floor, Governor Stirling Tower,
197 St George's Terrace
PERTH WA 6000

Dear Sir

Forested catchment management

The Institute of Foresters of Australia (IFA) is the professional association for forest scientists and managers of forested land. The IFA sees no issue of greater social, environmental and economic importance than the proper management of forested water catchments. A reduction in surface soil moisture in the higher rainfall water catchment forests is impacting adversely on the health of forest and stream ecosystems while water yields are declining.

The IFA strongly supports the Water Corporation's Wungong Project and considers that it is appropriate for forest management in the Perth water supply catchments to prioritize water quality and quantity to provide low-cost water resources. Alternative forest management practices are required in the higher rainfall areas of State forest on water supply catchments.

Our concerns relate primarily to the declining health of the catchment streams, forests and the stream biodiversity. These concerns were prompted by:

- a seventy five percent reduction in stream flows into dams;
- a fall of many metres in regional water tables;
- summer drying of streams that were once considered as perennial with consequent changes to the stream biota and;
- the deaths of large, old trees on shallower soils.

The main causes of these changes are:

- decreasing total rainfall in catchment areas;
- changes to the intensity and the timing of rainfall, including an absence over the past 30 years of well above average rainfall events;
- falling water tables in stream lines of about 2 m since 1995, leading to disconnection between the surface and the shallow groundwater table;
- substantial decrease in runoff since then, for any given rainfall;
- fire regimes of more intense fires with less fuel reduction burning;
- forest that is overstocked and out of balance with the current climate which evaporates or transpires 85-95 percent of rainfall so that it is now "mining" the groundwater.

The prognosis is that all these factors will be even worse in the future.

Necessary alternative forest management practices include designating “Water” as the priority management objective on about 100,000 hectares of State forest in the higher rainfall zone.

- Overstocked forests should be thinned to reduce canopy cover to about one third of its present density to a maximum basal area of 10-12 square metres/hectare and with subsequent control of coppice regrowth. Recurrent thinning and coppice control will be required.
- Regular prescribed burning with a maximum seven-year cycle.
- The abolition of non-essential Fauna Habitat Zones (where thinning is not permitted) within the priority water supply catchments
- Retention of stream zones to a maximum width of 50 m either side of the stream.
- Concentration of thinning activity in those parts of the landscape where it will be most effective.

If these practices are employed over the 100,000 ha of forested water catchment, it is conservatively estimated that an additional 30 GL per year of highest quality fresh water for Perth could be produced at a fraction of the economic, environmental and social cost of developing other drinking water sources.

The Institute recommends that you instruct your various Ministers and Departments to work quickly, cooperatively, in full partnership and efficiently if this goal is to be achieved. This includes the Ministries that cover Conservation and Environment, Water, Water Corporation and Forest Products. Time is of the essence.

The Institute recommends that you require workable, field based, management solutions to be presented to you within three months, for implementation within six months. The Wungong and 31 Mile Brook research study areas should receive initial priority.

There will always be a need for further research and monitoring. However, it is recommended that the Government act now on what is known (which is a lot) rather than what may (or may not) be learnt in the future. In the current critical situation for the streams and forests, adaptive management is really the only sensible option available.

The Institute would be pleased to be part of the “solution” and offers our full support in progressing this matter professionally and scientifically

Yours sincerely



David Wettenhall, RPF, MIFA, MACFA

Chair, IFA WA Division

CC: Hon. D.T. Redman, MLA, Minister for Forestry
Hon. D.E.M. Faragher, MLC, Minister for Environment
Hon. Dr G.G. Jacobs, MLA, Minister for Water