



Tasmanian Energy Security Taskforce

Consultation paper

Submission from the Inland Fisheries Advisory Council

This document provides a form which respondents may find helpful in providing answers to the questions presented in the Taskforce's consultation paper. The Taskforce recommends that you read the consultation paper to understand the context in which the Taskforce has posed the questions. The Taskforce will also welcome submissions in other formats should respondents prefer not to use this form.

Should you wish to claim confidentiality in relation to all or part of your submission, please clearly indicate the reasons for your claim. If only parts of your submission are requested to be confidential, please attach the confidential parts separately to the remainder of your submission that is suitable for publication.

Submission details	
Name:	
Organisation (if applicable):	Inland Fisheries Advisory Council
Contact (optional and not to be published):	

PURPOSE:

To inform the Tasmanian Energy Security Taskforce of the risks posed by water level management in Hydro-electric storages to lake ecosystems, recreational trout fisheries and regional economies. In summary;

- At extremely low levels, ecologically important weed (algal) beds will be significantly diminished with consequential impacts on macroinvertebrates, native fish and trout populations in the lakes for years after the event.
- As Hydro-electric storages pass through the high-extreme environmental risk levels detrimental consequences are likely for the trout fishery potentially resulting in a downturn in local economies with negative feedback likely from the local community, tourism operators and freshwater anglers.

RECOMMENDATION: That the Tasmanian Energy Security Taskforce:

- **note; the risks posed to lake ecosystems, recreational fisheries and regional economies by the operation of Hydro-electric storages in the high to extreme environmental risk band.**
- **recommend the direct involvement of the Director of Inland Fisheries Service in discussion policy development and decision making regarding the management of Hydro-electric storage levels.**

BACKGROUND

The Terms of Reference for the Taskforce require it to undertake an independent energy security risk assessment for Tasmania having regard to:

best practice water management including consideration of water requirements across a range of stakeholders;

The Inland Fisheries Advisory Council (IFAC) wishes to emphasise that the range of stakeholders goes beyond energy users and irrigators.

When very low lake levels eventuate in key Hydro-electric storages, there is potential for extreme environmental risk to water quality, ecosystems, recreational fisheries and possibly the regional economies of the immediate surrounding areas.

The Tasmanian recreational fishery has an estimated economic value of over \$90 million to the Tasmanian economy. Around 25 000 recreational anglers participate in the fishery each year including over 5 500 visiting from mainland Australia or overseas. The majority of the fishing effort occurs in the Central Highlands and recreational fishing is a major contributor to the economy in this region.

Typically, lake ecosystems rely on extensive aquatic weed algal/macrophyte beds and rocky habitat to support macro invertebrate communities, native fish and eventually trout as the top predator in the system. The rate of draw down and duration of dewatering of these habitats can adversely affect lake ecosystems and fisheries.

The Hydro Tasmania storages with the highest conservation and recreational fisheries values are yingina/Great Lake, Arthurs Lake and Woods Lake. They are the top three most popular recreational fisheries in Tasmania and host threatened endemic native fish and invertebrate species.

yingina/Great Lake is a natural lake modified for Hydro generation that also supports significant natural and recreational values and regularly ranks as the top trout fishing destination in Tasmania. It ranked No.1 in 2015-16 attracting an estimated 6 211 anglers for the season. yingina/Great Lake natural values include a number of threatened species that are endemic to the lake including two native fish and a range of invertebrates. Recreationally there is a hotel, shop and lodge accommodation at Miena and several hundred shacks located around the lake directly associated with the fishery.

As the lake level falls through the high-extreme risk band primary productivity of the lake from algal beds is significantly diminished with a serious impact to the lake ecosystem, including macro invertebrate communities, native fish populations and the recreational trout fishery.

Arthurs Lake and Woods Lake have high conservation values with the same two threatened fish species present in each lake, *Paragalaxias mesotes* and *Galaxias tanycephalus*. From a recreational fisheries perspective Arthurs Lake was the 2nd most popular fishery in the State in season 2015-16 with an estimated 5 639 anglers. Woods Lake was the third most popular fishery with an estimated 3 868 anglers.

The rate at which lake levels recover is not necessarily a direct reflection of the rate of recovery of the lake ecosystem. In fact, the speed at which the levels in a lake recover can further damage the natural ecosystem. This is currently evident at Arthurs Lake. Prior to 2009 the levels in Arthurs lake were low due to very dry conditions. Arthurs Lake then filled incredibly quickly during 2009. However, the weed beds did not recover at the same rate as the water level. This has impacted the macro invertebrate recovery meaning less food resulting in a reduction in the biomass of trout that can be supported. The fishery's performance is now suffering.

The potential for delayed ecosystem recovery in the three key storages of possibly up to ten years is likely to result in a reduction in participation in the recreational fisheries with consequential impact on land values, the viability of accommodation businesses at yingina/Great Lake and the volume of passing trade through rural towns including Bothwell, Deloraine, Longford and Cressy.

In very dry conditions like those experienced in 2015-16 the situation is likely to be compounded by the poor performance of other popular fisheries due to the dry conditions including Lake Echo, Tooms Lake, Lake Leake and Craighourne Dam. Any downturn of angling participation in the yingina/Great Lake, Arthurs Lake and Woods Lake recreational fisheries is likely to have detrimental economic consequences for the Central Highlands region. More so if two or all three experience a downturn at the same time. This situation is also likely to have a significant impact on angling licence revenue and limit the ability of the IFS to mitigate a downturn across the wider fishery should dry conditions persist.

The IFAC appreciates that in the midst of an energy crisis the focus of Government and Hydro is on securing ongoing energy supply to industry and the broader community.

However, there are other risks to falling lake levels which whilst not immediately obvious will become so in the short to medium term. These risks to lake ecosystems flow onto the trout fishery and regional economies.

In noting these risks and recommending the direct involvement of the Director of Inland Fisheries in discussion, policy development and decision making regarding Hydro-electric storage levels the Taskforce can be confident that these risks can be best managed.

Approved by: Michele Mosely
Position: Chair, Inland Fisheries Advisory Council
Version: 5.0 (FINAL)
Date: 09 September 2016
