

APPENDIX 3 .



The Western Australian Trout & Freshwater Angling Association Inc.

PO Box 1050,
Booragoon WA 6954

Mr Ian Stables
Chair
Western Australian Fish Foundation (WAFF)
19th March 2015

Dear Ian,

Thank you for the opportunity to outline our proposal for the creation of a sustainable recreational fishery in Wellington Dam. And an apology from me for taking so long to respond to your request.

The Western Australian Trout & Freshwater Angling Association Inc. is excited by the prospects for the establishment of a sustainable recreational fishery in Wellington Dam. We consider our organisation is well placed to provide the necessary focal point for the energy and commitment that will be required from a range of stakeholders to achieve a recreational fishery for the Dam.

We are a small organisation with an administration comprised of volunteers from our members and so we do not seek a project management role for WATFAA in the delivery of this important project. The role we can provide is to build and maintain support for a Wellington Dam fishery throughout the recreational freshwater fishing community in Western Australia. We would also garner support for the project from relevant stakeholders. We believe the following attributes place us in sound position to fulfil this role.

- Although a small organisation we are comprised of active freshwater fishers from diverse backgrounds and with significant numbers of members within the catchment that would be served by the proposed fishery.
- The development of a recreational fishery is aligned with the following objects of our association:
 - (a) The encouragement of the art of freshwater angling.
 - (c) The maintenance and care of fish stocks in streams and other freshwaters by stocking with trout and other suitable species, and any other measures, as specified by Council.
 - (d) The fostering and encouragement of a spirit of sportsmanship in freshwater angling.
 - (e) The working in co-operation with Government Departments and other bodies, kindred associations and persons for the furtherance of the objects of the Association or any of them.
 - (f) The promotion of social activities amongst freshwater anglers.
- We are currently represented on the Freshwater Fisheries Reference Group (providing advice and recommendations on stocking of trout species into public waters)
- We possess significant corporate knowledge on the successes and failures of stocking of a number of species into public waters, including a database of all stocking records since 1968
- We have a website and a regular magazine which is published quarterly and so communication about the development of a fishery within the Dam can be communicated on a regular basis
- We can draw upon significant expertise on technical issues relating to stocking of recreational fish and the ecology of stocked waters from among our members.

Regards

Dr Russell Hanley
WATFAA Council

Proposal for creation of a sustainable recreational fishery in Wellington Dam

Prepared on behalf of WATFAA by Dr Russell Hanley March 2015

Background.

Examination of the WATFAA database and a search of newspaper records using the Trove database reveals that Wellington Dam has never been a focus of any sustained stocking for recreational fishing. There was a stocking of some 2000 rainbow fry in 1936 not long after the construction of the dam and then in 2003 a total of 3000 brown trout yearlings were stocked into the Dam. The fate of these fish is unknown. Redfin have been in the Dam for a considerable time and redfin are regularly caught by fishermen today although it appears the dam is not highly regarded as a fishery for this species.

For most of its history the dam has been off limits to stocking and recreational fishing as it has been a drinking water supply. Even when the rising salinity of the water in the dam meant it was no longer used for drinking water it has remained off limits while successive state governments investigated options for improving water quality to a point where it could once again function as a drinking water supply. The dam continues to provide irrigation water for crops and pasture but there is also some doubt of the continued viability of this source of irrigation water given the development of salinity problems on the irrigated land.

A commitment by the State Government to develop Wellington Dam as a strategic source solely for industry, agriculture and recreation suggests that development of a recreational fishery for the Dam can proceed in a secure policy landscape once proposed legislative changes are finalised.

Species to be stocked

As a trout fishing club it should be no surprise that our preference for stocking of the dam is to focus on salmonid fishes, specifically rainbow trout (*Onchorynchus mykiss*) and brown trout (*Salmo trutta*). While acknowledging our bias toward these species we believe there are sound technical reasons for a focus on these two species for the creation of a recreational fishery in Wellington Dam.

1. The Department of Fisheries already has the technical expertise, experience and critical infrastructure to supply quality fish of these species for stocking in large numbers. The hatchery at Pemberton has been producing high quality stocks of these species for decades.
2. The history of stocking of trout into south west rivers and impoundments has shown the fish survive well and significant growth rates are often achieved. Where fish have not done well it is related to water quality (temperature, dissolved oxygen) over summer and the lack of suitable substrates for successful natural recruitment.
3. The water quality of the water in Wellington Dam is eminently suitable for these species. The water temperatures do not rise to levels over summer that create problems for trout such as occurs in the smaller water bodies and rivers of the south west. There is also no problem for trout at the current or projected levels of salinity and bromide present in the dam. Proof of the suitability of the water in the dam for trout is provided by the presence of a significant tailrace fishery in the Collie Gorge where irrigation water flows from the dam sustain a fishery which produces quality fish in excellent condition.
4. The stocking of trout into the rivers and impoundments of the south west has a long history and remains a key component of current Dept. Fisheries recreational fishery policy. The tailrace waters from the dam are currently stocked most years and the upstream sections of the Collie above the dam have been stocked with trout for many years in the past. There are unlikely to be any major biosecurity concerns related to stocking of both species of trout into the Dam from where at least some fish can be expected to migrate upstream into the Collie catchment.
5. Both species of trout can occupy different habitat niches within a large impoundment and evidence from elsewhere in Australia and New Zealand shows that both species can thrive in impoundments.

6. Both species of trout will prey on redfin perch, a species considered to be itself a major predator on marron. While there is no doubt that trout also prey on marron the available evidence suggests that only small marron are targeted while redfin will take much larger marron which are at or near reproductive age.
7. Trout are recognised as quality sports fish by the majority of freshwater anglers. Both species are attractive to Western Australian anglers and to interstate and overseas visitors. The establishment of a good sustainable trout fishery in Wellington Dam has the potential to attract considerable numbers of tourists to the area.
8. Growth rates for trout in south west Australia are relatively fast with fish regularly achieving a size range of 30-40cm within two years of being released as yearlings.

Some key considerations

Having established the rationale for stocking trout it is important to consider some key potential constraints and issues that need to be resolved to ensure there is a sustainable fishery.

1. There is some evidence that primary productivity in the dam may be quite low and/or there may be a lack of suitable trophic levels of organisms to provide a food chain to support trout (or any other apex predator). The capacity of trout to switch feeding strategies to consume a wide variety of organisms depending on abundance does mean that trout are one of the best species that could be selected for stocking into waters of limited productivity. Large trout feed on organisms ranging from midge larvae to other fishes. The carrying capacity of the Dam may prove to be currently limited however and so there should be some investigations of how that might be improved such as developing shallow water areas for the growth of benthic primary producers and/or establishment of pelagic food chains based on phytoplankton productivity. Part of the establishment of food chains may include stocking of the dam with species of suitable small fish both demersal and pelagic. A preference for native fishes where possible should be encouraged.
2. Following on from item 1, it is not clear what level of stocking would be required to provide a reasonable fishery in the Dam and so there will be a need for ongoing and regular monitoring of the outcome of stocking regimes to assess and where necessary refine stocking numbers, size of fish stocked, locations and so on. The Dam offers a good opportunity to garner information about optimum stocking levels to produce a quality fishery where quality may be defined by abundance or size of individual fish or angling experience.
3. In order to be truly sustainable it may be necessary and/or desirable to increase the capacity of the stock of fish within the Dam to sustain numbers through natural recruitment. Increasing the capacity for natural recruitment would involve in the first instance an increase in areas of substrate suitable for spawning. Other considerations may include development of areas where small fish can find refuge from predation.
4. An ongoing commitment by a number of stakeholders is essential if the project is to be successful. These will likely include The Department of Fisheries, Department of Parks and Wildlife, Department of Water, one or more freshwater research organisations, and a range of diverse recreational and community organisations. These ongoing commitments are likely to require budget support within these organisations.
5. It should be recognised by all that the establishment of a sustainable fishery in Wellington Dam will not be achieved easily. There is a need to clearly identify knowledge gaps, to identify known issues and constraints and to put in train a management process to fill the gaps and resolve the issues whether they be technical, economic, or political. Ultimately however it is possible to establish a recreational fishery that will repay the initial investment handsomely.