CONTRIBUTION TO THE SUBMISSION FOR FUNDS FOR THE WICKEPIN SOIL CONSERVATION DISTRICT

Freshwater lakes in the Western Australian agricultural areas are a rarity as a consequence of the current trend of salinization of these landscapes. Such lakes are however highly prized in a conservation sence as they provide the major sites for water fowl breeding, and are also therefore, of paramount importance to the duck shooting recreational industry.

Salting of lakes systems can be enhanced in two ways, both related to the clearing of the bushland of the appropriate catchment. The direct effect of this clearing is on the raising of the saline water table which causes an increase in the water salinity of the lake. The more indirect effect is by the great increase in surface water runoff on the cleared catchment, which enhances the waterflow into the lakes. This increased flow is detrimental due to the salt accumulation as a consequence of the movement over the salt affected landscape, and also due to the increased flooding effect on the lowland areas and the lake vegetation.

Most, but not all, native water fowl are able to utilize any quality water source for summer refuges, but are dependant on freshwater lakes for breeding. The majority of water fowl require freshwater to drink, and this becomes important during breeding before the young are able to travel to fresh water supplies. The more critical aspect of water quality however is related to appropriate food sources for the breeding water fowl. Freshwater invertebrates are the source of essential proteins for these birds, and especially the downy young.

The conservation of vegetation on and about lakes is also important for shelter and resting sites during breeding, quite apart from the desirability to preserve examples of

the vegetation types associated with freshwater lakes. Even transient changes in the water salinity which causes plant death will have a long term effect on the vegetation and the nursery status of the lake.

Lake Toolibin is an ephemeral, freshwater lake near the head of the North Arthur River Wetlands System. It is one of the few freshwater lakes remaining in the south west Agricultural Region, and the most important wetland water fowl nursery remaining in the Western Australian Wheatbelt. Lake Toolibin is a vegetated lake, which makes it ideal for the range of nesting requirements found in water fowl populations. Indeed most water fowl recorded in the Central Great Southern Province have been recorded at Lake Toolibin, with over half of these and the terrestrial avi-fauna, being noted breeding in this area. Included in the breeding records are the rare Freckled Duck and the Great Egret.

The vegetation on Lake Toolibin is dominated by the Swamp Sheoak (Casuarina obesa), Flooded Gum (Eucalyptus rudis) and Paperbarks (including an undescribed species of Melaleuca). These species are variously salt sensitive and will die off should the salinity rise too much in the lake. Already areas of Sheoak in the south western sector are degenerating and it is therefore obvious that without effective conservation practices aimed at reducing the salt input into this lake system, Lake Toolibin is in danger of being transformed into a desolate skeleton forest of dead trees like Lake Taarblin to the south. Should this be allowed to occur then a valuable asset to the region and beyond, would be lost forever.

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