Introduction

The Water Corporation is responsible for the majority of water and wastewater services across Western Australia and follows strict guidelines and policies to ensure these services are provided in a safe, secure and efficient manner.

The fundamental issue relating to safe drinking water is that nothing is more important to the Water Corporation than the safety of the water it supplies and, in turn, the health of its more than 1.8 million customers. Essentially, the trust that its customers have in the ability of the Corporation to protect their health is its most important asset.

As part of its commitment to ensuring safety and security the Corporation has adopted the Australian Drinking Water Guidelines (ADWG) that provide best practice principals to ensure water quality from catchment to consumer. It’s a well known fact that increased public health risks go hand in hand with recreational activities in drinking water sources and catchments.

In undertaking this duty of care the most critical component of its Drinking Water Quality Management System is the protection of its drinking water catchments. The Corporation has a firm belief that it has a responsibility to its customers and future generations to preserve, protect and repair undeveloped catchments.

Industry best practice on drinking water quality management is outlined in the 2004 Australian Drinking Water Guidelines. Within the Guidelines, prevention is identified as an essential component of drinking water quality management. Preventative measures are recommended to prevent hazards from occurring, or reduce them to acceptable levels.

The guidelines outline the use of multiple barriers as a critical method of implementing preventative measures. This is based on the understanding that some hazards require more than one preventative measure for effective control.

The 2004 ADWG specifically states in Section 3.3.1, pages 3-9, that:

- The strength of the multiple barrier approach is that the failure of one barrier may be compensated by the effective operation of remaining barriers, minimising the likelihood of contaminants passing through the entire water supply system and being present in sufficient amounts to cause harm to drinking water consumers. Traditional preventative measures are incorporated as or within a number of barriers including:
  - Catchment management and source water protection.
  - Detention in protected reservoirs or storages.
  - Extraction management.
  - Coagulation, flocculation, sedimentation and filtration.
  - Disinfection.
  - Protection and maintenance of the distribution system.

The Guidelines also note in Section 1.1, pages 1-2, that:

- The multiple barrier approach is universally recognised as the foundation for ensuring safe drinking water. No single barrier is effective against all conceivable sources of contamination, is effective 100 per cent of the time or constantly functions at maximum efficiency.

- Prevention of contamination provides greater surety than removal of contaminants by treatment, so the most effective barrier is protection of source waters to the maximum degree practical.
Logue Brook Dam

The Water Corporation forecasts that new drinking water sources totalling 107 gigalitres of water will be required for the Integrated Water Supply Scheme (IWSS) by the end of 2009. (A plan of the IWSS is attached) It is proposed that this water (required to restore supply and position the State for growth to at least 2017) will come from the Perth Seawater Desalination Plant (45 gigalitres); another major new source, with further development of the South West Yarragadee groundwater aquifer the preferred option, and major water trading with Harvey Water. The Harvey Water trade includes a critical 5.3 gigalitres from Logue Brook Dam.

The Water Corporation has been actively engaged in negotiations relating to the Harvey Water trading since Harvey Water first promoted the opportunity in March 2004. Trading is well under way, benefiting greatly both Harvey Water irrigators and the Corporation. The proposal is that the final 5.3 gigalitres will come from the Logue Brook water source.

However, as outlined in the introduction, for the Corporation to take and use water from this source for drinking water purposes, an appropriate Water Source Protection Plan for the catchment must be developed and implemented. This proviso is entirely consistent with the requirements of existing Corporation policies and the Australian Drinking Water Guidelines. The Corporation believes it is also consistent with the expectations of the WA Government and its relevant departments.

In practice, the source protection plan must include a stipulation that recreational activities will cease on the water body and be restricted within the catchment. The Corporation will not take water from this dam without this protection in place.

In stating its position, the Corporation recognises the impact on recreational activities and that the loss of Logue Brook Dam would put additional pressure on other nearby recreational facilities. However, it believes a whole of Government approach is required to determine the ability of this State to provide appropriate recreational amenity to the broader community.

Economics of Logue Brook use for drinking water

Water source treatment is very expensive, particularly for small sources and where water must be transported long distances. The need for extensive water treatment must be avoided, whenever possible, if the cost of water is to remain affordable.

In a 2005 water pricing inquiry, the State’s Economic Regulation Authority (ERA) determined that the value of the Water Corporation’s future water sources ranged from $0.82 to $1.20 per kilolitre.

The 5.3 gigalitres of water the Corporation proposes to take annually from the Logue Brook source forms a significant part of the total water trading option available at this time from Harvey Water.

Collectively, the cost of this highly attractive and beneficial water trading option is $0.60 cents per kilolitre – considerably less than the average value of alternative immediate sources that have been priced by the ERA in the range from $0.82 cents to $1.20.

Therefore, the cost of water trading from various sources from Harvey Water at this time is between $1 million to $3 million a year cheaper than the average cost of alternative options. Under this scenario, sourcing the 5.3 gigalitres of water per year from Logue Brook represents total savings to the State of up to $50 million.