
CITY OF KELOWNA
MEMORANDUM

Date: October 23, 2002
File No.: 5260-02

To: City Manager

From: Water Manager

Subject: **Okanagan Lake Limnology Study - Water Quality Task Force**

RECOMMENDATION:

THAT Council, for information, the report dated October 23, 2002 from the Water Manager on the Water Quality Task Force Okanagan Lake Limnology Study.

BACKGROUND:

As part of the Water Quality Task Force recommendations staff conducted a study into the influence of Okanagan Lake limnology on the water quality entering the City's water intakes. The study was endorsed by the Water Quality Task Force to investigate ways to improve the quality and safety of the utility's water supply to its customers. City staff engaged Hay and Company to perform a lake limnology review for Okanagan Lake. Limnology is the study of lake activity as a result of changing currents, climate change influence and a variety of additional influences such as wind speed and direction.

This study was completed at a cost of \$100,000 and was vital to the overall source to tap initiative undertaken by the Task Force. The work that was completed determined that under certain lake conditions surface water and contributing streams into Okanagan Lake have the potential to reach the existing intakes. The impact on source water quality however is not adversely effected given the lake conditions that must exist for this to occur and given the overall dilution that occurs as a result of the sheer size of the lake. This work also addressed the question of whether it would be beneficial to move the intakes to deeper depths. The existing intakes would have to be moved to considerably deeper depths at considerable cost to gain only a marginal improvement in source water quality. The outcome of this work was therefore very valuable in assisting the Task Force to reach its final decision to recommend UV treatment, which will provide the best possible barrier when dealing with any source water quality variations that may occur.

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This innovative technology and the approach by staff and the consultant that was used to complete this study has now been recognized by the Association of Professional Engineers of BC. As a result the City of Kelowna has received an award of excellence by this Association in the category of New Concepts and Assessments.

Don Degen, Water Manager

John Vos, Director of Works & Utilities