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**REPORT TO GANGES SEWER LOCAL SERVICE COMMITTEE
MEETING OF WEDNESDAY, 22 APRIL 2009**

SUBJECT RENEWAL OF ZENON MEMBRANE LEASE AGREEMENT

PURPOSE

To present for information to the Ganges Sewer Local Service Committee (GSLSC) a preliminary report on the Zenon membrane lease agreement, and to present alternatives and a recommendation for purchasing replacement membranes at a reduced price.

BACKGROUND

The GSLSC entered into a five year contract in December 2004 with Zenon Environmental to provide improved membrane modules for the entire system at an annual cost of \$44,200 for five years, increasing the plant capacity nominally from 600 to 1,000 cubic metres per day. This contract expires late in 2009, with an option to purchase additional membranes at a significant discount. However, given the rapid advancements in membrane technology and performance in recent years and the wide range of products available from different manufacturers, there may be several cost-effective alternatives available for use at the Ganges wastewater treatment plant.

As membranes age, their flow capacity diminishes. The membranes installed in 2005 have significantly outperformed initial expectations, and show very little visible wear. It is likely that these membranes will continue to provide reliable service for at least a few years beyond their expected five year life, although their flow capacity will continue to diminish over time. Partial or phased replacement of membranes as flow capacity of older membranes diminishes would maintain the required capacity of the plant while deferring replacement of some membranes.

Determining an appropriate strategy for membrane replacement will require a thorough review of available options and costs. In the interim, the purchase of membranes in order to replace a portion of the existing membranes as required could be pursued as a short to medium term approach to maintain plant capacity.

ALTERNATIVES

1. That the Ganges Sewer Local Service Committee receive this report for information and authorize the expenditure of up to \$50,000 from the capital purchase fund for the purpose of purchasing membranes to replace up to one third of the existing membranes in the Ganges wastewater treatment plant as required.
2. That the Ganges Sewer Local Service Committee receive this report for information.

FINANCIAL IMPLICATIONS

There was a balance of \$206,612 in the Ganges Sewer capital purchase fund at December 31, 2008. The use of \$50,000 to purchase membranes would leave a balance of \$156,612 available for future membrane replacement. There are no implications on the operating budget.

SUMMARY/CONCLUSIONS

The CRD has an option to purchase replacement membranes for the Ganges wastewater treatment plant from Zenon Environmental at a reduced price before the lease agreement expires late in 2009. Although alternatives will be considered, purchasing a quantity of membranes in 2009 sufficient to replace up to one third of the existing membranes would ensure that capacity of the system could be maintained should performance of the existing membranes diminish significantly before a long-term replacement strategy is implemented.

RECOMMENDATION

That the Ganges Sewer Local Service Committee receive this report for information and authorize the expenditure of up to \$50,000 from the capital purchase fund for the purpose of purchasing membranes to replace up to one third of the existing membranes in the Ganges wastewater treatment plant as required.



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