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DATE 07 June 1996

TO/DEST. Co-ordinator
Planning and Environment Committee

FROM/EXP. Environment and Transportation Commissioner

SUBJECT/OBJET **RESPONSE TO OUTSTANDING INQUIRY NO. P&E - 14
FEASIBILITY OF OPERATING THE REGION'S
STORMWATER MANAGEMENT FACILITIES FOR LONGER
PERIODS**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee receive this report for information.

BACKGROUND

On 14 May 1996 at Planning and Environment Committee, Councillor Stewart requested a report on the feasibility of operating the Region's stormwater management facilities for longer periods (i.e. during periods when no danger from ice exists).

RATIONALE

The Regional Municipality of Ottawa-Carleton (RMOC) presently owns and operates two permanent and one temporary stormwater management facilities (see attachment 1). In addition, the RMOC owns and "operates" a variety of smaller stormwater best management infrastructure elements such as biofilters, third pipe infiltration systems and oil and grit separators.

With the exception of the two permanent facilities (Hunt Club Bridge Facility and Graham Creek Facility), the above stormwater management practices are operated year round. The two permanent facilities, regulated by the Ministry of the Environment and Energy, are operated between May 15th and September 15th. During the non-operating season (September 16th to May 14th) using a system of valves and weirs, the facilities are bypassed and do not accept stormwater runoff.

The present operating season requires treatment for bacteria (E.coli) and suspended solids. These discharge criteria have been designed primarily to protect recreational river uses as well as loadings to the aquatic environment. Operating the facilities for a longer period of time throughout the year would realize an additional reduction in loadings to the receiving water courses and provide for increased benefit to the aquatic environment with regards to the reduction of contaminants normally associated with suspended solids.

The environmental benefits of extended operating seasons can be significant to the aquatic environment particularly during spawning seasons and should be evaluated.

Normally, an increased operating period (or season) increases operational and maintenance costs. This also applies to Stormwater facilities, however, the number of commissioning (spring) and decommissioning (fall) site inspections remain unchanged. With the extended operating season additional site inspections will be required. The operational mode of the RMOC facilities both incorporate infiltration techniques. Extending the operating season would also increase the amount of material removed from stormwater causing additional cleaning and removal operations of sediment from the facility. In the case of the Graham Creek facility filter membranes would have to be replaced more frequently.

The RMOC has been operating the Hunt Club facility (at Riverside Drive) for the past five years. Based on this experience it is expected that the extension of the operating season will require the removal of contaminated sediment approximately every two years rather than every five years. Given the increase of suspended solid loading due to winter season accumulation found in spring runoff and the increased frequency of rain events in the spring and fall, maintenance inspections should be maintained (or increased) in order to ensure that damage does not occur to the facility filtration systems and flow control structures.

In the case of the Graham Creek facility the RMOC has yet to complete one full operating season. Due to this lack of experience in the area, the actual maintenance costs for this facility are unknown and the required maintenance protocol is difficult to predict. It is expected however, that due to the number of filtration materials and elements, that an increase in material and maintenance costs would result in the extending of the operating season.

In order to better quantify the value of extending operating seasons, the Surface Water Quality Branch has already extended treatment operations for 1996 at the Hunt Club Bridge Facility. Regarding the Graham Creek facility, a regular operating season is recommended in order to better determine actual operating and maintenance costs prior to extending the normal operating season. This will be reviewed in the fall of 1996.

*Approved by
M. J. E. Sheflin, P. Eng.*

Attach. (1)

