



City of Richmond

Report to Committee

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To: Public Works and Transportation Committee      Date: July 2, 2002  
From: Jim Young, P. Eng.      File: -  
Manager Sewerage and Drainage  
Re: Feasibility of Extending Ditch Cleaning Time from 5 to 6 Years

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**STAFF RECOMMENDATION**

That this report on the feasibility of extending ditch cleaning time from 5 to 6 years as requested by the Public Works and Transportation Committee following the June 5, 2002 Sewerage and Drainage Department Levels of Services presentation be received for information.

Dave Semple  
Acting Director, Operations

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CONCURRENCE OF GENERAL MANAGER

## **Staff Report**

### **Origin**

At the Public Works and Transportation Committee following the June 5, 2002 Storm and Sewers Department Levels of Services presentation, staff were asked what the impact would be if the present level of ditch maintenance was reduced from a 5 to a 6-year cycle. The review is also to identify those ditches that serve agricultural areas.

### **Analysis**

The present funding level for the ditch maintenance program allows City forces to complete cleaning of all ditches on a 5-year cycle. The primary purpose of this program is to facilitate ditch hydraulics to minimize the potential for flooding. Over a period of time ditches gradually infill due to natural erosion and silt, sand, etc., runoff from road surfaces. City forces remove the infill material and excavate the ditch to the invert level of culverts normally located at driveway crossings to accommodate ditch hydraulics.

Secondary benefits of the ditch cleaning program include the minimization of standing water, removal of organics and general debris essentially as an overall aesthetic improvement supporting the 'Liveable' vision.

From a technical viewpoint, a reduction in the level of service from 5 to 6 years is expected to have the following impacts.

- Ditches will continue to experience natural infill resulting in an increased quantity of material to be removed at the time of cleaning;
- An increase in the number of flooding calls from the approximate 391 flooding calls received in 2001.

It is anticipated that the majority of the impact will be experienced from a public relations viewpoint. The City received approximately 123 calls in 2001 from the public related to various ditch concerns. The more common concerns brought to the City's attention where no action is taken other than an initial assessment include:

- Weeds and other organic matter have overgrown the ditch;
- Odours coming from the ditch;
- Ponding in ditch;
- Mosquitoes;
- Children's safety when playing near ditches, particularly when it is deep;
- Ditch stability where ditch hydraulics are not compromised;

- Requests for more frequent cleaning.

Where ditch hydraulics are not compromised, callers are advised when the ditch in question will next be visited according to the 5-year cycle and are normally provided Local Improvement Program information.

It is anticipated that a reduction in the level of service for ditch cleaning from 5 to 6 years will result in an increased number of calls from the public, the majority of which will be for the reasons as outlined above.

Of the approximate 320 km of ditches, approximately 32 km serve agricultural areas as highlighted on the attached drawing.

Given the potential for flooding and the likelihood of increased negative public response, staff do not recommend that the present level of service be reduced.

### **Financial Impact**

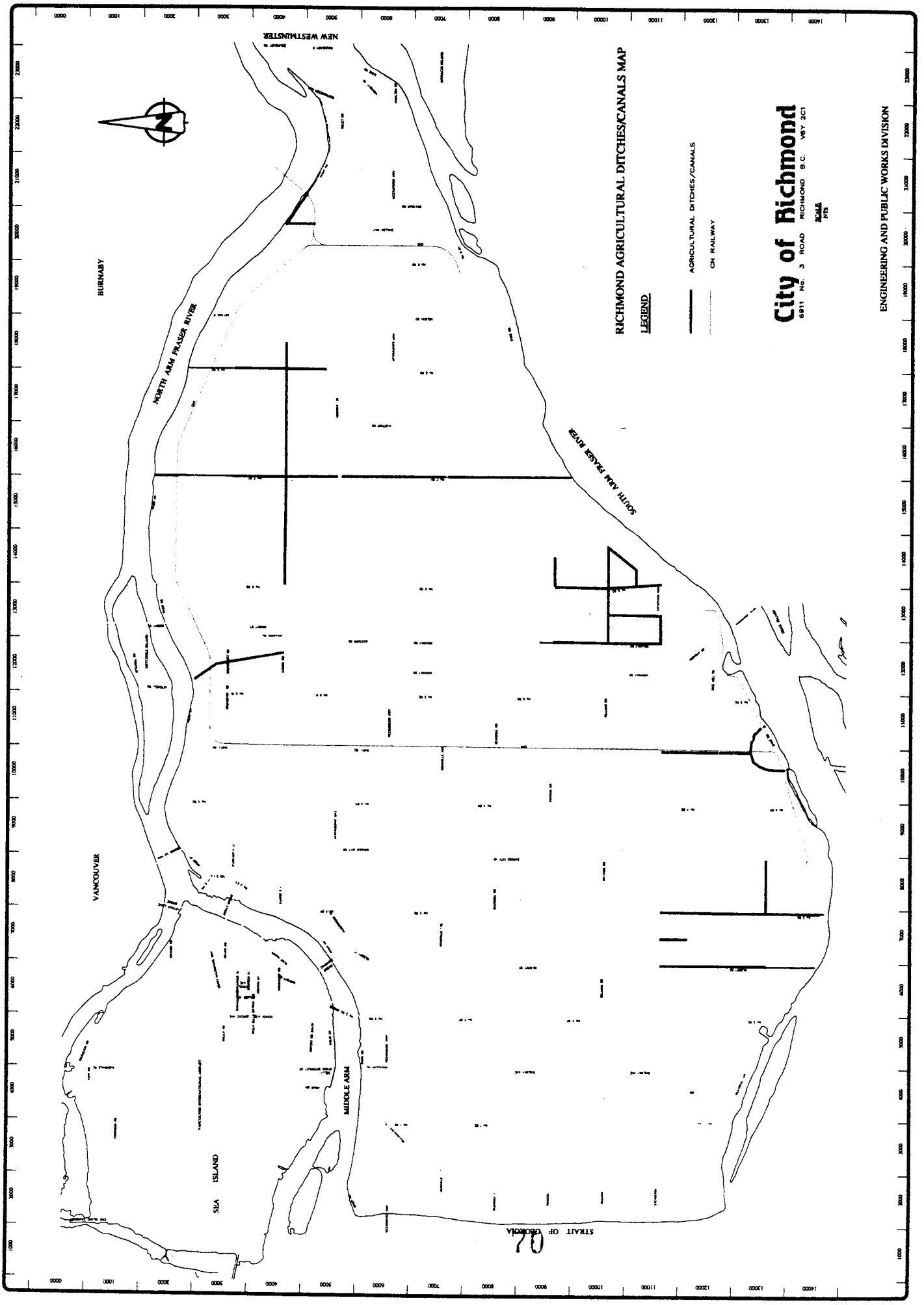
The 2002 budget for ditch cleaning is \$497,500 which allows work to be completed on a 5-year cycle. A reduction in the level of service from 5 to 6 years would allow the budget to be reduced to \$414,500 for an annual savings of \$83,000.

### **Conclusion**

It is feasible to reduce the City's ditch cleaning level of service from 6 to 5 years. It is anticipated that an increase in negative public response will be experienced as will the potential for flooding.

Jim Young, P. Eng.  
Manager Sewerage and Drainage

JVY:jvy



**RICHMOND AGRICULTURAL DITCHES/CANALS MAP**

**LEGEND**

- AGRICULTURAL DITCHES/CANALS
- CN RAILWAY

**City of Richmond**  
 6911 No. 3 Road Richmond B.C. V6Y 2C1  
 SCALE 1:25,000

ENGINEERING AND PUBLIC WORKS DIVISION

