

DATE OF MEETING SEPTEMBER 21, 2022  
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SUBJECT BUTTERTUBS SANITARY SEWER UPGRADE ALIGNMENT STUDY

## **OVERVIEW**

### **Purpose of Report**

To request funding and direction for staff to undertake a study for the upgrade to the Buttertubs Sanitary Sewer.

### **Recommendation**

That Council direct Staff to undertake the Buttertubs Sanitary Sewer Alignment Study and add a project to 2022 for \$150,000, funded from the Sanitary Sewer Reserve, to complete the work.

## **BACKGROUND**

The Buttertubs sanitary sewer collects flows from Vancouver Island University, areas around College Heights and Jingle Pot Road and discharges into the Millstone Trunk Sewer near Bowen Road. The sewer is located beside and under Buttertubs Marsh, making it difficult to access or replace. The attached graphic shows the existing sewer location.

Unfortunately the sewer can be overloaded during major storm events and requires upgrading, both to support continued growth in the catchment and address the overflow risk. Substantial development growth in the catchment, including at VIU, is increasing the urgency of upgrading this pipe.

With the existing pipe located under the eastern edge of Buttertubs Marsh, replacement in that location presents significant environmental and construction challenges. Careful consideration needs to be undertaken to determine the best solution.

## **DISCUSSION**

There are several options for upgrading this sewer, all of which have their own set of challenges and risks. Some of the options that could be considered include

- Upgrade of the gravity sewer in or near the existing alignment
- Install a relief sewer in a horizontal drilled alignment
- Construct a new pump station and forcemain
- Provide a pressurized relief sewer

A comprehensive alignment and options study is necessary to determine the most effective solution and to determine the probable cost. To effectively determine which option is best, it will be necessary to understand the soil conditions, environmental aspects, maintenance and operational implications, and other factors.

With the growth in the catchment, it is necessary to resolve this sewer capacity issue sooner than previously anticipated.

### **FINANCIAL CONSIDERATIONS**

There is funding available within the Sanitary Sewer Reserve to allocate \$150,000 and undertake this study.

### **OPTIONS**

1. That Council direct staff to undertake the Buttertubs Sanitary Sewer Alignment Study and add a project to 2022 for \$150,000 funded from the Sanitary Sewer Reserve to complete the work.
  - The advantages of this option: Completing this study will identify the preferred solution for capacity relief of the sewer. It will also provide a cost estimate that staff can use to set a budget for construction.
  - The disadvantages of this option: The only disadvantage is that the funding could be used for another project.
  - Financial Implications: The 2022 – 2026 Financial Plan will be amended at a future date to include this project.
  
2. That Council direct staff otherwise.
  - The disadvantages of this option: Without this study it will not be possible to accurately identify an optimal solution nor set an accurate construction budget. Also, it may not be possible to support new sewer connections within the catchment without additional capacity and the existing overflow risk during storms will remain. This would limit growth in the upstream area.

### **SUMMARY POINTS**

- The Buttertubs Sanitary Sewer is at capacity and requires upgrading.
- The existing sewer location is under the east edge of Buttertubs Marsh and is challenging to access.
- An alignment study is needed to identify the optimal upgrade solution and cost estimate.

### **ATTACHMENTS:**

Attachment A – Map of Buttertubs Sanitary Sewer Alignment Study Area |

**Submitted by:**

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**Concurrence by:**

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General Manager, Engineering & Public  
Works

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