



Corporate

NO: R113

Report

COUNCIL DATE: May 18, 2005

REGULAR COUNCIL

TO: Mayor & Council DATE: May 10, 2005
FROM: General Manager,
Engineering FILE: 5340-30
SUBJECT: Policy on Sewer Extensions and Connections in
Agricultural Areas

RECOMMENDATION

That Council establish a new policy governing the rules for sanitary service connection for properties outside the Greater Vancouver Sewerage and Drainage District's Fraser Sewerage Area (FSA), as outlined in the attached Policy H-48.

INTENT

Currently, requests for sewer extensions outside of the FSA are dealt with on an ad-hoc basis. The intent of this report is to establish a Council policy on sanitary sewer extensions and service connection for properties outside the Fraser Sewerage Area (i.e., primarily the agricultural areas), and establish criteria for the evaluation of such extensions.

BACKGROUND

Greater Vancouver Sewerage and Drainage District (GVS&DD) has established four Sewerage Areas in GVRD: North Shore, Vancouver, Lulu Island West and Fraser Sewerage areas in accordance with the GVS&DD Act. These areas were developed in line with the Livable Region Strategic Plan and the Liquid Waste Management Plan and are registered in the Land Registry Office. Attached is a map showing the Fraser Sewerage Area which includes Surrey.

Ever since the establishment of the Sewer Utility, we have strictly upheld the practise that a property must front or abut a City's sewer to be eligible for a connection. This practise is derived from the principle that the extensions to the sewer system are funded by the properties that benefit from (i.e., front) the sewer. Properties that front a sewer and are connected pay sewer user charges to cover the costs of operating the system. Conversely, those who are not fronting sanitary sewers do not pay any sewer charges. Also, this practise helps to achieve systematic expansion of the sewer system on a "beneficiaries pay" principle.

Areas outside the FSA in Surrey are in the Agricultural Land Reserve (ALR). Most of these areas do not front a sewer. Where they do front a sewer, the sewer is usually a GVRD's large interceptor. Connecting to large interceptor poses several problems: odour complaints from residents; potential surcharge and basement flooding during major storms, and in the extreme cases, sewerage spillage and overflow problems.

With the recent introduction of the Low Pressure System standards to facilitate servicing areas that cannot be serviced by gravity sewer, the current policy (H-17) covering pump connections is not sufficient to cover the areas outside the

FSA. Under this policy, non-fronting properties are conditionally permitted to connect (by pumping) on health and compassionate grounds where an existing building has a failed septic disposal system that is beyond repair and is so confirmed by the Regional Health Board. A new policy is needed to govern the rules for connections for areas outside the FSA (i.e., agricultural areas).

DISCUSSION

Expansion of sewer system to service the low density agricultural/rural houses is very different than establishing a systematic system for higher density such as the urban and suburban houses.

We have reviewed the impact of systematically expanding the sewer system beyond the FSA. The most significant of the impacts would be increased pressure to use the agricultural areas for urban/residential uses. A secondary impact would be the extra costs on both the development industry and the Sewer Utility. This report primarily deals with the development and Sewer Utility impacts.

Financial Impact on the Development Industry:

As developments in Surrey are pushing to the fringes of the urban and suburban areas towards the ALR, a consistent procedure is required for implementing the Works and Services required under the Subdivision By-law. Currently, the City is not requiring developments to construct a sewer along a road where it fringes the ALR, as the City does not anticipate sewer connections from the ALR lots.

Significant financial cost would be incurred on the development industry if sewer servicing was required to extend outside the FSA. To comply with the Work and Services requirements, sewer along these roads that fringe the ALR would cost the development industry in the range of an extra \$5 to \$10 million to add services to these fringe areas over the next 10 to 20 years.

Financial Impact on the Sewer Utility:

The main reasons for this financial burden on the Sewer Utility are:

- Lots outside the FSA are generally in the lowland and their frontages are generally wider than the frontage of the lots in the uplands. The average lowland lot frontage is 5 times the frontage of the upland lots. Because the operation and maintenance (O&M) cost is proportional to the length of the sewer, the O&M in the lowlands will be substantially higher, and are not reflected in the sewer charges for these properties.
- Because the lowland is generally very flat over a large area, a pumped system would be the most practical type of collection system for this area. Pump systems are more expensive to maintain than the conventional gravity sewer system that is predominant in the uplands. Additional flushing will be required at the force-mains because of the low flow conditions.
- More community pump stations will be required at the lowland as the distances are greater than can be achieved by the small individual pumps.
- Because of the poor soil conditions in the lowland, sewer are more expensive to build and are still liable for uneven settlement with resulting operational problems and costs.
- The sewer is also vulnerable to seismic events. Special features will need to be incorporated with the design and some may need to be replaced in a major seismic event.

Agricultural Advisory Committee

We presented the new Policy to the Agricultural Advisory Committee for comments as it deals with services to farm land. They endorsed the new Policy at their May 6, 2005, meeting.

Other Considerations:

Existing roads on the lowland are very fragile due to the poor soil conditions and because older, less suitable construction methods were used; consequently, the construction of utilities in these roads could damage the road extensively, potentially even beyond repair. Because the lowlands are flood prone, more inflow and infiltration (I&I)

may get into the system. This additional inflow may cause downstream sewer capacity to be reached. As a result, surcharges and basement flooding may occur on the downstream sewer sections. For the same reason that the lowlands are flood prone, the sewer system serving the lowlands, if installed, will not be less reliable.

It is more economical for the lowland lots to be serviced by individual septic system or an on-site treatment system than to connect to the City Sewer. Our Zoning and Subdivision by-laws stipulate the sewage disposal system has to meet the requirements of the Regional Health Board. A septic system or an on-site treatment system will meet this requirement.

Proposed Criteria for Allowing Extensions and Connections

In view of the above, it is proposed that connections and extensions only be supported by the City, to go forward to the GVS&DD Board for approval, in either of the following two circumstances:

1. The property that fronts an existing gravity sewer that can provide service where odour, surcharge or environmental spillage problem is not an issue. Force mains, pressure mains, siphons and interceptors are not considered as suitable for a connection (where applicable, Agricultural Land Commission approval may also be required).
2. Where an established existing building has a failed septic disposal system that is beyond repair and so confirmed by the Regional Health Board and where an on-site treatment system has been considered thoroughly and found to be not feasible.

For larger parcels that exist in the agricultural areas, usually 5 ac. or more, it would be very unusual for a replacement on-site disposal system not to be feasible, in the case of failure of the original on-site system.

CONCLUSION

To provide a consistent approach for sewer extensions outside the FSA (i.e., inside agricultural areas), to help keep the City agricultural areas for agricultural uses, and to minimize the financial impact on the Sewer Utilities and the development industry, we recommend that sewer connection and sewer extension only be supported as outlined in the proposed City H-48 Policy as attached.

Paul Ham, P.Eng.
General Manager, Engineering

VL/PH/RAL/rdd
Attachment

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CITY POLICY

No.

REFERENCE:	APPROVED BY:	CITY
REGULAR COUNCIL MINUTES	COUNCIL	
	DATE:	

HISTORY:
New

TITLE: Sewer Connections to Properties outside the Fraser Sewerage Area

Properties within the Greater Vancouver Sewage and Drainage District's (GVS&DD) Fraser Sewerage Area (FSA) will be allowed a sanitary service connection subject to: existing by-laws, and practice and procedure.

For properties outside of the FSA, no sewer extension will be supported by the City to go forward for a request to GVS&DD to extend the FSA except where an established existing building has a failed septic disposal system that is beyond repair and where an on-site treatment system has been considered thoroughly and found not feasible (and is so confirmed by the Regional Health Board).

For properties outside of the FSA a service connection to an existing gravity sewer may be supported by the city to go forward for a request to GVS & DD to extend the FSA if the following conditions are met:

- A. An existing lot of record fronts an existing gravity sewer that can provide service where odour, surcharge or environmental spillage problem is not an issue. Force mains, pressure mains, siphons and interceptors will not be considered as suitable for a connection.
- B. City Council has approved the inclusion of the property into the FSA.
- C. Agricultural Land Commission has approved the sewer extension where applicable.

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