

**REPORT TO THE JUAN DE FUCA WATER DISTRIBUTION COMMISSION
MEETING OF TUESDAY, MARCH 6, 2011**

SUBJECT GROUTING OF ABANDONED WATER MAINS – ADDITIONAL INFORMATION

ISSUE

As part of the construction permit process, the City of Colwood is requiring all abandoned water mains to be completely filled with concrete grout. The Juan de Fuca Water Distribution Commission requested additional information regarding the quantity of pipe 300mm.

BACKGROUND

The 5 year main replacement program does not have any pipe larger than 250mm. However, looking beyond 5 years, the Juan de Fuca Water Distribution system has approximately 35,800 m of pipe with a diameter greater than or equal to 300mm: 13,873 m of this pipe is older than 10 years with the majority installed from 1970-1980, is asbestos cement pipe, and due for replacement in the next 15 years.

There is a concern raised by the City of Colwood Engineering that abandoned pipes not filled with grout may provide a network for rodents. This is not a recognized problem in the Pacific Northwest.

IMPLICATIONS

For replacement of 300m pipe, the estimated cost is approximately \$750/m. Grouting of the abandoned pipe would cost approximately \$85/m or add 11% to the cost of main replacement.

The rate of occurrence of a failure, such as a sink hole that has a significant impact, has been approximately once every 4 - 5 years and associated cost to repair is in the range of \$15,000 to \$20,000 per occurrence. In the unlikely event of rodent problems, these can be addressed on a case by case basis.

CONCLUSIONS

Given the infrequent rate of failure of abandoned water mains larger than 250mm, the high cost of grouting abandoned water mains and the relatively small cost of repairing sink holes, we do not now recommend grouting of these water mains.

RECOMMENDATION

That the Juan de Fuca Water Distribution Commission not approve the grouting of abandoned water mains.

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