

**REPORT TO JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
MEETING OF TUESDAY, APRIL 1, 2014**

---

**SUBJECT      WATER DISTRIBUTION MAIN REPLACEMENT PROGRAM – 2013 PROJECT SUMMARY AND 2014 PROJECT UPDATE**

**ISSUE**

This report provides a summary of the 2013 Water Distribution Main Replacement Program and an update on the 2014 program.

**BACKGROUND**

Water Distribution Main Replacement Program – 2013 Project Summary

The Water Distribution Main Replacement Program was approved by the Juan de Fuca Water Distribution Commission in 1999 and is a comprehensive program to replace water mains based on age, material type and condition of the pipe, leak history, financial risk, environmental risk, service pressure, water quality impacts, and other factors, such as municipal construction and road paving programs. The approved program budget for 2013 was \$2,200,000. The following, and Attachment 1, provides a summary of the 2013 program and upgrades:

1. A total of 3,840 metres of 150mm-300mm diameter water mains were designed and constructed at a cost of \$2,481,337. Supplementary project funding was allocated from the Juan de Fuca Water capital fund, within the overall 2013 approved capital program budget. Variances in the constructed lengths and budget are explained below:
  - a. Forward Drive, Prevost Drive, Meade Road, and Lascelles Crescent projects – all of these projects are within Department of National Defence (DND) lands. These projects were not completed as a result of a change in DND environmental practices that were brought to the Capital Regional District's (CRD) attention during 2013. As recently as 2012, on CRD main replacement projects, DND provided excavated trench soil material testing and a DND site to accept surplus excavated material while it was determined if the material contained contaminants. In 2013, CRD was advised that the CRD would be required to establish a storage site for the trench material, so that the soil could be tested for contaminants, also a responsibility of the CRD, prior to final disposal. This new requirement would result in significant additional costs. Following further discussion with DND staff on this matter, this year DND has reconsidered the requirement and is now performing and funding the soil testing again, but is still requiring the CRD to identify a suitable final disposal site that meets DND's approval, depending on the results of the soil testing. These projects will be brought forward to a future year.
  - b. Additional pipe lengths were constructed on Stillwater Road, Marlene Drive (Hagel Road), Sooke Road, Metchosin Road, and the Island Highway to accommodate field conditions, such as tie-in locations and service connections, and the View Royal Fire Hall project.
  - c. Construction costs were higher than estimated, primarily as a result of:
    - Extended asphalt paving limits to better accommodate municipal needs and requirements for preservation of critical infrastructure.
    - The need to undertake night work on the Sooke Road/Metchosin Road projects was to avoid impacts to residents and businesses.
    - Excessive amounts of trench rock drilling, blasting and removal.
  - d. The planned Island Highway project at Knollwood Road and the Treanor Road project were deferred as a result of insufficient overall program budget.

2. Water main designs were completed utilizing both Capital Regional District (CRD) engineering staff and engineering consultants. All water main installation was completed by CRD crews.

Water Distribution Main Replacement Program – 2014 Project Update

The 2014 program has an approved budget of \$2,244,000, and includes the projects shown in Table 2 (Attachment 2).

The project on Wishart Road has been deferred to 2015, to occur at the same time as another project on an adjacent street. All other projects are expected to be completed this year.

**CONCLUSION**

The CRD replaced 3,840 metres of water distribution mains in 2013 under the Water Distribution Main Replacement Program at a cost of \$2,481,337. Designs for the planned 2014 projects are underway with construction expected to be complete by 2014 year end.

**RECOMMENDATION**

That the Juan de Fuca Water Distribution Commission receive the staff report for information.

---

Scott Mason, BSc, PEng  
Manager, Regional Water  
Infrastructure Engineering

---

Tim Tanton, MPA, PEng  
Senior Manager, Infrastructure Engineering  
Concurrence

---

Peter Sparanese, PEng  
Senior Manager, Infrastructure Operations  
Concurrence

---

Ted Robbins, BSc, CTech  
General Manager, Integrated Water Services  
Concurrence

SM:TR:mm

# ATTACHMENT 1

**Table 1: 2013 Annual Water Distribution Main Replacement Program – Project Summary**

Municipality / Electoral Area	Road Name	Proposed Length (m)	Actual Completed Length (m)	Pipe Diameter (mm)	Notes
View Royal	St Giles St	148	148	200	Completed
	Stillwater Rd	67	95	150	Completed
	Lowland Rd	88	88	150	Completed
	Island Hwy (at Knollwood)	30	0	200	Deferred – insufficient budget
	Prince Robert Lane	545	545	200	Completed
	Island Highway (at new Fire Hall)	0	142	250	Completed
	Colwood/DND	Forward Dr	491	0	150
Prevost Dr		130	0	150	Deferred – DND soil testing
Meade Rd		221	0	150	Deferred – DND soil testing
Lascelles Cr		148	0	150	Deferred – DND soil testing
Hockering Rd		168	168	150	Completed
Marlene Dr		240	300	200	Completed
Sooke Rd		295	535	300	Completed
Metchosin Rd		810	900	250	Completed
Laren Rd		319	319	200	Completed
Langford		Selwyn Rd	65	65	200
	Treanor Ave	76	0	200	Deferred – insufficient budget
	Brock Ave	225	225	200	Completed
	Florence Lk Rd	119	119	150	Completed
	Rodney Rd	76	76	100	Completed
	Massie Dr	115	115	150	Completed
	<b>Total Length</b>		<b>4376</b>	<b>3840</b>	<b>N/A</b>

Table 2: 2014 Annual Pipe Replacement Projects

Municipality / EA	Road Name	Length (m)	Pipe Diameter (mm)	Notes
Metchosin	Metchosin Rd	559	250	Construction in July
View Royal	Wilfert Rd	127	250	Completed
Sooke	Blythwood Rd	565	200	Completed
Colwood	Ridley Dr	454	200	Completed
	Acland Rd	204	200	Completed
	Galloway Rd	349	200	Completed
	Wishart Rd	174	200	Deferred to 2015
Langford	Selwyn Rd	731	200	Design underway
	Hockley Ave	136	200	Design underway
	Bryn-Maur Rd	63	200	Design underway
	Dunford Rd	188	200	Design underway
<b>Total</b>		<b>3550</b>	<b>N/A</b>	