

Balfour Water System Upgrades & Metering Project

Questions and Answers

Updated July 31, 2018

1. How was the hydrant spacing determined for the water line upgrade?

The Fire Underwriters Survey (FUS) states that “hydrant location and spacing should be convenient for fire department use.” We consulted with the Balfour fire department on this. The Balfour fire truck carries 1500’ of hose so spacing was set at 1000’ to allow for efficient deployment of hoses. The hydrant locations were determined based on safe access, such as in existing pull-outs and not on blind corners. Snow removal was also considered, and hydrants were located where snow clearing already exists or where minimal snow clearing would be required.

In order for a fire hydrant to be FUS recognized, it needs to be supplied by a minimum 6 inch water line. Most of Balfour has 4” or smaller water mains, therefore water main upgrades are required before additional hydrants can be installed.

We also considered each hydrant location carefully because of cost. Each hydrant costs more than \$12,000 to install, so we wanted to ensure we installed the right number of hydrants as required for safety.

We are responsible for delivering this project in a cost-effective manner. The tendered cost of the water line upgrade came in significantly higher than estimated and the RDCK continues to work to achieve full scope on this project without going over budget.

2. Why was the water line upgraded along the Highway and Busk road only?

The Balfour water system underwent a condition assessment in 2015. The entire water distribution system was assessed and recommendations made due to the condition and risk of failures. One of the recommendations emerging from this assessment was that the water line on Highway 3A—from the hydrant around 7625 Highway 3A to Busk/Madeline—should be replaced as a priority. This was completed as part of the upgrades project. The replacement of the water line from the hydrant around 7625 Highway 3A to the West and from Busk/Madeline East to Busk/Westley was listed as a second priority. The section from Busk/Madeline to Busk/Westley is either completed or to be completed as part of the upgrades project. Water line replacement in other areas and other recommendations arising from the assessment are being prioritized according to the condition assessment. It is evident that much of the water lines in Balfour are nearing ‘end of life’ and will require replacement; however, funding these replacements are a challenge. Our 2018 Five Year Financial Plan identifies small water line projects in 2020, 2021, 2022 but more replacements beyond 2022 will still be required.

3. Why am I getting a water meter even though the water line that supplies my house was not upgraded?

Even if the water line supplying your home is not yet upgraded, the universal water metering component of the project can proceed, and has several benefits for the entire system. By installing meters provide the following benefits:

- Improve water conservation
- Reduce energy, cartridge filter and treatment chemicals consumption
- Defer capacity upgrades
- Improve consumption data
- Improve leak detection
- Provide more equitable water rates

4. Did the RDCK purchase the correct reservoir?

Yes, the steel bolted reservoir being installed as part of this project is a standard reservoir for water systems in BC. The contractor doing this work installs about 10 per year throughout BC, including other recent reservoir for the Regional District. Both the inside and outside of the reservoir are epoxy coated with the outside being UV treated with a urethane coating. The existing failing reservoir would not meet current standards.

5. Why was the water line upgrade stopped on Busk road?

The water line upgrade portion of this project was to replace 1,521 meters of water line with new 200mm PVC waterline. As of today, 1,300.5 meters have been completed. Work has paused while the

project team evaluates the impact of other contingency considerations listed below, but the intent is for the remaining 220.5 meters to be partially or fully completed once the metering implementation portion of this project is underway. If we proceed with the remaining water line replacement right away, we risk using up our contingency before we understand the full impact of other considerations.

The other considerations at play in this work include the following:

- In the fall of 2017, the RDCK asked to gain access to residences so a survey of their waterline configuration could be completed. Approximately 45 residents allowed access and it was estimated that 60% of the residents of Balfour will require meter pit installs in lieu of an inside installation. The difference in costs of these installs between pit or inside is between \$1,500 and \$2,000 per install, depending on pipe size, depth, and restoration costs, and that will have an impact on the overall project cost. If the required pit installations are greater than the estimated 60%, we will either need to find additional funding to complete the pit installations, or use funds identified to complete the remaining 220.5 meters of water line upgrade. This portion of the water line upgrade project has always been considered as a secondary priority by the RDCK.
- The tendered costs of the water line upgrade portion of this project came in significantly higher than anticipated, using up much of the project contingency and the RDCK project team must explore cost-saving options in order to finish the water line. The metering part of this project must be substantially completed before we can determine if we have remaining funds to complete all or a portion of the remaining 220.5 meters of water line replacement. Full completion of the metering project is mandatory as it is a requirement of our grant providers.
- Much of the RDCK Balfour water system mapping and records are based on old historical information. During the course of the water line replacement project we have learned some of the information is inaccurate or missing. In addition, much of the existing infrastructure would not meet current materials and installation standards and are in poorer condition than expected. Some of the funds previously allocated to complete the water line upgrades are being held back as additional contingency in case we need to do some unplanned curb stop replacements or service line replacements as part of the meter installations.

6. How is the project sitting financially?

As of the end of July 2018, the project is in good financial shape with an adequate contingency for the metering project for reasons explained above. The project will be on-budget with only the **potential** of having less than 15% of the original scope of the water line upgrade not completed. All other components of the project are on track and will be completed: back-up power generators, new reservoir, universal metering—and to date 85% of the planned water main upgrade completed.

7. What can be done to ensure the fully scoped project is completed on-budget?

First and foremost, **the most critical element in keeping the project on-budget is for residents to schedule their in-house meter installation.** When the project was originally scoped, the budget was established based on the assumption that meters could be installed on the inside of the majority of properties versus pit installations, which are more costly to install. This number was in-line with in-house installations performed in other communities. The more in-house installations that can be completed, the more likely it is that the remaining 15% of the water line will be completed.

We encourage residents of Balfour to book their metering appointment with Corix as soon as possible to ensure they comply with the suggested installation. Some residences might need very minor modifications to their system in order to have the meter installed in their home instead of a pit. For example, a resident could “tee-off” their irrigation or other outside water connects after their main inside water valve (that is, where the meter would be installed in their residence). Your Corix installer will be able to tell you more, so book your appointment to get the process started.

8. What will the water rates look like after the metering is completed?

There will be no change from flat rate to volume-based bills until January 2020. This allows time to gather water usage information and to perform an analysis needed to determine metered rates. The community will be consulted during development of the metered rates billing structure. Watch for more information to come, likely in the fall of 2019, about how you will be able to provide your input on the new billing.