

Best Practice

Paradise Hill Water Plant Upgrade

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THE PRACTICE

In 2005, it became apparent that the Village of Paradise Hill's water plant needed to be replaced. A marked increase in treated water consumption and a shortage of treated water storage capacity made the need for an upgrade necessary. Not only was the old plant not able to keep up with demand during peak use periods, but the threat of an inadequate water supply for fire prevention was apparent.

THE PROCESS

The Village of Paradise Hill contracted the services of Bullee Consulting to help determine the best course of action. Bullee Consulting designed a new underground water reservoir to solve the storage capacity crisis. Three treatment processes were investigated. The choice was narrowed down to two; a reverse osmosis system and a manganese greensand filtering system (the same process the old plant was built on). Though the cost of the reverse osmosis system was higher and the familiarity with the manganese greensand system made it a tempting choice, the reverse osmosis system was chosen.

Once the decision was made to proceed with the reverse osmosis system, Bullee Consulting was given the authority to proceed with the design phase. All phases of design, construction and implementation were overseen by the engineer. The project went out to tender in May 2007, and was awarded to Bomac Management. Construction began in September 2007 and one year later we had water flowing to every resident in the village.

Other than a request for feedback from ratepayers, few formal consultations took place. There was regular communication between council, the village foreman, and Bomac Management.

THE RESULTS

The results of this project have been:

- Superior quality of produced water;
- Residents save money on water softeners and softening salt;
- Lower water consumption rates in households where water softeners were used regularly;
- Residents will no longer need to change taps, toilets and fixtures regularly because of scaling;
- Extended life of water mains due to reduced scaling and build up in the lines;
- Water quality is an asset that sets the community apart from other communities;
- More storage capacity for treated water; and
- Removal of ammonia from the water, providing more stabilized chlorine levels.

LESSONS LEARNED

The lessons learned depended a great deal on trusting the expertise of the consulting engineer to ensure that the information was correct and the finished product was the desired result. The village then provided the construction team with information and advice during the construction phase to ensure necessary changes were made and implemented.