

**OLU Water System – Upgrades Plan**

- 1. Commission a Source Water Analysis on the groundwater well source to determine the level of treatment required to conform with Interior Health Authority requirements.**

Initially a screening study will be conducted, estimated at \$10k and three months to complete. Depending on the results of the screening study, a Level 3 GARP study may need to be conducted, estimated at \$50k and over a year to complete.

- 2. Upgrade the water treatment system based on the results of the Source Water Analysis, including replacement of existing components as required.**

For this upgrade plan, it is assumed the highest level of treatment will consist of monitoring turbidity levels in the raw water, providing chlorination for disinfection, and maintaining a minimum chlorine residual throughout the distribution system. It is assumed a new building will be required to house the chlorination equipment. It is assumed an oversized water main from the pumphouse to Myriad Road will be required to provide adequate chlorine contact time prior to the first customer. It is assumed the existing pressure tank, piping, and some of the electrical system will be replaced during this upgrade.

The estimated cost to complete this step of the upgrade plan is \$850k. Note this estimate includes a 40% contingency that would cover engineering, material testing and a construction contingency. It is estimated to take 3-6 months to complete design and approvals for these upgrades, plus another 3-6 months to complete construction.

- 3. Add water storage, fire pumps, a backup generator, and replace the distribution system to provide fire protection and domestic service.**

For this upgrade plan, it is assumed fire protection will be provided using water stored in a reservoir next to the pumphouse/treatment plant, along with fire pumps that pump the water to the distribution hydrants. It is assumed a generator will be provided for backup power to these pumps and the rest of the pumphouse/treatment equipment. Replacing the distribution system will include:

- Upsizing the distribution mains to support fire flows on Osprey Road, Myriad Road, Quail Road, and Chukar Road;
- Installing approved fire hydrants, water sample stations, and blowoff assemblies;
- Installing new service connections to each lot, complete with a meter pit assembly.

The estimated cost to complete this step of the upgrade plan is \$2.97M. Note this estimate includes a 40% contingency that would cover engineering, material testing and a construction contingency. It is estimated to take 3-6 months to complete design and approvals for these upgrades, plus another 3-6 months to complete construction.