

Tater Knob, POA

Water Supply and Distribution

Overview

The Tater Knob water system has two parts:

- Water Supply – Dealing with the pumping of water from the ground to one of two water storage tanks near the top of Tater Knob.
- Water Distribution – Dealing with the outlet pipes from the two Water Storage Tanks to the various homes on the Knob, street-side shutoff valves and residential shutoff valves

Basically, the water system is split into two geographic locations. The North side and the South side.

Each “Side” has two separate wells, a well control house, and a storage tank located up on the Knob.

Each **Well** has a submersible pump, power line and piping from the water source below ground.

Our Tater Knob maintenance person regularly switches the well used at each well control house at each visit. This evens out the usage and “wear & tear” on each well pump.

Each **Well Control House** has several functions:

- Power – Receives main power from the electric utility and may have a backup generator for power.
- Well Pump Control Box – The “Control Box” applies additional voltage to start the well pump when it is first started. There are also two red buttons on the bottom of the control box to reset it if needed. A signal wire from the float-switch from the Water Storage Tank is used to tell the control box to start the well pump.
- Well Selection Switch to **manually** select one of the two wells at each location as the “On-Line” well. This selection is performed by one of the well operators or the POA Maintenance person. (Only one well pump runs at a time, the other serves as a backup, that is manually switched to if needed).
- Note: Some equipment may have surge suppressors attached to protect the equipment in case of a lightning strike

The **Storage Tank** is a large (about 1500) plastic tank with a float switch. A signal wire hooked to the float-switch signals the Well Pump Control box to power up the pump when the water level is low. The plastic tank has an upper inlet where water from the well fills the tank and a lower outlet that leads to the distribution system. As water is added to the tank a chlorinator feeds chlorine to the system from a 40 gallon solution tank.

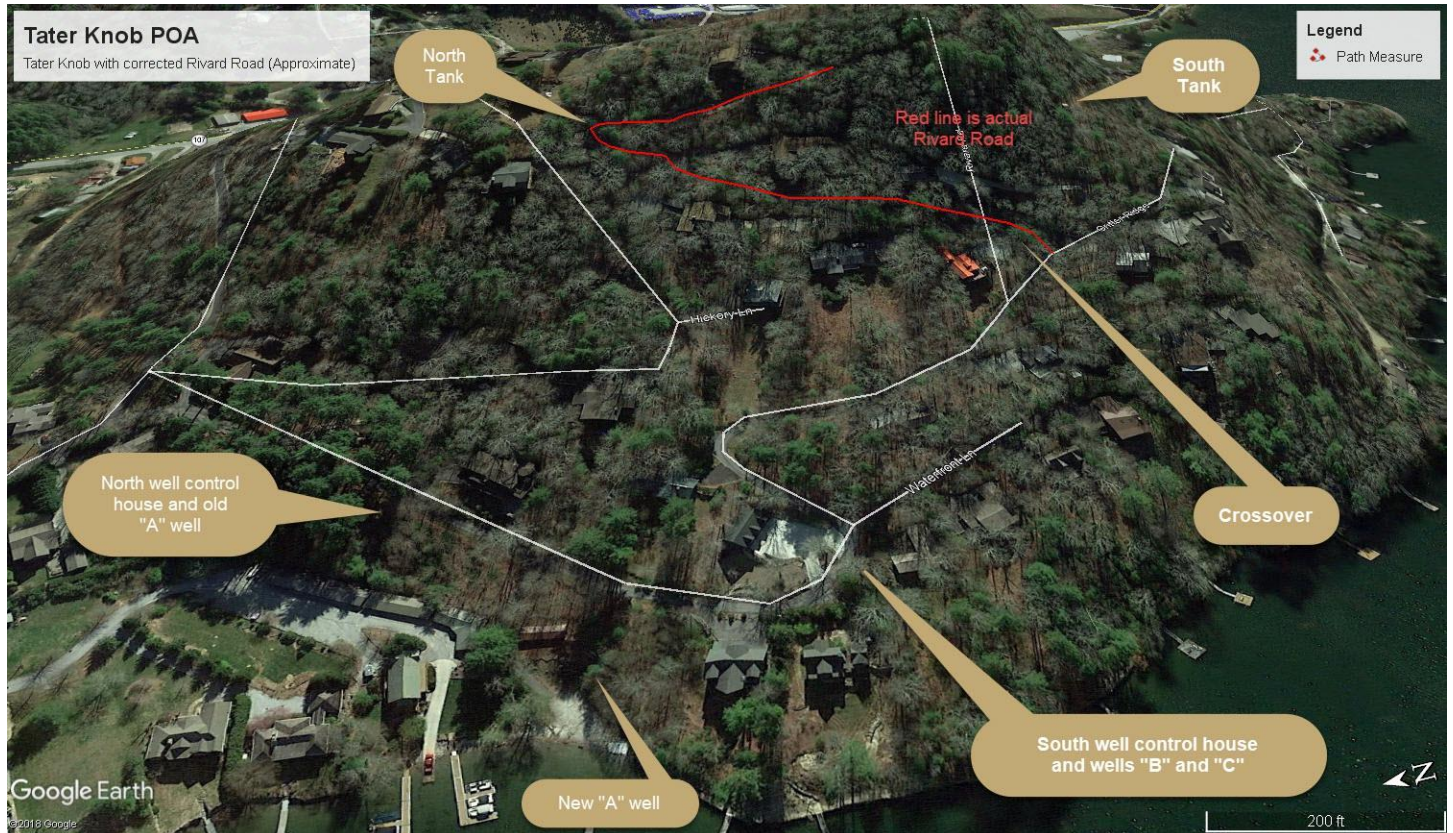
In most cases, the distribution of the water is done with gravity/water pressure from the storage tank to the “Down Stream” residents on each side of the system.

In addition to the two systems (North and South side) there is **an Emergency Crossover** that allows each tank to fill the other (via gravity to slowly fill the North or South tank to the same water level) or using an assist pump to fill the North Tank from the South Tank). The crossover is used when the north side or south side systems cannot fill their storage tank. The reasons vary, but include when both wells on one side are inoperable, a break in the line from the pump/well-house to the storage tank, etc.

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Image: Location of the Well System Main Components

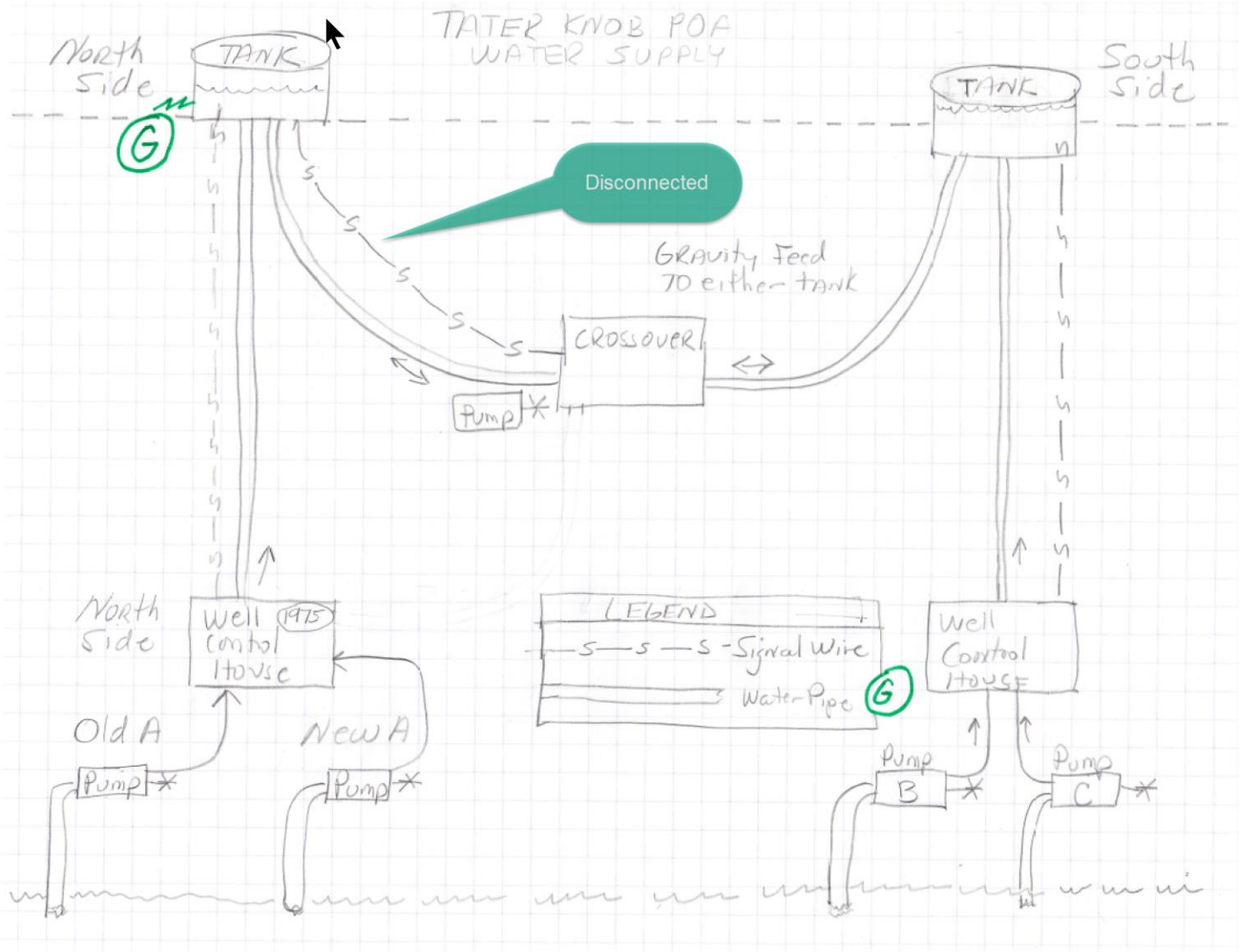


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Appendix System Overview Diagram

line

Note: The signal from the North Tank to the Crossover is now connected as of the Spring of 2018.



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