

# PUBLIC WATER SYSTEM

## Wireless Communication System

**R.E.A.** assisted a small public community water system in northeastern Vermont conserve water by installing a wireless communication system to automatically control pumping rates. The Town initially contacted **R.E.A.** about the possibility of siting and permitting a new supply well to meet demand. Using available information, **R.E.A.** was able to determine that the existing supply wells were sufficient to meet the Town's current water requirements and that a more efficient pump control system was needed. Water for the Town is provided by three bedrock supply wells that are located over 3,400 feet from the reservoir. The wireless communication system was installed to control the pumping sequence and allow a steady reliable flow of water from the supply wells to the reservoir.

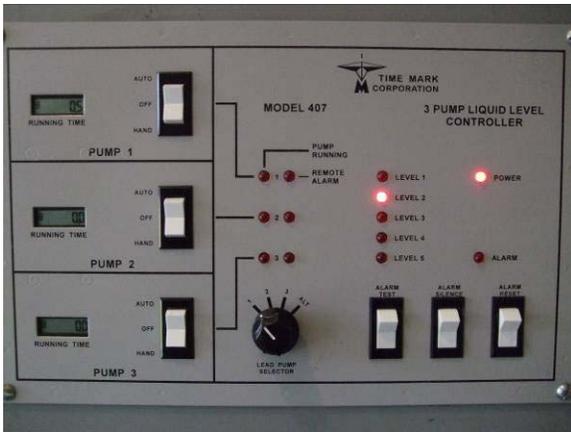


Figure 1. *Wireless Control Panel*

### Direct Cost Savings

Installation of the wireless communication system led to direct cost savings for the Town, providing a short payback time for the initial investment. The previous manual system was prone to over pumping, which led to wasting a large quantity of water, created periodic stress on the supply wells and increased electrical use. The wireless

system eliminated all of these issues. The wireless system also reduced the amount of time Town personnel needed to spend on daily operation of the water system allowing them more time for other projects.



Figure 2. *Site Plan*

### Key Findings

- Water pumping efficiency increased by evenly distributing the pumping-load to all three supply wells.
- Electrical demand was reduced providing the town a significant cost savings.
- Routine operation & maintenance was simplified by switching to a totally automated system.
- More efficient pumping reduced the stress on the supply wells and equipment.
- Town employees had more time to work on other projects.



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