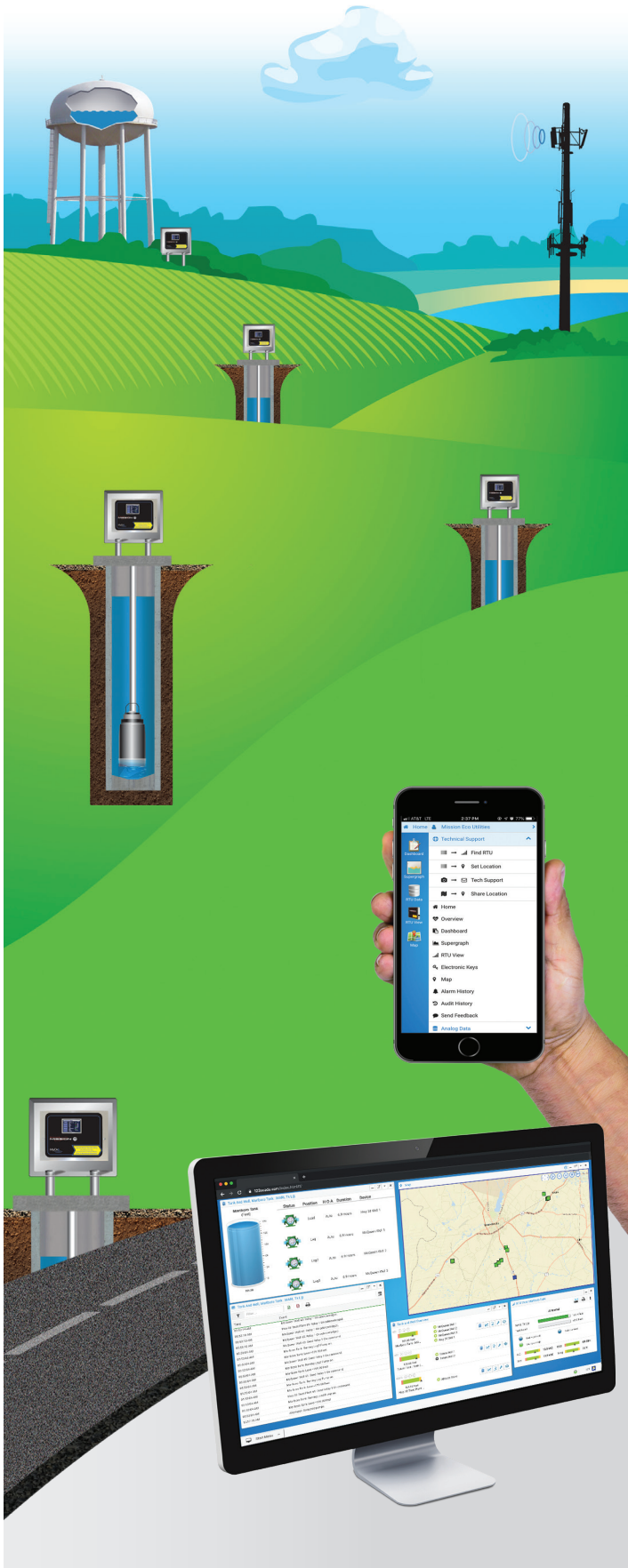
MISSION COMMUNICATIONS

Tank and Well Package

Automated Remote Control for Water Systems

The Mission Tank and Well System maintains the water level in a storage tank by automatically sending commands that signal remote well or booster pumps to turn on and off. The system relies on standard Mission 800 series RTUs and a transducer to measure the tank level. There are no radio networks, computers or PLCs to maintain. It is low cost and easy to set up.



How It Works

The RTU at the water tank continuously transmits level information to a nearby cellular tower. This RTU may be connected to other equipment such as chlorine monitors or other alarm inputs and can be solar powered. Status data packets are transmitted through a secure private network connection to Mission servers. When the tank level is outside the user configurable level boundaries, a command is automatically sent to output relays on the same RTU or remote RTUs to energize pumps or valves and refill the tank. The Tank and Well software is offered in two packages. The first supports up to three pumps, and the second supports up to five pumps.

Real-time notifications and reports inform operators of high pump starts, excessive pump runtimes, AC failure, low battery and more. The web portal allows an operator with appropriate security credentials to adjust the pump on/off trigger levels and view current level readings. Trending graphs and reports are accessible on desktops and through the 123SCADA app on devices such as smart phones and tablets.

Optimization and Money Saving Features

The software includes a virtual pump alternator feature which cycles through each well pump connected to a Tank and Well system. It can be set up to evenly distribute pump runtimes across all wells or alternate the lead pump to favor the well that has had the least water production in the last one to seven days.

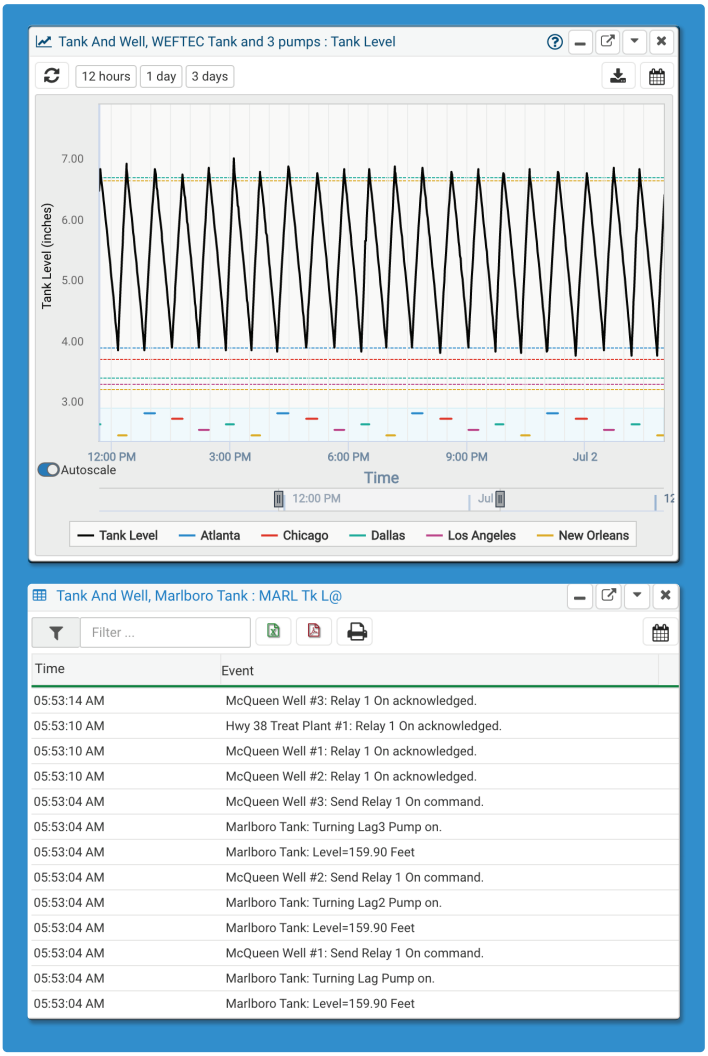
Maximum runtimes can be set for each pump, and the system will alternate to the next pump once the maximum runtime is reached. This reduces the risk of damaging the water table by over pumping.

An off-peak force fill feature is available to save you money by filling your tank when electricity rates are lower than peak hour rates.

Behind the scenes business logic is available to notify you of abnormal situations that can affect system performance. For example, a “call-to-run fail-to-run” alarm notification can be dispatched by the system if the well pump does not run when instructed. This could happen if the well is without AC power, an operator has locked the pump out locally (typically via the HOA switch) or the pump requires service (motor burnt out). More information is available in our document “Best Practices for Remote Control,” which can be found via the web portal.

Details

Tank and Well Package



On the 123SCADA web portal the customer can:

- View current and historic tank level
- View real-time well call and run status

With administrator credentials the operator can:

- Set well control points
- Enable and disable alternation
- Manually run or lock out individual wells via virtual HOA switch
- Set high and low alarm points

What You Will Need:

At the tank

- One MyDro 850 RTU (PN M851, M852, M852L, M853)
- One 800 Series Service Package for real-time alarms and streaming data (PN SP850-12/24/36)
- One Tank and Well Control Package (PN SW587)
- One 4-20 mA or 0-5 V analog level sensor, various PSI ranges (PN IT47X)
- One level sensor surge suppressor (PN IT482)
- One antenna extension kit, various lengths, optional (PN RF41X)

At each well

- One MyDro 850 RTU (PN M851, M852, M852L, M853)
- One 800 Series Service Package for real-time alarms and streaming data (PN SP850-12/24/36)
- Interposing relays (PN PW479 or PW480)
- One antenna extension kit, various lengths, optional (PN RF41X)

Refer to the MyDro data sheet, the accessories catalog, and Best Practices for Remote Control for more information.

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