MISSION
COMMUNICATIONS

Automated Remote Control for Water Systems

The Mission Tank and Well System maintains the water level in a storage tank by automatically commanding remote well or booster pumps to turn on and off. The system relies on standard Mission remote terminal units (RTUs) and a transducer to monitor the tank level. There are no private radio networks, computers or programmable logic controllers (PLCs) to maintain. It is low cost and easy to set up.

How It Works

The MyDro RTU at the water tank continuously monitors level or pressure. That signal gets transmitted through secure cellular networks to our servers. The RTU may be connected to other equipment such as chlorine monitors or digital alarms. Depending on the RTU chosen, it can be line powered (MyDro 850) or battery powered (MyDro 50).

When the tank level is outside the user configured level thresholds, a command is automatically sent to energize pumps or valves and refill the tank. The Tank and Well software supports up to five outputs (pumps, valves, etc.).

Real-time notifications and reports inform operators of high pump starts, excessive pump runtimes, AC failure, low battery, and more. The 123SCADA web portal securely allows an operator with appropriate access permission to adjust the pump on/off trigger levels and other settings. Current level readings are available via trending graphs and reports on desktop computers and through the 123SCADA app on smart phones and tablets.

Optimization 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.

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.

Behind-the-scenes business logic is available to notify 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 commanded. This could happen if the well is without AC power, an operator has locked the pump out locally (typically with the hand-off-auto (HOA) switch), or the pump requires service (motor inoperable). More information is available in our document Best Practices for Remote Control, which can be found on the 123SCADA web portal in the Start Menu > Help > Documents view.
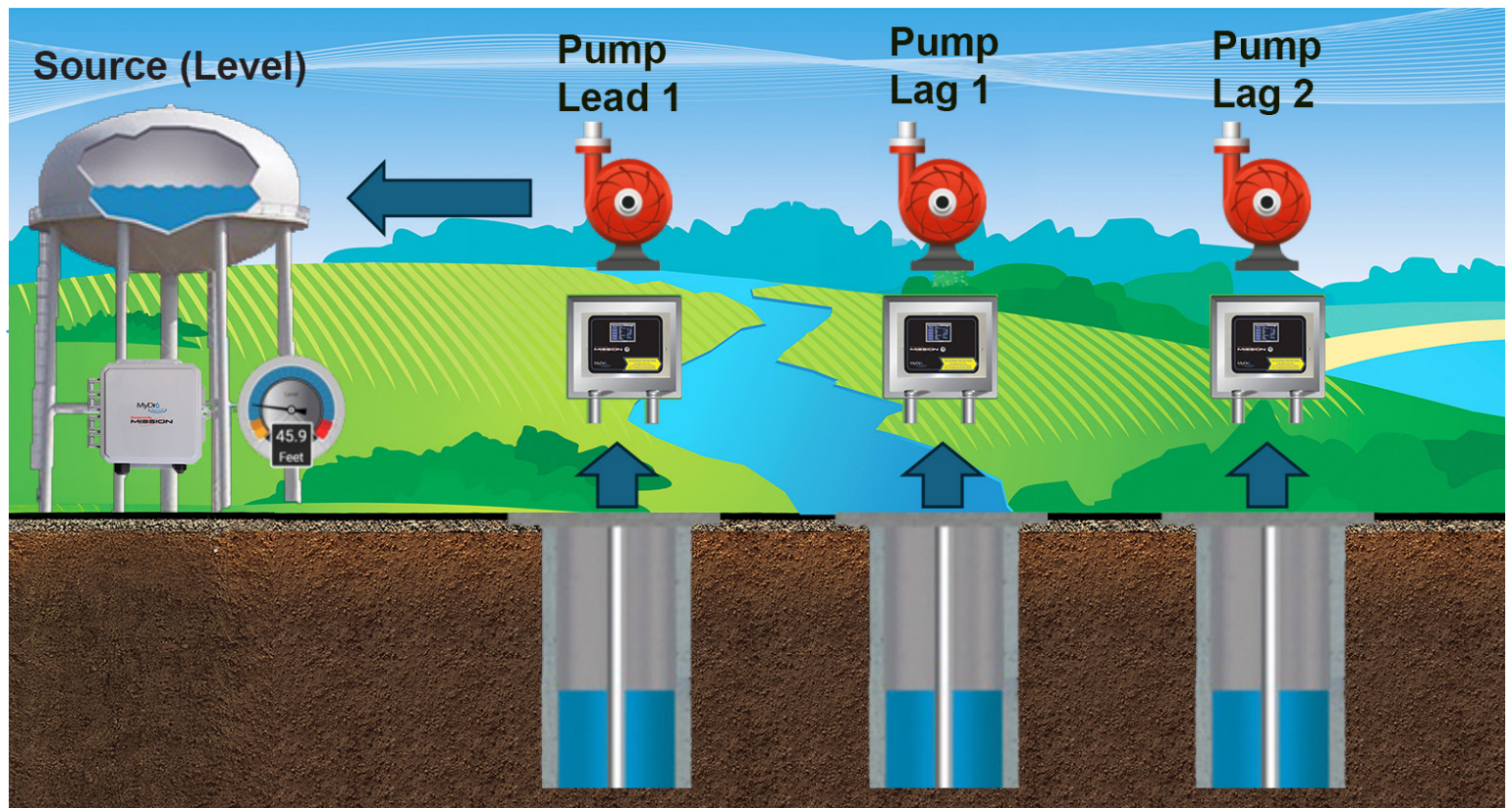
What is needed at the tank:

- MyDro 850 RTU (PN M853/M852/M851) or MyDro 50 RTU (PN M54/M52)
- Service Package for real-time alarms and streaming data (PN SP850-XX or SP50-XX)
- Tank and Well Control Service Package (PN SP587-XX, one per Tank and Well system)
- 4–20 mA or 0–5 V analog level sensor, various PSI ranges (PN IT47X)
- Level sensor surge suppressor (PN IT482)
- Antenna extension kit, various lengths, optional (PN RF41X, not available for M54)
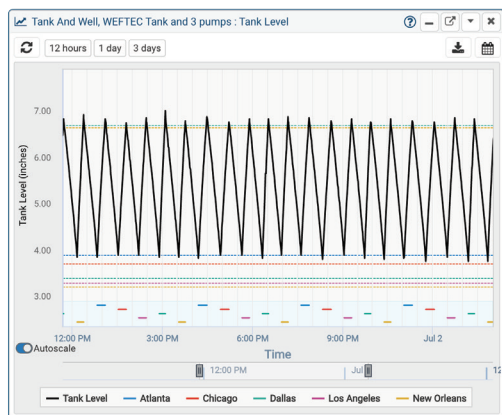
What is needed at each well:

- MyDro 850 RTU (PN M853/M852/M851) or *MyDro 50 RTU (PN M54/M52) depending on pump count at the well
- Service Package for real-time alarms and streaming data (PN SP850-XX or SP50-XX)
- Interposing relays (PN PW479, PW480, or PW478)
- Antenna extension kit, various lengths, optional (PN RF41X, not available for M54)

*MyDro 50 RTUs provide 1 runtime input and 1 status input. If additional runtimes are needed at the well, use the MyDro 850 RTU.

Example of a Three-Well Tank and Well System:

Source (Level)

Pump Lead 1

Pump Lag 1

Pump Lag 2

45.9 Feet

Manage Clean Water System with 123SCADA

On the 123SCADA web portal the customer can view:

- Current and historic tank levels
- 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

Refer to the MyDro 150/850 and MyDro 50 data sheets, the accessories catalog, and the Best Practices for Remote Control document for more information.

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SCADA Made Simple
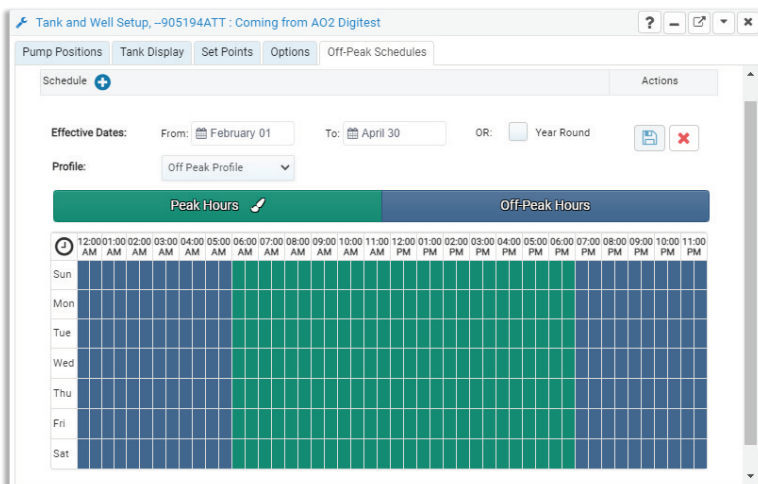
Save Money With Off-Peak Schedules

Off-Peak Schedules allow users to control the filling of their tanks to a different level during off-peak hours to take advantage of lower utility costs. By keeping the levels high during the off-peak period the tank will be nearly full at the start of the peak period where energy costs are higher. Depending on the size of the tank and demand for water the pumps may not need to run at all during the peak period. Configure off-peak schedules from the 123SCADA web portal using the following navigation path: Start Menu > Applications > Tank and Well > Wrench > Off-Peak Schedules

Proactive Alarms • Comprehensive Data • Accessible From Anywhere

	MyDro 150	MyDro 850
Standard Mission offering • Cellular connection, LTE, multi-carrier • Backup battery for operation after A/C loss • Technical support, 24/7 • Warranty, 2 years • Cloud-based SCADA web portal	✓	✓
Tank and Well (Destination)	✓	✓
Tank and Well Source	✓	✓
Connect to analog measurements and tracking as Tank and Well tank monitor	Up to 3 analog inputs 2 minute updates	Up to 9 analog inputs 2 minute or 5% updates
Receive digital inputs to track data such as pump starts and stops	Up to 3 digital inputs, 1 runtime and 1 status	Up to 16 digital inputs Up to 8 runtimes
DO/Relays to control pumps or other devices for Tank and Well well control	1 digital output	Up to 9 digital outputs
Pump state change tracking	✓	✓
Positive relay feedback logic to notify when equipment is not operating as expected	✓	✓
A/C Power		Supervised 120 VAC to 12 VAC, 1.2 A
Battery Life	1–2 years when used as tank monitor (2m reporting)	12 V, 5 Ah battery with enhanced charging system offers 18 hours backup power
Used in single–pump well stations	✓ Ideal for single–pump control Can monitor accessory pump such as chlorine dosing	✓
Used in multi–pump stations (boosters, etc.)		✓ Ideal for multiple pump stations
Interactive LCD touch display		✓

WARRANTY 2 YEARS WARRANTY

24/7 TECHNICAL SUPPORT

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2FA

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