

TCU800

There are so many extraordinary features offered by Data Flow Systems' fourth generation pump controller, the TCU800, that we can't fit all its elements and innovations in a single article. So, for the next few issues of Pipe Lines, we'll highlight some of its functions and capabilities. Simply stated, it is the most advanced, integrated pump control system available today.

While its predecessors, the PCU and TCU, ran on microprocessors, the TCU800 operates on a full, Linux Operating System, providing a wide range of powerful capabilities. It's SCADA-ready with open Modbus RTU and ASCII protocols and is available with our factory integrated TACII radio, network interface or Verizon cellular modem. The TCU800 provides an expandable I/O interface and full PLC capabilities which can enable a multitude of functional possibilities.

We've made the TCU800 easy to understand, install and use. Its bright, five-inch touchscreen interface presents the operation menu, set-point adjustment, fault resets, and status indication with the touch of a finger.

The TCU800 carries our famous, three year, parts and labor warranty that includes damage from lightning. And, if it's acquired as part of our SCADA As A Service

If It Ain't Broke -- Fix it?

The most insidious kind of technical failure is the one that occurs slowly over a long period, so that the operator doesn't notice the erosion of efficiency until total breakdown finally occurs. As the years pass, the importance of rigorous, preventative maintenance becomes more and more crucial.

Over time, the polling loop for the City of DeLand's SCADA system, which polls 132 wastewater and 20 fresh water RTUs, had slowed to an unacceptable level. With a goal of reducing the polling loop—the time it takes to poll the complete system—we replaced their RTU radio modules and installed DFP, our highly efficient, blazing-fast communications protocol. But when the results weren't satisfactory, our attention shifted to the individual RTU sites.

Our Quality Assurance Manager and communications guru, James MacArthur, teamed up with Tim Hunt, Electrical Supervisor for DeLand's water and wastewater operations. When James pointed out evidence of deteriorating conditions, conditions that are often the hidden operational culprits in 25-year-old systems, Tim understood immediately. James also noted that many of the individual modules in the system had two decade-old factory-installed firmware. The firmware had never been updated, mainly because these parts had never failed and had never been returned for repair and updating.

Tim is a longtime journeyman electrician who never tires of learning. By combining his accumulated knowledge and experience with the directions offered by James, Tim developed a series of systematic procedures to stop long-term deterioration before it occurs. A maintenance team goes through a rotation of the RTUs, checking off each item in Tim's checklist. When they finish the last RTU, they start over. And he never replaces components unless he's eliminated all other possible maintenance-related issues.

"You have to do everything," he said, "clear antenna path obstructions and check the antenna's efficiency, check the power and grounding, clean the polyphaser and all the connections, check the door gaskets, everything."

Tim wanted more. So we also supplied him with our firmware update software. Now, whenever he visits a site, he checks and updates the firmware version on each module and RTU component as part of his regular procedure.

The polling loop issue that started DeLand on their

program (SAAS), it carries a lifetime warranty.

Watch this space for more information about this amazing product.

Hurricane Season

We can see the goal line, but we're not there yet. Hurricane season officially ends on November 30. Call for an RA to get those repairs done now!

mission is now a thing of the past. The water RTUs are polled in just over two minutes and the lift stations are polled in under four and a half minutes. Analog measurements at all 152 sites are updated every 30 seconds. Tim Hunt's maintenance program has allowed the new radio modules and the DFP protocol to accomplish the goal of cutting the loop time. DFS on-site service visits and return-to-factory repairs will continue to diminish as his systematic procedures take effect.

We've all heard, "If it ain't broke, don't fix it." While that old adage may have some significance, we're seeing that dutiful attention to those conditions that cause the "broke" condition can eliminate the need for many future repairs.



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Ask about DFS's Lifetime Warranty on Products and Systems.