



NEWS & notes



This month's second annual WaterSmart Symposium, hosted by The Toro Co., will welcome superintendents, landscape contractors, architects and other professionals to the company's irrigation development and testing facility in Riverside, Calif. The July 19 event, which is designed to educate the industry about the importance of proper water management, will feature presentations from experts in the field who have implemented successful water-saving techniques and programs. For more information on this event, contact Toro at 951-785-3444 or e-mail Christeen Miller at christeen.miller@toro.com.

Scientists recently

gathered at an international workshop on preferential flow and transport processes in soil to present research on non-uniform movement of water and solutions in soil. The meeting, organized by the Institute of Terrestrial Ecology and held in Ascona, Switzerland, offered research findings that prompted workshop participants to agree that preferential flow and transport processes are more the norm than the exception. A paper reviewing the conference and the research conclusions is set to publish in the February 2008 issue of the *Euro-pean Journal of Soil Science*.



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First aid for your pump station

Pump station downtime can be costly in terms of stressed and damaged turf, not to mention your own stressed and damaged nerves. But a service provider's time can also be expensive once he arrives to troubleshoot and repair the pump station. By following some practical steps, superintendents can attain some basic information on what ails a pump station to pass along to a service provider once he arrives to fix it. This can minimize the service provider's work time and, ultimately, get your pump station back in the game.

Before assessing your pump station, please note that the steps provided are to be performed by a person familiar with electrical instrumentation, the pump station main disconnect switch and main line power circuit breaker operation. Further, troubleshooting must only be conducted on a de-energized pump station. If you are unsure of how to shut off your pump station and the pump house electrical power, stop and call a qualified service provider. Only persons qualified in electrical systems are to troubleshoot an energized pump station.

To get started, document the specific problem (pump number one does not run, for example), and then stop all irrigation. Once irrigation is stopped — as indicated by zero or very low system flow — verify all pumps have stopped running. Next, turn off or disable all pumps and then shut the pump station discharge isolation valve.

Once that valve is shut, document any pump station alarms. Then, shut off electrical power to the pump station by positioning its main power switch to the "off" or "open" position. Also, remove the main line power to the pump house by positioning the main line power circuit breaker or disconnect to the "off" or "open" position. Lock the main line disconnect in those positions by using a lock designed for this purpose, such as a Masterlock 410 series lock.

After shutting off power to the pump station, wait 20 minutes to allow the variable frequency drive (VFD) to de-energize and then open the pump station electrical panel and check it "dead." If you are unsure of how to check the electrical panel dead, stop and call a qualified service provider. With the electrical cabinet checked dead, perform an overall visual inspection and document any observed anomalies.

Check for tripped circuit breakers and document them. If you have an older pump station



that utilizes fuses, perform a continuity check on each fuse, documenting the fuses that are blown.

Verify that all electrical connections are tight and document any loose electrical connections. Once these checks are complete, shut the electrical cabinet door, leaving the pump station main power switch in the "off" or "open" position.

Verifying that power to the pump station is still shut off, perform a basic mechanical inspection. Check that the pumps rotate by hand in the counter-clockwise direction and document if the pumps are hard to turn or do not turn at all. Verify that individual pump isolation valves are in the open position, documenting any out-of-position valves. Also, be sure to check for and document any observed leaks.

With the above items correctly documented, you'll be able to better communicate the pump station's problems to the service provider. This will reduce his time on-site and will return your pump station to full service as quickly as possible.

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