Irrigation siphon

Combined with a through-the-bank siphon structure, the MACE AgriFlo XCi provides an economical solution for metering water supplied to irrigation farmers.

A MACE Doppler ultrasonic insert velocity sensor is mounted through the wall of the siphon pipe and the cable is routed through conduit to the pole-mounted AgriFlo XCi electronics module. With all cables routed either underground and/or through the mounting pole this provides an extremely tamper and vermin resistant design. A solar panel is used to charge the internal battery, thus making the AgriFlo a truly remote electronic flow meter.

By utilizing the full pipe siphon structure, the accuracy of the meter is increased when compared to open channel (or non-full pipe) configurations. Field accuracies better than 2% are easily obtainable. This degree of accuracy leads to far better management of the overall water resource.

Because the MACE insertion velocity sensor provides very little obstruction to the flow and has no moving parts to foul or clog with trash-laden flows, the whole system is virtually maintenance free.

In the example shown here, an AgriFlo XCi is being used to measure & display the flow rate and cumulative total of the turnout. With a MACE WebComm card installed, these readings are available 24/7 on the MACE website, as well as having the ability to be alarmed via SMS/email to any mobile phone.