



Application Case Study

Open Channel Flow

The Application

City-run municipalities take in wastewater and process it to remove the toxins and neutralize them so that they can be disposed of properly. The processed water is then reintroduced into a local body of water. The wastewater flows through the plant at a controlled rate to allow proper time for settling and processing. In this application, wastewater runs through open channels that are designed using weirs or partial flumes to be able to provide accurate flow rates by using the level of the liquid. Flow rates are controlled by large screw pumps to keep the incoming volume from affecting the time required for the process to flow through the plant properly.



The Solution

A wastewater municipality was having difficulty with steam/condensate in the winter affecting their ability to monitor how many gallons were flowing through the outdoor open channels during processing. Steam forms when the warm wastewater meets the cold winter air.

The customer wanted to update from its plumb-bob type of indicator to a non-contact device. The local sales representative used echOsonix transmitters to monitor the level in the channels and fed the outputs to the MEDACS Series II from Status Instruments to configure the flow rates. Flow rates that were not reliable and had to regularly be manually checked are now dependable and consistently accurate.



The Results

The customer put in 10 echOsonix loop powered transmitters to monitor the flow through its open channels and has been pleased with the consistent readings even during cold weather conditions. The customer has been so pleased that they have also installed the echOsonix in three additional level applications throughout the facility.

Ordering Information

Electronics Model **U11-CL9H-00-15**
Integral 24VDC Loop-powered transmitter
Explosion-proof style electronics housing

Sensor Model **BHP-3A-00-00000**
15kHz Transducer for loop-powered unit
3" NPT threaded connection