

FlowShark Pulse Provides Accurate Influent Data Reporting

Oahu, Hawaii

Cross Correlation Flow Monitoring

Oahu, HI - The Hawaiian Islands' topography lends itself to multiple small treatment plants. The island of Oahu contains more than 80% of the entire island chain's population. The Sandy Beach treatment plant on the eastern end of Oahu has been in operation since 1965 and currently operates at an average daily flow of about 4 mgd. The plant's influent flows are highly irregular with a large reliance on pump stations. Hourly dry weather fluctuations in flow rate range from 0.2 mgd to 10 mgd, with associated velocity ranging from <0.1 to 3.5 ft/s.

The influent monitoring location is just downstream of a transition from a rectangular channel into a 36-inch diameter concrete pipe. For several years, the plant superintendent has endured unreliable and irregular readings from several other flow monitors placed at this location, particularly during the low flow cycles throughout the day. This caused the need for an excessive amount of explanatory reporting to the Hawaii State Department of Health.



Primary accomplishments:

- Successful installation and low maintenance
- Flow accuracy in low and fluctuating flows
- Flow accuracy from influent tracks with effluent flows
- Continuous analog signal to SCADA system

Services Provided by ADS

- Long term flow monitoring
- Monitor installation
- Data collection integration with SCADA

Underground Intelligence® from ADS-

In March of 2007, the plant's operational superintendent, Bud Reiter, conducted a head-to-head test of the FlowShark® Pulse Cross Correlation monitor to a new model of meter/sensor using gated Doppler technology. The FlowShark Pulse exceeded all expectations for accurate flow data even during low flows.

For many years the plant's superintendent, Bud Reiter, utilized numerous technologies of flow monitors to try to track the influent flow to their plant with little success. The biggest challenge resulted from the highly variable flows resulting from a heavy reliance on pump stations (velocities frequently range from less than 0.1 ft/s to more than 4 ft/s during rain events). The superintendent has a very limited staff with very broad-based skills. He needed a flow meter that would require very little operator attention,

was reliable enough to tie-in to his SCADA system and be used to trigger his wastewater sampler on accurate flow-weighted intervals (to meet his regulatory obligations).

"After our 30 day test, the FlowShark Pulse Cross Correlation monitor won hands down. This monitor provided amazingly stable flow data even during the really low flow periods. This is going to make my life a lot easier when it comes to future reporting. For the first time ever, our influent flow meter tracks our effluent flow meter so dramatically well, at first we couldn't believe our eyes."

Roberto Cuevas
Plant Operational Superintendent
Sandy Beach Treatment Plant



Cross correlation depth/velocity meter interface shown here after mounting and hookup of sensor and SCADA wiring.

About **ADS**

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