WASTEWATER TREATMENT
Columbia Boulevard WWTP Secondary Bypass Channel

Site Characteristics: 5.5' wide x 5' high channel runs partially full to surcharged and is located less than 10 feet downstream of a 45° bend and isolation gate.

Configuration: 6-path crossed-plane channel (runs partially full to surcharged) (3 acoustic paths in each plane) to correct for cross-flow caused by upstream gate.

Transducers: Model 7656 Explosion Proof - FM and CSA certified for use in Class I Div. 1 Group C, D hazardous locations.

Installation Details: Downlooking acoustic transducer for water level measurement. Transducers were pre-mounted on sliding plates which are removable from above the channel for maintenance. Conduit and fittings were designed to comply with Class I Div. 1 Group C, D hazardous location requirements.

Operation Details: Good cross-flow correction, demonstrated during no-flow conditions when the channel was full but the upstream and downstream gates were closed. The Accusonic meter showed small positive and negative velocities on the crossing paths at each elevation, which indicated that the water was swirling around in the channel. The calculated flow remained steady in the range of 0 to about 1 mgd, due to the large cross-sectional area of water in the channel.

As an interesting note, a competitor's single-path meter installed in an adjacent channel showed fluctuations in readings from 0 to over 100 mgd under the same no-flow conditions because of the lack of ability to correct for cross-flow.

25 Bernard St. Jean Drive • E. Falmouth, MA 02536 • Phone: 508-495-6600 • Fax: 508-495-6699 • Email: sales@accusonic.com