

USER REQUIREMENTS FOR PROCESSING SEWER FLOW SURVEY DATA

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The velocity and depth monitors need to measure velocity in the range -1.0 to +6m/s, and depth upto 3m. The rainfall is most adequately measured using a tipping bucket raingauge, each tip < 0.25mm.

The principal philosophy is that the measured values, ie velocity and/or depth, are recorded and stored and that the data processing is undertaken off site.

For short term sewer flow surveys there are three phases to data processing - INITIAL, INTERMEDIATE, and FINAL, required to transform the raw measured values into flow, depth of flow and rainfall, in a format suitable for WASSP-SIM model verification.

1. INITIAL

This phase of the processing involves setting up the records of site information and collating the weekly or intermittent check measurements of velocity and/or depth of flow. The raw data is inputted into a store ready for the next processing phase. Suitable storm events are identified and velocity and/or depth responses at each monitor examined.

2. INTERMEDIATE

The calculation of flow incorporating all the measured values and applying the necessary calibrations. This includes the graphical/numerical output of data for quality control procedures.

3. FINAL

The outputting of all the data for the selected storm events and examples of the diurnal pattern and flow range for at least 2 dry days.

diameter pipes is preferred. The measurement of velocity/depth in small diameter pipes will enable infiltration in nominally foul sewers to be identified and quantified.

- b) Pipes 300 to 750mm diameter. It is envisaged that the equipment will be similar to the present equipment but, that techniques measuring average velocity rather than 'point' velocity will be pursued.
- c) Pipes greater than 750mm diameter. Again velocity averaging techniques are being pursued such as ultrasonic range gated doppler, electromagnetic and acoustic time of flight.

The timetable for the work is as follows

- a) Range gated doppler prototype for b) and c) -- Jan 1986
product for b) and c) Aug 1986
(depends on BASEEFA approval).
- b) Constriction device for a) June 1986.
- c) Electromagnetic June 1986.

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