



Memorandum

TO: Blue Plains Technical Committee and Other PI Users

FROM: Leonard Benson, Director, Department of Engineering and Technical Services

SUBJECT: Plan for Verification of Jurisdictional Wastewater Billing Meters

DATE: July 24, 2003

Purpose

The purpose of this memorandum is to provide details on DC WASA's 15-month plan for verification of jurisdictional wastewater billing meters sending flows to Blue Plains AWTP. In addition, this memorandum serves as a request for information from the user jurisdictions regarding the operations and maintenance practices for the accurate reporting of flows from their billing meters. A schedule for the 15-month plan is included with this memorandum as Figure 1.

Background

A basic tenet of the Intermunicipal Agreement (IMA) is that operating costs of joint use facilities are allocated in proportion to flows. Accordingly, the IMA requires each user to meter the flows from each sewer that is expected to discharge 60,000 gallons per day (GPD) or more into another user's sewer. For sewers that are anticipated to discharge less than 60,000 GPD into the sewer of another user, the IMA provides for an estimated annual discharge of 125,000 gallons per wastewater unit connected to the sewer. A wastewater unit is equivalent to a single-family house.

The collection of flow data and derivation of BP AWTP flows for apportioning the costs of conveyance and treatment is a process that involves many parties. Flows are recorded by over 60 meters, owned and maintained by each jurisdiction served by Blue Plains as well as at Blue Plains. These meters measure the flows from tributary areas as they are discharged into WASA's interceptors. Each jurisdiction reports the flow values recorded by their respective meters to WASA on a monthly basis.

WASA does not generally measure District of Columbia flows as they enter the interceptor system. Rather, flows are measured at Blue Plains by a series of flow meters. The flow contribution to Blue Plains by each of the user jurisdictions is obtained by summing the flow readings of the jurisdiction's meters for the month. The flow contribution to Blue Plains by the District of Columbia is obtained by deducting all of the other user jurisdictions' flows from the total plant influent flow recorded at Blue Plains.

User Jurisdiction Meters

The measurement of user jurisdiction flows to Blue Plains is accomplished by 54 meters located at the point where the jurisdiction's flow discharges into a WASA-owned interceptor sewer. The meters are typically owned and maintained by each jurisdiction where the meter is located. It is noted that WASA's Department of Engineering and Technical Services performs the monthly reading of the following five WSSC-owned, but WASA-maintained meters that measure flow from WSSC sewers: 1) Watts Branch – PG, 2) Oxon Run, 3) Barnaby Branch, 4) Owens Road, and 5) Indian Head Highway.

Billing meters discharge flows inside and outside of the District boundaries. A majority of the metered discharges are to the PI. For flows to the PI, the Washington Suburban Sanitary Commission has 13 metered discharges, Loudoun County Sanitary Authority has 22 metered discharges, Fairfax County has 9 metered discharges and Vienna has two metered discharges. Flows from the US Navy facility and Dulles Airport are also metered prior to discharge to the PI.

There are three metered flows from the District of Columbia (Valley Drive, Belt Road, and Suitland Parkway) as well as some unmetered District flows that are deducted from the WSSC's total flow because these flows are routed to WSSC sewers prior to metering the WSSC flow into WASA's interceptor.

Each jurisdiction provides a tabulation of daily flow readings from each of its respective meters to WASA's Department of Engineering and Technical Services on a monthly basis. These data are typically provided by the 25th day of the following month.

Meter Management Goals and Schedule

Based on the comprehensive metering study and management plan completed by Severn Trent in April 2001 under contract to MWCOG, WASA has been working with members of the Blue Plains Technical Committee (BPTC) to develop an approach for wastewater flow meter verification and standardized calibration by individual jurisdictions. WASA's meter management goals that are planned for implementation are summarized below and presented in the attached schedule (Figure 1).

- 1) WASA has developed a standardized electronic flow meter reporting spreadsheet to be completed and submitted electronically by the user jurisdictions to WASA. This spreadsheet will be implemented in October 2003, and is expected to ease the reporting process by the user jurisdictions.
- 2) By November 1, 2003, WASA requests that each user jurisdiction provide the following information regarding the maintenance and calibration of their meters:
 - Available written standards indicating protocols, procedures, and frequency for billing meter maintenance requirements and verification of accuracy.
 - Records for the previous 24-month period indicating dates that billing meters were visited for maintenance and/or calibration.
 - Detailed reports or information on the accuracy of the billing meters as determined by the user jurisdictions to include, but not limited to the following: meter name, type of

meter, manufacturer of meter, sensor(s) in use, accuracy range of sensor(s), and verification of recorded meter readings.

- 3) During the time period from October 2003 to April 2004, WASA will review the information provided by the jurisdictions, and coordinate with the jurisdictions to perform verification of billing meters as needed. Intensive flow metering performed inside of the District for development of our citywide hydraulic model will also be conducted during this time period. Based on review of the information WASA will develop a recommendation for the BPTC and other PI users for future requirements by all user jurisdictions regarding the standardization, reporting, and frequency of meter maintenance and verification.
- 4) From April – July 2004, WASA will work with members of the BPTC and other PI users to implement an acceptable plan for standardization, reporting, and frequency of meter maintenance and verification.
- 5) In October 2004, WASA will require that the accepted standardization, reporting, and frequency of meter maintenance and verification be implemented by all user jurisdictions.

Figure 1. Timeline for Meter Management Goals

