CITY OF WILLITS

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December 15, 2014

Denise Rose
General Manager
Brooktrails Township CSD
24860 Birch Street
Willits, CA 95490

RE: Response to November 17, 2014 and December 3, 2014 Letters

Dear Denise:

Thank you for your letters of November 17 and December 3, 2014, concerning the City Council's discussion at its November 12, 2014, meeting of issues affecting the accuracy of the sewer plant influent meter. One of the issues addressed at that meeting was the staff's recent determination that an adverse slope condition in the piping immediately downstream from the influent meter has caused a back flow effect that surcharges the meter, causing it to misread higher volumes of flow than actually exist, particularly in high flow events. We believe that this condition has likely existed since the time of installation in 2009.

The District was given advanced notice of this issue and was encouraged to share with the City any comments or recommendations to the City to address this apparent construction defect. Thank you for doing so. The recommendations made in your letter of December 3, 2014, to install a new Flo-Dar meter upstream from the existing meter will be carefully considered. We are of the opinion, however, that there is nothing wrong with the existing open-channel meter that would warrant its replacement, and that instead the problem that requires correction is a construction defect in the piping and manhole some 30 feet down steam from this meter. Until this plumbing defect is corrected it will continue to cause a backflow effect and the accumulation of debris that will require on-going maintenance. With respect to your suggestion to install a Flo-Dar meter to measure incoming flows, we request that you provide a written recommendation with a cost estimate, both prepared and signed by a Registered Civil Engineer licensed by the State of California to support this alternative.

1. Metering Locations

Based on your letters, we feel it necessary to clarify a few items related to our NPDES Permit and the monitoring requirements. It is important to understand that, in accordance with our NPDES Permit, we report total flows "measured continuously at EFF-002, calculated daily and averaged over a calendar month." (ref. pg. 5 NPDES PERMIT NO. CA0023060). Our permit does *not* require that total flows be metered at EFF-001, and your reliance on ***Table E-2 in***

ATTACHMENT E – MONITORING AND REPORTING PROGRAM is misplaced. Table E-2, entitled "Monitoring Station Locations", provides a description of required monitoring *locations* but does not specify the monitoring *requirements* for each location. The monitoring requirements are defined later in that section and the only monitoring requirements at INF-001 are for concentrations of Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS).

Table E-2 provides that INF-001 is located "…at the headworks of the wastewater treatment facility (WWTF) prior to treatment and consists of the wastewater from both the collection system and septage receiving station." It is important to understand that this monitoring station, INF-001, is located upstairs at the headworks building where flows are monitored after passage through the wet well. This is the only place to safely sample the raw wastewater for BOD and TSS constituent concentrations and satisfies the parameters established in Table E-2. Both the BOD and TSS tests are for concentration (mg/L) and are not dependent on total flow or total volume measurements. These tests are taken to satisfy the permit requirement of removing 85% for discharge at EFF-002. Also, defined in ***ATTACHMENT E*** are the monitoring requirements for the other locations, and ***flow measurement is listed as a requirement at EFF-002, EFF-003 and EFF-004.***

You also reference page F-23 of the prohibitions section of *ATTACHMENT F – FACT SHEET* where two prohibitions (III.J. and III.K.) list INF-001 as a point of measurement for waste flow limitations. This section is inconsistent with the rest of the permit so we contacted the Regional Water Quality Control Board (RWQCB) for clarification. We were advised that the references to INF-001 concerning prohibitions III.J and III.K are typographical errors in the permit and that the correct points of measurement for the maximum flows are in fact EFF-001 and EFF-002, where applicable. We are also advised that the RWQCB most likely would not see the need to re-open the permit to correct these typos and we would instead make the corrections in our new permit in 2015.

2. Correction of Construction Defect and Allocation of Operating Costs

The subject influent meter and associated piping was installed during Phase 1 of the wastewater plant treatment plant improvement project. The contractor responsible for this work has been notified of the condition and of the City's expectation that it be repaired as soon as possible and without cost to the City. The problems identified by MCC Control Systems (MCC) with the ultrasonic meter transducer location and the meter programming were corrected on September 26, 2014. Once the construction defect related to the manhole and piping upstream of the headworks has been corrected, we expect the influent meter measurements to be within an acceptable range of our magnetic meter measurements at EFF-002. To note, our preliminary findings are that the recent corrections at the influent meter have shown the backwater issue to be more significant than previously thought.

City staff recommends that the flow data from EFF-002 be used for allocation purposes with the District to be consistent with our NPDES Permit, and also because it provides the most accurate measurement of wastewater flows to and through the Willits Wastewater Treatment Facility. This recommendation is supported by the City's engineering consultant, GHD, and by the parties' mutually selected consultant for calibration services, MCC. As stated in his report included within the agenda summary, MCC's field manager, Raul Baca, recommends using the new mag meter for measuring total flows for billing allocation purposes, noting:

- It is new and factory calibrated. As such, it is as accurate as a flow meter can be in this application;
- It is an industry standard instrument;
- There are no known, or even suspected, issues with its installation or with its associated piping.

The influent and effluent meters *both* measure the total flows coming to the plant within the meaning of paragraph 16 of the contract. At this time, however, pending correction of the construction defect, the effluent meter is the only meter that has consistently provided the parties with reliable data for measuring total flows coming to and through the plant for billing allocation purposes. Use of this meter does *not* result in an understatement of total flow, but instead reveals that the District has a substantially higher percentage of the total flow than previously known. Our mutual objective is to fairly allocate operating costs on the basis of accurately measured flows. If the District believes that use of the effluent meter EFF-002 results in an understatement of total flows, then please provide the City with a supporting written and signed report from a Registered Civil Engineer, which will be carefully reviewed and considered.

Subject to any further information that the District may provide, discovery of the construction piping defect and the resulting backflow, surcharge effect that it has on the influent meter leads to several apparent conclusions, most notably:

- That the District has been undercharged for past operational costs;
- Claims of unaccounted for loss of water and seepage from the ponds has been exaggerated;
- The plant as improved has sufficient capacity; and
- This provides further reason why the District's claims that the City has infringed or trespassed on District capacity in the plant are without merit.

At this time, we anticipate recommending that the City Council authorize that the District be provided with a "true-up" report and debit underage statement for the Fiscal Year 2012-13 operational costs, based upon the actual flow data for that fiscal year as measured by the effluent meter. The effluent metering data should also be used for Fiscal Year 2013-14, as well as the current fiscal year for allocating costs. Using the effluent meter at EFF-002 is not only consistent with the NPDES Permit, but the flows at EFF-002 include all septage received and eliminate any errant readings caused by recirculating waste through the headworks. We have concluded through consultation with MCC, GHD, and the RWQCB that the actual difference between the influent and effluent flows is negligible; thus, it cannot be argued that measuring treated wastewater at EFF-002 results in an unfair representation of the total wastewater contributed by the City customers and the District customers.

Sincerely,

Adrienne Moore
City Manager

Rod Wilburn, PE
Public Works Director

cc: BTCSD Board of Directors
Willits City Council
H. James Lance, City Attorney