

## **The Metropolitan Water Reclamation District of Greater Chicago Instructions for Completing the User Charge Certified Sampling Analysis Reporting Statement (RD-920)**

### **General Instructions**

The Metropolitan Water Reclamation District of Greater Chicago (District) User Charge Ordinance describes procedures and conditions for accurately monitoring wastewater discharge volumes and determining representative concentrations of biochemical oxygen demand (BOD) and suspended solids (SS). This monitoring/sampling data, which is required for reporting purposes, must be reported on the **User Charge Certified Sampling Analysis Reporting Statement (RD-920)**.

Users must submit with this statement, specific and detailed laboratory analysis reports, sampling logs, logs of flowmeter totalizer readings, calibration certification, etc., signed by their consulting engineers and/or authorized laboratory supervisors.

### **Preparation**

#### **Line 1. Facility Name**

Enter the legal name of the reporting facility or the title used on Federal Internal Revenue Service tax accounts.

#### **Line 2. Address**

Enter the legal address of the facility covered by this report, including city, state and zip code.

#### **Line 3. User Account No.**

This number is the reporting facility's identifying account number used by the District.

#### **Line 4. Outlet Number**

Enter the number of the outlet, as designated by the District, to which the sampling data corresponds. In cases of multiple outlets, report each outlet on a separate sheet.

#### **Line 5. Primary Measuring Device**

Enter the size and type of primary measurement device (such as a weir or flume) present in the outlet for the purpose of discharge measurement.

#### **Line 6. Sampling Data**

##### **6a. Sample Date and Day of Week**

Enter the date and day of the week for each composite sample report.

##### **6b. Sample Times and Duration**

Enter the beginning time, ending time, and the duration, in hours, over which each composite listed in 6a was taken.

##### **6c. Metered Intake**

Enter the total volume of intake water for the facility in gallons, based on water meter readings, for each period listed in 6b. If the facility has unmetered intake water, leave blank; complete 6d.

##### **6d. Metered Discharge**

Enter the volume, in gallons, measured at the outlet for each period listed in 6b. If discharge is not measured at the outlet, leave blank.

##### **6e. Data Received**

Enter the date that each composite sample listed in 6a was received by the analytical laboratory.

##### **6f. Date Analyzed**

Enter the actual dates on which the analyses were begun and completed (beg/end) for 5-day BOD and SS for each composite sample listed in 6a.

##### **6g. BOD mg/L**

Enter the number of dilutions used for each BOD determination, and the analytical results for BOD expressed in milligrams per liter for each composite sample listed in 6a.

##### **6h. SS mg/L**

Enter the analytical results for SS expressed in milligrams per liter for each composite sample listed in 6a.

#### **Line 7. Averages**

Enter the average values for 6c and 6d, and the flow-weighted average values for 6g and 6h. In accordance with Section VI, Appendix C of the User Charge Ordinance, **arithmetic averaging of daily BOD and SS concentrations is not permissible for reporting purposes**; these averages must be computed by weighted average using the representative concentrations and the corresponding daily flows.

#### **Line 8. BOD Seed Source**

Enter the BOD seed source.

#### **Line 9. QA/QC Exceptions**

Describe exceptions to QA/QC protocols for sample analysis as described in **Standard Methods for the Examination of Water and Wastewater**.

#### **Line 10. Name of Analyst**

Name of person or persons performing analyses.

#### **Line 11. Name of Analyst's Supervisor**

Names of immediate supervisors of persons listed on Line 10.

### **Documentation**

One copy of the following documentation **must** be attached to this statement (Also see pg. 2):

- Field sample collection log sheets for each composite sample reported on the RD-920.
- Log of daily readings for all incoming water meters and all other privately owned water meters and direct discharge flowmeters if the User has an approved reporting methodology.
- Chain of custody record for each sample reported on the RD-920.
- Facility site sketch that indicates the location of each sampled outlet and labels each outlet as designated by the District.
- Laboratory data sheets listing individual analytical results and names of persons performing analyses.
- Results of all BOD dilutions. Copies of the BOD bench logs of BOD tests for each sample and the results of the test on each dilution analyzed for all samples. Data on excluded dilutions.

### **Certification**

- The form must be signed and dated by a corporate officer, a partner, a fiduciary or other duly authorized agent of the User.
- If an outside consultant or laboratory was involved in the generation of data contained in this statement, this form must also be signed by an officer, partner, fiduciary, or other duly authorized agent of such firm.

## RD-920 DOCUMENTATION DETAILS

- ❖ Field sample collection log sheets for each composite sample reported on RD-920
  - Log Sheet info must include name of person(s) conducting the sampling, start date/time and finish date/time of composite sample, automatic sampler aliquot frequency, automatic sampler aliquot volume, number of aliquots taken, total composite time, total composite volume, sample volume submitted for analysis, composite temperature, and composite description
  
- ❖ Log of daily readings for all incoming water meters, privately owned water meters, and direct discharge flowmeters if the User has any approved User Charge reporting methodologies
  - Log must identify ALL meters by serial number and any meter code designation (I1, O1, E1, Q1, etc.) if a User has any approved UC reporting methodologies
  - Log must show calculations of daily water volumes based on main incoming water meters, privately owned water meters, and direct discharge flowmeters for any approved User Charge reporting methodologies

### ISOLATED DATA

If a User considers any self-monitoring data inappropriate for inclusion in calculating its User Charges, the User must submit such data with its RD-920 Report, together with a written report detailing the basis for the User's assessment that such data were not representative for purposes of inclusion when calculating its User Charges. The District will review all data and the User's detailed report to determine whether reported data are representative.

### FLOW-WEIGHTED CALCULATIONS

To calculate the flow-weighted averages for BOD and SS, complete the Flow-Weighted Calculations part of this statement as follows:

1. Enter date(s) for all days of which complete valid data is available.
2. For each date listed, enter flow (in gallons) and analytical data (in milligrams per liter [mg/L]).
3. For each daily entry, calculate and enter in the appropriate columns the pounds of BOD and the pounds of SS by using the following equation.

$$\frac{\text{Flow (gals.)} \times 8.34 \times \text{BOD or SS (mg/L)}}{1,000,000} = \text{lbs.}$$

4. Add up the columns for gallons of flow and for BOD (lbs.), SS (lbs.) and enter amounts on the Totals line in the appropriate column.
5. Calculate the flow-weighted average for BOD, and for SS, as follows:

$$\frac{\text{Total Pounds} \times 1,000,000}{\text{Total Flow (gals.)} \times 8.34} = \text{Flow-Weighted Average (mg/L)}$$

6. Enter values on the Flow-Weighted Averages line of this section on Line 7.

FLOW-WEIGHTED CALCULATIONS (continued)

Date	Flow (gals.)	BOD (mg/L)	SS (mg/L)	BOD (lbs.)	SS (lbs.)
Totals	_____			_____	_____

Flow-Weighted Averages: BOD (mg/L) \_\_\_\_\_ SS (mg/L) \_\_\_\_\_

**THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
USER CHARGE CERTIFIED SAMPLING ANALYSIS REPORTING STATEMENT – RD-920**

1. Name \_\_\_\_\_ 3. User Account No. \_\_\_\_\_  
 2. Address \_\_\_\_\_ 4. Outlet Number \_\_\_\_\_  
 5. Primary Measurement Device \_\_\_\_\_

6. Sampling Data:

6a. Sample Date and Day of Week	6b. Sample Times and Duration	6c. Metered Intake	6d. Metered Discharge	6e. Date Received	6f. Date Analyzed		6g. BOD (mg/L) Dilutions/Result	6h. SS (mg/L)
					BOD	SS		
	FROM TO				BEG END			
	FROM TO				BEG END			
	FROM TO				BEG END			
	FROM TO				BEG END			
	FROM TO				BEG END			
	FROM TO				BEG END			
	FROM TO				BEG END			
7. Average flows (for intake and discharge) and flow-weighted analytical data for BOD and SS.								

8. BOD Seed Source \_\_\_\_\_  
 9. Exceptions \_\_\_\_\_  
 10. Name of Analyst \_\_\_\_\_  
 11. Name of Analyst's Supervisor \_\_\_\_\_

**Certification:** The undersigned has examined this statement and its supporting documentation, and he/she certifies that the methods used in the sampling analyses reported thereon were conducted in accordance with the latest edition of **Standard Methods for the Examination of Water and Wastewater**, and that the information contained thereon to the best of his/her knowledge is true, correct, and complete.

Facility Name \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of Officer/Owner \_\_\_\_\_ Telephone \_\_\_\_\_  
 Officer's Name and Title \_\_\_\_\_ Email \_\_\_\_\_  
 (Please PRINT) \_\_\_\_\_ (Optional) \_\_\_\_\_  
 Consultant or Laboratory Name \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of Officer/Owner \_\_\_\_\_ Telephone \_\_\_\_\_  
 Officer's Name and Title \_\_\_\_\_ Email \_\_\_\_\_  
 (Please PRINT) \_\_\_\_\_ (Optional) \_\_\_\_\_