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# BES Submeter Program Administrative Rules

## ENB-4.32

### April 2024 Update – Public Review Draft



ENVIRONMENTAL SERVICES  
CITY OF PORTLAND  
working for clean rivers

#### Table of Contents

1.	Applicability .....	2
2.	Purpose.....	2
3.	Definitions .....	2
4.	Regulatory Authority.....	3
5.	Meters Required .....	3
6.	Program Requirements .....	4
7.	Program Fees, Charges, and Credits .....	5
8.	Violations.....	6
9.	Administrative Review and Appeal .....	7
	<b>APPENDIX A—Background Information .....</b>	<b>8</b>



19 These are [the](#) administrative rules of the Bureau of Environmental Services (BES) Sub-Meter  
20 Program.

## 21 **1. Applicability**

22 These rules apply to commercial ratepayers who:

- 23 **A.** Want to demonstrate [that they discharge a quantity of less](#) sewage or drainage ~~discharge~~  
24 ~~below~~[than](#) what would be assumed from their City-supplied water usage or other site conditions  
25 (-such as quantity of impervious area);
- 26 **B.** Use alternative water sources that discharge to City systems; or
- 27 **C.** Use other site or facility processes that reduce sewage or drainage flows.

28 Ratepayers may be registered in the program upon their request or at the direction of the BES  
29 Director.

## 30 **2. Purpose**

31 These rules regulate the City's Sub-Meter Program and establish the BES decision-making criteria  
32 for measuring flows into and discharges from eligible commercial ratepayers to calculate accurately  
33 sewer and stormwater management service charges. These rules reinforce the City's goals of  
34 charging commercial ratepayers for their actual use of City sewer, storm sewer, and drainage  
35 systems.

## 36 **3. Definitions**

37 Terms used in these rules are defined ~~by~~[in](#) Portland City Code (PCC) Chapter 17.36 and the  
38 following:

- 39 **A. "Blowdown"** means water discharged from heating, ventilation, and air conditioning (HVAC)  
40 systems to the sewer to avoid the concentration of impurities during continued use.
- 41 **B. "Facial Challenge"** means a challenge to a requirement that is based on an argument that the  
42 requirement cannot be applied fairly or reasonably in any situation. By contrast, an as-applied  
43 challenge is one based on an argument that a requirement should not be applied to the  
44 challenger's particular situation because of factors that, in the challenger's view, distinguish it  
45 from similar situations.
- 46 **C. "Totalizing Meter"** means a volumetric flow meter designed to measure and register total flow.
- 47 **D. "Virtual Meter"** means a meter simulator used as a measurement and calculation alternative for  
48 determining flow volume. The term includes virtual charge meters and virtual product meters.
  - 49 **1. "Virtual Charge Meter"** means a virtual meter used to estimate site discharge volumes.
  - 50 **2. "Virtual Product Meter"** means a virtual meter used to measure the volume of water  
51 consumed in manufacturing products or onsite systems.



52 **4. Regulatory Authority**

53 These rules are authorized by Portland City Code (PCC) Section 3.13.040. ~~These rules~~ and implement  
54 PCC Section 17.36.050 BE.

55 **5. Meters Required**

56 Commercial ratepayers may choose or be directed to install any or all of the following meters:

57 **A. Credit Meters.** A commercial ratepayer may reduce the ratepayer’s sewer user charges by  
58 demonstrating that the ratepayer’s site uses more water onsite than is discharged to the City’s  
59 sewer, storm sewer, and drainage systems. Flows measured by these meters will be deducted  
60 from sewer user charge calculations since these flows are not discharged to City systems. Credit  
61 meters include:

- 62 **1. Irrigation meters:** ~~s.~~ A meter that measures water used for irrigation of site landscaping.
- 63 **2. Make-up meter:** ~~s.~~ A meter that measures water ~~s~~ lost to evaporation and other processes,  
64 such as but not limited to building or production-line HVAC systems.
- 65 **3. Product meter:** ~~s.~~ A ~~product~~ meter that measures the amount of water that is consumed in  
66 a production process or in a final product and that never discharges to a City system.
- 67 **4. Virtual product meter:** ~~s.~~ ~~Virtual product~~ A meter thats can be used to estimate inflow  
68 sources and discharge reductions from site operations. Virtual product meters may be  
69 approved when physical meters are difficult to install onsite or may not accurately record  
70 reduced flows to City systems. A virtual product meter may be combined with a traditional  
71 product meter to account for all operations that withdraw water from discharges to City  
72 systems. Virtual product meter calculations must be supported by verifiable and  
73 quantifiable quantities of discharge reduction. Virtual product meters may be approved to  
74 estimate:
  - 75 **a.** Evaporative losses. Used when the amount of water lost to evaporative and steam-  
76 based processes within commercial operations is not captured by traditional product  
77 meters.
  - 78 **b.** Moisture content losses. Used to calculate the amount of City-supplied water retained  
79 as moisture content in solid-waste reuse, recycling, or waste products.

80 Ratepayers with virtual meters must notify BES of any site modifications that could affect  
81 virtual meter calculations or estimates within 30 days of the process or site change.

82 **B. Charge Meters.** The Director may require a meter at each point of connection to the City system  
83 to calculate site discharge volumes to City sewer, storm sewer, and drainage systems. Sewer  
84 user charges will be calculated from readings of these meters.

- 85 **1. Discharge meter:** ~~s.~~ A meter that measures the volume of water discharged to the City’s  
86 system.



- 87 2. **Bleed meter:** A meter that measures ~~measure~~ flows related to blowdown or emptying of  
88 HVAC systems.
- 89 3. **Private source meter:** A meter that measures the water used on a site that is from a source  
90 other than the City of Portland. Source examples include, but are not limited to, wells,  
91 springs, and rainwater reuse. User charges are adjusted based on total site water usage.
- 92 4. **Rainwater harvesting meter:** A meter used to calculate the amount of rainfall captured in  
93 cisterns for reuse within a building or manufacturing process.
- 94 5. **Virtual charge meters:** A virtual charge meter may be used to calculate and measure flows  
95 that are discharged to City systems. A virtual charge meter may be combined with other  
96 meters to account for the total volume of water discharged to City systems. Virtual charge  
97 meters may include:
- 98 a. Impervious area calculations. Used for sites directing stormwater runoff from paved  
99 areas into sanitary-only systems. BES converts the estimated volume of runoff into a  
100 unit charge for the site and then adjusts the normal stormwater management service  
101 utility charges for the site accordingly.
- 102 b. Employee count. The Director may approve estimates of sewer system use based on  
103 employee count. These sites will be charged 15 gallons of sewage discharge per day per  
104 employee. Estimated flows will be divided by 748 to convert to the equivalent one-  
105 hundred cubic foot (ccf) unit for the final charge calculation.
- 106 Ratepayers with virtual meters must notify BES of any process or site modification that  
107 could affect virtual meter calculations or estimates within 30 days after the modification is  
108 complete.

## 109 6. Program Requirements

110 Commercial ratepayers participating in the Sub-Meter Program must comply with the following:

- 111 **A. Application.** Ratepayers must apply for participation in the program by using a BES Sub-Meter  
112 Application Form. Ratepayers wishing to use or establish a virtual product meter estimate must  
113 provide sufficient site discharge, water use, and product moisture content data for BES review.
- 114 **B. Program Approval.**
- 115 1. Reduced charges or credit will not be granted prior to the acceptance date as documented  
116 in the Sub-Meter Program approval ~~letter~~[notification](#) sent by BES. Reduced charges or credit  
117 will only be granted for those operations and processes identified in the approval  
118 ~~letter~~[notification](#).
- 119 2. Virtual meters will only be approved for sites that can:
- 120 a. Verify consistent water usage in manufactured products and waste products; or  
121 b. Verify a standard unit of water usage that is not otherwise measurable.



122 Program participants making process or site changes that affect meter reads or calculations  
123 must notify BES within 30 days of the process or site change.

124 **C. Meter Installation.** Program participants are responsible for purchase and installation of meters.  
125 Meters must be approved by the Director as to type, maintenance, calibration schedule, size,  
126 and location before installation. Meters must be totalizing meters, read in cubic feet, and meet  
127 the ~~other following~~ installation standards ~~of PCC 17.36.050 D.1 through 4.~~;

128 1. Meters installed on water systems supplied from private or public sources and used to  
129 measure cooling, irrigation, evaporation, or product water for the purpose of obtaining  
130 reduced sewer charges must be connected in such a manner as to register only that portion  
131 of the water supply used for that purpose.

132 2. All meters must be installed in an area that is freely accessible at all times and that, in  
133 determination of the Director, does not present a danger to City employees.

134 City ~~of Portland~~ plumbing permits may be required. Program participants must notify BES when  
135 installation is complete and schedule an initial Sub-Meter Program inspection.

136 **D. Meter Maintenance.** Program participants must implement measures to ensure meter accuracy,  
137 including meter calibration and maintenance, and maintain meter access for City personnel. All  
138 maintenance and calibration records must be retained for three years and available for review  
139 by City personnel.

140 1. During ~~the any~~ period of ~~the a~~ meter's non-operation ~~and pending the proper repair and~~  
141 ~~reinstallation of the meter~~, the ratepayer's account may be billed for full supply flow from  
142 City sources, up to three times the supply flow from non-City sources, or an amount deemed  
143 proper by the Director.

144 **E. Meter Reading.** Some program participants may be required to read their own meter volumes  
145 and provide applicable reports on the Sub-Meter Program reporting form to BES staff. A  
146 program participant who fails to provide credit meters reads for a period of two months or more  
147 may be deemed inactive and removed from the program. Reduced charges or credit will not be  
148 granted retroactively for the period in which no reports were submitted.

149 **F. Inspection.** Program participants are required to allow City inspectors access to sub-meters to  
150 ensure they are working appropriately or to read volumes for applicable billing cycles.

## 151 7. Program Fees, Charges, and Credits

152 Meter readings will be used by BES to ~~accurately~~ charge commercial customers accurately on their  
153 ~~sewer bills~~.

154 **A. Program Fees.** Sub-Meter Program participants must pay the appropriate applicable  
155 administrative and Sub-Meter Program fees for each billing cycle. Fees are established in the  
156 annual rate ordinances that go into effect every July 1 and appear on the customer's  
157 water/sewer bill. Program administrative fees are assessed in two parts, one by the City  
158 Portland Water Bureau and the other by BES.



159 **B. Program Charges and Credits.** Measured volume usage meter readings must be submitted per  
160 customer, per site, and for each individual meter. Meter reads may be submitted electronically  
161 to BES Sub-Meter Program staff. BES staff will track historical reads and prepare data for each  
162 billing cycle's sewer user charge or credit calculation. Credits are established after successful  
163 submittal of meter data. Retroactive credits are not available.

164 **1. Make-up meters.** In ~~lieu~~ the absence of a bleed meter, the City may grant an 80% credit  
165 against measured water used for cooling systems to account for the 20% of water  
166 discharged to City sewer and drainage systems from cooling system blowdown operations.

## 167 **8. Violations**

168 **A. Violations.** Program participants will be considered in violation of the Sub-Meter Program for  
169 any violation of these rules and for the following:

- 170 **1.** Failure to maintain and calibrate meters;
- 171 **2.** Failure to provide charge meter reading reports to BES;
- 172 **3.** Falsification of reports;
- 173 **4.** Failure to provide access to meters for inspectors; and
- 174 **5.** Inaccurately stating the representative nature of a meter.

175 **B. Violation Severity.** Violations will be classified based on the harm or potential threat to public  
176 health, safety, or the environment as described in the BES Enforcement Program  
177 Administrative Rules (PPD item ENB-4.15) and as follows:

- 178 **1. Class I violations.** Falsification of charge meter read data ~~and or~~ denial of entry ~~will be~~  
179 ~~determined to be Class I violations.~~
- 180 **2. Class II violations.** Inaccurately stating the representative nature of a meter.
- 181 **2.3. Class III violations.** Failure to provide charge metering reports ~~and or~~ to ~~appropriately~~  
182 maintain ~~and or~~ calibrate meters appropriately ~~will be determined to be Class III violations.~~

183 **C. Enforcement and Penalties.** A violation of ~~this program's~~ rules ~~will~~ may result in removal of  
184 any sub-meter discounted sewer and stormwater management service charges on the  
185 customer's water/sewer bill. Reversal of any discount may be retroactive based on the duration  
186 and nature of the violation. In cases of severe ~~non-compliance with program~~  
187 ~~requirements~~ violations, the Director may remove commercial ratepayers from the program.

188 Enforcement actions and penalties related to falsification of data or meter tampering ~~will be~~  
189 ~~assessed as described in~~ are governed by the BES Enforcement Program Administrative Rules  
190 (ENB-4.15).  
191



192 **9. Administrative Review and Appeal**

193 A program participant may request reconsideration of a BES decision or enforcement action through  
194 administrative review as described in this Section. Administrative review and appeal of an  
195 enforcement action is also governed by [the](#) BES Enforcement Program Administrative Rules, (ENB-  
196 4.15). After the requestor has exhausted all BES administrative review, the requestor may file for an  
197 appeal of a decision with the Code Hearings Officer ~~(CHO)~~ per ~~Portland~~ City Code Title 22. A person  
198 may only appeal a decision that is subject to administrative review by BES.  
199

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200 **APPENDIX A — Background Information**

201 The Sub-Meter Program has traditionally been a voluntary program for high water-use commercial  
202 ratepayers. Ratepayers are generally referred by city discharge permit managers or from the Water  
203 Bureau’s customer service staff. Given program changes in the Fats, Oil and Grease, Extra Strength  
204 Charges, and System Development Charge True-up programs, more commercial ratepayers are  
205 being recommended or directed to participate in the program as part of their permit or discharge  
206 program compliance efforts.

207 **Meters Required**

208 **Section 5.A** Credit meters can reduce costs primarily justifying the use of lower flow rates used to  
209 calculate sewer user charges. Some commercial operations already have special water use rates  
210 established, like commercial laundries, but other users need additional tools to reflect accurately  
211 what they discharge to City sewers.

212 **Section 5.A.4** — Breweries and water-based food product manufacturing (such as a local pickling  
213 plant) are the biggest users of virtual product meter calculations.

214 **Section 5.B**. Charge meters measure sewer usage directly. Flow measurements in cubic feet are  
215 converted into applicable ccf usage rates and billed accordingly.

216 **Program Fees and Credits**

217 **Section 7.A**. Most commercial ratepayers are on a monthly billing cycle. Some are on a quarterly  
218 billing cycle. For FY 13/14 the rates of Sub-Meter Program fees were \$24.20 for the Water Bureau  
219 portion and \$29.09 for the BES portion of the fee.

