

## **807 KAR 5:066. Water.**

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.280(2)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.280(2) provides that the Public Service Commission (hereinafter referred to as "commission") shall prescribe rules for the performance of any service or the furnishing of any commodity by the utility. This administrative regulation establishes general rules which apply to water utilities.

### **Section 1. Definitions.**

- (1) "Customer" means, in addition to the definition in 807 KAR 5:006, Section 1(4), a person who purchases water from a utility's water loading station.
- (2) "Distribution main" means a line from which service connections with customers are taken at frequent intervals.
- (3) "Meter" means any device used for the purpose of measuring the quantity of water delivered by a utility to a customer.
- (4) "Natural Resources Cabinet" means the state Environmental Public Protection Cabinet, Department for Environmental Protection, Division of Water.
- (5) "Point of service" means the outlet of a customer's water meter, or valve if no meter is placed.
- (6) "Service connection" means the line from the main to the customer's point of service, and shall include the pipe fittings and valves necessary to make the connection.
- (7) "Service line" means the water line from the point of service to the place of consumption.
- (8) "Transmission main" means a line which is used for conveying water to the distribution system, reservoirs, tanks or stand pipes, and has generally no service connections with customers.

**Section 2. Information Available to Customers.** A utility shall provide the following information to any customer upon request:

- (1) Characteristics of water. A description in writing of chemical constituents and bacteriological standards of the treated water as required by the Natural Resources Cabinet.
- (2) Rates. A schedule of rates for water service applicable to the service to be rendered to the customer.
- (3) Reading meters. Information about method of reading meters.
- (4) Bill analysis. A statement of the past readings of a customer's meter for a period of two (2) years.

### **Section 3. Quality of Water.**

- (1) Compliance with Natural Resources Cabinet. Any utility furnishing water service for human consumption or domestic use shall conform to all legal requirements of the Natural Resources Cabinet for construction and operation of its water system as pertains to sanitation and potability of the water.
- (2) Water supply. In absence of comparable requirements of the Natural Resources Cabinet, water supplied by any utility shall be:
  - (a) Adequately protected by artificial treatment to include continuous disinfection throughout the distribution system;
  - (b) Free from objectionable color, turbidity, taste, and odor; and
  - (c) From a source reasonably adequate to provide a continuous supply of water.
- (3) Operation of supply system.
  - (a) Sanitary conditions. The water supply system, including wells, reservoirs, pumping equipment, treatment works, mains, and service pipes shall be free from sanitary defects.
  - (b) Potable water connections. No utility shall make a physical connection between its distribution system and that of any other water supply unless the other water supply maintains a safe sanitary quality in accordance with this administrative regulation, and the utility provides notice to the commission prior to any such interconnections.
  - (c) Algae growth. The growth of algae in water at the source of supply, in reservoirs or other basins, and in water mains, shall be controlled by proper treatment.
  - (d) Well integrity. Utilities obtaining water supplies from driven or drilled wells must maintain the tightness of well casings and provide protection at the ground surface to prevent infiltration of water other than that from strata tapped by such wells. Wells shall be a minimum of 300 feet from any source of pollution.
- (4) Testing of water.
  - (a) Test. Each utility shall have representative samples of its water examined by the appropriate state or local agency or by a competent chemist and bacteriologist skilled in the sanitary examination of water, under methods approved by the Natural Resources Cabinet, to insure a safe water supply.

- (b) Report to the commission. If a utility is required by the Natural Resources Cabinet to make a public notification pursuant to administrative regulations of the Natural Resources Cabinet, the utility shall provide the commission with a copy of the public notification when it is made.

#### Section 4. Continuity of Service.

- (1) Emergency interruptions. Each utility shall make all reasonable efforts to prevent interruptions of service and when such interruptions occur shall endeavor to reestablish service with the shortest possible delay consistent with the safety of its consumers and the general public. If an emergency interruption of service affects service to any public fire protection device, the utility shall immediately notify the fire chief or other public official responsible for fire protection.
- (2) Scheduled interruptions. If any utility finds it necessary to schedule an interruption of its service, it shall notify all customers to be affected by the interruption, stating the time and anticipated duration of the interruption. Whenever possible, scheduled interruptions shall be made at hours of least inconvenience to customers. If public fire protection is provided by mains affected by the interruptions, the utility shall notify the fire chief or other officials responsible for fire protection of the interruption, stating the time and anticipated duration. The fire chief or other official responsible for fire protection shall be notified immediately upon restoration of service.
- (3) Standby equipment. The utility shall have available standby pumps capable of providing the maximum daily pumping demand of the system for use when any pump is out of service.
- (4) Storage. The minimum storage capacity for systems shall be equal to the average daily consumption.
- (5) Record of interruptions. Each utility shall keep a complete record of all interruptions on its entire system or on major divisions of that system. This record shall show the cause of interruption, date, time, duration, remedy and steps taken to prevent recurrence.

#### Section 5. Pressures.

- (1) Standard pressure. Each utility shall, subject to the approval of the commission, adopt and maintain a standard pressure in its distribution system at locations to be designated as the point or points of "standard pressure." The selection of such points shall be confined to locations fairly representative of average conditions. In selecting points for fixed standard pressure, a utility may divide its distribution system into districts if division is necessary due to differences of elevation or loss of pressure because of friction, or both, and may either adopt a standard pressure for each division or establish a single standard pressure for its distribution system as a whole. In no case shall the constant difference between the highest and lowest pressures in a district for which a standard has been adopted exceed fifty (50) percent of such standard. In the interpretation of this rule it shall be understood that in districts of widely varying elevations or low customer density a utility may undertake to furnish a service which does not comply with the foregoing specifications if the customer is fully advised of the conditions under which average service may be expected. It shall be understood that nothing shall prevent the commission from requiring improvements when, upon investigation, it appears right and proper that such betterments should be made. In no event, however, shall the pressure at the customer's service pipe under normal conditions fall below thirty (30) psig nor shall the static pressure exceed 150 psig.
- (2) Pressure gauges. Each utility shall provide itself with one (1) or more recording pressure gauges to make pressure surveys as required by these rules. These gauges shall be suitable to record the pressure experienced on the utility's system and shall be able to record a continuous twenty-four (24) hour test. One (1) of these recording pressure gauges shall be maintained for a minimum of one (1) week per month in continuous service at some representative point on the utility's mains.
- (3) Pressure surveys. At least once annually, each utility shall make a survey of pressures in its distribution system of sufficient magnitude to indicate the quality of service being rendered at representative points in its system. Pressure charts for these surveys shall show the date and time of beginning and end of the test and the location at which the test was made. Records of these pressure surveys shall be maintained at the utility's principal office in Kentucky and shall be made available to the commission upon request.

#### Section 6. Water Supply Measurement.

- (1) Measuring devices. Each utility shall install a suitable measuring device at each source of supply so that a record may be maintained of the quantity of water produced by each source.
- (2) Records. The quantity of water produced or purchased for resale to customers from each source of supply shall be determined on a monthly basis. The volumes of water distributed to customers and the volume used by the utility shall be determined in the same manner. Twelve (12) month totals of the volumes produced or purchased from each source of supply, distributed to customers, and used by the utility shall be recorded separately and transmitted to the commission in the utility's annual report to the commission.

(3) Unaccounted-for water loss. Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section.

Section 7. Standards of Construction. Design and construction of the utility's facilities shall conform to good standard engineering practice. Plans and specifications for water supplies shall be prepared by an engineer registered in Kentucky, with the submitted plans bearing the engineer's seal. The utility's facilities shall be designed, constructed and operated so as to provide adequate and safe service to its customers and shall conform to requirements of the Natural Resources Cabinet with reference to sanitation and potability of water.

Section 8. Distribution Mains.

(1) Depth of mains. Water mains shall be placed a minimum of twenty-four (24) inches below ground level and shall be protected sufficiently to prevent freezing during the coldest weather normally experienced in the community in which laid, and to prevent damage by traffic.

(2) Dead ends. In order to provide increased reliability of service and reduce head loss, dead ends shall be minimized by making appropriate tie-ins whenever practicable. Where dead ends occur they shall be provided with a fire hydrant, if flow and pressure are sufficient to meet the requirements of Section 10(2)(b) of this administrative regulation, or with an approved flushing hydrant or blowoff for flushing purposes. Flushing devices shall be sized to provide flows which will give a velocity of at least two and one-half (2.5) feet per second in the water main being flushed. No flushing device shall be directly connected to any sewer. Mains with dead ends shall be flushed at least once each year but more often if necessary to maintain the quality of the water.

(3) Segmentation of system. Valves or stopcocks shall be provided at reasonable intervals in the mains so that repairs may be made with the least possible interruption of service.

(4) Disinfection of water mains. All new mains shall be thoroughly disinfected before being connected to the system. The method of disinfecting shall comply with requirements of the Natural Resources Cabinet.

(5) Grid systems. Wherever feasible the distribution system shall be laid out in a grid to facilitate identification of line location and minimize service interruptions caused by breaks or repairs.

Section 9. Service Lines.

(1) Size of service line. The size, design, material and installation of the service line shall conform to such reasonable requirements of the utility as may be incorporated in its rules and administrative regulations. However, the minimum size of the line shall not be less than three-fourths (3/4) inch nominal size except under unusual circumstances which shall be clearly defined.

(2) Depth of service line. All service lines shall be laid at a depth sufficient to prevent freezing during the coldest weather normally experienced except where services are not intended for use during freezing weather and are actually drained during such periods.

(3) Inspection of service line. In the installation of the service line, the utility shall require the customer to leave the trench open and pipe uncovered, and the utility shall inspect the line to determine it is free from any tee, branch connection, irregularity or defect. The utility may substitute for its inspection an inspection by the appropriate state or local plumbing inspector, if proof of that inspection is presented to the utility by the customer.

Section 10. Construction Requirements.

(1) The system shall be adequate to deliver all reasonable water requirements of its customers and meet the requirements of Section 5(1) of this administrative regulation except under emergency conditions.

(2) Distribution system.

(a) Minimum pipe sizes. The distribution system shall be of adequate size and so designed in conjunction with related facilities to maintain the minimum pressures required by Sections 5(1) and 7 of this administrative regulation. The maximum length of any individual small pipe line shall be as follows:

	Circulating Noncirculating	
1 inch nominal size	150 feet	100 feet

1 1/2 inch nominal size	300 feet	200 feet
2 inch nominal size	500 feet	250 feet

In the case of rural water lines, if hydraulic studies indicate they can comply with Section 5(1) of this administrative regulation and can provide adequate flow of water to serve the peak requirements of customers, the above maximum extension lengths may be extended with approval of the commission.

(b) Fire protection.

1. On or after the effective date of this administrative regulation, fire hydrants may be installed by a utility only if:

- a. A professional engineer with a Kentucky registration has certified that the system can provide a minimum fire flow of 250 gallons per minute; and
- b. The system supporting this flow has the capability of providing this flow for a period of not less than two (2) hours plus consumption at the maximum daily rate.

2. The location, installation, and the responsibility for maintenance of fire hydrants, public and private fire protection facilities, connecting mains, and their ownership may be subject to negotiation between the utility and the applicant. Fire hydrants and public and private fire protection facilities shall be installed as required by the utility and if owned by the utility shall be subject to any conditions the commission may impose, based upon the compensation received for this service.

(3) Transmission systems. Transmission pipe lines from sources of supply shall be designed to deliver in combination with related storage facilities and to the limits of the capacity of those sources of supply the maximum requirements of that portion of the system which is dependent upon such transmission pipe lines.

(4) Water supply requirements. The quantity of water delivered to the utility's distribution system from all source facilities shall be sufficient to supply adequately, dependably and safely the total reasonable requirements of its customers under maximum consumption.

(5) Materials. Metallic and nonmetallic materials may be used separately and in combination to construct component parts of a water system including, but not limited to, conduits, pipes, couplings, caulking materials, protective linings and coatings, services, valves, hydrants, pumps, tanks and reservoirs, provided:

- (a) The material shall have a reasonable useful service life.
- (b) The material shall be capable of withstanding with ample safety factors the internal and external forces to which it may be subjected in service.
- (c) The material shall not cause the deterioration of the potability of the water supply.
- (d) Materials and equipment shall be so selected as to mitigate corrosion, electrolysis and deterioration.

Section 11. Extension of Service.

(1) Normal extension. An extension of fifty (50) feet or less shall be made by a utility to its existing distribution main without charge for a prospective customer who shall apply for and contract to use service for one (1) year or more.

(2) Other extensions.

(a) When an extension of the utility's main to serve an applicant or group of applicants amounts to more than fifty (50) feet per applicant, the utility may if not inconsistent with its filed tariff require the total cost of the excessive footage over fifty (50) feet per customer to be deposited with the utility by the applicant or the applicants, based on the average estimated cost per foot of the total extension.

(b) Each customer who paid for service under such extension shall be reimbursed under one (1) of the following plans, which shall be included in the utility's filed tariff:

1. Each year, for a refund period of not less than ten (10) years, the utility shall refund to the customer or customers who paid for the excessive footage the cost of fifty (50) feet of the extension in place for each additional customer connected during the year whose service line is directly connected to the extension installed and not to extensions or laterals therefrom. Total amount refunded shall not exceed the amount paid the utility. No refund shall be made after the refund period ends.

2. As an alternative to the refund plan outlined in subparagraph 1 of this paragraph, the utility may use the following plan: for a period of five (5) years after construction of the extension, each additional customer whose service line is directly connected to the extension installed, and not to extensions or laterals therefrom, shall be required to contribute to the cost of the extension based on a recomputation of both the utility's portion of the total cost and the amount contributed by the

customers. The utility shall refund to those customers that have previously contributed to the cost of the extension that amount necessary to reduce their contribution to the currently calculated amount for each customer connected to the extension. All customers directly connected to the extension for a five (5) year period after it is placed in service shall contribute equally to the cost of construction of the extension. In addition, each customer shall pay the approved tap-on fee applicable at the time of his application for the meter connection. The tap-on fee shall not be considered part of the refundable cost of the extension and may be changed during the refund period. After the five (5) year refund period expires, any additional customer shall be connected to the extension for the amount of the approved tap-on fee only. After the five (5) year refund period expires, the utility shall be required to make refunds for an additional five (5) year period in accordance with subparagraph 1 of this paragraph.

(3) An applicant desiring an extension to a proposed real estate subdivision may be required to pay the entire cost of the extension. Each year, for a refund period of not less than ten (10) years, the utility shall refund to the applicant who paid for the extension a sum equal to the cost of fifty (50) feet of the extension installed for each new customer connected during the year whose service line is directly connected to the extension installed by the developer, and not to extensions or laterals therefrom. Total amount refunded shall not exceed the amount paid to the utility. No refund shall be made after the refund period ends.

(4) Nothing contained herein shall be construed to prohibit the utility from making extensions under different arrangements if such arrangements have received the prior approval of the commission.

(5) Nothing contained herein shall prohibit a utility from making at its expense greater extensions than herein prescribed, provided like free extensions are made to other customers under similar conditions. The conditions under which such extensions will be made shall be stated in the utility's filed tariff.

(6) Upon complaint to and investigation by the commission a utility may be required to construct extensions greater than fifty (50) feet upon a finding by the commission that such extension is reasonable and that an extension of fifty (50) feet or less is unreasonable under the circumstances.

#### Section 12. Service Connections.

(1) Ownership of service.

(a) Utility's responsibility. The utility shall furnish and install at its own expense for the purpose of connecting its distribution system to the customer's premises that portion of the service connection from its main to and including the meter and meter box. The utility may recoup this expense from the customer in accordance with KRS 278.0152.

(b) In areas where the distribution system follows well-defined streets and roads, the customer's point of service shall be located at that point on or near the street right-of-way or property line most accessible to the utility from its distribution system. In areas where the distribution system does not follow streets and roads, the point of service shall be located as near the customer's property line as practicable. Prior to installation of the meter the utility shall consult with the customer as to the most practical location.

(2) Customer's responsibility. The customer shall furnish and lay the necessary pipe to make the connection from the point of service to the place of consumption and shall keep the service line in good repair and in accordance with such reasonable requirements of the utility as may be incorporated in its rules and administrative regulations.

#### Section 13. Measurement of Service.

(1) Metering. All water sold by a utility shall be upon the basis of metered volume sales except as set forth in subsection (2) of this section.

(2) Unmetered service. If water usage can be readily estimated, the utility may, subject to commission approval, provide unmetered service. For unmetered service the utility shall develop standard methods for estimating the volume of water used and maintaining records which show volumes used and associated revenues and expenses. Methods proposed to be used shall be submitted to the commission for approval. Flat rates conforming to the requirements set forth in 807 KAR 5:006, Section 7(2), may be charged for the following:

(a) Temporary service of such duration that installation of a meter is not feasible.

(b) Public and private fire protection service.

(c) Water used for street sprinkling and sewer flushing, when provided for in a contract between the utility and a municipality or other local government authority.

(d) Service to water haulers if installation of coin-operated or other metered stations is not feasible.

(3) Registration of meter. All meters used for metered sales shall have registration devices indicating the volume of water measured in either cubic feet or U.S. gallons. Where a constant or multiplier is

necessary to convert the meter reading to cubic feet or gallons, the constant shall be indicated upon the face of the meter.

(4) Standard method of meter and service line installation. Each utility shall adopt a standard method of installing meters and service lines and shall file with the commission a written description and drawings in sufficient detail that the requirements are clearly understandable. Copies of these standard methods shall be made available to prospective customers and contractors or others engaged in the business of placing pipe for water utilization. All meters shall be set in place by the utility.

#### Section 14. Meter Test Facilities and Equipment.

(1) Test facilities. Except as provided in 807 KAR 5:006, Section 17(2), each utility furnishing metered water service shall have the necessary standard facilities, instruments and other equipment for testing its meters in compliance with this administrative regulation.

(2) Shop equipment. The utility's meter test shop shall, insofar as practicable, simulate actual service conditions of temperature, inlet pressure, and outlet pressure. It shall be provided with necessary equipment, including valves on the inlet and outlet sides of the meter test bench, calibrated tanks, a device for regulating flow, a gauge to measure flow rate, pressure gauges and pressure relief valves. The overall error of the calibrated test tanks shall not exceed three-tenths (.3) of one (1) percent.

(3) Test measurement standards.

(a) Basic standard. Measuring devices for testing meters shall consist of a calibrated tank for volumetric measurement or a tank mounted upon scales for weight measurement. If a volumetric standard is used, it shall be certified as to its accuracy by the commission within the preceding thirty-six (36) months. If a weight standard is used, the scales shall be tested and calibrated at least once a year and certified as to accuracy by the commission.

(b) Size of basic standards. When meters are tested by weight method, utilities whose measure of quantity is the cubic foot shall use test equipment capable of holding not less than one (1) cubic foot of water. Utilities whose measure of quantity is the U.S. gallon shall use equipment holding not less than ten (10) U.S. gallons.

(c) Standard meter. With commission approval, a standard meter may be provided and used by any utility for the purpose of testing meters in place. This standard meter shall be tested and calibrated to a basic standard periodically to insure its accuracy within the limits required by this administrative regulation. In any event, such test shall be made at least once every other week while the standard meter is in use and a record of such tests shall be kept by both the utility and, if applicable, the organization doing the meter testing.

#### Section 15. Accuracy Requirements of Water Meters.

(1) General. All meters used for measuring the quantity of water delivered to a customer shall be in good mechanical condition and shall be adequate in size and design for the type of service which they measure.

(2) Testing of meters. All new meters, and any meter removed from service for any cause, shall be tested for accuracy as specified herein prior to being placed in service.

(a) Test flows. The test flow and normal test flow limits for the various types of cold water meters shall be as follows:

#### TEST REQUIREMENTS FOR NEW, REBUILT, AND REPAIRED COLD WATER METERS\*

Maximum Rate (All Meters)				Intermediate Rates (All Meters)				Minimum Rate (New and Rebuilt)				Minimum (Repaired)	
Size in.	Flow Rate gpm	Test Quantity gal	Accuracy Limits %	Flow Rate gpm	Test Quantity gal	Accuracy Limits %	Flow Rate gpm	Test Quantity gal	Accuracy Limits Percent	Accuracy Limits %	Accuracy Limits %	Accuracy Limits %	Accuracy Limits %
		ft <sup>3</sup>			ft <sup>3</sup>			ft <sup>3</sup>					
Displacement Meters													
5/8	15	100	10	98.5-101.5	2	10	1	98.5-101.5	1/4	10	1	95-101	90
5/8 x 3/4	15	100	10	98.5-101.5	2	10	1	98.5-101.5	1/4	10	1	95-101	90
3/4	25	100	10	98.5-101.5	3	10	1	98.5-101.5	1/2	10	1	95-101	90

1	40	100	10	98.5-101.5	4	10	1	98.5-101.5	3/4	10	1	95-101	90
1 1/2	50	100	10	98.5-101.5	8	100	10	98.5-101.5	1 1/2	100	10	95-101	90
2	100	100	10	98.5-101.5	15	100	10	98.5-101.5	2	100	10	95-101	90
3	150	500	50	98.5-101.5	20	100	10	98.5-101.5	4	100	10	95-101	90
4	200	500	50	98.5-101.5	40	100	10	98.5-101.5	7	100	10	95-101	90
6	500	1000	100	98.5-101.5	60	100	10	98.5-101.5	12	100	10	95-101	90
Multijet Meters													
5/8	15	100	10	98.5-101.5	1	10	1	98.5-101.5	1/4	10	1	97-103	90
5/8 x 3/4	15	100	10	98.5-101.5	1	10	1	98.5-101.5	1/4	10	1	97-103	90
3/4	25	100	10	98.5-101.5	2	10	1	98.5-101.5	1/2	10	1	97-103	90
1	35	100	10	98.5-101.5	3	10	1	98.5-101.5	3/4	10	1	97-103	90
1 1/2	70	100	10	98.5-101.5	5	100	10	98.5-101.5	1 1/2	100	10	97-103	90
2	100	100	10	98.5-101.5	8	100	10	98.5-101.5	2	100	10	97-103	90
Class I Turbine Meters													
1 1/2	80	200	20	98-102	Not Required				12	100	10	98-102	-
2	120	300	30	98-102					16	100	10	98-102	-
3	250	500	50	98-102					24	100	10	98-102	-
4	400	1000	100	98-102					40	100	10	98-102	-
6	1000	2000	200	98-102					80	1000	100	98-102	-
8	1500	3000	300	98-102					140	1000	100	98-102	-
10	2200	5000	500	98-102					225	1000	100	98-102	-
12	3300	7000	700	98-102					400	1000	100	98-102	-
Class II Turbine Meters													
2	120	300	30	98.5-101.5	Not Required				4	100	10	98.5-101.5	-
3	275	600	60	98.5-101.5					8	100	10	98.5-101.5	-
4	500	1000	100	98.5-101.5					15	100	10	98.5-101.5	-
6	1100	2500	250	98.5-101.5					30	1000	100	98.5-101.5	-
8	1800	4000	400	98.5-101.5					50	1000	100	98.5-101.5	-
10	3000	6000	600	98.5-101.5					75	1000	100	98.5-101.5	-
12	4000	8000	800	98.5-101.5					120	1000	100	98.5-101.5	-
Propeller Meters													
2	100	200	20	98-102	35	100	10	98-102	30	100	10	95	90

3	150	300	30	98-102	40	100	10	98-102	35	100	10	95	90
4	200	500	60	98-102	50	100	10	98-102	45	100	10	95	90
5	400	1000	100	98-102	75	200	20	98-102	70	200	20	95	90
6	500	1000	100	98-102	90	300	30	98-102	85	300	30	95	90
8	600	2000	200	98-102	100	300	30	98-102	90	300	30	95	90
10	900	3000	300	98-102	125	300	30	98-102	110	300	30	95	90
12	1000	5000	500	98-102	150	400	50	98-102	140	400	50	95	90
14	1100	5000	500	98-102	250	1000	100	98-102	225	1000	100	95	90
16	1400	5000	600	98-102	350	1000	100	98-102	315	1000	100	95	90
18	1600	5000	600	98-102	450	2000	200	98-102	405	2000	200	95	90
20	2000	10000	1000	98-102	550	2000	200	98-102	495	2000	200	95	90
24	3000	10000	1000	98-102	800	5000	500	98-102	720	5000	500	95	90
30	4500	20000	2000	98-102	1200	5000	500	98-102	1080	5000	500	95	90
36	6000	20000	2000	98-102	1500	5000	500	98-102	1350	5000	500	95	90

#### Compound Meters

2	100	100	10	97-103					100	10	90-103	-
3	150	500	50	97-103					100	10	90-103	-
4	200	500	50	97-103					100	10	90-103	-
6	500	1000	100	97-103	sec.				100	10	90-103	-
8	600	2000	200	97-103					200	20	90-103	-
10	900	2000	200	97-103					1000	100	90-103	-

#### Fire-Service Type

3	100	500	50	97-103				sec.	Not Less	-
4	200	500	100	97-103					than 85%	-
6	500	3000	200	97-103	sec.					-
8	600	3000	300	97-103						-
10	900	5000	500	97-103						-

\* - A rebuilt meter is one that has had the measuring element replaced with a factory-made new unit. A repaired meter is one that has had the old measuring element cleaned and refurbished in a utility repair shop.

sec. - Quantity should be one or more full revolution of the test hand but not less than two (2) min running.

(b) Determination of meter accuracy. No new, rebuilt or repaired meter shall be placed in service if the following required tests show that it does not register within the accuracy limits specified in paragraph (a) of this subsection.

1. Displacement, multijet, compound, fire service and propeller type meters. Meters of the displacement, multijet, compound, fire service and propeller type shall be tested at the minimum, intermediate and high test flow rates shown in paragraph (a) of this subsection. At least one (1) additional test shall be performed within the range of flows of compound and fire service meters to determine overall operational efficiency and accuracy of registration.

2. Class I and Class II turbine type meters. Meters of the Class I and Class II turbine type shall be tested at the minimum and high test flow rates shown in paragraph (a) of this subsection.

(3) As found tests. All meters tested in accordance with the rules for periodic, request or complaint tests, shall be tested in the condition as found in the customer's service prior to any alteration or adjustment. This test shall consist of three (3) rates of flow in the minimum, intermediate and high flow range for that type of meter as set out in subsection (2)(a) of this section.

(4) Determination of meter error for bill adjustment purposes. When upon periodic, request or complaint test, a meter is found to be in error in excess of the limits allowed by the commission's administrative regulations, three (3) additional tests shall be made: one (1) at seventy-five (75) percent of rated maximum capacity; one (1) at fifty (50) percent of rated maximum capacity; one (1) at twenty-five (25)



percent of the rated maximum capacity. The average meter error shall be the algebraic average of the errors of the three (3) tests.

Section 16. Periodic Tests.

(1) Each utility shall test periodically all water meters so that no meter will remain in service without test for a period longer than specified in the following table:

Size of Meter Inches	Interval Between Tests Years
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5/8	10
5/8 x 3/4	10
3/4	10
1	10
1 1/4	4
1 1/2	4
2	4
3	2
4 and larger	1

(2) Meters of the current and compound type shall be cleaned at a minimum of the frequency listed in subsection (1) of this section for testing. If meters are tested in place at the frequency listed in subsection (1) of this section and during the test are flushed at a high rate of flow, the meter shall be considered to be in compliance with this section.

(3) If the number of meters of any type which register in error beyond the limits specified in this administrative regulation is found by the commission to be excessive, then that type shall be tested with such additional frequency as the commission may direct.

Section 17. Water Shortage Response Plans. Each utility which files a water shortage response plan with the Natural Resources Cabinet shall simultaneously file a copy of the plan with the commission. Any utility which has already filed a plan with the Natural Resources Cabinet shall file the plan with the commission within sixty (60) days of the effective date of this administrative regulation.

Section 18. Deviations from Administrative Regulation. In special cases, for good cause shown, the commission may permit deviations from this administrative regulation.

(8 Ky.R. 828; eff. 4-7-1982; 18 Ky.R. 1968; 3388; eff. 6-7-1992; TAm eff. 8-9-2007; TAm 1-30-2013; Crt eff. 3-27-2019.)