

**902 KAR 115:010. Water fluoridation for the protection of dental health.**

RELATES TO: KRS Chapter 211

STATUTORY AUTHORITY: KRS 211.190, 211.190(10)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 211.190(10) directs the Cabinet for Human Resources to provide public health services that include water fluoridation programs for the protection of dental health. This administrative regulation sets forth the requirements for the programs.

Section 1. Community Implementation. (1) All community water systems serving a population of 3,000 or more, including consecutive supplies, shall adjust fluoride deficient waters to protect the dental health of the people served by the supply. For the purposes of this administrative regulation, consecutive supply shall mean a supply that purchases its water from another public water system. The population served by a community water system shall include its own population, as well as the population served by all of its consecutive supplies.

(2) Community water systems serving a population between 1,500 and 3,000 shall provide supplemental fluoridation only if adequate fluoride feed equipment is available from the Cabinet for Human Resources, Department for Health Services.

(3) Although not required to provide supplemental fluoridation, community water systems serving a population of less than 1,500 that choose to provide supplemental fluoridation shall do so only if adequate fluoride feed equipment is available from the Cabinet for Human Resources, Department for Health Services, and there are competently trained or certified personnel at the community water system.

Section 2. Approval. All community water systems shall obtain the written approval of the Cabinet for Human Resources before adding fluorides to a public water system. Approval by the cabinet shall be contingent upon the presentation of evidence satisfactory to the cabinet that the plant facilities and operation will provide for adequate control and supervision, safe operation and maintenance, the keeping of operational records, and compliance with this administrative regulation and 401 KAR Chapter 8:010 through 8:700 relating to public water systems.

Section 3. Equipment, Facilities, and Services. The equipment, facilities, and services shall meet the requirements set forth below:

(1) Feeding. Reliable feeding equipment with an accuracy within five (5) percent shall be provided to feed the proper dosage of fluoride. The rate of feed shall be in a manner that will give a fluoride content between eight-tenths (0.8) ppm and one and four-tenths (1.4) ppm in the treated water. Based on an evaluation of Kentucky climatological information, a fluoride concentration of no less than nine-tenths (0.9) ppm is recommended in the finished water. The point of application shall be selected so that fluoride will be evenly mixed with the water leaving the treatment plant.

(2) Method of measurement.

(a) Saturator tanks. If solution feed equipment is to be used, the water plant shall have a corrosion-resistant solution tank, and an accurate means for weighing the stock chemical (fluoride) available. A metering device for measuring the water for the solution shall also be provided.

(b) Dry feed hoppers. Dry feed hoppers shall be mounted on scales.

(c) Acid systems (H<sub>2</sub>SiF<sub>6</sub>). Scales shall be available to measure the weight loss each day or some other appropriate method of measuring the amount of acid being used each day.

(3) Protection of operator. Special precautions shall be taken to protect the operators. Precautions may vary with the type of installation, but, at a minimum, should include an approved respirator or approved rubber gloves, eye shield, and apron as indicated by the type of fluoride being used (dry or liquid). An adequate exhaust or ventilation system shall be provided for all fluoride feeding equipment.

(4) Storage. Separate storage areas shall be provided for all fluoride chemicals.

(5) Laboratory facilities. Laboratory facilities shall be provided for the determination of the fluoride content of the water by competent personnel in accordance with the procedures outlined by the Standard Methods for the Examination of Water and Wastewater, 18th Edition (1992). The Standard Methods for the Examination of Water and Wastewater, 18th Edition (1992), is jointly prepared and published by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation, and is incorporated by reference. This publication may be viewed or obtained at the Office of the Commissioner for Health Services, 275 East Main Street, Frankfort, Kentucky 40621, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, or may be obtained by contacting the Publication Office, American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005.

(6) Samples. Raw water and plant tap water samples shall be examined at least once per day and the results shall be included on the standard monthly operation report submitted to the cabinet. Additional finished water samples shall be analyzed by a laboratory certified by the Cabinet for Natural Resources and Environmental Protection in accordance with 401 KAR 8:040 for fluoride determination, with the results

being forwarded to the cabinet. This sampling shall be at a rate of two (2) samples per month. The first sample shall be collected from the plant tap during the first week of the month and the second sample collected from the distribution system, at a point of maximum retention, during the third week of the month. Evaluation of the results of these analyses shall be within the province of the cabinet.

(7) Siphon breakers. Fluoride feeders shall be equipped with siphon breakers to prevent back siphonage of concentrated fluoride solution into the distribution system.

(8) Notification of cabinet when fluoride begins. The cabinet shall be notified of the date on which fluoridation is to commence in order that a representative of the cabinet may be present to calibrate and check the fluoridation equipment and instruct the operating personnel concerning tests, records, operation, and safety precautions.

(9) Notice when fluoride is interrupted. The owner or operator of the water plant shall immediately notify the cabinet of any interruption to the addition of fluoride to the water supply.

Section 4. Procedure for Obtaining Approval. A system shall submit, in support of an application for approval, the following:

- (1) Detailed plans showing the method and point of application of fluoride and storage facilities for stock chemicals;
- (2) Information concerning technical supervision of the treatment process; and
- (3) Provisions for laboratory facilities. (21 Ky.R. 816; eff. 9-21-94.)