

401 KAR 8:100. Design, construction and approval of facilities.

RELATES TO: KRS 151.634, 224.10-110, 224.60-100, 322.020(1), 322.340, 40 C.F.R. 141.5, 141.110-111

STATUTORY AUTHORITY: KRS 224.10-100(2), 224.10-110, 40 C.F.R. 141.5, 141.110-111, 42 U.S.C. 300j-26

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-110 (2), (3), and (4) require the cabinet to enforce administrative regulations promulgated by the secretary for the regulation and control, including construction and operation, of the purification of water for public and semipublic use. This administrative regulation establishes design plan requirements for the construction of new and expanded facilities that deliver potable water for public or semipublic use and establishes requirements for submitting plans and specifications for modifications to existing facilities. There is not a federal regulation that deals with this subject matter; therefore, this administrative regulation is not more stringent than federal requirements.

Section 1. Preliminary Engineering Report. (1) A preliminary engineering report for a proposed new facility or a modification to an existing facility shall be prepared by a professional engineer and submitted to the cabinet.

(a) Except as established in paragraph (b) of this subsection, a supplier or potential supplier of water shall submit the preliminary engineering report to the cabinet before entering into a financial commitment for or initiating construction of a new public water system or increasing the capacity of an existing public water system.

(b) A preliminary engineering report shall not be required for:

1. A semipublic treatment facility; or
2. Construction, extension, or improvement of a distribution system.

(c) The preliminary engineering report shall comply with 40 C.F.R. 141.5, Siting requirements.

(2) The preliminary engineering report shall contain the following information:

(a) The name of the applicant and of the owner of the plant;

(b) A map that shows the location of the proposed facility;

(c) The proposed source of water and the quantity available, with the location of the intake or wellhead identified by latitude and longitude in degrees, minutes, and seconds;

(d) An analysis of the water from the proposed source for contaminants regulated pursuant to 401 KAR Chapter 8, performed by a certified laboratory;

(e) A detailed description of the proposed facility;

(f) A detailed flow diagram of the proposed facility;

(g) Pilot study conclusions, if conducted; and

(h) An operation plan, including:

1. Anticipated load;
2. Hours of operation;
3. Area served; and
4. Number and certification of operational staff.

(3) Preliminary engineering report approval.

(a) The preliminary engineering report shall be consistent with the requirements of the materials incorporated by reference in Section 9(a) - (c) of this administrative regulation.

(b) Upon receipt and review of the preliminary engineering report, the cabinet shall either approve the preliminary engineering report or return it to the applicant for revision.

1. Final plans shall not be submitted until the preliminary engineering report has been approved.

2. Approval of the preliminary engineering report shall not constitute final approval for construction.

3. A proposed change in the preliminary engineering report shall be submitted to the cabinet and approved prior to incorporation in the final plans.

Section 2. Final Plans and Specifications. (1) Final plans and specifications for the construction or modification of a water treatment plant or a distribution facility shall be consistent with the materials incorporated by reference in Section 9(a) - (c) of this administrative regulation.

(a) If a preliminary engineering report is required pursuant to Section 1 of this administrative regulation, the final plans and specifications shall be consistent with the approved preliminary engineering report.

(b)1. Plans for the construction or modification of a public water system shall be submitted by the water system or shall be accompanied

by a letter from the water system confirming that the water system has reviewed the plans, accepts the design, and has the capacity to and shall provide water service to the project.

2. A public water system that purchases water from another public water system shall submit a letter from the providing water system verifying the providing water system has the capacity and shall provide water service to the purchasing water system, including the proposed project if the project will result in:

- a. Demand for water exceeding eighty-five (85) percent of the purchaser's current purchase contract; or
- b. Increased water demand by the purchaser by 10,000 gallons or more per day.

(c) Engineering plans and specifications shall be submitted to the cabinet, shall be prepared by a professional engineer licensed in Kentucky, and shall bear the engineer's seal, signature, and date of signature.

1. Prior to the construction or modification of a public or semipublic water system, the following documents and fees shall be submitted to the cabinet:

- a. Three (3) copies of the plans and specifications or changes thereto;
- b. For construction or modification of a distribution system, a complete Construction Application for Drinking Water Distribution form;
- c. For the construction or modification of a treatment facility, a completed Construction Application for Drinking Water Treatment form;
- d. For construction or modification of a semi-public facility, a completed Construction Application for Small Groundwater and Semi-Public Systems form;
- e. A map that shows the location of the proposed facility;
- f. Hydraulic calculations;
- g. Design data and supporting documents necessary for review of the plans and specifications;
- h. Chemical and microbiological analyses of a new raw water source if the plans and specifications are for a treatment facility; and
- i. The fee required by 401 KAR 8:050.

2. Construction or modification of a public or semipublic water system shall not begin until the plans and specifications have been approved by the cabinet in writing.

3. The front page of the plans shall identify the public water system, the owner of the public water system, the public water system's location by city and county, and the professional engineer preparing the plans.

(d) The cabinet's review of plans and specifications shall be limited to sanitary features of design and other features of public health significance and shall not include a review of structural, mechanical, or electrical design.

(e) The plans shall be drawn to scale and shall be accompanied by specifications, so as to allow a comprehensive engineering review, and shall include the following:

1. Plan and sectional views with all necessary dimensions; and
2. A piping diagram in sufficient detail to allow a hydraulic analysis of the system.

(2) Approval of final plans.

(a) Upon receipt and review of final plans and specifications, the cabinet shall either approve the final plans and specifications in writing or return them to the applicant for revision.

(b) If approved, one (1) set of approved plans and specifications shall be returned to the engineer, and one (1) set shall be returned to the water system.

Section 3. Construction. (1)(a) During construction, a set of approved plans and specifications shall be available at the job site.

(b) Construction shall be performed in accordance with the approved plans and specifications.

(2) If the cabinet's representative observes work being performed in a manner that does not conform to the approved plans and specifications, the cabinet shall notify the owner in writing.

(3) Unless construction begins within two (2) years from the date of approval of the final plans and specifications, the approval shall expire.

Section 4. Final approval of facility. (1) Upon completion of construction, a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications.

(2) A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation.

(3) The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet.

Section 5. Modifications and extension of service. The cabinet shall not approve a modification of a public water system or an extension of

service to one (1) or more customers if the modification or extension of service is likely to result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600.

Section 6. Treatment Techniques. A public water system shall comply with the treatment technique requirements established in 40 C.F.R. 141.10 through 141.111, General requirements and treatment techniques for acrylamide and epichlorohydrin.

Section 7. Variance. If plans and specifications deviate from the requirements of this administrative regulation, a written request for a variance shall be submitted with the plans and specifications or preliminary plans.

(1) The variance request shall include:

- (a) a description of the reason for the variance request;
- (b) The basis for the alternate plans or specifications, which shall be supported by current engineering practices; and
- (c) Other information necessary to support the variance;

(2) A variance shall not be approved if it will not protect public health, water quality, and the environment.

Section 8. Incorporation by Reference. (1) The following material is incorporated by reference:

(a) Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers "Recommended Standards for Water Works", 2007;

(b) "General Design Criteria for Surface and Ground Water Supplies", April 2010;

(c) "Water Policy Memorandum number 84-02, General Guidelines for Conducting Stream Studies for Wastewater Discharges Proposed within Five Miles Upstream from Public Water Supply Sources, or for the Location of Public Water Supply Intakes within Five Miles Downstream from Wastewater Discharges", 1984;

(d) "Construction Application for Drinking Water Distribution", DW-1, 8/2010;

(e) "Construction Application for Drinking Water Treatment", DW-2, 8/2010; and

(f) "Construction Application for Small Groundwater and Semi-Public Systems", DW-3, 8/2010.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky, Monday through Friday, 8 a.m. to 4:30 p.m. (17 Ky.R. 609; Am. 1437; 1715; 1977; eff. 11-15-90; 20 Ky.R. 3037; 21 Ky.R. 316; eff. 7-27-94; 23 Ky.R. 2560; eff. 5-14-97; 37 Ky.R. 123; Am. 991; eff. 1-3-2011.)