

**Title 10—DEPARTMENT OF
NATURAL RESOURCES**

**Division 60—Public Drinking Water
Program**

**Chapter 10—Plans and Specifications;
Siting Requirements; Recreational Use
of Impoundments**

10 CSR 60-10.010 Plans and Specifications

PURPOSE: This rule sets forth requirements for submission, review and approval of engineering reports, plans and specifications for community water supply planning and construction.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. Therefore, the material which is so incorporated is on file with the agency who filed this rule, and with the Office of the Secretary of State. Any interested person may view this material at either agency's headquarters or the same will be made available at the Office of the Secretary of State at a cost not to exceed actual cost of copy reproduction. The entire text of the rule is printed here. This note refers only to the incorporated by reference material.

(1) Report Required. When plans are being made by a supplier of water to a community water system for constructing expansions, modifications and improvements of the water supply source, water treatment facility or for the development of a new community water system, the supplier of water shall submit an engineer-prepared report to the department for review and approval. Upon receipt of an engineering report, the department will evaluate the report and either approve the report in writing or outline the requirements for further investigation.

(A) Written approval of the engineering report shall be obtained before construction plans and specifications are finalized.

(B) Engineering reports need not be submitted to the department for facilities constructed under a supervised program.

(C) If the original approved report is more than two (2) years old, an updated engineering report must be submitted before final plans and specifications will be reviewed or as deemed necessary by the department.

(2) Plans and Specifications Required.

(A) Water Treatment Facility.

1. Every supplier of water to a community water supply must submit to the department

plans and specifications prepared by an engineer for review and issuance of a written approval to construct prior to initiating construction of—

A. A new water treatment facility(ies); and

B. Expansions or modifications of existing water treatment facilities which would significantly change or alter plant capacity or treatment processes.

2. The department shall review or advise plans and specifications and may approve the supplier of water and his/her engineer of the review findings and, if required, outline additional information or changes necessary for approval.

3. The department may approve the plans and specifications by issuance of a written approval to construct and shall describe the facilities to be constructed along with any comments or conditions of approval.

(B) Water Supply Source. Every supplier of water to a community water supply must submit to the department plans and specifications prepared by an engineer for review and issuance of a written approval to construct prior to initiating—

1. Construction of a new water supply source(s); or

2. Modification of an existing water supply source which might reasonably result in significant change in the quality or quantity of water originally approved for the source.

(C) Water Distribution System.

1. Every supplier of water to a community water system must submit to the department plans and specifications prepared by an engineer for review and issuance of a written approval to construct prior to initiating construction of—

A. A complete new water distribution system(s); and

B. Expansion or modification of water distribution systems unless a supervised program of design, construction and construction supervision is maintained by the supplier of water.

2. A supplier of water to a community water supply that desires to conduct a supervised program for construction of water distribution systems, in lieu of submitting plans for approval, must submit to the department a written request for approval.

A. Approval of supervised programs may be granted for a period of up to five (5) years with automatic renewal. Supervised programs will be periodically reviewed by the department and may be revoked should the supplier of water fail to conduct the program in accordance with the approved plan.

B. Upon revocation of a supervised program, engineering plans and specifications

must be submitted to the department for review and issuance of a written approval to construct.

C. A modification(s) to an approved supervised program may be made by written request to the department.

D. A supervised program shall provide the following minimum elements:

(I) Sizing water mains and appurtenances with minimum four-inch (4") diameters so that a minimum pressure of twenty pounds per square inch (20 psi) is maintained under normal flow conditions. Requests for approval to install lesser diameter water mains serving cul-de-sacs may be granted by the department upon submission of standard design data;

(II) Maintenance of permanent records and drawings of the entire water distribution network including all appurtenances to the network, such as valves, hydrants and cleanouts, along with plans and specifications of projects under construction for review by the department;

(III) Selection of construction materials manufactured in conformity with the latest standard specifications issued by the American Water Works Association (AWWA) or other approved specifications;

(IV) Disinfection of the distribution system in conformity with the latest standard specifications issued by the AWWA or other approved methods prior to placement in service; and

(V) Protection of water mains during construction from sources of contamination by—

(a) Maintaining at least a ten-foot (10') horizontal separation of water mains from any existing or proposed sanitary sewer. The distance must be measured edge-to-edge. Installation of the water main closer to a sanitary sewer is acceptable where the water main is laid in a separate trench or on an undisturbed earth shelf located on one (1) side of the sanitary sewer at an elevation so the bottom of the water main is at least eighteen inches (18") above the top of the sanitary sewer;

(b) Providing a minimum vertical distance of eighteen inches (18") between the outside of the water main and the outside of the sanitary sewer where water mains cross sanitary sewer mains. This shall be the case where the water main is either above or below the sanitary sewer. At crossings, one (1) full length of water pipe must be located so both joints will be as far from the sanitary sewer line as possible. Special structural support for the water and sanitary sewer pipes may be required;

(c) Providing at least a ten-foot (10') horizontal separation between water mains and sanitary sewer force mains. There shall be an eighteen-inch (18") vertical separation at crossings;

(d) Locating water mains so that they do not pass through or come in contact with any sanitary sewer manhole; and

(e) Consulting with the department as to the precautions necessary where the conditions in subparts (2)(C)2.D.(V) (a)-(d) cannot be met.

(3) If construction has not commenced within two (2) years after the date of issue or there is a halt in construction of more than two (2) years, the approval to construct will be void unless an extension of time has been granted by the department.

(4) All construction work must conform to approved plans and specifications.

(A) Should it be necessary or desirable to make a material change in the approved design which will affect water quality, capacity and sanitary features or performance, revised plans and specifications, together with a written statement of the reasons for the change, must be submitted to the department for review and approval must be obtained in writing before the work affected by the change is undertaken.

(B) Minor revisions not affecting water quality, capacity, flow, sanitary features or performance will be permitted during construction without further approval; provided, as-built plans documenting these changes are submitted to the department.

(5) Final Approval of Construction.

(A) A final inspection completed by the department or certified by an engineer with the approval of the department.

(B) Construction conformance with the approved plans and specifications and any changes documented by the submission of two (2) copies of as-built plans with the affixed seal of the engineer.

(C) A supplier of water having an approved supervised program for construction does not need additional approval of construction for work completed under that program.

(6) The department will review engineering reports, engineering plans and specifications, requests for approval of supervised water main extension programs and carry out inspections required for final approval of construction within thirty (30) working days of receipt of request. Review time is subject to emergency conditions, manpower availability or other factors beyond department control.

(7) Essential portions of copies of engineering documents will be kept on file by the department.

AUTHORITY: section 640.100, RSMo Supp. 1989. Original rule filed May 4, 1979, effective Sept. 14, 1979. Amended: Filed April 14, 1981, effective Oct. 11, 1981.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989.*

10 CSR 60-10.020 Siting Requirements

PURPOSE: This rule establishes requirements for siting of new or expanded water systems.

(1) To the extent practicable, all new or expanded water systems must not be located on a site which—

(A) Is subject to a significant risk from earthquakes, floods, fires, pollution or other disasters which could cause a breakdown of the public water system or a portion of the system; and

(B) Except for intake structures, is within the floodplain of a one hundred (100)-year flood where appropriate records exist.

AUTHORITY: section 640.100, RSMo Supp. 1989. Original rule filed May 4, 1979, effective Sept. 14, 1979.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989.*

10 CSR 60-10.030 Recreational Use of Public Water Supply Impoundments

PURPOSE: This rule establishes limitations on recreational use of water supply impoundments.

(1) Every supplier of water to a public water supply must apply for and secure the approval of the department before permitting the use of public water supply impoundments for recreational usage.

(A) Regulated recreational activities are permitted when provisions for these activities are included in the original planning, construction and approval of the impoundment and water treatment facilities.

(B) Recreational activities proposed for existing impoundments will be appraised in the light of the effect on the primary purposes of the impoundment, the capability of the water treatment works, the physical adaptability of the impoundment to the desired recreational use and the maintenance of public confidence in the water supply.

(2) Where recreational activities are permitted, provisions must be made for local enforcement where applicable. Rules must be posted and maintained in legible condition at conspicuous points in the impoundment area.

AUTHORITY: section 640.100, RSMo Supp. 1989. Original rule filed May 4, 1979, effective Sept. 14, 1979.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989.*

10 CSR 60-10.040 Prohibition of Lead Pipes, Lead Pipe Fittings and Lead Solder and Flux

PURPOSE: This rule protects public water systems and the customer water systems connected to the public water systems from the leaching of lead into the drinking water.

(1) This rule applies to all public water systems.

(2) For the purpose of this rule, the term lead-free, when used with respect to—

(A) Solder and flux, refers to solders and flux containing not more than two-tenths percent (0.2%) lead;

(B) Pipes and pipe fittings, refers to pipes and pipe fittings containing not more than eight percent (8.0%) lead; and

(C) Plumbing fittings and fixtures intended by the manufacturer to dispense water for human ingestion, refers to fittings and fixtures that are in compliance with standards established in accordance with 42 U.S.C. 300g-6(e).

(3) As of January 1, 1989 all materials used in the construction, expansion, modification or improvement of a public water system or customer water system shall be lead free. This section shall not apply to leaded joints necessary for the repair of cast iron pipes.

(4) Any customer water system constructed, expanded, modified or repaired after January 1, 1989 that is connected to a public water system, and later is found to contain materials that are not lead-free, shall have the water meter removed or otherwise have the service line severed from the public water system when the supplier of water is so ordered by the appropriate local governmental authority (if one exists) or by the department. The requirements of this section shall not apply to any customer water system previously served by a water system other than a public water system.

(5) No ordinance or rule established by a unit of local government or a supplier of water for