

Kansas Administrative Regulations

Kansas Department of Agriculture—Division of Water Resources

Article 42.—Design of Stream Obstructions

5-42-5. Determining the peak discharge of a one percent-chance storm.

In determining the flow magnitude of a design storm, the applicant shall use one of the following methods. (a) For drainage areas of less than 640 acres, use of the rational formula shall be acceptable.

The rational formula is $Q = CIA$

Where C = the runoff coefficient

I = the intensity of rainfall, in inches per hour

A = the drainage area, in acres.

(b) For any drainage area, the flow magnitude of a design storm may be determined by using one of the methods in the following:

(1) "Estimation of peak streamflows for unregulated rural streams in Kansas," water-resources investigations report 00-4079, published by the United States geological survey in 2000, which is hereby adopted by reference;

(2) "urban hydrology for small watersheds," technical release 55, published by the natural resources conservation service and dated June 1986, which is hereby adopted by reference; and

(3) "computer program for project formulation," technical release 20, published by the natural resources conservation service, United States department of agriculture, and dated October 2004, which is hereby adopted by reference.

(c) For streams for which sufficient stream gaging data is available, the applicant may use sound engineering principles and commonly accepted engineering practices to estimate the peak one percent-chance discharge from the gage record.

(d) A method other than the methods specified in subsections (a), (b), and (c) may be used to determine the one percent-chance storm discharge if the method meets both of the following criteria:

(1) The method is based on sound engineering principles and commonly accepted engineering practices.

(2) The method has been previously approved, in writing, by the chief engineer.

(Authorized by and implementing K.S.A. 2006 Supp. 82a-303a; effective May 18, 2007.)

***** Authenticated Kansas Administrative Regulation *****