



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 07-09 Technical Advisory

April 24, 2007

TO: All Design, Operations, and District Personnel, and Consultants

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SUBJECT: Rational-Method Formula for Determining Peak Rate of Runoff

REVISES: *Indiana Design Manual Section 29-8.04*

EFFECTIVE: Immediately

Due to assumptions made in the Rational-Method formula, the runoff coefficient, C , can vary depending on the design storm. The value for C can be expressed as follows:

$$C = kC_1$$

Where:

k = factor to adjust Rational-Method formula

C_1 = runoff coefficient representing a ratio of runoff to rainfall

The k factor should be taken as follows:

Design Storm	k
2- to 10-year	1.0
25-year	1.1
50-year	1.2
100-year	1.25