

Appendix 7E-6 Riprap Size Relationship

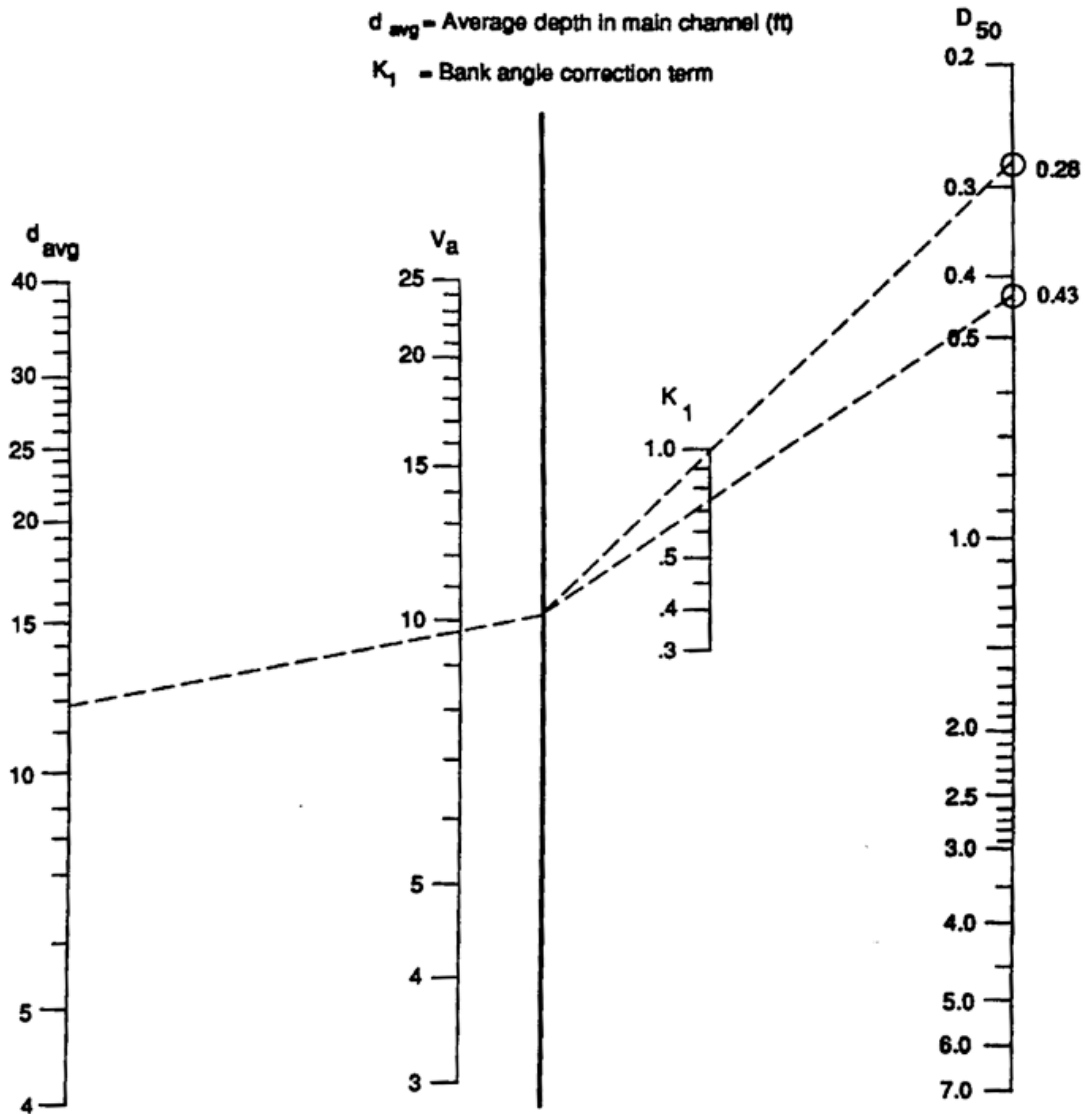
$$D_{50} = 0.001 V_a^3 / (d_{avg}^{1/2} K_1^{3/2})$$

D_{50} = Median Riprap Size (ft.)

V_a = Average velocity in main channel (ft/sec)

d_{avg} = Average depth in main channel (ft)

K_1 = Bank angle correction term



Example

Given:

$V_a = 9.7$

$d_{avg} = 11.8$ ft.

$K_1 = 0.73$

Find:

D_{50}

Solution:

$D_{50} = 0.43$

Source: HEC-11