IlliNois Fire Service Institute
University of Illinois at Urbana-Champaign
FSI.ILLINOIS.EDU
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Instructors: Bill Fulton
Tim Meister

IFSi Mobile Water Supply Operations

Preplanning Formulas

Needed Fire Flow (NFF):

NFA Formula:

$NFF = \left(\frac{\text{Length} \times \text{Width}}{3}\right) \times \% \text{ Involvement}$

Iowa Formula:

$NFF = \frac{(\text{Length} \times \text{Width} \times \text{Height})}{100}$

The Iowa formula doesn’t take into consideration the percent of involvement, only the needed fire flow if fully involved.

Water Supply Available per Tender Formula:

Flow (GPM) = Tank Capacity – 10%

Load + Dump + Round Trip Times

Remember we are hoping that each tender will supply at least 100 GPM to the mobile water supply operation.