

TABLE 1—Impounding Structure Regulations

Class of Dam	Hazard Potential If Impounding Structure Fails	SIZE CLASSIFICATION		Spillway Design Flood (SDF) ^b
		Maximum Capacity (Ac-Ft) ^a	Height (Ft) ^a	
I	Probable Loss of Life; Excessive Economic Loss	Large $\geq 50,000$	≥ 100	PMF ^c
		Medium $\geq 1,000$ & $< 50,000$	≥ 40 & < 100	PMF
		Small ≥ 50 & $< 1,000$	≥ 25 & < 40	$\frac{1}{2}$ PMF to PMF
II	Possible Loss of Life; Appreciable Economic Loss	Large $\geq 50,000$	≥ 100	PMF
		Medium $\geq 1,000$ & $< 50,000$	≥ 40 & < 100	$\frac{1}{2}$ PMF to PMF
		Small ≥ 50 & $< 1,000$	≥ 25 & < 40	100-YR ^e to $\frac{1}{2}$ PMF
III	No Loss of Life Expected; Minimal Economic Loss	Large $\geq 50,000$	≥ 100	$\frac{1}{2}$ PMF to PMF
		Medium $\geq 1,000$ & $< 50,000$	≥ 40 & < 100	100-YR to $\frac{1}{2}$ PMF
		Small ≥ 50 & $< 1,000$	≥ 25 & < 40	50-YR ^d to 100-YR
IV	No Loss of Life Expected; No Economic Loss to Others	≥ 50 (nonagricultural) ≥ 100 (agricultural)	≥ 25 (both)	50-YR to 100-YR

a. The factor determining the largest size classification shall govern.

b. The spillway design flood (SDF) represents the largest flood that need be considered in the evaluation of the performance for a given project. The impounding structure shall perform so as to safely pass the appropriate SDF. Where a range of SDF is indicated, the magnitude that most closely relates to the involved risk should be selected. The establishment in this chapter of rigid design flood criteria or standards is not intended. Safety must be evaluated in the light of peculiarities and local conditions for each impounding structure and in recognition of the many factors involved, some of which may not be precisely known. Such can only be done by competent, experienced engineering judgment, which the values in Table 1 are intended to supplement, not supplant.

c. PMF: Probable maximum flood. This means the flood that might be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the region.

The PMF is derived from the current probable maximum precipitation (PMP) available from the National Weather Service, NOAA. In some cases local topography or meteorological conditions will cause changes from the generalized PMP values; therefore, it is advisable to contact local, state or federal agencies to obtain the prevailing practice in specific cases.

d. 50-Yr: 50-year flood. This means the flood magnitude expected to be equaled or exceeded on the average of once in 50 years. It may also be expressed as an exceedence probability with a 2.0% chance of being equaled or exceeded in any given year.

e. 100-Yr: 100-year flood. This means the flood magnitude expected to be equaled or exceeded on the average of once in 100 years. It may also be expressed as an exceedence probability with a 1.0% chance of being equaled or exceeded in any given year.