USACE Debris Hurricane Estimating Debris Model

Formula: Q = H(C)(V)(B)(S)

Q = Quantity of debris in cubic yards
H = Number of households
C = Storm category factor in cubic yards
V = Vegetation characteristic multiplier
B = commercial / business / industrial multiplier
S = storm precipitation characteristic multiplier

H is the number of households, which is total population (P) divided by 3 (assumed that there is 3 people per household).

C is the storm category factor, where ñCò is the debris quantity in cubic yards (cy) per household by hurricane category. Debris quantity includes house, its contents, and land foliage.

Hurricane Category	Value of "C" Factor
1	2 cy
2	8 cy
3	26 cy
4	50 cy
5	80 cy

V is the vegetation multiplier, which increases the quantity of debris by adding in public right-of-way vegetation (trees, shrubbery, etc.)

Vegetative Cover	Value of "V" Multiplier
Light	1.1
Medium	1.3
Heavy	1.5

B is the multiplier that takes into account non single-family unit structures, including government buildings, schools, shopping centers, apartments, and light industrial / commercial buildings. Built into this multiplier is the offset of commercial insurance requirements for salvage operations.

Multi-Family / Nonresidential Density	Value of "B" Multiplier
Light	1.0
Medium	1.2
Heavy	1.3

S is the precipitation multiplier that takes into account either a ñwetò or ñdryò storm event. A ñwetò event will generate more vegetative debris.

Precipitation Characteristic	Value of "S" Multiplier
None - Light	1.0
Medium - Heavy	1.3