Hazus Flood Assessment Structure Tool (FAST)

Damage Function Customization

FAST damage functions are stored as percent damage values at each one-foot increment of flood water. This range of depth damage values varies for each specific occupancy class used in Hazus. Depth damage values for content, inventory, and structure damages for each specific occupancy class are stored in the "flBldgContDmgFn.csv", "flBldgInvDmgFn.csv", and "flBldgStructDmgFn.csv" tables (respectively) in the "Lookuptables" subfolder of the FAST zip download (Figure 1).

Each depth damage function corresponds to a unique numeric code used to assign that function to input building data during FAST loss calculations. Any depth damage function can be assigned to any building type by inserting the appropriate numeric code from the "ContDmgFnID", "InvDmgFnID", and "BldgDmgFnID" fields in each lookup table to the ContentDDF, InventoryDDF, and BuildingDDF fields of input building data. Review the formatting guidelines for FAST building data inputs to correctly assign depth damage function to each building type. Percent damage values for individual functions can be edited at each increment of flood water using the "p0," "p1", "p2", etc. fields in each damage function table (Figure 2).

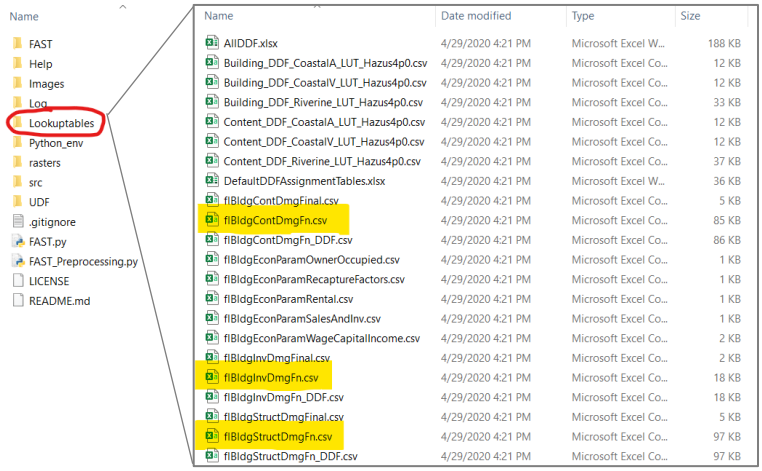

Figure 1: Building damage parameters are stored in the "flBldgContDmgFn.csv", flBldgInvDmgFn.csv", and "flBldgStructDmgFn.csv" tables.

A	B	C	D	E	F	G	H	I	J	K	L	M
ContDmgFnId	Occupancy	Source	Description	m4	m3	m2	m1	p0	p1	p2	p3	p4
21	RES1	FIA	one floor, no basement, Contents, A-Zone	0	0	0	0	12	25	35	36	38
22	RES1	FIA	one floor, w/ basement, Contents, A-Zone	0	5	7	8	16	20	22	28	33
23	RES1	FIA	two floors, no basement, Contents, A-Zone	0	0	0	0	8	11	19	23	28
24	RES1	FIA (MOD.)	two floors, w/ basement, Contents, A-Zone	0	5	7	8	16	18	25	29	33
25	RES1	FIA (MOD.)	three or more floors, no basement, Contents, A-Zone	0	0	0	0	7	15	21	22	23
26	RES1	FIA (MOD.)	three or more floors, w/ basement, Contents, A-Zone	0	5	7	8	15	22	27	28	29
27	RES1	FIA	split level, no basement, Contents, A-Zone	0	0	0	0	8	11	19	23	28
28	RES1	FIA (MOD.)	split level, w/ basement, Contents, A-Zone	0	5	7	8	16	18	25	29	33
29	RES1	FIA	one floor, no basement, Contents, V-Zone	0	0	0	0	10	17	23	29	35
30	RES1	FIA	one floor, w/ basement, Contents, V-Zone	0	5	7	8	15	20	22	28	33

Figure 2: Content damage function ID values (highlighted in yellow) are used to assign each damage function to the appropriate building type using matching values in the "BuildingDDF" field of input building data. Percent damage values are stored in one-foot increments in fields highlighted in blue. Percent damage values for flood heights below a building's first finished floor are stored in fields highlighted in orange.