**Process 2: Displacement Model**

**Data Source:** Assessment records (BSF tables)

**Used fields:** Lat, Long, CID, Community Name, Flood Depth Value, Hazard Occupancy Code, and Land Use Description

1. Save as the BSF table naming it COUNTY\_Displacement\_BLD\_DATE
2. Add a new field (column) named: **Average\_Household\_Size** and use the value of each community for each building located in that community, use CID codes from table WV\_Demographic\_Data\_10222019 sheet 1 (WV\_Communities\_Demographic) to find the values
3. Add a new field (column) named: **Residential\_Units\_FLD**, then, under it:
4. If Flood\_Depth\_Value < 1, print 0
5. For Flood\_Depth\_Value >= 1:

If (Hazard\_Occupancy\_Code = “RES1”) AND (Land\_Use\_Description <> “Residential Vacant”), print 1

If (Hazard\_Occupancy\_Code = “RES2”) AND (Land\_Use\_Description <> “Residential Vacant”), print 1

If (Hazard\_Occupancy\_Code = “RES3A”) AND (Land\_Use\_Description <> “Residential Vacant”), print 2

If (Hazard\_Occupancy\_Code = “RES3B”) AND (Land\_Use\_Description <> “Residential Vacant”), print 4

If (Hazard\_Occupancy\_Code = “RES3C”) AND (Land\_Use\_Description <> “Residential Vacant”), print 9

If (Hazard\_Occupancy\_Code = “RES3D”) AND (Land\_Use\_Description <> “Residential Vacant”), print 19

If (Hazard\_Occupancy\_Code = “RES3E”) AND (Land\_Use\_Description <> “Residential Vacant”), print 49

If (Hazard\_Occupancy\_Code = “RES3F”) AND (Land\_Use\_Description <> “Residential Vacant”), print 75

If (Hazard\_Occupancy\_Code = “AGR1”) AND (Land\_Use\_Description <> “Residential Vacant”), print 1

If (Hazard\_Occupancy\_Code = “COM1”) AND (Land\_Use\_Description = “Mixed Commercial/Residential”) AND (Land\_Use\_Description <> “Residential Vacant”), print 1

If else: print 0

\* Note: The maximum number of units in each multi-family occupancy class is considered for the calculations except for “RES3F” that does not have a maximum number (The number of units was decided as 75 for that class).

1. Add a new column named **Displaced\_Population\_FLD\_BLD**
2. Multiply Residential\_Units\_FLD of each row by its Ave\_Household\_Size and print in the above field

**Next Stage:**

1. Create a new excel sheet named COUNTY\_Displacement\_COMM\_DATE
2. Copy these fields from WV\_Communities\_Demographic sheet 1 (WV\_Communities\_Demographic):

**GEO\_label**

**CID**

**GEO\_ID**

**Census\_ID**

**Area**

**Population\_Total**

1. Create a new field named **Residential\_Units\_FLD\_COMM**
2. Add all the values under Residential\_Units\_FLD\_BLD in the excel sheet named COUNTY\_Displacement\_BLD\_DATE for each community using the CID codes
3. Create a new field named **Displaced\_Population\_FLD\_COMM**
4. Add all the values under Displaced\_Population\_FLD\_BLD in the excel sheet named COUNTY\_Displacement\_BLD\_DATE for each community using the CID codes