

# Statewide Flood Risk Assessment

## Building Inventory & Accuracy Improvements

### ■ Building Inventory Objectives

- Identify Primary Structures points
- Verify Building Identification
  - E-911 Address
  - Parcel geometry and assessment record
  - Aerial and StreetView Images
  - Building Sketches (parcel assessment record)
- Determine Building Characteristics (Occupancy Class, Cost, Basement, Foundation Type, Stories, Area, etc.)
  - Default Characteristics derived from Assessment Records
  - Overriding Modified Building Characteristics from user-defined values
- Ensure Building Point in most Restrictive Flood Zone
- Iterative Process and QC to make more accurate

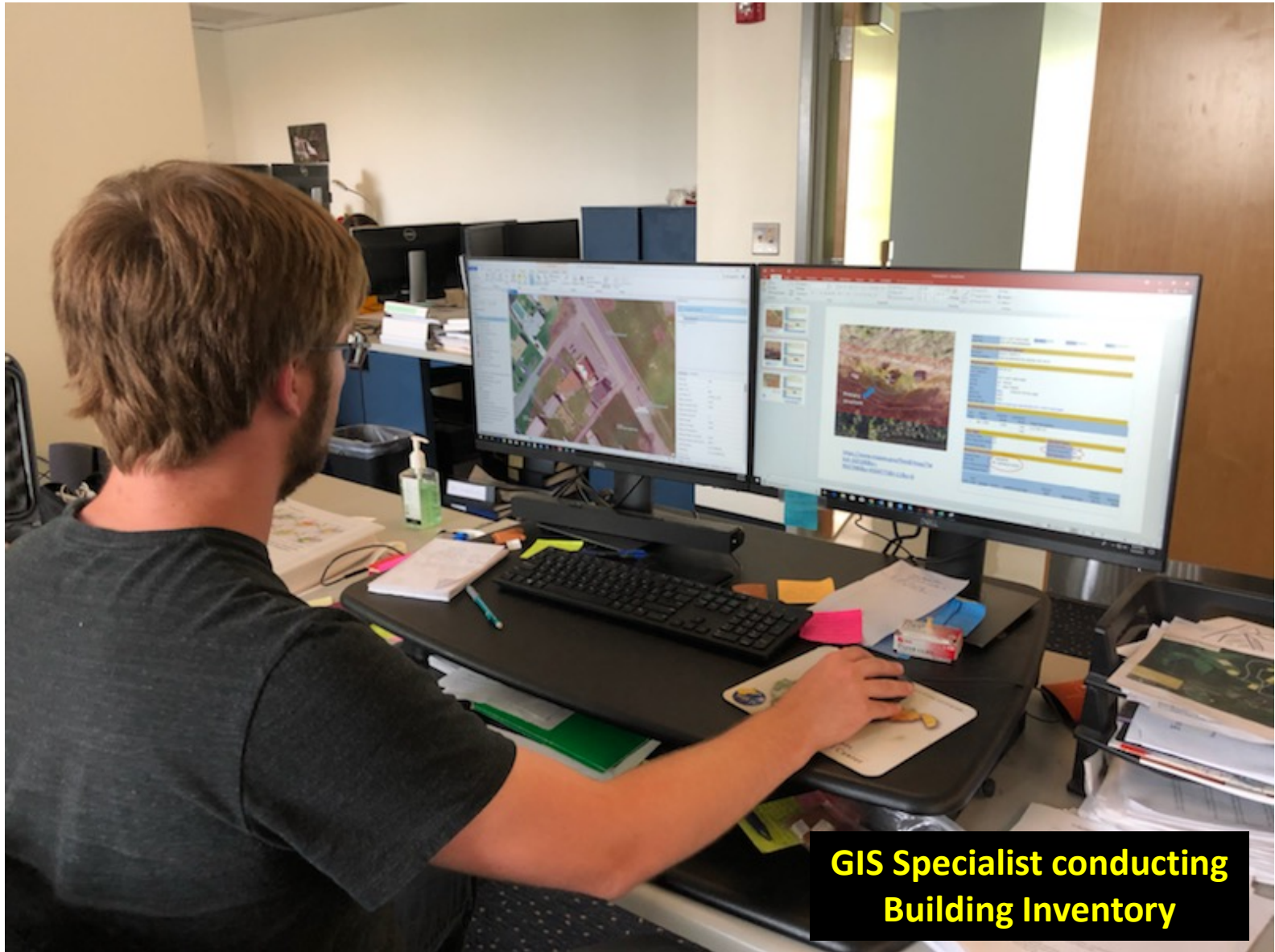


**BUILDING  
INVENTORY &  
ACCURACY  
IMPROVEMENTS**

Building Location  
Building Attributes

### ■ Record Data Issues and Data Gaps

# Building Inventory



**GIS Specialist conducting Building Inventory**

# Building Inventory Workflow

## 1 Initial Processing

- Building Inventory Setup
- Assessment Error Flags
- Execute Building Inventory Process Script (*BIP Script*)



## 2 Building Inventory Processing (BIP)

- Building Inventory Processing (BIP) Feature Class
  - Primary Insurable Structure Identification
  - Modified User-Defined Values
    - Location Identifiers (Parcel ID, E-911 Address)
    - Building Characteristics (Occupancy Class, Stories, Basement, Foundation, First Floor Height, Area, Cost)
  - Data Error Flags
  - Quality Control Checks
- Execute Building Inventory Enhanced Script (*BIE Script*)



## 3 Building Inventory Enhanced (BIE)

- Building Inventory Enhanced (BIE) Table #1 (iterative process to fix errors)
- Building Input FAST (BIF) Table #2 for OpenHazard Flood Loss Utility
- Re-execute Building Inventory Enhanced Script (*BIE Script*) to fix errors



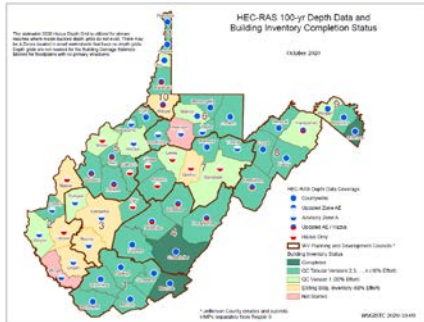
## 4 Hazus Flood Assessment Structure Tool (FAST)

- Inputs: Building Input FAST (BIF) Table #2, DDF Table, Depth Grids
- Output: Building Output FAST (BOF) Table #3
- Execute OpenHazard Flood Assessment Structure Tool (FAST)



## 5 Building-Level Outputs & Verification

- Join Building Inventory Enhanced (BIE) Table #1 and Building Output FAST (BOF) Table #3 to Building Inventory GIS Feature Class
- GIS Product: Building-Level Risk Assessment (BLRA) Feature Class
- Table Product: Merged Individual Building Assessment Table(s) (BLRA)

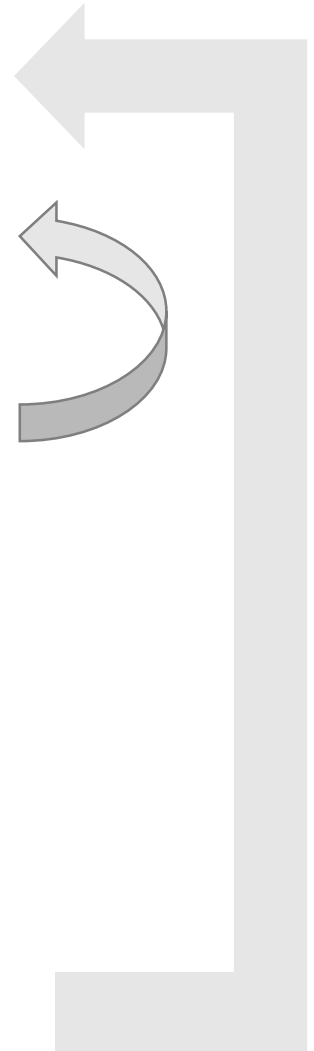


**Step 3:** Building Inventory Enhanced (BIE) – Tabular QC

Unit of work at  
county scale

Blue Text: GIS File

Red Text: Tables



# Building Inventory Workflow

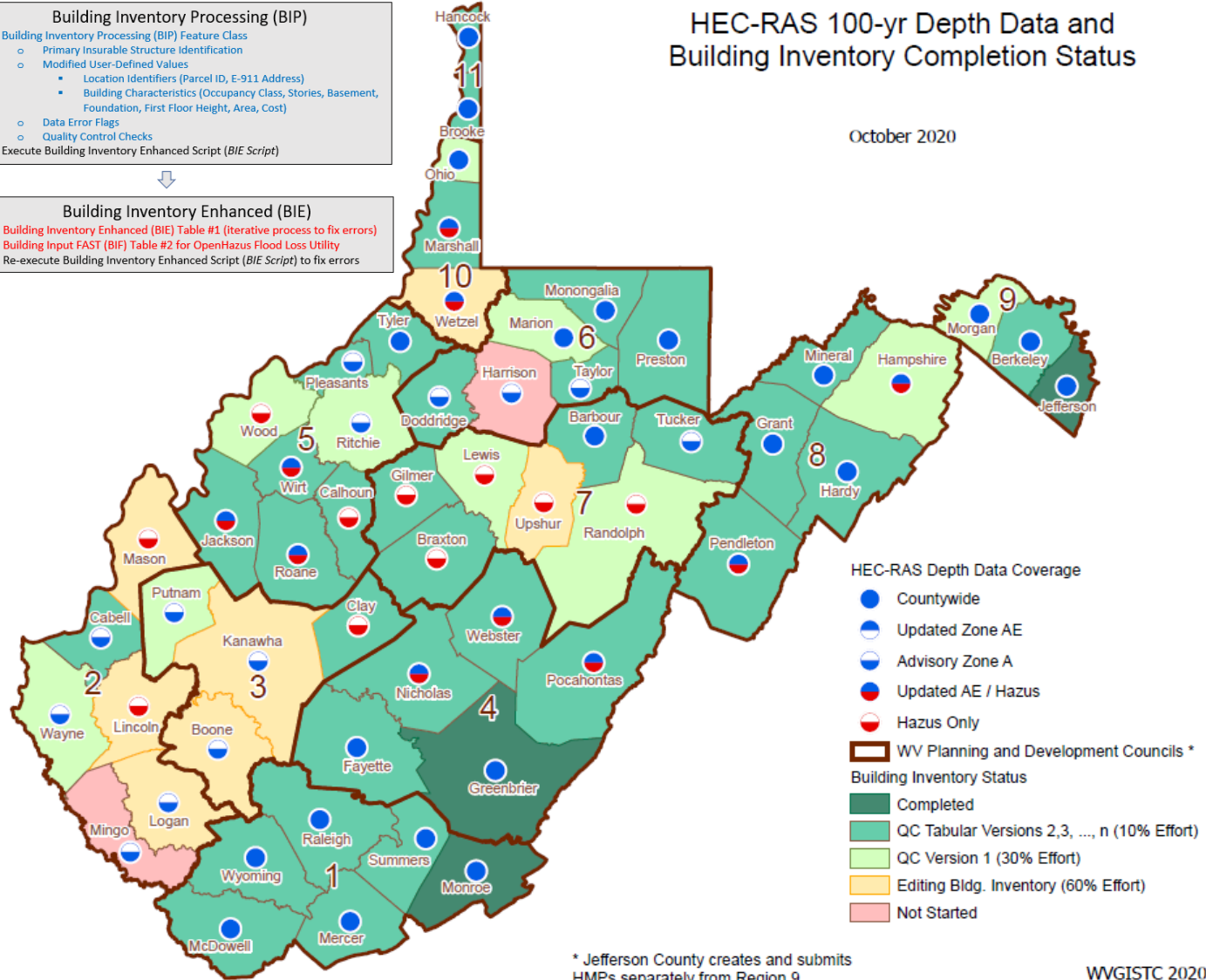
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## HEC-RAS 100-yr Depth Data and Building Inventory Completion Status

October 2020



# Building Definition

*CRS Manual Page 300-4*

## 301.a Definition of “Building”

- 2 or more exterior walls and a roof affixed to a site
- Manufactured (mobile) home
- Travel trailer without wheels



# Primary Structure: Not a Building

CRS Manual Page 300-5

## “Not a Building”

- ✓ Open pavilions, carports, underground pump stations, trailers, etc. are not buildings
- ✓ Accessory structures are not counted



*All primary structures in high-risk flood zones are inventoried.  
Critical infrastructure in moderate-risk flood zones also inventoried.*

# Building Identification Resources

## Building Identification Resource Layers

- Imagery
  - Top Down (Best Leaf Off, 2018 NAIP, Commercial)
  - Oblique
  - Street View (Esri, Bing)
- Parcels
  - Property Lines
  - Assessment Records (building identification, value, owner name, address)
- Site Addresses
- Building Footprints
- Floodplain Boundaries