Residensity Release Notes – *August 2024*

Overview (Update Process & Data Preparation):

- The raw assessor's and 911 point address data was retrieved on Jul 31, 2024 and processed on Aug 1, 2024 .
  - *MassGIS Property Tax Parcels:*
    - The source data was last updated on Jul 23, 2024
  - *MassGIS Master Address Data:*
    - The source data is updated weekly; the team retrieved the Master Address Data on the week of Jul 29, 2024

- 307 out of 351 cities and towns in Massachusetts were updated with newly available assessor data. A detailed table is available below with the fiscal years of each community's assessor data.

- Medway's raw assessor's data accessed on Jul 31, 2024 appeared to be corrupted. The data team elected to impute available raw data for Medway that was last previously retrieved on Mar 27, 2024 .

- The full update was completed on Aug 9, 2024 and the following datasets were uploaded to ArcGIS Online:
  - Massachusetts Town-Level Summary Dataset on Aug 6, 2024
  - Residensity (Massachusetts Parcel Density) Dataset on Aug 12, 2024

Data Accuracy Overview:

- State Level Accuracy:
  - Census Total Housing Units (2020 Decennial): **2,998,537**
  - Residensity Total Housing Units (Aug 2024): **2,991,085**
  - State Level Percent Difference: **0.249%**

- Town Level Accuracy:
  - Average Accuracy: **3.94%**
  - Median Accuracy: **2.58%**
  - Town Level Accuracy Quantiles:
    - Min – **0.01%**

- 25th Percentile – **1.15%**
- Median – **2.58%**
- 75th Percentile – **4.97%**
- Max – **45.88%**

- Block Group Level Accuracy:
    - Comparing Residensity total unit estimates to 2022 ACS 5-Year Housing Unit Estimates at the Block Group Level:
        - Residensity Estimates are within the ACS margin of error for **79.8%** of all Block Groups in Massachusetts.
        - Residensity Estimates are not within the ACS margin of error for **20.2%** of Block Groups in Massachusetts.
    - Block Group Accuracy Quantiles:
        - Min – **0.00%**
        - 25th Percentile – **5.82%**
        - Median – **13.29%**
        - 75th Percentile – **24.35%**
        - Max – **100%**

Note: By their design, Census block groups represent relatively small geographies. The average number of residential units reported by the ACS across all block groups is 588 with an average margin of error of 150 units. Greater levels of variation between our Residensity estimates and the ACS-reported estimates are expected at the block group level.

The data team will rely on this difference analysis to identify block groups with higher levels of heterogeneity to further refine our methodology in specific geographies and reduce these differences in future releases of the Residensity dataset.

Detailed Tables:

1. *City/Town Level Accuracy Tracker (link)*

2. *Block Group Accuracy Tracker (link)*

3. *Assessor Data Fiscal Year Updated Tracker (link)*