



# UMass Donahue Institute Population Estimates Program

*Resources to Support a Successful Local  
Update of Census Addresses for the 2020  
Census (LUCA 2020)*

***October-December 2017  
Workshops***

*Susan Strate, Senior Manager*

*Meghan Flanagan, Research Analyst*

*Matthew Schlaikjer, Research Analyst*



UMASS DONAHUE INSTITUTE  
ECONOMIC & PUBLIC POLICY RESEARCH



# Population Estimates Program Mission

With support from the Massachusetts Secretary of the Commonwealth, the Population Estimate Program's goal is to ensure that the **population estimates** and **counts** produced by the U.S. Census Bureau for Massachusetts geographies are as **accurate** and **comprehensive** as possible.

# UMDI Population Estimates Program Website

[Home](#)

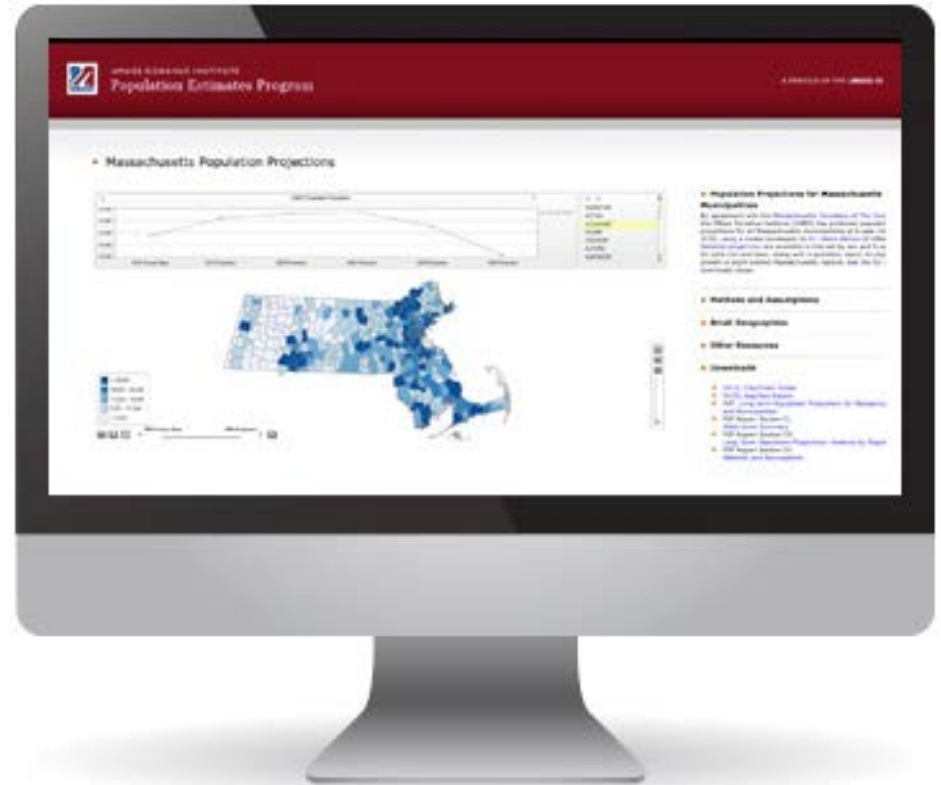
[Population Estimates by Massachusetts Geography](#)

[Population Projections](#)

[Projects and Initiatives](#)

[News & Updates](#)

[PEP Team](#)



<http://www.donahue.umassp.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program>

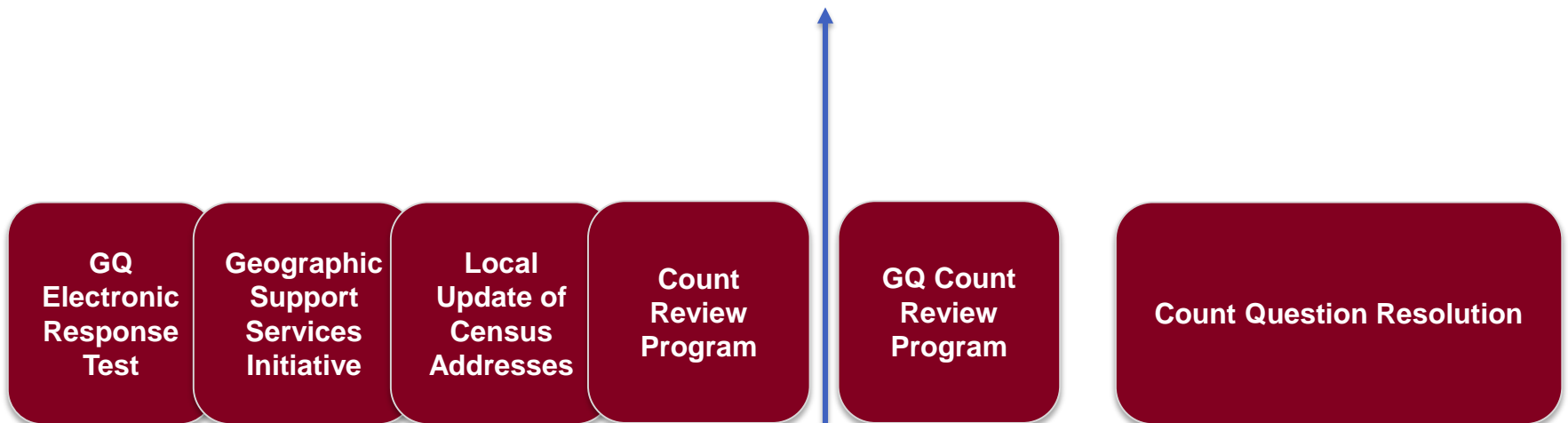


# UMDI PEP Projects and Initiatives

- Produce population estimates and projections
- Annual Group Quarters and Housing Unit Surveys to support Census estimates
- Technical support for Census challenges
- **Decennial Census preparations and review activities**



# Census Preparation & Review Activities



*Build address frame for Census*

*Census review opportunities*

# The 2020 Census is about.....



**DATA**



**MONEY**



**POWER**

# The 2020 Census is about.....



**DATA**

- Accurate Census data supports infrastructure planning, public health, transportation, emergency preparedness, and other public concerns.
- The Census 2020 Count will set the base for annual population estimates, future forecasts, and the American Community Survey for **the next 10 years.**

# The 2020 Census is about.....



## MONEY

- The US Government spent nearly \$590 billion in FY 2015 based on Census data – \$16,118,445,446 or \$16 billion in Massachusetts\*
- Massachusetts per person per year = **\$2,372** in federal funds
- based on 16 large federal assistance programs that distribute funds on basis of Decennial Census

\* - George Washington University report: Counting for Dollars 2020: The Role of the Decennial Census in the Geographic Distribution of Federal Funds (<https://gwipp.gwu.edu/counting-dollars-role-decennial-census-geographic-distribution-federal-funds>)



# LUCA: A little work could pay big dividends

1 mill conversion with 283 units and 1 to 2 residents per unit = ~ \$10 million in federal funds to state and local governments between 2020 and 2030



# The 2020 Census is about.....



Census counts are used to determine the number of representatives Massachusetts gets to send to Congress.

## POWER

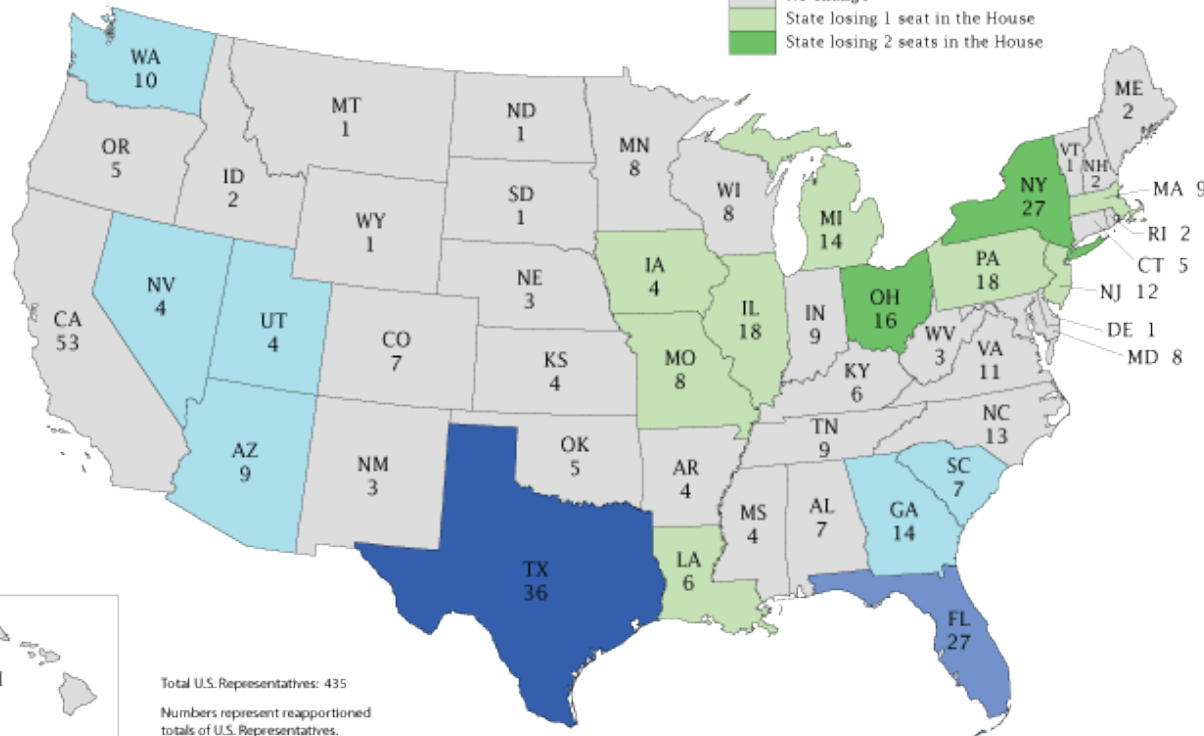
# Reapportionment 2010

Apportionment of the U.S. House of Representatives  
Based on the 2010 Census



Change from 2000 to 2010

- State gaining 4 seats in the House
- State gaining 2 seats in the House
- State gaining 1 seat in the House
- No change
- State losing 1 seat in the House
- State losing 2 seats in the House



*Massachusetts lost one seat in 2010*



Total U.S. Representatives: 435  
Numbers represent reapportioned totals of U.S. Representatives.

U.S. Department of Commerce

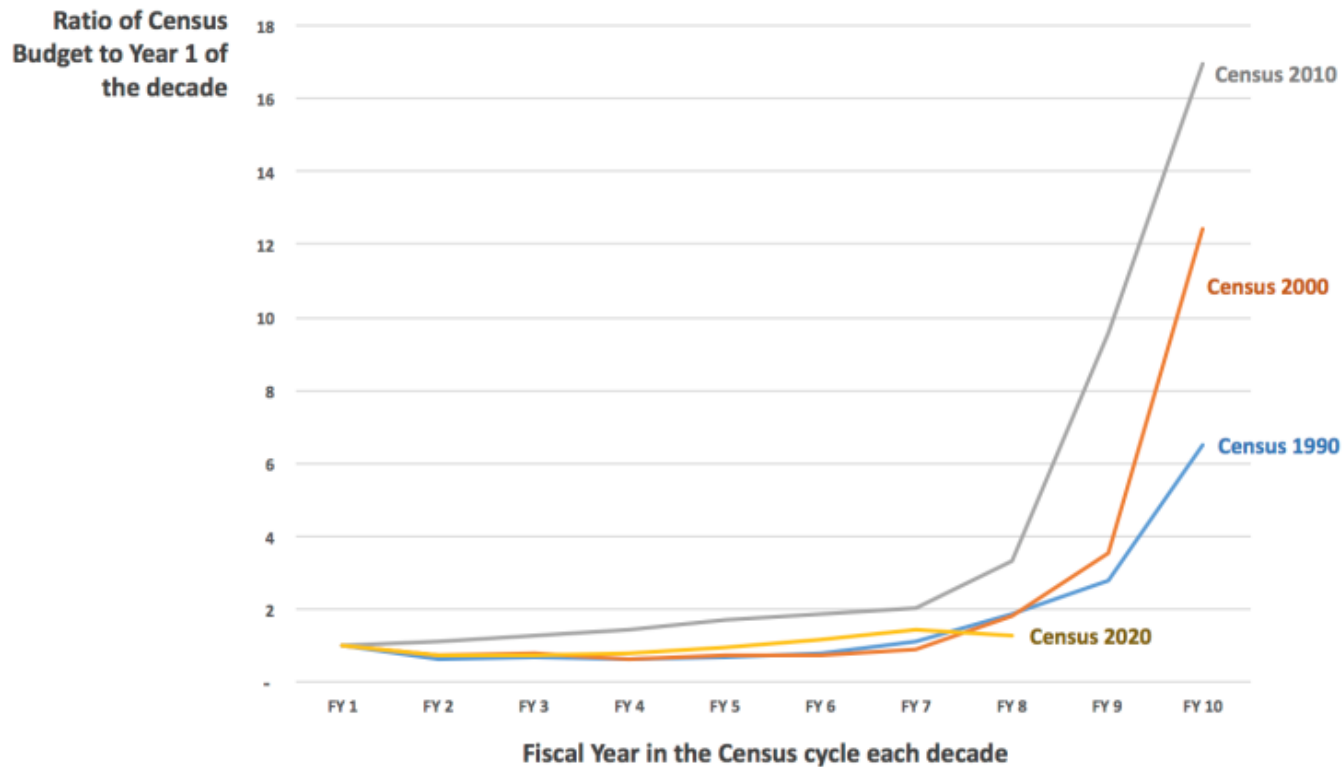
USCENSUSBUREAU  
Making the Nation's Federal Decisions



# “A Census at Risk”

## A Census at Risk

Spending during Four Census Decades



**Sources**

Congressional Research Service, Courtesy Congresswoman Carolyn B. Maloney, (D-NY)  
\*2018 figure from Office of Management & Budget (OMB), as reported by the Washington Post



# UMDI Census 2020 Preparation

- We are developing a list of residential addresses at the state-level
- Goal is to create a comprehensive list to compare against Census Master Address File

MassGIS  
Master  
Address  
Database

Level 3  
Assessors  
Parcel  
Data

Voter  
Address  
Lists



# UMDI Census 2020 Preparation

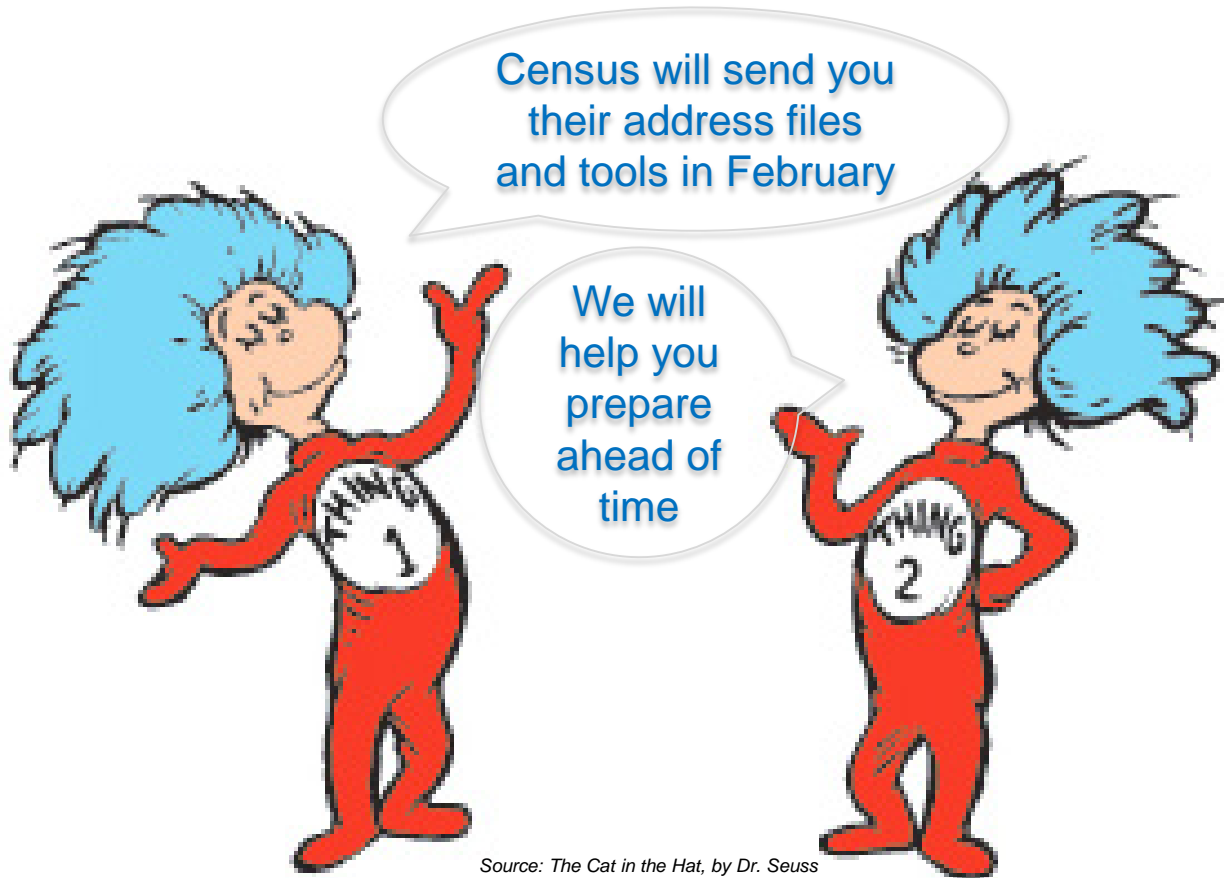
- We are developing a list of residential addresses at the state-level
- Goal is to create a comprehensive list to compare against Census Master Address File

Comprehensive,  
includes XY  
coordinates

Land use  
codes

Confirms  
residential  
status

# UMDI LUCA Resources: Two Products



# UMDI LUCA Resources: Two Products



Census 2010  
vs. Census  
2017 Housing  
Units



Census 2017  
vs. UMDI 2017  
Housing Units



# UMDI LUCA Resources : Two Products



**Census 2010  
vs. Census  
2017 Housing  
Units**

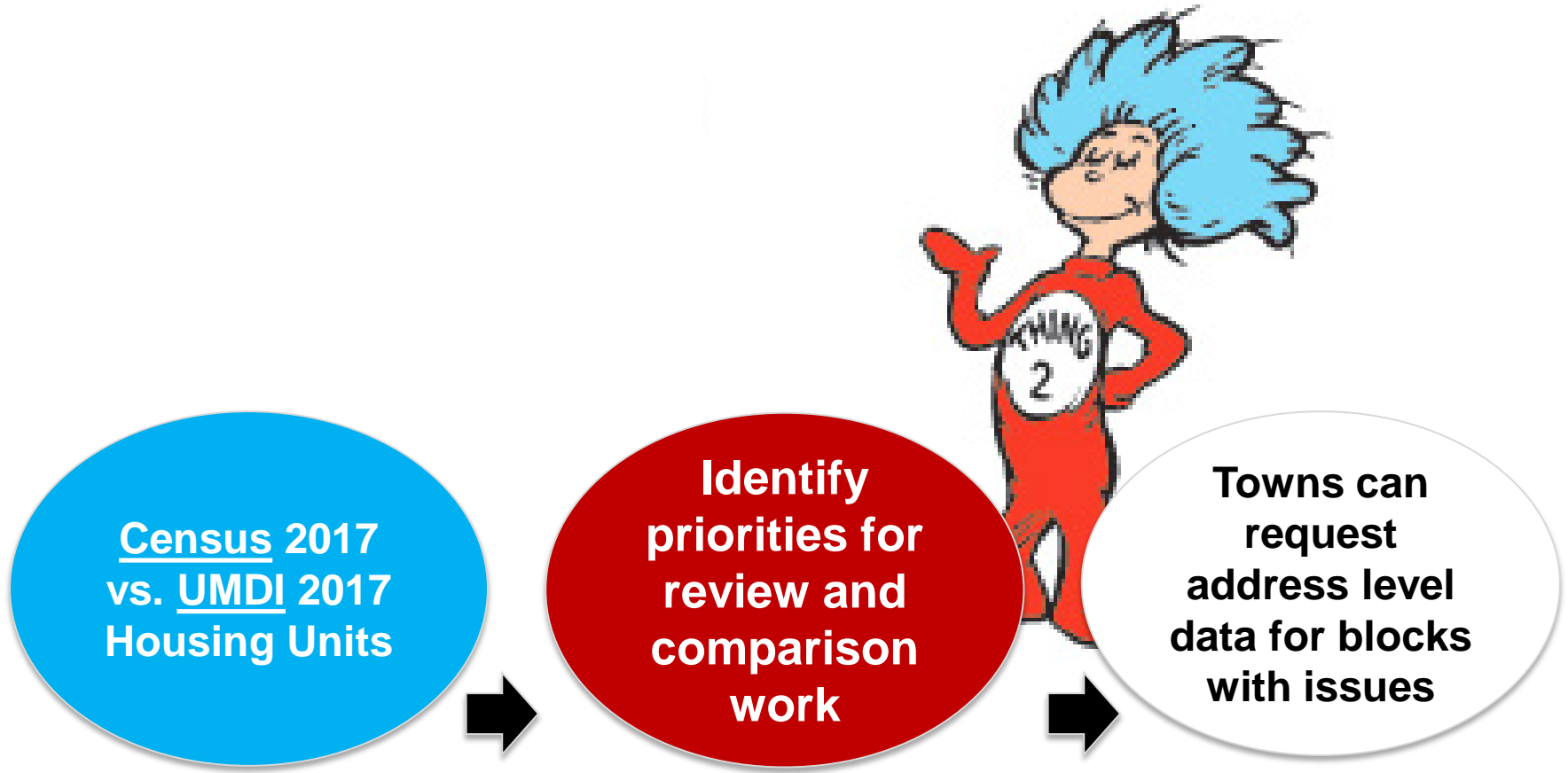


**Identify areas  
where Census  
has or has not  
caught new  
growth**



**Begin to  
compile  
address lists  
for areas the  
Bureau has  
missed**

# UMDI LUCA Resources : Two Products



# UMDI LUCA Resources : Two Products

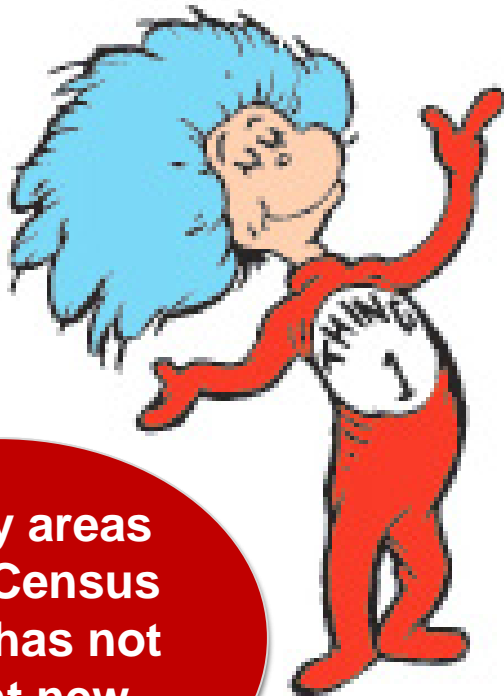


**Online now**



**Preliminary  
files are in  
development  
now**

# UMDI LUCA Resource #1



Identify areas where Census has or has not caught new growth

### Housing Unit Change by Census Block 2010 - 2017

To prepare for the Local Update of Census Addresses (LUCA), the U.S. Census Bureau released updated counts of residential addresses by block for the entire country in January 2017. These housing unit counts can be compared with local address lists to identify discrepancies where the Census Bureau's Master Address File might be missing residential addresses. Participants in LUCA will have the opportunity to submit new or missing residential addresses to the Census Bureau to ensure that the 2020 Census count is as complete as possible.

The map below displays the difference between the 2010 housing unit counts by block and the 2017 housing unit counts. Select an option from the drop down menu to view a map of your city.

This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth.

Select your city/town:  
ABINGTON

>> Click the box to download the data for your city/town.

>> Click the Excel icon to download the data for the entire state.

### ABINGTON

Pan and zoom using the toolbar to the left. Click the "Zoom Home" button to reset the map before selecting a new city/town in the menu above.

HU change 2010-2017

- <= -6
- 5 to -1
- 0
- 1 to 2
- 3 to 10
- >= 11

© OpenStreetMap contributors  
Return to the UMDI-PEP website: <http://www.donahue.umasspep.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program>

# UMDI LUCA Resource #1

## Housing Unit Change by Census Block 2010 - 2017

To prepare for the Local Update of Census Addresses (LUCA), the U.S. Census Bureau released updated counts of residential addresses by block for the entire country in January 2017. These housing unit counts can be compared with local address lists to identify discrepancies where the Census Bureau's Master Address File might be missing residential addresses. Participants in LUCA will have the opportunity to submit new or missing residential addresses to the Census Bureau to ensure that the 2020 Census count is as complete as possible.

The map below displays the difference between the 2010 housing unit counts by block and the 2017 housing unit counts. Select an option from the drop down menu to view a map of your city.

This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth.

Select your city/town:

ABINGTON

Select your city or town here

>> Click the box to download the data for your city/town.



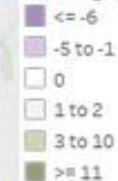
>> Click the Excel icon to download the data for the entire state.



## ABINGTON

Pan and zoom using the toolbar to the left. Click the "Zoom Home" button to reset the map before selecting a new city/town in the menu above.

HU change 2010-2017





This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth. If you have questions about this dashboard, please contact Meghan Flanagan (MFlanagan@donahue.umassp.edu) or Matt Schlaikjer (MSchlaikjer@donahue.umassp.edu).

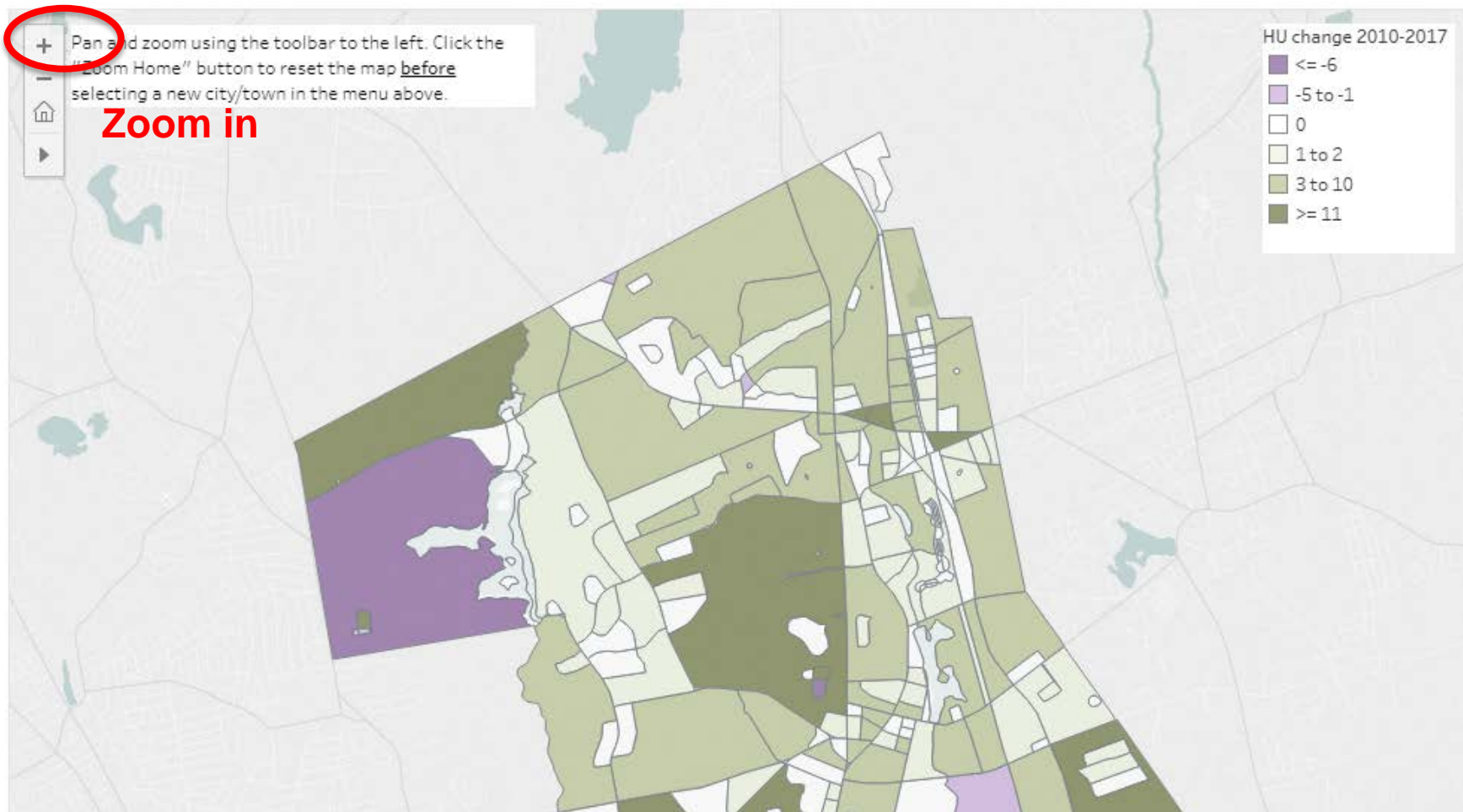
>> Click the box to download the data for your city/town.



>> Click the Excel icon to download the data for the entire state.



## ABINGTON



# Census 2010 to 2017 Housing Unit Change



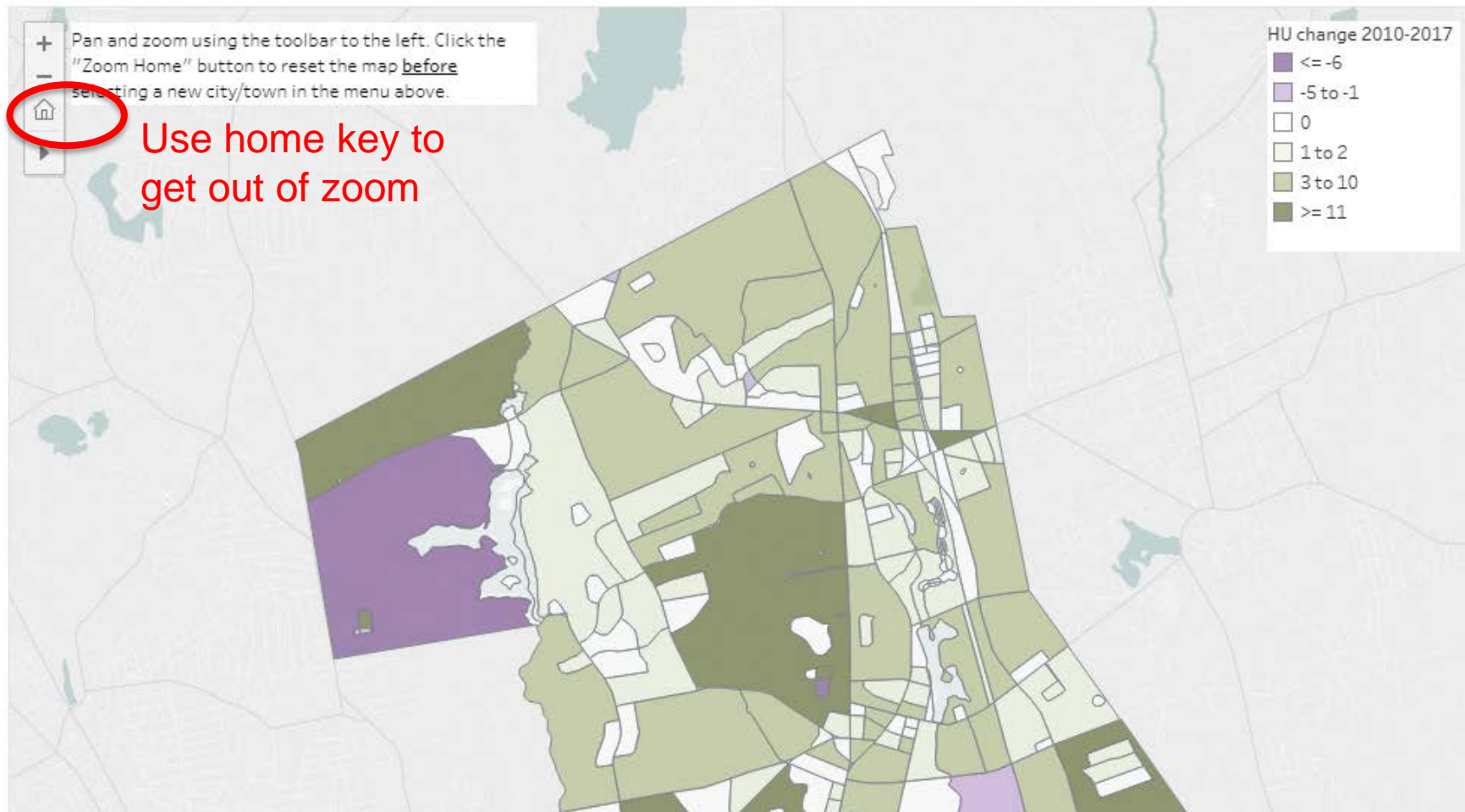
This map was created by the UMass Donahue's Institute Population Estima Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth. If you have questions about this dashboard, please contact Megan Flanagan (MFlanagan@donahue.umassp.edu) or Matt Schlaikjer (MSchlaikjer@donahue.umassp.edu).

## Download counts for your city or town



>> Click the Excel icon to download the data for the entire state.

### ABINGTON





# Census 2010 to 2017 Housing Unit Change

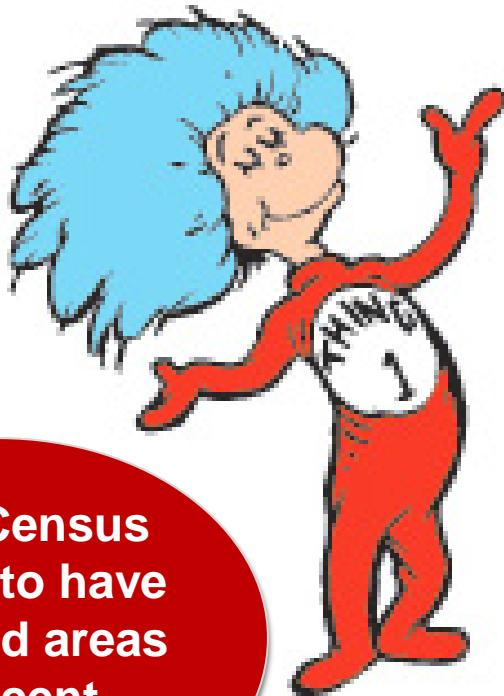
BLOCK_GEOID_2010	County	County_ID	Town	Town_ID	HU Change 2010-2017	HU Count 2010	HU Estimate 2017
25_023_502200_3008	PLYMOUTH	23	ABINGTON	1	0	0	0
25_023_520100_1000	PLYMOUTH	23	ABINGTON	1	1	0	1
25_023_520100_1001	PLYMOUTH	23	ABINGTON	1	1	14	15
25_023_520100_1002	PLYMOUTH	23	ABINGTON	1	1	19	20
25_023_520100_1003	PLYMOUTH	23	ABINGTON	1	0	10	10
25_023_520100_1004	PLYMOUTH	23	ABINGTON	1	1	19	20
25_023_520100_1005	PLYMOUTH	23	ABINGTON	1	0	6	6
25_023_520100_1006	PLYMOUTH	23	ABINGTON	1	1	26	27
25_023_520100_1007	PLYMOUTH	23	ABINGTON	1	0	0	0
25_023_520100_1008	PLYMOUTH	23	ABINGTON	1	0	0	0
25_023_520100_1009	PLYMOUTH	23	ABINGTON	1	0	0	0

# Census 2010 to 2017 Housing Unit Change

BLOCK_GEOID_2010	County	County_ID	Town	Town_ID	HU Change 2010-2017	HU Count 2010	HU Estimate 2017
25_023_520202_3015	PLYMOUTH				99	69	168
25_023_520202_2011	PLYMOUTH			1	59	43	102
25_023_520202_3011	PLYMOUTH			1	41	407	448
25_023_520100_3000	PLYMOUTH			1	26	95	121
25_023_520202_1007	PLYMOUTH	23	ABINGTON	1	26	205	231
25_023_520100_3016	PLYMOUTH	23	ABINGTON	1	12	30	42
25_023_520201_1017	PLYMOUTH	23	ABINGTON	1	12	35	47
25_023_520100_4002	PLYMOUTH	23	ABINGTON	1	11	81	92
25_023_520201_2009	PLYMOUTH	23	ABINGTON	1	11	44	55
25_023_520201_2014	PLYMOUTH	23	ABINGTON	1	11	21	32
25_023_520100_1018	PLYMOUTH	23	ABINGTON	1	10	18	28

Can be sorted Z-A to see blocks with greatest change 2010-2017

# UMDI LUCA Resource #1



Does Census appear to have captured areas of recent growth?

### Housing Unit Change by Census Block 2010 - 2017

To prepare for the Local Update of Census Addresses (LUCA), the U.S. Census Bureau released updated counts of residential addresses by block for the entire country in January 2017. These housing unit counts can be compared with local address lists to identify discrepancies where the Census Bureau's Master Address File might be missing residential addresses. Participants in LUCA will have the opportunity to submit new or missing residential addresses to the Census Bureau to ensure that the 2020 Census count is as complete as possible.

The map below displays the difference between the 2010 housing unit counts by block and the 2017 housing unit counts. Select an option from the drop down menu to view a map of your city.

This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth.

Select your city/town:  
ABINGTON

>> Click the box to download the data for your city/town.

>> Click the Excel icon to download the data for the entire state.

### ABINGTON

Pan and zoom using the toolbar to the left. Click the "Zoom Home" button to reset the map **before** selecting a new city/town in the menu above.

HU change 2010-2017

- <= -6
- 5 to -1
- 0
- 1 to 2
- 3 to 10
- >= 11

© OpenStreetMap contributors  
Return to the UMDI-PEP website: <http://www.donahue.umasspep.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program>

# UMDI LUCA Resource #1



**If not, start compiling address lists for the neighborhoods they have missed!**

### Housing Unit Change by Census Block 2010 - 2017

To prepare for the Local Update of Census Addresses (LUCA), the U.S. Census Bureau released updated counts of residential addresses by block for the entire country in January 2017. These housing unit counts can be compared with local address lists to identify discrepancies where the Census Bureau's Master Address File might be missing residential addresses. Participants in LUCA will have the opportunity to submit new or missing residential addresses to the Census Bureau to ensure that the 2020 Census count is as complete as possible.

The map below displays the difference between the 2010 housing unit counts by block and the 2017 housing unit counts. Select an option from the drop down menu to view a map of your city.

This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth.

Select your city/town:  
ABINGTON

>> Click the box to download the data for your city/town.

>> Click the Excel icon to download the data for the entire state.

### ABINGTON

Pan and zoom using the toolbar to the left. Click the "Zoom Home" button to reset the map **before** selecting a new city/town in the menu above.

HU change 2010-2017

- <= -6
- 5 to -1
- 0
- 1 to 2
- 3 to 10
- >= 11

© OpenStreetMap contributors  
Return to the UMDI-PEP website: <http://www.donahue.umasspep.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program>

# UMDI LUCA Resource #2

## 2017 Census vs UMDI Housing Unit Counts by Census Block

To prepare for the Local Update of Census Addresses (LUCA), the U.S. Census Bureau released updated counts of residential addresses by block for the entire country in January 2017. These housing unit counts can be compared with local address lists to identify discrepancies where the Census Bureau's Master Address File might be missing residential addresses. Participants in LUCA will have the opportunity to submit new or missing residential addresses to the Census Bureau to ensure that the 2020 Census count is as complete as possible.

The map below displays the difference between the 2017 MAF counts and the UMDI-PEP residential address list database. Select an option from the drop down menu to view a map of your city.

This map was created by the UMass Donahue's Institute Population Estimates Program (UMDI-PEP) in collaboration with the Office of the Secretary of the Commonwealth.

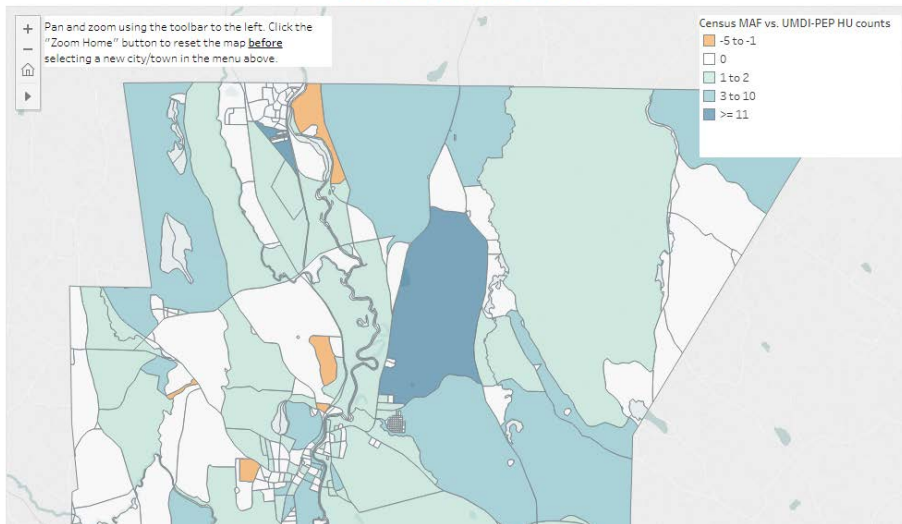
Select your city/town:  
GREAT BARRINGTON

>> Click the box to download the data for your city/town.

>> Click the Excel icon to download the data for the entire state.



### GREAT BARRINGTON



“Thing 2” will provide current comparisons

2017 Housing Units Census vs. 2017 Housing Units UMDI

Identify priorities for additional review and comparison work



# 2017 UMDI MAD vs. Census MAF counts

BLOCK_GEOID_2010	County	County_ID	Town	Town_ID	UM vs. Census	Census 2017	UMDI 2017
25_023_520202_3015	PLYMOUTH	23	ABINGTON	1	99	69	168
25_023_520202_2011	PLYMOUTH	23	ABINGTON	1	59	43	102
25_023_520202_3011	PLYMOUTH	23	ABINGTON	1	41	407	448
25_023_520100_3000	PLYMOUTH	23	ABINGTON	1	26	95	121
25_023_520202_1007	PLYMOUTH	23	ABINGTON	1	26	205	231
25_023_520100_3016	PLYMOUTH	23	ABINGTON	1	12	30	42
25_023_520201_1017	PLYMOUTH	23	ABINGTON	1	12	35	47
25_023_520100_4002	PLYMOUTH	23	ABINGTON	1	11	81	92
25_023_520201_2009	PLYMOUTH	23	ABINGTON	1	11	44	55
25_023_520201_2014	PLYMOUTH	23	ABINGTON	1	11	21	32
25_023_520100_1018	PLYMOUTH	23	ABINGTON	1	10	18	28

# UMDI LUCA Resource #2

Now  
what???

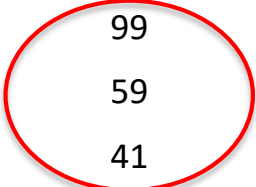


2017 counts  
from MAF vs.  
2017 counts  
from UMDI

# Identify Priority Blocks

BLOCK_GEOID_2010	County	County_ID	Town	Town_ID	UM vs. Census	Census 2017	UMDI 2017
25_023_520202_3015	PLYMOUTH	23	ABINGTON	1	99	69	168
25_023_520202_2011	PLYMOUTH	23	ABINGTON	1	59	43	102
25_023_520202_3011	PLYMOUTH	23	ABINGTON	1	41	407	448
25_023_520100_3000	PLYMOUTH	23	ABINGTON	1	26	95	121
25_023_520202_1007	PLYMOUTH	23	ABINGTON	1	26	205	231
25_023_520100_3016	PLYMOUTH	23	ABINGTON	1	12	30	42
25_023_520201_1017	PLYMOUTH	23	ABINGTON	1	12	35	47
25_023_520100_4002	PLYMOUTH	23	ABINGTON	1	11	81	92
25_023_520201_2009	PLYMOUTH	23	ABINGTON	1	11	44	55
25_023_520201_2014	PLYMOUTH	23	ABINGTON	1	11	21	32
25_023_520100_1018	PLYMOUTH	23	ABINGTON	1	10	18	28

Identify your priority blocks





# Request UMDI address list

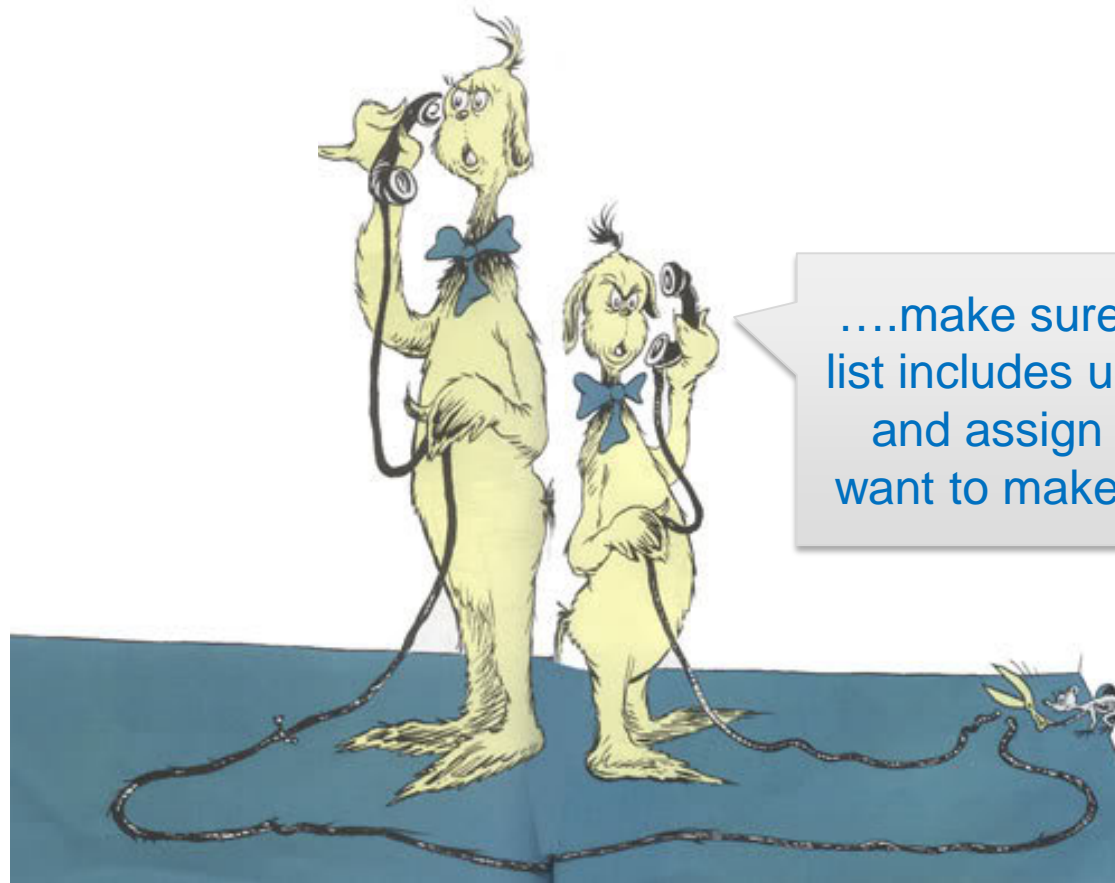
I need a copy of my address list!

We can send you the **UMDI** address list compiled from state sources to get you started.

Census will send your official LUCA review list in February!

*Source: One Fish Two Fish Red Fish Blue Fish, by Dr. Seuss*

# OR use your own address list



....make sure your address list includes unit designators and assign blocks if you want to make comparisons!

Source: *One Fish Two Fish Red Fish Blue Fish*, by Dr. Seuss

# Filter Address List by Blocks of Interest

25\_013\_813601\_1024  
25\_013\_813601\_1032

Sort & Filter

UM_ID	ADD_NO	STREET	SUBADDRESS	ZIP	CITY	BLOCK_GEOID_2010	LAT	LONG	TYPE	USE_CODE
1278498	1	SCHOOL STREET	1	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278503	1	SCHOOL STREET	3	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278504	1	SCHOOL STREET	4	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278505	1	SCHOOL STREET	5	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278506	1	SCHOOL STREET	6	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278510	1	GLENBROOK LANE	19	02474	ARLINGTON	25_013_813601_1032	42.427118	-71.172768	Residential	101
1278511	1	GLENBROOK LANE	BASEMENT	02474	ARLINGTON	25_013_813601_1032	42.427118	-71.172768	Residential	101
1278512	1	HARVARD STREET	1	02476	ARLINGTON	25_013_813601_1032	42.422803	-71.178416	Residential	104
1278513	1	LAUREL STREET	1	02476	ARLINGTON	25_013_813601_1032	42.421194	-71.169572	Residential	105
1278514	1	LAUREL STREET	2	02476	ARLINGTON	25_013_813601_1032	42.421194	-71.169572	Residential	105
1278515	1	LAUREL STREET	3	02476	ARLINGTON	25_013_813601_1032	42.421194	-71.169572	Residential	105
1278517	1	OLD COLONY LANE	10	02476	ARLINGTON	25_013_813601_4009	42.421819	-71.171103	Residential	102
1278518	1	OLD COLONY LANE	11	02476	ARLINGTON	25_013_813601_4009	42.421819	-71.171103	Residential	102
1278519	1	OLD COLONY LANE	12	02476	ARLINGTON	25_013_813601_4009	42.421819	-71.171103	Residential	102

# Review and Prepare Addresses

- 1) Remove duplicates
- 2) Check unit designations
- 3) Check residential status
- 4) Supplement with missing data
- 5) Format to Census specifications

UM_ID	ADD_NO	STREET	SUBADDRESS	ZIP	CITY	BLOCK_GEOID_2010	LAT	LONG	TYPE	USE_CODE
1278498	1	SCHOOL STREET	1	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278503	1	SCHOOL STREET	3	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278504	1	SCHOOL STREET	4	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278505	1	SCHOOL STREET	5	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102
1278506	1	SCHOOL STREET	6	02474	ARLINGTON	25_013_813601_1024	42.427114	-71.186560	Residential	102



# Why should my town participate in LUCA?

- Data Lag!

MassGIS, Assessor's, and voter address data used in our address database all have some inherent lag period in gathering and processing.

- Imperfect Database

May include duplicates, may have mis-assigned unit identifiers or misclassified use



# Why should my town participate in LUCA?

- Local knowledge

  - New units and facilities

  - Unit numbering: 1, 2, 3 vs. A, B, C

  - “Under the roof” changes and conversions

  - In-law apartments

  - Reviewing duplicate, inaccurate, or missing records

- Increased emphasis on in-office canvassing for Census 2020 makes your local knowledge even more important!

# In-Office Canvassing



# In-Office Canvassing



Acton, MA 2017



# In-Office Canvassing: Conversions



# In-Office Canvassing: Conversions



# Under-the-Roof Conversions

NEWS ABOUT LIVE HERE PROGRESS PHOTOS CONTACT HISTORY BLOG



LIVE AND PLAY IN THE HEART OF HOLYOKE'S INNOVATION DISTRICT

The Cubit is a former factory building in the center of Holyoke, Massachusetts. This renovation will yield **18 Apartment Lofts** with salient features such as spacious floors, high ceilings, and large bright windows.



APARTMENT LOFTS



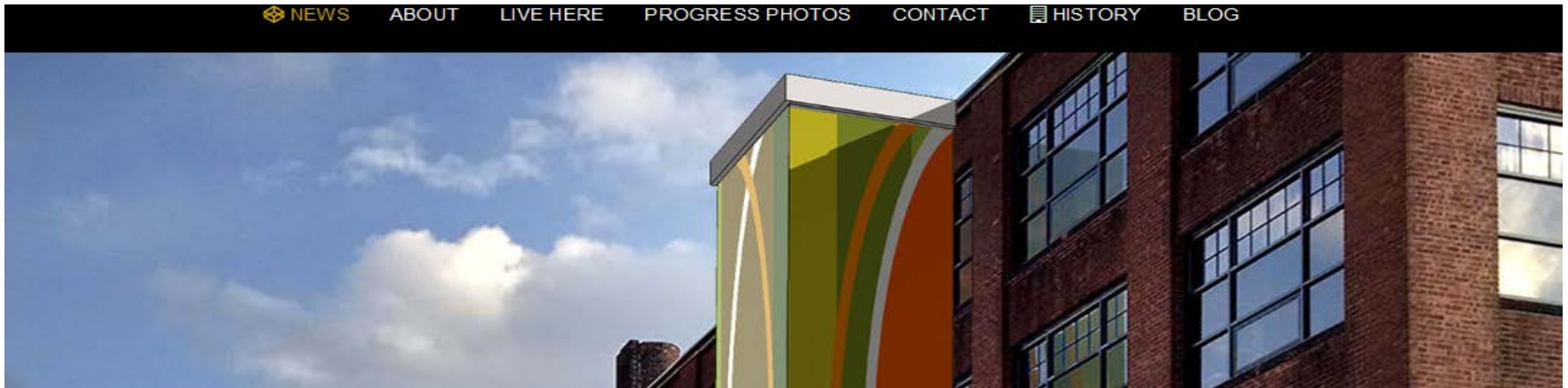
CANAL MARKET



PARKING



# Under-the-Roof Conversions



18 Units x 1-2 persons each = \$640k in federal funding to state and local government from 2020 to 2030.

# LUCA Next Steps

- Register for LUCA by **December 15, 2017**
- Attend a **training workshop** (Fall 2017)
- Locate **current address lists and start preparing** (work on unit identifiers, tag new or hard-to-find unit)
- Use Thing 1 and Thing 2 to identify priorities
- SOC will contact you when Thing 2 is available



The graphic features a yellow header with the text 'Local Update of Census Addresses (LUCA)'. Below this, a circular icon shows a house with '123 Main St.' written below it. To the right, the main title 'LUCA Invitation Begins' is displayed in large, bold letters, followed by the subtitle '39,000 Governments Invited to Participate'. A central illustration shows a stack of envelopes with a dotted line path leading to a government building icon. Below this, a calendar icon highlights 'December 15' with the text 'Registration deadline: December 15, 2017'. At the bottom, there is a footer with logos for 'United States Census 2020', 'U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU census.gov', and a source note: 'Source: 2020 Census Local Update of Census Addresses Operation www.census.gov/geo/partnerships/luca'.

LUCA  
Local Update of Census Addresses (LUCA)

**LUCA Invitation Begins**  
39,000 Governments Invited to Participate

123 Main St.

Registration forms sent to eligible governments to prepare for the 2020 Census: **July-August 2017**

Registration deadline:  
**December 15, 2017**

United States  
**Census 2020**

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU  
[census.gov](http://census.gov)

Source: 2020 Census Local Update of Census Addresses Operation  
[www.census.gov/geo/partnerships/luca](http://www.census.gov/geo/partnerships/luca)

# *Thank you!*

## **Susan Strate**

Senior Manager, Population Estimates Program  
Economic and Public Policy Research

UMass Donahue Institute

100 Venture Way, Suite 9

Hadley, MA 01035

<http://www.donahue.umassp.edu>

[sstrate@donahue.umassp.edu](mailto:sstrate@donahue.umassp.edu)

(413) 577-0753

