In-Office Address Canvassing for the 2020 Census: an Overview of Operations and Initial Findings

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In-Office Address Canvassing for the 2020 Census: an Overview of Operations and Initial Findings

- Overview of 2020 Census Operations
  - Ongoing Maintenance and Updates
  - Address Canvassing
  - Reengineered Canvassing
    - Research and Development
    - Status Update
  - LUCA
  - Preliminary Results of Changes in the Built Landscape

Decennial Census

The purpose is to **conduct** a census of population and housing and **disseminate** results to the President, the States and the American People

Uses of Census data:

- **Apportioning** representation among states as mandated by Article 1, Section 2 of the US Constitution
- **Drawing** congressional and state legislative districts, school districts and voting precincts
- **Enforcing** voting rights and civil rights legislation
- **Distributing** federal dollars
- **Informing** planning decisions of tribal, federal, state and local government and organizational decisions (e.g., where to locate, size of market, etc.) of businesses and non-profits

The 2020 Census: A New Design for the 21st Century

Motivate People to Respond

Conduct a nation-wide communications and partnership campaign

Maximize outreach using traditional and new media

Target ads to specific audiences

Work with trusted sources to inspire participation.

Count the Population

Collect data from all households, including group and unique living arrangements

Make it easy for people to respond anytime, anywhere

Encourage people to use the new online response option

Use the most cost-effective strategy to contact and count nonrespondents

Knock on doors only when necessary

Streamline in-field census-taking

TELEPHONE AND PAPER SELF-RESPONSE

NONRESPONSE FOLLOWUP

INTERNET SELF-RESPONSE

Establish Where to Count

Identify all addresses where people could live

IN-FIELD

IN-OFFICE

Conduct a 100% review and update of the nation's address list

Minimize field work with in-office updating

Use multiple data sources to identify areas with address changes

Get local government input

Release Census Results

Process and Provide Census Data

Deliver apportionment counts to the President by December 31, 2020

Release counts for redistricting by April 1, 2021

Make it easier for the public to get data

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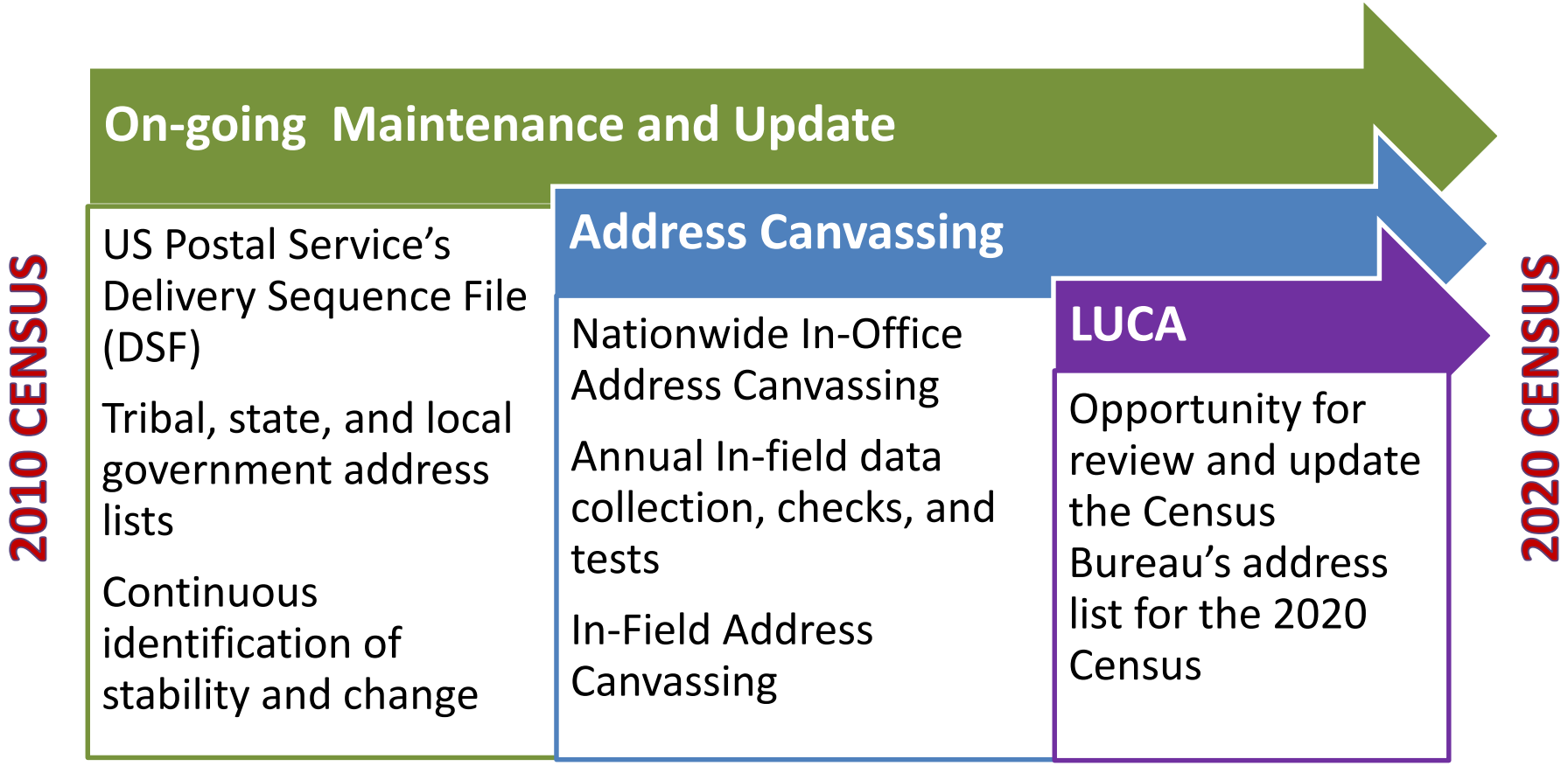
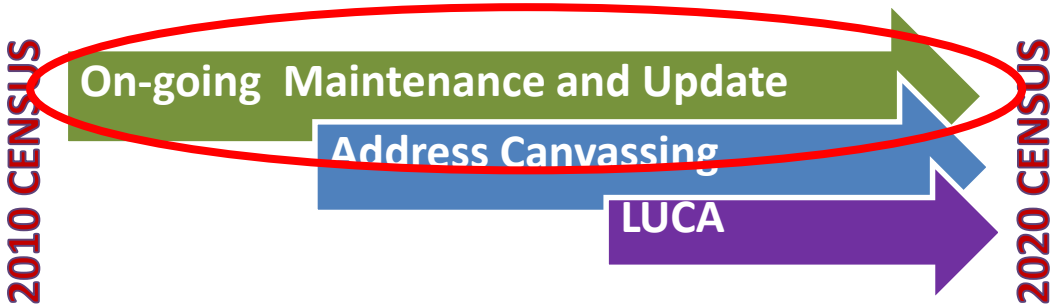
Maintaining an Accurate Address List



Datasets Used in Updating, Maintaining, and Evaluating the Master Address File (MAF)

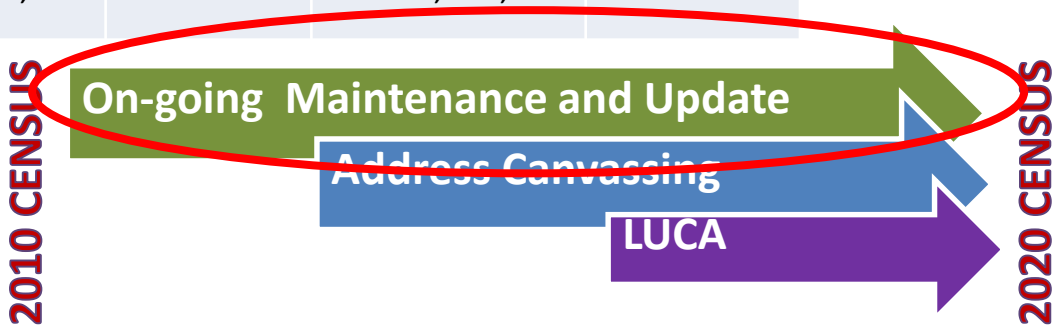
- US Postal Service Delivery Sequence File (DSF) and related products
  - Locatable Address Conversion Service (LACS) file
  - Enhanced Line of Travel (eLot)
- Tribal, state, and local government address lists and parcel (cadastre) files
  - Provided through Geographic Support System partnership activities
  - Accessed on-line for in-office update programs
  - Provided through the Local Update of Census Addresses (LUCA) program
- Building permits data (change detection; MAF analysis)
- Commercial address lists



Delivery Sequence File

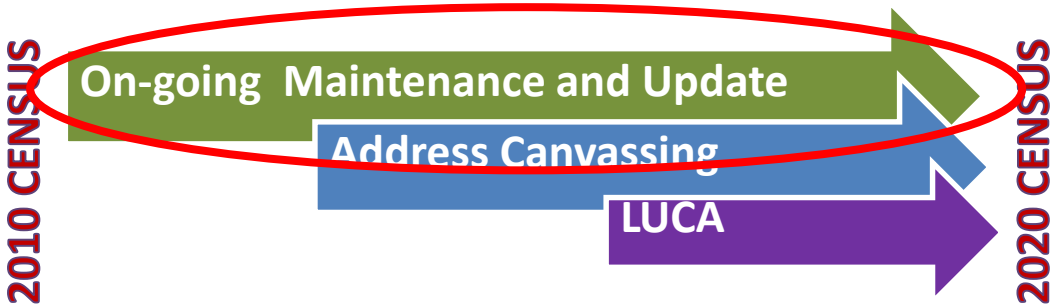
Records Added or Matched to the MAF, 2010-2017

Year	Number of DSF Residential Addresses	Residential Addresses that are New to the DSF	New DSF Residential Addresses Matched to the MAF		New DSF Residential Addresses Added to the MAF	
			Number	Percent	Number	Percent
2017	128,674,723	894,069	148,293	16.6	745,776	83.4
2016	127,228,148	1,681,768	745,092	44.3	936,676	55.7
2015	125,109,346	719,483	138,532	19.2	580,951	80.8
2014	124,093,231	1,074,852	222,985	20.7	851,867	79.3
2013	122,165,378	323,957	87,008	26.9	236,949	73.1
2012	122,319,728	626,494	183,328	29.3	443,166	70.7
2011	121,591,739	625,495	220,209	35.2	405,286	64.8
2010	121,209,935	873,429	420,198	48.1	453,231	51.9
Total 2010-2017		6,819,547	2,165,645	31.8	4,653,902	68.2



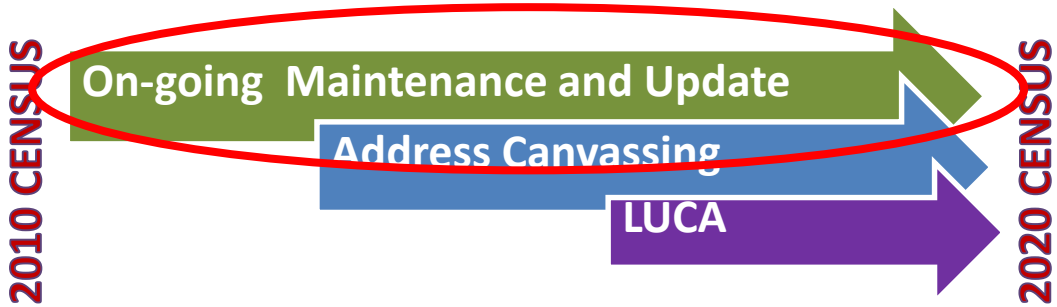
Address Improvements from Tribal, State, and Local Government Address Lists, 2012-2017

Address Improvement	Number of Addresses
Addresses received	104,363,558
Addresses accepted for use in updating the MAF	83,312,316
Addresses updating information for existing addresses in MAF	82,976,258
New addresses added to the MAF	336,058
Addresses for which partner files provided new or improved latitude/longitude coordinates	65,095,658
MAF addresses for which geocodes were corrected by partner data	1,434,342
Previously un-geocoded MAF addresses geocoded using partner data	1,245,832



Commercial Address Lists Matched to the MAF, 2016

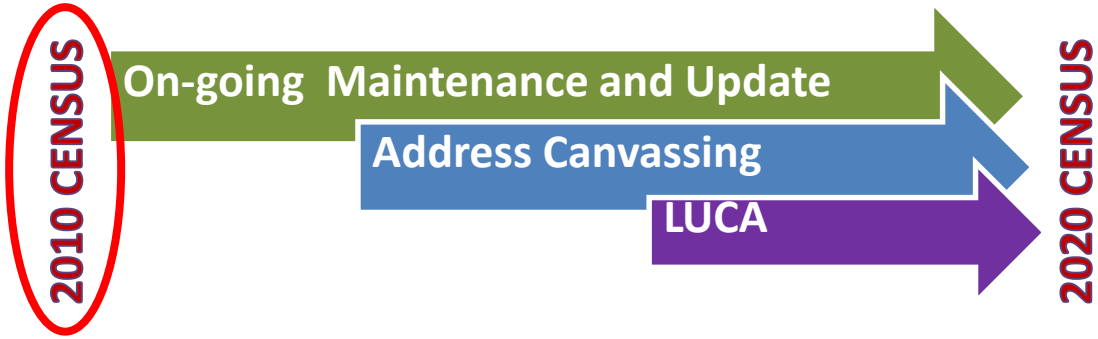
Vendor	Usable Addresses	Number of Usable Addresses Matched to MAF Addresses	Percentage of Usable Addresses Matched to MAF Addresses	Number of Usable Addresses Matching DSF Addresses	Percent of Usable Addresses Matching to DSF-confirmed Addresses
1	120,270,430	119,529,128	99.4	109,628,663	91.1
2	102,313,410	95,822,185	93.6	86,407,653	84.4
3	152,581,321	148,730,349	97.5	140,071,903	91.8
4	98,037,776	90,919,679	92.7	81,894,085	83.5
5	111,040,589	109,148,391	98.3	100,483,496	90.5



2010 Census Address Canvassing

Setting the Stage for Reengineered Address Canvassing

- Covered the entirety of the U.S. and Puerto Rico
  - Exceptions: Remote Alaska and northern Maine, which account for nearly 12 percent of the US land area, but less than 1 percent of housing units
- Created a critical baseline set of information
  - In 2009, more than 150,000 field staff drove every mile of road in the nation
  - Verified and updated over 155 million address records
  - Collected GPS points for all housing units visited
  - Added more than 2.5 million new roads segments
- One of the most expensive decennial census field operations
  - Two-thirds of the updates were concentrated in 4 percent of the blocks canvassed
  - Cost over $450 million



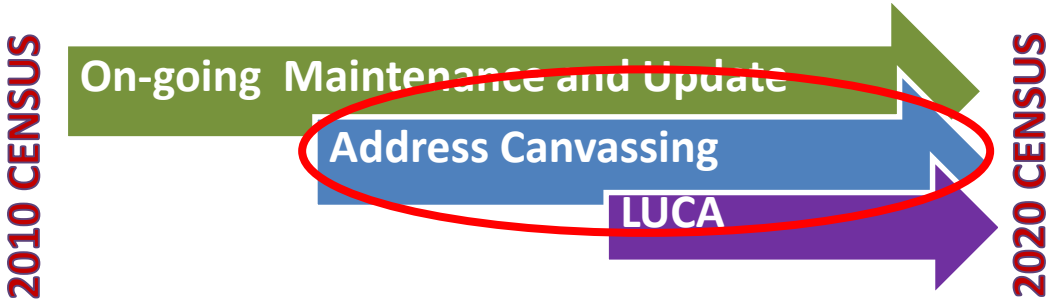
Reengineered Address Canvassing

General Questions:

- Is a traditional, on-the-ground canvassing operation necessary nationwide to ensure a complete and accurate address list for the decennial census?
- Are there areas of the country in which the address list and locational information can be kept current without canvassing in the field?

Goals:

- Manage 70 percent or more of the addresses in the office; up to 30 percent of addresses canvassed in the field.
  - What is 30 percent? Approximately 42.1 million addresses.
  - To put into context: the 85 U.S. places with 100,000 or more population in 2015 contain a total of 24.7 million housing units (source: ACS 2011-2015 5-year data).



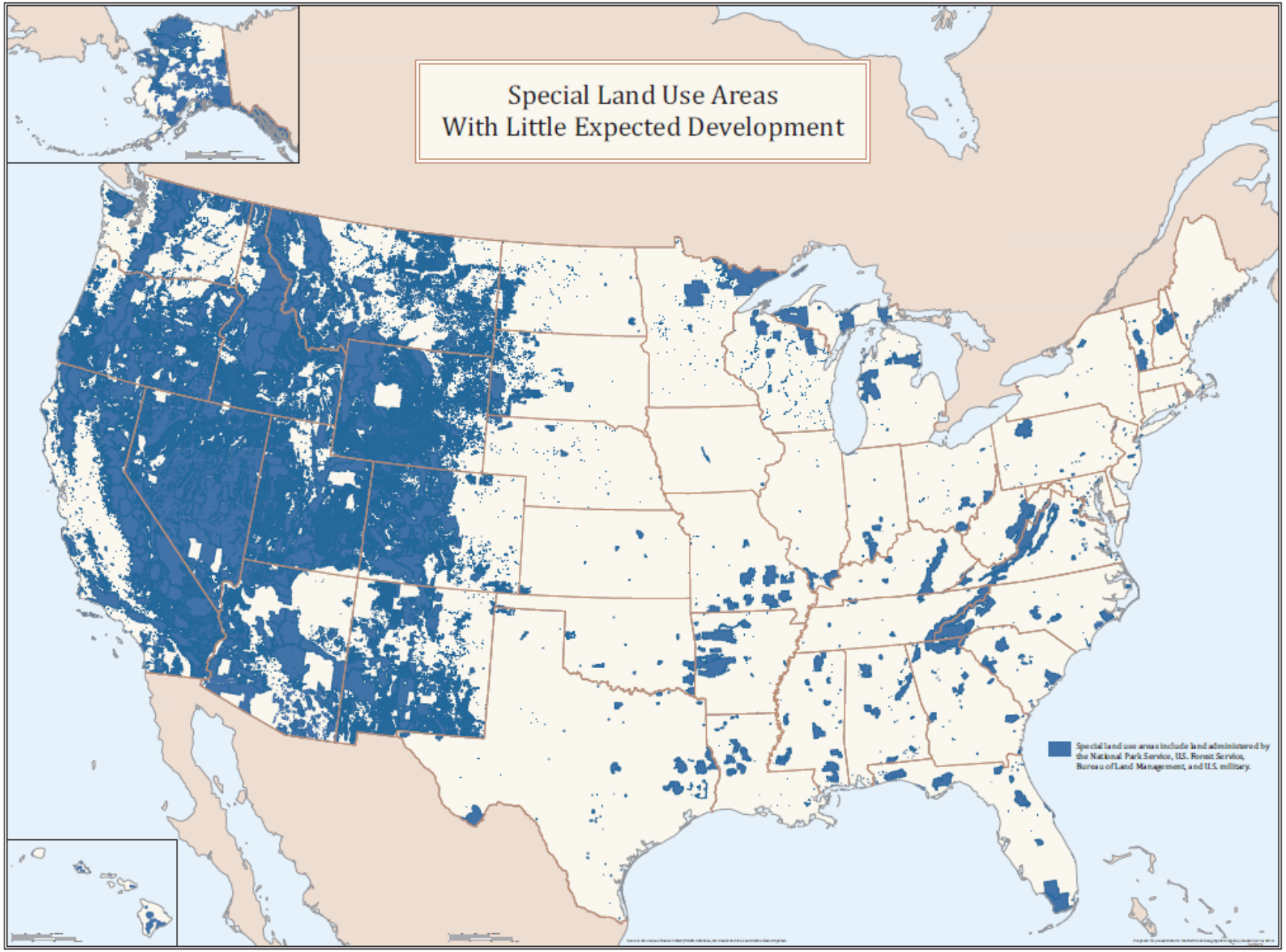
What is Address Canvassing?

- Address canvassing is the process by which the U.S. Census Bureau validates, corrects, or deletes existing Census Bureau addresses, adds missing addresses before a decennial census

- MAF = Master Address File
- Blocks = Census tabulation blocks

Post-2010 Assessments:
More efficient and cost effective ways to validate and update the MAF

- Many blocks are stable and the address list is correct and complete
  - Address Canvassing Adds Were Very Concentrated
  - Two-thirds of addresses added were located in just 4% of blocks



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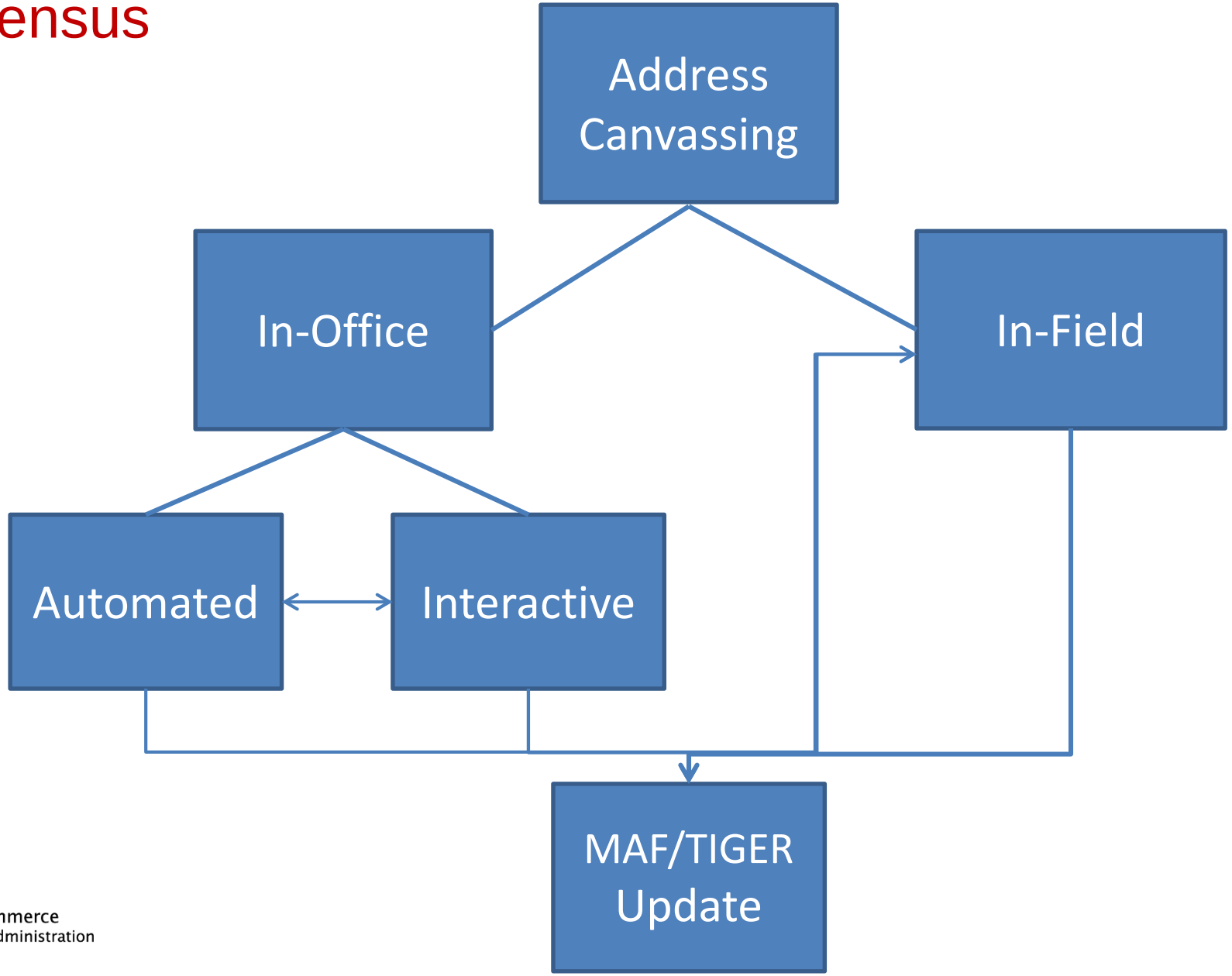
Post-2010 Assessments:
More efficient and cost effective ways to validate and update the MAF

- Continuous MAF evaluation and update can be done throughout the decade:
  - Continue USPS Delivery Sequence File (DSF) updates
  - Partner with local governments – obtain their address lists to validate and update the MAF (when needed)
  - **Re-engineer address canvassing** so that areas can be canvassed in office, and only some areas need to be sent to field canvassing

Re-engineered Address Canvassing for the 2020 Census



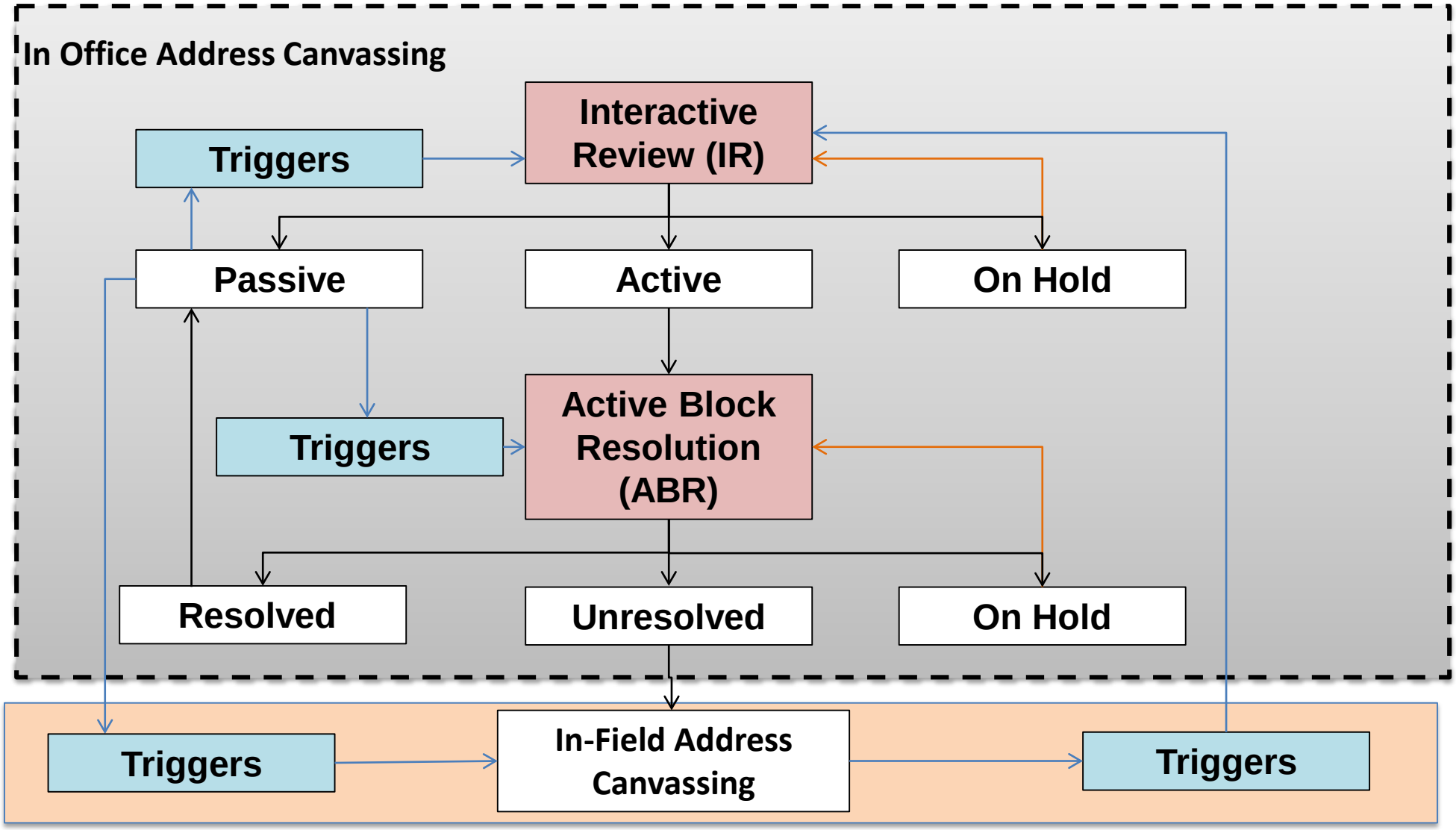
In-Office Address Canvassing Goals

- Identify geographic areas that require in-field address canvassing and geographic areas that do not need to be canvassed in the field (i.e., in-office validation and improvement, where needed).
- Focus effort on decreasing in-field canvassing by identifying areas of stability. Where possible fix coverage issues and errors in the office.
- Identify, obtain, and manage data needed to support this activity and related review and decision-making efforts through the decade.

How do we achieve these goals?

- How do we know the MAF is correct and complete – and that it continues to be correct and complete over time?
  - Comparing the MAF to imagery, and assessing the propensity for change within the block. **“Interactive Review”**
  - Data analysis and processes that determine where change is occurring/likely to occur and where is there stability in the MAF and in the residential landscape **“Triggers”**
- How do we fix address list issues in the office?
  - Reviewing addresses where potential issue identified (above) and correcting the issue using local data sources **“Active Block Resolution”**

Address Canvassing for the 2020 Census



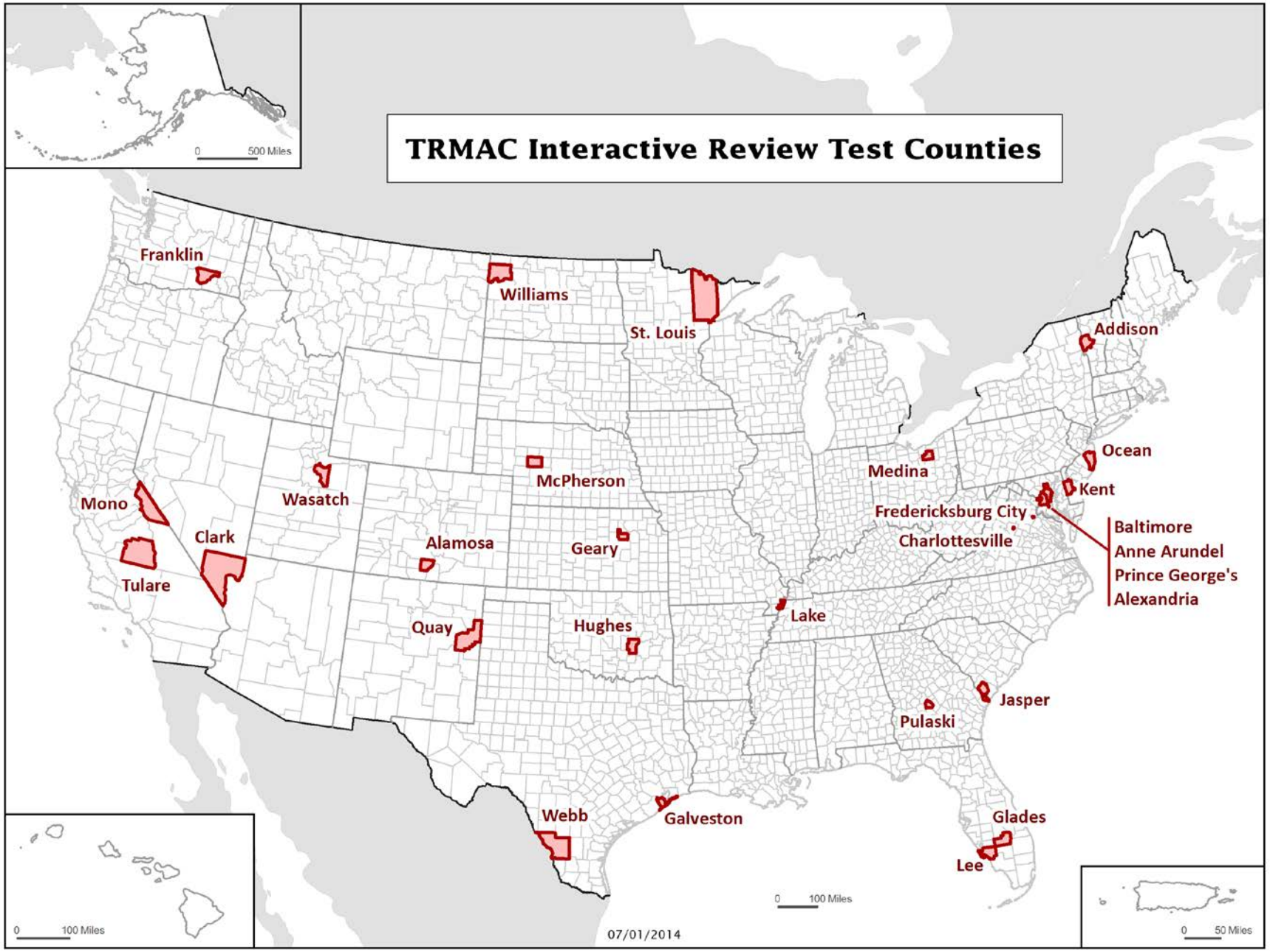
Interactive Review R & D

How do we validate the address list is current and correct? Primarily through observation:

- Field observation – comparing what is seen on the ground to the address list
- Office observation – comparing imagery and street-level images to what is seen in the address list

Interactive Review R&D
Pilot Project Spring 2014

- 21,924 blocks (0.2% nationally) were reviewed
  - 11,286 reviewed twice to compare results between individual reviewers
- Review occurred in 29 counties selected for several characteristics, including:
  - Partner file updates occurring
  - MAF housing unit change
  - Population Estimates Program housing unit change
  - MAF Model Validation Test (MMVT) blocks
  - Special land uses
  - Urban/rural



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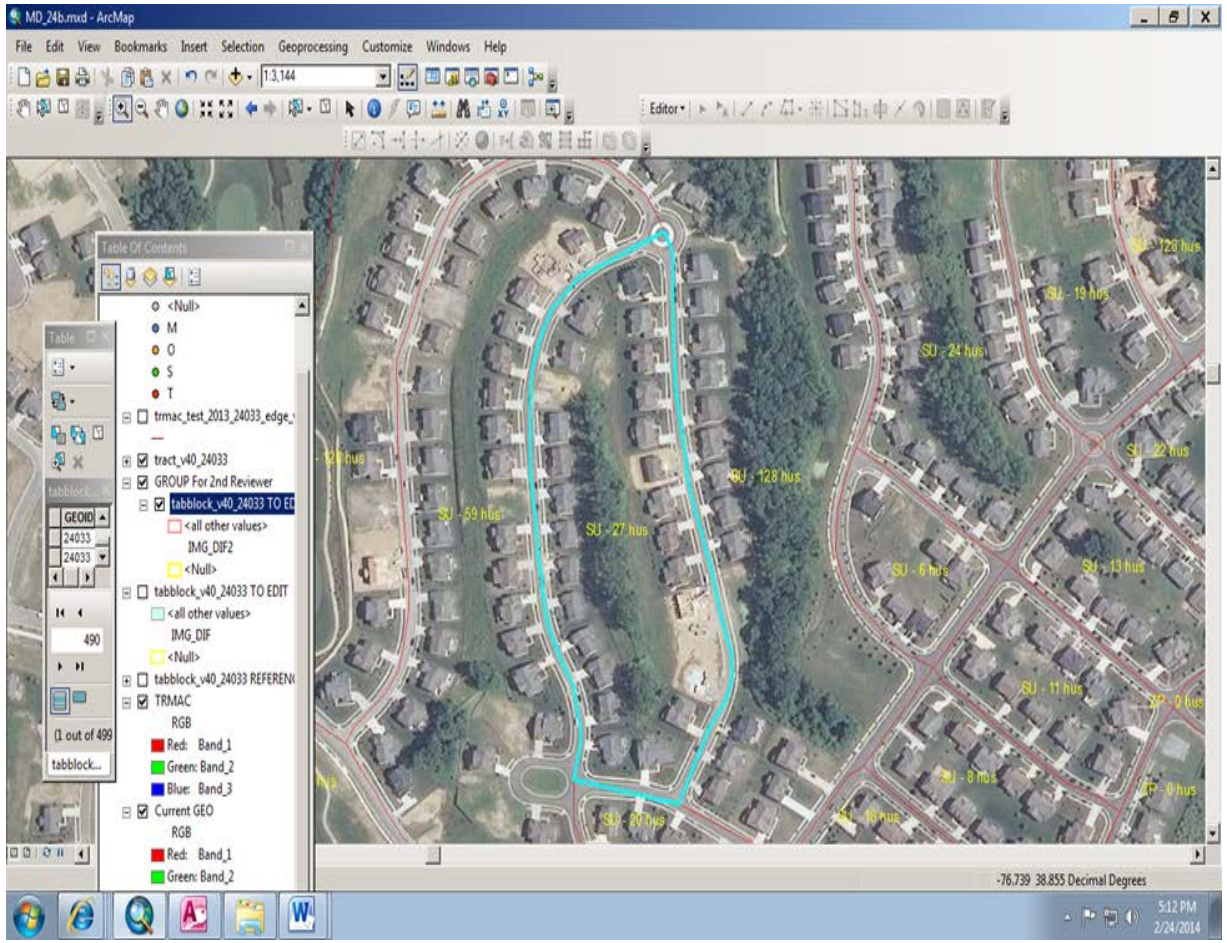
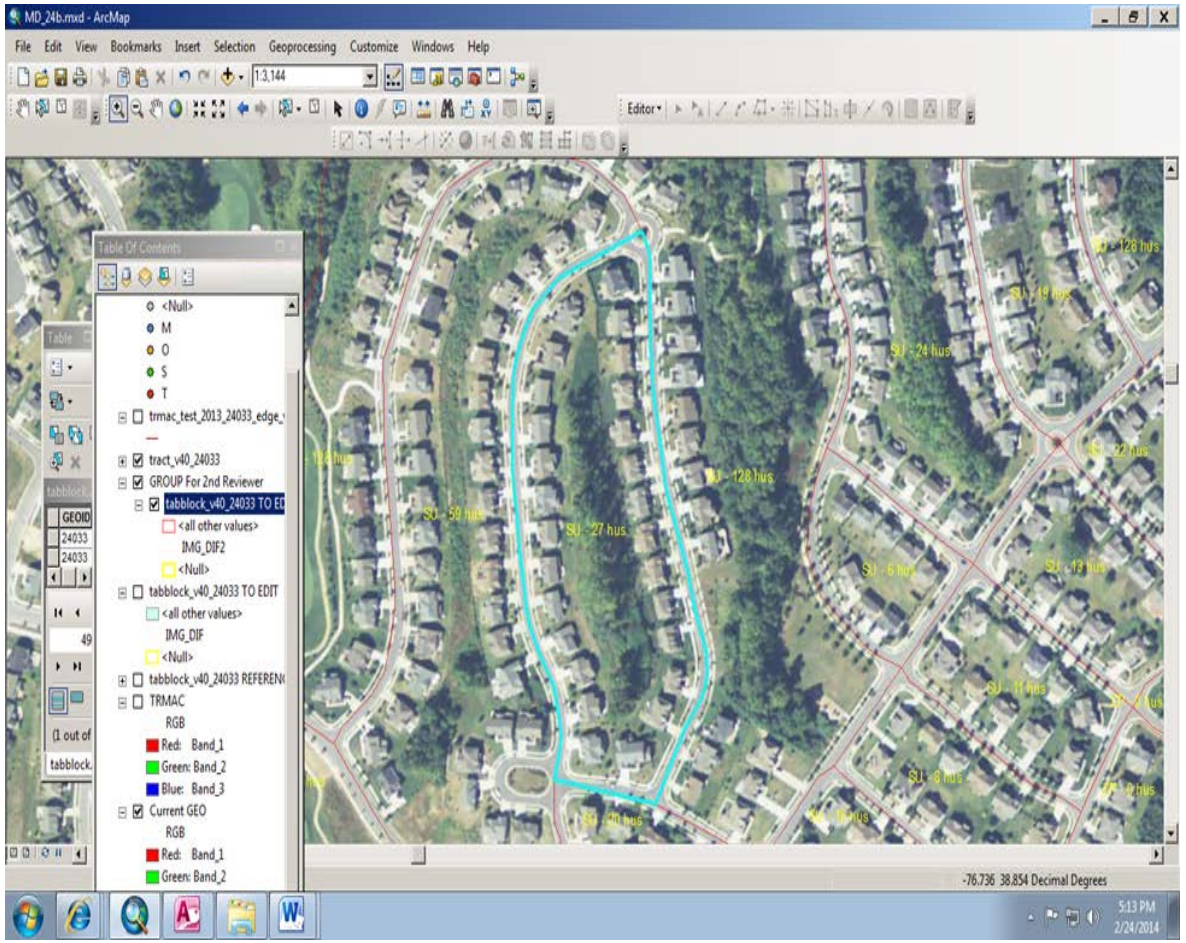
Interactive Review R&D
Pilot Project Spring 2014

- Compare current imagery with 2009 vintage of imagery to identify change
- Assess imagery (and parcels, if available) for likelihood of stability or future change
- Assess current imagery and compare to current address information to identify coverage as well as geocoding issues
- Identify obvious errors in our data

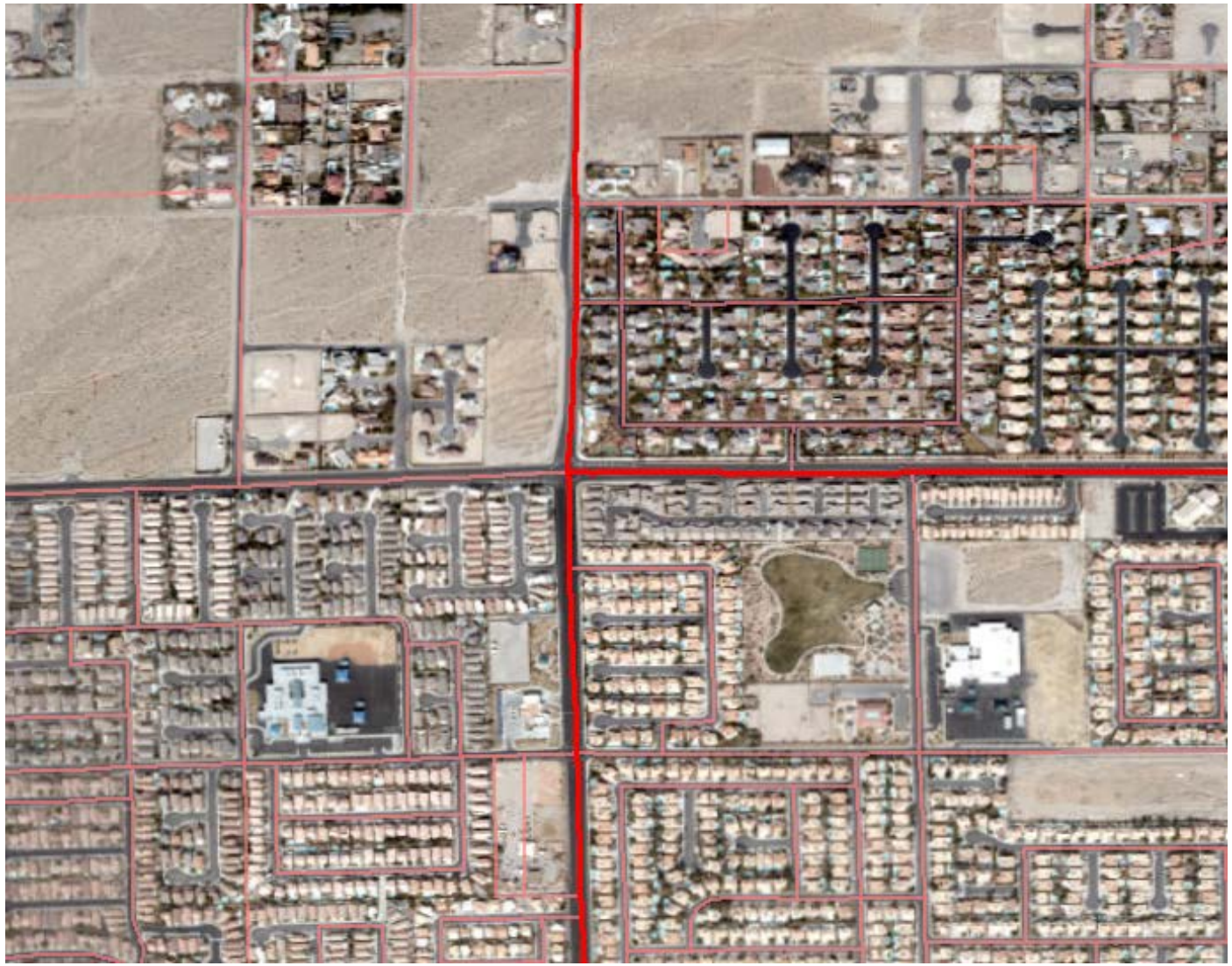
Step 1: Identify Change

Positive Change





Step 2: Built Out Residential “B”



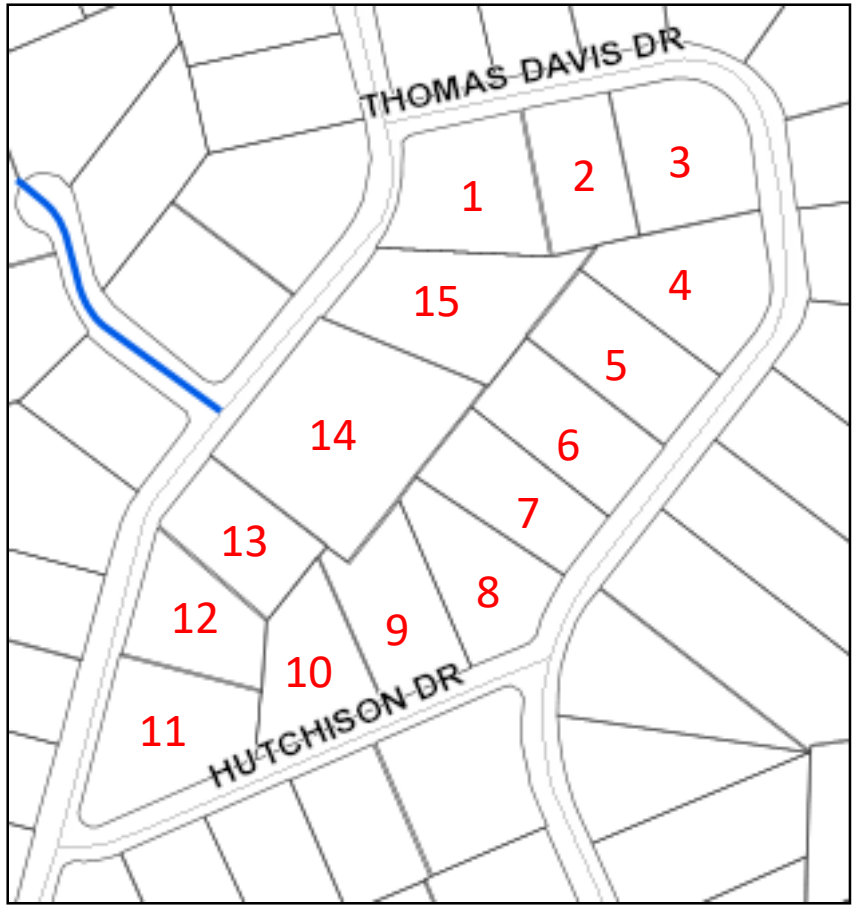
Use parcel data to help identify HU count changes &“built out”

Example of “Built Out” block containing large lots.

HU count is 15, which matches number of houses in current imagery.

Use parcel data to help identify HU count changes &“built out”

The same block as seen at the Kent County, DE GIS site



Step 2: Future Growth – “F”

Step 3: Identify Coverage Issues

Suspected Geocoding Problems

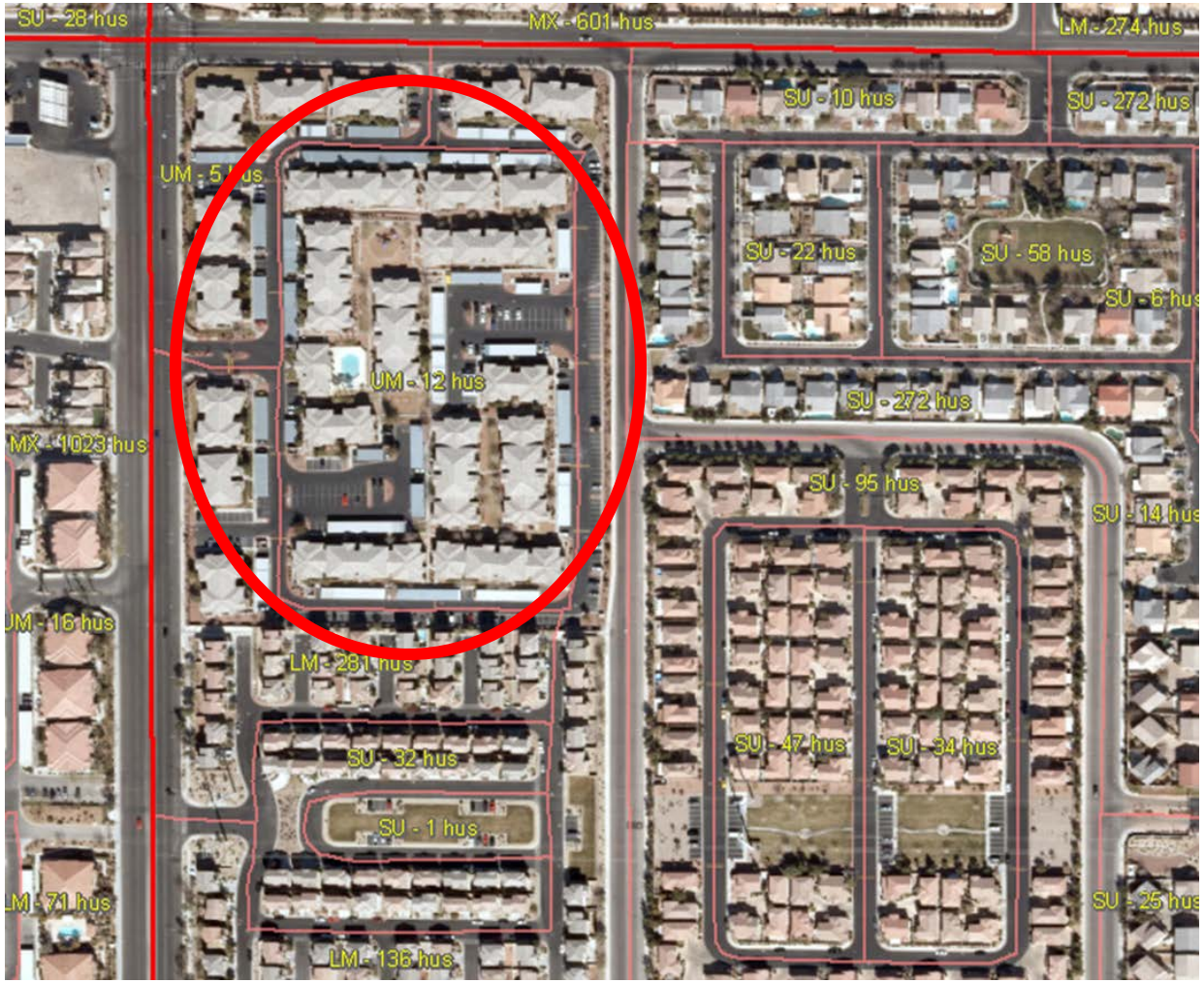
Stability: Built Out Blocks

- 69% of reviewed blocks were classified by the reviewers as “built out”

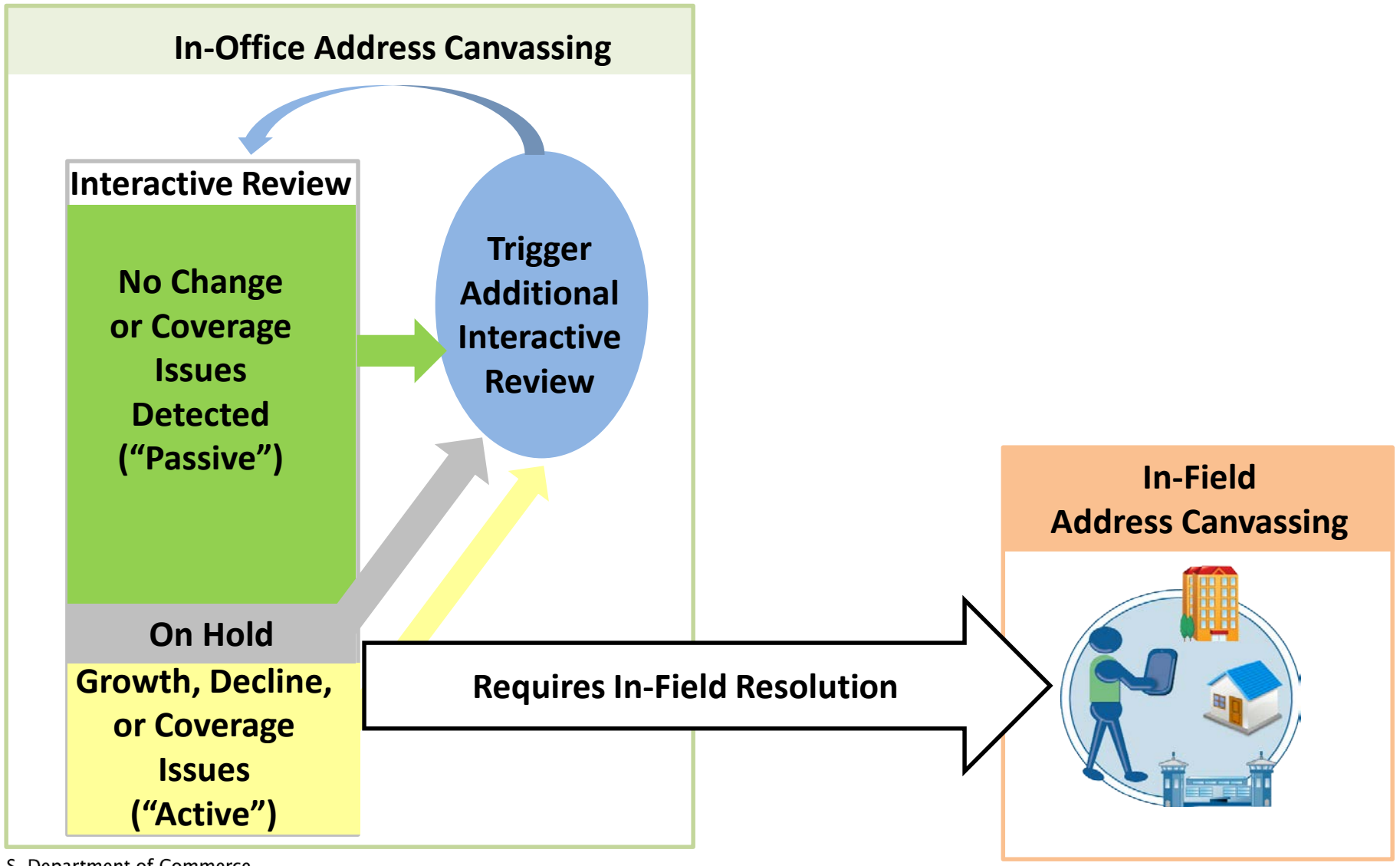
- Assuming the same pattern applied to all blocks nationally this would be roughly 7,697,000 blocks

Blocks with general data errors

- 8.2% of reviewed blocks had general data errors – where the MAF counts didn't match what was on the ground. In this example, the MAF reported 12 housing units for the highlighted block. The block contains 12 multi-unit buildings.
- Skewed toward easy to observe errors, and blocks with few housing units (often small blocks).



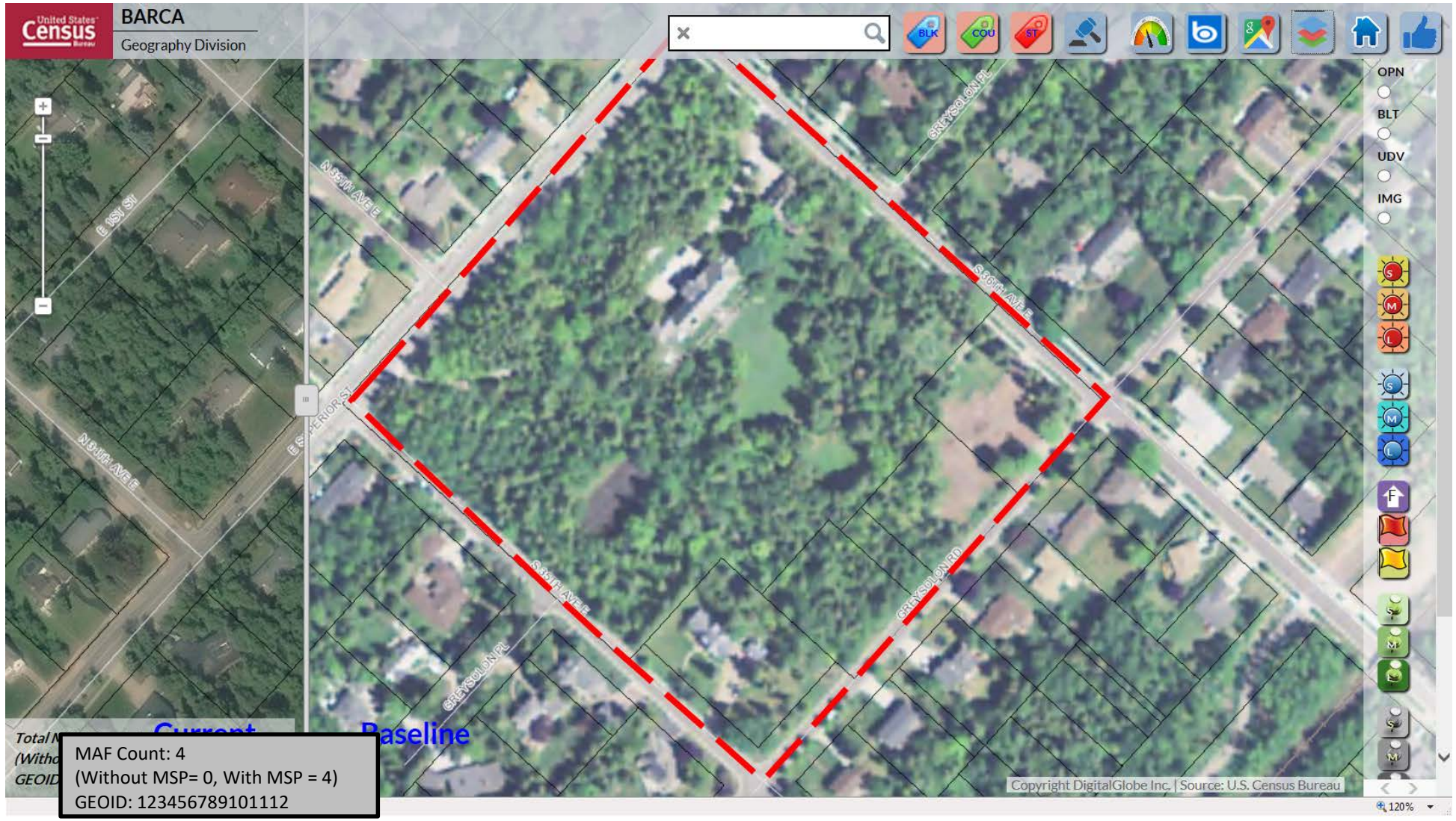
In-Office Address Canvassing Overview



Block Assessment Review and Classification Application (BARCA)

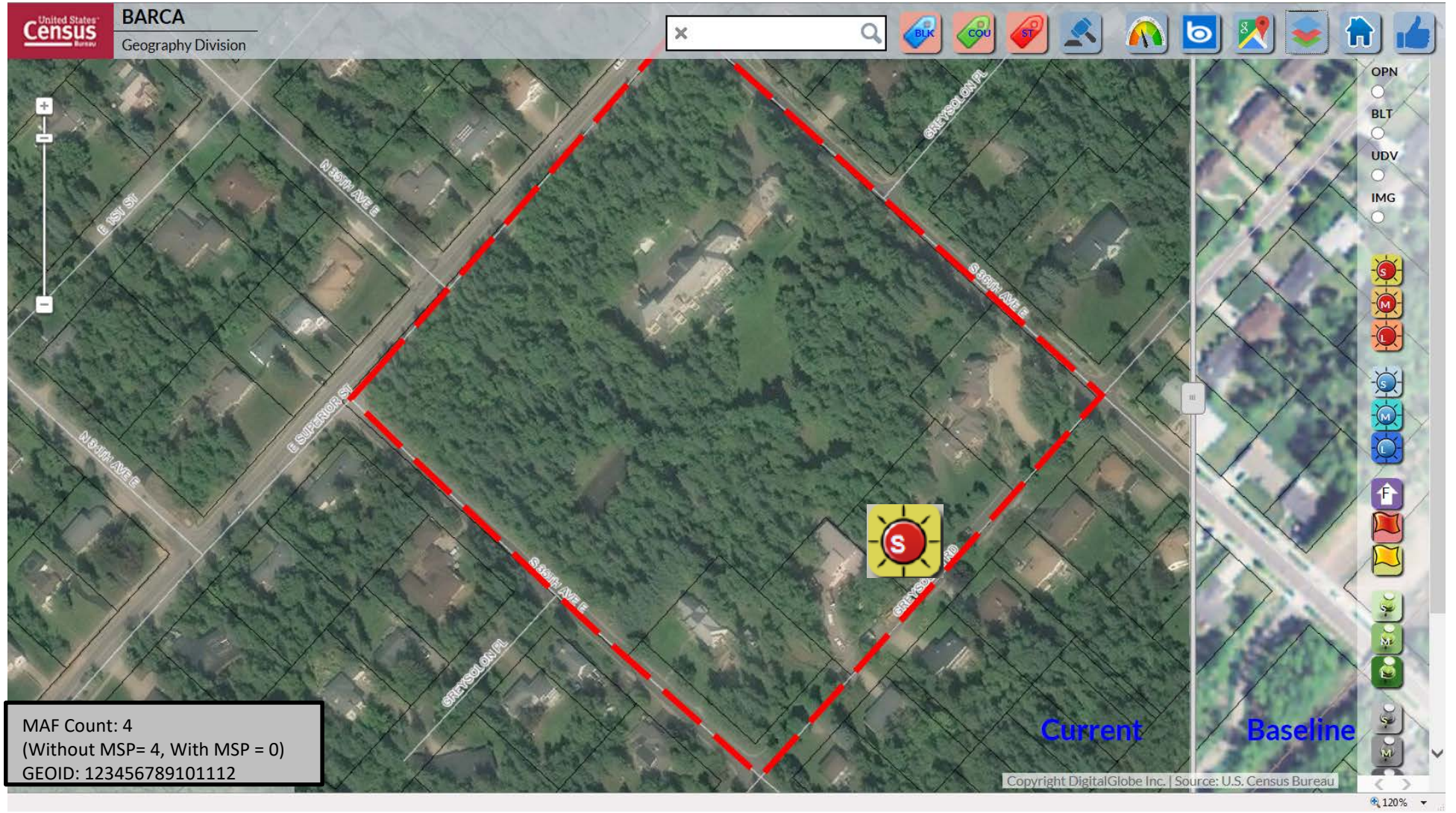
Note: This slide does not contain Title 13 data.

Baseline Imagery (circa 2009/2010)



Note: This slide does not contain Title 13 data.

Current Imagery (as of time of review)



Note: This slide does not contain Title 13 data.

Interactive Review: Block Status

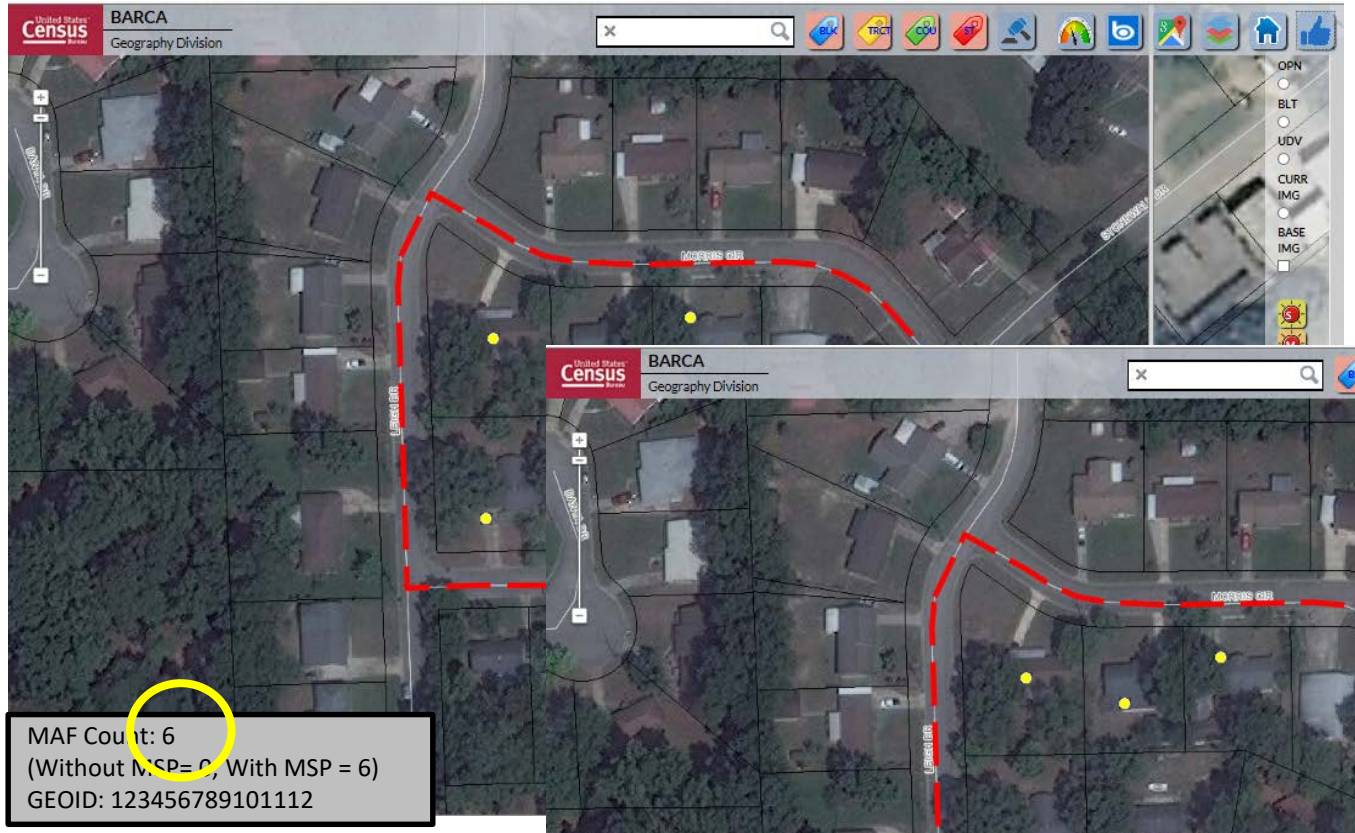
Built-Out

Open Space

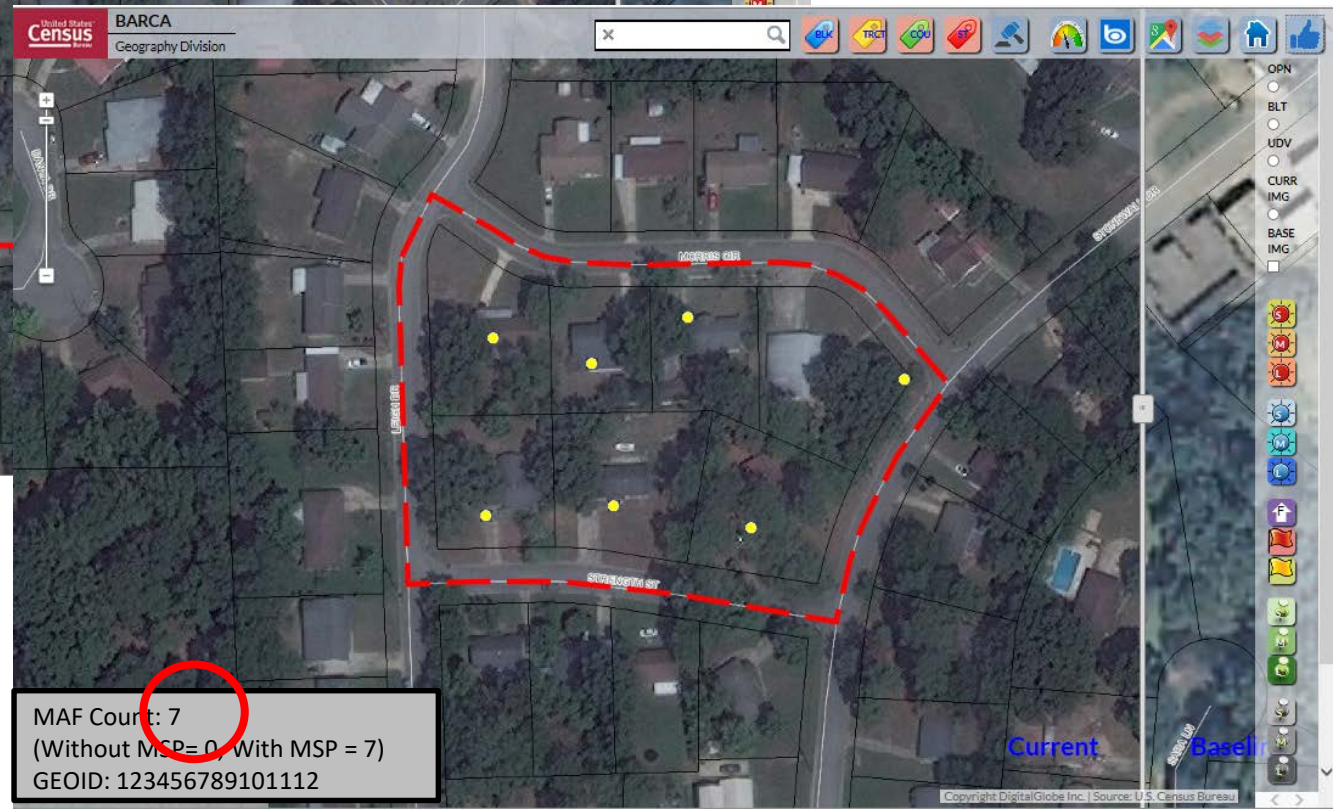
Note: This slide does not contain Title 13 data.

Triggers: Bringing Blocks Back into Interactive Review

- A trigger is an “event” that provides information and/or data that suggest the need to send a block back through IR. Examples include:
  - New, or better resolution, imagery becomes available
  - Results from processing DSF or GSS partner files
  - Results from Ungeocoded Resolution and other MAF update and clean-up activities
  - Automated imagery review/analysis that detects, or suggests, the existence of new housing
  - A natural disaster (hurricane, flood, tornado) affects housing stock in an area to the extent that inhabitability, deliverability of mail, and existence of structures may be affected



Reviewed:
December 2016



MAF Count Changed:
June 2017

Note: This slide does not contain Title 13 data.

In-Office Address Canvassing Interactive Review Status: All Blocks

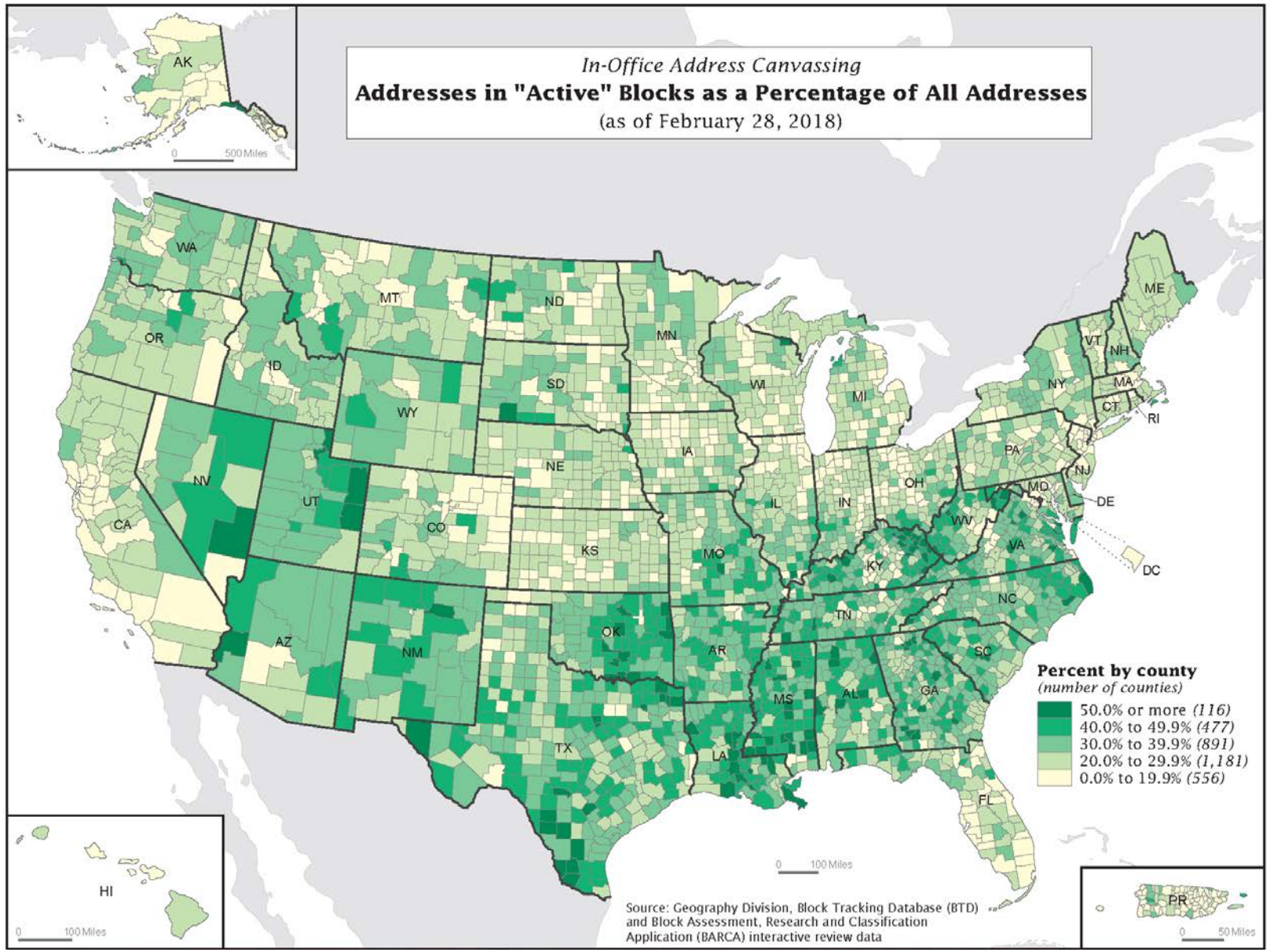
(as of April 9, 2018)

	Blocks		Housing Units	
	Number	Percentage	Number	Percentage
Total US and Puerto Rico	11,155,486	100.0	143,700,371	100.0
Total Passive	8,781,232	78.72	91,871,091	63.93
Total Active	1,681,738	15.08	35,179,887	24.48
Total On-Hold	590,816	5.30	15,129,151	10.53
Total Triggered	101,700	0.91	1,520,242	1.06

In-Office Address Canvassing Interactive Review Status: Mail-out/Mail-back Blocks

(as of April 9, 2018)

	Blocks		Housing Units	
	Number	Percentage	Number	Percentage
Total US and Puerto Rico	9,827,851	100.0	137,052,418	100.0
Total Passive	7,774,326	79.11	88,875,927	64.85
Total Active	1,485,717	15.12	32,894,065	24.00
Total On-Hold	477,092	4.85	13,830,609	10.09
Total Triggered	90,716	0.92	1,451,817	1.06



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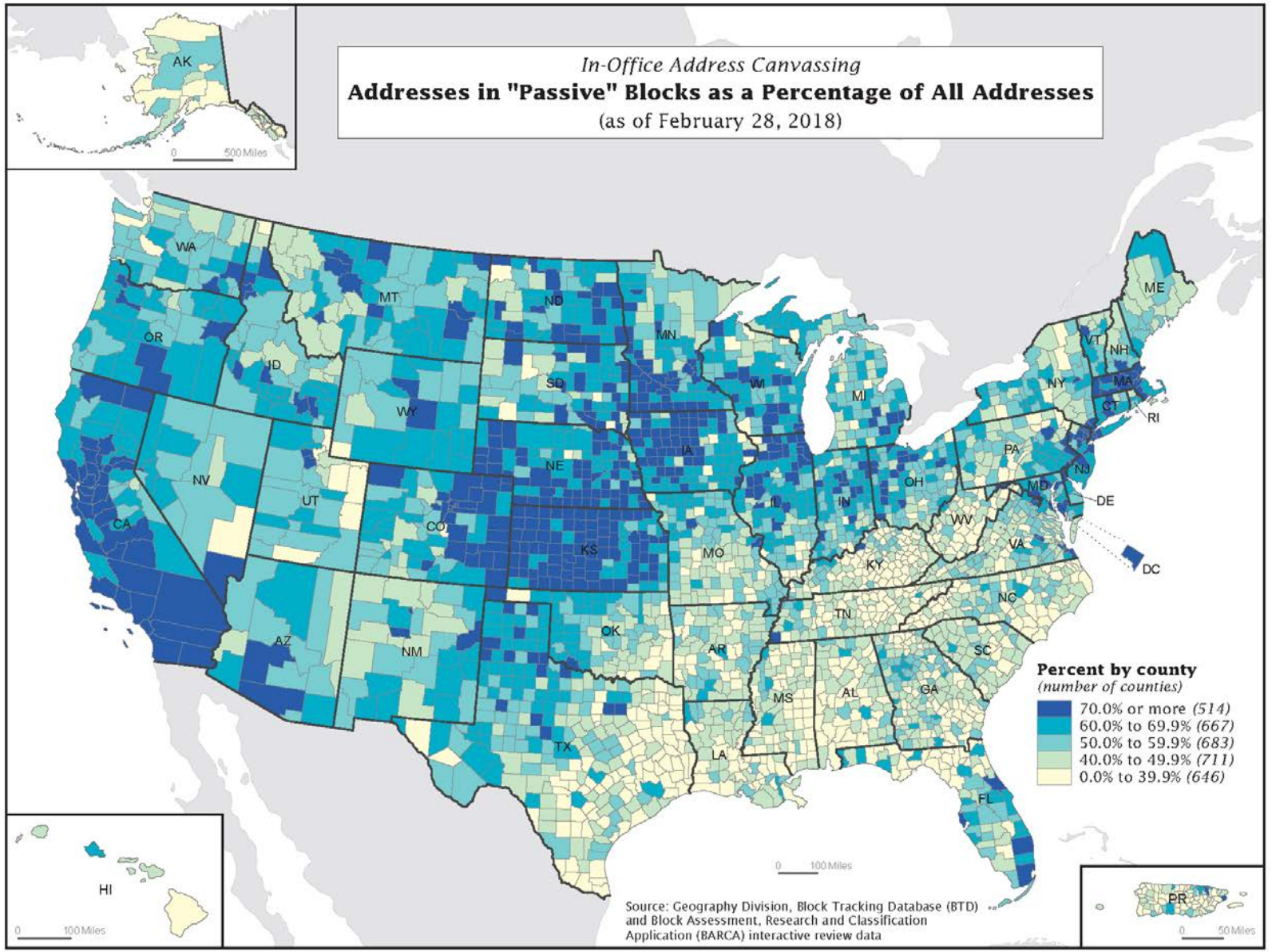
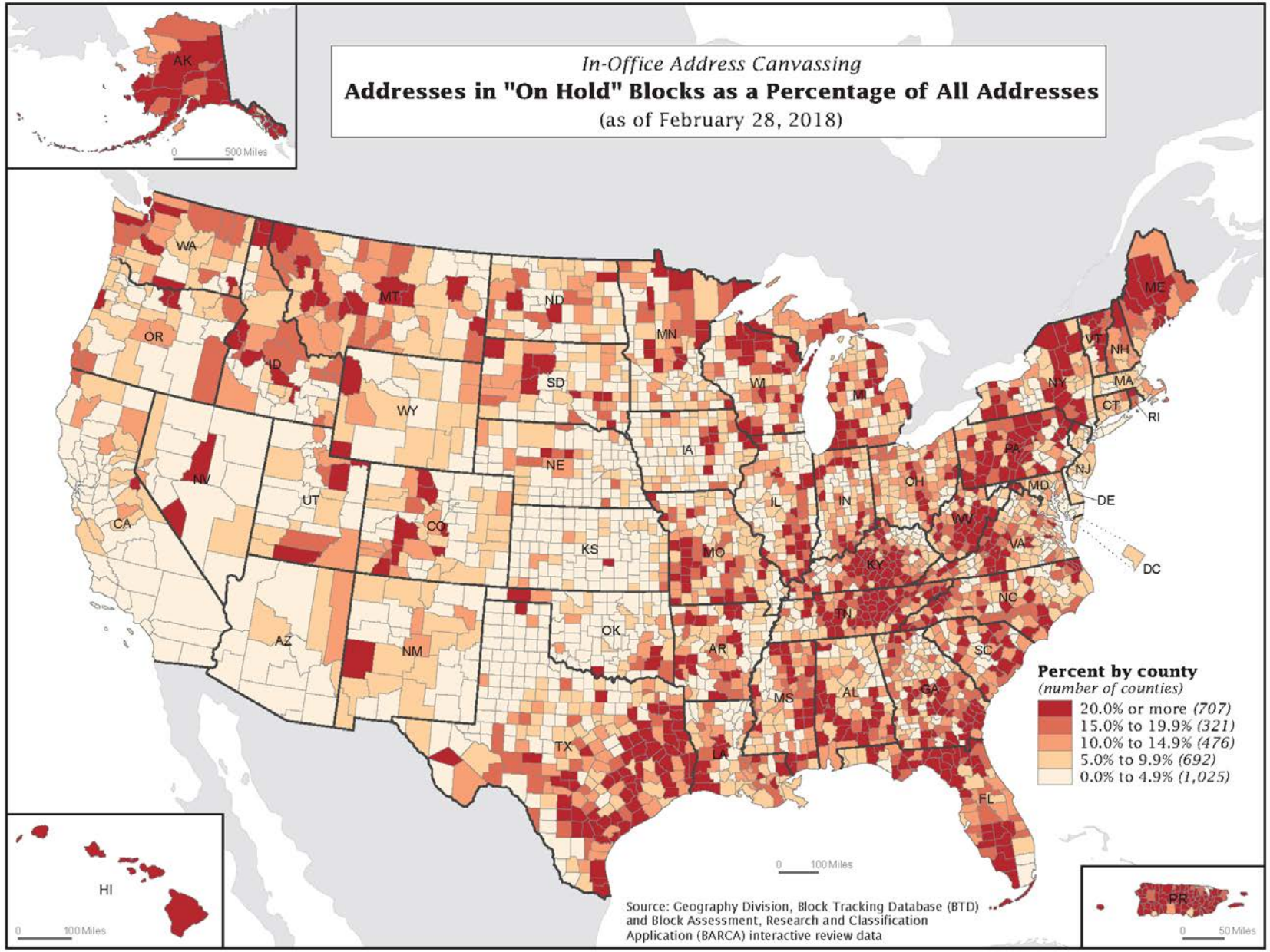
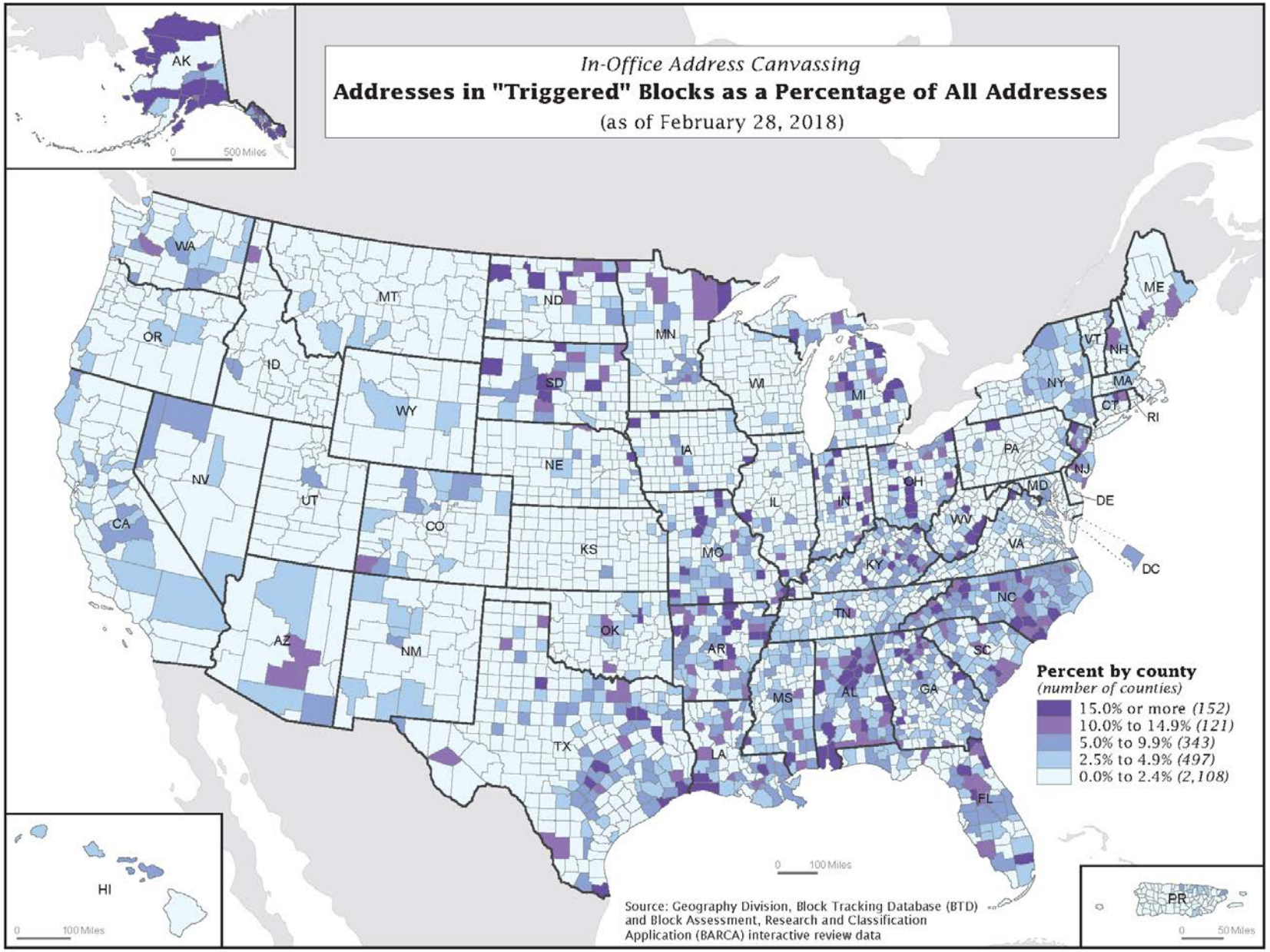

In-Office Address Canvassing
Addresses in "Passive" Blocks as a Percentage of All Addresses
(as of February 28, 2018)
AK
0 500 Miles
HI
0 100 Miles
PR
0 50 Miles
0 100 Miles
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
MD
DE
NJ
CT
RI
MA
VT
NH
ME
DC
Percent by county
(number of counties)
70.0% or more (514)
60.0% to 69.9% (667)
50.0% to 59.9% (683)
40.0% to 49.9% (711)
0.0% to 39.9% (646)
Source: Geography Division, Block Tracking Database (BTD) and Block Assessment, Research and Classification Application (BARCA) interactive review data


In-Office Address Canvassing
Addresses in "On Hold" Blocks as a Percentage of All Addresses
(as of February 28, 2018)
AK
0 500 Miles
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
MD
DE
NJ
CT
RI
MA
VT
NH
ME
DC
HI
0 100 Miles
PR
0 50 Miles
0 100 Miles
Percent by county
(number of counties)
20.0% or more (707)
15.0% to 19.9% (321)
10.0% to 14.9% (476)
5.0% to 9.9% (692)
0.0% to 4.9% (1,025)
Source: Geography Division, Block Tracking Database (BTD) and Block Assessment, Research and Classification Application (BARCA) interactive review data


In-Office Address Canvassing
Addresses in "Triggered" Blocks as a Percentage of All Addresses
(as of February 28, 2018)
AK
0 500 Miles
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
MD
DE
NJ
CT
RI
MA
VT
NH
ME
DC
HI
0 100 Miles
PR
0 50 Miles
0 100 Miles
Percent by county
(number of counties)
15.0% or more (152)
10.0% to 14.9% (121)
5.0% to 9.9% (343)
2.5% to 4.9% (497)
0.0% to 2.4% (2,108)
Source: Geography Division, Block Tracking Database (BTD) and Block Assessment, Research and Classification Application (BARCA) interactive review data

LUCA

The 2020 Census Local Update of Census Addresses Operation (LUCA)

What is LUCA?

LUCA is the only opportunity offered to tribal, state, and local governments to review and comment on the U.S. Census Bureau's residential address list for their jurisdiction prior to the 2020 Census. The Census Bureau relies on a complete and accurate address list to reach every living quarters and associated population for inclusion in the census.

Why participate in LUCA?

- To help ensure an accurate decennial census count in your community.
- To help the federal government distribute more than $400 billion in funds annually for infrastructure, programs, and services.
- To help your community plan for future needs.

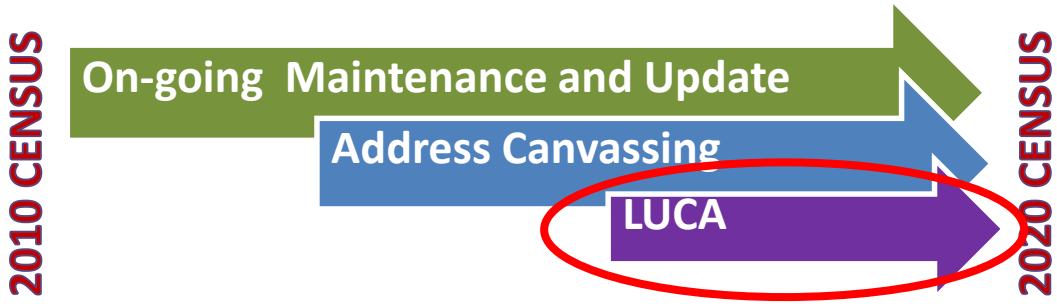
Who can participate in LUCA?

Active, functioning, legal governments can participate in LUCA. These include:

- Federally recognized tribes with a reservation and/or off-reservation trust lands.
- States.
- Counties.
- Cities (incorporated places).
- Townships (minor civil divisions).

Schedule

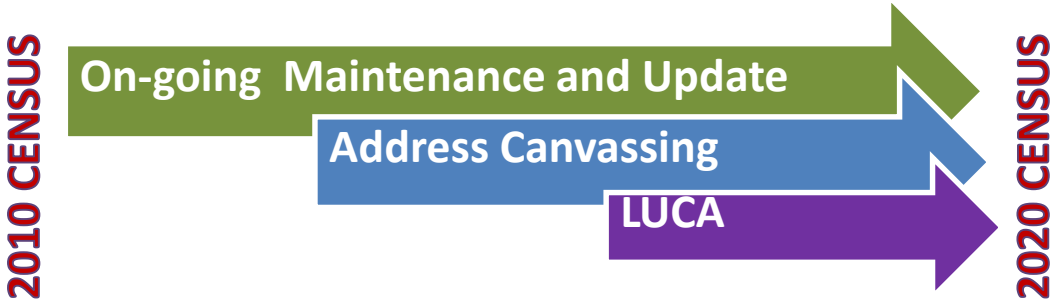
- January 2017: Advance notification of LUCA mailed to the highest elected official (HEO) or Tribal Chairperson (TC) of all eligible governments and other LUCA contacts.
- March 2017: LUCA promotional workshops begin.
- July 2017: Invitation letter and registration forms mailed to the HEO or TC of all eligible governments.
- October 2017: Training workshops begin. Self-training aids and Webinars will be available online at the LUCA Web site.
- February 2018: Participation materials mailed to registered participants. Participants have 120 calendar days from the receipt of materials to complete their review.



Summary

Building and maintaining the address list for the 2020 Census relies upon multiple administrative sources of addresses and multiple methods for reviewing, updating, and validating the MAF

- On-going maintenance and updates from multiple sources, anchored by the USPS' Delivery Sequence File and local government address lists
- In-Office imagery-based Interactive Review to detect areas of stability and areas of change
- In-office resolution processes to resolve and update as many addresses as possible in the office prior to identifying areas to canvass in the field in 2019
- Local Update of Census Addresses to provide tribal, state, and local governments the opportunity to review the Census Bureau's address list and provide updates



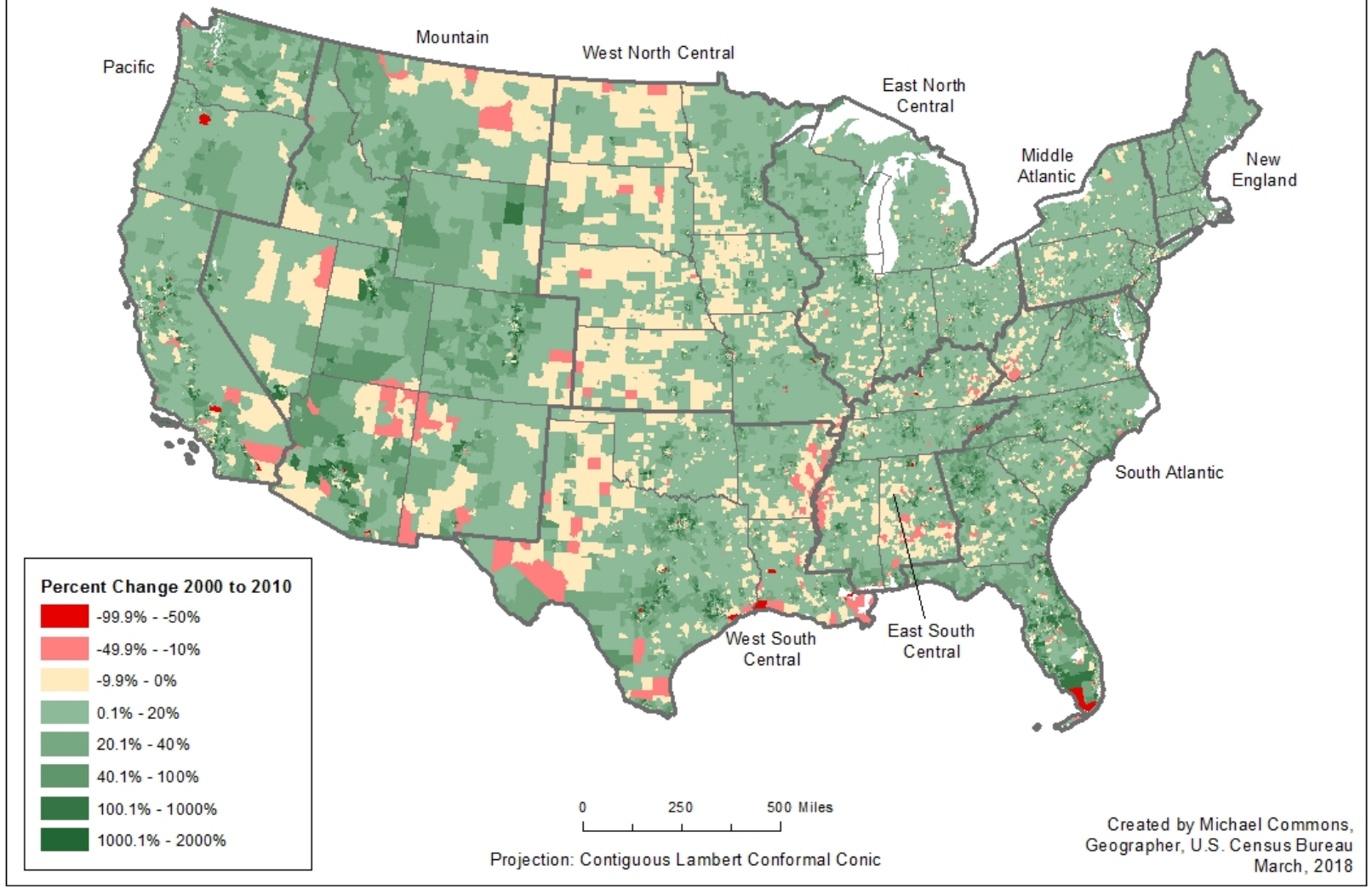
Changes in the Built Landscape

- Purpose of research
- Review of changes from 2000 to 2010
- Data sources and methodology
- Results by geographic location and urban-rural type
- Comparison with demographic data
- Findings

Purpose of Research

- Summarize IR detection of change and compare to Housing Unit Estimates (HUE)
- Increase efficacy of ongoing in-office canvassing operations (2020 and beyond)
  - Target specific areas of change
    - More frequent in-office canvassing
    - Pursue and acquire local data sources
  - Avoid redundancy in areas with high likelihood of stability

Percent Change in Housing Units 2000 to 2010



Proportion of the Growth in Housing Units

Census Divison	2000 to 2010
Middle Atlantic	6.3%
East South Central	5.5%
East North Central	10.3%
Mountain	12.7%
New England	3.0%
Pacific (not AK, HI)	13.5%
South Atlantic	28.7%
West North Central	5.7%
West South Central	14.2%

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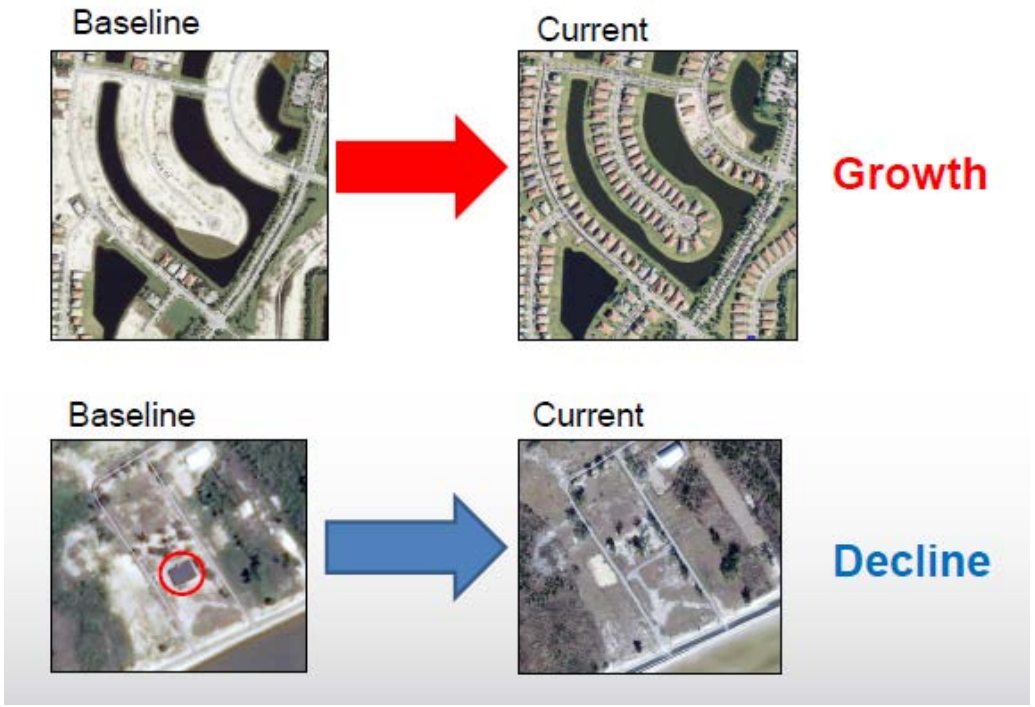
Data Sources

Interactive Review (IR)

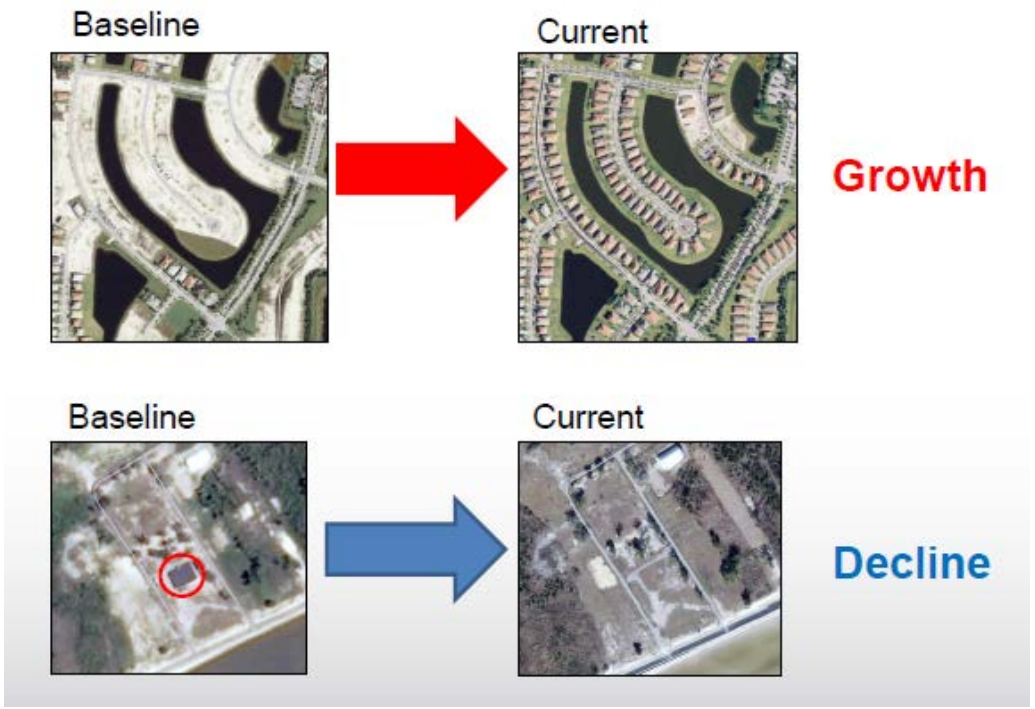
- Staff compare 2010 imagery to the most current imagery
- In addition to verifying the housing counts are correct, they also note changes in the landscape, including the removal or addition of housing units



Data Sources

Interactive Review (IR)

- Staff compare 2010 imagery to the most current imagery
- In addition to verifying the housing counts are correct, they also note changes in the landscape, including the removal or addition of housing units
  - Use a 3-class pin system
    - Small (1) = 1 HU
    - Medium (2) = 2-9 HU
    - Large (3) = 10+ HU



Data Sources

Housing Unit Change

- New addresses added since 2010
  - US Postal Service Delivery Sequence File (DFS)
  - Geographic Support System (GSS)
- Housing Unit Estimates (Population Estimates Program)

Demographic Data

- Demographic data extracted from American Community Survey 3-year (2009-2011)

Data Sources

Housing Unit Change

- New addresses added since 2010
  - US Postal Service Delivery Sequence File (DFS)
  - Geographic Support System (GSS)
- Housing Unit Estimates (Population Estimates Program).

Demographic Data

- Demographic data extracte
  year (2009-2011).

NOTE: Alaska, Hawaii, Puerto Rico, and Island Areas were removed from the analysis because of significant differences in development patterns and urban classifications.

Methodology

- Data Analysis at multiple scales and geographies
  - Census tract
  - Census division
  - 2010 Rural-Urban Commuting Area Codes (RUCA)
    - Ten classes
      - Created by USDA using Census urban areas
      - Based on population density and functional connections (commuter patterns)

Methodology

- 2010 Rural-Urban Commuting Area Codes (RUCA)

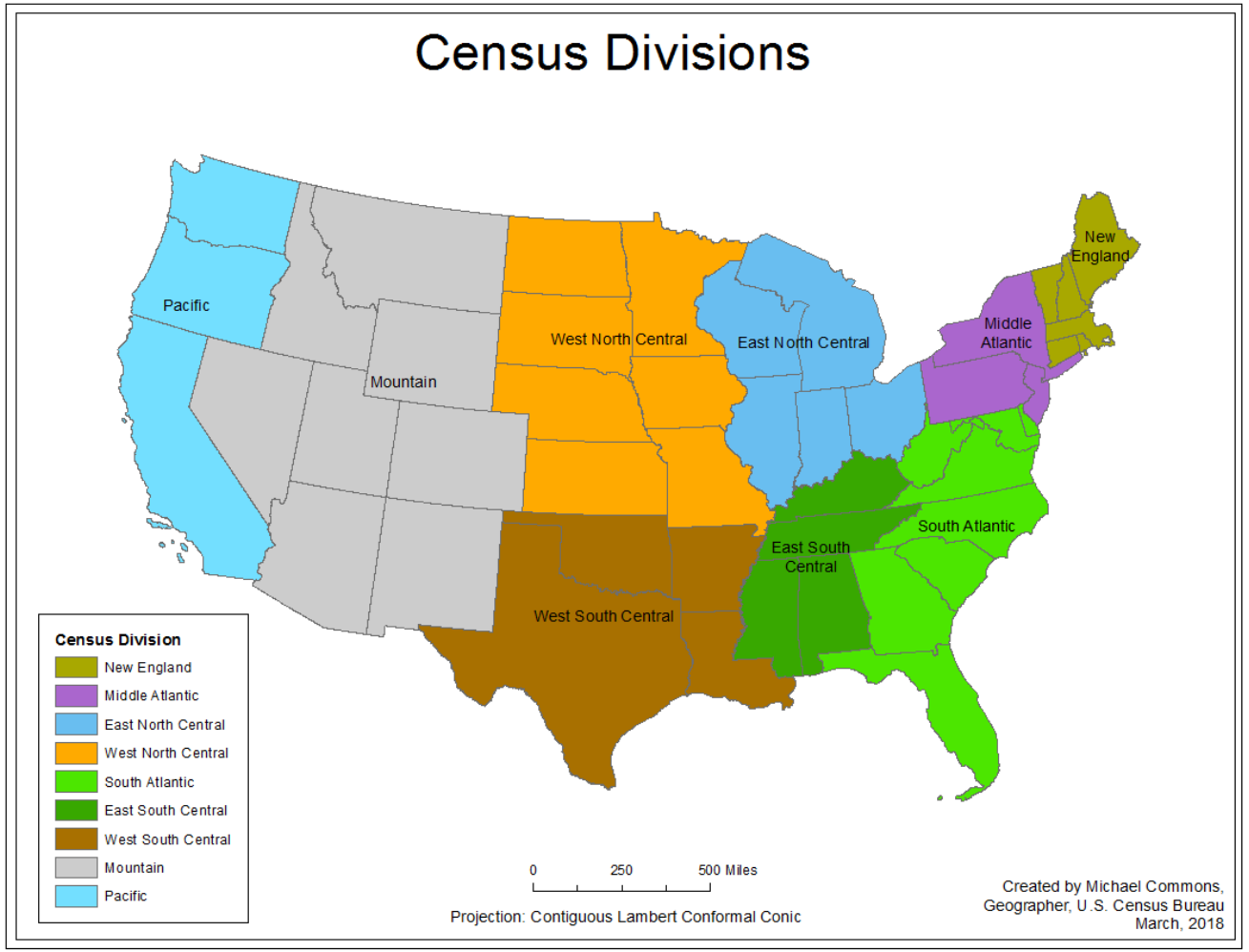
1	Metropolitan area core: primary flow within an Urbanized Area (UA)
2	Metropolitan area high commuting: primary flow 30% or more to a UA
3	Metropolitan area low commuting: primary flow 10% to 30% to a UA
4	Micropolitan area core: primary flow within an Urban Cluster of 10,000 to 49,999 (large UC)
5	Micropolitan high commuting: primary flow 30% or more to a large UC
6	Micropolitan low commuting: primary flow 10% to 30% to a large UC
7	Small town core: primary flow within an Urban Cluster of 2,500 to 9,999 (small UC)
8	Small town high commuting: primary flow 30% or more to a small UC
9	Small town low commuting: primary flow 10% to 30% to a small UC
10	Rural areas: primary flow to a tract outside a UA or UC

Methodology

- IR Growth and Decline Pins multiplied by number of housing units expected
  - Expected housing unit numbers based on analysis of Active Block Resolution (ABR) results
    - Small (1) * 1
    - Medium (2) * 5.5
    - Large (3) * 15

Methodology

- IR Growth and Decline Pins multiplied by number of housing units expected
  - Expected housing unit numbers based on analysis of Active Block Resolution (ABR) results
    - Small (1) * 1
    - Medium (2) * 5.5
    - Large (3) * 15
- Summed to the Census Tract
- New addresses can supplement IR Pins



Proportion of the Growth in Housing Units

Census Divison	2000 to 2010	2010 to Current
Middle Atlantic	6.3%	5.5%
East South Central	5.5%	8.7%
East North Central	10.3%	7.1%
Mountain	12.7%	14.5%
New England	3.0%	3.4%
Pacific (not AK, HI)	13.5%	10.0%
South Atlantic	28.7%	22.6%
West North Central	5.7%	8.5%
West South Central	14.2%	19.7%

Tracts with Growth and Decline 2010 to Current by Census Division

	All Tracts	Growth Tracts	Decline Tracts	Pct Tracts with Growth	Pct Tracts with Decline
Middle Atlantic	10,147	6,214	4,885	61.2%	48.1%
East South Central	4,457	3,942	3,735	88.4%	83.8%
East North Central	11,808	8,286	8,306	70.2%	70.3%
Mountain	5,250	4,082	2,958	77.8%	56.3%
New England	3,392	2,733	2,057	80.6%	60.6%
Pacific (not AK, HI)	10,349	6,152	4,414	59.4%	42.7%
South Atlantic	13,706	10,947	8,940	79.9%	65.2%
West North Central	5,285	4,398	4,133	83.2%	78.2%
West South Central	8,145	6,877	6,202	84.4%	76.1%
All Divisions	**72,539**	**53,631**	**45,630**		

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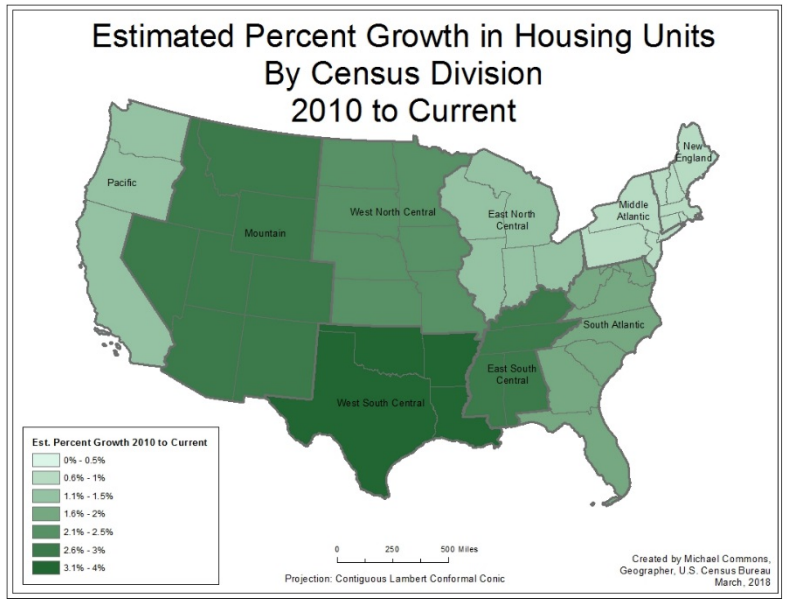
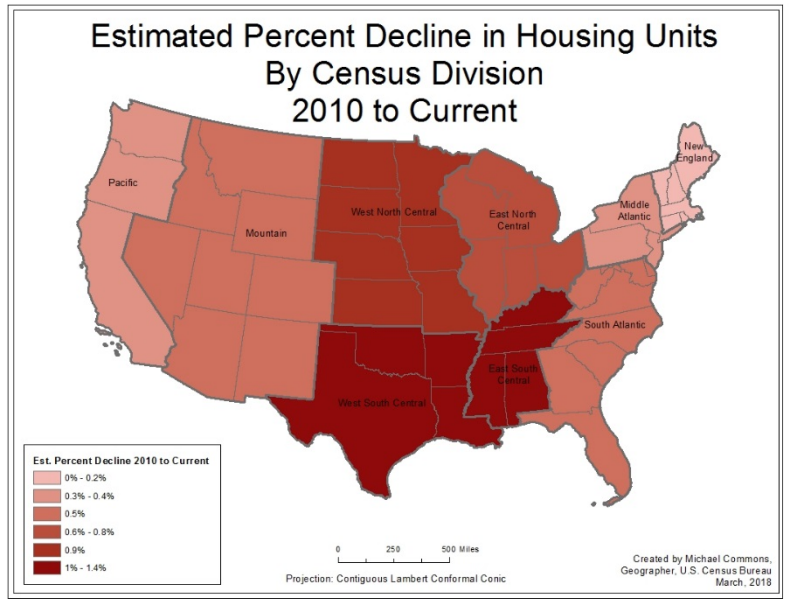
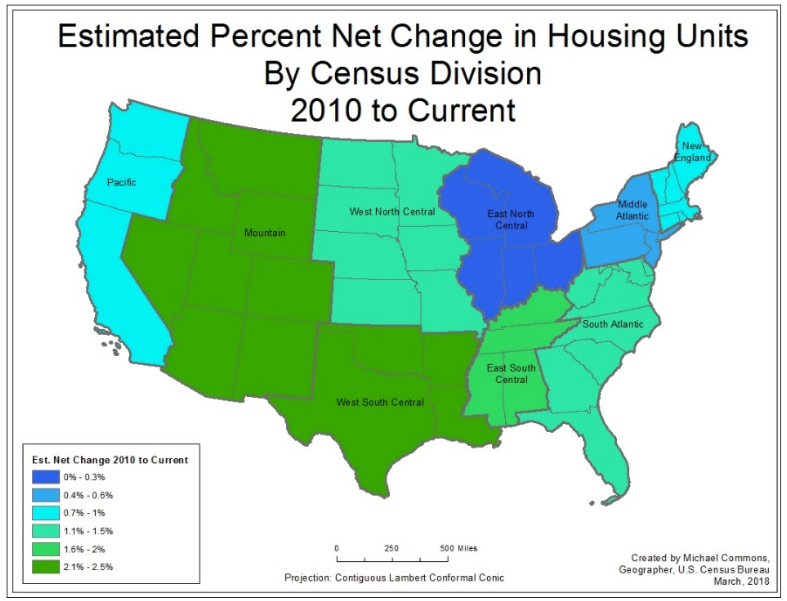
Housing Unit Estimates

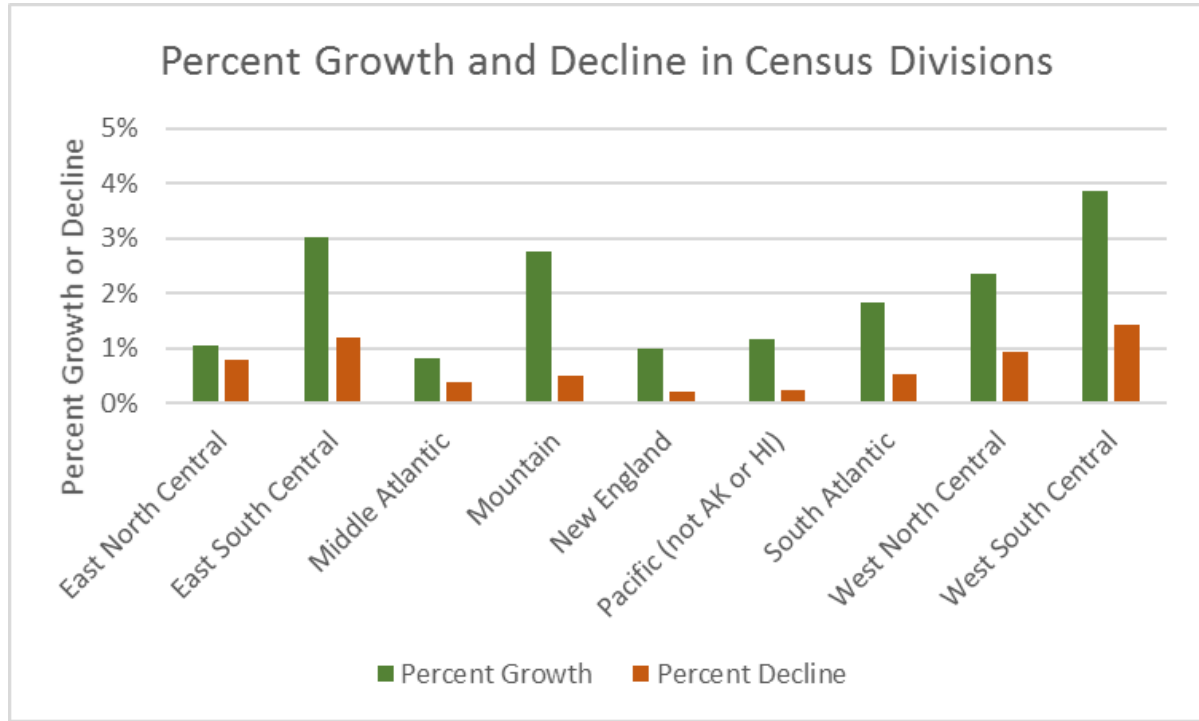
Proportion of the Growth in Housing Units

Census Divison	2000 to 2010	2010 to Current	HUE
Middle Atlantic	6.3%	5.5%	4.7%
East South Central	5.5%	8.7%	3.5%
East North Central	10.3%	7.1%	2.7%
Mountain	12.7%	14.5%	12.4%
New England	3.0%	3.4%	2.2%
Pacific (not AK, HI)	13.5%	10.0%	19.4%
South Atlantic	28.7%	22.6%	29.2%
West North Central	5.7%	8.5%	4.7%
West South Central	14.2%	19.7%	21.2%









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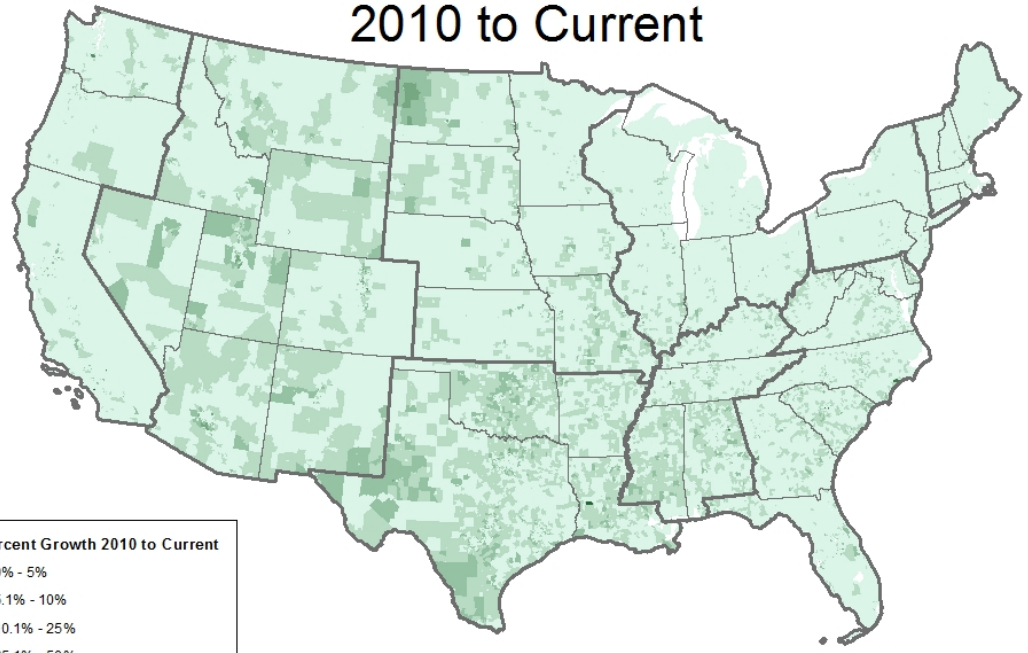
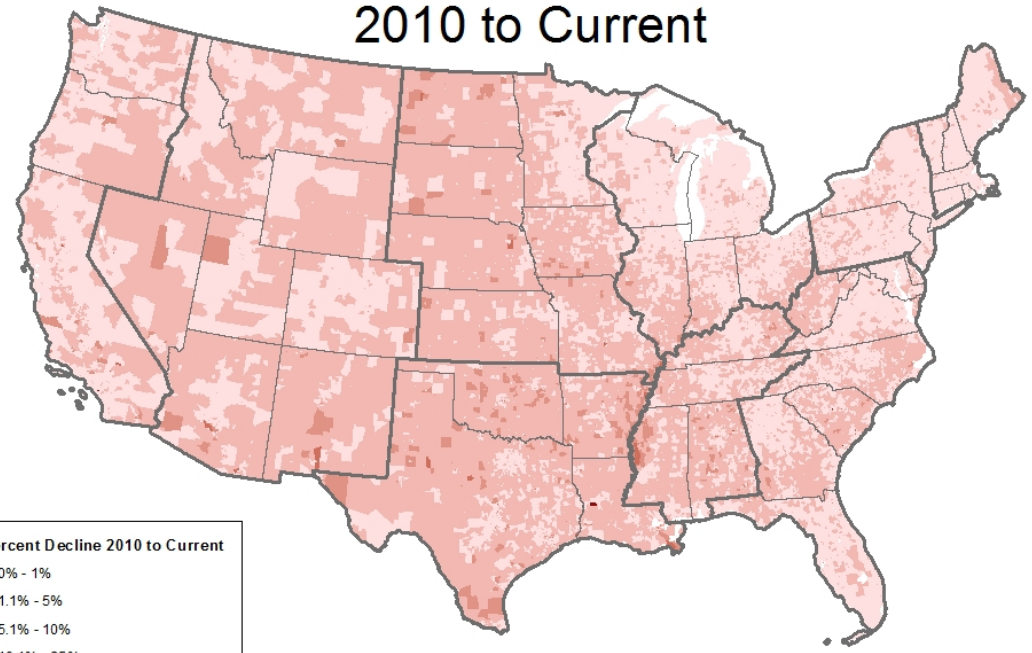
Estimated Percent Growth in Housing Units By Census Tract 2010 to Current



Projection: Contiguous Lambert Conformal Conic

Created by Michael Commons, Geographer, U.S. Census Bureau March, 2018

Estimated Percent Decline in Housing Units By Census Tract 2010 to Current



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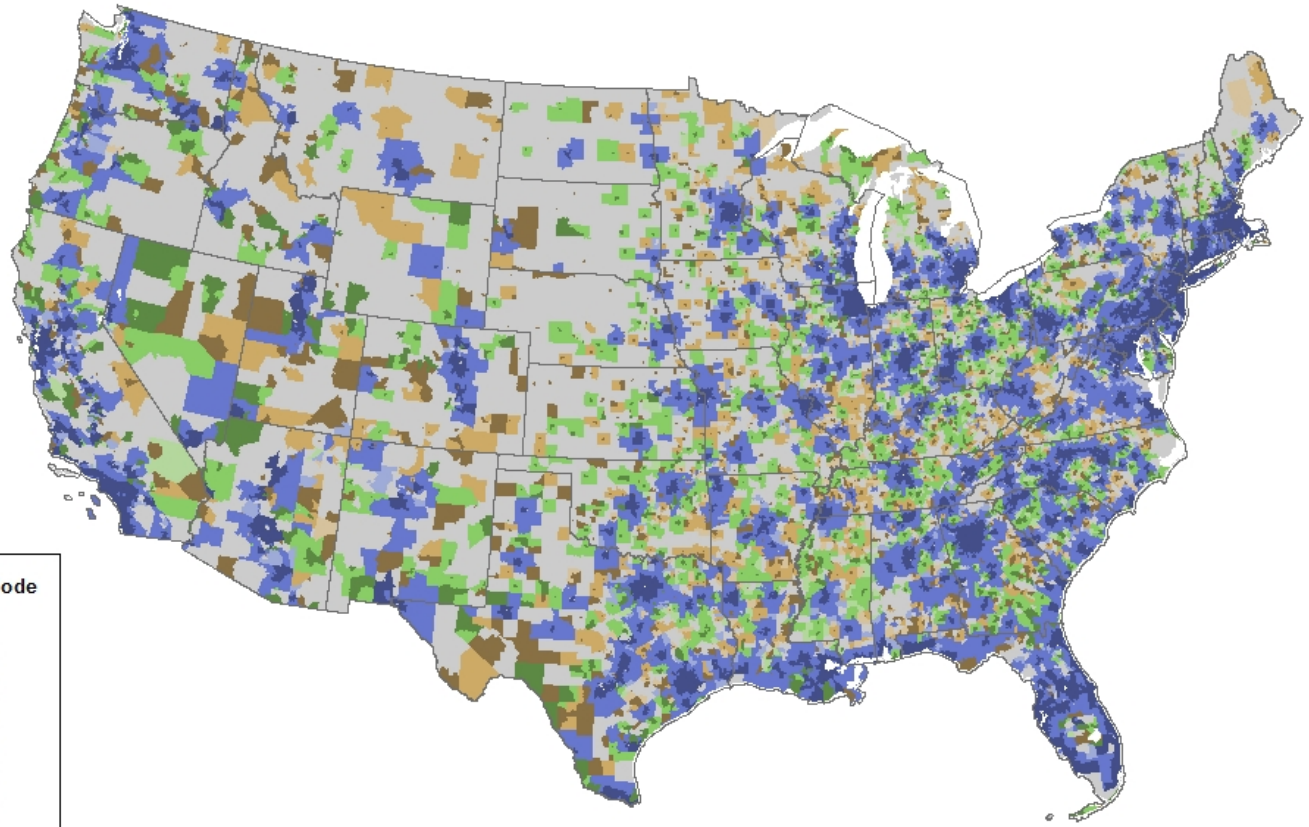
RUCA Codes by Census Tract



RUCA Code	Proportion of Tracts
1 Metropolitan area core: primary flow within an Urbanized Area (UA)	71.4%
2 Metropolitan area high commuting: primary flow 30% or more to a UA	9.4%
3 Metropolitan area low commuting: primary flow 10% to 30% to a UA	0.9%
4 Micropolitan area core: primary flow within an Urban Cluster of 10,000 to 49,999 (large UC)	5.8%
5 Micropolitan high commuting: primary flow 30% or more to a large UC	2.7%
6 Micropolitan low commuting: primary flow 10% to 30% to a large UC	0.6%
7 Small town core: primary flow within an Urban Cluster of 2,500 to 9,999 (small UC)	3.0%
8 Small town high commuting: primary flow 30% or more to a small UC	1.1%
9 Small town low commuting: primary flow 10% to 30% to a small UC	0.5%
10 Rural areas: primary flow to a tract outside a UA or UC	4.7%

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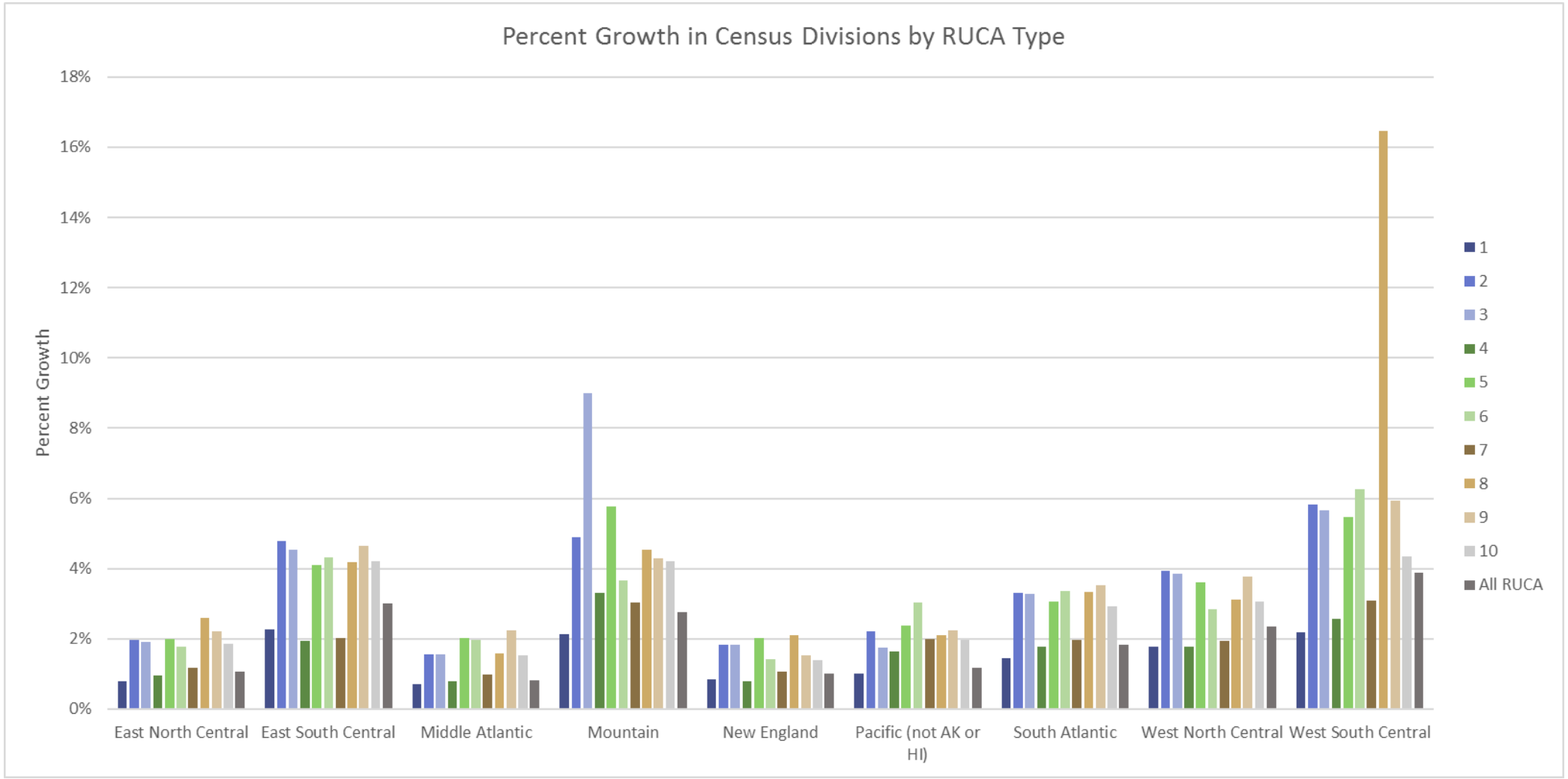

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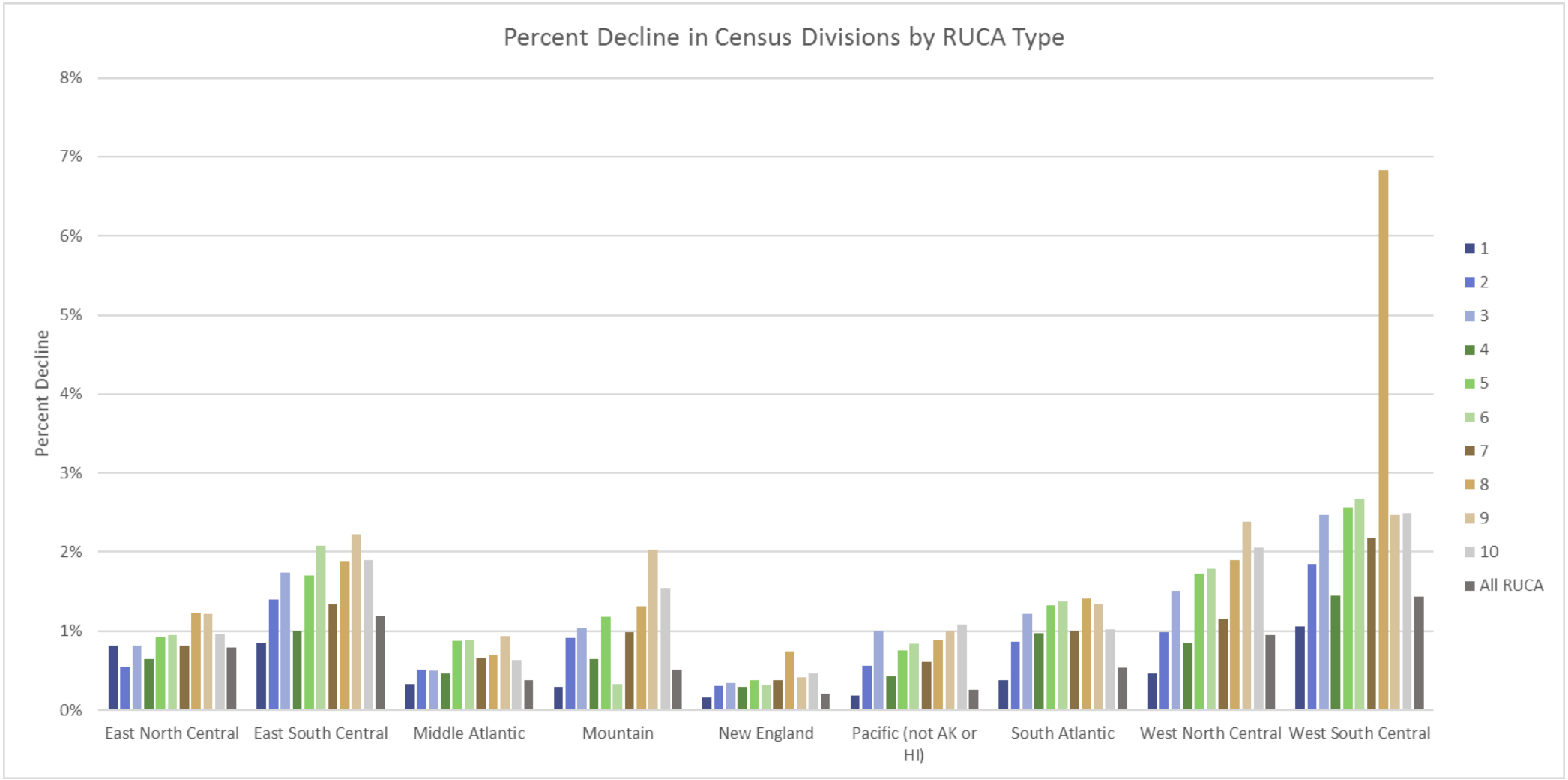

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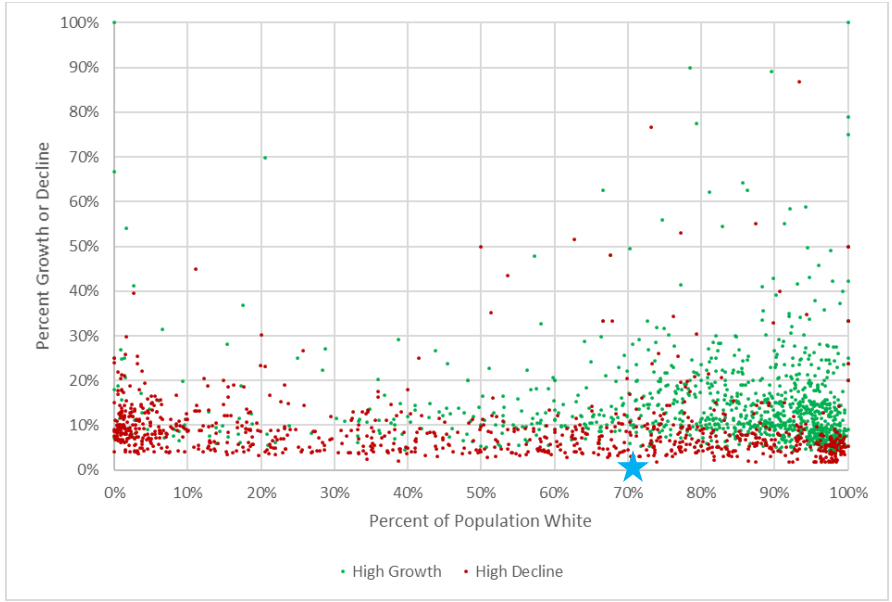
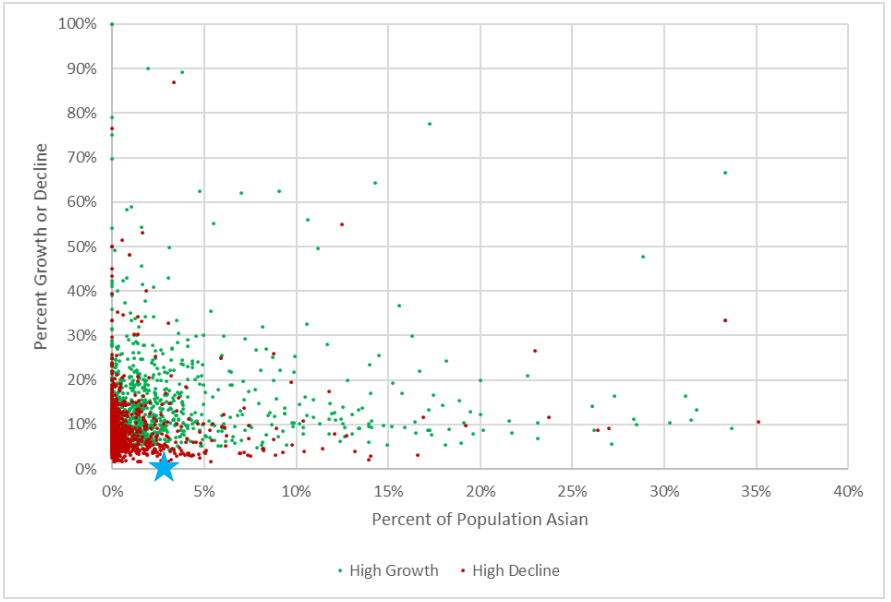
Comparison with Demographic Variables

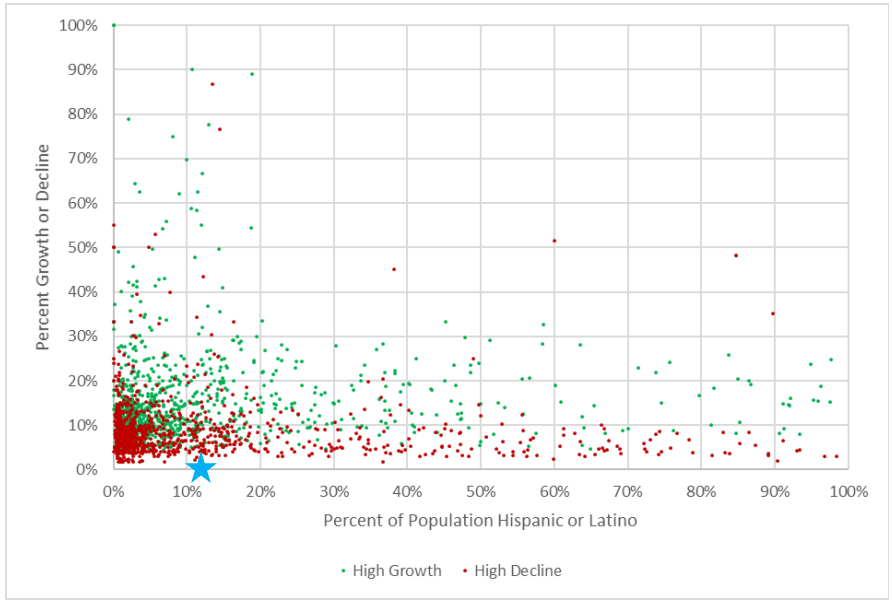
- High Growth tracts: two percent with highest growth rate
- High Decline tracts: two percent with highest decline rate
- Comparisons made at the census division level and for the entire country (excluding AK, HI, PR, and Island Areas)
- Mean of demographic variables compared with the percent growth or percent decline for those tracts

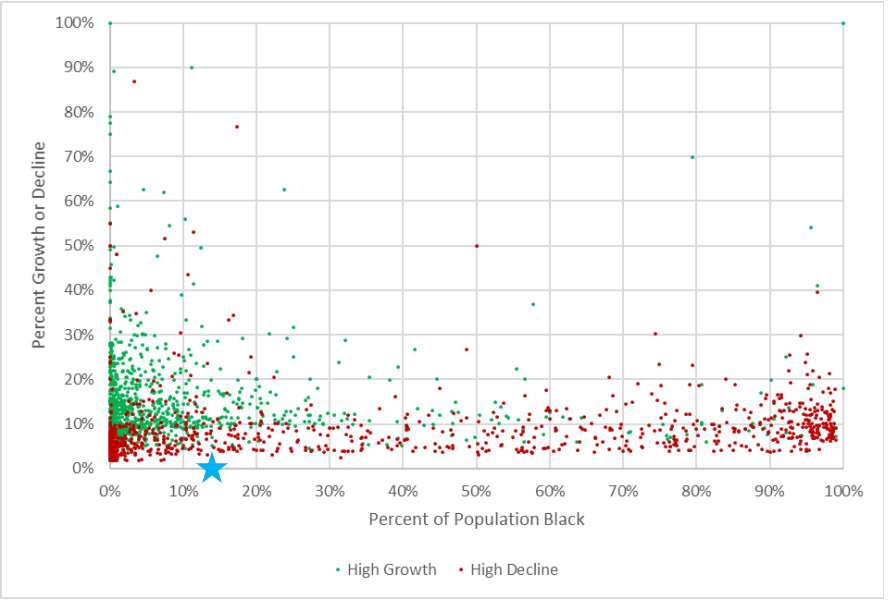
Tract Average

White	74.5%
Asian	3.8%
Hispanic or Latino	16.2%
Black	13.4%









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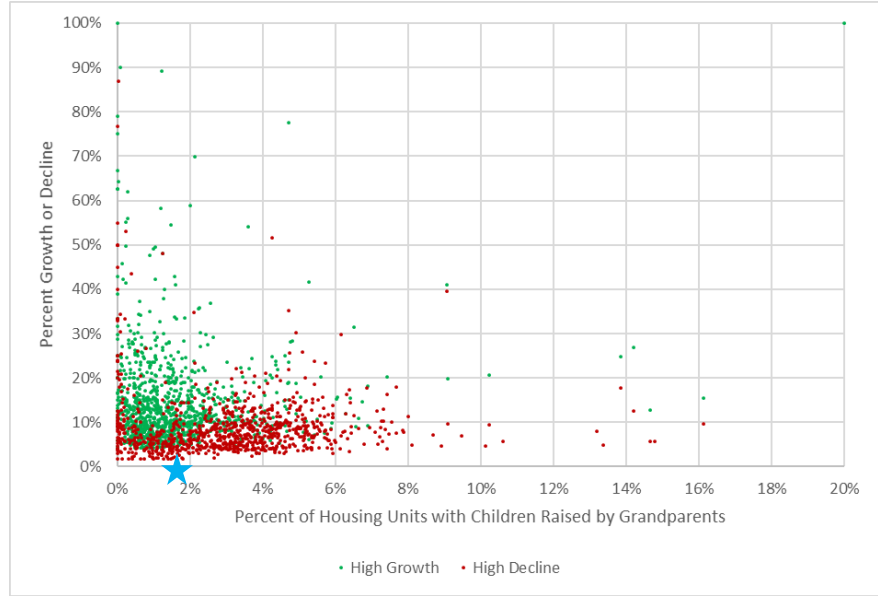
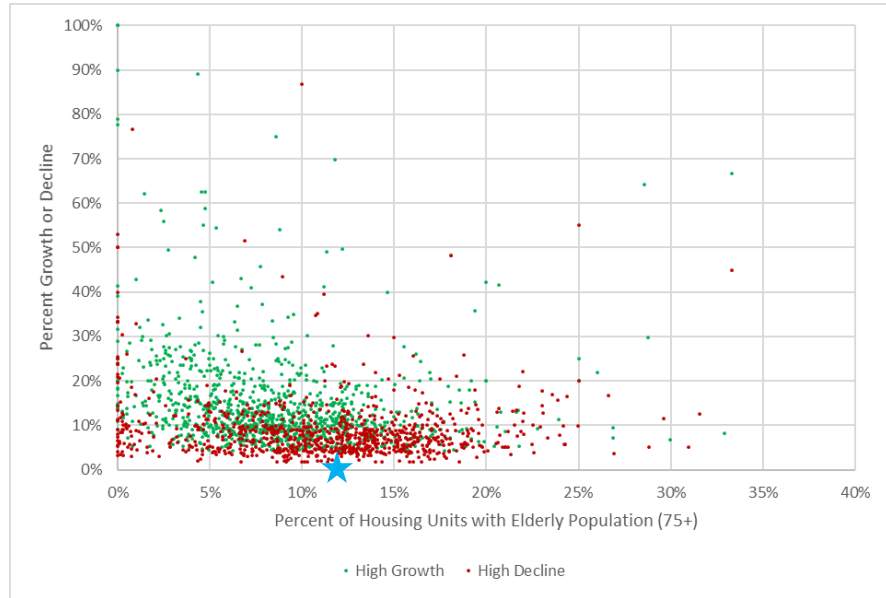
Tract Average

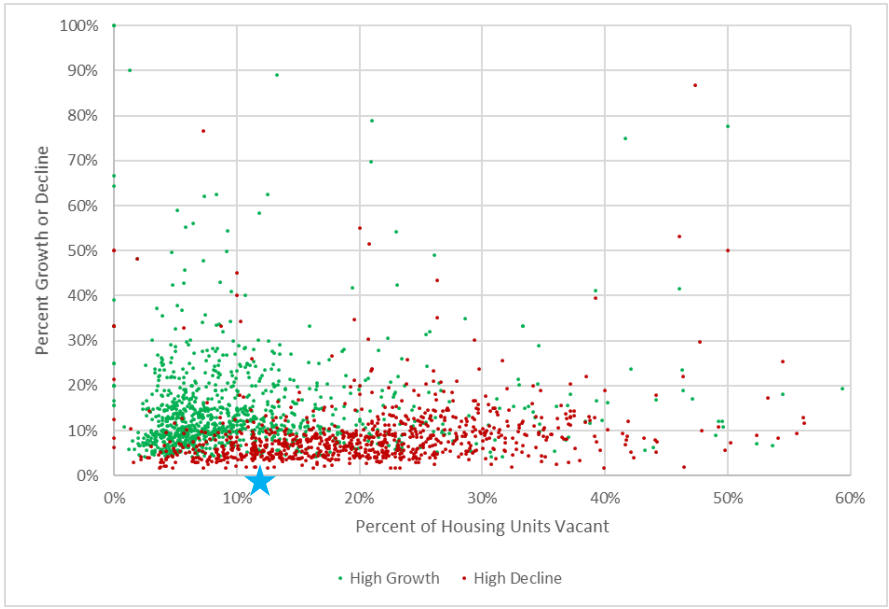
Multi-generation	4.6%
Children w/grandparents	1.9%
HU with age 75+	12.2%

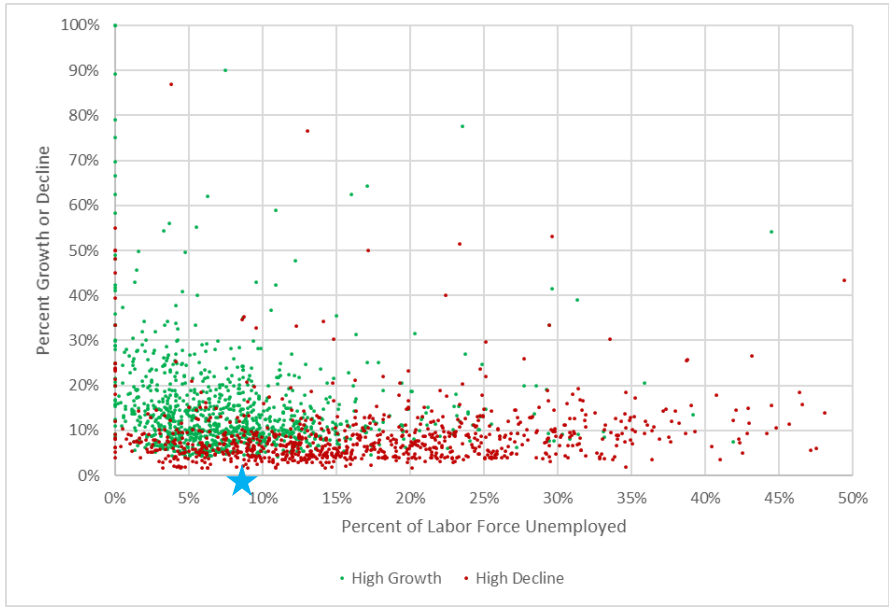


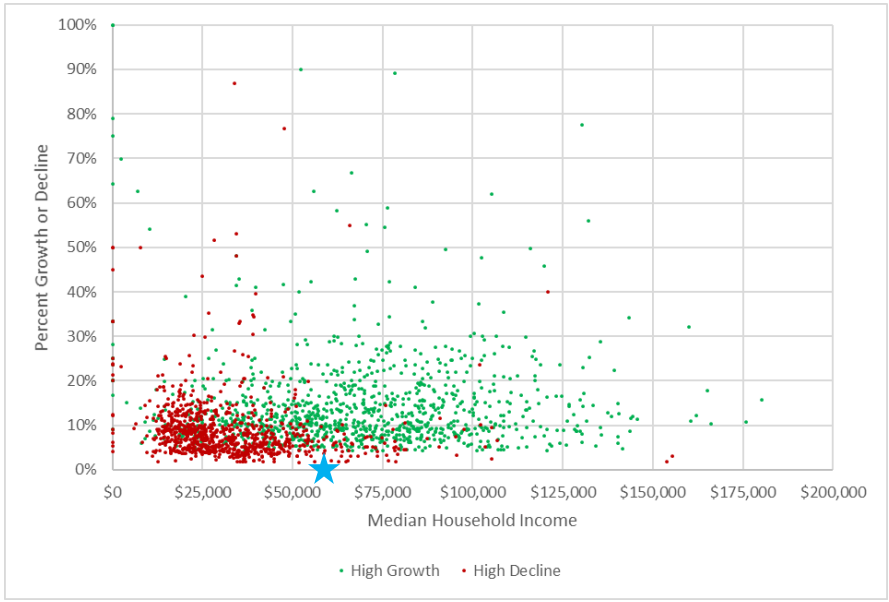


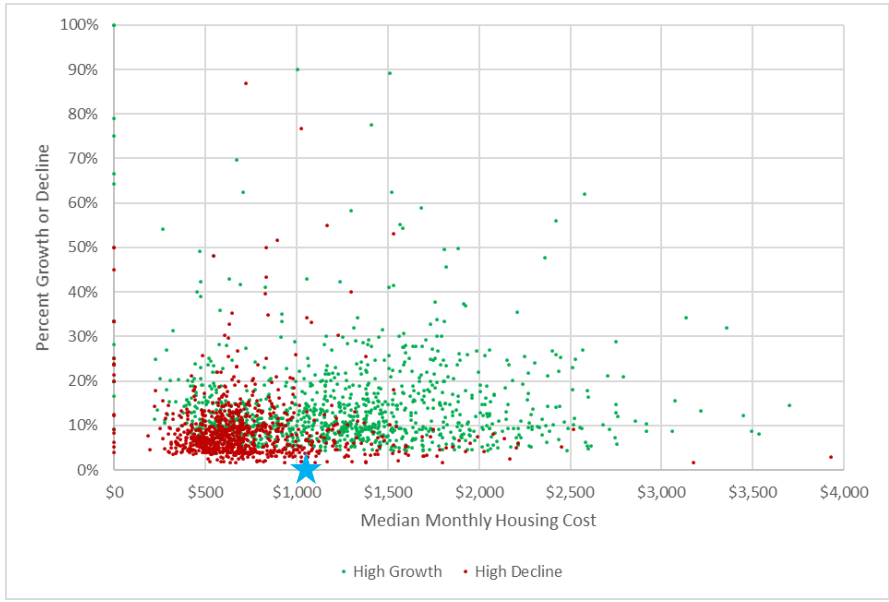
Tract Average

HU vacant	10.90%
Unemployed	9.90%
Median income	$55,457
Monthly housing cost	$1,089



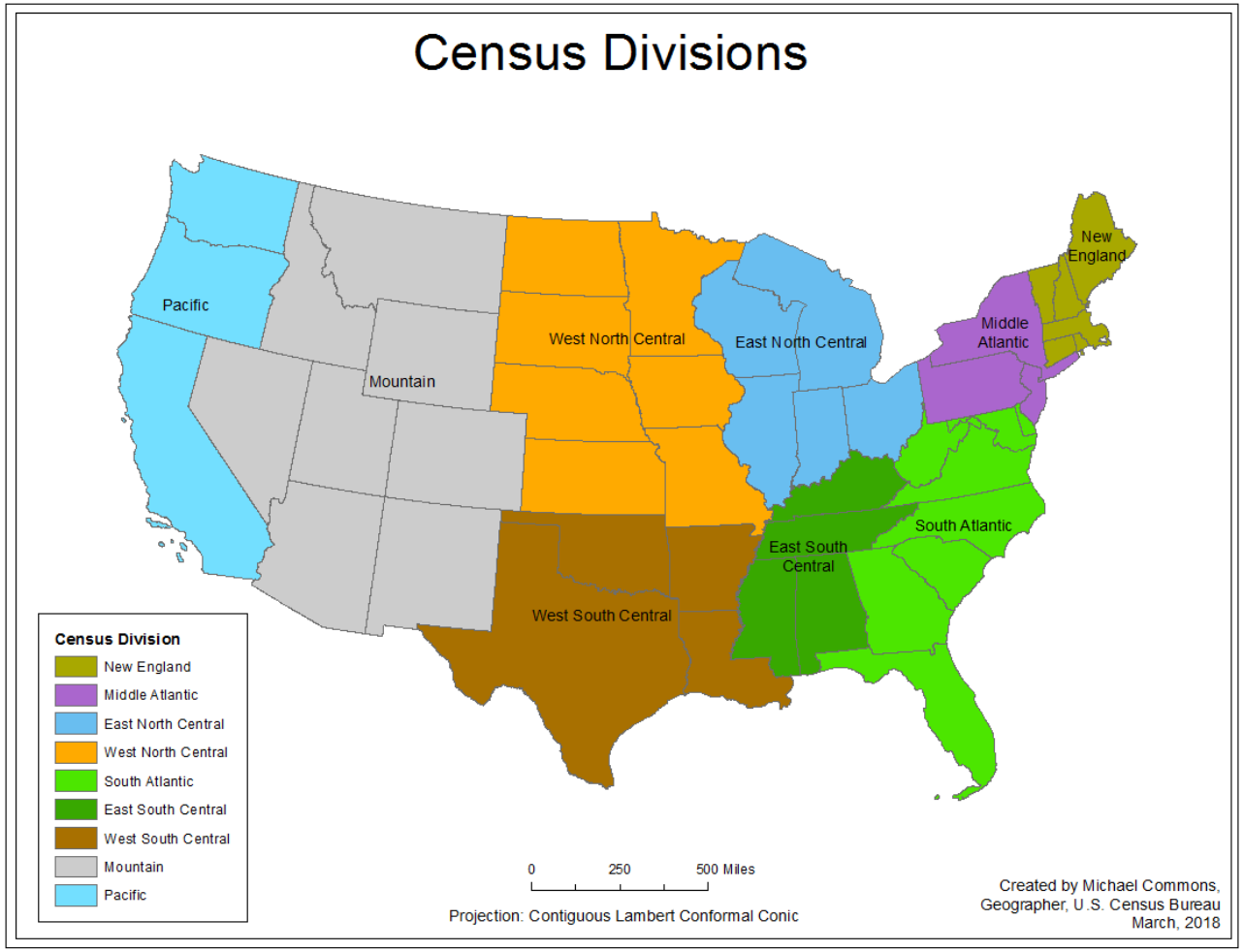


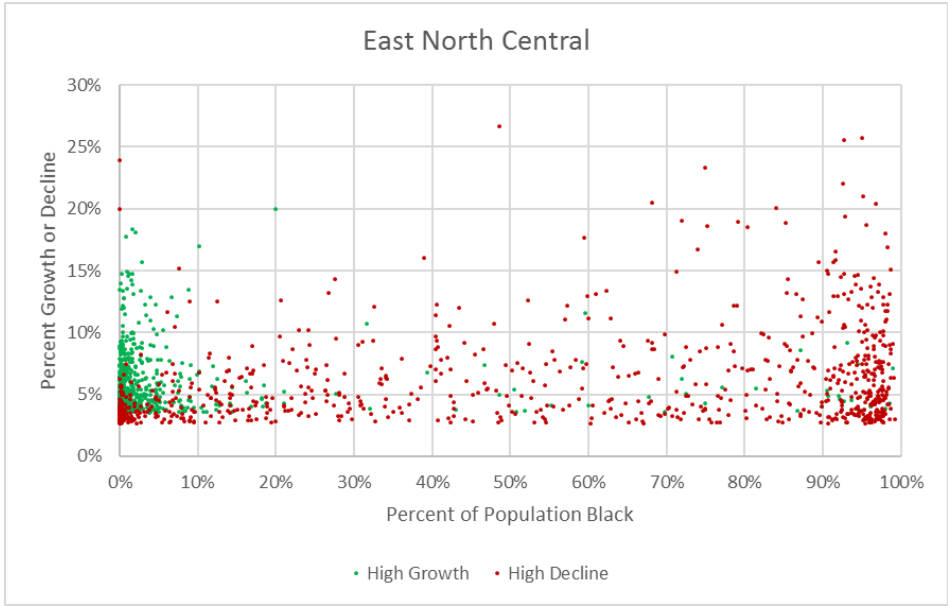


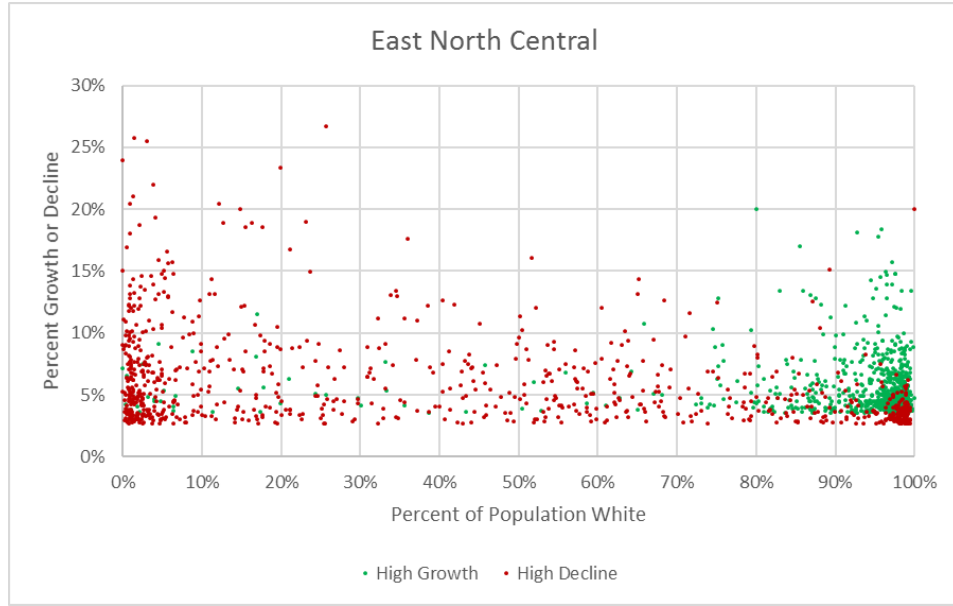


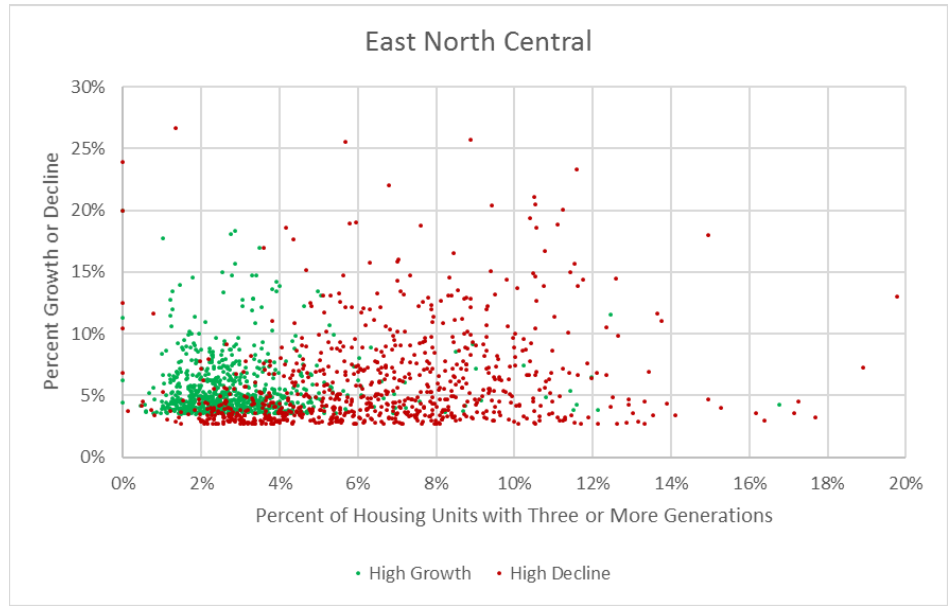
Demographic Variables by Census Division:

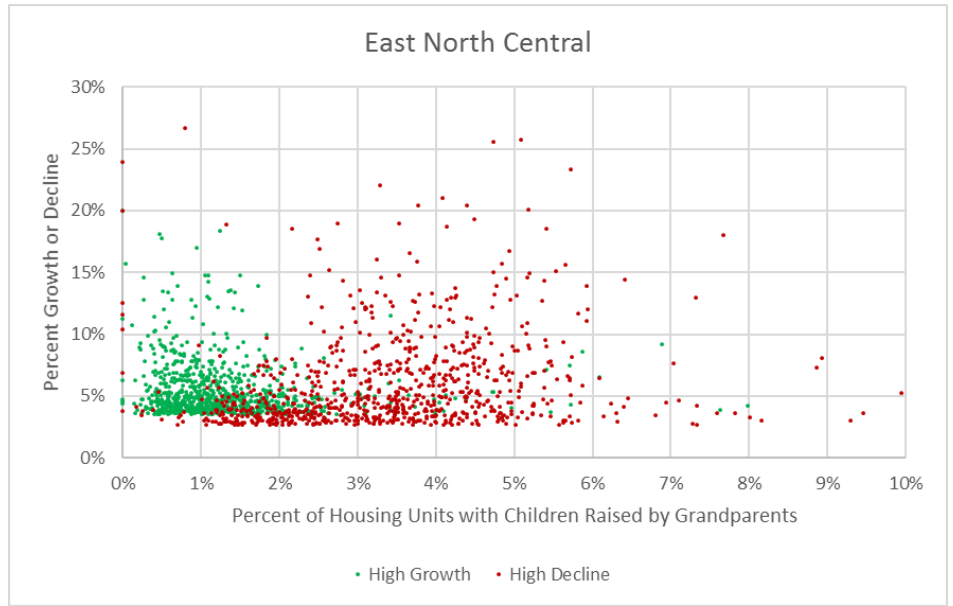
- East north Central

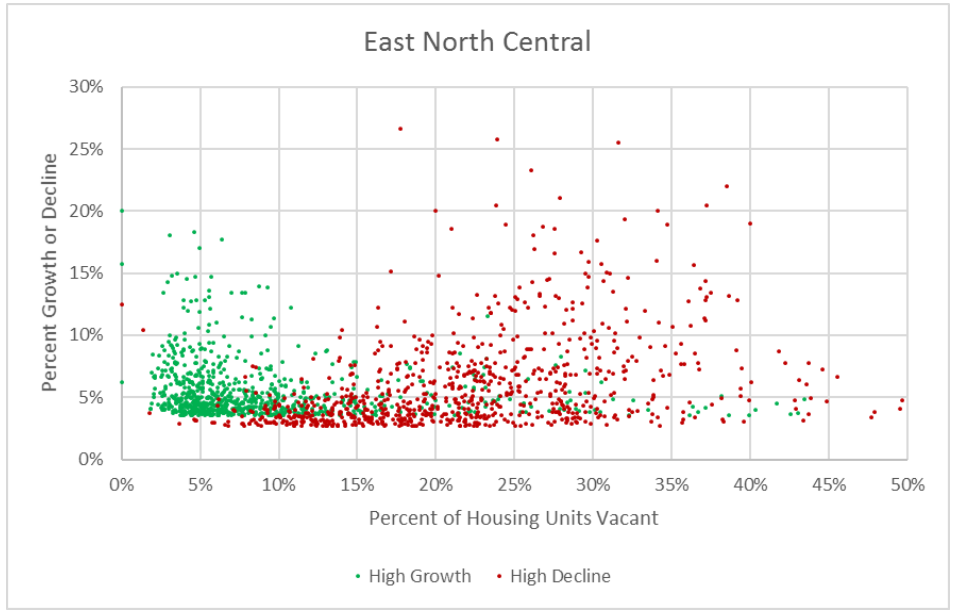


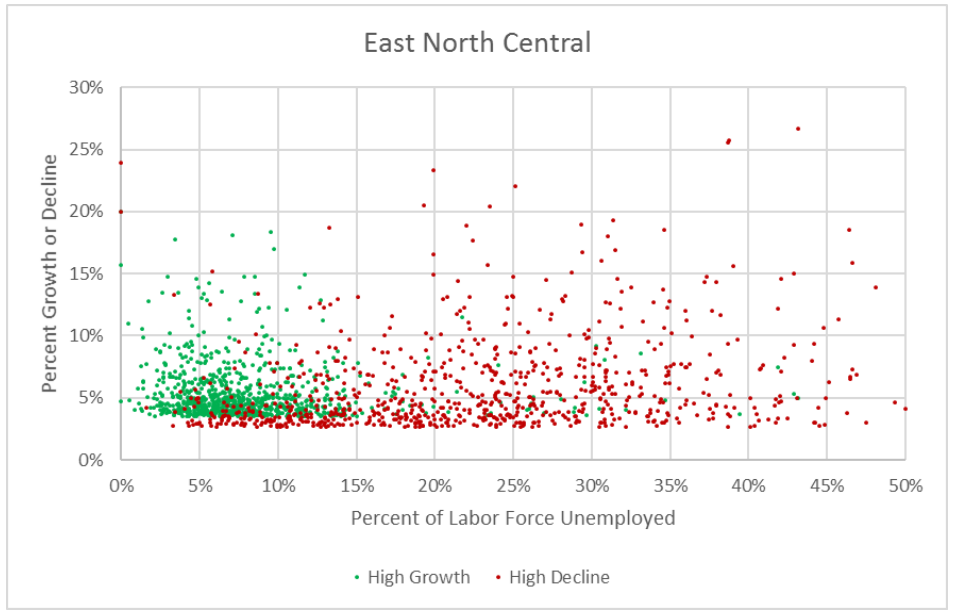

East North Central
Percent Growth or Decline
30%
25%
20%
15%
10%
5%
0%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percent of Population Black
High Growth
High Decline

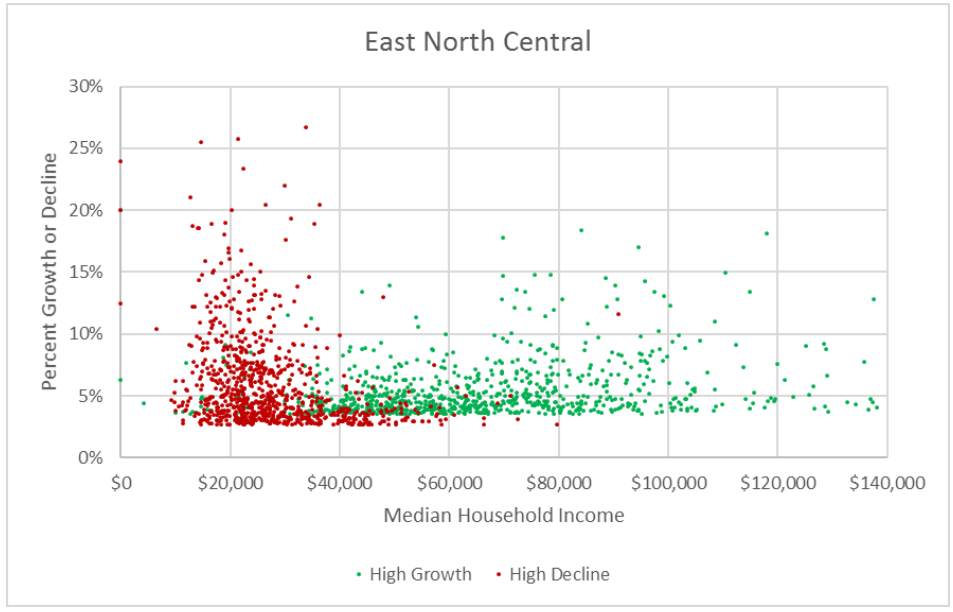

East North Central
Percent Growth or Decline
30%
25%
20%
15%
10%
5%
0%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percent of Population White
High Growth
High Decline

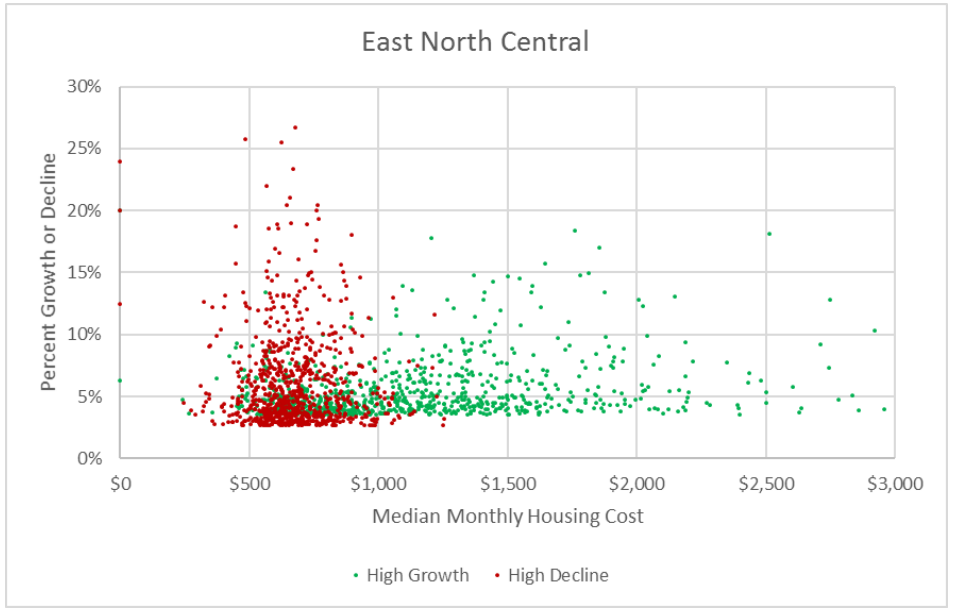

East North Central
Percent Growth or Decline
30%
25%
20%
15%
10%
5%
0%
0% 2% 4% 6% 8% 10% 12% 14% 16% 18% 20%
Percent of Housing Units with Three or More Generations
High Growth
High Decline


East North Central
Percent Growth or Decline
30%
25%
20%
15%
10%
5%
0%
0% 1% 2% 3% 4% 5% 6% 7% 8% 9% 10%
Percent of Housing Units with Children Raised by Grandparents
High Growth
High Decline









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Findings

Substantial change (growth and decline) occurring in small towns of East South Central and West South Central divisions

- Areas where new addresses may be lacking and require additional local data sources

Findings

Decline:

- Lower than average median household income
- Housing unit vacancy greater than 15 percent
- Unemployment greater than 10 percent

Findings

Growth:

- Higher than average median income
- Housing unit vacancy less than eight percent
- Median monthly housing cost greater than $1,000
- Population less than 15 percent Hispanic or Latino in Mountain

Moving Forward

Results of this research:

- Feed back into the In-Office Address Canvassing operations
  - Re-review areas where changes are most likely
- Identify areas of change where address sources may not be sufficient

Questions or Comments?

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