Proposed Urban Area Criteria for the 2020 Census:

New Jersey State Data Center

November 9, 2021

Michael Commons

U.S. Census Bureau

michael.commons@census.gov

Urban Area Criteria: Changes for 2020 (per February 2021 F.R.N.)

(1) Increase the Minimum Threshold to Qualify as an Urban Area — 4,000 HU or 10,000 Pop

- Qualify on total housing units or population

(2) Cease Distinguishing Different Types of Urban Areas

(3) Adoption of Housing Unit Density Threshold for Qualification of Census Blocks — 385 HPSM

(4) Reduce the Maximum Distances of Jumps — 1.5 miles

(5) No Longer Include Low Density Hop or Jump "Corridor" in the Urban Area

(6) Splitting of Large Agglomerations of Densely Settled Territory

- Utilization of *Longitudinal Employer-Household Dynamics* (LEHD) data

Proposed Urban Area Criteria for the 2020 Census

1. Increase the Minimum Threshold to Qualify as an Urban Area
   - *Total housing units or population*
2. Cease Distinguishing Different Types of Urban Areas
3. Reduce the Maximum Distance of Jumps
4. No Longer Include Low Density Hop or Jump "Corridor" in the Urban Area
5. Adoption of Housing Unit Density Threshold for Qualification of Census Blocks

Proposed Urban Area Criteria for the 2020 Census

1 Increase the Minimum Threshold to Qualify as an Urban Area

Population: 10,000

OR

Housing Units: 4,000

2 Cease Distinguishing Different Types of Urban Areas

Urban Clusters: Urban Areas with population of 2,500 to 49,999

Urbanized Areas: Urban Areas with population of 50,000 or more

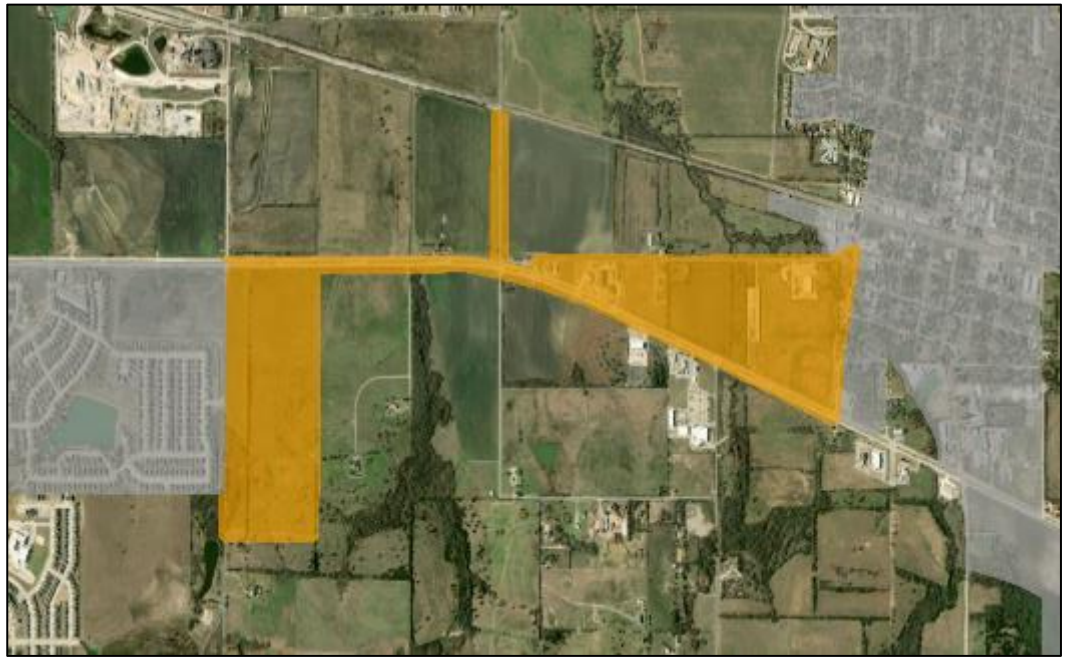
Proposed Urban Area Criteria for the 2020 Census

3 Reduce the Maximum Distance of Jumps

- From 2.5 miles back down to **1.5 miles**
  - Extended to 2.5 miles in 2000
  - Impervious surface added in 2010
    - Combination led to overbounding in 2010

- Excluded territory still extends hops and jumps to maximum of 5 miles
  - Water and wetlands

4 No Longer Include Low Density Hop or Jump "Corridor" blocks in the Urban Area



2010 Jump Blocks

2010 Qualified Urban Blocks

Proposed Urban Area Criteria for the 2020 Census

5 **Adoption of Housing Unit Density Threshold for Qualification of Census Blocks**

385 housing units (occupied or vacant) per square mile

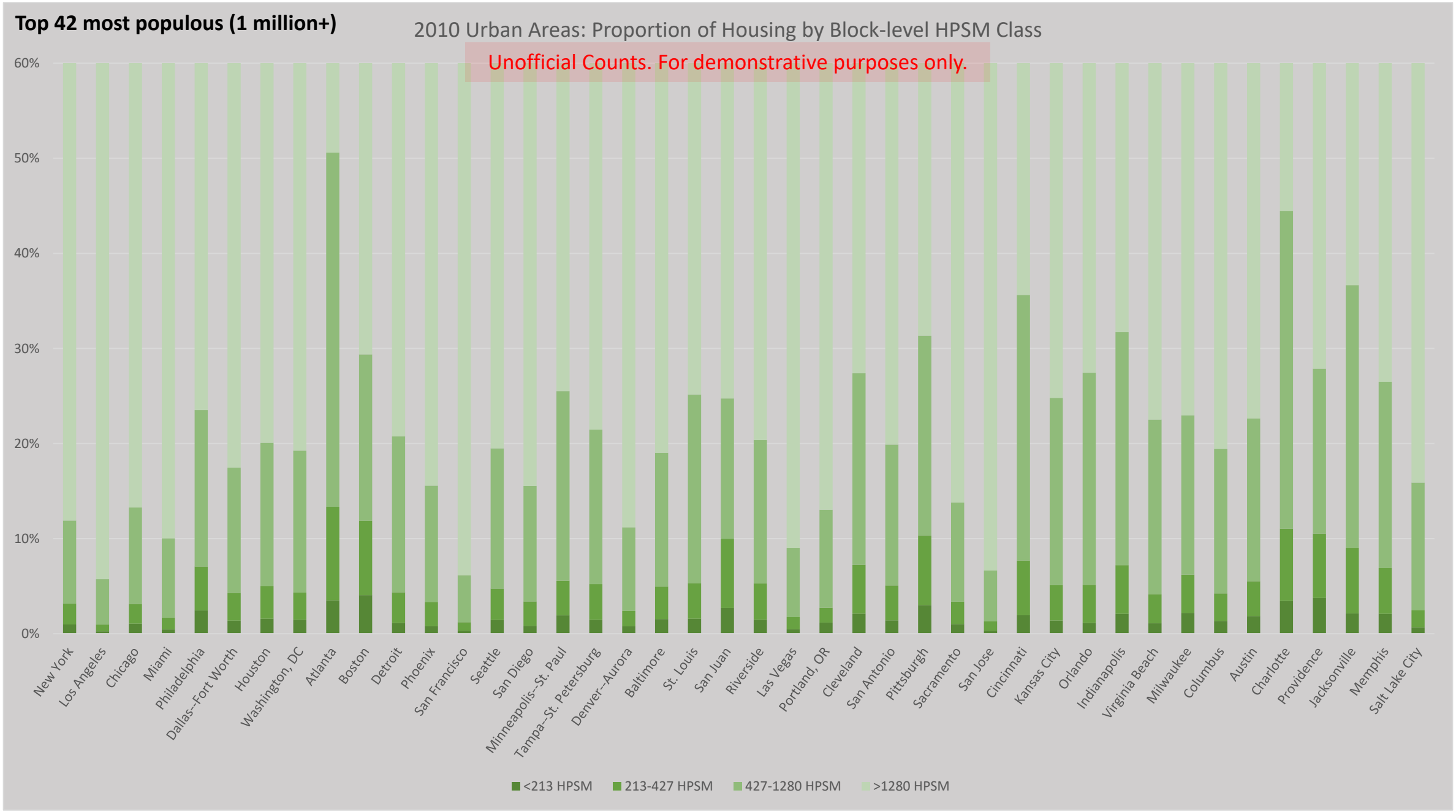
- Equivalent to 1 housing unit per 1.6 acres
- Equivalent to approximately 1,000 persons per square mile

- **More direct measure of developed landscape**
- **Ability to update extent of Urban Areas between censuses**
- **Census block-level housing unit counts are invariant**

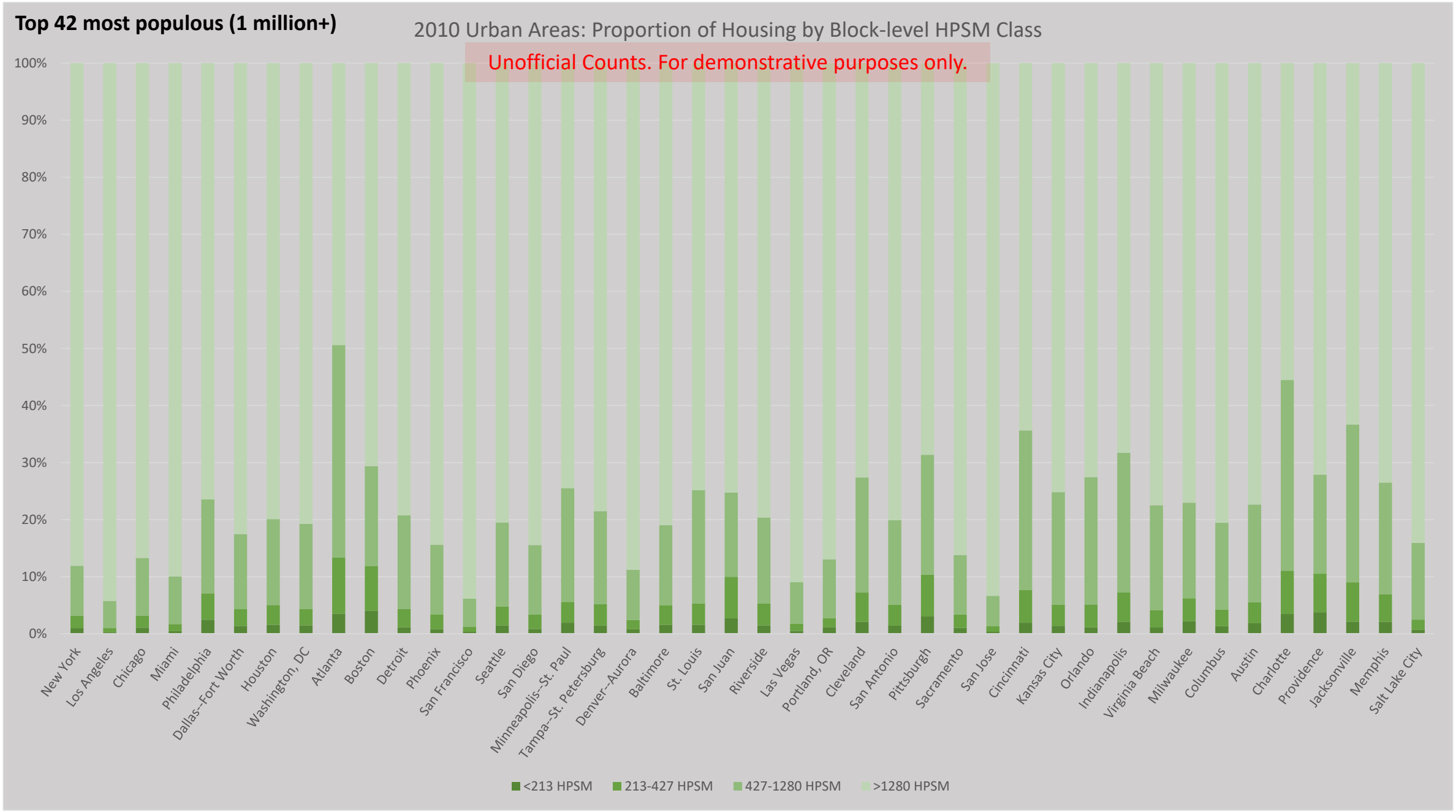
Conceptually-Accessible Density Classes

HU/Acre	Acres/HU	HU/Sq mi	Pop/Sq mi	Acres/Pop	Pop/Acre
2.00	0.5	1,280	3,328	0.19	5.20
1.00	1.0	640	1,664	0.38	2.60
0.67	1.5	427	1,109	0.58	1.73
0.60	**1.7**	**385**	**1,001**	**0.64**	**1.56**
0.50	2.0	320	832	0.77	1.30
0.40	2.5	256	666	0.96	1.04
0.33	3.0	213	555	1.15	0.87

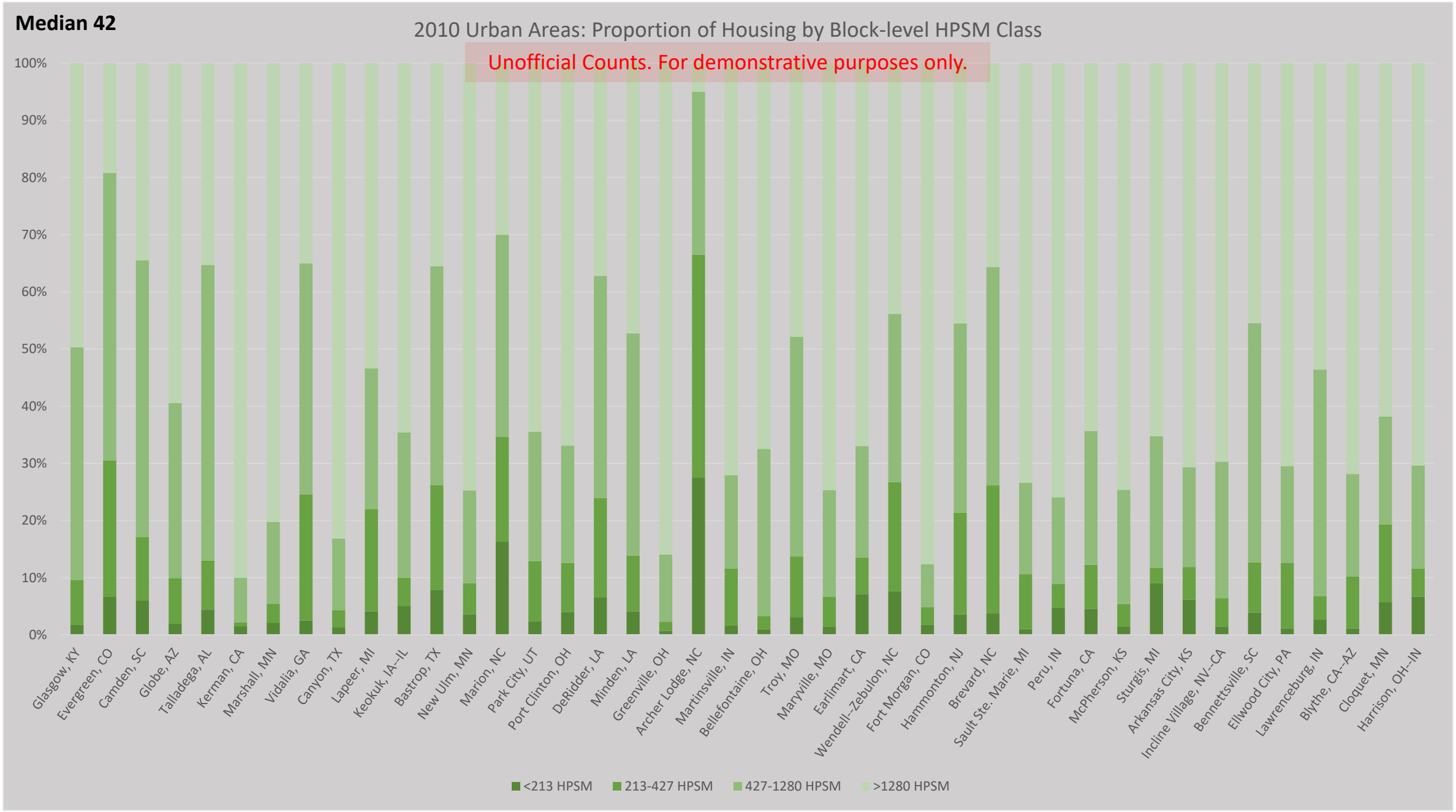
Top 42 most populous (1 million+)



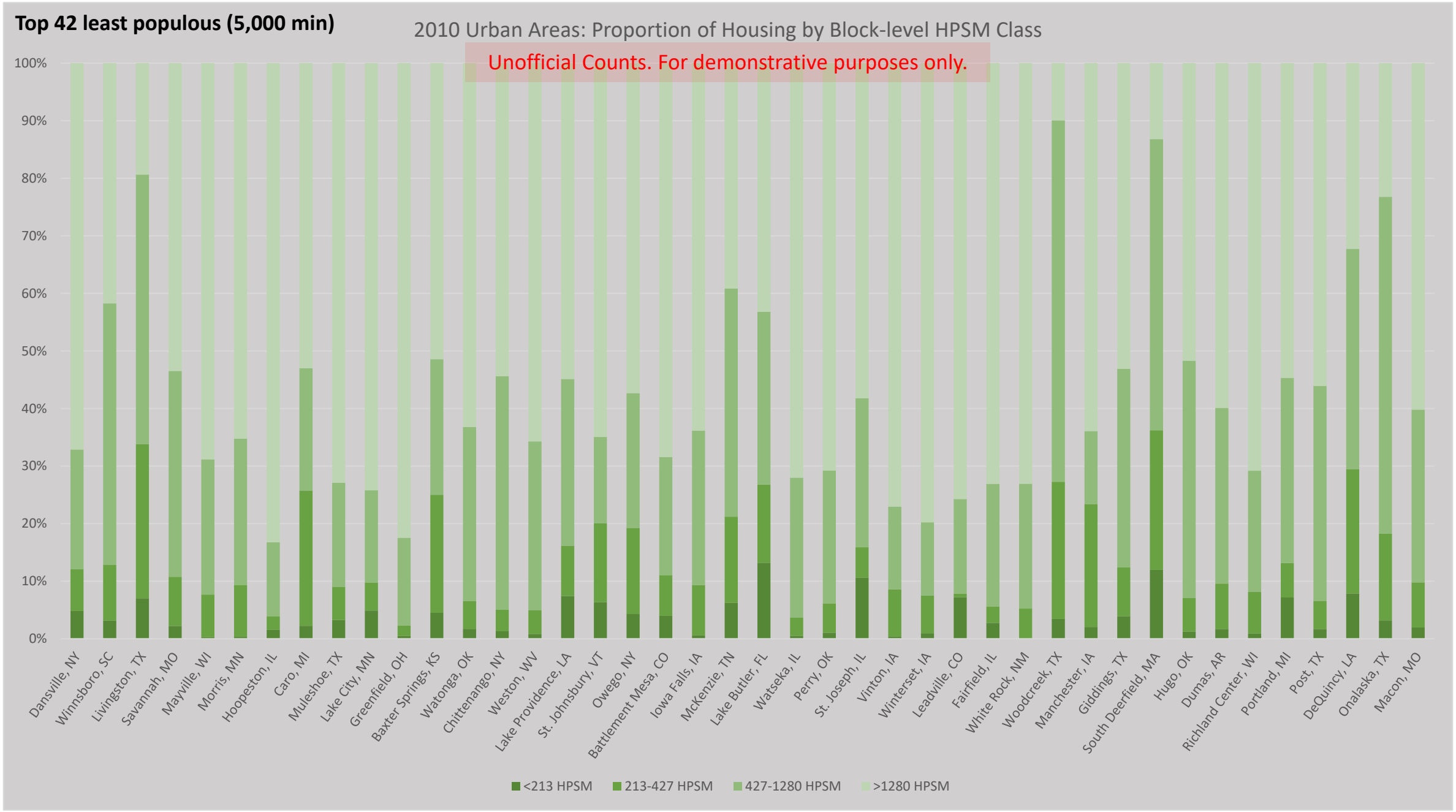
Top 42 most populous (1 million+)



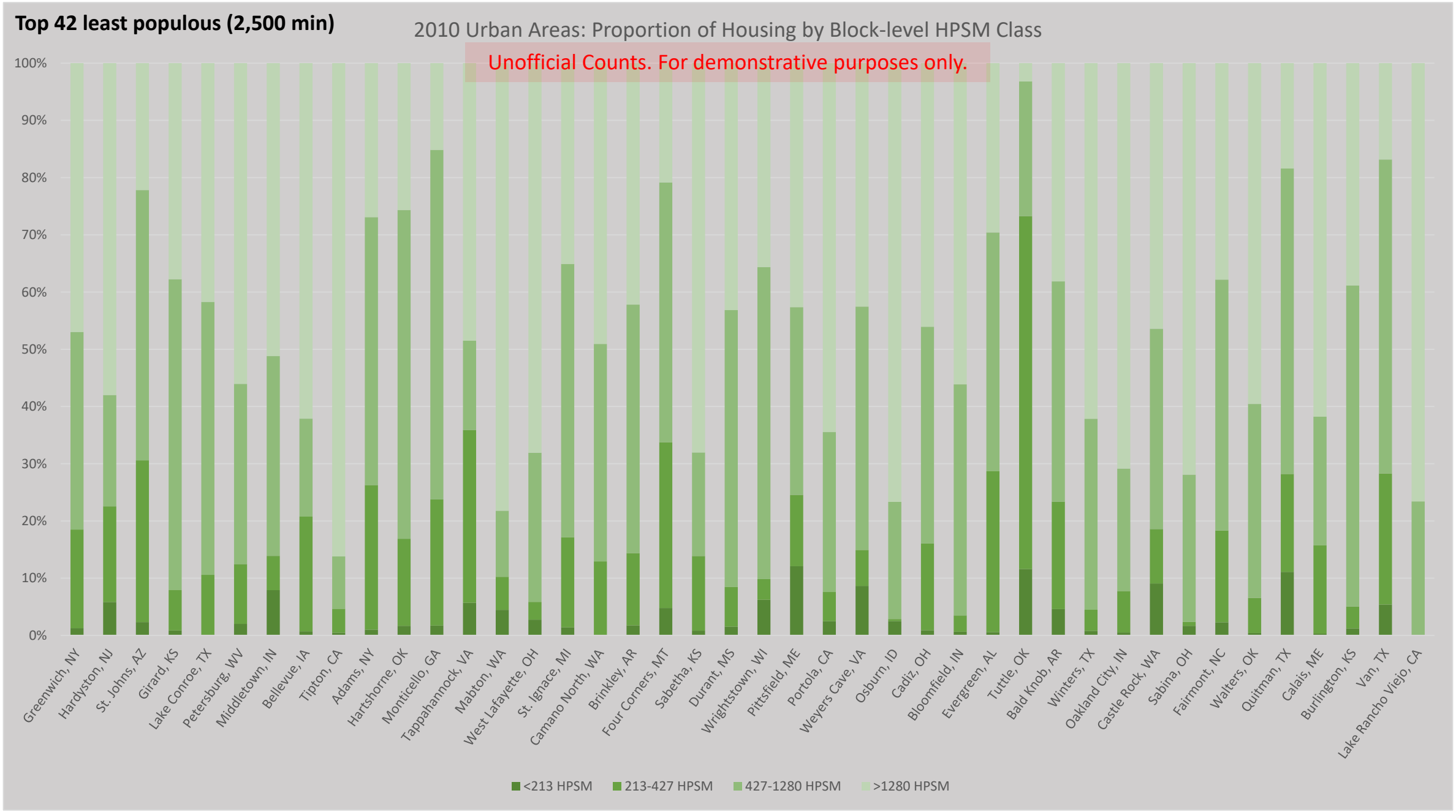
Median 42


2010 Urban Areas: Proportion of Housing by Block-level HPSM Class
Unofficial Counts. For demonstrative purposes only.
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Glasgow, KY
Evergreen, CO
Camden, SC
Globe, AZ
Talladega, AL
Kerman, CA
Marshall, MN
Vidalia, GA
Canyon, TX
Lapeer, MI
Keokuk, IA--IL
Bastrop, TX
New Ulm, MN
Marion, NC
Park City, UT
Port Clinton, OH
DeRidder, LA
Minden, LA
Greenville, OH
Archer Lodge, NC
Martinsville, IN
Bellefontaine, OH
Troy, MO
Maryville, MO
Earlimart, CA
Wendell--Zebulon, NC
Fort Morgan, CO
Hammonton, NJ
Brevard, NC
Sault Ste. Marie, MI
Peru, IN
Fortuna, CA
McPherson, KS
Sturgis, MI
Arkansas City, KS
Incline Village, NV--CA
Bennettsville, SC
Ellwood City, PA
Lawrenceburg, IN
Blythe, CA--AZ
Cloquet, MN
Harrison, OH--IN
<213 HPSM
213-427 HPSM
427-1280 HPSM
>1280 HPSM

Top 42 least populous (5,000 min)



Top 42 least populous (2,500 min)

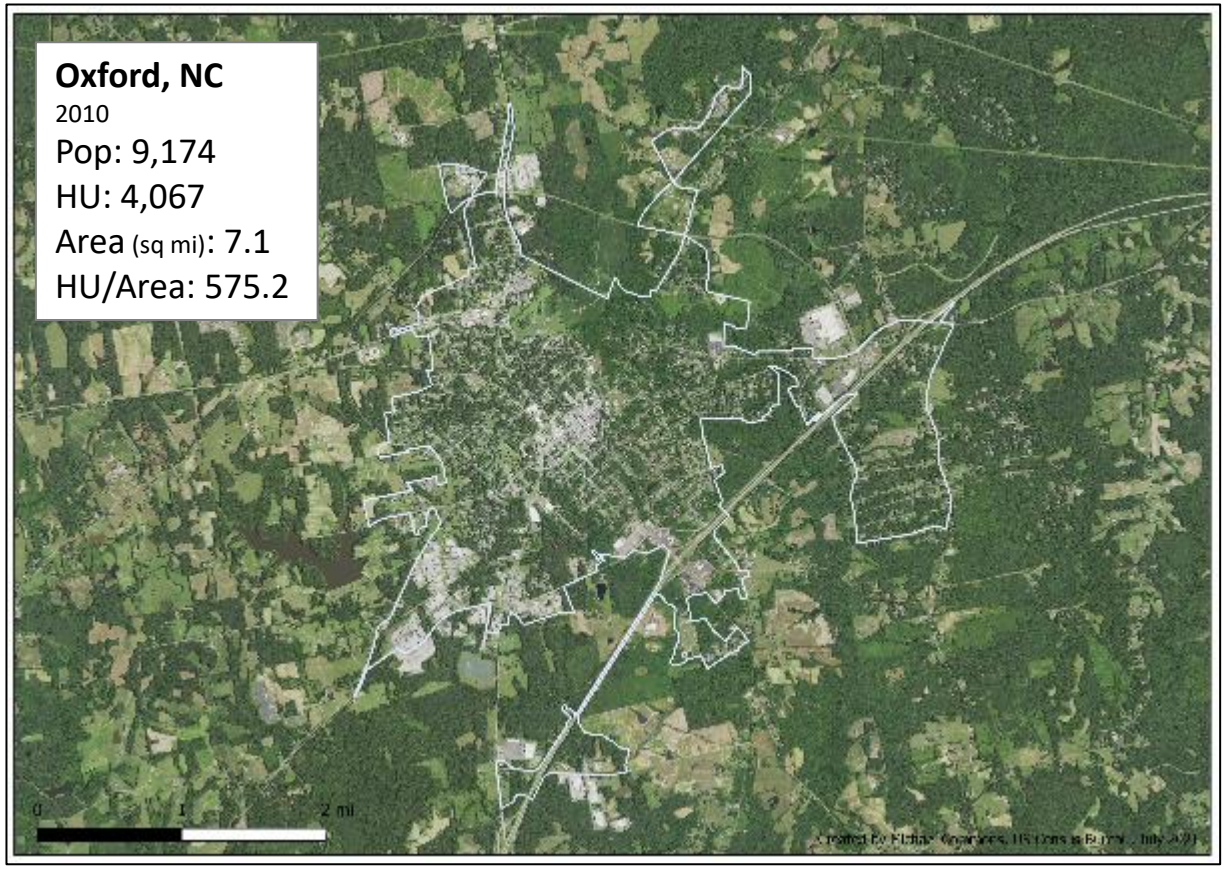


Possible Criteria Changes

- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units

Possible Criteria Changes

- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units

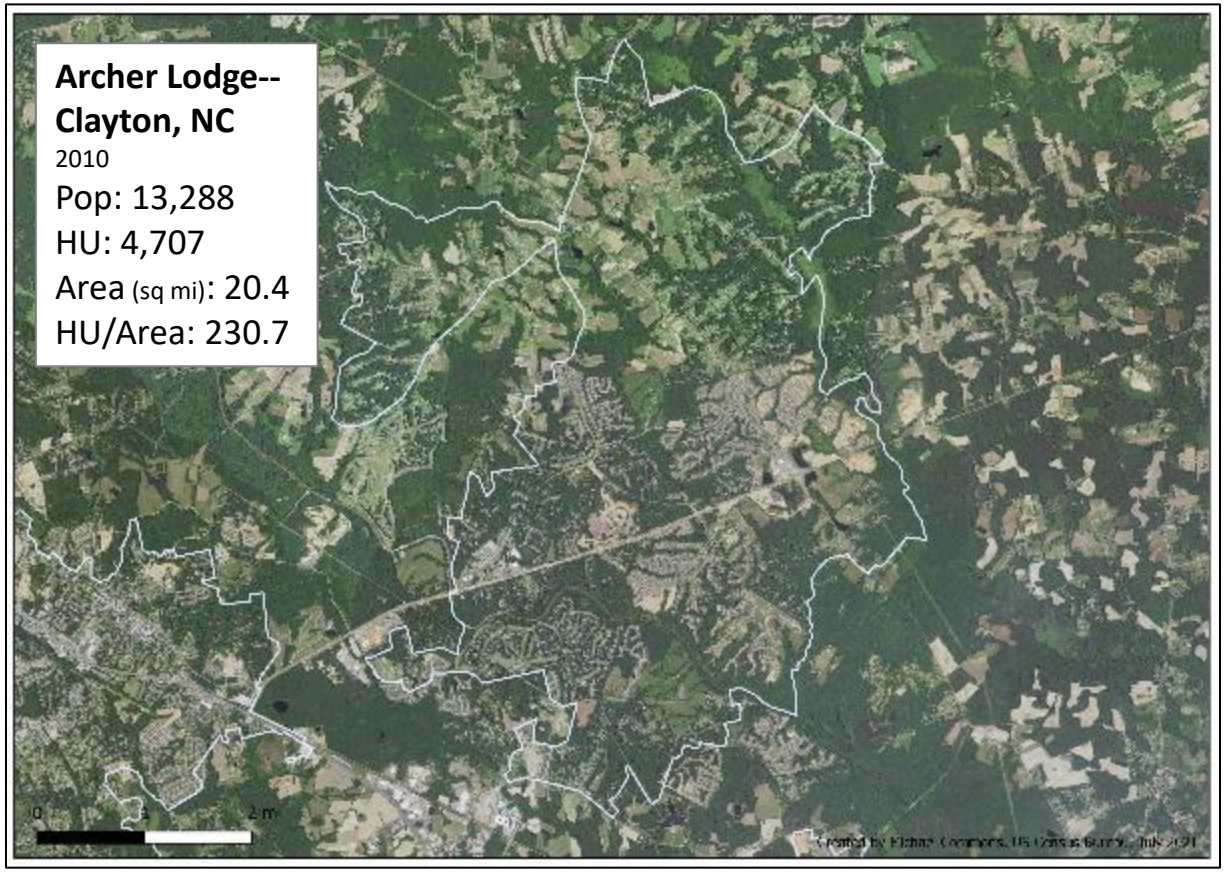


Preliminary Findings. For demonstrative purposes only.

Average HU/Area of all 2010 UA = 725
Average HU/Area of all UA2010 w/2,000HU or 5,000POP = 745

Possible Criteria Changes

- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units

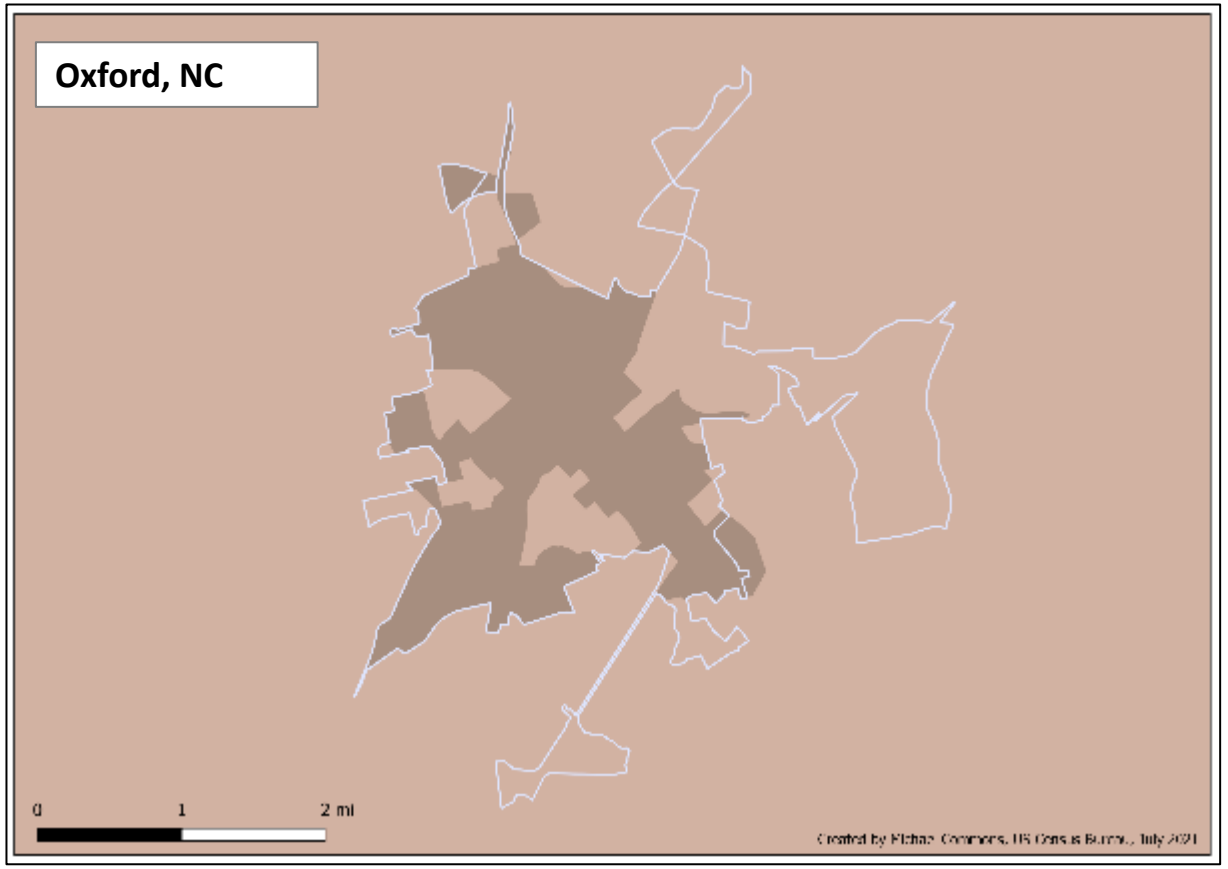


Preliminary Findings. For demonstrative purposes only.

Average HU/Area of all 2010 UA = 725
Average HU/Area of all UA2010 w/2,000HU or 5,000POP = 745

Possible Criteria Changes

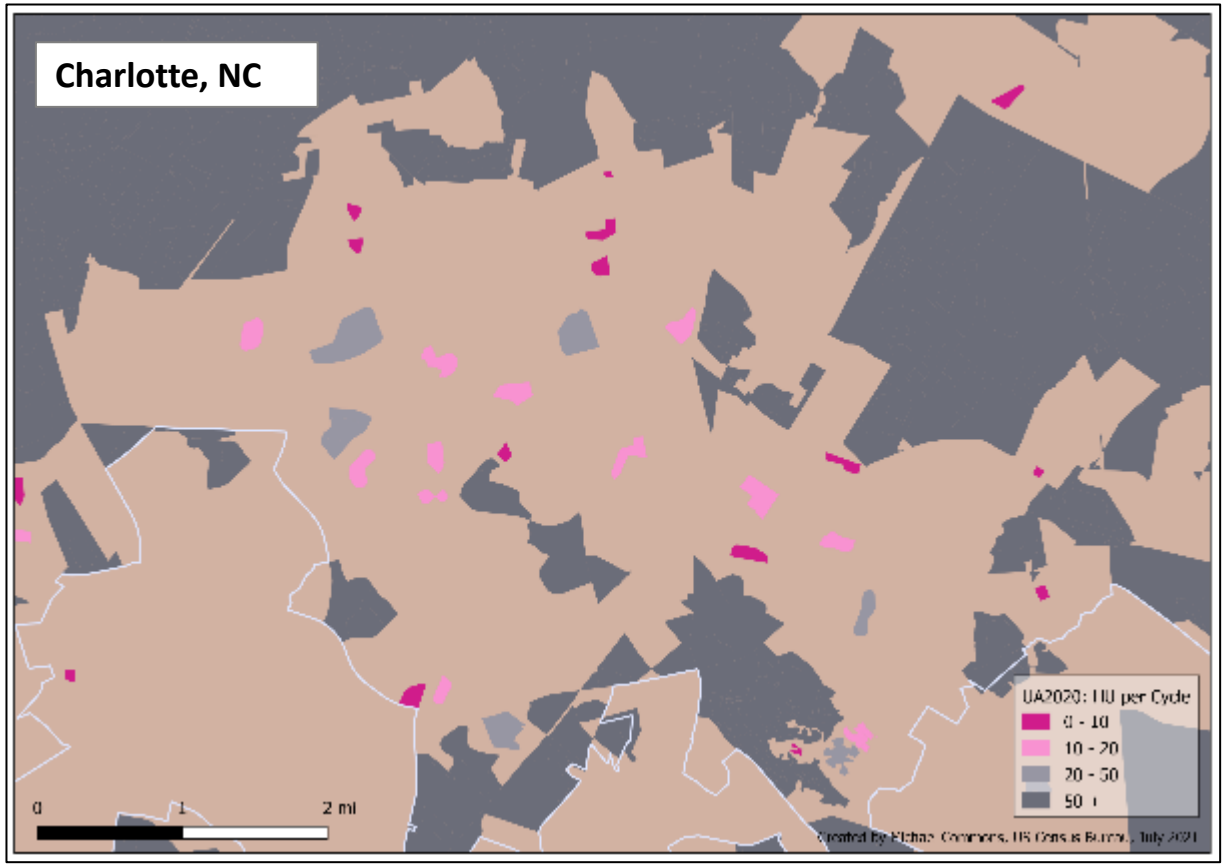
- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units



Preliminary Findings. For demonstrative purposes only.

Possible Criteria Changes

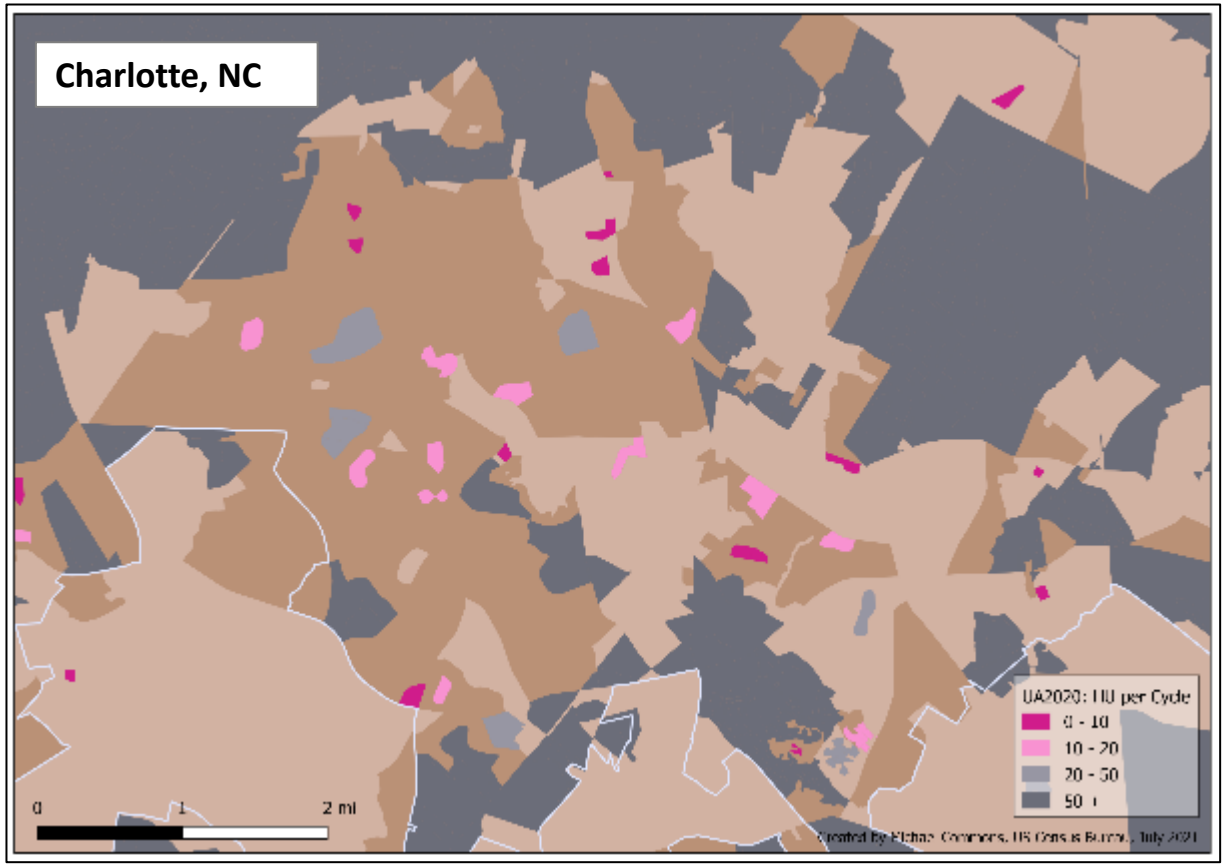
- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units



Preliminary Findings. For demonstrative purposes only.

Possible Criteria Changes

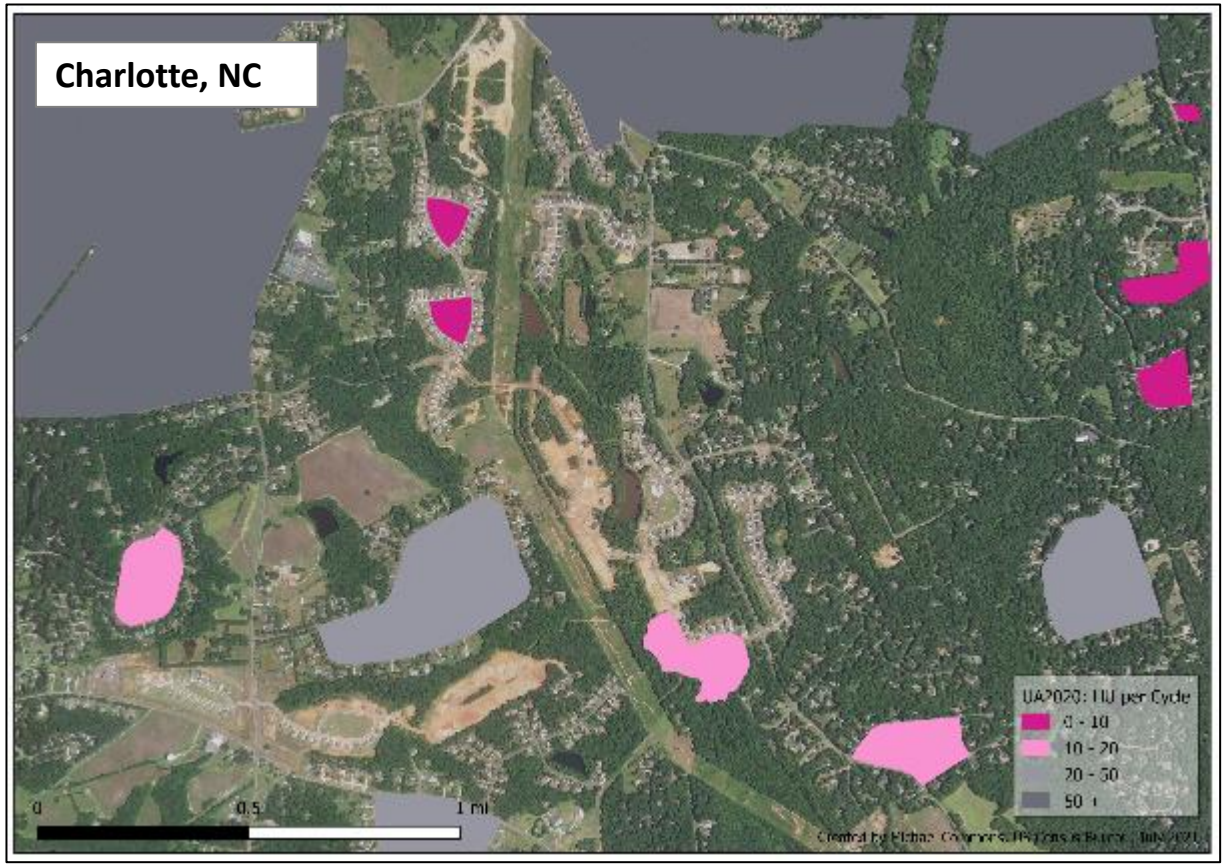
- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units



Preliminary Findings. For demonstrative purposes only.

Possible Criteria Changes

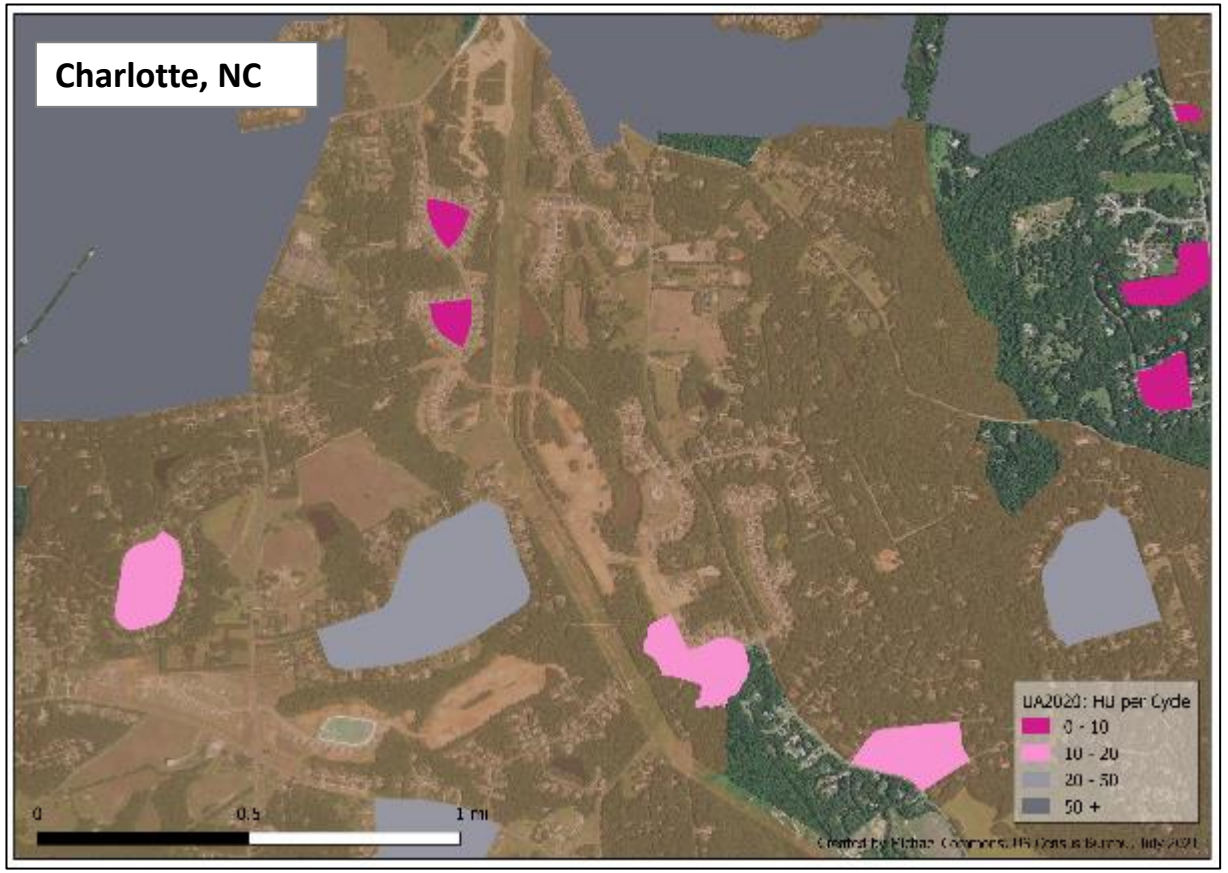
- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units



Preliminary Findings. For demonstrative purposes only.

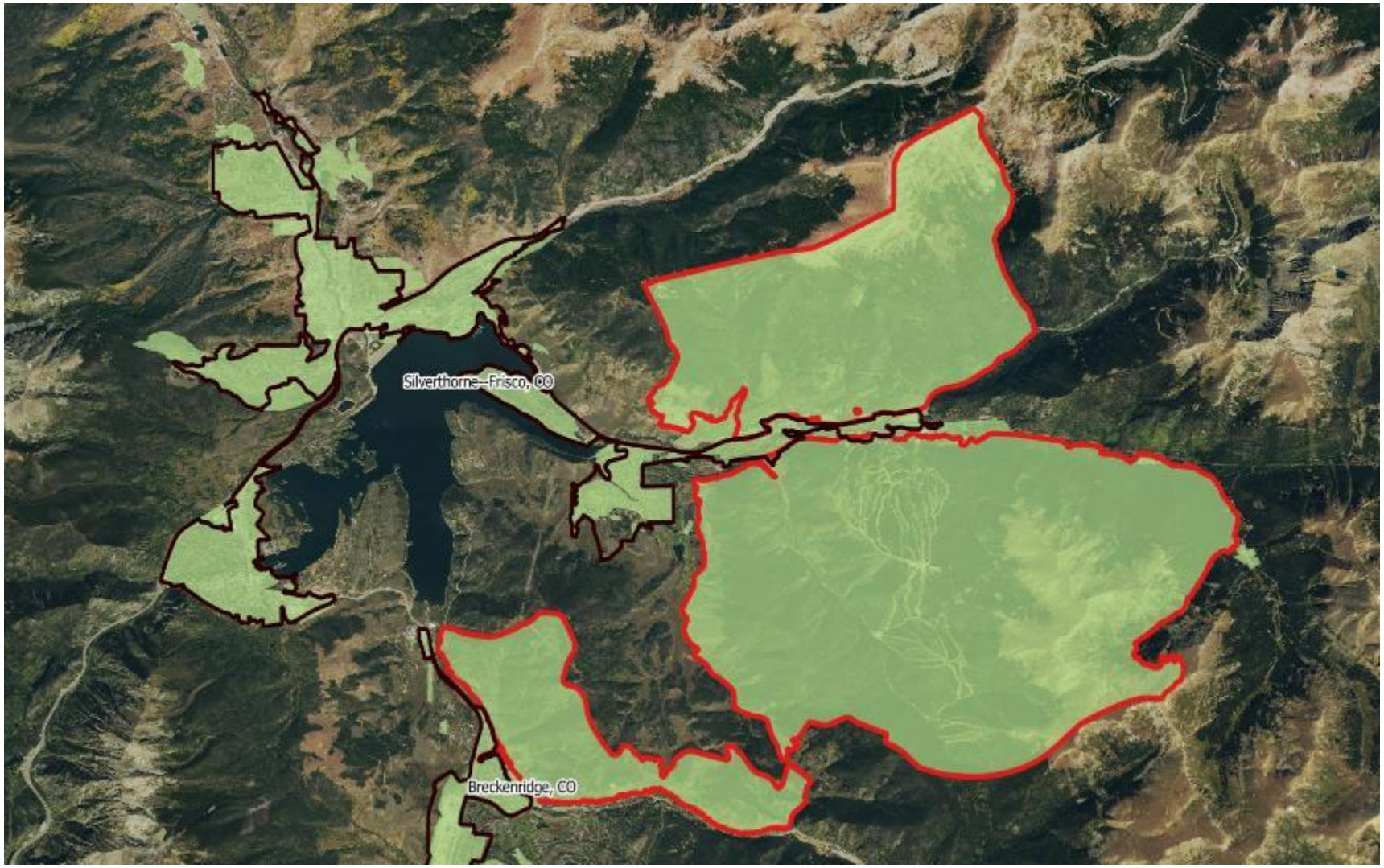
Possible Criteria Changes

- High Density Cores
  - 1,280 HPSM (0.5 acres per HU)
- Final Fill
  - 213 HPSM (3 acres per HU)
- Minimum Cycle Size
  - 50 Housing Units
- Minimum Urban Area Qualification
  - 5,000 Persons or 2,000 Housing Units



Preliminary Findings. For demonstrative purposes only.

Possible Criteria Changes

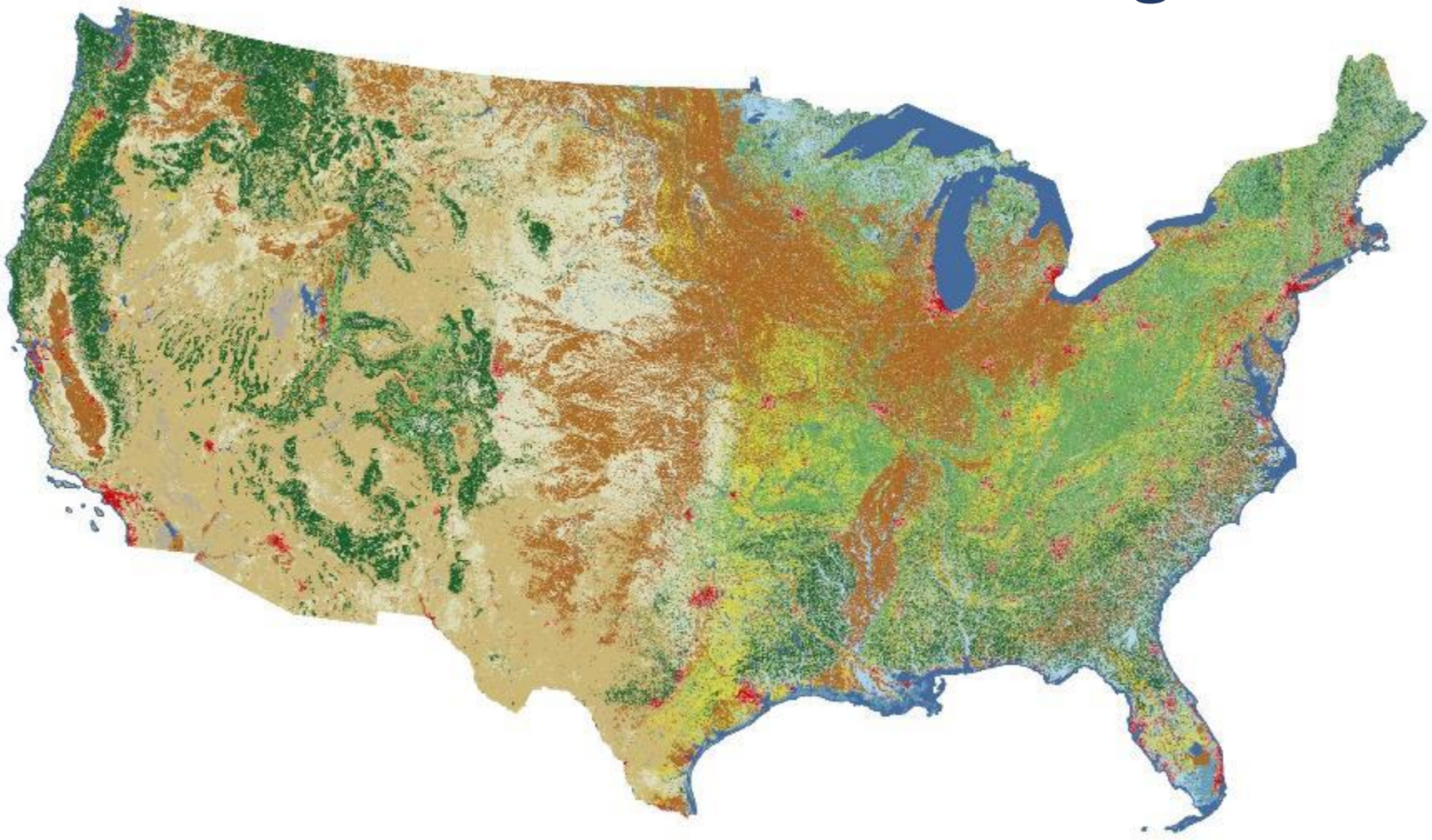


The proposed criteria specified automatically qualifying blocks with Group Quarters as urban if they were adjacent to already qualified urban area. During criteria testing, this led to large blocks with low housing and population expanding the urban areas, sometimes by miles.

Further testing is continuing, but we are considering inclusion of GQ blocks where the block-level population density is at least 500 PPSM.

Preliminary Findings. For demonstrative purposes only.

Possible Criteria Changes



New NLCD (2019) released since Proposed Urban Area Criteria was published

Primary Core
1275 HPSM -or-
Impervious -or-
GQ & 500 PPSM

500+ Total HU

Secondary Core
425 HPSM -or-
Impervious -or-
GQ & 500 PPSM

500+ Total HU

Hop/Jump Core
425 HPSM -or-
Impervious -or-
GQ & 500 PPSM

10+ Total HU

Final Fill
200 HPSM -or-
GQ & 500 PPSM

Non-Residential Urban Territory
Impervious -or-
1000 Jobs

Hop Connection

Jump Connection

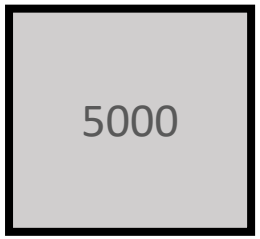
Non-Res Connection

Merge Connection

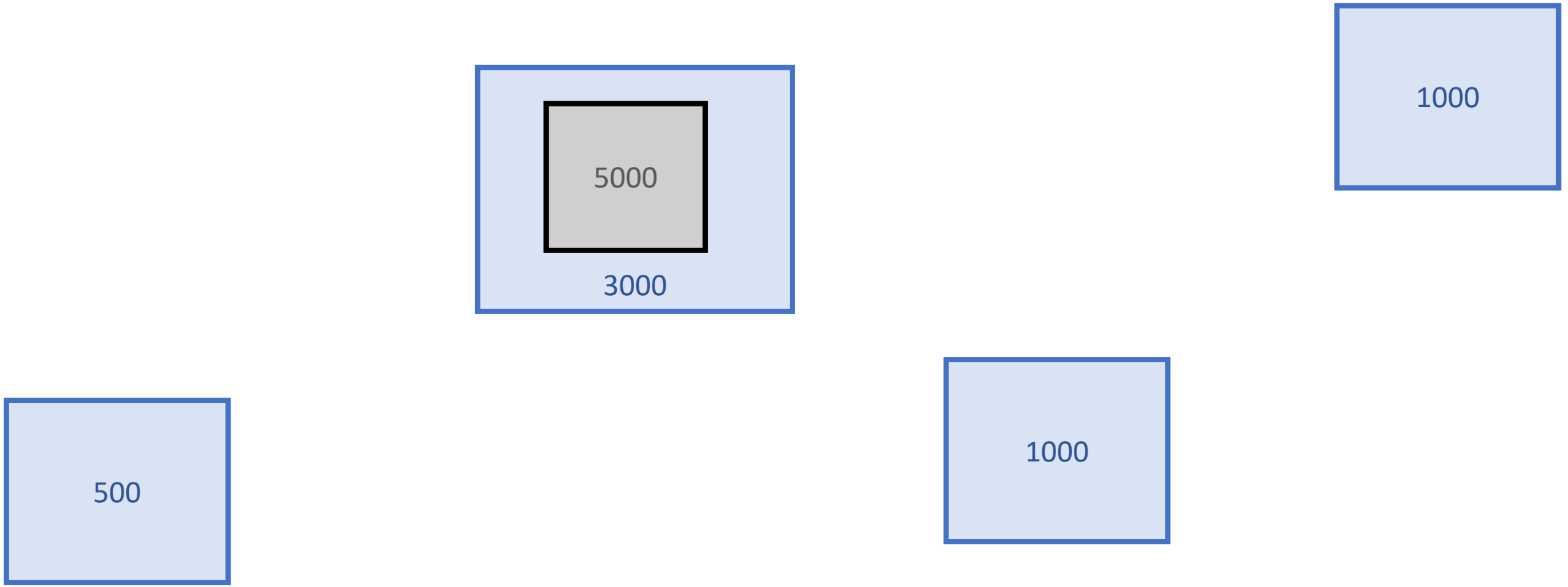
Split Evaluation

Preliminary Findings. For demonstrative purposes only.

Primary Cores

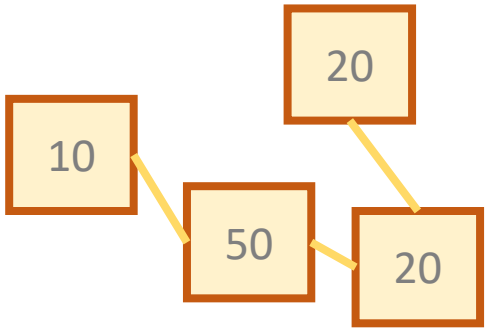


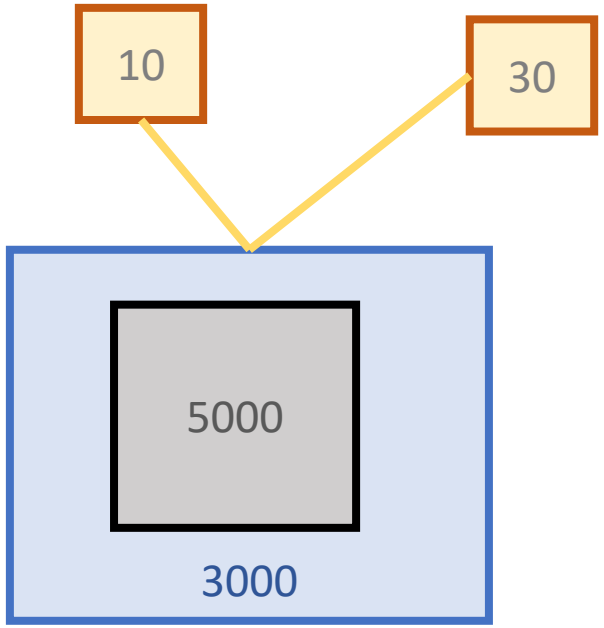
Secondary Cores

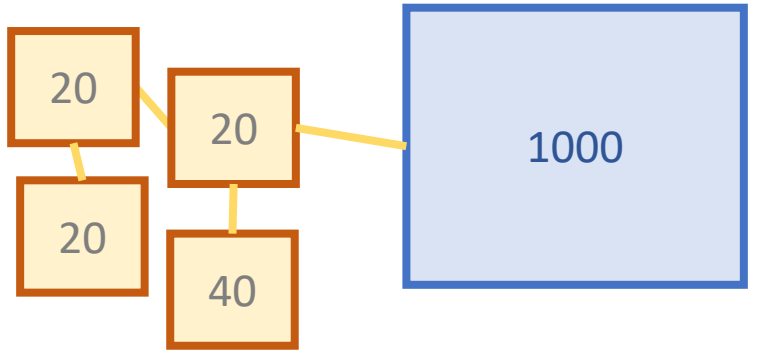


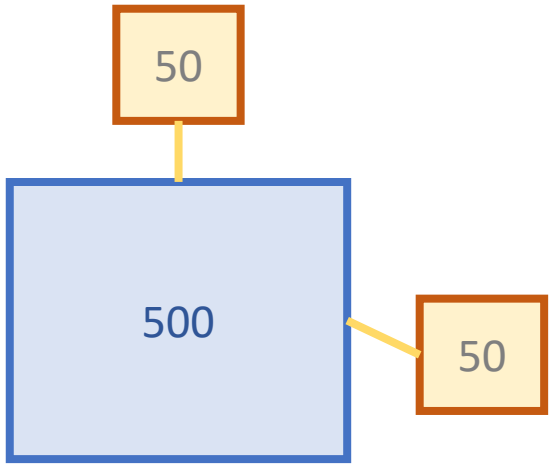
Preliminary Findings. For demonstrative purposes only.

Hop Cores and Connections



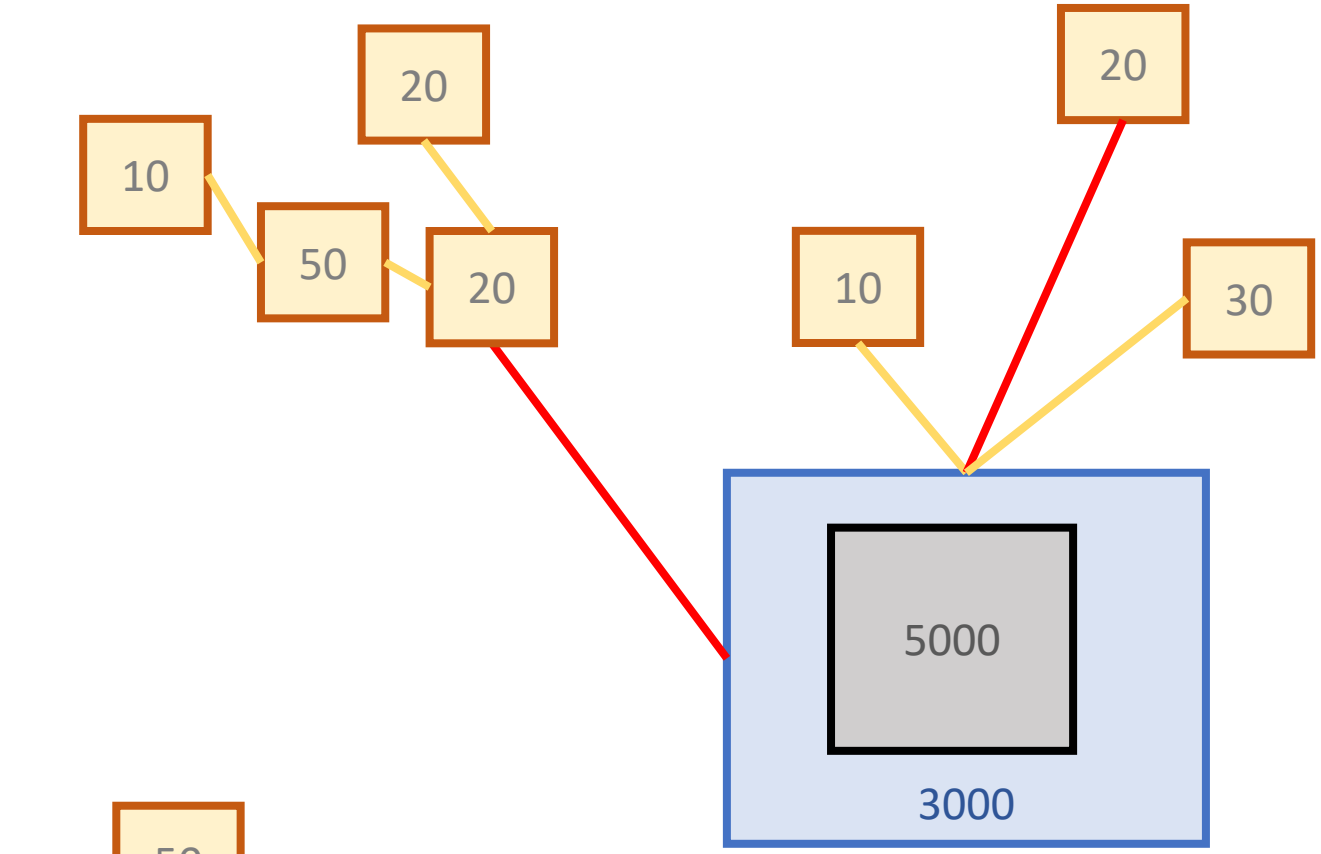


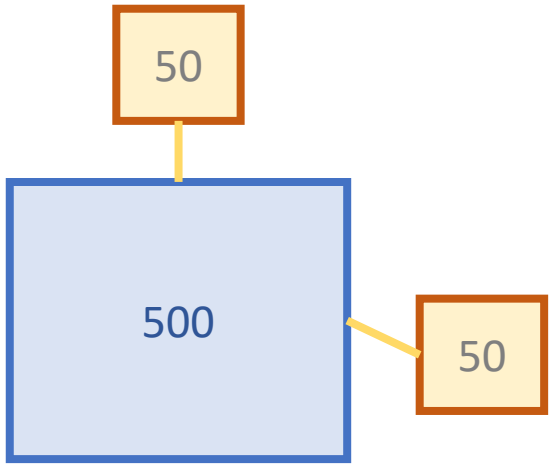


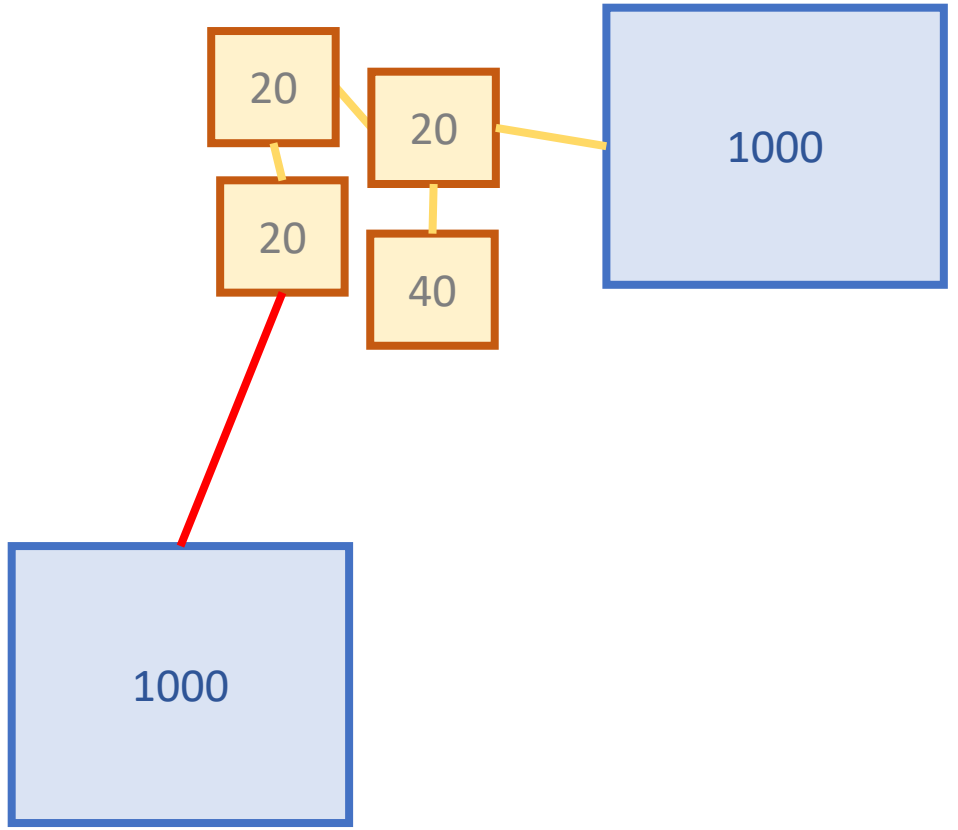


Preliminary Findings. For demonstrative purposes only.

Jump Cores and Connections

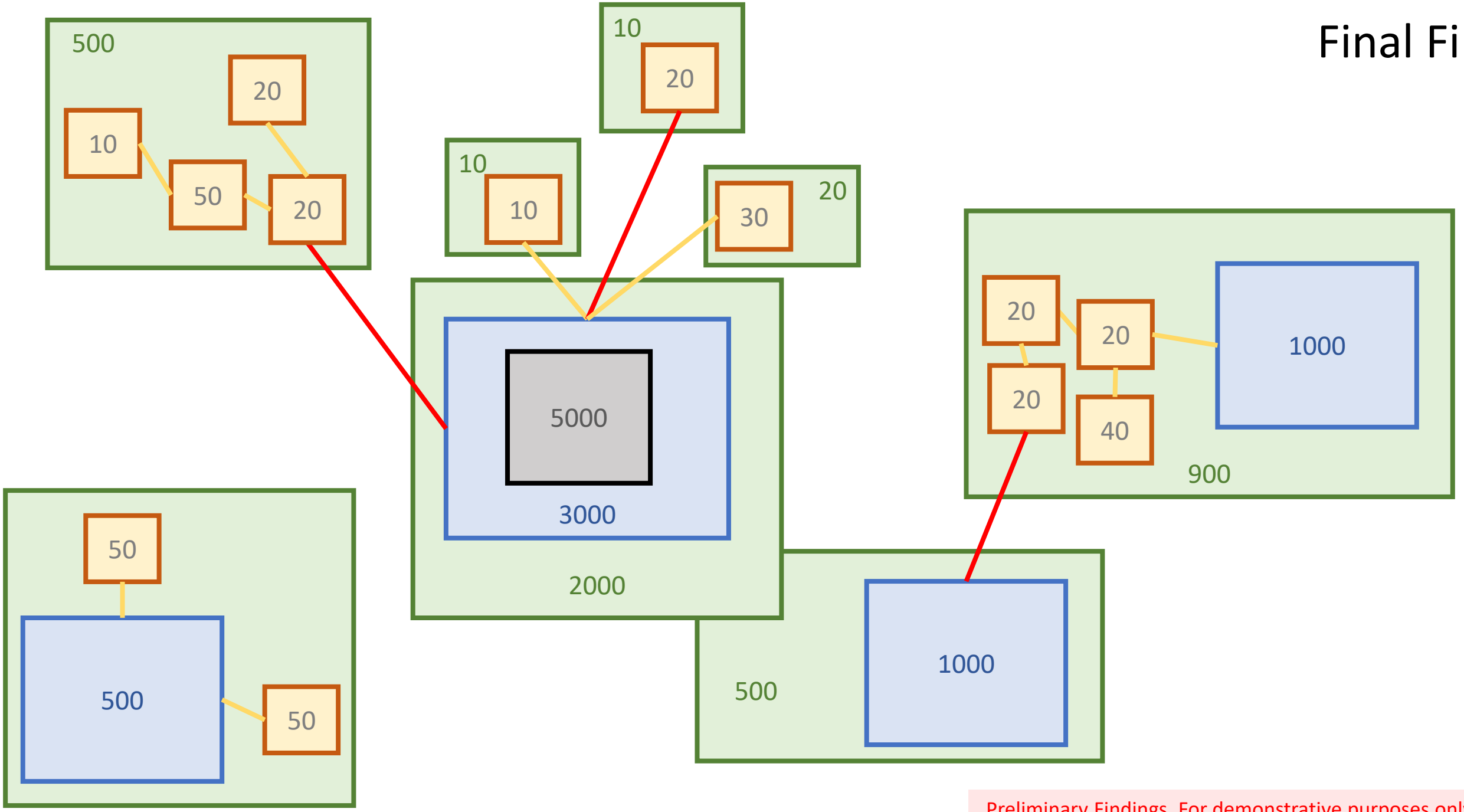




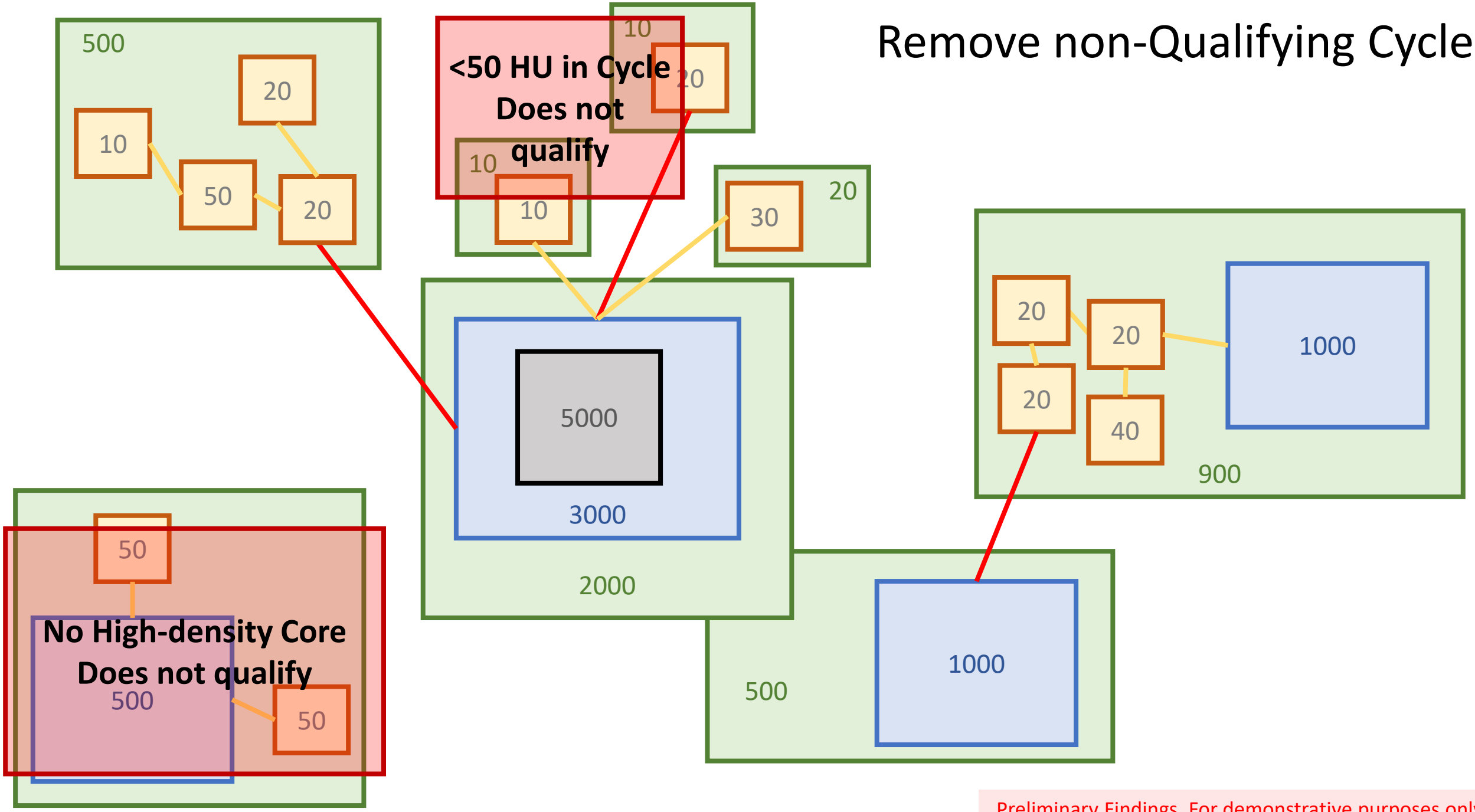


Preliminary Findings. For demonstrative purposes only.

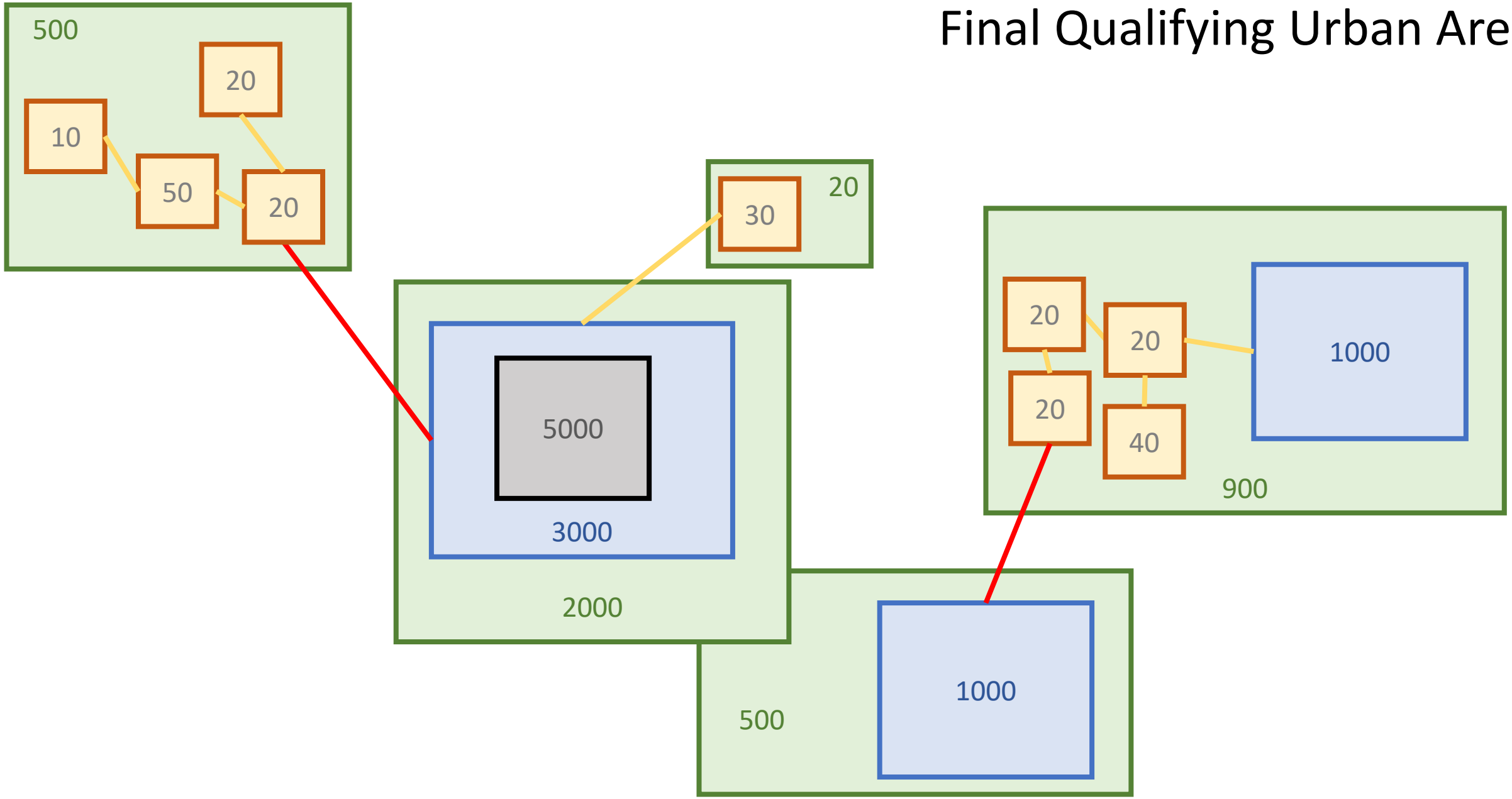
Final Fill



Remove non-Qualifying Cycles



Final Qualifying Urban Area



Reduce the Number of Cycles per Urban Area

2020 FRN Proposed Criteria					Updated Test Criteria					Impact of Update			
UA	**POP**	**HU**	**AREA**	**CYCLES**	**UA**	**POP**	**HU**	**AREA**	**CYCLES**	**POP**	**HU**	**AREA**	**CYCLES**
Charlotte, NC	1,455,923	770,820	781.2	515	Charlotte, NC	1,478,343	782,530	855.0	62	1.5%	1.5%	9.4%	-88.0%
Raleigh (Wake County)--Durham (Durham County)--Cary (Wake County), NC	1,108,168	623,186	520.8	292	Raleigh (Wake County)--Durham (Durham County)--Cary (Wake County), NC	1,157,114	647,009	605.3	53	4.4%	3.8%	16.2%	-81.8%
Nashville-Davidson metropolitan government (balance), TN	1,048,952	587,129	530.4	255	Nashville-Davidson metropolitan government (balance), TN	1,096,300	610,114	602.6	35	4.5%	3.9%	13.6%	-86.3%
Memphis, TN	856,995	397,778	314.5	41	Memphis, TN	879,429	407,161	338.5	11	2.6%	2.4%	7.6%	-73.2%
Greensboro--Winston-Salem, NC	776,147	392,002	420.1	329	Greensboro--Winston-Salem, NC	792,989	400,021	469.0	43	2.2%	2.0%	11.6%	-86.9%
Knoxville, TN	465,361	241,612	289.0	142	Knoxville, TN	504,429	260,418	343.9	32	8.4%	7.8%	19.0%	-77.5%
Chattanooga, TN	275,434	142,697	174.6	96	Chattanooga, TN	289,172	149,013	193.6	8	5.0%	4.4%	10.9%	-91.7%
Asheville, NC	218,891	131,715	218.7	196	Asheville, NC	242,593	144,456	264.5	17	10.8%	9.7%	20.9%	-91.3%
Fayetteville, NC	278,189	131,192	151.8	65	Fayetteville, NC	298,974	141,112	177.3	12	7.5%	7.6%	16.8%	-81.5%
Wilmington, NC	195,198	116,768	105.7	28	Wilmington, NC	199,367	118,938	112.2	8	2.1%	1.9%	6.2%	-71.4%
Johnson City (Washington County)--Kingsport (Sullivan County)--Elizabethton, TN	187,037	99,134	137.5	205	Johnson City (Washington County)--Kingsport (Sullivan County)--Bristol, TN	239,922	126,103	196.8	37	28.3%	27.2%	43.1%	-82.0%
Hickory (Catawba County)--Lenoir--Morganton, NC	153,897	73,891	135.3	193	Hickory (Catawba County)--Lenoir--Morganton, NC	183,635	87,144	180.5	24	19.3%	17.9%	33.5%	-87.6%
Clarksville, TN	130,777	70,008	157.9	54	Clarksville, TN	137,497	73,546	171.5	16	5.1%	5.1%	8.6%	-70.4%
Burlington (Alamance County)--Graham--Mebane (Alamance County), NC	113,952	63,443	77.1	61	Burlington (Alamance County)--Graham--Mebane (Alamance County), NC	116,775	64,798	79.6	13	2.5%	2.1%	3.2%	-78.7%
Greenville, NC	110,391	58,875	52.5	42	Greenville, NC	113,688	60,429	58.0	14	3.0%	2.6%	10.5%	-66.7%

*Population derived from 2010 Census; Housing derived from Master Address File – NOT ENUMERATED 2020 CENSUS COUNTS

Values shown here are estimates. These are not the official counts from the 2020 Census and do not reflect the final Urban Area delineation for the 2020 Census.

Density Composition

<213				213 to 427				427 to 1280				1280+				
BLOCKS	**POP**	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	UA_NAME
32.8%	**61.4%**	3.2%	95.8%	3.1%	2.1%	7.7%	1.6%	5.5%	3.2%	7.3%	0.5%	58.6%	33.3%	81.8%	2.1%	Kinross, MI
70.1%	**55.1%**	0.3%	70.9%	3.0%	5.7%	12.8%	11.0%	6.0%	14.9%	32.2%	12.8%	20.9%	24.2%	54.8%	5.4%	Twentynine Palms North, CA
16.7%	**51.5%**	0.2%	39.0%	5.5%	0.9%	0.6%	1.9%	25.8%	25.7%	17.8%	24.2%	52.0%	21.9%	81.4%	34.9%	Florence East, AZ
23.6%	**47.0%**	2.4%	46.6%	7.9%	5.3%	8.3%	16.7%	24.9%	12.8%	22.5%	17.5%	43.7%	35.0%	66.8%	19.2%	Ionia, MI
21.9%	**46.6%**	2.1%	41.0%	12.3%	10.0%	17.4%	30.0%	26.2%	14.4%	25.9%	17.1%	39.6%	29.0%	54.6%	11.9%	Gatesville, TX
37.9%	**46.2%**	0.3%	79.3%	0.8%	0.1%	0.1%	0.1%	21.8%	8.5%	16.6%	7.0%	39.5%	45.3%	83.1%	13.6%	Grissom AFB (Miami County), IN
39.8%	**45.0%**	1.1%	24.3%	16.7%	13.0%	25.5%	39.1%	26.9%	35.6%	51.4%	31.4%	16.7%	6.4%	21.9%	5.2%	Dahlonega, GA
31.5%	**44.7%**	15.5%	77.6%	10.2%	14.5%	19.0%	11.4%	29.6%	27.3%	37.6%	9.1%	28.7%	13.4%	27.9%	1.9%	Farmville (Prince Edward County), VA
17.2%	**44.5%**	4.2%	45.0%	3.9%	3.1%	3.4%	11.2%	15.6%	12.2%	18.4%	22.2%	63.3%	40.2%	74.0%	21.6%	Kutztown--Kutztown University, PA
33.3%	**43.7%**	21.5%	73.7%	12.7%	17.4%	21.9%	17.3%	19.8%	13.8%	18.5%	5.4%	34.1%	25.1%	38.1%	3.6%	Morehead, KY
27.5%	**43.4%**	2.7%	36.5%	10.1%	9.8%	15.9%	23.4%	29.0%	28.4%	51.8%	33.5%	33.3%	18.3%	29.6%	6.7%	Coxsackie, NY
27.5%	**42.8%**	5.9%	78.5%	5.3%	9.8%	17.3%	9.3%	32.2%	22.1%	34.3%	7.9%	35.1%	25.4%	42.5%	4.3%	Kenedy, TX
27.2%	**42.0%**	9.5%	54.9%	3.3%	0.6%	0.8%	1.8%	27.2%	27.3%	31.1%	25.3%	42.4%	30.0%	58.6%	18.0%	Canton, NY
13.8%	**39.8%**	0.8%	16.7%	16.3%	11.5%	13.6%	33.0%	33.8%	19.0%	31.9%	31.0%	36.3%	29.8%	53.7%	19.3%	Collins, NY
14.1%	**39.3%**	3.1%	35.0%	5.1%	7.7%	11.0%	30.3%	20.4%	12.6%	17.1%	20.2%	60.4%	40.4%	68.9%	14.5%	Huntingdon, PA
24.6%	**39.1%**	1.9%	33.6%	10.0%	6.6%	9.3%	24.3%	25.7%	14.7%	20.7%	16.4%	39.6%	39.7%	68.1%	25.8%	Colorado City, TX
42.7%	**38.3%**	3.7%	23.1%	14.5%	18.5%	27.9%	45.4%	26.4%	22.4%	33.3%	24.9%	16.4%	20.8%	35.2%	6.5%	Pembroke, NC
32.3%	**37.3%**	7.7%	35.9%	24.2%	22.5%	29.3%	38.0%	29.0%	15.6%	31.3%	20.5%	14.5%	24.6%	31.6%	5.6%	Storrs, CT
23.2%	**36.5%**	0.8%	22.9%	8.1%	14.0%	21.0%	33.7%	22.7%	24.0%	37.7%	33.7%	45.9%	25.5%	40.4%	9.6%	Chester, IL
42.9%	**35.5%**	1.9%	40.1%	9.8%	14.6%	21.4%	29.0%	24.3%	27.3%	37.8%	23.9%	23.0%	22.6%	39.0%	7.0%	Fort Leonard Wood, MO

Preliminary Findings. For demonstrative purposes only.

Density Composition

<213				213 to 427				427 to 1280				1280+				
BLOCKS	POP	HU	LAND	BLOCKS	**POP**	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	UA_NAME
14.5%	2.6%	2.1%	6.3%	54.5%	**64.6%**	64.5%	71.7%	26.8%	27.3%	28.7%	21.2%	4.1%	5.5%	4.7%	0.7%	Middleburg, FL
13.4%	3.6%	2.9%	9.2%	42.9%	**55.3%**	50.0%	69.6%	30.4%	28.0%	29.2%	18.4%	13.4%	13.1%	17.9%	2.9%	Ridgefield, CT
12.5%	1.2%	1.1%	7.2%	48.8%	**52.9%**	50.7%	61.9%	37.5%	45.3%	47.2%	30.7%	1.3%	0.6%	1.0%	0.2%	Wales, WI
10.6%	1.6%	1.4%	7.8%	33.3%	**50.1%**	55.5%	73.9%	42.3%	40.7%	34.8%	16.5%	13.8%	7.5%	8.2%	1.8%	North Windham, ME
39.0%	10.0%	6.4%	40.0%	27.2%	**47.8%**	52.9%	46.5%	22.8%	30.7%	28.6%	12.2%	11.0%	11.5%	12.2%	1.3%	Ellijay, GA
17.6%	0.0%	0.0%	12.0%	19.6%	**47.1%**	46.2%	65.0%	35.3%	29.5%	29.4%	17.4%	27.5%	23.4%	24.3%	5.6%	Altavista, VA
11.2%	2.9%	3.1%	17.1%	23.5%	**46.3%**	46.0%	61.7%	43.9%	34.3%	32.6%	18.3%	21.4%	16.6%	18.3%	3.0%	Antwerp, MI
0.0%	0.0%	0.0%	0.0%	33.3%	**45.4%**	45.6%	66.6%	37.0%	44.0%	43.5%	31.2%	29.6%	10.6%	10.9%	2.2%	, GA
10.7%	2.0%	2.0%	5.7%	28.0%	**44.9%**	45.3%	66.5%	25.3%	33.7%	31.6%	22.4%	36.0%	19.3%	21.2%	5.5%	Richland, MI
27.6%	8.1%	6.7%	24.1%	25.3%	**43.7%**	40.8%	55.0%	34.5%	40.2%	40.8%	20.0%	12.6%	8.0%	11.6%	0.9%	Deerfield--South Deerfield, MA
10.6%	0.9%	0.3%	3.7%	28.2%	**42.7%**	41.6%	72.1%	24.7%	16.6%	16.8%	14.3%	36.5%	39.8%	41.3%	9.8%	Stafford Springs, CT
42.2%	17.4%	12.7%	40.3%	16.4%	**41.8%**	44.0%	45.2%	26.9%	28.1%	27.5%	12.8%	14.5%	12.6%	15.8%	1.7%	North Wilkesboro--Wilkesboro, NC
32.7%	2.8%	0.7%	13.2%	18.6%	**41.4%**	42.0%	53.8%	40.4%	48.0%	48.4%	31.0%	8.3%	7.7%	8.9%	2.0%	Jefferson, GA
23.3%	0.0%	0.0%	2.1%	14.0%	**40.9%**	40.0%	76.5%	16.3%	25.9%	22.6%	16.5%	46.5%	33.2%	37.4%	4.9%	Carrollton, VA
26.7%	10.4%	9.5%	29.8%	11.7%	**40.8%**	41.2%	46.6%	25.8%	29.9%	31.7%	19.9%	35.8%	18.8%	17.6%	3.7%	Mont Belvieu (Chambers County), TX
16.1%	8.7%	6.2%	27.3%	24.7%	**40.6%**	39.8%	50.0%	30.1%	30.3%	35.5%	19.6%	29.0%	20.4%	18.5%	3.2%	Boothbay Harbor, ME
23.7%	6.3%	4.4%	16.0%	15.8%	**39.8%**	38.7%	58.0%	41.7%	38.1%	37.7%	22.0%	18.7%	15.8%	19.2%	4.0%	Ozark, AL
23.7%	15.6%	10.9%	37.9%	8.6%	**39.8%**	37.7%	49.8%	18.3%	17.9%	17.9%	8.4%	49.5%	26.7%	33.5%	3.9%	Leonardtown, MD
24.0%	5.9%	4.8%	23.0%	17.7%	**38.9%**	37.2%	51.7%	29.9%	32.0%	32.9%	20.4%	28.4%	23.2%	25.0%	4.9%	Breaux Bridge, LA
16.8%	2.6%	1.7%	28.2%	12.8%	**38.7%**	27.0%	37.9%	29.6%	45.8%	45.3%	27.7%	40.7%	12.9%	26.0%	6.2%	Hampstead, NC

Preliminary Findings. For demonstrative purposes only.

Density Composition

<213				213 to 427				427 to 1280				1280+				
BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	**POP**	HU	LAND	BLOCKS	POP	HU	LAND	UA_NAME
2.0%	0.7%	0.3%	1.2%	2.0%	0.5%	0.3%	1.2%	87.8%	**90.6%**	88.3%	91.9%	8.2%	8.2%	11.1%	5.7%	San Diego Country Estates, CA
5.8%	0.5%	0.4%	4.8%	10.3%	7.0%	9.0%	20.6%	72.0%	**76.6%**	74.3%	66.7%	11.9%	15.9%	16.3%	7.9%	Ocean Shores, WA
2.4%	0.0%	0.0%	2.8%	13.1%	16.7%	16.6%	28.5%	75.0%	**76.6%**	76.5%	66.4%	9.5%	6.7%	6.8%	2.4%	Johnson Lane, NV
8.6%	0.1%	0.1%	2.5%	12.1%	14.3%	14.8%	26.9%	63.8%	**75.8%**	74.4%	67.2%	15.5%	9.8%	10.7%	3.3%	Tellico Village, TN
4.4%	0.8%	0.2%	2.1%	11.1%	9.3%	10.9%	20.9%	56.7%	**75.5%**	72.8%	71.0%	27.8%	14.4%	16.0%	6.0%	Rio Verde, AZ
5.8%	0.0%	0.0%	0.5%	1.7%	4.1%	3.9%	9.1%	57.9%	**74.4%**	76.9%	78.4%	34.7%	21.5%	19.2%	12.1%	Lake Monticello, VA
7.2%	0.2%	0.0%	0.9%	24.1%	16.9%	17.0%	37.1%	54.2%	**70.9%**	69.9%	58.0%	14.5%	12.0%	13.0%	4.0%	Milton, VT
31.7%	6.0%	1.8%	24.5%	12.8%	9.7%	9.3%	17.7%	41.5%	**70.4%**	71.9%	54.6%	14.0%	14.0%	17.0%	3.2%	Jackson, GA
38.6%	1.0%	0.7%	8.1%	9.9%	18.9%	18.6%	31.6%	42.6%	**70.0%**	71.1%	56.3%	8.9%	10.1%	9.6%	4.0%	Wind Lake, WI
15.4%	2.7%	2.1%	30.8%	15.4%	17.2%	16.5%	24.5%	56.0%	**66.0%**	65.8%	41.3%	13.1%	14.1%	15.6%	3.4%	Fairfield Glade, TN
23.7%	2.4%	1.6%	28.2%	13.2%	15.7%	14.9%	22.5%	43.2%	**64.6%**	65.7%	44.5%	20.0%	17.3%	17.9%	4.8%	Portland (Sumner County), TN--KY
0.0%	0.0%	0.0%	0.0%	26.3%	14.9%	8.1%	26.0%	47.4%	**64.3%**	63.6%	70.0%	26.3%	20.7%	28.3%	4.0%	, CA
25.9%	4.9%	3.2%	19.6%	17.7%	18.1%	17.5%	29.4%	52.4%	**63.7%**	59.9%	46.3%	4.1%	13.2%	19.4%	4.7%	Lago Vista (Travis County), TX
16.7%	1.2%	0.2%	4.1%	11.1%	7.4%	4.5%	11.1%	38.9%	**63.3%**	61.7%	78.8%	33.3%	28.1%	33.5%	6.0%	Snowmass Village, CO
8.7%	6.2%	2.2%	21.3%	8.7%	10.0%	9.3%	17.8%	67.4%	**62.8%**	66.7%	53.8%	15.2%	21.1%	21.8%	7.0%	Hayes--Harrison, MI
20.5%	3.4%	2.6%	20.1%	14.8%	15.7%	17.0%	28.7%	51.6%	**61.5%**	63.1%	45.3%	13.2%	19.4%	17.3%	5.8%	Gun Barrel City, TX
28.0%	0.9%	1.0%	6.9%	9.8%	20.2%	14.0%	30.5%	36.6%	**61.0%**	59.0%	52.0%	25.6%	17.8%	26.0%	10.6%	Seabrook Island--Kiawah Island, SC
7.4%	1.3%	0.5%	2.7%	11.7%	15.9%	12.5%	25.4%	55.3%	**60.8%**	60.7%	61.7%	25.5%	22.0%	26.4%	10.1%	Blowing Rock (Watauga County), NC
29.4%	3.4%	2.1%	21.4%	10.9%	14.7%	10.2%	20.7%	32.3%	**60.3%**	55.6%	49.0%	27.4%	21.5%	32.1%	8.8%	Elkton, VA
11.2%	1.3%	1.1%	25.0%	5.6%	11.4%	11.4%	20.1%	47.7%	**60.3%**	60.2%	47.3%	35.5%	27.0%	27.4%	7.6%	Smithfield, VA

Preliminary Findings. For demonstrative purposes only.

Density Composition

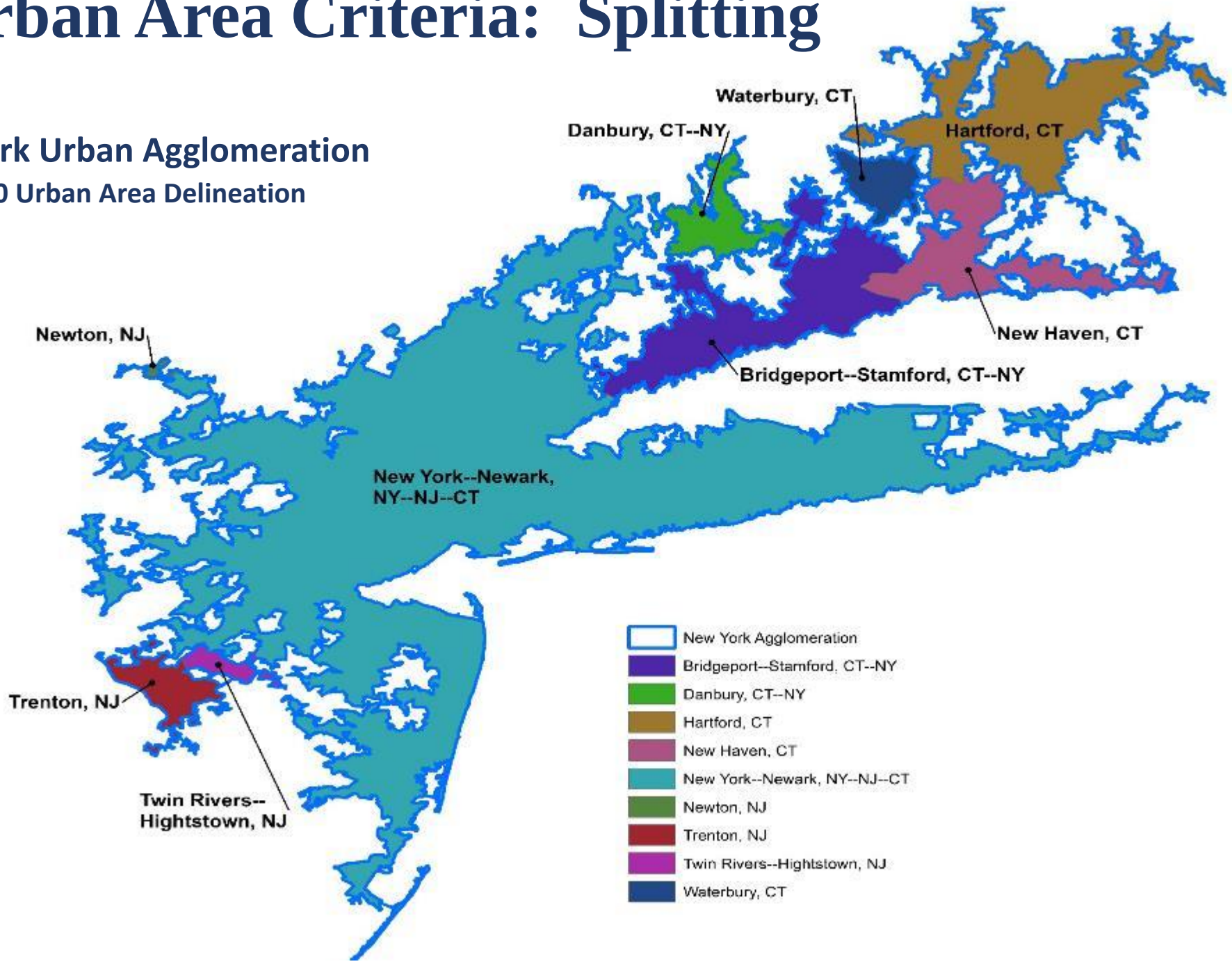
<213				213 to 427				427 to 1280				1280+				
BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	POP	HU	LAND	BLOCKS	**POP**	HU	LAND	UA_NAME
5.5%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	1.8%	0.2%	0.1%	0.3%	92.7%	**99.8%**	99.9%	96.0%	Riviera Beach, FL
16.7%	0.0%	0.0%	13.8%	2.4%	0.2%	0.1%	0.9%	4.8%	1.4%	1.6%	3.7%	76.2%	**98.4%**	98.3%	81.7%	Mecca, CA
12.6%	0.1%	0.0%	35.1%	2.3%	0.5%	0.5%	5.4%	6.9%	3.7%	2.6%	10.4%	78.2%	**95.7%**	96.9%	49.0%	Key Biscayne, FL
16.6%	0.9%	0.5%	41.4%	3.6%	1.2%	1.0%	5.0%	5.8%	3.8%	3.7%	5.7%	74.0%	**94.1%**	94.7%	47.8%	Patterson, CA
5.4%	0.2%	0.0%	13.9%	1.4%	0.8%	0.6%	11.3%	8.2%	5.3%	3.2%	21.7%	85.0%	**93.7%**	96.1%	53.1%	Mahanoy City, PA
9.0%	0.2%	0.1%	3.5%	0.6%	0.1%	0.0%	0.2%	3.1%	6.2%	6.3%	14.4%	87.2%	**93.5%**	93.6%	81.9%	Long Beach--North Beach Haven, NJ
20.9%	0.4%	0.3%	23.2%	1.5%	1.2%	1.2%	4.7%	9.7%	4.9%	4.5%	10.2%	67.9%	**93.5%**	94.0%	62.0%	Orange Cove, CA
16.5%	0.3%	0.1%	20.2%	1.6%	0.9%	0.7%	3.6%	6.0%	5.4%	5.0%	12.9%	75.9%	**93.4%**	94.3%	63.3%	Wasco, CA
12.8%	0.6%	0.0%	16.2%	0.6%	0.1%	0.1%	1.0%	7.3%	6.2%	6.8%	16.1%	79.3%	**93.1%**	93.0%	66.8%	Arvin, CA
15.0%	0.6%	0.4%	16.7%	1.9%	0.4%	0.2%	1.0%	3.8%	5.9%	5.8%	11.0%	79.4%	**93.1%**	93.7%	71.2%	Newman, CA
8.3%	1.7%	1.5%	37.9%	2.9%	3.2%	2.9%	21.6%	3.6%	2.1%	1.5%	4.2%	85.2%	**93.0%**	94.1%	36.3%	Tamaqua, PA
8.1%	0.2%	0.1%	8.5%	0.8%	0.1%	0.2%	1.7%	6.5%	6.9%	6.2%	20.7%	84.7%	**92.8%**	93.5%	69.1%	Parlier, CA
8.7%	0.4%	0.2%	18.9%	1.3%	1.0%	0.8%	3.9%	8.7%	6.0%	5.9%	16.8%	81.3%	**92.7%**	93.1%	60.3%	Soledad, CA
16.3%	1.2%	0.4%	41.3%	1.7%	0.4%	0.3%	1.5%	6.6%	6.2%	6.0%	11.2%	75.4%	**92.2%**	93.3%	46.0%	Woodland, CA
17.6%	2.2%	0.3%	34.5%	1.3%	1.0%	1.0%	4.5%	5.3%	4.9%	4.7%	10.2%	75.8%	**91.9%**	94.0%	50.8%	Delano, CA
43.2%	2.0%	1.3%	41.9%	1.1%	0.2%	0.0%	0.2%	4.2%	6.0%	5.8%	9.8%	51.6%	**91.8%**	92.9%	48.1%	Buellton, CA
15.0%	0.5%	0.3%	17.0%	4.1%	1.5%	1.2%	8.0%	7.1%	6.6%	7.9%	21.0%	73.8%	**91.3%**	90.6%	54.0%	Santa Paula, CA
12.1%	0.7%	0.3%	22.0%	1.8%	2.3%	2.6%	12.0%	7.2%	6.1%	5.5%	9.7%	78.9%	**90.9%**	91.7%	56.3%	Reedley--Dinuba, CA
26.1%	1.3%	0.3%	30.4%	3.3%	2.4%	1.2%	9.4%	8.9%	5.5%	3.5%	9.7%	61.7%	**90.8%**	95.1%	50.5%	Mammoth Lakes, CA
17.1%	1.1%	0.5%	30.3%	2.1%	1.6%	1.6%	8.2%	7.0%	6.5%	6.2%	12.0%	73.8%	**90.7%**	91.7%	49.5%	Modesto, CA

Preliminary Findings. For demonstrative purposes only.

Proposed Urban Area Criteria: Splitting

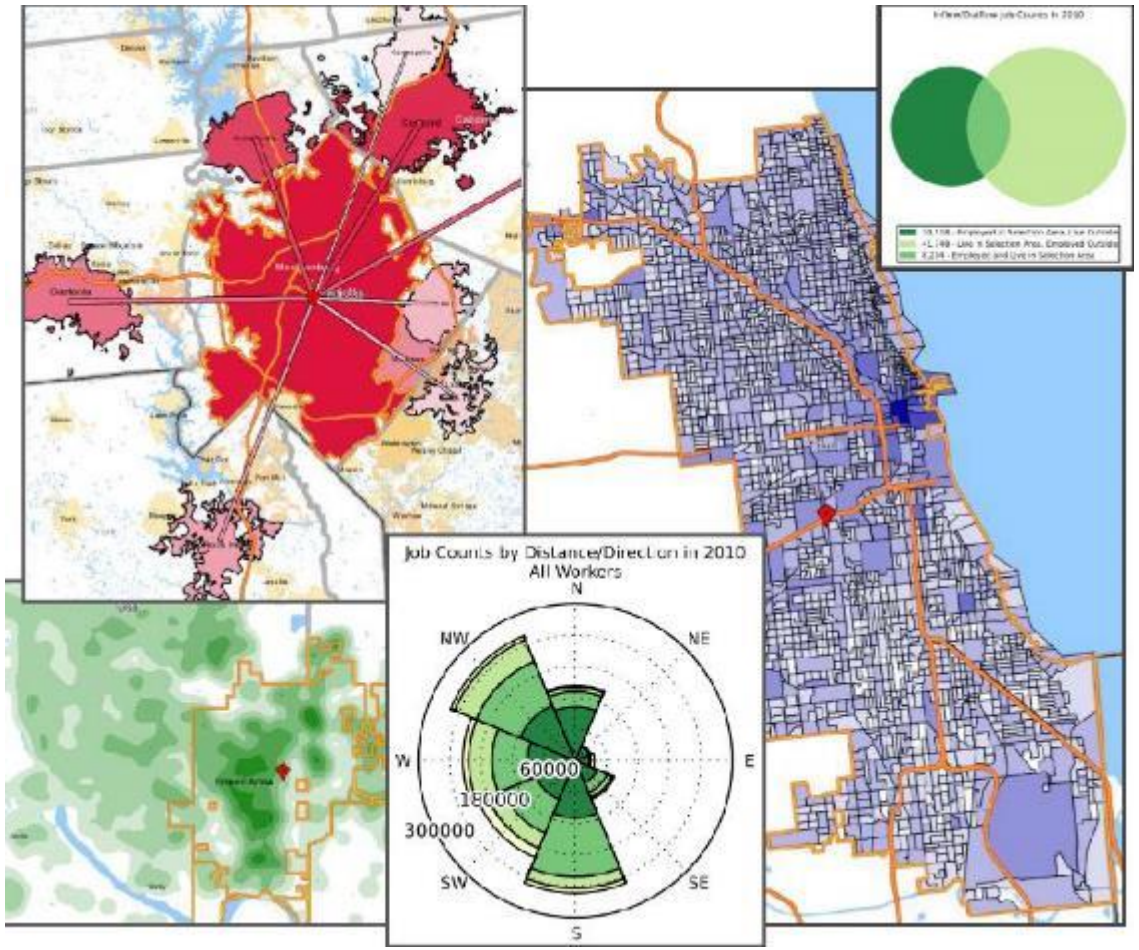
New York Urban Agglomeration

2010 Urban Area Delineation



Proposed Urban Area Criteria: Splitting

Utilization of Longitudinal Employer-Household Dynamics (LEHD) data



OD

Filename of the OD datasets are described by the following templates
[ST]_od_[PART]_[TYPE]_[YEAR].csv.gz where

[ST] = lowercase, 2-letter postal code for a chosen state
[PART] – Part of the state file, can have a value of either "main" or "aux". Complimentary parts of the state file, the main part includes jobs with both workplace and residence in the state and the aux part includes jobs with the workplace in the state and the residence outside of the state.
[TYPE] = Job Type, can have a value of "JT00" for All Jobs, "JT01" for Primary Jobs, "JT02" for All Private Jobs, "JT03" for Private Primary Jobs, "JT04" for All Federal Jobs, or "JT05" for Federal Primary Jobs.
[YEAR] – Year of job data. Can have the value of 2002-2018 for most states.

As an example the main OD file of Primary Jobs in 2007 for California would be the file: ca_od_main_JT01_2007.csv.gz

The structure of the OD files is as follows:

Origin-Destination (OD) File Structure			
Pos	**Variable**	**Type**	**Explanation**
1	w_geocode	Char15	Workplace Census Block Code
2	h_geocode	Char15	Residence Census Block Code
3	S000	Num	Total number of jobs
4	SA01	Num	Number of jobs of workers age 29 or younger[17]
5	SA02	Num	Number of jobs for workers age 30 to 54[17]
6	SA03	Num	Number of jobs for workers age 55 or older[17]
7	SE01	Num	Number of jobs with earnings $1250/month or less
8	SE02	Num	Number of jobs with earnings $1251/month to $3333/month
9	SE03	Num	Number of jobs with earnings greater than $3333/month
10	SI01	Num	Number of jobs in Goods Producing industry sectors
11	SI02	Num	Number of jobs in Trade, Transportation, and Utilities industry sectors
12	SI03	Num	Number of jobs in All Other Services industry sectors
13	createdate	Char	Date on which data was created, formatted as YYYYMMDD

LEHD Origin-Destination Employment Statistics (LODES) Dataset Structure (V 7.5)
https://lehd.ces.census.gov/data/

Proposed Urban Area Criteria: Splitting

Two-step process for accepting or adjusting 2010 split boundaries

Step One:

Conduct analysis of the new 2020 UAs using the 2010 UA splits

- Measure aggregate commuter flows into and out of each UA
- Upon qualification, the UA split boundaries are further analyzed in *Step Two*

Step Two:

Conduct block-level analysis of the commuter flows

- Using the LEHD data, apply the *Leiden Community Detection Algorithm* to identify natural partitions, or communities
- Split boundaries are then adjusted to match the nearest *LEHD Origin-Destination Community*

Proposed Urban Area Criteria: Splitting

Step One. Conduct analysis of the new 2020 UAs using the 2010 UA splits

Where do Avondale Residents work?	Flows	Percent
Phoenix--Mesa, AZ	**80,034**	**83.5%**
Avondale--Goodyear, AZ	11,110	11.6%
Tucson, AZ	1,473	1.5%
Buckeye, AZ	1,404	1.5%

Where do Washington Residents work?	Flows	Percent
Washington, DC--VA--MD	**1,854,172**	**88.1%**
Baltimore, MD	120,178	5.7%
Richmond, VA	26,252	1.2%
Virginia Beach, VA	16,304	0.8%

Where do Avondale Workers live?	Flows	Percent
Phoenix--Mesa, AZ	**20,124**	**57.0%**
Avondale--Goodyear, AZ	11,110	31.4%
Buckeye, AZ	856	2.4%
Tucson, AZ	712	2.0%

Where do Washington Workers live?	Flows	Percent
Washington, DC--VA--MD	**1,854,172**	**81.6%**
Baltimore, MD	149,564	6.6%
Waldorf, MD	28,690	1.3%
Virginia Beach, VA	25,987	1.1%

2018 LEHD Origin-Destination Employment Statistics (LODES) data

Preliminary Findings. For demonstrative purposes only.

Proposed Urban Area Criteria: Splitting

Step Two. Conduct block-level analysis of the commuter flows

- Using the LEHD data, apply the *Leiden Community Detection Algorithm* to identify natural partitions, or communities
- Split boundaries are then adjusted to match the nearest *LEHD Origin-Destination Community*

Literature related to *Leiden Community Detection Algorithm*:

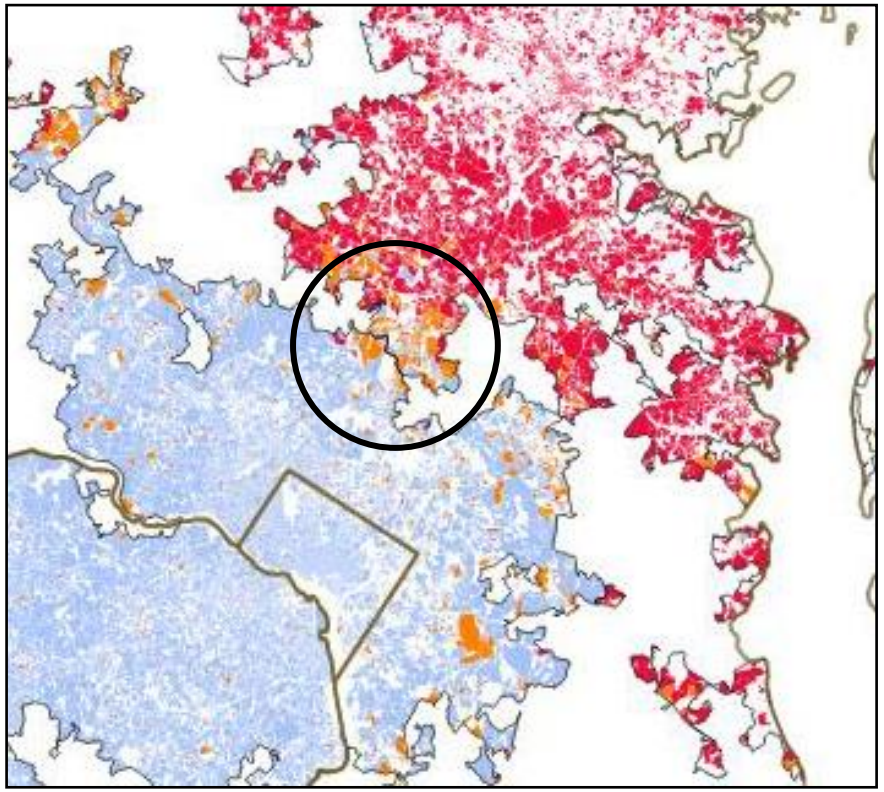
Thomas, I., A. Adam, and A. Verhetsel. "Migration and commuting interactions fields: a new geography with community detection algorithm?" *Belgeo*, **4**, 2017, pp. 1-17.

Traag, V., L. Waltman and N.J. van Eck. "From Louvain to Leiden: guaranteeing well connected communities." *Scientific Reports*, **9**, pp. 1-12.

Stefanouli, M. and S. Polyzos. "Analysis of commuting in Attica: The Attica commuting network." *Journal of Land Use, Mobility and Environment*, **Vol. 13, n. 1**, 2020, pp. 21-40.

Proposed Urban Area Criteria: Splitting

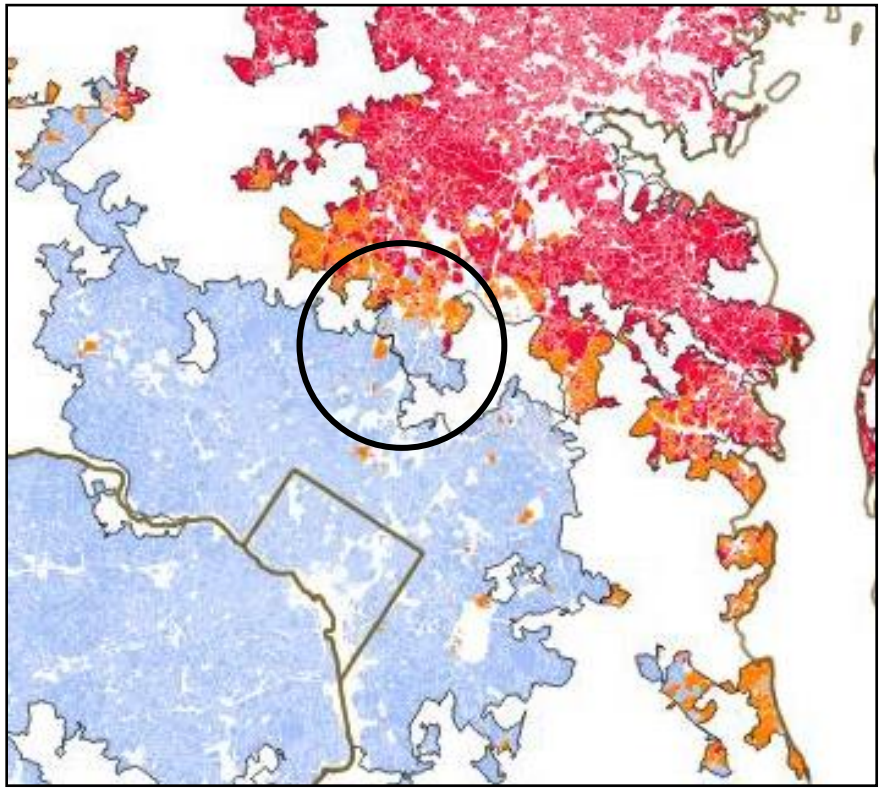
Where do Washington Residents work?



Percent of jobs filled by residents of Washington

- 0.00 - 0.30
- 0.30 - 0.50
- 0.50 - 1.00

Where do Washington Workers live?



Percent of residents working in Washington

- 0.00 - 0.30
- 0.30 - 0.50
- 0.50 - 1.00

2018 LEHD Origin-Destination Employment Statistics (LODES) data

Preliminary Findings. For demonstrative purposes only.

Schedule

Spring 2021	Publish Proposed Urban/Rural Criteria in the Federal Register Notice
Summer 2021	Review comments on Proposed Urban/Rural Criteria published in the Federal Register Notice
Winter 2021-2	Publish Final Urban/Rural Criteria in the Federal Register Notice
Summer 2022	Publish Federal Register Notice announcing qualifying Urban Areas

Contact Us

Send questions and comments to us at

geo.urban@census.gov

Proposed Criteria Federal Register Notice:
https://www.federalregister.gov/documents/2021/02/19/2021-03412/urban-areas-for-the-2020-census-proposed-criteria

Census Bureau Urban and Rural page with link to *2020 Proposed Urban Area Criteria Viewer*:
https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html