



UNIVERSITY OF MINNESOTA

Paper Maps & Rogue TIGERs

Using Government Documents to Digitize
1980 Census Blocks for IPUMS NHGIS

Kate Knowles, Jonathan Schroeder & Jenny McBurney
University of Minnesota, Twin Cities

FDLP Academy Webinar Series — August 23, 2023

Who we are



Kate Knowles
Data Analyst



Jonathan Schroeder
Research Scientist



Jenny McBurney
Government Publications
Librarian



Overview

- Introduction to IPUMS NHGIS
- Introduction to 1980 block editing project
- Role of Government Documents
- Workflow demonstration
- Example use case
- Preview of future work

IPUMS

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community contexts. Data and services available free of charge.



U.S. Census and American Community Survey microdata from 1850 to the present. [Learn More](#)

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Current Population Survey microdata including basic monthly surveys and supplements from 1962 to the present. [Learn More](#)

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World's largest collection of census microdata covering over 100 countries, contemporary and historical. [Learn More](#)

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Tabular and GIS data from population, housing, and agricultural censuses around the world. [Learn More](#)
Find additional spatial population & environmental data in [IPUMS Terra](#).

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CENSUS BUREAU PLANS MAJOR CHANGES TO PUBLIC DATA

New data may be unusable for research and planning

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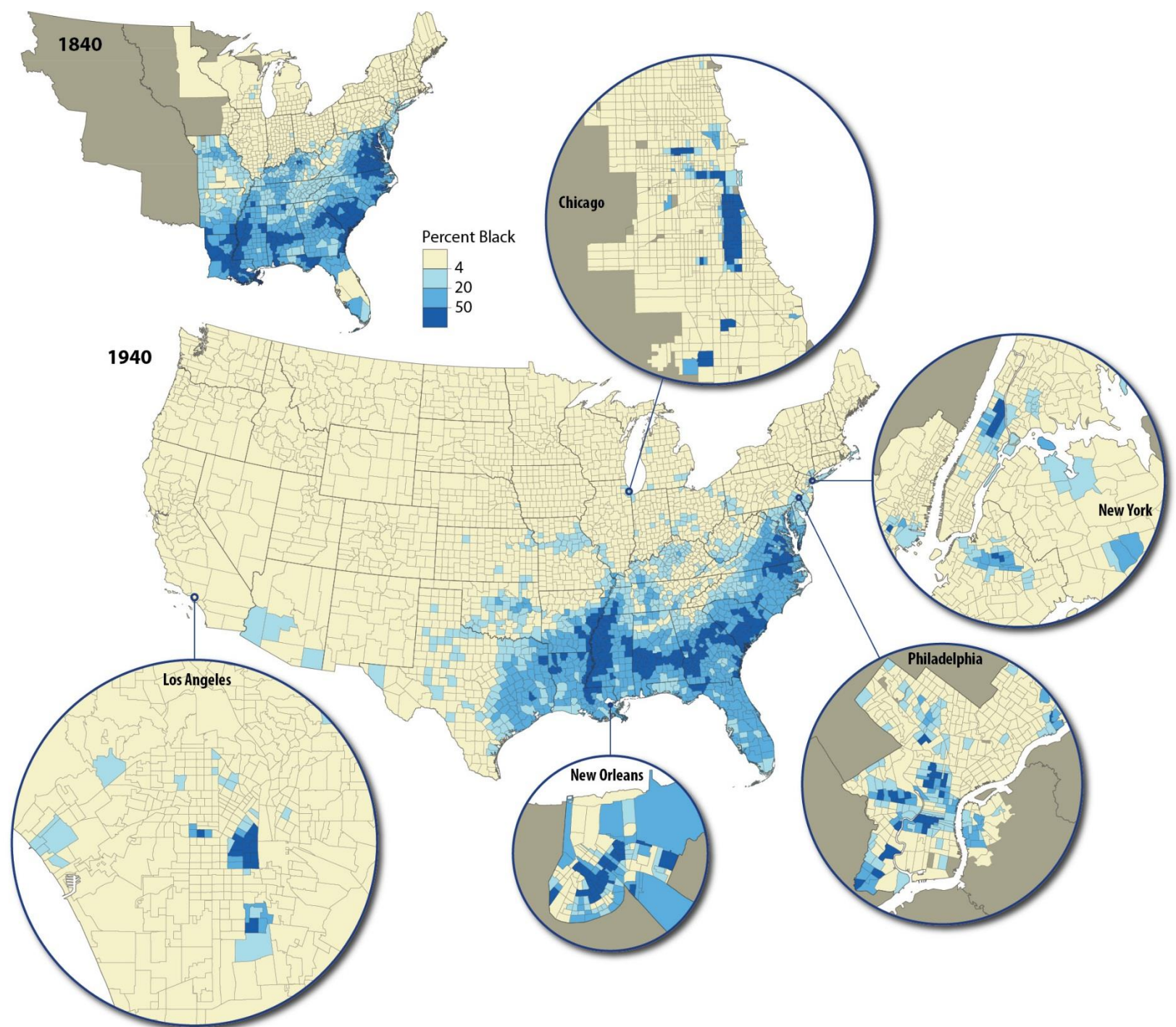


CALENDAR

[Webinar: Did The COVID-19 Pandemic Impact Contraceptive Use? An Introduction To Longitudinal Analysis Using PMA Data](#)

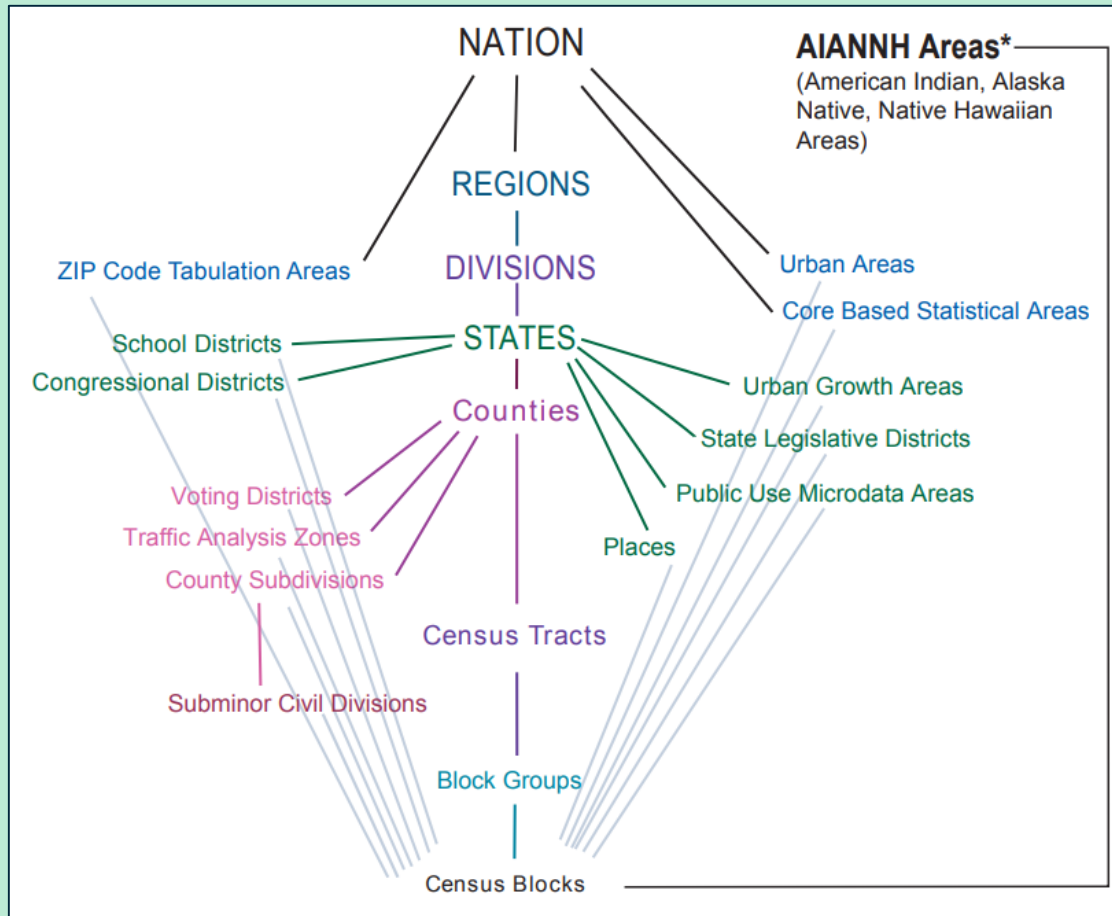
NHGIS

- Geographic U.S. census & survey data
- Summary tables *and* GIS files
- 1790 to the present



Observation units of census & survey data

Summary data: *Areas*



<https://www.census.gov/geo/reference/hierarchy.html>

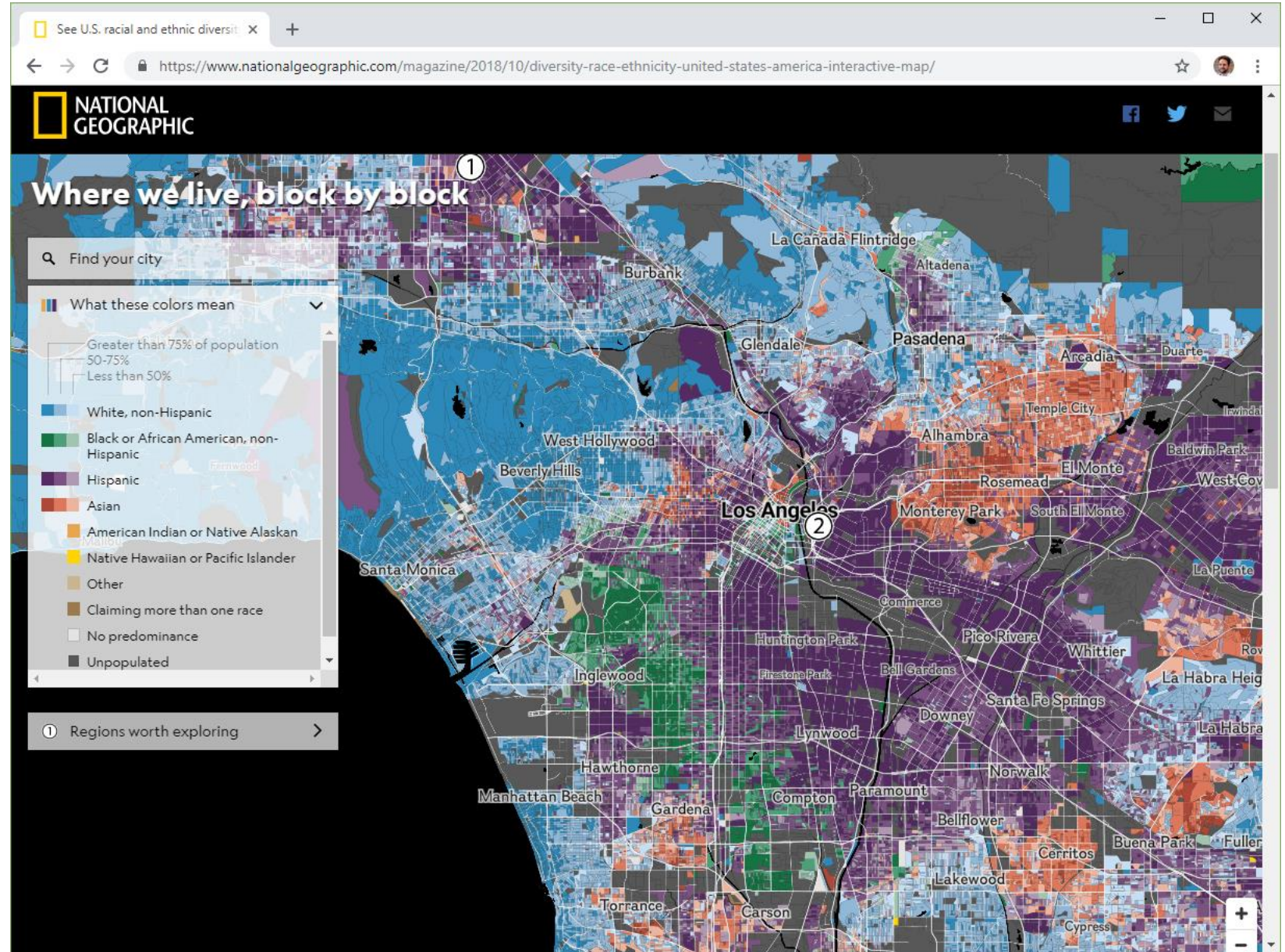
Microdata: *Respondents*



- + Flexible classification, modeling & cross-tabulation
- Restricted geographic detail
- Limited sample sizes

NHGIS

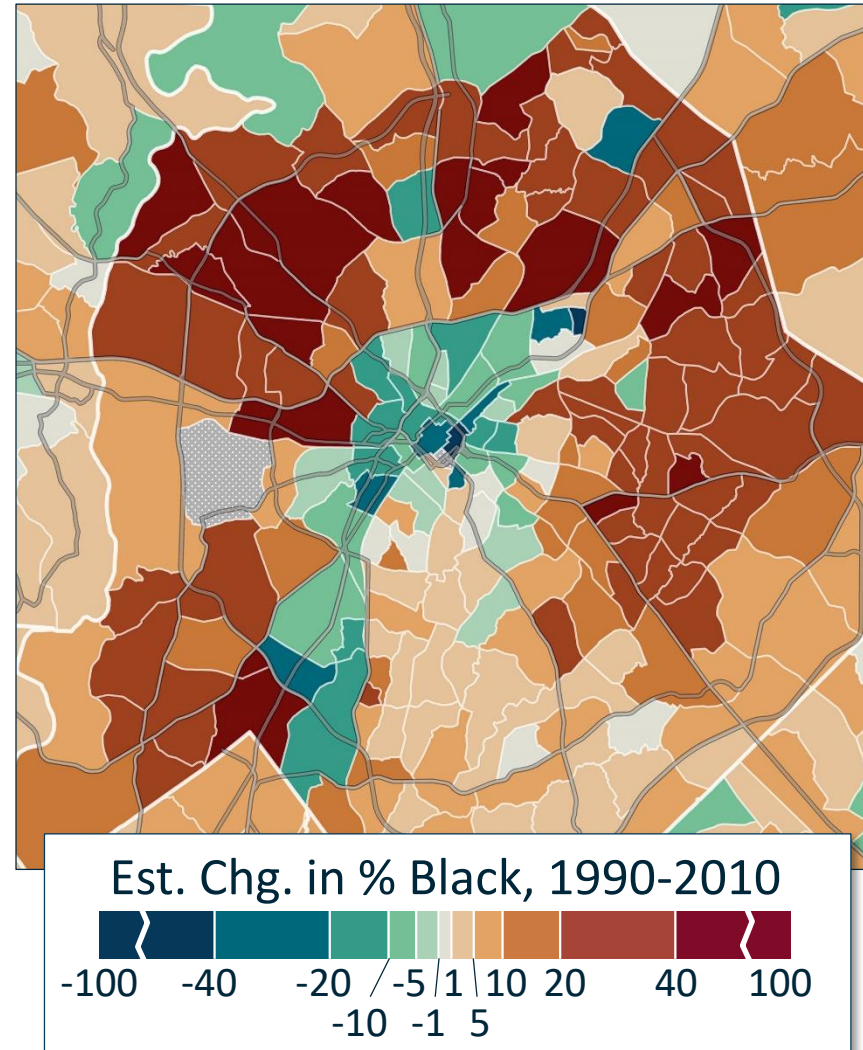
- All summary levels down to census blocks



NHGIS

- All summary levels down to census blocks
- Time series & geographic crosswalks
- A data source, not a mapping or analysis tool

Charlotte, NC

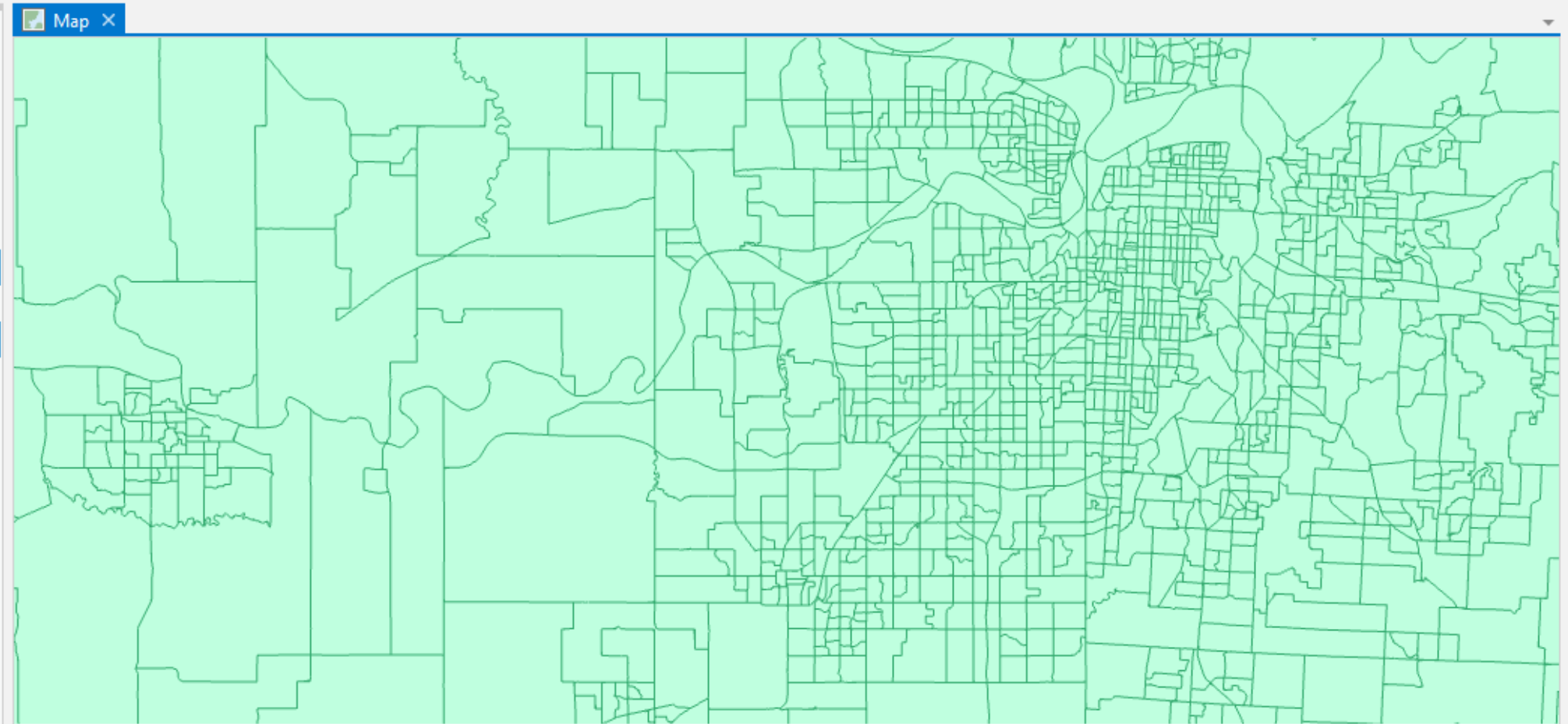


Contents

Search

Selection

- Map
 - US_blk_grp_2015
- Standalone Tables
 - nhgis0845_ds215_20155_blk_grp.csv



1:441,113 | 10,518,487.64W 4,667,167.48N m | Selected Features: 0

nhgis0845_ds215_20155_blk_grp.csv

Field: Add Calculate Selection: Select By Attributes Zoom To Switch Clear Delete Copy

GISJOIN	YEAR	REGIONA	DIVISIONA	STATE	STATEA	COUNTY	COUNTYA
G20000109526001	2011-2015	<Null>	<Null>	Kansas	20	Allen County	
G20000109527001	2011-2015	<Null>	<Null>	Kansas	20	Allen County	

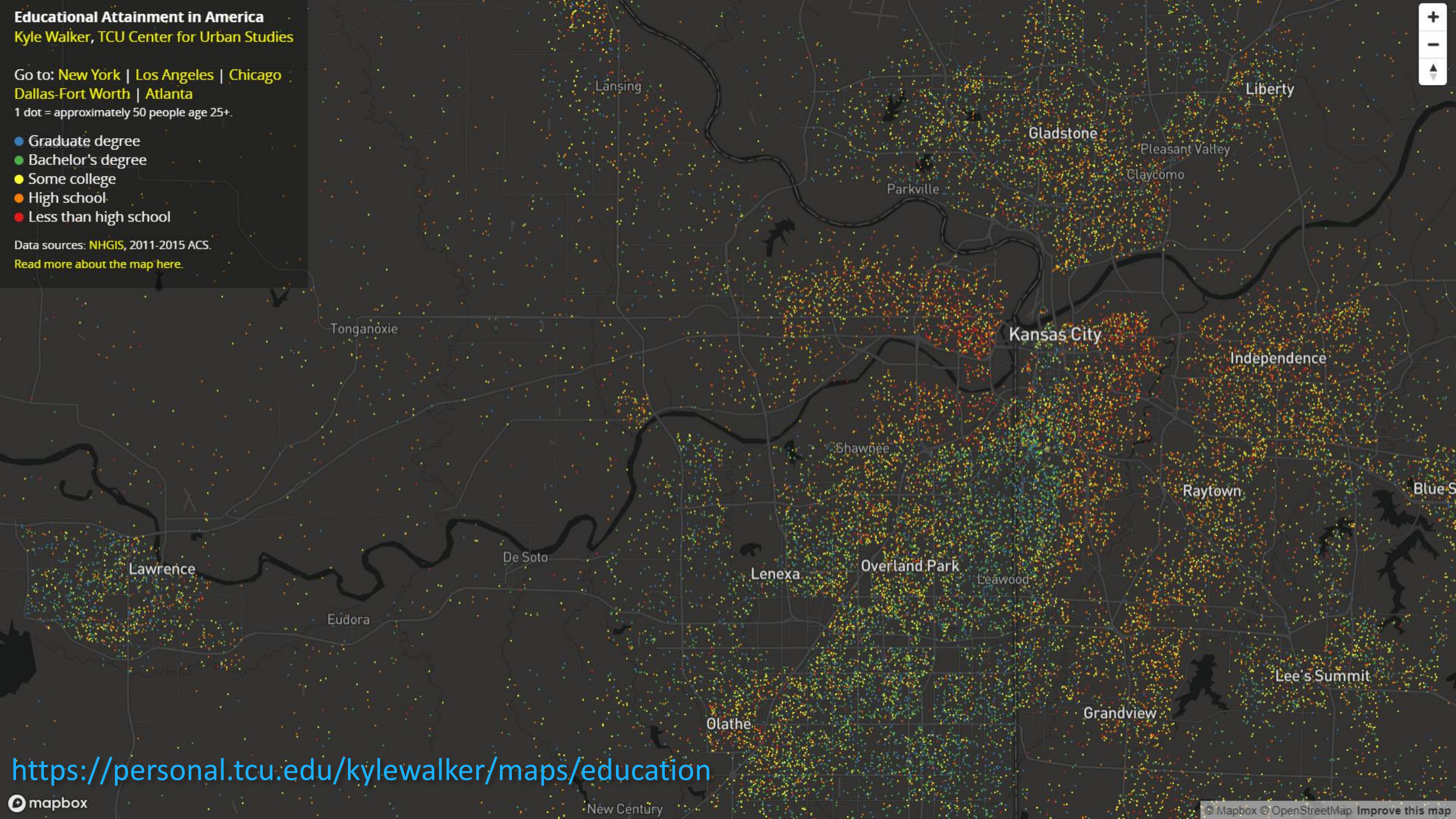
Educational Attainment in America
Kyle Walker, TCU Center for Urban Studies

Go to: [New York](#) | [Los Angeles](#) | [Chicago](#) | [Dallas-Fort Worth](#) | [Atlanta](#)

1 dot = approximately 50 people age 25+.

- Graduate degree
- Bachelor's degree
- Some college
- High school
- Less than high school

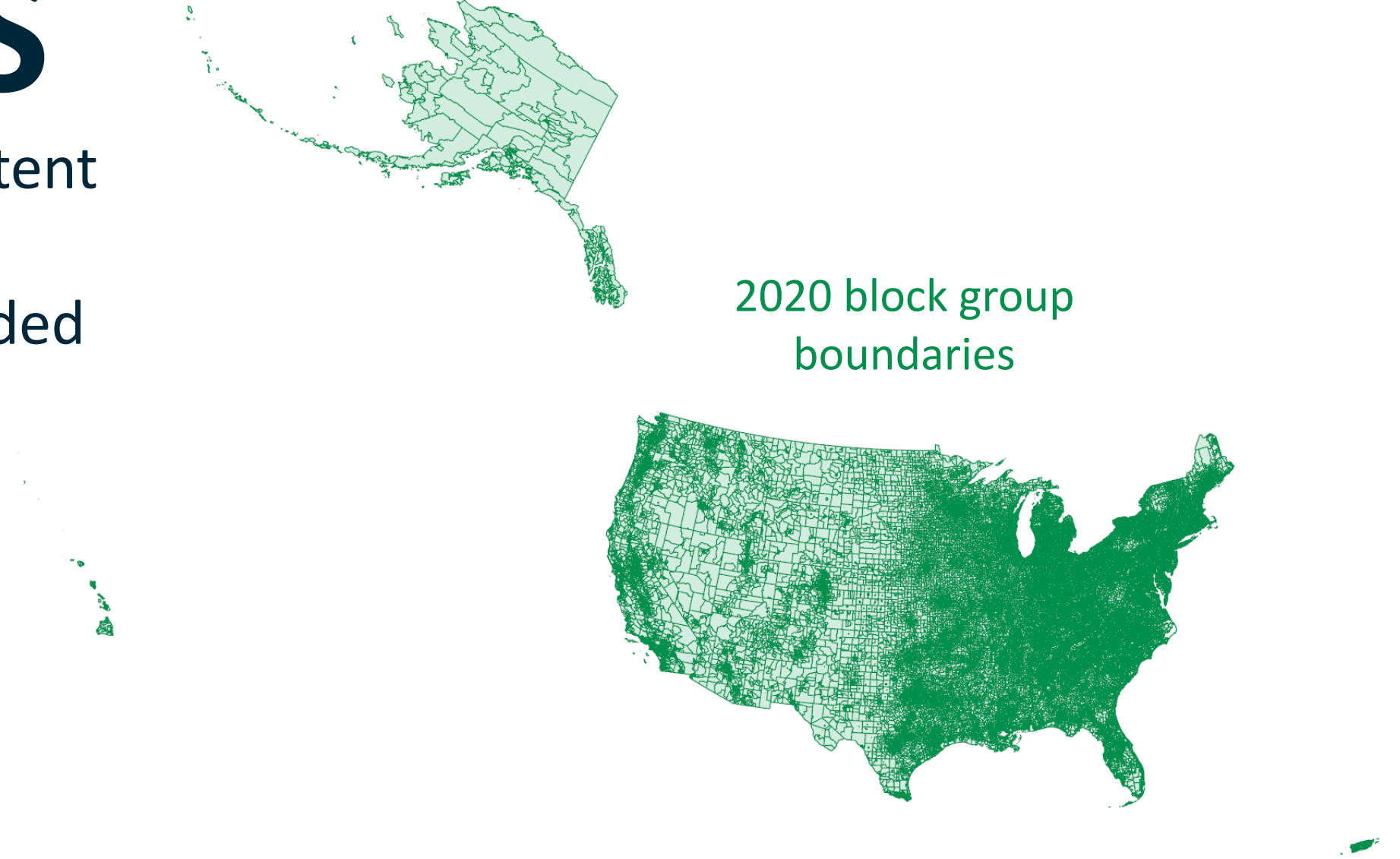
Data sources: [NHGIS](#), 2011-2015 ACS.
[Read more about the map here.](#)



<https://personal.tcu.edu/kylewalker/maps/education>


NHGIS

- Nationwide extent for most levels
- Principally funded by NSF & NIH grants...
- **FREE**



Alternative: data.census.gov

The image shows a browser window with the following elements:

- Browser Tab:** "Explore Census Data" with a close button (x) and a plus sign (+).
- Address Bar:** "data.census.gov/cedsci/" with navigation icons (back, forward, refresh) and a "Guest" user profile.
- Trust Bar:** "An official website of the United States government" with a link "Here's how you know".
- Dark Blue Header:**
 - Left: "Welcome to the new data.census.gov website"
 - Right: "Microdata", "Help", "FAQ", "Feedback"
- United States Census Bureau Logo:** Located on the left side of the header.
- Navigation Links:** "Tables", "Maps", "Pages" are positioned on the right side of the header.
- Main Content Area:**
 - ## Explore Census Data
 - The Census Bureau is the leading source of quality data about the nation's people and economy.
 - 
 - [Advanced Search](#) [? Help](#) [Feedback](#)



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DOCUMENTATION

DATA AVAILABILITY

OVERVIEW OF DATASETS

TABULAR DATA SOURCES

TIME SERIES TABLES

GIS FILES

REVISION HISTORY

DOWNLOAD U.S. CENSUS DATA TABLES & MAPPING FILES

The **National Historical Geographic Information System (NHGIS)** provides easy access to summary tables and time series of population, housing, agriculture, and economic data, along with GIS-compatible boundary files, for years from 1790 through the present and for all levels of U.S. census geography, including states, counties, tracts, and blocks. [Read more.](#)

START HERE:

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WHAT IS IPUMS?

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services are available free of charge. [Learn more about IPUMS.](#)



FILTER » OPTIONS » REVIEW

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SHOW SELECTIONS CONTINUE

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No filters selected.



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INCLUDES

Race

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14266 SOURCE TABLES | 135 TIME SERIES TABLES | 1837 GIS FILES

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POPULARITY	TABLE NAME	UNIVERSE	CLASSIFICATIONS	YEAR - DATASET	BREAKDOWNS
	NT4. White Males and Estimated White Females by Sex by Age	White Persons	Age (2) , Sex (2)	1790_cPop	
	NT5. White Population by Sex	White Persons	Sex (2)	1790_cPop	
	NT6. Race/Slave Status	Persons	Race (2) , Slave Status (2)	1790_cPop	
	NT12. White Population by Nationality	White Persons	Ancestry (8)	1790_cPop	
	NT14. Families by Slaveholding Status by Race	Families	Race (2) , Slaveholding Status (2)	1790_cPop	
	NT15. White Family Members by Slaveholding Status	White Family Members	Slaveholding Status (2)	1790_cPop	



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INCLUDES Race

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VIEW 1 - 20 OF 14,266

POPULARITY	TABLE NAME	UNIVERSE	CLASSIFICATIONS	YEAR - DATASET	BREAKDOWNS
	P1. Race	Total population	Race (70)	2020_PL94171	
	B02001. Race	Total population	Race (9)	2016_2020_ACS5a	Spatial
	B02001. Race	Total population	Race (9)	2017_2021_ACS5a	Spatial
	P2. Hispanic or Latino, and Not Hispanic or Latino by Race	Total population	Hispanic Origin (2) , Race (70)	2020_PL94171	
	B03002. Hispanic or Latino Origin by Race	Total population	Hispanic Origin (2) , Race (9)	2016_2020_ACS5a	Spatial
	P3. Race	Total population	Race (7)	2010_SF1a	Spatial
	B03002. Hispanic or Latino Origin by Race	Total population	Hispanic Origin (2) , Race (9)	2017_2021_ACS5a	Spatial



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INCLUDES ▾

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	POPULARITY	YEAR	GEOGRAPHIC LEVEL	EXTENT	BASIS
		1790	State	United States	2000 TIGER/Line +
		1790	County	United States	2000 TIGER/Line +
		1790	County	United States	2008 TIGER/Line +
		1800	State	United States	2000 TIGER/Line +
		1800	County	United States	2000 TIGER/Line +
		1800	County	United States	2008 TIGER/Line +
		1810	State	United States	2000 TIGER/Line +



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14266 SOURCE TABLES 135 TIME SERIES TABLES 1837 GIS FILES

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	POPULARITY	SEQUENCE	TABLE NAME	GEOGRAPHIC INTEGRATION	YEARS	GEOGRAPHIC LEVELS
+		110.01	B18. Persons by Race [5*]	Nominal	1970, 1980, 1990, 2000, 2010, 2020, ACS 5-year periods 2006-2021	STATE, COUNTY, TRACT, CTY_SUB, PLACE
+		110.02	AA0. Persons by Race [6*]	Nominal	1980, 1990, 2000, 2010, 2020, ACS 5-year periods 2006-2021	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
+		110.03	B07. Persons by Race [7*]	Nominal	1990, 2000, 2010, 2020, ACS 5-year periods 2006-2021	NATION, REGION, DIVISION, STATE, COUNTY, TRACT, CTY_SUB, PLACE
+		110.04	CM1. Persons by Race [7*]	Standardized to 2010	1990, 2000, 2010, 2020	STATE, COUNTY, TRACT, BLCK_GRP, CTY_SUB, PLACE, CD110TH-112TH, CBSA, URB_AREA, ZCTA

Nominal integration

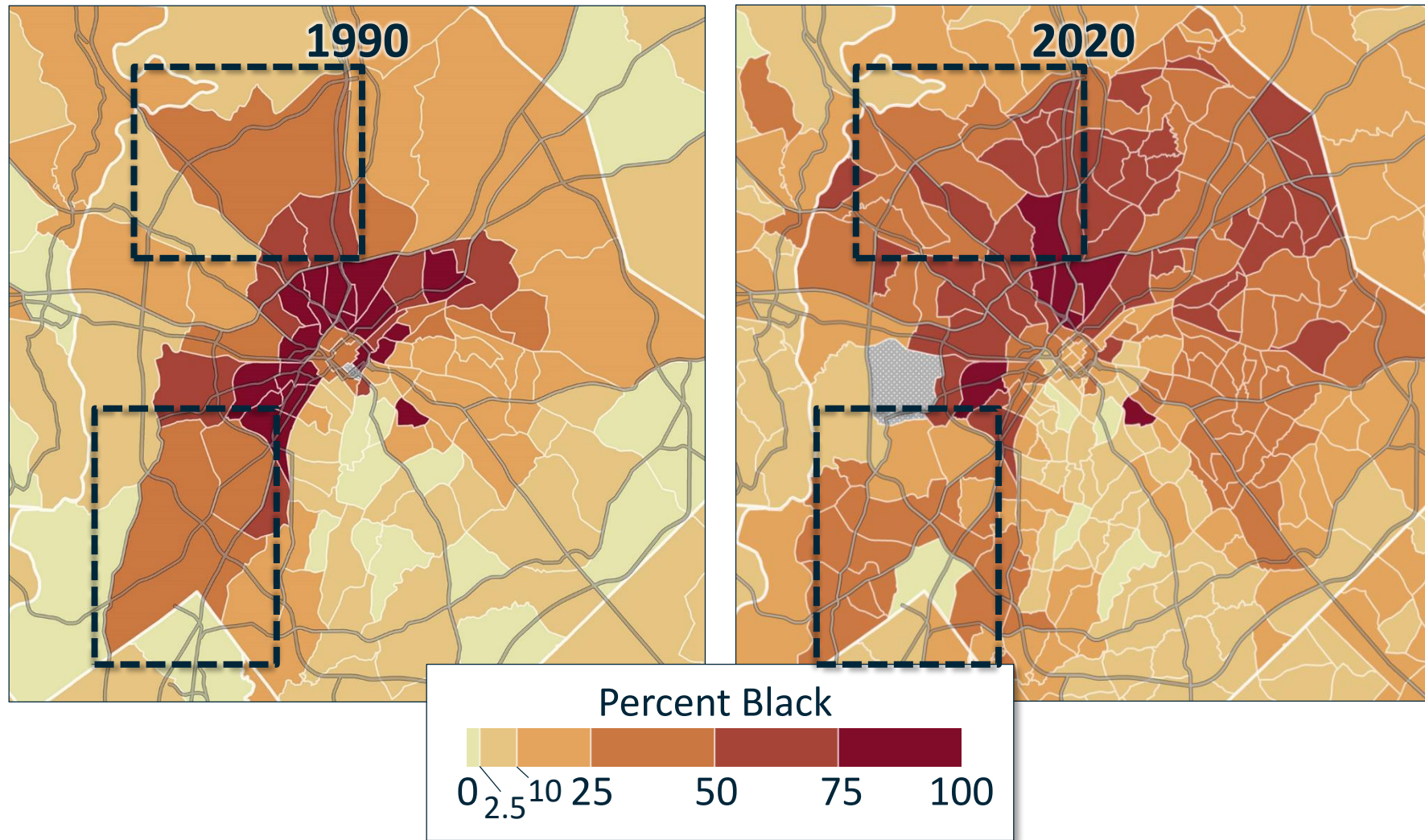
	A	B	C	D	E	F	G	H	I	J
1	GISJOIN	STATE	STATEA	BL1AA1970	BL1AA1980	BL1AA1990	BL1AA2000	BL1AA125	BL1AA125M	BL1AB1970
	GIS Join Match	State Name	State Code	1970: Persons: Male ~ Never married	1980: Persons: Male ~ Never married	1990: Persons: Male ~ Never married	2000: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	1970: Persons: Male ~ Now married
2	Code	State Name	Code	1970: Persons: Male ~ Never married	1980: Persons: Male ~ Never married	1990: Persons: Male ~ Never married	2000: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	2008-2012: Persons: Male ~ Never married	1970: Persons: Male ~ Now married
3	G010	Alabama	10	324572	375515	406140	444450	584355	4261	792229
4	G020	Alaska	20	38428	53423	67827	78955	105333	1532	69046
5	G040	Arizona	40	170463	286183	409976	581715	876661	5440	410438
6	G050	Arkansas	50	170171	200864	209851	245874	330745	3312	464000
7	G060	California	60	2102965	2938148	4034185	4343790	5778554	18439	4611973
8	G080	Colorado	80	230115	341985	373157	516816	678866	4145	510105
9	G090	Connecticut	90	306085	369471	412921	385888	496941	3768	706908
10	G100	Delaware	100	52624	67052	76997	87154	122851	1650	126479
11	G110	District Of Co	110	99908	112013	118273	112516	142162	1558	142605
12	G120	Florida	120	596651	950049	1336469	1702648	2553294	14356	1687636
13	G130	Georgia	130	446917	564696	716125	940487	1299191	7312	1050444
14	G150	Hawaii	150	104625	137448	152188	166715	205985	2060	169920
15	G160	Idaho	160	69395	86794	91380	128613	172169	2427	169553
16	G170	Illinois	170	1115952	1318480	1395167	1495795	1838840	9371	2542632
17	G180	Indiana	180	477592	541264	569459	643222	814989	5228	1222896
18	G190	Iowa	190	271540	301518	281081	318000	375129	2818	665781
19	G200	Kansas	200	223168	241362	244866	281338	345753	3010	542632
20	G210	Kentucky	210	318856	358353	361278	401465	518929	4039	757239
21	G220	Louisiana	220	370838	450684	464285	514633	633702	4170	793188
22	G230	Maine	230	97253	116576	126930	132473	163254	1650	227135
23	G240	Maryland	240	392646	501319	587368	610852	814952	4997	906860
24	G250	Massachuset	250	622162	743825	832633	817954	981462	5728	1243732
25	G260	Michigan	260	872687	1036241	1078995	1159693	1352844	6714	2021198
26	G270	Minnesota	270	403762	484050	504483	591866	716441	4620	849440
27	G280	Mississippi	280	222569	252992	275422	319922	388559	3394	480663

Nominal integration

1	NHGISCODE	STATE	STATEFP	STATENH	COUNTY	COUNTYFP	COUNTYNH	TRACTA	AV0AA1970	AV0AA1980	AV0AA1990	AV0AA2000	AV0AA2010
2	NHGIS Integrated Geographic Unit Code	NHGIS Integrated State Name	FIPS State Code	NHGIS Integrated State Code	NHGIS Integrated County Name	FIPS County Code	NHGIS Integrated County Code	NHGIS Integrated Census Tract Code	1970: Persons: Total	1980: Persons: Total	1990: Persons: Total	2000: Persons: Total	2010: Persons: Total
73390	G3701190001400	North Carolina	37	370	Mecklenburg	119	1190	1400	3338	2799	2400	2656	2607
73391	G3701190001501	North Carolina	37	370	Mecklenburg	119	1190	1501	4660	6891	9260		
73392	G3701190001502	North Carolina	37	370	Mecklenburg	119	1190	1502	7506				
73393	G3701190001503	North Carolina	37	370	Mecklenburg	119	1190	1503		5047	7081	9191	
73394	G3701190001504	North Carolina	37	370	Mecklenburg	119	1190	1504		4728	4629	4806	6401
73395	G3701190001505	North Carolina	37	370	Mecklenburg	119	1190	1505				2906	3678
73396	G3701190001506	North Carolina	37	370	Mecklenburg	119	1190	1506				6423	
73397	G3701190001507	North Carolina	37	370	Mecklenburg	119	1190	1507					4004
73398	G3701190001508	North Carolina	37	370	Mecklenburg	119	1190	1508					6061
73399	G3701190001509	North Carolina	37	370	Mecklenburg	119	1190	1509					2976
73400	G3701190001510	North Carolina	37	370	Mecklenburg	119	1190	1510					3047
73401	G3701190001601	North Carolina	37	370	Mecklenburg	119	1190	1601	7408				
73402	G3701190001602	North Carolina	37	370	Mecklenburg	119	1190	1602	5815	5401	6735	8346	
73403	G3701190001603	North Carolina	37	370	Mecklenburg	119	1190	1603		3351	3675	4082	4598
73404	G3701190001604	North Carolina	37	370	Mecklenburg	119	1190	1604		4028	6191	6993	
73405	G3701190001605	North Carolina	37	370	Mecklenburg	119	1190	1605					1776
73406	G3701190001606	North Carolina	37	370	Mecklenburg	119	1190	1606					4295
73407	G3701190001607	North Carolina	37	370	Mecklenburg	119	1190	1607					2613
73408	G3701190001608	North Carolina	37	370	Mecklenburg	119	1190	1608					3933
73409	G3701190001609	North Carolina	37	370	Mecklenburg	119	1190	1609					3168
73410	G3701190001700	North Carolina	37	370	Mecklenburg	119	1190	1700	6784	7399			
73411	G3701190001701	North Carolina	37	370	Mecklenburg	119	1190	1701				4111	3749
73412	G3701190001702	North Carolina	37	370	Mecklenburg	119	1190	1702				5151	4881
73413	G3701190001798	North Carolina	37	370	Mecklenburg	119	1190	1798			7840		
73414	G3701190001800	North Carolina	37	370	Mecklenburg	119	1190	1800	5485	4031		4380	

nhgis0570_ts_nominal_tract

Charlotte census tracts



Geographic standardization

1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	GISJOIN	GEOYEAR	STATE	STATEA	COUNTY	COUNTYA	TRACTA	CL8AA199	CL8AA199	CL8AA199	CL8AA200	CL8AA200	CL8AA200	CL8AA2010
	GIS Join Match Code	Geography Year	State Name	State Code	County Name	County Code	Census Tract Code	1990: Persons: Total	1990: Persons: Total	1990: Persons: Total	2000: Persons: Total	2000: Persons: Total	2000: Persons: Total	2010: Persons: Total
49315	G3701190001400	2010	North Carolina	37	Mecklenburg Co	119	1400	2389.68	2366	2391	2652.31	2640	2653	2607
49316	G3701190001504	2010	North Carolina	37	Mecklenburg Co	119	1504	4629	4629	4629	4806	4806	4806	6401
49317	G3701190001505	2010	North Carolina	37	Mecklenburg Co	119	1505	2901	2901	2901	2906	2906	2906	3678
49318	G3701190001507	2010	North Carolina	37	Mecklenburg Co	119	1507	3419	3419	3419	4791	4791	4791	4004
49319	G3701190001508	2010	North Carolina	37	Mecklenburg Co	119	1508	3662	3662	3662	4400	4400	4400	6061
49320	G3701190001509	2010	North Carolina	37	Mecklenburg Co	119	1509	3213	3213	3213	3229	3229	3229	2976
49321	G3701190001510	2010	North Carolina	37	Mecklenburg Co	119	1510	3146.1	3146	3211	3194.36	3194	3367	3047
49322	G3701190001603	2010	North Carolina	37	Mecklenburg Co	119	1603	3660	3660	3660	4065	4065	4065	4598
49323	G3701190001605	2010	North Carolina	37	Mecklenburg Co	119	1605	1389	1389	1389	1978	1978	1978	1776
49324	G3701190001606	2010	North Carolina	37	Mecklenburg Co	119	1606	3822	3822	3822	4154	4154	4154	4295
49325	G3701190001607	2010	North Carolina	37	Mecklenburg Co	119	1607	1524	1524	1524	2214	2214	2214	2613
49326	G3701190001608	2010	North Carolina	37	Mecklenburg Co	119	1608	3872	3872	3872	4321	4321	4321	3933
49327	G3701190001609	2010	North Carolina	37	Mecklenburg Co	119	1609	2251.16	1687	2334	2445.55	2137	2635	3168
49328	G3701190001701	2010	North Carolina	37	Mecklenburg Co	119	1701	3303	3303	3303	4111	4111	4111	3749
49329	G3701190001702	2010	North Carolina	37	Mecklenburg Co	119	1702	4537	4537	4537	5151	5151	5151	4881
49330	G3701190001801	2010	North Carolina	37	Mecklenburg Co	119	1801	1813.95	1349	1814	1706.96	1702	1707	1249
49331	G3701190001802	2010	North Carolina	37	Mecklenburg Co	119	1802	2775	2775	2775	2673	2673	2673	2892
49332	G3701190001910	2010	North Carolina	37	Mecklenburg Co	119	1910	4277	4277	4277	4614	4614	4614	5117
49333	G3701190001911	2010	North Carolina	37	Mecklenburg Co	119	1911	4613	4613	4613	5041	5041	5041	5441
49334	G3701190001912	2010	North Carolina	37	Mecklenburg Co	119	1912	5096.84	5014	5661	5506.45	5317	5815	6565
49335	G3701190001914	2010	North Carolina	37	Mecklenburg Co	119	1914	3295	3295	3295	3965	3965	3965	3485
49336	G3701190001915	2010	North Carolina	37	Mecklenburg Co	119	1915	4403	4403	4403	5460	5460	5460	6293
49337	G3701190001916	2010	North Carolina	37	Mecklenburg Co	119	1916	3003.8	2465	3050	3005.23	2508	3009	3725
49338	G3701190001917	2010	North Carolina	37	Mecklenburg Co	119	1917	3050.2	3004	3589	3294.77	3291	3792	3567
49339	G3701190001918	2010	North Carolina	37	Mecklenburg Co	119	1918	2842.4	698	3700	3129	3129	3129	3527
49340	G3701190001919	2010	North Carolina	37	Mecklenburg Co	119	1919	3243.6	2386	5388	3837	3837	3837	3379



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- [How to Use the Crosswalks](#)
 - [Crosswalks from Blocks](#)
 - [Using Block Crosswalks to Generate Data for Larger Units](#)
 - [Crosswalks from Block Group Parts](#)
 - [Extending to 2011-2019 Census Units](#)
- [Technical Details](#)
 - [Basics](#)
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OVERVIEW

NHGIS geographic crosswalks describe how U.S. census geographic units from one census year correspond to units from another year. The crosswalks are designed to support high-quality tabulations of one year's census data for another year's geographic units (e.g., 1990 foreign-born population for 2010 census tracts).

Sources of block boundary data

- Census Bureau TIGER/Line Files
 - 2020 files: 2020 and 2010 census blocks
 - 2010 files: 2010 and 2000 census blocks
 - 2000 files: 2000 and 1990 census blocks
 - 1992 files: 1990 and 1980* census blocks

* INCOMPLETE: missing ~765,000 polygons

Project motivation

- We have 1980 census block summary tables
- We lack complete 1980 block boundary data
- We can acquire 1980 block maps

PROJECT: Create accurate 1980 block boundaries by editing 1992 TIGER/Line data to match block maps

Project timeline

- 2018: Begin 5-year NIH NICHD grant
- 2019: Develop workflow
 - Tracy Kugler w/ David Van Riper & myself
 - Using maps from UMN libraries: 15 metro areas

Project timeline

- 2020
 - January: Two undergrads begin production
 - Early March: Begin making ILL requests
 - Mid March: Global pandemic
 - Libraries close. Undergrads go home. Work paused.
 - June: Libraries begin resuming service
 - Most ILL requests return microfiche... not workable!
 - Requesting for individual metro areas: struggle to find senders

Project timeline

- 2021
 - January: Kate begins along with 2 more undergrads
 - August: Begin working with UMN Gov Pubs & Data
- March 2022: First data release, 48 metro areas

Libraries Involvement

Libraries Involvement

- Challenges:
 - Regular ILL requests weren't always working
 - FDLP distributed microfiche, not paper
- Solution:
 - Email GOVDOC-L for help!
 - Found 262 maps via 19 libraries

Libraries Involvement

- Lending institutions helped through:
 - Donating maps
 - Scanning locally at the lending institution
 - Sending via special ILL requests
- UMN library staff arranged scanning and special access:
 - Libraries Admin: Kate McCready
 - ILL: Melissa Eighmy Brown, Alice Welch, Guy Peterson
 - Map Library: Ryan Mattke, Dana Peterson
 - Gov Pubs: Alicia Kubas, Sara Westdal, Jenny McBurney
- Local and national group effort!

Libraries Involvement

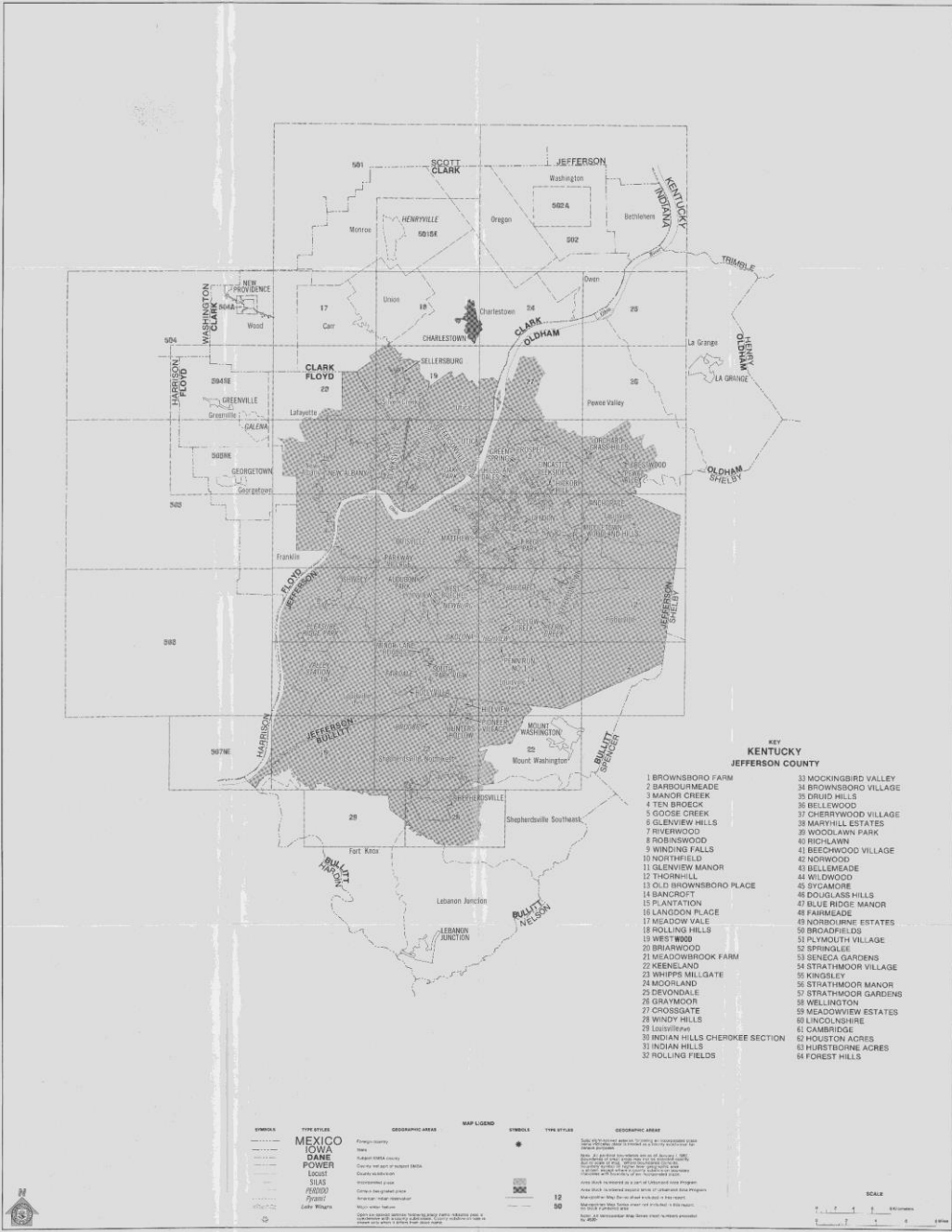
Ongoing:

- Tracking spreadsheet
 - Indicates which library has which maps
 - Notes about special requirements or issues
- Continue to request maps via ILL according to the spreadsheet

Editing Overview

1. Acquire 1980 block polygons from 1992 TIGER/Line
2. Acquire 1980 data tables (already in NHGIS)
3. Generate a list of missing blocks:
Exist in data tables but not in polygons
4. Acquire paper 1980 block maps
5. Look for missing blocks on maps & edit 1980 polygons to include missing blocks

INDEX TO BLOCK NUMBERED AREAS
LOUISVILLE, KY.-IND.
 STANDARD METROPOLITAN STATISTICAL AREA



Geographic Areas and Map Sheet Numbers

COUNTY OR COUNTY EQUIVALENT

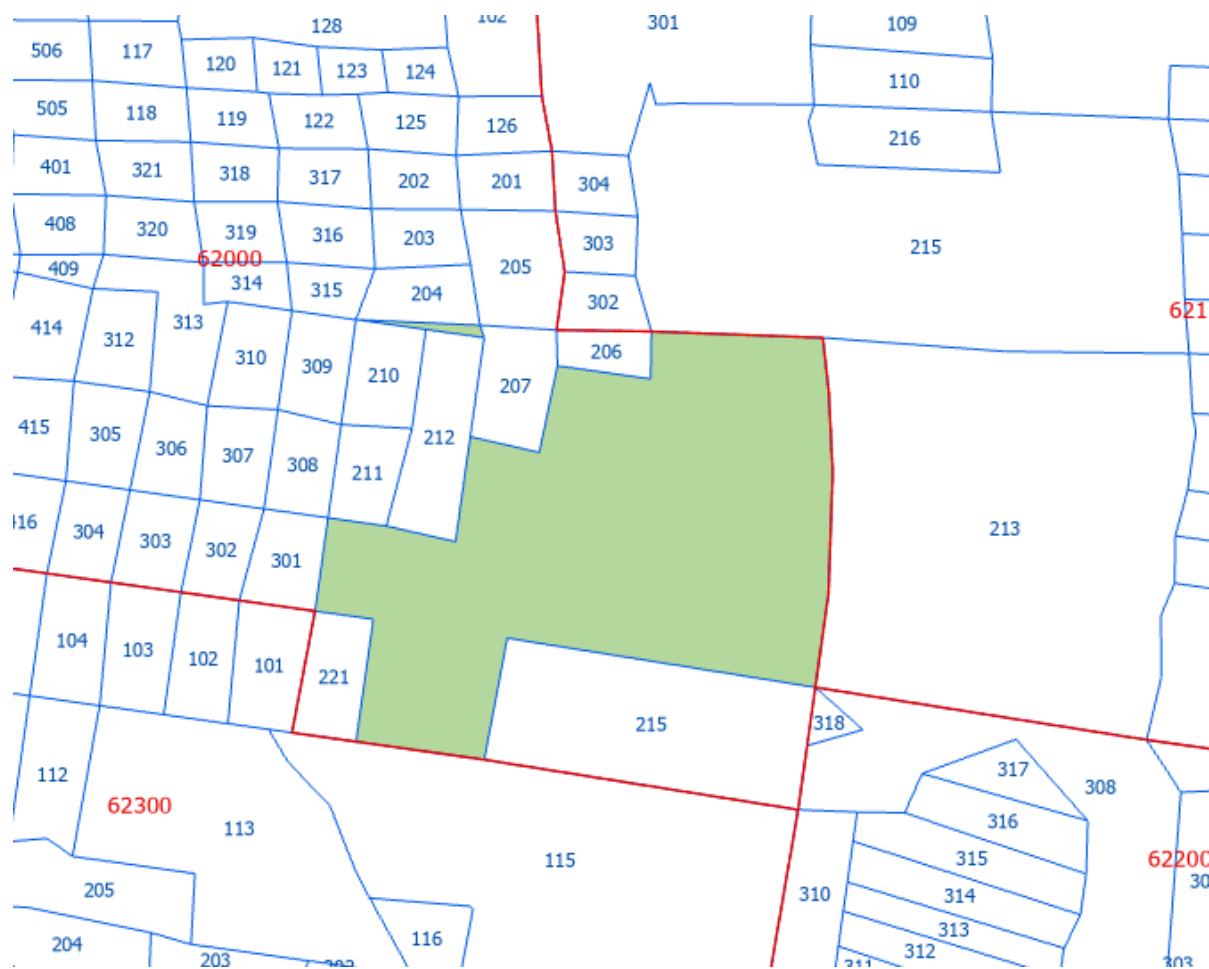
Jefferson county.....	4520-1	4520-2	4520-3	4520-4	4520-5
	4520-6	4520-7	4520-8	4520-9	4520-10
	4520-11	4520-12	4520-13	4520-14	4520-15
	4520-16	4520-21	4520-23	4520-27	4520-507NE

CENSUS TRACT OR BLOCK NUMBERING AREA

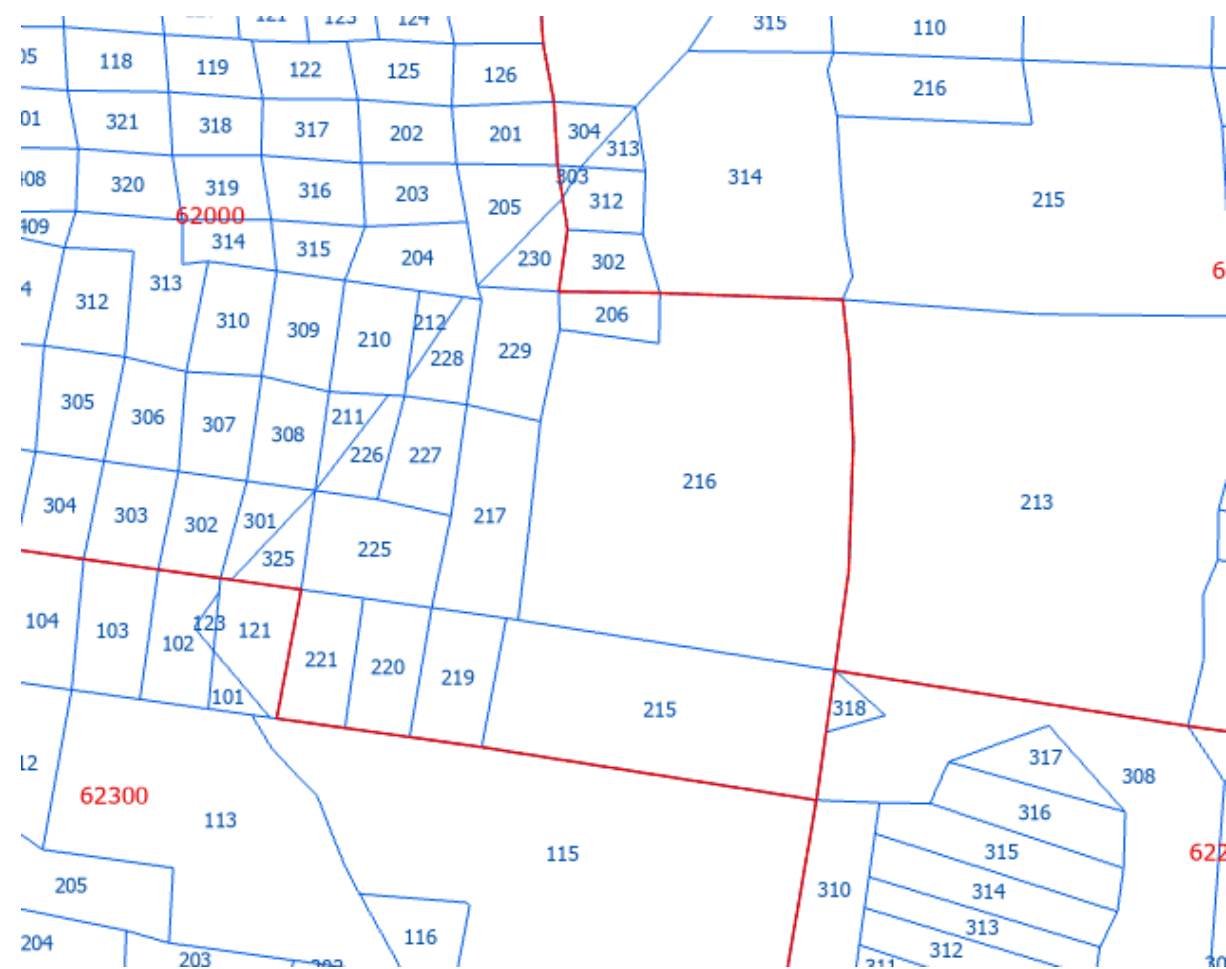
1	4520-8			58	4520-7
2	4520-1	4520-2	4520-8	59	4520-7
3	4520-8			60	4520-7
4	4520-8			61	4520-7
5	4520-8			62	4520-7
6	4520-8			63	4520-7
7	4520-8			64	4520-7
8	4520-8			65	4520-7
9	4520-8			66	4520-7
10	4520-8			67	4520-7
11	4520-8			68	4520-7
12	4520-8			69	4520-7
13	4520-8			70	4520-7
14	4520-8			71	4520-7
15	4520-8			72	4520-7
16	4520-8			73	4520-7
17	4520-8			74	4520-2
18	4520-8			75.01	4520-2
19	4520-7	4520-8			4520-3
20	4520-8			75.02	4520-2
21	4520-8				4520-3
22	4520-7	4520-8			4520-27
23	4520-7	4520-8		76.01	4520-7
24	4520-7	4520-8		76.02	4520-7
25	4520-7	4520-8		76.03	4520-7
26	4520-7	4520-8			4520-7
27	4520-7	4520-8			4520-7
28	4520-7	4520-8			4520-7
29	4520-7				4520-7
30	4520-7				4520-7
32	4520-7				4520-7
33	4520-7				4520-7
34	4520-7				4520-7
35	4520-7				4520-7
36	4520-7	4520-9	4520-10		4520-7
37	4520-7	4520-10			4520-7
38	4520-10				4520-7
39	4520-9	4520-10			4520-7
40	4520-10			91.01	4520-10
41	4520-10			91.02	4520-10
42	4520-10			92	4520-10
43.01	4520-9	4520-10		93	4520-7
43.02	4520-9	4520-10		94	4520-10
44	4520-10			95	4520-7
45	4520-9	4520-10		96	4520-7
46	4520-10			97	4520-7
47	4520-7			98	4520-6
48	4520-7			99	4520-6
49	4520-7			100.01	4520-6
50	4520-7			100.02	4520-3
51	4520-7			100.03	4520-3
52	4520-7			101.01	4520-6
53	4520-7			101.02	4520-6
54	4520-7	4520-10		102	4520-3
55	4520-10			103.01	4520-3
56	4520-10				4520-4
57	4520-7				4520-6

MAP INDEX

Unedited 1980 block boundaries



Edited 1980 block boundaries





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DOWNLOAD U.S. CENSUS DATA TABLES & MAPPING FILES

The **National Historical Geographic Information System (NHGIS)** provides easy access to summary tables and time series of population, housing, agriculture, and economic data, along with GIS-compatible boundary files, for years from 1790 through the present and for all levels of U.S. census geography, including states, counties, tracts, and blocks. [Read more.](#)

START HERE:

Get Data

WHAT IS IPUMS?

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration and documentation makes it easy to study change, conduct comparative research, merge information across data types, and analyze individuals within family and community context. Data and services are available free of charge. [Learn more about IPUMS.](#)

NHGIS NEWS

[1980 BLOCK BOUNDARIES FOR 41 MORE METROS \(V3.0\)](#)

[2021 ACS 5-YEAR SUMMARY FILE & 2021 GIS BOUNDARY FILES NOW AVAILABLE](#)

[NEW & REVISED CONTEXT FIELDS FOR DATA TABLES](#)

[PRIVACY-PROTECTED 2010 CENSUS DEMONSTRATION DATA, V2022-08-25](#)

[GEOGRAPHIC CROSSWALKS FOR 2010-2020 ACS DATA](#) | [TIME SERIES EXTENDED TO 2020 CENSUS & 2019 ACS](#)

[BLOG POST: BETTER MAPS WITH CENSUS CENTERS OF POPULATION](#) | [MORE NEWS...](#)

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1980 BLOCK BOUNDARIES

NHGIS 1980 census block shapefiles depict 1980 block boundaries for selected areas throughout the U.S. The current version (v3.0) includes all or part of 103 metropolitan areas. We will update and extend the shapefiles in future releases as we complete more areas.

These files provide a more accurate and complete representation of 1980 block boundaries than is available from the U.S. Census Bureau's 1992 TIGER/Line Files, the only previously existing source of digital 1980 block definitions for the nation .

We currently provide the boundary files through this web page along with documentation and census summary statistics for 1980 blocks. In the future, we will provide both the boundary files and summary tables through the [NHGIS Data Finder](#) [↗](#), where we already provide block summary data for 1970 and both summary and boundary data for all census years after 1980 .

- [Overview](#)
- [Technical Details](#)
 - [Basics](#)
 - [Geographic Coverage](#)
 - [Data for Whole Collection Blocks, Not Tabulation Blocks](#)
 - [Popular Tables](#)
- [Download: Boundaries](#)
- [Download: Statistics](#)
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OVERVIEW

The U.S. Census Bureau's [1992 TIGER/Line Files](#) [↗](#) include both 1990 and 1980 census block boundaries, but the 1980 blocks are badly incomplete and often inaccurate. Of the 2.5 million blocks that appear in the 1980 census summary tables, about 765,000 do not appear in the 1992 TIGER/Line Files, and there are missing cases in nearly every county where block data were provided.

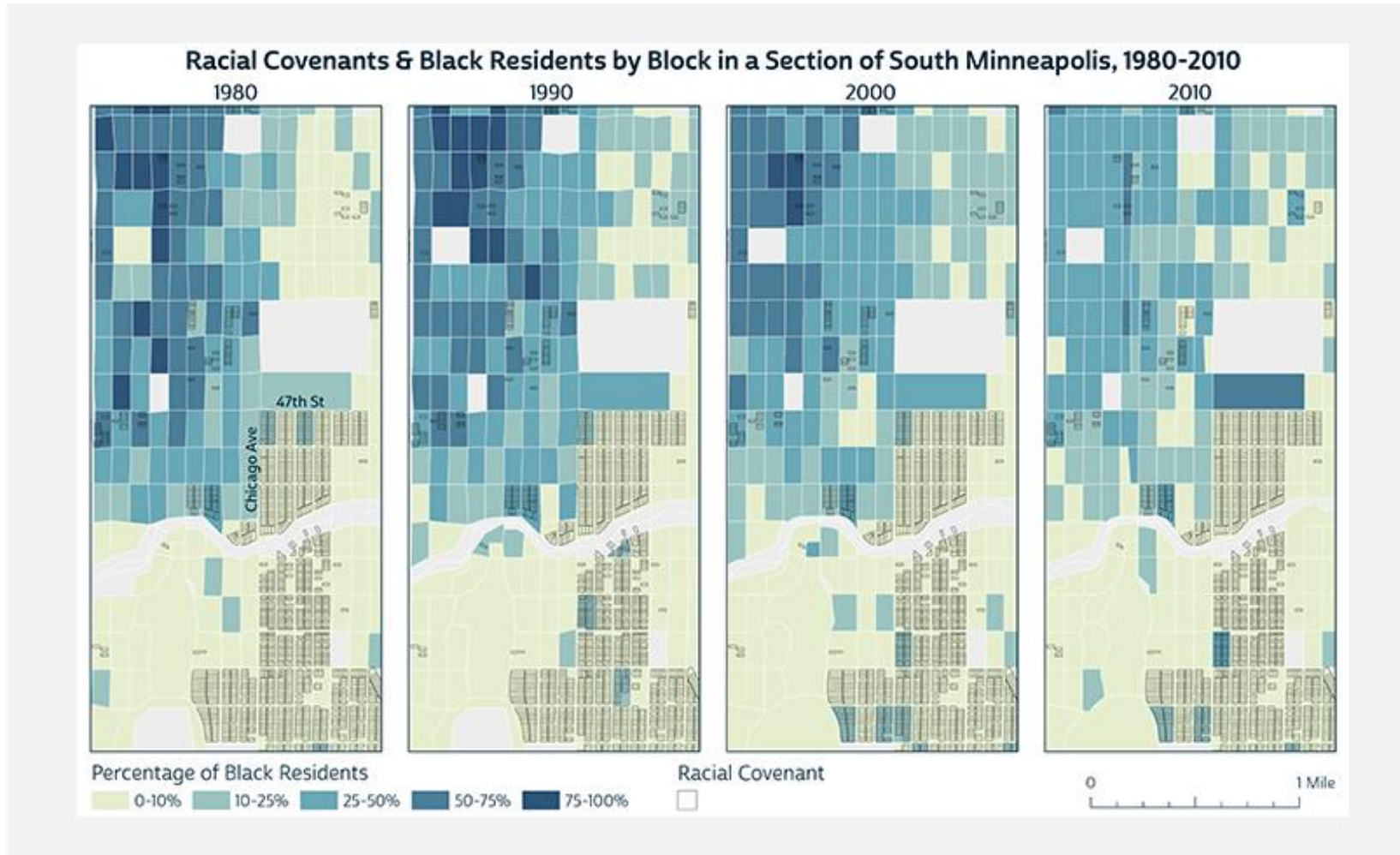
Current coverage for 1980

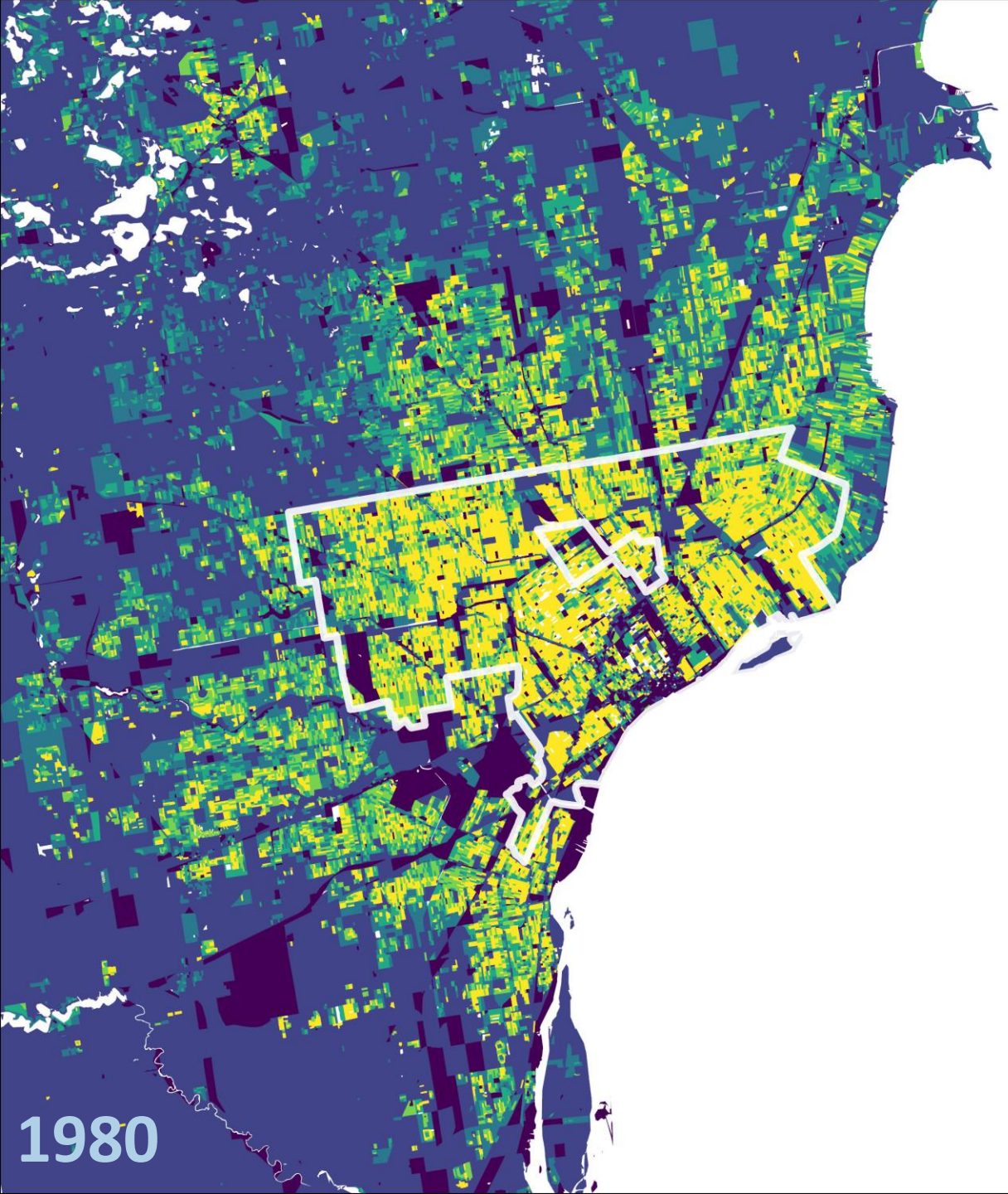
Covered Metro Areas By Population

Rank	Standard Metropolitan Statistical Area	Population
1.	New York, N.Y.-N.J.	9,120,346
2.	Los Angeles-Long Beach, Calif.	7,477,503
3.	Chicago, Ill.	7,103,624
4.	Philadelphia, Pa.-N.J.	4,716,818
5.	Detroit, Mich. *	4,353,413
6.	San Francisco-Oakland, Calif.	3,250,630
7.	Washington, D.C.-Md.-Va.	3,060,922
8.	Dallas-Fort Worth, Tex.	2,974,805
9.	Houston, Tex.	2,905,353
10.	Boston, Mass.	2,763,357
14.	Baltimore, Md.	2,174,023
15.	Minneapolis-St. Paul, Minn.-Wis.	2,113,533
16.	Atlanta, Ga.	2,029,710
17.	Newark, N.J.	1,965,969
18.	Anaheim-Santa Ana-Garden Grove, Calif.	1,932,709
19.	Cleveland, Ohio	1,898,825
20.	San Diego, Calif.	1,861,846
22.	Denver-Boulder, Colo.	1,620,902
23.	Seattle-Everett, Wash.	1,607,469
26.	Phoenix, Ariz.	1,509,052
27.	Cincinnati, Ohio-Ky.-Ind.	1,401,491
28.	Milwaukee, Wis.	1,397,143
29.	Kansas City, Mo.-Kans.	1,327,106
30.	San Jose, Calif.	1,295,071

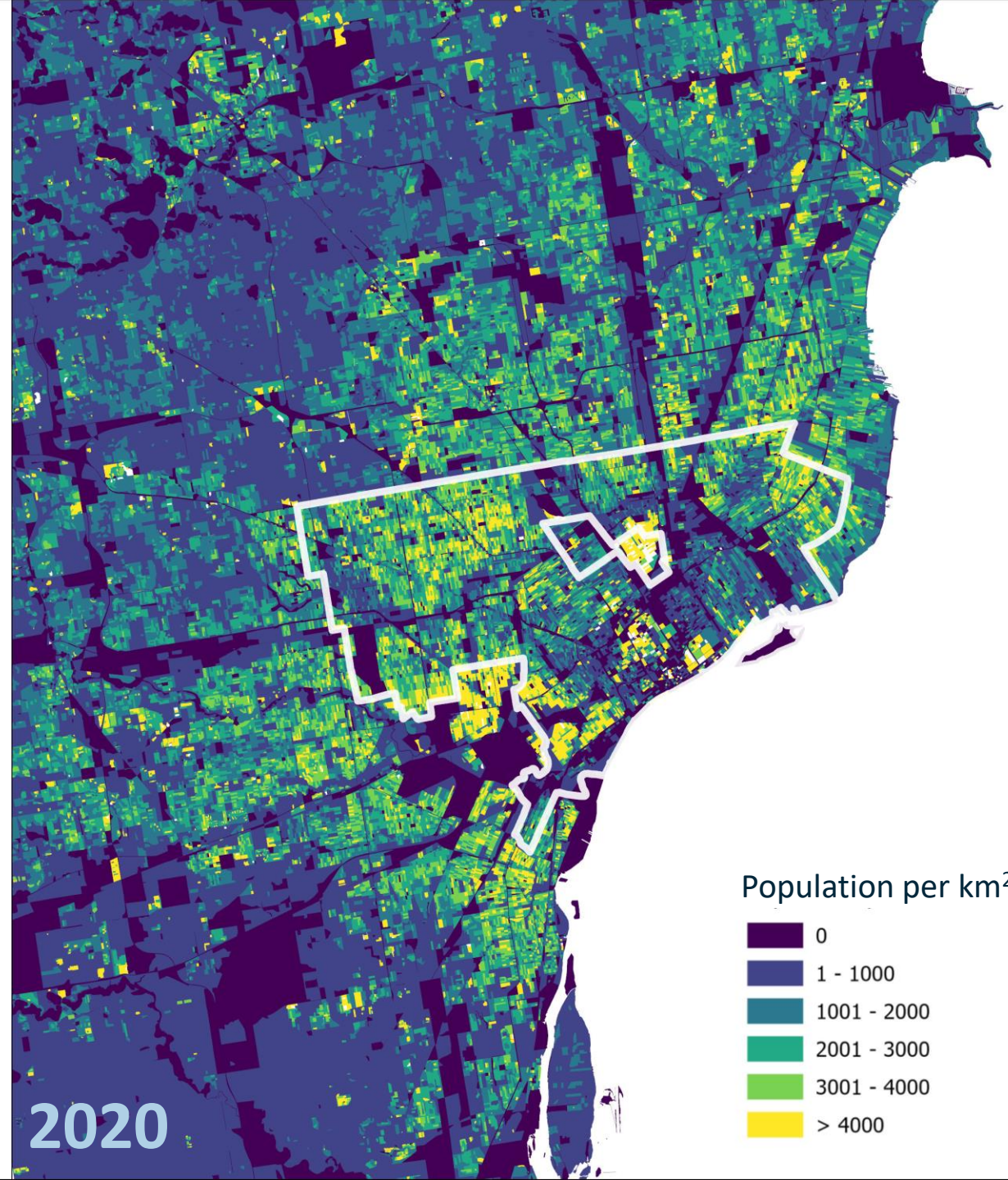
- 103 Metro Areas
- 44 States
- ALL OF THE TOP TEN!

Example of data use: Racial covenants



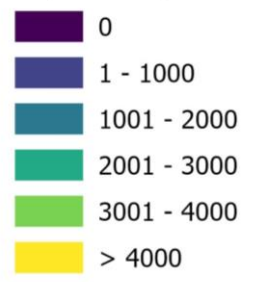


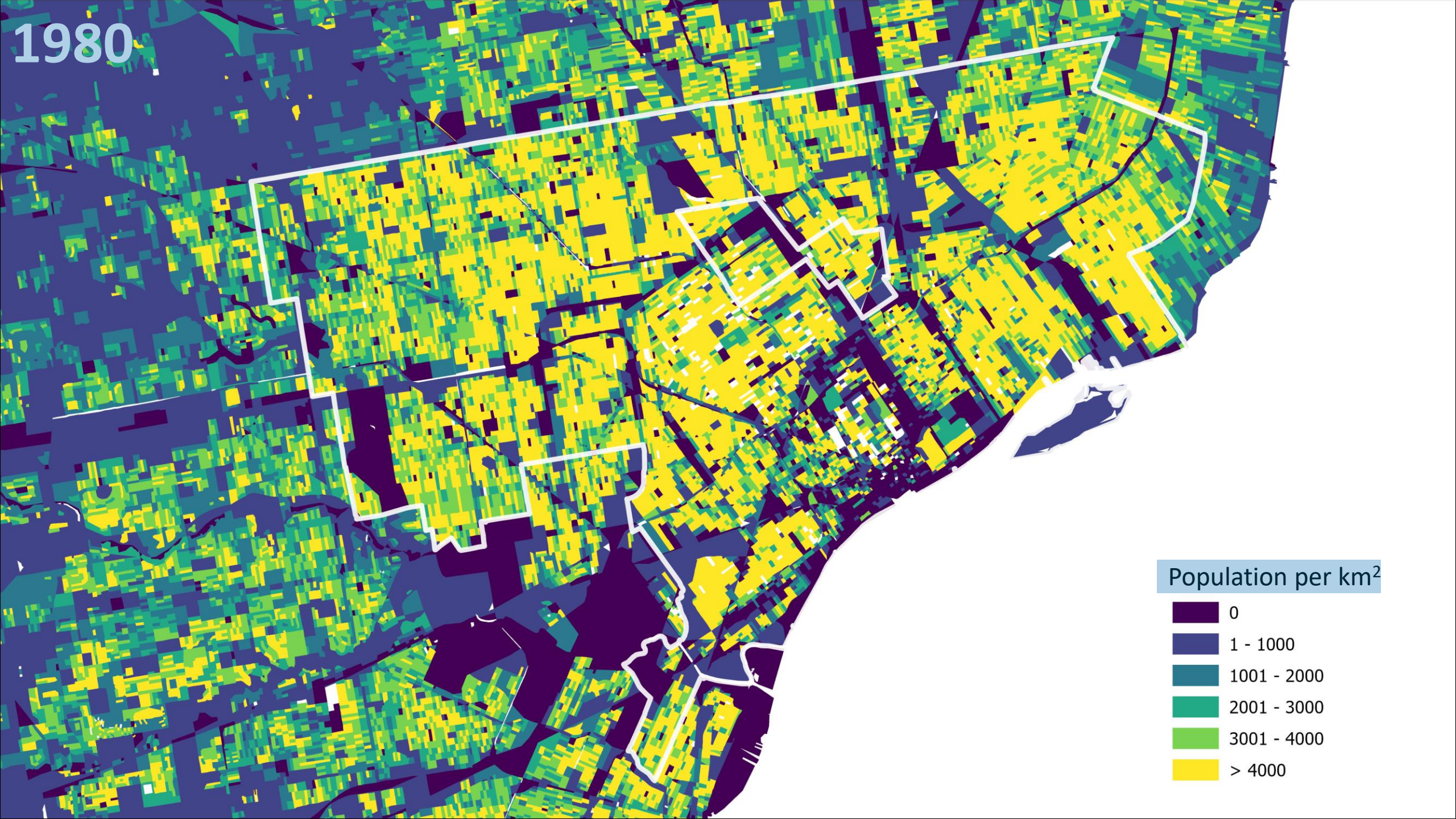
1980

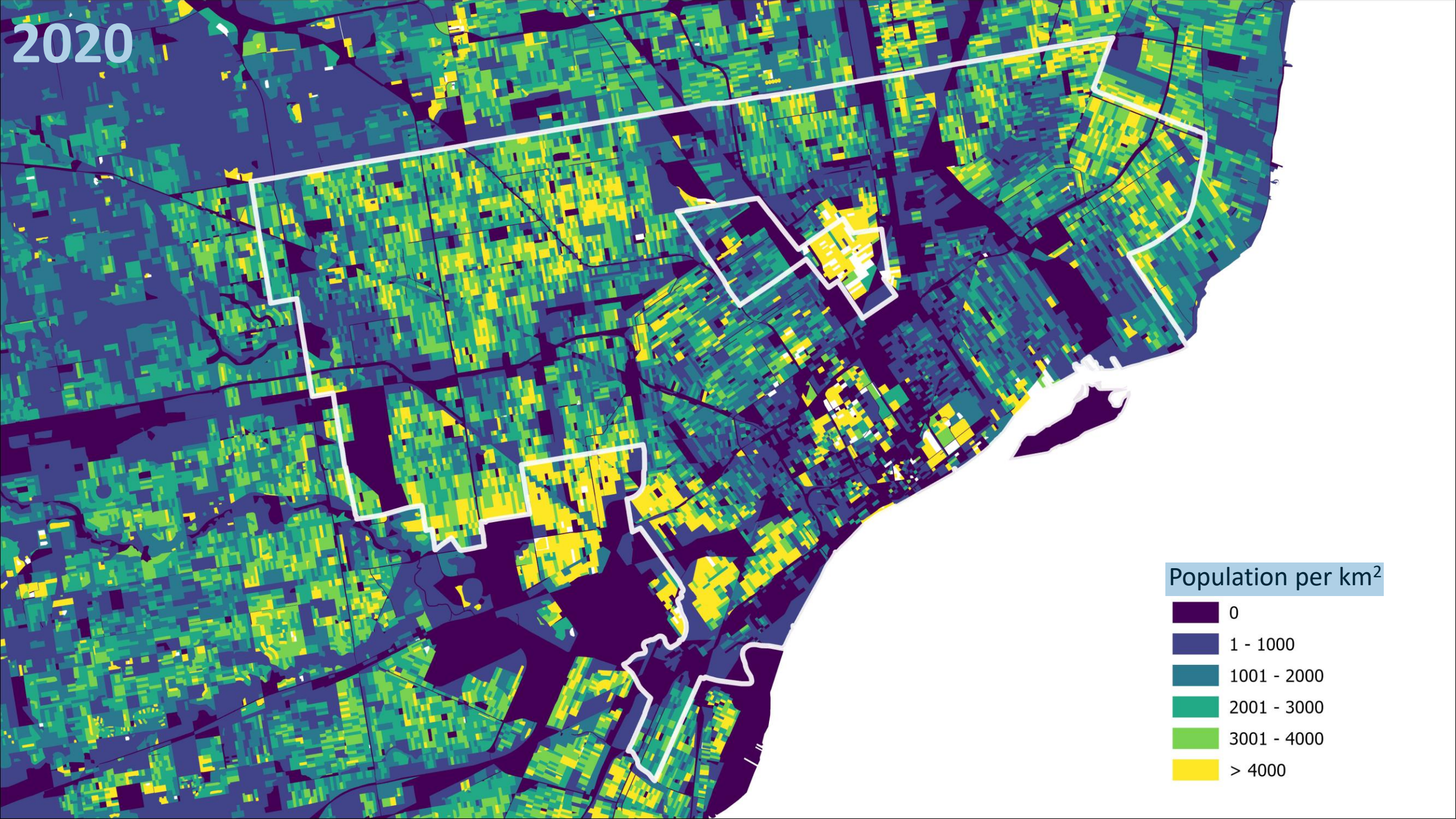


2020

Population per km²







What's next?

- Remaining 215 metro areas
- 1970 blocks from 1980 boundaries
- Crosswalks to standardize 1980 and 1970 data to 2010 or 2020 census units

1970 Block Boundaries

- Starting in September
- 233 urbanized areas
- Start with our 1980 boundaries
- All paper maps

SIX DECADES OF BLOCKS!

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