



2020 Census Redistricting Data

05/26/2021

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United States[®]
Census
2020

Apportionment vs. Redistricting

		APPORTIONMENT	REDISTRICTING
Geography	Largest	State	State
	Smallest	State	Census Block
Who is counted		Resident Population + Federally Affiliated Count Overseas	Resident Population Only
What is reported		Total Population only	Race, ethnicity, and select housing characteristics
Disclosure Avoidance		None	Differentially Private (TopDown Algorithm)
Current Timeline		By April 30, 2021	Legacy Format – by August 16, 2021 DVDs/Flash Drives & data.census.gov by September 30, 2021

2020 Census Redistricting Data Program

Public Law 94-171

Program Mission: Provide states an opportunity to identify the geographic areas for which specific tabulations of population are needed for legislative redistricting and to deliver high quality data for those areas in a timely manner

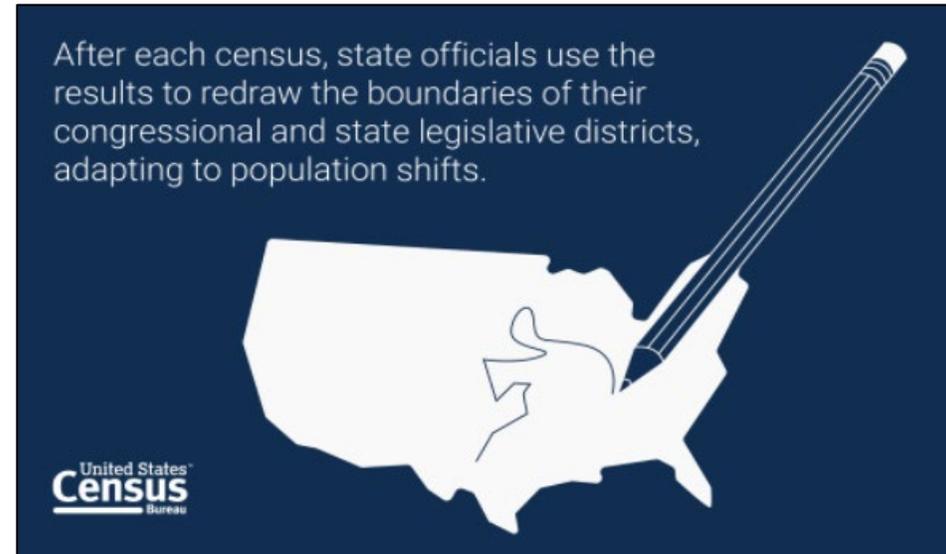
Identified “geographic areas desired”:

- Census Tabulation Blocks
- Voting Districts (e.g. precincts, wards, etc.)
- Legislative and Congressional Districts

Requirements:

- Conduct the program in a non-partisan manner
- Establish program criteria
- Identify required tabulations
- Deliver the tabulations to the governor and the officers or public bodies having initial responsibility for the legislative apportionment or districting of each State no later than 1 year from Census Day*

*Delayed until Sept 30, 2021



Redistricting Data Program

Phase 3 – P.L. 94-171 Redistricting Data Geographic Support Products

2020 Census P.L. 94-171 Redistricting Data Geographic Products

Product Type	Census Web Address
Shapefiles	https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html
Reference Maps	https://www.census.gov/geographies/reference-maps.html
Block Assignment Files	https://www.census.gov/geographies/reference-files.html
Name Lookup Tables	https://www.census.gov/geographies/reference-files/time-series/geo/name-lookup-tables.html
Block to Block Relationship Files	https://www.census.gov/geographies/reference-files/time-series/geo/relationship-files.html

- Shapefiles – Geographic information system geometry files.
- Reference Maps (PDF only) – County Block; State Legislative with Voting District; Census Tract; School District.
- Block Assignment Files – Tables identifying the blocks used to build different geographic entities.
- Name Lookup Tables – Contain names and codes for geographic areas within a state.
- Block to Block Relationship Files – Crosswalk of 2010 blocks to 2020 blocks.

Redistricting Data Program

Phase 3 – P.L. 94-171 Redistricting Data Tabulation Product

2020 Census P.L. 94-171 Redistricting Data Tabulations

Table P1 – Race

Table P2 – Hispanic or Latino, and not Hispanic or Latino by Race

Table P3 – Race for the Population 18 Years and Over

Table P4 – Hispanic or Latino, and not Hispanic or Latino by Race for the Population 18 Years and Over

Table H1 – Occupancy Status (Housing)

New Table

Table P5 – Group Quarters Population by Group Quarters Type

- All tables produced at multiple geographies including census block
- Group Quarter types: Correctional Institutions for Adults, Juvenile Facilities, Nursing Facilities/Skilled Nursing, Other Institutional, College/University Student Housing, Military quarters, and other non-institutional
- Group quarters is total population only, no demographic breakdown

Redistricting Data Program

P.L. 94-171 Redistricting Data Tabulation Product

Table P1 – Race

Universe: Total Population

Table P3 – Race for the Population 18 Years and Over

Universe: Total population 18 years and over

RACE [71]
Universe: Total population
Total:
Population of one race:
White alone
Black or African American alone
American Indian and Alaska Native alone
Asian alone
Native Hawaiian and Other Pacific Islander alone
Some Other Race alone
Two or More Races:
Population of two races:
White; Black or African American
White; American Indian and Alaska Native
White; Asian
White; Native Hawaiian and Other Pacific Islander
White; Some Other Race
Black or African American; American Indian and Alaska Native
Black or African American; Asian
Black or African American; Native Hawaiian and Other Pacific Islander
Black or African American; Some Other Race
American Indian and Alaska Native; Asian
American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander
American Indian and Alaska Native; Some Other Race
Asian; Native Hawaiian and Other Pacific Islander
Asian; Some Other Race
Native Hawaiian and Other Pacific Islander; Some Other Race
Population of six races:
White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some Other Race



Redistricting Data Program

P.L. 94-171 Redistricting Data Tabulation Product

Table P2 – Hispanic or Latino, and Not Hispanic or Latino by Race

Universe: Total population

Table P4 – Hispanic or Latino, and Not Hispanic or Latino by Race for the Population 18 Years and Over

Universe: Total population 18 years and over

HISPANIC OR LATINO, AND NOT HISPANIC OR LATINO BY RACE [73]
Universe: <i>Total population</i>
Total:
Hispanic or Latino
Not Hispanic or Latino:
Population of one race:
White alone
Black or African American alone
American Indian and Alaska Native alone
Asian alone
Native Hawaiian and Other Pacific Islander alone
Some Other Race alone
Two or More Races:
Population of two races:
White; Black or African American
White; American Indian and Alaska Native
White; Asian
White; Native Hawaiian and Other Pacific Islander
White; Some Other Race
Black or African American; American Indian and Alaska Native
Black or African American; Asian
Black or African American; Native Hawaiian and Other Pacific Islander
Black or African American; Some Other Race
American Indian and Alaska Native; Asian
American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander
American Indian and Alaska Native; Some Other Race
Asian; Native Hawaiian and Other Pacific Islander
Asian; Some Other Race
Native Hawaiian and Other Pacific Islander; Some Other Race
Population of six races:
White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some Other Race



Redistricting Data Program

P.L. 94-171 Redistricting Data Tabulation Product

Table H1 – Occupancy Status

Universe: Housing Units

- Total
 - Occupied
 - Vacant

Table P5 - Group Quarters Population by Group Quarters Type

Universe: Total Population in Group Quarters

- Total
 - Institutionalized population
 - Correctional facilities for adults
 - Juvenile facilities
 - Nursing facilities/Skilled-nursing facilities
 - Other institutional facilities
 - Noninstitutionalized population
 - College/University student housing
 - Military quarters
 - Other non-institutional facilities



Ensure all records are coded to their most detailed level of geography.



Conduct characteristic editing and imputation that ensures each record has valid values for major characteristics.



Apply differential privacy to ensure confidentiality of responses.



Redistricting Data Program

Phase 3 – P.L. 94-171 Redistricting Data Processing



Tabulate and review all redistricting data in multiple formats.



Create physical media, load and test web-based systems.



Deliver data to the states and public by September 30.

Redistricting Data Program

Public Law 94-171 official tools and materials

The user-friendly tools and materials we intend to deliver in September are the DVDs and Flash Drive and our Data.census.gov Data Explorer platform.

- DVDs and Flash Drives – These are what we deliver to the official recipients with an integrated software browsing tool that allows intuitive browsing of the data. They also contain a custom extraction menu that allows for the extraction of large datasets from the device. Those extractions can then be imported easily into a Geographic Information System or database.
- Data Explorer web tool – The data.census.gov Data Explorer is our online data browsing tool for both the official recipients and the public. Users of the Data Explorer platform can access many different census datasets, including the redistricting data. It has custom filters that allow the user to filter on those geographic and characteristic data for which they are interested. For example, a State could filter the data and easily identify the number of voting-age residents by race or ethnicity in each and every block within a census tract, county, or even for the entire state. They can then view, map, and download these datasets once they have set the filters with their choices.



Ensure all records are coded to their most detailed level of geography.



Conduct characteristic editing and imputation that ensures each record has valid values for major characteristics.



Apply differential privacy to ensure confidentiality of responses.



Redistricting Data Program

Phase 3 – P.L. 94-171 Redistricting Data Processing



Tabulate and review all redistricting data in multiple formats.



Legacy Format Summary Files



Create physical media, load and test web-based systems.



Deliver data to the states and public by September 30.

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

Legacy Format Summary Files

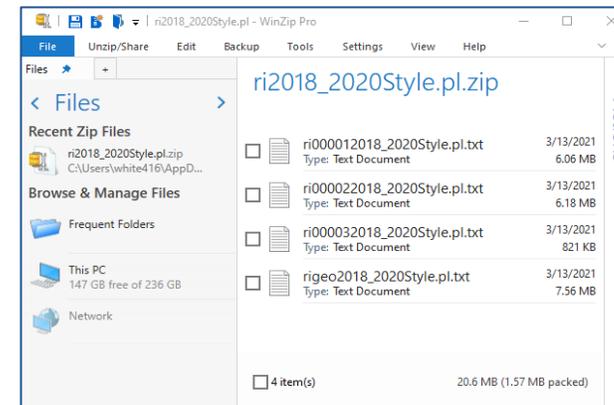
- Product was always part of the 2020 Census product plan
- Format produced and provided to the states since at least Census 2000
- Requires additional handling to properly extract data from this format
- Fully reviewed and cleared for publication by August 16, 2021
- The same data as what will be released in more user-friendly forms by September 30, 2021
 - Used as the source files for the DVD/Flash Drive creation
- Prototype data from the 2018 End-to-End Census Test is available for designing and testing redistricting systems
 - Only for Providence County, Rhode Island

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

Physical description

- 2020 formatting is four pipe delimited text files per state contained in a single .ZIP file
 - Geoheader – contains all the geographic codes for the geography include in the redistricting dataset
 - Now contains a GEOCODE field so data can be easily joined to geography
 - Data Segment 1 – Table P1: Race & Table P2: Hispanic or Latino, and not Hispanic or Latino by Race
 - Data Segment 2 – Table P3: Race for the Population 18 Years and Over & Table P4: Hispanic or Latino, and not Hispanic or Latino by Race for the Population 18 and Over & Table H1 – Housing Status (Occupancy)
 - Data Segment 3 – Table P5: Group Quarters Population by Group Quarters Type
- The geoheader must be used together with the data segments in order to access the data
- 2010 formatting was different
 - 3 files in total: 1 geoheader and 2 data segments
 - Geoheader was a fixed width format
 - Data segments were comma delimited



Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

FILEID	STUSAB	SUMLEV	GEOVAR	GEOCOMP	CHARITER	CIFSN	LOGRECNO	GEOID	GEOCODE	REGION	DIVISION	STATE	STATENS
PLST	RI	040	00	00	000	00	0000001	0400000US44	44	1	1	44	01219835
PLST	RI	050	00	00	000	00	0000002	0500000US44007	44007	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000003	0600000US4400711800	4400711800	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000004	0600000US4400714140	4400714140	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000005	0600000US4400719180	4400719180	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000006	0600000US4400720080	4400720080	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000007	0600000US4400722960	4400722960	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000008	0600000US4400727460	4400727460	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000009	0600000US4400730340	4400730340	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000010	0600000US4400737720	4400737720	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000011	0600000US4400741500	4400741500	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000012	0600000US4400751760	4400751760	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000013	0600000US4400752480	4400752480	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000014	0600000US4400754640	4400754640	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000015	0600000US4400759000	4400759000	1	1	44	01219835

Processing and
Extracting Data

Screenshot of
portion of
geoheader

Link the
tables on the
common
field

FILEID	STUSAB	CHARITER	CIFSN	LOGRECNO	P0010001	P0010002	P0010003	P0010004	P0010005
PLST	RI	000	01	0000001	614053	566407	410378	49589	4269
PLST	RI	000	01	0000002	614053	566407	410378	49589	4269
PLST	RI	000	01	0000003	16558	15627	14940	95	46
PLST	RI	000	01	0000004	17337	14497	6972	1065	38
PLST	RI	000	01	0000005	82619	76703	59720	4340	427
PLST	RI	000	01	0000006	34709	33271	30439	813	18
PLST	RI	000	01	0000007	45484	43068	36592	2762	72
PLST	RI	000	01	0000008	4550	4282	4202	32	5
PLST	RI	000	01	0000009	10135	9854	9468	236	1
PLST	RI	000	01	0000010	27889	26507	23965	646	30
PLST	RI	000	01	0000011	22130	21107	18900	533	403
PLST	RI	000	01	0000012	32664	30410	25408	2319	73
PLST	RI	000	01	0000013	12308	11780	11239	190	0
PLST	RI	000	01	0000014	70765	62475	41186	8770	626
PLST	RI	000	01	0000015	164341	149399	69996	24695	2302
PLST	RI	000	01	0000016	10489	10033	9687	155	0
PLST	RI	000	01	0000017	21740	20874	19697	345	140

Screenshot of
portion of data
segment 1

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

FILEID	STUSAB	SUMLEV	GEOVAR	GEOCOMP	CHARITER	CIFSN	LOGRECNO	GEOID	GEOCODE	REGION	DIVISION	STATE	STATENS
PLST	RI	040	00	00	000	00	0000001	0400000US44	44	1	1	44	01219835
PLST	RI	050	00	00	000	00	0000002	0500000US44007	44007	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000003	0600000US4400711800	4400711800	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000004	0600000US4400714140	4400714140	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000005	0600000US4400719180	4400719180	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000006	0600000US4400720080	4400720080	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000007	0600000US4400722960	4400722960	1	1	44	01219835
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PLST	RI	060	00	00	000	00	0000009	0600000US4400730340	4400730340	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000010	0600000US4400737720	4400737720	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000011	0600000US4400741500	4400741500	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000012	0600000US4400751760	4400751760	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000013	0600000US4400752480	4400752480	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000014	0600000US4400754640	4400754640	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000015	0600000US4400759000	4400759000	1	1	44	01219835

Screenshot of portion of geoheader

Q: I want total population for my townships in RI.

Township identifier is in Summary Level field as 060

Total Population field is in data segment 1 as field P0010001

FILEID	STUSAB	CHARITER	CIFSN	LOGRECNO	P0010001	P0010002	P0010003	P0010004	P0010005
PLST	RI	000	01	0000001	614053	566407	410378	49589	4269
PLST	RI	000	01	0000002	614053	566407	410378	49589	4269
PLST	RI	000	01	0000003	16558	15627	14940	95	46
PLST	RI	000	01	0000004	17337	14497	6972	1065	38
PLST	RI	000	01	0000005	82619	76703	59720	4340	427
PLST	RI	000	01	0000006	34709	33271	30439	813	18
PLST	RI	000	01	0000007	45484	43068	36592	2762	72
PLST	RI	000	01	0000008	4550	4282	4202	32	5
PLST	RI	000	01	0000009	10135	9854	9468	236	1
PLST	RI	000	01	0000010	27889	26507	23965	646	30
PLST	RI	000	01	0000011	22130	21107	18900	533	403
PLST	RI	000	01	0000012	32664	30410	25408	2319	73
PLST	RI	000	01	0000013	12308	11780	11239	190	0
PLST	RI	000	01	0000014	70765	62475	41186	8770	626
PLST	RI	000	01	0000015	164341	149399	69996	24695	2302
PLST	RI	000	01	0000016	10489	10033	9687	155	0
PLST	RI	000	01	0000017	21740	20874	19697	345	140

Screenshot of portion of data segment 1

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

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PLST	RI	040	00	00	000	00	0000001	0400000US44	44	1	1	44	01219835
PLST	RI	050	00	00	000	00	0000002	0500000US44007	44007	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000003	0600000US4400711800	4400711800	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000004	0600000US4400714140	4400714140	1	1	44	01219835
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PLST	RI	060	00	00	000	00	0000014	0600000US4400754640	4400754640	1	1	44	01219835
PLST	RI	060	00	00	000	00	0000015	0600000US4400759000	4400759000	1	1	44	01219835

Screenshot of portion of geoheader

Q: I want total population
For my townships in RI.

Query: From the GEOHEADER file
give me records where **SUMLEV = 060**. Output the corresponding **GEOCODE**, **NAME** (not shown on slide) and **P0010001**

FILEID	STUSAB	CHARITER	CIFSN	LOGRECNO	P0010001	P0010002	P0010003	P0010004	P0010005
PLST	RI	000	01	0000001	614053	566407	410378	49589	4269
PLST	RI	000	01	0000002	614053	566407	410378	49589	4269
PLST	RI	000	01	0000003	16558	15627	14940	95	46
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PLST	RI	000	01	0000015	164341	149399	69996	24695	2302
PLST	RI	000	01	0000016	10489	10033	9687	155	0
PLST	RI	000	01	0000017	21740	20874	19697	345	140

Screenshot of portion of data segment 1

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

SUMLEV	GEOCODE	NAME	P0010001
060	4400711800	Burrillville town	16558
060	4400714140	Central Falls city	17337
060	4400719180	Cranston city	82619
060	4400720080	Cumberland town	34709
060	4400722960	East Providence city	45484
060	4400727460	Foster town	4550
060	4400730340	Glocester town	10135
060	4400737720	Johnston town	27889
060	4400741500	Lincoln town	22130
060	4400751760	North Providence town	32664
060	4400752480	North Smithfield town	12308
060	4400754640	Pawtucket city	70765
060	4400759000	Providence city	164341
060	4400764220	Scituate town	10489
060	4400766200	Smithfield town	21740
060	4400780780	Woonsocket city	40335

Screenshot of results

Query Results: From the GEOHEADER file give me records where **SUMLEV = 060** and output the corresponding **GEOCODE**, **NAME** and **P0010001**

Redistricting Data Program

Public Law 94-171 Legacy Format Summary Files

Support

- Consultations with major software vendors, NCSL, and individual states to ensure they understand the August format
- 2020 Census State Redistricting (P.L. 94-171) Summary File Technical Documentation
- Prototype P.L. 94-171 Redistricting Data Summary File
 - Content from the 2018 End-to-End Census Test in Providence County, RI
 - In the format planned for the 2020 Census Legacy Format Summary Files
- Header File – Excel Format
 - Tabs for the header of each file which can be imported into other software or used within Excel
 - Tabs with plain English definition for the headers
- Microsoft Access database shell
 - Tables shells for each file
 - Example queries to demonstrate query logic and provide practice
 - Illustrated step-by-step guide on how to use the Microsoft Access database shell
- SAS script for import of the Legacy Format Summary File

Redistricting Data Program

P.L. 94-171 Redistricting Data Delivery

Legacy Format Summary Files

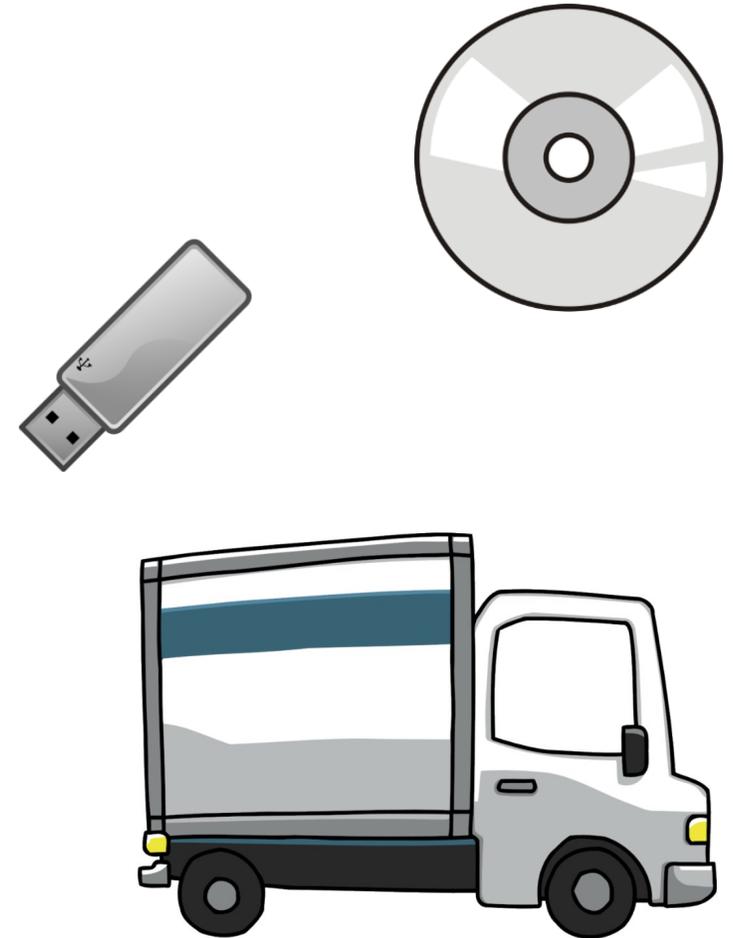
- Release files to states and public on Public File Transfer Protocol (Public FTP) site by August 16, 2021.

User-Friendly Format Summary Files

- Mail files to official state recipients on physical media (DVD/Flash Drive) by September 30, 2021 (Confirm Receipt).
- Release to states and public via the Data Explorer web tool <data.census.gov> by September 30, 2021.

Official State Recipients of the Data

- Governors
- Majority and Minority Legislative Leadership
- Redistricting Commissions (if established)
- Non-partisan State Liaisons



Redistricting Data Program

Where to get the data.

WWW.CENSUS.GOV/RDO

Voting Rights Data
(Section 203 & CVAP)

Decennial Census of Population and Housing

- About the Decennial Census
 - Why a Census?
 - History of the Census
 - Census in the Constitution
 - Decennial and the American Community Survey (ACS)
 - Coverage Measurement
 - Local Update of Census Addresses Operation (LUCA)
 - New Construction Program
 - Participant Statistical Areas Program (PSAP)
 - Redistricting**
 - Voting Rights
 - Related Sites
 - Information for Respondents
 - By Decade

Redistricting Data Program
REDISTRICTING & VOTING RIGHTS DATA OFFICE (RDO@CENSUS.GOV OR 301-763-4039)

MAY 05, 2017
Redistricting Data Program Congressional Districts
Guidance and access to information about congressional districts and congressional district products.

MAY 08, 2017
Redistricting Data Program State Legislative Districts
Guidance and access to information about state legislative districts and state legislative district products.

MAY 08, 2017
Decennial Census P.L. 94-171 Redistricting Data Summary Files
Guidance and documentation to assist in accessing P.L. 94-171 Redistricting Data

Redistricting Data Program Management
Guidance about and for participation in the Redistricting Data Program for the current and past Decennial Censuses.

Prototype Data & Legacy format summary
file support materials

Shape
your future
START HERE >



Thank You

James Whitehorne

Chief - Census Redistricting & Voting Rights Data Office

Email: rdo@census.gov

Phone: 1-301-763-4039

Web: www.census.gov/rdo