The U.S. Census Bureau's Planning Database and Forthcoming Updates

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Disclaimer: This presentation is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed are those of the authors and not those of the U.S. Census Bureau. The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure avoidance protection of the confidential source data used to produce this product (Data Management System (DMS) number: P-7501505, Disclosure Review Board (DRB) approval numbers: CBDRB-FY2024-0185 and CBDRB-FY2024-0045).



Overview

- The Planning Database (PDB): Background, introduction, and examples.
- Unique variables on FY23 (fiscal year 2023) Planning Database (July 2024).
- New features on upcoming FY24 Planning Database (Summer 2025).



What Is in the Planning Database (PDB)?

- "Greatest hits" of American Community Survey (ACS) 5-year estimates and 2020 Census variables.
- Types of variables:
 - Population (sex, age, education, poverty).
 - Household (language, relationship, income).
 - Housing unit (tenure, number of units).
 - Census operational (response rates, return rates).
- We calculate the percentages for each estimate.
- Available at census tract (n > 85,000) and block group (n > 242,000) level.
- Available as a comma-delimited file (CSV) or through the Census API.









What Is in the Planning Database (PDB)?

• The PDB is the only published source for metrics such as:

...ACS Self-Response Rate.

... Census Operational Statistics.

...the Low Response Score (LRS).



Broad Scope of Uses

Research

Development

Planning

- Examining expected survey completion rates at lower levels of geography.
- Linking PDB data with spatial map data to create thematic maps.
- Generating reports, cross tabulations and simple analyses.
- Identifying areas for special outreach and promotional efforts.
- Planning interviewer-administered surveys and censuses.
- Teaching statistics, data science, sociology, demography, etc.



History of the Planning Database (PDB)

• Planning for field resources, tailored communication, and partnership campaigns during census and survey operations.

1990

- Hard-to-Count Score (HTC) established.
- 1990 Census used the HTC for hiring decisions and resource allocations.

2000 - 2010

- Continued HTC for Census operations.
- Identified areas for additional outreach and engagement.

2020

- Low Response Score (LRS) replaced the HTC for the 2020 Census.
- LRS publicly released to stakeholders.



Why Use the Planning Database?

- Easier to download than full ACS files.
- Contains most popular ACS 5-year census tract and block group aggregated estimates.
- Estimates are matched to decennial Census estimates for each geography.
- Contains unique operational statistics not available anywhere else.
- Updated annually with the latest ACS data.
- The ROAM application makes the PDB even more accessible.

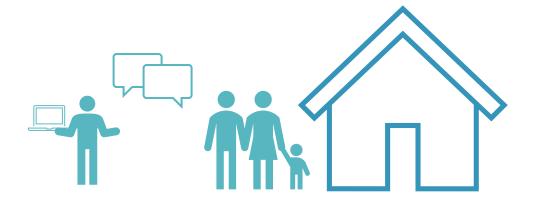
Future FY24 Release (Summer 2025)

- Will contain a new intermediate version of the LRS.
- Will crosswalk Connecticut geographies in planning regions to 2020 decennial variables (e.g., percent rural).



Example: Households That Speak English Less Than "Very Well"

- What if you want to identify areas that may need support for a language other than English?
- Find block groups in the area that have a high percentage of housing units where no one over the age of 14 speaks English "very well."
- What language is spoken in these block groups?





Language Needs for Block Groups in Harris County, TX

Block group	No one age 14+ in the house speaks English "very well"	Spanish is spoken at home <u>AND</u> no one age 14+ in the house speaks English "very well"
482012230022	94.22% (± 21.21)	94.22% (± 19.67)
482012224012	91.24% (± 17.11)	91.24% (± 16.83)
482015332003	88.61% (± 9.64)	86.91% (± 9.47)



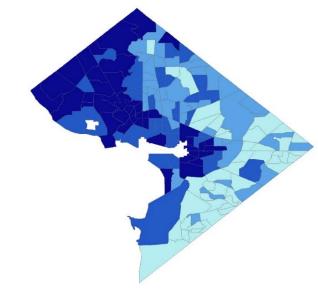
Denominator = Total occupied housing units

Unique Variables on the FY23 Planning Database (Released July 2024)



ACS Self-Response Rate

- 5-year self-response rates for internet, paper, or phone to the ACS, available only at the tract level.
- This is the percentage of households in the tract that responded by internet, paper, or phone to the ACS, aggregated over 5 years.
- It is ONLY available on the PDB, not on <data.census.gov>.
- Important things to know:
 - These rates do not include group quarters.
 - No rates for Puerto Rico at this time.
 - No rates for tracts below a minimum number of households.





Source: FY2023 Planning Database



2020 Operational Statistics Variables

- The PDB includes many operational statistics from the 2020 Census, such as:
 - Bilingual questionnaire housing unit count: the number of housing units in Self Response enumeration areas and Update Leave enumeration areas (where a census taker drops off the census invitation) that received bilingual English/Spanish materials.
 - <u>Internet self-response rate:</u> the percentage of housing units providing a sufficient internet self-response.
 - Return rate: the percentage of occupied housing units that responded to the census on their own (online, by phone, or by mail).
- The operational data do not contain noise-infused counts.



2020 Operational Statistics Variables

All housing housing units units **Self-response rate Return rate** Geography mean mean **Tracts** 65.48% 72.96% Block groups 66.35% 73.59%

Source: FY2023 Planning Database



Self-response

for *occupied*

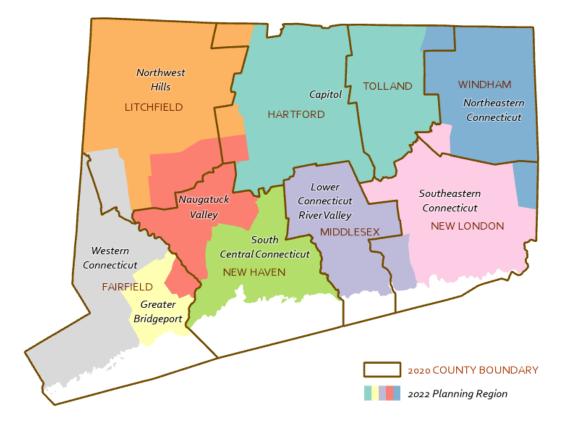
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New Features on the Upcoming FY24 Planning Database (Expected Release Summer 2025)



2020 Census Variables for Connecticut Planning Regions

- CT data products use planning regions instead of counties for the first time in 2022.
- 2020 Census variables (e.g., percent rural) only reported for the former counties.
- FY24 PDB:
 - Crosswalks 2020 Census counties to the new planning regions on the 2022 ACS 5-year file.
 - Users can compare 2020 Census and recent ACS variables within the same tracts and block groups.



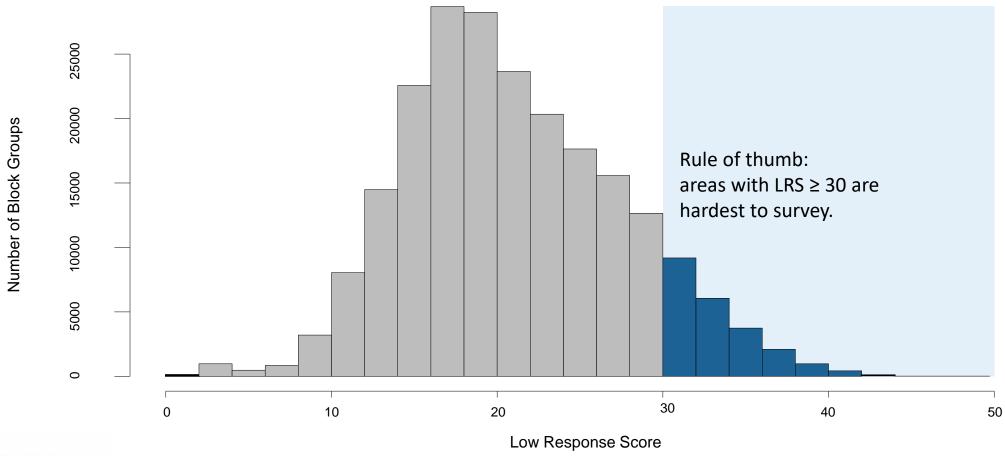
Source: Authors, based on info from the Federal Register (87 FR 34235), June 6, 2022.

What Is the Low Response Score (LRS)?

- Successor to the Hard-to-Count score:
 - HTC is ethnographically oriented and identifies areas difficult to enumerate.
 - LRS is a model-based approach and identifies areas predicted to have low self response.
- Predicted rate of low or non-response to the Decennial Census:
 - Based on OLS regression of 25 PDB metrics upon 2010 Census mail return rate.
 - Values range from 0-100 percent (lower values are better).
 - Methodology: Erdman and Bates, 2017.
 - LRS is updated annually with latest ACS 5-year estimates on the PDB.



National Distribution of Block Group LRS





Source: Erdman and Bates, 2017.

Intermediate LRS

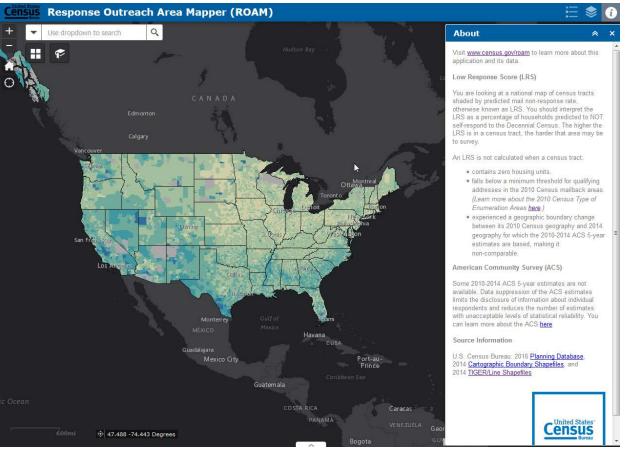
- Census Bureau's LRS Working Group:
 - Focused on updating the LRS model with new features and more recent data to improve predictive accuracy in preparation for future decennial planning.
- FY24 PDB will include an "intermediate" LRS, which updates the 2010-based LRS model to produce 2020-based LRS predictions as soon as possible, while further research continues.
 - A more comprehensive modeled variable will be released in later PDB vintages.

Luke Larsen's LRS presentation at this year's conference will provide more information!



Response Outreach Area Mapper (ROAM)

- The ROAM interactive viewer will be updated with the FY24 PDB:
 - ROAM is a web mapping application for users to identify, locate, and learn about hard-to-count census tracts.
 - Accessible through a web browser (no download required).
 - Will include intermediate LRS.





<www.census.gov/roam>

Questions or Comments?

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QR code to the Census
Planning Database website

