Welcome to the PLAN Monthly Webinar Series!
The webinar will begin shortly. Please mute and turn off camera.

Check out our Planning and Zoning Training website page for:
- Slides and recording of all completed webinars in the PLAN series
- Schedule for upcoming webinars
- A short, anonymous online survey to gather feedback and topics for future webinars

www.nh.gov/osi/planning/planning-training.htm
Webinar Logistics

• Presentation, then Question and Answer session
  • Please type questions into the Chat box

• We will be recording the presentation portions of the webinar.
THE 2020 CENSUS: NEW DATA FOR NEW HAMPSHIRE COMMUNITIES
**Agenda**

- 2020 Census – process and timeline
  - Overview/Operations
  - Data releases and Census geography
  - Challenges and post-Census operations
  - *Ken Gallager, Office of Planning and Development / NH State Data Center*

- Results from 2020 for New Hampshire
  - Demographic change in the state
  - Diversity in the state
  - Comparisons to historical trends
  - *Ken Johnson, Senior Demographer, Carsey School of Public Policy*
The NH State Data Center

- NH liaison to the Census Bureau
  - Previously within Office of Strategic Initiatives
  - Now Office of Planning and Development within BEA
- Distributes and interprets Census data
- Supplies state data to the Census
- Conducts annual population estimates
- Produces population projections twice per decade
- Supports the decennial Census follow-up operations
  - Count Question Resolution
The 2020 Census

- Counted every person and housing unit in the United States
- Mandated by the U.S. Constitution: Article 1, Section 2
- To apportion each state's number of seats in the U.S. House of Representatives
- And to apportion "direct taxes": the Census is used widely for distribution of federal and other funds
  - In 2016, $3.7 billion distributed to NH ($675B nationwide)
- Baseline for population estimates throughout the decade
Final Census Timeline

- Self-response: March 12 – October 15, 2020
- Group quarters enumeration: April 2 – September 3, 2020
- Counts of homeless and transitory – September 2020
- Non-response follow-up: August 11 – October 15, 2020
- Deliver apportionment counts: April 26, 2021
- Deliver redistricting data:
  - Legacy format: August 12, 2021
  - On data.census.gov: September 16, 2021
- Deliver Demographic and Housing Characteristics (DHC) files: 2022?
Apportionment Data

- The constitutional basis for conducting the census
- Used to distribute the 435 seats in the U.S. House of Representatives
- Consists of the population of each state:
  - Resident population
  - Overseas federal employees (military and civilian) and their dependents
- New Hampshire’s 2020 **apportionment** population is 1,379,089
- New Hampshire’s 2020 **resident** population is 1,377,529
  - The resident population will be used as the state’s total population for all subsequent data releases
Redistricting Data

- Data that states need to draw their new voting districts
- Six tables:
  - P1. Race
  - P2. Hispanic/Latino by Race
  - P3. Race for the Population 18 Years and Over
  - P4. Hispanic/Latino by Race for 18 Years and Over
  - Group Quarters Population by Type
  - H1. Occupancy Status
Redistricting Data

• Available two ways:

• **Legacy Format**
  - Flat files that can be imported into MS Access or into standard statistical packages such as SAS or R
  - [Decennial Census P.L. 94-171 Redistricting Data Summary Files](#) contains the data, technical documentation, and table shells to facilitate imports

• [Data.census.gov](#)
  - Easier for general public to query and download custom results

• Both types available at all levels of census geography
Future Data Releases

- **Demographic and Housing Characteristics (DHC) files**
  - 5-year age groups and sex
  - Household types, size, and relationships
  - Housing occupancy, tenure, types of vacancy

- **Detailed DHC files**
  - More detailed race and ethnicity combinations
  - Single-year age groups, and age in combination with race
  - Household types in combination with race
  - Group quarters by race

- No release dates available yet
A Brief Digression: Geographic Data

Figure 2-1.
Standard Hierarchy of Census Geographic Entities

* Refer to the “Hierarchy of American Indian, Alaska Native, and Native Hawaiian Areas.”
Geographic Data

• Entities with non-standard nesting:
  • Tracts
    • Do not nest inside county subdivisions
    • Instead are drawn to contain approx. 5,000 residents
    • There might be several tracts in a town or city, or several towns may comprise a single tract
  • Places
    • Cities are places, but towns are not
    • Census-designated places exist within towns, but can also cross town (and county) borders, as well as tract boundaries
Challenges - COVID

• Delays in operations
• Changes in peoples’ locations
  • Movements to second homes?
    • Found some increases compared to annual estimates
  • Movements of college students?
    • One college town had abnormally large increase
  • Anomalies may not be due only to COVID, however
Differences between Census 2020 and OPD population estimates

The three largest:
- Manchester 4,030
- Nashua 1,750
- Henniker 1,232

The highest percentages:
- Waterville Valley 103.2%
- Henniker 25.4%
- Jackson 19.3%
- Moultonborough 17.5%

- Waterville Valley, Jackson, and a few others may be due to people moving
- The other cases probably have different reasons.
Challenges – Disclosure Avoidance

• Census is required under Title 13 of the U.S. Code to fully protect privacy of personal data

• As computing power and number of administrative databases have increased, there is a greater danger that personal data can be reconstructed by outside actors

• Until recently, personal data was protected through the use of data swapping when necessary

• But analysis this past decade showed that up to 57% of the population had a unique combination of demographic traits at block level, and were thus vulnerable to disclosure through algorithmic methods

• Solution (Differential Privacy) requires sophisticated calculations that appear to be increasing the amount of time needed to release the data
Solution – Differential Privacy

• Injects randomly generated noise into the Census results, using an adjustable privacy loss budget

• Uses a Top Down Algorithm, which allocates precise amounts of statistical noise at different levels of geography while maintaining the overall accuracy of the data at the aggregate level
Solution – Differential Privacy

- Invariants (numbers not subject to Disclosure Avoidance)
  - Total population at state level
  - Number and type of group quarters facilities at block level
  - Number of housing units (occupied and vacant) at block level

- Practical effects
  - Block-level data will have the highest amount of noise. Examples:
    - Household population with no housing units
    - Occupied housing units and no population
    - Children living without parents
  - Accuracy improves with higher levels of geography
  - Recommended minimum aggregated population is about 450 for reliability
More information about Disclosure Avoidance and Differential Privacy:

- Disclosure Avoidance Modernization (census.gov)
Count Question Resolution (CQR)

- Town or city may challenge the count if they believe populations were placed in the wrong geographic area
- Does not include simply saying the population is incorrect
- Usually used by a community saying their population was undercounted
- Detailed rules published in Federal Register this fall
- Announcement in December
- Challenges accepted January 2022 through June 30, 2023
- More information: 2020 Census Count Question Resolution
Post-Census Operations

PUMA Delineation

- Public Use Microdata Areas
- For dissemination of Public Use Microdata Sample (PUMS) data associated with the American Community Survey (ACS)
- Allows for more detail than available in published ACS tabulations: e.g. more countries of origin, more occupations, etc.
- Drawn following decennial census; valid for the following decade
- Will be delineated at OPD with input from regional planning commissions
QUESTIONS?