

6/7/2024

**User Notes and Errata, Small Area Demographic Estimates, Preliminary release 20240328
Washington State Office of Financial Management, Forecasting and Research Division**

Small Area Demographic Estimates (SADE) data for 2020-2023 are currently available.

These are the first SADE estimates based on the 2020 Census data, be aware that some 2020 census data products that the SADE process uses have not been released as of this publication date (June 7, 2024). These estimates are considered “preliminary” because they use factors from the 2010 census to bridge the census “some other race” data to standard federal race categories. The 2020 census “Modified Race” data SADE relies on are expected to be released later this year and are likely to be incorporated into the 2025 spring SADE release.

OFM recommends that users limit their analysis to a specific SADE data release (e.g., 20240328) because estimates for prior years are updated if new or more accurate information becomes available.

Impacts from the COVID-19 pandemic are apparent in the 2020-2023 data. Many state and private institutions had limited occupancy due to pandemic related restrictions. Communities with large populations living in group quarters such as college or university housing, prisons, jails, nursing homes, and most group living situations were impacted by pandemic regulations. The SADE estimates reflect those changes and users should be aware that the year-to-year variation in the data is greater in the current release than pre-pandemic releases.

SADE Data Inputs

The SADE model utilizes OFM county race estimates, county age sex estimates and Small Area Estimates Program (SAEP) data. The SADE model uses an iterative proportional fitting procedure to ensure consistency with these products. The SADE model produces estimates of age, sex, race and ethnicity by small geographic area and year.

County Race Estimates

Expect changes to race and ethnicity characteristics in the next SADE release. OFM 2020-2023 race and Hispanic controls are considered preliminary as they are based on modified race factors from the 2010 census. The release date for 2020 census modified race data is expected to be later this year. OFM will begin using that data when they become available.

2020 census and OFM 2020-23 preliminary race and ethnicity data are based on the Federal Office of Management and Budget (OMB) 1997 statistical reporting data standard. On March 28, 2024, OMB announced the revision of the standard through Statistical Policy Directive 15 (SPD 15). As per the directive Federal agencies are to start using the new standard by March 28, 2029. Information about the SPD 15 revision can be found at <https://spd15revision.gov/>.

County Age Sex Estimates

The 2020 census data exhibited a large amount of “age-heaping”. Age heaping refers to the phenomenon where respondents are more likely to round their age to multiples of 5 rather than provide a specific age. This results in distorted population counts for these ages. For example, the population aged 25 might be larger than expected, while at the same time ages 24 and 26 might be lower than expected.

OFM smoothed the age heaped single year age-sex data within 5-year age groups using a Bayesian Random Walk procedure. Users of standard 5-year or 10-year age group data will not notice a change as a result of this adjustment but users that rely on single year data may notice that OFM estimates deviate from census data.

For information about age heaping in the 2020 census please see:

<https://www.census.gov/newsroom/blogs/random-samplings/2023/05/age-heaping-2020-census-dhc.html>.

Small Area Estimate Program (SAEP) Estimates

Because of new census privacy protection measures implemented by the Census Bureau, OFM had to adjust census block populations and housing occupancy status to make them more logically consistent. Please see the [SAEP User Guide](#) for additional information about the data and the methods behind the SAEP estimates as well as limitations in their use.

Note that OFM makes corrections and adjustments to decennial census populations and OFM data may not match decennial data exactly. In general, our adjustments are intended to increase accuracy and correct issues. Adjustments will manifest themselves differently in different products but we strive to make most of our products, including the SADE product, consistent with the total populations published in OFM's April 1 County-City population estimate series. For more information about April 1 estimate adjustments please see table 5 in OFM's "Population Trends" publication:

https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf

Changes to the SADE Model Code

The SADE model code base used for vintage 20240328 has been completely revised to modernize the model and make it easier to maintain. Although the basic process is consistent with the prior methodology, a few changes to the process were made, including:

- Changing how "some other race" data is processed. While the decennial Census collects data on "some other race", many data users prefer to distribute "some other race" to other race classifications (this process is called "bridging"). The method has been updated to parallel how the US Census Bureau bridges "some other race". Additionally, randomized elements in the old model have been replaced with replicable processes. As stated, the current estimates are called "preliminary" because this release uses 2010 census bridging factors.
- Changing how the model handles geographies with large and rapid population change. The method has been fine-tuned to smooth change within demographic classifications rather than the overall population. This update should smooth improbable change in individual demographic characteristics in rapidly changing areas.
- Changing how consistency is maintained with our county race/ethnicity estimates. The method now ensures consistency with race classifications within Hispanic ethnicity rather than the Hispanic population overall.
- Changing how race data is bridged to the Office of Management and Budget (OMB) 1977 race definitions. The method has been updated to proportional fitting using data from the National Center for Health Statistics (NCHS).

Future Work

OFM intends to develop 2010-2020 and 2000-2010 intercensal estimates normalized to 2020 census geographies using OMB97 race and ethnicity classifications during the summer of 2024. These products will be released as they become available.

OFM will start to explore the OMB24-race bridging factors after the 2000-2020 intercensal products have been released and after the 2020 census modified race data is available.

Prior vintage data

2000-2020 SADE data based upon 2010 census data and normalized to 2010 census geographic boundaries are available upon request. Please email OFMForecasting@ofm.wa.gov.