

Arizona July 1, 2022 Population Estimates – Methodology

Group Quarters Population

Group Quarters (GQ) population is estimated in the following steps:

1. Establish the total GQ population in each place (incorporated place or unincorporated balance of county) as of Census 2020;
2. Track the GQ population of major facilities annually starting April 2020 and for each subsequent July;
3. Find the change in GQ population in these facilities between April 2020 and the estimate year (if data is missing for either April 2020 or for the estimate year, then that record is not used in calculating the change). Aggregate these changes at the place level;
4. Estimate GQ population of each place by adding the base GQ population from Step 1 and the population change from Step 3;
5. The sum of GQ populations of all places within a county is the GQ population estimate for that county.

Housing Units and Household Population

1. Start with the Census 2020 housing units, household population, persons per housing unit, for each sub-county jurisdiction.
2. Determine the July 1, 2022 housing unit stock by adding cumulative completions or building permits between Q2 2020 and Q2 2022 to the Census 2020 housing stock. For permits, a six-month lag is assumed for single-family units and 2-to-4-unit buildings; a 12-month lag is assumed for 5-plus-unit buildings. It is assumed that 98% of permits are built. Mobile homes are assumed to be in place the same quarter they are permitted with a 100% placement rate. Find the number of demolitions for the entire period and subtract them from the housing stock.
3. Annexed housing units are added to the housing stock for the acquiring jurisdiction and are subtracted from the housing stock of the losing jurisdiction. The result is the housing unit estimate for July 1, 2022.
4. Identify the housing unit change for each jurisdiction for FY2022 (completions - demolitions + annexations).
5. Multiply the result from Step 4 by persons per housing unit from Step 1. This gives the household population change for FY2022.
6. Add this change to the household population from the July 1, 2021 population estimates to get the household population for July 1, 2022.
7. Sub-county estimates are finalized by adding the GQ population and household population at the jurisdiction level.

County population estimates are sums of population estimates for all jurisdictions (including the unincorporated balance of county) within the county. State population estimate is the sum of population estimates for all counties.

Incorporation of CQR and PCGQR and a Special Case

The U.S. Census has reviewed and approved or partially approved the Count Question Resolution (CQR) cases and Post Census Group Quarter Review (PCGQR) cases submitted by several Arizona jurisdictions. These results are incorporated to update the 2020 Census base household population and GQ population. The City of Yuma is treated here as a special case. The City submitted 20 PCGQR cases. The Census Bureau informed the City and the Arizona State Demographer's Office that it approved seven of the cases without specifying which seven or providing the exact adjustment to the base GQ population. The State Demographer's Office contacted the Census Bureau in an attempt to obtain more details about the approved cases but learned that it is the Census Bureau's policy to provide that information only to the Population Estimates Program (PEP) within the Bureau. The PEP will further process that information for updating its estimate base of GQ population. However, because of the timing of the approval of the PCGQR cases and the schedule of population estimates, the base will not be updated until the Vintage 2023 population estimates. The State Demographer's Office reviewed all 20 cases submitted by Yuma and was not able to discern which seven cases the Census Bureau might have approved. Based on the reports that the City has been providing to the State Demographer's Office, the City's GQ population had a decline of 325 between April 2020 and July 2022. However, that change estimate uses the City's April 2020 count as the base year, and that count is significantly higher than the 2020 Census count. Because the Census Bureau has approved some of the City's PCGQR cases but it is unclear how many people that will add to Yuma's base GQ population for 2020, the State Demographer's Office decided to keep the 2020 Census base GQ population and apply 0 change to estimate the July 1, 2022 population. When the Census Bureau publishes the actual adjustment to the 2020 Census base GQ population, the State Demographer's Office will adopt that adjustment and resume the standard method of applying the 2020 to estimate year GQ population change for the City of Yuma in future estimate years.