These projection scenarios and this user guide were developed by:

Mike Hollingshaus
Senior Demographer

Eric Albers
Research Analyst

Michael Hogue
Senior Research Statistician

Mallory Bateman
Director of Demographic Research
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Long-Term Planning Projection Scenarios User Guide

The Kem C. Gardner Policy Institute prepares long-term demographic and economic planning projections to assist with state decision-making. The Institute released a set of baseline (or most likely) projections in January 2022. These baseline projections provide the data foundation for Utah’s long-term transportation, water, education, and other planning activities. As a supplement to these baseline projections, the Gardner Institute has now prepared two alternative projection series at the state and county level that provide an upper and lower range. These scenarios convey the inherent uncertainty involved with long-term projections and support planning activities that benefit from a range of alternative futures. This user guide summarizes the purpose, key findings, methods, and limitations of these alternative projections. It also provides the data at the state level and shares product information to help users access and use the data.

Purpose and Potential Uses

No one can predict the future with absolute certainty. It is inherently unknowable because we are actively creating it; and yet we need some idea of future possibilities to responsibly prepare. While Utah’s projections have generally performed well over the past decades, our recent research shows there have been errors, especially for counties that have small populations, experience rapid change, and are rural.1 It is therefore critical to communicate uncertainty and provide a range of projections for data users.2

We strongly encourage users to utilize our “baseline” scenario, released in early 2022 for most applications. These new high and low scenarios provide guideposts for each county’s possibilities. This can help entities whose planning processes would benefit from a range of population projections.

Key Findings

While the full data are publicly available online, Figures 1-3 provide users a general idea by showing the population, household, and employment scenarios for the entire state. Tables 2-4 provide state-level information for population, households, and employment for all three scenarios.

In 2060, the baseline scenario projects a population of 5.5 million for the state. The high scenario is 15.8% higher at 6.3 million while the low scenario is 18.5% lower at 4.4 million. The baseline scenario projects 2.2 million households in 2060 for the state. The high scenario is 15.2% higher at 2.5 million while the low scenario is 17.6% lower at 1.8 million. Regarding employment, the baseline scenario projects 3.4 million jobs in 2060 for the state. The high scenario is 19.0% higher at 4.1 million, while the low scenario is 18.3% lower at 2.8 million.

Figure 1: Total Resident Population in Utah by Scenario, 2025-2060

Figure 2: Total Households in Utah by Scenario, 2025-2060

Source: Kem C. Gardner Policy Institute

Source: Kem C. Gardner Policy Institute
Sources: Kem C. Gardner Policy Institute, National Center for Health Statistics, U.S. Bureau of Economic Analysis, United States Mortality DataBase.8

This table shows 2019 data because they were prior to the COVID-19 pandemic, which we considered a temporal anomaly for modeling purposes.

These three forces interact to affect the projected births, deaths, and net migration—the demographic components of change. Each assumption is implemented at the Utah state, economic region, and county levels. Table 1 overviews the state-level assumptions. More detailed baseline assumptions and model logic have been provided in previous documentation.5

Limitations

These different scenarios help illustrate the future’s uncertainty. Unfortunately, there is no way to assess our assumptions’ accuracy until several years into the future, at which point the projections become history. For example, there is still no way to know exactly how COVID-19 will affect deaths in the future. Also, projection models themselves are subject to error and there will be measurement and sampling error in the data inputs.6

One critical data limitation is the lack of the detailed 2020 decennial census tables needed to make more accurate projections, including age and sex detail and household size.7 Furthermore, while economic data are released quarterly, the baseline projections rely on fall 2021 data. Due to differences in the timing of input data sources, the 2020-2025 window may not reflect the most recent demographic or economic data. Since these are long-term projections, we begin the scenarios in 2025 to reduce potential confusion. We are presently conducting research on how to best combine short and long-term projections in a way that is technically accurate, as well as interpretable and actionable by policymakers.

Data Product – Microsoft Excel Data Workbook

These projection scenario data are available in Excel Workbook form. The file is organized into three primary worksheets (corresponding to the low, baseline, and high scenarios) in addition to a worksheet explaining the file layout. Each of the three primary worksheets contains population, households, and employment projections for the state and all 29 counties.

### Methods

The Gardner Institute and community partners developed a set of most likely assumptions to create a baseline scenario. Of course, multiple factors can change in ways that might impact population, households, and employment. One way to address these potential changes is to create alternative scenarios using different sets of assumptions.3

We made and modeled different assumptions for the three main drivers of our Utah Demographic and Economic Model (UDEM). These drivers include the total fertility rate, life expectancy, and employment growth. These three forces interact to affect the projected births, deaths, and net migration—the demographic components of change. Each assumption is implemented at the Utah state, economic region, and county levels. Table 1 overviews the state-level assumptions. More detailed baseline assumptions and model logic have been provided in previous documentation.5

### Table 1: State-level Scenario Assumptions

<table>
<thead>
<tr>
<th>Year/Scenario</th>
<th>Total Fertility Rate</th>
<th>Life Expectancy</th>
<th>Employment</th>
<th>Average Annual Percentage Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Jobs (in thousands)</td>
</tr>
<tr>
<td>2019 Estimate</td>
<td>1.99</td>
<td>81.9</td>
<td>78.3</td>
<td>2,127</td>
</tr>
<tr>
<td>2060 Low</td>
<td>1.74</td>
<td>85.4</td>
<td>81.3</td>
<td>2,817</td>
</tr>
<tr>
<td>2060 Baseline</td>
<td>1.78</td>
<td>87.3</td>
<td>84.2</td>
<td>3,448</td>
</tr>
<tr>
<td>2060 High</td>
<td>1.86</td>
<td>89.2</td>
<td>87.1</td>
<td>4,104</td>
</tr>
</tbody>
</table>

Notes: Total Fertility is the average number of children a woman would be expected to have throughout her life. Life expectancy at birth is the average number of years a newborn is expected to live. These are period (not cohort) measures. The U.S. Bureau of Economic Analysis definition provides the basis for the employment concept, which includes wage and salary employment and self-employment; full-time and part-time. These are a count of jobs rather than a count of employed persons; one employed person may hold multiple jobs. This table shows 2019 data because they were prior to the COVID-19 pandemic, which we considered a temporal anomaly for modeling purposes.

Sources: Kem C. Gardner Policy Institute, National Center for Health Statistics, U.S. Bureau of Economic Analysis, United States Mortality Database.5
Reference Table 2: Total Population in Utah by Scenario, 2025-2060

<table>
<thead>
<tr>
<th>Year</th>
<th>Low</th>
<th>Baseline</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>3,536,756</td>
<td>3,588,325</td>
<td>3,639,588</td>
</tr>
<tr>
<td>2026</td>
<td>3,584,123</td>
<td>3,647,847</td>
<td>3,714,097</td>
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<tr>
<td>2027</td>
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<td>3,707,365</td>
<td>3,789,609</td>
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<tr>
<td>2028</td>
<td>3,678,340</td>
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<tr>
<td>2029</td>
<td>3,723,499</td>
<td>3,879,161</td>
<td>4,013,963</td>
</tr>
<tr>
<td>2030</td>
<td>3,766,911</td>
<td>4,017,482</td>
<td>4,233,615</td>
</tr>
<tr>
<td>2031</td>
<td>3,808,514</td>
<td>4,158,181</td>
<td>4,381,211</td>
</tr>
<tr>
<td>2032</td>
<td>3,848,224</td>
<td>4,323,615</td>
<td>4,567,511</td>
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<tr>
<td>2033</td>
<td>3,886,628</td>
<td>4,495,824</td>
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<tr>
<td>2034</td>
<td>3,923,528</td>
<td>4,667,034</td>
<td>4,927,850</td>
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<tr>
<td>2035</td>
<td>3,959,314</td>
<td>4,849,244</td>
<td>5,134,365</td>
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<tr>
<td>2036</td>
<td>3,994,218</td>
<td>5,031,454</td>
<td>5,421,871</td>
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<tr>
<td>2037</td>
<td>4,028,066</td>
<td>5,213,664</td>
<td>5,719,376</td>
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<td>2038</td>
<td>4,060,716</td>
<td>5,395,874</td>
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<td>2039</td>
<td>4,092,027</td>
<td>5,578,084</td>
<td>6,284,386</td>
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<tr>
<td>2040</td>
<td>4,122,543</td>
<td>5,760,294</td>
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<tr>
<td>2041</td>
<td>4,151,691</td>
<td>5,942,504</td>
<td>6,863,396</td>
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<tr>
<td>2042</td>
<td>4,179,229</td>
<td>6,124,714</td>
<td>7,174,901</td>
</tr>
<tr>
<td>2043</td>
<td>4,205,229</td>
<td>6,306,924</td>
<td>7,486,506</td>
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<tr>
<td>2044</td>
<td>4,229,313</td>
<td>6,489,134</td>
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<tr>
<td>2045</td>
<td>4,252,133</td>
<td>6,671,344</td>
<td>8,129,716</td>
</tr>
</tbody>
</table>

Note: The baseline projections are recommended for long-term planning purposes. The low and high scenarios provide an additional insight of potential ranges of future growth. Baseline numbers presented here may differ slightly from previous publications due to rounding.

Source: Kem C. Gardner Policy Institute, 2025-2060 Long-Term Planning Projection Scenarios

Reference Table 3: Total Households in Utah by Scenario, 2025-2060

<table>
<thead>
<tr>
<th>Year</th>
<th>Low</th>
<th>Baseline</th>
<th>High</th>
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<tbody>
<tr>
<td>2025</td>
<td>1,176,264</td>
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<td>2026</td>
<td>1,200,504</td>
<td>1,220,284</td>
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<td>2027</td>
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<td>1,248,097</td>
<td>1,274,791</td>
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<td>2028</td>
<td>1,249,033</td>
<td>1,275,878</td>
<td>1,308,432</td>
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<td>2029</td>
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<td>2030</td>
<td>1,306,467</td>
<td>1,347,897</td>
<td>1,388,662</td>
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<td>2036</td>
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<td>2037</td>
<td>1,497,451</td>
<td>1,551,601</td>
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<td>2038</td>
<td>1,519,618</td>
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<td>2039</td>
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<td>2040</td>
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<td>2045</td>
<td>1,674,974</td>
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<td>1,897,523</td>
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</table>

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Source: Kem C. Gardner Policy Institute, 2025-2060 Long-Term Planning Projection Scenarios
Reference Table 4: Total Employment in Utah by Scenario, 2025-2060

<table>
<thead>
<tr>
<th>Year</th>
<th>Low</th>
<th>Baseline</th>
<th>High</th>
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</thead>
<tbody>
<tr>
<td>2025</td>
<td>2,341,451</td>
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<td>2026</td>
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<td>2044</td>
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<td>3,309,855</td>
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<tr>
<td>2045</td>
<td>2,640,647</td>
<td>3,036,888</td>
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</tr>
</tbody>
</table>

Note: The baseline projections are recommended for long-term planning purposes. The low and high scenarios provide an additional insight of potential ranges of future growth. Baseline numbers presented here may differ slightly from previous publications due to rounding.

Source: Kem C. Gardner Policy Institute, 2025-2060 Long-Term Planning Projection Scenarios
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Ray Pickup
Gary B. Porter
Taylor Randall
Jill Remington Love
Brad Rencher
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Charles W. Sorenson
James Lee Sorenson
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Stuart Adams
Representative Brian King
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Mayor Jenny Wilson
Mayor Erin Mendenhall

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Nathan Seegert, David Eccles School of Business

Senior Advisors
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I N F O R M E D  D E C I S I O N S ™
Kem C. Gardner Policy Institute 411 East South Temple Street, Salt Lake City, Utah 84111 801-585-5618 gardner.utah.edu

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