

## 2.0 Population

Development of a comprehensive water system master plan begins with an evaluation of the area's historical populational trends and projected growth patterns. To accurately predict future water demands, it is necessary to determine the magnitude, location, and characteristics of future population growth.

### 2.1 City of Lincoln Population

Historical population data was obtained from the U.S. Census Bureau. Population projection data for the City of Lincoln was also obtained from the current *LPlan 2040* that delineates the spatial distribution of growth within the growth tiers by Traffic Analysis Zones (TAZ) through Year 2040. Beyond 2040, the *LPlan 2040* uses an extrapolation to develop the 2060 projections.

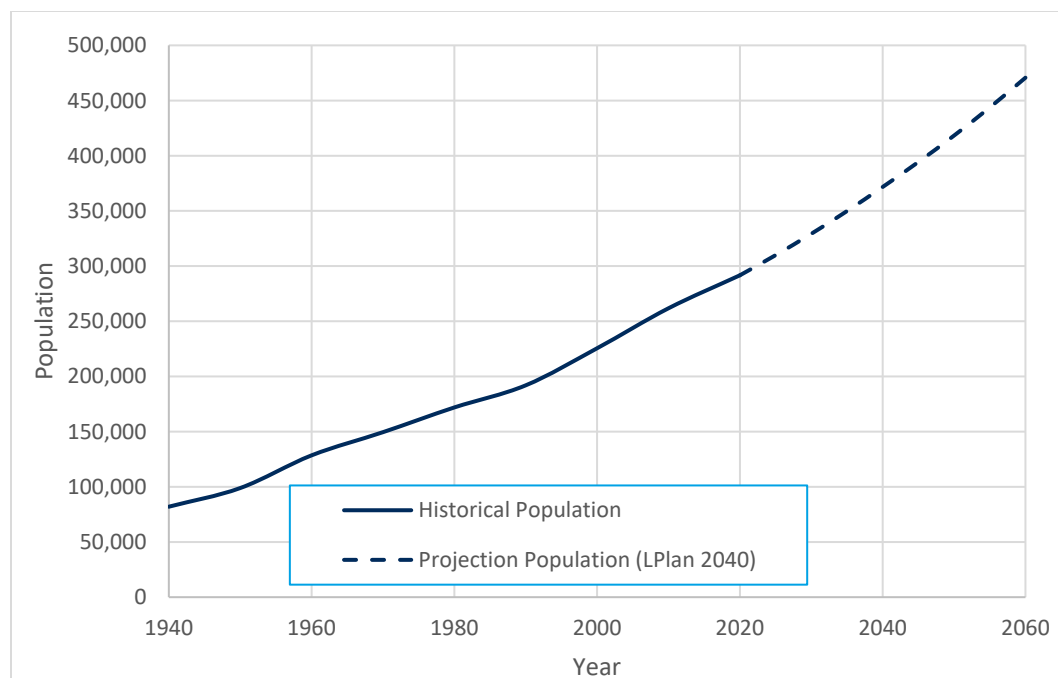
The following key points present a high-level summary of the *LPlan 2040*:

- Lancaster County will continue to grow at a rate of 1.2 percent per year over the next 40 years.
- The City of Lincoln will continue to serve approximately 90 percent of the county population.
- Twenty percent of the future dwelling units are expected to be built within existing developed areas.
- The spatial distribution of population includes a higher percentage of infill and redevelopment than previous plans.
- The number of people per household is expected to trend downward slightly over the next 20 years.
- Population projections for Lancaster County for Year 2040 and Year 2060 are 413,000 and 523,000 respectively.
- City of Lincoln population (service population) for Year 2040 and Year 2060 are 371,700 and 470,700 respectively.
- Year 2040 population projections did not change in the update.
- Year 2060 population projections increased slightly from a previous projection of 461,700 to 470,700 persons.

The City has indicated that the *LPlan 2040* is currently being updated, but the projections will not be final until the Plan is adopted, anticipated to be in 2021. The preliminary projections shared for the upcoming update indicate that population is projected to increase at a slightly lower rate than in the current *LPlan 2040*. This indicates that the population projections used in this Master Plan update and based on the current *LPlan 2040* (adopted in December 2016) may be higher than future projections from the upcoming *LPlan 2040* update. This provides some conservatism to the population projections for this Master Plan update. Table 2-1 presents the historical and projected population through 2060 and Figure 2-1 shows this graphically.

**Table 2-1 City of Lincoln Population (Historical and Projected)**

Year	Population	Average Annual Growth	
		Persons	Percentage
1940	81,984	-	-
1950	98,884	1,690	1.9%
1960	128,521	2,964	2.7%
1970	149,518	2,100	1.5%
1980	171,932	2,241	1.4%
1990	191,972	2,004	1.1%
2000	225,581	3,361	1.6%
2010	261,796	3,622	1.5%
2020	291,677	2,988	1.1%
2025	309,902	3,645	1.2%
2030	329,266	3,873	1.2%
2035	349,840	4,115	1.2%
2040	371,700	4,372	1.2%
2045	394,303	4,521	1.2%
2050	418,281	4,796	1.2%
2055	443,717	5,087	1.2%
2060	470,700	5,397	1.2%



**Figure 2-1 City of Lincoln Historical and Projected Population**

## 2.2 Population Distribution

The Lincoln-Laster County Planning Department provided spatial distribution of populations and households within the county for Years 2015, 2026 and 2040. The data included number of households and population by TAZ which covered the entire study area, including the Tier II and Tier III development limits. This spatial data was disaggregated by Service Level and by TAZ for the planning period through Year 2040. No spatial distribution of population was available beyond Year 2040, so the overall growth rates by Service Level from Year 2040 were used to estimate the population by Service Level beyond Year 2040.

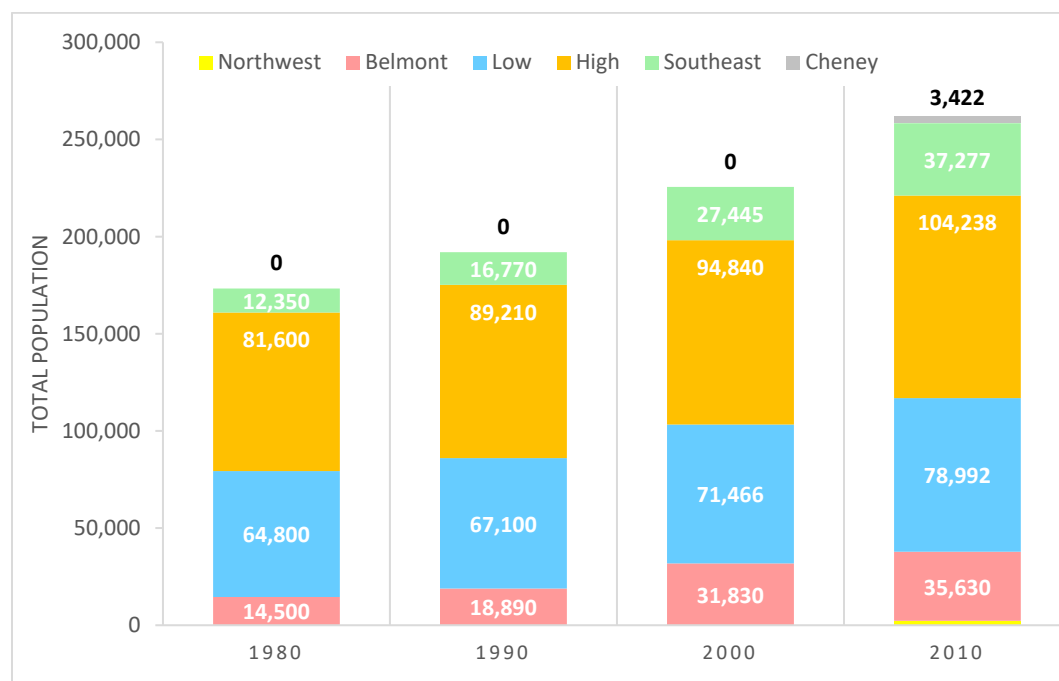
### 2.2.1 Population by Service Level

Census population data was used to update the population by Service Level for Year 2010 and the *LPlan 2040* data was used to develop the population projections by Service Level for the planning period, included Year 2020 benchmark population, short-term, mid-term, and long-term populations. The spatial distribution was benchmarked for the estimated Year 2020 population based on the *LPlan 2040* and Year 2010 Census data. TAZ that were split between Service Levels (overlapping two or more Service Levels) were divided based on equal-area percentage of the population to obtain projections by Service Level.

Table 2-2 provides the historical population by Service Level and Figure 2-2 shows this graphically. Table 2-3 provides the projected population by Service Level and Figure 2-3 shows this graphically.

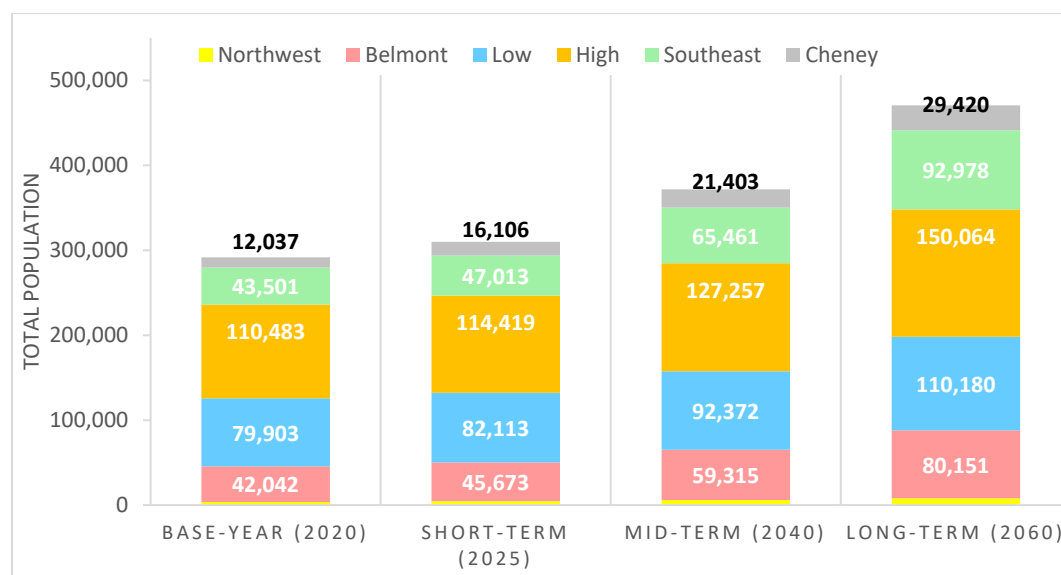
**Table 2-2 Historical Population by Service Level**

Service Level	1980	1990	2000	2010
Northwest	-	-	-	2,237
Belmont	14,500	18,890	31,830	35,630
Low	64,800	67,100	71,466	78,992
High	81,600	89,210	94,840	104,238
Southeast	12,350	16,770	27,445	37,277
Cheney	-	-	-	3,422
Total	173,250	191,970	225,581	261,796

**Figure 2-2 Historical Population by Service Level**

**Table 2-3 Existing and Projected Population by Service Level**

Service Level	Base-Year (2020)	Short-term (2025)	Mid-term (2040)	Long-term (2060)
Northwest	3,711	4,578	5,892	7,907
Belmont	42,042	45,673	59,315	80,151
Low	79,903	82,113	92,372	110,180
High	110,483	114,419	127,257	150,064
Southeast	43,501	47,013	65,461	92,978
Cheney	12,037	16,106	21,403	29,420
Total	291,677	309,902	371,700	470,700

**Figure 2-3 Existing and Projected Population by Service Level**

In addition to developing the population projections by Service Level, the TAZ data provided from the *LPlan 2040* data for Years 2015, 2026, and 2040 was input into a Power BI dashboard to provide a quick visual reference to the growth hot-spots within the City. This provided a qualitative review of the population breakdown by TAZ and for the City overall. Figure 2-4 shows a few of the characteristics for each of the three years provided. Year 2015 is shown on the left, Year 2026 is illustrated in the center, and Year 2040 on the right. The symbology for the TAZ data shows population density in each of the years with higher populations in dark red (30 persons or greater per acre) and lowest populations in lighter yellows (between 0 and 10 persons per acre). Also shown in the figure are the total populations, categorized by single-family or multi-family, and the ratio between single-family and multi-family for each year. As noted in the *LPlan 2040*, more of the future population will be multi-family and it can be seen that the ratio of multi-family to total population increases slightly over the planning horizon and by Year 2040 will be closer to 24 percent of the total population while currently it is around 22 percent of the total population.

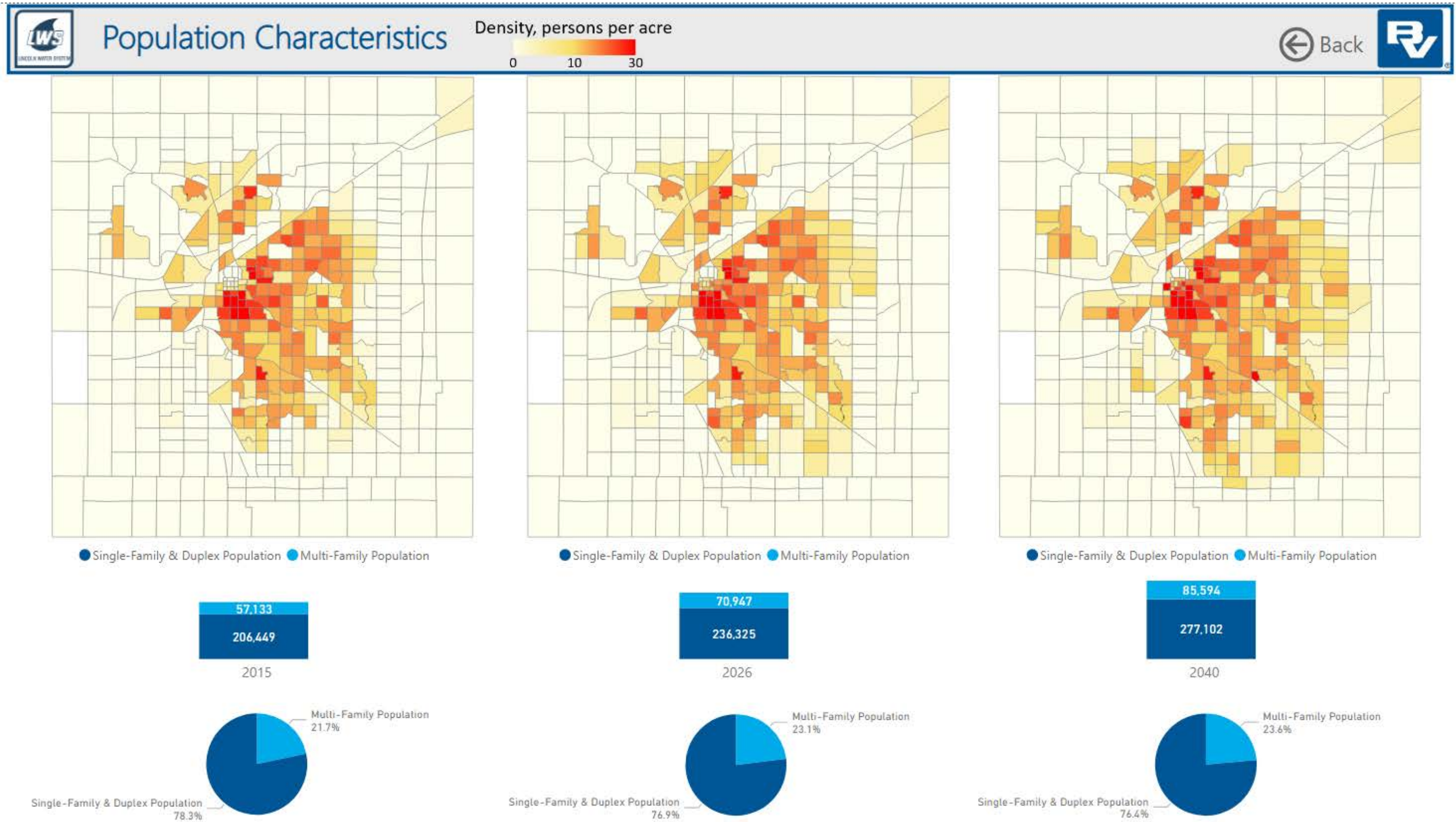


Figure 2-4      Population Characteristics