



2024

NORTH DAKOTA STATE DATA CENTER POPULATION PROJECTIONS

OF THE STATE, REGIONS,
AND COUNTIES

Prepared February 6, 2024, from the
North Dakota Department of Commerce
– State Data Center

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EXECUTIVE SUMMARY

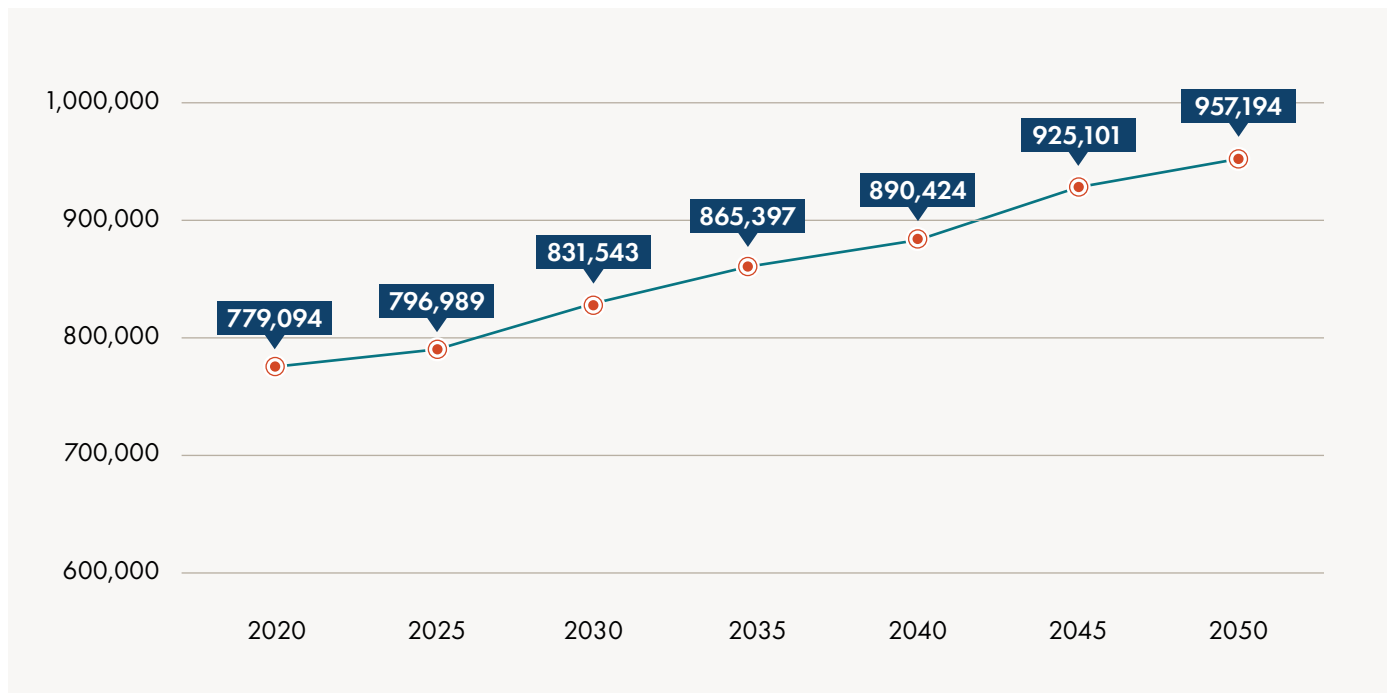
The North Dakota Department of Commerce – State Data Center prepared population projections for the state between now and 2050.

Between 2010 and 2020, the state has gained more than 106,000 residents, and reached a population count of 779,094 as of April 1, 2020. The state of North Dakota is projected to reach a population of 831,543 by 2030, a 6% increase; 890,424 by 2040, a 14% increase; and 957,124 by 2050, a 23% increase from Census 2020.

The growth the state experienced between 2010 and 2020 was the most significant in a century and is unlikely to be repeated in the near timeframe. In recent times, about half of the states in the U.S. have been in natural decline, experiencing more deaths than births. As a result, individuals are less likely to migrate for economic reasons, which has been a primary driver of North Dakota growth in the last decade. Nationwide, the rate of childbirth has declined as mothers are having their first child at a later age and having fewer children than in the past. While the rate of births in North Dakota does remain higher than most states, it has experienced a gradual rate of decline over time. This trend is likely to continue in the future.



PROJECTED STATEWIDE POPULATION 2020 TO 2050



Urbanization and consolidation of the state's population into the state's metropolitan and micropolitan areas is likely to continue as has been the trend in the state for the last century. Most rural counties in the state are expected to continue to lose population to the more urban areas of the state. By 2050, nearly 30% of the state's population is expected to reside in just one county, (Cass County). Nearly 60% of the state's population will likely reside in the state's four largest counties.

The western areas of the state, which are dominated by energy developments and the boom to bust cycle that this region and the industry tends to experience, is less predictable than the eastern half of the state. Cass County, with its more balanced economic base, tends to be more predictable than much of the rest of the state.

A NOTE OF CAUTION

These projections are an attempt to provide the most likely outcome of population change expected in the state.

Past long-term projections have often been proven to be inaccurate. For example, the most recent Census Bureau state-level population projections completed in 2005 indicated the state of North Dakota would continuously lose population and would have approximately 606,000 individuals by 2030. At this point, these projections appear highly unlikely.

This office's 2018 projections put the expected Census 2020 resident count at 793,537, about 5,500 more than the 2020 decennial census found.

Fluctuation in prices of the state's exports will likely continue, as has been the case recently in both agricultural and mining sectors. It is impossible to forecast how these changes will play out or what impact they will have on the overall population of the state, regions, or counties over time. In addition, the oil boom in western North Dakota appears to have reversed

a decades' long trend of out-migration. The pattern of migration that is believed to have occurred between 2010 and 2020 is likely to shift again with time. Given the dramatic shift in migration because of oil field development, the opportunity for these projections to be fallible must be considered.

The population of each county is summed to estimate the population of the region at years ending in a zero or a five. Likewise, the region's population is summed to that of the state for the same points in time.



METHODOLOGY

The process used in these projections is a modified version of the cohort survival component method, the most used method of projections.

Projections are based upon the population by 5-year age group and sex found in each county in Census 2020. The natural rate of growth, rates of fertility and survival rates are determined for each age group and sex in each county, then mortality rates are applied.

Fertility, birth rates, and age of the mother was determined from data provided by North Dakota Department of Health & Human Services Vital Statistics from 2016 through 2022. Results by county were blended with both state level rates and those found nationally as of 2021 (National Vital Statistics Reports, 2023, January 31, <https://www.cdc.gov/nchs/products/index.htm>), with rates smoothed to reduce anomalies in the number of births during this timeframe. (Children projected to be born to women who recently migrated to the state are treated as part of the net migration for each of the five-year periods.)

Survival rates are based upon the most recent life tables for state from the Center for Disease Control published in 2022 for the year 2020 (Center for Disease Control, 2022, <https://www.cdc.gov/nchs/products/index.htm>).

Migration is by far the most problematic and complex factor to predict but is probably the most important component of population change, as about three-fourths of the state's net population change between 2010 and 2020 is a result of migration.

To project the approximate rates of migration, the natural growth was calculated for each county by age group and sex for each five-year timeframe from 2000 to 2020. Timeframes include 2000 to 2005, 2005 to 2010, 2010 to 2015, and 2015 to 2020. The differences found between what would be expected if there was no migration in each 5-year age group and 53 counties (1,908 individual cells) were then compared to estimate the past rate during this timeframe for each age group and sex in each county. An average of what was found for each age group in each sex was then averaged over the four 5-year timeframes to determine the expected percentage of the state's overall migration in each county, region, and the state.

Given the significant in-migration that North Dakota experienced from 2010 to 2020, the rates were typically reduced to about 60% of what was found using the process explained above because in-migration that occurred from 2010 to 2020 was the highest the state had experienced in a century because of the Bakken oil boom and is unlikely to occur again. Counties with significant college age populations typically required additional adjustments as the algorithm tends to not capture the in- and out-migration of college age residents as well as it should. The rate of migration in counties in the Bakken region that experienced significant growth during the last decade also were adjusted to a lower rate and the rate of male migration was further reduced compared to female migration as the pattern found from 2000 to 2020 when in-migration was dominated by males is unlikely to continue into the future and would have resulted in unrealistic sex ratio in future years.

COMPONENTS OF CHANGE



Population change is generally counted in two ways: natural growth (births minus deaths) and net migration. There is a high level of interaction between these two components as the age groups most likely to migrate are those of, or near, childbearing ages and young children. Natural growth is expected to gradually decline as rates of birth decline, reflecting a current trend in many other states. Migration is expected to continue to be a key factor in the state's population growth between now and 2050. Expected change in population by components of change is shown in the table below.

	2020 -2025	2025 - 2030	2030 -2035	2035 - 2040	2040 - 2045	2045 - 2050
Natural Change	6,102	16,404	10,321	1,083	5,572	(5,526)
Net Migration	7,717	18,154	23,539	23,948	29,111	37,624
Total Expected Change	13,819	34,558	33,860	25,031	34,683	32,098

Natural growth is expected to initially be low up until 2025 due to some out-migration of individuals of childbearing ages in the first years of this decade, a trend that appears to be reversing now. Natural growth will again taper off later after 2045 in large part due to the larger population of older residents which will lead to a higher mortality rate and a trend towards lower fertility.

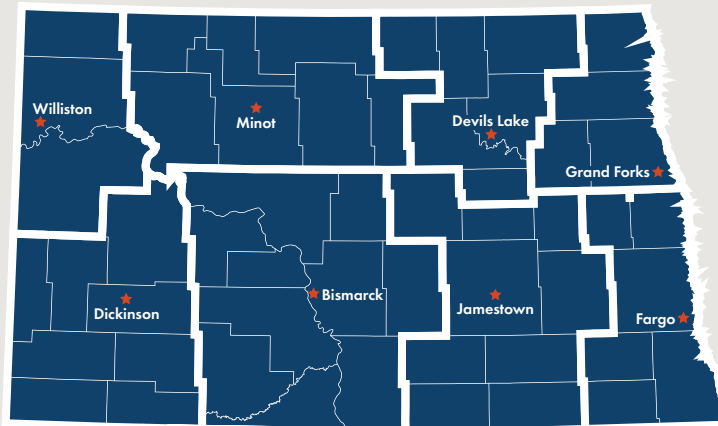
Net migration into the state will likely bring in approximately 140,000 additional residents between 2020 and 2050. An additional 34,000 will result from natural growth (births less deaths). As mentioned previously, in North Dakota, the natural rate is substantially influenced by migration as many of the state's new arrivals are primarily in the child-bearing age group.

Greater in-migration to the state by younger adults tends to be moderated by an outflow of retirement age adults. As a result,

during times of higher migration, the state has experienced a downward shift in median age as younger residents often replace older residents. This phenomenon may be unique to this region. North Dakota is one of the few states with more males than females in large part due to its ability to attract workers into traditionally male dominated industries and females tend to exceed the number of males in the older age groups.

The rate of migration also will likely impact the sex ratio of the state. In 2020 there were 104 males for every 100 females in the state. The ratio of males to females should remain close to what was found in 2020 assuming the predicted migration pattern occurs. In a scenario where little migration occurs, the ratio of males to females would be close to even by 2050. Should there be more out-migration than in-migration the number of females would likely exceed the number of males in the state by 2050.

CHANGE IN POPULATION BY REGION

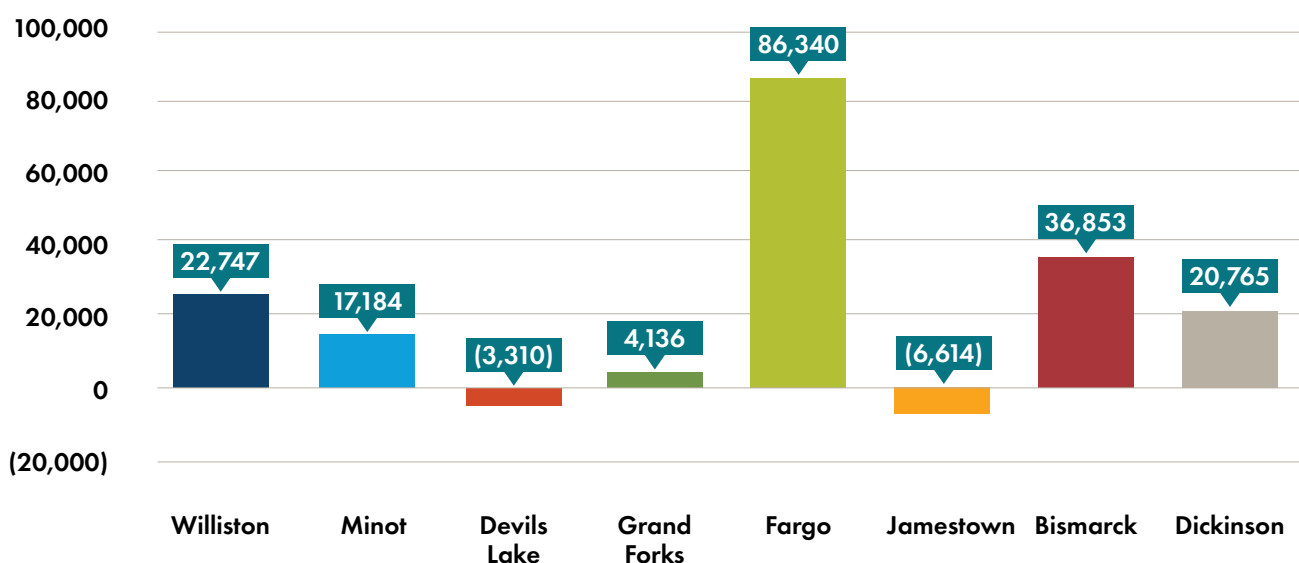


The Fargo region will continue to have the highest percentage of the state population, dominated by Cass County, reaching nearly one-third of the state population by 2050. The Bismarck region will remain the second largest, dominated by the population of Burleigh and Morton counties remaining at about 21% of the state's total population.

Likewise, Cass County remains the largest county in terms of population. In 2015, Ward County was estimated to have briefly edged out Grand Forks County as the state's third largest county. These projections suggest that Ward will move ahead of Grand Forks around 2040 and continue to be the state's third largest county thereafter.

Both the eastern and western halves of the state will see growth. In the east, the Fargo region will see the greatest growth and the Grand Forks region will experience more limited growth. The Devils Lake and Jamestown regions are expected to see a gradual loss of population. The western four combined economic regions (Williston, Minot, Dickinson, and Bismarck) will continue to see growth through 2050.

The Jamestown region is expected to remain under 56,000 individuals and experience a gradual loss of total population. The Devils Lake region is likely dropping below 35,000 by 2050. The Williston region is expected to reach a resident population of about 81,000 and the Dickinson region would have an expected population of approximately 70,000 by 2050.



CHANGES IN DEMOGRAPHIC MAKEUP OF THE STATE **OVER TIME**



Population of Children, Residents Under Age 18

The population of resident children continues to grow in the state. Child population will grow from about 153,000 to 228,000 by 2030, with growth slowing in the years reaching 2040.

Young Children, Residents Under Age 5

The population of young children continues to grow through 2050, however at a slower rate than the state has experienced in the last few decades. This is due to the lower fertility rates and women having children at an older age.

Workforce Age Group, Ages 18 – 64

The primary workforce age group is expected to grow continuously throughout the timeframe of the projections. Both those from 18 to 34 years of age as well as those 35 to 64 years of age should see continued growth through 2050.

Age 65+ Residents

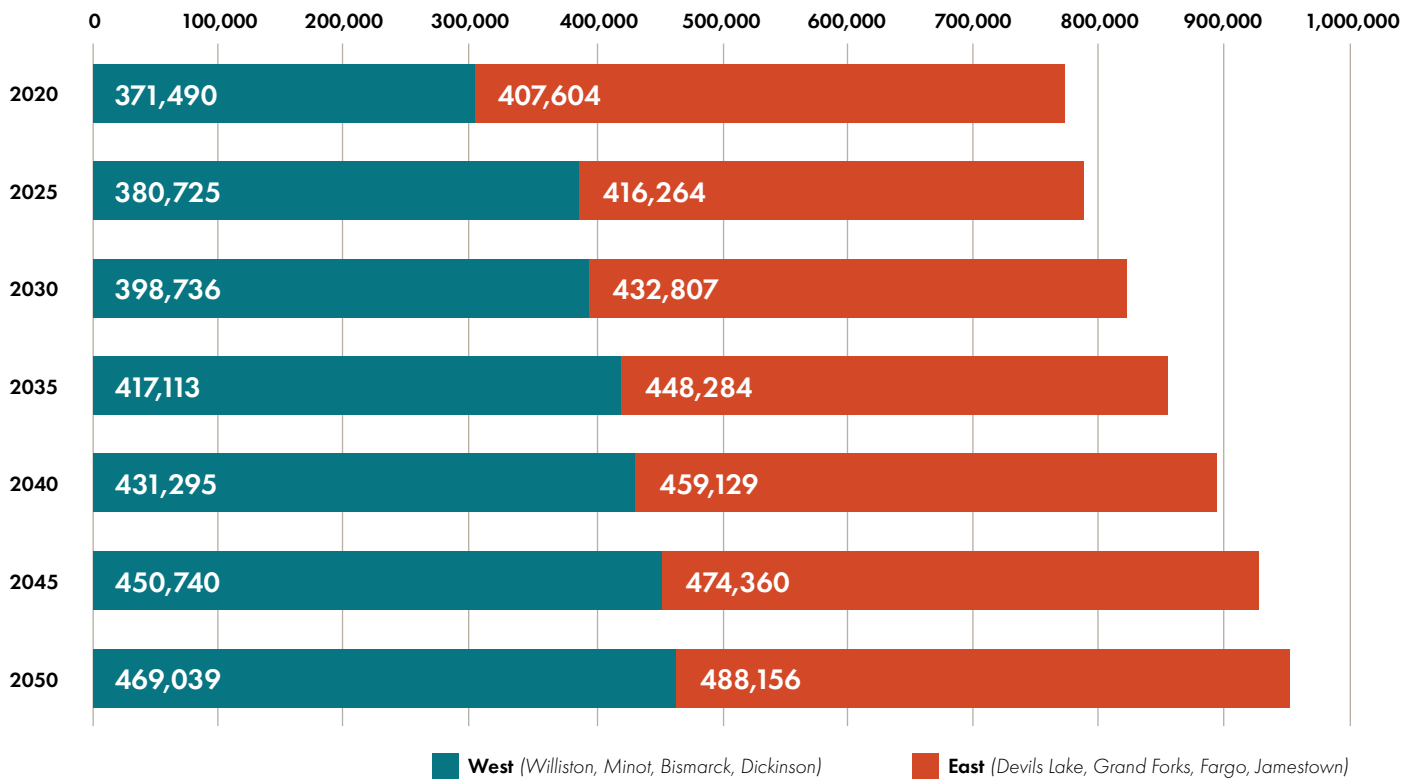
The population of age 65+ is expected to grow significantly between now and 2035, but decline slightly between 2035 and 2045, then begin to grow again. The 85+ age group is included in this projection.

Age 85+ Residents

The 85+ population is expected to decline some between 2020 and 2025 due to a slightly smaller group entering this age range as well as some additional deaths due to COVID-19 but will begin to grow afterwards. The large number of individuals in the baby boom generation will cause this age group to grow substantially, particularly after 2040.

	2020	2025	2030	2035	2040	2045	2050
Children Ages 0 - 17	183,001	189,319	192,518	197,084	199,422	204,874	216,522
Children Ages 0 - 4	53,276	53,207	50,433	54,854	54,690	56,806	62,745
Workforce Ages	471,723	465,025	481,699	510,973	539,595	565,554	582,716
Age 65+	123,042	142,646	157,326	157,341	151,407	154,673	157,956
Age 85+	18,973	15,756	18,013	18,525	18,532	27,162	24,457

STATE AND REGIONS SUMMARY



NORTH DAKOTA'S ECONOMIC PLANNING REGIONS	2020	2025	2030	2035	2040	2045	2050
Region 1 (Williston)	57,849	61,992	65,237	68,640	73,383	77,450	80,596
Region 2 (Minot)	99,925	101,836	104,442	107,851	110,355	113,840	117,109
Region 3 (Devils Lake)	37,969	37,741	36,926	36,520	36,095	35,575	34,659
Region 4 (Grand Forks)	93,592	94,712	96,437	97,388	98,056	98,141	97,728
Region 5 (Fargo)	220,414	229,886	246,314	262,289	274,025	290,250	306,754
Region 6 (Jamestown)	55,629	53,925	53,130	52,087	50,953	50,394	49,015
Region 7 (Bismarck)	164,906	167,188	175,883	183,655	187,402	194,932	201,759
Region 8 (Dickinson)	48,810	49,709	53,174	56,967	60,155	64,518	69,575

SUMMARY OF PROJECTIONS – COUNTIES

	2020	2025	2030	2035	2040	2045	2050
Adams County	2,200	2,120	2,052	1,987	1,896	1,863	1,805
Barnes County	10,853	10,482	10,327	10,023	9,731	9,498	9,128
Benson County	5,964	6,083	5,829	5,820	5,803	5,695	5,547
Billings County	945	975	1,028	1,081	1,097	1,179	1,229
Bottineau County	6,379	6,242	6,157	6,083	5,974	5,944	5,926
Bowman County	2,993	2,940	2,903	2,888	2,842	2,881	2,849
Burke County	2,201	2,213	2,279	2,414	2,539	2,709	2,900
Burleigh County	98,458	100,657	108,057	114,646	117,739	123,366	128,663
Cass County	184,525	194,767	211,322	227,406	239,681	255,799	272,878
Cavalier County	3,704	3,609	3,484	3,384	3,266	3,187	3,147
Dickey County	4,999	4,870	4,749	4,631	4,543	4,488	4,358
Divide County	2,195	2,195	2,304	2,414	2,503	2,713	2,917
Dunn County	4,095	4,165	4,444	4,805	5,107	5,527	5,976
Eddy County	2,347	2,298	2,262	2,247	2,223	2,224	2,196
Emmons County	3,301	3,148	3,073	3,024	2,949	2,885	2,751
Foster County	3,397	3,323	3,283	3,268	3,229	3,227	3,160
Golden Valley County	1,736	1,708	1,705	1,716	1,700	1,753	1,720
Grand Forks County	73,170	74,966	77,443	79,159	80,561	81,238	81,582
Grant County	2,301	2,213	2,153	2,084	2,012	1,961	1,884
Griggs County	2,306	2,217	2,185	2,124	2,036	2,061	2,046
Hettinger County	2,489	2,453	2,462	2,481	2,490	2,573	2,687
Kidder County	2,394	2,343	2,303	2,270	2,195	2,197	2,159
LaMoure County	4,093	3,967	3,936	3,934	3,906	3,960	3,933
Logan County	1,876	1,792	1,776	1,815	1,865	1,943	1,963
McHenry County	5,345	5,211	5,106	5,114	5,105	5,142	5,111
McIntosh County	2,530	2,335	2,243	2,171	2,114	2,111	2,004
McKenzie County	14,704	15,991	16,763	17,590	19,927	20,780	21,633

	2020	2025	2030	2035	2040	2045	2050
McLean County	9,771	9,626	9,630	9,647	9,642	9,847	10,057
Mercer County	8,350	8,222	8,221	8,238	8,206	8,320	8,270
Morton County	33,291	33,898	35,483	36,839	37,821	39,540	41,359
Mountrail County	9,809	10,016	10,412	10,873	11,150	11,506	11,694
Nelson County	3,015	2,845	2,703	2,548	2,416	2,336	2,229
Oliver County	1,877	1,862	1,840	1,840	1,823	1,850	1,829
Pembina County	6,844	6,584	6,280	5,965	5,630	5,358	5,030
Pierce County	3,990	3,843	3,737	3,674	3,593	3,572	3,441
Ramsey County	11,605	11,403	11,416	11,332	11,200	11,159	11,029
Ransom County	5,703	5,602	5,623	5,621	5,578	5,690	5,692
Renville County	2,282	2,245	2,206	2,190	2,143	2,135	2,062
Richland County	16,529	16,093	16,025	16,053	15,801	15,839	15,548
Rolette County	12,187	12,261	11,933	11,775	11,699	11,407	10,936
Sargent County	3,862	3,783	3,753	3,735	3,665	3,659	3,586
Sheridan County	1,265	1,209	1,159	1,097	1,048	1,042	985
Sioux County	3,898	4,010	3,965	3,971	3,968	3,924	3,801
Slope County	706	713	724	759	753	808	799
Stark County	33,646	34,636	37,856	41,251	44,270	47,936	52,510
Steele County	1,798	1,769	1,705	1,657	1,584	1,545	1,488
Stutsman County	21,593	21,135	21,000	20,652	20,194	19,881	19,330
Towner County	2,162	2,086	2,001	1,962	1,905	1,904	1,805
Traill County	7,997	7,870	7,885	7,818	7,717	7,718	7,562
Walsh County	10,563	10,317	10,012	9,716	9,449	9,210	8,887
Ward County	69,919	72,066	74,545	77,503	79,852	82,831	85,975
Wells County	3,982	3,804	3,631	3,468	3,335	3,225	3,093
Williams County	40,950	43,807	46,170	48,635	50,953	53,957	56,047
North Dakota Totals	779,094	796,989	831,543	865,397	890,424	925,101	957,194

COMPOSITION OF THE STATE'S POPULATION BY AGE GROUP AND SEX BY YEAR

MALES

Age Group	2020	2025	2030	2035	2040	2045	2050
0-4	27,306	26,461	25,740	28,081	28,022	29,057	32,054
5-9	26,557	25,870	26,913	26,233	28,563	28,524	29,681
10-14	26,130	26,281	26,564	27,637	26,958	29,352	29,343
15-19	26,626	27,158	29,848	30,238	30,936	30,743	33,720
20-24	33,805	30,935	35,471	38,400	37,735	37,728	37,471
25-29	31,078	27,376	27,520	32,029	35,246	35,138	34,985
30-34	30,022	29,303	27,894	28,267	32,781	36,077	36,051
35-39	28,624	28,890	29,574	28,026	28,579	33,100	36,466
40-44	23,881	27,176	29,061	29,735	27,785	28,779	33,339
45-49	20,904	22,443	27,197	29,094	29,797	27,799	28,865
50-54	20,952	19,933	22,467	27,230	29,188	29,850	27,898
55-59	23,844	19,818	19,778	22,301	26,981	28,947	29,630
60-64	24,288	22,515	19,031	18,985	21,424	25,876	27,732
65-69	20,603	22,248	20,826	17,607	17,621	19,785	23,853
70-74	14,878	18,148	19,653	18,399	15,670	15,534	17,383
75-79	9,448	12,400	15,392	16,692	15,740	13,274	13,154
80-84	6,170	7,231	9,339	11,624	12,826	11,873	9,992
85+	6,280	4,666	5,734	6,926	6,904	9,767	8,748
Total Males	401,242	398,854	418,003	437,505	452,755	471,202	490,365

COMPOSITION OF THE STATE'S POPULATION BY AGE GROUP AND SEX BY YEAR

F E M A L E S

Age Group	2020	2025	2030	2035	2040	2045	2050
0-4	25,651	26,746	24,693	26,773	26,669	27,749	30,691
5-9	25,575	25,587	27,056	24,963	26,972	27,022	28,143
10-14	24,968	26,294	26,231	27,705	25,440	27,685	27,686
15-19	24,741	26,309	29,020	29,249	30,395	28,397	31,154
20-24	30,145	29,870	32,751	36,434	35,463	36,435	34,112
25-29	26,795	24,328	25,527	28,549	32,497	32,423	32,838
30-34	25,490	27,034	24,899	26,271	28,936	33,285	33,109
35-39	24,480	26,709	26,937	24,776	26,182	28,920	33,216
40-44	20,518	25,279	26,692	26,905	24,674	26,185	28,898
45-49	18,513	20,787	25,298	26,713	26,891	24,684	26,189
50-54	18,979	18,952	20,651	25,149	26,526	26,725	24,527
55-59	22,573	19,434	18,609	20,299	24,724	26,051	26,251
60-64	23,283	22,853	18,793	18,014	19,653	23,898	25,190
65-69	19,838	23,567	21,790	17,965	17,215	18,729	22,799
70-74	14,953	19,635	22,176	20,582	17,039	16,260	17,735
75-79	10,549	14,119	17,848	20,282	18,881	15,552	14,894
80-84	8,395	9,541	12,288	15,664	17,882	16,504	13,689
85+	12,676	11,090	12,279	11,599	11,627	17,395	15,709
Total Females	378,122	398,135	413,539	427,893	437,668	453,899	466,829

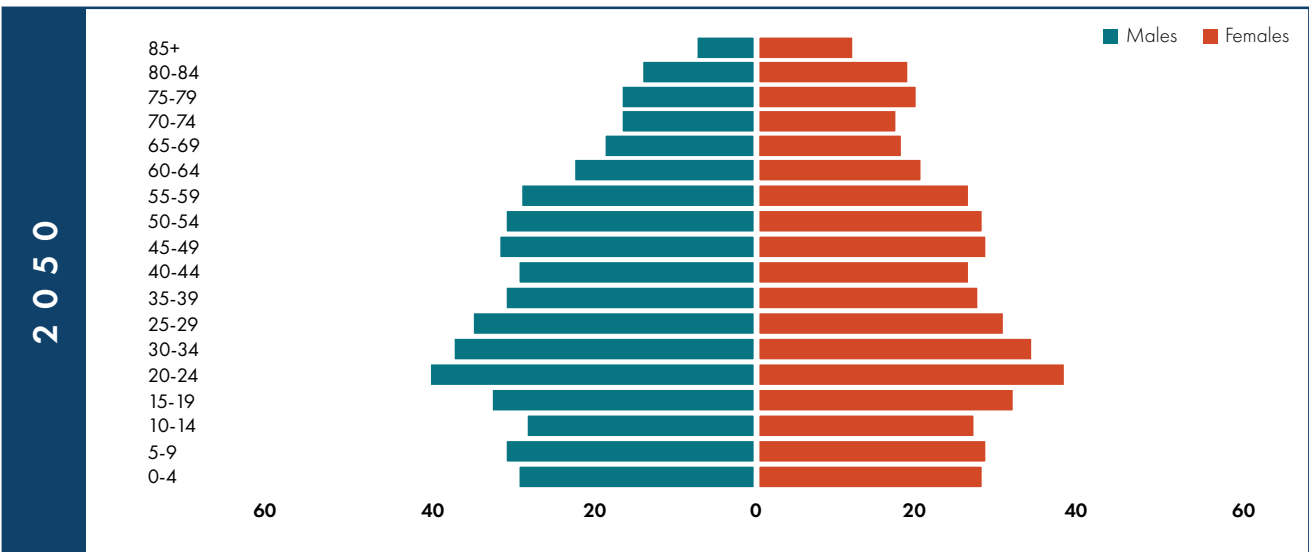
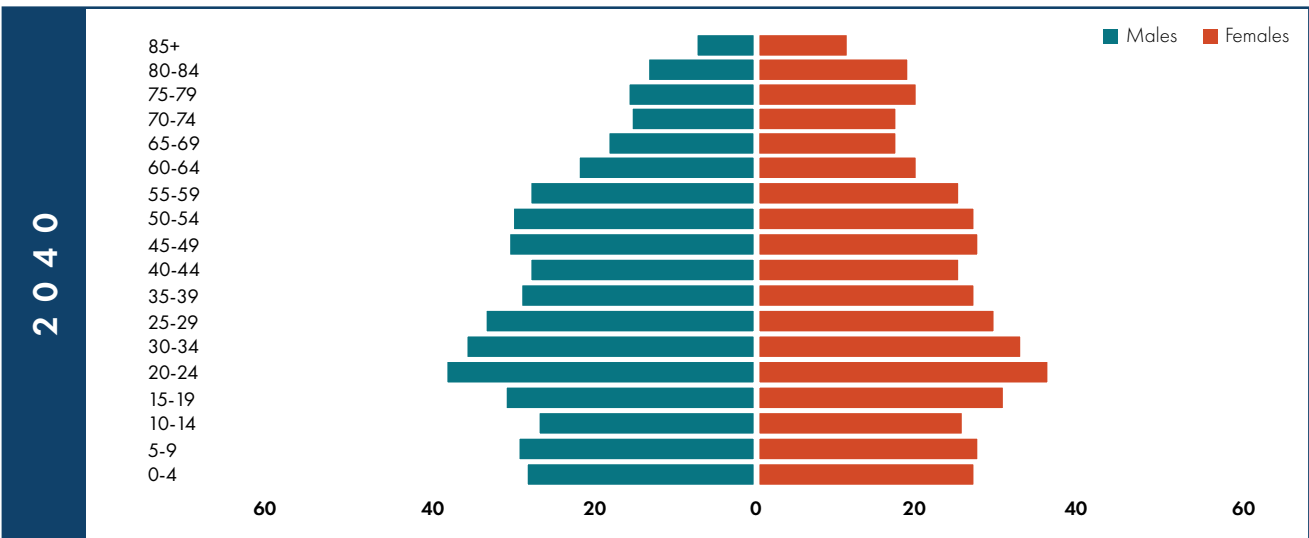
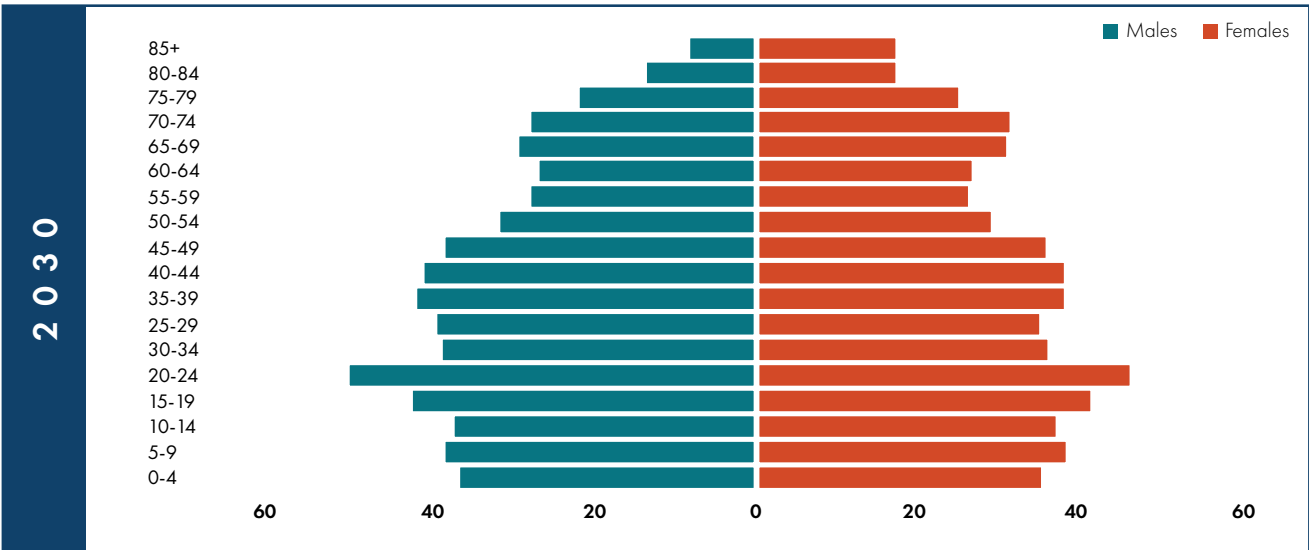
COMPOSITION OF THE STATE'S POPULATION BY AGE GROUP AND SEX BY YEAR

BOTH SEXES

Age Group	2020	2025	2030	2035	2040	2045	2050
0-4	53,276	53,207	50,433	54,854	54,690	56,806	62,745
5-9	51,944	51,456	53,969	51,196	55,536	55,546	57,824
10-14	51,111	52,575	52,795	55,342	52,397	57,037	57,029
15-19	51,212	53,468	58,868	59,487	61,331	59,140	64,874
20-24	63,809	60,805	68,222	74,835	73,198	74,162	71,583
25-29	58,269	51,704	53,047	60,578	67,743	67,561	67,823
30-34	55,468	56,338	52,793	54,538	61,717	69,362	69,159
35-39	52,966	55,599	56,511	52,802	54,761	62,019	69,682
40-44	43,960	52,456	55,753	56,640	52,459	54,964	62,237
45-49	39,570	43,230	52,495	55,808	56,688	52,483	55,054
50-54	40,007	38,885	43,119	52,379	55,714	56,575	52,425
55-59	46,842	39,252	38,387	42,599	51,705	54,998	55,881
60-64	47,615	45,368	37,824	37,000	41,077	49,774	52,922
65-69	40,113	45,815	42,616	35,572	34,837	38,514	46,652
70-74	29,462	37,783	41,829	38,981	32,709	31,795	35,118
75-79	19,908	26,519	33,240	36,975	34,621	28,825	28,048
80-84	14,586	16,773	21,627	27,288	30,709	28,377	23,680
85+	18,973	15,756	18,013	18,525	18,532	27,162	24,457
Total	779,094	796,989	831,543	865,397	890,424	925,101	957,194

POPULATION PROJECTION NORTH DAKOTA

BY AGE AND SEX





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