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United States State-Level Population Estimates: Colonization to 1999

David P. Coulson
Linda Joyce

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Abstract: The U.S. landscape has undergone substantial changes since Europeans first arrived. Many land use changes are attributable to human activity. Historical data concerning these changes are frequently limited and often difficult to develop. Modeling historical land use changes may be neccessary. We develop annual population series from first European settlement to 1999 for all 50 states and Washington D.C. for use in modeling land use trends. Extensive research went into developing the historical data. Linear interpolation was used to complete the series after critically evaluating the appropriateness of linear interpolation versus exponential interpolation.

Authors

David Coulson, MATCOM, Fort Collins, CO.
Linda Joyce, Rocky Mountain Research Station, Fort Collins, CO.

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United States State-Level Population Estimates:

Colonization to 1999

David P. Coulson
Linda Joyce

Introduction

Background

The United States landscape has undergone substantial changes since the first European settlements. Ecological models used to examine the potential impact of climate change suggest the likelihood of substantial future changes on the United States landscape (Joyce and Birdsey 2000, McGuire and others 2001). The role that historical land management has had on changes in the United States landscape has not been considered in these ecological models. Casperson and others (2000) suggest that historical land management may have masked any impact that recent climate changes may have caused. Historical data series reflecting these landscape changes are limited and often difficult to develop, in part, due to the lack of historical records. The lack of historical land use information, particularly at levels below the national level, has made it difficult to test this idea using ecological models examining the impact of climate change. Ramankutty and Foley (1999) developed historical information on the area of cropland converted from forestland and the type of crops planted annually. Unfortunately, recording forest harvest area was not a concern of the early settlers facing a seemingly endless forest. The few early forest harvest records that exist are primarily product oriented, such as barrels of pitch or number of ship masts. Houghton and others (1987) used aggregations of this information to determine the area disturbed through harvest at large spatial scales. However, at finer spatial scales, these records are frequently plagued with missing values, inconsistencies, unknown collection methodologies, measurement errors, varying standards of measure, and in some cases, even fraudulent reporting. Thus, the paucity of information at finer spatial scales leads us to model estimates of resource use using human population level as one of our data sources.

Human population data is used in ecological and land-use models. Some examples are: Berry and others 1996; Brown 2001; Campbell 2001; Irwin and Geoghegan 2001; Jenerette and Wu 2001; Reynolds and Pierson 1942; Sandewall and others 2001; Schumacher 2001; Serneels and Lambin 2001; Stéphenne and Lambin 2001; and Veldkamp 1997. Further, Reynolds and Pierson (1942) use population levels to estimate fuel wood consumption from 1630 to 1930. This work implies that detailed spatial and temporal population series could be used to estimate resource use on an annual basis from 1600 to 1999. We presume that the magnitudes of these landscape changes are related to the nonindigenous population levels.

Availability of Historical Information on U.S. Populations

While detailed U.S. population series exist for recent years (1900 to present), data becomes increasingly scarce for earlier periods, especially before 1790. Further, the population estimates frequently used are those of the American colonies, which exclude French and Spanish colonies. For example, the 1630

population estimate of the American Colonies (United States Bureau of Census 1975) is 4,646. This estimate excludes Florida and New Mexico, which we estimate had a population of 2,032 at the time. The 1780 population estimate of the American Colonies (United States Bureau of Census 1975) is 2,780,369 and excludes the population of other areas of what would become the United States (16 other states with settlements at the time), which we estimate to have been some 445,985 persons, or 13.8 percent of the total U.S. population. The estimates are for the contiguous states and only those indigenous peoples accounted for by the colonists. Hawaiian, Alaskan, and those Native Americans of the contiguous states are excluded and have conservative estimates of 300,000 in 1777 (Castle 1917), 72,600 in 1740 (Denevan 1976), and 879,400 in 1600 (Denevan 1976) respectively. Detailed temporal and spatial population series for the entire present day United States from first European settlement to present are rare.

Prior to 1900, many annual population values are missing. As a result, annual state level population series development requires estimation of population numbers for intervening years, generally through interpolation. Linear interpolation is a commonly used method to estimate missing values. Human population growth is typically considered an exponential process; however, as the United States was settled and population grew, factors other then natural birth and death rates influenced state level population changes. For example, immigration and emigration strongly impacted population levels in parts of the United States, such as when easterners pushed westward to seek their financial futures and during the California gold rush. We explore the possible use of exponential interpolation, before opting to use linear interpolation. We recognize that other mathematical processes might fit the data better, but exploring those options is beyond the scope of this work.

Objective

Our objective was to develop an annual population data series from the first nonindigenous settlements to 1999 for each present day state. These series can then be used to model landscape change presumed to be a direct result of activities associated with and subsequent to the settlement of nonindigenous people. Aboriginal peoples were utilizing resources at the time of European discovery and likely modified the landscape, such as clearing land for agriculture, setting fires, and so forth. We are presuming that this influence on the vegetation cover of the American landscape differed from the settlers who came to the continent in the 1600s. And we presume that the magnitudes of landscape changes after the settlements of the 1600s to present day are related to those nonindigenous population levels. Aboriginal populations prior to, at the time of, and subsequent to first European settlement were not uniformly included in the earlier population data. Our assumption is that when the aboriginals were counted and recorded by the settlers in the historical data, these individuals were an integral part of life and land use of the settlement. Slaves, both indigenous and nonindigenous, appear to have been fully recorded and are included in the series. Thus, we assume that all persons counted by the settlers were a part of the settlement and, as such, represented the total population that was changing the surrounding land cover and land use. Thus, the population values for early years of the series developed here may not fully represent all people living in the state at that time. As time progresses, increasing numbers of aboriginals are counted until at some unknown point all peoples are fully counted and presumably having a similar impact on the land.

We provide annual U.S. state-level population estimates from the first European settlement (Fort Caroline, Florida, 1564) to 1999. These data are downloadable either as an Excel or an ASCII comma delimited text file. We caution the user to understand the caveats and methodologies associated with

this data before downloading. The values presented are estimates, representing the magnitude and distribution of nonindigenous settlers during the early years and, as time progresses, all peoples in the United States. Developed to help quantify historical land use changes, these estimates represent general trends, and are not, and should not be considered “exact” head counts. It is recommended that the user read and understand the methodologies used in developing these estimates before using them for any purpose. While considerable care was given to the development of this series, the user is fully responsible for any issues that arise from the use of these data. The authors make no claims or warranties as to the suitability of these estimates for any purpose. There are no copyright restrictions, and we ask only that appropriate credit be given. While extensive research went into the development of this series, it is by no means exhaustive. We consider this series a “work in progress.” It is subject to revision as new information is brought to light. To that end, we welcome input that improves the accuracy of these estimates.

Methodology

Series Development

Our objective was to construct an annual time series of state-level population estimates from the first European settlement in the area now known as the United States to 1999. To do this, we first established the temporal and spatial availability of federal census. Second, we included population values from other historical data, and lastly, interpolated missing values between years. The federal censuses and other censuses form a population series for only the census years. Using other historical information, we established a time series of population values from 1564 (first settlement) to 1999 with intermittent years missing. Two different interpolation methodologies were explored as to which method resulted in the best fit for the missing years. A detailed procedural description follows.

Data Sources

The following general sources were used in the development of the population series. They are listed in descending order of preference. A full listing of sources is provided in the references.

United States Federal censuses began in 1790. Census values are used over all other sources. Table 1 shows the decade when the first federal census was taken for a state. Additionally, we use Census Bureau annual population estimates for all states from 1900 to 1999 (Alaska and Hawaii from 1950). Prior to 1790 we use the United States Bureau of Census estimates where available. Greene and Harrington’s (1932) work proved extremely valuable and was generally given preference over other sources. Their work is a collection of population estimates, census values, and other population related data, such as polls, tax rolls, or military rolls, and is fully referenced. Wilson (1998) was used as the primary source for date of first settlement. Further, many texts on state histories were reviewed. In addition to hardcopy references, we made extensive use of internet sources, primarily historical narratives. From these narratives we obtained not only numbers, but also information on significant events such as gold rushes, massacres, settlement dates, land rushes, wars, and other significant historical events that impacted population levels. We used this knowledge as a means to estimate the timing and magnitude of shifts in population, primarily for times prior to 1790 and occasionally times between censuses.

Table 1—Year of first European settlement, first federal census, and statehood.

State	First settlement	First U.S. census	Statehood
Alabama	1702	1800	1819
Alaska	1784	1880	1959
Arizona	1687	1870	1912
Arkansas	1686	1810	1836
California	1769	1850	1850
Colorado	1825	1860	1876
Connecticut	1634	1790	1788
Delaware	1631	1790	1787
Florida	1564	1830	1845
Georgia	1733	1790	1788
Hawaii	1778	1900	1959
Idaho	1809	1870	1890
Illinois	1675	1810	1818
Iowa	1833	1840	1846
Kansas	1821	1860	1861
Kentucky	1763	1790	1792
Louisiana	1714	1810	1812
Maine	1604	1790	1820
Maryland	1634	1790	1788
Massachusetts	1620	1790	1788
Michigan	1669	1810	1837
Minnesota	1689	1850	1858
Mississippi	1699	1800	1817
Missouri	1735	1810	1821
Montana	1828	1870	1889
Nebraska	1822	1860	1867
Nevada	1849	1860	1864
New Hampshire	1623	1790	1788
New Jersey	1633	1790	1787
New Mexico	1598	1850	1912
New York	1624	1790	1788
North Carolina	1650	1790	1789
North Dakota	1801	1850	1889
Ohio	1788	1800	1803
Oklahoma	1889	1890	1907
Oregon	1805	1850	1859
Pennsylvania	1643	1790	1787
Rhode Island	1636	1790	1790
South Carolina	1670	1790	1788
South Dakota	1817	1870	1889
Tennessee	1768	1790	1796
Texas	1682	1850	1845
Utah	1828	1850	1896
Vermont	1724	1790	1791
Virginia	1607	1790	1788
Washington	1845	1850	1863
West Virginia	1726	1790	1889
Wisconsin	1665	1840	1848
Wyoming	1834	1870	1890

Historical Data Series

Starting with United States Bureau of Census data and estimates, we fill in as many years as possible with data from 1564 to 1999. This includes decadal estimates prior to 1790. Additional values are then added on a state-by-state basis using the following general procedures. These values and their sources are presented in Appendix C.

We establish date of first settlement for each state and the initial settlement size. The population prior to first settlement is assumed to be zero. First

settlement is defined as: the first permanent European presence in a state (present day political boundaries). While simple in definition, the date of first settlement is not always clear, as the distinction among explorers, traders, trappers, missionaries, and settlers and their activities is often blurred. As modern boundaries were not established, settlement locations were sometimes obscure. While initial settlement size was occasionally found, it was frequently necessary to estimate the size of the initial settlement. While somewhat subjective, these estimates were made after reading historical accounts of the event and considering the initial size of other settlements, population levels after initial settlement, size and numbers of ships, and other accounts.

Consider for example, the following historical account of New Mexico's first settlement from the New Mexico fact book online at http://www.edd.state.nm.us/FACTBOOK/PDF/hist.pdf.

> "The man chosen to establish the first settlement in New Mexico was Don Juan de Onate, who set out for New Mexico in 1598 with 400 men (some 130 brought wives and children), 10 Franciscan friars, 7,000 head of livestock and 83 carts. They moved north along the Rio Grande to San Juan. He established the first settlement there on July 11, 1598."

From this account we assume there were 130 families of size 4.5. Thus, the initial settlement is calculated to be 865: 270 men (400 less 130) plus 10 friars plus 715 in families (130 times 4.5). We use 4.5 in this instance, rather then 5.5 family size suggested by Felt (referenced in Greene and Harrington 1932) under the assumption family size would be smaller at the time of settlement versus an established settlement. Lower and upper bounds for this estimate are as follows. The minimum would be 400 men plus 10 friars plus 130 (women and children, family size of 2) or 540. This estimate seems unrealistically low, due to the small family size assumption. The upper bound could be any value if we assumed ridiculously high family sizes. However, if we assume a realistic family size, say 6, and interpret "some" to mean at least 130 women, then we would estimate an initial population of 1,114. Further, we note that this account does not state whether or not Native Americans were included in this initial settlement, a common practice in early Spanish settlements, and likely in this case given the friars' presence. Additionally, many early explorers/traders/trappers/settlers were known to take native wives. Thus, while the actual settlement size is not known, we do have a sense of magnitude and are able to make an estimate.

After establishment of first settlement date and size, further research was conducted to fill in the missing years. As with the initial settlement, some subjectivity was required in sifting through the various sources. For consistency, Coulson made all "subjective" determinations. The following general approach was taken. Values from nonfederal censuses, head counts, rosters, rolls, houses, and similar records were generally accepted "as is" unless strong evidence suggested something was awry. Greene and Harrington (1932) provided many such counts and estimates, counts generally being preferred over estimates. In cases of non-census counts, a conversion factor was applied to the count to obtain an estimate of the population at the time. For example, Felt estimates that each house counted was equivalent to 7.15 persons. Table 2 provides examples of the conversion factors given in Greene and Harrington (1932). There were cases where we had a time series, a tax roll for example, that overlapped census values or defensible population estimates. We then "linked" the two sources and used the trend of the count data to obtain population estimates over that period, effectively calculating a series specific conversion factor.

When count data were unavailable, we then considered population estimates, ignoring any estimates in which we lacked confidence in their validity. For example, Sheridan (1995) estimated the population of Texas to be 10,000 in 1830, up from 4,155 in 1809 (non-federal census). This is a reasonable estimate

Table 2—Conversion factors of counts.[a]

	Militia	Polls, tax lists	Families[b]	Houses
All Regions	5:1	6:1	7:1	
North	4:1			
South	3:1			
Felt[c]	5.33:1	4:1	5.5:1	7.15:1

[a]Source: Greene and Harrington (1932).
[b]1790 Census average family was 5.7.
[c]Felt's work (a historian) was our primary choice for conversion factors.

in that from 1823 to 1830 the Mexican government permitted extensive American settlement. All counts and estimates found were checked for reasonableness. The assumption is that interim population values (between census years for example) are between the endpoints in magnitude, unless there was strong evidence to the contrary. For example, New York has United States Bureau of Census estimates of 1,930 and 4,116 for years 1640 and 1650 respectively. If a source had an estimate of 6,000 in 1641, we would be suspicious of its validity unless there was collaborating evidence to support such a sudden shift in population, such as the documented arrival of large numbers of colonists. We would also want to document the losses from 1641 to 1650.

The data reflect all peoples the settlers considered a part of their colony, including slaves, who were always counted, and some aboriginal peoples. We assume that if the aboriginals were counted and recorded by European settlers, then they were an integral part of the European settlement and subsequently were changing the landscape in a manner similar to the European settlers. Therefore they are included in the data. However, aboriginal populations prior to first settlement are not included in this data, nor are aboriginal population estimates made specifically of aboriginals living separately and independently of European settlers. We justify this approach in that these data were developed for the express purpose of modeling land use change, presumed to be a result of European settlement.

Evaluation of Interpolation Methodologies

Developing a database of annual state population estimates for each state (and DC) from its initial European settlement to 1999 requires 14,080 values. The Bureau of Census provides all values from 1900 to 1999, except for Alaska and Hawaii. We developed 1,647 additional values based on available reliable sources for the period from first settlement to 1900 (out of 9,041 possible), or 18 percent. All remaining values were filled in using linear interpolation.

Historical human population change plotted over time is generally an "exponential" growth curve. This questions the appropriateness of linear interpolation. Would exponential interpolation be a better approach? To answer this question we conducted three empirical tests on the two interpolation methods (linear and exponential), using the two existing data series from the United States Bureau of Census: the state-level decadal census data 1790 to 1990 and the annual state-level census estimates from 1900 to 1990. In all three tests we interpolate linearly and exponentially between the series starting and ending values for each state. The sum of squared differences are calculated for each method and compared. The premise is that the smaller sum of squares represents the better fit to the data and thus is the better interpolation method had it been necessary to interpolate the "known" data.

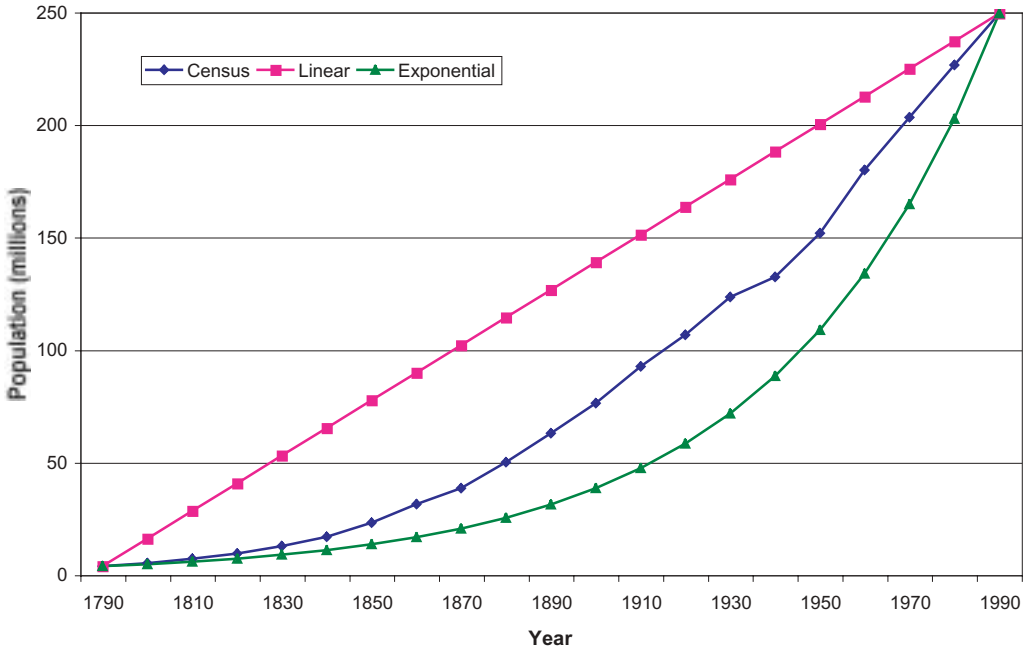

Figure 1—Interpolation between the 1790 and 1990 United States censuses by decade and actual census data.

Test 1 - Census, interpolate 1790 to 1990 and match decades (census values)

We interpolate between the initial census value and the 1990 census value for each state and the national total. Figure 1 compares the two methods to the actual data for national totals. The actual data falls between the two interpolation methods. Exponential interpolation provided the “best” fit in the case of national totals. However, examination of the sum of squared differences for each method at the state level showed that linear interpolation fit the actual decadal census data better for 61 percent of the states. See table 3.

Table 3—Interpolation comparison results[a] for the 50 states and Washington DC.

	Census Interpolate 1790 to 1990 Match Decades		Census Estimates Interpolate 1900 to 1990 Match Annually			Census Estimates Interpolate by Decade Match Annually	
	Best fit[b]	Percent[c]		Best fit	Percent		Best fit	Percent
Linear	31	61	29	57	33	65		
Exponential		20	39	22	43	18	35	

[a]Includes Washington DC.
[b]Smallest sum of squared differences between data and interpolation method.
[c]Percent of Cases method fits best, out of a possible 51.

Test 2 - Census annual estimates interpolate between 1900 and 1990 matching annually

We interpolate linearly and exponentially between the population values in 1900 and 1990 for all states, Washington DC (1950 to 1990 for Alaska and Hawaii), and national totals. As previously, the actual values for the national

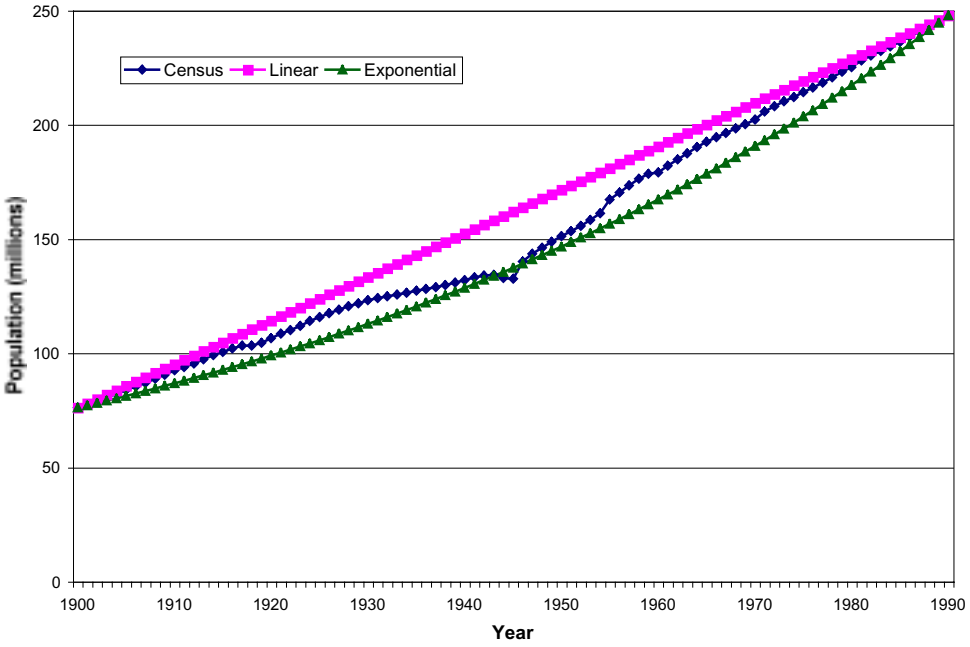

Figure 2—Interpolation between the 1900 and 1990 United States censuses by year and annual Bureau of Census population estimates.

totals generally fall between the two interpolation methods and exponential fits best. See figure 2. Examination of the state level interpolations shows that linear interpolation fit the census estimates better for 57 percent of the states. See table 3.

Test 3 - Census annual estimates interpolating between censuses

The decadal census values are known values, so a more realistic comparison is interpolation between the decadal census values compared to census estimates. Figure 3 illustrates that when short periods are used, both methods produce similar results. In this comparison, linear interpolation produces a better fit for 65 percent of the states over the entire period, table 3. When we look at each individual decade (449 decadal intervals) we find, individually, that 55 percent fit better using linear interpolation.

Linear interpolation "fits" the known data more frequently then exponential, suggesting that the use of linear interpolation is generally more appropriate. Exponential interpolation's fit is "better" frequently enough to raise the question, "Is it possible to determine when exponential interpolation would provide a better fit?"

When might exponential interpolation be better?

We know that short line segments can approximate any complex curve and that increasing the number of intervals provides a better approximation. The above work indicates that using linear interpolation for missing data for intervals of 10 years or less is reasonable. However, in the development of "actual" data series, intervals exceeding 10 years exist. Should exponential interpolation be used in these cases? At what point is the difference between the two methods "substantially" different to justify exponential over linear interpolation?

To answer these questions, we assume that the long-term human population growth curves are exponential. We further assume that all populations are increasing over time (mostly true for the states). Under this assumption, linear interpolation will always be larger then exponential interpolation values at the same point in time (see Appendix B for proof). We now seek to know when the maximum difference between the two methods occurs and the magnitude of that

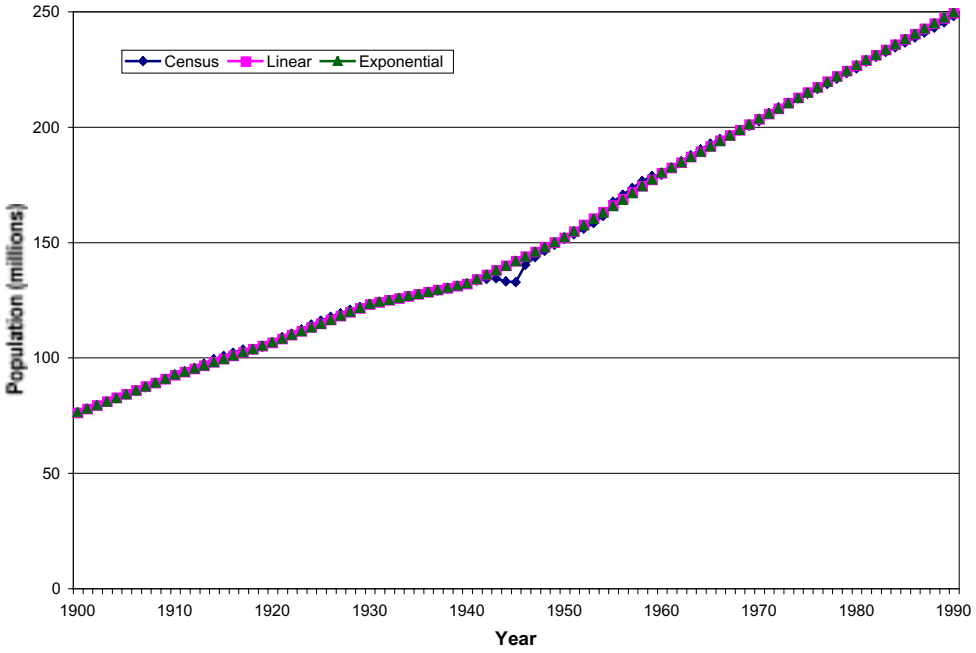

Figure 3—Annual interpolation between United States census from 1900 and 1990 for both interpolation methods and annual Bureau of Census population estimates.

difference. The idea is to use the time interval and magnitude of population shift to determine when to use one interpolation method over the other.

We demonstrate that the maximum difference between linear and exponential interpolation is strictly dependent on the ratio of T_1/T_n, which we refer to as a difference ratio and define the ratio as $y = T_1/T_n$, where T_1 is the initial population and T_n is the ending population. See Appendix A for the derivation. Using

$$DP = \left(\frac{y + a(1 - y)}{y^{1-a}} - 1 \right) x100\% ,$$

where 'a' is a function of 'y' and DP is the difference percentage, we find that even when a population has doubled the maximum percent difference between linear and exponential interpolation is 6 percent. This relationship between the difference ratio and the maximum percent difference is shown in table 4 and graphically in figure 4. Thus, we see that changes in population estimates need to nearly double before a significant error (over 5 percent) is introduced using linear interpolation. Our empirical tests indicate that linear interpolation was "better" for short intervals (10 year period, table 3). This suggests the following decision rule: For intervals over 10 years, select exponential interpolation over linear interpolation when T_1/T_n, the difference ratio, is less then some value based an acceptable level of error. For example, using $T_1/T_n = 0.53$ would limit the difference percentage to under 5 percent, under the assumption that the growth is exponential.

We empirically test this decision rule using a 10 percent level of error. Our decision rule becomes: For periods over 10 years, use exponential interpolation for difference ratios (T_1/T_n) less than or equal to 0.407 and linear interpolation for ratios greater than 0.407. Applying this rule to the previous empirical work, we "predict" the best interpolation method to use. We then compare the predicted interpolation method to the interpolation method that actually gave the best fit to the data. Using this decision rule we were able to select the "correct"

Table 4—Relationship of difference ratio to recent difference between linear and exponential interpolation using equation A.13.

T_1/T_n	Percent difference
0.754	1.0
0.75	1.0
0.53	5.0
0.5	6.0
0.407	10.0
0.3333	14.8
0.331	15.0
0.278	20.0
0.25	23.4
0.238	25.0
0.207	30.0
0.2	31.3

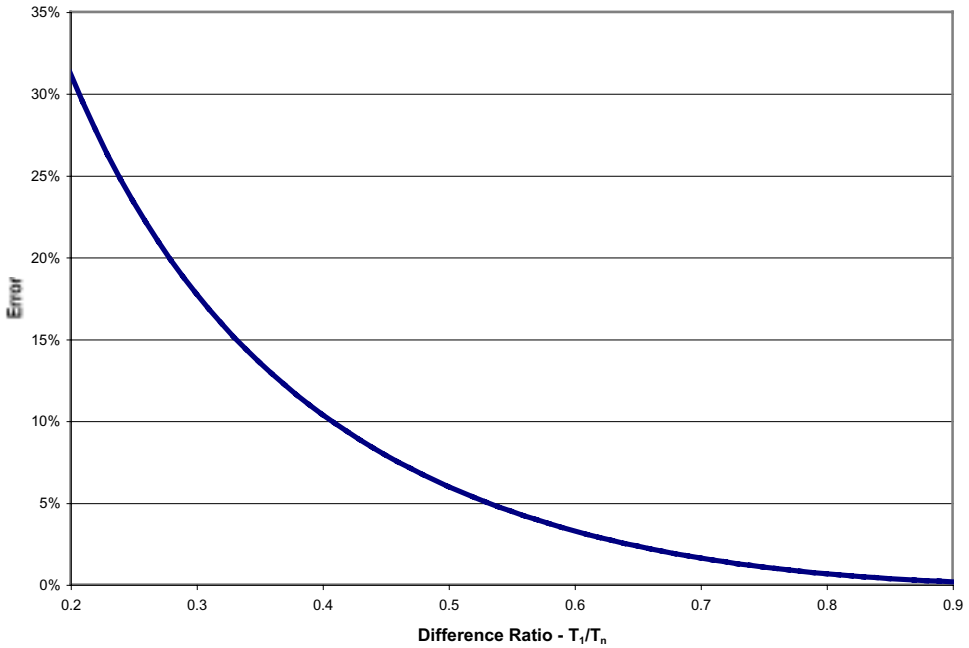

Figure 4—Relationship of difference ratio to percent error.

interpolation method 66.7 percent of the time when we interpolated from 1790 to 1990 by decade. We got slightly better results (70.6 percent) when we varied T_1/T_n until we maximized the number of matches. When we interpolated between 1900 and 1990 and matched to the United States Bureau of Census estimates, we correctly selected the interpolation method 56.1 percent of the time. Interpolating between decades was worse; only 39.2 percent of the time was the "correct" method selected. Seeking the difference ratio that maximized the correct method improved our selection percentage only slightly. Table 5 summarizes the results of this empirical test.

This empirical test suggests that the decision rule is not particularly effective in determining which of the two interpolation methods to use for the "best" fit. The reason is likely that the assumption of exponential growth is not valid for these population data. Factors other then births and deaths influence population growth, such as immigration, emigration, and counting previously uncounted aboriginals. In the long run nationally (1790 to 1990), the United States

Table 5—Results of predicting “Best” interpolation method for each of the three tests.

	Census Estimates Interpolate Decades 1790 to 1990 Match Decades		Census Estimates Interpolate 1900 to 1990 Match Annually		Census Estimates Interpolate by Decade Match Annually	
	T_1/T_n	Matched	T_1/T_n	Matched	T_1/T_n	Matched
10 percent difference	0.407	66.7%	0.407	56.1%	0.407	39.2%
Best Prediction Ratio	0.180	70.6%	0.450	56.1%	0.15	41.2%

Note: The difference ratios of 0.18, 0.45, and 0.15 result in percent differences between linear and exponential interpolation of 42.9 percent, 35.3 percent, and 7.9 percent respectively.

population growth fits an exponential model more closely than a linear model (figure 1). At the state level this is not generally the case. Thus, it is possible that the effects of immigration and emigration mask “natural” growth and, subsequently, invalidate the exponential assumption at a finer spatial and temporal scale.

Even though empirically linear interpolation appears to fit more frequently, and there is no selection criterion to “predict” when one interpolation method is better then the other, we have shown (Appendix B) that using exponential interpolation provides lower population estimates under an increasing population scenario. Thus, it might be prudent to err on the side of conservatism when the intervals between data points are large (over 10 years) and there are large differences between the starting and ending population level for that interval. Table 6 provides a list of such intervals for our data set. When the missing population values are estimated using exponential interpolation for these intervals only, we get differences in our estimates of national population (linear interpolation) ranging from less than 0.01 percent to a maximum of 5.9 percent (1618, 143 fewer individuals). The differences in population estimates between linear and exponential for the intervals listed in table 6 vary from a low of 17 to 29,558.

Table 6—Intervals to consider using exponential interpolation over linear interpolation.

State	T_1/T_n	Starting year	Ending year
Alaska	0.160	1799	1833
California	0.162	1781	1822
Illinois	0.123	1682	1723
Illinois	0.197	1787	1810
Maine	0.050	1650	1760
Missouri	0.114	1735	1763
Missouri	0.097	1770	1804
New Jersey	0.066	1633	1665
New Mexico	0.154	1692	1776
New Mexico	0.167	1776	1800
Vermont	0.151	1724	1763
West Virginia	0.004	1732	1790
Wisconsin	0.137	1800	1820

Results

Interpolation

We opted to use linear interpolation to fill in missing population values throughout the data set, recognizing that there are possibly cases where exponential interpolation might be better. This decision is based, first, on the empirical evidence, which indicates linear interpolation fits the known population data more frequently than does exponential interpolation. Second, we were unable to develop a criterion allowing us to predict when to use one method over the other. Third, assuming conservative estimates might be better, we examined the impact that specific intervals with large differences between starting and ending populations would have on our estimates. The differences were minor in terms of the overall estimates. Further, linear interpolation also has the additional advantages of being easily applied, easily explained, easily understood, and accepted as a valid methodology.

The Data

The United States population estimates cover the 50 states and Washington DC from first European settlement to 1999. These estimates represent the new settlers whom are presumed responsible for changing the landscape from an earlier state. Thus, these estimates do not include aboriginals unless they were counted as part of the settlements. There are estimates of aboriginal populations at the time of European settlement and prior to 1564, although they may not be complete. Figure 5 shows the U.S. total population estimates from 1564 to 1999. It would appear that little population growth occurred prior to 1790. However, figure 6 and figure 7 demonstrate that early growth in the plot is masked by the magnitude of recent population levels.

Figure 8 further demonstrates the varying rates of growth over time. Here we treat each century, seventeenth through the twentieth, as a separate population and standardize each to a range between zero and one by dividing though the hundredth year (1699, 1799, 1899, and 1999 respectively).

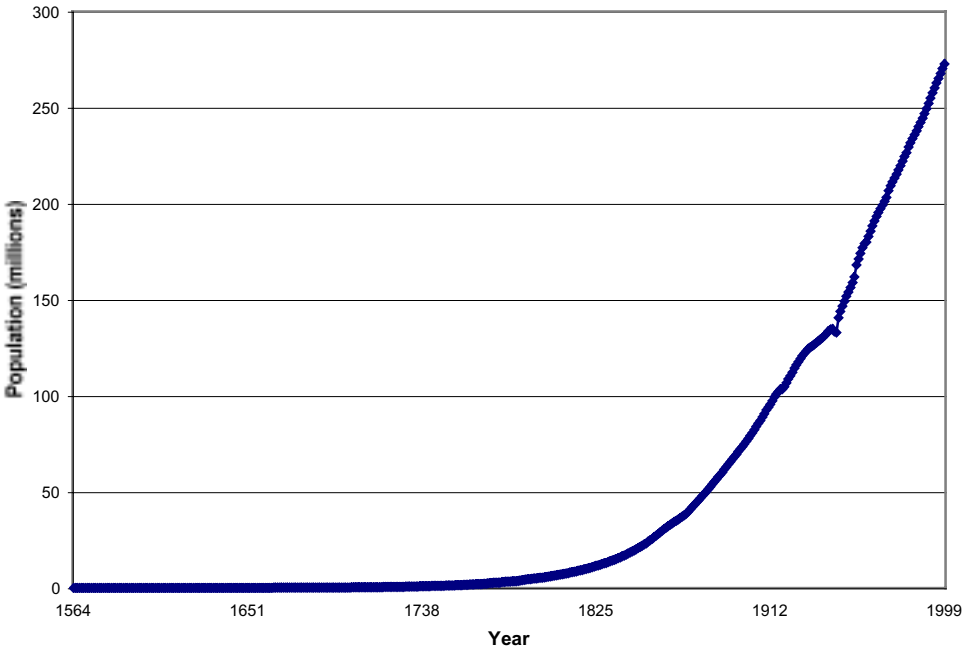

Figure 5—United States population estimates from first European settlement to 1999.

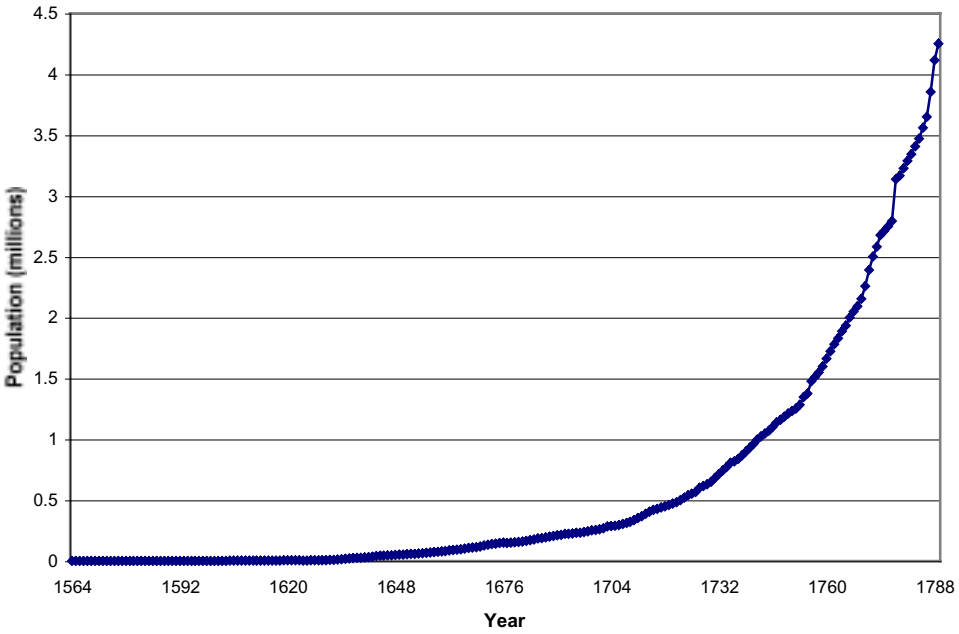

Figure 6—United States population estimates 1564 to 1789.

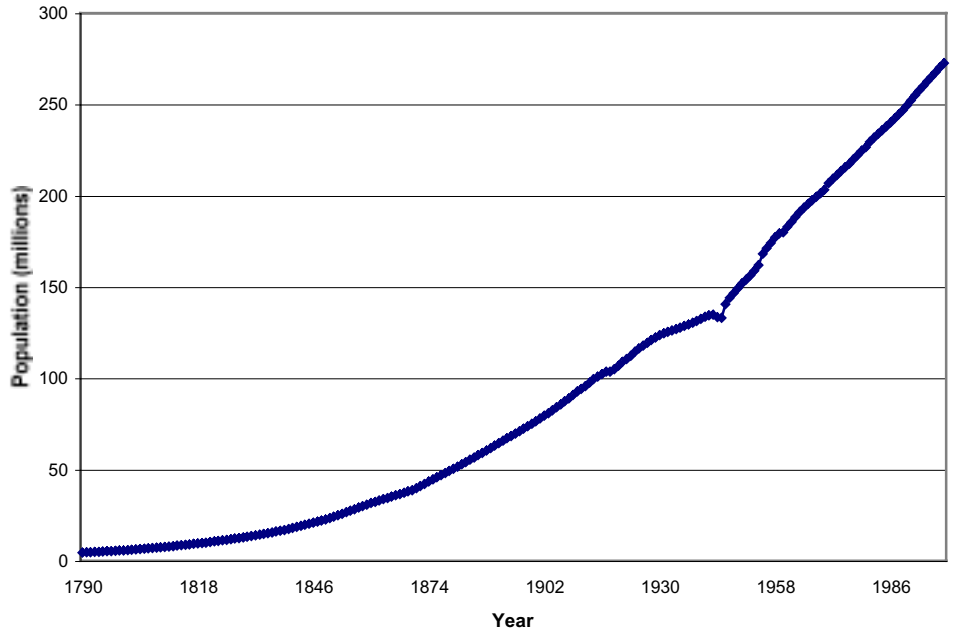

Figure 7—United States population estimates 1790 to 1999.

In 1790 only 31 of the 51 present day states and Washington DC had population estimates over 1,000, pointing out the need for spatial distributions finer then the national level. While the overall national population is relatively small in the early years (prior to 1790) when compared to today, there are states with early population levels high enough to have caused substantial land use early in the time series. Figures 9 through 13 show the population estimates for Arizona, Maine, California, North Dakota, and South Carolina, respectively.

Figure 14 illustrates the variation in population growth across states through time. We standardized the individual growth curves between zero and one for Arizona, California, Maine, North Dakota, South Carolina, and the United States by dividing each population value by the maximum population value for the series from 1790 to 1999.

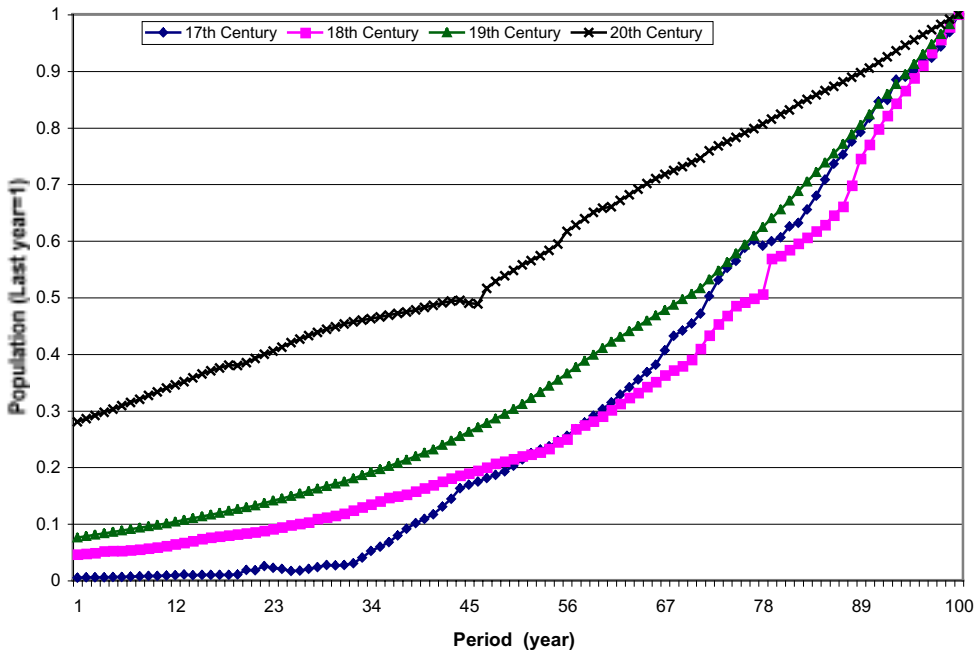

Figure 8—Standardized population growth curves by century.

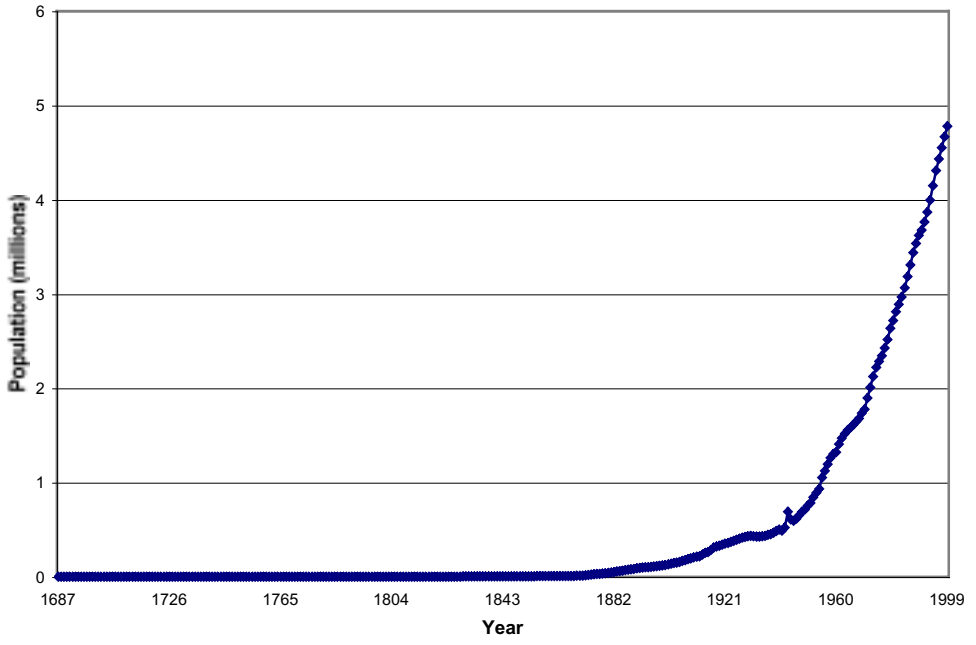

Figure 9—Arizona population estimates 1687 to 1999.

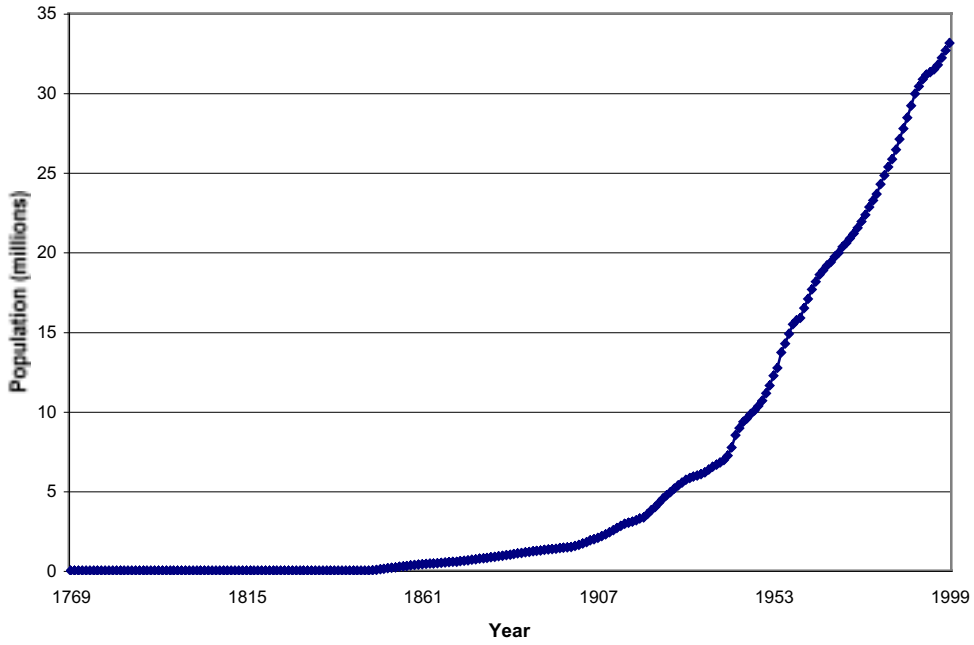

Figure 10—California population estimates 1769 to 1999.

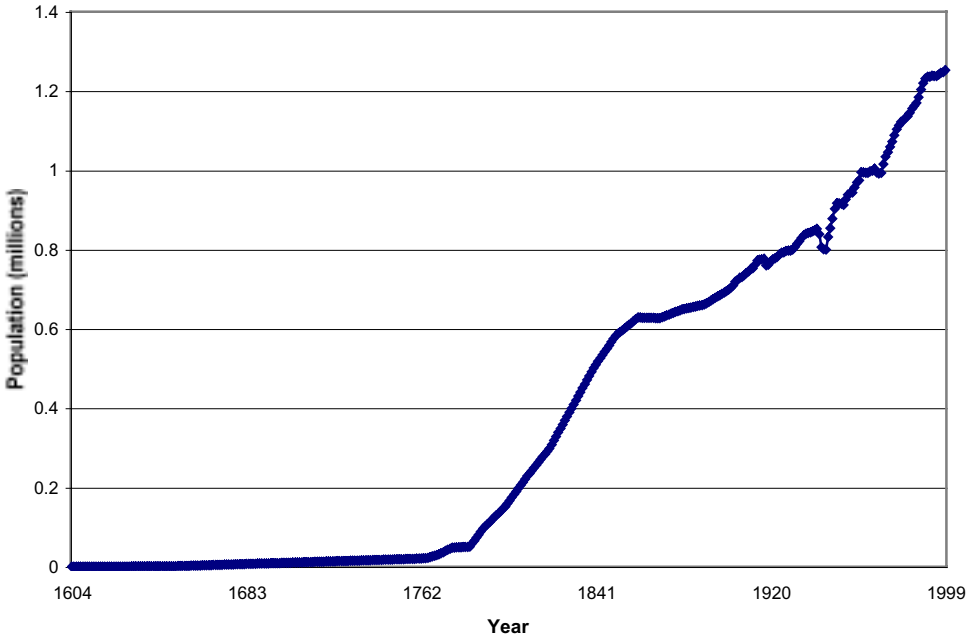

Figure 11—Maine population estimates 1604 to 1999.

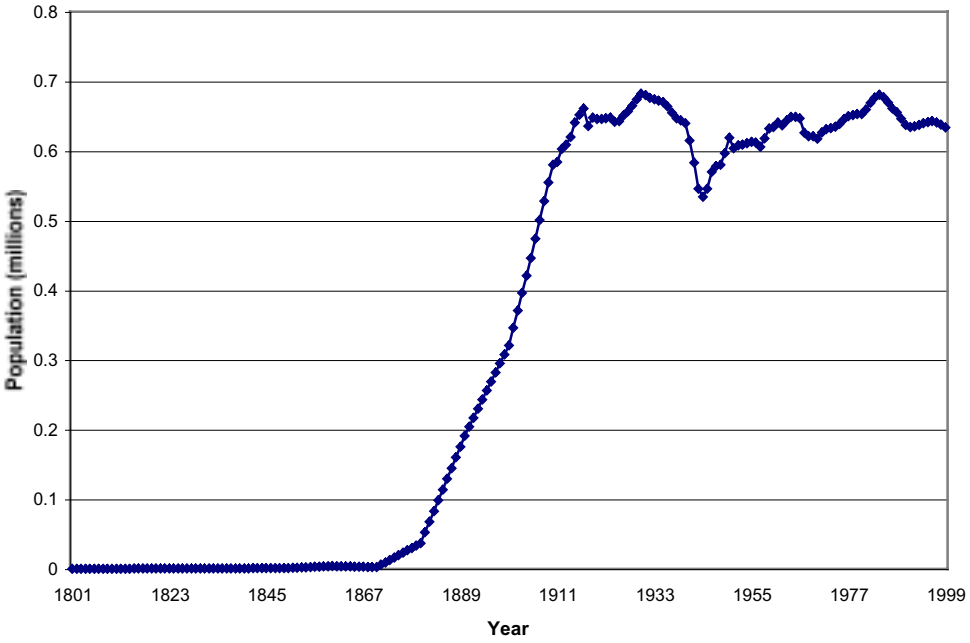

Figure 12—North Dakota population estimates 1801 to 1999.

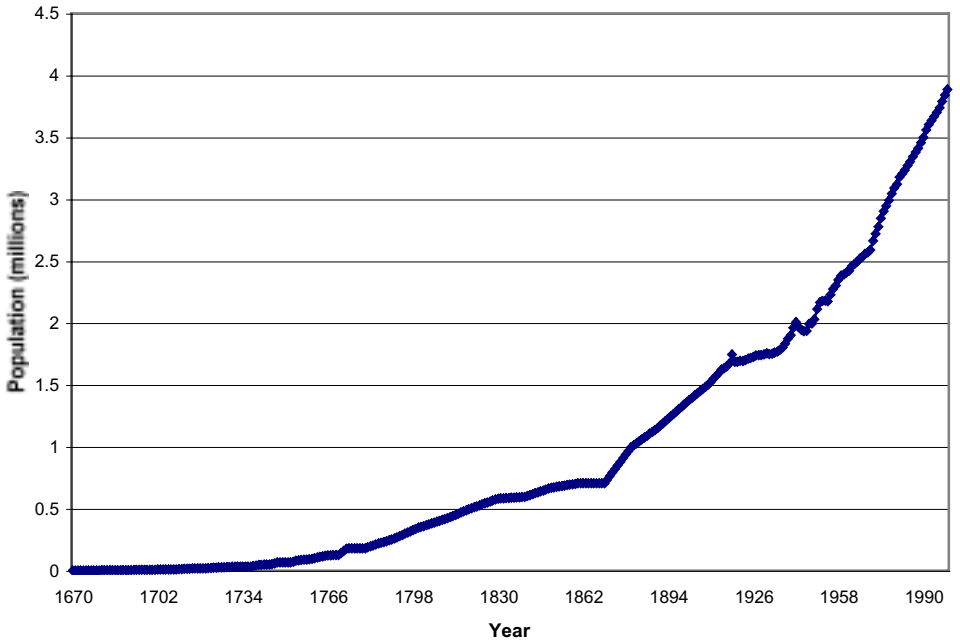

Figure 13—South Carolina population estimates 1670 to 1999.

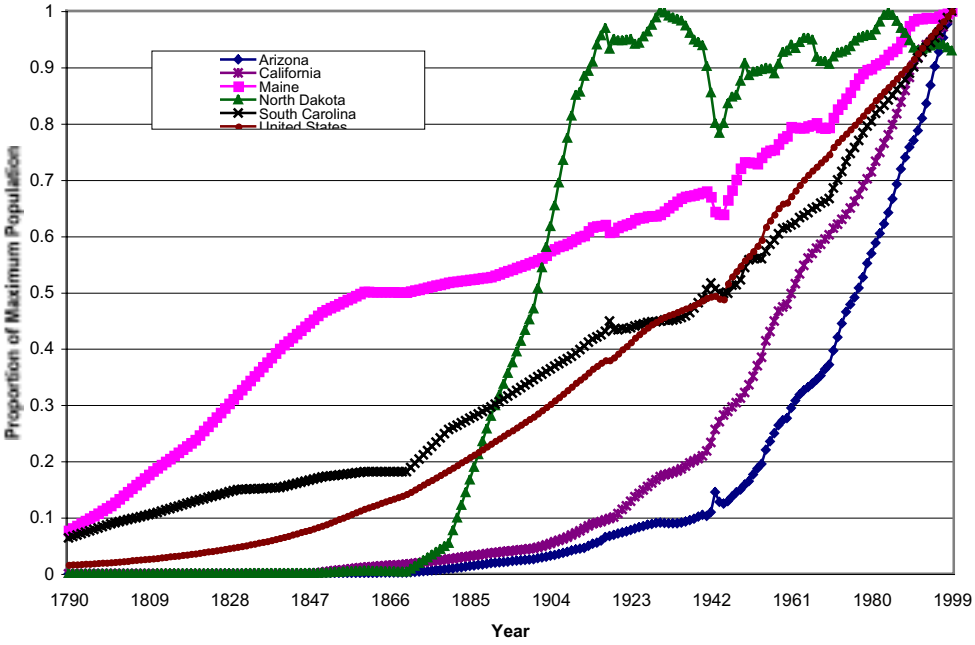

Figure 14—Standardized population growth curves for the United States and selected states (figures 9 to 13).

Conclusion

We present United States population series from first European settlement to 1999 for all states and Washington DC. These series were developed to assist in modeling historical trends in land use, but may have other applications. As historical land use changes are frequently viewed as having their beginnings with the arrival of European settlers, the data do not account for the aboriginal peoples during early settlement. However, aboriginals were not excluded as time passed and they were subsequently counted. Thus, this series is meant to represent the magnitudes and trends of the American population that was impacting/causing changes in land use from European settlement.

There was a substantial human population in North America prior to the arrival of Europeans. There is little doubt that the aboriginal peoples impacted the land, although to what extent is not readily quantifiable. With the arrival of Europeans and the introduction of disease and other factors, there was a large loss of human life, primarily the aboriginal population (Mann 2002). This raises the possibility that the anthropogenic disturbances may have been actually reduced, temporarily, with the onset of European settlement. There may be merit in the development of spatial and temporal population data to account for all peoples prior to and subsequent to European settlement for use in modeling historical land use.

While extensive research went into the development of this series and an extensive number of sources were consulted, it is by no means exhaustive. As “new” historical information comes to light, the authors may revise the series as appropriate. Further, it should be noted that data were not available for every year from first settlement to 1999; in fact even when values are available for specific years (other than censuses), they are generally estimates.

In addition to the data series, a critical look was taken on the use of linear interpolation when working with human population series. Ask someone to draw a growth curve for human population and you will likely get something in the form of an exponential curve. While this seems intuitive, we find that at the state-level, forces other than natural reproduction and death, such as immigration and emigration, appear to drive population change. Thus, the

empirical findings of this work suggest that linear interpolation is a better interpolation method than exponential. We further point out those states and times where linear interpolation could potentially overestimate the population and show that the overall estimation error is likely small. Given the lack of clear evidence on which interpolation methods to use, further work on data assimilation and population may be warranted.

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Appendix A—Development of Difference Measure between Exponential and Linear Interpolation

Linear interpolation is defined as

$$T_i = T_1 + D(i-1) \quad \text{A.1}$$

and exponential interpolation is defined as

$$\mathrm{m}\,T_i = T_1 e^{r(i-1)}. \quad \text{A.2}$$

Where T_i = period population, i = 1 to n, n is the number of equal time intervals, and note that

$$D = \frac{T_n - T_1}{n-1} \quad \text{A.3}$$

and

$$r = \frac{\ln\left(\frac{T_n}{T_1}\right)}{n-1}. \quad \text{A.4}$$

We write the difference function as

$$f(\text{difference}) = \left(T_1 + D(i-1)\right) - \left(T_1 \exp\left(r(i-1)\right)\right). \quad \text{A.5}$$

Taking the derivative, setting to zero and solving for i gives

$$\frac{df}{di} = D - rT_1 \exp\left(r(i-1)\right) = 0$$

$$i = \frac{\ln(D) - \ln(r) - \ln(T_1)}{r} + 1.$$

Substituting in A.3 and A.4 gives

$$i = \frac{\ln\left(\frac{T_n - T_1}{n-1}\right) - \ln\left(\frac{\ln\left(\frac{T_n}{T_1}\right)}{n-1}\right) - \ln(T_1)}{\frac{\ln\left(\frac{T_n}{T_1}\right)}{n-1}} + 1$$

$$i = \frac{\left(\ln(T_n - T_1) - \ln(n-1) - \ln\left(\ln\left(\frac{T_n}{T_1}\right)\right) + \ln(n-1) - \ln(T_1)\right)}{\ln\left(\frac{T_n}{T_1}\right)}(n-1) + 1$$

$$i = \frac{\left(\ln(T_n - T_1) - \ln\left(\ln\left(\frac{T_n}{T_1} \right) \right) - \ln(T_1) \right)}{\ln\left(\frac{T_n}{T_1} \right)} (n-1) + 1 . \quad \text{A.6}$$

This represents the time i that maximizes the difference between linear and exponential interpolation. If we let

$$a = \frac{\ln\left(\frac{T_n - T_1}{T_1} \right) - \ln\left(\ln\left(\frac{T_n}{T_1} \right) \right)}{\ln\left(\frac{T_n}{T_1} \right)} \quad \text{A.7}$$

our equation reduces to

$$i = a(n-1) + 1 . \quad \text{A.8}$$

We note that A.7 is independent of i, time.

We now demonstrate that the maximum difference is independent of time by substituting A.3, A.4, and A.8 into our difference equation A.5 to obtain.

$$f(\text{difference}) = \left(T_i + \left(\frac{T_n - T_1}{n-1} \right) (a(n-1) + 1 - 1) \right) - \left(T_1 \exp\left(\frac{\ln\left(\frac{T_n}{T_1} \right)}{n-1} (a(n-1) + 1 - 1) \right) \right)$$

$$f(\text{difference}) = (T_i + (T_n - T_1)a) - \left(T_1 \left(\frac{T_n}{T_1} \right)^a \right) \quad \text{A.9}$$

Neither i nor n remain in the equation, thus demonstrating that the maximization of the difference between linear and exponential interpolation is independent of the time interval.

We further demonstrate that the percent difference between the two methods, defined as

$$\% \text{ difference} = \frac{\text{linear} - \text{exponential}}{\text{exponential}} \, x \, 100\%$$

is independent of the actual magnitude or difference between the starting and ending populations T_1 and T_n respectively and is dependent solely on the relative magnitude of T_1 and T_n, expressed as a ratio, T_1/T_n . Thus, the maximum percent difference between the two interpolation methods can be calculated with a single value $y = T_1/T_n$.

We define the difference proportion as

$$DP = \frac{\text{linear} - \text{exponential}}{\text{exponential}}$$

$$DP = \frac{\left(T_i + \left(T_n - T_1\right)a\right) - \left(T_1\left(\frac{T_n}{T_1}\right)^a\right)}{\left(T_1\left(\frac{T_n}{T_1}\right)^a\right)}$$

$$DP = \frac{\left(T_i + \left(T_n - T_1\right)a\right)}{\left(T_1\left(\frac{T_n}{T_1}\right)^a\right)} - 1 \quad . \qquad \text{A.10}$$

Define the magnitude ratio as

$$y = \frac{T_1}{T_n} \, . \qquad \text{A.11}$$

Substitute A.11 in to A.7

$$a = \frac{\ln\left(\frac{1}{y} - 1\right) - \ln\left(\ln\left(\frac{1}{y}\right)\right)}{\ln\left(\frac{1}{y}\right)}$$

$$a = \frac{\ln\left(\frac{1-y}{y}\right) - \ln\left(\ln(1) - \ln(y)\right)}{\ln(1) - \ln(y)}$$

$$a = -\frac{\ln\left(\frac{1-y}{y}\right) - \ln\left(-\ln(y)\right)}{\ln(y)} \, . \qquad \text{A.12}$$

Further substitute A.11 into A.10

$$DP = \frac{\left(yT_n + \left(T_n - yT_n\right)a\right)}{\left(yT_n\left(\frac{T_n}{yT_n}\right)^a\right)} - 1$$

$$\left(1 + DP\right)\left(yT_n\left(\frac{1}{y}\right)^a\right) = T_n\left(y + a - ay\right)$$

$$\left(1 + DP\right)y^{1-a} = y + a\left(1 - y\right)$$

$$DP = \frac{y + a\left(1 - y\right)}{y^{1-a}} - 1 \, . \qquad \text{A.13}$$

We note that *a* is a function dependent only on y. Therefore, so is the maximum percent difference between the two interpolation methods. This means that the maximum difference between the two methods, under the assumption that exponential interpolation is correct, is calculable using the ratio of starting population to ending population values.

Appendix B—Proof linear interpolation is always greater than or equal to exponential interpolation under strictly increasing conditions

We assume $1 \le T_1 \le T_d$ and that both are integer valued. The difference equation from A.5 is

$$f(\text{difference}) = \left(T_1 + D(i-1)\right) - \left(T_1 \exp\left(r(i-1)\right)\right).$$

We assume our difference equation is greater than or equal to zero and substituting in A.3 and A.4 respectively we obtain

$$T_1 + (T_n - T_1)\left(\frac{i-1}{n-1}\right) - T_1 \exp\left(\ln\left(\frac{T_n}{T_1}\right)\left(\frac{i-1}{n-1}\right)\right) \ge 0 . \qquad \text{B.1}$$

Rearranging terms produces

$$T_1 + (T_n - T_1)\left(\frac{i-1}{n-1}\right) - T_1\left(\frac{T_n}{T_1}\right)^{\left(\frac{i-1}{n-1}\right)} \ge 0$$

which we divide through by T_1 giving

$$1 + \frac{T_n}{T_1}\left(\frac{i-1}{n-1}\right) - \frac{i-1}{n-1} - \left(\frac{T_n}{T_1}\right)^{\left(\frac{i-1}{n-1}\right)} \ge 0 .$$

Rearrange terms and multiply through by T_1/T_n gives

$$\frac{T_1}{T_n} - \left(\frac{T_1}{T_n}\right)\frac{i-1}{n-1} + \left(\frac{i-1}{n-1}\right) - \left(\frac{T_n}{T_1}\right)^{1-\left(\frac{i-1}{n-1}\right)} \ge 0 .$$

Rearrange and combine terms to get

$$\left(\frac{i-1}{n-1}\right)\left(1 - \frac{T_1}{T_n}\right) + \frac{T_1}{T_n} - \left(\frac{T_1}{T_n}\right)^{1-\left(\frac{i-1}{n-1}\right)} \ge 0 . \qquad \text{B.2}$$

We note that

$$\left(\frac{i-1}{n-1}\right)\left(1 - \frac{T_1}{T_n}\right) \qquad \text{B.3}$$

is always greater then one because $\left(\frac{i-1}{n-1}\right)$ is constrained between 0 and 1 as i = 1 to n. Likewise, $\left(1 - \frac{T_1}{T_n}\right)$ is constrained between 0 and 1 as T_1 is greater than or equal to one and T_n is greater than or equal to T_1. Multiplying two positive numbers between 0 and 1 result in a value between 0 and 1. Therefore this part is always equal to or greater than zero.

Turning our attention to

$$\frac{T_1}{T_n} - \left(\frac{T_1}{T_n}\right)^{1-\left(\frac{i-1}{n-1}\right)} \qquad \text{B.4}$$

we note the power term of the second radical is constrained to be between 0 and 1 by the previous argument and will always be positive. Also the ratios, by the previous arguments, are constrained between 0 and 1. Ratios between 0 to 1 taken to a power between 0 and 1 will always be less than the ratio. Thus, this component is obviously greater than or equal to one. The sum of two values greater than or equal to zero will be greater than or equal to zero.

QED

We note that under strictly decreasing situations a similar proof can be made to show exponential interpolation will always be larger than linear interpolation.

Appendix C—State level series development

Introduction

All Internet references that follow are given as state and number, labeled in the reference section, under States (Electronic media). All missing years are filled in via linear interpolation unless otherwise noted. In cases where the initial settlement size was not found, an estimate was made based on the general size of other settlements in the region during a comparable time. For example, early French posts (1600s) were generally a handful of trappers, rarely exceeding 10. Historical accountings of these trading posts indicate that they remained small, rarely exceeding 40 to 50 inhabitants. English settlements, on the other hand, were generally 100 to 200, while the Spanish settlements were frequently larger. We note that 10 to 25 people permanently staffed fur-trading forts during the 1820s to 1840s in the Western United States, but they often saw their ranks swollen to as many as 250. Further, the 10 to 25 staff do not account for the wives and children frequently present. Thus we assume trading forts/posts during this period represent a "resident" population of 100, accounting for travelers, traders, trappers, miners, soldiers, and miscellaneous settlers present in the region but not well accounted. The interested reader might read the account of Bent's Old Fort (State Historical Society of Colorado 1979) for more information on the historical activities of a western trading post.

An interesting situation exists when attempting to estimate settlement size. Frequently the records will list the number of men present but not wives and children. In the case of trappers, particularly the early French, they frequently took native wives, especially with the establishment of forts and trading posts. In the case of the Spanish, most soldiers were soldier/settlers and many, if not most, had their wives and children with them. Another characterization of the Spanish was their mission system. Missions were nearly always established with a military presence. In fact this was such a hand--in-glove situation that the Spanish government limited expansion of the mission system in America due to the lack of resources to provide adequate soldiers to protect the missions. The implications of this are simply that records listing the numbers of soldiers, missionaries, and traders generally understate the true numbers of people present.

The following is a synopsis of the research by state. The population estimates found and their references are provided. The following are the definitions for the sources given in the data tables developed from Greene and Harrington (1932) and United States Bureau of Census (1975). The conversion factors in table 2 were used to convert the data to the population estimates reported in the data tables, barring an overriding reason to use a different factor. In the cases where a different conversion factor was used, it is so noted in the state-level accounts.

Census	A census conducted by someone other than the United States federal government.
Estimate	Population estimated prior to 1790 made by the United States Bureau of Census.
Family	Count of families in the region excludes soldiers and individuals. Assumed to be six individuals.
House	Count of habitable structures. Assumed to be seven people per house, as homes generally had extras above and beyond the family unit.
Men	A count of men able to bear arms. Assumed to be equivalent to four individuals.
Militia	Those registered to be called to fight. Assume to be equivalent to 5.33 people per militia.

Poll — A list of eligible voters; the relation to population is assumed to be similar to that of "men," equivalent to four individuals.

Taxable — Those individuals eligible for taxation. The list may include slaves. It is assumed that there are four individuals for every person on the tax rolls.

Tithable — Count of those obligated to pay tithes to churches. It is assumed to be equivalent to four individuals.

Value — Population estimate made at the time. These estimates come from a wide variety of sources, such as newspapers, letters, visitors, local leaders, and so forth.

The following state level accounts show the development of the historical population series prior to the first federal census. Unless stated otherwise, we linearly interpolate between all data values in the final series development. The last population value given here for each state is also linearly interpolated to the first federal census value that is not generally provided in the following accounts.

Alabama - 01

Pickett (1851) provides the following account.

1702 Fort Louis, the first permanent settlement, was established by d'Iberville with 202 colonists.

1704 Fort Louis was reported to have 180 men, two French families (with 10 children), six Indian slaves, and officers (est. 218). Later that year 23 women arrived from France along with 75 soldiers of whom 30 died shortly after arrival. We estimate the population to be 286.

1706 Fifty Canadians from the upper Mississippi joined the colony. We estimate the population to be 330.

1708 There were 279 persons reported, plus an additional 60 Canadians for a total of 339.

1712 There were 28 families reported, plus 20 Negroes, 75 Canadians, and two companies of 50 each for a total of 324.

1717 There were an estimated 400 inhabitants.

1721 There were 5,420 plus some 600 Negroes in the French Colonies (includes all of the Mississippi and Gulf region). That year two ships of slaves (240) and three ships of immigrants (806) were unloaded at Mobile. We estimate Alabama's population at 1,500 in 1721 (240 + 806 + 400, rounded up).

1722 The Royal Bank of France failed, subsequently the colonies' needs were neglected and many settlers began abandoning the settlement, which we assume to be approximately 1,500.

1723 We estimate a one-third population loss, reducing it to 1,000.

1724 We estimate another 500 abandoned the settlement, reducing the population to 500, and assume it remains constant population until 1763.

1763 The British take over. Mobile has a population of 350 at the time (Rogers, 1994). We assume the existence of another 150 in the region. We interpolate from 500 to the 1800 census.

Alaska - 02

1741 The Russians first sighted Alaska in (Alaska 1).

1784 The first permanent settlement was established at Three Saints Harbor on Kodiak Island (Hardwick 1993) with over 200 men. There were over 6,500 Sugpiaq Eskimos living in the area at the time (Alaska 3). We assume that Kodiak was settled with half those on the initial expedition (three ships, one lost), or 100.

1787 Fort St. George and St. Nicholas Redoubt were established on the Kenai (Hardwick 1993). We assume 100 each for the two settlements on Kenai in 1787, bringing the non-native population to 300.

1791 Kenai has an estimated population of 300 (Alaska 2) and Kodiak has a population of 110 Russians and 900 natives (Alaska 4). The Russian population is estimated at 1,310 (300 + 110 + 900) this year and we assume no further growth in 1792.

1793 St. Constantine Redoubt established (Hardwick 1993) with an assumed 100 and we estimate Alaska's population to be 1,410 and assume no further growth until the next settlement.

1795 Slavorossiya (Yakutat) established (Hardwick 1993) with an assumed 100. We estimate Alaska's population to be 1,510 and assume no further growth until the next settlement.

1799 New Archangel (Sitka) established (Hardwick 1993) with an assumed initial 100 and we estimate Alaska's population to be 1,610.

1817 New Archangel had a population of 620 (190 Russians, 182 Creoles, 248 Aleuts) (Hardwick 1993).

1820s The region was divided into four districts (Hardwick 1993).

1833 New Archangel - Russians 379, Creoles 307, natives 136, total 822 (882 in text).

Kodiak - Russians 103, Creoles 239, natives 6,607, total 6,949.

Unalaska - Russians 30, Creoles 186, natives 1,282, total 1,498.

Atka - Russians 41, Creoles 146, natives 593, total 780.

The total is 10,049 (Hardwick 1993).

1840 There were 10,313 Orthodox in Alaska - 706 Russian, 1,295 Creole and 8,312 natives (Hardwick 1993). We estimate 11,000 under the assumption that nearly all members of the Russian-American Company were Orthodox.

1867 The Russian-American Company (trading company) was Alaska from 1791 until the United States purchase in 1867. As the fur trade was on the decline from 1840 to 1867 we assume a constant population during this period.

1897 The famous gold rush this year suggests a sudden influx of people. So we assume 35,000 in 1896, rather than a straight interpolation from the1890 census to the 1900 census.

Arizona - 04

The following accounts are taken from Peck (1962), Sheridan (1995), and Wagoner (1975).

1687 Kino and a few colleagues established the first "settlement," the mission Tumacacori. We assume a low initial population of 10 Europeans and interpolate to 1732, noting that the missions were not well maintained.

1732 San Xavier de Bac and Guevavi were established, bringing in a trickle of colonists. We estimate a population of 100 and note that there was renewed interest in the region by the Catholic Church.

1736 Silver was discovered, attracting miners and traders. We estimate a population of 200.

1741 The Mexican government shuts down the silver trade, but many remained in the region. As no new towns were established we assume the population grew to 1,000.

1744 San Xavier had a population of over 400 families, primarily native (Arizona 2).

1751 The Pima uprising resulted in the death of over 100 settlers; many more escaped. We assume a constant population of 1,000 (non-native) from 1741-50. Then we estimate a population of 100, assuming the majority of 1,000 were forced out of the state.

1752 The Spanish responded by establishing a Presidio at Tubac, the first permanent non-native town in Arizona with a garrison of 50 and their families. We estimate a population of 300 (100 remaining + 50 soldiers times 4).

1757 Tubac had over 400 residents. We estimate 500 for the state.

1768-72 San Xavier (near Tucson) had a population of nearly 300. We estimate 800 in 1768 and assume a constant population through 1778.

1779 A garrison was established at Tucson with 80 soldiers (and presumably families). We assume a population of 1,120 (700 plus 80 times 4).

1780 Yuma was established with 40 families and 42 soldiers (30 with their wives and children). A short-lived settlement, as the Yuma killed all but seven men. Northern settlement did not occur again until 1870-80 when the Indians were brought under control by the American military.

1790 to 1820 There was general peace in the region and the population was steady at 300 to 500 in Tucson, 300 to 400 in Tubac and 100 in Tumacacori. Tucson had a population of 395 in 1820 (Arizona 1). Therefore we assume a constant population from 1779 to 1820 (1,120).

1820-30 Hundreds of trappers arrived in the region. With the influx of trappers, we estimate the population rises to 2,000 by 1830.

1830-59 The Apache Indians halted any further settlement and effectively limited non-native populations to Tubac, Yuma, and Tucson, so we assume a constant population of 2,000 during this period.

1860 A territorial census shows Arizona to have 2,421 whites, 4,040 Indians, and 21 Negroes, totaling 6,482. We interpolate from 1850 to 1860.

Arkansas - 05

1686 DeTonti established the Arkansas Post, Arkansas' first settlement, with a party of six (Arkansas Secretary of State, 2000). There is no evidence to suggest that the settlement grew beyond a small trading post until 1720.

1720 Some 100 settlers came to the area (Arnold 1991).

1722 Forty-four settlers remain; the rest resettled outside present day New Orleans.

1723 A visiting priest indicated that there were only 20 living in the area (Arnold 1991).

1727 Approximately 30 French were living in the area (Ashmore 1978).

1731 The Fort was reestablished with 12 soldiers (Arnold 1991). Thus, we assume a population of 42 at that time (30 from 1727 plus 12 soldiers).

1770 Pittman (Ashmore 1978) found 32 soldiers and eight families. Assuming six to a family, we estimate a population of 80.

1779 Thirty dwellings were noted (Arnold 1991). Assuming seven per dwelling, we estimate a population of 210.

1793 The area was reported have 220 free and slave (Arnold 1991).

1799 The white population was estimated to be 386, with a total population likely around 400 (Arnold 1991).

California - 06

1769 Franciscan Father Juan Crespi with three ships and two land parties set out from the Baja to establish a mission at present day San Diego, with maybe half the initial 300 plus surviving the journey (Bean 1968).

1770 A Presidio was established at Monterey with a population of 47. Five died before year-end, 20 more joined in 1771, and by 1772 nearly 50 remained at Monterey (California 3).

1776 San Francisco is established with 30 soldiers and families plus four civilian families.

Bean (1968) provides the following timeline for mission establishment in table B1 from 1769-80. The state population estimates are of the authors, based on the above information and the assumption that each mission established after San Francisco had an initial population of 50.

1781 The population of Alta California was approximately 600 (202 men in garrisons) (California 2).

1822 The population of Alta California was approximately 3,700 (California 2).
1845 Bean (1968) estimates the non-native population was approximately 7,000.
1848 The discovery of gold brought the gold rush and about 6,000 miners that year Bean (1968). We extend the interpolation trend line from 1822 to 1845 (estimated 7,000) to 1847 (estimate 7,287) and then add 6,000 to estimate a population of 13,000.
1849 There were 40,000 miners, so we estimate a population of 50,000 that year.

Colorado - 08

Hafen (1933) provides us with the following account, except as noted. There were lesser posts, explorers, and visitors in the region from 1820 through 1850 that are not specifically accounted for here. We assume each trading post in operation through 1850 represents 100 residents. Population estimates given are for Colorado as a whole.

1825 Robidoux established the first permanent trading post (Colorado 1). Population estimated at 100.
1828 Fort Bent established on the Arkansas. Population estimated at 200.
1830 Marurice LeDoux established near Florence, on the South Platte River. Population estimated at 300.
1836 Fort Lupton established. Population estimated at 400.
1837 Fort Velasquez established. Population estimated at 500.
1838 Fort Jackson and Fort St. Vrain. Population estimated at 700
1839 Browns Hole established. Population estimated at 800.
1842 A settlement was attempted and failed at Pueblo.
1842 Fort Pueblo established. Population estimated at 900.
1843-44 Fifteen to 20 families settled at Hardscrabble creek south of Trinidad. We estimate a population of 1,000 in 1843.
1846 Two hundred and seventy-five Mormons settle south of Pueblo. We estimate a population of 1,300.

In addition to the settlements during the 1840s there were numerous ranches in the region. Starting in 1851, we estimate that each permanent settlement adds 200 to the population and that Fort Massachusetts adds 100 (two companies).

1851 San Luis is established at Conejos in San Luis Valley (Colorado 1). We estimate a population of 1,500.
1852 San Pedro and Fort Massachusetts are established. We estimate a population of 1,800
1853 San Acacio is established. We estimate a population of 2,000.
1854 Galadalpe is established. We estimate a population of 2,200.
1858 Fort Garland replaced Fort Massachusetts and had two companies of soldiers and officers (100 plus). Gold was discovered at Dry Creek near Englewood resulting in sudden changes. Auraria, near present downtown Denver, was founded with a meeting of 200 men (Colorado 2). We estimate a population of 2,500 in 1858 with the establishment of Auraria (Denver).
1859 An estimated 100,000 set out for Colorado from Missouri; 50,000 reached the mountains, and of those, half returned home after reaching Cherry Creek. We estimate a population of 27,500 (25,000 + 2,500).
1860 The population is 34,277 according to the United States Bureau of Census estimates (CPH-2-1, table 16). A territorial census in 1861 puts the population of the territory at 25,331 (Hafen 1933). Given that the gold boom turned to bust, the population dropped as fast as it started.

There is a real lack of “hard” numbers for early Colorado, so the values we present from 1825 though 1858 are estimates. In 1858, we know that there were at least four communities and one fort (with over 100 men), and that the

founding meeting for Denver drew over 200 men. Assuming four people for each man at the meeting, that accounts for 800. Further, assuming 200 per community (family size of 4) and adding another 100 for the fort, we are sure Colorado's population was over 1,700 people at the time. This does not account for ranchers, explorers, miners, natives, trappers and miscellaneous settlers. So we suspect our estimate of 2,500 for 1858 is low.

Connecticut - 09

We use the founding of Wethersfield, Windsor, 1634, as the initial settlement date (Wilson 1998). From Greene and Harrington we find the population was 800 in both 1636 and 1637, so we use this as our starting population. Table B2 of population estimates was developed from Greene and Harrington (1932) and Census Bureau estimates (estimate).

Delaware - 10

In 1631 Dutch establish Zwaanendael, the first settlement (Wilson 1998). No information was found on the initial size of the settlement, but it was set up as a whaling colony and everyone was killed the first year. The colony was reestablished in 1632. We assume 25, although that is likely conservative. The subsequent years to 1790 were developed from Greene and Harrington (1932) and Census Bureau (1975) estimates (estimate) as shown in table B3.

Florida - 12

Milanich (1995) reported that the French built Fort Caroline in 1564 with 300. Some men stole a ship and headed home, another 60 deserted. A month or two later the Spanish established St. Augustine with 600 and cleared out the French, killing 132 Frenchmen and capturing 50 plus women and children. The shipwrecked French fleet arrived and the Spanish killed the first wave (111), sparing a dozen Catholics. The second group arriving two weeks later was all killed. Other forts and settlements occurred after 1564, but all were abandoned by 1587 and St. Augustine was the sole remaining settlement in Florida until 1598 when Pensacola was established.

1564 Deagan (1991) reported that while a large force built St. Augustine, the residual force left was 70 men and an unknown number of women and children. We estimate Florida's population at 82, assuming 15 percent women and children.

1569 Eighty men and 14 women were added to the fort. We assume no growth prior to this year and estimate a population of 176.

1577 The fort reported 100 men and officers and a more "normal" ratio of men and women (we assume normal to mean 50/50, and use 60/40 men/women as approaching normal). We estimate the population to be 167.

1578 186 men were reported (27 being seamen). We assume the same ratio applied to the 186 less the 27 sailors. Thus we estimate a population of 292.

1580 150 men were reported. We estimate the population to be 250 (150/0.6).

From 1596 to 1761, Deagan (1991) provides population estimates for St. Augustine (table B4). TePaske (1975) estimated St. Augustine's population in 1746 to be 1,509 (403 blacks). When the Spanish evacuated St. Augustine the population was 3,104. We linearly interpolate between these values and add them to the Pensacola population estimates obtaining an estimate for Florida.

Pensacola, the only other Florida settlement through 1763, was established in 1698 with 100 soldiers. In 1699 another 357 soldiers were added. In 1763 at the time of evacuations there were 981 residents (Bense 1999). Assuming 15 percent women and children we estimate the population to be 118 and 538 for 1698 and 1699 respectively. We linearly interpolate to estimate the missing values.

Numbers for the British era from 1763 to 1783 are scarce. While efforts were made to colonize the region, they appear to have been relatively unsuccessful. Tanner (Proctor 1975) estimated the population at the time of the American Revolution (1776) to be approximately 1,000 whites and 3,000 blacks. Therefore, we assume the British simply replaced the Spanish with an equivalent number of settlers and soldiers (4,085). During the Second Spanish era, West Florida's population was 3,190 in 1787 and approximately 900 in East Florida in 1791 (Tebeau 1971). We thus estimate a total Florida population of 4,090 for 1789. This suggests and therefore we assume there was no population change from 1763 through 1789.

1795 Florida's population was 8,363 (Bense 1999).

1825 A census put Florida's population at 13,544 (Tebeau 1971).

Georgia - 13

Early in 1733, Oglethorpe led 116 carefully selected colonists to present day Charleston, SC, and on Feb. 12, 1733, he founded Savannah (Georgia). Table B5 provides the rest of the pre-census values found in Greene and Harrington (1932) and Census Bureau (1975) estimates (estimate).

Hawaii - 15

Hawaii is an unusual state, in that it was first settled in the thirteenth century (Castle 1917). Castle (1917) provides the insight into the Hawaiian Islands history. The islands consisted of many warring factions up to and subsequent to their discovery by Cook in 1777, although historical records indicate the Spanish were aware of the Islands prior to 1777. King Kamehameha I consolidated the islands over the next 30 years. While there were many subsequent visits by ship after Cook's landing, the visitors primarily engaged in commerce. Peoples of European descent did not start settling in force until 1820 with the arrival of Protestant American missionaries, as well as the whaling ships. Further, Hawaii was always an independent country until its annexation to the United States in 1898. While we add the population in from 1777, when Hawaii was "discovered," it could easily be argued that its population should not be included prior to its becoming a territory.

Given Hawaii was not colonized like the rest of the United States, we treat it differently. We start with its estimated population of 300,000 (Hawaiian) at its discovery, accounting for the entire "aboriginal" population from the onset. Several non-federal censuses were conducted and those values are presented in the table B6 (Hawaii 2). The "gift" of disease from visiting ships resulted in a huge loss of life. By 1853 the native population had "dwindled" to 70,036 (Hawaii 1) versus the census value of 73,148, the difference between these two values suggests non-native population of 3,112 at the time.

Idaho - 16

The following accounts are from Arrington (1994) except as otherwise noted.

1809 Daniel Thompson and associates (46 mule train), employed by the British Northwest Co., built the first trading structure (Wilson 1998). We assume a party of nine (one per five mules). Thompson occupied this structure for four years. There was a steady flow of trappers in the region and Arrington (1994) provides detailed accounts of various trappers (crew size rarely given) through the 1850s.

1818 Fort Nez Perce was established in 1818 with 56 trappers. We estimate a population of 100 to account for others in the area.

1820-55 Based on the level of trapping activity we estimate a constant population of 300 during this period.

1856 The first "settlement" occurred with 79 people. Interestingly, while many immigrants passed through from 1840-60, there is no evidence of prior settlement. We estimate a population 400.

1859 We estimate the population to be 600.
1860 The discovery of gold brought an influx of miners to the area.

Table B7 shows the major mining areas and their approximate populations (Arrington 1995). We assume these values represent the peak populations occurring in 1863 and declining thereafter. We estimate Idaho's population to be 1,000 in 1860, 1,600 in 1861, and 24,200 in 1863.

Illinois - 17

Father Marquette established a mission in 1675 (Illinois 2). We assume a starting population of six and a constant population until Fort Creve Coeur was built and abandoned (approx. 35) in 1680 (Illinois 1). Fort St. Louis was completed in 1682 so we estimate a population of 41 from 1680 to1682. Greene and Harrington (1933) was the source of the population values in table B8.

Indiana - 18

Fort Ouiatenon was established in 1717, then Fort Miami in 1721, followed by Fort Vincennes in 1832 (Indiana). Clarksville was established in 1783 with a population of 100. Table B9 shows the populations of the three forts from Greene and Harrington (1933).

We assume a starting population of 56 in 1717. We develop population estimates for Indiana by assuming constant population values for Ft. Miami (1721 to 1783) and Ft. Ouiatanon (1717 to 1783, 56 through 1765, 48 thereafter) and add these values to the interpolated values for Vincennes. For 1783 we add 100 to the estimate for Clarksville and estimate a population of 1,404.

Iowa - 19

In 1788 DuBuque opened a lead mine (Wilson 1998) and upon his death the Indians continued operation and kept settlers out. In 1833, with the ending of the Black Hawk war and the removal of military protection (of the Indians from the settlers), there was a rush of settlers into the area, first by the hundreds, then by the thousands (Sage 1975). We use 1833 as the date of first settlement and estimate a population of 500. A sheriff's census in 1836 showed a population of 10,531, illustrating the magnitude of the rush.

Kansas - 20

With the pioneering of the Santa Fe Trail in 1821, Kansas experienced an influx of immigrants through its boundaries. In 1827 Fort Leavenworth was established with 14 officers and 174 men (Kansas) to protect the wagon trains. Despite the heavy traffic, there was little if any settlement in the region until Kansas became a territory in 1854, after which the population boomed to 107,206 in 1860 (census). We therefore use 1821 as the period of "first" settlement and assume that there were at least 100 buffalo hunters and trappers working the area. Then with the establishment Fort Leavenworth we estimate a population of 300 in 1827, and then estimate a population of 500 in 1853.

Kentucky - 21

We use 1763 as the time of first settlement, the end of the French and Indian War. The initial population is estimated to be 100. Although considering the War, the numbers were likely higher. It is noted that parts of Kentucky were explored from 1748 on and that Europeans were obviously "present" in parts of Kentucky from 1748 forward (Kentucky). However, early settlers faced frequent Indian attacks keeping early settlement to a minimum.

Louisiana - 22

Population data are sparse for Louisiana. Natchitoches was the first permanent settlement, established in 1714 (Wilson 1998) with 27 (Davis,1975). Davis (1975) provides the following information. In 1717 it is estimated that less that 1,000 occupied the region and in 1731 the population was an estimated 7,500. A census in 1744 showed over 3,000 whites, 800 soldiers, and over 2,000 slaves (total estimate 5,900). In 1757 the colony had a population of approximately 7,500. A 1780 census showed approximately 29,000. In 1803 the population was estimated to be approximately 50,000.

Maine - 23

First settlement occurred at St. Croix in 1604 with 80 (Maine 1). By 1611, there were Jesuit colonists on the Penobscot and at Mount Desert. English fishermen and traders also visited the coast from year to year (Maine 2). In 1623 a permanent settlement was made at Saco. Other settlements around this time included Sheepscot, Damariscotta, Pemaquid, Monhegan, and a few other points (Maine 2).

Based on this information we estimate 400 in 1623 under the assumption of a constant population through 1630. The following estimates are from Greene and Harrington (1932) and United States Bureau of Census (1975): 900 in 1640, 1,000 in 1650, 20,000 in 1760, 21,587 in 1765, 31,257 in 1770, 47,767 in 1776, 49,133 in 1780, and 50,493 in 1784.

Maryland - 24

First settlement was by Leonard Calvert, with 200 settlers in 1634 (Wilson 1998). Table B10 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

Massachusetts - 25

First settlement was Plymouth in 1620 with 102, of which only 50 were left after the first winter. Plymouth and Massachusetts were separate entities through around 1690. Thus, we develop separate data sets through 1690 and sum to obtain the population of Massachusetts. The table B11 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975) for Plymouth and table B12 similarly for Massachusetts. We assume a starting population of 100 in 1625 for Massachusetts. Maine, from 1660 to 1750, was part of Massachusetts. Maine's population estimates were subtracted from Massachusetts's estimates for this period.

Michigan - 26

Dunbar (1970) provides the following information, unless otherwise noted. We assume that slaves represent 15 percent of population, that houses represent six people, and that men are 60 percent of the population for the remote garrisons (all but Detroit).

1668 Marquette establishes Sault Ste. Marie with eight.

1671 The settlement moves to St. Ignance with 21 and Fort de Buade is established. We estimate a population of 51.

1683 St. Ignance has 30 soldiers. We estimate a population of 100 (50 per fort).

1686 Fort De Buade has 400 (Greene and Harrington 1932). We estimate 450 total.

1696 The garrisons are ordered closed. We estimate that 100 people remain in the region.

1701 Detroit was founded by Antoine de la Mothe Cadillac, with about 100 followers. We assume a constant population through 1700 and add that to the new for an estimate of 200.
1715 Fort Michilimackinac is established.
1755 Fort St. Joseph is established.
1760 Detroit had 80 houses and a population of approximately 500 (Michigan 2). We estimate the region population to be 600, Detroit plus Fort Michilimackinac and Fort St. Joseph.
1763 St. Joseph had 14 men and Fort Michilimackinac had 32 men. We estimate the population to be 577 (500 plus 46 men divided by 0.6).
1767 St. Joseph had 40 men. We estimate the population to be 577 (500 plus 72 men divided by 0.6).
1779 Detroit recorded 138 slaves. We estimate a population of 1,040 (Detroit 920 plus 120 for the other two forts).
1780 Detroit recorded 175 slaves. We estimate a population of 1,290 (Detroit 1,170 plus 120).
1781 Fort Michilimackinac has 100 men.
1782 Detroit recorded 179 slaves. We estimate a population of 1,400 (Detroit 1,170 plus 230).
1796 Detroit recorded 300 houses and 53 men in the garrison. We estimate a population of 2,100.

Minnesota - 27

The first fort was Saint Antoine in 1689 (Minnesota 1). The French developed the following forts and settlements in Minnesota: Isle Pelee in 1695, Fort L. Huillier in 1700, Fort Beauharnois in 1727, Fort St. Pierre and Fort St. Charles in 1731, Fort Lullier in 1750, and Fort La Sueur 1755. The French ceded these lands in 1763. From 1784 to 1803 the Northwest Trading Company (British) operated over the Grand Portage with approximately 500 people (Blegen 1975). There was little activity in the region until the treaty of 1837 when the Natives ceded the lands, opening the region for European settlement. An 1840 census showed 341 and an 1849 census put the population at 4,852 (Blegen 1975).

We note that forts were established in years 1695, 1700, 1727, and 1731 (two forts). We assume each fort represented approximately 50 people and estimate the population as 50 in 1689, 100 in 1695, 150 in 1700, 200 in 1727, 300 in 1731, 350 in 1750, and 400 in 1759. We further assume constant population values between the years through 1783. From 1784 through 1803 we assume a constant population of 500.

Mississippi - 28

In 1699 d'Iberville established the first settlement near present-day Biloxi with 80 men (Hamilton 1976). Natchez was founded in 1716 (Mississippi 1). McLemore (1973) provides the following information. In 1704 Biloxi had 243 residents. In 1729, 246 of the 733 residents of Natchez were killed. In 1785 the Natchez district (encompassing most of present day Mississippi) had approximately 1,100 whites and 900 blacks. A 1793 census put the district at 4,346 residents.

We assume that Natchez was founded with 200 in 1716 and that Biloxi had grown, estimating the population to be 500 in 1716. In 1729 we assume that Biloxi was as large as Natchez and estimate a population of 1,500.

Missouri - 29

Foley (1971) provides the following information. St. Genevieve was the first permanent settlement in 1735 although there is evidence of mining prior to this time. In 1800, the original town site had 50 houses. Other forts and settlements are Fort La Huillier (1740), Fort Orleans (1755), St. Louis (1764), and Cape

Gerareau (1793). In 1804, the population was 10,350 of which 15 percent were slaves.

The City of St. Louis (Missouri) provides the following population estimates for St. Louis: founded 1764 with 40 settlers, 300 in 1766, 500 in 1770, 925 in 1798, 1,100 in 1806, and 1,200 in 1811. In 1804 there were 180 houses; assuming six per house, we estimate a population of 1,080.

We assume that St. Genevieve had a starting population of 50, which would be typical for early French settlements. As it only had 50 houses by 1800 we assume it reached this maximum population early (a mining community) by 1764 (300). We also assume 50 for the other two forts at the time of 1764 and add the 40 for St. Louis. Thus, we estimate the population for Missouri to be 440 in 1764. We then assume that St. Louis represents 50 percent of the population for Missouri in 1766 and 1770 for populations of 600 and 1,000 respectively.

Montana - 30

Abbott (1964) provides the following accounting unless otherwise noted. Manuel Lisa established the first trading post in 1807 with 40 and the trading fort lasted through the War of 1812 when the Blackfoot attacked the fort. No other permanent forts were established until 1828, when Fort Union with approximately 100 was built. It is noted that the Indians (Blackfoot), in general, did not permit whites (including fur trappers) on their lands. A small pox infection in the early 1860s paved the way for European settlement.

1828 We use the establishment of Fort Union as the first settlement and estimate a population of 100.
1831 Fort Piegan was built. Population is estimated to be 200.
1832 Fort Cass was built and abandoned in 1835. Fort McKenzie was built and abandoned in 1843. Population is estimated to be 400.
1836 Population is estimated to be 300.
1843 Fort Chardon built in 1843 and moved in 1844 to Fort Van Buren (Miles city). 1845 Fort Benton was built. Population is estimated to be 400.
1853 Fort Owen built with a capacity for 150 men. Population is estimated to be 500.

Most of the posts and fur trading forts were gone by 1860. The Federal Government bought Fort Benton in 1868. Some missions occurred from 1840-80. Pioneer city was started in 1862 with the discovery of gold. Then in 1863 the gold rush gained full steam with the discovery at Alders Gulch drawing thousands from California, Colorado, and Idaho. We assume a constant population between years through 1861 (500). With the discovery of gold in 1862 we estimate 1,000, with 5,000 in 1863, and 10,000 in 1864.

Nebraska - 31

Olson (1966) provides the following information except as noted. Bellevue, a trading post, was established in 1822 by the American Fur Company and was the only settlement until 1847 when Fort Kearny was built in 1847 with 175 (Nebraska). In 1854, Bellevue was estimated to have a population of maybe 50. It is noted that the treaties of 1833 made it illegal to occupy Indian territories without specific permission of the Federal Government. In 1854 the Indians ceded most of these lands, opening them to settlement. Censuses taken during this period yielded the following counts: 2,732 in 1854, 4,495 in 1855, 10,716 and in 1856. In 1867 the population was estimated to be 50,000.

We estimate a population of 100 from 1822 through 1846 and estimate the population to be 275 in 1847.

Nevada - 32

The Spanish entered southern Nevada as early as 1776, but no further interest was taken in the region until 1826 when Jedediah Smith explored and

trapped parts of the Great Basin. Several other trappers worked the state occasionally as late as 1843, as fur possibilities in Nevada were very limited and no trading posts were established. A few emigrant parties passed through the region from 1841 to 1845. The Donner party misfortune ended any further travel through the area until 1848, when the discovery of gold in California prompted others to cross once again (Elliot 1987).

Mormon Station or Genoa was the first “permanent” establishment in 1850 (Wilson 1998) with seven people (Nevada). In 1851 over 100 settlers met at Reese’s station to establish a framework of control (Elliot 1987). In 1857, 450 Mormon settlers were recalled to Salt Lake. From 1850 to 1859, 100 to 180 miners worked the Gold Canyon, peaking in 1855.

Based on this information we estimate 1850 population to be 107. We assume the settlers who met in 1851 to be adult males with families. Erring on the side of caution we assume a family size of four and estimate the population at 400 settlers and 100 miners or 500. In 1861, a census commissioned by Governor Nye had the population at 16,374. Elliot (1987) suggested this count included approximately 1,000 in California, so we reduce the count by that much and show the 1861 population as 15,374.

New Hampshire - 33

David Thompson established Little Harbor in 1623 as a fishing colony (Wilson 1998). We estimate a starting population of 100. Table B13 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

New Jersey - 34

The date of first settlement is not clear. However, in 1630, Michael Pauw received the first Dutch land grant on the west bank of the Hudson River, which is the current site of Jersey City (New Jersey). The first houses were built in 1633, the date we use as first settlement. We estimate 50 as the starting population, as this was the minimum settlement size required by the charter. Table B13 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

New Mexico - 35

Unless otherwise noted Reeve and Cleaveland (1969) are the source for this information.

1598 Juan de Onate founded San Gabriel (Wilson 1998) with 400 men (some 130 brought wives and children) and 10 Franciscan friars. Assuming a family size of 4.5 suggests a starting population of 865 people (New Mexico).

1610 Santa Fe was founded. We estimate the population to be 1,000 (San Gabriel estimated at 900 plus 100 for Santa Fe).

1638 Santa Fe had 50 houses and about 200 residents. We estimate the population to be 1,200.

1680 An estimated 2,500 Spanish lived in New Mexico when the Indian uprising resulted in the death of 421. The rest were forced leave New Mexico, leaving the region “unpopulated.”

1692 De Vargas reestablished Mexican control over the region with 200 soldiers. He then left and returned with 100 additional soldiers, 70 families, some singles, and servants, for a total of over 800 people.

1696 Taos and San Cruz were founded.

1706 Albuquerque was founded with 252.

1754 Abiquiu was founded.

1765 Taos had a population of 160.

1776 The population of New Mexico was 5,201 in the following communities: Santa Fe area - 2,014 (1337 in Santa Fe proper), Taos - 67 families or 306 residents, Santa Cruz - 680, Chiayo - 367, Quemando - 200, Truchas - 122, Trampas - 278, Bernalillo - 81, Albuquerque - 763, and Abiquiu - 254 plus 136 natives.

Given the number of small communities and uncertainty of their initial establishment size, we estimate the population between 1692 and 1776 through linear interpolation. The total population was estimated at 30,000 by the end of the 18th century, including the Pueblos (natives).

New York - 36

Fort Orange was originally established in 1615 as a trading post but abandoned in 1617, so we do not consider New York as having a population until 1624 when 30 Flemish families were brought to the area (New York). Table B15 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975)

North Carolina - 37

Wilson (1995) shows the first Colony being established in 1585. However, all 110 settlers vanished without a trace by 1590 and no further settlement occurred before 1650. At that time there was an overflow of settlers from Virginia into the Albemarle area of northeast North Carolina (North Carolina 1). We use 1650 as the date of first settlement and estimate 100. Table B16 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

North Dakota - 38

Robinson (1966) provides the following accounting. Alexander Henry, Jr., established a trading post at Pembina in 1801. In 1823, Pembina had a population of approximately 350 and 637 in 1849. Further, in 1829, Fort Union was established, and then Fort Clark in 1831. The official 1850 census enumerated 1,134 persons, but the true total was actually 1,116 persons, as three families were counted twice (North Dakota 1). Based on the actual numbers from the Dakota Territory Census of 1860, we calculate the population to be 3,899 (North Dakota 2) out of the 4,837 reported by the United States Census for South Dakota in 1860.

We estimate a population of 100 in 1801. For the years from 1823 to 1849 we linearly interpolate the Pembina estimates and add 100 for the years 1829 and 1830 (Fort Union), 200 for years 1831 to 1844, and 300 for years 1845 to 1849.

Ohio - 39

Marietta, founded in 1788, was the first permanent American settlement in Ohio, founded by Rufus Putnam and Manasseh Cutler. By the end of 1788, 137 people populated the area (Ohio). Roseboom (1988) shows that in 1790 Columbia (Cincinnati) and Gallipolis were founded, Gallipolis with 600 French. We estimate the population to be 300 in 1789, assuming it more than doubled from the previous year. In 1790 we add 600 for Gallipolis and 100 for Columbia, estimating a population of 1,000.

Okalahoma - 40

While there is little doubt that Europeans were present in the area prior to 1889, the lands were Indian Territory and not open for settlement until the land rush in April 1889 (Wilson 1998). The population went from essentially zero to 258,657 in 1890.

Oregon - 41

We set the first date of “settlement” as 1792 based on the “roll call” of settlers to Oregon from 1792 to 1842. We counted heads for each year of arrival and kept a running total (Oregon); the results are presented in table B17.

Good records were kept of the wagon trains crossing to Oregon on the Oregon Trail. Arrington (1994) provides the following values: 1,000 in 1843, 1,000 in 1844, 2,500 in 1845, 1,200 in 1846, 4,000 in 1847, and 1,300 in 1848. Adding these values annually provides population estimates for each year. This seems a reasonable approach, as our estimate for 1848 is 10,743 and the United States Census Bureau 1850 value is 12,093. Additional growth of 1,350 (the difference) seems very reasonable as the 1848 California gold rush undoubtedly attracted the majority of the westward bound travelers.

Pennsylvania - 42

The Governor of New Sweden, John Printz, built the first settlement on Tinicum Island in 1643. In 1647 there were reported 183 under John Printz’s command, then in 1654 that declined to 100. An influx of settlers in 1655 brought the settlement to 420 and in 1664 it was reported to be 650 (Dunaway 1948). We assume no growth from 1643 to 1647. We also note that the great influx of settlers to the state occurred with William Penn in 1682, so we assume a population of 680 in 1681. Table B18 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

Rhode Island - 44

Roger Williams founded Providence in 1636. While the initial starting population was not located, it was stated he had a small band of followers, which we assume to be 50 (Rhode Island). Table B19 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

South Carolina - 45

While there was an initial settlement in 1526 by Vasquez, it failed and there was no other recorded settlement until 1670, when a group of about 100 settled at Albemarle Point near current day Charleston (South Carolina). Table B20 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

TePaske (1964) provides the following estimates: 4,220 whites and 3,250 blacks in 1703, 4,100 blacks and 4,080 whites in 1708, 10,500 blacks and 6,250 whites in 1715, and 11,800 blacks and 7,800 whites in 1721.

South Dakota - 46

Wilson (1998) suggests that Pierre Dorian settled in the area as early as 1780. While this may be so, European presence in South Dakota was likely limited to explorers and an occasional trapper until 1817 with the establishment of Fort Pierre, a trading post and the first continuous European presence. (South Dakota 1). The only other trading post noted was Fort Lookout built in 1822. The European presence was minimal until the late 1850s with the establishment of land companies. In 1860 the territorial census indicates a population of 914, with the following populations: 38 in Sioux Falls established 1856: Vermillion, 228, established 1859: and Yankton, 458, established 1859. The rest were dispersed between various trading post and abandoned forts (North Dakota 2).

We assume a starting population of 100 in 1817 and assume the population remains constant until 1822 when we estimate the population to be 200. Again we assume a constant population until 1856 when we estimate 250 for that year,

1857 and 1858. Then in 1859 we estimate the population to be 850 (250 plus 600 for Vermillion and Yankton).

Tennessee - 47

William Bean established the first permanent settlement on the Watauga River in 1768 with 10 families (Abernethy 1967). There was exploration of Tennessee prior to 1768, but due to Indians and land grant issues settlers were effectively kept out. In 1768 the Indians ceded their claims to the British. We assume a family size of six and estimate the population to be 60 in 1768.

Texas - 48

Anderson and others (1988) provide the following accounting, except as noted.

1682 Corpus Christi de la Isleta was the first mission and pueblo (called Ysleta del Sur) in Texas, established by Antonio de Otermín and Fray Francisco de Ayeta (Texas 1). The early settlement had 21 families plus three friars. We estimate the population to be 129 (21 times 6 plus 3). From the 1682 through the early 1700's many missions were attempted and failed.

1716 With 25 soldiers, nine priests, and 30 families Captain Domingo Ramon established five missions: Mission San Francisco de los Tejas, Nuestra Senora de la Purisima Concepcion, Nuestra Senora de Guadalupe de los Nacogdoches, San Jose de los Nazonis, and Nuestra Senora de los Dolores. We assume minimal growth through 1715 to 150 and add 214 (25 plus 9 plus 30 time 6) estimating a population of 364.

1718 San Antonio was founded.

1721 Aguayo set out for Texas with 500 men founding La Bahia and Los Adaes (capital 1722 to 1773 and was always a small struggling community) with 100 men and left behind 269 men at San Antonio.We assume no growth through 1720 and add 615 (369 divided by 0.6) for a population of 1,000.

1735 An additional 55 soldiers were sent to San Antonio. We assume no growth until 1735 and estimate 1,100 with the addition of the soldiers.

1749 Escandon entered the Louisiana region with 3,000 settlers and soldiers.

1755 Escandon had placed 6,000 in 23 settlements, two of which were Dolores and Laredo (about 250 per settlement) in the present day boundaries of Texas. Again, we assume no further growth occurred until 1755 when we assume the two new settlements brought an additional 500 to the state and we estimate the population to be 1,600.

1778 The population of San Antonio was estimated to be 2,060 (Texas 2). In 1778 we estimate the population to be approximately 3000.

1782 Golid (La Bahia) was 512.

1790 Nacogdoches was 480.

1803 There were three communities in Texas: San Antonio population 2,500, Golid population 1,200, and Nacogdoches population 500, for at total of 4,200.

1809 The population was estimated at 4,155.

1820 Austin (Anderson and others 1988) received a contract to bring 300 families in by 1823. From 1809 to 1819 we assume a constant population, then we add 100 families (600 people) a year through 1823, for population estimates of 4,800, 5,400 and 6,000, respectively.

1830 The population was estimated to be 7,000 Anglos and 3,000 Mexicans

1834 The population was estimated at 24,70l.

1836 The ratio of Anglos to Mexicans was assumed to be 10 to 1 with no change in the number of Mexicans from 1830. Thus we estimate 33,000 (Sheriden 1995).

1850 The census (212,592) is estimated to be a 50 percent increase over 1847 numbers.

Utah - 49

Utah had “settlers” long before the arrival of the Mormons in 1847, although they were minimal in number.

1828 William Reed established a trading post in Utah. We assume a population of 100.

1838 Antoine Rabidoux bought Reed’s post and ran the business as Fort Uinta, along with Fort Uncompahgre (Colorado) until 1844 when the Utes burned both down (Utah 1). We assume a population of 100.

1845 Miles Goodyear built Fort Buena Ventura near present day Ogden. He lived there with his wife, two children, Indian helpers, and other trappers. So we estimate a population of 100.

1847 Mormons settled in the Salt Lake Valley with an initial population of 148 (Utah 2). We estimate Utah’s population at 248 (100 plus 148).

1848 Brigham Young led some 2,500 emigrants to Utah (Olson). We estimate a population of 3,000.

Vermont - 50

Although the French established a fort on Isle La Motte in 1666 and manned it with over 600 troops for 20 years, no efforts were made to settle the region. The troops were part of a contingent sent to Quebec, so those that did settle the region most likely settled around Quebec (Vermont 2). Therefore, we show the date of first settlement to be Fort Dummer, established by the English in 1724 with 43 soldiers and 12 Mohawks (Vermont 1). Table B21 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

Virginia - 51

Virginia began in 1607 with the settlement of Jamestown (Wilson 1998). Table B22 provides the rest of the pre-census values found in Greene and Harrington (1932) and United States Bureau of Census (1975).

Washington - 53

While there may have been some trading with the Indians prior to 1845, when Tumwater was established, it was likely limited as Pacific coast Indians were very protective of their lands and discouraged early settlement. The first settlers came via wagon train that was led by Simmons bound for Oregon. One of the party, George Bush, was a mulatto. Oregon law at the time forbade land ownership by people of color. The wagon train then turned north into Washington where such laws did not exist where they founded “New Market” or present day Tumwater (Washington 2). The initial wagon train started out with 323 (Washington 1), which we will assume to be the initial population.

West Virginia - 54

The first “official” settlement recorded appears to be Morgan Morgan in 1726. Indications are he was the only settler that year, possibly with his family of eight (West Virginia 1). Lewis (1904) provides the following account. In 1727 a few German families trickled in and founded New Meckenberg. We assume a few to mean fewer then 10, so we estimate the population to be 50 in 1727. The next settlement occurred in 1732 when Joist Hite settled in the region with 16 families. We assume that New Meckenberg had grown to 100 and add 100 for Joist Hite’s group (200 total).

Wisconsin - 55

The first explorers of Wisconsin arrived in 1634, but we select 1665 as the date of first settlement with the establishment of the first permanent missions by Father Claude Allouez (Wilson 1998). From 1685 to 1687 three French trading posts were established: Trempealeace, Fort St. Antoine, and Fort St. Nicolas (Thompson 1973). In 1716 La Porte arrived at Green Bay with 800 men to conduct a campaign against the Indians (Wisconsin 1) and built a fort at present day Green Bay. In 1781 the only other "settlement" prior to 1800 was established, Paire du Chiem. Around 1800 the population of Wisconsin (European) was
estimated to be around 200 (Writers 1941). In 1820 the population was 1,455 and in 1830 approximately 3,000 (Thompson 1973). 1825 to 1835 saw a rush to the lead mines in southwest Wisconsin. By 1836, half the 11,683 people were estimated to be associated with the mining (Wisconsin 2). In 1847 the population was estimated to be 210,546 (Wisconsin 2).

We assume a small presence in Wisconsin of 10 in 1665 and estimate that it was 100 by 1685 with the establishment of the trading posts. From 1685 until 1715 we assume a constant population. In 1716 we estimate 800 for that year only and estimate it dropped to 150 in 1717 and remained constant through 1780. In 1781, with the establishment of Praire du Chiem, we estimate the population to be 200. Again we assume a constant population until 1800 were we then interpolate to 1,455 in 1820.

Wyoming - 56

The first permanent settlement was Fort Laramie in 1834 (Wilson 1998), a trading post then called Fort William. The Army purchased Fort John (Fort Laramie) in 1849 for $4,000. The first garrison was comprised of two companies of Mounted Riflemen and one company of the 6th Infantry. In 1850, the high tide of emigration passes Fort Laramie; nearly 50,000 people flowed through the area (Wyoming).

In 1842 Fort Bridger, a trading post, was built and sold in 1853 to Robinson for use as a Mormon community. In 1868 the building of the railroad brought large numbers into the state. The crew was approximately 10,000 strong and when they left Cheyenne approximately 1,500 remained in the area (Writer's Project, Wyoming 1941).

Based on the information found, we estimate a constant population of 100 from 1834 to 1841. With the establishment of Fort Bridger in 1842, we estimate a population of 200, which we assume remains constant through 1848. Then in 1849 we estimate 500, based on Fort Laramie's three companies, around 200 plus the high traffic flow. We assume moderate growth until the railroad in 1868. We estimate a population of 2,000 in 1867, which jumps to an estimated 12,000 in 1868.

Table C1—Timeline of California mission establishment.

Year	Mission	Estimated population
1769	San Diego de Alcala	150
1770	San Carlos Borromeo	192
1771	San Antonio de Padua andSan Gabriel Arcangel	250
1772	San Luis Obispo De Tolosa	300
1776	San Francisco de Asis	500
1776	San Juan Capistrano	525
1777	Santa Clara de Asis	550
1780	La Purisima Concepcion (Arizona)	550
1780	San Pedro and San Pablo (Both destroyed by Yumas)	550

Table C2—Connecticut population estimates.

Year	Pop.	Source	Year	Pop.	Source
1636	800	Value	1697	24,284	Taxable
1637	800	Value	1698	25,433	Taxable
1640	1,472	Estimate	1699	26,528	Taxable
1642	2,000	Value	1700	25,963	Taxable
1643	3,000	Value	1701	26,604	Taxable
1650	4,139	Estimate	1702	28,166	Taxable
1654	3,186	Value	1703	29,160	Taxable
1655	3,011	Taxable	1704	28,958	Taxable
1660	7,980	Estimate	1705	28,145	Taxable
1665	9,350	Families	1706	29,837	Taxable
1669	10,822	Freemen	1707	32,256	Taxable
1670	12,603	Estimate	1708	33,610	Taxable
1671	12,300	Men	1710	39,450	Value
1674	12,420	Men	1714	46,750	Value
1676	16,121	Houses	1715	47,500	Value
1677	12,991	Families	1720	58,830	Estimate
1678	13,695	Families	1730	75,530	Estimate
1679	13,871	Families	1740	89,580	Estimate
1680	17,246	Houses	1742	100,000	Value
1681	17,714	Taxable	1746	100,000	Value
1682	17,600	Taxable	1750	111,280	Estimate
1683	18,407	Taxable	1754	130,000	Value
1684	17,194	Taxable	1756	130,612	Census
1685	19,953	Taxable	1760	142,470	Estimate
1686	19,266	Taxable	1762	146,490	Value
1687	20,669	Taxable	1765	180,000	Value
1689	20,173	Taxable	1770	183,881	Estimate
1690	21,658	Taxable	1774	197,842	Census
1691	21,266	Taxable	1775	200,000	Value
1692	21,115	Taxable	1780	206,701	Estimate
1693	21,397	Taxable	1782	209,177	Census
1694	22,536	Taxable	1783	206,000	Value
1695	23,247	Taxable	1786	192,000	Value
1696	23,725	Taxable	1787	202,000	Value

Table C3—Delaware population estimates.

Year	Pop.	Source
1644	210	Men
1648	166	Men
1650	185	Estimate
1653	200	Value
1655	440	Men
1660	540	Estimate
1670	700	Estimate
1677	886	Tithable
1680	1,146	Families
1687	1,256	Taxable
1690	1,482	Estimate
1700	2,470	Estimate
1710	3,645	Estimate
1720	5,385	Estimate
1730	9,170	Estimate
1740	19,870	Estimate
1750	28,704	Estimate
1760	33,250	Estimate
1770	35,496	Estimate
1780	45,385	Estimate
1786	50,000	Value

Table C4—TePaske's population estimates of St. Augustine.

Year	Population
1596	175
1601	275
1611	450
1621	450
1631	538
1641	575
1651	588
1661	725
1671	725
1681	988
1691	1,175
1701	912
1711	800
1721	925
1731	1,350
1741	1,325
1751	1,700
1761	2,750

Table C5—Georgia population estimates.

Year	Pop.	Source
1734	437	Value
1736	2,300	Value
1740	2,021	Estimate
1750	5,200	Estimate
1755	6,500	Value
1760	9,578	Value
1761	9,700	Value
1765	13,300	Value
1766	17,700	Value
1770	23,375	Estimate
1773	33,000	Value
1780	56,071	Estimate

Table C6—Hawaii census values.

Year	Population
1832	130,313
1836	108,579
1850	84,165
1853	73,138
1860	69,800
1866	62,959
1872	56,897
1878	57,985
1884	80,578
1890	89,990
1896	109,020

Table C7—Early Idaho mining communities and their peak populations.

Community	Period	Population
Clearwater	1860-66	1,000
Florence	1861-66	600
Boise Basin	1863-66	16,000
Idaho City	1863-66	6,000
Owyhee	1863-66	500

Table C8—Illinois population estimates.

Year	Pop.	Source
1723	334	Value
1726	700	Value
1732	699	Value
1750	1,460	Value
1764	1,400	Value
1766	1,488	Families
1767	1,449	Families
1770	2,000	Value
1772	1,500	Value
1787	2,424	Males

Table C9—Population estimates of Illinois forts.

Year	Vincennes	Ft. Miami	Ft. Ouiatanon
1733	40		
1758	70		
1763	280		
1765	320	40	56
1767	232		
1769	250	40	48
1775	240		48
1778	621		
1787	1,692		
1788	1,710		

Table C10—Maryland population estimates.

Year	Pop.	Source
1634	200	Wilson
1640	583	Estimate
1642	828	Tithable
1650	4,504	Estimate
1660	8,426	Estimate
1670	13,226	Estimate
1675	16,525	Tithable
1680	17,904	Estimate
1690	24,024	Estimate
1694	24,368	Taxable
1695	25,976	Taxable
1696	25,953	Taxable
1697	27,575	Taxable
1700	29,604	Estimate
1701	32,258	Value
1704	34,192	Value
1707	33,833	Value
1710	42,741	Value
1712	46,151	Value
1715	50,270	Value
1720	66,133	Estimate
1728	80,000	Value
1730	91,113	Estimate
1732	96,000	Value
1740	116,093	Estimate
1743	125,000	Taxable
1748	130,000	Value
1750	141,073	Estimate
1754	148,000	Value
1755	153,505	Census
1756	170,688	Value
1762	182,007	Value
1770	202,599	Estimate
1775	223,050	Taxable
1780	245,474	Estimate
1782	254,050	Census

Table C11—Plymouth population estimates.

Year	Pop.	Source
1620	102	Value
1621	50	Value
1624	180	Value
1629	300	Value
1630	390	Estimate
1633	324	Poll
1634	324	Poll
1637	732	Freemen
1640	1,020	Estimate
1643	1,167	Men
1650	1,566	Estimate
1660	1,980	Estimate
1670	5,333	Estimate
1671	5,330	Militia
1678	6,396	Freemen
1680	6,400	Estimate
1690	7,424	Estimate

Table C12—Massachusetts population estimates.

Year	Pop.	Source	Year	Pop.	Source
1630	506	Value	1730	114,116	Estimate
1631	426	Value	1731	120,000	Value
1632	2,000	Value	1733	120,000	Value
1633	4,000	Value	1735	144,308	Value
1634	4,000	Value	1736	138,000	Poll
1637	7,912	Value	1737	138,212	Militia
1638	8,592	Value	1740	151,613	Estimate
1640	8,932	Estimate	1742	164,000	Value
1643	15,000	Value	1747	180,000	Militia
1650	14,037	Estimate	1750	188,000	Estimate
1660	20,082	Estimate	1754	200,000	Value
1665	23,467	Value	1758	199,587	Men
1667	30,000	Value	1760	202,600	Estimate
1670	30,000	Estimate	1761	228,800	House
1675	40,612	House	1763	241,024	Value
1678	40,000	Militia	1765	223,841	Census
1680	39,752	Estimate	1770	266,565	Estimate
1688	44,000	Value	1771	292,000	Poll
1690	49,504	Estimate	1772	293,912	Poll
1700	55,941	Estimate	1775	291,039	Value
1709	56,000	Value	1776	290,900	Census
1712	75,102	Value	1779	305,780	Poll
1715	96,000	Value	1780	317,760	Estimate
1718	94,000	Value	1781	318,580	Poll
1720	91,008	Estimate	1784	307,018	Census
1721	94,000	Value	1788	356,542	Value
1726	99,000	Poll	1789	360,000	Value
1727	106,600	Militia			

Table C13—New Hampshire population estimates.

Year	Population	Source
1630	500	Estimate
1639	1,000	Value
1640	1,055	Estimate
1650	1,305	Estimate
1660	1,555	Estimate
1670	1,850	Estimate
1671	1,800	Value
1680	2,047	Estimate
1682	2,399	Militia
1684	4,000	Value
1690	4,164	Estimate
1700	4,958	Estimate
1708	5,000	Men
1709	5,150	Value
1710	5,681	Estimate
1712	6,642	Value
1715	9,650	Value
1716	9,000	Value
1720	9,375	Estimate
1721	9,500	Value
1730	10,755	Estimate
1732	11,784	Poll
1737	13,100	Value
1740	23,256	Estimate
1742	24,500	Poll
1745	28,000	Poll
1750	27,505	Estimate
1753	25,568	Poll
1755	30,000	Value
1760	39,093	Estimate
1761	36,584	Poll
1767	52,720	Census
1770	62,396	Estimate
1773	73,097	Census
1774	80,000	Value
1775	81,300	Census
1780	87,802	Estimate
1786	95,849	Census
1787	102,000	Value

Table C14—New Jersey population estimates.

Year	Population	Source
1665	754	Men
1670	1,000	Value
1673	2,580	Men
1676	3,500	Value
1680	3,400	Estimate
1682	3,450	Value
1690	8,000	Estimate
1698	12,000	Value
1699	13,005	Freemen
1700	14,010	Estimate
1701	15,000	Value
1708	20,000	Value
1710	19,872	Estimate
1715	22,500	Value
1720	29,818	Estimate
1726	32,422	Census
1730	37,510	Estimate
1738	46,676	Census
1740	51,373	Estimate
1745	61,403	Census
1747	70,000	Value
1750	71,393	Estimate
1752	79,000	Value
1754	81,500	Value
1755	81,800	Value
1760	93,813	Estimate
1765	100,000	Value
1770	122,806	Estimate
1772	121,008	Census
1774	130,000	Value
1775	130,000	Value
1780	139,627	Estimate
1784	149,435	Census

Table C15—New York population estimates.

Year	Population	Source
1624	165	Family
1625	200	Estimate
1628	270	Estimate
1630	350	Estimate
1640	1,930	Estimate
1650	4,116	Estimate
1660	4,936	Estimate
1667	8,000	Estimate
1671	8,250	Men
1672	11,000	Militia
1673	12,000	Estimate
1674	11,000	Militia
1690	13,909	Estimate
1693	16,126	Militia
1695	16,500	Family
1698	18,067	Census
1700	19,107	Estimate
1703	20,665	Census
1708	22,000	Militia
1710	21,625	Estimate
1712	22,608	Census
1715	26,650	Militia
1716	26,970	Militia
1718	30,301	Militia
1721	31,980	Militia
1723	40,564	Census
1730	48,594	Estimate
1731	50,286	Census
1737	60,437	Census
1740	63,665	Estimate
1746	61,589	Census
1749	73,348	Census
1750	76,696	Estimate
1754	96,000	Estimate
1756	96,790	Census
1760	117,138	Estimate
1770	162,920	Estimate
1771	163,348	Census
1774	182,251	Estimate
1776	191,741	Estimate
1780	210,541	Estimate
1786	238,897	Census
1787	280,000	Estimate

Table C16—North Carolina population estimates.

Year	Population	Source
1660	1,000	Estimate
1663	1,800	Family
1670	3,850	Estimate
1677	4,200	Tithable
1680	5,430	Estimate
1690	7,600	Estimate
1700	10,720	Estimate
1710	15,120	Estimate
1720	21,270	Estimate
1730	30,000	Estimate
1732	42,000	Value
1735	46,000	Value
1740	51,760	Estimate
1750	72,984	Estimate
1751	74,750	Taxable
1753	76,857	Taxable
1754	83,164	Taxable
1755	88,281	Taxable
1756	91,487	Taxable
1757	92,120	Taxable
1758	92,942	Taxable
1759	103,309	Taxable
1760	110,442	Taxable
1761	123,145	Taxable
1762	123,835	Taxable
1763	123,995	Taxable
1764	137,958	Taxable
1765	139,621	Taxable
1766	148,458	Taxable
1767	158,532	Taxable
1768	158,783	Taxable
1769	174,950	Taxable
1770	197,200	Taxable
1771	204,000	Taxable
1774	217,600	Taxable
1780	270,133	Estimate
1786	300,000	Value

Table C17—Oregon population estimates and settlers arriving 1792 to 1842.

Year	Settlers	Population
1792	4	4
1793	6	10
1794	0	10
1795	0	10
1796	0	10
1797	0	10
1798	0	10
1799	0	10
1800	1	11
1801	0	11
1802	0	11
1803	0	11
1804	34	45
1805	0	45
1806	1	46
1807	5	51
1808	4	55
1809	3	58
1810	5	63
1811	25	88
1812	30	118
1813	14	132
1814	7	139
1815	1	140
1816	1	141
1817	2	143
1818	9	152
1819	4	156
1820	3	159
1821	2	161
1822	1	162
1823	3	165
1824	7	172
1825	10	182
1826	3	185
1827	2	187
1828	11	198
1829	3	201
1830	10	211
1831	5	216
1832	21	237
1833	15	252
1834	34	286
1835	11	297
1836	25	322
1837	20	342
1838	48	390
1839	56	446
1840		446
1841		446
1842	197	643

Table C18—Pennsylvania population estimates.

Year	Population	Source
1680	680	Estimate
1682	3,000	Value
1683	4,000	Value
1685	8,200	Value
1688	12,000	Value
1689	12,000	Value
1690	11,450	Estimate
1693	10,660	Militia
1700	17,950	Estimate
1708	20,000	Men
1710	24,450	Estimate
1720	30,962	Estimate
1722	40,000	Value
1730	51,707	Estimate
1733	80,000	Value
1740	85,637	Estimate
1747	120,000	Value
1750	119,666	Estimate
1752	116,600	Taxable
1760	183,703	Estimate
1769	230,000	Value
1770	240,057	Estimate
1774	300,000	Value
1775	302,000	Value
1779	311,693	Taxable
1780	327,305	Estimate
1786	368,088	Taxable

Table C19—Rhode Island population estimates.

Year	Population	Source
1640	300	Estimate
1650	785	Estimate
1655	1,200	Value
1658	1,200	Family
1660	1,539	Estimate
1670	2,155	Estimate
1675	2,850	House
1678	3,000	Men
1680	3,017	Estimate
1690	4,221	Estimate
1693	4,800	Men
1700	5,894	Estimate
1702	6,000	Men
1704	6,600	Men
1708	7,181	Census
1710	7,573	Estimate
1714	8,550	Value
1715	9,000	Value
1720	11,680	Estimate
1730	16,950	Estimate
1731	16,950	Value
1740	25,255	Estimate
1748	34,128	Census
1749	35,000	Value
1755	40,636	Census
1760	45,471	Estimate
1770	58,196	Estimate
1774	59,607	Census
1775	58,000	Value
1776	54,715	Value
1780	52,946	Estimate
1783	51,887	Census
1786	59,670	Value
1787	58,000	Value

Table C20—South Carolina population estimates.

Year	Population	Source
1670	200	Estimate
1671	200	Value
1672	406	Value
1680	1,200	Value
1682	2,500	Value
1690	3,900	Estimate
1700	5,704	Estimate
1701	7,000	Value
1702	7,150	Value
1710	10,883	Estimate
1715	16,750	Value
1720	17,048	Estimate
1730	30,000	Estimate
1737	32,000	Men
1740	45,000	Estimate
1745	50,000	Value
1747	65,000	Value
1749	64,000	Value
1750	64,000	Estimate
1751	65,000	Value
1752	65,000	Value
1753	70,000	Value
1754	80,000	Value
1760	94,074	Estimate
1763	110,000	Value
1765	120,000	Value
1769	125,000	Value
1770	124,244	Estimate
1773	175,000	Value
1774	180,000	Value
1780	180,000	Estimate
1786	225,000	Value

Table C21—Vermont population estimates.

Year	Population	Source
1763	385	Family
1767	1,375	Family
1768	3,999	Family
1770	10,000	Estimate
1780	47,620	Estimate

Table C22—Virginia population estimates.

Year	Population	Source	Year	Population	Source
1607	104	Value	1700	58,560	Estimate
1608	200	Value	1701	57,596	Census
1609	240	Value	1702	60,606	Value
1610	350	Value	1703	71,746	Tithable
1611	400	Men	1704	72,167	Tithable
1612	700	Value	1705	72,502	Tithable
1613	300	Value	1708	80,400	Tithable
1614	400	Value	1710	78,281	Value
1616	351	Value	1714	84,527	Tithable
1617	400	Value	1715	84,843	Tithable
1618	400	Value	1721	84,000	Value
1619	2,400	Value	1722	84,560	Tithable
1620	2,200	Value	1723	89,065	Tithable
1621	4,000	Value	1724	98,284	Tithable
1623	2,500	Value	1726	102,720	Tithable
1624	1,275	Value	1729	107,959	Tithable
1625	1,227	Census	1730	114,000	Value
1628	3,000	Value	1740	180,440	Estimate
1630	2,500	Value	1750	231,033	Estimate
1634	4,909	Census	1755	231,632	Tithable
1635	5,119	Value	1756	293,472	Value
1640	10,442	Estimate	1759	314,445	Tithable
1648	15,300	Value	1760	339,726	Estimate
1650	18,731	Estimate	1761	339,861	Tithable
1653	20,610	Tithable	1762	363,066	Tithable
1660	27,020	Estimate	1763	368,826	Value
1665	30,000	Men	1766	409,480	Tithable
1670	35,309	Estimate	1769	409,480	Tithable
1671	40,000	Value	1770	447,016	Value
1680	43,596	Estimate	1772	522,087	Tithable
1682	45,486	Tithable	1773	529,861	Tithable
1688	50,000	Value	1774	560,000	Value
1690	53,046	Estimate	1780	538,004	Estimate
1696	52,437	Tithable	1782	567,614	Value
1697	53,600	Tithable	1786	650,000	Value
1698	55,002	Tithable	1787	700,000	Value
1699	58,040	Census	1788	821,385	Value

The Rocky Mountain Research Station develops scientific information and technology to improve management, protection, and use of the forests and rangelands. Research is designed to meet the needs of National Forest managers, Federal and State agencies, public and private organizations, academic institutions, industry, and individuals.

Studies accelerate solutions to problems involving ecosystems, range, forests, water, recreation, fire, resource inventory, land reclamation, community sustainability, forest engineering technology, multiple use economics, wildlife and fish habitat, and forest insects and diseases. Studies are conducted cooperatively, and applications may be found worldwide.

Research Locations

Flagstaff, Arizona	Reno, Nevada
Fort Collins, Colorado*	Albuquerque, New Mexico
Boise, Idaho	Rapid City, South Dakota
Moscow, Idaho	Logan, Utah
Bozeman, Montana	Ogden, Utah
Missoula, Montana	Provo, Utah
Lincoln, Nebraska	Laramie, Wyoming

*Station Headquarters, Natural Resources Research Center, 2150 Centre Avenue, Building A, Fort Collins, CO 80526

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