

# APPORTIONMENT OF THE U.S. HOUSE OF REPRESENTATIVES

## INTRODUCTION

The primary reason for the establishment of the decennial census of population is set forth in Article 1, Section 2, of the Constitution. The Constitution provides for an enumeration of the population to serve as the basis for the apportionment of members of the U.S. House of Representatives among the States, with the provision that each State must have at least one Representative. An apportionment has been made on the basis of each census from 1790 to 1990, except following the census of 1920.

Calculation of a Congressional apportionment requires three factors—the apportionment population of each State, the number of Representatives to be allocated among the States, and a method to use for the calculation.

## APPORTIONMENT POPULATION

The apportionment population base always has included those persons who have established a residence in the United States. The first Census Act of 1790 established the concept of “usual residence” which has been applied in that and each subsequent census. (See appendix D for further discussion on “Enumeration and Residence Rules” for the 1990 census). Prior to 1870, the population base included the total free population of the States, three-fifths of the number of slaves, and excluded American Indians not taxed.

The 14th Amendment, ratified in 1868, removed the fractional count of the number of slaves from the procedure. In 1940, it was determined that there were no longer any American Indians who should be classed as “not taxed” (39 Op. Att’y. Gen. 518 (1940)).

In 1970 and 1990, certain segments of the overseas population (U.S. Armed Forces personnel, civilian U.S. Federal employees, and dependents of both groups) were allocated to their home States and included in the populations of those States for apportionment purposes only. These segments of the overseas population were not distributed to the political subdivisions of the States, nor included in other 1970 or 1990 census data products.

The 1990 apportionment population counts by State are presented in table A of this text. These counts were transmitted by the Secretary of Commerce to the President on December 26, 1990, and from the President to the Congress on January 3, 1991. The population base for the apportionment of each census is shown in table B of this text. Laws related to the census are codified in the *United States Code, Title 13*.

## NUMBER OF REPRESENTATIVES

The Constitution set the number of Representatives at 65 from 1787 until the first enumeration in 1790. The first apportionment, based on the 1790 census, resulted in 105 members. From 1800 through 1840, the number of Representatives was determined by the ratio of the number of persons each was to represent (“fixed ratio”), although the way to handle fractional remainders changed. Therefore, the number of Representatives changed with that ratio, as well as with population growth and the admission of new States.

For the 1850 census and later apportionments, the number of seats was determined prior to the final apportionment (“fixed house size”); and thus, the ratio of persons each was to represent was the result of the calculations. In 1911, the House size was fixed at 433 with provision for the addition of one seat each for Arizona and New Mexico when they became States (U.S. Statutes at Large, 37 Stat 13, 14 (1911)). The House size, 435 members, has been unchanged since, except for a temporary increase to 437 at the time of admission of Alaska and Hawaii as States. The representation by State resulting from each apportionment is shown in table 3.

## METHOD OF APPORTIONMENT

It is impossible to attain absolute mathematical equality in terms of the number of persons per Representative, or in the share each person has in a Representative, when seats are to be apportioned among States of varying population size and when there must be a whole number of Representatives per State. Proportional voting (fractional seats) has never been attempted in the U.S. House of Representatives. Laws concerning the method of apportionment are codified in the *United States Code, Title 2*.

Since the first apportionment following the 1790 census, there have been five basic methods used to apportion the House of Representatives.

**1790 to 1830**—The “Jefferson method” of greatest divisors (fixed ratio with rejected fractional remainders). Under this method, a ratio of persons to Representatives was selected; the population of each State was divided by that number of persons. The resulting whole number of the quotient was the number of Representatives each State received. Fractional remainders were not considered, no matter how large. Thus a State with a quotient of 3.99 received three

Representatives, the same number as a State with a quotient of 3.01. The size of the House of Representatives was not predetermined, but resulted from the calculation.

**1840**—The “Webster method” of major fractions (fixed ratio with retained major fractional remainders). This method was applied in the same way as the Jefferson method, except if a fractional remainder were greater than one-half, another seat would be assigned. Thus a State with a quotient of 3.51 received four Representatives, while a State with a quotient of 3.49 received three. In this method also, the size of the House of Representatives was not predetermined but resulted from the calculation.

**1850-1900**—The “Vinton” or “Hamilton” method established a predetermined number of Representatives for each apportionment, and divided the population of each State by a ratio determined by dividing the apportionment population of the United States by the total number of Representatives. The resulting whole number was assigned to each State, with an additional seat assigned, one at a time, to the States with the largest fractional remainders, up to the predetermined size of the House of Representatives. This method was subject to the “Alabama paradox,” in which a State could receive fewer representatives if the size of the House of Representatives was increased.

**1910, 1930**—The method of major fractions assigned seats similarly to the Webster method of 1840 by rounding fractional remainders using the arithmetic mean. The ratio was selected so that the result would be the predetermined size of the House of Representatives. In 1910, the House size was fixed at 433 with provision for the addition of one seat each for Arizona and New Mexico when they became States.

**1940-1990**—The “Hill” method of equal proportions assigns seats similarly to the Jefferson and Webster method, except it rounds fractional remainders of the quotient of the State population divided by the ratio differently. With this method an additional seat is assigned if the fraction exceeds the difference obtained by subtracting the integer part of the quotient from the geometric mean of this integer and the next consecutive integer. For example, a State with a quotient of 3.48 receives four Representatives, while a State with a quotient of 3.45 receives three Representatives, since  $.48 > \sqrt{3 \times 4} - 3 > .45$ . The size of the House of Representatives remained fixed at 435 (except when Alaska and Hawaii became States, there was a temporary addition of one seat for each until the apportionment following the 1960 census).

Following the 1990 census, two lawsuits concerning apportionment issues were filed in Federal Courts. The U.S. Supreme Court held that the method of equal proportions was constitutional; that the Congress had properly exercised its apportionment authority; and that the inclusion of U.S. Federal military and civilian personnel, and their dependents, in the apportionment populations of the States was constitutional. These cases were *United States Department of Commerce v. Montana* 112 S.Ct. 1415 (1992) and *Franklin v. Massachusetts* 112 S.Ct. 2767 (1992).

Additional information about apportionment of the U.S. House of Representatives may be obtained from the Chief, Population Division, U.S. Bureau of the Census, Washington, DC 20233-3400.