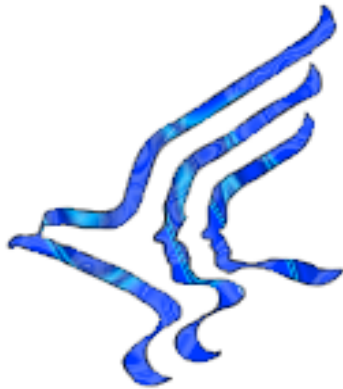


# TANF

## SAMPLING AND STATISTICAL METHODS MANUAL



October 1999



# TANF

## SAMPLING AND STATISTICAL METHODS MANUAL

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# TANF

## SAMPLING AND STATISTICAL METHODS MANUAL

### 1100 INTRODUCTION

Title I of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) establishes the Block Grants for Temporary Assistance for Needy Families (TANF) Program by amending Titles IV-A and IV-F of the Social Security Act. The purpose of this welfare reform initiative, which replaced the Aid to Families with Dependent Children Program and the Jobs Opportunity and Basic Skills Program, is to increase the flexibility of States and Tribal grantees in operating a program designed to:

1. Provide assistance to needy families (cases) so that children may be cared for in their own homes or in the homes of relatives;
2. End the dependence of needy parents on government benefits by promoting job preparation, work, and marriage;
3. Prevent and reduce the incidence of out-of-wedlock pregnancies and establish annual numerical goals for preventing and reducing the incidence of these pregnancies; and
4. Encourage the formation and maintenance of two-parent families.

While the TANF provisions allow States and Tribal grantees discretion as to the mechanisms used in meeting these goals, they place on States and Tribal grantees a responsibility for measuring, tracking, and reporting on their reform initiatives.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 requires States and Tribes to collect on a monthly basis and report to the Secretary of the Department of Health and Human Services (DHHS) on a quarterly basis a wide variety of

disaggregated case record information on the families receiving assistance, families no longer receiving assistance, and families applying for assistance from programs funded under the TANF program. State or Tribal grantee may comply with this requirement by collecting and submitting case record information for its entire caseload or by collecting and submitting the case record information for a portion of the caseload which is obtained through the use of scientifically acceptable sampling methods.

## 1110 Purpose of the Manual

Sampling is the selection of a part of a whole for the purpose of drawing conclusions about the population, or universe. It permits the administrator to cut costs; reduce manpower requirements; gather vital information more quickly; obtain data not available otherwise; obtain more comprehensive data; and, in some instances, actually increase statistical accuracy. The manual explains statistical techniques in sufficient detail for careful observance of sound sampling procedures and other basic statistical principles. Theory is included to the extent necessary to provide working rules for application of the more commonly used techniques as well as for recognizing the limitation of such techniques. Because many users of the Manual are not statisticians, mathematical exposition and technical language have been kept to a minimum.

This sampling manual contains the broad framework and procedures to be used by each State or Tribes, that opts to file its TANF Data Report (or Tribal TANF Data Report) based on a sample of its caseload. In developing its more specific sampling plans, States and Tribal grantees have considerable latitude in designing samples that are consistent with the principles described herein. The manual should provide the user with a basic understanding of the TANF program sample requirements and statistically valid sampling methods, which are essential to the successful reporting on the TANF program.

Section 1200 describes common types of sample designs (e.g., simple random sampling and systematic random sampling) and basic statistical concepts, which are applicable in any sample survey setting. It is intended to provide a general background to non-statisticians who use the manual. Section 1300 contains sampling plan requirements: a State or Tribal sampling plan must include a detailed description of the sample frame and the procedures that are to be employed in constructing the sample frame, i.e., the list from which the sample is to be selected. Also, the plan must describe in detail the sample selection procedures for identifying the sample cases (families) for which data are to be reported. For guidance on developing a sampling plan, see Appendix D. Section 1400 contains the sample size requirements, sample selection procedures for systematic random sampling and simple random sampling, and special sampling problems associated with the TANF program. Section 1500 describes procedures to be using in the event an adjustment to the sample size is needed. Section 1600 describes the methodology for calculating the monthly and annual work participation rates. Section

1700 contains general information on basic statistical techniques that can be used for an effective analysis of the TANF program data. States and Tribes should use the sampling plan requirements specified in Sections 1300, 1400, and 1500, along with the outline contained in Appendix D (Page 141), to develop their detailed sampling plans. If they need further assistance to develop sampling plans, they can contact the Administration for Children and Families (ACF) Regional Administrator for assistance.



## 1200 BASIC STATISTICAL CONCEPTS

Probability sampling is an acceptable alternative to providing 100% counts of the TANF caseload each month. Probability sampling has two properties: (1) every unit in the entire population has a known, non-zero chance (called a probability) of being selected in the sample, and (2) there is an element of "randomness" used to select the particular sample for which data are to be collected. These two principles --measurability and randomness -- distinguish probability samples from haphazard, judgment, or quota samples.

### 1210 Sampling and Non-Sampling Errors

When a sample is selected through a random procedure, the estimates of a population characteristic from that sample will generally be different from the true value of the population characteristic simply because the estimates are based on a sample. Sampling error is defined as the difference between the value of the characteristic as estimated from the sample and the true population value of the characteristic. Although such errors cannot be avoided, they can be controlled and measured (in probability samples).

Non-sampling errors, on the other hand, are generally not measurable (except by the use of special auxiliary sample checks). Examples of non-sampling errors include: (1) careless errors in coding responses, (2) errors attributable to the imperfect design of measurement tools, e.g., I.Q. tests are only an approximate measure of intelligence, and (3) errors due to inability to obtain relevant information for all sample members, i.e., non-response bias.

The design of any study should be examined carefully in order to determine the presence and impact of such errors.

### 1220 Common Types of Scientific Sampling Techniques

It is impossible to specify a single sampling procedure that would be best suited to all State agencies for all samples. There are many different ways of selecting scientific (probability) samples from populations with items of equal importance. The simplest and most widely used methods are: simple random sampling, systematic sampling, stratified simple random sampling, and stratified systematic sampling. These four widely used methods are acceptable methods of sampling for the purpose of collecting and reporting

the disaggregated TANF and separate State program - maintenance of error (SSP-MOE) data.

#### 1221 Simple Random Sampling

Simple random sampling is a method of selecting a sample in such a way that each unit of the frame has an equal and independent chance of being included in the sample. For samples of any given size ( $n$ ) from a population of size  $N$ , all possible combinations of  $n$  units that could form samples of that size must have the same probability of selection. A table of random numbers (see Appendix A, page 107) or a computer program with a random number generator is generally used to choose the sample units. This method is relatively easy to administer and is responsive to variations in caseload size over the course of the sample period.

#### 1222 Systematic Sampling

Systematic sampling method provides a system or pattern of selection of individual units from a sample frame (which may be a hardcopy list or computer file of all the individual units in the population) at equally spaced intervals (such as every 10th, 140th, 850th, etc., as required to obtain the total of a given sample size) with the starting point within the first interval being determined by random selection.

In using the systematic sampling method, one needs to be aware of a major pitfall that exists when the cases on the sample frame are arranged in some kind of repetitive or cyclical pattern. In such an ordered list, the sample interval might sometimes be the same as the cycle and could, therefore, yield a sample of cases with similar characteristics which may not be typical of the caseload. It is, therefore, important not to use a systematic sample with a listing that is cyclical in nature.

#### 1223 Stratified Random Sampling

Stratified random sampling is random sampling of a population that is divided into a number of sub-populations according to some pre-determined criterion (geographic location, characteristic, etc.). In order to produce estimates with a given precision while minimizing the total sample size required, the population is divided into several homogeneous groups so that the units in the same group are more alike than the units in different groups. Each group is called a "stratum" and the process of dividing the population into groups is referred to as "stratification." The strata do not overlap and together comprise the entire population. Sample cases can be selected independently from each stratum using either systematic sampling, simple random sampling, or an

alternative approved sampling procedure. If the percent of the sub-population selected from each sub-population are equal, i.e., proportional sampling, no weighting is required. The sample is "self-weighting." Otherwise, individual weighting factors for each sub-population must be taken into account before the sub-population sample results can be combined.

There are various purposes for stratification. It may be that information is desired on the strata separately; that more accurate estimates of the population parameters are needed than can be obtained by a non-stratified sample; or that costs and administrative constraints must be considered. To achieve these purposes, optimum allocation of the sample size among the strata is usually required. Because a disproportionate number of cases can be drawn from particular strata, some strata may be sampled more intensively than others. For example, a State may find it administratively efficient to give a higher probability of being sampled to urban areas than to rural areas.

The following points should be considered in using the stratified sampling method:

5. Stratified sampling requires advance knowledge of the proportion of the population in each stratum;
6. Stratification by one characteristic does not ensure an efficient stratification by other characteristics that may be of interest;
7. Gains in precision for population estimates will be negligible unless it is known that there are substantial differences among the strata and relatively small differences within each stratum;
8. The cost and effort of creating the strata may outweigh the potential gains in precision;
9. The weighting procedures required for calculating population estimates and confidence levels for stratified samples in which the strata units are disproportionately allocated can be complex and time consuming (see Section 1232.2 (page 14); and
10. Over stratification (i.e., creating too many strata) for a given size of sample can result in some small strata that may adversely affect the precision of estimates.

## 1224 Allocation of Stratified Sample

If a State selects a stratified sample, the State must decide how to allocate the sample among the strata and describe the allocation procedures in the sampling plan. Two common methods for sample allocation are allocation proportional to stratum caseload size and optimal allocation with respect to an important program characteristic (e.g., participation rate).

### 1224.1 Proportional Allocation

Proportional allocation means that the size of the samples from the different strata are proportional to the size of the caseload for the strata. In general, this allocation method is desirable because it produces a self-weighting sample. For proportional allocation calculate the stratum sample size by multiplying the total sample size by the ratio of the stratum's caseload to the total caseload.

$$n_h = n \left( \frac{N_h}{N} \right)$$

### 1224.2 Optimal Allocation

Optimal allocation of a given size sample means that the sizes of the samples from the different strata are determined so that the overall variance is minimized. This is done by taking into consideration several characteristics, e.g., caseload size as well as the estimated standard error for the value of the program characteristic of interest to the program administrator. Because strata differ in both caseload size and the program characteristic, it is reasonable to take larger samples from the strata with greater value of the program characteristic of interest and smaller samples from the strata with less value of the program characteristic of interest. Optimal allocation with respect to the program characteristic produces a disproportionate stratified sample that minimizes the estimated standard error of the program characteristic. Because the sample is disproportionately allocated, the sample results will have to be weighted to generate State program characteristics. The equation for the optimal allocation of a sample is:

$$n_h = n \left( \frac{N_h S_h}{\sum_{h=1}^H (N_h S_h)} \right)$$



where:

$n_h$  is the sample size for the  $h^{th}$  stratum;

$n = n_1 \% n_2 \% \dots \% n_h$  is the total State sample size;

$h = 1, 2, \dots, H$  represents the  $H$  strata, in which the State's caseload is grouped for sampling;

$S_h$  is the estimated standard error of program characteristic for the  $h^{th}$  stratum; and

$N_h$  is the TANF caseload for the  $h^{th}$  stratum.

#### 1230 Validity and Reliability of Statistical Data

Sampling and statistical procedures, by themselves, cannot assure validity (or freedom from bias) of the collected data -- that is, that case record information is actually correct and is reported correctly. The validity of the statistical data depends upon the adequacy of the coding schedule in relation to the scope, detail, and significance of the data collected; the accuracy and completeness of the data in the case record; and the degree to which case record reviews are carried out effectively.

Sound sampling procedures can assure a known degree of reliability (also referred to as precision) of statistical data. If sampling procedures are soundly based, the results obtained from one sample taken from the total caseload will be the approximate results obtained if the whole caseload was reviewed.

The TANF sample is designed so that the reliability of the sample results is measurable and can be shown to be relatively high. These results can be made more reliable through proper application of statistical methods, as well as through an increase in sample size.

Because of their importance, examples of sources of bias (which affect validity) and explanations of the formulas involved in measuring precision (reliability) are discussed in some detail.

#### 1231 Bias

A biased sample is one that does not represent the population from which it was selected, i.e., an infinite number of selected samples would not yield the characteristics of the

population from which they were selected. For example, suppose that an opinion survey was conducted in the middle of the day by interviewing everyone on a busy street willing to stop for ten minutes for the interview. If 90 percent of those persons interviewed had a favorable opinion on the issue involved, it would not necessarily follow that about 90 percent of the city residents have a favorable opinion. People on a particular street at a particular time of day would more than likely be unrepresentative of the total city population. Also, the fact that the sample consisted only of individuals who could spare ten minutes in the middle of the day makes the sample even more unrepresentative. Such a sample could contain bias.

One source of bias deals with cases for which data cannot be collected. "Data not collected" or non-response cases fall into several categories. Such cases should have been included in the sample but could not be for reasons such as the case record could not be located or contains incomplete information.

If the number of non-response cases is small, the bias resulting from their non-response will generally also be small. If the number of such cases is large, a considerable bias may be introduced. In effect, a segment of the total caseload is unrepresented if the sample cases for that segment are not reviewed. If a substantial number of sample cases are not included, there is no assurance that conclusions drawn from the sample apply to the total caseload. The number of such cases can be anticipated and should be compensated for by oversampling. Even if the correct number of cases is compensated by oversampling, non-response bias may still be present.

#### 1232      Precision -- Computation of the Confidence Interval

Population values, which can normally be estimated from a sample, are often referred to as population "parameters." A single valued estimate of a population parameter is called a "point estimate." In order to predict the actual proportion of the population with a given caseload characteristic (i.e. the proportion of the caseload with an adult participating in a work program) with any degree of certainty, a range of possible values (confidence interval) is computed. The first step is to compute the "variance" (also called the "mean square deviation") of the point estimate. Variance is the quantity that is used to measure the extent of fluctuations around the mean (simple average) while mean square deviation is used to measure the dispersion around the mean or some arbitrary origin.

For systematic samples, when simulating simple random selection, the estimated variance of a proportion is computed approximately by the following equation <sup>1/</sup>:

$$V_p = \frac{p(1-p)}{n} \times \frac{N-n}{N}$$

where:

$p$  = estimated proportion (for item being estimated) in the sample, and

$n$  = sample size

The precision of a sample estimate is measured by the standard error of the estimate,  $S_p$ , which is the square root of the variance. The standard error, like the variance, is normally unknown, and can be estimated from the sample.

$$S_p = \sqrt{V_p} \quad \text{or} \quad \sqrt{\frac{p(1-p)}{n} \times \frac{N-n}{N}}$$

If  $n$  is small relative to  $N$ , then  $(N - n)/N$  can be ignored.

The precision specification consists of two elements. First, the administrative decision on the desired degree of reliability determines the sample size necessary to meet the specified probability level and precision range. For example, the administrator might specify that the estimate of the proportion of two-parent families in the caseload is to be within 1 percentage point of the figure that would be obtained by a complete review of the entire caseload. This is called the tolerance specification or limit.

Secondly, since the administrator is dealing with a sample, a certain degree of risk is also assumed. Thus, in the example given above, if the sampling error had been computed so that the estimate plus or minus 1 percent would include the true value in 95 out of 100 samples selected from the same population, the estimate plus or minus 1 percent would be called the 95 percent confidence interval.

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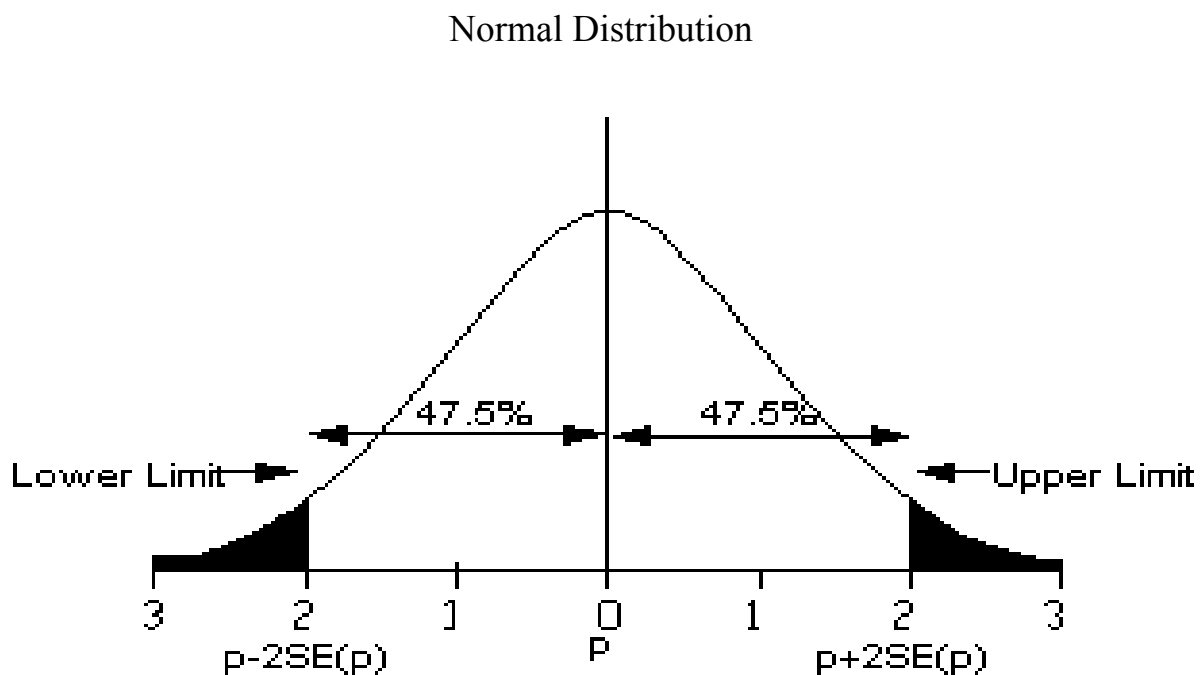
<sup>1/</sup> It can be shown that, if the units are randomly ordered, the variance of a systematic sample is equivalent to the variance of a simple random sample.

In general, the 95 percent confidence interval is equal to the point estimate plus or minus 1.96 times the standard error of the normal distribution (or its approximation) and is expressed as follows:

$$95\% \text{ CI } = p \pm 1.96 S_p$$

This confidence interval will cover the true value of "p" about 95 percent of the time when sampling repetitively. Expressed in another way, we can be reasonably confident that about 95 percent of the sample proportions will be within 1.96 standard errors of their corresponding population proportion. A visual representation of this statement is shown in the following figure. (The standard normal deviate, 1.96, is associated with the exact 95 percent confidence interval. In practice, however, 2 is sometimes conveniently used to replace 1.96 for constructing a 95 percent confidence interval. The actual probability is 95.46 percent if 2, instead of 1.96, is used.)

Figure 1.



If " $p$ " is the sample proportion, then there is a 95 percent probability that the population value lies between  $p + 2S_p$  and  $p - 2S_p$ . Thus, the population value is within 2 standard errors. (If 99.7 percent confidence was desired, the appropriate

universe value would be within 3 standard errors.) This is called two-tailed probability and is used when interest is in both the upper and lower limits of an estimate.

If however, only one limit is of interest, a one-tailed limit can be used. The standard error (SE) units and probabilities are different for one-tailed limits. The 95 percent confidence interval for the one-tailed lower limit is  $p - 1.65 S_p$ . If  $p$  represents the sample estimate of the participation rate, there is a 95 percent probability that the true participation rate is greater than  $p - 1.65 S_p$ . Similarly, the 95 percent confidence interval for the one-tailed upper limit is  $p + 1.65 S_p$ . There is a 95 percent probability that the true participation rate is less than  $p + 1.65 S_p$ .

### 1232.1 Computation of Sample Size to Obtain a Desired Precision

By algebraic rearrangement, it is possible to compute the minimum sample size needed to obtain a desired precision. For example, to obtain the sample size required for 95 percent confidence, that a sample proportion " $p$ " will be within plus or minus 2 percent of the true proportion " $P$ " when " $p$ " is assumed to be 50 percent. The computation is as follows:

$$e = 1.96 \sqrt{\frac{p(1 \& p)}{n}}$$

$$\text{or } n = \frac{(1.96)^2 p(1 \& p)}{e^2}$$

where " $e$ " is the desired precision level (2 percent in this example).

Substituting:

$$n = \frac{(1.96)^2 (.50) (1 \& .50)}{(.02)^2}$$

$$n = 2,401 \text{ or approximately } 2,400 \text{ cases}^2$$

It should be noted that, for a proportion, precision is primarily a function of sample size. Larger samples will generally yield more precise estimates. In many cases, the size of the population from which the sample is drawn is not important. As the population size increases, and the ratio  $(N \& n)/N$  approaches 1.00 (where "N" is the population size and "n" is the sample size), the effect of population size on precision diminishes and can usually be disregarded.

The specification of precision and confidence are both administrative decisions that are generally the responsibility of those who will use the data. The uncertainty associated with sampling can be reduced by taking larger samples or using superior measurement techniques, but only at some expense. Therefore, these decisions also must take account of the resources available to collect the sample data.

#### 1232.2 Computation of Levels of Precision for Stratified Samples From State (Tribal) Sample

In a stratified sample, population and variance estimates are computed from information in each stratum or group, appropriately weighted and combined.

#### Precision for Proportions

If in each stratum ( $h$ ) a systematic sample (approximating a simple random sample) is selected, the equations for estimating the overall proportion ( $p_s$ ) and its variance are as follows:

---

2/ The 2,400 figure is based on the assumption that the population rate is 50 percent and that the sample is a small fraction of the caseload so that the finite population factor can be ignored. If the same fraction is large, the finite population factor should be included; the sample size can be modified using the equation

$$n_1 = \frac{n}{1 + (n - 1) / N}$$

where N is the population size.

$$p_s = \sum_{h=1}^H W_h p_h = \sum_{h=1}^H \frac{N_h}{N} p_h$$

and

3

$$V_{p_s} = \sum_{h=1}^H \left( \frac{N_h}{N} \right)^2 \left[ \frac{p_h (1 - p_h)}{n_h} \right]$$

where:

$H$  = number of strata;

$N_h$  = population size in stratum  $h$ ;

$N = \sum N_h$  = total population size;

$W_h = \frac{N_h}{N}$  = stratum weight;

$n_h$  = sample size in stratum  $h$ ;

$n = \sum n_h$  = total sample size of all strata; and

$p_h$  = proportion in stratum  $h$ .

The standard error of  $p_h$  is estimated by the square root of its estimated variance and, as mentioned earlier, is used in the calculation of confidence intervals. These intervals are calculated in the same manner as for a non-stratified sample.

For example, assume a sample is drawn from three strata. The population sizes in each stratum are 1,000, 2,000, and 4,000; the sample sizes are 50, 200, and 200; and the stratum proportions are .05, 0.1, and 0.2 respectively. The overall proportion is estimated as:

---

3/ If the finite population factor is included, the equation is given as follows:

$$V_{p_s} = \sum_{h=1}^H \left( \frac{N_h}{N} \right)^2 \left( \frac{N_h - n_h}{N_h - 1} \right) \left( \frac{p_h (1 - p_h)}{n_h} \right)$$

$$P_s = \left[ .05 \times \left( \frac{1000}{7000} \right) \right] \% + \left[ 0.1 \times \left( \frac{2000}{7000} \right) \right] \% + \left[ 0.2 \times \left( \frac{4000}{7000} \right) \right] = .15$$

and the variance of the proportion is:

$$V_{p_s} = \left[ \left( \frac{1000}{7000} \right)^2 \times \frac{(.05)(.95)}{50} \right] \% + \left[ \left( \frac{2000}{7000} \right)^2 \times \frac{(0.1)(0.9)}{200} \right] \\ + \left[ \left( \frac{4000}{7000} \right)^2 \times \frac{(0.2)(.08)}{200} \right] = 0.00032$$

The standard error of the proportion is:

$$S_{p_s} = \sqrt{V_{p_s}} = \sqrt{.00032} = .018$$

The 95 percent confidence interval of the proportion is:

$$CI = p_s \pm 1.96S_{p_s} = .15 \pm 1.96(.018), \text{ or from } .115 \text{ to } .185$$

### 1232.3 Relative Efficiency of Stratified Random and Simple Random Sampling

The frequently adopted definition of relative efficiency ( $E$ ) of an estimator having a variance, for example, of  $V_1$  to another having a variance of  $V_2$  is:

$$E = V_2 / V_1$$

Thus, the smaller the variance of an estimator, the more efficient the estimator. If a State proposes to change its sample design, e.g., from a systematic sample to a stratified random sample, it should check to see if the estimator (for a variety of characteristics being measured) based on the new sample design has a variance that is equal or smaller than that of the present sample design.



## **1300      SAMPLING PLAN REQUIREMENTS**

The sampling plan serves as the foundation for the Administration for Children and Families (ACF) review of the integrity of the State agency's and Tribal grantee's TANF sampling procedures and SSP-MOE sampling procedures. The State or Tribe that elects to submit case record information for a sample of families (also known as, cases) must select its TANF sample (and, if applicable, SSP-MOE sample) for data reporting purposes under a sampling plan approved by the ACF Regional Administrator. All sampling procedures used by the State agency or Tribal grantee, including frame composition and construction, must be fully documented and available for review by the ACF Regional Office. This requirement includes all data processing specifications and automated routines used to select the samples.

The sampling plan documentation must describe the list(s) of families from which the samples are selected, the sample selection procedures, and the methodology for estimating caseload characteristics and sampling errors. Referencing sub-sections of this manual in the sampling plan does not constitute acceptable compliance with the requirements set forth for sampling plan documentation without further explication of the specific procedures the State or the Tribe will use. Detailed descriptions of the sample frames, sample selection, and estimation procedures used by the State or Tribe must be included in the sampling plan documentation.

If a State or Tribe opts to report the required case record information for a sample of families (as opposed to for the entire caseload), a State shall have an approved sampling plan in effect for a full sample period. A State or Tribe may not implement a new sample design without prior approval. A revised sampling plan must be submitted to the ACF Regional Administrator with specific documentation of any substantive modification of a previously approved sample design at least 60 days before the start of the annual sample period, i.e., no later than August 1. The State is not required to resubmit the sampling plan if it is unchanged from the previous year. Changes in random start numbers, sample intervals, or caseload estimates are not to be submitted as a revision of the sampling plan. They should, however, be sent to the ACF Regional Office.

### **1310      Criteria for Plan Approval**

The sampling plan must meet the following criteria:

11. Conformance to principles of probability sampling, i.e., each case (family) in the population must have a known, non-zero probability of selection and computational methods of estimation must lead to a unique estimate;
12. Documentation of methods for constructing and maintaining the sample frame(s), including assessment of frame completeness and any potential problems associated with using the sample frame(s);
13. Documentation of methods for selecting the sample cases from the sample frame(s); and
14. Documentation of methods for estimating case characteristics and their sampling errors, including the computation of weights, where appropriate.

1320 Sample Frame

Samples are selected from a list of families called a "sample frame." The sampling plan must describe in detail the master file, the payroll file, or other list(s) from which the sample of families is actually selected. The plan must explicitly describe the following sample frame characteristics:

1. Date(s) when the sample cases (both regular and supplemental, if applicable) for the sample month are selected, e.g., first workday of the month following the sample month);
2. Source, components, accuracy, and completeness of the sample frame in relation to the total caseload; if not accurate or complete, explanation of why not and how State (Tribe) plans to correct for the problems with the sample frame;
3. Procedures for ensuring that the sample frame contains complete coverage of the applicable caseload (e.g., the active TANF sample frame includes all families receiving assistance under the State's or Tribe's TANF Program, including all newly approved applicants for the sample month, and the closed TANF sample frame includes all families no longer receiving assistance under the State's TANF Program, i.e., assistance terminated effective for the sample month);
4. Whether or not the frame is constructed by combining more than one list (if more than one list, explanation of how lists are identified and how duplication of cases on lists are prevented);

5. Whether the frame is compiled entirely in the State office, entirely in local offices, in the State office based on information supplied by local offices, etc.;
6. Form of the frame, e.g., a computer file, microfilm, or hard copy; if parts of the frame are in different forms, specifications for each part;
7. Frequency and length of delays and method used in updating the frame or its sources;
8. Procedures for estimating the proportion of sample cases for which the State (Tribe) will not be able to collect and report case record information (e.g., dropped as "listed-in-error" because the family (case) did not receive TANF assistance for the reporting month);
9. Methods of locating and deleting "listed-in-error" cases from the frame;
10. Structure of the frame, i.e., the order of cases within each list and the data elements on the frame, including definitions of coded values;
11. Treatment of special populations under TANF (e.g., individuals under a tribal family assistance plan, a non-custodial parent who participates in work activities); and
12. Criteria for stratifying sample (if applicable).

1330      Sample Selection Procedures

The sampling plan must describe in detail the procedures for selecting the sample cases. The plan must explicitly describe the following characteristics:

1. Procedures for estimation of caseload size, if applicable to sampling method;
2. Procedures for determination of an appropriate allowance for sample cases for which the review may not be complete because the sample case was "listed-in-error" (e.g., family did not receive TANF assistance for the sample month);
3. Procedures for determining the required monthly sample size and indication of the sample size;

4. If stratified sample design is used, procedures for sample allocation;
5. Procedures for the computation of sample intervals and the determination of random starts if the State (Tribe) used systematic sampling or stratified systematic sampling;
6. Application of selection procedures to identify sample cases;
7. Procedures to compensate for excessive oversampling or undersampling;  
and
8. Time schedule for each step in the sampling procedure.

## **1400      SAMPLE SIZES AND PROCEDURES FOR SELECTING SAMPLE CASES**

### **1410      Annual Sample Size Requirements**

State agencies and Tribal grantees should consider their own management information needs relative to desired reliability of characteristic data broken out for specific groupings, geographic areas, or by monthly or quarterly time periods in deriving the TANF and the SSP-MOE sample sizes. While this section of the manual specifies the minimum required annual sample sizes, States and Tribes are encouraged to select larger size samples in order to increase the precision of the resulting estimates and to meet their own information needs.

For TANF data collection and reporting purposes, there are two sampling frames from which cases are to be sampled. The sampling frames are for families receiving assistance (i.e., active cases, including all newly approved applicants) and families no longer receiving assistance (i.e., closed cases).

If a State has one or more SSP-MOE, it must collect and report a limited amount of data on TANF families receiving assistance, as defined in Appendix B (page 119) and no longer receiving assistance under the SSP-MOEs if it wishes to: receive a high performance bonus or qualify for work participation caseload reduction credit (see section 261.40 through 261.44 of the final rule). The SSP-MOE data reporting requirements are not applicable to Tribes. For the SSP-MOE data collection and reporting purposes, there are two sampling frames from which cases are to be sampled. The sampling frames are for families receiving assistance (i.e., active SSP-MOE cases, including all newly approved applicants) and families no longer receiving assistance (i.e., closed SSP-MOE cases).

### **1411      Sample Size Requirements for the TANF Active Sample**

The minimum required annual sample size for the active TANF sample is 3000 completed cases, of which approximately 2400 are ongoing cases and 600 are newly approved applicants. Of the 2400 ongoing cases, approximately 600 cases are two-parent TANF families. The minimum required sample sizes are designed to provide reasonably precise estimates for such proportions as the work participation rates for all families (e.g., a precision of about plus or minus 2 percentage points at a 95% confidence level) and for

two-parent families (e.g., a precision of about plus or minus 2.3 percentage points at a 95% confidence level), as well as for demographic and case characteristics of newly approved TANF families and all TANF families. In addition, these sample sizes will permit us to detect real changes in certain proportions over time (e.g., changes in the proportion of child-only cases).

The midpoint estimate (from which the confidence limits are constructed) of the overall and two-parent work participation rates will be used in determining if States have met the statutory requirements. If the State is unwilling to accept the precision levels obtained from the minimum required annual sample sizes for the purpose of assessing penalties for failing to meet the work participation rates, it is the State's responsibility to increase its sample size to what the State determines is an acceptable level of precision for this purpose.

To meet these sample size requirements, States and Tribes may select one of the following options:

9. Use a simple or systematic sampling methodology (or other acceptable method) and use an overall sample size that is sufficiently large enough to obtain the 600 cases needed to meet the two-parent family required sample size, the 600 required to meet the newly approved application sample size, and the 3000 cases required to meet the overall sample size.
10. Stratify the sample by newly approved applications; two-parent families; and all other families. Use a random sampling method within each stratum to select the sample. Taking into consideration the fact that two-parent families are included in the calculation of the all family work participation rate, compute the sample size for each stratum based on the 600-case requirement for the two-parent stratum and 600 for the newly approved applications stratum, and 1800 cases for the remaining families.

Under option 2, each stratum is sampled separately, and the monthly all families work participation rate is a weighted rate, reflecting the representation of two-parent families and other families with at least one adult or a minor child head-of-household to the total all family population. If a State or Tribe uses a stratified sample design, the State (or Tribe) must submit the monthly caseload for each stratum. These monthly caseload sizes by stratum are due 45 days after the close of each quarter (i.e., the same due dates as for the quarterly TANF Data Report).

If a State or Tribe does not have enough newly approved applicants or two-parent families to meet the required annual sample sizes of 600 families (i.e., the average monthly sample size of approximately 50 newly approved applicant families or 50 two-parent families), the State or Tribe must select 100% of such families and select from the

other ongoing stratum enough additional cases to meet the overall required annual sample size of 3000 families. If a State or Tribe does not have enough families to meet the overall sample requirement (i.e., 3000 families for the active TANF sample for an average monthly sample of 250 families), the State or Tribe must report on 100% of their families each month.

States and Tribes are not limited to these two methods for meeting the sample size requirements. However, alternative methods should be discussed with Regional statistical staff to ensure the reliability of the work participation rates and any other statistic used to award a bonus or assess a penalty is not severely affected.

#### 1412 Sample Size Requirements for the TANF Sample of Closed Cases

The minimum required annual sample size for the sample of closed cases is 800 cases. An 800-case sample will permit us to obtain a precision of plus or minus 3.5 percentage points for an attribute of 0.50 at a 95% confidence level. This result is obtained from the formula in Section 1232.1 of this manual.

If a State or Tribe does not have enough closed cases to meet the required minimum annual sample size of 800 families (i.e., an average monthly sample size of approximately 67 families), the State or Tribe must collect data for and report on 100% of the closed cases.

#### 1413 Sample Size Requirements for the SSP-MOE Active Sample

The minimum required annual sample size for the active SSP-MOE sample is 3000 cases, of which approximately 2400 are ongoing cases and 600 are newly approved applicants. Of the 2400 ongoing SSP-MOE cases approximately 600 cases are two-parent families. The minimum required annual sample sizes are designed to provide reasonably precise estimates for such proportions as the work participation rates for all families (e.g., a precision of about plus or minus 2 percentage points at a 95% confidence level) and for two-parent families (e.g., a precision of about plus or minus 2.3 percentage points at a 95% confidence level), as well as for demographic and case characteristics of State SSP-MOE families. In addition, these sample sizes will permit us to detect real changes in certain proportions over time (e.g., changes in the proportion of child-only cases).

If a State does not have enough newly approved applicants or two-parent families to meet the required annual sample size of 600 newly approved applicant families and 600 two-parent families (i.e., the average monthly sample size of approximately 50 newly approved applicant families and 50 two-parent families respectively), the State must select 100% of such families and select from the other ongoing stratum enough additional

cases to meet the overall required annual sample size of 3000 families. If a State does not have enough families to meet the overall sample requirement (i.e., 3000 families for the active SSP-MOE sample for an average monthly sample of 250 families), the State must collect data for and report on 100% of its families.

1414      Sample Size Requirements for the SSP-MOE Sample of Closed Cases

The minimum required annual sample size for the SSP-MOE sample of closed cases is 800 cases. An 800-case sample will permit us to obtain a precision of plus or minus 3.5 percentage points for an attribute of 0.50 at a 95% confidence level. This result is obtained from the formula in Section 1232.1 of this manual.

If a State does not have enough closed cases to meet the required annual SSP-MOE sample size of 800 families (i.e., an average monthly sample size of approximately 67 families), the State must collect data for and report on 100% of the closed cases.

1415      Adjustment to the Sample Size for States and Tribes with Small Caseloads

If a State or Tribe has a small average monthly caseload, it may use the following procedures in applying the finite correction factor to adjust the minimum annual sample size. The formula for obtaining an adjusted sample size using the finite correction factor is:

$$n_1 = \frac{n}{1 + (n - 1) / N}$$

where     $N$     =    Total number of case months for the annual sample period (i.e., the average monthly caseload times twelve months)

$n$      =    minimum required annual sample (e.g., active case sample is 3000 cases and closed case sample is 800 cases)

1.    Compute the estimated number of case months for the annual reporting period.

For example, if a State or Tribe has an estimated average monthly active TANF caseload of 1,000 cases, then the total number of case months is 12,000 case months (i.e.,  $N = 1,000$  cases per month times 12 months = 12,000 case months).



2. Use the above formula and round up to determine the adjusted overall sample size requirement.

For our example, the adjusted overall minimum required active TANF sample size would be:

$$n_1 = \frac{3000}{1 \% (3000 \& 1) / 12000} = 2400$$

3. In computing the adjusted minimum annual sample size for the State's or Tribe's active TANF sample or the active State SSP-MOE sample, prorate the overall adjusted sample size to determine the required number of two parent families, the required number of newly approved applicants and the required number of other ongoing cases.

For our example, the sample size requirement for two-parent families is 480 cases (i.e., 600 times 2400 divided by 3000 ), for newly approved applicant families is 480 (i.e., 600 times 2400 divided by 3000) and for other ongoing cases is 1440 cases (i.e., 1800 times 2400 divided by 3000).

#### 1416 Average Monthly Sample Size

A State agency or Tribal grantee must select approximately one-twelfth of its annual sample size each sample month. The average monthly sample size is determined by dividing the required annual sample size by 12 and rounding the result up to the nearest whole number. For the active TANF sample and SSP sample, the average monthly sample sizes are 250 cases, of which 50 are two-parent families, 50 are newly approved applicants, and 150 are other ongoing cases. For TANF and SSP samples of closed cases, the average monthly sample sizes are about 67 cases. The following additional procedures apply to the TANF samples and to the State's SSP samples:

1. State agencies and Tribal grantees should select additional cases (use the rate for "listed-in-error" cases based on historical data or, if unknown, use five percent) of each sample to compensate for cases that may be reported as "listed-in-error";
2. A State or Tribe may increase its sample size above the minimum (and we encourage them to do so), but may not reduce its sample size below the minimum; and
3. A State or Tribe has the option of collecting and reporting data for the entire TANF population and a State has the option of collecting and

reporting data for its entire SSP population. However, we encourage States and Tribes to take advantage of their option to use sampling, when appropriate. Sufficiently large samples can produce reasonably precise estimates, while saving substantial administrative staff resources and funds.

1420      Sample Frame

Creating a frame or list of cases from which the monthly samples are to be selected and determining the sample size are preliminary steps applicable to any probability sample design. Careful study of the structure of the sample frame is always essential in probability sampling, especially in systematic sampling. The choice of a frame depends upon the criteria of timeliness, completeness, and administrative burden. The structure of the sample frame should provide for an unduplicated list of cases comprising the target population or otherwise allow for all units to have a known, non-zero chance of selection into the sample. In systematic sampling, cases should be randomly ordered with respect to the variables being measured, e.g., case characteristics data, earnings, participation in work activities, etc. This random order is usually achieved if cases are arranged by case number or by county and then alphabetically within county, or by any other file organization that is not directly related to the measurement of critical variables. The structure of the sampling frame must be fully documented in the sampling plan and may not be changed without an approved revision of the sampling plan.

1421      Sampling Frame for the TANF Active Case Sample

The monthly TANF sample frame consists of all families who receive assistance under the State (Tribal) TANF Program for the sample month by the end of the sample month. The term "assistance", defined in §260.31 of the final rule, includes cash, payments, vouchers, and other forms of benefits designed to meet a family's ongoing basic needs (i.e., for food, clothing, shelter, utilities, household goods, personal care items, and general incidental expenses). It includes such benefits even when they are provided in the form of payments by a TANF agency, or other agency on its behalf, to individual recipients and conditioned on their participation in work experience, community service, or other work activities (i.e., under §261.30).

Except where excluded as indicated in the following paragraph, it also includes supportive services such as transportation and child care provided to families who are not employed.

The term "assistance" excludes:

1. Nonrecurrent, short-term benefits (such as payments for rent deposits or appliance repairs) that:
  - a. Are designed to deal with a specific crisis situation or episode of need;
  - b. Are not intended to meet recurrent or ongoing needs; and
  - c. Will not extend beyond four months.
2. Work subsidies (i.e., payments to employers or third parties to help cover the costs of employee wages, benefits, supervision, and training);
3. Supportive services such as child care and transportation provided to families who are employed;
4. Refundable earned income tax credits;
5. Contributions to, and distributions from, Individual Development Accounts;
6. Services such as counseling, case management, peer support, child care information and referral, transitional services, job retention, job advancement, and other employment-related services that do not provide basic income support; and

7. Transportation benefits provided under an Access to Jobs or Reverse Commute project, pursuant to section 404(k) of the Act, to an individual who is not otherwise receiving assistance.

The exclusion of nonrecurrent, short-term benefits under (1) of this paragraph also covers supportive services for recently employed families, for temporary periods of unemployment, in order to enable continuity in their service arrangements.

The TANF active case sample frame could be a master file; a payroll file; an eligibility, activity, or other caseload file; or a combination of such files depending on how the State or Tribe defines its range of benefits/assistance. If such a list cannot be constructed based on the above definition of the sampling universe, it may be necessary to use a special procedure to ensure that all families receiving assistance have a known, non-zero chance of being included in the sample. The sampling plan should contain the State or Tribe's objective criteria for the delivery of assistance and determination of eligibility as set forth in the State or Tribe's family assistance plan. State agencies and Tribal grantees should verify the receipt of assistance for all selected cases, and all such cases discovered not to have received assistance for the reporting month should be reported as "listed-in-error." For all other cases selected into the sample, the data collection must be completed and the data must be submitted to ACF by the specified time frames.

States or Tribes that use regular first-of-the-month payroll or eligibility listings as the frame for selection of sample cases must extend that frame at the end of the report month and continue sampling all cases for which assistance was initiated during the report month that were not on the first-of-the-month payroll/eligibility listing. Care must be taken to ensure that the sample frame consists of unduplicated cases. A distinction is made between cases already receiving TANF and cases in which assistance is initiated during the month. For example, a case receiving a regular payment on October 1 and a supplemental payment on October 12 should only be subject to selection once for the month of October. Procedures for accomplishing this must be specified in the sampling plan. Normally, this will be accomplished by running a computer sort/merge routine at the end of the report month in order to establish the list of supplemental cases to be added to the frame.

States or Tribes that use simple random sampling should form the sample frame at the end of the sample month, ensuring all families that received assistance for the month by the end of the month are on the sample frame. Then the sample is selected after the end of the sample month.

1422

The Treatment of Special Groups With Respect to TANF Reporting

There are a number of family circumstances that merit special attention. These are described below.

#### 1422.1 Newly Approved Applicant (a.k.a., Initial Assistance Cases)

A newly-approved applicant or an "initial payment/assistance" case for a sample month means the family is newly added to the TANF caseload and the current reporting month is the first month in which the TANF family receives TANF assistance (and thus has had a chance to be selected into the TANF sample). This may be either the first month that the TANF family has ever received assistance or the first month of a new spell on assistance. The initial payment/assistance case should be included on the sample frame for the initial month in which it received assistance and for all subsequent months for which assistance is issued. For States that provide assistance back to the date of application, these cases may, at State option, be included on the frames for prior months, as assistance was not received by the end of such months.

A family that moves back and forth between receipt of assistance to receipt of only non-assistance in a subsequent month while remaining in the TANF program will be a newly approved applicant each time it moves to receipt of assistance for a reporting month.

#### 1422.2 Non-Custodial Parents

A non-custodial parent is defined in §260.30 as a parent of a minor child who: (1) lives in the State and (2) does not live in the same household as the minor child. The State must report information on the non-custodial parent if the non-custodial parent: (1) is receiving assistance as defined in §260.31; (2) is participating in work activities as defined in section 407(d) of the Act; or (3) has been designated by the State as a member of a family receiving assistance. In reporting non-custodial parents, States or Tribes should not treat the non-custodial parent as a separate case. Rather, when the family unit containing his/her child(ren) is selected into the sample, code the type and amount of assistance received by the non-custodial parent as part of that case. The non-custodial parent's person level data must also be provided. States and Tribes have the option to include or exclude the non-custodial parent from the work participation rate on a case-by-case basis. If an individual is both a custodial parent for a TANF family receiving assistance and a non-custodial parent for another TANF family receiving assistance, the State or Tribe should report the individual only with the family for which (s)he is the custodial parent.

1422.3 Members of Indian Tribes Not Receiving Assistance under a Tribal Family Assistance Plan

The State sample frame must include each member of an Indian tribe otherwise meeting the definition of the sampling unit who is domiciled in the State and is not receiving assistance under a Tribal family assistance plan.

1422.4 Members of Indian Tribes Receiving Assistance under a Tribal Family Assistance Plan

The State should not include members of an Indian tribe receiving assistance under a Tribal family assistance plan, even if the State selected the option to include such families in the calculation of its participation rate as provided for in section 407(b)(4) of the Social Security Act.

1422.5 Cases Selected For More Than One Sample Month

If a family is selected into the sample for more than one month during the annual reporting period, the State or Tribe should collect data for and report on the family for each month for which it is selected.

1422.6 Cases Receiving Assistance Under the State's TANF Program and Separate State Programs for the Same Month

A TANF eligible family may receive some form of assistance under both the State's TANF Program and its SSP during the reporting month. If this occurs, the family should be included on the active sample frame for both the TANF and the SSP. If such a family is selected into the sample, the State should collect data for and report on the family for each program for which it was selected.

#### 1422.7 Cases With a Child Not Living With a Parent or Adult Caretaker Relative

Many activities are covered under section 401(a) of the Social Security Act (Act) (the purposes of the TANF program). However, some activities are not permissible under the purposes of the TANF program, but had been included in a State's approved AFDC plan, JOBS plan, or Supportive Services plan as of 9/30/95, or at State option, 8/21/96. Section 404(a)(2) "grandfathers in" States whose prior programs had such expenditures. Thus, this section allows States to use Federal TANF funds for specific activities that had been previously authorized based on an approved plan, using the same financial eligibility criteria contained in the approved prior plan. Examples of such activities are juvenile justice and foster care activities that were included in some States' approved plan.

The legislative history makes it clear that the State may elect to continue to provide the service or benefit under section 404(a)(2) of the Act, notwithstanding the prohibitions in section 408 of the Act. For example, if a State's approved AFDC plan enabled it to provide "assistance" or services to children in the juvenile justice system that does not constitute TANF "assistance", then it may continue to use TANF funds for such activities even though the child is not living with his parent or other adult caretaker relative. Nonetheless, if the child is receiving "assistance" funded under the State TANF program, the child is a child-only family for data collection and reporting purposes. For a State that reports on its entire caseload, the State must collect data on and report data for all such child-only families for each month that the families receive assistance. For the State that reports its data for a sample of families, the State must include all such child-only families on its monthly sample frame for each month that the family receives assistance. If the child-only family is selected in a monthly sample, the State must collect data for and report data on the child-only family for that month.

#### 1423 Sample Frame for the Sample of Closed TANF Cases

For closed cases, the monthly TANF sample frame must consist of all families whose assistance under the State TANF Program was terminated for the reporting month (do not include families whose assistance was temporarily suspended), but received assistance under the State's TANF Program in the prior month. A family that moves from receipt of assistance under the TANF program for a month to receipt of benefits that are not assistance under the TANF program for the subsequent month is a closed case for reporting purposes. Also, a TANF eligible family that is transferred to the State's SSP or Tribal TANF program is usually closed for the State TANF Program.

#### 1424 Sample Frame for the Sample of Active SSP Cases



The monthly active SSP sample frame must consist of all families who receive assistance under the separate State programs for the reporting month by the end of the reporting month. The term "assistance" for separate State programs has the same meaning as for TANF Programs. See Section 1421 (page 27) for the definition.

#### 1425 Sample Frame for the Sample of Closed SSP Cases

For closed cases, the monthly SSP sample frame must consist of all families whose "assistance" under the SSP was terminated for the reporting month (do not include families whose assistance was temporarily suspended), but received assistance under the SSP in the prior month. A family that is transferred to a State's TANF Program is usually a closed case for the SSP.

#### 1430 Procedures for Selecting Sample Cases

States and Tribal grantees have flexibility to choose from a wide variety of sampling methods, including systematic sampling, simple random sampling, and stratified (systematic or simple) random sampling. For illustrative purposes, the following procedures are based on the systematic sampling design and, if used, are repeated each month during the annual sample period. In illustrating the procedures, a State or Tribe with an estimated average monthly active TANF caseload of 42,600 is used. These same procedures could be used to select the sample of closed TANF cases or the sample of the active and closed SSP cases. Note, these procedures could be used to select a sample within each stratum for a stratified systematic sample design.

##### 1. Estimate Caseload Size

The TANF average caseload is an estimate of the average monthly number of cases that will receive assistance for the forthcoming annual sample period. The average caseload size should be estimated on the basis of past caseload sizes and trends. Any known circumstances, such as policy changes that would appreciably change caseload sizes, also should be taken into account in making the estimate.

Since the average monthly caseload must be estimated before the beginning of the annual sample period, unanticipated changes can result in the need for adjusting the sample interval. Recognizing the difficulty of forecasting caseloads over a 12-month period, States and Tribes should re-evaluate the estimated caseload before the end of each quarterly reporting period. If the caseload estimate is changed, a new sample interval for the 12-month period and adjustments to the number of sample cases already selected may

be needed. The procedures in Section 1510 (page 42), or 1520 (page 44,) can be used depending on whether the sample requires correction for oversampling or undersampling. If no correction is required for the remaining quarterly reporting period(s), using these procedures will result in a self-weighting annual sample.

2. Determine Sample Size

The minimum required annual sample sizes of completed cases are shown in Section 1410 (page 21). In our illustration, the minimum sample size is used.

$$n = 3,000$$

An estimate of the percent of cases that may possibly be reported as listed-in-error during the TANF data collection process will need to be made in order to arrive at the required completed sample size. For example, assuming that 5 percent of the selected cases will be reported as listed-in-error, the number of cases to be selected can be computed as follows:

$$3,000 \div (1 \& .05) = 3,158$$

3. Establish Frame

As mentioned in Section 1421 (page 27), a listing of all TANF cases that received assistance for the sample month by the end of the month (including initial assistance cases and cases that are reinstated) comprises the frame from which the sample is selected.

4. Establish Average Monthly Sample Size

The average monthly sample size is obtained by dividing the sample size for the sample period by the number of months in the period. In our illustration, the average monthly sample size is  $3,158 \div 12$ , which is 263.167 cases.

5. Compute Sample Interval

The sample interval is obtained by dividing the estimated average caseload in the annual sample period (Step 1) by the unrounded average monthly sample size (Step 4). In our example, the sample interval is  $42,600 \div$

263.167, or 161 (rounded down). This means that each month, data will be collected for 1 out of every 161 TANF cases.

6. Select Random Start Number

The random start number can be as large as the number of cases contained in the sample interval and is used only to determine the first selected sample case for each month's sample. Since the sample interval in our example is 161, we must select a random start number between 001 and 161 (inclusive). Assume the number selected is 103.

7. Select Monthly Sample

The sequential position of the first selected sample case on the frame is the starting point for selection of all subsequent cases. (If the frame is in several parts, it will be desirable to assemble the parts so that one continuous list is created. Every " $k^{th}$ " case will then be selected from a list in which all cases are present.)

It is important in selecting the monthly sample to apply the same sample interval to the entire list of cases each month. This is an important part of the sampling design and should not be violated in order to obtain a specific number of cases each month.

In our illustration, if the sample interval was a whole number, the 103rd case on the list would be selected and every 161st case thereafter, i.e., 103rd, 264th, 425th, etc. In each of the remaining eleven months of the sample period, assuming no adjustment in estimated caseload size is necessary after the sixth month, new random starts would be obtained as the first case of each month and then multiples of 161 added to obtain the other cases for data collection and reporting.

It should be understood that the numbers selected for the sample cases relate to specific cases; substitutions or approximations are not acceptable. For example, only the 103rd case must be selected, not the 102nd, or 104th, etc. Once the random start and sample interval are determined, the specific cases to be selected are identified.

There are several methods of selecting sample cases when the sample interval is not a whole number. In one method, the sample case to be selected is determined by rounding the number obtained after the sample interval is added to the previous sample interval. For example, since in our illustration the sample interval number was actually 161.87 instead of 161,

the following sample cases would be selected from the sample frame of eligible cases (assuming a random start number of 163):

Selected Cases	Selection Procedure
# 103	- random start case
# 265	$\begin{array}{r} 103 \\ + 161.87 \\ \hline 264.87 = 265 \end{array}$ - random start case - interval - rounded
# 427	$\begin{array}{r} 264.87 \\ + 161.87 \\ \hline 426.74 = 427 \end{array}$ - previous total - interval - rounded
# 589	$\begin{array}{r} 426.74 \\ + 161.87 \\ \hline 588.61 = 589 \end{array}$ - previous total - interval - rounded
# 750	$\begin{array}{r} 588.61 \\ + 161.87 \\ \hline 750.48 = 750 \end{array}$ - previous total - interval - rounded
etc.	etc.

For TANF purposes, an acceptable method for selecting sample cases when the sample interval is not a whole number is to round down to the next lower whole number and use that number in selecting the sample cases. For example, using the same sample interval of 161.87 and random start number of 103, the interval would be rounded down to 161 and the sample cases selected would be the 103rd, the 261th, the 425th, the 586th, 747th, etc.

8. Submission of Caseload Size, Sample Interval and Sample Cases Selected

If a State or Tribe opts to use systematic sampling or stratified systematic sampling, the State or Tribe should send the estimated average monthly caseload and the computed sample interval(s) to be used for the 12-month sample period to the ACF Regional Administrator thirty (30) calendar days before the October sample selection.

If a State or Tribe uses a stratified sample design, it must submit the monthly caseload sizes by stratum for each month of the quarter within 45 days after the end of the quarter. These data are needed for weighting purposes.

Regardless of the method used to select the sample cases, each State and Tribe that opts to collect data for and report on a sample of cases must submit the monthly list of selected sample cases (including reserve pool cases, if applicable, under Section 1531 page 47), within 10 days of the date of selection specified in the State or Tribe sampling plan.

1440 Procedures for Selecting Sample Cases Using a Simple Random Sample

States and Tribal grantees may want to use simple random sampling or stratified simple random sampling because there are a number of computer software packages that contain programs that use this method of sampling. For illustrative purposes, the following procedures are based on the simple random sampling design and, if used, are repeated each month during the annual sample period. These same procedures could be used to select the sample of closed TANF cases or the sample of the active and closed SSP cases. Note, these procedures could be used to select a sample within each stratum for a stratified simple random sample design.

1. Establish the Monthly Sample Frame

As mentioned in Section 1421 (page 27), a listing of all TANF cases that received assistance for the sample month by the end of the month (including initial assistance cases and cases that are reinstated) comprises the frame from which the sample is selected.

2. Determine the Number of Families on the Sample Frame

Many automated simple random sampling routines need to know the number of sampling units on the sample frame and the number of units to be selected prior to execution of the sample selection routine. For the

TANF active sample, the sampling units are the families receiving TANF assistance. If a stratified simple random sample is used, the State must determine the number of families in each stratum for the sample month.

3. Determine Sample Size

The minimum required annual sample sizes of completed cases are shown in Section 1410 (page 21). In our illustration, the minimum sample size is used.

$$n = 3,000$$

An estimate of the percent of cases that may possibly be reported as "listed-in-error" during the TANF data collection process will need to be made in order to arrive at the required completed sample size. For example, assuming that 5 percent of the selected cases will be reported as "listed-in-error", the number of cases to be selected can be computed as follows:

$$3,000 \div (1 - .05) = 3,158$$

4. Establish Average Monthly Sample Size

The average monthly sample size is obtained by dividing the sample size for the sample period by the number of months in the period. In our illustration, the average monthly sample size is  $3,158 \div 12$ , which is 263.167 cases or 263 cases.

5. Select Monthly Sample

The most practical way of selecting a sample of TANF cases using a simple random sample is with the use of automated routines. These routines use a random number generator to select  $n$  (the number of units to be selected) out of  $N$  (the number of units on the sample frame). The  $n$  sample cases should be selected without replacement. To illustrate using a monthly sample frame with 42,600 families and a monthly sample size of 263 sample cases, the automated sampling routine would select 263 numbers between 1 and 42,600 inclusive. If the random numbers generated include 20, 175, 183, 500, etc., then the 20th, 175th, 183rd, and 500th case on the sample frame would be drawn into the sample.

6. Submission of Caseload Size, Sample Interval, and Sample Cases Selected

If a State or Tribe uses a stratified sample design, it must submit the monthly caseload sizes by stratum for each month of the quarter within 45 days after the end of the quarter. These data are needed for weighting purposes. States and Tribes that use non-stratified sample designs report their total monthly caseload numbers on the TANF Data Report - Section Three. These figures are used to weight the State data.

Regardless of the method used to select the sample cases, each State and Tribe that opts to collect data for and report on a sample of cases must submit the monthly list of selected sample cases (including reserve pool cases, if applicable) within 10 days of the date of selection specified in the State or Tribe sampling plan.

1450 Retention of Sampling Records

Each State and Tribe shall retain all sampling records for an annual sample period for a minimum of three years after the end of the sample period. These materials shall include the

1. original monthly sample frames from which the sample was selected;
2. computer programs used to construct the sample frames and select the sample cases;
3. caseload estimate worksheets;
4. sample intervals and random start numbers;
5. sample size;
6. lists of selected cases, including supplemental and reserve pool cases if applicable; and
7. audit trail tracking logs.

In addition, the State and Tribe shall retain the approved sampling plan until a revised plan is approved and implemented. When the revised approved sampling plan is implemented, the previously approved sampling plan should be retained for three years. These materials are to be made available to the Regional staff upon request.





## **1500      CORRECTION FOR UNDERSAMPLING AND EXCESSIVE OVERSAMPLING**

When using systematic sampling, imprecise caseload projections or an unexpected drop rate will result in the State or Tribe not obtaining its target sample size. If the actual universe is larger than the estimated size, oversampling may occur. If the actual universe is smaller than the estimated size, undersampling may occur. A State agency and Tribal grantee must correct for undersampling to the extent necessary to meet sample size requirements for TANF reporting and a State agency must correct for undersampling to the extent necessary to meet sample size requirements for reporting of separate State programs. A State agency or Tribal grantee has the option as to whether or not to correct for excessive oversampling. However, we encourage States and Tribes to select larger than the minimum required annual sample size in order to increase the precision of statistics that are estimated from the sample data.

In correcting the TANF or SSP sample size, care must be taken to assure that the statistical principles of "randomness" and measurability are not violated. The selection of additional families for the TANF and SSP samples or deletion of units from the samples must be done in a manner that assures all cases in the population have a known, non-zero probability of selection into the final sample. In addition, techniques of stratification should not be employed in such a way that small additional strata are created for which computed estimates may be unreliable, resulting in a loss of precision in population estimates.

The procedures that a State (Tribe) uses to correct for excessive oversampling or correct for undersampling will depend partly on the procedures the State (Tribe) used to select its original sample cases. States and Tribes may choose from a wide variety of sampling methods. State agencies or Tribal grantees that select their TANF samples or State agencies that select their SSP samples using the systematic sampling method can use the procedures in Sections 1510, 1520, or 1530 of this manual to adjust sample sizes. State agencies or Tribal grantees that select their TANF samples or State agencies that select their SSP samples using the simple random sampling method can use the procedures in Sections 1540 to adjust sample sizes. For State agencies or Tribal grantees that use another method to select their TANF samples, ACF Regional Office staff will be happy to provide technical guidance on procedures to correct for excessive oversampling or undersampling to ensure that the principles of probability sampling are retained.

Monthly sample sizes should be monitored throughout the reporting period and correction should be made only when it becomes clear that target samples will not be met. It is good practice to re-estimate caseloads at the end of each quarterly reporting period. Waiting to the end of the annual period to make necessary corrections could create difficulties in collecting the information and adversely affect the State's (Tribe's) ability to submit data in a timely manner.

The following procedures allow State agencies and Tribal grantees to make corrections in all months starting with the first month of the reporting period. A consideration for a State in selecting this method is that, in certain circumstances, it may be difficult to obtain accurate information for past months. This method does not involve the creation of additional strata.

1510      Standard Method to Correction for Undersampling or Oversampling when Sample Selected Using Systematic Sampling

1510.1    Correction for Oversampling

8. Using the procedure described in Section 1430, Step 1 (page 32), re-estimate the caseload size, adding on the expected number of cases to be dropped as listed-in-error, and compute a revised sample interval.

For each month in which the sample cases have already been selected:

9. Divide the size of the monthly sample frame by the revised sample interval (Step 1) to obtain the revised estimate of the number of sample cases that should have been selected.
10. Subtract the number of cases obtained in Step 2 from the number of sample cases that have been selected. This is the number of sample cases to be eliminated.
11. Divide the number of sample cases that have been selected by the number of cases to be eliminated (Step 3) to obtain the secondary sample interval to be used in identifying the cases to be eliminated.
12. Use a random start and apply the secondary sample interval obtained in Step 4 to select cases from the list of sample cases already selected. The cases so identified are to be eliminated regardless of whether or not data had already been collected.

For months in the annual period for which sample cases have not yet been selected:

13. Use the corrected sample interval for the period obtained in Step 1 to select sample cases from the monthly frames.

#### 1510.2 Correcting for Undersampling

1. Using the procedure described in Section 1430, Step 1, (page 32) re-estimate the caseload size, adding on the expected number of cases to be dropped as listed-in-error, and compute a revised sample interval.

For each month in which the sample cases have already been selected:

2. Divide the size of the monthly sample frame by the revised sample interval (Step 1) to obtain the revised estimate of the number of sample cases that should have been selected.
3. Subtract the number of sample cases already selected from the number obtained in Step 2. This is the number of additional sample cases to be selected from the monthly frame.
4. Divide the total monthly sample frame size by the number identified in Step 3 to obtain the secondary sample interval to be used in selecting additional cases from the monthly sample frame.
5. Use a random start and apply the secondary sample interval obtained in Step 4 to the monthly sample frame from which cases have already been selected. (If correction for undersampling is required only for the third and/or fourth quarters of the annual period, the State has the option of applying the secondary interval either to the first month of the sample period (October) or the first month of the applicable quarter (April or July)). Add the specific cases identified to the cases already selected for the same month as the month of the sample frame from which they were selected. If a case previously selected in the sample is again selected and identified for the same month as previously selected, an alternate case is to be selected by using a table of random numbers.

For months in the annual period for which sample cases have not yet been selected:

6. Use the corrected sample interval for the period obtained in Step 1 to select sample cases from the monthly frames.

1520 Alternate Method of Correcting for Undersampling or Oversampling When Sample Selected Using Systematic Sampling

An alternate method involves no adjustment for the months for which cases were already selected, however it does result in stratification of the sample by time. The alternative method entails the computation of a new sample interval that will either (1) undersample the remaining months of the 12-month sample period to meet sample size requirements if the earlier months had been oversampled, or (2) oversample the remaining months of the annual period to meet sample size requirements if the earlier months had been undersampled.

Because two different sample intervals will have been used, results of cases selected by each sample interval cannot be directly added to obtain State-wide (Tribal-wide) estimates as the proportions of the monthly frames sampled are different, i.e., the total sample is not a self-weighting sample.<sup>4</sup> The alternate method will require all data to be weighted at the end of the 12-month period. The procedure involves inflating the various frequencies (e.g., number of families with an adult working, the number of families with a minor parent head of household, cases with earned income, etc.) in cases obtained using each sample interval, to their representation in the caseload and dividing the result by the caseload.<sup>5</sup> This gives the weighted rate for the State (Tribe). In order to make each of the frequencies (number of families with an adults working, the number of families with a minor parent head of household, etc.) comparable with those of other States (Tribes), it is necessary to multiply the weighted rate by the total sample size. The equation for this procedure is as follows:

- 
- 4/ It should be noted that a self-weighting sample, except for rounding, must possess the following characteristic:

$$\frac{\text{Sample cases selected in a specific month}}{\text{Total sample cases selected in sample period}} = \frac{\text{Cases in sample frame for same month}}{\text{Total cases in all sample frames in sample period}}$$

- 5/ "Caseload", for the purpose, is defined as the completed sample size multiplied by the sample interval.

$$\text{Weighted State Rate} = \frac{\sum (x_m)(SI_m)}{\sum (n_m)(SI_m)}$$

where:

- $j$  = the sum of . . . all strata ("stratum" is defined as part of the annual period using the same sample interval);
- $m$  = the  $m^{\text{th}}$  stratum (m is the stratum index);
- $x_m$  = "characteristic of interest" in the  $m^{\text{th}}$  stratum;
- $n_m$  = completed sample size in the  $m^{\text{th}}$  stratum; and
- $SI_m$  = sample interval used in the  $m^{\text{th}}$  stratum.

For example, assume that a State originally had estimated that its caseload would average 80,000 cases for the annual sample period. Assuming a 5 percent drop rate, the State used a sample interval of 303. Actual experience after 10 months resulted in the State revising its average caseload to 75,000, making no change in its drop rate. If the State made no corrections, the final completed sample size for the period would be short approximately 188 cases.

Assume that the State decides to obtain the additional 188 cases by using a revised sample interval of 219 for the last 2 months of the sample period. Also assume for the first 10 months of the sample period ( $m = 1$ ) that the --

Number of cases completed ( $n_1$ ) = 2,350

Number of cases with "characteristic of interest" ( $x_1$ ) = 112

and for the last 2 months of the sample period ( $m = 2$ ) that the --

Number of cases completed ( $n_2$ ) = 650

Number of cases with "characteristic of interest" ( $x_2$ ) = 37

Using the definition of "caseload" as defined earlier, i.e., sample cases completed multiplied by the sample interval, the weighted proportion of the case with the characteristic of interest would be computed as follows:

$$= \frac{(112 \times 303) \% (37 \times 219)}{(2,350 \times 303) \% (650 \times 219)} , \frac{42,039}{854,400}$$

$$= .0492$$

The State case proportion for the "characteristic of interest" would be .0492. The reported number of cases with the characteristic of interest for the 12-month period, for comparability with other States, would be 148, i.e., .0492 x 3,000.

Note that each frequency of occurrence or proportion of the total sample must be calculated in the same way, e.g., number of families with an adults working, the number of families with a minor parent head of household, the number of child only cases, the number of cases with earned income, etc. Caseload weights are to be used in computing State-wide (Tribal-wide) characteristics.

Note, it is important that the appropriate code be entered on the coding schedule to identify the stratum from which the case was selected.

#### 1530 Correcting for Undersampling Using a Reserve Sample Pool

Correcting for undersampling using the sample interval (see Section 1520, page 44) involves resampling the original frame using a new sample interval. A State (Tribe) may find this to be difficult and/or costly. The same result can be achieved by selecting a reserve sample pool at the time of original sample selection. The designated reserve sample cases are to be used only if correction for undersampling is required. Properly selected reserve pool cases retain the self-weighting property of the final sample. However, careful attention to the controls is necessary to ensure that cases are properly selected. Any number of cases may be designated as a reserve pool -- a good number could be 10 or 15 percent of the required sample size.

The State (Tribal) sampling plan must describe in detail the procedures for setting up a reserve sample pool. If a random number generator is used, the type of generator and seed number is to be specified.

#### 1531 Procedure for Setting Up a Reserve Sample Pool

Procedures for setting up a reserve sample pool are similar to those outlined in Section 1430 (page 32). To illustrate the procedures, the example in Section 1430, is used, i.e., a State (Tribe) uses the systematic sampling method, elects the standard sample size, has an estimated average monthly caseload of 42,600 and estimates a 5 percent drop

rate for the 12-month sample period. In addition, the State (Tribe) specifies 15 percent of its selected sample as reserve pool cases each month.

1. Determine Average Monthly Sample Size

Divide the number of sample cases for which data is to be collected in the annual sample period by  $(1 - 0.15)$  to obtain the estimated total number of sample cases to be selected. In our example, according to Section 1430, Step 2, (page 33) the number of sample cases (completed and dropped cases) is 3,158. The number of cases to be selected would be  $3158 \div (0.85)$ , or 3,715, or an average of 309 cases per month. The average number to be placed in a reserve pool each month is 15% of 309 cases, or 46 cases (rounded down).

Note that the reserve pool is only to be used to correct for undersampling; it is not to be used to replace dropped cases.

2. Select Monthly Sample

Using the monthly sample size from Step 1, 309 cases, and the procedures outlined in Section 1430, Steps 5, 6 and 7, (page 34) compute the sample interval, determine a random start and select monthly sample cases from the sample frame.

3. Compute Secondary Interval for Selection of Reserve Pool Cases

Compute a secondary sample interval to be applied to the list of sample cases selected each month. This is obtained by dividing the estimated average monthly sample size by the average estimated number of cases designated for the reserve pool. In our illustration, the sample interval is  $309 \div 46$ , or 6.72.

4. Select and Identify Monthly Reserve Pool Cases

Since the interval obtained in Step 3 above is not a whole number, the acceptable method is to round up to the next higher number. (Note that rounding up is recommended to ensure that the basic sample will have a sufficient number of cases.) In our example, 1 out of every 7 cases on the monthly list of selected sample cases would be identified for the reserve pool, using a random start number between 1 and 7 inclusive. It is important in selecting monthly reserve pool cases to apply the same sample interval to the entire list of selected cases each month. This is an important part of the sample design and should not be violated in order to obtain a specific number of reserve pool cases each month.

## 5. Submission of Sample Cases Selected

The estimated average caseload, the specified percentage of monthly selected sample cases for the reserve pool, the computed sample intervals, manually generated random start and seed numbers to be used in the 12-month sample period for selection of total sample cases and reserve pool cases should be sent to the ACF Regional Administrator thirty (30) calendar days before the October sample selection. The monthly list of selected sample cases, with reserve pool cases identified, and computer generated random start and seed numbers should be submitted within 10 days of the date of selection specified in the State sampling plan.

If random numbers are used to identify cases for the reserve pool, it is absolutely essential that the total number of sample cases selected each month is known.

The following procedures are to be used and repeated each month if random numbers are used.

1. Determine the total number of sample cases selected. In our example, assume that the number selected for October was 309.
2. Multiply the number obtained in Step 1 by the percentage of selected sample cases specified for the reserve pool. In our illustration, the number of cases to be placed in a reserve pool for October is  $309 \times .15$ , or 46 cases (rounded down). Note that the same percentage must be applied each month.
3. Randomly select and identify reserve pool cases. In our example, 46 random numbers between 1 and 309, inclusive, would be selected.

If a Table of Random Numbers is used (see Appendix A, page 107), a photocopy of the page(s) used, showing start number, direction, and all selected numbers circled, is to be submitted each month along with the total list of selected sample cases. Sample cases corresponding to the circled random numbers are to be identified on the total list.

## 1532 Procedure for Obtaining Cases from a Reserve Sample Pool

States (Tribes) with reserve pools must use the same procedures in correcting for undersampling as outlined in Section 1520 (page 44) and 1530 (page 46). A revised estimate of the number of sample cases that should have been selected (excluding reserve pool cases) is to be computed. The difference between the number that should have been



selected and the number that was selected is the number of additional sample cases that will need to be selected from the reserve pool.

If a State (Tribe) uses a disproportionate stratified sample design, the State must maintain a separate reserve sample pool for each stratum. If a State with a disproportionate stratified sample design undersamples, the State must use the allocation procedures specified in its sampling plan to determine in which stratum (or strata) the State has undersampled. The State must correct for undersampling in each stratum in which undersampling occurred.

The same primary sample interval as determined in Section 1430, Step 5 (page 34), Step 2, must be used to select sample cases for months in the annual period for which such cases have not yet been selected. However, a new secondary sample interval to be applied to the monthly lists of selected sample cases must be used in identifying cases for the reserve pool.

The revised secondary sample interval is the product of the original secondary sample interval and the number of cases in the reserve sample pool prior to selection of cases from the reserve sample pool divided by the number of cases remaining in the reserve sample pool after selection of cases from the reserve sample pool.

#### 1540 Correction for Undersampling or Oversampling When Sample Was Selected Using Simple Random Sampling

As described in Sections 1510 and 1520 (pages 42 and 44), there are two basic approaches to correcting the annual samples. The first approach is to correct the sample for both the months for which the sample has already been selected and the months for which the sample has not been selected. This approach provides an annual sample with approximately one-twelfth of the sample selected each month. The second approach is to make the entire adjustment in the months for which the sample has not yet been selected. Monthly samples selected using simple random sampling are less likely to need large adjustments for undersampling than for samples selected using systematic sampling. This is true because under simple random sampling a fix number of sampling units is selected each month regardless of the monthly caseload. Under systematic sampling, a fixed proportion of the caseload is selected each month. However, caseloads can vary from month to month. This variation of the monthly caseload results in variation in the monthly sample size.

1540.1 Correcting for Undersampling

If a small correction (e.g., less than 50 cases) is needed to ensure the State agency or Tribal grantee will meet its minimum required annual sample size and no month is substantially short of the approximate one-twelfth of the annual sample, then the State or Tribe should correct for undersampling by adjusting the sample size in months for which the sample has not yet been selected. If the sample for all months have been selected, then the adjustments should be made for the months in the last quarter of the fiscal year. On the other hand, if a large correction is needed for months in which the sample have already been selected, the State or Tribe should consider making adjustments to all monthly samples. To correct a monthly sample for undersampling , use the following procedures:

1. Retrieve the Original Monthly Sample Frame

As required under Section 1460, States and Tribes must to retain their original monthly sample frames. The State or Tribe should locate the original month sample frame for use in selecting the additional sample cases.

2. Review Original Determinations of Total Monthly Caseload and Average Monthly Sample Size

Review the original application of the sample selection procedures from Section 1440 Steps 2, 3, and 4 (Page 37) to identify the reason for undersampling (e.g., under estimated the number of listed-in-error cases).

3. Determine the Number of Additional Sample Cases Needed

Subtract the number of completed cases for the sample month from the required number of sample cases for the month to determine the short fall. Allowing for some additional listed-in-error cases (using the procedures in Section 1440, Step 4 (Page 37)), determine the number of additional sample cases to be selected from the original sample frame.

4. Select the Additional Sample Cases

Using the same procedures as in Section 1440, Step 5 (page 37), select the addition sample cases from the sample frame and forward the sample selection list to the ACF Region Office.

1540.2 Correcting for Oversampling

States are not required to correct for excessive oversampling. If correction is desired, the procedures to correct for excessive oversampling are similar to correcting for undersampling. However, instead of using the original monthly sample frame, the State or Tribe would use its monthly sample selection list and apply the following procedures:

1. Determine the Number of Cases on the Original Monthly Sample Selection List

This is the total number of sample cases, including cases that were listed-in-error.

2. Determine the Number of Excess Cases

In determining the number of excess cases, make allowances for the number of listed-in-error cases in the original sample. A proportion of these cases will be selected as cases to be removed. For example, if the original monthly sample had 325 cases of which 25 were listed-in-error, then the listed-in-error cases represent about 7.7% of the total sample and the total number of case of the sample frame. In reducing the sample so that there are at least 250 completed cases, the State or Tribe could expect about 20 listed-in-error cases. Therefore, the number of excess cases is 325 - 270 or 55 cases.

3. Select the Excess Cases to be Removed from the Sample

Using the same process as in Section 1440, Step 5 (page 37), select the number of excess cases from the original sample and forward the sample selection list of excess cases to the ACF Regional Office.



## **1600      WORK PARTICIPATION RATES**

The purpose of the chapter is to provide States and Tribes with the methodology for calculating the monthly and annual work participation rates. In applying the methodology it is necessary to understand the statutory and regulatory provisions on the work participation requirements, the policies associated with waiver inconsistencies, and the TANF Data Report - Section One data elements used to capture the information needed for these calculations. It is for this reason that we have included, as background, certain mandatory work requirements from the law and the final regulation, which States must adhere to in administering their TANF programs. These provisions include:

4.      Establishing the minimum all families and two-parent work participation rate requirements;
5.      Defining the monthly and annual work participation rate calculations, including families that are to be included in or excluded from the calculation;
6.      Identifying countable work activities, including limitation on certain activities;
7.      Specifying the hourly requirements for engaged in work for the all families (also known as “overall”) and two-parent families work participation rates and related special circumstances (e.g., deemed engaged in work); and
8.      Applying waiver inconsistencies as related to the work requirements.

## **1610      Work Participation Rate Standards and Caseload Reduction Credit**

For each fiscal year, the statute specifies the all families and two-parent families minimum work participation rate standards that States must meet in administering their TANF Programs. These standards are shown in the following table:

Minimum Required Work Participation Rate		
Fiscal Year	All Families Rate	Two-Parent Families Rate
1997	25	75
1998	30	75
1999	35	90
2000	40	90
2001	45	90
2002 and thereafter	50	90

States that are successful in moving welfare recipients from welfare to self-sufficiency or otherwise reducing their welfare rolls are given credit for their efforts with respect to these standards. If the average number of cases receiving assistance, including assistance under a separate State program, for the State in the preceding fiscal year was lower than the average number of cases receiving assistance in FY '95, then the minimum work participation rate standard that the State must meet for the fiscal year will decrease by the amount of percentage points the caseload has fallen in comparison to the FY '95 caseload. This reduction in the minimum work participation rate standard is referred to as the caseload reduction credit. The caseload reduction credit will not include changes that are required by Federal law or that are as a result of changes in State eligibility criteria.

The minimum two-parent families participation rate the State must meet for the fiscal year decreases, at State option, by either:

1. The number of percentage points the prior-year two-parent caseload, including assistance under a separate State program (as provided in §261.42(b)), fell in comparison to the FY 1995 two-parent caseload; or
2. The number of percentage points the prior-year overall caseload, including assistance under a separate State program (as provided in §261.42(b)), fell in comparison to the FY 1995 overall caseload.

These calculations must disregard the net caseload reduction (i.e., caseload decreases offset by increases) due either to requirements of Federal law or to changes that a State has made in its eligibility criteria in comparison to its criteria in effect in FY 1995.



We will determine the total and two-parent caseload reduction credits that apply to each State based on the information and estimates reported to us by the State on eligibility policy changes, application denials, and case closures. In order to receive a caseload reduction credit, a State must submit a Caseload Reduction Report to us containing the following information:

1. A listing of, and implementation dates for, all State and Federal eligibility changes, as defined at §261.42, made by the State since the beginning of FY 1995;
2. A numerical estimate of the positive or negative impact on the applicable caseload of each eligibility change (based, as appropriate, on application denials, case closures or other analyses);
3. An overall estimate of the total net positive or negative impact on the applicable caseload as a result of all such eligibility changes;
4. An estimate of the State's caseload reduction credit;
5. Total prior year caseload;
6. The number of application denials and case closures for fiscal year 1995 and the prior fiscal year;
7. The distribution of such denials and case closures, by reason, for fiscal year 1995 and the prior fiscal year;
8. A description of the methodology and the supporting data that the State used to calculate its caseload reduction estimates;
9. A certification that it has provided the public an appropriate opportunity to comment on the estimates and methodology, considered their comments, and incorporated all net reductions resulting from Federal and State eligibility changes; and
10. A summary of all public comments.

We will calculate the caseload reduction credit that applies to the work participation rate(s). However, we will not calculate a caseload reduction credit unless the State reports case-record data on individuals and families served by any separate State program, as required under §265.3(d). A State may only apply to its participation rate a caseload reduction credit that we have calculated. If a State disagrees with the caseload

reduction credit, it may appeal the decision as an adverse action in accordance with §262.7.

A State must report the necessary documentation on caseload reductions for the preceding fiscal year by December 31.

## 1620 Definitions of Annual and Monthly Work Participation Rates

The statute defines the overall annual participation rate and the overall monthly participation rate as follow:

Overall Annual Participation Rate is the average of the State's overall participation rates for each month in the fiscal year.

Overall Monthly Participation Rate is: (1) the number of families receiving TANF assistance that include an adult or a minor head-of-household who is engaged in work for the month (the numerator), divided by (2) the number of families receiving TANF assistance during the month that include an adult or a minor head-of-household minus the number of families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not exclude it from the participation rate calculation.

Other circumstances for which a family may be disregarded from the overall monthly work participation rate calculation are:

1. A State has the option of not requiring a single custodial parent caring for a child under age one to engage in work. If the State adopts this option, we will disregard such a family in the participation rate calculation for a maximum of 12 months;
2. At State option, a family that is participating in a Tribal Work Program may be included or excluded from the work participation rate calculation. If the State has opted to exclude all Tribal Work Program participants from its work participation rate, such families will be excluded from the calculation;
3. A family that is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act will be excluded from the participation rate calculation; and

4. Some States have an approved 1115 waiver, which contains provisions that exempt certain groups of recipients from participating in work activities. Based on these approved 1115 waiver inconsistencies, we will exclude such families from the participation rate calculation.

The statute defines the two-parent annual participation rate and the two-parent monthly participation rate as follow:

Two-parent Family Annual Participation Rate is the average of the State's two-parent participation rates for each month in the fiscal year.

Two-parent Family Monthly Participation Rate is: (1) the number of two-parent families receiving TANF assistance in which the adults or minor child head-of-household and other parent meet the requirements set forth in §261.32 for the month (the numerator), divided by (2) the number of two-parent families receiving TANF assistance during the month minus the number of two-parent families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not exclude it from the participation rate calculation.

Other circumstances for which a family may be disregarded from the two-parent monthly work participation rate calculation are:

1. At State option, a family that is participating in a Tribal Work Program may be included or excluded from the work participation rate calculation. If the State has opted to exclude all Tribal Work Program participants from its work participation rate, such two-parent families will be excluded from the two-parent participation rate calculation;
2. A two-parent family that is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act will be excluded from the participation rate calculation;
3. Some States have an approved 1115 waiver, containing provisions that exempt certain groups of recipients from participating in work activities. Based on these approved 1115 waiver inconsistencies, we will exclude such two-parent families from the two-parent participation rate calculation; and
4. If a two-parent family includes a disabled parent, we will not consider the family as a two-parent family for the purpose of calculating the two-parent work participation rate.

For the purpose of calculating the two-parent work participation rate, the two-parent families must include, but is not limited to, any family with two natural or adoptive parents (of the same minor child) receiving assistance and living in the home, unless both are minor and neither are head-of-household. This is a minimal definition. At State option, a broader definition of two-parent families may be used. For example, a State may want to include step-parents and/or non-custodial parents.

A State may opt to include a noncustodial parent as part of the eligible family receiving assistance. If the State does so, the noncustodial parent may receive assistance or other services and may participate in work activities. The included noncustodial parent must live in the State, but may not live with his/her child(ren). A noncustodial parent may participate in work activities funded under the State TANF Program. In addition, the State must report the noncustodial parent as part of the TANF family. However, the State may choose whether a two-parent family with a noncustodial parent as one of the two parents is a two-parent family for the purposes of calculating the two-parent work participation rate. If a State chooses to exclude a two-parent family with a noncustodial parent as one of the parents from the two-parent work participation rate, the State must code the TANF Data Report data element "Type of Family for Work Participation" (data element #12) with a "2," code "Family Affiliation" (data element #30) with a "1," code "Noncustodial Parent Indicator" (data element #31) with a "1," code "Parent with a Minor Child in the Family" (data element #39) with a "1," and code the data element "Work Participation Status" for the noncustodial parent with a "99."

#### 1630      Countable Work Activities

The statute requires that adults and minor child heads-of-household participate in certain work activities. Countable work activities include the following:

1.    Unsubsidized employment;
2.    Subsidized private sector employment;
3.    Subsidized public sector employment;
4.    Work experience;
5.    On-the-job training (OJT);
6.    Job search and job readiness assistance;
7.    Community service programs;
8.    Vocational educational training;
9.    Job skills training directly related to employment;
10.   Education directly related to employment, in the case of a recipient who has not received a high school diploma or a certificate of high school equivalency;

11. Satisfactory attendance at secondary school or in a course of study leading to a certificate of general equivalence, if a recipient has not completed secondary school or received such a certificate; and
12. Providing child care services to an individual who is participating in a community service program.

Each adult (or minor child head-of-household) has a life-time limit on countable hours of participation for vocational educational training. Vocational educational training may only count as a work activity for a total of 12 months.

There are four limitations on job search and job readiness training. These are:

1. Job search and job readiness assistance only count for 6 weeks in any fiscal year;
2. An individual's participation in job search and job readiness assistance counts for no more than 4 consecutive weeks;
3. If the State's (Tribe's) total unemployment rate for a fiscal year is at least 50 percent greater than the United States' total unemployment rate for that fiscal year or the State is a "needy" State (within the meaning of Section 403 (b)(6)), then an individual's participation in job search or job readiness assistance counts for up to 12 weeks in that fiscal year; and
4. A State may count 3 or 4 days of job search and job readiness assistance during a week as a full week of participation, but only once for any individual.

Some States have an approved 1115 waiver. These waivers may include provisions that allow the State to count certain additional work activities (e.g., extending participation in vocational education and/or job search and job readiness training beyond statutory limitations). The average hours per week of participation in these additional work activities is captured on the TANF Data Report by the data element "Additional Work Activities Permitted Under Waiver Demonstration."

#### 1640 Required Hours of Work to be "Engaged in Work"

A family counts as participating in work for the overall work participation rate for a month in which an adult or minor child head-of-household is engaged in work. That is, the adult or minor child head-of-household participates in countable work activities during the month for at least the minimum average number of hours per week as specified in the following table:

If the fiscal year is:	Then the minimum average hours per week is:
1997 .....	20
1998 .....	20
1999 .....	25
2000 or thereafter ...	30

At least 20 of the above hours per week must come from work activities (1) through (8) and (12), as shown in Section 1630. (Hereafter, we will refer to these work activities as "core" work activities.) Hours above the 20 hours per week may also come from work activities (9), (10), and (11) as shown in Section 1630. A State with an approved 1115 waiver may be able to count additional work activities (see Section 1630 work activity (13) and Section 1650) as a core work activity and count the hours of participation in these additional work activities toward the 20 hours and the hours above the 20 hours.

A two-parent family counts as engaged in work for the month in determining the two-parent rate, if one of the following is applicable:

1. If the family does not receive federally-funded child care and an adult (or minor child head-of-household) and the other parent in the family are participating in work activities for an average of at least 35 hours per week during the month, and, at least 30 of the 35 hours per week come from participation in the core work activities, (1) through (8) and (12) listed in Section 1630. The family counts as engaged in work. Above the 30 hours per week, countable hours may also come from work activities (9), (10), and (11) from those work activities listed in Section 1630.
  
2. If the family receives federally-funded child care, an adult in the family is not disabled or caring for a severely disabled child, and an adult (or minor child head-of-household) and the other parent in the family are participating in work activities for an average of at least 55 hours per week during the month, and, at least 50 of the 55 hours per week come from participation in the core work activities, (1) through (8) and (12) listed in Section 1630. The family counts as engaged in work. Above the 50 hours per week, countable hours may also come from work activities (9), (10), and (11) from those work activities listed in Section 1630.

1641 Deemed Engaged In Work

For purposes of the overall work participation and two-parent work participation rate, a family with single minor child head-of-household or married teen parent is deemed engaged in work in a month if (s)he maintains satisfactory attendance at a secondary school or the equivalent during the month or participates in education directly related to employment for an average of at least 20 hours per week during the month.

A single custodial parent or caretaker relative with a child under age six will count as engaged in work if (s)he participates for at least an average of 20 hours per week. Hours of participation in all twelve work activities specified in Section 1630 (not just the core work activities) apply toward meeting this 20 hour requirement. If the State has an approved 1115 waiver, the additional hours of work activities permitted under the waiver also count toward the 20 hours.

1642 The Thirty (30) Percent Limit

In counting families for each monthly participation rate, not more than 30 percent of families with individuals engaged in work in a month may be included in the numerator because the individuals are: (1) participating in vocational educational training; or (2) beginning in fiscal year 2000 and thereafter, [individuals] deemed to be engaged in work by participating in work activities (10) and (11) as listed in Section 1630. For each month in which the State exceeds the 30% limit, its overall and two parent work participation rates will be adjusted by decreasing the number of participating families until the 30% limit is not exceeded.

1650 Waiver Inconsistencies as Related to the Work Requirements

Section 415 of the Social Security Act states that any waiver granted to a State under Section 1115 of the Act would delay implementation of the amendments made by PRWORA to the extent that such amendments are inconsistent with the waiver.

The regulations provide States (not applicable to Tribes) with guidance on waiver inconsistencies as related to the work participation rates and the time limits. The definitions of "waiver" and "inconsistent" are:

Waiver - consists of the work participation or time-limit component of the State's demonstration project under section 1115 of the Act. The component includes the revised AFDC requirements indicated in the State's waiver list, as approved by the Secretary under the authority of section 1115, and the associated AFDC provisions that did not need to be waived.

Inconsistent - means that complying with the TANF work participation or sanction requirements at section 407 of the Act, or the time-limit requirement at section 408(a)(7) of the Act, would necessitate that a State change a policy reflected in an approved waiver.

In order for the State's alternative waiver requirements to be considered in the calculation of the work participation rates, the Chief Executive Officer must certify in writing to the Secretary:

1. The specific inconsistencies that the state is choosing to continue; and
2. Consistent with the waiver, the policies that the State will use to:
  - a. Exempt individuals from requirements to participate in work activities;
  - b. Assign individuals to an alternative work activities or to an alternative number of work hours; and
  - c. Determine exemptions from or exceptions to the time limits.

The TANF Data Report has four data elements that capture data related to the State waiver. These data elements are:

1. Waiver Evaluation Experimental and Control Group;

This data element is used to identify families that are members of a control group or experimental group of a Welfare Reform Demonstration Project for the purpose of continuing an impact analysis. Such families are excluded from the calculation of the work participation rates.

2. Work Participation Status;

This data element contains the following two codes that identify families that are disregarded from the work participation rate based on approved 1115 welfare reform waivers:

- 03 = Disregarded, family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act



04 = Disregarded from the work participation rate based on an approved waiver inconsistency that exempts the family from participation

3. Additional Work Activities Permitted Under Waiver Demonstration

This data element is used to code the average hours per week of participation in work activities that are permitted and countable under a Federally-approved 1115 waiver, but not countable under the statute.

4. Required Hours of Work.

Some States have a Federally-approved 1115 waiver that permits the State to set on an individual basis the number of hours of participation for an individual to be counted as engaged in work. The data element is used to capture the required hours of work for such an individual.

1660 Tribal Work Participation Rates

Under each Tribal Family Assistance Plan, the Tribe and the Federal Government have negotiated and agreed upon a number of operating procedures that effect the calculation of the work participation rates, including the following:

- a. Minimum required hours of participation in work activity to be considered engaged in work .
- b. Activities which count toward meeting the minimum hours of work .
- c. The participation rate standard to be met.
- d. Groups for which participation rate are to be measured (e.g., one-parent families, all adults).
- e. The year by which the participation rate standard is to be achieved.

1670 Methodology Used in Calculating the Monthly Work Participation Rate

The monthly TANF population consists of all families who receive assistance under the State TANF Program for the reporting month. For the all family (and two parent family) work participation rate, we are interested in a portion of these families. This smaller

grouping is referred to as a subpopulation or subdomain. For the overall work participation rate, the subpopulation of interest is all TANF families with an adult or minor child head-of-household, except those families that are disregarded due to:

1. Single custodial parent with child under 12 months;
2. Sanctioned for the reporting month, but not sanctioned for more than 3 months within the preceding 12-month period;
3. Participating in a Tribal Work Program, State has opted to exclude all Tribal Work Program participants from its Work Participation rate;
4. Family is part of an ongoing research evaluation (as a member of a control group or experimental treatment group) approved under Section 1115 of the Social Security Act; and
5. An approved waiver inconsistency that exempts the family from participation.

Similarly, for the two parent work participation rate, the subpopulation of interest is all two parent TANF families with an adult or minor child head-of-household, except those that are disregarded due to:

1. Sanctioned for the reporting month, but not sanctioned for more than 3 months within the preceding 12-month period;
2. Participating in a Tribal Work Program, State has opted to exclude all Tribal Work Program participants from its Work Participation rate;
3. Family is part of an ongoing research evaluation (as a member of a control group or experimental treatment group) approved under Section 1115 of the Social Security Act; and
4. An approved waiver inconsistency that exempts the family from participation.

The standard statistical methodology for estimating means (proportions are special cases of means) over subpopulations from universe data, non-stratified samples and stratified samples are shown below.

1661      Calculation of the Monthly Work Participation Rate from Universe Data

For a State that reports the TANF Data Report for its entire caseload, the monthly work participation rate (R) is the total number of families participating from the subpopulation (Y<sub>j</sub>) divided by the total number of families in the subpopulation (N<sub>j</sub>) and is calculated as follows:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j}$$

where  $i = 1, 2, \dots, N$

$Y_i = 1$ , if the  $i^{th}$  family is participating in  $j^{th}$  subpopulation

$= 0$ , if the  $i^{th}$  family is not participating in  $j^{th}$  subpopulation

$N_j =$  the number of cases in the  $j^{th}$  subpopulation

For example, a State with a monthly caseload of 42,600 families reports its entire caseload as follows:

The number of families that are:	All Families	Two-Parent Families
1. Reported (i.e., total caseload)	42,600	3,000
2. No Parent Families	11,500	-
3. Listed-in-error	50	-
4. Disregarded: single custodial parent with child under 12 months	2,200	-
5. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	1,775	245
6. Disregarded: Participating in a Tribal work program	25	0
7. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0
8. Disregarded (#5): Based on an approved waiver inconsistency	2,000	295
9. Required to Participate (item #1 minus item 2 through item 8)	25,050	2,460
10. Participating	8,338	1,225
11. Counting toward the 30% limit	1,731	120

The ratio estimator for the all family work participation rate is:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j} = \frac{8,338}{25,050} = 0.3329$$

The ratio estimator for the two-parent work participation rate is:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j} = \frac{1,225}{2,460} = 0.4980$$

1662 Calculation of the Monthly Work Participation Rate from Sample Data

For a State that samples but does not stratify, the estimated monthly work participation rate is calculated using the ratio estimator.

The ratio estimator is:

$$\hat{R} = \frac{N \bar{y}_j}{N \bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}}$$

- $y_i$  = 1, if the  $i^{th}$  family is participating in  $j^{th}$  subpopulation  
 = 0, if the  $i^{th}$  family is not participating in  $j^{th}$  subpopulation  
 $x_i$  = 1, if the  $i^{th}$  family is in  $j^{th}$  subpopulation  
 = 0, if the  $i^{th}$  family is not in  $j^{th}$  subpopulation

The estimated variance for the ratio estimator is:

$$v(\hat{R}) = \frac{(1+f)}{n \bar{x}^2} \frac{\sum_{i=1}^n (y_i - \hat{R} x_i)^2}{n-1}$$

where:

$$f = \frac{n}{N}$$

$$R = \frac{\hat{Y}}{\hat{X}}$$

For example, a State with a monthly caseload of 42,600 families reports based on a non-stratified sample as follows:

The number of families that are:	All Families	Two-Parent Families
1. Total Caseload	42,600	3,000
2. Reported (sample size)	255	51
3. No Parent Families	60	-
4. Listed-in-error	2	-
5. Disregarded: single custodial parent with child under 12 months	10	-
6. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	19	4
7. Disregarded: Participating in a Tribal work program	0	0
8. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0
9. Disregarded (#5): Based on an approved waiver inconsistency	10	5
10. Required to Participate (item #2 minus item 3 through item 9) in the sample	154	42
11. Participating in the sample	56	21
12. Counting toward the 30% limit in the sample	12	3

For the all family rate:

The estimated total number of families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{42,600 \times 154}{255} = 25,727.0588$$

The estimated total number of families that are participating from the total caseload (i.e., the numerator of the participation rate) is:

$$\frac{42,600 \times 56}{255} = 9,355.2941$$

The estimated monthly all family work participation rate is:

$$\hat{R} = \frac{N\bar{y}_j}{N\bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}} = \frac{\frac{42,600 ( 56)}{255}}{\frac{42,600 ( 154)}{255}} = 0.3636$$

The estimated number of participating families that count toward the 30% limit is:

$$\frac{42,600 \times 12}{255} = 2,004.7059$$

The number of participating families due to vocational education (and after 1999 due to deemed engaged in work based on work activities 10 and 11 from Section 1630) is less than 30% of total participating families. Therefore, no adjustment is necessary.

For the two-parent work participation rate:

The estimated total number of two-parent families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{3,000 \times 42}{51} = 2,470.5882$$

The estimated total number of two-parent families that are participating from the total caseload (the numerator of the participation rate) is:

The estimated monthly two-parent work participation rate is:

$$\hat{R} = \frac{N\bar{y}_j}{N\bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}} = \frac{3,000 (21)}{51} = 0.5000$$

the estimated number of participating two-parent families that count toward the 30% limit is:

$$\frac{3,000 \times 3}{51} = 176.4706$$

The number of two-parent participating families due to vocational education (and after 1999 due to deemed engaged in work based on work activities 10 and 11 from Section 1630) is less than 30% of total number of two-parent families that are participating. Therefore, no adjustment is necessary.

### 1663 Calculation of the Monthly Work Participation Rate from Stratified Sample Data

For a State that selects a stratified sample the monthly work participation rate as estimated with the ratio estimator is:

$$\hat{R} = \frac{\hat{Y}_j}{\hat{X}_j} = \frac{\sum_{h=1}^H N_{hj} \bar{y}_{hj}}{\sum_{h=1}^H N_{hj} \bar{x}_{hj}} = \frac{\sum_{h=1}^H \frac{N_h}{n_h} \sum_{k=1}^{n_{hj}} y_{hjk}}{\sum_{h=1}^H \frac{N_h}{n_h} \sum_{k=1}^{n_{hj}} x_{hjk}}$$

where  $k = 1, 2, \dots, n_{hj}$

$h = 1, 2, \dots, H$



$n_{hj}$  = the number of families in  $h^{th}$  stratum and the  $j^{th}$  subpopulation

$H$  = the number of strata

$y_{hjk}$  = 1, if the  $i^{th}$  family from stratum  $h$  is participating in the  $j^{th}$  subpopulation.

= 0, if the  $i^{th}$  family from stratum  $h$  is not participating in the  $j^{th}$  subpopulation.

The estimated variance for the ratio estimator is :

$$v(\hat{R}) \approx \frac{1}{N^2} \sum_{h=1}^H \frac{f_h}{N_h} S_{hZ}^2$$

$$f_h = \frac{n_h}{N_h}$$

where:

$$S_{hZ}^2 = S_{hY}^2 + R^2 S_{hX}^2 + 2R p_{hXY} S_{hX} S_{hY}$$

$$p_{hXY} = \frac{S_{hXY}}{S_{hX} S_{hY}}$$

$$S_{hX}^2 = \frac{1}{N_h} \sum_{i=1}^{N_h} (x_{hi} - \bar{X}_h)^2$$

$$S_{hY}^2 = \frac{1}{N_h} \sum_{i=1}^{N_h} (y_{hi} - \bar{Y}_h)^2$$

For example, a State with a monthly caseload of 42,600 families reports based on a stratified sample, in which the two-parent families are in stratum 02 and all other families are in stratum 01, as follows:

The number of families that are:	All Families		Two-Parent Families
	01	02	02
1. Total Caseload	39,600	3,000	3,000
2. Reported (sample size)	204	51	51
3. No Parent Families	60	0	-
4. Listed-in-error	2	0	-
5. Disregarded: single custodial parent with child under 12 months	10	0	-
6. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	15	4	4
7. Disregarded: Participating in a Tribal work program	0	0	0
8. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0	0
9. Disregarded (#5): Based on an approved waiver inconsistency	15	5	5
10. Required to Participate (item #2 minus item 3 through item 9) in the sample	112	42	42
11. Participating in the sample	35	21	21
12. Counting toward the 30% limit in the sample	9	3	3

For the all family rate:

The estimated total number of families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{39,600 ( 112 }{204} \% \frac{3,000 ( 42 }{51} \cdot 24,211.7647$$

The estimated total number of families that are participating from the total caseload (i.e., the numerator of the participation rate) is:

$$\frac{39,600 ( 35 }{204} \% \frac{3,000 ( 21 }{51} \cdot 8,029.4118$$

The estimated monthly all family work participation rate is:

$$R \cdot \frac{\frac{39,600 ( 35 }{204} \% \frac{3,000 ( 21 }{51}}{\frac{39,600 ( 112 }{204} \% \frac{3,000 ( 42 }{51}} \cdot \frac{8,029.4118}{24,211.7647} \cdot 0.3316$$

The estimated number of participating families that count toward the 30% limit is:

$$\frac{39,600 ( 9 }{204} \% \frac{3,000 ( 3 }{51} \cdot 176.4706$$

In this example, the two-parent work participation rate is based on the data in stratum 02 and the result are the same as in the previous example.

#### 1664 Adjusting the Monthly Work Participation Rate for Exceeding the 30% Limit

If, in the example from Section 1662 for the all family work participation rate, the number of participating families that count toward the 30% limit is 20 sample cases (instead of 12 sample cases), then the 30% limit is exceeded. In this instance, the estimated total number of participating families that count toward the limit is:

$$\frac{42,600 ( 20 }{255} = 3,341.1765$$

The estimate number of participating families that counts toward the 30% limit (3,341.17) exceeds the 30% limit (3,341.1765 / 9,355.2941 = .3571.) To make the adjustment, first determine the number of participating families that do not count toward the 30% limit (9,355.2941 - 3,341.175 = 6,014.1176). This group represents the 70% of the total adjusted number of participating families. Thus, the total adjusted number of participating families is calculated by dividing the number of participating families that do not count toward the 30% limit by 0.7 (i.e., 6,014.1176 / 0.7 = 8,591.5966). The adjusted all family work participation rate is

$$\frac{8,591.5966}{25,727.0588} = 0.3340$$

The adjustment from 0.3636 to 0.3340 is a decrease in the participation rate of 0.296 or 2.96%.

1680 TANF Data Reporting Elements Used in Calculating the Monthly Work Participation Rate

The overall and two parent work participation rates are calculated based on data provided on the TANF Data Report - Section One and, for States that do not use a stratified sample, the TANF Data Report - Section Three, data element #8, the total number of families. For States that use a stratified sample design, the State must submit for each month the number of families in each stratum. The TANF Data Report - Section One data elements used in the calculation are listed below:

Item Number	Data Element
1	State FIPS code
4	Reporting Month
5	Stratum
9	Disposition
12	Type of Family for Work Participation
17	Receives Subsidized Child Care

Item Number	Data Element
27	Waiver Evaluation Experimental and Control Group
30	Family Affiliation
31	Non-custodial Parent
32	Date-of-Birth
37	Marital Status
38	Relationship to Head-of-Household
39	Parent with a Minor Child
48	Work Participation Status
49	Unsubsidized employment
50	Subsidized private sector employment
51	Subsidized public sector employment
52	Work experience
53	On-the-job training (OJT)
54	Job search and job readiness assistance
55	Community service programs
56	Vocational educational training
57	Job skills training directly related to employment
58	Education directly related to employment, in the case of a recipient who has not received a high school diploma or a certificate of high school equivalency
59	Satisfactory attendance at secondary school or in a course of study leading to a certificate of general equivalence, if a recipient has not completed secondary school or received such a certificate
60	Providing child care services to an individual who is participating in a community service program
61	Additional Work Activities Permitted Under Waiver

Item Number	Data Element
63	Required Hours of Work
67	Date-of-Birth (Child)

## **1700      STATISTICAL METHODS IN DATA ANALYSIS**

A State or Tribal grantee may comply with the reporting requirements of TANF by reporting on the entire TANF caseload or by using data collected through scientifically acceptable sampling methods approved by the Secretary. In addition to information necessary to compute participation rates, the sample will provide demographic and financial characteristics of families, including age, race, sex, education, income, and type and amount of assistance of family members. Together with a sample of closed cases, States will be able to generate data on families applying for assistance, families receiving assistance, and families that have become ineligible. By carefully analyzing the data, States will be able to examine trends in employment and earnings of families with minor children. (If the sample is sufficiently large enough, the State will be able to produce accurate and reliable information on the number of hours of participation in different activities such as, education, subsidized employment, unsubsidized employment, job search, etc.)

The following subsections outline some of the more common statistical techniques that can be used in the statistical analysis process. States are encouraged to do their own research and develop statistical methodology to meet their own special needs in data analysis.

### **1710      Statistical Tests of Significance**

Because sample results will normally be in error by some amount simply because they are based on a sample, inferences from sample results must take into account sampling error. The means for doing this is known as testing statistical hypotheses and estimation (including confidence interval construction) for statistically significant differences. The "difference" may be between two or more samples or between a sample and the population. The hypothesis used in testing differences (called the null hypothesis) is that there is no "true" difference between the observed results, i.e., that the observed difference is only due to random errors or chance. When the observed difference is sufficiently larger than the sampling error, it can be stated that there is a statistically significant difference, i.e., that a "true" difference most likely exists.

This section is concerned with various statistical procedures that test null hypotheses. The tests that follow are appropriate for the systematic random or simple random sampling methods.

## 1711 Testing the Representativeness of the Sample with the Caseload

There are several statistical techniques that can be used to ensure that the sample is acceptably representative of the caseload from which it is drawn. These techniques involve the comparison of sample case findings with known caseload information. The two statistical methods that are discussed are: (1) the confidence interval estimate of population parameters for averages and proportions, and (2) the one-sample chi-square test for distribution of sample findings.

All States and Tribal grantees collect information on their entire caseload on an ongoing basis -- monthly, quarterly, or annually. Caseload data closest to those of the sample period should be used in making the comparisons. If the test reveals significant differences in results, the method of sample selection and sample sizes should be re-examined to provide assurance that no errors have occurred in the sample selection process.

Sections 1711.1 and 1711.2 below illustrate the methods using the confidence interval to estimate representativeness of the sample when proportions are not used and when proportions are used.

### 1711.1 Comparison of Sample and Total Caseload When Proportions Are Not Used

In order to determine whether the sample average dollar amount of assistance is representative of the caseload, use the following procedure:

For our example, assume that the average dollar amount of assistance in the total caseload is \$90.20 and in the sample, \$95.35 with a standard error of \$5.48.

The equation for a 95 percent confidence interval in this calculation is approximately as follows:

$$\bar{x} \pm 1.96 \left( \frac{s}{\sqrt{n}} \right)$$

where:

$n$  = number of sample cases for which a review was completed;



$\bar{x}$  = mean dollar amount of assistance per sample case for which data was collected =  $\frac{\sum x_i}{n}$ ;

$\sum$  = the sum operator;

$s$  = estimated standard deviation =  $\sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}}$ ;

$x_i$  = actual dollar amount of assistance for a sample case; and

$\frac{s}{\sqrt{n}}$  = estimated standard error of  $\bar{x}$ .

If, in our example, the estimated standard error of the sample average dollar amount of assistance is \$5.48, then 1.96 times the standard error is \$10.74. Therefore, the 95 percent confidence limits are \$95.35 ± \$10.74, or \$84.61 to \$106.09. Since the confidence interval in this case includes the "true" or total caseload average dollar amount of assistance of \$90.20, there is no evidence that the sample is not representative of the caseload from which it is drawn.

## 1711.2 Comparison of Sample and Total Caseload When Proportions Are Used

If information on the proportion of the entire caseload having certain characteristics is available, a similar test can be conducted. For example, if the proportion of 2-parent families in the entire caseload is known, the sample proportion can be compared to this figure. In this situation, a confidence interval is calculated around the total caseload, or population value, to see if the sample value is included.

The sample proportion of 2-parent families should fall within the following interval:

$$P \pm 1.96 \sqrt{\frac{P(1 - P)}{n}}$$

where:

$P$  = proportion of 2-parent families in the caseload; and

$n$  = number of completed sample cases

It should be noted that the best estimate of a standard error uses the most complete data readily available. Theoretically, total caseload data, if available, should be used to calculate the standard error wherever findings are compared between sample cases and the total caseload. Calculation of the standard error from total caseload data is a relatively simple process where proportions are being compared. However, where proportions are not used, as in comparing average dollar amount of assistance, calculating the best estimate of the standard error from the total caseload is a very lengthy process. In such circumstances, the standard error is calculated from the sample data.

### 1711.3 One Sample Chi-Square ( $X^2$ ) Test

This method for testing the representativeness of samples compares the distribution of sample cases by certain characteristics with that of the total caseload. The assumption is that a certain amount of information is available based upon universe counts of the entire caseload.

The most readily available characteristic that can be compared is the distribution of cases by county, or other geographic areas. If cases in the sample have been drawn with each case having an equal chance of selection, they would be distributed among the counties or other geographic areas in the same proportions as cases in the total caseload. To determine if the county (or other geographic area) variations in sample cases are large enough to support a possible suspicion of bias, the chi-square test of significant differences can be computed. In the chi-square test, theoretical, i.e., expected values are computed. If the observed values differ greatly from these expected values, a significant concentration is in evidence.

The equation for computing the chi-square statistic is as follows:

$$X^2 = \sum_j \left[ \frac{(O - E)^2}{E} \right]$$

where:

$j$  = the sum of all categories;

$O$  = observed number of cases in each category (or case characteristic);  
and

$E$  = expected number of cases in each category (or case characteristic) which when calculated is as follows:

$$\frac{\text{number of population cases in category}}{\text{total cases in population}} \times \text{sample size}$$

The following example will illustrate the method.

Comparison of Distributions of Cases by County Groups			
County Groups	Total Caseload ( $U$ )	Observed Number of Cases in Sample ( $O$ )	Expected Number of Cases in Sample $E = \frac{U}{U} \times O$
# 1	1,000	11	$\frac{1,000}{20,000} \times 200 = 10$
# 2	3,000	33	$\frac{3,000}{20,000} \times 200 = 30$
# 3	5,000	58	$\frac{5,000}{20,000} \times 200 = 50$
# 4	4,000	57	$\frac{4,000}{20,000} \times 200 = 40$
# 5	2,000	13	$\frac{2,000}{20,000} \times 200 = 20$
# 6	2,000	13	$\frac{2,000}{20,000} \times 200 = 20$

Comparison of Distributions of Cases by County Groups			
County Groups	Total Caseload ( <i>U</i> )	Observed Number of Cases in Sample ( <i>O</i> )	Expected Number of Cases in Sample $E = \frac{U}{N} \times O$
# 7	3,000	15	$\frac{3,000}{20,000} \times 200 = 30$
	$\Sigma U = 20,000$	$\Sigma O = 200$	$\Sigma E = 200$

$$\begin{aligned}
 \chi^2 = \sum \left[ \frac{(O - E)^2}{E} \right] &= \frac{(11 - 10)^2}{10} + \frac{(33 - 30)^2}{30} + \\
 &\frac{(58 - 50)^2}{50} + \frac{(57 - 40)^2}{40} + \frac{(13 - 20)^2}{20} + \\
 &\frac{(15 - 30)^2}{30} = 21.31
 \end{aligned}$$

To show significance, the computed value must exceed the critical value in the following table.

Critical Chi-Square ( $\chi^2$ ) Values	
Degrees of Freedom	Critical Value of $\chi^2$ Statistic
1	3.84
2	5.99
3	7.81

Critical Chi-Square ( $X^2$ ) Values	
Degrees of Freedom	Critical Value of $X^2$ Statistic
4	9.49
5	11.1
6	12.6
7	14.1
8	15.5
9	16.9
10	18.3
11	19.7
12	21.0
13	22.4
14	23.7
15	25.0
16	26.3
17	27.6
18	28.9
19	30.1
20	31.4
21	32.7
22	33.9
23	35.2
24	36.4
25	37.7
26	38.9
27	40.1

The critical value is dictated by the number of "degrees of freedom." Problems of this type have degrees of freedom equal to the number of categories minus "1", in this example, 7 & 1 = 6. The critical value of 12.6 is clearly exceeded. Thus, a suspicion of possible bias in the sample is given greater validity and observed variation in such categories is more than can reasonably be attributed to chance. (The table of values is set at 95 percent, i.e., when a computed value exceeds the table value, there is less than 5 chances out of 100 that the large observed differences are due to chance. This predefined statistical probability, in this table, set at alpha = .05 is called a Type I error.)

Note that the chi-square test is inapplicable, i.e., serious distortions of results may appear, when 20 percent or more of the groups have expected values of less than "5" or any group has an expected frequency of less than "1." Under these circumstances, groups must be combined until the requirements are satisfied. When practical, such combinations should be made before obtaining or looking at the sample results, in order to avoid biases in the test. The combinations should be meaningful, e.g., rural counties, northern counties, etc.

If there are only two groups, each expected value must be "5" or more. In such tables, the preferred calculation of chi-square is as follows:

$$X^2 = \sum_j \left[ \frac{(*Observed \& Expected* \& 0.5)^2}{Expected} \right]^6$$

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6/ The parallel bars, \*\*, indicate absolute value of the term, i.e., ignore the sign and assume positive. The 0.5 figure is called the Yates Correction for Continuity.

1712      Testing Differences of Proportions Between Samples

Repeated sampling from a given population should not differ from each other by more than chance fluctuations.

The equations used to determine the statistical significance the of difference in proportions, such as participation rates, between two reporting periods and using a predefined probability (Type I error, or alpha = .05) are as follows:

$$p = \frac{n_A p_A \% n_B p_B}{n_A \% n_B}$$

where:

$p$  = weighted participation rate for reporting periods A and B combined;

$p_A$  = participation rate for reporting period A;

$p_B$  = participation rate for reporting period B;

$n_A$  = number of sampled cases in reporting period A; and

$n_B$  = number of cases reviewed in reporting period B.

The equation for the statistic is as follows:

7

$$z = \frac{p_A - p_B}{\sqrt{p(1-p) \left( \frac{1}{n_A} + \frac{1}{n_B} \right)}}$$

If the computed value of "z" is greater than 1.96, a significant difference exists between  $p_B$  and  $p_A$ .

---

7/ The "z" test is satisfactory only if both  $n_A$  and  $n_B$  are large.

For example, assume a participation rate of 33.2 percent based on 1,573 sample cases in sample period A is compared with an participation rate of 25.7 percent based on 1,495 sample cases in sample period B. The test of significance would be computed as follows:

$$p = \frac{(1,573)(0.332) \% (1,495)(0.257)}{1,573 \% 1,495} = 0.295453 \text{ or } 0.295$$

$$z = \frac{*.332 \& *.257*}{\sqrt{.295(1 \& .295) \times \left( \frac{1}{1,573} \% \frac{1}{1,495} \right)}} = 4.55$$

Since the computed value of  $z$  (4.55) is larger than 1.96, the difference between the participation rates is statistically significant. If the computed value was less than 1.96, the difference would not have been statistically significant. It is, therefore, reasonable to deduce that the observed difference in the participation rate is not attributable to chance fluctuations.

### 1713 Testing Differences Within the Same Sample -- Chi-Square ( $X^2$ )

A test of statistical significance can be used to determine if the characteristics of one group vary significantly from the characteristics of another. For example, this test can be used to compare the distribution of participants in one county versus another.

In testing this hypothesis, the chi-square test uses "column" and "row" groupings. Although the expected values are computed differently than in Section 1711.3 (page 80), the overall equation is computed the same way:

$$X^2 = \sum_j \left[ \frac{(O \& E)^2}{E} \right]$$

where:

$O$  = observed number of cases in each grouping; and



$E$  = proportional number of cases expected, if no sampling variation was present, computed as follows:

$$E = \frac{\text{row total} \times \text{column total}}{\text{grand total}}$$

To determine whether the distribution of participants by activity varies between two counties, assume the following data were observed from the sample:

	Number of Sample Cases		
Type of Activity	Total	County A	County B
Total	280	160	120
Education	45	30	15
Subs. Employment	40	15	25
Unsubs. Employment	22	12	10
Public Sector Empl.	17	7	10
Job Search	55	35	20
Job Skills	54	34	20
Voc. Training	47	27	20

	Expected Values ( <i>E</i> )	
	County A	County B
Education	$\frac{160 \times 45}{280} = 25.7$	$\frac{120 \times 45}{280} = 19.3$
Subs. Empl.	$\frac{160 \times 40}{280} = 22.9$	$\frac{120 \times 40}{280} = 17.1$
Unsubs. Empl	$\frac{160 \times 22}{280} = 12.6$	$\frac{120 \times 22}{280} = 9.4$
Public Sector Empl.	$\frac{160 \times 17}{280} = 9.7$	$\frac{120 \times 17}{280} = 7.3$
Job Search	$\frac{160 \times 55}{280} = 31.4$	$\frac{120 \times 55}{280} = 23.6$
Job Skills	$\frac{160 \times 54}{280} = 30.9$	$\frac{120 \times 54}{280} = 23.1$
Voc. Training	$\frac{160 \times 47}{280} = 26.9$	$\frac{120 \times 47}{280} = 20.1$

$$\chi^2 = \sum_j \left[ \frac{(O - E)^2}{E} \right] = \frac{(30 - 25.7)^2}{25.7} \% + \frac{(15 - 19.3)^2}{19.3} \%$$

$$\frac{(15 - 22.9)^2}{22.9} \% + \frac{(25 - 17.1)^2}{17.1} \%$$

$$\frac{(12 \text{ \& } 12.6)^2}{12.6} \% \quad \frac{(10 \text{ \& } 9.4)^2}{9.4} \%$$

$$\frac{(7 \text{ \& } 9.7)^2}{9.7} \% \quad \frac{(10 \text{ \& } 7.3)^2}{7.3} \%$$

$$\frac{(35 \text{ \& } 31.4)^2}{31.4} \% \quad \frac{(20 \text{ \& } 23.6)^2}{23.6} \%$$

$$\frac{(34 \text{ \& } 30.9)^2}{30.9} \% \quad \frac{(20 \text{ \& } 23.1)^2}{23.1} \%$$

$$\frac{(27 \text{ \& } 26.9)^2}{26.9} \% \quad \frac{(20 \text{ \& } 20.1)^2}{20.1}$$

$$X^2 = .72 + .96 + 2.73 + 3.65 + .03 + .04 + .75 + 1.00 + .41 + .55 + 0 + 0 = 10.29$$

To determine if the computed chi-square value is significant, i.e., the concentrations of error can not be reasonably regarded as due to sampling variation, the table of Critical Chi-Square Values in Section 1713 (page 86), should be used. The appropriate number of degrees of freedom (DF) for examples of this type (with any number of rows or columns) is computed by the following equation:

$$DF = (number \text{ of rows } + 1) \times (number \text{ of columns } + 1)$$

Again, if the computed chi-square value exceeds the table value, the value is significant, i.e., participation in different activities varies from County A to County B. In this example, DF = 6. Since 10.67 does not exceed 12.6, the data is not significant at the .05 level.

Interpretation of significant data is a somewhat more complex task. Briefly, the analyst must look to the source of the greatest variation, noting whether the observed value was larger or smaller than expected. If this test had shown statistical significance, the analyst would need to further examine the subsidized employment category, where County A had a smaller than expected number of cases while County B had a greater than expected number of cases.

The restrictions on the use of this table are the same as in Section 1711.3 (page 80) -- that the test is inapplicable, i.e., serious distortions of results may appear, when 20 percent or more of the cells have expected values of less than "5" or any cell has an expected value of less than "1." Under these circumstances, rows and/or columns must be combined until the requirements are satisfied.

As indicated in Section 1711.3 (page 80), in a 2 x 2 table, each expected value must be "5" or more. (In such tables, the preferred method for computing the chi-square is by the use of the equation given in Section 1711.3.)

#### 1720 Trends

It may be important in a State for the TANF system to have feedback on apparent changes over time for a variety of statistics (e.g., changes in caseload, in participation rates, in out-of-wedlock births, in error rates). The general direction of change in data over time is called the "trend" and can be used, for example, to assess the effectiveness of State policies or of corrective actions in reducing error rates. Throughout this section, we are using the error rate, however the methodology is applicable to other proportions. Trends can be based on moving averages of error rates or on individual monthly error rates.

#### 1721 Moving Averages

Trends based on a moving average involve taking the averages calculated over a fixed number of months and progressively dropping data for the earliest month and adding data for the latest month. In this way, the composition of each fixed time period average remains approximately the same because any given average covers early, middle, and late months of the fixed period. Monthly aberrations are smoothed because these fixed groupings are not particularly sensitive to any given monthly rate. Thus, the long term trend can be judged visually.

For TANF purposes, a six-month moving average is recommended. Six-month moving averages can be computed on reviewed sample cases by either month of review or by month of completion (see Figures 2. and 3. below). The advantage of computing six-

month averages by month of review is that the effectiveness of corrective actions for which results are expected at a given point in time can be observed more clearly than if computed by month of completion. On the other hand, averages computed by month of completion have the advantage of timeliness, i.e., there is no delay of several months for cases to be completed before a trend can be observed. (It should be noted,

however, unless cases are completed on a more continuous flow basis than is generally true at the present time, moving averages based on month of completion can lead to spurious peaks and valleys in the data.)

Figure 2.

Six-Month Moving Averages of Completed Sample Cases  
By the Month of Review

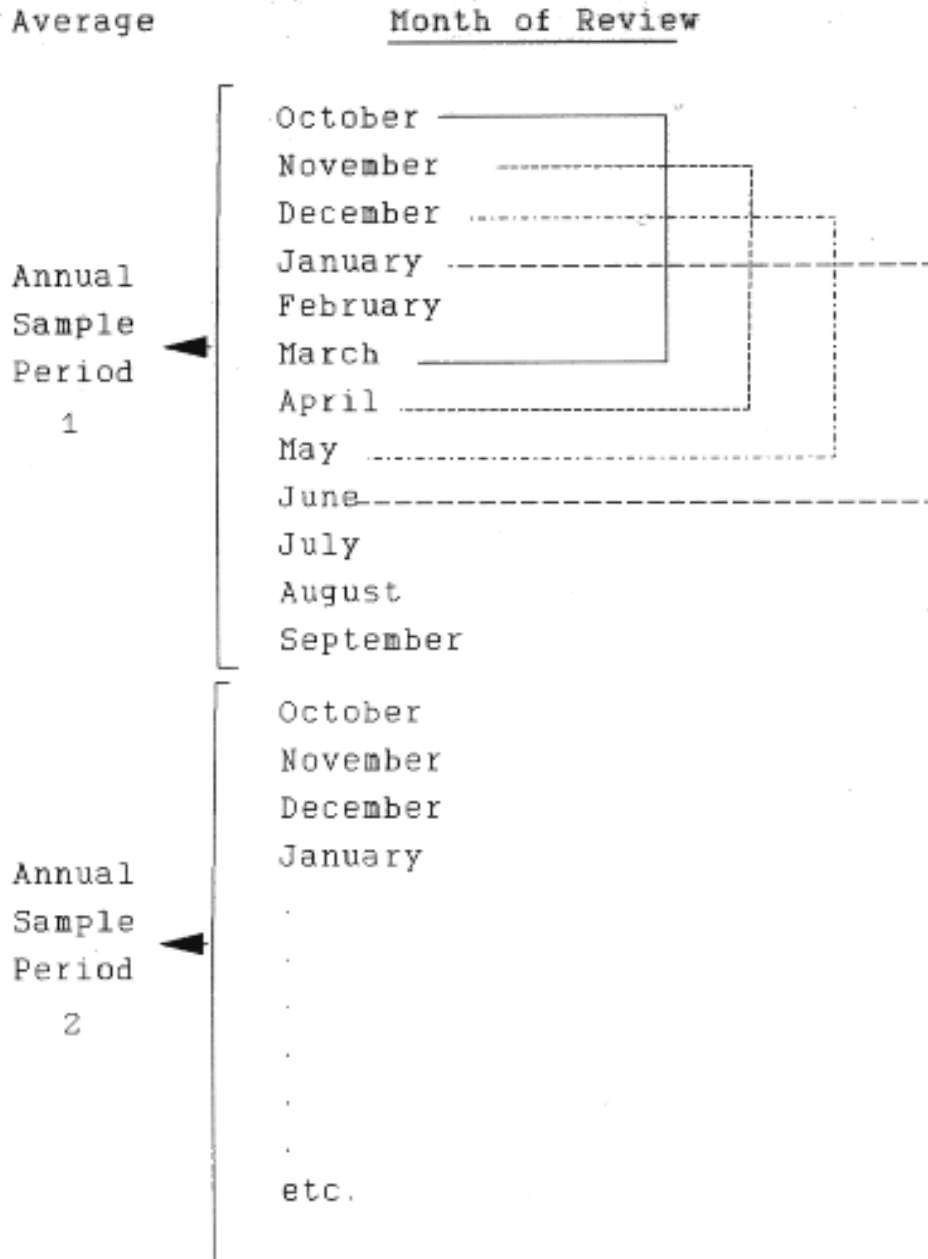
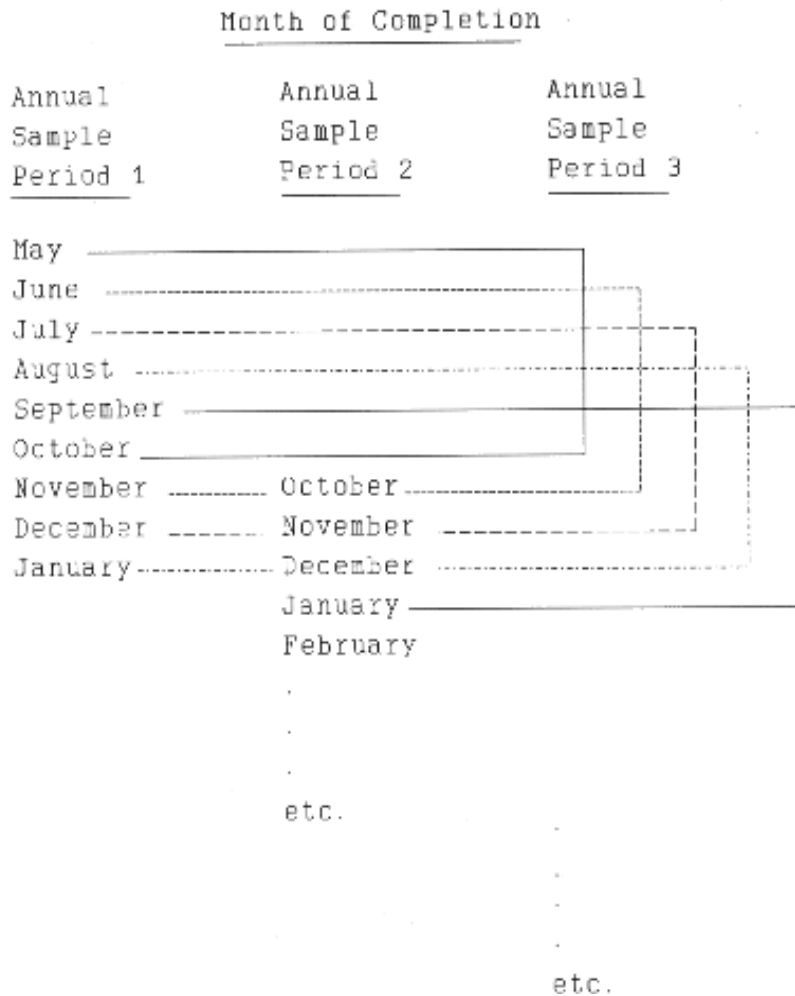


Figure 3.

Six-Month Moving Averages of Completed Sample Cases  
Regardless of Month of Review



1722 Individual Monthly Rates

Individual rates are generally examined for short-term time periods. Because each month's sample is small, the monthly error rates tend to fluctuate much more than six-month moving averages. The classic way of measuring this trend is to fit a mathematical trend line, called a regression line, estimated by the method of "least squares." While a trend line could be drawn by inspection, such a line probably would be inaccurate and

would be graphed differently by different people, depending on who was drawing the line. The advantages to the regression line are: (1) the sum of squares of monthly error rate deviations from the trend line is minimized; (2) all analysts fit the same line; (3) different measures, e.g., degree of relationship, can be computed; and (4) future estimates can readily be extrapolated from the line.

### 1723 Computation of a Regression Line by "Least Squares" Method

It is best to fit the line after all sample cases for the annual sample period have been completed. In our example, we are using the error rate; however, the methodology is applicable to other proportions. If a regression line is to be fitted for shorter or longer periods, the overall error rate for the shorter or longer period must be used in the computation. The form of the equation used is as follows:

$$\hat{p}_m = a + bm$$

where  $\hat{p}_m$  is the estimated error rate for a given month. The equation for "b" is:

$$b = \frac{\sum n_m(p_m - p_t)(m - \bar{m})}{\sum n_m(m - \bar{m})^2}$$

where:

$b$  = error rate change (increase or decrease) per unit month advance;

$n_m$  = number of sample cases completed for the  $m^{th}$  month;

$p_m$  = actual proportion of error cases in sample for the  $m^{th}$  month;

$p_t$  = actual proportion of error cases in sample for annual sample period;

$m$  = "1" for first month; "2" for second month; etc.; and



a,  $p_t$ , &  $\bar{m}$

$$\bar{m} = \frac{\sum (m)(n_m)}{\sum n_m}$$

The equation for "a" (the y intercept) is:

To illustrate the "least-squares" method of fitting a trend line, data for a six-month period are used. Assume the number of sample cases completed and the case error rate for each month to be as follows:

Month	m	Number of Cases Reviewed ( $n_m$ )	Case Error Proportions( $p_t$ )
April	1	203	.082
May	2	201	.088
June	3	197	.065
July	4	194	.049
August	5	202	.080
September	6	204	.063
Total		$\sum n_m = 1,201$	$p_t = .071$

Step 1. Compute  $\bar{m}$  :

$$\bar{m} = \frac{\sum (m)(n_m)}{\sum n_m}$$

$$\bar{m} = \frac{1(203) + 2(201) + 3(197) + 4(194) + 5(202) + 6(204)}{1,201}$$

$$\bar{m} = \frac{4,206}{1,201}$$

$$\bar{m} = 3.5$$

Step 2. Compute b:

$$b = \frac{\sum n_m (p_m \& p_t) (m \& \bar{m})}{\sum n_m (m \& \bar{m})^2}$$

Month (m)	$n_m$	$(p_m \& p_t)$	$(m \& \bar{m})$	$n_m(p_m \& p_t)(m \& \bar{m})$	$n_m(m \& \bar{m})^2$
1	203	(.082-.071)	(1-3.5)	-5.583	1,268.75
2	201	(.088-.071)	(2-3.5)	-5.126	452.25
3	197	(.065-.071)	(3-3.5)	.591	49.25
4	194	(.049-.071)	(4-3.5)	-2.134	48.50
5	202	(.080-.071)	(5-3.5)	2.727	454.50
6	204	(.063-.071)	(6-3.5)	-4.080	1275.00
				$\Sigma = -13.605$	$\Sigma = 3,548.25$

$$b = \frac{-13.605}{3,548.25} = -.0038 \text{ or } -.38\%$$

Step 3. Substitute and solve for "a" ("the y intercept"):

$$a + p_t + bm = (.071) + (.0038)(3.5) = .0846 \text{ or } 8.46\%$$

Step 4. Substitute the equation for the line into the general form and solve for  $\hat{p}_m$  values using  $m = 6$  and  $m = 0$ :

$$\hat{p}_m = a + bm$$

When  $m = 6$ , then

$$\hat{p}_m = .0846 + .00383(6) = .0616 \text{ or } 6.16\%$$

When  $m = 0$ , then

$$\hat{p}_m = .0846 + .00383(0) = .0808 \text{ or } 8.08\%$$

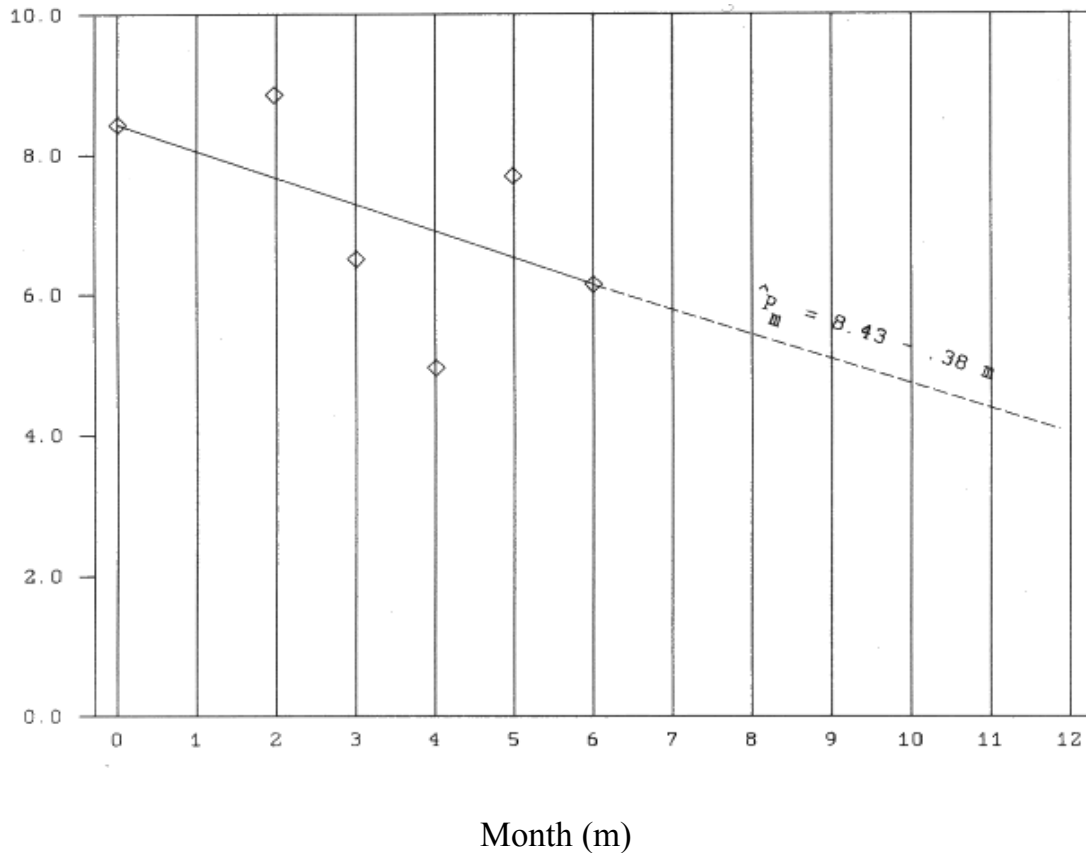
Step 5. Draw a trend line on a graph (Figure 4.) using the values of  $\hat{p}_t$  and  $m$  from step 4.

Figure 4.

Trend Line

Error Rate

$(\hat{p}_m)$



The graph shows an inverse relationship between month sequence and error rates, i.e., the error rates decrease as the months progress. The trend line would be more accurate if twelve months of data were used instead of six months.

Once the trend line is established, it is possible to compute from it what the estimated error rate would be each month if only the factor of trend affected the rate; in other words, what the error rate would have been if there were no unpredictable or cyclical factors affecting it.

### 1723.1 Practical Uses of Trend Line and Trend Values

The differences between the actual and trend values of the error rates show whether the actual values are above or below the values they would have been if only trend affected the rates. These differences may reveal the combined effect of such factors as policy changes and staff turnover on the eligibility and payment process in the TANF program.

The trend line also provides a basis for estimating probable error rates in future periods. The accuracy of such estimates will depend on the number of points used in the time series and the assumptions made regarding the future effects of unpredictable factors on the error rates. (It should be noted, however, that the line of best fit is an average line, and predicting error rates beyond the range of values used to compute the line assumes the same scattergram beyond the range.)

The regression line  $p = a + bm$  discussed above is restricted to linear regression only, i.e., fitting a straight line to the data. If the scatter diagram from the data indicates non-linearity (e.g., no pattern or curvature), the model given in Section 1723 (page 94) is not applicable. Other appropriate methods or models should be considered.

### 1723.2 Testing Trend for Statistical Significance

Testing for a significant trend is actually a test of the null hypothesis, i.e.,  $b = 0$  in the equation  $p = a + bm$ . The test statistic used is again the chi-square test. The following equation is not in the form shown earlier for chi-square but it can be shown that this statistic is distributed as chi-square with one degree of freedom when the number of months is large. Therefore, the critical value is 3.84 (see Section 1711.3 (page 80), Critical Chi-Square ( $X^2$ ) Values).

$$X^2 = \frac{[ \sum n_m (p_m - \bar{p})(m - \bar{m}) ]^2}{[ \sum (p_m - \bar{p})^2 + \sum n_m (m - \bar{m})^2 ]}$$

All of the terms in the equation have been previously computed for the regression line itself. Thus, substituting in the equation using the data for the example in Section 1723 (page 94):

$$X^2 = \frac{(-13.605)^2}{(.0712)(1 - .0712)(3,548.25)} = \frac{185.096}{234.039} = 0.789$$

Since the computed  $\chi^2$  value (0.791) is less than 3.84, the trend is not statistically significant.

Note that in this example, there are only 6 months available. This may not be large enough to ensure the satisfactory use of the chi-square test. The example is used only to illustrate the computation. Basing predictions on a linear fit that is not statistically significant is highly questionable.

### 1723.3 Relationship Between Time Sequence and Error Rates

In comparing the error rates over the months of the sample period, it is frequently desirable to measure the degree of relationship. One way of looking at this relationship is to determine how similar or the closeness of the relationship between the error rates and time.

The statistic usually used to determine the mutual relationship between two variables is called the coefficient of correlation ( $r$ ). It ranges from +1 to -1. If a perfect relationship exists as rates rise over the period, the coefficient of correlation equals +1. If a perfect relationship exists as rates decline over the period, the coefficient equals -1. If no relationship exists, the computed value equals zero. Rarely are there situations where  $r = \pm 1$ .

The following equation is used to compute the coefficient of linear correlation:

$$r = b \sqrt{\frac{\sum n_m (m - \bar{m})^2}{\sum n_m (p_m - \bar{p})^2}}$$

The only term that has not been computed for our example in Section 1723 (page 94) is  $\sum n_m (p_m - \bar{p})^2$ . This computation is as follows:

Month (m)	$n_m$	$(p_m - \bar{p})$	$n_m(p_m - \bar{p})^2$
1	203	(.082 - .071)	.025

Month (m)	$n_m$	$(p_m \& p_t)$	$n_m(p_m \& p_t)^2$
2	201	(.088 - .071)	.058
3	197	(.065 - .071)	.007
4	194	(.049 - .071)	.094
5	202	(.080 - .071)	.016
6	204	(.063 - .071)	.013
			= .213

Substituting all the computed terms in the above formula, the coefficient of correlation is:

$$r = .0038 \sqrt{\frac{3,548.25}{.213}} = .49$$

Thus, the degree of relationship on the scale of -1 to +1 is -0.49.

It should be emphasized at this point, that there is no direct or proportional comparison between different values of  $r$ . For example, when the coefficient of correlation ( $r$ ) between two variables is +0.8, it does not mean that the association is twice as good as that shown by a value of  $r = +0.4$ .

Assume that in our example, the State wants to know how much of the variation in the error rate is associated with or explained by the time sequence. A simple method of measuring this explained variation in terms of a percentage of the total variation has been developed through the use of the coefficient of determination ( $r^2$ ):

$$\text{Coefficient of determination} = 100 \cdot r^2$$

(explained variation)

From this formula, the percentage of unexplained variation can also be calculated:

$$\text{Unexplained variation} = 100 (1 - r^2)$$

In our example, the coefficient of correlation was -0.49. Therefore, only 24 percent, or  $(100)(0.49)^2$ , of the total variation in error rates is accounted for by the time sequence. Conversely, it can be determined that the time sequence fails to account for 76 percent of the total variation in error rates, or  $(100)(1 - 0.49^2)$ . Obviously, other factors play a more important role in the decrease in error rates and must be brought into the analysis.

As noted in Section 1723.2, (page 99), since in this example the regression line is not statistically significant, neither the coefficient of correlation nor the coefficient of determination is statistically significant. The example only serves to illustrate the computations. It should be recognized that when  $r$  is based on a sample, it is subject to chance variation, just as is any other statistic based on a sample. Thus, before assuming a strong or weak correlation, consideration should be given not only to the value of  $r$ , but also to the size of the sample. Furthermore, sample correlation analysis has some basic limitations. A common-sense approach is needed to tell whether two variables (in this example, error rates and time) are, in fact, casually related or the apparent relationship is just a coincidence.

#### 1730 Statistical Procedures for Developing Profiles of Error-Prone Cases

The purpose for developing profiles of error-prone or high risk cases or characteristics is to facilitate the identification of those particular types of cases or characteristics that should be singled out for special consideration, review, or treatment. For example, cases with a particular combination of factors might be redetermined for eligibility more frequently than other cases; particular elements might require more verification; or cases more likely to be in error might be emphasized in training.

In determining the kind of statistical method to be used in developing error-prone profiles, a State should consider sample size, whether the error rate is high or low, and whether it wants the profile to have limited or broad error-prone groups. Resource demands and statistical availability should also be considered. Demands upon State resources will vary with the procedure selected.

Various statistical procedures are used in analyzing and predicting the risk and the expected amount of error of cases possessing a specific type of error. One predictive technique used with quantitative or numerical data is called multiple regression. Another technique, known as discriminant analysis, uses multivariate quantitative information.

Multiple regression techniques can be used to predict the expected dollars in error in cases possessing certain characteristics. Corrective action can then be focused on cases possessing characteristics associated with the highest average dollars in error. Discriminant analysis can be used to determine the likelihood of a case being in error.



This predictive technique tries to define a functional relationship for assigning certain types of cases to various groups.

Most of the procedures that have been used in the TANF program establish specific characteristics from the sample by which a case is determined to belong to a certain group. They are generally case-driven procedures that take one of two approaches. Either a search is conducted for characteristic combinations that have a high concentration of case errors or a procedure is developed to rank cases from most error-prone to least error-prone. (It should not be too difficult to make these procedures dollar-driven. In the former procedure, the search criteria can become a high concentration of dollar errors. In the latter, the definition of error can be modified so that most error-prone implies most prone to high dollar error. This might be accomplished by defining an error case as one in which (1) the amount in error exceeds a certain amount, such as the median amount of error; or (2) the percent of the amount in error exceeds a certain percentage, perhaps of the total payment. Techniques of regression analysis would be well suited for developing a procedure that predicts the amount in error for a given case.)

All procedures used in the TANF program are based on a prior quality control sample. If the conditions under which the sample was reviewed remain constant, the sample can be used to predict cases most likely to contain errors. However, if these conditions change, so must the procedures.

#### 1731 Criteria for Setting Up Error-Prone Profile Models

Cases selected and reviewed as error-prone should have the highest likelihood of being in error and should produce the highest cost savings to a State. The error-prone model should meet the following specifications:

13. Cases are ranked by error proneness so that resources are expended more efficiently;
14. Screening models are easy to use so that extensive time is not required to train supervisors;
15. Criteria used are quick to apply so that extensive time is not needed to identify error-prone characteristics in the case file;
16. Models can be incorporated into the existing case processing system;
17. Models include a monitoring component that informs the agency of success rates;

18. System is easily updated so that staff can adjust the model to reflect changes in caseload; and
19. System is cost-effective and feasible.

## **APPENDICES**



## APPENDIX A

### Table of Random Numbers

A table of random numbers is a compilation of numbers whose frequency and sequence of occurrence have been determined by chance. Since the position that any digit occupies is a result of chance, any number formed by a combination of these digits, in any sequence, by any progression, systematic or random, in any direction from any starting point, may be regarded as a random grouping or selection.

The only requirement is that all of the items from which a random selection is to be made have, or were assigned, individual identifying numbers. The entire group of numbered items may be regarded, for certain purposes, as a statistical population. A selection of any part of that statistical population by means of a table of random numbers may be regarded as a random sample of the population.

For example, if the population to be sampled consists of 84 cases, numbered from 1 through 84, random numbers of two digits are required. If the population to be sampled consists of 796 cases, random numbers of three digits are required. To obtain a two-digit, three-digit, seven digit or other size number from the table, combine adjacent digits as needed. It makes no difference where in the table one begins or in which direction one moves in selecting random numbers. However, each time the table is used, select a different starting point.

Example: If the highest consecutively numbered case in the population is 7,543, assume that a randomly selected location starts with the four digits in line 49, column 1. Assume also that it is decided in advance that the numbers to be used in drawing the sample will be consecutive numbers obtained by reading across the columns from left to right on each consecutive line in the table until a sample of the desired size has been accumulated. If the first four digits of each number in each five-digit column are used, the sample would consist of cases identified as 6837, 7076, 1059, 0454, 5432, 0234, 1724, 2886, 1477, 6273, 1566, and so on until the desired sample size is obtained. The numbers 9501, 9352, 7646, 9227, as well as any other number larger than 7,543 that may later be encountered are not usable for this universe and are, therefore, rejected.



### Table of Random Sampling Numbers

))  
Line/Col. (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14)  
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11048015011015360201181647916466917914194625903620720969995709129190700  
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141036561129875298568948237522676768993394015112635885104202852997589868  
150711997336710480817877233139164756481056977358597729372744612855190707

165108512765518215125977452163086075692144494425390070960639907560140719  
170236821382524046026889368198855532244819011886525564835449190594455157  
180101154092333629490431273041461859429852715858503051132019159274764951  
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### Table of Random Sampling Numbers

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272967620591680862643246901208498976881536866451265992259571028042825280  
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Table of Random Sampling Numbers

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## **APPENDIX B**

### **Definitions**

**Note: The definitions listed below pertain to this manual only.**

20. Absolute Value - disregards the sign of a number; considers all numbers positive.
21. ACF - the Administration for Children and Families.
22. Act - Social Security Act
23. Adequate Sample - pertains most commonly to the size of a sample; a sample is adequate if its size is large enough to give the degree of precision or reliability required in a given sample estimate.
24. Adjusted State Family Assistance Grant, or Adjusted SFAG - the SFAG amount, minus any reductions for Tribal Family Assistance Grants paid to Tribal grantees on behalf of Indian families residing in the State and any transfers to the Social Services Block Grant or the Child Care and Development Block Grant.
25. Administrative Costs has the meaning specified at §263.01(b) of the final rule.
26. Adult - An individual who is not a minor child (See Section 419 of Act.)
27. AFDC - Aid to Families with Dependent Children.
28. Aid to Families with Dependent Children - the welfare program in effect under title IV-A of prior law.
29. Alpha - the allowable probability associated with observed differences attributed to chance. If the probability associated with sample differences is less than alpha, we can reasonably conclude that a real difference between samples exists (see Risk).
30. Annual Sample Period - (also called Fiscal Year) - The 12-month period, October 1 through September 30.
31. Annual Work Participation Rate - the overall (or two-parent) work participation rate for a fiscal year is the average of the State's overall (or two-parent) work participation rates for each month in the fiscal year.

32. Application - The action by which an individual indicates in writing to the agency administering the State TANF program (or separate State program) his/her desire to receive assistance.

33. Assistance - The term "assistance" includes cash, payments, vouchers, and other forms of benefits designed to meet a family's ongoing basic needs (i.e., for food, clothing, shelter, utilities, household goods, personal care items, and general incidental expenses). It includes such benefits even when they are provided in the form of payments by a TANF agency, or other agency on its behalf, to individual recipients and conditioned on their participation in work experience, community service, or other work activities (See §261.30 of final rule).

The term "assistance" excludes:

- a. Nonrecurrent, short-term benefits (such as payments for rent deposits or appliance repairs) that:
  - 1) Are designed to deal with a specific crisis situation or episode of need;
  - 2) Are not intended to meet recurrent or ongoing needs; and
  - 3) Will not extend beyond four months.
- b. Work subsidies (i.e., payments to employers or third parties to help cover the costs of employee wages, benefits, supervision, and training);
- c. Supportive services such as child care and transportation provided to families who are employed;
- d. Refundable earned income tax credits;

- e. Contributions to, and distributions from, Individual Development Accounts;
- f. Services such as counseling, case management, peer support, child care information and referral, transitional services, job retention, job advancement, and other employment-related services that do not provide basic income support; and

- g. Transportation benefits provided under an Access to Jobs or Reverse Commute project, pursuant to section 404(k) of the Act, to an individual who is not otherwise receiving assistance.

The exclusion of nonrecurrent, short-term benefits under (1) of this paragraph also covers supportive services for recently employed families, for temporary periods of unemployment, in order to enable continuity in their service arrangements.

34. Basic MOE means the expenditure of State funds that must be made in order to meet the MOE requirement at section 409(a)(7) of the Act

35. Bias - systematic error, leading to distortion in one direction of a statistical result; distinct from random error, where distortion in both directions may be largely self-canceling.

36. Caseload - is comprised of the members of the "target" population. For example, the State's TANF caseload is the families (cases) receiving assistance under the State TANF Program. The caseload size is the number of such families.

37. Cash assistance - when provided to participants in the Welfare-to-Work program (WtW), has the meaning specified at §260.32.

38. CCDBG - means the Child Care and Development Block Grant Act of 1990, as amended, 42 U.S.C. 9858 et. seq.

39. CCDF - means the Child Care and Development Fund, or those child care programs and services funded either under section 418(a) of the Act or CCDBG.

40. Child - (also called Minor Child) An individual who has not attained 18 years of age; or has not attained 19 years of age and is a full time student in a secondary school (or in the equivalent level of vocational or technical training).

41. Child Care/ Family Care Services - Services that assist an individual in meeting his/her family care needs during participation. Family care ranges from day care inside or outside the home to after school programs inside or outside the home. It usually includes supervision and shelter. It may also include meals and transportation.

42. Closed Case (TANF) - A case (family) whose assistance under the State TANF Program was terminated for the reporting month (does not include families whose assistance was temporarily suspended), but received assistance under the State's TANF Program in the prior month. Thus,

TANF eligible families that are transferred to a separate State program for the reporting month are considered closed cases for reporting purposes in the State TANF Program.

43. Closed Case (State MOE) - A case (family) whose assistance under the separate State program was terminated for the reporting month (does not include families whose assistance was temporarily suspended), but received assistance under the separate State program in the prior month. Thus, TANF eligible families that are transferred to a State TANF Program from a separate State programs for the reporting month are considered closed cases for reporting purposes in the separate State program.

44. Commingled State TANF Expenditures - means expenditures of State funds that are made within the TANF program and commingled with Federal TANF funds.

45. Completed Case - A case for which the State (or Tribe) collects all required disaggregated data and reports the information to DHHS.

46. Complete and Accurate Report for Disaggregated Data - a report that --  
a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;

- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all elements (i.e., no data are missing);
- d.1) The data are provided for all families; or
- 2) If the State opts to use sampling, for all families selected in a sample that meets the specifications and procedures in the TANF Sampling Manual for minimum sample size requirements (except for families listed-in-error); and
- e. Where estimates are required (e.g., some types of assistance may require cost estimates), the State uses reasonable methods to develop these estimates.

47. Complete and Accurate Report for Aggregated Data - a report that --

- a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;
- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all applicable elements; and
- d. Monthly totals are unduplicated counts for all families (e.g., the number of families and the number of out-of-wedlock births are unduplicated counts).

48. Complete and Accurate Report for the TANF Financial Data - a report that --

- a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;

- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all applicable elements; and;
- d. All expenditures have been made in accordance with §92.20(a) of the Code of Federal Regulations.

49. Confidence Interval - the interval between two sample values, known as confidence limits, within which it may be asserted with a specified degree of confidence that the true population value lies.

50. Confidence Limits - the values that form the upper and lower limits of the confidence interval.

51. Contingency Fund - means Federal TANF funds available under section 403(b) of the Act, and Contingency Funds means the Federal monies made available to States under that section. Neither term includes any State funds expended pursuant to section 403(b).

52. Contingency Fund MOE - means the MOE expenditures that a State must make in order to meet the MOE requirements at sections 403(b)(6) and 409(a)(10) of the Act and subpart B of part 264 of the regulations and to retain the contingency funds made available to the State. The only expenditures that qualify for Contingency Fund MOE are State TANF expenditures.

53. Control group is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

54. Countable State expenditures has the meaning specified at §264.0.

55. DHHS - U.S. Department of Health and Human Services

56. Discretionary Fund of the CCDF refers to child care funds appropriated under the CCDBG.

57. Disposed of Case - A case (family) for which the data was collected and reported to DHHS or the case was reported as dropped, listed-in-error.

58. Disabled Individual - An individual who has a physical or mental impairment that substantially limits one or more of the major life activities of such an individual, who has a record of such impairment, or who is regarded as having such an impairment.

59. DV Waiver (or Federally recognized good cause domestic violence waiver) has the meaning specified in §260.51.

60. EA - Emergency Assistance.

61. Earned Income - Income in cash or in-kind earned by an individual through the receipt of wages, salary, commissions or profit from activities in which he/she is engaged as a self-employed individual or as an employee.

62. Earned Income Credit (EIC) - A refundable tax credit for families with dependent children. EIC payments are received either monthly (as advance payment through the employer), annually (as a refund from IRS), or both.

63. Eligible State - means a State that, during the 27-month period ending with the close of the first quarter of the fiscal year, has submitted a TANF plan that we have determined is complete.

64. Emergency Assistance - the program option available to States under sections 403(a)(5) and 406(e) of prior law to provide short-term assistance to needy families with children.

65. Employed - An individual who is currently a paid employee; works in his/her own business, profession, or farm; works 15 hours or more per week as an unpaid worker in an enterprise operated by a member of the family; or is one who is not working, but has a job or business from which he/she is temporarily absent because of illness, bad weather, vacation, labor-management dispute, or personal reasons, whether or not paid by the employer for time off and whether or not seeking another job. Employed also includes active duty military.

66. Equal Probability of Selection - selection of a sample where every case has an independent and equal chance of inclusion in the sample (also called self-weighted sample).

67. Expenditure means any amount of Federal TANF or State MOE funds that a State expends, spends, pays out, or disburses consistent with the requirements of parts 260 through 265 of the regulations. It may include expenditures on the refundable portions of State or local tax credits, if they are consistent with the provisions at §260.33. It does not include any amounts that merely represent avoided costs or foregone revenue. Avoided costs include such items as contractor penalty payments for poor performance and purchase price discounts, rebates, and credits that a State receives. Foregone revenue includes State tax provisions -- such as waivers, deductions, exemptions, or nonrefundable tax credits -- that reduce a State's tax revenue.

68. Experimental group is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

69. Family Violence Option (or FVO) has the meaning specified at §260.51.

70. FAMIS - Family Assistance Management Information System - the automated statewide management information system under sections 402(a)(30), 402(e), and 403 of prior law.

71. Federal Expenditures - expenditures by a State of Federal TANF funds.

72. Federal TANF Funds - means all funds provided to the State under section

403 of the Act, including WtW funds awarded under section 403(a)(5). The term includes the SFAG, any bonuses, supplemental grants, or contingency funds.

73. Federally recognized good cause domestic violence waiver has the meaning specified at §260.51.

74. Fiscal Year - (also called Annual Sample Period) - The 12-month period, October 1 through September 30.

75. Frame - the list of cases from which the sample is actually selected; also known as the sample selection list.

76. FY - fiscal year.

77. Good cause domestic violence waiver has the meaning specified at §260.51.

78. Governor - the Chief Executive Officer of the State. It thus includes the Governor of each of the 50 States and the Territories and the Mayor of the District of Columbia.

79. Housing Assistance - Services that assist individuals in maintaining or obtaining adequate shelter for themselves and their families while they are receiving employment, training or other supportive services.

80. IEVS - the Income and Eligibility Verification System operated pursuant to the provisions in section 1137 of the Act.



81. Inconsistent is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

82. Indian Tribe - has the meaning given such terms by section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b), except that the term "Indian tribe" means, with respect to the State of Alaska, only the Metlakatla Indian Community of the Annette Islands Reserve and the following Alaska Native regional nonprofit corporations:

- a. Arctic Slope Native Association;
- b. Kawerak, Inc.;
- c. Maniilaq Association;
- d. Association of Village Council Presidents;
- e. Tanana Chiefs Council;
- f. Cook Inlet Tribal Council;
- g. Bristol Bay Native Association;
- h. Aleutian and Pribilof Island Association;
- i. Chugachmuit;
- j. Tlingit Haida Central Council;
- k. Kodiak Area Native Association; and
- l. Copper River Native Association.

83. Individual Development Accounts has the meaning specified at §263.20 of the Act.

84. Job Opportunities and Basic Skills Training Program - the program under title IV-F of prior law to provide education, training and employment services to welfare recipients.

85. JOBS - the Job Opportunities and Basic Skills Training Program.

86. Listed-in-error - cases included in the sample selection list that are not included in the population of interest.

87. Mean - a measure of the central tendency of data. The sum of the values divided by the number of values.

88. Medical Assistance - Medical assistance services received by an individual under the State plan approved under title XIX of the Social Security Act.

89. Minor Child - An individual who has not attained 18 years of age; or has not attained 19 years of age and is a full time student in a secondary school or in the equivalent level of vocational or technical training.

90. MOE - maintenance-of-effort.

91. Needy State - is a term that pertains to the provisions regarding the Contingency Fund and the penalty for failure to meet participation rates. It means, for a month, a State where:

- a. 1) The average rate of total unemployment (seasonally adjusted) for the most recent 3-month period for which data are published for all States equals or exceeds 6.5 percent; and
- 2) The average rate of total unemployment (seasonally adjusted) for such 3-month period equals or exceeds 110 percent of the average rate for either

(or both) of the corresponding 3-month periods in the two preceding calendar years; or

b. The Secretary of Agriculture has determined that the average number of individuals participating in the Food Stamp program in the State has grown at least 10 percent in the most recent 3-month period for which data are available.

92. Noncustodial Parent - as used here, means a parent of a minor child who: (1) lives in the State and (2) does not live in the same household as the minor child.

93. Non-Sampling Error - the error or deviation from the true population value in sample estimates that cannot be attributed to chance sampling variations.

Examples are errors resulting from imperfections in the selection of sample units, bias in the estimating procedure used, mistakes in arithmetical calculations, inconsistent review procedures, etc.

94. Normal Distribution - a symmetrical, bell shaped curve that describes the sampling distribution of many common sample statistics. While the sampling distributions of proportions and ratios as used in TANF are more correctly described by the binomial distribution, they are often closely approximated by the normal distribution, and it is common practice to use the normal distribution for this purpose. The normal distribution provides the theoretical basis for the determination of confidence limits, for

the specification of particular levels or degrees of confidence involved in making sample estimates, and in evaluating sampling error.

95. Not in Labor Force - An individual who is classified as neither employed nor unemployed.

96. Oversampling - selecting more sample cases than required.

97. Overall Monthly Work Participation Rate - (also known as All Families Work Participation Rate) - The State's overall participation rate for a month is defined as follows:

a. The number of families receiving TANF assistance that include an adult or a minor head-of-household who is engaged in work for the month (the numerator), divided by

b. The number of families receiving TANF assistance during the month that include an adult or a minor head-of-household minus the number of families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not deduct it from the denominator. A State has the option of not requiring a single custodial parent caring for a child under age one to engage in work. If the State adopts this option, it may disregard such a family in the participation rate calculation for a maximum of 12 months.

98. Parameter - a value, property, or characteristic of a population, which can normally be estimated from a sample. Examples are a mean, proportion or percentage, total, range, or standard deviation of a population.

99. Population of Interest - those units about which we wish to form conclusions from which a sample is selected and estimates made.

100. Precision - see definition for Reliability. The degree to which a sample estimate approximates the value obtained from a complete count of all units using the same methods.

101. Prior law - means the provisions of title IV-A and IV-F of the Social Security Act in effect as of August 21, 1996. They include provisions related to Aid to Families with Dependent Children (or AFDC), Emergency Assistance (or EA), Job Opportunities and Basic Skills Training (or JOBS), and Family Assistance Management Information System (FAMIS).

102. Probability - relative frequency of occurrence; the probability of an event is the relative frequency of occurrence of the event in an indefinitely large number of observations.

103. Probability Sampling - any method of sample selection that is based on the theory of probability. Probability sampling, which requires that at any stage of selection the probability of any

unit or set of units being selected must be known, is the only general method of sampling that makes it possible to obtain a mathematical measure of the precision of the sample estimate. The term "random sampling" is used in the sense of probability sampling.

104. PRWORA - the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, or Public Law 104-193.

105. Qualified Aliens has the meaning prescribed under section 431 of PRWORA, as amended, 8 U.S.C. 1641.

106. Qualified State Expenditures - means the total amount of State funds expended during the fiscal year that count for basic MOE purposes. It includes expenditures, under any State program, for any of the following with respect to eligible families:

- a. Cash assistance;
- b. Child care assistance;
- c. Educational activities designed to increase self-sufficiency, job training, and work, excluding any expenditure for public education in the State except expenditures involving the provision of services or assistance of an eligible family that is not generally available to persons who are not members of an eligible family;
- d. Any other use of funds allowable under subpart A of part 263 of the regulations; and
- e. Administrative costs in connection with the matters described in paragraphs

(1), (2), (3) and (4) of this definition, but only to the extent that such costs do not exceed 15 percent of the total amount of qualified State expenditures for the fiscal year.

107. Random Numbers - series of digits, each occurring independently of each other. Each digit tends to appear as many times as any other, in any progression, if the series selected is large.

108. Random Sampling - the process of selecting a sample from a population so that every unit in the population has a known chance of being included in the sample.

109. Random Start - in selecting a systematic sample at intervals of some specified number of items in an ordered frame, it is mandatory to select the first item completely without bias. Such selection is then said to have given the sample "a random start."

110. Range - the largest minus the smallest of a group of values.

111. Reliability See definition of Precision - the uniformity of sample results when obtained from repeated samples of the same size and type from the sample population; the degree to which a sample estimate approximates the value obtained from a complete count of all units using the same methods.

112. Reporting Month - the specific calendar or fiscal month for which data is being collected. The reporting month and the sample month are always the same month.

113. Risk - as used here, refers to the degree of risk associated with given degrees of confidence. For example, if a statement is made "with 95 percent confidence" that the true population parameter lies within a specified interval, there is a "5 percent risk" that the parameter actually lies outside that interval (also called alpha).

114. Sample - part of a population; a limited or finite number of items selected from a population, by a prescribed procedure, with the objective of estimating certain values (mean, total proportion, etc.) of the parent population, or of testing the validity of certain assumptions or hypotheses with respect to particular properties of the population.

115. Sample Interval - in systematic sampling, the number of cases between two consecutive selections on the sampling frame.

116. Sample Month - the specific calendar or fiscal month for which the sample is selected. The sample month and the reporting month are always the same month.

117. Sample Period - the 12 month period October 1 through September 30.

118. Sample Selection List - the list of cases from which the sample is actually selected; also known as the sample frame.

119. Sample Size - the number of items in the sample.

120. Sampling Distribution - the distribution of a (sample) statistic, such as a sample mean or a sample proportion or percentage, that would be formed by obtaining such statistics from all possible samples of a given fixed size selected by some specified sampling procedure; a population of all possible sample values of the statistic under consideration.

121. Sampling Error - that part of the difference between a population value, and an estimate of that value obtained from a random sample, which is due solely to the fact that only a sample of values is observed; to be distinguished from non-sampling error which is due to biased or imperfect sample selection, or real differences due to changes over time, error of observation, recording, calculation, etc.

122. Scientifically Acceptable Sampling Method - a probability sampling method in which every sampling unit from the population has a known, non-zero chance to be included in the sample, and the sample size requirements are met.

123. Secretary - Secretary of the Department of Health and Human Services or any other Department official

duly authorized to act on the Secretary's behalf.

124. Segregated State TANF Expenditures - means expenditures of State funds within the TANF program that are not commingled with Federal TANF funds.

125. Separate State Program - means a program operated outside of TANF in which the expenditures of State funds may count for basic MOE purposes.

126. SFAG - State Family Assistance Grant.

127. SFAG Payable - means the SFAG amount, reduced, as appropriate, for any Tribal Family Assistance Grants made on behalf of Indian families residing in the State and any penalties imposed on a State.

128. Significant Difference - a difference is statistically significant if it can be concluded from a sample, with a given degree of risk, that the difference actually exists in the universe. A difference observed in a sample is judged not statistically significant if it could easily have occurred purely as a result of random sampling variations.

129. Simple Random Sample - a probability sample selected in such a way that each unit of the frame has an equal and independent chance of being included in the sample; for samples of any given size, all possible combinations

of units that could form samples of that size must have the same probability of selection (usually uses random digits for item selection).

130. Single audit - means an audit or supplementary review conducted under the authority of the Single Audit Act at 31 U.S.C. chapter 75.

131. Social Services Block Grant means the social services program operated under title XX of the Act, pursuant to 42 U.S.C. 1397.

132. SSBG means the Social Services Block Grant.

133. Standard Deviation - the most widely used measure of the dispersion (scatter or variability) of frequency distributions from their arithmetic means. The standard deviation of the sampling distribution of any given statistic is also known as the "standard error" of that statistic.

134. Standard Error - the standard deviation of the sampling distribution of a given statistic; used in measuring precision of an estimate.

135. State - the 50 States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, and American Samoa, unless otherwise specified.

136. State agency - means the agency that the Governor certifies as the administering and supervising agency for the TANF program, pursuant to section 402(a)(4) of the Act.

137. State Family Assistance Grant - means the amount of the basic block grant allocated to each eligible State under the formula at section 403(a)(1) of the Act.

138. State MOE Expenditures - means the expenditure of State funds that may count for purposes of the basic MOE requirements at section 409(a)(7) of the Act and the Contingency Fund MOE requirements at sections 403(b)(4) and 409(a)(10) of the Act.

139. State MOE Family - For reporting purposes only, the State MOE family is the eligible family receiving assistance plus the following persons living in the household if they are not already in the eligible family receiving assistance:

- a. a parent or caretaker relative of any minor child in the eligible family receiving assistance,
- b. a minor sibling of any child in the eligible family receiving assistance, and
- c. any person whose income or resources are counted in determining the eligibility for or the amount of the assistance for the eligible family.

140. State TANF Expenditures - means the expenditure of State funds within the TANF program.

141. Stratified Random Sampling - random sampling of a population that has been divided in a number of sub-populations according to some predetermined criterion (geographic location, characteristic, etc.). The percentage size of each sample must be equal or have individual weighting factors taken into account before the sub-population sample results can be combined.

142. Stratum - a segment of the population for which separate estimates are computed for some special reason. All strata must be combined if an estimate of the total population is to be made.

143. Subsidized Child Care - A benefit provided by the government to a parent to support, in part or whole, the cost of child care services provided by an eligible provider to an eligible child.

144. Subsidized Housing - Money paid by the government or through a private social service agency to the family or to the owner of the housing to assist the family in paying rent.

145. Supplemental Case - a case added to the caseload for the review month after the regular sample frame, (i.e., the payroll listing or master file listing) has been compiled for the monthly sample selection.

146. Suspended Case - a formalized agency action that results in no

assistance provided to the family for one or more months without removing the family from the eligible rolls.

147. Systematic Sample - a sample attained by selecting from a file, list or computer tape, individual items at equally spaced intervals (as every 10th, 140th, 850th, etc. item, as required to obtain a total sample of a given size), with the starting point within the first such interval being determined by random selection.

148. TANF - Temporary Assistance for Needy Families.

149. TANF Family - For reporting purposes only, the TANF family is the eligible family receiving assistance plus the following persons living in the household if they are not already in the eligible family receiving assistance:  
a. a parent or caretaker relative of any minor child in the eligible family receiving assistance,  
b. a minor sibling of any child in the eligible family receiving assistance, and  
c. any person whose income or resources are counted in determining the eligibility for or the amount of assistance of the eligible family.

150. TANF Funds - all funds provided to the State under section 403 of the Act, including the SFAG, any bonuses, supplemental grants, or contingency funds, except Welfare to Work funds.

151. TANF MOE - the expenditure of State funds that must be made in order to meet the MOE requirement at section 409(a)(7) of the Act.

152. TANF Program - a State program of family assistance operated by an "eligible State" under its State TANF plan.

153. Teen Parent - A teen parent is a person who is under 20 years of age and whose child is also a member of the TANF family.

154. Territories - the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, and American Samoa.

155. Title IV-A - refers to the title and part of the Act that now includes TANF, but previously included AFDC and EA. For the purpose of the TANF program regulations, this term does not include child care programs authorized and funded under section 418 of the Act, or their predecessors, unless we specify otherwise.

156. Tolerance - the proportion of error that has been determined to be acceptable.

157. Transportation - Services that ensure mobility between home and the location of employment, training, or other supportive services.

158. Tribal Family Assistance Grant - means a grant paid to a Tribe that has an

approved Tribal family assistance plan under section 412(a)(1) of the Act.

159. Tribal grantee means a Tribe that receives Federal TANF funds to operate a Tribal TANF program under section 412(a) of the Act.

160. Tribal TANF program - means a TANF program developed by an eligible Tribe, Tribal organization, or consortium and approved by us under section 412 of the Act.

161. Tribe - means Indian Tribe or Tribal organization, as defined elsewhere in this section. The definition may include Tribal consortia (i.e., groups of federally recognized Tribes or Alaska Native entities that have banded together in a formal arrangement to develop and administer a Tribal TANF program).

162. Two-Parent Monthly Work Participation Rate - The two-parent participation rate for a fiscal year is the average of the State's two-parent participation rate for each month in the fiscal year. We determine a State's two-parent participation rate for a month as follows:

- a. The number of two-parent families receiving TANF assistance in which the adults or minor child head-of-household and other parent meet the requirements set forth in §261.32 for the month (the numerator), divided by
- b. The number of two-parent families receiving TANF assistance during the month minus the number of two-parent



families`that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not deduct it from the denominator.

163.Unemployed - An individual who is not employed, who is available for work, and who has made specific efforts to find a job within the prior four weeks.

Included as unemployed are those who are not working, are available for work, and are waiting to be called back to a job from which they were laid off.

164.Unearned Income - Cash payment or in-kind contributions or benefits from government agencies, private organizations or individuals.

165.Victim of domestic violence has the meaning specified at §260.51.

166.Waiver - has the meaning specified at §260.71. (It is distinguished from the domestic violence waiver.)

167.Welfare-to-Work - means the program for funding work activities at section 403(a)(5) of the Act.

168.WtW - Welfare-to-Work.

169.WtW cash assistance has the meaning specified at §260.32.



## APPENDIX C

### Standard Error of Percentages Based on Selected Sample Sizes

The following table provides a quick reference of the standard error of percentages of case error rates obtained from a specified sample size. For example, if a simple random sample of 800 cases is found to have 80 errors, the case error rate would be 10 percent and the standard error would be 1.1 percent.

The entries in the table are estimated by the following equation for a normal distribution:

$$S_p = \sqrt{\frac{p(1 \& p)}{n}}$$

where:

p=estimated proportion of error cases; and

n=sample size.

The 95 percent confidence interval can be obtained by multiplying the standard error by 1.96.

In the above example, the 95 percent confidence interval would be 1.96 x 1.1% or approximately  $\pm 2.2\%$ .

Note that the table provides only approximate standard errors. The approximation is good when the sample fraction  $n/N$  is small. When the fraction is large, the standard error given in the table is overestimated by a factor of

$$\frac{1}{\sqrt{\frac{N \& n}{N \& 1}}}$$



STANDARD ERROR OF PERCENTAGES BASED ON SELECTED SAMPLE SIZES

Sample Size or Base of Estimated Percentage	Est. Percent	50	80	100	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1500	
11	41.11	00.80	70.60	60.50	50.40	40.40	40.40	40.40	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30
22	01.61	41.11	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
32	41.91	71.41	21.11	00.90	90.80	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
42	82.22	01.61	41.21	11.01	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
53	12.42	21.81	51.41	31.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
63	42.72	41.91	71.51	41.31	21.11	00.90	80.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
73	62.92	62.11	81.61	51.41	31.11	01.00	90.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
83	83.02	72.21	91.71	61.51	41.21	11.01	00.90	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
94	03.22	92.32	01.81	71.51	41.31	21.11	01.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
104	23.43	02.42	11.91	71.61	51.31	21.11	11.00	90.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
114	43.53	12.62	22.01	81.71	61.41	31.21	11.01	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
124	63.63	22.72	32.11	91.71	61.51	31.21	11.11	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
134	83.83	42.72	42.11	91.81	71.51	41.31	21.11	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
144	93.93	52.82	52.22	01.91	71.61	41.31	21.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
155	04.03	62.92	52.32	11.91	81.61	51.31	31.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
205	74.54	03.32	82.52	32.12	01.81	61.51	41.31	31.21	21.10	10.90	00.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
256	14.84	33.53	12.72	52.32	21.91	81.61	51.41	41.31	31.10	20.90	10.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
306	55.14	63.73	22.92	62.42	32.01	91.71	61.51	41.31	31.20	20.90	10.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
356	75.34	83.93	43.02	82.52	42.11	91.81	71.61	51.41	41.20	30.80	20.70	10.60	00.50	00.40	00.30	00.20	00.10	00.00	00.00
406	95.54	94.03	53.12	82.62	42.22	01.91	71.61	51.41	41.30	30.70	20.60	10.50	00.40	00.30	00.20	00.10	00.00	00.00	00.00
457	05.65	04.13	53.12	92.72	52.22	01.91	81.71	61.41	41.30	30.60	20.50	10.40	00.30	00.20	00.10	00.00	00.00	00.00	00.00
507	15.65	04.13	53.22	92.72	52.22	01.91	81.71	61.41	41.30	30.50	20.40	10.30	00.20	00.10	00.00	00.00	00.00	00.00	00.00



## APPENDIX D

### TANF SAMPLE PLAN Guidance

TANF sampling plan requirements are detailed in the TANF Manual, Sampling and Statistical Methods (Sections 1300, 1400, and 1500). Sampling plans for the active cases (including newly approved applicants) and the closed cases are required. The plans must conform to principles of probability sampling, i.e., each case in the population must have a known, non-zero probability of selection and computational methods of estimation must lead to a unique estimate. More specifically the plan must describe the following:

CLXX. **Sample Frame** - Documentation of methods for constructing and maintaining the sample frame(s), including assessment of frame completeness and any potential problems associated with using the sample frame(s). The plan must explicitly describe the following sample frame characteristics:

CLXX. Date(s) when the sample cases (both regular and supplemental, if applicable) for the sample month are selected, e.g., first workday of the month following the sample month).

Comments:

CLXX. Source, components, accuracy and completeness of the sample frame in relation to the total caseload; if not accurate or complete, explanation of why not and how the State (Tribe) plans to correct for the problems with the sample frame.

Comments:

CLXX. Procedures for ensuring that the sample frame contains complete coverage of the applicable caseload (e.g., active TANF sample frame includes all families receiving assistance under the State's or Tribe's TANF Program, including all newly approved applicants for the sample month and closed TANF sample frame includes all families no longer receiving assistance under the State's TANF Program, i.e., assistance terminated effective for the sample month).

Comments:

CLXX. Whether or not the frame is constructed by combining more than one list; if more than one list, an explanation of how the lists are identified and how duplication of cases on lists are prevented.

Comments:

CLXX. How the frame is compiled, e.g., whether the frame is compiled entirely in the State office, entirely in local offices, in the State office based on information supplied by local offices, etc.

Comments:

CLXX. Form of the frame, e.g., a computer file, microfilm, or hard copy; if parts of the frame are in different forms, specifications for each part.

Comments:

CLXX. Frequency and length of delays and method used in updating the frame or its sources.

Comments:



CLXX. Procedures for estimating the proportion of sample cases for which the State (Tribe) will not be able to collect and report case record information (e.g., dropped as listed-in-error because the family did not receive TANF assistance for the reporting month).

Comments:

CLXX. Methods of locating and deleting "listed-in-error" cases from the frame.

Comments:

CLXX. Structure of the frame, i.e., the order of cases within each list and the data elements on the frame, including definitions of coded values.

Comments:

CLXX. Treatment of special populations under TANF (e.g., individuals under a tribal family assistance plan, a non-custodial parent who participates in work activities).

Comments:

CLXX. Criteria for stratifying sample (if applicable).

Comments:

CLXXI. **Sample Selection Procedures** - The sampling plan must describe in detail the procedures for selecting the sample cases. The plan must explicitly describe the following characteristics:

CLXXI. Procedures for estimation of caseload size.

Comments:

CLXXI. Procedures for determination of an appropriate allowance for cases that might be dropped from the sample for acceptable reasons.

Comments:

CLXXI. Procedures for determining the required sample size and indication of the sample size.

Comments:

CLXXI. If stratified sample design, procedures for sample allocation.

Comments:

CLXXI. Procedures for the computation of sample intervals and the determination of random starts (systematic random sampling or stratified systematic random sampling), if applicable.

Comments:

CLXXI. Application of selection procedures to identify sample cases.

Comments:

CLXXI. Procedures to compensate for excessive oversampling or undersampling.

Comments:

CLXXI. Time schedule for each step in the sampling procedure.

Comments:

CLXXI. Relationship, if appropriate, to sampling frames for other programs (e.g., Welfare-to-Work).

Comments:

CLXXII. **Additional Sampling Plan Information**

CLXXII. Treatment of any special cases or circumstances unique to the State or Tribe.

Comments:

CLXXII. Documentation of methods for estimating proportions and their sampling errors, including the computation of weights where appropriate.

Comments:



## APPENDIX E

### TRIBAL CODES FOR THE TANF PROGRAM

This list of codes for tribes is based on the Federal Register: November 13, 1996 (Volume 61, Number 220), Notices, Page 58211-58216. From the Federal Register Online via GPO Access [wais.access.gpo.gov]

#### Alaska Non-Profit Associations:

NOTE: The "Special Rules for Indian Tribes in Alaska" specify that "...only the Metlakatla Indian Community, Annette Island Reserve, and..." Alaska native regional corporations are eligible. However, the 'corporations' listed are actually the non-profit arms of the corporations

#### CODE Alaska Non-Profit Association

- 801Metlakatla Indian Community, Annette Island Reserve, Alaska
- 802Artic Slope Native Association
- 803Kawerak, Inc.
- 804Maniilag Association
- 805Association of Village Council Presidents
- 806Tananana Chiefs Conference
- 807Cook Inlet Tribal Council
- 808Bristol Bay Native Association
- 809Aleutian and Pribolof Islan Association
- 810Chugachmuit
- 811Tlinget Haida Central Council
- 812Kodiak Area Native Association
- 813Copper River Native Association

Consortiums: Codes for consortiums of tribal entities listed below can be obtained by contacting

John Bushman  
Director, Division of Tribal Services  
Office of Community Services, Administration for Children and Families  
370 L'Enfant Promenade, Washington, D.C. 20447-0001

Phone - Voice (202) 401-2418;  
Fax (202) 401-5718;  
E-mail - JBushman@acf.dhhs.gov

CODES FOR TRIBAL TANF PROGRAMS (Cont.)

All Others:

Below are the codes for Indian entities in the contiguous 48 states which are Federally recognized and eligible to establish a tribal TANF program or participate in a consortium of Tribes for a Tribal TANF program. All three digits are to be used (for example, '001' not '1').

CODETRIBAL ENTITY

- 001 Absentee-Shawnee Tribe of Indians of Oklahoma
- 002 Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation, California
- 003 Ak Chin Indian Community of Papago Indians of the Maricopa, Ak Chin Reservation, Arizona
- 004 Alabama and Coushatta Tribes of Texas
- 005 Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma
- 006 Alturas Indian Rancheria of Pit River Indians of California
- 007 Apache Tribe of Oklahoma
- 008 Arapahoe Tribe of the Wind River Reservation, Wyoming
- 009 Aroostook Band of Micmac Indians of Maine
- 010 Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana
- 011 Augustine Band of Cahuilla Mission Indians of the Augustine Reservation, California
- 012 Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation, Wisconsin
- 013 Bay Mills Indian Community of the Sault Ste. Marie Band of Chippewa Indians, Bay Mills Reservation, Michigan
- 014 Bear River Band of the Rohnerville Rancheria of California
- 015 Berry Creek Rancheria of Maidu Indians of California
- 016 Big Lagoon Rancheria of Smith River Indians of California
- 017 Big Pine Band of Owens Valley Paiute Shoshone Indians of the Big Pine Reservation, California
- 018 Big Sandy Rancheria of Mono Indians of California
- 019 Big Valley Rancheria of Pomo & Pit River Indians of California
- 020 Blackfeet Tribe of the Blackfeet Indian Reservation of Montana
- 021 Blue Lake Rancheria of California
- 022 Bridgeport Paiute Indian Colony of California
- 023 Buena Vista Rancheria of Me-Wuk Indians of California
- 024 Burns Paiute Tribe of the Burns Paiute Indian Colony of Oregon
- 025 Cabazon Band of Cahuilla Mission Indians of the Cabazon Reservation, California
- 026 Cachil DeHe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria, California
- 027 Caddo Indian Tribe of Oklahoma
- 028 Cahuilla Band of Mission Indians of the Cahuilla Reservation, California
- 029 Cahto Indian Tribe of the Laytonville Rancheria, California
- 030 Campo Band of Diegueno Mission Indians of the Campo Indian Reservation, California

CODE      TRIBAL ENTITY

- 031 Barona Group of Capitan Grande Band of Diegueno Mission Indians of the Barona Reservation, California
- 032 Viejas (Baron Long) Group of Capitan Grande Band of Diegueno Mission Indians of the Viejas Reservation, California
  - 033 Catawba Tribe of South Carolina
  - 034 Cayuga Nation of New York
  - 035 Cedarville Rancheria of Northern Paiute Indians of California
  - 036 Chemehuevi Indian Tribe of the Chemehuevi Reservation, California
  - 037 Cher-Ae Heights Indian Community of the Trinidad Rancheria, California
  - 038 Cherokee Nation of Oklahoma
  - 039 Cheyenne-Arapaho Tribes of Oklahoma
- 040 Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota
  - 041 Chickasaw Nation of Oklahoma
  - 042 Chicken Ranch Rancheria of Me-Wuk Indians of California
  - 043 Chippewa-Cree Indians of the Rocky Boy's Reservation, Montana
  - 044 Chitimacha Tribe of Louisiana
  - 045 Choctaw Nation of Oklahoma
  - 046 Citizen Potawatomi Nation, Oklahoma
  - 047 Cloverdale Rancheria of Pomo Indians of California
- 048 Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
  - 049 Cocopah Tribe of Arizona
  - 050 Coeur D'Alene Tribe of the Coeur D'Alene Reservation, Idaho
  - 051 Cold Springs Rancheria of Mono Indians of California
- 052 Colorado River Indian Tribes of the Colorado River Indian Reservation, Arizona and California
  - 053 Comanche Indian Tribe, Oklahoma
  - 054 Confederated Salish & Kootenai Tribes of the Flathead Reservation, Montana
  - 055 Confederated Tribes of the Chehalis Reservation, Washington
  - 056 Confederated Tribes of the Colville Reservation, Washington
- 057 Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians of Oregon
- 058 Confederated Tribes of the Goshute Reservation, Nevada and Utah
- 059 Confederated Tribes of the Grand Ronde Community of Oregon
  - 060 Confederated Tribes of the Siletz Reservation, Oregon
  - 061 Confederated Tribes of the Umatilla Reservation, Oregon
  - 062 Confederated Tribes of the Warm Springs Reservation of Oregon
- 063 Confederated Tribes and Bands of the Yakama Indian Nation of the Yakama Reservation, Washington
  - 064 Coquille Tribe of Oregon
  - 065 Cortina Indian Rancheria of Wintun Indians of California
  - 066 Coshatta Tribe of Louisiana
  - 067 Cow Creek Band of Umpqua Indians of Oregon
  - 068 Coyote Valley Band of Pomo Indians of California
  - 069 Crow Tribe of Montana
- 070 Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota

CODE      TRIBAL ENTITY

- 071Cuyapaipe Community of Diegueno Mission Indians of the Cuyapaipe Reservation, California
  - 072Death Valley Timbi-Sha Shoshone Band of California
    - 073Delaware Tribe of Indians, Oklahoma
    - 074Delaware Tribe of Western Oklahoma
  - 075Devils Lake Sioux Tribe of the Devils Lake Sioux Reservation, North Dakota
    - 076Dry Creek Rancheria of Pomo Indians of California
  - 077Duckwater Shoshone Tribe of the Duckwater Reservation, Nevada
    - 078Eastern Band of Cherokee Indians of North Carolina
    - 079Eastern Shawnee Tribe of Oklahoma
  - 080Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria, California
    - 081Elk Valley Rancheria of California
    - 082Ely Shoshone Tribe of Nevada
    - 083Enterprise Rancheria of Maidu Indians of California
    - 084Flandreau Santee Sioux Tribe of South Dakota
  - 085Forest County Potawatomi Community of Wisconsin Potawatomi Indians, Wisconsin
    - 086Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
  - 087Fort Bidwell Indian Community of Paiute Indians of the Fort Bidwell Reservation, California
  - 088Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation, California
  - 089Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation, Nevada
  - 090Fort McDowell Mohave-Apache Indian Community of the Fort McDowell Indian Reservation, Arizona
    - 091Fort Mojave Indian Tribe of Arizona, California & Nevada
    - 092Fort Sill Apache Tribe of Oklahoma
  - 093Gila River Pima-Maricopa Indian Community of the Gila River Indian Reservation of Arizona
    - 094Grand Traverse Band of Ottawa & Chippewa Indians of Michigan
    - 095Greenville Rancheria of Maidu Indians of California
  - 096Grindstone Indian Rancheria of Wintun-Wailaki Indians of California
    - 097Guidiville Rancheria of California
  - 098Hannahville Indian Community of Wisconsin Potawatomi Indians of Michigan
    - 099Havasupai Tribe of the Havasupai Reservation, Arizona
  - 100Ho-Chunk Nation of Wisconsin - (formerly known as the Wisconsin Winnebago Tribe)
    - 101Hoh Indian Tribe of the Hoh Indian Reservation, Washington
    - 102Hoopa Valley Tribe of the Hoopa Valley Reservation, California
    - 103Hopi Tribe of Arizona
  - 104Hopland Band of Pomo Indians of the Hopland Rancheria, California
    - 105Houlton Band of Maliseet Indians of Maine
  - 106Hualapai Indian Tribe of the Hualapai Indian Reservation, Arizona
    - 107Huron Potawatomi, Inc., Michigan
  - 108Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit
    - 109Reservation, California
  - 110Ione Band of Miwok Indians of California
  - 111Iowa Tribe of Kansas and Nebraska



CODE      TRIBAL ENTITY

- 112Iowa Tribe of Oklahoma
- 113Jackson Rancheria of Me-Wuk Indians of California
- 114Jamestown Klallam Tribe of Washington
- 115Jamul Indian Village of California
- 116Jena Band of Choctaw Indians, Louisiana
- 117Jicarilla Apache Tribe of the Jicarilla Apache Indian Reservation, New Mexico
- 118Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona
- 119Kalispel Indian Community of the Kalispel Reservation, Washington
- 120Karuk Tribe of California
- 121Kashia Band of Pomo Indians of the Stewarts Point Rancheria, California
- 122Kaw Nation, Oklahoma
- 123Keweenaw Bay Indian Community of L'Anse and Ontonagon Bands of Chippewa Indians of the L'Anse Reservation, Michigan
- 124Kialegee Tribal Town of the Creek Indian Nation of Oklahoma
- 125Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
- 126Kickapoo Tribe of Oklahoma
- 127Kickapoo Traditional Tribe of Texas
- 128Kiowa Indian Tribe of Oklahoma
- 129Klamath Indian Tribe of Oregon
- 130Kootenai Tribe of Idaho
- 131La Jolla Band of Luiseno Mission Indians of the La Jolla Reservation, California
- 132La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation, California
- 133La Courte Oreilles Band of Lake Superior Chippewa Indians of the Lac Courte Oreilles Reservation of Wisconsin
- 134Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin
- 135Lac Vieux Desert Band of Lake Superior Chippewa Indians of Michigan
- 136Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada
- 137Little River Band of Ottawa Indians of Michigan
- 138Little Traverse Bay Bands of Odawa Indians of Michigan
- 139Los Coyotes Band of Cahuilla Mission Indians of the Los Coyotes Reservation, California
- 140Lovelock Paiute Tribe of the Lovelock Indian Colony, Nevada
- 141Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota
- 142Lower Elwha Tribe of the Lower Elwha Reservation, Washington
- 143Lower Sioux Indian Community of Minnesota Mdewakanton Sioux Indians of the Lower Sioux Reservation in Minnesota
- 144Lummi Tribe of the Lummi Reservation, Washington
- 145Lytton Rancheria of California
- 146Makah Indian Tribe of the Makah Indian Reservation, Washington
- 147Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria, California
- 148Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation, California
- 149Mashantucket Pequot Tribe of Connecticut
- 150Mechoopda Indian Tribe of Chico Rancheria, California

CODE      TRIBAL ENTITY

- 151 Menominee Indian Tribe of Wisconsin
- 152 Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation, California
- 153 Mescalero Apache Tribe of the Mescalero Reservation, New Mexico
- 154 Miami Tribe of Oklahoma
- 155 Miccosukee Tribe of Indians of Florida
- 156 Middletown Rancheria of Pomo Indians of California
- 157 Minnesota Chippewa Tribe, Minnesota
- (All six component reservations: Bois Forte Band (Nett Lake); Fond du Lac Band; Grand Portage Band; Leech Lake Band; Mille Lacs Band; White Earth Band)
- 158 Mississippi Band of Choctaw Indians, Mississippi
- 159 Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada
- 160 Modoc Tribe of Oklahoma
- 161 Mohegan Indian Tribe of Connecticut
- 162 Mooretown Rancheria of Maidu Indians of California
- 163 Morongo Band of Cahuilla Mission Indians of the Morongo Reservation, California
- 164 Muckleshoot Indian Tribe of the Muckleshoot Reservation, Washington
- 165 Muscogee (Creek) Nation of Oklahoma
- 166 Narragansett Indian Tribe of Rhode Island
- 167 Navajo Nation of Arizona, New Mexico & Utah
- 168 Nez Perce Tribe of Idaho
- 169 Nisqually Indian Tribe of the Nisqually Reservation, Washington
- 170 Nooksack Indian Tribe of Washington
- 171 Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- 172 Northfork Rancheria of Mono Indians of California
- 173 Northwestern Band of Shoshoni Nation of Utah (Washakie)
- 174 Oglala Sioux Tribe of the Pine Ridge Reservation, South Dakota
- 175 Omaha Tribe of Nebraska
- 176 Oneida Nation of New York
- 177 Oneida Tribe of Wisconsin
- 178 Onondaga Nation of New York
- 179 Osage Nation of Oklahoma
- 180 Ottawa Tribe of Oklahoma
- 181 Otoe-Missouria Tribe of Indians, Oklahoma
- 182 Paiute Indian Tribe of Utah
- 183 Paiute-Shoshone Indians of the Bishop Community of the Bishop Colony, California
- 184 Paiute-Shoshone Tribe of the Fallon Reservation and Colony, Nevada
- 185 Paiute-Shoshone Indians of the Lone Pine Community of the Lone Pine
- 186 Reservation, California
- 187 Pala Band of Luiseno Mission Indians of the Pala Reservation, California
- 188 Pascua Yaqui Tribe of Arizona
- 189 Paskenta Band of Nomlaki Indians of California
- 190 Passamaquoddy Tribe of Maine
- 191 Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation, California

CODE      TRIBAL ENTITY

- 192Pawnee Indian Tribe of Oklahoma
- 193Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, California
- 194Penobscot Tribe of Maine
- 195Peoria Tribe of Oklahoma
- 196Picayune Rancheria of Chukchansi Indians of California
- 197Pinoleville Rancheria of Pomo Indians of California
- 198Pit River Tribe of California (includes Big Bend, Lookout, Montgomery Creek & Roaring Creek Rancherias & XL Ranch)
- 199Poarch Band of Creek Indians of Alabama
- 200Pokagon Band of Potawatomi Indians of Michigan
- 201Ponca Tribe of Indians of Oklahoma
- 202Ponca Tribe of Nebraska
- 203Port Gamble Indian Community of the Port Gamble Reservation, Washington
- 204Potter Valley Rancheria of Pomo Indians of California
- 205Prairie Band of Potawatomi Indians, Kansas
- 206Prairie Island Indian Community of Minnesota Mdewakanton Sioux Indians of the Prairie Island Reservation, Minnesota
- 207Pueblo of Acoma, New Mexico
- 208Pueblo of Cochiti, New Mexico
- 209Pueblo of Jemez, New Mexico
- 210Pueblo of Isleta, New Mexico
- 211Pueblo of Laguna, New Mexico
- 212Pueblo of Nambe, New Mexico
- 213Pueblo of Picuris, New Mexico
- 214Pueblo of Pojoaque, New Mexico
- 215Pueblo of San Felipe, New Mexico
- 216Pueblo of San Juan, New Mexico
- 217Pueblo of San Ildefonso, New Mexico
- 218Pueblo of Sandia, New Mexico
- 219Pueblo of Santa Ana, New Mexico
- 220Pueblo of Santa Clara, New Mexico
- 221Pueblo of Santo Domingo, New Mexico
- 222Pueblo of Taos, New Mexico
- 223Pueblo of Tesuque, New Mexico
- 224Pueblo of Zia, New Mexico
- 225Puyallup Tribe of the Puyallup Reservation, Washington
- 226Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation, Nevada
- 227Quapaw Tribe of Oklahoma
- 228Quartz Valley Indian Community of the Quartz Valley Reservation of California
- 229Quechan Tribe of the Fort Yuma Indian Reservation, California & Arizona
- 230Quileute Tribe of the Quileute Reservation, Washington
- 231Quinault Tribe of the Quinault Reservation, Washington
- 232Ramona Band or Village of Cahuilla Mission Indians of California

CODE      TRIBAL ENTITY

- 233Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin
- 234Red Lake Band of Chippewa Indians of the Red Lake Reservation, Minnesota
- 235Redding Rancheria of California
- 236Redwood Valley Rancheria of Pomo Indians of California
- 237Reno-Sparks Indian Colony, Nevada
- 238Rincon Band of Luiseno Mission Indians of the Rincon Reservation, California
- 239Robinson Rancheria of Pomo Indians of California
- 240Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota
- 241Round Valley Indian Tribes of the Round Valley Reservation, California - (formerly known as the Covelo Indian Community)
- 243Rumsey Indian Rancheria of Wintun Indians of California
- 244Sac & Fox Tribe of the Mississippi in Iowa
- 245Sac & Fox Nation of Missouri in Kansas and Nebraska
- 246Sac & Fox Nation, Oklahoma
- 247Saginaw Chippewa Indian Tribe of Michigan, Isabella Reservation
- 248Salt River Pima-Maricopa Indian Community of the Salt River Reservation, Arizona
- 249Samish Indian Tribe
- 250San Carlos Apache Tribe of the San Carlos Reservation, Arizona
- 251San Juan Southern Paiute Tribe of Arizona
- 252San Manual Band of Serrano Mission Indians of the San Manual Reservation, California
- 253San Pasqual Band of Diegueno Mission Indians of California
- 254Santa Rosa Indian Community of the Santa Rosa Rancheria, California
- 255Santa Rosa Band of Cahuilla Mission Indians of the Santa Rosa Reservation, California
- 256Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation, California
- 257Reservation, California
- 258Santa Ysabel Band of Diegueno Mission Indians of the Santa Ysabel Reservation, California
- 259Santee Sioux Tribe of the Santee Reservation of Nebraska
- 260Sauk-Suiattle Indian Tribe of Washington
- 261Sault Ste. Marie Tribe of Chippewa Indians of Michigan
- 262Scotts Valley Band of Pomo Indians of California
- 263Seminole Nation of Oklahoma
- 264Seminole Tribe of Florida, Dania, Big Cypress & Brighton Reservations
- 265Seneca Nation of New York
- 266Seneca-Cayuga Tribe of Oklahoma
- 267Shakopee Mdewakanton Sioux Community of Minnesota (Prior Lake)
- 268Sheep Ranch Rancheria of Me-Wuk Indians of California
- 269Sherwood Valley Rancheria of Pomo Indians of California
- 270Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract), California
- 271Shoalwater Bay Tribe of the Shoalwater Bay Indian Reservation, Washington
- 272Shoshone Tribe of the Wind River Reservation, Wyoming
- 273Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho
- 274Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada
- 275Sisseton-Wahpeton Sioux Tribe of the Lake Traverse Reservation, South Dakota

CODE      TRIBAL ENTITY

- 276Skokomish Indian Tribe of the Skokomish Reservation, Washington
- 277Skull Valley Band of Goshute Indians of Utah
- 278Smith River Rancheria of California
- 279Soboba Band of Luiseno Mission Indians of the Soboba Reservation, California
- 280Sokaogon Chippewa Community of the Mole Lake Band of Chippewa Indians, Wisconsin
- 281Southern Ute Indian Tribe of the Southern Ute Reservation, Colorado
- 282Spokane Tribe of the Spokane Reservation, Washington
- 283Squaxin Island Tribe of the Squaxin Island Reservation, Washington
- 284St. Croix Chippewa Indians of Wisconsin, St. Croix Reservation
- 285St. Regis Band of Mohawk Indians of New York
- 286Standing Rock Sioux Tribe of North & South Dakota
- 287Stockbridge-Munsee Community of Mohican Indians of Wisconsin
- 288Stillaguamish Tribe of Washington
- 289Summit Lake Paiute Tribe of Nevada
- 290Suquamish Indian Tribe of the Port Madison Reservation, Washington
- 291Susanville Indian Rancheria of Paiute, Maidu, Pit River & Washoe Indians of California
- 292Swinomish Indians of the Swinomish Reservation, Washington
- 293Sycuan Band of Diegueno Mission Indians of California
- 294Table Bluff Rancheria of Wiyot Indians of California
- 295Table Mountain Rancheria of California
- 296Te-Moak Tribes of Western Shoshone Indians of Nevada
- 297Thlopthlocco Tribal Town of the Creek Nation of Oklahoma
- 298Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota
- 299Tohono O'odham Nation of Arizona - (formerly known as the Papago Tribe of the Sells, Gila Bend & San Xavier Reservation, Arizona)
- 300Tonawanda Band of Seneca Indians of New York
- 301Tonkawa Tribe of Indians of Oklahoma
- 302Tonto Apache Tribe of Arizona
- 303Torres-Martinez Band of Cahuilla Mission Indians of California
- 304Tule River Indian Tribe of the Tule River Reservation, California
- 305Tulalip Tribes of the Tulalip Reservation, Washington
- 306Tunica-Biloxi Indian Tribe of Louisiana
- 307Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
- 308Turtle Mountain Band of Chippewa Indians of North Dakota
- 309Tuscarora Nation of New York
- 310Twenty-Nine Palms Band of Luiseno Mission Indians of California
- 311United Auburn Indian Community of the Auburn Rancheria of California
- 312United Keetoowah Band of Cherokee Indians of Oklahoma
- 313Upper Lake Band of Pomo Indians of Upper Lake Rancheria of California
- 314Upper Sioux Indian Community of the Upper Sioux Reservation, Minnesota
- 315Upper Skagit Indian Tribe of Washington
- 316Ute Indian Tribe of the Uintah & Ouray Reservation, Utah
- 317Ute Mountain Tribe of the Ute Mountain Reservation, Colorado, New Mexico & Utah

CODE      TRIBAL ENTITY

- 318Utu Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation, California
- 319Walker River Paiute Tribe of the Walker River Reservation, Nevada
- 320Wampanoag Tribe of Gay Head (Aquinnah) of Massachusetts
- 321Washoe Tribe of Nevada & California (Carson Colony, Dresslerville & Washoe Ranches)
- 322White Mountain Apache Tribe of the Fort Apache Reservation, Arizona
- 323Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma
- 324Winnebago Tribe of Nebraska
- 325Winnemucca Indian Colony of Nevada
- 326Wyandotte Tribe of Oklahoma
- 327Yankton Sioux Tribe of South Dakota
- 328Yavapai-Apache Nation of the Camp Verde Indian Reservation, Arizona
- 329Yavapai-Prescott Tribe of the Yavapai Reservation, Arizona
- 330Yerington Paiute Tribe of the Yerington Colony & Campbell Ranch, Nevada
- 331Yomba Shoshone Tribe of the Yomba Reservation, Nevada
- 332Ysleta Del Sur Pueblo of Texas
- 333Yurok Tribe of the Yurok Reservation, California
- 334Zuni Tribe of the Zuni Reservation, New Mexico

CODE      TRIBAL ENTITY

**APPENDIX F**

**FIPS County Codes - Alphabetical List**

Note that FIPS county codes are unique within state. You will usually need to pre-append the 2-digit FIPS state code to form a complete FIPS county code.

**ALABAMA - 01**

001 =Autauga  
003 =Baldwin  
005 =Barbour  
007 =Bibb  
009 =Blount  
011 =Bullock  
013 =Butler  
015 =Calhoun  
017 =Chambers  
019 =Cherokee  
021 =Chilton  
023 =Choctaw  
025 =Clarke  
027 =Clay  
029 =Cleburne  
031 =Coffee  
033 =Colbert  
035 =Conecuh  
037 =Coosa  
039 =Covington  
041 =Crenshaw  
043 =Cullman  
045 =Dale  
047 =Dalla  
049 =DeKalb  
051 =Elmore  
053 =Escambia  
055 =Etowah  
057 =Fayette  
059 =Franklin  
061 =Geneva  
063 =Greene  
065 =Hale  
067 =Henry  
069 =Houston  
071 =Jackson  
073 =Jefferson  
075 =Lamar  
077 =Lauderdale  
079 =Lawrence  
081 =Lee  
083 =Limestone  
085 =Lowndes  
087 =Macon  
089 =Madison  
091 =Marengo  
093 =Marion  
095 =Marshall  
097 =Mobile  
099 =Monroe  
101 =Montgomery  
103 =Morgan  
105 =Perry  
107 =Pickens  
109 =Pike  
111 =Randolph  
113 =Russell  
115 =St. Clair  
117 =Shelby  
119 =Sumter  
121 =Talladega  
123 =Tallapoosa

125 =Tuscaloosa  
127 =Walker  
129 =Washington  
131 =Wilcox  
133 =Winston

**ALASKA - 02**

013 =Aleutians East  
016 =Aleutians West Census  
020 =Anchorage  
050 =Bethel Census  
060 =Bristol Bay  
070 =Dillingham Census  
090 =Fairbanks North Star  
100 =Haines  
110 =Juneau  
122 =Kenai Peninsula  
130 =Ketchikan Gateway  
150 =Kodiak Island  
164 =Lake and Peninsula  
170 =Matanuska-Susitna  
180 =Nome Census  
185 =North Slope  
188 =Northwest Arctic  
201 =Prince of Wales-Outer  
Ketchikan Census  
220 =Sitka  
231 =  
Skagway-Yakutat-Angoon  
Census

240 =Southeast Fairbanks  
Census  
261 =Valdez-Cordova  
Census  
270 =Wade Hampton  
Census  
280 =Wrangell-Petersburg  
Census  
290 =Yukon-Koyukuk  
Census

#### **ARIZONA - 04**

001 =Apache  
003 =Cochise  
005 =Coconino  
007 =Gila  
009 =Graham  
011 =Greenlee  
012 =La Paz  
013 =Maricopa  
015 =Mohave  
017 =Navajo  
019 =Pima  
021 =Pinal  
023 =Santa Cruz  
025 =Yavapai  
027 =Yuma

#### **ARKANSAS - 05**

001 =Arkansas  
003 =Ashley  
005 =Baxter  
007 =Benton  
009 =Boone  
011 =Bradley  
013 =Calhoun  
015 =Carroll  
017 =Chicot  
019 =Clark  
021 =Clay

023 =Clebune  
025 =Cleveland  
027 =Columbia  
029 =Conway  
031 =Craighead  
033 =Crawford  
035 =Crittenden  
037 =Cross  
039 =Dallas  
041 =Desha  
043 =Drew  
045 =Faulkner  
047 =Franklin  
049 =Fulton  
051 =Garland  
053 =Grant  
055 =Greene  
057 =Hempstead  
059 =Hot Spring  
061 =Howard  
063 =Independence  
065 =Izard  
067 =Jackson  
069 =Jefferson  
071 =Johnson  
073 =Lafayette  
075 =Lawrence  
077 =Lee  
079 =Lincoln  
081 =Little River  
083 =Logan  
085 =Lonoke  
087 =Madison  
089 =Marion  
091 =Miller  
093 =Mississippi  
095 =Monroe  
097 =Montgomery  
099 =Nevada  
101 =Newton  
103 =Ouachita  
105 =Perry  
107 =Phillips  
109 =Pike

111 =Poinsett  
113 =Polk  
115 =Pope  
117 =Prairie  
119 =Pulaski  
121 =Randolph  
123 =St. Francis  
125 =Saline  
127 =Scott  
129 =Searcy  
131 =Sebastian  
133 =Sevier  
135 =Sharp  
137 =Stone  
139 =Union  
141 =Van Buren  
143 =Washington  
145 =White  
147 =Woodruff  
149 =Yell

#### **CALIFORNIA - 06**

001 =Alameda  
003 =Alpine  
005 =Amador  
007 =Butte  
009 =Calaveras  
011 =Colusa  
013 =Contra Costa  
015 =Del Norte  
017 =El Dorado  
019 =Fresno  
021 =Glenn  
023 =Humboldt  
025 =Imperial  
027 =Inyo  
029 =Kern  
031 =Kings  
033 =Lake  
035 =Lassen  
037 =Los Angeles  
039 =Madera



041 =Marin  
043 =Mariposa  
045 =Mendocino  
047 =Merced  
049 =Modoc  
051 =Mono  
053 =Monterey  
055 =Napa  
057 =Nevada  
059 =Orange  
061 =Placer  
063 =Plumas  
065 =Riverside  
067 =Sacramento  
069 =San Benito  
071 =San Bernardino  
073 =San Diego  
075 =San Francisco  
077 =San Joaquin  
079 =San Luis Obispo  
081 =San Mateo  
083 =Santa Barbara  
085 =Santa Clara  
087 =Santa Cruz  
089 =Shasta  
091 =Sierra  
093 =Siskiyou  
095 =Solano  
097 =Sonoma  
099 =Stanislaus  
101 =Sutter  
103 =Tehama  
105 =Trinity  
107 =Tular  
109 =Tuolumne  
111 =Ventura  
113 =Yolo  
115 =Yuba

#### **COLORADO - 08**

001 =Adams  
003 =Alamosa

005 =Arapahoe  
007 =Archuleta  
009 =Baca  
011 =Bent  
013 =Boulder  
015 =Chaffee  
017 =Cheyenne  
019 =Clear Creek  
021 =Conejos  
023 =Costilla  
025 =Crowley  
027 =Custer  
029 =Delta  
031 =Denver  
033 =Dolores  
035 =Douglas  
037 =Eagle  
039 =Elbert  
041 =El Paso  
043 =Fremont  
045 =Garfield  
047 =Gilpin  
049 =Grand  
051 =Gunnison  
053 =Hinsdale  
055 =Huerfano  
057 =Jackson  
059 =Jefferson  
061 =Kiowa  
063 =Kit Carson  
065 =Lake  
067 =La Plata  
069 =Larimer  
071 =Las Animas  
073 =Lincoln  
075 =Logan  
077 =Mesa  
079 =Mineral  
081 =Moffat  
083 =Montezuma  
085 =Montrose  
087 =Morgan  
089 =Otero  
091 =Ouray

093 =Park  
095 =Phillips  
097 =Pitkin  
099 =Prowers  
101 =Pueblo  
103 =Rio Blanco  
105 =Rio Grande  
107 =Routt  
109 =Saguache  
111 =San Juan  
113 =San Miguel  
115 =Sedgwick  
117 =Summit  
119 =Teller  
121 =Washington  
123 =Weld  
125 =Yuma

#### **CONNECTICUT - 09**

001 =Fairfield  
003 =Hartford  
005 =Litchfield  
007 =Middlesex  
009 =New Haven  
011 =New London  
013 =Tolland  
015 =Windham

#### **DELAWARE - 10**

001 =Kent  
003 =New Castle  
005 =Sussex

#### **DIST. OF COL. - 11**

001 =District of Columbia

#### **FLORIDA - 12**

001 =Alachua  
003 =Baker  
005 =Bay  
007 =Bradford  
009 =Brevard  
011 =Broward  
013 =Calhoun  
015 =Charlotte  
017 =Citrus  
019 =Clay  
021 =Collier  
023 =Columbia  
025 =Dade  
027 =DeSoto  
029 =Dixie  
031 =Duval  
033 =Escambia  
035 =Flagler  
037 =Franklin  
039 =Gadsden  
041 =Gilchrist  
043 =Glades  
045 =Gulf  
047 =Hamilton  
049 =Hardee  
051 =Hendry  
053 =Hernando  
055 =Highlands  
057 =Hillsborough  
059 =Holmes  
061 =Indian River  
063 =Jackson  
065 =Jefferson  
067 =Lafayette  
069 =Lake  
071 =Lee  
073 =Leon  
075 =Levy  
077 =Liberty  
079 =Madison  
081 =Manatee  
083 =Marion  
085 =Martin  
087 =Monroe

089 =Nassau  
091 =Okaloosa  
093 =Okeechobee  
095 =Orange  
097 =Osceola  
099 =Palm Beach  
101 =Pasco  
103 =Pinellas  
105 =Polk  
107 =Putnam  
109 =St. Johns  
111 =St. Lucie  
113 =Santa Rosa  
115 =Sarasota  
117 =Seminole  
119 =Sumter  
121 =Suwannee  
123 =Taylor  
125 =Union  
127 =Volusia  
129 =Wakulla  
131 =Walton  
133 =Washington

### **GEORGIA - 13**

001 =Appling  
003 =Atkinson  
005 =Bacon  
007 =Baker  
009 =Baldwin  
011 =Banks  
013 =Barrow  
015 =Bartow  
017 =Ben Hill  
019 =Berrien  
021 =Bibb  
023 =Bleckley  
025 =Brantley  
027 =Brooks  
029 =Bryan  
031 =Bulloch  
033 =Burke

035 =Butts  
037 =Calhoun  
039 =Camden  
043 =Candler  
045 =Carroll  
047 =Catoosa  
049 =Charlton  
051 =Chatham  
053 =Chattahoochee  
055 =Chattooga  
057 =Cherokee  
059 =Clarke  
061 =Clay  
063 =Clayton  
065 =Clinch  
067 =Cobb  
069 =Coffee  
071 =Colquitt  
073 =Columbia  
075 =Cook  
077 =Coweta  
079 =Crawford  
081 =Crisp  
083 =Dade  
085 =Dawson  
087 =Decatur  
089 =DeKalb  
091 =Dodge  
093 =Dooly  
095 =Dougherty  
097 =Douglas  
099 =Early  
101 =Echols  
103 =Effingham  
105 =Elbert  
107 =Emanuel  
109 =Evans  
111 =Fannin  
113 =Fayette  
115 =Floyd  
117 =Forsyth  
119 =Franklin  
121 =Fulton  
123 =Gilmer

125 =Glascock  
127 =Glynn  
129 =Gordon  
131 =Grady  
133 =Greene  
135 =Gwinnett  
137 =Habersham  
139 =Hall  
141 =Hancock  
143 =Haralson  
145 =Harris  
147 =Hart  
149 =Heard  
151 =Henry  
153 =Houston  
155 =Irwin  
157 =Jackson  
159 =Jasper  
161 =Jeff Davis  
163 =Jefferson  
165 =Jenkins  
167 =Johnson  
169 =Jones  
171 =Lamar  
173 =Lanier  
175 =Laurens  
177 =Lee  
179 =Liberty  
181 =Lincoln  
183 =Long  
185 =Lowndes  
187 =Lumpkin  
189 =McDuffie  
191 =McIntosh  
193 =Macon  
195 =Madison  
197 =Marion  
199 =Meriwether  
201 =Miller  
205 =Mitchell  
207 =Monroe  
209 =Montgomery  
211 =Morgan  
213 =Murray

215 =Muscogee  
217 =Newton  
219 =Oconee  
221 =Oglethorpe  
223 =Paulding  
225 =Peach  
227 =Pickens  
229 =Pierce  
231 =Pike  
233 =Polk  
235 =Pulaski  
237 =Putnam  
239 =Quitman  
241 =Rabun  
243 =Randolph  
245 =Richmond  
247 =Rockdale  
249 =Schley  
251 =Screven  
253 =Seminole  
255 =Spalding  
257 =Stephens  
259 =Stewart  
261 =Sumter  
263 =Talbot  
265 =Taliaferro  
267 =Tattnall  
269 =Taylor  
271 =Telfair  
273 =Terrell  
275 =Thomas  
277 =Tift  
279 =Toombs  
281 =Townes  
283 =Treutlen  
285 =Troup  
287 =Turner  
289 =Twiggs  
291 =Union  
293 =Upson  
295 =Walker  
297 =Walton  
299 =Ware  
301 =Warren

303 =Washington  
305 =Wayne  
307 =Webster  
309 =Wheeler  
311 =White  
313 =Whitfield  
315 =Wilcox  
317 =Wilkes  
319 =Wilkinson  
321 =Worth

### **HAWAII - 15**

001 =Hawaii  
003 =Honolulu  
005 =Kalawao  
007 =Kauai  
009 =Maui

### **IDAHO - 16**

001 =Ada  
003 =Adams  
005 =Bannock  
007 =Bear Lake  
009 =Benewah  
011 =Bingham  
013 =Blaine  
015 =Boise  
017 =Bonner  
019 =Bonneville  
021 =Boundary  
023 =Butte  
025 =Camas  
027 =Canyon  
029 =Caribou  
031 =Cassia  
033 =Clark  
035 =Clearwater  
037 =Custer  
039 =Elmore  
041 =Franklin

043 =Fremont  
045 =Gem  
047 =Gooding  
049 =Idaho  
051 =Jefferson  
053 =Jerome  
055 =Kootenai  
057 =Latah  
059 =Lemhi  
061 =Lewis  
063 =Lincoln  
065 =Madison  
067 =Minidoka  
069 =Nez Perce  
071 =Oneida  
073 =Owyhee  
075 =Payette  
077 =Power  
079 =Shoshone  
081 =Teton  
083 =Twin Falls  
085 =Valley  
087 =Washington

**ILLINOIS - 17**

001 =Adams  
003 =Alexander  
005 =Bond  
007 =Boone  
009 =Brown  
011 =Bureau  
013 =Calhoun  
015 =Carroll  
017 =Cass  
019 =Champaign  
021 =Christian  
023 =Clark  
025 =Clay  
027 =Clinton  
029 =Coles  
031 =Cook  
033 =Crawford

035 =Cumberland  
037 =DeKalb  
039 =De Witt  
041 =Douglas  
043 =DuPage  
045 =Edgar  
047 =Edwards  
049 =Effingham  
051 =Fayette  
053 =Ford  
055 =Franklin  
057 =Fulton  
059 =Gallatin  
061 =Greene  
063 =Grundy  
065 =Hamilton  
067 =Hancock  
069 =Hardin  
071 =Henderson  
073 =Henry  
075 =Iroquois  
077 =Jackson  
079 =Jasper  
081 =Jefferson  
083 =Jersey  
085 =Jo Daviess  
087 =Johnson  
089 =Kane  
091 =Kankakee  
093 =Kendall  
095 =Knox  
097 =Lake  
099 =La Salle  
101 =Lawrence  
103 =Lee  
105 =Livingston  
107 =Logan  
109 =McDonough  
111 =McHenry  
113 =McLean  
115 =Macon  
117 =Macoupin  
119 =Madison  
121 =Marion

123 =Marshall  
125 =Mason  
127 =Massac  
129 =Menard  
131 =Mercer  
133 =Monroe  
135 =Montgomery  
137 =Morgan  
139 =Moultrie  
141 =Ogle  
143 =Peoria  
145 =Perry  
147 =Piatt  
149 =Pike  
151 =Pope  
153 =Pulaski  
155 =Putnam  
157 =Randolph  
159 =Richland  
161 =Rock Island  
163 =St. Clair  
165 =Saline  
167 =Sangamon  
169 =Schuyler  
171 =Scott  
173 =Shelby  
175 =Stark  
177 =Stephenson  
179 =Tazewell  
181 =Union  
183 =Vermilion  
185 =Wabash  
187 =Warren  
189 =Washington  
191 =Wayne  
193 =White  
195 =Whiteside  
197 =Will  
199 =Williamson  
201 =Winnebago  
203 =Woodford

**INDIANA - 18**

001 =Adams  
003 =Allen  
005 =Bartholomew  
007 =Benton  
009 =Blackford  
011 =Boone  
013 =Brown  
015 =Carroll  
017 =Cass  
019 =Clark  
021 =Clay  
023 =Clinton  
025 =Crawford  
027 =Daviess  
029 =Dearborn  
031 =Decatur  
033 =De Kalb  
035 =Delaware  
037 =Dubois  
039 =Elkhart  
041 =Fayette  
043 =Floyd  
045 =Fountain  
047 =Franklin  
049 =Fulton  
051 =Gibson  
053 =Grant  
055 =Greene  
057 =Hamilton  
059 =Hancock  
061 =Harrison  
063 =Hendricks  
065 =Henry  
067 =Howard  
069 =Huntington  
071 =Jackson  
073 =Jasper  
075 =Jay  
077 =Jefferson  
079 =Jennings  
081 =Johnson  
083 =Knox  
085 =Kosciusko  
087 =Lagrange

089 =Lake  
091 =La Porte  
093 =Lawrence  
095 =Madison  
097 =Marion  
099 =Marshall  
101 =Martin  
103 =Miami  
105 =Monroe  
107 =Montgomery  
109 =Morgan  
111 =Newton  
113 =Noble  
115 =Ohio  
117 =Orange  
119 =Owen  
121 =Parke  
123 =Perry  
125 =Pike  
127 =Porter  
129 =Posey  
131 =Pulaski  
133 =Putnam  
135 =Randolph  
137 =Ripley  
139 =Rush  
141 =St. Joseph  
143 =Scott  
145 =Shelby  
147 =Spencer  
149 =Starke  
151 =Steuben  
153 =Sullivan  
155 =Switzerland  
157 =Tippecanoe  
159 =Tipton  
161 =Union  
163 =Vanderburgh  
165 =Vermillion  
167 =Vigo  
169 =Wabash  
171 =Warren  
173 =Warrick  
175 =Washington

177 =Wayne  
179 =Wells  
181 =White  
183 =Whitley

### IOWA - 19

001 =Adair  
003 =Adams  
005 =Allamakee  
007 =Appanoose  
009 =Audubon  
011 =Benton  
013 =Black Hawk  
015 =Boone  
017 =Bremer  
019 =Buchanan  
021 =Buena Vista  
023 =Butler  
025 =Calhoun  
027 =Carroll  
029 =Cass  
031 =Cedar  
033 =Cerro Gordo  
035 =Cherokee  
037 =Chickasaw  
039 =Clarke  
041 =Clay  
043 =Clayton  
045 =Clinton  
047 =Crawford  
049 =Dallas  
051 =Davis  
053 =Decatur  
055 =Delaware  
057 =Des Moines  
059 =Dickinson  
061 =Dubuque  
063 =Emmet  
065 =Fayette  
067 =Floyd  
069 =Franklin  
071 =Fremont

073 =Greene  
075 =Grundy  
077 =Guthrie  
079 =Hamilton  
081 =Hancock  
083 =Hardin  
085 =Harrison  
087 =Henry  
089 =Howard  
091 =Humboldt  
093 =Ida  
095 =Iowa  
097 =Jackson  
099 =Jasper  
101 =Jefferson  
103 =Johnson  
105 =Jones  
107 =Keokuk  
109 =Kossuth  
111 =Lee  
113 =Linn  
115 =Louisa  
117 =Lucas  
119 =Lyon  
121 =Madison  
123 =Mahaska  
125 =Marion  
127 =Marshall  
129 =Mills  
131 =Mitchell  
133 =Monona  
135 =Monroe  
137 =Montgomery  
139 =Muscatine  
141 =O'Brien  
143 =Osceola  
145 =Page  
147 =Palo Alto  
149 =Plymouth  
151 =Pocahontas  
153 =Polk  
155 =Pottawattamie  
157 =Poweshiek  
159 =Ringgold

161 =Sac  
163 =Scott  
165 =Shelby  
167 =Sioux  
169 =Story  
171 =Tama  
173 =Taylor  
175 =Union  
177 =Van Buren  
179 =Wapello  
181 =Warren  
183 =Washington  
185 =Wayne  
187 =Webster  
189 =Winnebago  
191 =Winneshiek  
193 =Woodbury  
195 =Worth  
197 =Wright

#### **KANSAS - 20**

001 =Allen  
003 =Anderson  
005 =Atchison  
007 =Barber  
009 =Barton  
011 =Bourbon  
013 =Brown  
015 =Butler  
017 =Chase  
019 =Chautauqua  
021 =Cherokee  
023 =Cheyenne  
025 =Clark  
027 =Clay  
029 =Cloud  
031 =Coffey  
033 =Comanche  
035 =Cowley  
037 =Crawford  
039 =Decatur  
041 =Dickinson

043 =Doniphan  
045 =Douglas  
047 =Edwards  
049 =Elk  
051 =Ellis  
053 =Ellsworth  
055 =Finney  
057 =Ford  
059 =Franklin  
061 =Geary  
063 =Gove  
065 =Graham  
067 =Grant  
069 =Gray  
071 =Greeley  
073 =Greenwood  
075 =Hamilton  
077 =Harper  
079 =Harvey  
081 =Haskell  
083 =Hodgeman  
085 =Jackson  
087 =Jefferson  
089 =Jewell  
091 =Johnson  
093 =Kearny  
095 =Kingman  
097 =Kiowa  
099 =Labette  
101 =Lane  
103 =Leavenworth  
105 =Lincoln  
107 =Linn  
109 =Logan  
111 =Lyon  
113 =McPherson  
115 =Marion  
117 =Marshall  
119 =Meade  
121 =Miami  
123 =Mitchell  
125 =Montgomery  
127 =Morris  
129 =Morton

131 =Nemaha	001 =Adair
133 =Neosho	003 =Allen
135 =Ness	005 =Anderson
137 =Norton	007 =Ballard
139 =Osage	009 =Barren
141 =Osborne	011 =Bath
143 =Ottawa	013 =Bell
145 =Pawnee	015 =Boone
147 =Phillips	017 =Bourbon
149 =Pottawatomie	019 =Boyd
151 =Pratt	021 =Boyle
153 =Rawlins	023 =Bracken
155 =Reno	025 =Breathitt
157 =Republic	027 =Breckinridge
159 =Rice	029 =Bullitt
161 =Riley	031 =Butler
163 =Rooks	033 =Caldwell
165 =Rush	035 =Calloway
167 =Russell	037 =Campbell
169 =Saline	039 =Carlisle
171 =Scott	041 =Carroll
173 =Sedgwick	043 =Carter
175 =Seward	045 =Casey
177 =Shawnee	047 =Christian
179 =Sheridan	049 =Clark
181 =Sherman	051 =Clay
183 =Smith	053 =Clinton
185 =Stafford	055 =Crittenden
187 =Stanton	057 =Cumberland
189 =Stevens	059 =Davies
191 =Sumner	
193 =Thomas	
195 =Trego	
197 =Wabaunsee	
199 =Wallace	
201 =Washington	
203 =Wichita	
205 =Wilson	
207 =Woodson	
209 =Wyandotte	

**KENTUCKY - 21**

061 =Edmonson  
063 =Elliott  
065 =Estill  
067 =Fayette  
069 =Fleming  
071 =Floyd  
073 =Franklin  
075 =Fulton  
077 =Gallatin  
079 =Garrard  
081 =Grant  
083 =Graves  
085 =Grayson  
087 =Green  
089 =Greenup  
091 =Hancock  
093 =Hardin  
095 =Harlan  
097 =Harrison  
099 =Hart  
101 =Henderson  
103 =Henry  
105 =Hickman  
107 =Hopkins  
109 =Jackson  
111 =Jefferson  
113 =Jessamine  
115 =Johnson  
117 =Kenton  
119 =Knott  
121 =Knox  
123 =Larue  
125 =Laurel  
127 =Lawrence  
129 =Lee  
131 =Leslie  
133 =Letcher  
135 =Lewis  
137 =Lincoln  
139 =Livingston  
141 =Logan  
143 =Lyon  
145 =McCracken  
147 =McCreary

149 =McLean  
151 =Madison  
153 =Magoffin  
155 =Marion  
157 =Marshall  
159 =Martin  
161 =Mason  
163 =Meade  
165 =Menifee  
167 =Mercer  
169 =Metcalf  
171 =Monroe  
173 =Montgomery  
175 =Morgan  
177 =Muhlenberg  
179 =Nelson  
181 =Nicholas  
183 =Ohio  
185 =Oldham  
187 =Owen  
189 =Owsley  
191 =Pendleton  
193 =Perry  
195 =Pike  
197 =Powell  
199 =Pulaski  
201 =Robertson  
203 =Rockcastle  
205 =Rowan  
207 =Russell  
209 =Scott  
211 =Shelby  
213 =Simpson  
215 =Spencer  
217 =Taylor  
219 =Todd  
221 =Trigg  
223 =Trimble  
225 =Union  
227 =Warren  
229 =Washington  
231 =Wayne  
233 =Webster  
235 =Whitley

237 =Wolfe  
239 =Woodford

## LOUISIANA - 22

001 =Acadia  
003 =Allen  
005 =Ascension  
007 =Assumption  
009 =Avoyelles  
011 =Beauregard  
013 =Bienville  
015 =Bossier  
017 =Caddo  
019 =Calcasieu  
021 =Caldwell  
023 =Cameron  
025 =Catahoula  
027 =Claiborne  
029 =Concordia  
031 =De Soto  
033 =East Baton Rouge  
035 =East Carroll  
037 =East Feliciana  
039 =Evangeline  
041 =Franklin  
043 =Grant  
045 =Iberia  
047 =Iberville  
049 =Jackson  
051 =Jefferson  
053 =Jefferson Davis  
055 =Lafayette  
057 =Lafourche  
059 =La Salle  
061 =Lincoln  
063 =Livingston  
065 =Madison  
067 =Morehouse  
069 =Natchitoches  
071 =Orleans  
073 =Ouachita  
075 =Plaquemines



077 =Pointe Coupee  
079 =Rapides  
081 =Red River  
083 =Richland  
085 =Sabine  
087 =St. Bernard  
089 =St. Charles  
091 =St. Helena  
093 =St. James  
095 =St. John the Baptist  
097 =St. Landry  
099 =St. Martin  
101 =St. Mary  
103 =St. Tammany  
105 =Tangipahoa  
107 =Tensas  
109 =Terrebonne  
111 =Union  
113 =Vermilion  
115 =Vernon  
117 =Washington  
119 =Webster  
121 =West Baton Rouge  
123 =West Carroll  
125 =West Feliciana  
127 =Winn

### **MAINE - 23**

001 =Androscoggin  
003 =Aroostook  
005 =Cumberland  
007 =Franklin  
009 =Hancock  
011 =Kennebec  
013 =Knox  
015 =Lincoln  
017 =Oxford  
019 =Penobscot  
021 =Piscataquis  
023 =Sagadahoc  
025 =Somerset  
027 =Waldo

029 =Washington  
031 =York

### **MARYLAND - 24**

001 =Allegany  
003 =Anne Arundel  
005 =Baltimore  
009 =Calvert  
011 =Caroline  
013 =Carroll  
015 =Cecil  
017 =Charles  
019 =Dorchester  
021 =Frederick  
023 =Garrett  
025 =Harford  
027 =Howard  
029 =Kent  
031 =Montgomery  
033 =Prince George's  
035 =Queen Anne's  
037 =St. Mary's  
039 =Somerset  
041 =Talbot  
043 =Washington  
045 =Wicomico  
047 =Worcester  
510 =Baltimore

### **MASSACHUSETTS - 25**

001 =Barnstable  
003 =Berkshire  
005 =Bristol  
007 =Dukes  
009 =Essex  
011 =Franklin  
013 =Hampden  
015 =Hampshire  
017 =Middlesex  
019 =Nantucket

021 =Norfolk  
023 =Plymouth  
025 =Suffolk  
027 =Worcester

### **MICHIGAN - 26**

001 =Alcona  
003 =Alger  
005 =Allegan  
007 =Alpena  
009 =Antrim  
011 =Arenac  
013 =Baraga  
015 =Barry  
017 =Bay  
019 =Benzie  
021 =Berrien  
023 =Branch  
025 =Calhoun  
027 =Cass  
029 =Charlevoix  
031 =Cheboygan  
033 =Chippewa  
035 =Clare  
037 =Clinton  
039 =Crawford  
041 =Delta  
043 =Dickinson  
045 =Eaton  
047 =Emmet  
049 =Genesee  
051 =Gladwin  
053 =Gogebic  
055 =Grand Traverse  
057 =Gratiot  
059 =Hillsdale  
061 =Houghton  
063 =Huron  
065 =Ingham  
067 =Ionia  
069 =Iosco  
071 =Iron

073 =Isabella  
075 =Jackson  
077 =Kalamazoo  
079 =Kalkaska  
081 =Kent  
083 =Keweenaw  
085 =Lake  
087 =Lapeer  
089 =Leelanau  
091 =Lenawee  
093 =Livingston  
095 =Luce  
097 =Mackinac  
099 =Macomb  
101 =Manistee  
103 =Marquette  
105 =Mason  
107 =Mecosta  
109 =Menominee  
111 =Midland  
113 =Missaukee  
115 =Monroe  
117 =Montcalm  
119 =Montmorency  
121 =Muskegon  
123 =Newaygo  
125 =Oakland  
127 =Oceana  
129 =Ogemaw  
131 =Ontonagon  
133 =Osceola  
135 =Oscoda  
137 =Otsego  
139 =Ottawa  
141 =Presque Isle  
143 =Roscommon  
145 =Saginaw  
147 =St. Clair  
149 =St. Joseph  
151 =Sanilac  
153 =Schoolcraft  
155 =Shiawassee  
157 =Tuscola  
159 =Van Buren

161 =Washtenaw  
163 =Wayne  
165 =Wexford

**MINNESOTA - 27**

001 =Aitkin  
003 =Anoka  
005 =Becker  
007 =Beltrami  
009 =Benton  
011 =Big Stone  
013 =Blue Earth  
015 =Brown  
017 =Carlton  
019 =Carver  
021 =Cass  
023 =Chippewa  
025 =Chisago  
027 =Clay  
029 =Clearwater  
031 =Cook  
033 =Cottonwood  
035 =Crow Wing  
037 =Dakota  
039 =Dodge  
041 =Douglas  
043 =Faribault  
045 =Fillmore  
047 =Freeborn  
049 =Goodhue  
051 =Grant  
053 =Hennepin  
055 =Houston  
057 =Hubbard  
059 =Isanti  
061 =Itasca  
063 =Jackson  
065 =Kanabec  
067 =Kandiyohi  
069 =Kittson  
071 =Koochiching  
073 =Lac Parle

075 =Lake  
077 =Lake of the Woods  
079 =Le Sueur  
081 =Lincoln  
083 =Lyon  
085 =McLeod  
087 =Mahnomen  
089 =Marshall  
091 =Martin  
093 =Meeker  
095 =Mille Lacs  
097 =Morrison  
099 =Mower  
101 =Murray  
103 =Nicollet  
105 =Nobles  
107 =Norman  
109 =Olmsted  
111 =Otter Tail  
113 =Pennington  
115 =Pine  
117 =Pipestone  
119 =Polk  
121 =Pope  
123 =Ramsey  
125 =Red Lake  
127 =Redwood  
129 =Renville  
131 =Rice  
133 =Rock  
135 =Roseau  
137 =St. Louis  
139 =Scott  
141 =Sherburne  
143 =Sibley  
145 =Stearns  
147 =Steele  
149 =Stevens  
151 =Swift  
153 =Todd  
155 =Traverse  
157 =Wabasha  
159 =Wadena  
161 =Waseca

163 =Washington  
165 =Watowan  
167 =Wilkin  
169 =Winona  
171 =Wright  
173 =Yellow Medicine

**MISSISSIPPI - 28**

001 =Adams  
003 =Alcorn  
005 =Amite  
007 =Attala  
009 =Benton  
011 =Bolivar  
013 =Calhoun  
015 =Carroll  
017 =Chickasaw  
019 =Choctaw  
021 =Claiborne  
023 =Clarke  
025 =Clay  
027 =Coahoma  
029 =Copiah  
031 =Covington  
033 =DeSoto  
035 =Forrest  
037 =Franklin  
039 =George  
041 =Greene  
043 =Grenada  
045 =Hancock  
047 =Harrison  
049 =Hinds  
051 =Holmes  
053 =Humphreys  
055 =Issaquena  
057 =Itawamba  
059 =Jackson  
061 =Jasper  
063 =Jefferson  
065 =Jefferson Davis  
067 =Jones

069 =Kemper  
071 =Lafayette  
073 =Lamar  
075 =Lauderdale  
077 =Lawrence  
079 =Leake  
081 =Lee  
083 =Leflore  
085 =Lincoln  
087 =Lowndes  
089 =Madison  
091 =Marion  
093 =Marshall  
095 =Monroe  
097 =Montgomery  
099 =Neshoba  
101 =Newton  
103 =Noxubee  
105 =Oktibbeha  
107 =Panola  
109 =Pearl River  
111 =Perry  
113 =Pike  
115 =Pontotoc  
117 =Prentiss  
119 =Quitman  
121 =Rankin  
123 =Scott  
125 =Sharkey  
127 =Simpson  
129 =Smith  
131 =Stone  
133 =Sunflower  
135 =Tallahatchie  
137 =Tate  
139 =Tippah  
141 =Tishomingo  
143 =Tunica  
145 =Union  
147 =Walthall  
149 =Warren  
151 =Washington  
153 =Wayne  
155 =Webster

157 =Wilkinson  
159 =Winston  
161 =Yalobusha  
163 =Yazoo

**MISSOURI - 29**

001 =Adair  
003 =Andrew  
005 =Atchison  
007 =Audrain  
009 =Barry  
011 =Barton  
013 =Bates  
015 =Benton  
017 =Bollinger  
019 =Boone  
021 =Buchanan  
023 =Butler  
025 =Caldwell  
027 =Callaway  
029 =Camden  
031 =Cape Girardeau  
033 =Carroll  
035 =Carter  
037 =Cass  
039 =Cedar  
041 =Chariton  
043 =Christian  
045 =Clark  
047 =Clay  
049 =Clinton  
051 =Cole  
053 =Cooper  
055 =Crawford  
057 =Dade  
059 =Dallas  
061 =Daviess  
063 =DeKalb  
065 =Dent  
067 =Douglas  
069 =Dunklin  
071 =Franklin

073 =Gasconade  
075 =Gentry  
077 =Greene  
079 =Grundy  
081 =Harrison  
083 =Henry  
085 =Hickory  
087 =Holt  
089 =Howard  
091 =Howell  
093 =Iron  
095 =Jackson  
097 =Jasper  
099 =Jefferson  
101 =Johnson  
103 =Knox  
105 =Laclede  
107 =Lafayette  
109 =Lawrence  
111 =Lewis  
113 =Lincoln  
115 =Linn  
117 =Livingston  
119 =McDonald  
121 =Macon  
123 =Madison  
125 =Maries  
127 =Marion  
129 =Mercer  
131 =Miller  
133 =Mississippi  
135 =Moniteau  
137 =Monroe  
139 =Montgomery  
141 =Morgan  
143 =New Madrid  
145 =Newton  
147 =Nodaway  
149 =Oregon  
151 =Osage  
153 =Ozark  
155 =Pemiscot  
157 =Perry  
159 =Pettis

161 =Phelps  
163 =Pike  
165 =Platte  
167 =Polk  
169 =Pulaski  
171 =Putnam  
173 =Ralls  
175 =Randolph  
177 =Ray  
179 =Reynolds  
181 =Ripley  
183 =St. Charles  
185 =St. Clair  
186 =Ste. Genevieve  
187 =St. Francois  
189 =St. Louis  
195 =Saline  
197 =Schuyler  
199 =Scotland  
201 =Scott  
203 =Shannon  
205 =Shelby  
207 =Stoddard  
209 =Stone  
211 =Sullivan  
213 =Taney  
215 =Texas  
217 =Vernon  
219 =Warren  
221 =Washington  
223 =Wayne  
225 =Webster  
227 =Worth  
229 =Wright  
510 =St. Louis

**MONTANA - 30**

001 =Beaverhead  
003 =Big Horn  
005 =Blaine  
007 =Broadwater  
009 =Carbon

011 =Carter  
013 =Cascade  
015 =Chouteau  
017 =Custer  
019 =Daniels  
021 =Dawson  
023 =Deer Lodge  
025 =Fallon  
027 =Fergus  
029 =Flathead  
031 =Gallatin  
033 =Garfield  
035 =Glacier  
037 =Golden Valley  
039 =Granite  
041 =Hill  
043 =Jefferson  
045 =Judith Basin  
047 =Lake  
049 =Lewis and Clark  
051 =Liberty  
053 =Lincoln  
055 =McCone  
057 =Madison  
059 =Meagher  
061 =Mineral  
063 =Missoula  
065 =Musselshell  
067 =Park  
069 =Petroleum  
071 =Phillips  
073 =Pondera  
075 =Powder River  
077 =Powell  
079 =Prairie  
081 =Ravalli  
083 =Richland  
085 =Roosevelt  
087 =Rosebud  
089 =Sanders  
091 =Sheridan  
093 =Silver Bow  
095 =Stillwater  
097 =Sweet Grass

099 =Teton  
101 =Toole  
103 =Treasure  
105 =Valley  
107 =Wheatland  
109 =Wibaux  
111 =Yellowstone  
113 =Yellowstone National

**NEBRASKA - 31**

001 =Adams  
003 =Antelope  
005 =Arthur  
007 =Banner  
009 =Blaine  
011 =Boone  
013 =Box Butte  
015 =Boyd  
017 =Brown  
019 =Buffalo  
021 =Burt  
023 =Butler  
025 =Cass  
027 =Cedar  
029 =Chase  
031 =Cherry  
033 =Cheyenne  
035 =Clay  
037 =Colfax  
039 =Cuming  
041 =Custer  
043 =Dakota  
045 =Dawes  
047 =Dawson  
049 =Deuel  
051 =Dixon  
053 =Dodge  
055 =Douglas  
057 =Dundy  
059 =Fillmore  
061 =Franklin  
063 =Frontier

065 =Furnas  
067 =Gage  
069 =Garden  
071 =Garfield  
073 =Gosper  
075 =Grant  
077 =Greeley  
079 =Hall  
081 =Hamilton  
083 =Harlan  
085 =Hayes  
087 =Hitchcock  
089 =Holt  
091 =Hooker  
093 =Howard  
095 =Jefferson  
097 =Johnson  
099 =Kearney  
101 =Keith  
103 =Keya Paha  
105 =Kimball  
107 =Knox  
109 =Lancaster  
111 =Lincoln  
113 =Logan  
115 =Loup  
117 =McPherson  
119 =Madison  
121 =Merrick  
123 =Morrill  
125 =Nance  
127 =Nemaha  
129 =Nuckolls  
131 =Otoe  
133 =Pawnee  
135 =Perkins  
137 =Phelps  
139 =Pierce  
141 =Platte  
143 =Polk  
145 =Red Willow  
147 =Richardson  
149 =Rock  
151 =Saline

153 =Sarpy  
155 =Saunders  
157 =Scotts Bluff  
159 =Seward  
161 =Sheridan  
163 =Sherman  
165 =Sioux  
167 =Stanton  
169 =Thayer  
171 =Thomas  
173 =Thurston  
175 =Valley  
177 =Washington  
179 =Wayne  
181 =Webster  
183 =Wheeler  
185 =York

**NEVADA - 32**

001 =Churchill  
003 =Clark  
005 =Douglas  
007 =Elko  
009 =Esmeralda  
011 =Eureka  
013 =Humboldt  
015 =Lander  
017 =Lincoln  
019 =Lyon  
021 =Mineral  
023 =Nye  
027 =Pershing  
029 =Storey  
031 =Washoe  
033 =White Pine  
510 =Carson

**NEW HAMPSHIRE - 33**

001 =Belknap  
003 =Carroll

005 =Cheshire  
007 =Coos  
009 =Grafton  
011 =Hillsborough  
013 =Merrimack  
015 =Rockingham  
017 =Strafford  
019 =Sullivan

**NEW JERSEY - 34**

001 =Atlantic  
003 =Bergen  
005 =Burlington  
007 =Camden  
009 =Cape May  
011 =Cumberland  
013 =Essex  
015 =Gloucester  
017 =Hudson  
019 =Hunterdon  
021 =Mercer  
023 =Middlesex  
025 =Monmouth  
027 =Morris  
029 =Ocean  
031 =Passaic  
033 =Salem  
035 =Somerset  
037 =Sussex  
039 =Union  
041 =Warren

**NEW MEXICO - 35**

001 =Bernalillo  
003 =Catron  
005 =Chaves  
006 =Cibola  
007 =Colfax  
009 =Curry  
011 =DeBaca

013 =Dona Ana  
015 =Eddy  
017 =Grant  
019 =Guadalupe  
021 =Harding  
023 =Hidalgo  
025 =Lea  
027 =Lincoln  
028 =Los Alamos  
029 =Luna  
031 =McKinley  
033 =Mora  
035 =Otero  
037 =Quay  
039 =Rio Arriba  
041 =Roosevelt  
043 =Sandoval  
045 =San Juan  
047 =San Miguel  
049 =Santa Fe  
051 =Sierra  
053 =Socorro  
055 =Taos  
057 =Torrance  
059 =Union  
061 =Valencia

**NEW YORK - 36**

001 =Albany  
003 =Allegany  
005 =Bronx  
007 =Broome  
009 =Cattaraugus  
011 =Cayuga  
013 =Chautauqua  
015 =Chemung  
017 =Chenango  
019 =Clinton  
021 =Columbia  
023 =Cortland  
025 =Delaware  
027 =Dutchess

029 =Erie  
031 =Essex  
033 =Franklin  
035 =Fulton  
037 =Genesee  
039 =Greene  
041 =Hamilton  
043 =Herkimer  
045 =Jefferson  
047 =Kings  
049 =Lewis  
051 =Livingston  
053 =Madison  
055 =Monroe  
057 =Montgomery  
059 =Nassau  
061 =New York  
063 =Niagara  
065 =Oneida  
067 =Onondaga  
069 =Ontario  
071 =Orange  
073 =Orleans  
075 =Oswego  
077 =Otsego  
079 =Putnam  
081 =Queens  
083 =Rensselaer  
085 =Richmond  
087 =Rockland  
089 =St. Lawrence  
091 =Saratoga  
093 =Schenectady  
095 =Schoharie  
097 =Schuyler  
099 =Seneca  
101 =Steuben  
103 =Suffolk  
105 =Sullivan  
107 =Tioga  
109 =Tompkins  
111 =Ulster  
113 =Warren  
115 =Washington

117 =Wayne  
119 =Westchester  
121 =Wyoming  
123 =Yates

**NORTH CAROLINA - 37**

001 =Alamance  
003 =Alexander  
005 =Alleghany  
007 =Anson  
009 =Ashe  
011 =Avery  
013 =Beaufort  
015 =Bertie  
017 =Bladen  
019 =Brunswick  
021 =Buncombe  
023 =Burke  
025 =Cabarrus  
027 =Caldwell  
029 =Camden  
031 =Carteret  
033 =Caswell  
035 =Catawba  
037 =Chatham  
039 =Cherokee  
041 =Chowan  
043 =Clay  
045 =Cleveland  
047 =Columbus  
049 =Craven  
051 =Cumberland  
053 =Currituck  
055 =Dare  
057 =Davidson  
059 =Davie  
061 =Duplin  
063 =Durham  
065 =Edgecombe  
067 =Forsyth  
069 =Franklin  
071 =Gaston

073 =Gates  
075 =Graham  
077 =Granville  
079 =Greene  
081 =Guilford  
083 =Halifax  
085 =Harnett  
087 =Haywood  
089 =Henderson  
091 =Hertford  
093 =Hoke  
095 =Hyde  
097 =Iredell  
099 =Jackson  
101 =Johnston  
103 =Jones  
105 =Lee  
107 =Lenoir  
109 =Lincoln  
111 =McDowell  
113 =Macon  
115 =Madison  
117 =Martin  
119 =Mecklenburg  
121 =Mitchell  
123 =Montgomery  
125 =Moore  
127 =Nash  
129 =New Hanover  
131 =Northampton  
133 =Onslow  
135 =Orange  
137 =Pamlico  
139 =Pasquotank  
141 =Pender  
143 =Perquimans  
145 =Person  
147 =Pitt  
149 =Polk  
151 =Randolph  
153 =Richmond  
155 =Robeson  
157 =Rockingham  
159 =Rowan

161 =Rutherford  
163 =Sampson  
165 =Scotland  
167 =Stanly  
169 =Stokes  
171 =Surry  
173 =Swain  
175 =Transylvania  
177 =Tyrrell  
179 =Union  
181 =Vance  
183 =Wake  
185 =Warren  
187 =Washington  
189 =Watauga  
191 =Wayne  
193 =Wilkes  
195 =Wilson  
197 =Yadkin  
199 =Yancey

**NORTH DAKOTA - 38**

001 =Adams  
003 =Barnes  
005 =Benson  
007 =Billings  
009 =Bottineau  
011 =Bowman  
013 =Burke  
015 =Burleigh  
017 =Cass  
019 =Cavalier  
021 =Dickey  
023 =Divide  
025 =Dunn  
027 =Eddy  
029 =Emmons  
031 =Foster  
033 =Golden Valley  
035 =Grand Forks  
037 =Grant  
039 =Griggs

041 =Hettinger  
043 =Kidder  
045 =LaMoure  
047 =Logan  
049 =McHenry  
051 =McIntosh  
053 =McKenzie  
055 =McLean  
057 =Mercer  
059 =Morton  
061 =Mountrail  
063 =Nelson  
065 =Oliver  
067 =Pembina  
069 =Pierce  
071 =Ramsey  
073 =Ransom  
075 =Renville  
077 =Richland  
079 =Rolette  
081 =Sargent  
083 =Sheridan  
085 =Sioux  
087 =Slope  
089 =Stark  
091 =Steele  
093 =Stutsman  
095 =Towner  
097 =Traill  
099 =Walsh  
101 =Ward  
103 =Wells  
105 =Williams

**OHIO - 39**

001 =Adams  
003 =Allen  
005 =Ashland  
007 =Ashtabula  
009 =Athens  
011 =Auglaize  
013 =Belmont

015 =Brown  
017 =Butler  
019 =Carroll  
021 =Champaign  
023 =Clark  
025 =Clermont  
027 =Clinton  
029 =Columbiana  
031 =Coshocton  
033 =Crawford  
035 =Cuyahoga  
037 =Darke  
039 =Defiance  
041 =Delaware  
043 =Erie  
045 =Fairfield  
047 =Fayette  
049 =Franklin  
051 =Fulton  
053 =Gallia  
055 =Geauga  
057 =Greene  
059 =Guernsey  
061 =Hamilton  
063 =Hancock  
065 =Hardin  
067 =Harrison  
069 =Henry  
071 =Highland  
073 =Hocking  
075 =Holmes  
077 =Huron  
079 =Jackson  
081 =Jefferson  
083 =Knox  
085 =Lake  
087 =Lawrence  
089 =Licking  
091 =Logan  
093 =Lorain  
095 =Lucas  
097 =Madison  
099 =Mahoning  
101 =Marion

103 =Medina  
105 =Meigs  
107 =Mercer  
109 =Miami  
111 =Monroe  
113 =Montgomery  
115 =Morgan  
117 =Morrow  
119 =Muskingum  
121 =Noble  
123 =Ottawa  
125 =Paulding  
127 =Perry  
129 =Pickaway  
131 =Pike  
133 =Portage  
135 =Preble  
137 =Putnam  
139 =Richland  
141 =Ross  
143 =Sandusky  
145 =Scioto  
147 =Seneca  
149 =Shelby  
151 =Stark  
153 =Summit  
155 =Trumbull  
157 =Tuscarawas  
159 =Union  
161 =Van Wert  
163 =Vinton  
165 =Warren  
167 =Washington  
169 =Wayne  
171 =Williams  
173 =Wood  
175 =Wyandot

**OKLAHOMA - 40**

001 =Adair  
003 =Alfalfa  
005 =Atoka



007 =Beaver  
009 =Beckham  
011 =Blaine  
013 =Bryan  
015 =Caddo  
017 =Canadian  
019 =Carter  
021 =Cherokee  
023 =Choctaw  
025 =Cimarron  
027 =Cleveland  
029 =Coal  
031 =Comanche  
033 =Cotton  
035 =Craig  
037 =Creek  
039 =Custer  
041 =Delaware  
043 =Dewey  
045 =Ellis  
047 =Garfield  
049 =Garvin  
051 =Grady  
053 =Grant  
055 =Greer  
057 =Harmon  
059 =Harper  
061 =Haskell  
063 =Hughes  
065 =Jackson  
067 =Jefferson  
069 =Johnston  
071 =Kay  
073 =Kingfisher  
075 =Kiowa  
077 =Latimer  
079 =Le Flore  
081 =Lincoln  
083 =Logan  
085 =Love  
087 =McClain  
089 =McCurtain  
091 =McIntosh  
093 =Major

095 =Marshall  
097 =Mayes  
099 =Murray  
101 =Muskogee  
103 =Noble  
105 =Nowata  
107 =Okfuskee  
109 =Oklahoma  
111 =Okmulgee  
113 =Osage  
115 =Ottawa  
117 =Pawnee  
119 =Payne  
121 =Pittsburg  
123 =Pontotoc  
125 =Pottawatomie  
127 =Pushmataha  
129 =Roger Mills  
131 =Rogers  
133 =Seminole  
135 =Sequoyah  
137 =Stephens  
139 =Texas  
141 =Tillman  
143 =Tulsa  
145 =Wagoner  
147 =Washington  
149 =Washita  
151 =Woods  
153 =Woodward

#### **OREGON - 41**

001 =Baker  
003 =Benton  
005 =Clackamas  
007 =Clatsop  
009 =Columbia  
011 =Coos  
013 =Crook  
015 =Curry  
017 =Deschutes  
019 =Douglas

021 =Gilliam  
023 =Grant  
025 =Harney  
027 =Hood River  
029 =Jackson  
031 =Jefferson  
033 =Josephine  
035 =Klamath  
037 =Lake  
039 =Lane  
041 =Lincoln  
043 =Linn  
045 =Malheur  
047 =Marion  
049 =Morrow  
051 =Multnomah  
053 =Polk  
055 =Sherman  
057 =Tillamook  
059 =Umatilla  
061 =Union  
063 =Wallowa  
065 =Wasco  
067 =Washington  
069 =Wheeler  
071 =Yamhill

#### **PENNSYLVANIA - 42**

001 =Adams  
003 =Allegheny  
005 =Armstrong  
007 =Beaver  
009 =Bedford  
011 =Berks  
013 =Blair  
015 =Bradford  
017 =Bucks  
019 =Butler  
021 =Cambria  
023 =Cameron  
025 =Carbon  
027 =Centre

029 =Chester  
031 =Clarion  
033 =Clearfield  
035 =Clinton  
037 =Columbia  
039 =Crawford  
041 =Cumberland  
043 =Dauphin  
045 =Delaware  
047 =Elk  
049 =Erie  
051 =Fayette  
053 =Forest  
055 =Franklin  
057 =Fulton  
059 =Greene  
061 =Huntingdon  
063 =Indiana  
065 =Jefferson  
067 =Juniata  
069 =Lackawanna  
071 =Lancaster  
073 =Lawrence  
075 =Lebanon  
077 =Lehigh  
079 =Luzerne  
081 =Lycoming  
083 =Mc Kean  
085 =Mercer  
087 =Mifflin  
089 =Monroe  
091 =Montgomery  
093 =Montour  
095 =Northampton  
097 =Northumberland  
099 =Perry  
101 =Philadelphia  
103 =Pike  
105 =Potter  
107 =Schuylkill  
109 =Snyder  
111 =Somerset  
113 =Sullivan  
115 =Susquehanna

117 =Tioga  
119 =Union  
121 =Venango  
123 =Warren  
125 =Washington  
127 =Wayne  
129 =Westmoreland  
131 =Wyoming  
133 =York

#### **RHODE ISLAND - 44**

001 =Bristol  
003 =Kent  
005 =Newport  
007 =Providence  
009 =Washington

#### **SOUTH CAROLINA - 45**

001 =Abbeville  
003 =Aiken  
005 =Allendale  
007 =Anderson  
009 =Bamberg  
011 =Barnwell  
013 =Beaufort  
015 =Berkeley  
017 =Calhoun  
019 =Charleston  
021 =Cherokee  
023 =Chester  
025 =Chesterfield  
027 =Clarendon  
029 =Colleton  
031 =Darlington  
033 =Dillon  
035 =Dorchester  
037 =Edgefield  
039 =Fairfield  
041 =Florence  
043 =Georgetown

045 =Greenville  
047 =Greenwood  
049 =Hampton  
051 =Horry  
053 =Jasper  
055 =Kershaw  
057 =Lancaster  
059 =Laurens  
061 =Lee  
063 =Lexington  
065 =McCormick  
067 =Marion  
069 =Marlboro  
071 =Newberry  
073 =Oconee  
075 =Orangeburg  
077 =Pickens  
079 =Richland  
081 =Saluda  
083 =Spartanburg  
085 =Sumter  
087 =Union  
089 =Williamsburg  
091 =York

#### **SOUTH DAKOTA - 46**

003 =Aurora  
005 =Beadle  
007 =Bennett  
009 =Bon Homme  
011 =Brookings  
013 =Brown  
015 =Brule  
017 =Buffalo  
019 =Butte  
021 =Campbell  
023 =Charles Mix  
025 =Clark  
027 =Clay  
029 =Codington  
031 =Corson  
033 =Custer

035 =Davison  
037 =Day  
039 =Deuel  
041 =Dewey  
043 =Douglas  
045 =Edmunds  
047 =Fall River  
049 =Faulk  
051 =Grant  
053 =Gregory  
055 =Haakon  
057 =Hamlin  
059 =Hand  
061 =Hanson  
063 =Harding  
065 =Hughes  
067 =Hutchinson  
069 =Hyde  
071 =Jackson  
073 =Jerauld  
075 =Jones  
077 =Kingsbury  
079 =Lake  
081 =Lawrence  
083 =Lincoln  
085 =Lyman  
087 =McCook  
089 =McPherson  
091 =Marshall  
093 =Meade  
095 =Mellette  
097 =Miner  
099 =Minnehaha  
101 =Moody  
103 =Pennington  
105 =Perkins  
107 =Potter  
109 =Roberts  
111 =Sanborn  
113 =Shannon  
115 =Spink  
117 =Stanley  
119 =Sully  
121 =Todd

123 =Tripp  
125 =Turner  
127 =Union  
129 =Walworth  
135 =Yankton  
137 =Ziebach

**TENNESSEE - 47**

001 =Anderson  
003 =Bedford  
005 =Benton  
007 =Bledsoe  
009 =Blount  
011 =Bradley  
013 =Campbell  
015 =Cannon  
017 =Carroll  
019 =Carter  
021 =Cheatham  
023 =Chester  
025 =Claiborne  
027 =Clay  
029 =Cocke  
031 =Coffee  
033 =Crockett  
035 =Cumberland  
037 =Davidson  
039 =Decatur  
041 =DeKalb  
043 =Dickson  
045 =Dyer  
047 =Fayette  
049 =Fentress  
051 =Franklin  
053 =Gibson  
055 =Giles  
057 =Grainger  
059 =Greene  
061 =Grundy  
063 =Hamblen  
065 =Hamilton  
067 =Hancock  
069 =Hardeman

071 =Hardin  
073 =Hawkins  
075 =Haywood  
077 =Henderson  
079 =Henry  
081 =Hickman  
083 =Houston  
085 =Humphreys  
087 =Jackson  
089 =Jefferson  
091 =Johnson  
093 =Knox  
095 =Lake  
097 =Lauderdale  
099 =Lawrence  
101 =Lewis  
103 =Lincoln  
105 =Loudon  
107 =McMinn  
109 =McNairy  
111 =Macon  
113 =Madison  
115 =Marion  
117 =Marshall  
119 =Maury  
121 =Meigs  
123 =Monroe  
125 =Montgomery  
127 =Moore  
129 =Morgan  
131 =Obion  
133 =Overton  
135 =Perry  
137 =Pickett  
139 =Polk  
141 =Putnam  
143 =Rhea  
145 =Roane  
147 =Robertson  
149 =Rutherford  
151 =Scott  
153 =Sequatchie  
155 =Sevier  
157 =Shelby

159 =Smith  
161 =Stewart  
163 =Sullivan  
165 =Sumner  
167 =Tipton  
169 =Trousdale  
171 =Unicoi  
173 =Union  
175 =Van Buren  
177 =Warren  
179 =Washington  
181 =Wayne  
183 =Weakley  
185 =White  
187 =Williamson  
189 =Wilson

**TEXAS - 48**

001 =Anderson  
003 =Andrews  
005 =Angelina  
007 =Aransas  
009 =Archer  
011 =Armstrong  
013 =Atascosa  
015 =Austin  
017 =Bailey  
019 =Bandera  
021 =Bastrop  
023 =Baylor  
025 =Bee  
027 =Bell  
029 =Bexar  
031 =Blanco  
033 =Borden  
035 =Bosque  
037 =Bowie  
039 =Brazoria  
041 =Brazos  
043 =Brewster  
045 =Briscoe  
047 =Brooks

049 =Brown  
051 =Burlison  
053 =Burnet  
055 =Caldwell  
057 =Calhoun  
059 =Callahan  
061 =Cameron  
063 =Camp  
065 =Carson  
067 =Cass  
069 =Castro  
071 =Chambers  
073 =Cherokee  
075 =Childress  
077 =Clay  
079 =Cochran  
081 =Coke  
083 =Coleman  
085 =Collin  
087 =Collingsworth  
089 =Colorado  
091 =Comal  
093 =Comanche  
095 =Concho  
097 =Cooke  
099 =Coryell  
101 =Cottle  
103 =Crane  
105 =Crockett  
107 =Crosby  
109 =Culberson  
111 =Dallam  
113 =Dallas  
115 =Dawson  
117 =Deaf Smith  
119 =Delta  
121 =Denton  
123 =DeWitt  
125 =Dickens  
127 =Dimmit  
129 =Donley  
131 =Duval  
133 =Eastland  
135 =Ector

137 =Edwards  
139 =Ellis  
141 =El Paso  
143 =Erath  
145 =Falls  
147 =Fannin  
149 =Fayette  
151 =Fisher  
153 =Floyd  
155 =Foard  
157 =Fort Bend  
159 =Franklin  
161 =Freestone  
163 =Frio  
165 =Gaines  
167 =Galveston  
169 =Garza  
171 =Gillespie  
173 =Glasscock  
175 =Goliad  
177 =Gonzales  
179 =Gray  
181 =Grayson  
183 =Gregg  
185 =Grimes  
187 =Guadalupe  
189 =Hale  
191 =Hall  
193 =Hamilton  
195 =Hansford  
197 =Hardeman  
199 =Hardin  
201 =Harris  
203 =Harrison  
205 =Hartley  
207 =Haskell  
209 =Hays  
211 =Hemphill  
213 =Henderson  
215 =Hidalgo  
217 =Hill  
219 =Hockley  
221 =Hood  
223 =Hopkins

225 =Houston	313 =Madison	401 =Rusk
227 =Howard	315 =Marion	403 =Sabine
229 =Hudspeth	317 =Martin	405 =San Augustine
231 =Hunt	319 =Mason	407 =San Jacinto
233 =Hutchinson	321 =Matagorda	409 =San Patricio
235 =Irion	323 =Maverick	411 =San Saba
237 =Jack	325 =Medina	413 =Schleicher
239 =Jackson	327 =Menard	415 =Scurry
241 =Jasper	329 =Midland	417 =Shackelford
243 =Jeff Davis	331 =Milam	419 =Shelby
245 =Jefferson	333 =Mills	421 =Sherman
247 =Jim Hogg	335 =Mitchell	423 =Smith
249 =Jim Wells	337 =Montague	425 =Somervell
251 =Johnson	339 =Montgomery	427 =Starr
253 =Jones	341 =Moore	429 =Stephens
255 =Karnes	343 =Morris	431 =Sterling
257 =Kaufman	345 =Motley	433 =Stonewall
259 =Kendall	347 =Nacogdoches	435 =Sutton
261 =Kenedy	349 =Navarro	437 =Swisher
263 =Kent	351 =Newton	439 =Tarrant
265 =Kerr	353 =Nolan	441 =Taylor
267 =Kimble	355 =Nueces	443 =Terrell
269 =King	357 =Ochiltree	445 =Terry
271 =Kinney	359 =Oldham	447 =Throckmorton
273 =Kleberg	361 =Orange	449 =Titus
275 =Knox	363 =Palo Pinto	451 =Tom Green
277 =Lamar	365 =Panola	453 =Travis
279 =Lamb	367 =Parker	455 =Trinity
281 =Lampasas	369 =Parmer	457 =Tyler
283 =La Salle	371 =Pecos	459 =Upshur
285 =Lavaca	373 =Polk	461 =Upton
287 =Lee	375 =Potter	463 =Uvalde
289 =Leon	377 =Presidio	465 =Val Verde
291 =Liberty	379 =Rains	467 =Van Zandt
293 =Limestone	381 =Randall	469 =Victoria
295 =Lipscomb	383 =Reagan	471 =Walker
297 =Live Oak	385 =Real	473 =Waller
299 =Llano	387 =Red River	475 =Ward
301 =Loving	389 =Reeves	477 =Washington
303 =Lubbock	391 =Refugio	479 =Webb
305 =Lynn	393 =Roberts	481 =Wharton
307 =McCulloch	395 =Robertson	483 =Wheeler
309 =McLennan	397 =Rockwall	485 =Wichita
311 =McMullen	399 =Runnels	487 =Wilbarger

489 =Willacy  
491 =Williamson  
493 =Wilson  
495 =Winkler  
497 =Wise  
499 =Wood  
501 =Yoakum  
503 =Young  
505 =Zapata  
507 =Zavala

### UTAH - 49

001 =Beaver  
003 =Box Elder  
005 =Cache  
007 =Carbon  
009 =Daggett  
011 =Davis  
013 =Duchesne  
015 =Emery  
017 =Garfield  
019 =Grand  
021 =Iron  
023 =Juab  
025 =Kane  
027 =Millard  
029 =Morgan  
031 =Piute  
033 =Rich  
035 =Salt Lake  
037 =San Juan  
039 =Sanpete  
041 =Sevier  
043 =Summit  
045 =Tooele  
047 =Uintah  
049 =Utah  
051 =Wasatch  
053 =Washington  
055 =Wayne  
057 =Weber

### VERMONT - 50

001 =Addison  
003 =Bennington  
005 =Caledonia  
007 =Chittenden  
009 =Essex  
011 =Franklin  
013 =Grand Isle  
015 =Lamoille  
017 =Orange  
019 =Orleans  
021 =Rutland  
023 =Washington  
025 =Windham  
027 =Windsor

### VIRGINIA - 51

001 =Accomack  
003 =Albemarle  
005 =Alleghany  
007 =Amelia  
009 =Amherst  
011 =Appomattox  
013 =Arlington  
015 =Augusta  
017 =Bath  
019 =Bedford  
021 =Bland  
023 =Botetourt  
025 =Brunswick  
027 =Buchanan  
029 =Buckingham  
031 =Campbell  
033 =Caroline  
035 =Carroll  
036 =Charles City  
037 =Charlotte  
041 =Chesterfield  
043 =Clarke  
045 =Craig  
047 =Culpeper

049 =Cumberland  
051 =Dickenson  
053 =Dinwiddie  
057 =Essex  
059 =Fairfax  
061 =Fauquier  
063 =Floyd  
065 =Fluvanna  
067 =Franklin  
069 =Frederick  
071 =Giles  
073 =Gloucester  
075 =Goochland  
077 =Grayson  
079 =Greene  
081 =Greensville  
083 =Halifax  
085 =Hanover  
087 =Henrico  
089 =Henry  
091 =Highland  
093 =Isle of Wight  
095 =James City  
097 =King and Queen  
099 =King George  
101 =King William  
103 =Lancaster  
105 =Lee  
107 =Loudoun  
109 =Louisa  
111 =Lunenburg  
113 =Madison  
115 =Mathews  
117 =Mecklenburg  
119 =Middlesex  
121 =Montgomery  
125 =Nelson  
127 =New Kent  
131 =Northampton  
133 =Northumberland  
135 =Nottoway  
137 =Orange  
139 =Page  
141 =Patrick

143 =Pittsylvania  
145 =Powhatan  
147 =Prince Edward  
149 =Prince George  
153 =Prince William  
155 =Pulaski  
157 =Rappahannock  
159 =Richmond  
161 =Roanoke  
163 =Rockbridge  
165 =Rockingham  
167 =Russell  
169 =Scott  
171 =Shenandoah  
173 =Smyth  
175 =Southampton  
177 =Spotsylvania  
179 =Stafford  
181 =Surry  
183 =Sussex  
185 =Tazewell  
187 =Warren  
191 =Washington  
193 =Westmoreland  
195 =Wise  
197 =Wythe  
199 =York  
510 =Alexandria  
515 =Bedford  
520 =Bristol  
530 =Buena Vista  
540 =Charlottesville  
550 =Chesapeake  
560 =Clifton Forge  
570 =Colonial Heights  
580 =Covington  
590 =Danville  
595 =Emporia  
600 =Fairfax  
610 =Falls Church  
620 =Franklin  
630 =Fredericksburg  
640 =Galax  
650 =Hampton

660 =Harrisonburg  
670 =Hopewell  
678 =Lexington  
680 =Lynchburg  
683 =Manassas  
685 =Manassas Park  
690 =Martinsville  
700 =Newport News  
710 =Norfolk  
720 =Norton  
730 =Petersburg  
735 =Poquoson  
740 =Portsmouth  
750 =Radford  
760 =Richmond  
770 =Roanoke  
775 =Salem  
780 =South Boston  
790 =Staunton  
800 =Suffolk  
810 =Virginia Beach  
820 =Waynesboro  
830 =Williamsburg  
840 =Winchester

033 =King  
035 =Kitsap  
037 =Kittitas  
039 =Klickitat  
041 =Lewis  
043 =Lincoln  
045 =Mason  
047 =Okanogan  
049 =Pacific  
051 =Pend Oreille  
053 =Pierce  
055 =San Juan  
057 =Skagit  
059 =Skamania  
061 =Snohomish  
063 =Spokane  
065 =Stevens  
067 =Thurston  
069 =Wahkiakum  
071 =Walla Walla  
073 =Whatcom  
075 =Whitman  
077 =Yakima

#### WASHINGTON - 53

001 =Adams  
003 =Asotin  
005 =Benton  
007 =Chelan  
009 =Clallam  
011 =Clark  
013 =Columbia  
015 =Cowlitz  
017 =Douglas  
019 =Ferry  
021 =Franklin  
023 =Garfield  
025 =Grant  
027 =Grays Harbor  
029 =Island  
031 =Jefferson

#### WEST VIRGINIA - 54

001 =Barbour  
003 =Berkeley  
005 =Boone  
007 =Braxton  
009 =Brooke  
011 =Cabell  
013 =Calhoun  
015 =Clay  
017 =Doddridge  
019 =Fayette  
021 =Gilmer  
023 =Grant  
025 =Greenbrier  
027 =Hampshire  
029 =Hancock  
031 =Hardy  
033 =Harrison

035 =Jackson  
037 =Jefferson  
039 =Kanawha  
041 =Lewis  
043 =Lincoln  
045 =Logan  
047 =McDowell  
049 =Marion  
051 =Marshall  
053 =Mason  
055 =Mercer  
057 =Mineral  
059 =Mingo  
061 =Monongalia  
063 =Monroe  
065 =Morgan  
067 =Nicholas  
069 =Ohio  
071 =Pendleton  
073 =Pleasants  
075 =Pocahontas  
077 =Preston  
079 =Putnam  
081 =Raleigh  
083 =Randolph  
085 =Ritchie  
087 =Roane  
089 =Summers  
091 =Taylor  
093 =Tucker  
095 =Tyler  
097 =Upshur  
099 =Wayne  
101 =Webster  
103 =Wetzel  
105 =Wirt  
107 =Wood  
109 =Wyoming

**WISCONSIN - 55**

001 =Adams  
003 =Ashland

005 =Barron  
007 =Bayfield  
009 =Brown  
011 =Buffalo  
013 =Burnett  
015 =Calumet  
017 =Chippewa  
019 =Clark  
021 =Columbia  
023 =Crawford  
025 =Dane  
027 =Dodge  
029 =Door  
031 =Douglas  
033 =Dunn  
035 =Eau Claire  
037 =Florence  
039 =Fond du Lac  
041 =Forest  
043 =Grant  
045 =Green  
047 =Green Lake  
049 =Iowa  
051 =Iron  
053 =Jackson  
055 =Jefferson  
057 =Juneau  
059 =Kenosha  
061 =Kewaunee  
063 =La Crosse  
065 =Lafayette  
067 =Langlade  
069 =Lincoln  
071 =Manitowoc  
073 =Marathon  
075 =Marinette  
077 =Marquette  
078 =Menominee  
079 =Milwaukee  
081 =Monroe  
083 =Oconto  
085 =Oneida  
087 =Outagamie  
089 =Ozaukee

091 =Pepin  
093 =Pierce  
095 =Polk  
097 =Portage  
099 =Price  
101 =Racine  
103 =Richland  
105 =Rock  
107 =Rusk  
109 =St. Croix  
111 =Sauk  
113 =Sawyer  
115 =Shawano  
117 =Sheboygan  
119 =Taylor  
121 =Trempealeau  
123 =Vernon  
125 =Vilas  
127 =Walworth  
129 =Washburn  
131 =Washington  
133 =Waukesha  
135 =Waupaca  
137 =Waushara  
139 =Winnebago  
141 =Wood

**WYOMING - 56**

001 =Albany  
003 =Big Horn  
005 =Campbell  
007 =Carbon  
009 =Converse  
011 =Crook  
013 =Fremont  
015 =Goshen  
017 =Hot Springs  
019 =Johnson  
021 =Laramie  
023 =Lincoln  
025 =Natrona  
027 =Niobrara



029 =Park  
031 =Platte  
033 =Sheridan  
035 =Sublette  
037 =Sweetwater  
039 =Teton  
041 =Uinta  
043 =Washakie  
045 =Weston

**AMER. SAMOA - 60**

010 =Eastern  
020 =Manu'a  
030 =Rose  
040 =Swains  
050 =Western

**GUAN - 66**

010 =Guam

**PUERTO RICO - 72**

001 =Adjuntas  
003 =Aguada  
005 =Aguadilla  
007 =Aguas Buenas  
009 =Aibonito  
011 =Añasco  
013 =Arecibo  
015 =Arroyo  
017 =Barceloneta  
019 =Barranquitas  
021 =Bayamon  
023 =Cabo Rojo  
025 =Caguas  
027 =Camuy  
029 =Canovanas  
031 =Carolina  
033 =Cataño

035 =Cayey  
037 =Ceiba  
039 =Ciales  
041 =Cidra  
043 =Coamo  
045 =Comerio  
047 =Corozal  
049 =Culebra  
051 =Dorado  
053 =Fajardo  
054 =Florida  
055 =Guanica  
057 =Guayama  
059 =Guayanilla  
061 =Guaynabo  
063 =Gurabo  
065 =Hatillo  
067 =Hormigueros  
069 =Humacao  
071 =Isabela  
073 =Jayuya  
075 =Juana Diaz  
077 =Juncos  
079 =Lajas  
081 =Lares  
083 =Las Marias  
085 =Las Piedras  
087 =Loiza  
089 =Luquillo  
091 =Manati  
093 =Maricao  
095 =Maunabo  
097 =Mayagüez  
099 =Moca  
101 =Morovis  
103 =Naguabo  
105 =Naranjito  
107 =Orocovis  
109 =Patillas  
111 =Peñuelas  
113 =Ponce  
115 =Quebradillas  
117 =Rincon  
119 =Rio Grande

121 =Sabana Grande  
123 =Salinas  
125 =San German  
127 =San Juan  
129 =San Lorenzo  
131 =San Sebastian  
133 =Santa Isabel  
135 =Toa Alta  
137 =Toa Baja  
139 =Trujillo Alto  
141 =Útuado  
143 =Vega Alta  
145 =Vega Baja  
147 =Vieques  
149 =Villalba  
151 =Yabucoa  
153 =Yauco

**VIRGIN ISLANDS - 78**

010 =St. Croix  
020 =St. John  
030 =St. Thomas



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