

Survey Methodology, Respondent Demographics, and Glossary

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Executive Summary

In Spring 2022, the American Speech-Language-Hearing Association (ASHA) conducted a survey of speech-language pathologists (SLPs) and educational audiologists in school settings. The survey was designed to provide information about school-based service delivery and to update and expand information gathered during previous *Schools Surveys*.

The results are presented in a series of reports. This report is based on responses from SLPs and audiologists in special day/residential schools, preschools, elementary schools, secondary schools, students' homes, administrative offices, and a combination of types of facilities. Data are presented only for those subsets of data in which at least 25 individuals provided a response. Several groups are included as part of the *total* response, even though data are not presented for them in a separate category because fewer than 25 of them provided the necessary information.

Overall Findings

- ◆ The overall response rate was 38%: 38% for SLPs and 36% for audiologists.
- ◆ The most common facility was elementary schools for SLPs (59%) and combined school settings for audiologists (50%).
- ◆ 86% of SLPs and 89% of audiologists were salaried employees.
- ◆ 90% of SLPs and 77% of audiologists were clinical service providers.
- ◆ 87% of SLPs and 84% of audiologists worked full time.
- ◆ 85% of SLPs and 89% of audiologists received an annual salary; the rest were paid an hourly wage.
- ◆ 1% of SLPs held an SLPD or CSS degree, and 65% of audiologists held an AuD degree.
- ◆ SLPs had a median of 15 years of experience in the professions; audiologists had a median of 24 years.
- ◆ 48% of SLPs and 44% of audiologists worked in a suburban area.
- ◆ SLPs were more likely to work in the South (32%), and audiologists were more likely to work in the Midwest (32%) than in other areas of the country.

Survey Methodology

Sample Design

The survey was mailed on February 17, 2022, to a random sample of 8,000 ASHA-certified SLPs and to all 649 ASHA-certified audiologists who were employed in school settings in the United States. Individuals who returned their surveys were removed from second (March 28) and third (April 21) mailings. Each mailing consisted of a personalized cover letter, a numbered survey, and a #10 postage-paid business return envelope inserted into a #11 window envelope with an ASHA return address. Metered postage was at the full, first-class rate. In addition, a be-on-the-lookout email was sent to all sample members on February 15.

Weighting

Because states with few SLPs (e.g., Idaho) were oversampled and those with many (e.g., California) were undersampled, weighting was used when presenting data to restore all groups to their actual proportion in the population of ASHA SLPs. All ASHA-certified audiologists who were employed in school settings were included, so no weighting was necessary for this group.

Response Rate

Of the original 8,649 members of the sample, 209 were ineligible. The number of respondents was 3,191, resulting in a 38% response rate overall (see Table 1).

Table 1: Calculation of Response Rate

Disposition	Total	CCC-SLP	CCC-A
Original sample size	8,649	8,000	649
Undeliverable mailing address	41	39	2
Ineligible: retired	22	20	2
Ineligible: other reasons	146	135	11
Net sample size	8,440	7,806	634
Number of respondents	3,191	2,961	230
Response rate	37.8%	37.9%	36.3%

Nonresponse

Not only is it typically the case that some individuals who receive a survey do not complete it (unit nonresponse), but it is likewise true that some who return their surveys do not answer every question (item nonresponse) and thus do not qualify for inclusion in portions of a report. They may be excluded from analyses because they did not answer a question at all or because their answer disqualified them (such as stating that they were employed part time when a particular analysis was limited to full-time employees). For example, among the 2,961 SLPs who responded, only 2,939 were included in reporting on their primary employment facility (see Figure 1) because they

- ◆ indicated that they had ASHA certification (i.e., the Certificate of Clinical Competence) in Speech-Language Pathology (CCC-SLP);
- ◆ indicated that they were employed full time or part time; and
- ◆ identified the type of employment facility where they were employed.

Experimental Design

Each survey had 28 questions in Arial 11-point font on 11 in. × 17 in. white paper, folded to 8.5 in. × 11 in. and printed in a format of two columns per page on four pages. Surveys were designed in Teleform to be scannable.

We personalized cover letters with the sample member’s name and address and mailed them in window envelopes under the signature of ASHA’s chief executive officer.

We designed a methodological experiment into the survey. We randomly selected half of the SLPs and half of the audiologists to receive a question about making up missed sessions. Half received the question with four response options; the other half had three options. Both questions are shown below, and responses are in Table 2.

Are you required to make up missed sessions? *Select all that apply.*

1. I am not required to make up missed sessions.
2. When the student misses a session due to assembly or classroom activity.
3. Any time a student misses a session for any reason.
4. Any time I miss a session for any reason.

Are you required to make up missed sessions? *Select one response.*

1. Yes – but only for a few circumstances
2. Yes – always or almost always
3. No – never or almost never

Table 2: Responses to Experimental Question (%)

Response Wording	CCC-SLP	CCC-A
I am not required to make up missed sessions.	36	44
When the student misses a session due to assembly or classroom activity.	14	8
Any time a student misses a session for any reason.	7	11
Any time I miss a session for any reason.	60	33
Yes – but only for a few circumstances	45	18
Yes – always or almost always	34	35
No – never or almost never	21	47

Based on these data, question wording on future surveys would depend on the focus that is needed. Is it more valuable to know the reasons for making up missed sessions (version a) or the frequency of making up missed sessions (version b)?

Respondents Versus Population

The closer the match between survey respondents and the population of ASHA school-based constituents from which they were drawn, the more validity there is in generalizing from the sample to the population—that is, the more truth there is in saying that the people who answered the survey questions represent the broader group from which they were selected. Demographic variables that appear in both the membership database and the survey include status, primary employment facility and function, highest earned degree, and region of the country.

Comparisons between the respondents and the population can be made for their employment *status*.

- In the population, 85% of SLPs and 84% of audiologists who worked in the schools were employed *full time*, compared with 87% and 84%, respectively of the survey respondents.

A second area of comparison is their primary employment facility.

- In the population, 41% of SLPs and 3% of audiologists who worked full time or part time in the schools were employed in *elementary schools*, compared with 59% and 28%, respectively, of the survey respondents.

A second area of comparison is their primary *function*.

- 96% of SLPs and 90% of audiologists in the population who worked full time or part time in the schools were *clinical service providers*, compared with 89% of SLPs and 77% of audiologists among the survey respondents.

Another characteristic to be compared is the *highest earned degree*.

- 1% of SLPs and 44% of audiologists in the population who worked full time or part time in the schools reported having earned a *doctoral degree*, compared with 1% of SLPs and 66% of audiologists among the survey respondents.

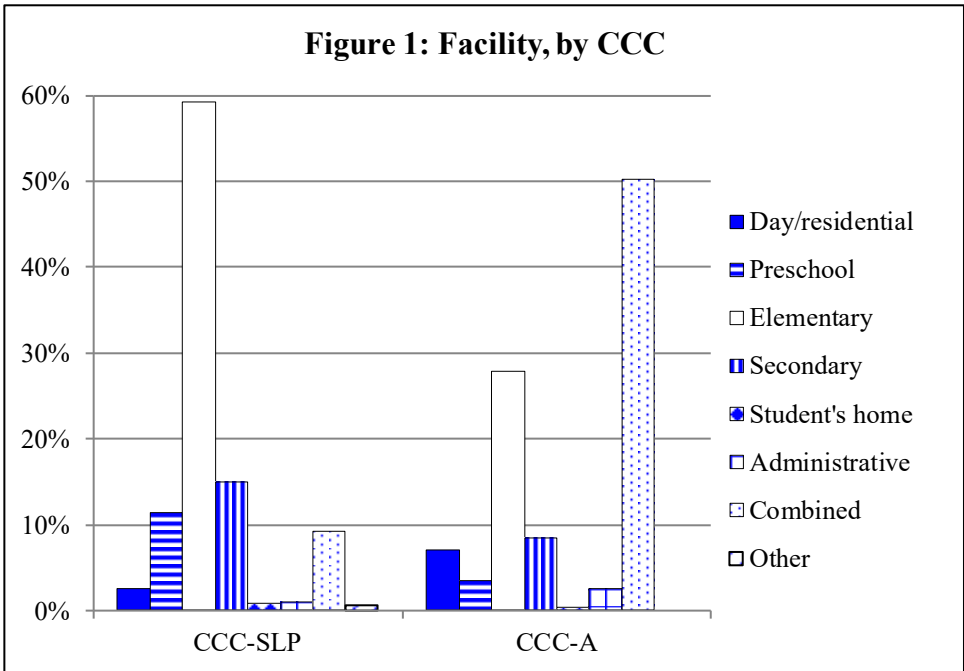
The survey sample was stratified by state; that is, states with small numbers of ASHA constituents were oversampled, and those with large numbers were undersampled.

- 26% of SLPs and 17% of audiologists in the population who worked full time or part time in the schools—compared with 25% of SLPs and 16% of audiologists who replied to the survey—worked in the *Northeast*.
- 23% of SLPs and 26% of audiologists in the population who worked full time or part time in the schools—compared with 24% of SLPs and 32% of audiologists who replied to the survey—worked in the *Midwest*.
- 33% of SLPs and 32% of audiologists in the population who worked full time or part time in the schools—compared with 32% of SLPs and 27% of audiologists who replied to the survey—worked in the *South*.
- 18% of SLPs and 27% of audiologists in the population who worked full time or part time in the schools—compared with 19% of SLPs and 26% of audiologists who replied to the survey—worked in the *West*.

Demo-
graphics

Primary
Employment
Facility

More SLPs were employed in *elementary* schools (59%) and more audiologists in *combined* school settings (50%) than in any other facility type, as shown in Figure 1.



Note. For CCC-SLP, $n = 2,939$. For CCC-A, $n = 227$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Excluded
Facilities

We included individuals who worked in an *other* type of facility in the 2022 *Schools Survey* reports only as part of the total—not as a separate category of facility—because of the ambiguous nature of this small group of individuals ($n = 18$ SLPs). We also included the few SLPs who worked in students’ homes ($n = 26$) and in administrative offices ($n = 30$) in the total data, but they are not broken out or shown separately.

We also included the small groups of audiologists who worked in special day/residential schools ($n = 16$), preschools ($n = 8$), secondary schools ($n = 19$), student’s home ($n = 1$), and administrative offices ($n = 6$) in the total.

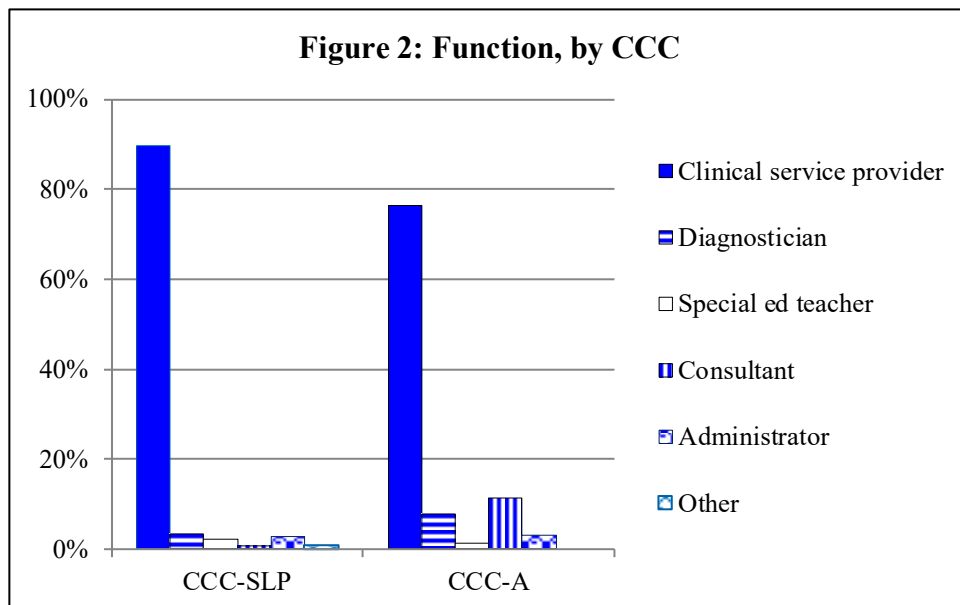
Sixteen SLPs and three audiologists did not identify a primary employment facility despite being employed full- or part time.

Employment
Situation

Both SLPs (86%) and audiologists (89%) were more likely to be salaried employees than either contract employees or self employed.

Primary Employment Function

The vast majority of respondents were clinical service providers, including 90% of SLPs and 77% of audiologists (see Figure 2).



Note. For CCC-SLP, $n=2,910$. For CCC-A, $n=221$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Employment Status

Being identified as employed full time or part time in the ASHA member database was one of the requirements for being included in the sample of ASHA constituents who received the 2022 Schools Survey. Among those who responded, 87% of the SLPs and 84% of the audiologists worked full time. An additional 13% of SLPs and 16% of audiologists were employed part time.

Salary Basis

Most of the SLPs (85%) and most of the audiologists (89%) were paid an annual salary. The rest received an hourly wage.

Highest Degree

Few SLPs (0.4%) or audiologists (1.7%) had earned a PhD, but audiologists were much more likely than SLPs to have earned a clinical doctorate.

- 65% of audiologists had earned an AuD degree as their highest degree.
- 1% of SLPs had earned an SLPD or CScD degree.
- 99% of SLPs and 34% of audiologists had earned a master’s as their highest degree.

Years of Experience

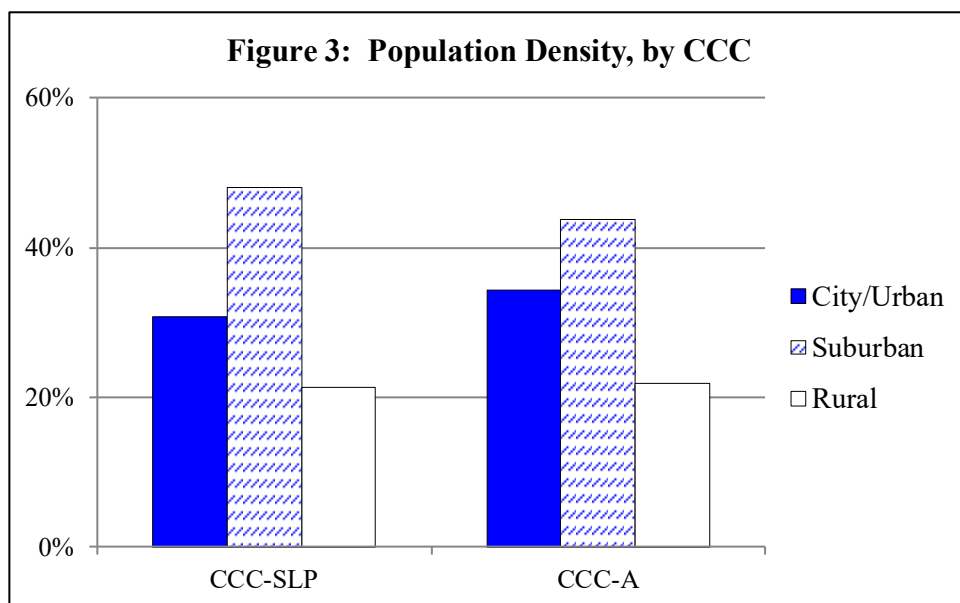
SLPs averaged 17 (mean) or 15 (median) years of experience in the *professions* and 14 (mean) or 12 (median) years of experience in the *schools*.

Audiologists averaged more years of experience than did the SLPs. The mean number of years of experience that audiologists had in the *professions* was 23, and the median was 24 years. Audiologists averaged 16 years of experience in the *schools*. The median was 15 years.

Population Density

Nearly half (48%) of the SLPs who were employed either full time or part time worked in a suburban area (see Figure 3). The type of school setting was related to the locale in which SLPs worked ($p = .000$; not shown in any figure).

- More than half of the SLPs in preschools (54%), secondary schools (56%), and special day/residential schools (65%) worked in suburban areas.
- SLPs in elementary schools (46%) were more likely to work in suburban areas than in other types of areas.
- More SLPs in administrative offices (43%) and in combined school settings (39%) worked in city/urban areas than in other types of areas.

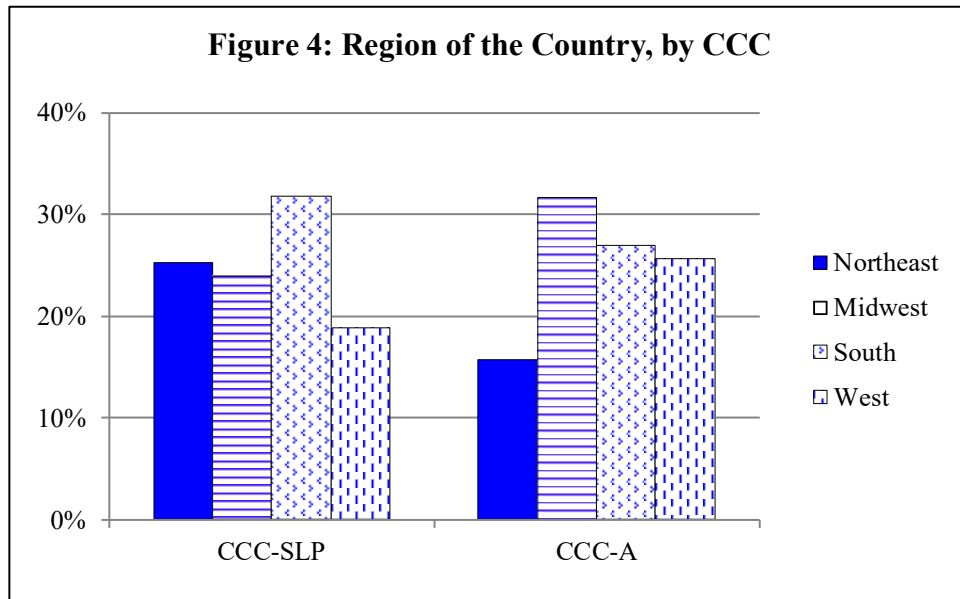


Note. For CCC-SLP, $n = 2,883$. For CCC-A, $n = 224$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Of the audiologists, 44% worked in suburban areas, 34% in city/urban areas, and 22% in rural areas. The type of school setting was not significantly related to the locale in which audiologists worked ($p = .877$).

Geographic Distribution

Among the respondents, SLPs were more likely to work in the South (32%) and audiologists in the Midwest (32%) than in other regions of the country. Moreover, SLPs (25%) were much more likely than audiologists (16%) to work in the Northeast and were much less likely to work in the West (19% and 26%, respectively; see Figure 4).



Note. For CCC-SLP, $n = 2,955$. For CCC-A, $n = 230$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Geographic distribution was related to type of facility for SLPs ($p = .000$). Ranges for SLPs were between

- a low of 10% in administrative offices and a high of 52% in special day/residential schools for those who work in the Northeast;
- 16% who work in special day/residential schools and 30% who work in preschools in the Midwest;
- 16% of SLPs who work in special day/residential schools and 52% who work in administrative offices in the South; and
- 17% who work in special day/residential schools and administrative offices and 20% who work in combined school settings in the West.

Geographic distribution was not related to type of facility for audiologists ($p = .906$).

Reports

We have presented results from the *2022 Schools Survey* in a series of reports for SLPs:

- *Survey Summary Report: Numbers and Types of Responses, SLPs*
- *SLP Annual Salaries and Hourly Wages*
- *SLP Caseload and Workload Characteristics*
- *SLP Workforce and Work Conditions*
- *Survey Methodology, Respondent Demographics, and Glossary, SLPs*

Results from the educational audiologists are presented in a separate report: *Survey Summary Report: Numbers and Types of Responses, Educational Audiologists*.

Suggested Citation

American Speech-Language-Hearing Association. (2022). *2022 Schools Survey report: Survey methodology, respondent demographics, and glossary*. www.asha.org/research/memberdata/schools-survey/

Resources

Agresti, A., & Finlay, B. (1986). *Statistical methods for the social sciences* (2nd ed.). Dellen.

Dillman, D. A. (2000). *Mail and Internet surveys: The tailored design method* (2nd ed.). Wiley.

Thank You!

ASHA would like to thank the SLPs and audiologists who completed the *2022 Schools Survey*. Reports like this one are possible only because people like *you* participate.

Is this information valuable to you? If so, please accept invitations to participate in other ASHA-sponsored surveys and focus groups. You are the experts, and we rely on you to provide data to share with your fellow members. ASHA surveys benefit *you*.



Additional Information

If you would like to speak with a member of the ASHA School Services in Speech-Language Pathology Team about the survey, please send a message to schools@asha.org or call ASHA's Action Center (800-498-2071) and ask to be connected to a School Services staff member. To learn more about how the Association is working on behalf of school-based ASHA Certified Members, visit the ASHA Schools webpages at www.asha.org/slp/schools/.

Glossary

The following is a glossary of terms used in the *2022 Schools Survey* reports.

Types of Facilities

- School:
- Special day/residential
 - Pre-elementary (preschool)
 - Elementary
 - Secondary school (middle school, junior high, senior high)
 - Student's home
 - Administrative office
 - Combination from the above list
 - Other

Respondents self-identified their primary employment facility as one of the following types of schools: special day/residential; pre-elementary (preschool); elementary; secondary (middle school, junior high, senior high); student's home; administrative office; combination from the above list; or other. Individuals from the *other* category are included when total responses are discussed, but they are not presented as a separate type of facility because their numbers were fairly small (18 SLPs and 0 audiologists) and because of the uncertain nature of the category.



Random Sample

We selected a random, stratified sample of 8,000 ASHA-certified SLPs who were school-based to participate in this survey. We also selected all 649 ASHA-certified school-based audiologists. A *random sample* is a probabilistic sample in which each person has an equal chance of being selected. A sample is stratified when the population is divided into separate groups (i.e., strata), and a random sample is drawn from each stratum. In this survey, there were 51 strata: the 50 U.S. states plus the District of Columbia.

Response Rate

The response rate was calculated using the following equation:

$$RR = \frac{(C + P)}{(S + ID) - (Ret + I)}$$

- where
- RR = Response rate
 - C = Number of completed surveys
 - P = Number of partial surveys
 - S = Sample size
 - ID = Ripped off identification number
 - Ret = Ineligible because of retirement
 - I = Ineligible for other reasons (e.g., does not work in a school, is no longer in the discipline)

$$RR = \frac{3191}{(8,649) - (22 + 187)} = 37.8\%$$

Measures of Central Tendency

Mean: To find the mean, add the total of all the values, and divide by n (the number of items).

Median: To find the median, arrange the values in order, from lowest to highest. Then, select the value in the middle position.

Mode: The mode is the value that occurs more often than any other.

Example: Sample data set

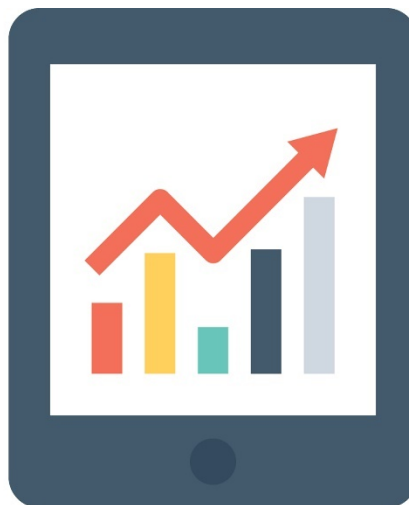
1, 1, 7, 34, 88

Mean: $(1 + 1 + 7 + 34 + 88) / 5 = 26.2$

Median: 7

Mode: 1

The statistic that is reported most often in the *2022 Schools Survey* is the median (middle) statistic unless otherwise noted. Median statistics are presented because they are more stable and less sensitive to extreme values than are mean values.



Statistical Significance

p value refers to probability. It is found in expressions such as $p = .04$, meaning “There is a 4% chance of observing a difference as large as the one that you observed even if the two population means are identical (the null hypothesis is true).” The smaller the number, the less likely that the result was due to chance.

A z -score (also known as a standard score) indicates how many standard deviations a score is from the mean.

Appendix

States, by Regions and Divisions

Regions of the Country

Northeast

- ◆ Middle Atlantic
 - New Jersey
 - New York
 - Pennsylvania
- ◆ New England
 - Connecticut
 - Maine
 - Massachusetts
 - New Hampshire
 - Rhode Island
 - Vermont

South

- ◆ East South Central
 - Alabama
 - Kentucky
 - Mississippi
 - Tennessee
- ◆ South Atlantic
 - Delaware
 - District of Columbia
 - Florida
 - Georgia
 - Maryland
 - North Carolina
 - South Carolina
 - Virginia
 - West Virginia
- ◆ West South Central
 - Arkansas
 - Louisiana
 - Oklahoma
 - Texas

Midwest

- ◆ East North Central
 - Illinois
 - Indiana
 - Michigan
 - Ohio
 - Wisconsin
- ◆ West North Central
 - Iowa
 - Kansas
 - Minnesota
 - Missouri
 - Nebraska
 - North Dakota
 - South Dakota
- ◆ Mountain
 - Arizona
 - Colorado
 - Idaho
 - Montana
 - Nevada
 - New Mexico
 - Utah
 - Wyoming

West

- ◆ Pacific
 - Alaska
 - California
 - Hawaii
 - Oregon
 - Washington