

# DATA BULLETIN

## DESIGNATION OF TEACHER SHORTAGE AREAS FOR THE 2012-13 SCHOOL YEAR (Fall Hiring Report)

Results from the 2011 Fall Hiring Survey revealed little change in the number of total and available positions that the Local Education Agencies (LEAs) sought to staff for the 2011-12 school year, in comparison with the prior year. However, these stagnant overall figures obscure some more negative local trends as, for example, the number of available positions dropped sharply in the larger urban districts and total positions declined slightly. Fourteen public LEAs and nearly half of all state-approved private special education programs had no available positions. Furthermore, the percentage of districts that noted that their local budgetary and administrative difficulties negatively affected their ability to staff their available positions nearly tripled. Eight of the 10 shortage areas identified by the 2011 Fall Hiring Survey were also shortage areas in the prior year. New shortage areas included Hearing Impaired, PK-12, and School and Library Media Specialists.

The Fall Hiring Survey is an annual collection of information, primarily concerning certified educational positions, designed to track employment trends and identify teacher shortage areas. Results from the 2011 Fall Hiring Survey were used to determine the shortage areas for the 2012-13 school year. Teachers and administrators in shortage areas may qualify for federal student loan deferral or forgiveness and may also be eligible for mortgage assistance through the Connecticut Housing Finance Authority (CHFA). School districts may utilize the shortage area designations to rehire retired teachers and administrators who are not subject to earnings limits. Fall Hiring Survey participants in 2011 included the 166 public school districts, 17 charter schools, six regional educational service centers (RESCs), the three endowed and incorporated academies, the

### *Teacher Shortage Areas for the 2012-13 School Year (based upon 2011 Fall Hiring Survey results):*

- Bilingual Education, PK-12
- Comprehensive Special Education, K-12
- Hearing Impaired, PK-12
- Intermediate Administrator
- Mathematics, 7-12
- Remedial Reading and Language Arts, 1-12
- School Library and Media Specialist
- Science, 7-12
- Speech and Language Pathologist
- World Languages, 7-12

Connecticut Technical High School System, the Connecticut Departments of Corrections, Children and Families, and Developmental Services, and 50 state-approved, non-public special education programs.

### **Public School Employment Trends, School Years 2007-08 to 2011-12**

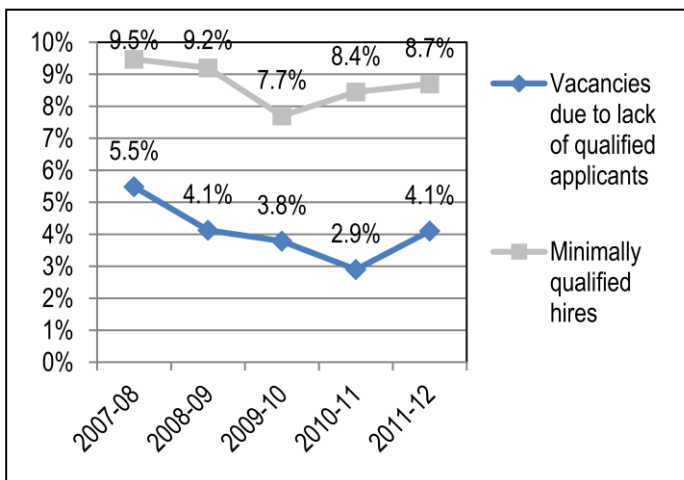
Static public school employment figures reflected the continuing weak economy and resultant strained local and state education budgets. There was very little change in the total number of certified positions (-0.2 percent), available positions (0.2 percent) and the rate at which available positions were filled (-0.5 percentage points: Table 1). Consequently, the numbers of total certified and available positions remained below those from the 2007-08 school year, which was the beginning of the most recent recession. Fourteen public LEAs (7 percent) did not have any available positions and this was a slight increase from thirteen in the previous year.

**Table 1: Public School Hiring, School Years 2007-08 to 2011-12**

School Year	Total Certified Positions	Available Positions Sought to Fill	Percent of Available Positions that were Part-time	Available Positions as Percent of Total Positions	Percent of Available Positions Filled by Oct. 1	Available Positions Not Filled by Oct. 1	Available Positions Not Filled by October 1 Due to Lack of Qualified Applicants	Median Applicants per Available Position
2011-12	52,126	3,267	10.4%	6.3%	92.1%	258	134	25
2010-11	52,208	3,260	10.4%	6.2%	92.6%	241	95	23
2009-10	52,718	2,957	10.9%	5.6%	91.4%	255	112	20
2008-09	53,427	4,533	8.1%	8.5%	94.1%	269	187	16
2007-08	53,129	4,793	8.2%	9.0%	92.0%	382	263	15
Change 2010-11 to 2011-12	-0.2%	0.2%	-	-	-	7.1%	41.1%	8.7%
Change 2007-08 to 2011-12	-1.9%	-31.8%	-	-	-	-32.5%	-49.1%	66.7%

While the number of available positions declined over the last five years, the median number of appropriately certified applicants per position increased sharply from 15 to 25. As a consequence of these and other factors, the percentage of available positions that remained vacant due to the lack of qualified applicants steadily declined from 2007 to 2010, but surprisingly increased in 2011 (Figure 1).<sup>1</sup> Similarly, the percent of “minimally qualified” hires, those selected from small applicant pools whose quality had been rated poorly by districts, declined from 2007 through 2009, but has increased slightly over the last two years.<sup>2</sup>

**Figure 1: Percent of Available Positions Remaining Vacant Due to Lack of Qualified Applicants and Percent of All Minimally Qualified Hires,**

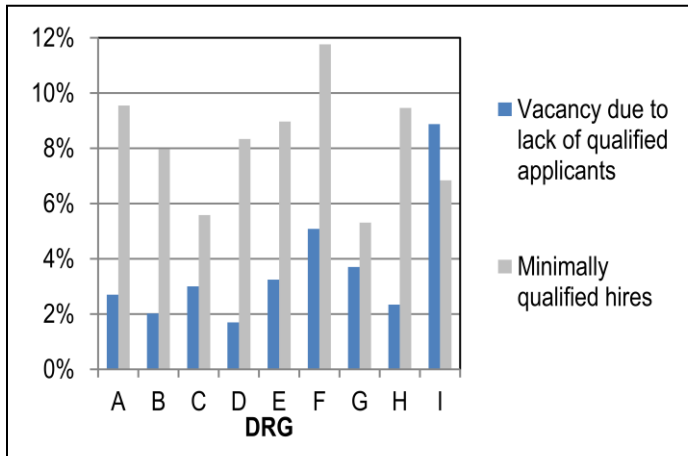


**Table 2: Hiring Statistics by District Reference Groups, 2011-12**

DRG	Total Certified Positions	Change in Total Positions, 2010 to 2011	Available Positions Sought to Fill for 2010-11 School Year	Change in Available Positions, 2010 to 2011	Percent of Available Positions that were Part-time	Percent of Available Positions Filled by October 1	Available Positions Not Filled by October 1	Median Applications per Available Position
A	2,974	0.7%	185	5.1%	12.4%	96.2%	7	32.5
B	8,976	0.4%	544	4.2%	15.6%	96.9%	17	23
C	3,710	0.1%	233	15.3%	19.3%	92.3%	18	22
D	7,617	-1.0%	412	2.5%	11.7%	96.1%	16	29
E	2,510	1.9%	154	-0.6%	14.9%	94.2%	9	20
F	2,652	-0.2%	118	0.9%	11.9%	86.4%	16	21
G	6,051	-0.7%	378	39.5%	8.2%	94.7%	20	29
H	5,806	0.2%	342	-19.9%	4.1%	92.7%	25	25
I	8,537	-0.6%	552	-16.7%	2.7%	90.0%	55	23.5
NA*	4,449	2.4%	443	2.3%	12.0%	79.7%	90	13

\*Includes the Connecticut Technical High School System, Unified School Districts, charter schools, RESCs and state-approved private special education programs.

**Figure 2: Percent of Available Positions that Remained Vacant, Due to a Lack of Qualified Applicants and Minimally Qualified Hires, as a Percent of All Hires by DRG, 2011-12**



### State-approved, Non-public Special Education Programs

The continuing fragile economy also affected the state-approved, non-public special education programs. Among these 50 programs, nearly half (22) did not have any available certified positions that they sought to fill for the

**Table 3: State-approved, Non-public Special Education Programs, 2008-09 to 2011-12**

School Year	Total Certified Positions	Available Positions LEAs Sought to Fill	Percent of Available Positions that were Part-time	Available Positions as a Percent of Total Positions	Percent of Available Positions Filled by October 1	Available Positions Not Filled by October 1	Available Positions Not Filled by October 1 Due to Lack of Qualified Applicants	Median Applications per Available Position
2011-12	955	94	13.8%	9.8%	84.0%	15	12	5
2010-11	900	108	7.4%	12.0%	82.4%	19	9	6
2009-10	904	111	10.8%	12.3%	80.2%	22	14	5
2008-09	857	110	4.5%	12.8%	75.5%	27	20	3.5

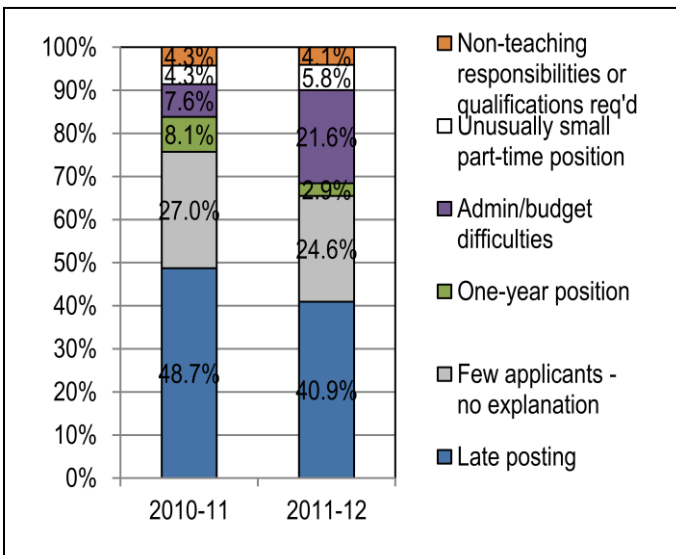
**Table 4: Public-school, Non-certified Special Services, 2011-12**

Service Area	Available Positions LEAs Sought to Fill for 2010-11 School Year	Available Positions Not Filled by October 1	Median Applicants per Available Position
Licensed Physical Therapist	2	0	4
Licensed Occupational Therapist	3	0	11.5
Pre-kindergarten Paraprofessional	11	1	30
Kindergarten Paraprofessional	15	0	65.5
Regular Program Paraprofessional	34	4	19
Special Education Paraprofessional	170	13	33
English as a Second Language (ESL)/Bilingual Paraprofessional	2	0	10.5
Other Program Paraprofessional	14	1	10

**Accounting for October Vacancies**

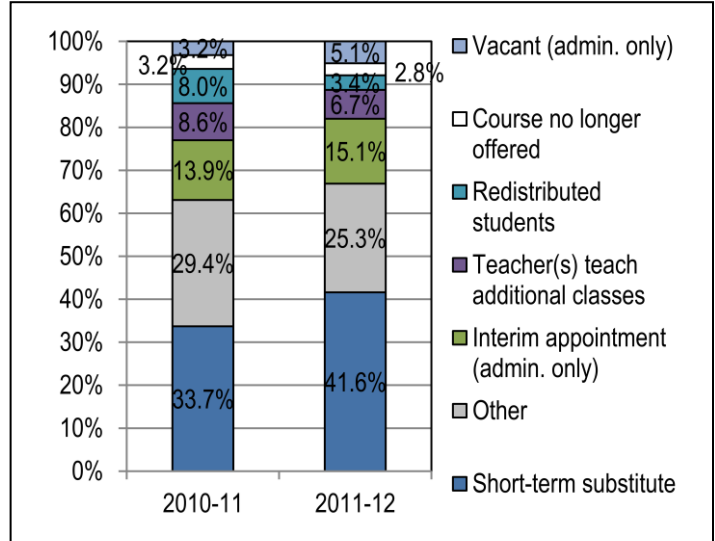
Public school LEAs reported that 52 percent of all positions, which remained vacant on October 1, were due to the lack of qualified candidates. This was a significant increase from 39 percent in the previous year and is particularly surprising, as the median number of applicants per available position increased during this time. Districts with October vacancies most frequently cited late postings as a key factor that affected the size and quality of their applicant pools (Figure 3). However, this percentage declined in comparison with 2010 as did the percentage that cited one-year positions as a factor. Conversely, the percentage of districts that cited local administrative or budgetary difficulties nearly tripled from 7.6 percent in 2010 to 21.6 percent in 2011.

**Figure 3: Factors Affecting the Size and Quality of Applicant Pools for Positions that Remained Vacant on October 1, 2010, and October 1, 2011**



substitutes increased in 2011. Additionally, LEAs left more administrative positions vacant. Conversely, they were less likely to cancel courses, redistribute students among other classes or require teachers to teach additional classes.

**Figure 4: LEA Responses to October Vacancies, 2010-11 and 2011-12**



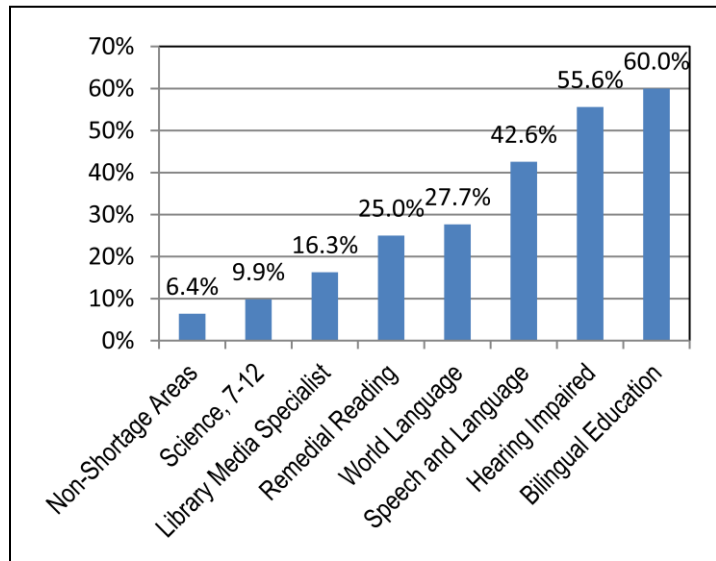
**Shortage Areas, 2012-13**

Connecticut’s shortage areas have remained fairly consistent over the last five years. Based upon the 2011 Fall Hiring Survey, the only new shortage areas for the 2012-13 school year will be School Library Media Specialist and Hearing Impaired, PK-12. Collectively, the shortage areas accounted for 38.2 percent of total positions and 44.4 percent of available positions that LEAs sought to fill. They were 52.8 percent of all vacancies and 65.1 percent of vacancies due to the lack of qualified applicants. The shortage areas accounted for only 32 percent of all first Connecticut certificates that were issued or renewed, but most of the positions were staffed under Durational Shortage Area Permits (DSAPs: 70.1 percent) and long-term substitutes (54.8 percent). They were also 60.9 percent of minimally qualified hires. Among the

**Table 5: Designated Shortage Areas for the 2012-13 School Year Based upon 2011 Fall Hiring Survey Results**

A final shortage indicator was the prevalence of “minimally qualified hires (See Footnote 2).” They were a significant percentage of new hires for several shortage areas (Figure 5).

**Figure 5: Minimally Qualified Hires as a Percentage of All Hires in Selected Shortage Areas, 2011-12**



#### Footnotes

<sup>1</sup>In the distribution of applicants for available positions, the median is the middle value, meaning that half of all available positions had more applicants while half had fewer. Positions remaining vacant had fewer median applicants than those that were filled (18 versus 25). The median varies by endorsement but the overall median is intended to provide a general indicator. See Table 6 for the median number of applicants per position by endorsement.

<sup>2</sup>“Minimally qualified hires” are those hired from an applicant pool of fewer than 20, which also received the poorest quality rating from LEAs (“few or no ‘minimally qualified’ candidates”).

<sup>3</sup>For more on DRGs, including DRG membership, see [http://sdeportal.ct.gov/Cedar/Files/Pdf/Reports/db\\_drg\\_06\\_2006.pdf](http://sdeportal.ct.gov/Cedar/Files/Pdf/Reports/db_drg_06_2006.pdf).

<sup>4</sup>State-approved, non-public special education programs are private facilities that have applied to and received approval from the Connecticut State Department of Education (CSDE) to provide special education services to public school students upon the request of public school districts. They are required to participate in the Fall Hiring Survey. However, they are private entities and so their data were not included with the public school figures (Table 1 and Figures 1 through 4). Their data are, however, included in the determination of shortage areas.

<sup>5</sup>Non-certified, special services data were not included in any analysis and are only presented in Table 4.

#### For Further Information Contact:

Subject	Contact	Contact Information
Federal Perkins Loan Deferment/Forgiveness	U.S. Department of Education	1-800-433-3243 and <a href="http://studentaid.ed.gov/PORTALSWebApp/students/english/cancelstaff.jsp">http://studentaid.ed.gov/PORTALSWebApp/students/english/cancelstaff.jsp</a>
Teachers’ Mortgage Assistance Program	Connecticut Housing Finance Authority (CHFA)	860-721-9501 or 860-571-3502 and <a href="http://www.chfa.org">http://www.chfa.org</a>
Teacher Certification	CSDE Bureau of Certification Helpline	860-713-6969 and <a href="http://www.sde.ct.gov/sde/cwp/view.asp?a=2613&amp;Q=321230">http://www.sde.ct.gov/sde/cwp/view.asp?a=2613&amp;Q=321230</a>
Teacher Retirement/Rehiring of Retired Teachers	Teachers’ Retirement Board	860-241-8402 or 1-800-504-1102 and <a href="http://www.ct.gov/trb/site/default.asp">http://www.ct.gov/trb/site/default.asp</a>
Fall Hiring Survey Data and Analysis	CSDE Bureau of Data Collection, Research and Evaluation	860-713-6856 or <a href="mailto:michael.sabados@ct.gov">michael.sabados@ct.gov</a>

**Table 6: 2011-12 Hiring Statistics by Endorsement**

Endorsement	Available Positions that LEAs Sought to Fill for 2011-12	October 1 Vacancies Due to Lack of Qualified Applicants	Durational Shortage Area Permits	Temporary Authorization for Minor Assignments	Minimally Qualified Hires	Median Applicants	First CT Certificates and Renewals	Median Applicant Quality Rating <sup>1</sup>	Shortage Rank
Agriculture, PK-12	3	0	0	0	0	11	7	4	43
Art, PK-12	61	6	1	0	2	30.5	97	3	18
Bilingual, PK-12	18	8	13	0	6	8	5	1	3
Blind, PK-12	1	0	0	0	1	2	1	1	31
Business, 7-12	24	1	0	0	0	29	31	4	34
Comprehensive Special Education, K-12	377	12	28	0	11	31	452	3	7
Cooperative Work Education/Diversified	4	0	1	0	1	4.5	1	2	30
Department Chairperson	7	1	12	0	1	3	18	2	14
Elementary, K-6	649	7	1	0	2	178	1324	5	17
English, 7-12	232	2	3	3	4	53	316	4	24
English, Middle School	33	1	2	0	9	33	24	3	27
External Diploma Program/Noncredit Mandated Program	1	0	0	0	0	14	58	4	46
Health Occupations - VT Schools	4	4	0	0	0	16	3	1	25
Health, PK-12	49	0	1	3	2	39	47	4	41
Hearing Impaired, PK-12	14	5	0	0	5	4.5	9	1.5	9
High School Diploma Program	8	5	0	0	0	10	208	2.5	22
History and Social Studies, 7-12	147	1	0	4	6	72.5	298	4	29
History and Social Studies, Middle School	8	0	0	1	0	96.5	23	4.5	48
Home Economics, PK-12	18	1	1	0	9	6	10	1	16
Integrated Early Childhood/Spec. Ed, Birth-K	12	0	2	0	5	17	13	1.5	33
Integrated Early Childhood/Spec. Ed, Nursery-K- Elem. 1-3	43	0	1	0	3	20	106	4	40
Intermediate Administrator	231	12	32	0	13	24	494	3	6
Mathematics, 7-12	233	9	8	1	8	36	216	3	10
Mathematics, Middle School	39	3	2	0	13	19	41	2	12
Music, PK-12	97	4	1	0	9	25	107	3	15
Occupational Subject, VT School	34	2	0	0	6	16	49	1	23
Partially Sighted, PK-12	1	0	0	0	1	2	1	1	31
Physical Education, PK-12	79	0	0	0	3	40	137	4	45
Practical Nurse Education Instruction	4	0	0	0	0	7	3	2	37
Reading and Language Arts Consultant	18	3	0	0	4	8	38	2	19
Remedial Reading and Language Arts, 1-12	73	5	2	0	16	12	23	2	8
School Business Administrator	7	0	0	0	0	15	38	2	47
School Counselor	93	0	3	0	5	40	161	4	42
School Library Media Specialist	52	7	12	0	7	11.5	33	2	4
School Nurse Teacher	5	0	0	0	0	11	2	2	39
School Psychologist	72	0	0	0	5	20	82	3	38
School Social Worker	46	2	0	0	1	14	111	3	26
Science, 7-12	239	12	3	5	22	19	228	2	5
Science, Middle School	28	0	11	1	2	22	19	3	36
Speech and Language Pathologist	110	14	0	0	40	6	75	2	1
Superintendent	18	1	0	0	0	7	42	4	28
Technology Education, PK-12	34	1	3	0	10	11	28	2	20
TESOL, PK-12	34	3	5	0	5	12	31	2	11
Trade and Industrial Occupations - Comprehensive High School	4	0	0	0	3	7	15	1	34
Unique Subject Area Endorsement	9	3	5	0	3	10	11	1.5	13
Vocational Agriculture, 7-12	1	0	0	0	0	11	4	4	44
World Language Instructor, Elementary	8	1	6	0	1	5	33	2	21
World Languages, 7-12	213	15	18	2	54	8	130	2	1

<sup>1</sup>Applicant Pool Ratings: 1) Few or no minimally qualified applicants; 2) Some acceptable applicants; 3) Many acceptable applicants; 4) Some high-quality applicants; and 5) Many high-quality applicants.

## Appendix A: Shortage Area Methodology

The Connecticut State Department of Education's (CSDE) Bureau of Data Collection, Research and Evaluation and the Bureau of Educator Standards and Certification collaborated to develop a methodology to identify teacher shortage areas that incorporate several significant factors (Table 7). Data for this analysis are from the Bureau of Teacher Certification's Connecticut Educator Certification System and the Fall Hiring Survey, an annual employment survey covering the current school year. In 2011, Fall Hiring Survey participants included 166 public school districts, 17 charter schools, six regional educational service centers (RESCs), the three endowed and incorporated academies, 50 state-approved, non-public special education programs, the Connecticut Technical High School System and the Connecticut Departments of Correction, Children and Families, and Developmental Services.

Endorsements for which positions were available in the current school year are included in the shortage area analysis. An "available position" is one for which an LEA actively sought internal and external applicants in response to a position announcement and/or reviewed applications from existing files. There are, however, four areas for which the individual endorsements are aggregated into general categories: World Languages, 7-12 (French, 7-12; German, 7-12; Italian, 7-12; Latin, 7-12; Russian, 7-12; Spanish, 7-12; and Other World Languages, 7-12); Science, 7-12 (Biology, 7-12; Chemistry, 7-12; Physics, 7-12; Earth Science, 7-12; and General Science, 7-12); Science, Middle School (Biology, Middle School; Chemistry, Middle School; Physics, Middle

School; Earth Science, Middle School; General Science, Middle School; and Integrated Science, Middle School); and Intermediate Administrator (Principal, Assistant/Vice Principal; Subject Area Supervisor, District Level; Program Director/Curriculum Coordinator, School Level; and Assistant/Deputy/Associate Superintendent).

For the Fall Hiring Survey, LEAs may report up to two endorsements per available position (e.g., Mathematics, 7-12, and Physics, 7-12). When there are multiple endorsements per position, each endorsement is counted as a separate position for calculating the shortage area scores (e.g., a position requiring Mathematics, 7-12, and Physics 7-12, endorsements is treated as one Mathematics 7-12 position and one Physics 7-12 position). This is only done for calculating the shortage areas and not for any other analysis presented in this Bulletin.

The first step in identifying shortage areas is assigning ranks to each endorsement, from least to most severe, for each of the following four factors: number of vacancies due to the lack of qualified candidates; median number of applicants per position; number of first CT certificates and renewals divided by the number of available positions; and the sum of DSAPs, long-term substitutes, minimally qualified hires and Temporary Authorizations for Minor Assignments (TAMAs). These four ranks are placed in the CSDE's formula to produce a shortage score for each endorsement. Finally, these shortage scores are ranked to identify the top ten shortage areas.

**Table 7: Factors Used for Calculation of Shortage Area Scores**

Factor	Description
Durational Shortage Area Permits (DSAP)	Issued by the CSDE to LEAs so they may staff positions for which there was a shortage of available, qualified candidates. Teachers working under a DSAP must hold a bachelor's degree, have 12 semester hours in the subject area being taught and meet the state's basic skills testing requirement. DSAPs are issued for a year and may be conditionally reissued for an additional two years.
First issued or renewed Connecticut certificates per position	The number of people receiving or renewing Connecticut certificates between October 1, 2010, and September 30, 2011, divided by the total number of available positions in each endorsement area.
Long-term substitutes	Individuals serving in the employ of a board of education in the same assignment for more than 40 school days.
Median number of appropriately credentialed applicants per available position	Median is the middle number in a distribution (e.g., the number of applicants per position for which half of all available positions had more applicants and half had fewer applicants).
Minimally qualified hires	Those hired from an applicant pool of fewer than 20, which also received the lowest quality rating from the LEA ("Few or no minimally qualified applicants").
October vacancies due to the lack of qualified applicants	Positions that LEAs sought to fill for the 2011-12 school year but could not because they had no available qualified applicants.
Temporary Authorizations for Minor Assignments (TAMAs)	Issued by the CSDE to districts which cannot find an appropriately credentialed applicant with certification in the subject area of the minor assignment. The minor assignments supplement a primary assignment. Teachers working under a TAMA must be certified in another area and have 12 semester hours of credit in the subject being taught. TAMAs are issued for a year and may be conditionally reissued for an additional year.