

## PUBLIC SCHOOL HIRING TRENDS AND TEACHER SHORTAGE AREAS FOR 2014–15

### The Fall Hiring Survey and Shortage Areas

Each year in the fall, the Connecticut State Department of Education surveys certified educational positions to ascertain:

- the number of teaching and administrative vacancies that existed before the start of the school year;
- the quantity and quality of applications received for those vacancies; and
- the vacancies that remained after the start of school.

In fall 2013, survey participants included:

- public school districts (166 local educational agencies; 17 charter schools; six regional educational service centers [RESCs]; three endowed and incorporated academies; the Connecticut Technical High School System; and the State Departments of Corrections, Children and Families, and Developmental Services); and
- 48 state-approved private special education programs.

Results from this survey were used to determine the shortage areas for the 2014–15 school year (see text box on the right). Nine of the 10 shortage areas for 2014–15 were also shortage areas in 2013–14. TESOL (Teachers of English to Speakers of Other Languages), PK–12 will be the only new shortage area in the 2014–15 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 use the shortage area designations to rehire retired teachers and administrators who are not subject to earnings limits.*

### Statewide Employment Trends — Public School Districts

Results of the Fall Hiring Survey for the 2013–14 school year illuminate robust growth following the most recent recession

#### Teacher Shortage Areas for the 2014–15 School Year:

- Bilingual Education, PK–12
- Comprehensive Special Education, K–12
- Intermediate Administrator
- Mathematics, 7–12
- School Library and Media Specialist
- Science, 7–12
- Speech and Language Pathologist
- Technology Education, PK–12
- TESOL, PK–12
- World Languages, 7–12

and the subsequent slow recovery. Specifically, the total number of certified positions, available certified positions (vacancies) that LEAs sought to staff before the start of the school year, the percentage of available positions as a share of total positions, and the percentage of available positions filled by districts by October 1 all reached their highest levels in five years (Table 1). With this recent growth, the total number of certified positions approached its pre-recession level (53,129 positions in the 2007–08 school year) and the number of available positions even exceeded pre-recession totals (4,793 in 2007–08 and 4,894 in 2006–07). In addition, only six public LEAs in the 2013–14 school year were without any available positions compared with 14 just two years ago.

While the number of available positions has increased by 72.3 percent since the end of the recession during the 2009–10 school year, much of this growth occurred in just the last two years (55.9 percent). The growth in available positions over the last two years was far greater than in the number of total positions

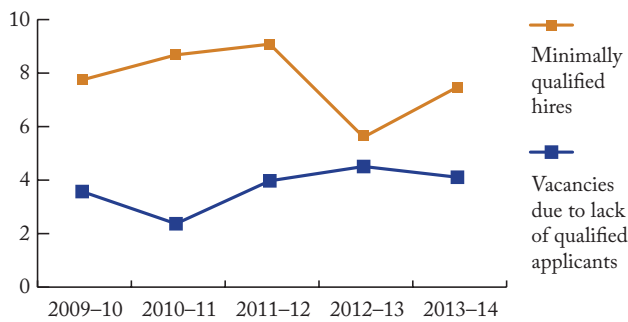
TABLE 1: Public School Hiring Trends, 2009–10 to 2013–14

School Year	Total Certified Positions	Available Positions LEAs Sought to Fill	Percentage of Available Positions that were Part Time	Available Positions as Percentage of Total Positions	Percentage of Available Positions Filled by Oct. 1	Available Positions Not Filled by Oct. 1	Available Positions Not Filled by Oct.1 Due to Lack of Qualified Applicants	Median Applicants per Available Position
2013–14	52,872	5,095	7.4%	9.6%	93.1%	353	216	24
2012–13	52,404	4,080	9.0%	7.8%	92.8%	294	182	24
2011–12	52,181	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
Change 2012–13 to 2013–14	0.9%	24.9%	-	-	-	20.1%	18.7%	0%
Change 2009–10 to 2013–14	0.3%	72.3%	-	-	-	38.4%	92.9%	20.0%

(1.3 percent), suggesting that a significant amount of personnel turnover has occurred. There are many possible reasons for this. For example, the creation of new positions has a multiplier effect on the number of vacancies as teachers may leave existing positions to fill new ones, thus creating vacancies for others to fill. The increase in vacancies may also result from an improving economy and with it a more fluid labor market. From October 2007 to October 2010, Connecticut’s unemployment rate increased from 4.8 percent to 9.4 percent but fell to 7.9 percent in October 2013.<sup>1</sup> In a better economy, teachers and administrators may be more willing to take the risk of changing positions. The increase in available positions may also be associated with Connecticut’s educational reforms, which include restructuring some districts’ administration and schools and the implementation of new teacher evaluation systems and Common Core.

Despite the increased number of available positions, the percentage of “minimally qualified” hires — those selected from small applicant pools whose quality districts had rated poorly — and the percentage of available positions that were vacant due to the lack of qualified applicants remained comparable with the preceding years (Figure 1).

**FIGURE 1:**  
Percentage of Vacancies Due to Lack of Qualified Applicants and Minimally Qualified Hires 2009–10 to 2013–14



**Local Employment Trends — Public School Districts**

To examine local employment trends, districts were grouped by the school reform categories (Table 2): the Educational (ED) Reform Districts<sup>2</sup>; Alliance Districts<sup>3</sup>; State School Districts<sup>4</sup>; RESCs; Public Charter Schools; and all Other LEAs.

Connecticut’s public school system experienced a net increase of 691 total positions during the last two school years. RESCs accounted for the largest number of new positions (287) followed by the ED Reform Districts (200) and Public Charter Schools (127). The rate of growth in total positions was highest in the Public Charter Schools (22.4 percent) and RESCs (20.2 percent) and more moderate for State Districts (3.8 percent) and the ED Reform Districts (2.0 percent).

From the 2011–12 to 2013–14 school year, Connecticut’s public school system experienced a 55.9 percent increase in the number of available positions. Regardless of whether districts within a school reform category experienced significant growth (RESCs and Public Charters), moderate growth (ED Reform Districts), or no growth in the number of total positions (Alliance Districts), they all still had substantial increases in the number of available positions. This highlights the pervasiveness of personnel turnover over the last two years. For example, the ED Reform districts had a 2 percent increase in total positions, but available positions grew by 140.8 percent, and the Alliance Districts had no increase in total positions but a 37.1 percent increase in available positions. Available positions were the largest percentage of total positions in Public Charter schools (25.5 percent), RESCs (21.1 percent) and the ED Reform Districts (14.5 percent).

Public Charter Schools and Other LEAs filled the highest percentages of their available positions. They also had the lowest percentages of available positions that remained vacant due to the lack of qualified applicants (0.6 percent and 1.9 percent, respectively) while the ED Reform District (7.7 percent) had the highest rate (Figure 2). Public Charter Schools (39.8 percent) and Other LEAs (7.1 percent) had the highest percentage of “minimally qualified” hires while State Districts (0 percent) and RESCs (2.7 percent) had the lowest.

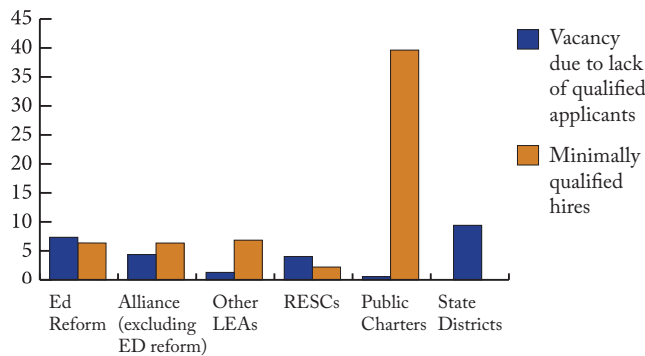
**TABLE 2: Public School Districts Hiring Statistics by School Reform Categories, 2013–14**

Districts	Total Certified Positions	Change in Total Positions, 2011–12 to 2013–14	Available Positions LEAs Sought to Fill for 2013–14 School Year	Change in Available Positions, 2011–12 to 2013–14	Percentage of Available Positions that were Part time	Percentage of Available Positions Filled by October 1	Available Positions Not Filled by October 1	Median Applications per Available Position
ED Reform	10,403	2.0%	1,510	140.8%	14.5%	91.4%	130	23
Alliance (excluding ED Reform)	9,015	0%	783	37.1%	8.7%	92.0%	63	23
Other LEAs	29,475	0%	2,187	27.2%	7.4%	95.7%	93	25
RESCs	1,711	20.2%	361	173.5%	21.1%	91.4%	31	18
Public Charters	693	22.4%	177	39.4%	25.5%	99.4%	1	11
State School Districts	1,575	3.8%	77*	-14.4%*	4.9%*	54.5%*	35*	20*

\* Values affected by incomplete reporting

FIGURE 2:

Percentage of Available Positions Remaining Vacant Due to Lack of Qualified Applicants and Minimally Qualified Hires as a Percentage of All Hires by Reform District Categories, 2013–14



the prior school year (72.9 percent versus 66.1 percent). Consistent with the results of prior Fall Hiring Surveys, this percentage remained substantially below the rate at which public LEAs filled their vacancies (93.1 percent). In comparison with public LEAs, APSEPs had a higher percentage of available positions that remained vacant due to the lack of qualified applicants (15.9 percent versus 4.2 percent) and had more “minimally qualified” hires (15.3 percent versus 7.5 percent). For APSEPs, available positions were also a higher percentage of their total positions than in public LEAs (10.9 percent versus 9.6 percent). They also received fewer applications per available position than public LEAs in such significant areas as Comprehensive Special Education (10 versus 41.5), Intermediate Administrator (11 versus 30), School Psychologist (5 versus 20), School Counselor (7 versus 38) and Speech and Language Pathologist (4 versus 9).

### State-Approved Private Special Education Programs

In the 2013–14 school year, the total number of positions in state-approved private special education programs (APSEPs) reached their highest level in five years (Table 3). Unlike the public school system, APSEPs had slightly fewer available positions than in the previous school year. However, in comparison with recent years, fewer APSEPs (16) did not have any available positions (18 in 2012–13 and 22 in 2011–12). They also staffed a slightly higher percentage of their available positions than in

### Public School Noncertified Special Services

The number of available noncertified special services positions reached its highest level in five years. It grew by 19 percent from the prior year, and this growth was largely driven by an increase in the number of special education paraprofessionals (Table 4: 146 in 2012–13 to 190 in 2013–14). Despite the current year’s increase, the number of available licensed paraprofessional and therapist positions (266) remained considerably lower than the number that was typically available before the most recent recession (e.g., 355 in 2007–08). Unlike the certified teaching,

TABLE 3: State-Approved Private Special Education Programs, 2009–10 to 2013–14

School Year	Total Certified Positions	Available Positions Programs Sought to Fill	Percentage of Available Positions that were Part time	Available Positions as Percentage of Total Positions	Percentage of Available Positions Filled by Oct. 1	Available Positions Not Filled by Oct. 1	Available Positions Not Filled by Oct. 1 Due to Lack of Qualified Applicants	Median Applicants per Available Position
2013–14	984	107	6.5%	10.9%	72.9%	29	17	7
2012–13	954	112	8.0%	11.7%	66.1%	38	25	6
2011–12	962	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

TABLE 4: Public School Noncertified Special Services, 2013–14

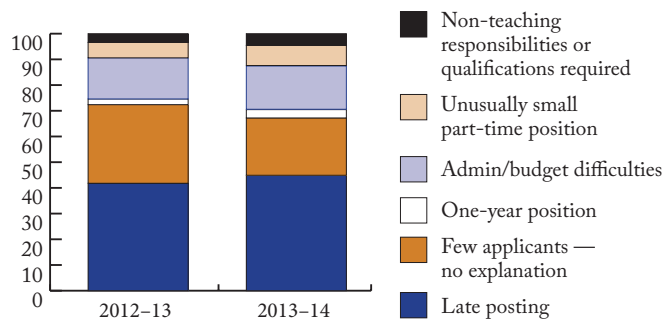
Service Area	Available Positions LEAs Sought to Fill for 2013–14 School Year	Available Positions Not Filled by October 1	Median Applicants per Available Position	Service Area	Available Positions LEAs Sought to Fill for 2013–14 School Year	Available Positions Not Filled by October 1	Median Applicants per Available Position
Licensed Physical Therapist	2	0	7.5	Regular Program Paraprofessional	29	7	36
Licensed Physical Therapist Assistant	1	0	3	Special Education Paraprofessional	190	20	30
Licensed Occupational Therapist	9	1	5	English as a Second Language (ESL)/Bilingual Paraprofessional	2	0	3.5
Pre-kindergarten Paraprofessional	7	1	21.5	Other Program Paraprofessional	16	0	18.5
Kindergarten Paraprofessional	10	3	17	<b>TOTALS</b>	<b>266</b>	<b>32</b>	<b>23</b>

administrative and special service positions, a much higher percentage of the noncertified service positions were part-time (29 percent versus 7 percent). Public LEAs filled 88 percent of available, noncertified special services positions.

### Accounting for October Vacancies

Public school LEAs reported that 61 percent of all positions that remained vacant on October 1 were due to the lack of qualified candidates, which is unchanged from the previous year. Districts with October vacancies most frequently cited late postings as a key that affected the size and quality of their applicant pools (Figure 3).

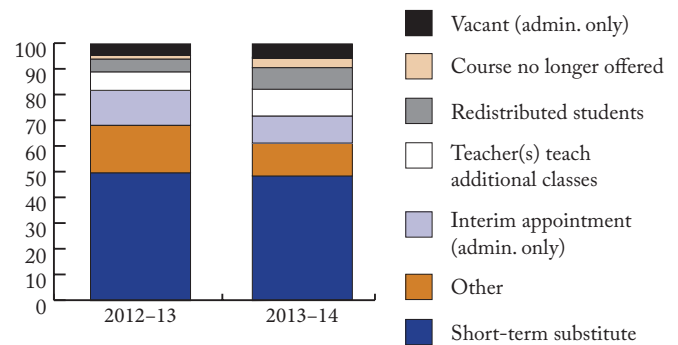
**FIGURE 3:**  
Factors Affecting the Size and Quality of Applicant Pools for Positions that Remained Vacant on October 1, 2012, and October 1, 2013



### LEA Responses to October Vacancies

Public LEAs most common response to vacancies continues to be hiring short-term substitutes (Figure 4). Compared with prior school years, they were also more likely to address staffing shortages by assigning extra classes to teachers (10.3 percent versus 7.2 percent), redistributing students (8 percent versus 5 percent), and even canceling courses (4.7 percent versus 1.4 percent).

**FIGURE 4:**  
LEA Responses to October Vacancies, 2012–13 and 2013–14



### Shortage Areas, 2014–15

During the last two school years, total positions for the 10 shortage areas collectively had a net increase of 3.3 percent with the most notable increases in Mathematics, 7–12 (28.5 percent), TESOL (6.7 percent) and Intermediate Administrator (5.2 percent). Five of the areas, however, had fewer total positions with the sharpest decline occurring in Bilingual Education (-7.2 percent). In contrast, all the shortage areas had marked increases in the number of available positions, which again highlights the larger general trend of significant personnel turnover (Table 5). Available positions were a higher percentage of total positions in Bilingual Education (15.8 percent), TESOL (15 percent), Intermediate Administrator (14.9 percent), and World Languages (14 percent).

Although the shortage areas were only 44.2 percent of available positions that LEAs sought to fill, they accounted for 57.6 percent of all October 1 vacancies. They were also 65.2 percent of those vacancies due to the lack of qualified applicants, which is the most critical factor used to identify shortage areas (Appendix A). All the shortage areas except Science, 7–12 had higher percentages of vacancies due to the lack of qualified applicants than that for the state as a whole (4.2 percent). These types of va-

**TABLE 5: Designated Shortage Areas for the 2014–15 School Year Based on 2013 Fall Hiring Survey Results**

Endorsement Type	Shortage Area Rank	Total Positions	Change in Total Positions, 2011–12 to 2013–14	Available Positions LEAs Sought to Fill for 2013–14 School Year	Change in Available Positions, 2011–12 to 2013–14	Percentage of Available Positions Filled by Oct. 1	Available Positions Not Filled Due to Lack of Qualified Applicants	Available Positions as a Percentage of Total Positions
World Languages, 7–12	1	1,965	1.7%	276	29.6%	92.8%	6.2%	14.0%
Bilingual, PK–12	2	298	-7.2%	47	161.1%	70.2%	27.7%	15.8%
School Library Media Specialist	3	766	-0.8%	88	69.2%	80.7%	17.0%	11.5%
Speech & Language Pathologist	4	1,155	-0.1%	144	30.9%	88.2%	6.9%	12.5%
Technology Education, PK–12	5	555	-0.7%	60	76.5%	88.3%	10.0%	10.8%
Comprehensive Special Education, K–12	6	5,871	0.7%	567	50.4%	92.4%	4.8%	9.7%
Science, 7–12	7	3,190	-0.2%	326	36.4%	95.4%	3.1%	10.2%
TESOL, PK–12	8	479	6.7%	72	111.8%	77.8%	22.2%	15.0%
Intermediate Administrator	9	2,916	5.2%	435	88.3%	89.0%	4.6%	14.9%
Mathematics, 7–12	10	3,415	28.5%	321	37.8%	91.9%	5.0%	9.4%



cancies were particularly prevalent in Bilingual Education (27.7 percent), TESOL (22.2 percent), and School Library Media Specialist (17 percent).

A second important factor in the identification of shortage areas was the median number of appropriately certified applicants per available position. Collectively, the shortage areas had a median of 17 applicants per position compared with 30 for the nonshortage areas. In particular, Bilingual Education (4), Technology Education (7), Speech and Language Pathologist (8), World Languages, 7–12 (9), TESOL and School Library and Media Specialist (11) were well below the statewide median (24) and significantly lower than such nonshortage areas as Elementary, K–6 (180), History and Social Studies (80), and English, 7–12 (64.5).

A third factor for identifying shortage areas was the number of first or renewed Connecticut certificates per available position, as fewer certificates issued means fewer potential applicants. The shortage areas accounted for 34 percent of total positions and 37.3 percent of all first certificates renewals. The median for all certification areas was just over one new certificate or renewal per available position. With the exception of Intermediate Administrators and TESOL, each of the shortage areas had fewer renewals or first certificates. In fact, Bilingual Education, World Languages, 7–12 and Technology Education had fewer than 0.5 renewals and new certificates per available positions suggesting that there are very limited pools of potential candidates for positions in these fields.

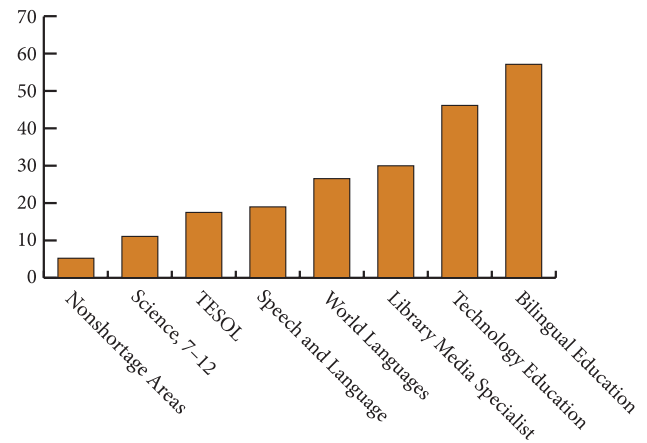
The fourth factor used to identify shortage areas was the use of Durational Shortage Area Permits (DSAPs) during the 2012–13 school year. DSAPs allow LEAs to staff positions they could not fill with candidates who have credits in the subject matter but have not yet earned their certification. The shortage areas accounted for most of the positions staffed by DSAPs (68.3 percent). LEAs employed them most frequently in shortage areas such as Intermediate Administrator (23), Special Education (21), World Languages (18), and Science, 7–12 (11).

A final shortage area indicator was the prevalence of “minimally qualified hires.” Although only 43.1 percent of all new hires occurred in the shortage areas, they accounted for 62.9 percent of minimally qualified hires. Collectively, the shortage areas had a higher percentage of minimally qualified hires than for the nonshortage areas (11.4 percent versus 5.1 percent). They were particularly prevalent in Bilingual Education (Figure 5: 57.6 percent), Technology Education (45.3 percent), and Library Media Specialist (29.6 percent).

### Eligibility for Retirement

During the most recent school years, Connecticut has experienced significant growth in the number of both total and available positions. As the demand for certified teachers and administrators has returned to pre-recession levels, it is important to note that 18.2 percent of all certified staff who were employed as of October 2013 are eligible for retirement. Over the next five years, this percentage will increase to 26.9 percent. It is signifi-

**FIGURE 5:**  
Minimally Qualified Hires as a Percentage of All Hires in Selected Shortage Areas, 2013–14



cant that a number of the shortage areas also have particularly high percentages of teachers who will be eligible for retirement over the next five years such as Intermediate Administrator (46.5 percent), Bilingual Education (46.3 percent), Library Media Specialist (40.8 percent), Technology Education (37.3 percent), Speech and Language Pathologist (33.2 percent), Special Education (31 percent), and TESOL (28.5 percent).

### Endnotes

1. U.S. Bureau of Labor Statistics.
2. The ED Reform Districts include Bridgeport, East Hartford, Hartford, Meriden, New Britain, New Haven, New London, Norwich, Waterbury, and Windham. These districts had the lowest performance statewide on the CMT and CAPT.
3. Besides the 10 ED Reform Districts, the Alliance Districts also include Ansonia, Bloomfield, Bristol, Danbury, Derby, East Haven, East Windsor, Hamden, Killingly, Manchester, Middletown, Naugatuck, Norwalk, Putnam, Stamford, Vernon, West Haven, Winchester, Windsor, and Windsor Locks. These are the 30 lowest performing districts on the CMT and CAPT. For analysis in the Fall Hiring Bulletin, the Alliance District category excludes the ED Reform Districts.
4. The State School Districts include the Connecticut Technical High School System, Unified District #1 (Department of Corrections), Unified District #2 (Department of Children and Families) and Unified District #3 (Department of Developmental Services).

TABLE 6: 2013–14 Hiring Statistics by Endorsement

Endorsement	Available Positions that LEAs Sought to Fill for 2013–14	October 1 Vacancies Due to Lack of Qualified Applicants	Durational Shortage Area Permits	Minimally Qualified Hires	Median Applicants	First CT Certificates and Renewals	Median Applicant Quality Rating	Shortage Rank
Agriculture, PK–12	8	0	0	0	9.5	8	2	42
Art, PK–12	113	1	1	4	31.5	109	3	30
Bilingual, PK–12	47	13	4	19	4	12	1	2
Blind, PK–12	1	0	0	1	1	1	1	36
Business, 7–12	30	3	0	8	19	32	2	21
Comprehensive Special Education, K–12	567	27	21	22	35	524	3	6
Department Chairperson	17	2	7	2	11.5	12	3.5	20
Elementary, K–6	1079	5	0	10	175	884	4.5	19
English, 7–12	328	3	0	6	61	338	4	22
English, Middle School	31	0	0	1	21.5	26	3	40
External Diploma Program/Noncredit Mandated Program	7	6	0	0	3	61	4	18
Health Occupations – Comprehensive High School	3	0	0	3	5	5	1	35
Health, PK–12	54	0	0	2	39	121	4	46
Hearing Impaired, PK–12	14	0	0	7	6	11	1	31
High School Diploma Program	3	0	0	0	16	34	3.5	47
History and Social Studies, 7–12	184	1	0	3	79.5	269	4	34
History and Social Studies, Middle School	8	0	0	1	18	26	3	45
Home Economics, PK–12	24	5	3	8	6	22	1	11
Integrated Early Childhood/Spec. ED, Birth–K	25	5	2	0	26.5	22	3	24
Integrated Early Childhood/Spec. ED, Nursery-K-Elem. 1–3	96	9	3	2	14	117	2.5	14
Intermediate Administrator	435	20	23	5	30	521	3	9
Marketing Education, 7–12	1	0	0	0	26	6	3	48
Mathematics, 7–12	321	16	6	16	32	257	3	10
Mathematics, Middle School	44	0	3	5	14	36	2	33
Music, PK–12	160	7	0	19	25	128	3	12
Non-English Speaking Adults	6	2	0	0	13	34	2	32
Occupational Subject, VT School	21	0	0	0	206	41	4	49
Partially Sighted, PK–12	2	1	0	1	1	1	1	23
Physical Education, PK–12	140	2	0	3	46	124	4	29
Practical Nurse Education Instruction	1	0	0	0	10	3	2	44
Reading and Language Arts Consultant	17	0	0	4	15	53	2	42
Remedial Reading and Language Arts, 1–12	79	9	3	11	15	224	2	13
School Business Administrator	13	1	0	7	7	39	1.5	26
School Counselor	123	2	1	9	38	178	4	28
School Library Media Specialist	88	15	10	21	11	70	2	3
School Nurse Teacher	4	0		1	7		4	37
School Psychologist	129	8	0	9	19	111	3	16
School Social Worker	108	4	0	2	27.5	171	3	27
Science, 7–12	326	10	11	32	17	282	2	7
Science, Middle School	22	0	0	2	15	13	2	38
Speech and Language Pathologist	144	10	1	24	8	109	2	4
Superintendent	16	0	0	2	8	35	3	39
Technology Education, PK–12	60	6	2	24	7	26	1	5
TESOL, PK–12	72	16	3	10	11	98	1	7
Trade and Industrial Occupations — Comprehensive High School	12	1	0	4	7	10	2	25
Unique Subject Area Endorsement	10	2	10	1	3	20	2	14
Vocational Agriculture, 7–12	4	0	0	1	10	6	2	41
World Language Instructor, Elementary	17	1	13	3	6	44	2	17
World Languages, 7–12	276	17	18	68	9	113	2	1

Applicant pool ratings:

1) Few or minimally qualified applicants; 2) Some acceptable applicants; 3) Many acceptable applicants; 4) Some high-quality applicants; 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 2013, Fall Hiring Survey participants included 166 public school districts; 17 charter schools; six regional educational service centers (RESCs); the three endowed and incorporated academies; 48 state-approved nonpublic 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 public position announcement and/or reviewed applications from existing files in order to bring staffing to the level authorized by the local board of education. 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 required endorsements per available position (e.g., Mathematics, 7–12, and Physics, 7–12). When there are multiple endorsements per position, each endorsement counts 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 Connecticut certificates and renewals divided by the number of available positions; and the sum of DSAPs, long-term substitutes and minimally qualified hires. 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 10 shortage areas.

### For Further Information, Contact:

#### Federal Perkins Loan Deferment/Forgiveness

U.S. Department of Education  
1-800-433-3243 and <http://studentaid.ed.gov/repay-loans/forgiveness-cancellation/charts/teacher>

#### Teachers' Mortgage Assistance Program

Connecticut Housing Finance Authority (CHFA)  
860-721-9501 or 860-571-4390 and <http://www.chfa.org>

#### Teacher Retirement/Rehiring of Retired Teachers

Teachers' Retirement Board  
860-241-8400 and <http://www.ct.gov/trb/site/default.asp>

#### Teacher Certification

CSDE Bureau of Certification Helpline  
860-713-6969 and  
<http://www.sde.ct.gov/sde/site/default.asp>

#### Fall Hiring Survey Data and Analysis

CSDE Bureau of Data Collection, Research and Evaluation,  
860-713-6856 or [michael.sabados@ct.gov](mailto:michael.sabados@ct.gov)

**TABLE 7: Factors Used for Calculations 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, 2012, and September 30, 2013, 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 2013–14 school year but could not because they had no available qualified applicants.