

# DATA BULLETIN

## DESIGNATION OF TEACHER SHORTAGE AREAS, 2009-10 (Fall Hiring Report)

Results from the 2009 Fall Hiring Survey revealed a significant break from the relatively stable patterns of public school employment. In the midst of a national recession and tightening educational budgets, the total number of certified positions and positions available for the 2009-10 school year declined. With fewer positions available, the average number of applicants per available position increased. Despite the increased number of applicants, the 2009-10 school year had the largest percent of positions that remained vacant in the last five years. These trends occurred not only at the aggregate state level but affected most school districts.

The Fall Hiring Survey is an annual collection of employment data, principally for certified educational positions, designed to track employment trends and identify teacher shortage areas. Results from the 2009 Fall Hiring Survey were used to determine the shortage areas for the 2010-11 school year. Teachers and administrators in shortage areas may qualify for 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 2009 included the 166 public school districts, 18 charter schools, six regional educational service centers (RESC's), the three endowed and incorporated academies, the Connecticut Technical High School System, the Connecticut Departments of Corrections, Children and Families and Developmental Services, and 54 state-approved, non-public special education programs.

### *Teacher Shortage Areas for the 2010-11 School Year (based upon the 2009 Fall Hiring Survey results):*

- Bilingual, PK-12
- Comprehensive Special Education, K-12
- English, 7-12
- Intermediate Administrator
- Mathematics, 7-12
- Music, PK-12
- Remedial Reading and Language Arts, 1-12
- School Psychologist
- Speech and Language Pathologist
- World Languages 7-12

### **Public School Employment Trends, School Years 2005-06 to 2009-2010**

Fall Hiring figures for the 2009-10 school year are distinct from the preceding four school years (Table 1). While available positions increased slightly from 2005 through 2008, dramatic downward shifts distinguish the 2009-10 school year from prior school years.

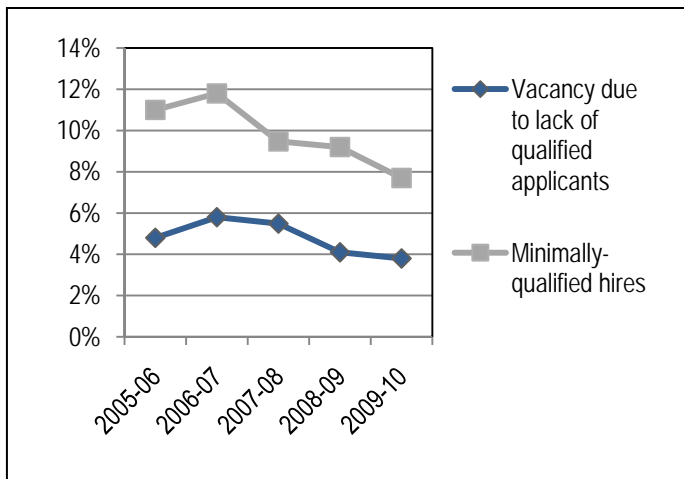
In the 2009-10 school year, the total certified positions declined by -1.3 percent (709 positions), thus ending four years of slow but steady growth. Available certified positions also plummeted by -34.8 percent or nearly 1,600 fewer positions than in the preceding year. During this time, public school enrollment (K-12) fell by less than 1 percent (-0.7 percent). Furthermore, available positions as a share of total positions fell from 8.5 percent to 5.6 percent. This may reflect a combination of retrenchment by Local Educational Agencies (LEAs) faced with tightening budgets and staff decisions to retain their current positions in an uncertain economy. Over the last two years, part-time positions increased from 8.1 percent to 10.9 percent of total available positions.

**Table 1: Public School Hiring, School Years 2005-06 to 2009-10**

School Year	Total Positions	Available Positions	Percent of Available Positions Part-Time	Available Positions as Percent of Total Positions	Vacancies Remaining on October 1 <sup>st</sup>	Percent of Available Positions Filled	Vacancies Due to Lack of Qualified Applicants	Median Applicants Per Position
2009-10	52,718	2,957	10.9%	5.6%	255	91.4%	112	20
2008-09	53,427	4,533	8.1%	8.5%	269	94.1%	187	16
2007-08	53,129	4,793	8.2%	9.0%	382	92.0%	263	15
2006-07	52,870	4,894	9.3%	9.3%	369	92.5%	282	14
2005-06	52,314	4,981	9.9%	9.5%	348	93.0%	238	15
Change 2008-09 to 2009-10	-1.3%	-34.8%	-	-	-5.2%	-	-40.1%	25%
Change 2005-06 to 2009-10	0.8%	-40.6%	-	-	-26.7%	-	-52.9%	33%

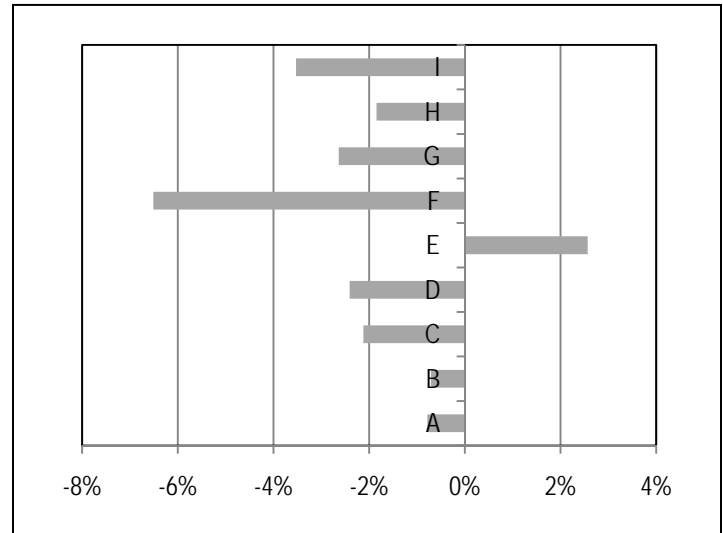
With fewer available certified positions, the median number of appropriately-credentialed applicants per position increased sharply from 16 in 2008-09 to 20 in 2009-10.<sup>1</sup> Despite fewer available positions and more applicants per position, October vacancies decreased only marginally (-5.2 percent). As a result, the 2009-10 school year had the lowest percent of available positions that were filled by October 1<sup>st</sup> in the last five years. However, the percents of vacancies attributed to the lack of qualified applicants and “minimally qualified” hires continued to decline (Figure 1).<sup>2</sup>

**Figure 1: Percents of Vacancies Due to Lack of Qualified Applicants and Minimally Qualified Hires, 2009-10**



Regardless of socio-demographic differences, every DRG had fewer total positions and available positions in the 2009-10 school year than in the prior school year (Table 2). During this time, part-time positions increased as a percent of all available positions for eight of the nine DRGs by an average of 3 percentage points (not shown in table). Two DRGs composed of the smallest districts (C and E) had the highest percents of part-time positions, while three DRGs composed of the larger districts (G, H and I) had the lowest percents.

**Figure 2: Change in the Percent of Available Positions Filled by October 1<sup>st</sup> by DRG, 2008-09 to 2009-10**



### Local Hiring Trends

Local hiring trends are quite similar to those for the state as a whole: declining total and available positions, October vacancies and the rates at which available positions are staffed, along with increased applicants per available position. To examine hiring trends at the local level, the 2009 Fall Hiring Survey Results were analyzed utilizing District Reference Groups (DRGs), a classification system that groups school districts based upon community and student socio-demographic characteristics.<sup>3</sup>

Over the last two school years, the median number of applicants per position increased for virtually all DRGs and, in particular, almost doubled for the largest urban districts (DRG I: 11.0 to 20.5). Despite fewer available positions and more applicants per position, eight of the nine DRGs filled lower percents of their available positions than in the previous year (Figure 2). This mirrored the trend for the state as a whole. The lone exception to this was DRG E, which filled a higher percent of available positions in 2009 than in 2008. On average, DRG E is composed of the smallest districts. The wealthiest districts (DRG A) filled the highest percent of

**Table 2: Hiring Statistics by District Reference Groups, 2009-10**

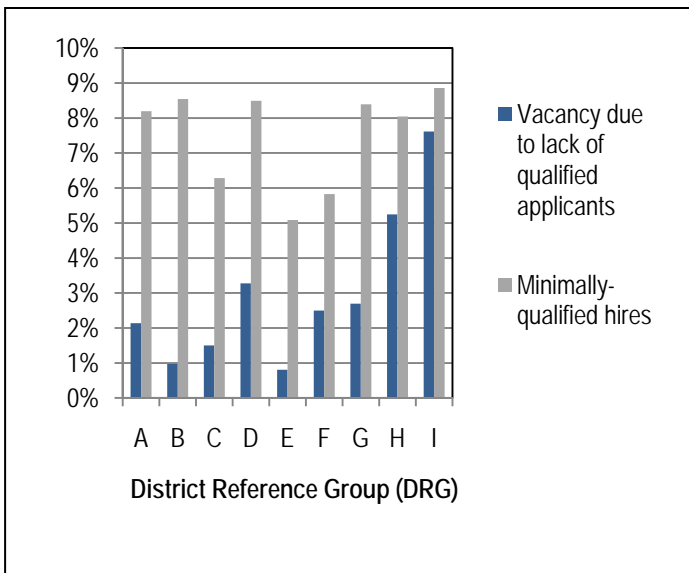
DRG	Total Positions	Change in Total Positions 2008 to 2009	Available Positions	Percent Change in Available Positions 2008 to 2009	Available Positions as a Percent of Total Positions	Percent of Available Positions that were Part-Time	Percent of Available Positions Filled by October 1st
A	2,951	-1.4%	187	-36.6%	6.3%	15.5%	97.9%
B	9,007	-1.0%	412	-44.6%	4.6%	17.2%	96.6%
C	3,732	-1.1%	200	-32.0%	5.4%	17.5%	95.5%
D	7,883	-0.4%	336	-47.8%	4.3%	8.9%	94.6%
E	2,504	-2.0%	124	-34.4%	5.0%	21.0%	95.2%
F	2,703	-2.6%	120	-42.6%	4.4%	10.8%	85.8%
G	6,244	-0.6%	297	-41.7%	4.8%	7.7%	92.3%
H	5,832	-2.1%	286	-29.6%	4.9%	4.2%	91.3%
I	8,718	-1.1%	604	-27.5%	6.9%	4.5%	84.1%
NA*	4,231	-0.5%	502	-3.5%	11.9%	13.3%	87.1%

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

available positions (Table 2: 97.9 percent) in 2009, while the largest urban districts (DRG I) filled the lowest (84.1 percent).

The larger urban districts (DRGs H and I) had the highest percents of vacancies due to the lack of qualified applicants, while the smallest districts (DRG E) had the lowest percent (Figure 3). DRG I also had the highest percent of minimally-qualified hires while DRG E again had the lowest. In 2009-10, most DRGs had lower percents of vacancies due to the lack of qualified applicants and minimally qualified hires compared with the prior school year. DRG I experienced the steepest declines in both rates

**Figure 3: Percent of Vacancies Due to the Lack of Qualified Applicants and “Minimally-Qualified” Hires by DRG, 2009-10**



**State-approved Non-public Special Education Programs**

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. These programs are required participants in the Fall Hiring Survey. Because they are private entities, their data were not included with the public school figures at the beginning of this report (Table 1 and Figure1), and so are presented here separately (Table 3). Their data are, however, included in the determination of shortage areas.

Despite the poor economy, the total number of certified positions in state-approved, non-public special education programs increased 5.5 percent and the number of available positions remained stable over the last two school years (Table 3). Part-time positions as a percent of total available positions more than doubled (4.5 percent to 10.8 percent). Compared with public LEAs, they had higher percents of available positions (12.3 percent versus 5.6 percent) and vacancies due to the lack of qualified applicants (12.6 percent versus 3.8 percent). They also filled fewer available positions (80.2 percent versus 91.4 percent) and had nearly twice as many minimally-qualified hires (14.6 percent versus 7.7 percent).

**Public-school, Non-certified Special Services**

Public-school, non-certified special services are presented here separate from the figures for certified positions used in the rest of this report. For the 2009-10 school year, there were 208 non-certified special services positions available, a decline of 51 percent over the last five years (Table 4). During this time, available special education paraprofessional positions declined 60 percent. October vacancies also fell from 9 percent to 5 percent.

**Table 3: State-approved, Non-public Special Education Programs, 2008-09 and 2009-10**

School Year	Total Certified Positions	Available Positions	Available Positions as a Percent of Total Positions	Vacancies Remaining on October 1 <sup>st</sup>	Percent of Available Positions Vacant Due to Lack of Qualified Applicants	Percent of Available Positions Filled by October 1st
2009-10	904	111	12.3%	22	12.6%	80.2%
2008-09	857	110	12.8%	27	18.2%	75.5%

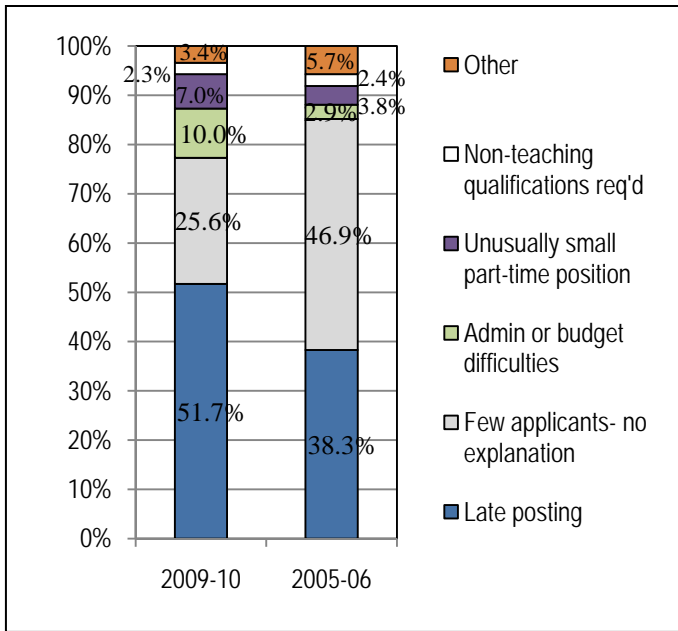
**Table 4: Public-school, Non-certified Special Services, 2009-10**

Service Area	Available Positions	Vacancies Remaining on October 1 <sup>st</sup>	Median Applicants
Licensed Physical Therapist	6	3	2
Licensed Occupational Therapist	15	1	3
Licensed Occupational Therapist Assistant	2	0	10
Pre-Kindergarten Paraprofessional	16	0	20.5
Kindergarten Paraprofessional	18	0	21
Regular Program Paraprofessional	30	2	39
Special Education Paraprofessional	114	5	28
ESL/Bilingual Paraprofessional	1	0	6
Other Program Paraprofessional	6	0	13

**Accounting for October Vacancies**

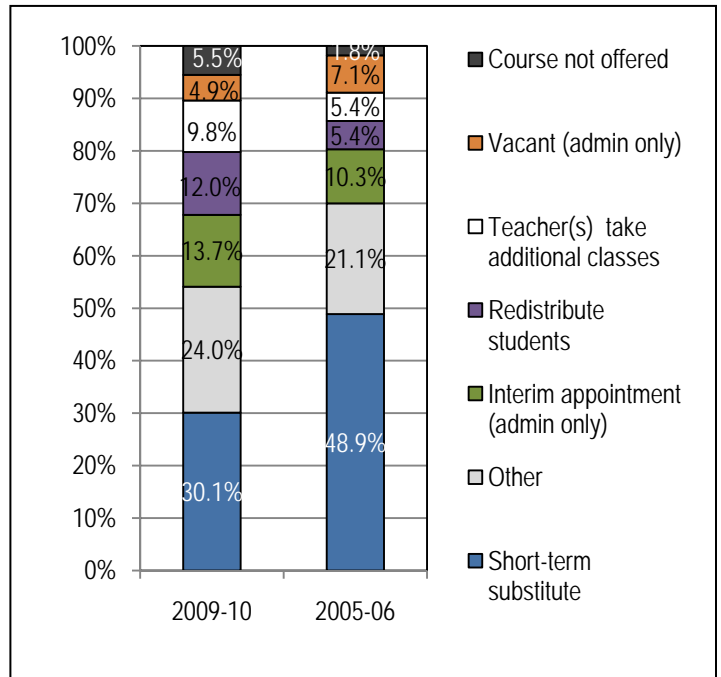
In October 2009, there were 255 public school vacancies. LEAs reported that 44 percent of these resulted from the lack of qualified available candidates, which was down from 70 percent in the previous school year. Identifying factors that affected both the number and quality of job applicants for positions that remained vacant, over half of all LEAs cited late job postings (late summer onward), which was an increase over five years ago (Figure 4). Similarly, local budgetary/administrative issues and unusually small part-time positions (<=0.3 FTE) were more prominent factors in the 2009-10 school year than in the past.

**Figure 4: Factors Affecting the Size and Quality of Applicant Pools for Positions that Remained Vacant, 2005-06 and 2009-10**



appropriately-credentialed teachers teach additional classes and not offering scheduled courses. The number of administrative positions (e.g. principal, program director, superintendent, etc.) filled on an interim basis also slightly increased. In the current school year, LEAs also responded to nearly one-quarter of all October vacancies with “Other” solutions including: Employing temporary teachers, long-term substitutes and consultants; rehiring former or retired staff; and continuing to search for appropriate candidates.

**Figure 5: LEA Responses to October Vacancies, 2005-06 and 2009-10**



**LEA Responses to October Vacancies**

Over the last five years, there have been changes in how LEAs responded to October vacancies. While the use of short-term substitutes remained the most common response, they were employed less frequently in 2009 than five years ago (Figure 5). In contrast, more LEAs reported redistributing students among other classes, having

**Shortage Areas, 2010-11**

Despite the significant changes in available positions over the last two school years, the shortage areas have remained remarkably consistent. Based upon the data collected in the 2009 Fall Hiring Survey, the only new shortage areas for the 2010-11 school year will be Remedial Reading and Language Arts, 1-12, and School Psychologist (Table 5 and also see Table 6 for hiring statistics for all endorsements, and Appendix A for shortage area identification methodology).

**Table 5: Designated Shortage Areas for the 2010-11 School Year Based upon 2009 Fall Hiring Survey Results**

Endorsement Type	Total FTEs	Change in Total FTEs 2008-09 to 2009-10	Available Positions	Change in Available Positions 2008-09 to 2009-10	Shortage Area Rank
Bilingual Education, PK-12	356.5	-8.6%	25	-26.5%	4
Comprehensive Special Education, K-12	5,503.3	0.6%	422	-25.4%	2
English, 7-12	3,062.2	-6.8%	205	-43.7%	6
Intermediate Administrator	2,769.1	-3.0%	175	-30.6%	4
Mathematics, 7-12	2,816.7	-2.1%	188	-40.1%	8
Music, PK-12	1,622.3	-1.4%	101	-36.9%	7
Remedial Reading and Language Arts, 1-12	847.9	0.1%	62	-23.5%	10
School Psychologist	946.6	0.5%	61	-32.2%	9
Speech and Language Pathologist	1,042.1	2.1%	118	-9.9%	1
World Languages, 7-12	1,681.7	0.5%	163	-33.7%	3

Collectively, the shortage areas accounted for 39.4 percent of all FTE's. They were a significant share of available positions (47.5 percent) and a majority of minimally-qualified hires (62.2 percent), October vacancies (58.6 percent) and vacancies due to the lack of qualified applicants (72.3 percent). The shortage areas also accounted for the majority of positions staffed under Durational Shortage Area Permits ([DSAPs]: 58.5 percent) and long-term substitutes (52 percent). Over the last two years, available positions declined in each of the shortage areas and total FTEs fell in half of them, particularly in Bilingual Education (-8.6 percent) and English, 7-12 (-6.8 percent).

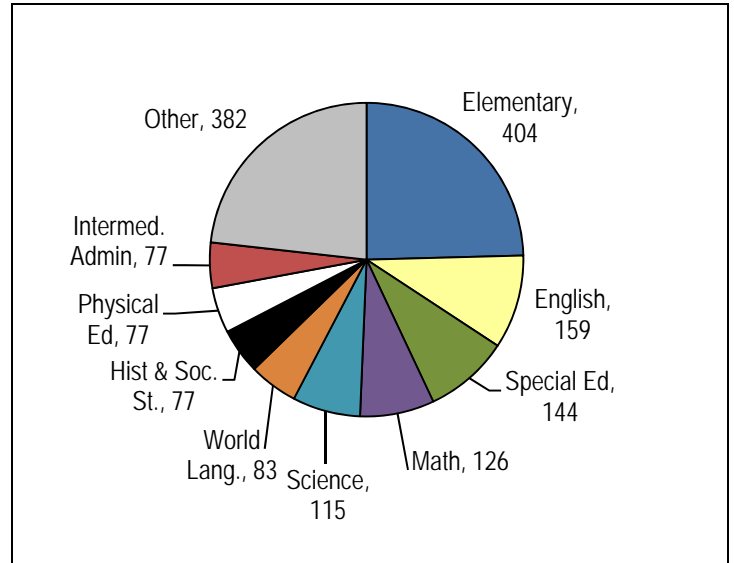
A key characteristic shared by all ten shortage areas was the higher number of available positions that were not filled due to the lack of qualified candidates. This was particularly prevalent in Bilingual Education (36 percent) and Speech and Language Pathology (22 percent). Furthermore, these endorsements had relatively high percents of minimally-qualified hires (44 and 40 percent, respectively) along with World Languages (24 percent).

Another important factor in the identification of shortage areas is the number of median applicants per available position. Median applicants for Speech and Language Pathology (4), Bilingual (6), World Languages (8) and Remedial Reading and Language Arts positions (11.5) were well below the overall median (20) and strikingly fewer than such non-shortage areas as Elementary, K-6 (129) and History and Social Studies, 7-12 (50). A final factor for identifying shortage areas is the number of first or renewed Connecticut certificates per available position. Collectively, the shortage areas averaged 3.5 first certificates or renewals, per available position, while the non-shortage areas averaged 5.7. All of the shortage areas except English, 7-12 and Intermediate Administrators ranked near the bottom in the number of new or renewed certificates.

Although the quality rating of applicant pools is not part of the methodology for identifying shortage areas, many of the shortage areas were rated lower by LEAs: bilingual had the lowest rating ("Few or no minimally-qualified applicants"), and Remedial Reading and Language Arts, School Psychologists, Speech and Language Pathologists and World Languages had the next lowest ("Some acceptable applicants"). The highest rated applicant pools was Elementary, K-6 ("Many high-quality applicants"); followed by English, 7-12; History, 7-12; History, Middle School and Physical Education, PK-12, Health, PK-12 and School Counselor ("Some high-quality applicants").

Over the last two school years, certifications that experienced the largest decline in the number of available positions included Elementary, K-6 (404: -44 percent), English, 7-12 (159: -44 percent), Special Education (144: -25 percent) and Mathematics, 7-12 (126: -40 percent). Available positions for Reading and Language Arts Consultants, School Library Media Specialists and Physical Education fell by over half.

**Figure 6: Number of Fewer Available Positions by Endorsement, 2008-09 to 2009-10**



#### Footnotes

<sup>1</sup>In the distribution of applicants for all 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 (16 versus 21). The median varies by endorsement but the overall figure presented above 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 the LEA ("Few or no minimally-qualified candidates").

<sup>3</sup>For more on DRGs, including DRG membership, see [http://www.csde.state.ct.us/public/cedar/databulletins/db\\_drg\\_06\\_2006.pdf](http://www.csde.state.ct.us/public/cedar/databulletins/db_drg_06_2006.pdf)

#### For Further Information Contact:

Subject	Contact	Contact Information
Teachers' Mortgage Assistance Program	Connecticut Housing Finance Authority (CHFA)	860-571-3502
Teacher Certification	CSDE Bureau of Certification Helpline	860-713-6969
Teacher Retirement/Rehiring of Retired Teachers	Teacher's Retirement Board	860-241-8402; 800-504-1102
Fall Hiring Survey Data and Analysis	CSDE Bureau of Data, Assessment, Research and Technology	860-713-6856 or <a href="mailto:Michael.sabados@ct.gov">Michael.sabados@ct.gov</a>

**Table 6: 2009-10 Hiring Statistics by Endorsement**

Endorsement	Available Positions	Vacancies Due to Lack of Qualified Applicants	Durational Shortage Area Permits	Minor Assignments	Minimally-Qualified Hires	Median Applicants	First CT Certificates	Median Applicant Quality Rating <sup>1</sup>	Shortage Rank <sup>2</sup>
Agriculture, PK-12	1	0	0	0	0	7	18	3	45
Art, PK-12	66	0	2	0	1	22.5	351	3.5	38
Bilingual, PK-12	25	9	8	0	7	6	83	1.5	4
Business, 7-12	24	0	0	0	2	16.5	160	2.5	40
Comprehensive Special Education, K-12	422	23	46	0	17	20	1424	3	2
Cooperative Work Education/Diversified	1	0	0	0	1	5	5	1	40
Department Chairperson	6	1	14	0	1	6.5	39	2	23
Elementary, K-6	509	3	8	1	2	129	3732	5	12
English, 7-12	205	8	14	1	1	46	883	4	6
English, Middle School	42	2	0	3	3	23	70	2	14
General Science, 7-12	187	2	20	16	23	14	953	2	13
General Science, Middle School	22	1	5	0	2	20	55	3	24
Health Occupations – Comprehensive High School	1	1	0	0	0	1	9	1	29
Health Occupations – CT Technical High Schools	7	1	0	0	0	24	13	2	30
Health, PK-12	38	0	0	3	2	22.5	257	4	43
Hearing Impaired, PK-12	10	1	0	0	0	6	39	2	28
High School Diploma Program	12	1	0	0	0	22	48	3	33
History & Social Studies, 7-12	140	1	3	4	3	50	914	4	25
History & Social Studies, Middle School	26	0	0	2	0	50.5	44	4	39
Home Economics, PK-12	14	2	4	0	5	5	47	2	16
Integrated Early Childhood/Special Ed, Birth-K	13	0	6	0	1	11	40	3	31
Integrated Early Childhood/Special Ed, Nursery-3	75	0	3	0	3	19	298	3	37
Intermediate Administrator	175	11	32	0	10	22	930	3	4
Marketing Education, 7-12	1	0	0	0	0	13	21	2	47
Mathematics, 7-12	188	3	16	2	17	25	586	3	8
Mathematics, Middle School	43	1	18	2	3	19	90	2	20
Music, PK-12	101	4	3	0	3	24.5	354	3	7
Non-English Speaking Adults	3	0	0	0	0	12	125	5	46
Occupational Subject, CT Technical High Schools	34	0	0	0	0	288	162	4	48
Partially Sighted, PK-12	1	0	1	0	1	2	10	1	42
Physical Education, PK-12	72	1	0	0	0	33	450	4	26
Practical Nurse Education Instruction	3	0	0	0	0	18	14	2	44
Reading and Language Arts Consultant	12	2	1	0	2	8.5	97	2	21
Remedial Reading & Language Arts, 1-12	62	3	13	0	7	11.5	228	2.5	10
School Business Administrator	7	1	0	0	0	19	92	3	36
School Counselor	101	3	2	0	1	35.5	411	4	18
School Library Media Specialist	31	3	14	0	9	18	142	3	11
School Nurse Teacher	8	3	0	0	0	7	11	2	19
School Psychologist	61	5	0	0	8	12	220	2	9
School Social Worker	59	2	0	0	3	19	294	3	22
Speech and Language Pathologist	118	26	0	0	36	4	186	2	1
Superintendent of Schools	18	1	0	0	0	12.5	97	3.5	32
Technology Education, PK-12	41	2	2	0	9	10	85	2	15
TESOL, PK-12	24	2	5	0	4	10	158	2	17
Trade and Industrial Occupations - Comprehensive High School	3	1	0	0	1	1	40	1	27
Unique Subject Area Endorsement	5	0	9	0	1	9.5	98	2.5	34
World Language Instructor, Elementary	17	0	3	0	3	13	116	2	35
World Languages, 7-12	163	7	37	3	36	8	466	2	3

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

<sup>2</sup>Shortage area rankings range from 1 (most severe shortage area) to 48 (least severe shortage area). Bilingual Education and Intermediate Administrator are both ranked 4 and Business, 7-12 and Cooperative Work Education/Diversified are both ranked 40.

## 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 incorporates 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 2009, Fall Hiring Survey participants included 166 public school districts, 18 charter schools, six regional educational service centers (RESCs), the three endowed and incorporated academies, 54 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); General Science, 7-12 (Biology, 7-12; Chemistry, 7-12; Physics, 7-12; Earth Science, 7-12 and General Science 7-12); General Science, Middle School (Biology, Middle School; Chemistry, Middle School; Physics, Middle School; Earth Science, Middle School and Integrated Science, Middle School); and Intermediate Administrator (Principal; Assistant/Vice Principal; Subject Area Supervisor, District Level; Program Director, School Level; and Assistant/Deputy/Associate Superintendent).

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, 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 and physics 7-12, endorsements 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 severest 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, 2008, and September 30, 2009, 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 are vacant because the LEA could not find any available qualified applicants.
Temporary Authorizations for Minor Assignments (TAMA)	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.