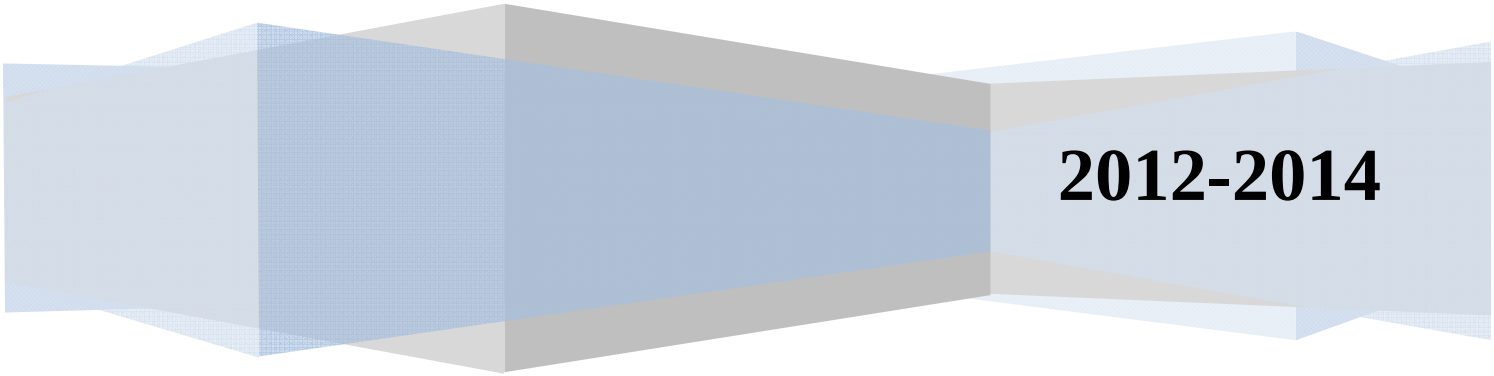
MARYLAND
TEACHER STAFFING REPORT



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EXECUTIVE SUMMARY

The Maryland State Department of Education, in conjunction with local school systems and institutions of higher education, has conducted an annual study since 1986 to determine critical teacher shortage areas. Although some data is collected annually, since 2008 the report is published biennially. The latest *Maryland Teacher Staffing Report, 2012-2014,* provides data on teacher candidates completing programs in institutions of higher education that have Maryland Approved Programs (MAP) and in Maryland Approved Alternative Preparation Programs (MAAPP). The report also collects the hiring needs of the local school systems to determine critical shortage areas by analyzing the data and applying the criteria agreed upon. The process includes additional data beyond the traditional formula used since the beginning of the report. It incorporates the recommendations of an Expert Panel, composed of representatives of various stakeholders, that was convened in 2008 to review the process and make recommendations. The criteria developed by the Expert Committee are now used in this study. Details of the process are in Section II of the report.

The scope of the report has expanded over the years, and now includes shortage areas for both teachers and select non-classroom professionals; information on traditional higher education as well as alternative preparation programs; the graduates; geographic shortage areas; teacher attrition; highly qualified teachers (as defined by the 2001 *No Child Left Behind [NCLB] Act);* and the number of retired/rehired teachers and principals. This report also includes a number of important incentives and strategies for the recruitment and retention of quality teachers and principals for Maryland public schools.

The Maryland State Board of Education, pursuant to HB 688*, Workforce Shortage Student Assistance Grants,* Education Article §18-708, adopts the critical shortage teaching areas that are then the basis for the Maryland Higher Education Commission to offer scholarships to qualified individuals. Students in Maryland preparing to become teachers in critical shortage areas may apply for student financial assistance if they meet specific requirements of the law. The list of critical shortage areas is also used for other purposes: teachers who teach in critical shortage areas may qualify for deferment of loan repayment and/or loan forgiveness of several federal loan programs; grants from the TEACH Act; and the Retire/Rehire Program in Maryland, a way for local school systems to rehire teachers, mentors or principals in select schools in critical shortage areas. The list also is shared with the United States Department of Education, which annually publishes *Teacher Shortage Areas Nationwide.*

This report presents four recommendations to the Maryland State Board of Education identifying the critical shortage areas in: teaching content areas, state geographic areas, gender and diversity, and non-classroom professionals. Because the report is now biennial, the following recommendations pertain to both the 2012-2013 and 2013-2014 academic school years.

This report also provides information for higher education institutions, alternative preparation programs, and local school systems as they educate and hire the future teachers for Maryland's schools.

The recommendations for the Maryland State Board of Education approval are:

Recommendation 1: The Maryland State Board of Education declares the following content areas as critical shortage areas:

- Career and technology areas (7-12):
    - Technology education, and

    - Family and Consumer Sciences;
- Computer science (7-12);
- English for speakers of other languages (ESOL) (PreK-12);
- Mathematics (7-12);
- Science areas (7-12):
    - Chemistry;
    - Earth/space science,
    - Physical science, and
    - Physics;
- Special education areas:
    - Generic: Infant/primary (birth-grade 3);
    - Generic: Elementary/middle school (grades 1-8);
    - Generic: Secondary/adult (grades 6 – adult);
    - Hearing impaired;
    - Severely and profoundly disabled; and
    - Visually impaired;
- World language areas (PreK-12):
    - Chinese, and
    - Spanish.

Recommendation 2: The Maryland State Board of Education declares the following twenty (20) Maryland jurisdictions as geographic areas of projected shortage of certified teachers:

1. Anne Arundel County
2. Baltimore City
3. Baltimore County
4. Calvert County
5. Caroline County
6. Carroll County
7. Cecil County
8. Charles County
9. Dorchester County
10. Frederick County
11. Harford County
12. Howard County
13. Kent County
14. Montgomery County
15. Prince George's County
16. Queen Anne's County
17. St. Mary's County
18. Somerset County
19. Washington County
20. Wicomico County

Recommendation 3: The Maryland State Board of Education declares a shortage of teachers who are males and teachers who are members of minority groups.

Recommendation 4: The Maryland State Board of Education declares a shortage of the non-classroom professional positions of library/media specialist, principal and speech/language pathologist.

INTRODUCTION

The Maryland Teacher Staffing Report is a biennial report produced by the Maryland State Department of Education (MSDE) for the purpose of determining critical shortage teaching areas. In addition to publishing the content areas that are considered to be shortage areas, the *Maryland Teacher Staffing Report* provides information on the number of teacher candidates produced through traditional teacher education programs, Maryland Approved Programs (MAP) and alternative routes, Maryland Approved Alternative Preparation Programs (MAAPP). In addition, the actual and anticipated hiring needs of the 24 local school systems are collected. This information addresses both the supply of new Maryland teachers and the demand that local school systems expect in hiring.

Background

Legislation originally passed by the Maryland General Assembly in 1984 and revised in 2006 requires the state to declare teaching fields designated as critical shortage areas. These identified areas have been used to award state grants. In 2006, the General Assembly unified several pieces of legislation to include scholarships in many workforce areas, HB 688: *Workforce Shortage Student Assistance Grants* (see Appendix A for bill). This bill consolidated all state grants and scholarships across professions, including teaching. The Maryland State Board of Education declares the critical teaching areas. The *Sharon Christa McAuliffe Teacher Education Awards,* in honor of the nation's first teacher in space, are awarded to future teachers in shortage areas by the State Scholarship Committee, Maryland Higher Education Commission.

The list of teacher shortage areas are used for several purposes beyond the state awards. SB 663*: Retirement and Pensions – Reemployment of Retirees* uses the declared teacher shortage areas to exempt certain retired teachers from an earnings limitation if they are reemployed as classroom teachers in one of the critical shortage areas and in qualifying schools. This law also includes principals and mentors.

The United States Department of Education annually publishes the *Teacher Shortage Areas Nationwide*, and allows certain students who teach in critical shortage areas to qualify for deferment of loan repayment and/or loan forgiveness.

In 2007, Congress passed the *Teacher Education Assistance for College and Higher Education (TEACH) Grant Program.* This law provides grants of up to $4,000 per year to students who intend to teach in a public or private elementary or secondary school in a state's critical teacher shortage areas.

Biennial Report

In 2008, MSDE transitioned from an annual to a biennial report. This reporting process aligns with the *Workforce Shortage Student Assistance Grants* schedule for awarding state tuition grants to address workforce shortages. At that time, MSDE developed and implemented new procedures explained in Section II and used in this study. Biennial reporting on teacher shortages is consistent with practices in other states and appropriate in Maryland, where year-to-year variation is minimal.

Summary and Overview

The procedures were established and documented to ensure systematic replication in state reports of teacher staffing as well as formative review for ongoing improvements to the report. The report begins with *Incentives and Strategies for the*

Recruitment and Retention of Quality Teachers and Principals. Subsequent sections cover staffing patterns, geographic areas of projected shortage, Maryland-prepared teachers, minority and gender data, hiring data on select non-classroom professionals, and recommendations to the Maryland State Board of Education. This report provides information for higher education institutions, alternative preparation programs, and local school systems as they educate and hire future teachers for Maryland's schools.

SECTION I: INCENTIVES AND STRATEGIES FOR THE RECRUITMENT AND RETENTION OF QUALITY TEACHERS AND PRINCIPALS

Historically, Maryland has had a shortage of qualified teachers in certain content areas. Maryland has always been an "import" state, hiring teachers from other states that produce more teachers than needed. Early-career attrition, flat teacher education graduation rates, and teacher retirements all contribute to shortages. Maryland has instituted state scholarships in the shortage areas, as well as implemented certain strategies to attract and retain teachers. The federal government also has several programs, such as the *TEACH Act,* loan deferment and loan forgiveness programs, and *Troops to Teachers* (to attract retiring military personnel into second careers as teachers). An overview of select incentives and strategies with websites for more current information is provided below.

NATIONAL AND FEDERAL INITIATIVES

Teacher Education Assistance for College and Higher Education Grant Program

Congress created the *Teacher Education Assistance for College and Higher Education (TEACH) Grant Program* to provide grants of up to $4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families. Areas of need in the law are: bilingual education and English Language Acquisition; foreign languages; mathematics; reading specialist; science; and special education. To be eligible for a *TEACH* grant, candidates must meet certain criteria. Information is available through financial aid offices at participating institutions and the U.S. Department of Education website at: http://www.ed.gov/index.html.

Federal Student Aid and Loan Forgiveness Programs

The federal government supports loan programs for students who wish to go to college. The amount of funds for these programs varies from year to year. Current information is located at the federal loan site: http://www.FederalStudentAid.ed.gov.

The federal government also has several discharge or loan forgiveness programs connected to federal loans for teachers. The programs include deferment for borrowers under the Family Federal Loan (FEEL); Federal Supplemental Loans for Students programs; debt incurred under the Federal Perkins Loan Program; reduction of teaching obligation under the Paul Douglas Teacher Scholarships Program; and the teaching obligation for recipients of the Education Assistance for College and Higher Education (TEACH) Grant Program. Details and applications are available on the website at:

https://studentaid.ed.gov/PORTALSWebApp/students/english/cancelstaff.jsp?tab=repay

Troops to Teachers

In 1994, the Department of Defense in cooperation with the Department of Education established the *Troops to Teachers* (TTT) Program. The program assists military personnel in making successful transitions to new careers in teaching. For information call 1-866-251-3123 or go to the website: proudtoserveagain.com.

STATE INITIATIVES

Workforce Shortage Student Assistance Grants

The 2006 General Assembly passed HB 688: *Higher Education – Workforce Shortage Student Assistance Grants* (Chapter 367, Acts of 2006) to consolidate seven workforce-related state financial assistance programs into one program (see Appendix A: §18-708: *Workforce Shortage Student Assistance Grants*). The rules and regulations

apply to seven workforce areas, including teachers. For teachers, the grant has been named the *Sharon Christa McAuliffe Memorial Teacher Education Award*, after the first teacher in the space program. More information and requirements are on the website at: http://www.mhec.state.md.us/financialAid.

The Distinguished Scholar Teacher Education Program

The Distinguished Scholar Teacher Education Program is designed to provide financial incentives to attract highly able students to Maryland's teacher preparation programs. This merit-based award program is available only to undergraduate students who already have been identified as Distinguished Scholar Award recipients. It also requires the individual to fulfill a service obligation requirement (one year as a full-time classroom teacher for each year of the award). Additional information can be obtained on the website at: http://www.mhec.state.md.us/financialAid.

Quality Teacher Incentive Act Grants

In 1999, the Maryland General Assembly passed HB9*: Quality Teacher Incentive Act*, enabling local school systems to offer a number of incentives to recruit and retain quality teachers. The details of grants provided to National Board Certified teachers and those with Advanced Professional Certificates are reported by local school systems in Appendix C: *Quality Teacher Incentive Act Grants.*

State Tax Credits

Maryland classroom teachers enrolled in college courses are eligible for an annual $1,500 tuition tax credit on their Maryland income tax returns, designed to offset graduate tuition expenses necessary to achieve or maintain advanced teacher certification. To receive the credit, the teacher must successfully complete the courses

with a grade of B or better, be employed by a local school system, have a satisfactory performance evaluation, and not have been reimbursed by the local school system for the tuition paid. Check the Annotated Code of Maryland Tax-General Article §10-717 at the website: http://individuals.marylandtaxes.com/incometax/gtpitc/quality.asp.

Resident Teacher Certificate

The Resident Teacher Certificate (RTC) is designed to attract and recruit into teaching, liberal arts graduates and career changers who possess academic content backgrounds in the arts and sciences, but who did not complete teacher preparation programs. All programs that use the RTC are Maryland Approved Alternative Preparation Programs (MAAPP) and operate under the authority of the Division of Certification and Accreditation at MSDE. For more information, the website is: http://marylandpublicschools.org/MSDE/divisions/certification/progapproval/maapp_10_07.htm.

National Board for Professional Teaching Standards

The National Board for Professional Teaching Standards (NBPTS) is an independent, non-profit, non-partisan organization established in 1987 to improve student learning in America's schools by developing a system of advanced, voluntary certification for teachers. NBPTS has established rigorous standards and a performance-based certification system to recognize quality teaching. Certification is achieved through a performance-based assessment that typically takes more than a year to complete. It is designed to measure what accomplished teachers should know and be able to do. The process requires teachers to demonstrate how their activities,

both inside and outside the classroom, strengthen student performance and contribute to student achievement.

The certification process is open to anyone with a baccalaureate degree and three years of classroom experience. The certificate is valid for 10 years, after which a teacher may seek renewal. Maryland is proud that it has 2,214 Nationally Board Certified Teachers, ranking 13th in the nation. More information is on the web at: http://www.ncpublicschools.org/recruitment/nationalboardcertification/

Teachers of Promise

The *Teachers of Promise* mentoring program began as an outgrowth of the Maryland Teacher of the Year Program. It capitalized on the expertise of Teachers of the Year and other award-winning teachers by matching them with the most promising pre-service graduating seniors from Maryland colleges and universities. This program is designed to provide these promising candidates with support as they transition from the role of student to the new role of teacher. Mentoring begins in the candidates' senior year and continues through summer and fall placement in Maryland schools, creating a transitional mentoring program for beginning teachers. Estimates are that one third of the nation's teachers leave the profession sometime during the first three years of teaching with 50 percent leaving after five years. In 2010-2011, the Maryland attrition rate for teachers with 5 years of experience or less was 42.2%. Research suggests that teacher mentors assigned to work with new teachers can be crucial in encouraging them to remain in the field. The Teachers of Promise Program has developed powerful partnerships among MSDE, corporations, and higher education that together enhance the chances of success and confidence for so many of our new teachers.

Retire/Rehire Program

In 1999, the Maryland General Assembly passed a bill which exempted certain retired teachers and principals from an earnings limitation of their Maryland pension, provided they are re-employed as classroom teachers, substitute teachers, teacher mentors or principals. The revision in 2005 was SB 663*: Retirement and Pensions - Reemployment of Retirees*, and is aimed at rehiring teachers to work in specific schools and teach in critical shortage content areas.

These retired rehires represent experienced teachers or principals who are placed in the lowest performing schools in critical teacher shortage areas. The most recent report is listed in Appendix D: *Retire/Rehire Program.*

Comprehensive Teacher Induction Program

In response to the Maryland General Assembly, which passed a law requiring mentoring programs, COMAR 13A.07.01 *Comprehensive Teacher Induction Program*, was adopted by the Maryland State Board of Education on April 27, 2010. This law was supportive of the successful effort to secure federal *Race to the Top (RTTT)* funding to provide greater consistency in the quality of support provided to new teachers throughout the state. The law also provides training for mentors. Details are located on the web: http://www.dsd.state.md.us/comar/SearchTitle.aspx?scope=13A.

In summary, various incentives and strategies have been implemented in an effort to recruit and retain quality teachers and principals. The strategies have been implemented to attract and retain teachers for public school classrooms.

SECTION II: STAFFING PATTERNS

This section presents information on the number of new hires by Maryland's local school systems, by certification area. Included also is the methodology for determining teacher shortage areas; certification areas by extent of staffing need; trend data; and teacher experience and attrition.

New Hires

Table 1*: Actual New Hires by Certification Area,* reports the number of new hires from October 2011 through October 2012. The new hires are in four categories:

- new hires with no experience from Maryland teacher preparation programs;
- new hires with no experience from out-of-state programs;
- new hires with experience who last taught in Maryland; and
- new hires with experience who last taught outside Maryland.

The table also gives the number hired by certification area. There were 3,695 new hires, the lowest number hired since 1995-1996. Table 3 *Trend Data of New Hires,* shows the number of new hires for the past 17 years. A graphic presentation of these numbers is presented in Figure 1.

The decline in available teaching positions has been impacted across the state by continuing economic slowdown. The number peaked in 2005-2006 with 8,046 hired, and has been on a downward trend ever since. The projected number of new hires for 2012-2013 is 3,087.

Table 1

Actual New Hires by Certification Area
Maryland Public Schools: October 2010 Through October 2011

Certification Area	Total New Hires	Beginning New Hires*			Experienced New Hires		
		Total	Maryland IHE**	Non-Md IHE**	Total	Maryland	Outside Maryland
Total New Hires	**3,695**	**2,342**	**815**	**1,527**	**1,353**	**711**	**642**
The Arts	**248**	**178**	**60**	**118**	**70**	**38**	**32**
Art (PreK-12)	102	81	30	51	21	14	7
Dance (7-12)	15	11	3	8	4	3	1
Music (PreK-12)	125	82	26	56	43	20	23
Theater (7-12)	6	4	1	3	2	1	1
Career/Technology Education (7-12)	**142**	**100**	**5**	**95**	**42**	**29**	**13**
Agriculture	6	3	1	2	3	1	2
Business Education	24	13	2	11	11	9	2
Data Processing	0	0	0	0	0	0	0
Family & Consumer Sciences	16	8	1	7	8	5	3
Health Occupations	4	1	0	1	3	2	1
Marketing Education	0	0	0	0	0	0	0
Technology Education	59	52	1	51	7	4	3
Trades and Industry	33	23	0	23	10	8	2
Computer Science (7-12)	**8**	**2**	**0**	**2**	**6**	**4**	**2**
Early Childhood (PreK-3)	**362**	**250**	**149**	**101**	**112**	**76**	**36**
Elementary Education (1-6 & Middle School)	**1,097**	**723**	**319**	**404**	**374**	**199**	**175**
English (7-12)	**328**	**232**	**51**	**181**	**96**	**47**	**49**
Environmental Education (PreK-12)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ESOL (PreK-12)	**79**	**41**	**12**	**29**	**38**	**18**	**20**
Foreign Language (7-12) ***	**156**	**90**	**21**	**69**	**66**	**32**	**34**
Arabic	2	2	0	2	0	0	0
Chinese	8	5	1	4	3	3	0
French	22	12	2	10	10	4	6
German	3	1	1	0	2	1	1
Italian	4	4	0	4	0	0	0
Japanese	0	0	0	0	0	0	0
Latin	2	1	1	0	1	0	1
Russian	2	1	0	1	1	0	1
Spanish	111	63	16	47	48	24	24
Other Foreign Language	2	1	0	1	1	0	1
Health (PreK-12)	**15**	**12**	**5**	**7**	**3**	**2**	**1**
Health/Physical Education (PreK-12)	**34**	**20**	**7**	**13**	**14**	**5**	**9**
Mathematics (7-12)	**242**	**157**	**35**	**122**	**85**	**38**	**47**
Middle School Education (4-9)	**47**	**28**	**9**	**19**	**19**	**1**	**18**
Middle School Ed: English/Language Arts	13	7	3	4	6	0	6
Middle School Ed: Mathematics	28	17	4	13	11	0	11
Middle School Ed: Science	5	3	2	1	2	1	1
Middle School Ed: Social Studies	1	1	0	1	0	0	0
Physical Education (PreK-12)	**82**	**55**	**30**	**25**	**27**	**22**	**5**
Science (7-12)	**223**	**134**	**27**	**107**	**89**	**51**	**38**
Biology	139	70	15	55	69	42	27
Chemistry	24	18	4	14	6	3	3
Earth/Space	14	12	5	7	2	1	1
Physical Science	10	9	0	9	1	0	1
Physics	14	10	2	8	4	4	0
General Science	22	15	1	14	7	1	6
Social Studies (7-12)	**174**	**114**	**37**	**77**	**60**	**34**	**26**
Special Education	**444**	**202**	**48**	**154**	**242**	**111**	**131**
Generic: Infant/primary (birth-grade 3)	19	11	7	4	8	6	2
Generic: Elementary/middle (grades 1-8)	155	69	13	56	86	40	46
Generic: Secondary/adult (grades 6-adult)	127	55	10	45	72	30	42
Hearing Impaired	4	1	0	1	3	3	0
Severely and Profoundly Disabled	6	3	2	1	3	1	2
Visually Impaired	1	0	0	0	1	1	0
Other (SpEd-K-12 and SpEd-Generic: Infant-Ac	132	63	16	47	69	30	39
Other Teaching Areas	**14**	**4**	**0**	**4**	**10**	**4**	**6**

* Includes teachers on conditional, resident teacher, and professional certificates.
** Institution of Higher Education
***This certifcation area became World Languages Pre-12, May 2012.

The new hire data provided in Table 1 includes teachers who hold many different types of Maryland certificates. They include professional certificates (the Standard Professional Certificate I, the Standard Professional Certificate II, and the Advanced Professional Certificate); the Resident Teacher Certificate (used for teachers in Maryland Approved Alternative Preparation Programs); and the Conditional Certificate (used when local school systems cannot meet their staffing needs with qualified teachers on professional or resident certificates).

Conditional Certified Teachers

New hires who are employed using the Conditional Certificate have not met all of the state requirements for certification. These new hires must be working toward full certification by completing all remaining professional education and content courses and by meeting any missing testing requirements. The number of conditionally certified teachers has been dropping annually because of school system's efforts to meet the federal requirements for Highly Qualified Teachers in the *NCLB* law.

Appendix E: *Teachers Issued a Conditional Certificate: Two-Year Comparison, 2010-2011 and 2011-2012* lists the total number of conditionally certified teachers by local school system. Appendix F: *Newly Hired Maryland Teachers with Conditional Certificates* reports the total number of *newly hired teachers* in 2010-2012 with Conditional Certificates.

This report also includes data on teachers who move from school system to school system, known as "within-state" movement of teachers. These teachers, who change jobs within the state, are reported as "new" by their school systems, although they are not new to teaching in Maryland. Since including this movement of teachers

from system to system skews the number of new hires, they are extracted from Table 1. Table I A: *Number of New Hires Who Transferred From Local School System to Local School System* displays the number of teachers from each sending and each receiving school system. The chart lists which school systems are hiring from other in-state systems and which systems are losing teachers to other in-state systems. Attention to the within-state new hiring data is important for understanding the teacher shortage issue. The impact of what is viewed as the teacher shortage areas is mitigated by within-state movement, which is analyzed only rarely as a component of new hire data. The number of teachers who moved within the state for 2010-2011 was 226**,** or 6.1% of the new hires.

Table 1A

Number of New Hires Who Transferred From Local School System to Local School System
Maryland Public Schools
October 2010 Through October 2011

RESIGNED FROM: Local School System	HIRED BY: Local School System																									Total
	Allegany	Anne Arundel	Baltimore City	Baltimore	Calvert	Caroline	Carroll	Cecil	Charles	Dorchester	Frederick	Garrett	Harford	Howard	Kent	Montgomery	Prince George's	Queen Anne's	St. Mary's	SEED School	Somerset	Talbot	Washington	Wicomico	Worcester	
Allegany	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Anne Arundel	0	0	5	1	0	0	1	0	0	0	1	0	0	1	0	4	2	1	1	0	0	2	0	2	0	21
Baltimore City	0	5	0	3	0	0	1	0	1	0	2	0	1	2	0	4	2	0	0	0	0	0	0	0	0	21
Baltimore	0	4	7	0	0	0	2	0	0	0	1	0	4	2	0	7	0	0	1	0	0	0	1	1	0	30
Calvert	0	3	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Caroline	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Carroll	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
Cecil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Charles	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	4
Dorchester	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3
Frederick	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	5	0	0	8
Garrett	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harford	0	0	0	3	0	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
Howard	0	0	1	0	0	0	1	0	1	0	2	0	0	0	0	3	0	0	0	0	0	0	1	1	0	10
Kent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery	0	4	0	0	0	0	0	0	0	0	2	0	0	4	0	0	1	0	0	0	0	1	1	0	0	13
Prince George's	0	22	9	2	0	0	0	0	3	0	3	0	2	3	0	23	0	0	0	2	0	0	0	0	0	69
Queen Anne's	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
St. Mary's	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
SEED School	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Somerset	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Talbot	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4
Washington	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	5
Wicomico	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5
Worcester	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL	0	45	22	10	2	2	6	2	14	1	15	1	7	17	1	47	7	1	3	2	0	3	8	7	3	226

Data Sources for Determining Shortages

The Staffing Report determines the critical teacher shortages based on three different sources. They are described below.

Statewide Projection Formula. The Division of Accountability, Assessment and Data Systems (DAAD) prepares new hire and projection tables and figures based upon information provided by local school systems. Using data from the past five years, a staffing rate is extrapolated to project anticipated staffing for the next year. These projections are compared with local school system staffing reports submitted each October. Using these data, staff traditionally has projected a surplus or a shortage in each content area. The formula used is below.

$$\text{RATE} = 1 + \left(\frac{(\text{\# of new hires in 2011-2012}) - (\text{\# of new hires in 2006-2007})}{\text{\# of new hires in 2006-2007}} / 5 \right)$$

The formula calculates the rate of five years of change, with 1 as the rate base; it is subject to some variability if significant spikes occur within the five-year period on which it is based. To determine the "projected staffing pool" for 2011-2012, the rate is multiplied by the number of new hires in 2008-2009. The number of "projected new hires" is provided by the local school system.

> Criterion 1: If the difference between the "projected staffing pool" and "projected new hires" is 85% or less, the certification area is identified on the *Rubric for Determining Critical Shortage Certification Areas* as a *statewide teacher shortage.*

In a given certification area, the "projected new hires" statewide also must be greater than 10 to be considered as a critical teaching shortage area since the formula would not be appropriate for small numbers.

August Statewide Survey of Vacancies. The Office of Academic Policy surveys the human resource directors in each of the local school systems in late August to provide a view of school staffing for the opening of school (see Appendix G: *Annual Survey of Local School System Vacancies, August, 2011*). The survey requests projected teacher needs, actual teachers hired, remaining vacancies, and recruitment difficulties. These data from each local school system provide the most recent available information at the time the critical teaching shortage areas are being identified.

> Criterion 2: If 5 or more local school systems report recruitment difficulties in a certification area, that area is identified on the *Rubric for Determining Critical Shortage Certification Areas* as a statewide teacher shortage.

Number of Classes Statewide Taught by Not Highly Qualified Teachers. The Division of Accountability and Assessment provides data on the number of classes in Maryland public schools that are *not being taught* by highly qualified teachers (see Appendix H: *Classes Taught by Highly Qualified Teachers, 2011-2012*).

> Criterion 3: If 10% or more of the classrooms in a certification area are not being taught statewide by highly qualified teachers (HQT), that area is identified on the *Rubric for Determining Critical Shortage Certification Areas* as a statewide teacher shortage.

Since not all content areas are considered core academic subjects by *No Child Left Behind*, the rubric was adjusted so that non-core academic subject areas (e.g., all Career and Technology areas, physical education, and health) are not penalized through the use of the rubric.

Procedures for Identifying Certification Areas by Extent of Staffing Need

The methodology used to review MSDE's three data sources was designed by an Expert Committee, composed of constituents around the state. The process, now used by MSDE staff, was designed to culminate in (1) the categorization of certification

areas by staffing need; and (2) the identification of critical teacher shortage areas for recommendation to the State Superintendent and the Maryland State Board of Education. It includes the use of a rubric for rating each certification area on the three sources of data. (See Appendix B: *Rubric for Rating Certification Content Areas*). Staff compiled the information from the three data sources and presented the results for each certification area to be reviewed and agreed upon by the Assistant State Superintendent of Certification and Accreditation. The final step is to present the recommendations to the State Superintendent and the State Board for adoption.

Certification Areas by Extent of Staffing Need

The critical shortage areas identified are valid for a two-year period, 2011-2012 and 2012-2013, since the report is now produced biennially. The results are displayed in Table 2: *Certification Areas by Extent of Staffing Need*. They have been categorized into *Shortage, Balanced and Oversupply*.

Trend Data

Table 3: *Trend Data of New Hires,* reports 17 years of new hires from 1995-1996 to 2011-2012. Figure 1: *Trend Data: New Hires by Maryland Public Schools* 1995-1996 to 2012-2013, is a graphic representation of the trend data from Table 3, with a projection for 2012-2013. It reports the actual number of hires over the past 17 years.

Table 4: *Newly Hired Teachers by Local School Systems, October 2010 through October 2011,* reports the number of teachers hired by each of the 24 local school systems.

Table 2
Certification Areas by Extent of Staffing Need
September 2012

	Ranking for Certification Area		
	Critical	Balanced	Surplus
The Arts			
Art (PreK-12)		X	
Dance (PreK-12)		X	
Music (PreK-12)		X	
Theatre (7-12)		X	
Career/Technology Education (7-12)			
Agriculture		X	
Business Education			X
Family & Consumer Sciences	X		
Technology Education *	X		
Trades and Industry		X	
Health Occupations		X	
Computer Science (7-12) *	X		
Early Childhood (PreK-3)		X	
Elementary Education (1-6 & Middle School)			X
English (7-12)		X	
ESOL (PreK-12) *	X		
Foreign Language (7-12) **			
Chinese	X		
French		X	
German		X	
Italian		X	
Latin		X	
Japanese		X	
Russian		X	
Spanish *	X		
Health/Physical Education (PreK-12)			X
Mathematics (7-12) *	X		
Science (7-12)			
Biology		X	
Chemistry *	X		
Earth/Space Science *	X		
Physical Science *	X		
Physics *	X		
Social Studies (7-12)		X	
Special Education			
Generic: Infant/primary(birth-grade 3) *	X		
Generic: Elementary/middle (1-8) *	X		
Generic: Secondary/adult (6-adult) *	X		
Hearing Impaired *	X		
Severely & Profoundly Disabled *	X		
Visually Impaired *	X		

Shaded areas are the critical shortage areas declared in 2012-2013 a

* Areas on the critical shortage list 5 or more years.

** This certifcation areas became World Languages PreK-12, May 2012

Revised 7/10/12

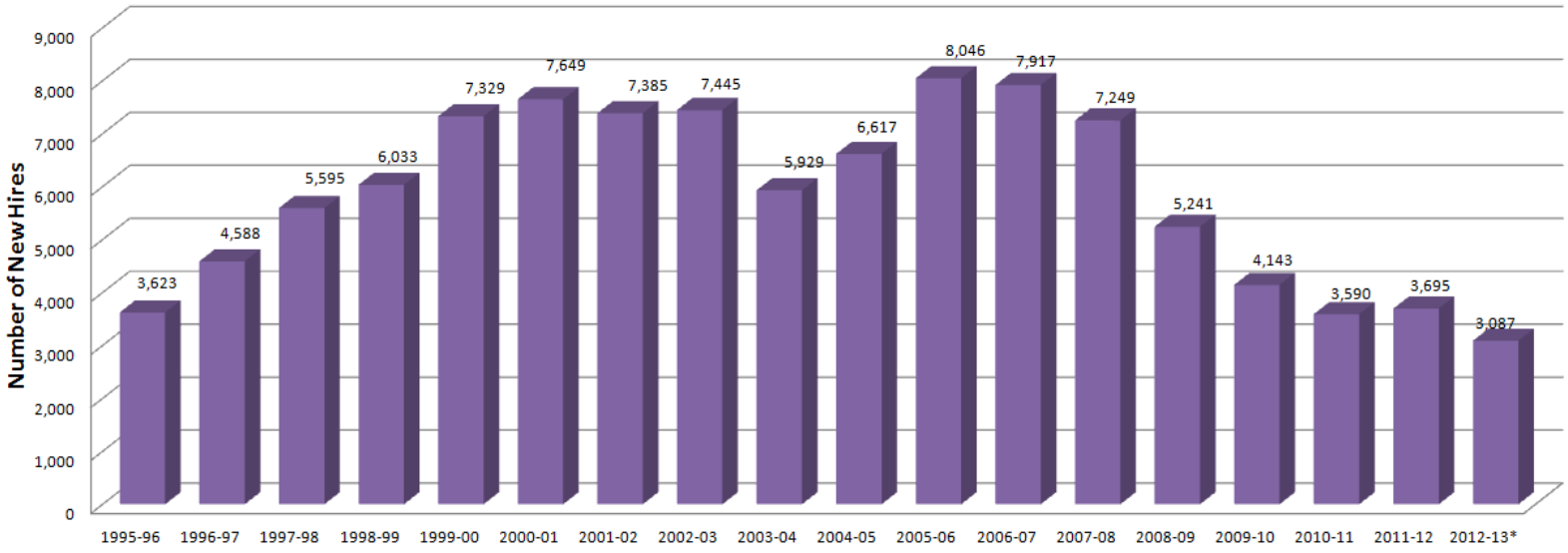
Table 3

Trend Data of New Hires
Maryland Public Schools
1995-1996 to 2011-2012

Year	Total New Hires	Beginning New Hires*		Experienced New Hires	
		Maryland IHE**	Non-Md IHE**	Maryland	Outside Maryland
1995-1996	3,623	1,123	1,127	533	840
1996-1997	4,588	1,455	1,363	1,112	658
1997-1998	5,595	1,780	1,537	1,362	916
1998-1999	6,033	1,543	1,871	1,426	1,193
1999-2000	7,329	1,665	2,233	2,072	1,359
2000-2001	7,649	1,896	2,706	1,860	1,187
2001-2002	7,385	1,694	2,336	1,820	1,535
2002-2003	7,445	1,769	2,608	1,633	1,435
2003-2004	5,929	1,420	1,664	1,667	1,178
2004-2005	6,617	1,435	1,749	2,257	1,176
2005-2006	8,046	1,439	2,911	2,330	1,366
2006-2007	7,917	1,345	3,025	1,651	1,896
2007-2008	7,249	1,234	2,769	1,549	1,697
2008-2009	5,241	985	1,777	1,202	1,277
2009-2010	4,143	812	1,767	839	725
2010-2011	3,590	826	1,445	713	606
2011-2012	3,695	815	1,527	711	642

***** Includes teachers on conditional, resident teacher, and professional certificates.
****** Institution of Higher Education

Trend Data: New Hires
Maryland Public Schools
1995-1996 to 2012-2013



*Estimated new hires as projected by local school systems, May 2012.

Figure 1

Table 4

Newly Hired Teachers by Local School Systems
Maryland Public Schools
October 2010 Through October 2011

Local School System	Total New Hires	Beginning New Hires*			Experienced New Hires		
		Total	Maryland IHE**	Non-Md IHE**	Total	Maryland	Outside Maryland
Total New Hires	**3,695**	**2,342**	**815**	**1,527**	**1,353**	**711**	**642**
Allegany	2	0	0	0	2	2	0
Anne Arundel	477	281	126	155	196	124	72
Baltimore City	580	407	57	350	173	113	60
Baltimore	270	204	117	87	66	4	62
Calvert	29	17	6	11	12	5	7
Caroline	28	19	5	14	9	6	3
Carroll	102	64	31	33	38	24	14
Cecil	35	27	3	24	8	3	5
Charles	154	92	29	63	62	32	30
Dorchester	31	27	11	16	4	2	2
Frederick	179	108	42	66	71	40	31
Garrett	10	1	1	0	9	9	0
Harford	169	127	35	92	42	22	20
Howard	213	129	56	73	84	46	38
Kent	8	6	2	4	2	1	1
Montgomery	705	446	151	295	259	133	126
Prince George's	412	214	66	148	198	77	121
Queen Anne's	26	16	4	12	10	9	1
St. Mary's	41	23	8	15	18	8	10
SEED School	15	2	1	1	13	3	10
Somerset	11	7	6	1	4	2	2
Talbot	19	9	4	5	10	5	5
Washington	92	54	20	34	38	19	19
Wicomico	60	48	25	23	12	12	0
Worcester	27	14	9	5	13	10	3

* Includes teachers on conditional, resident teacher, and professional certificates.
** Institution of Higher Education

Figure 2, *New Hires by Local School System, 2010-2011 and 2011-2012* is a graphic representation of the hiring data by local school systems for the past two years. The largest five school systems (Montgomery, Prince George's, Baltimore City, Baltimore County and Anne Arundel) hire more than 60% of the new teachers.

Figure 3*, New Hires: Out-of-State and In-State Comparison 2002-2003 to 2011-2012,* compares hiring for the last ten years. The out-of-state new hires have exceeded the in-state new hires for the past seven years.

Figure 4*, New Hires: Experienced and Beginning Teachers: 2002-2003 to 2011-2012,* compares the number of experienced teachers and beginning teachers hired for ten years. This chart combines both the in-state and out-of-state beginning and experienced new hires. For the past ten years, beginning teacher new hires have exceeded experienced teachers for all but one year (2004-2005).

Figure 5, *New Hires: Beginning and Experienced Teachers and Out-of-State and In-State Comparison: 2011-2012*, is a graphic representation of the new hires. For several years the four quarters of this pie chart were relatively equal, but this has slowly changed in the last few years. The 2011-2012 data show that the largest group of new hires, 42.2%, is the out-of-state prepared new hires, while beginning teachers (both Maryland and out-of-state prepared) are 63.4% of the new hires.

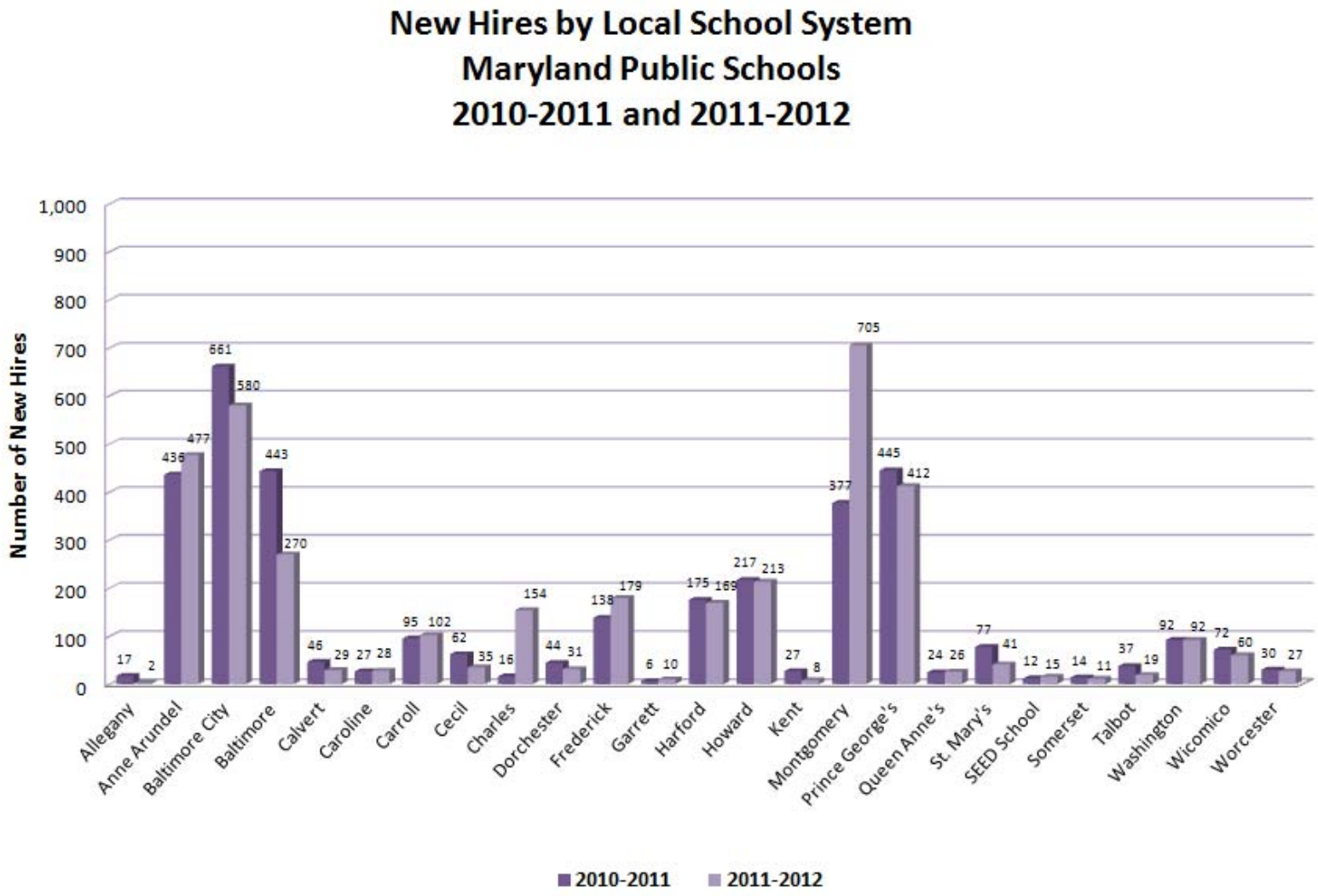

New Hires by Local School System
Maryland Public Schools
2010-2011 and 2011-2012
Number of New Hires
1,000
900
800
700
600
500
400
300
200
100
0
Allegany 17 2
Anne Arundel 436 477
Baltimore City 661 580
Baltimore 443 270
Calvert 46 29
Caroline 27 28
Carroll 95 102
Cecil 62 35
Charles 16 154
Dorchester 44 31
Frederick 138 179
Garrett 6 10
Harford 175 169
Howard 217 213
Kent 27 8
Montgomery 377 705
Prince George's 445 412
Queen Anne's 24 26
St. Mary's 77 41
SEED School 12 15
Somerset 14 11
Talbot 37 19
Washington 92 92
Wicomico 72 60
Worcester 30 27
2010-2011
2011-2012

Figure 2

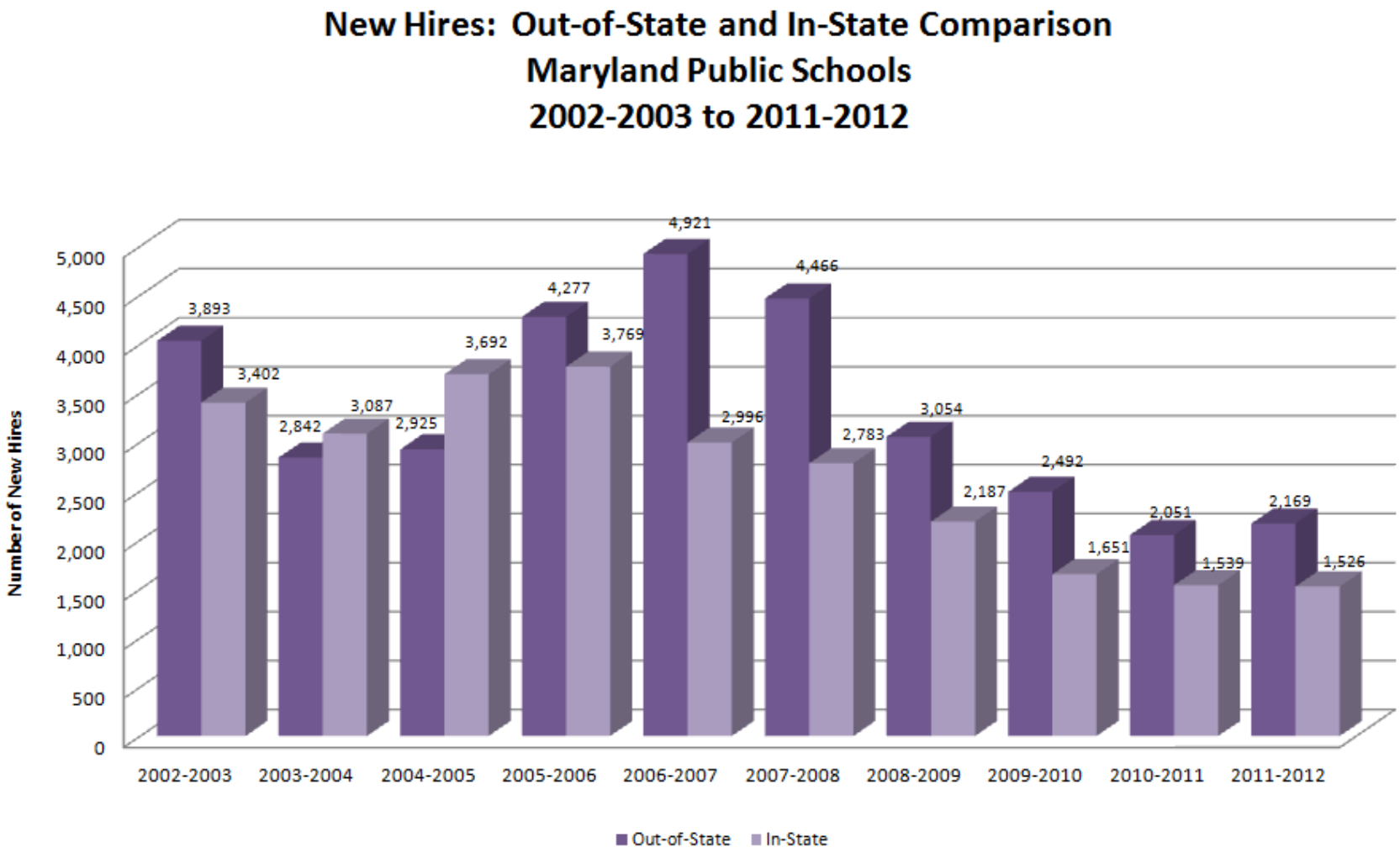

New Hires: Out-of-State and In-State Comparison
Maryland Public Schools
2002-2003 to 2011-2012
Number of New Hires
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
3,893
3,402
2,842
3,087
2,925
3,692
4,277
3,769
4,921
2,996
4,466
2,783
3,054
2,187
2,492
1,651
2,051
1,539
2,169
1,526
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
2010-2011
2011-2012
Out-of-State
In-State

Figure 3

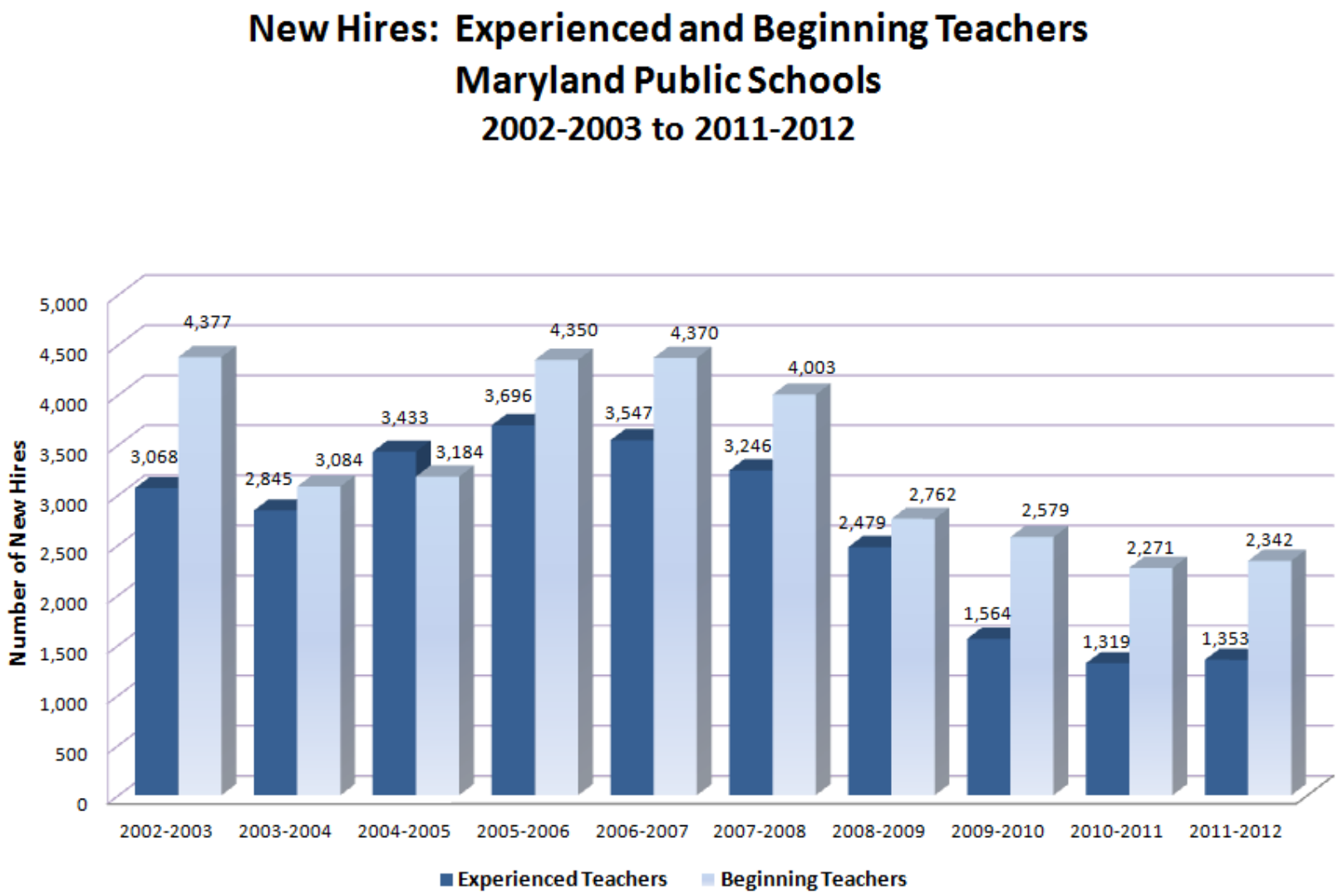

New Hires: Experienced and Beginning Teachers
Maryland Public Schools
2002-2003 to 2011-2012
Number of New Hires
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
3,068
4,377
2,845
3,084
3,433
3,184
3,696
4,350
3,547
4,370
3,246
4,003
2,479
2,762
1,564
2,579
1,319
2,271
1,353
2,342
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
2010-2011
2011-2012
Experienced Teachers
Beginning Teachers

Figure 4

New Hires: Beginning and Experienced and Out-of-State and In-State Comparison
Maryland Public Schools
2011-2012

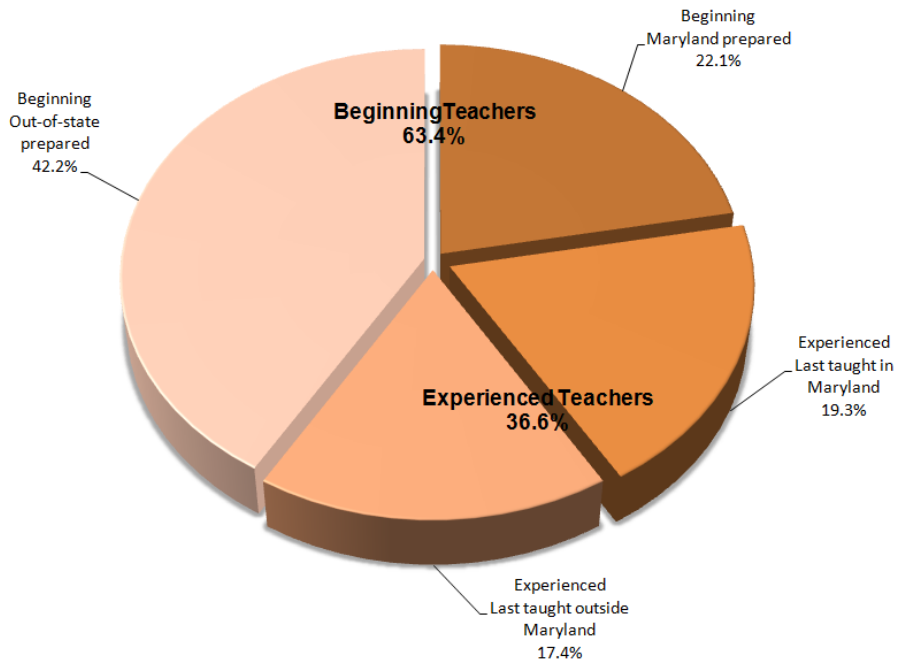


Figure 5

Teacher Attrition

Teacher staffing patterns are sometimes described as a function of workforce supply and demand. The demand component is influenced by numerous contextual factors, such as increasing or decreasing student enrollment, new school building construction, new academic programs in schools, and ebb and flow of the national and state economy.

An important feature of Maryland's staffing patterns is the distribution of teachers according to their years of experience. Table 5: *Teachers by Years of Experience* show that the largest number of teachers, 15,527, is in the "one to five" category, Adding in those with less than one year of experience (first column) increases the number to 17,855. Approximately 30.6% of the total teacher workforce (58,351) has less than five years of experience. At the other end of the distribution are the 6,116 teachers (10.5%) with 26 or more years of experience. These two categories, the least experienced and the longest serving, make up over 40% of the teacher population. These are the two groups where teachers are most likely to leave, requiring replacement by new hires.

Retention is a major contributing factor to the teacher shortage problem nationally. Looking at the attrition rate of teachers is useful; however, attrition data are complex, and it is difficult to separate those who leave the profession from those who move from one employer to another. It also is difficult to differentiate those who leave permanently from those who leave (maternity leave, illness) and return. Additionally, the causes cited for separation present a challenge in interpretation. Many individuals are not willing to cite specific reasons for leaving a job; therefore, the reasons collected through separation documents and exit conferences may be vague or less than accurate.

Table 5

Teachers by Years of Experience
Maryland Public Schools
As of October, 2011

Local School System	Years of Experience								Total Teachers
	Less than One	One to Five	Six to Ten	Eleven to Fifteen	Sixteen to Twenty	Twenty One to Twenty Five	Twenty Six to Thirty	More than Thirty	
State Total	**2,328**	**15,527**	**14,176**	**10,245**	**5,822**	**4,137**	**2,319**	**3,797**	**58,351**
Allegany	0	86	141	127	93	76	37	89	649
Anne Arundel	278	1,277	1,278	859	577	329	210	375	5,183
Baltimore City	407	1,748	1,168	859	427	320	161	458	5,548
Baltimore	200	2,316	1,837	1,345	678	470	173	343	7,362
Calvert	17	90	253	271	184	140	56	70	1,081
Caroline	19	112	82	70	41	32	28	32	416
Carroll	64	276	453	389	264	171	120	179	1,916
Cecil	27	378	318	172	68	77	47	67	1,154
Charles	92	589	393	210	115	115	79	130	1,723
Dorchester	26	107	84	50	28	25	9	48	377
Frederick	108	540	641	468	350	281	187	226	2,801
Garrett	1	40	53	56	50	39	44	40	323
Harford	127	597	636	546	361	219	101	182	2,769
Howard	129	876	910	702	439	309	206	212	3,783
Kent	6	60	28	21	19	17	12	10	173
Montgomery	446	1,994	2,398	2,027	1,199	781	454	657	9,956
Prince George's	208	3,083	2,261	1,156	431	339	119	219	7,816
Queen Anne's	16	122	114	89	55	45	20	29	490
SEED School	2	11	10	4	1	0	0	1	29
St. Mary's	23	220	259	197	106	85	51	103	1,044
Somerset	7	63	65	40	11	14	15	18	233
Talbot	9	87	77	57	18	18	20	23	309
Washington	54	487	340	233	121	95	80	131	1,541
Wicomico	48	269	250	189	116	80	54	78	1,084
Worcester	14	99	127	108	70	60	36	77	591

NOTE: Only includes staff whose primary position is a teacher, including reading specialists.

One way to examine attrition is to focus on the number of teachers who leave school systems annually, which captures comparable data with minimal complexity. As seen in Table 5A: *Teacher Attrition: By Years of Experience, October 16, 2010 – October 14, 2011,* the number of teachers who left employment through October 2011 is listed in five year increments by each school system. Maryland lost 7.1% of the workforce when 4,485 teachers left employment. Teachers who moved from one Maryland school system to another within the same one-year reporting period, a total of 226 (as reported in the footnote of Table 1A), are not included in the totals in this attrition table. It is clear that the greatest number of teachers, 1,892 (see Table 5A, 133 from column one plus 1,759 from column two), leave employment within the first five years. This rate represents over 42% of the attrition reported.

Several studies show that half of new teachers leave within the first five years of teaching. Maryland school systems have established beginning teacher induction and mentoring programs in an effort to assist new teachers in becoming successful in the classroom and increase retention. Having teachers intern in Professional Development Schools (PDS), a component of Maryland Approved Programs, also demonstrates promise in increasing teacher retention. Retention studies at Towson University show marked differences between PDS-trained and non-PDS-trained new teachers. In one large urban school system, as many as 40% more PDS-trained teachers are continuing as teachers through an ongoing eight-year retention study. Similarly, MSDE tracks teachers who are career-changers and prepared in Maryland Approved Alternative Preparation Programs. These teachers are remaining in teaching at levels comparable to Maryland's Professional Development School-prepared teachers. The extensive internship of these programs with the support of strong mentors has proven to be crucial in promoting retention.

In summary, this section presents the new hire data for the 2011-2012 school year. It includes an explanation of the methodology for identifying critical shortage areas; trend data of new hires; number of teachers by years of experience; and attrition data.

Table 5A

Teacher Attrition: By Years of Experience
Maryland Public Schools
October 16, 2010 Through October 14, 2011

Local School System	Years of Experience								Total Attrition*	Total Teachers	Percent Attrition
	Less than One	One to Five	Six to Ten	Eleven to Fifteen	Sixteen to Twenty	Twenty One to Twenty Five	Twenty Six to Thirty	More than Thirty			
State	**133**	**1,759**	**810**	**364**	**201**	**221**	**184**	**813**	**4,485**	**58,351**	**7.1**
Allegany	0	2	2	2	3	2	2	18	31	649	4.6
Anne Arundel	21	100	55	24	14	15	22	74	325	5,183	5.9
Baltimore City	9	308	93	58	27	32	27	218	772	5,548	12.2
Baltimore	44	176	91	37	32	37	16	85	518	7,362	6.6
Calvert	2	16	13	8	3	6	4	12	64	1,081	5.6
Caroline	1	6	3	3	1	1	1	2	18	416	4.1
Carroll	0	17	23	16	4	4	0	9	73	1,916	3.7
Cecil	0	38	4	5	5	3	6	9	70	1,154	5.7
Charles	0	29	14	5	3	1	2	6	60	1,723	3.4
Dorchester	1	7	3	0	0	1	2	8	22	377	5.5
Frederick	0	36	52	18	10	12	9	43	180	2,801	6.0
Garrett	1	0	1	2	1	1	2	11	19	323	5.6
Harford	3	44	31	11	17	11	12	43	172	2,769	5.8
Howard	5	69	57	19	12	13	9	19	203	3,783	5.1
Kent	0	0	0	0	0	0	0	4	4	173	2.3
Montgomery	18	141	94	44	31	34	30	77	469	9,956	4.5
Prince George's	22	676	236	93	25	29	16	100	1,197	7,816	13.3
Queen Anne's	1	6	6	3	0	1	1	7	25	490	4.9
SEED School	0	3	1	1	0	0	0	1	6	29	17.1
St. Mary's	1	20	7	6	6	8	3	16	67	1,044	6.0
Somerset	0	4	3	0	0	0	0	6	13	233	5.3
Talbot	0	10	3	0	1	0	2	4	20	309	6.1
Washington	1	29	5	3	4	7	11	21	81	1,541	5.0
Wicomico	3	19	10	2	1	2	4	13	54	1,084	4.7
Worcester	0	3	3	4	1	1	3	7	22	591	3.6

NOTE: Only includes staff whose primary position is a teacher, including reading specialists.

SECTION III: GEOGRAPHIC AREAS OF PROJECTED SHORTAGE

Maryland legislation enacted in 1986 (Annotated Code of Maryland, Education Article §18-703) required the Maryland State Board of Education to annually identify geographic areas of teacher shortages. The intent of the legislation was to assist local school systems affected by geographical conditions that make the recruitment and retention of qualified teachers difficult. However, when the scholarship incentive to teach in a declared area of geographic shortage was repealed, MSDE made the decision to continue to collect this information for some federal loan forgiveness programs that use geographic shortage areas.

Procedures

To determine the areas of geographic shortage, the following procedures were followed. The Maryland State Board of Education must have identified content areas as critical shortages for *at least three years.* Those areas identified as critical shortage areas for at least three years for this report are *computer science, technology education, ESOL, mathematics, chemistry, earth space science, physical science, physics, and all areas of special education.*

Each local school superintendent was surveyed to determine if he/she was able to satisfy the need for teachers in any of the above identified critical shortage areas and was asked to respond to two questions:

> 1. Did your local school system experience a critical shortage of teachers in any of the following state identified critical shortage areas: *computer science, technology education, ESOL, mathematics, chemistry, earth space science, physical science, physics, as well as all areas of special education?*
>
> 2. If yes, do you wish to have your local school system declared an area of geographic shortage?

Each local school system superintendent must agree to have his or her system designated as an area of geographic shortage, based on the above information.

Findings

For the past few years, some school systems have not experienced difficulty finding teachers. This year twenty (20) jurisdictions asked to be identified as geographic areas of projected shortage. They are:

1. Anne Arundel County
2. Baltimore City
3. Baltimore County
4. Calvert County
5. Caroline County
6. Carroll County
7. Cecil County
8. Charles County
9. Dorchester County
10. Frederick County
11. Harford County
12. Howard County
13. Kent County
14. Montgomery County
15. Prince George's County
16. Queen Anne's County
17. St. Mary's County
18. Somerset County
19. Washington County
20. Wicomico County

SECTION IV: MARYLAND-PREPARED TEACHER CANDIDATES

The teacher education candidates reported in this section, both undergraduate and post-baccalaureate, are all those who qualify for an initial teaching certificate, pending satisfactory performance on all state-required certification assessments. The report includes those candidates who complete programs using the traditional pathway of institutions of higher education, called Maryland Approved Programs (MAP), and those who complete the alternative pathway programs, called Maryland Approved Alternative Preparation Programs (MAAPP). The latter candidates teach using the Resident Teacher Certificate (RTC) at the request of the superintendent of the local school system (as required by regulation). The RTC is used for one to two years of the residency during which time the teachers are considered to be the teachers of record and are fully-compensated school faculty members. When all elements of the MAAPP are completed, candidates are eligible for the Standard Professional Certificate I, again at the superintendent's request. Later in this section information and data on MAAPP is provided.

Maryland Approved Programs

All Maryland institutions of higher education with Maryland Approved Programs (MAP) in teacher education report the number of graduates, by certification area, for the supply side of the *Maryland Teacher Staffing Report*. Teacher candidates who completed approved programs for 2010-2011 were the pool of Maryland new hires for the local school systems for the 2011-2012 school year. The higher education institutions are asked to report *all candidates eligible for initial teacher certification.* The number includes students in both undergraduate and post-baccalaureate programs, such as Master of Arts in Teaching (MAT) degree programs. In addition, the institutions

project the number of teacher education candidates who will be completing programs in the 2011-2012 and 2012-2013 (junior and senior years). These data are collected annually from Maryland Deans and Directors of teacher education programs. Institutions reported 2,555 teacher education candidates in 2010-2011, with 342 having a dual major, providing 2,897 graduates by certification area. This is displayed in Table 6: *Supply of Candidates from Maryland Approved Programs by Certification Area, 2010-2011.*

In May, 2012, the Maryland State Board of Education approved changing the certification area, *Foreign Languages (7-12*) to *World Languages (Pre-K12).* This change, reflected in this report's *Recommendations,* does not appear on the higher education forms. Data for the reporting period are based on the former certification area, not the revised one.

Table 7*: Anticipated Teacher Candidates from Maryland Approved Programs by Certification Area, 2011-2012 and 2012-2013,* reports the projected number of candidates by certification categories for the next two years. Programs projected 3,060 candidates becoming eligible for initial certification (undergraduate and post-baccalaureate) in 2011-2012, and 3,130 in 2012-2013.

Table 8: *Newly Eligible Candidates from Maryland Approved Programs by Institution,* 2010-2011, reports the total number of teacher education graduates from each of the 23 institutions of higher education with approved teacher education programs. Seven of the 23 institutions produce over three quarters of the teacher candidates. Although the total number of graduates has shown little growth, some institutions have increased their numbers, including Towson University and University of Maryland College Park, Maryland's two largest producers of teachers.

Table 6
Supply of Candidates from Maryland Approved Programs by Certification Area
Maryland Institutions of Higher Education
2010 - 2011

Certification Area	Teacher Supply
Total	**2,897**
The Arts	**207**
Art (PreK-12)	114
Dance (7-12)	11
Music (PreK-12)	78
Theater (7-12)	4
Career/Technology Education (7-12)	**12**
Agriculture	1
Business Education	10
Data Processing	0
Family & Consumer Sciences	0
Health Occupations	0
Marketing Education	0
Technology Education	1
Trades and Industry	0
Computer Science (7-12)	**1**
Early Childhood (PreK-3)	**329**
Elementary Education (1-6)	**1,011**
English (7-12)	**169**
Environmental Education (PreK-12)	**0**
ESOL(PreK-12)	**63**
Foreign Language (7-12)	**54**
Arabic	0
Chinese	5
French	4
German	0
Italian	0
Japanese	0
Latin	0
Spanish	45
Other Foreign Languages	0
Health (PreK-12)	**31**
Mathematics (7-12)	**71**
Middle School Education (4-9)	**21**
Middle School Ed: English/Language Arts	4
Middle School Ed: Mathematics	10
Middle School Ed: Science	4
Middle School Ed: Social Studies	3
Physical Education (PreK-12)	**94**
Science (7-12)	**93**
Biology	60
Chemistry	11
Earth/Space	15
Physical Science	0
Physics	7
Social Studies(7-12)	**173**
Geography	0
History	56
Social Studies	117
Special Education	**568**
Generic: Infant/primary (birth-grade 3)	65
Generic: Elementary/middle (grades 1-8)	341
Generic: Secondary/adult (grades 6-adult)	113
Hearing Impaired	2
Severely and Profoundly Disabled	47
Visually Impaired	0

NOTE: Includes graduates from fall 2010, spring 2011, and summer 2011,
342 of the 2010-2011 graduates have dual majors.
SOURCE: Deans and Directors of Teacher Education, Maryland Institutions of Higher Education, May 2012.

Table 7
Anticipated Teacher Candidates from Maryland Approved Programs by Certification Area
Maryland Institutions of Higher Education
2011-2012 and 2012-2013

Certification Area	2011-2012 Candidate Supply	2012-2013 Candidate Supply
Total	**3,060**	**3,130**
Art (PreK-12)	**193**	**169**
Art (PreK-12)	106	87
Dance (7-12)	9	8
Music (PreK-12)	76	72
Theater (7-12)	2	2
Career/Technology Education (7-12)	**5**	**8**
Agriculture	1	1
Business Education	3	5
Data Processing	0	0
Family & Consumer Sciences	1	0
Health Occupations	0	0
Marketing Education	0	0
Technology Education	0	2
Trades and Industry	0	0
Computer Science (7-12)	**4**	**2**
Early Childhood (PreK-3)	**343**	**360**
Elementary Education (1-6)	**1,030**	**1,066**
English (7-12)	**186**	**189**
Environmental Education (PreK-12)	**2**	**1**
ESOL (PreK-12)	**47**	**56**
Foreign Language (7-12)	**59**	**56**
Arabic	0	0
Chinese	9	17
French	7	11
German	4	1
Italian	0	0
Japanese	0	0
Latin	0	0
Russian	0	0
Spanish	39	27
Other Foreign Languages	0	0
Health (PreK-12)	**35**	**37**
Mathematics (7-12)	**92**	**81**
Middle School Education (4-9)	**20**	**34**
Middle School Ed: English/Language Arts	2	3
Middle School Ed: Mathematics	11	15
Middle School Ed: Science	6	11
Middle School Ed: Social Studies	1	5
Physical Education (PreK-12)	**108**	**117**
Science (7-12)	**116**	**106**
Biology	75	68
Chemistry	16	15
Earth/Space	10	14
Physical Science	0	1
Physics	15	8
Social Studies (7-12)	**203**	**172**
Geography	0	1
History	47	57
Social Studies	156	114
Special Education	**617**	**676**
Generic: Infant/primary (birth-grade 3)	65	65
Generic: Elementary/middle (grades 1-8)	356	398
Generic: Secondary/adult (grades 6-adult)	139	150
Hearing Impaired	2	2
Severely and Profoundly Disabled	55	61
Visually Impaired	0	0

NOTE: 164 of the 2011-2012 projected graduates have dual majors.
175 of the 2012-2013 projected graduates have dual majors.
SOURCE: Deans and Directors of Teacher Education, Maryland Institutions of Higher Education, May 20

Table 8

Newly Eligible Candidates from Maryland Approved Programs by Institution
Maryland Institutions of Higher Education
2010 – 2011

Institution	Maryland Approved Program Graduates
Total	**2,555**
>Bowie State University	47
>Coppin State University	16
>Frostburg State University	172
Goucher College	32
Hood College	44
Johns Hopkins University	137
Loyola University Maryland	68
Maryland Institute College of Art	30
McDaniel College	62
Morgan State University	14
Mt. St. Mary's University	59
Notre Dame University of Maryland	334
Peabody Institute, Johns Hopkins University	7
St. Mary's College of Maryland	34
>Salisbury University	233
Stevenson University	68
>Towson University	676
>University of Maryland Baltimore County	95
>University of Maryland College Park	379
>University of Maryland Eastern Shore	21
>University of Maryland University College	7
Washington College	13
Washington Adventist University	7

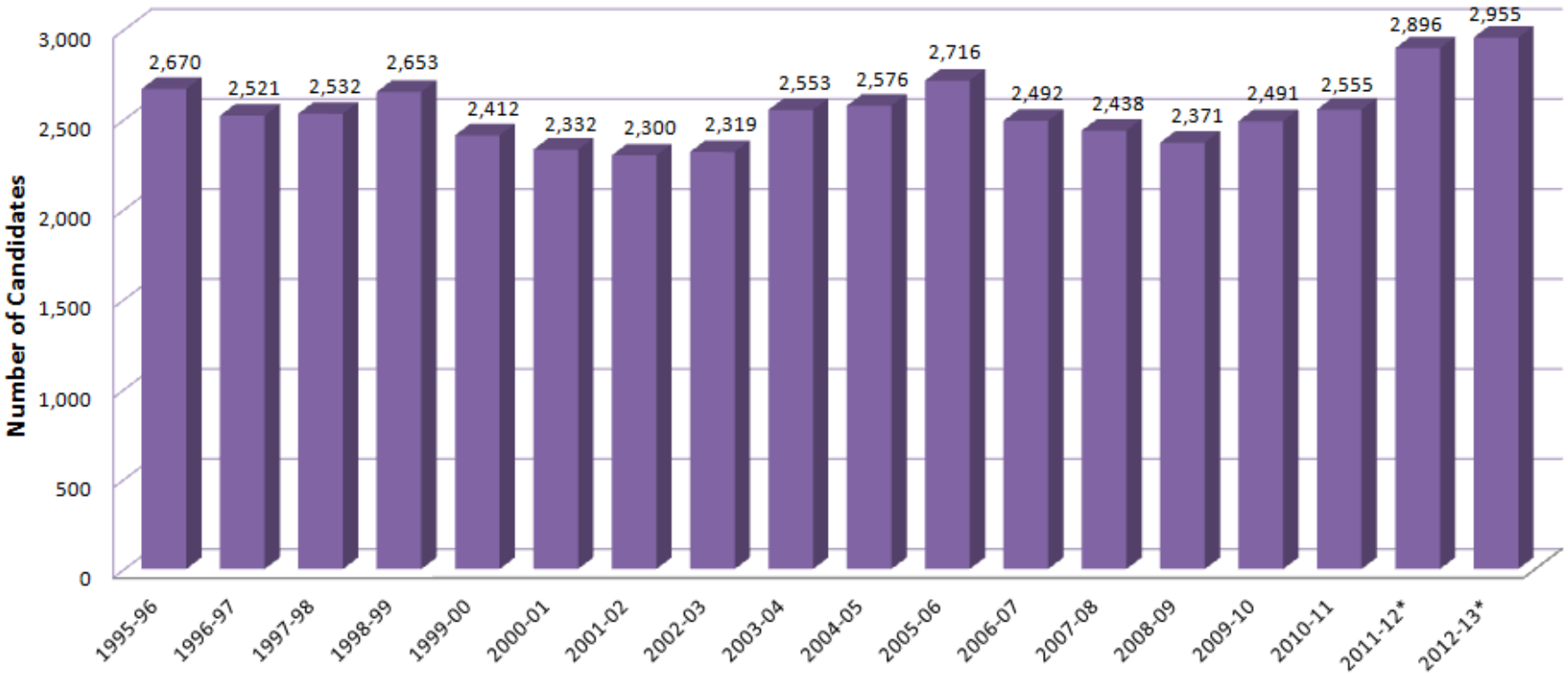
> Institutions of higher education that are part of the University System of Maryland.

SOURCE: Deans and Directors, Maryland Institutions of Higher Education, May 2012.

Although Maryland institutions produced 2,555 teacher candidates in 2010-2011 (Table 8), a smaller number were hired as teachers in Maryland (Table 1). Many who graduate from Maryland institutions do not apply for teaching positions in Maryland for various reasons. Those not native to Maryland might return to their home states; others may decide to move out-of-state, go to graduate school, pursue careers outside of teaching, or not enter teaching immediately.

Figure 6: *Trend Data: Teacher Education Candidates Prepared by Maryland Approved Programs,* shows the actual number of teacher education candidates from Maryland institutions eligible for initial certification from 1995-1996 through 2012-2013 and projections on the number of graduates for the next two years, 2011-2012 and 2012-2013.

Trend Data: Teacher Education Candidates Prepared by Maryland Approved Programs 1995-1996 to 2012-2013



*Anitcipated teacher candidates are projected by Maryland higher education institutions.

Figure 6

Maryland Approved Alternative Preparation Programs

The Maryland Approved Alternative Preparation Programs (MAAPP) are designed to attract and recruit into teaching liberal arts graduates and career changers who possess academic content backgrounds in the arts and sciences, but did not complete teacher preparation programs. The regulation supporting alternative preparation programs, COMAR 13A.12.01.07, was first passed in 1990 and amended in 2005. Maryland's alternative preparation programs are tailored to meet the specific staffing needs of Maryland school districts, while providing the flexibility necessary to attract experienced, diverse individuals to the classroom. Several school systems sponsor alternative preparation programs, either in partnership with two-year or four-year colleges, or with private providers such as The New Teacher Project or Teach for America, or by local school systems who develop and implement their own training.

Alternative preparation programs differ from traditional programs in that alternative preparation leads to teacher certification, but not necessarily to an advanced degree. Alternative preparation programs allow an individual to begin teaching and receiving a salary early in the program, and the cost for the candidate is usually less than for the traditional pathway four-year programs. Because of the modified timeframe, alternative preparation programs are intensive and challenging. The qualifications to enter the program, as a result of a May 2010 Maryland State Board of Education decision, include:

- A GPA of 2.75;
- Qualifying scores on the required Praxis I and Praxis II content tests:
- A college degree with a major or core area in a certification content area or a transcript with 30-hour core of study area in which the individual wants to teach; or
- As of 2010, a test-in option for a candidate to prove content competency.

Candidates who are accepted into a MAAPP begin by completing courses or instructional modules of required pre-employment training. This training must include classroom instruction and management training designed to provide the skills necessary for the candidate to begin the school year as the teacher of record. Training also includes fundamental instruction in lesson planning, student assessment, and the first of the state-required reading courses. Finally, upon successful completion of pre-employment training, a candidate has an internship for a period of four to eight weeks, supported and monitored by a master or mentor teacher. The length of the internship is dependent on prior life experiences and demonstrated competency. The candidate then begins teaching as an employee of the partnering local school system using the Resident Teacher Certificate (RTC). At the end of a successful residency, the candidate is eligible for the Standard Professional Certificate I (SPC), professional licensure that is mobile across states. Those who successfully complete the MAAPP not only have teacher certification in an academic area, but also a strong footing in the classroom and supportive relationships with the school staff.

Table 8A: *Initial Hires from Maryland Approved Alternative Preparation Programs,* reports the number of MAAPP candidates for the past two years. The school system is listed first, followed by the partner/provider. The chart lists the number of candidates as they enter their residency, which can be one or two years in length. In 2010-2011 there were 504 candidates in 12 programs; in 2011-2012 there were 398 candidates in nine programs. Since one of the goals of the program is to increase the number of teachers in shortage areas, these candidates are hired to teach in areas where the local school system has a need, such as science, mathematics and special education.

The advent of the MAAPP route to teaching has been very successful in Maryland. Since these programs are instituted by the local school systems, only candidates in those content areas that represent a local hiring need are accepted into the programs. The certification areas of the candidates for the two years reported in Table 8A include 201 teachers in the Science, Technology, Engineering, and Mathematics (STEM) areas. Also included are 72 who received dual certification in special education and either a secondary education content area, elementary education or early childhood education. MAAPP candidates will continue to be used to target difficult areas to staff. With attention now turning to defining and evaluating the effective teacher, the quality of those hired through all pathways will become increasingly important.

Table 8A
Initial Hires from Maryland Approved Alternative Preparation Programs
2010-2011 and 2011-2012

Local School System/Partner and Program Provider	Number of Initial Hires 2010-2011	2011-2012
Total	**504**	**398**
Anne Arundel Co Public Schools / Anne Arundel Community College (AACPS/AACC)	5	11
Anne Arundel Co Public Schools/Notre Dame of MD University (AACPS/NDMU)	8	0
*Baltimore City/Baltimore Co Public Schools Teach for America (BC/TFA)	170	179
Baltimore City Public Schools/TNTP Academy (formerly BCTR)	122	98
*Baltimore City/Urban Teacher Center (BC/UTC)	0	18
Baltimore County Public Schools/ Goucher College (BCPS/GC)	10	8
Baltimore County Public Schools /Towson University (BCPS/TU)	10	0
Montgomery Co Public Schools/Montgomery Community College (MCPS/MCC)	6	4
Prince George's Co Public Schools/Notre Dame of Maryland University (PGCPS/NDMU)	14	0
*Prince George's Co Public Schools /MSMaRT (PGCPS/UMCP)	11	8
Prince George's Co Public Schools /Teach for America (PGCPS/TFA)	74	46
Prince George's Co Public Schools /Resident Teacher (PGCPS/RT)	26	26
Prince George's Co Public Schools/The New Teacher Project (PGCPS/TNTP)	48	0

* Newly-approved program for 2010-2011.
Source: Maryland Approved Alternative Preparation Programs, 2012.

SECTION V: MINORITY AND GENDER DATA

Minority and gender data on teacher candidates from Maryland institutions of higher education and on new hires reported by the local school systems are collected by MSDE. This information is important because Maryland is committed to a diverse teacher workforce. The federal government recently changed the way minority data is collected. One major change is individuals may check more than one category when reporting their race/ethnicity.

Minority Data for Teacher Candidates and New Hires

Table 9: *Trend Data: Minority Teacher Candidates from Maryland Approved Programs,* displays minority trend data for newly eligible teachers prepared by Maryland institutions of higher education for the past five years. The minority designations include Hispanic/Latino, Black/African-American, American Indian/Alaska Native, Asian, and 2 or more races. The percentage of minorities was 19.5% in 2006-2007, and is 18.8% for 2010-2011.

There were 546 minority teacher candidate graduates for 2010-2011; the largest number majored in elementary education (174), followed by special education (134), and early childhood (51). All other certification areas have relatively small numbers of minorities.

Table 9

Trend Data: Minority* Teacher Candidates from Maryland Approved Programs
Maryland Institutions of Higher Education
2006-2007 to 2010-2011

	2006-2007			2007-2008			2008-2009			2009-2010			2010-2011		
		Minority			Minority			Minority			Minority			Minority	
Certification Area	Total	Number	%	Total	Number	%	Total	Number	%	Total	Number	%	Total	Number	%
Total	**2,657**	**517**	**19.5%**	**2,599**	**554**	**21.3%**	**2,535**	**428**	**16.9%**	**2,617**	**414**	**15.8%**	**2,897**	**546**	**18.8%**
Art (PreK-12)	96	13	13.5%	96	15	15.6%	97	12	12.4%	97	12	12.4%	114	18	15.8%
Career/Technology Education (7-12)	16	6	37.5%	17	9	52.9%	13	4	30.8%	18	5	27.8%	12	3	25.0%
Computer Science (7-12)	0	0	0.0%	0	0	0.0%	2	0	0.0%	1	0	0.0%	1	1	100.0%
Early Childhood (PreK-3)	283	41	14.5%	266	57	21.4%	300	38	12.7%	312	46	14.7%	329	51	15.5%
Elementary Ed. (1-6 & Middle School)	995	210	21.1%	930	200	21.5%	919	164	17.8%	939	144	15.3%	1,011	174	17.2%
English (7-12)	146	25	17.1%	134	27	20.1%	157	21	13.4%	161	26	16.1%	169	29	17.2%
ESOL (PreK-12)	54	22	40.7%	54	20	37.0%	45	14	31.1%	42	18	42.9%	63	25	39.7%
Foreign Language (7-12)*	48	11	22.9%	43	16	37.2%	39	9	23.1%	48	5	10.4%	54	17	31.5%
Health/Physical Education (PreK-12)	121	20	16.5%	128	12	9.4%	112	14	12.5%	104	11	10.6%	125	9	7.2%
Mathematics (7-12)	105	19	18.1%	95	28	29.5%	81	12	14.8%	95	16	16.8%	71	13	18.3%
Middle School Education (4-9)	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	3	16.7%	21	6	28.6%
Music (PreK-12)	62	12	19.4%	56	16	28.6%	68	9	13.2%	55	7	12.7%	78	13	16.7%
Science (7-12)	125	26	20.8%	113	17	15.0%	91	21	23.1%	96	17	17.7%	93	26	28.0%
Social Studies (7-12)	194	25	12.9%	203	36	17.7%	170	16	9.4%	205	21	10.2%	173	27	15.6%
Special Education	397	83	20.9%	454	100	22.0%	429	92	21.4%	414	82	19.8%	568	134	23.6%
Other Teaching Areas^	15	4	26.7%	10	1	10.0%	12	2	16.7%	12	1	8.3%	15	0	0.0%

* Minority includes American Indian/Alaska Native, Asian, Black or African American, Hispanic, Native Hawaiian or Other Pacific Islander, and two or more races.
^ theater and dance
NOTE: Counts include graduates with dual majors.
*Foreign Languages (7-12) became World Languages (PreK-12) May 2012.

Table 10: *Minority New Hires by Certification Area,* includes the number and percent of minority new hires by certification area. Of the 3,695 new hires, 889 (24.1%) were minorities. Of these, 438 (18.7%) were beginning new hires, while 451 (33.3%) were experienced new hires. The largest percentages of minority new hires were in elementary education, special education and early childhood education.

Table 11:*Trend Data for Minority New Hires, 2007-2008 to 2011-2012,* displays five years of minority new hires. The number and percent decreased from 2,213 (29.3%) in 2007-2008 to 889 (24.1%) in 2011-2012. Despite many programs to attract minorities into teaching, the number of candidates has not increased significantly over time.

Minority Data for All Maryland Students and Teachers

The Division of Accountability, Assessment and Data (DAAD) collects data on all students and teachers in the state's public schools, so a comparison can be made contrasting the newly hired teachers with all teachers in the state. Among the 58,351 Maryland teachers reported in October 2011, 76.3% were White, 16.6% were African-American and 7.1% were classified as other (American Indian, Asian, and Hispanic). This data is available from the *MSDE Fact Book, 2010-2011* which is available on the web at: http://www.marylandpublicschools.org/MSDE/divisions/bus_svcs/fb.

DAAD collects minority data on all Maryland PreK-12 students. Of the 854,086 students, 42.5% were white, 35.4% African-American, 12.1% Hispanic/Latino, 5.9% Asian and 4.1% either Asian/Pacific Islander or American Indian/Alaskan Native. The total Maryland minority student population is a majority of 57.5%.

Table 10

Minority* New Hires by Certification Area
Maryland Public Schools
October 2010 Through October 2011

	Total New Hires			Beginning New Hires			Experienced New Hires		
		Minority			Minority			Minority	
Certification Area	**Total**	**Number**	**Percent**	**Total**	**Number**	**Percent**	**Total**	**Number**	**Percent**
Total New Hires	**3,695**	**889**	**24.1%**	**2,342**	**438**	**18.7%**	**1,353**	**451**	**33.3%**
The Arts	**248**	**38**	**15.3%**	**178**	**27**	**15.2%**	**70**	**11**	**15.7%**
Art (PreK-12)	102	10	9.8%	81	9	11.1%	21	1	4.8%
Dance (7-12)	15	2	13.3%	11	1	9.1%	4	1	25.0%
Music (PreK-12)	125	24	19.2%	82	17	20.7%	43	7	16.3%
Theater (7-12)	6	2	33.3%	4	0	0.0%	2	2	100.0%
Career/Technology Education (7-12)	**142**	**43**	**30.3%**	**100**	**24**	**24.0%**	**42**	**19**	**45.2%**
Agriculture	6	0	0.0%	3	0	0.0%	3	0	0.0%
Business Education	24	9	37.5%	13	2	15.4%	11	7	63.6%
Data Processing	0	0	0.0%	0	0	0.0%	0	0	0.0%
Family & Consumer Sciences	16	6	37.5%	8	2	25.0%	8	4	50.0%
Health Occupations	4	2	50.0%	1	1	100.0%	3	1	33.3%
Marketing Education	0	0	0.0%	0	0	0.0%	0	0	0.0%
Technology Education	59	9	15.3%	52	8	15.4%	7	1	14.3%
Trades and Industry	33	17	51.5%	23	11	47.8%	10	6	60.0%
Computer Science (7-12)	**8**	**6**	**75.0%**	**2**	**1**	**50.0%**	**6**	**5**	**83.3%**
Early Childhood (PreK-3)	**362**	**84**	**23.2%**	**250**	**55**	**22.0%**	**112**	**29**	**25.9%**
Elementary Education (1-6 & Middle School)	**1,097**	**234**	**21.3%**	**723**	**121**	**16.7%**	**374**	**113**	**30.2%**
English (7-12)	**328**	**67**	**20.4%**	**232**	**41**	**17.7%**	**96**	**26**	**27.1%**
Environmental Education (PreK-12)	**0**	**0**	**0.0%**	**0**	**0**	**0.0%**	**0**	**0**	**0.0%**
ESOL (PreK-12)	**79**	**27**	**34.2%**	**41**	**14**	**34.1%**	**38**	**13**	**34.2%**
Foreign Language (7-12)*	**156**	**45**	**28.8%**	**90**	**25**	**27.8%**	**66**	**20**	**30.3%**
Arabic	2	0	0.0%	2	0	0.0%	0	0	0.0%
Chinese	8	8	100.0%	5	5	100.0%	3	3	100.0%
French	22	5	22.7%	12	2	16.7%	10	3	30.0%
German	3	1	33.3%	1	0	0.0%	2	1	50.0%
Italian	4	0	0.0%	4	0	0.0%	0	0	0.0%
Latin	2	0	0.0%	1	0	0.0%	1	0	0.0%
Russian	2	0	0.0%	1	0	0.0%	1	0	0.0%
Spanish	111	30	27.0%	63	18	28.6%	48	12	25.0%
Other Foreign Language	2	1	50.0%	1	0	0.0%	1	1	100.0%
Health (PreK-12)	**15**	**2**	**13.3%**	**12**	**2**	**16.7%**	**3**	**0**	**0.0%**
Health/Physical Education (PreK-12)	**34**	**4**	**11.8%**	**20**	**0**	**0.0%**	**14**	**4**	**28.6%**
Mathematics (7-12)	**242**	**68**	**28.1%**	**157**	**34**	**21.7%**	**85**	**34**	**40.0%**
Middle School Education (4-9)	**47**	**18**	**38.3%**	**28**	**10**	**35.7%**	**19**	**8**	**42.1%**
Middle School Ed: English/Language Arts	13	6	46.2%	7	3	42.9%	6	3	50.0%
Middle School Ed: Mathematics	28	10	35.7%	17	7	41.2%	11	3	27.3%
Middle School Ed: Science	5	2	40.0%	3	0	0.0%	2	2	100.0%
Middle School Ed: Social Studies	1	0	0.0%	1	0	0.0%	0	0	0.0%
Physical Education (PreK-12)	**82**	**11**	**13.4%**	**55**	**2**	**3.6%**	**27**	**9**	**33.3%**
Science (7-12)	**223**	**53**	**23.8%**	**134**	**25**	**18.7%**	**89**	**28**	**31.5%**
Biology	139	31	22.3%	70	10	14.3%	69	21	30.4%
Chemistry	24	7	29.2%	18	5	27.8%	6	2	33.3%
Earth/Space	14	1	7.1%	12	1	8.3%	2	0	0.0%
Physical Science	10	5	50.0%	9	4	44.4%	1	1	100.0%
Physics	14	3	21.4%	10	2	20.0%	4	1	25.0%
General Science	22	6	27.3%	15	3	20.0%	7	3	42.9%
Social Studies (7-12)	**174**	**26**	**14.9%**	**114**	**14**	**12.3%**	**60**	**12**	**20.0%**
Special Education	**444**	**158**	**35.6%**	**202**	**43**	**21.3%**	**242**	**115**	**47.5%**
Generic: Infant/primary (birth-grade 3)	19	3	15.8%	11	2	18.2%	8	1	12.5%
Generic: Elementary/middle (grades 1-8)	155	50	32.3%	69	12	17.4%	86	38	44.2%
Generic: Secondary/adult (grades 6-adult)	127	53	41.7%	55	11	20.0%	72	42	58.3%
Hearing Impaired	4	1	25.0%	1	1	100.0%	3	0	0.0%
Severely and Profoundly Disabled	6	2	33.3%	3	1	33.3%	3	1	33.3%
Visually Impaired	1	0	0.0%	0	0	0.0%	1	0	0.0%
Other (SpEd-K-12 and SpEd-Generic: Infant-Adult)	132	49	37.1%	63	16	25.4%	69	33	47.8%
Other Teaching Areas	**14**	**5**	**35.7%**	**4**	**0**	**0.0%**	**10**	**5**	**50.0%**

Minority includes American Indian/Alaska Native, Asian, Black/African American, Hispanic, Native Hawaiian/Other Pacific Islander, and 2 or more races.
*Foreign Laguages (7-12) became World Languages (PreK-12) May 2012.

Table 11

Trend Data for Minority* New Hires
Maryland Public Schools
2007-2008 to 2011-2012

	2007-2008			2008-2009			2009-2010			2010-2011			2011-2012		
		Minority			Minority			Minority			Minority			Minority	
Certification Area	Total	Number	%	Total	Number	%	Total	Number	%	Total	Number	%	Total	Number	%
Total New Teachers	7,249	2,123	29.3%	5,241	1,592	30.4%	4,143	1,005	24.3%	3,590	886	24.7%	3,695	889	24.1%
Art (PreK-12)	190	18	9.5%	125	16	12.8%	108	22	20.4%	97	20	20.6%	102	10	9.8%
Career/Technology Education (7-12)	217	81	37.3%	145	47	32.4%	160	46	28.8%	139	50	36.0%	142	43	30.3%
Computer Science (7-12)	13	6	46.2%	14	7	50.0%	8	5	62.5%	7	4	57.1%	8	6	75.0%
Early Childhood (PreK-3)	636	158	24.8%	441	116	26.3%	384	79	20.6%	296	63	21.3%	362	84	23.2%
Elementary Ed. (1-6 & Middle School)	2,557	688	26.9%	1,753	445	25.4%	1,396	292	20.9%	1,094	223	20.4%	1,097	234	21.3%
English (7-12)	617	162	26.3%	447	102	22.8%	357	81	22.7%	329	81	24.6%	328	67	20.4%
ESOL (PreK-12)	96	38	39.6%	62	29	46.8%	61	18	29.5%	69	24	34.8%	79	27	34.2%
Foreign Language (7-12)*	201	60	29.9%	178	69	38.8%	194	59	30.4%	178	57	32.0%	156	45	28.8%
Health/Physical Education (PreK-12)	249	51	20.5%	224	64	28.6%	147	27	18.4%	140	39	27.9%	131	17	13.0%
Mathematics (7-12)	477	197	41.3%	340	153	45.0%	240	62	25.8%	225	56	24.9%	242	68	28.1%
Middle School Education (4-9)	NA	NA	NA	23	3	13.0%	33	6	18.2%	48	13	27.1%	47	18	38.3%
Music (PreK-12)	227	32	14.1%	145	28	19.3%	136	21	15.4%	121	22	18.2%	125	24	19.2%
Science (7-12)	485	189	39.0%	372	152	40.9%	251	65	25.9%	232	63	27.2%	223	53	23.8%
Social Studies (7-12)	423	83	19.6%	300	58	19.3%	212	42	19.8%	219	39	17.8%	174	26	14.9%
Special Education	823	347	42.2%	634	289	45.6%	417	167	40.0%	368	120	32.6%	444	158	35.6%
Other Teaching Areas^	38	13	34.2%	38	14	36.8%	39	13	33.3%	28	12	42.9%	35	9	25.7%

Minority includes American Indian/Alaska Native, Asian, Black or African American, Hispanic, Native Hawaiian or Other Pacific Islander, and two or more races.
^ theater, dance, and other teaching areas
*Foreign Laguages (7-12) became World Languages (PreK-12) May 2012.

Gender of New Hires and Teacher Candidates

Teaching has long been a predominately female occupation, and gender data for both new hires and teacher candidates collected for this report show this is still true. Table 12: *New Hires in Certification Areas by Gender,* reports that of the 3,695 new hires through October 2011, 77.7% are females and 22.3% are males. The ratio of females to males has changed minimally over the past several years.

Table 13: *Teacher Graduates from Maryland Approved Programs by Gender,* indicates that of the 2,897 graduates from Maryland Institutions of Higher Education in 2010-2011, the number of male teacher candidates is 540, or 18.6%. The number of female teacher candidates is 2,357 or 81.4%. The number of males exceeds females only in physical education (54 to 40). It appears that despite attempts to increase the number of males in teaching, the various programs and incentives have not resulted in a change.

Table 12

New Hires in Certification Areas by Gender
Maryland Public Schools
October 2010 Through October 2011

Certification Area	Total	Male		Female	
		Number	Percent	Number	Percent
Total New Teachers	**3,695**	**824**	**22.3%**	**2,871**	**77.7%**
The Arts	248	69	27.8%	179	72.2%
Career/Technology Education (7-12)	142	88	62.0%	54	38.0%
Computer Science (7-12)	8	3	37.5%	5	62.5%
Early Childhood (PreK-3)	362	4	1.1%	358	98.9%
Elementary Education (1-6 & Middle School)	1,097	121	11.0%	976	89.0%
English (7-12)	328	88	26.8%	240	73.2%
ESOL (PreK-12)	79	7	8.9%	72	91.1%
Foreign Language (7-12)*	156	36	23.1%	120	76.9%
Health (PreK-12)	15	0	0.0%	15	100.0%
Health/Physical Education (PreK-12)	34	17	50.0%	17	50.0%
Mathematics (7-12)	242	87	36.0%	155	64.0%
Middle School Education (4-9)	47	11	23.4%	36	76.6%
Physical Education (PreK-12)	82	56	68.3%	26	31.7%
Science (7-12)	223	74	33.2%	149	66.8%
Social Studies (7-12)	174	77	44.3%	97	55.7%
Special Education	444	81	18.2%	363	81.8%
Other Teaching Areas	14	5	35.7%	9	64.3%

*Foreign Laguages (7-12) became World Languages (PreK-12) May 2012.

Table 13

Teacher Graduates from Maryland Approved Programs by Gender
Maryland Institutions of Higher Education
2010 - 2011

Certification Area	Total	Male		Female	
		Number	Percent	Number	Percent
Total	**2,897**	**540**	**18.6%**	**2,357**	**81.4%**
The Arts	207	58	28.0%	149	72.0%
Career/Technology Education (7-12)	12	6	50.0%	6	50.0%
Computer Science (7-12)	1	0	0.0%	1	0.0%
Early Childhood (PreK-3)	329	12	3.6%	317	96.4%
Elementary Education (1-6)	1,011	89	8.8%	922	91.2%
English (7-12)	169	37	21.9%	132	78.1%
ESOL (PreK-12)	63	11	17.5%	52	82.5%
Foreign Language (7-12)*	54	12	22.2%	42	77.8%
Health (PreK-12)	31	7	22.6%	24	77.4%
Mathematics (7-12)	71	27	38.0%	44	62.0%
Middle School Education (4-9)	21	5	23.8%	16	76.2%
Physical Education (PreK-12)	94	54	57.4%	40	42.6%
Science (7-12)	93	44	47.3%	49	52.7%
Social Studies (7-12)	173	81	46.8%	92	53.2%
Special Education	568	97	17.1%	471	82.9%

NOTE: 342 of the total graduates have dual majors.
Foreign Language (7-12) became World Language (PreK-12) May 2012
Source: Deans and Directors of Teacher Education Programs, May 2012.

Gender of All Maryland Students and Teachers

DAAD reported that in 2011-2012 the gender of all Maryland teachers is 77.6% female and 22.4% male. These percentages have shown little change over the past several years. The student gender information shows that of the 848,412 Maryland students, 51.3% are males and 48.7% are females.

The ethnic and gender data (and other data such as salaries, degrees, and years of experience) are included in the *MSDE Fact Book, 2010-2011*, available online at: http://www.marylandpublicschools.org/MSDE/divisions/bus_svcs/fb.

To summarize, as the number of minority students rise, there continues to be a higher percentage of minorities among Maryland PreK-12 students than among their teachers. There also continues to be more females than males in the teaching profession. The ratio (3 to 1) of female/male teachers has not changed over the past several years. The teaching profession in Maryland and nationally still remains predominately white and female.

SECTION VI: NON-CLASSROOM PROFESSIONALS

At the request of the Maryland State Board of Education, MSDE has collected information for several years from local school systems and institutions of higher education on the supply and demand for select non-classroom professional positions. These positions are: guidance counselor, library/media specialist, principal, reading specialist, and school psychologist.

Staffing Projections for Non-Classroom Professionals

Table 14: *Staffing Projections of Local School Systems for Non-Classroom Professionals,* presents projected needs identified by local school systems for the next two years 2012-2013 and 2012-2014 for five non-classroom professional positions. As with the teacher data, all numbers are lower than in past years. Again, this is likely related to the downturn in the economy since fewer professionals are retiring due to the economy.

Although speech/language pathologists are no longer certified by MSDE (they are licensed by the state), House Bill 1235 designated speech language pathology as an area of critical shortage, so they have been added to the MSDE shortage list. By declaring them a shortage area, they become eligible for the Retire/Rehire Program.

Table 14

Staffing Projections of Local School Systems for Non-Classroom Professionals Maryland Public Schools 2012-2013 - 2013-2014

Non-Classroom Professionals	2012-13	2013-14
Guidance Counselor	38	40
Library/Media Specialist	50	45
Reading Specialist	20	25
School Psychologist	27.5	31.5
Principal	108	105

Source: Local school systems, May 2012

Supply of Non-Classroom Professionals

Table 15: *Supply of Non-Classroom Professionals from Maryland Institutions of Higher Education,* presents five years of graduates, 2008-2009 through 2010-2011, and projected graduates for 2011-2012 and 2012-2013 in five professional areas. As a cautionary note, MSDE only has access to graduates of Maryland institutions, but many in-state professionals may go to nearby Washington DC, Virginia, and Delaware for their graduate degrees, given the proximity of many institutions of higher education in their areas. Additionally, many online options are now available. Therefore, the number of graduates reported here may be smaller than the personnel actually available to school systems.

Table 15

Supply of Non-Classroom Professionals From Maryland Institutions of Higher Education 2008-2009 - 2012-2013

Non-Classroom Professionals	Candidates 2008-09	Candidates 2009-10	Candidates 2010-11	Projected 2011-12	Projected 2012-13
Guidance Counselor	133	153	217	209	188
Library/Media Specialist	56	91	72	114	70
Reading Specialist	253	230	195	201	188
School Psychologist	17	26	24	20	21
Principal	529	628	627	621	638

Source: Institutions of Higher Education, May 2012

Non-Classroom Professionals by Extent of Staffing Need

Table 16: *Non-Classroom Professionals by Extent of Staffing Need,* was projected based on the new hires, the information from the survey of local school needs and the actual vacancies each August.

Within the limitations of this study of projected shortages, and based on projected imbalances in supply and demand, MSDE uses the same three categories used in the teacher projections: *Critical Shortage, Balanced, and Surplus*. To summarize, this year the non-classroom professionals that are declared as critical shortage areas in Maryland are library media specialist, principal and speech/language pathologist.

Table 16
Non-Classroom Professionals by Extent of Staffing Need
May 2012

Certification Area	Critical Shortage	Balanced	Surplus
Guidance Counselor		X	
Library/Media	X		
Principal	X		
Reading Specialist		X	
School Psychologist		X	
Speech/Language Pathologist	X		

Shaded bands are those that are considered critical shortage areas.

MSDE also collects the number of graduates of non-classroom professional positions by the institution of higher education. Table 17: *Newly Eligible Non-Classroom Professional Graduates by Institution and Program,* gives the 2010-2011 graduates by program and by institution of higher education. An “NA” indicates the institution did not have an approved program in the area.

In summary, this report identifies select non-classroom professional positions that are critical shortage areas. Many of these positions come from the teacher ranks and are considered career pathways for teachers. All of these positions are essential to having successful schools for Maryland’s K-12 population.

Table 17

Newly Eligible Non-Classroom Professional Graduates by Institution and Program
Maryland Institutions of Higher Education
2010 - 2011

Institution	Guidance Counselor	Library/ Media Specialist	Reading Specialist	School Psychologist	Principal
Total	**217**	**72**	**195**	**24**	**642**
>Bowie State University	20	NA	NA	3	8
College of Notre Dame of Maryland	NA	13	3	NA	72
>Coppin State University	NA	NA	NA	NA	19
>Frostburg State University	23	NA	16	NA	15
Goucher College	NA	NA	31	NA	19
Hood College	NA	NA	14	NA	47
Johns Hopkins University	65	NA	14	NA	103
Loyola College	48	NA	11	NA	28
McDaniel College	41	21	9	0	185
Morgan State University	NA	NA	NA	NA	5
*New Leaders for New Schools Marylai	NA	NA	NA	NA	15
>Salisbury University	0	0	6	0	11
>Towson University	0	22	82	12	113
>University of Maryland College Park	9	16	9	9	2
>University of Maryland Eastern Shore	11	0	0	0	0

> Institutions of higher education that are part of the University System of Maryland.
* New Leaders for New Schools is the only non IHE with an approved principal preparation program.
SOURCE: Deans and Directors, Maryland Institutions of Higher Education, May 2012.

SECTION VII: RECOMMENDATIONS TO THE MARYLAND STATE BOARD OF EDUCATION

The MSDE is recommending to the Maryland State Board of Education teaching and geographic areas of critical shortage, consistent with Education Article §18-708, the *Sharon Christa McAuliffe Memorial Teacher Education Award*, found in the Annotated Code of Maryland. A declared shortage recommendation on gender and diversity in teaching is made, and inclusion of certain non-classroom professional positions as critical shortage areas is presented. The recommendations are below.

Recommendation 1: The Maryland State Board of Education declares the following content areas as critical shortage areas:

- Career and technology areas (7-12):
  - Technology education, and
  - Family and Consumer Sciences;
- Computer science (7-12);
- English for speakers of other languages (ESOL) (PreK-12);
- Mathematics (7-12);
- Science areas (7-12):
  - Chemistry,
  - Earth/Space science,
  - Physical science, and
  - Physics;
- Special education areas:
  - Generic: Infant/primary (birth-grade 3),
  - Generic: Elementary/middle school (grades 1-8),
  - Generic: Secondary/adult (grades 6 – adult),
  - Hearing impaired,
  - Severely and profoundly disabled, and
  - Visually impaired;

- World language areas (PreK-12):
  - Chinese, and
  - Spanish.

Recommendation 2: The Maryland State Board of Education declares the following twenty Maryland jurisdictions as geographic areas of projected shortage of certified teachers:

1. Anne Arundel County
2. Baltimore City
3. Baltimore County
4. Calvert County
5. Caroline County
6. Carroll County
7. Cecil County
8. Charles County
9. Dorchester County
10. Frederick County
11. Harford County
12. Howard County
13. Kent County
14. Montgomery County
15. Prince George's County
16. Queen Anne's County
17. St. Mary's County
18. Somerset County
19. Washington County
20. Wicomico County

Recommendation 3: The Maryland State Board of Education declares a shortage of teachers who are males and teachers who are members of minority groups.

Recommendation 4: The Maryland State Board of Education declares a shortage of the non-classroom professional positions of library/media specialist, principal and speech/language pathologist.

A P P E N D I C E S

APPENDIX A

EDUCATION

§ 18-708. Workforce Shortage Student Assistance grants.

(a) *Definitions.* – (1) In this section the following words have the meanings indicated.

(2) "Advisory Council" means the Advisory Council on Workforce Shortage.

(3) "Eligible institutions" means a public or private institution of higher education in this State that possesses a certificate of approval from the Commission.

(4) "Grant" means the Workforce Shortage Student Assistance grant.

(b) *Program established.* - There is a program of Workforce Shortage Student Assistance grants under this section for students who pledge to work in fields of critical shortage in the State on completion of their studies.

(c) *Purpose.* – The purpose of the program is to:

(i) Provide financial assistance to students enrolled at institutions of higher education in the State; and

(ii) Address the workforce shortage needs of the State.

(d) *Requirements for recipients of grant.* – A recipient of a Workforce Shortage Student Assistance grant under this section shall:

(i) Be a resident of the State;

(ii) Be selected by the Office from qualified applicants;

(iii) Sign a letter of intent to enroll at an eligible institution in the State in an eligible program as specified for each field in which there is a critical shortage in this State as provided in this section;

(iv) Sign a letter of intent to perform the service obligation on completion of the recipient's required studies;

(v) Accept any other conditions attached to the grant;

(vi) Satisfy any additional criteria the Commission may establish; and

(vii) After completion of studies in an eligible program, perform the service obligation as specified for each field in which there is a critical shortage, as provided in this section.

(e) *Duties of Commission; Advisory Council; workforce shortage fields in general; removal of fields.* – (1) Except as provided in paragraph (5) of this subsection, the Commission shall on a biennial basis:

(i) Identify workforce shortage fields in the State;

(ii) Designate eligible workforce shortage fields under the grant program; and

(iii) Remove from the grant program any field that the Commission determines no longer qualifies as a workforce shortage.

(2) The Secretary shall appoint an Advisory Council on Workforce Shortage to:

(i) Identify workforce shortage fields in the State; and

(ii) Recommend to the Commission:

1. Priority workforce shortage fields to be included in the grant program; and

2. The removal of fields that in the Advisory Council's judgment no longer qualify as workforce shortage fields.

(3) In making recommendations to the Commission, the Advisory Council shall consider whether a workforce shortage field provides a public good or benefit to the citizens of Maryland.

(4) The Advisory Council shall include the following members:

(i) The Secretary of Higher Education or designee;

(ii) The Secretary of Labor, Licensing, and Regulation or designee;

(iii) One representative from the Governor's Workforce Investment Board, appointed by the Governor;

(iv) The Secretary of Business and Economic Development or designee;

(v) The Secretary of Health and Mental Hygiene or designee;

(vi) The State Superintendent of Schools or designee;

(vii) One representative of the Senate of Maryland, appointed by the President of the Senate;

(viii) One representative of the Maryland House of Delegates, appointed by the Speaker of the House;

(ix) Two representatives from the University System of Maryland, appointed by the Chancellor;

(x) The President of Morgan State University or designee;

(xi) The President of St. Mary's College or designee; and

(xii) Representatives nominated by the following organizations and appointed by the Secretary of Higher Education;

1. One representative from the Maryland Chamber of Commerce;
2. One representative from the Washington Board of Trade;
3. One representative from the Greater Baltimore Committee;
4. Two representatives from the Maryland Independent College and University Association;
5. Two representatives from the Maryland Association of Community Colleges;
6. One representative from the Maryland Association of Nonprofit Associations; and
7. One representative from the Financial Assistance Advisory Council representing a financial aid office at an institution of higher education.

(5) (i) Except as provided in subparagraph (ii) of this paragraph, the following workforce shortage fields shall be included in the grant program:

(i) School teachers (the grant to be known as the Sharon Christa McAuliffe Memorial Teacher Scholarship);

(ii) Nurses;

(iii) Child care providers;

(iv) Developmental disabilities, mental health, child welfare, and juvenile justice providers;

(v) Physical and occupational therapists and assistants; and

(vi) Public servants (the grant to be known as the William Donald Schaefer Scholarship).

(ii) The Commission may remove a shortage field specified in subparagraph (i) of this paragraph if in the Commission's judgment the field no longer qualifies as a workforce shortage field.

(6) A grant recipient in a workforce shortage field that is removed from the grant program may continue to receive renewal awards under the program.

(f) *Annual determination of number of grants.* – Each fiscal year, the Commission shall determine the number of grants to be awarded in eligible workforce shortage fields based on the:

(i) Priority of the workforce shortage field;

(ii) Severity of the workforce shortage in the field; and

(iii) Availability of funds.

(g) *Selection of recipients; renewal of grants.* – (1) The Office shall annually select eligible students and offer a grant to each student selected to be used at an eligible institution of the student's choice.

(2) Eligible students shall be selected based on academic accomplishment and financial need, as determined by standards established and approved by the Commission.

(3) Each grant shall be renewable for a maximum of 5 years subsequent to the original grant if the recipient:

(i) Continues to meet the qualifications specified in subsection (d) of this section; and

(ii) Meets satisfactory academic progress standards as determined by the eligible institution.

(h) *Requirements.* – (1) A grant recipient may be enrolled at an eligible institution on a part-time or full-time basis.

(2) Except as provided in paragraph (3) of this subsection, a grant recipient shall be an undergraduate student at an eligible institution.

(3) A grant recipient may be a graduate student if the Office determines that the shortage field requires employees with a graduate level education.

(i) *Determination of amount of grant.* – (1) In this subsection, "cost of attendance" means the equivalent annual tuition and mandatory fees of a resident undergraduate student at the 4-year public institution of higher education within the University System of Maryland, other than the University of Maryland University College and University of Maryland, Baltimore, with the highest annual expenses for a full-time resident undergraduate.

(2) Subject to paragraph (3) of this subsection, the Commission shall establish in guidelines the annual grant awards under this section.

(3) Annual grant awards shall be within the following ranges:

(i) For a part-time student attending a 2-year eligible institution – $1,000 and 12.5% of cost of attendance;

(ii) For a full-time student attending a 2-year eligible institution - $2,000 and 25% of cost of attendance;

(iii) For a part-time student attending a 4-year eligible institution - $2,000 and 25% of cost of attendance; and

(iv) For a full-time student attending a 4-year eligible institution – $4,000 and 50% of cost of attendance.

(j) *Use of grant award.* – The grant award may be used at any eligible institution for educational expenses as defined by the Commission, including tuition, mandatory fees, and room and board.

(k) *Service obligation requirements.* – (1) A grant recipient shall perform a service obligation in the recipient's field of critical shortage in:

(i) A full-time position at a rate of 1 year for each year that the recipient receives a grant awarded under this section; or

(ii) A part-time position at a rate of 2 years for each year that the recipient receives a grant awarded under this section.

(2) The Commission may establish alternative service obligation requirements for designated workforce shortage fields to address statewide and regional needs.

(1) *Repayment requirements.* – (1) A grant recipient shall repay the Commission the funds received as set forth in **§** 18-112 of this title if the recipient does not:

(i) Complete the specified degree, attain the licensure or certification required, or fulfill other requirements as provided in this section; or

(ii) Perform the service obligation required under subsection (k) of this section.

(2) The Office shall waive the repayment of a grant award at a rate of:

(i) 1 year for each year that the recipient performs the service obligation on a full-time basis; or

(ii) 6 months for each year that the recipient performs the service obligation on a part-time basis.

(3) A recipient shall begin repayment at any time during the period that the recipient is no longer performing the service obligation.

(4) A recipient may delay repayment as long as the recipient remains a student enrolled at least part-time in a degree-granting program.

(5) Except as otherwise provided in this section, repayment shall be made to the State within 6 years after the repayment period begins and shall follow a repayment schedule established by the Office.

(6) The Office may waive or defer repayment in the event of disability or extended sickness which prevents the recipient from fulfilling the service obligation required under this section.

(7) The Office shall grant a deferment from the service obligation required under this section to:

(i) An individual who has been assigned military duty outside the State;

or

(ii) The spouse of an individual who has been assigned military duty outside the State.

(m) *William Donald Schaefer Scholarship requirements.* – (1) This subsection applies to recipients of the William Donald Schaefer Scholarship specified in subsection (e)(5) of this section.

(2) The Commission, in collaboration and consultation with the William Donald Schaefer Scholarship Advisory Council, shall annually select eligible students and offer grants to students who demonstrate outstanding potential for and who plan to pursue a career in public service.

(3) In making William Donald Schaefer Scholarship awards under this section, the Commission shall endeavor to select award recipients who are representative of the State's rich cultural, geographic, racial, ethnic, and gender diversity.

(4) Each individual awarded a William Donald Schaefer Scholarship under this section must have indicated and demonstrated to the Commission and to the William Donald Schaefer Scholarship Advisory Council a serious intent to enter public service on the completion of the student's educational program.

(n) *Workforce Shortage Student Assistance Grant Fund.* – (1) There is a Workforce Shortage Student Assistance Grant Fund in the Commission.

(2) The Commission:

(i) May accept any gift or grant from any person or corporation for the Workforce Shortage Student Assistance Grant Fund;

(ii) Shall use any gift or grant that it receives for a grant award from the Fund; and

(iii) Shall deposit any gift or grant that it receives for the Fund with the State Treasurer in a nonbudgeted account.

(3) (i) At the end of the fiscal year, the Commission shall prepare an annual report on the Workforce Shortage Student Assistance Grant Fund that includes an accounting of all financial receipts and expenditures to and from the Fund.

(ii) The Commission shall submit a copy of the report to the General Assembly as provided under **§** 2-1246 of the State Government Article.

(o) *Limitation on amount of grant and scholarship awards per student.* – A recipient may hold a Workforce Shortage Student Assistance grant and any other State grant or scholarship awarded by the Office provided that the total of all grants and scholarships does not exceed:

(1) The student's total cost of attendance, as certified by the institution where the student is enrolled; and

(2) The cost of attendance, as defined in subsection (i) of this section.

(p) *Funding for program.* – Funds for the Workforce Shortage Student Assistance grant program shall be as provided in the annual budget of the Commission by the Governor.

(q) *Guidelines or regulations.* – The Commission shall adopt guidelines or regulations necessary to implement this section (2006, ch. 367, **§** 2.)

Editor's note. – Section 3, ch. 367, Acts 2006, provides that "the Office of Student Financial Assistance in the Maryland Higher Education Commission may not award an initial scholarship or grant under the student financial assistance programs specified in Section 1 of this Act after June 30, 2007. The office may renew a scholarship or grant after June 30, 2007, if the individual received an initial scholarship or grant before that date."

Section 4, ch. 367, Acts 2006, provides that "(1) the Secretary of Higher Education shall Appoint an Advisory Council on Workforce Shortage on or before September 1, 2006; and "(2) the Office of Student Financial Assistance in the Maryland Higher Education Commission shall make initial awards under the Workforce Shortage Student Assistance Grant program established under **§** 18-708 of the Education Article in the fiscal year beginning July 1, 2007."

Section 8, ch. 367, Acts 2006, provides that the act shall take effect July 1, 2006.

The Annotated Code of the Public General Laws of Maryland: Education, 2006, pp. 762-766.

Appendix B

Maryland Teacher Staffing Report
Rubric for Determining Critical Shortage Content Areas
2011-2012

Objective: To determine the State's critical shortage areas by using the rubric to score each content area by multiple criteria. For those content areas that are *core academic subjects* (CAS), use all three criteria; for those content areas that *are not* CAS, use only the first two criteria.

Content Area: _____ Core Academic Subject (CAS) ___YES ____NO

	Statewide Critical Shortage	**Statewide Balance**	**Statewide Oversupply**	**Not Applicable (NA)**	**Rating**
Criteria	**3 points**	**2 points**	**1 point**		
1. State projection formula	85% or less **Finding:**	86 –100% **Finding:**	100% or higher **Finding:**		**Rating:**
2.August LEA Recruitment Difficulties	5 or more **Finding:**	1-4 **Finding:**	0 (none) **Finding:**		**Rating:**
3 No. classes taught by NHQT Core Academic Areas only (CAS)	89% or less **Finding:**	90% – 95%. **Finding:**	95-100%. **Finding:**		**Rating:**
				TOTAL	

For content areas that are ***Core Academic Subjects*** (rated on all three criteria) use the following scale:

_____ 7- 9 points, it is a statewide critical shortage area.
_____ 4-6 points, the content area is in statewide balance.
_____ 0-3 points, the content is an area of oversupply.

For content areas that ***ARE NOT Core Academic Subjects*** (rated on only two of the criteria) use the following scale:

_____ 5-6 points, it is a statewide critical shortage area.
_____ 3-4 points, the content area is in state balance.
_____ 0-2 points, the content is an area of oversupply

DECISION:_____

Additional comments or rationale for the decision:

Appendix C

QUALITY TEACHER INCENTIVE ACT GRANTS
Number and Types of Teacher Incentive Grants Awarded
2010-2011

	No. of NBCT* Teachers	NBCT Teacher Stipend	No. of APC** Teachers	APC Teacher Awards	Total of Award Amounts
Allegany County	24	$26,000	37	$55,500	$81,500
Anne Arundel County	266	$277,000	176	$264,000	$541,000
Baltimore City	34	$46,000	987	$1,480,500	$1,526,500
Baltimore County	90	$94,000	436	$654,000	$748,000
Calvert County	19	$19,000		$0	$19,000
Caroline County	16	$16,000		$0	$16,000
Carroll County	133	$144,000		$0	$144,000
Cecil County	40	$44,000	44	$66,000	$110,000
Charles County	16	$16,000	39	$58,500	$74,500
Dorchester County	3	$6,000	46	$69,000	$75,000
Frederick County	40	$41,000		$0	$41,000
Garrett County	7	$7,000		$0	$7,000
Harford County	44	$51,000	131	$196,500	$247,500
Howard County	89	$91,000	18	$27,000	$118,000
Kent County	0			$0	$0
Montgomery County	583	$593,204	204	$306,000	$899,204
PG County	263	$347,000	1549	$2,323,500	$2,670,500
Queen Anne County	15	$15,000		$0	$15,000
Somerset County	1	$1,000	40	$60,000	$61,000
St. Mary's County	33	$35,000	52	$78,000	$113,000
Talbot County	2	$4,000		$0	$4,000
Washington County	31	$34,000	20	$30,000	$64,000
Wicomico County	30	$32,000	78	$117,000	$149,000
Worcester County	23	$23,000		$0	$23,000
TOTALS	**1,802**	**$1,962,204**	**3,857**	**$5,785,500**	**$7,747,704**

* NBCT - National Board Certified Teachers

** APC - Advanced Professional Certificate

Source: Maryland State Department of Education, July 2012.

Appendix D

Summary Report of Retire/Rehire Program

Maryland State Department of Education

Report for 2011 - 2012

	Anne Arundel	Baltimore City	Baltimore County	Cecil	Charles	Frederick	Prince George's	Queen Anne's	Washington	Wicomico	TOTALS
Total # Rehires	**2**	**4**	**5**	**1**	**7**	**1**	**4**	**1**	**2**	**1**	**28**
Teachers	1	2	4	1	6		4	1	2	1	22
Speech Pathologist		1			1						2
Principals	1	1	1			1					4
										Total	**28**
Condition of Rehire											
Title I		1									1
AYP	2	2	4	1	5	1	2	1		1	19
Alternative Education			1		2				1		4
Exception*											
FARM		1					2		1		4
										Total	**28**
Content Areas											
Biology								1			1
Core Subjects*					2						2
Earth Science							1				1
Latin					1						1
Mathematics	1		1		2				2		6
Psychology*		1									1
Physical Science			1								1
Spanish		1									1
Special Education			2		1		3			1	7
Technology Ed				1							1
Teachers	**1**	**2**	**4**	**1**	**6**		**4**	**1**	**2**	**1**	**22**
Speech Pathologist		**1**			**1**						**2**
Principals	**1**	**1**	**1**			**1**					**4**
										Total	**28**

* Exceptions: The law allows a minimum of 5 exemptions per system, or 0.2% of the total full-time equivalent teachers, not to exceed 15 per school system. The exemptions may be either a regular school or a non critical content area.

Data provided to MSRA and MSDE by the local school systems, 2011-2012 school year.

Appendix E

Teachers Issued a Conditional Certificate: Two-Year Comparison*
Maryland Public Schools
2010-2011 and 2011-2012

Local School System	2010-2011**			2011-2012***		
	Number of Teachers	Number of Conditional Teachers	Percent of Conditional Teachers	Number of Teachers	Number of Conditional Teachers	Percent of Conditional Teachers
Allegany	683	1	0.1%	649	2	0.3%
Anne Arundel	5,179	45	0.9%	5,183	46	0.9%
Baltimore City	5,758	170	3.0%	5,548	117	2.1%
Baltimore	7,613	75	1.0%	7,362	61	0.8%
Calvert	1,111	10	0.9%	1,081	9	0.8%
Caroline	414	10	2.4%	416	9	2.2%
Carroll	1,930	13	0.7%	1,916	18	0.9%
Cecil	1,164	5	0.4%	1,154	6	0.5%
Charles	1,623	32	2.0%	1,723	27	1.6%
Dorchester	373	5	1.3%	377	7	1.9%
Frederick	2,739	13	0.5%	2,801	13	0.5%
Garrett	338	3	0.9%	323	1	0.3%
Harford	2,783	9	0.3%	2,769	8	0.3%
Howard	3,768	47	1.2%	3,783	50	1.3%
Kent	184	3	1.6%	173	1	0.6%
Montgomery	9,841	20	0.2%	9,956	30	0.3%
Prince George's	8,450	31	0.4%	7,816	17	0.2%
Queen Anne's	526	6	1.1%	490	3	0.6%
St. Mary's	1,071	2	0.2%	1,044	1	0.1%
SEED School	21	0	0.0%	29	3	10.3%
Somerset	224	1	0.4%	233	2	0.9%
Talbot	312	2	0.6%	309	1	0.3%
Washington	1,552	13	0.8%	1,541	8	0.5%
Wicomico	1,080	15	1.4%	1,084	18	1.7%
Worcester	593	3	0.5%	591	1	0.2%
STATE TOTAL	**59,330**	**534**	**0.9%**	**58,351**	**459**	**0.8%**

* A conditional certificate is issued at the request of the local school systems form one year to individuals who do not meet full requirements of a professional certificate. Local school systems may request a renewal according to state regulations.

** Based on teachers employed by local school systems as of October 2010.

*** Based on teachers employed by local school systems as of October 2011.

SOURCE: Maryland State Department of Education, 2012

Newly Hired Maryland Teachers with Conditional Certification*
Maryland Public Schools
2011-2012

Local School System	Total Number of Newly Hired Teachers	Total Number of Newly Hired Conditional Teachers	Newly Hired Conditional Teachers With Experience	Newly Hired Conditional Teachers With No Experience	Percent of Newly Hired Conditional Teachers
Allegany	2	0	0	0	0.0%
Anne Arundel	477	35	10	25	7.3%
Baltimore City	580	17	10	7	2.9%
Baltimore	270	16	4	12	5.9%
Calvert	29	3	0	3	10.3%
Caroline	28	2	0	2	7.1%
Carroll	102	11	2	9	10.8%
Cecil	35	2	1	1	5.7%
Charles	154	9	4	5	5.8%
Dorchester	31	4	1	3	12.9%
Frederick	179	6	2	4	3.4%
Garrett	10	0	0	0	0.0%
Harford	169	0	0	0	0.0%
Howard	213	6	2	4	2.8%
Kent	8	0	0	0	0.0%
Montgomery	705	13	8	5	1.8%
Prince George's	412	12	6	6	2.9%
Queen Anne's	26	2	0	2	7.7%
St. Mary's	41	0	0	0	0.0%
SEED School	15	1	1	0	6.7%
Somerset	11	0	0	0	0.0%
Talbot	19	0	0	0	0.0%
Washington	92	3	1	2	3.3%
Wicomico	60	3	0	3	5.0%
Worcester	27	0	0	0	0.0%
STATE TOTAL	**3,695**	**145**	**52**	**93**	**3.9%**

* A conditional certificate is issued at the request of the local school systems form one year to individuals who do not meet requirements of a professional certificate. The local school system may request a renewal according to state regulations.

SOURCE: Maryland State Department of Education, May 2012.

Appendix G

Annual Survey of Local School System Vacancies by Division of Academic Policy
Maryland State Department of Education
August 2011

School System	Contact Person	Explanation: Original projection of need, actual hires, remaining vacancies and recruitment difficulties
Allegany School begins 8/24	Jeff Blank/Steve Wilson (301) 759-2033	projected teacher needs 2011-12: 5 actual teachers hired 2011-12: 3 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 1 # of assistant principals hired as of 8/11: 0 recruitment difficulties: None any teacher layoffs due to budget cuts: No
Anne Arundel School begins 8/23	Vanessa Bass (410) 222-5066	projected teacher needs 2011-12: 350 actual teachers hired 2011-12: 274 teacher vacancies as of 8/19: 25.5 # of principals hired as of 8/11: 9 # of assistant principals hired as of 8/11: 13 recruitment difficulties: ECI, Spec. Ed, Spanish, Tech Ed, Physics any teacher layoffs due to budget cuts: No
Baltimore City School begins 8/29	Laura Kiesler (410) 396-8880	projected teacher needs 2011-12: 200 actual teachers hired 2011-12: 445 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 19 # of assistant principals hired as of 8/11: recruitment difficulties: CTE, Russian, Chinese, dance any teacher layoffs due to budget cuts: No
Baltimore Co School begins 8/29	Joelle Skorczewski (410) 887-2945	projected teacher needs 2011-12: 400 actual teachers hired 2011-12: 143 teacher vacancies as of 8/19: 5 # of principals hired as of 8/11: 4 # of assistant principals hired as of 8/11: 4 recruitment difficulties: Chinese, Span, OT, PT, SLP, Spec Ed -secondary any teacher layoffs due to budget cuts: No
Calvert School begins 8/24	Kevin Michael (410) 535-7495	projected teacher needs 2011-12: 25-30 actual teachers hired 2011-12: 18 teacher vacancies as of 8/11: 16 # of principals hired as of 8/11: 1 # of assistant principals hired as of 8/11: recruitment difficulties: Spanish, French any teacher layoffs due to budget cuts: Yes
Caroline School begins 8/24	John Perry (410) 479-2894 x132	projected teacher needs 2011-12: 25 actual teachers hired 2011-12: 19 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 1 # of assistant principals hired as of 8/11: 2 recruitment difficulties: Speech Therapist (major problem) any teacher layoffs due to budget cuts: No
Carroll School begins 8/30	Jimmie Saylor (410) 751-3078	projected teacher needs 2011-12: 95 actual teachers hired 2011-12: 89 teacher vacancies as of 8/19: 1 # of principals hired as of 8/11: 6 # of assistant principals hired as of 8/11: 7 recruitment difficulties: Spec Ed, Tech Ed any teacher layoffs due to budget cuts: reduced staffing through attrition by 14
Cecil School begins 8/24	Robert Davis (410) 996-5432	projected teacher needs 2011-12: 35 actual teachers hired 2011-12: 31 # of principals hired as of 8/11: 5 # of assistant principals hired as of 8/11: 4 teacher vacancies as of 8/19: 3 recruitment difficulties: Speech Pathologists, Family and Consumer Science any teacher layoffs due to budget cuts: Yes-6
Charles School begins 8/29	Keith Hettel (301) 934-7230	projected teacher needs 2011-12: 113 actual teachers hired 2011-12: 157 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 6 # of assistant principals hired as of 8/11: 10 plus 1 vacancy recruitment difficulties: Span, Latin, Math, Spch Lang Path, Early childhood any teacher layoffs due to budget cuts: 0

Annual Survey of Local School System Vacancies by Division of Academic Policy, continued

Dorchester School begins 8/22	Gary McCabe (410) 228-4747 ext 1014	projected teacher needs 2011-12: 40 actual teachers hired 2011-12: 36 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 3 # of assistant principals hired as of 8/11: 2 recruitment difficulties: Math, Literacy Coach, A. P's, certificated minorities. any teacher layoffs due to budget cuts: No
Frederick School begins 8/29	Paula Lawton (301) 644-5097	projected teacher needs 2011-12: 160-170 actual teachers hired 2011-12: 147 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 3 # of assistant principals hired as of 8/11: 4 recruitment difficulties: Tech Ed, Family & Cons Sci, Spec Ed, SLP any teacher layoffs due to budget cuts: 1-Business
Garrett School begins 8/24	Keith Harvey (301) 334-8903	projected teacher needs 2011-12: 0 actual teachers hired 2011-12: 8 teacher vacancies as of 8/19: 4 # of principals hired as of 8/11: 6 # of assistant principals hired as of 8/11: 2 recruitment difficulties: none any teacher layoffs due to budget cuts: no
Harford School begins 8/29	Jean Mantegna (410) 588-5226	projected teacher needs 2011-12: 175-200 actual teachers hired 2011-12: 153 (as of 8/1) teacher vacancies as of 8/19: 19 # of principals hired as of 8/11: 7 (2 promoted January 2011) # of assistant principals hired as of 8/11: 3 promoted from within; 3 reassigned to AP recruitment difficulties: Media Specialists, Tech. Ed, Physics, Speech, Spec. Ed any teacher layoffs due to budget cuts: No
Howard School begins 8/29	Ernesto Diaz (410) 313-6779	projected teacher needs 2011-12: 250 actual teachers hired 2011-12: 201 as of 8/3/11 teacher vacancies as of 8/19: 23 # of principals hired as of 8/11: 2 # of assistant principals hired as of 8/11: 10 recruitment difficulties: Math, Tech. Ed, Comp Sci, World Lang (all), ESOL, OT, PT, SLP, Spec. Ed, Reading Spec, Media Spec, Male tchrs, under-represented groups any teacher layoffs due to budget cuts: No
Kent School begins 8/29	Jeff Grafton (410) 778-7135	projected teacher needs 2011-12: 5.5 actual teachers hired 2011-12: 3 teacher vacancies as of 8/19: 3 # of principals hired as of 8/11: 0 # of assistant principals hired as of 8/11: 0 recruitment difficulties: Spanish; Speech Pathologist any teacher layoffs due to budget cuts: No
Montgomery School begins 8/30	Jeff Martinez (301) 279-3278	projected teacher needs 2011-12: 500-600 actual teachers hired 2011-12: 693 teacher vacancies as of 8/19: 32 # of principals hired as of 8/11: 24 # of assistant principals hired as of 8/11: 29 recruitment difficulties: Technology Education any teacher layoffs due to budget cuts: 0

Annual Survey of Local School System Vacancies by Division of Academic Policy, continued

Prince George's School begins 8/22	Robert Gaskin (301) 952-6037	projected teacher needs 2011-12: 200 actual teachers hired 2011-12: 93 teacher vacancies as of 8/19: 80 - 40 are Spec Ed # of principals hired as of 8/11: 35 # of assistant principals hired as of 8/11: <15 recruitment difficulties: Dually certified Special Ed. Teachers/Secondary any teacher layoffs due to budget cuts: Yes
Queen Anne's School begins 8/29	James Jennings (410) 758-2403	projected teacher needs 2011-12: 18 actual teachers hired 2011-12: 15 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 4 # of assistant principals hired as of 8/11: 3 recruitment difficulties: Spanish, Physics any teacher layoffs due to budget cuts: No
St. Mary's School begins 8/24	Dale Farrell (301) 475-5511 x170	projected teacher needs 2011-12: 25-30 actual teachers hired 2011-12: 34 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 4 # of assistant principals hired as of 8/11: 4 recruitment difficulties: Spec Ed, Physics any teacher layoffs due to budget cuts: No
Somerset School begins 8/22	Beth Whitelock (410) 621-6231	projected teacher needs 2011-12: 10 actual teachers hired 2011-12: 14 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 0 # of assistant principals hired as of 8/11: 0 recruitment difficulties: Music, Tech. Ed, Art, Physical Science any teacher layoffs due to budget cuts: Yes- 3
Talbot School begins 8/23	Kelly Griffith (410) 822-7557	projected teacher needs 2011-12: 14 actual teachers hired 2011-12: 17 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 0 # of assistant principals hired as of 8/11: 0 recruitment difficulties: Math, Spec Ed any teacher layoffs due to budget cuts: 1 (administrative)
Washington School begins 8/24	Donna Newcomer (301) 766-2808	projected teacher needs 2011-12: approximately 100 actual teachers hired 2011-12: 84 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 6 # of assistant principals hired as of 8/11: 8 recruitment difficulties: foreign language, Spec Ed, ELL any teacher layoffs due to budget cuts: No
Wicomico School begins 8/29	Stephanie Moses (410) 677-4531	projected teacher needs 2011-12: 75 actual teachers hired 2011-12: 80 teacher vacancies as of 9/19: 4 # of principals hired as of 8/11: 3 # of assistant principals hired as of 8/11: 3 recruitment difficulties: Math, Spanish any teacher layoffs due to budget cuts: Reduced positions through attrition
Worcester School begins 8/29	Velda Henry (410) 632-2582 x 5077	projected teacher needs 2011-12: 30 actual teachers hired 2011-12: 32 teacher vacancies as of 8/19: 0 # of principals hired as of 8/11: 1 # of assistant principals hired as of 8/11: 3 recruitment difficulties: Critical shortage areas any teacher layoffs due to budget cuts: 0

Appendix H

Number and Percentage of Classes Taught by Highly Qualified Teachers
Kindergarten Through Grade 12
Maryland Public Schools
2011-2012

Core Academic Subject	Number of Classes	Classes Taught by HQ Teachers	Percent of Classes Taught by HQ Teachers
English	**23,669**	**22,014**	**93.0%**
ESOL	**4,410**	**4,275**	**96.9%**
Language Arts/Reading	**6,452**	**6,015**	**93.2%**
Foreign Languages	**9,165**	**8,123**	**88.6%**
French	1,731	1,605	92.7%
German	259	253	97.7%
Latin	286	235	82.2%
Russian	34	29	85.3%
Arabic	8	6	75.0%
Chinese	202	153	75.7%
Italian	99	51	51.5%
Japanese	61	55	90.2%
Spanish	6,093	5,442	89.3%
Other Foreign Language	88	31	35.2%
Multiple Language Course	304	263	86.5%
Mathematics	**24,680**	**22,816**	**92.4%**
Science	**21,635**	**19,126**	**88.4%**
Biology	4,740	4,318	91.1%
Chemistry	2,393	2,026	84.7%
Earth/Space	1,471	950	64.6%
General Science	10,840	10,138	93.5%
Geology	3	3	100.0%
Physical Science	408	198	48.5%
Physics	1,173	985	84.0%
Environmental Science	607	508	83.7%
Social Studies	**20,788**	**19,434**	**93.5%**
Economics	273	259	94.9%
Geography	742	636	85.7%
History	7,130	6,659	93.4%
Political Science	1,823	1,685	92.4%
Social Studies	10,820	10,195	94.2%
The Arts	**25,376**	**23,840**	**93.9%**
Art	10,787	10,168	94.3%
Dance	546	408	74.7%
Drama/Theater	873	555	63.6%
Music	13,170	12,709	96.5%
Elementary Education	**51,928**	**49,500**	**95.3%**
Early Childhood (Kindergarten)	**12,820**	**11,864**	**92.5%**
Total CAS Classes	**200,923**	**187,007**	**93.1%**

Data provided by the Division of Accountability, Assessment, and Data Systems, 2012.