



**Chart Book**

# **Addressing California's Emerging Teacher Shortage: *An Analysis of Sources and Solutions***

Linda Darling-Hammond, Roberta Furger, Patrick M. Shields, and Leib Sutcher

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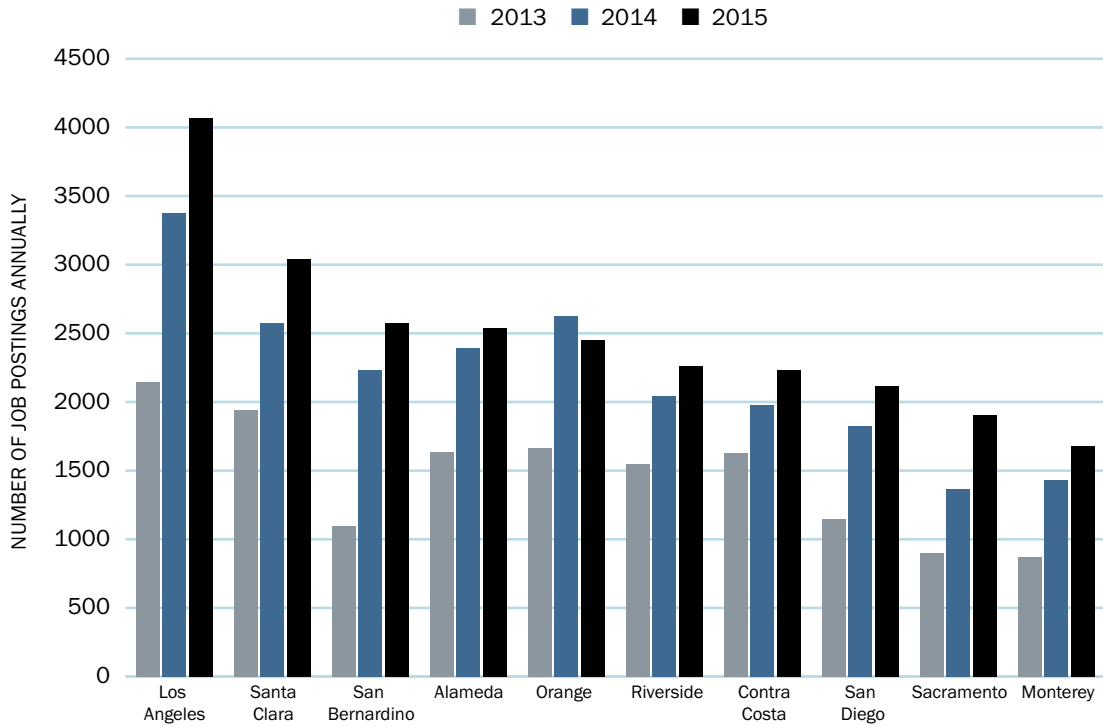
The appropriate citation for this report is: Linda Darling-Hammond, Roberta Furger, Patrick Shields, and Leib Sutcher, *Addressing California's Emerging Teacher Shortage: An Analysis of Sources and Solutions* (Palo Alto: Learning Policy Institute, 2016). This report can be found at [www.learningpolicyinstitute.org/addressing-ca-teacher-shortage](http://www.learningpolicyinstitute.org/addressing-ca-teacher-shortage).

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## Demand for Teachers Is Growing



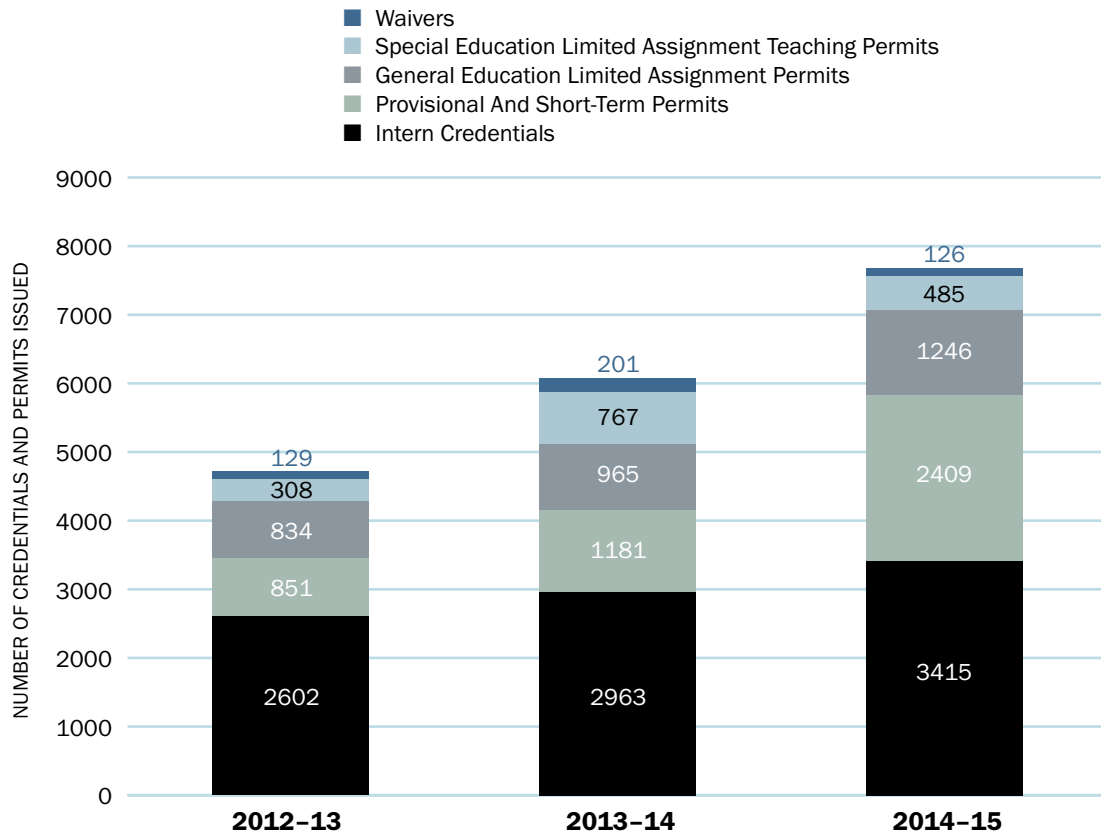
*Note: Numbers reflect open teaching positions advertised on EdJoin over 12-month period, beginning October 16 and ending October 15.*

*Source: EdJoin data on postings for 12-month period, provided to LPI.*

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## Substandard Permits and Credentials Are Increasing, 2012-13 to 2014-15



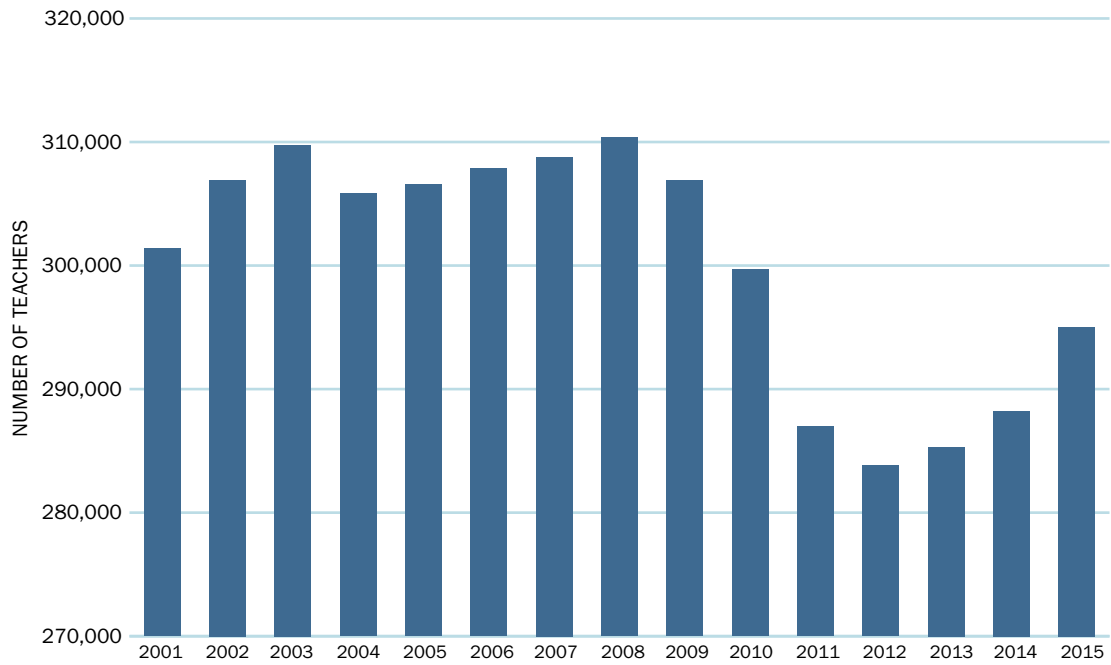
Note: Number of credentials issued between July 1st of each year and June 30 of the following year. (See Appendix B.)

Source: Data provided by the California Commission on Teacher Credentialing through a special request.

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## The Teacher Workforce Is Expanding Again



### **Number of California public school teachers, 2000-01 to 2014-15**

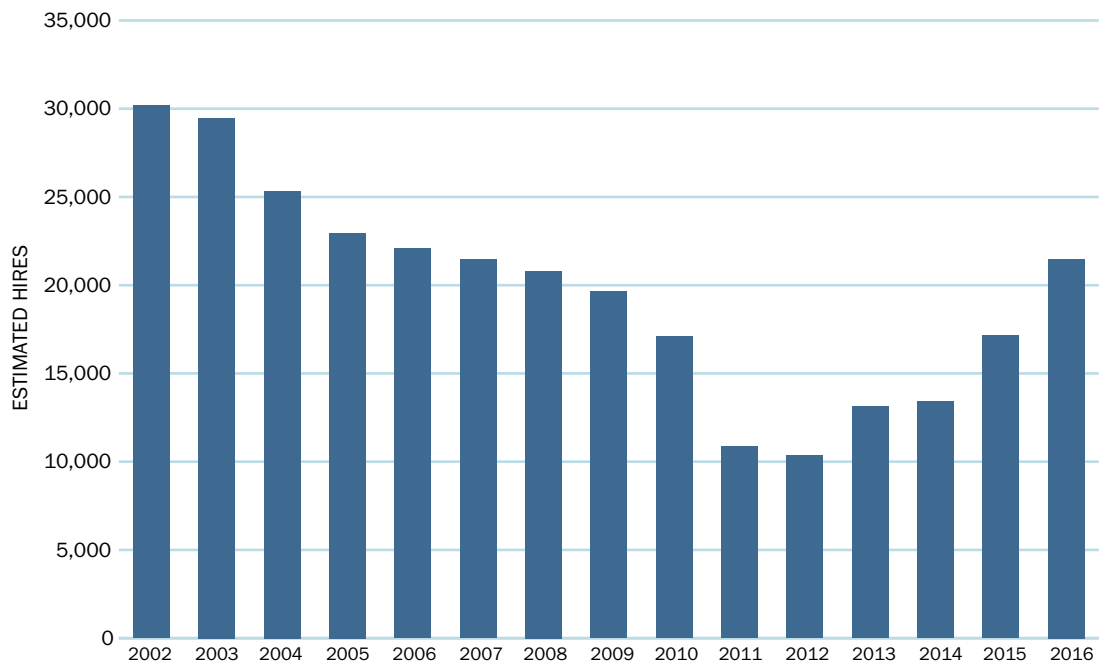
Source: California Department of Education 2001-2015. Data available at <http://data1.cde.ca.gov/dataquest/>.

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## District Hiring Is on the Rise



### **Estimated new hires in California, 2001-02 to 2015-16**

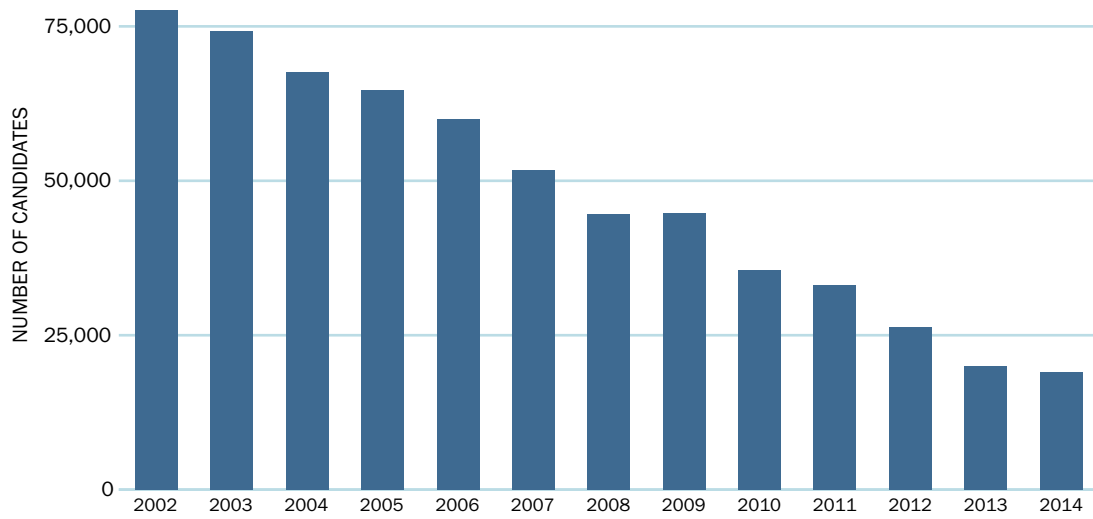
Source: California Department of Education 2002-2016. Data available at <http://data1.cde.ca.gov/dataquest/>.

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## Enrollment in Teacher Preparation Programs Has Declined



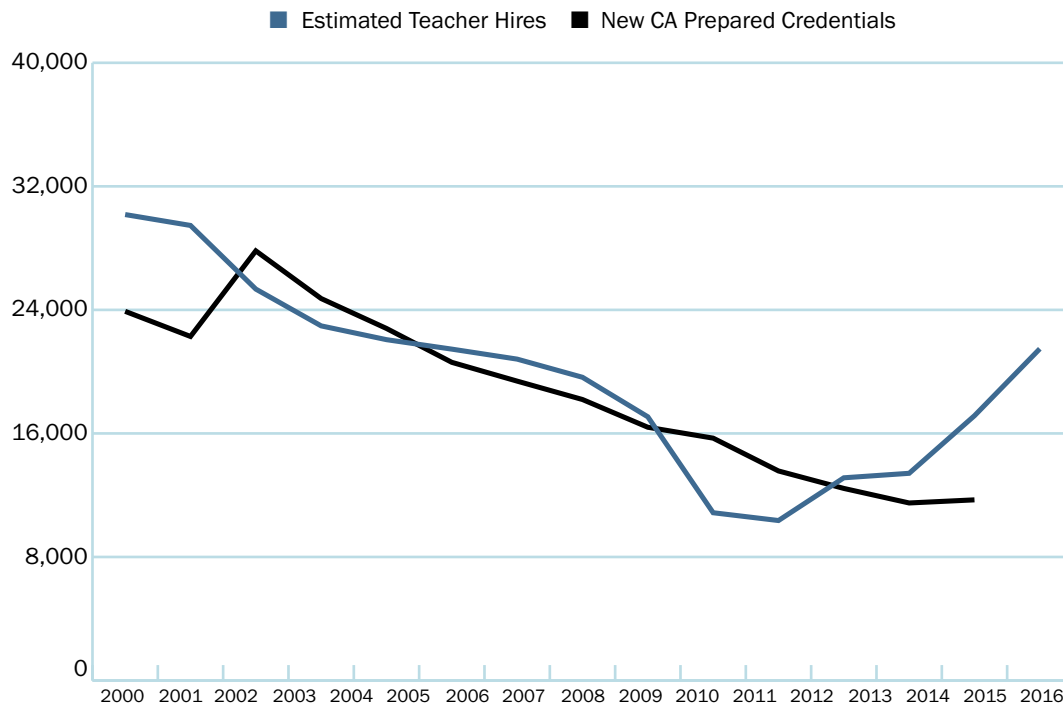
### **Number of candidates enrolled in California teacher preparation programs, 2001-02 to 2013-14**

Source: California Commission on Teacher Credentialing, 2002-2014. Teacher Supply in California: A Report to the Legislature. Data available at <http://www.ctc.ca.gov/reports/all-reports.html>; 2014 Title II State Program Information. Data available at <https://title2.ed.gov/Public/Report/StateHome.aspx>.

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## Teacher Demand Is Outpacing Supply



### Number of preliminary new teaching credentials issued and district-estimated new hires, 1999-2000 to 2015-16

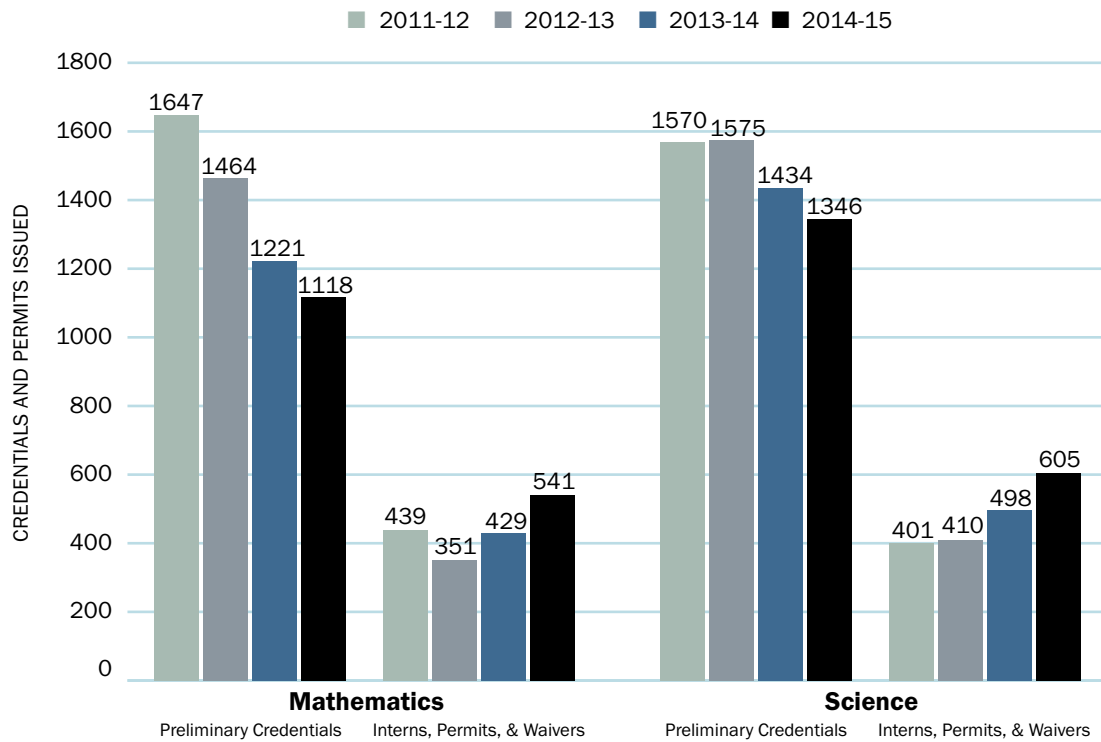
Note: Estimated teacher hires are reported annually by each California school district for the upcoming school year. New credentials are preliminary credentials issued to California-prepared teachers. 2014-15 credential data are preliminary.

Source: Estimated hires data are from California Department of Education DataQuest Web Page, at <http://data1.cde.ca.gov/dataquest/>. New credentials data were provided from the California Commission on Teacher Credentialing upon request.

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## Trends in Mathematics and Science Teacher Supply



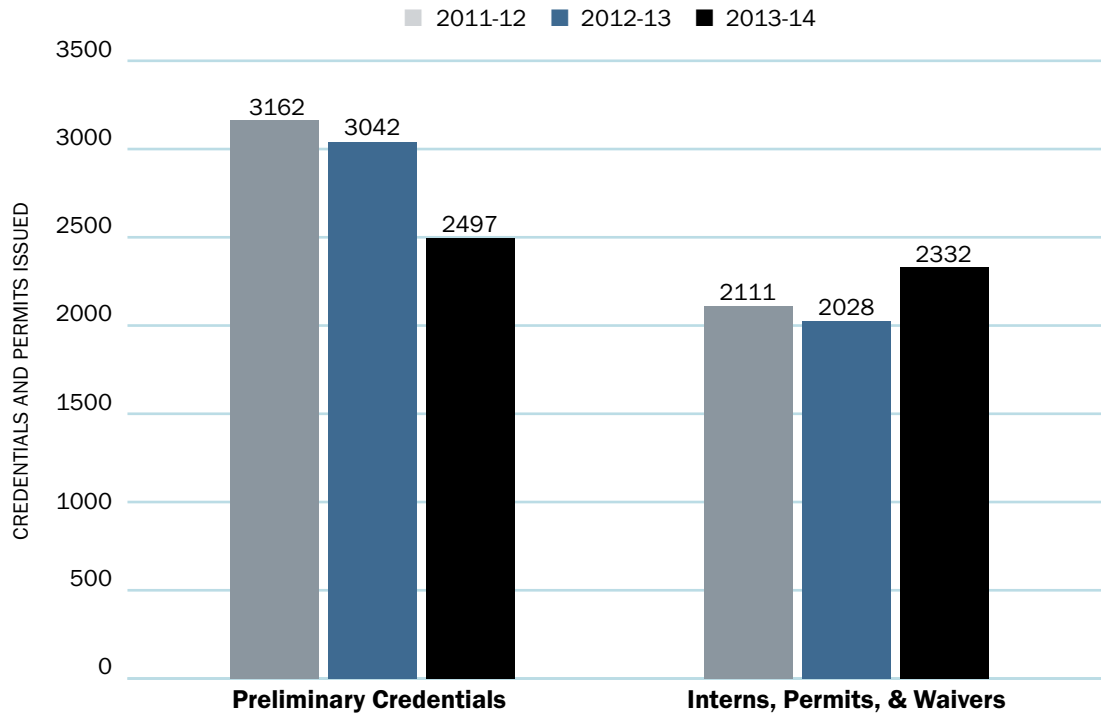
### Credentials and permits issued, 2011-12 to 2014-15

Source: California Commission on Teacher Credentialing.

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## Trends in Special Education Teacher Supply



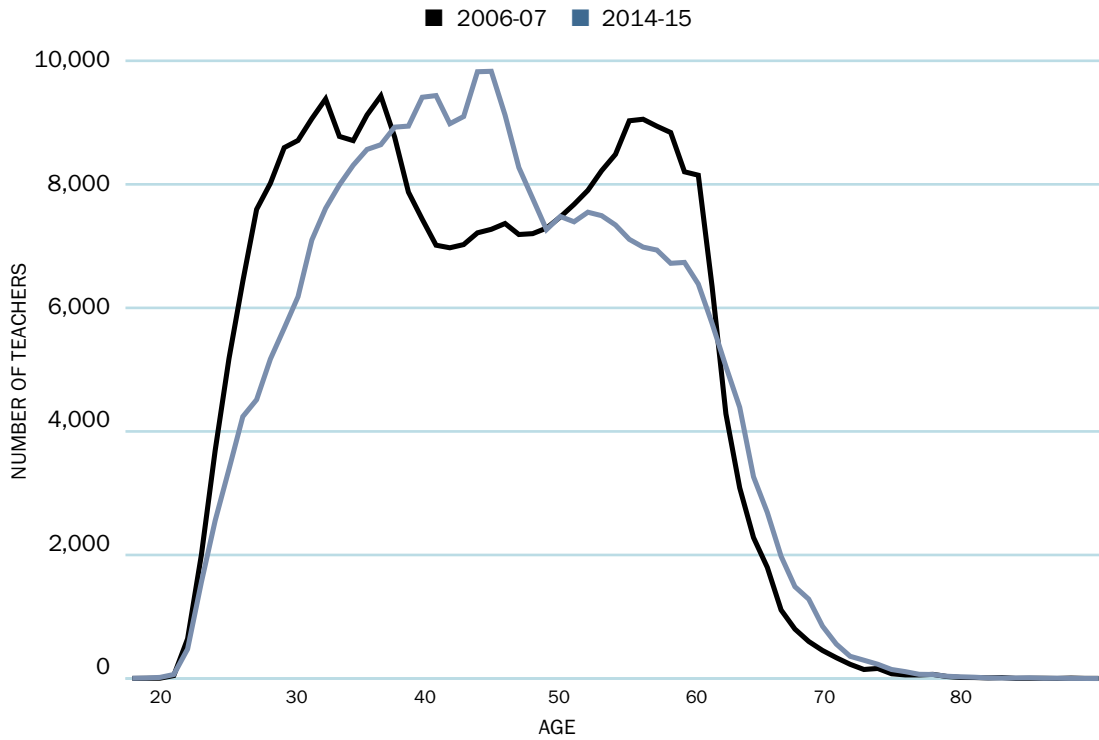
### ***Credentials and permits issued, 2011-12 to 2013-14***

Source: California Commission on Teacher Credentialing.

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## California Nears the End of Retirement Surge



### California public school teacher age distribution, 2006-07 and 2014-15

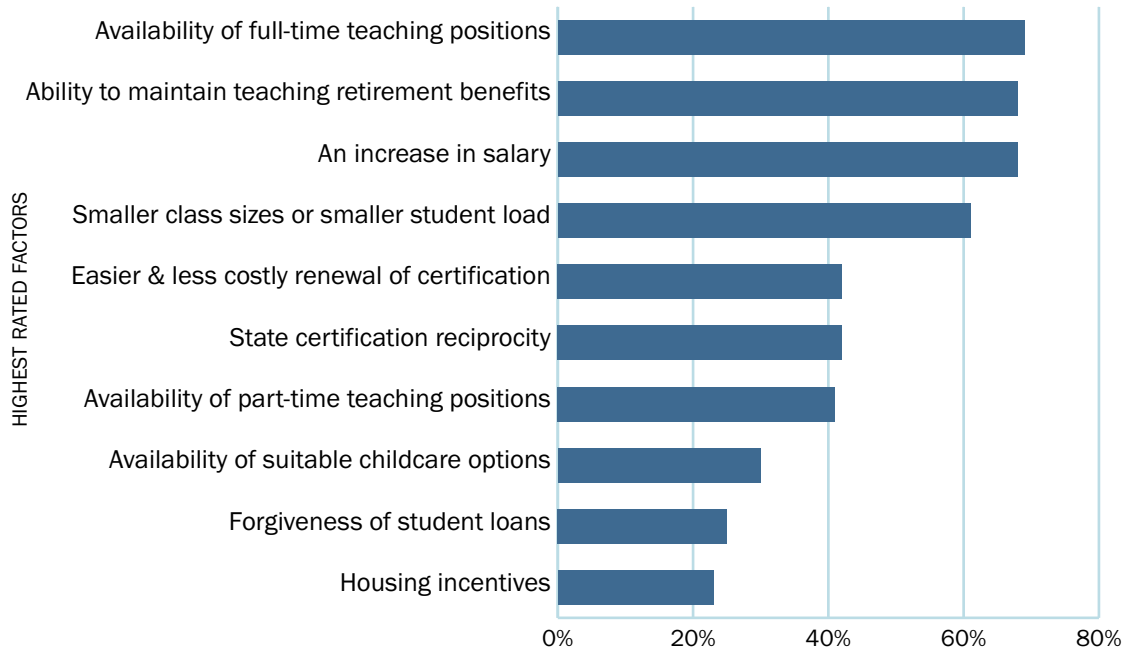
Source: California Department of Education data, provided in response to a special request.

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## What Would Bring Leavers Back?



### *Factors rated by former teachers as important in a decision to return*

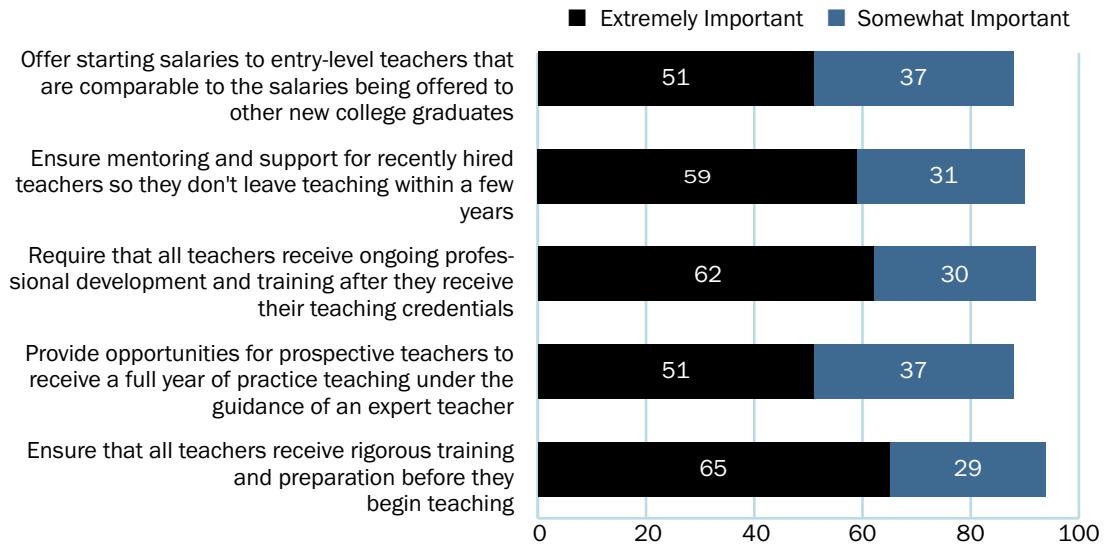
Source: U.S. Department of Education, National Center for Education Statistics, 2012-13 Teacher Follow-up Survey.

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## California Voters Appear Ready to Invest in Teaching



### **Percent of registered voters who feel that specific policies to address the teacher shortage are important**

Source: Learning Policy Institute, developed from Field Poll survey data.

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## Teacher Preparation Enrollments in the State University System

| Institution Type            | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------------------|---------|---------|---------|---------|
| University of California    | 1,055   | 788     | 726     | 883     |
| California State University | 9,496   | 8,052   | 8,642   | 8,837   |
| Total                       | 10,551  | 9,840   | 9,368   | 9,720   |

Source: Data from the CSU Office of the Chancellor and the UC Office of the President.  
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## Top Hiring Areas, 2013-14 School Year

| Subject Area                                       | Number of Full-Time Equivalent (FTE) Teachers | Percent of FTE Teachers in the Field |
|--|---|--------------------------------------|
| Special Education, including State Special Schools | 4,540.3                                       | 26.9%                                |
| Mathematics/Computer Education                     | 2,214.6                                       | 10.4%                                |
| Science  | 2,016.9                                       | 12.7%                                |
| English/Drama/Humanities                           | 2,024.2                                       | 8.5%                                 |
| PE/Health/Dance                                    | 903.2   | 7.4%                                 |
| History/Social Science                             | 1,184.9                                       | 7.1%                                 |
| Other Specializations                              | 967.9   | 6.8%                                 |
| Totals   | 13,858.3                                      | 5.34%                                |

Source: California Department of Education, district hiring estimates data.

## Age Distribution of the California Teacher Workforce

| Age          | 2006-07 | 2008-09 | 2010-11 | 2012-13 | 2014-15 |
|--------------|---------|---------|---------|---------|---------|
| Under 30     | 42,214  | 40,823  | 28,082  | 24,372  | 27,679  |
|              | 13.7%   | 13.3%   | 9.8%    | 8.5%    | 9.4%    |
| 30 to 39     | 87,269  | 89,535  | 84,605  | 82,071  | 81,679  |
|              | 28.3%   | 29.2%   | 29.5%   | 28.8%   | 27.6%   |
| 40 to 49     | 72,018  | 73,020  | 76,185  | 80,790  | 87,082  |
|              | 23.3%   | 23.8%   | 26.5%   | 28.3%   | 29.4%   |
| 50 to 59     | 84,501  | 78,368  | 73,205  | 70,778  | 70,652  |
|              | 27.4%   | 25.5%   | 25.5%   | 24.8%   | 23.9%   |
| 60 and older | 22,009  | 24,357  | 24,854  | 27,294  | 28,706  |
|              | 7.1%    | 7.9%    | 8.7%    | 9.6%    | 9.7%    |
| Total        | 308,790 | 306,887 | 286,969 | 285,308 | 295,800 |

### Number and percentage of teachers by age groupings, 2006-2007 to 2014-2015

Source: California Department of Education data, provided in response to a special request.

## Supports for Recruiting and Retaining Teachers Have Dwindled

### *Discontinued and inactive California teacher development and support programs*

| Program   | Description  | When Instituted              | Current Status  |
|---|--|------------------------------|---|
| Teacher Recruitment Incentive Program (TRIP)      | Established six regional teacher recruitment centers to address the teacher shortage. Centers assisted school districts in recruiting qualified teachers to low-performing and hard-to-staff schools. \$9.4 million allocated annually.                    | Funded beginning in 2000-01  | Suspended 2003-04   |
| California Center for Teaching Careers (CalTeach) | Created to serve as a one-stop information, recruitment, and referral service for prospective teachers. Funding peaked at \$11 million in 2000-01 and 2001-02.   | Funded beginning in 1997     | Suspended in 2003-04  |
| Governor's Teaching Fellowship                    | Created to attract and retain qualified individuals in the teaching profession. Provided \$20,000 for tuition and living costs in exchange for a four-year teaching commitment in a low-performing school. \$21.1 million allocated in 2001-02.            | Funded beginning in 2000-01  | Suspended 2002-03   |
| Cal Grant T                                       | Provided tuition and fee assistance to students in teacher preparation programs in exchange for teaching in a low-performing school for at least one year. \$10 million allocated annually, from 1998-99 through 2001-02.                                  | Funded beginning in 1998-99  | Discontinued 2003-04  |
| Teacher Retention Tax Credit                      | Allowed teachers to claim a state income tax credit of up to \$1,500, depending on years of service.   | Funded beginning in 2000     | Suspended in 2004   |
| Mathematics Initiative for Teaching               | Created to address shortage of credentialed math teachers. Provided funds for tuition and related expenses. Recipients agreed to teach one year of math for every \$2,500 received.  | Funded beginning in 1998     | Eliminated in 2003-04   |
| Teaching as a Priority (TAP) Block Grant          | Provided competitive block grants to districts to create incentives to recruit and retain credentialed teachers for low-performing schools. Incentives included signing bonuses, improved working conditions, teacher compensation, and housing subsidies. | Funding beginning in 2000-01 | Funding suspended in 2003-04; incorporated into the Professional Development Block Grant in 2005-06 |
| Assumption Program of Loans for Education (APLE)  | Long-standing loan forgiveness program designed to encourage outstanding students to work in teacher shortage areas. Teachers received a total of up to \$19,000 in outstanding loan forgiveness.  | Established in 1983          | New warrants suspended in 2012-13 (active recipients still received remaining funds)                |

Source: *Teaching and California's Future: California's Teaching Force 2006: Key Issues and Trends*; and California Student Aid Commission data available at <http://www.csac.ca.gov/doc.asp?id=111>.



## Teacher Preparation and Credentialing: Understanding the Terms

| Term                    | Credential Types   | Definition   |
|-------------------------|--|--|
| Fully Prepared Teachers | Preliminary Credential   | Awarded to individuals who have successfully completed a teacher preparation program and the state assessments required for a license; preliminary credentials are valid for five years.   |
|                         | Clear Credential   | Awarded to preliminary credential holders once they have successfully completed an induction program; clear credentials are renewable every five years.  |
| Underprepared Teachers  | Provisional Intern Permits, Short Term Staff Permits and Waivers | Used to fill “immediate and acute” staffing needs, these one-year permits allow individuals who lack the appropriate training or subject-matter competency to teach a particular grade or course for a maximum of one year.                    |
|                         | Limited Assignment Teaching Permits                              | These authorizations allow credentialed teachers to teach outside of their subject area, to fill a “staffing vacancy or need.”   |
|                         | Intern Credentials   | Awarded to teachers-in-training who have an undergraduate degree and subject-matter competency but have not completed preparation or met the performance assessments for a license. Interns take courses and receive mentoring while teaching. |

Source: California Commission on Teacher Credentialing, CTC Glossary: [http://cig.ctc.ca.gov/cig/CIG\\_glossary/all.php](http://cig.ctc.ca.gov/cig/CIG_glossary/all.php). See also <http://www.ctc.ca.gov/credentials/leaflets/cl858.pdf>; <http://www.ctc.ca.gov/credentials/leaflets/cl856.pdf>; <http://www.ctc.ca.gov/credentials/leaflets/cl402a.pdf>.  
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## Number of Vacancies Listed in EdJoin by County

| County          | 2013          | 2014          | 2015          | % Change from 2013 to 2015 |
|-----------------|---------------|---------------|---------------|----------------------------|
| Alameda         | 1,632         | 2,393         | 2,539         | 55.6                       |
| Alpine          | 0             | 4             | 1             | NA                         |
| Amador          | 55            | 54            | 92            | 67.3                       |
| Butte           | 231           | 316           | 374           | 61.9                       |
| Calaveras       | 36            | 61            | 70            | 94.4                       |
| Colusa          | 60            | 81            | 66            | 10.0                       |
| Contra Costa    | 1,631         | 1,978         | 2,236         | 37.1                       |
| Del Norte       | 5             | 19            | 77            | 1440.0                     |
| El Dorado       | 196           | 199           | 219           | 11.7                       |
| Fresno          | 1,233         | 1,230         | 1,227         | -0.5                       |
| Glenn           | 47            | 55            | 74            | 57.4                       |
| Humboldt        | 58            | 115           | 141           | 143.1                      |
| Imperial        | 194           | 548           | 618           | 218.6                      |
| Inyo            | 52            | 54            | 52            | 0.0                        |
| Kern            | 300           | 438           | 733           | 144.3                      |
| Kings           | 124           | 184           | 262           | 111.3                      |
| Lake            | 104           | 161           | 544           | 423.1                      |
| Lassen          | 31            | 64            | 85            | 174.2                      |
| Los Angeles     | 2,146         | 3,378         | 4,071         | 89.7                       |
| Madera          | 180           | 334           | 259           | 43.9                       |
| Marin           | 324           | 339           | 426           | 31.5                       |
| Mariposa        | 7             | 30            | 27            | 285.7                      |
| Mendocino       | 185           | 248           | 230           | 24.3                       |
| Merced          | 354           | 576           | 629           | 77.7                       |
| Modoc           | 13            | 26            | 15            | 15.4                       |
| Mono            | 16            | 33            | 32            | 100.0                      |
| Monterey        | 868           | 1,428         | 1,676         | 93.1                       |
| Napa            | 92            | 205           | 218           | 137.0                      |
| Nevada          | 96            | 129           | 105           | 9.4                        |
| Orange          | 1,661         | 2,627         | 2,450         | 47.5                       |
| Placer          | 492           | 521           | 550           | 11.8                       |
| Plumas          | 34            | 35            | 46            | 35.3                       |
| Riverside       | 1,547         | 2,041         | 2,262         | 46.2                       |
| Sacramento      | 898           | 1,365         | 1,905         | 112.1                      |
| San Benito      | 104           | 186           | 250           | 140.4                      |
| San Bernardino  | 1,096         | 2,234         | 2,573         | 134.8                      |
| San Diego       | 1,151         | 1,824         | 2,117         | 83.9                       |
| San Francisco   | 135           | 503           | 190           | 40.7                       |
| San Joaquin     | 616           | 858           | 987           | 60.2                       |
| San Luis Obispo | 303           | 305           | 301           | -0.7                       |
| San Mateo       | 953           | 1,269         | 1,599         | 67.8                       |
| Santa Barbara   | 313           | 383           | 489           | 56.2                       |
| Santa Clara     | 1,944         | 2,578         | 3,041         | 56.4                       |
| Santa Cruz      | 468           | 534           | 619           | 32.3                       |
| Shasta          | 158           | 233           | 253           | 60.1                       |
| Sierra          | 1             | 2             | 3             | 200.0                      |
| Siskiyou        | 38            | 52            | 81            | 113.2                      |
| Solano          | 582           | 818           | 937           | 61.0                       |
| Sonoma          | 689           | 930           | 990           | 43.7                       |
| Stanislaus      | 900           | 1,006         | 1,217         | 35.2                       |
| Sutter          | 210           | 226           | 203           | -3.3                       |
| Tehama          | 86            | 98            | 72            | -16.3                      |
| Trinity         | 23            | 11            | 19            | -17.4                      |
| Tulare          | 718           | 1,043         | 1,223         | 70.3                       |
| Tuolumne        | 44            | 53            | 51            | 15.9                       |
| Ventura         | 248           | 398           | 501           | 102.0                      |
| Yolo            | 439           | 622           | 577           | 31.4                       |
| Yuba            | 56            | 90            | 160           | 185.7                      |
| <b>Total</b>    | <b>26,177</b> | <b>37,525</b> | <b>42,764</b> |                            |

Note: Numbers reflect open teaching positions advertised on EdJoin over 12-month period, beginning October 16 and ending October 15.

Source: EdJoin data on postings for 12-month period provided to LPI by request.

## Teaching Permits, Waivers, and Credentials Issued by Year, 2012-2015

| Type of Credential   | 2012-2013     | 2013-2014     | 2014-2015     | 1-year change 2013-14 to 2014-15 |
|--|---------------|---------------|---------------|----------------------------------|
| <b>University Interns</b>  |               |               |               |                                  |
| Education Specialist Instruction Credential  | 1,318         | 1,395         | 1,359         | -2.6%                            |
| Multiple Subject Teaching Credential   | 253           | 342           | 554           | 62.0%                            |
| Single Subject Teaching Credential   | 570           | 704           | 828           | 17.6%                            |
| <b>Total University Interns</b>  | <b>2,141</b>  | <b>2,441</b>  | <b>2,741</b>  | <b>12.3%</b>                     |
| District Interns   | 461           | 522           | 674           | 29.1%                            |
| <b>Total Intern Credentials</b>  | <b>2,602</b>  | <b>2,963</b>  | <b>3,415</b>  | <b>15.3%</b>                     |
| <b>Provisional Internship Permit</b>   |               |               |               |                                  |
| Provisional Internship Permit  | 186           | 267           | 525           | 96.6%                            |
| Short-Term Staff Permit  | 665           | 914           | 1,884         | 106.1%                           |
| <b>Total Short-Term and Provisional Permits</b>  | <b>851</b>    | <b>1,181</b>  | <b>2,409</b>  | <b>104.0%</b>                    |
| <b>General Education Limited Assignment Multiple Subject Teaching Permit</b>   |               |               |               |                                  |
| General Education Limited Assignment Multiple Subject Teaching Permit  | 42            | 68            | 76            | 11.8%                            |
| <b>General Education Limited Assignment Single Subject Teaching Permit</b>   |               |               |               |                                  |
| General Education Limited Assignment Single Subject Teaching Permit  | 792           | 897           | 1,170         | 30.4%                            |
| <b>Special Education Limited Assignment Teaching Permit</b>  |               |               |               |                                  |
| Special Education Limited Assignment Teaching Permit   | 308           | 767           | 485           | -36.8%                           |
| <b>Total Limited Assignment Teaching Permits</b>   | <b>1,142</b>  | <b>1,732</b>  | <b>1,731</b>  | <b>0.0%</b>                      |
| Teaching Waivers   | 129           | 201           | 126           | -37.3%                           |
| <b>New Preliminary Teaching Credentials recommended by IHEs, excluding interns (first time credentials and new types of credentials added to an existing credential)</b> |               |               |               |                                  |
| California State University  | 6,004         | 5,552         | 5,499         | -1.0%                            |
| Private and Independent Colleges and Universities  | 5,231         | 4,747         | 4,842         | 2.0%                             |
| University of California   | 861           | 843           | 883           | 4.7%                             |
| <b>Total IHE Preliminary Credentials</b>   | <b>12,096</b> | <b>11,142</b> | <b>11,224</b> | <b>0.7%</b>                      |
| <b>IHE: New Credentials by Type</b>  |               |               |               |                                  |
| Education Specialist Instruction Credential  | 2,807         | 2,276         | 2,195         | -3.6%                            |
| Multiple Subject Teaching Credential   | 4,574         | 4,444         | 4,709         | 6.0%                             |
| Single Subject Teaching Credential   | 4,715         | 4,422         | 4,320         | -2.3%                            |
| <b>Total IHE New Credentials</b>   | <b>12,096</b> | <b>11,142</b> | <b>11,224</b> | <b>0.7%</b>                      |

*These data are drawn from the Commission on Teacher Credentialing database to represent the number of credentials issued between July 1 of each year and June 30 of the following year. Due to processing time, there are credentials counted in this data run from applicants who completed preparation in the prior year; therefore they differ from data in the annual teacher supply report, which reflects only those applicants who completed preparation in that academic (July-June) year.*



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