LAKE COUNTY ECONOMIC DEVELOPMENT STRATEGY

WORKFORCE DEVELOPMENT

Overview

Lake County's labor market has many links to its neighboring counties. Such links create challenges and opportunities for any economic development strategy. For Lake County, major employers are government, health care, retail, and personal services businesses. Some of these businesses support tourism also, where there is a mix local support and visitor support happening in season. Agriculture is another large employer, where there is also a focus on "export" products; manufacturing is part of this in the labor market information due mainly to the wine industry. Construction employment is like an export industry based on regional demand for construction work.

Recommendations

- Speak with industries in targeted areas primarily, and stay close to local employers
- Agricultural Supply Chain
    - Manufacturing jobs here if anywhere
    - Manufacturing and processing depends on choice of ag expansion
    - Logistics the next big issue: NE Lake County
- Tourism Supply Chain
    - Customer service focus to management: Lake County as a living lab
    - Event coordination: event planning and community development
    - May include some ride-sharing self-proprietors
- Science and Professional Business Supply Chain
    - Coding in Python and R, AutoCad and design, Adobe Creative Cloud suite
    - Lab workers: exportable jobs here also
    - Expansion of science curriculum at community college campuses

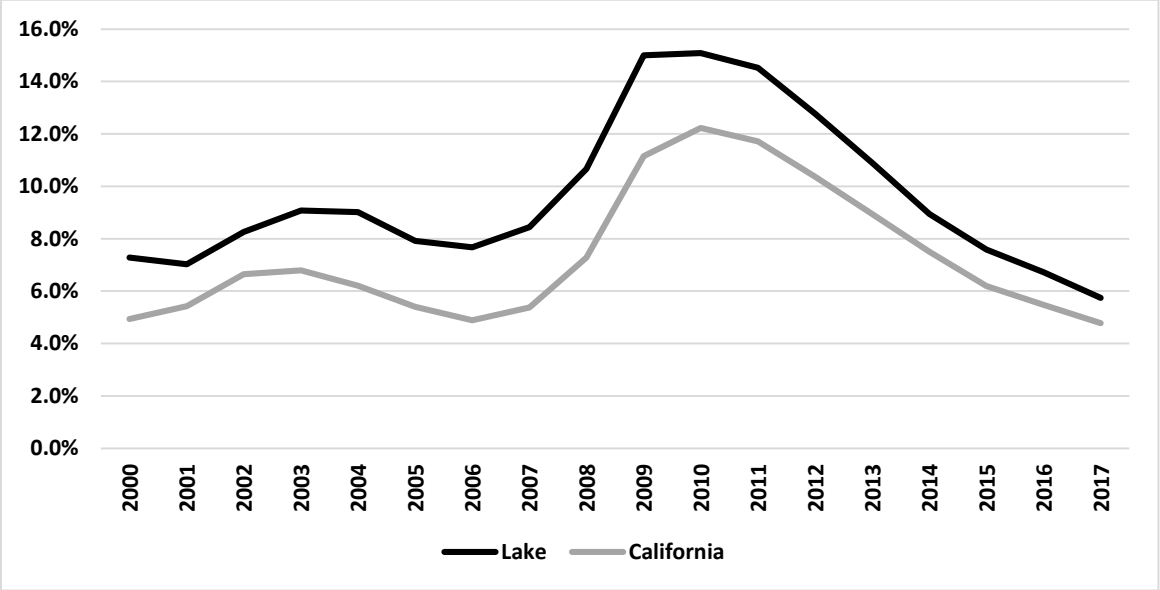
Workforce Development and Labor Markets

Lake County has challenges as a rural county close to a growing suburban area in California. Training programs for local workers need to be adaptive to changing economics and demographics and stay connected to **both** local and regional employers. We see in the data that wages are relatively low versus the region. The county's labor force is also less-educated and older than the regional or state average.

Using data from EMSI (see http://www.economicmodeling.com for more), the figures below compare and contrast Lake County's labor market information with other counties and California overall. Wage data provides a way to look at both employer groupings and occupations and what pay is provided. These data show the evolution of real wages, or after-inflation wages levels. Real wages are a reflection of purchasing power and shows what employers and occupations make above the median level for Lake County.

Figure 1 shows that Lake County, at least since 2000, has followed the state trend at losing jobs and also regaining jobs per the unemployment rate. The gap has narrowed since 2015, narrowing may be due to many factors.

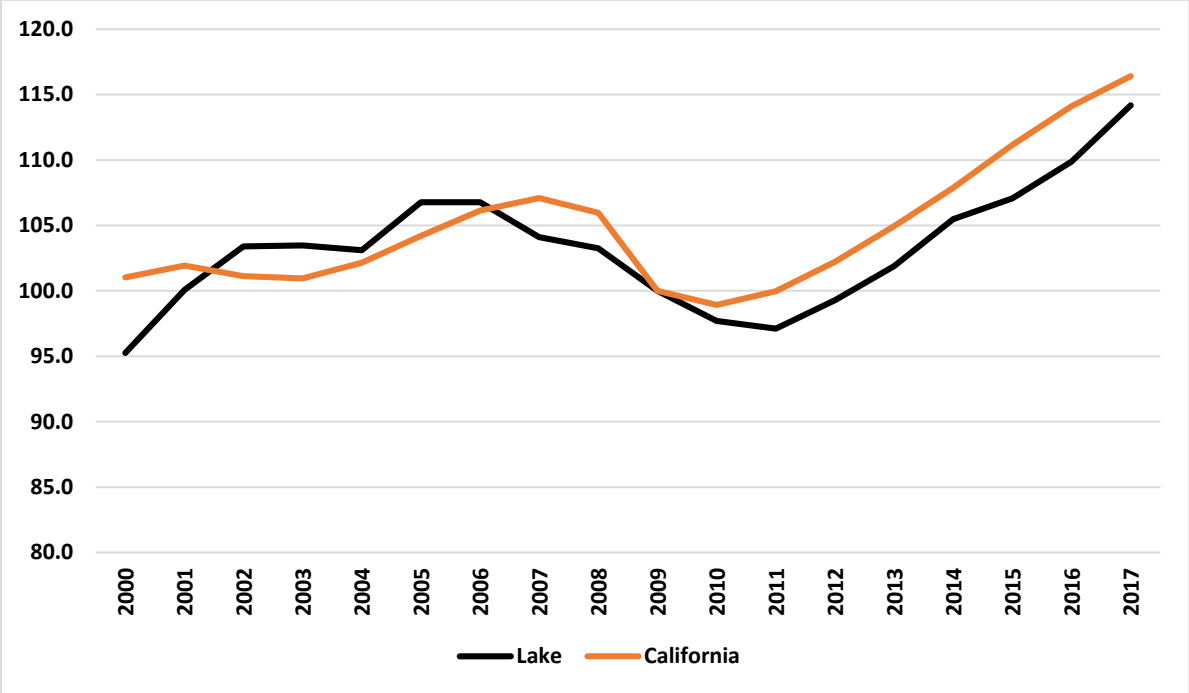
Figure 1: Unemployment Rate, 2000-2017, Lake County and California, Percentage of Labor Force



Source: California EDD (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1005) and Author's Calculations

Figure 2 shows Lake County increasing the number of workers annually, speeding up after 2015. Figure 2 is non-farm employment, and a measure of how local employers are employing people, not how residents are finding or not finding work (which is reflected partially in the unemployment rate). Figure 2's data do not reflect self-employment.

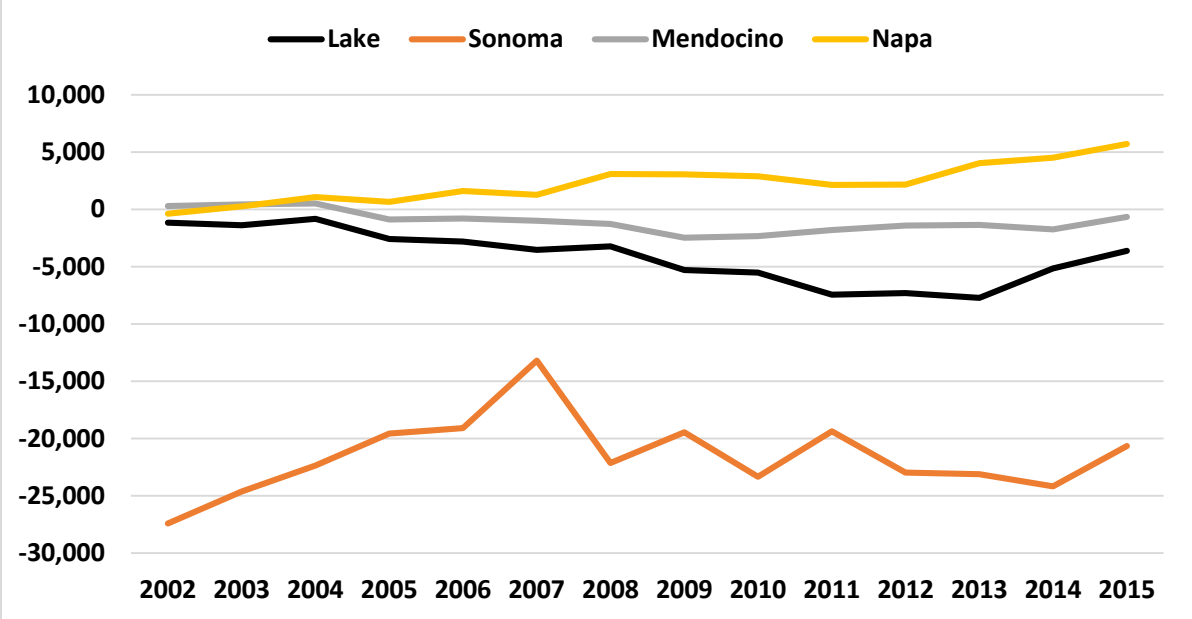
Figure 2: Non-Farm Employees, Lake and California, 2000-2017



Source: California EDD (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1005) and Author's Calculations

Figure 3 is the movement of workers, in net, inside the indicated area and outside. Lake County saw more outflow of residents to work from 2004 to 2013, and that trend reversed a bit in 2014. Notice Sonoma County has a net outflow of workers, as there are more working residents in Sonoma County than work available given regional competition in labor markets.

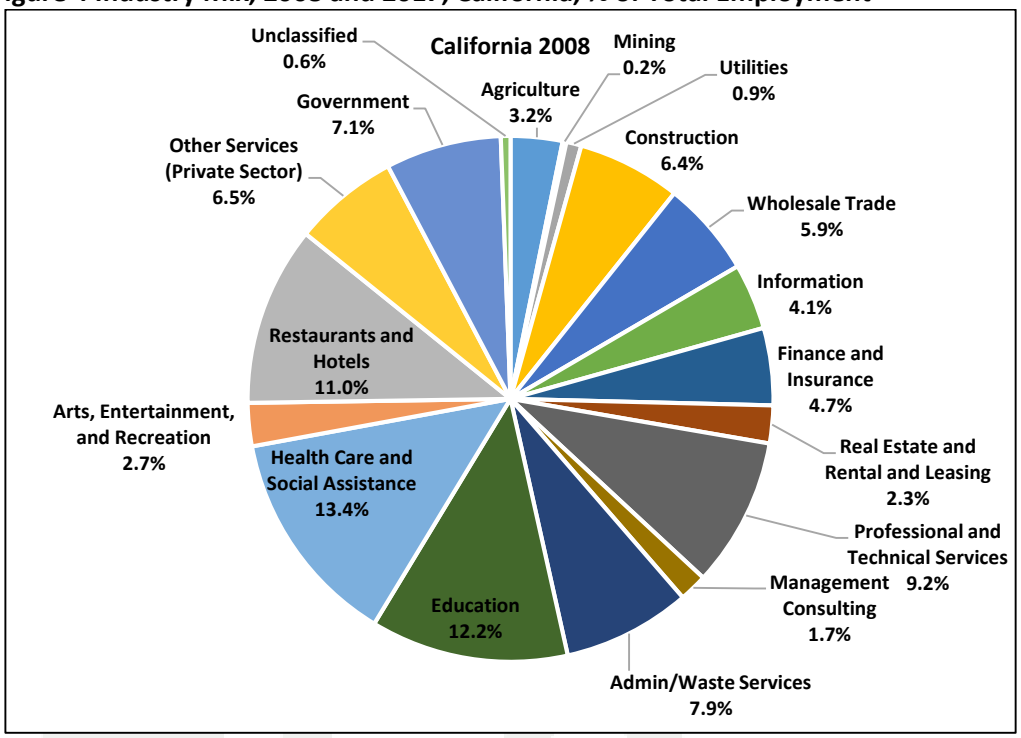
Figure 3: Net Inflow (+) or Outflow (-) workers as percentage of total employment, Lake County and Selected Counties, Number of Workers, 2002-15



Source: Census Bureau (https://onthemap.ces.census.gov/) and Author's Calculations

Figure 4 shows the evolution of California's economy in terms of jobs mix. The first panel is 2008 (just before the Great Recession and then 2017 (the latest annual data). Figure 5 shows the same for Lake County.

Figure 4 Industry Mix, 2008 and 2017, California, % of Total Employment



Source: EMSI (www.economicmodeling.com) and Author's Calculations

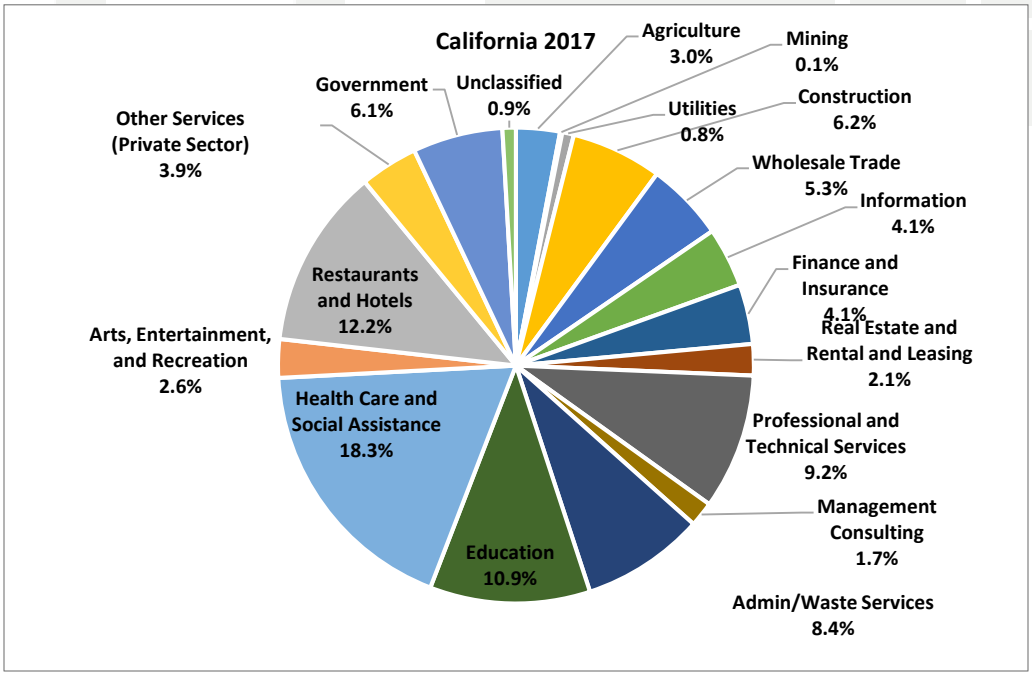
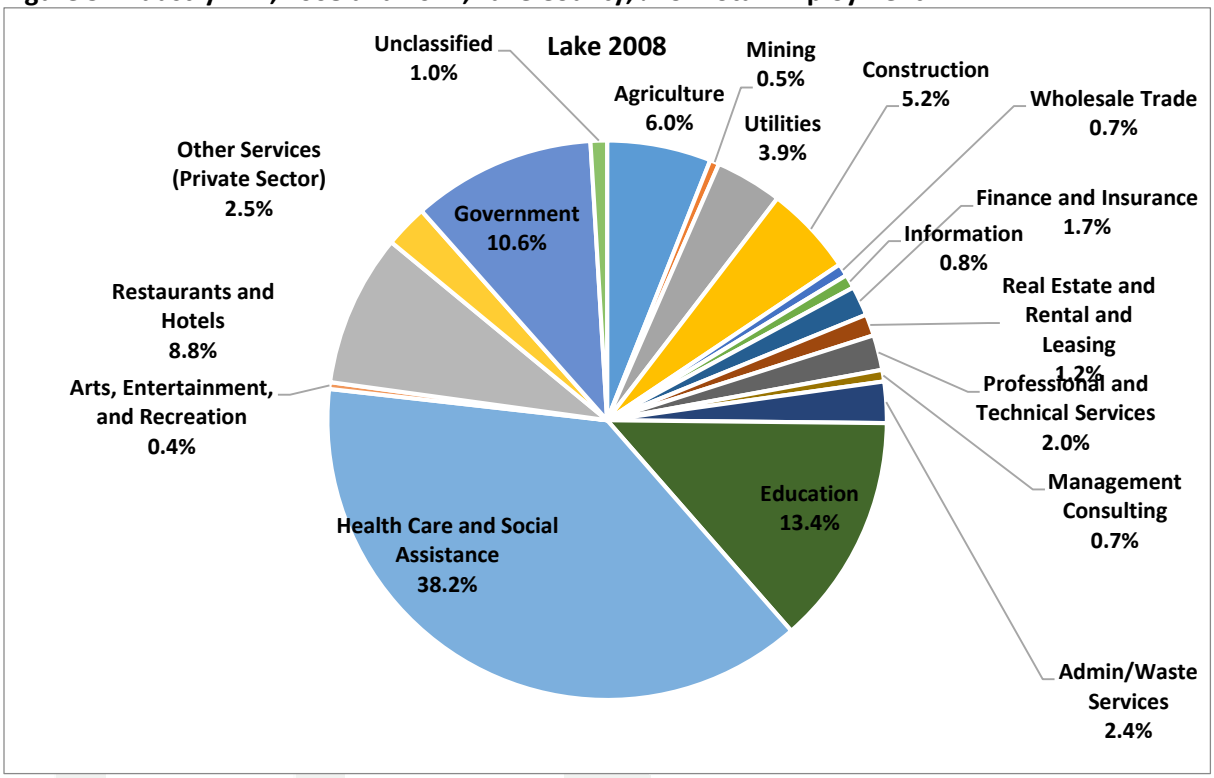
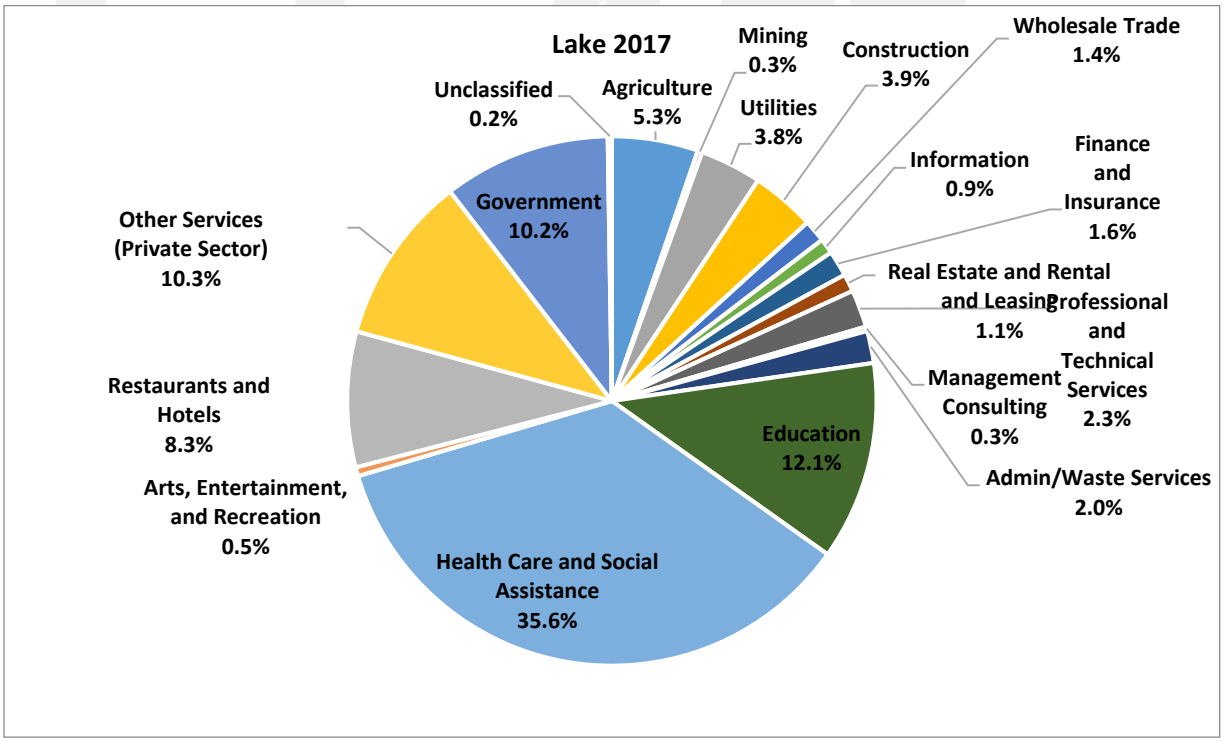


Figure 5: Industry Mix, 2008 and 2017, Lake County, % of Total Employment





Source: EMSI (www.economicmodeling.com) and Author's Calculations

Figure 6 and 7 compare wages in 2010 and 2018 Quarter 1. Due to minimum wage laws and California's economy growing more quickly than Lake County's after the recession, Lake County wages lag the state in many occupations. This is an opportunity to showcase a currently, less-

expensive workforce as economic development, and median wages should be monitored as employment grows.

Figure 6: Wages in Lake County, Occupational Categories, 2018 Quarter 1, Current Dollars, % of Median

2018 Quarter 1 Wages, Lake County	25th Percentile	Median 50th Percentile	75th Percentile	Median Wages California	Lake County % of CA
Overall Average	$12.17	$17.33	$27.03	$28.12	61.6%
Management	$26.43	$36.50	$52.45	$64.88	56.3%
Business and Financial Operations	$20.76	$26.78	$34.36	$40.97	65.4%
Computer and Mathematical	$22.73	$29.80	$38.75	$51.44	57.9%
Architecture and Engineering	$27.40	$37.88	$51.15	$48.61	77.9%
Life, Physical, and Social Science	$17.87	$28.12	$40.13	$40.28	69.8%
Community and Social Services	$15.59	$21.24	$28.11	$26.85	79.1%
Legal	$27.88	$35.02	$45.45	$63.05	55.5%
Education, Training, and Library	$16.59	$26.86	$38.20	$31.06	86.5%
Arts, Design, Entertainment, Sports, and Media	$14.52	$19.34	$27.00	$35.42	54.6%
Healthcare Practitioners and Technical	$24.99	$37.11	$54.60	$46.93	79.1%
Healthcare Support	$12.95	$15.77	$19.39	$18.34	86.0%
Protective Service	$18.31	$29.39	$42.16	$29.11	101.0%
Food Preparation and Serving-Related	$11.13	$12.00	$14.06	$13.98	85.8%
Building and Grounds Cleaning and Maintenance	$11.24	$12.57	$16.59	$16.31	77.1%
Personal Care and Service	$11.08	$11.81	$13.14	$14.25	82.9%
Sales and Related	$11.22	$12.70	$17.80	$21.60	58.8%
Office and Administrative Support	$13.15	$17.17	$21.68	$20.58	83.4%
Farming, Fishing, and Forestry	$11.39	$13.51	$18.42	$12.84	105.2%
Construction and Extraction	$18.11	$23.87	$29.55	$28.39	84.1%
Installation, Maintenance, and Repair	$15.18	$19.50	$26.62	$25.72	75.8%
Production	$12.68	$16.39	$21.63	$18.92	86.6%
Transportation and Material Moving	$12.42	$16.77	$22.18	$18.86	88.9%

Source: EMSI (www.economicmodeling.com) and Author's Calculations

Figure 7: Wages in Lake County, Occupational Categories, 2010 Quarter 1, Current Dollars, % of Median

2010 Quarter 1 Wages, Lake County	25th Percentile	Median 50th Percentile	75th Percentile	Median Wages California	Lake County % of CA
Overall Average	**$10.38**	**$15.19**	**$23.32**	**$18.12**	83.8%
Management	$21.77	$32.65	$45.71	$50.17	65.1%
Business and Financial Operations	$18.35	$23.33	$30.14	$31.47	74.1%
Computer and Mathematical	$17.71	$24.52	$32.89	$40.45	60.6%
Architecture and Engineering	$24.44	$32.49	$44.85	$39.74	81.8%
Life, Physical, and Social Science	$16.97	$24.17	$32.88	$32.64	74.1%
Community and Social Services	$13.92	$18.43	$25.03	$22.55	81.7%
Legal	$19.30	$29.28	$36.09	$46.61	62.8%
Education, Training, and Library	$13.48	$21.93	$30.25	$25.19	87.1%
Arts, Design, Entertainment, Sports, and Media	$12.04	$16.19	$23.33	$24.72	65.5%
Healthcare Practitioners and Technical	$22.44	$31.62	$44.71	$35.61	88.8%
Healthcare Support	$10.14	$12.74	$15.52	$13.39	95.1%
Protective Service	$14.98	$23.79	$35.66	$22.26	106.9%
Food Preparation and Serving-Related	$8.71	$9.29	$10.37	$9.43	98.5%
Building and Grounds Cleaning and Maintenance	$9.79	$12.61	$15.72	$11.72	107.6%
Personal Care and Service	$9.11	$10.40	$12.92	$10.95	95.0%
Sales and Related	$9.11	$11.09	$15.52	$12.84	86.4%
Office and Administrative Support	$11.29	$14.64	$18.80	$16.47	88.9%
Farming, Fishing, and Forestry	$9.19	$11.44	$16.05	$9.08	126.0%
Construction and Extraction	$15.76	$20.63	$26.20	$23.17	89.0%
Installation, Maintenance, and Repair	$13.33	$17.86	$24.01	$21.64	82.5%
Production	$10.68	$14.47	$20.07	$13.64	106.1%
Transportation and Material Moving	$10.88	$14.74	$18.77	$13.75	107.2%

Source: EMSI (www.economicmodeling.com) and Author's Calculations

For Lake County, labor force forecasts like Figure 8's data suggest that the total jobs to come by 2022 in Lake County is 1,579 additional jobs. Most of those jobs will be in personal services, healthcare, office and administrative support, and community and social services under the current assumptions. While these are one of many possible fates for Lake County employment by occupation, economic development efforts can help shape these outcomes.

Figure 8: Jobs by Occupation in Lake County, Occupational Categories, 2010, 2017, 2022, Full-Time Equivalent workers

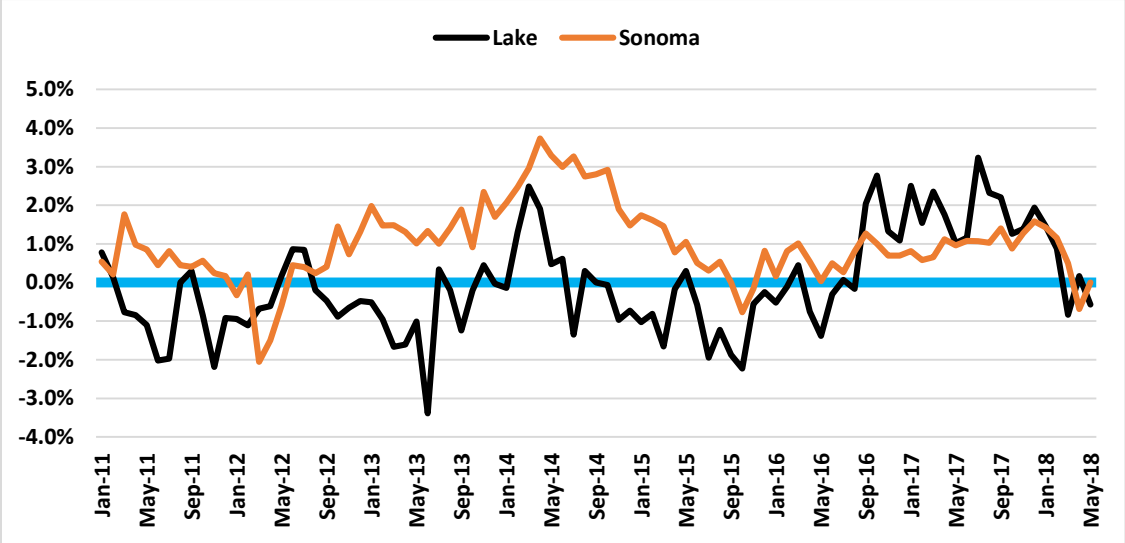
Occupations	2010	2017	2022	Change 2010-17	Change 2017-22
Total Jobs	**15,948**	**17,897**	**19,476**	**1,949**	**1,579**
Management	878	1,059	1,130	181	71
Business and Financial Operations	396	441	462	45	21
Computer and Mathematical	111	110	120	-1	10
Architecture and Engineering	40	51	56	11	5
Life, Physical, and Social Science	113	119	125	6	6
Community and Social Services	303	717	828	414	111
Legal	82	75	71	-7	-4
Education, Training, and Library	1,345	1,450	1,534	105	84
Arts, Design, Entertainment, Sports, and Media	155	156	177	1	21
Healthcare Practitioners and Technical	685	1,065	1,230	380	165
Healthcare Support	333	524	636	191	112
Protective Service	464	520	562	56	42
Food Preparation and Serving-Related	1,281	1,441	1,533	160	92
Building and Grounds Cleaning and Maintenance	1,143	901	914	-242	13
Personal Care and Service	1,414	1,018	1,263	-396	245
Sales and Related	1,676	1,824	1,940	148	116
Office and Administrative Support	2,074	2,564	2,717	490	153
Farming, Fishing, and Forestry	796	795	869	-1	74
Construction and Extraction	842	929	975	87	46
Installation, Maintenance, and Repair	703	821	883	118	62
Production	425	507	559	181	71
Transportation and Material Moving	690	810	891	45	21

Source: EMSI (www.economicmodeling.com) and Author's Calculations

Effects of the fires on Jobs

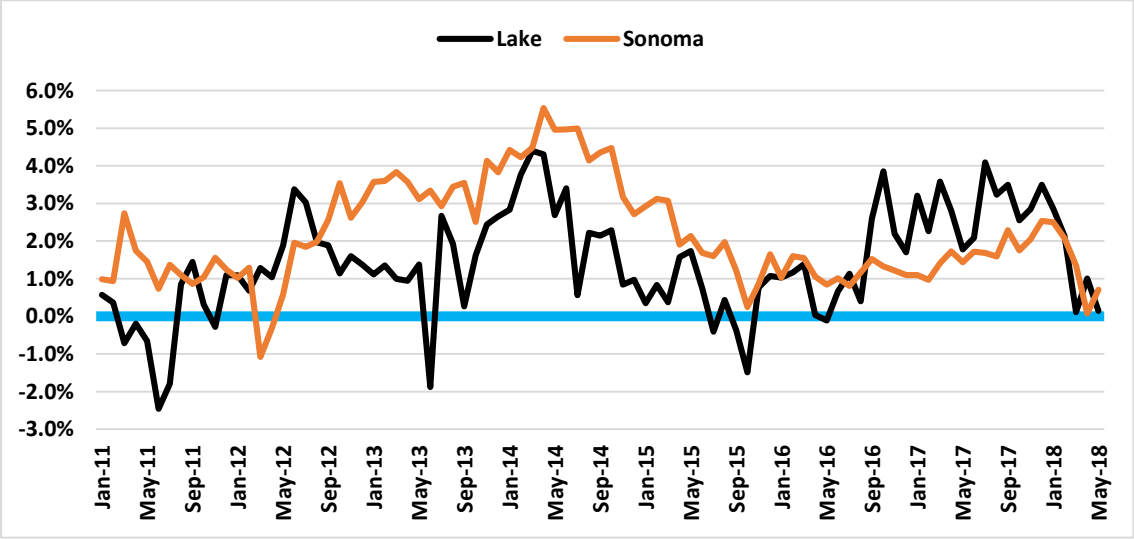
After four years of fires, Lake County jobs growth has continued. However, there were some changes along the way. Figure 9 through 11 shows the evolution of three data series compared to Sonoma County as a way to see how the fires may have affected Lake County different than Sonoma County through the 2017 data. It is labor force retention that has become a question; such changes could be aging population and lower population where potential workers are leaving.

Figure 9: Labor Force, Annual Percentage Change, Monthly Data, 2001 to 2018, Lake and Sonoma counties



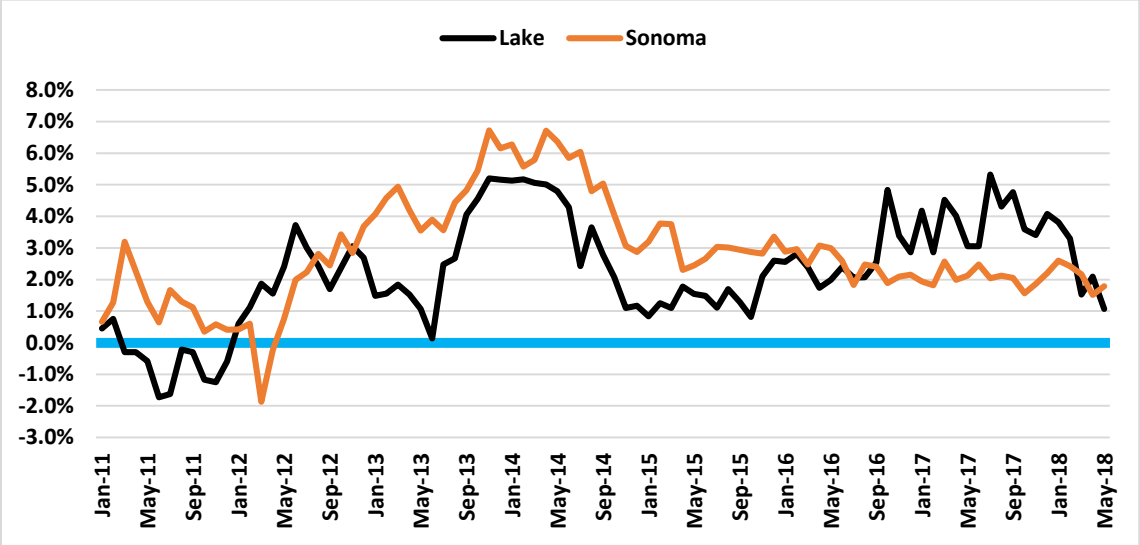
Source: California EDD (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1005) and Author's Calculations

Figure 10: Residential Employment, Annual Percentage Change, Monthly Data, 2001 to 2018, Lake and Sonoma counties



Source: California EDD (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1005) and Author's Calculations

Figure 11: Non-Farm Employment, Annual Percentage Change, Monthly Data, 2001 to 2018, Lake and Sonoma counties



Source: California EDD (http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=1005) and Author's Calculations

The fires have started to show a short-term effect in labor force and employment of residents, while overall non-farm employment is still growing, albeit less quickly than in 2016 and early 2017. One concern is that these data may also be indicative of a shrinking labor force due to the local economy being close to full employment.

Opportunities

Lake County has opportunities in labor markets tied to targeted industries for training and broader educational programs. An emphasis should be placed on globally-marketable skills and certificates, and specific majors for transfer to potential partnerships. Science, both laboratory and computer-based, must become more emphasized. Such education can be linked to economic development attracting and retaining university-based science coming to Lake County to study specific phenomena that differentiates Lake County from its regional partners and is a story to tell.

- Speak with industries in targeted areas primarily, and stay close to local employers
- Agricultural Supply Chain
    - Manufacturing jobs here if anywhere
    - Manufacturing and processing depends on choice of ag expansion
    - Logistics the next big issue: NE Lake County
- Tourism Supply Chain
    - Customer service focus to management: Lake County as a living lab
    - Event coordination: event planning and community development
    - May include some ride-sharing self-proprietors
- Science and Professional Business Supply Chain
    - Coding in Python and R, AutoCad and design, Adobe Creative Cloud suite
    - Lab workers: exportable jobs here also
    - Expansion of science curriculum at community college campuses