

North Bay Regional Planning Unit Regional Plan

Program Year 2017-2020



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Plan developed by Racy Ming on behalf of the North Bay Regional Planning Unit.

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A. LIST OF REGIONAL PARTNERS WHO ARE PARTY TO THE PLAN

The North Bay Regional Planning Unit (RPU) is comprised of the counties of Lake, Marin, Mendocino, Napa, Solano and Sonoma. Within the RPU, the Workforce Alliance of the North Bay is a Joint Powers Agency representing three counties (Marin, Napa, Lake) under one workforce development board. Each of the other member counties operates its own workforce development board. Mendocino County is currently exploring the possibility of joining the Alliance, but a final decision will not be made until June 2017. The North Bay RPU is also commonly referred to as NBEC, or the North Bay Employment Connection, and has been collaborating regionally since 2000.

The geographic spread of the RPU is vast, covering 9,498 square miles and stretching from Marin County just north of the Golden Gate Bridge northward over 180 miles through Sonoma and Mendocino Counties on the Pacific Coast, and through Solano, Napa, and Lake Counties on the eastern border of the RPU. These six counties are home to 1.44 million people and approximately 147,000 businesses.

The regional planning partners who took part in the development of the plan include the following required parties:

- Industry sector leaders, including associations, business organizations, and organized labor from the region's priority industry sectors
- Regionally organized Local Boards
- Local economic development agencies
- Regional consortia of community colleges
- Regional consortia of adult education providers
- Representatives of K-12 Career and Technical Education (CTE) programs funded by either federal Perkins funds or various state-specific CTE funding streams
- Department of Rehabilitation

In addition to the above organizations, input was solicited from county welfare agencies, EDD, elected officials, community based organizations serving those with high need and barriers to employment, youth serving organizations, staff, and other interested parties. Stakeholder input sessions were held throughout the region in every county in fall 2016, including at meetings of local workforce boards, community college Strong Workforce sessions, chief local elected official meetings, and partner convening's. Stakeholders were also encouraged to submit written input if unable to attend a session in person. Attendees at the sessions were asked to help identify any existing gaps in the workforce development system, propose possible solutions, and identify ways that resources can be better coordinated and leveraged. This plan incorporates those discussions. Please see Appendix A for a list of meetings, dates, and invitees where input for the regional plan was solicited.

NBEC is not petitioning for a regional planning partner modification.

B. REGIONAL ECONOMIC AND BACKGROUND ANALYSIS

Demographic Profile

Given the large size of the RPU, the demographic profile of the labor force as well as the local economy varies significantly throughout the region. Sonoma is the most populous county with 484,878 residents and 268,100 in the labor force, and Lake County is the least populous county, with 64,655 residents and 30,060 in the labor force. The unemployment rate ranges from a high of 6% in Lake County to a low of 3.3% in Marin. The following table summarizes numbers employed and unemployed, as well as the number of companies in each county.

SOURCE: CA LMID, Sept 2016/2012 Survey of Business Owners/EMSI

County	# in labor force	# employed	# unemployed	% unemployed	# of establishments
Lake	30,060	28,250	1,820	6.0%	2,944
Marin	145,100	140,400	4,800	3.3%	12,213
Mendocino	40,590	38,690	1,900	4.7%	4,140
Napa	78,400	75,400	3,000	3.8%	5,664
Solano	211,500	200,200	11,300	5.3%	10,591
Sonoma	268,100	258,000	10,100	3.8%	19,233
TOTAL	773,750	740,940	32,920	4.3%	54,784

The amount of poverty in each community also varies across the region, with higher deprivation existing in the more rural areas. Lake County has the highest percentage of its population living below the federal poverty line, at 24.3%, as well as the lowest median income at \$35,997. Marin County has the lowest percentage of its population living in poverty at 8.8%, and the highest median income at \$91,529. Mendocino County experiences the highest unemployment rate for people with disabilities at 30.1%; Marin County has the lowest at 7.9%.

SOURCE: 2014 American Community Survey

County	Population	Population age 25 & up	Median household income	unemployment rate for PWD	% below poverty
Lake	64,655	46,293	\$35,997	16.4%	24.3%
Marin	252,409	185,016	\$91,529	7.9%	8.8%
Mendocino	87,841	61,225	\$43,290	30.1%	20.2%
Napa	136,484	93,628	\$70,925	17.2%	10.3%
Solano	413,344	274,874	\$76,341	14.8%	13.1%
Sonoma	483,878	336,295	\$63,799	11.6%	12.3%
TOTAL	1,438,611	997,331			

Not unexpectedly, the educational attainment rates of the population also vary widely by county. Overall, the region has a lower percentage of high school non-completers than the state average. Across the region, approximately 124,000 have less than a high school degree. Lake has the

highest percentage of the population with a high school diploma or less at 43.4%, followed closely by Mendocino with 40.5%, compared to the state overall at 39.2%. Within the region, Marin’s population has the highest percentage with a baccalaureate degree or higher at 54.8%, followed by Sonoma at 32.6%, compared to the state average of 31%. Not surprisingly, this highly skilled workforce is taking part in the Bay Area regional economy, but high housing costs and long commutes are major challenges to the workforce and economic development, issues identified in multiple stakeholder sessions.

SOURCE: FactFinder.Census.gov (2010 Census) Pop age 25 and older

	Less than HS degree	HS graduate	Some college	AA degree	BA or higher
California	18.5%	20.7%	22.0%	7.8%	31.0%
Lake	15.1%	28.3%	39.4%	11.0%	16.2%
Marin	7.5%	12.2%	19.0%	6.5%	54.8%
Mendocino	14.1%	26.4%	28.7%	8.2%	22.5%
Napa	17.2%	19.2%	22.5%	9.2%	31.9%
Solano	12.4%	24.1%	29.5%	9.7%	24.3%
Sonoma	13.2%	20.1%	25.3%	8.9%	32.6%

Within the RPU, approximately 153,000 speak English less than very well, and 264,000 were born outside of the United States. The region overall has far lower percentages of limited English speakers than the state figure of 43.7%. Napa County has the highest percentage in the region of those who speak English “less than very well,” at 16.3%. For those who speak a language other than English at home, Spanish is the most commonly spoken language with over 40% in every county, although groups of Asian language speakers also exist, particularly in Sonoma and Marin Counties.

SOURCE: 2014 American Community Survey

County	Speak English less than “very well”	Percentage (less than “very well”)	Foreign Born Population	Spanish	Asian and PI languages
Lake	3,664	5.7%	5,886	40.6%	24.8%
Marin	22,969	9.1%	48,477	46.4%	42.6%
Mendocino	8,608	9.8%	11,707	49.7%	31.1%
Napa	22,247	16.3%	32,296	49.6%	38.1%
Solano	46,295	11.2%	84,535	40.6%	36.9%
Sonoma	52,743	10.9%	81,328	45.6%	41.7%
TOTAL	152,862	10.6%	264,229		

Labor Market Analysis and Forecast

Because of space limitations, the following is a brief overview of North Bay regional economic conditions including existing and emerging sectors and occupations, labor market forecasts, employment needs of employers in the region, and other labor market trends. Much more detailed data for the six county region is available in Attachment 1, including context within the

state and national economic trends, priority industry sector data, occupational analysis and knowledge and skills analysis.

Employment Forecasts for the North Bay Region

Regional forecasts take into account national forecasts and use them as a basis for local predictions. Unsurprisingly, similar patterns emerge for the North Bay RPU compared to nationwide:

- Healthcare is likely to be a leading industry for jobs growth;
- Manufacturing is likely to be declining in durable goods (machines and business capital), while growing in non-durable goods outside of textiles (food and beverage especially); and
- Service-providing jobs are likely to be growing faster than goods-producing industry employment, though construction jobs are likely to be growing between 2014 and 2024 versus the years of 2010-2014.

The current, long-term forecast from EDD has these key elements for the North Bay region:

- Healthcare jobs grow throughout the state, including the Bay Area and the North Bay;
- Accommodations and food services, the mix of hotels, motels, and restaurants, will also grow in all regions;
- Manufacturing jobs are predicted to fall in California by over 40,000 workers, but grow in the North Bay and San Francisco Bay Area. Faster growth is predicted in the North Bay region than the Bay Area;
- Construction growth is expected across California;
- Retail and wholesale jobs growth is also predicted in all regions; and
- Government jobs at the state and local level are also projected to grow.

The top five industries in the North Bay projected to have the most job growth in the next ten years are healthcare and social assistance, accommodation and food services, retail trade, manufacturing, and construction. In terms of gross numbers, healthcare is expected to see the greatest growth with 18,554 jobs. The total growth for these top five industries is projected to be 48,776, accounting for almost 70% of the expected total job growth over the next decade. The manufacturing industry has the highest average earning at \$100,620, and construction and accommodation and food services have the largest “ripple effect” on the rest of the economy. Please see the following two tables for greater detail.

Source: EMSI

Industry Sector	Jobs in 2016	Jobs in 2026	Job Growth	Job Growth Rate
Health Care and Social Assistance	89,599	108,153	18,554	20.7%
Accommodation and Food Services	64,546	74,642	10,096	15.6%
Retail Trade	71,722	79,926	8,204	11.4%

Industry Sector	Jobs in 2016	Jobs in 2026	Job Growth	Job Growth Rate
Manufacturing	52,876	59,688	6,812	12.9%
Construction	33,964	39,074	5,110	15.0%
SUB-TOTAL	312,706	361,484	48,776	
REGION TOTAL	577,785	648,174	70,389	12.2%
<i>Percentage</i>	<i>54.1%</i>	<i>55.8%</i>	<i>69.3%</i>	

Industry Sector	Location Quotient (2016)	Total Average Earnings	Gross Regional Product	Establishments (2015)
Health Care and Social Asst	1.16	\$64,161	\$6,065,984,099	17,200
Accommodation / Food Services	1.19	\$26,424	\$2,330,110,407	3,330
Retail Trade	1.10	\$40,504	\$4,263,783,149	4,526
Manufacturing	1.06	\$100,620	\$11,368,984,655	2,070
Construction	1.25	\$77,042	\$3,541,719,086	4,200
SUB-TOTAL			\$27,570,581,395	31,326
REGION TOTAL		\$66,063	\$72,481,102,692	54,566
<i>Percentage</i>			<i>38.0%</i>	<i>57.4%</i>

The next figure shows the fastest growing industries since 2010 for the North Bay region. Construction and real estate jobs shifted out of the labor market and gave way to more retail and other services jobs. The construction industry comeback is evident in these data. Notice that social assistance jobs (including non-profit organizations that provide health care) grew, as did biotechnology. Manufacturing has seen job growth in food and beverage makers; the wine industry, which links agriculture to manufacturing to tourism and retail, remains a foundation of jobs for this region, reflected in beverage manufacturing and agricultural support jobs.

Fastest Growing Industries (Top 12), 2010-15, Percentage Growth Payroll Employment by Employers, Number of Workers, North Bay Region

Industry	Percent Growth	Employees
Rental and Leasing Services	192.7%	794
Life Sciences	112.3%	3,145
Agriculture & Forestry Support	41.5%	2,313
Support Activities for Transportation	39.9%	392
Utilities	36.6%	517
Food Manufacturing	25.5%	1,532
Construction	22.9%	5,895
Beverage Manufacturing	20.6%	3,225
Motor Vehicle and Parts Dealers	20.5%	1,335
Miscellaneous Store Retailers	20.3%	669

Industry	Percent Growth	Employees
Couriers and Messengers	19.5%	226
Bars and Restaurants	19.3%	8,073

Source: QCEW (www.edd.ca.gov)

An economic theme in the North Bay is the connection with the Bay Area more generally. The next figure shows the recovery period and the emergence from the recession in terms of jobs performance; this table also shows the industries expecting the fastest growth of jobs from the type of business or employer. Bay Area comparisons are with San Francisco (SF), San Mateo (SM), Alameda, and Contra Costa (CC) Counties.

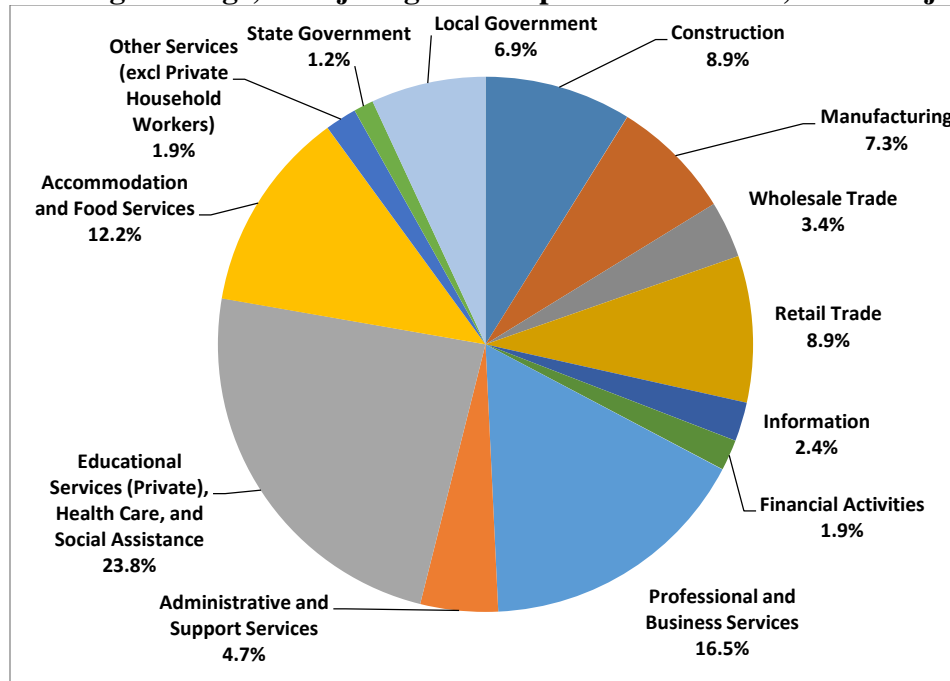
Employment Trends in the NORTH BAY Region:
Fastest Growth Industries from 2010-15 (Sources: QCEW (www.edd.ca.gov) and EFA)

Industries	N. Bay	CA	SF	SM	Alameda	CC
Rental and Leasing Services	192.7%	9.7%	-5.5%	22.6%	14.7%	3.5%
Life Sciences	112.3%	29.6%	33.5%	68.0%	33.9%	31.9%
Broadcasting (except Internet)	47.2%	6.6%	23.8%	59.5%	32.8%	196.8%
Agriculture & Forestry Support	41.5%	9.0%	28.0%	-11.8%	14.2%	8.7%
Support Activities for Transportation	39.9%	5.3%	17.3%	7.3%	-69.6%	-32.2%
Utilities	36.6%	-3.6%	103.1%	-11.2%	9.1%	-7.6%
Food Manufacturing	25.5%	-3.8%	-2.5%	-3.1%	-39.0%	
Construction	22.9%	5.9%	-5.8%	-5.0%	4.4%	6.8%
Beverage Manufacturing	20.6%	1.2%	-6.0%	-9.0%	-13.8%	23.4%
Motor Vehicle and Parts Dealers	20.5%	35.9%	209.2%	58.4%	16.3%	215.6%
Miscellaneous Store Retailers	20.3%	8.0%	1.5%	-0.4%	13.8%	6.9%
Couriers and Messengers	19.5%	14.4%	48.4%	24.0%	17.7%	-0.5%
Food Services & Drinking Places	19.3%	-2.7%	-14.9%	5.4%	-11.1%	-3.1%
Hotels and Motels	18.6%	12.1%	-5.0%	97.1%	4.9%	6.5%
Nursing and Residential Care Facilities	17.7%	14.1%	15.6%	11.8%	14.3%	14.3%
Wood Product Manufacturing	17.6%	33.5%	-17.0%	6.0%	17.3%	-11.8%
Fabricated Metal Product Manufacturing	17.5%	8.6%	11.4%	3.2%	15.6%	5.4%
Administrative and Support Services	16.4%	-8.6%	-1.3%	-26.4%	-30.6%	-19.8%
Performing Arts and Spectator Sports	15.4%	10.1%	18.1%	6.6%	13.6%	25.3%

The similarities of the North Bay, San Francisco and East Bay suggest that jobs growth will be similar also; the percentage change in jobs since the recession's end have similar themes across these areas.

Recent industry employment performance, combined with occupation employment performance and other factors, lead to considerations about employer hiring after 2016. The national level forecast is in place through 2024, but the regional and local forecasts are different enough to raise some doubts about how the national economic trends reflect the local economy. The next figure shows the predicted performance of industry employment from 2015 to 2022. The percentages represent the proportion of overall growth by industry; for example, manufacturing is predicted to be 7.3 percent of the overall employment growth of the six counties in the North Bay region (62,040 more jobs by 2022).

Forecasted Growth of Industry Employment, North Bay Counties, 2015-2022, Percentage Change, total jobs growth is predicted to be 62,040 more jobs



Sources: California EDD (www.edd.ca.gov) and Bureau of Labor Statistics (www.bls.gov)

Commute Patterns

Housing and transportation infrastructure play an important role in how integrated the regional workforce can be. For example, Sonoma, Marin, Solano, and Napa Counties are all relatively well-connected by various freeways and highways. Mendocino and Lake Counties are more challenged in terms of access to major labor markets and employers, outside of government or retail, due to distance.

Housing and transportation naturally link labor markets between county economies. People travel between the core counties on a daily basis; Mendocino and Lake Counties have more outflow of workers than inflow, much like any other rural areas that are adjacent to more

populated areas. If rent is less expensive in the North Bay, and jobs pay more in the core Bay Area, people will commute.

These data are a reminder that people flow over county lines for work and also outside the North Bay region for jobs. In many cases, the workforce system trains and educates individuals who will not work in the North Bay region but may live within the region. Monitoring the commute data helps gauge the flows of labor and how occupations and employment may be different locally versus regionally.

These data are split by where people live and where they work, with three categories based on a specific place (for example, Napa County):

1. People work in Napa County and live in Napa County;
2. People work in Napa County and live in another county (inbound commuters); or
3. People live in Napa County and work in another county (outbound commuters).

In terms of people flow, outbound commuters reduce the locally-available workforce. These are local residents leaving the area for work, suggesting there are better economic opportunities elsewhere. In the North Bay, as of 2014 (the latest data available), over 77 percent of North Bay residents also work within the North Bay’s six counties. The remaining places where regional residents work are spread throughout northern California. Compared to pre-recession (2008), there are fewer people that work and live locally, meaning more outbound commuters in the North Bay counties.

The next two figures tell a different story (Source: LEHD - onthemap.ces.census.gov). These data are about who comes to work in the North Bay region. From the perspective of local employment, given the number of people, only 66.7% of those that work in the North Bay region also live there, and the rest come from other places to work locally. There have been a surge of inbound commuters to San Francisco and Sacramento, and an outflow of workers from the North Bay to other places as commuters.

Working Residents that Live in the North Bay, Work in...

Work In	Employees	% of Total 2014	% of Total 2008
N. Bay	373,577	77.2%	78.2%
San Francisco	15,069	3.1%	3.2%
Alameda	18,682	3.9%	3.6%
Contra Costa	28,148	5.8%	5.3%
Santa Clara	10,121	2.1%	2.1%
Sacramento	16,874	3.5%	3.3%
San Mateo	8,101	1.7%	1.7%
Yolo	6,985	1.4%	1.4%
San Joaquin	6,538	1.4%	1.2%
Totals	484,095	100.0%	100.0%

People that Work in the North Bay, Live in...Selected Areas

Live In	Employees	% of Total 2014	% of Total 2008
N Bay	373,631	66.7%	68.1%
San Fran.	51,862	9.3%	8.2%
Alameda	33,743	6.0%	5.9%
C Costa	36,051	6.4%	6.8%
Santa Clara	17,225	3.1%	3.1%
Sacramento	20,815	3.7%	3.2%
San Mateo	14,654	2.6%	2.6%
Yolo	6,410	1.1%	1.3%
San Joaquin	5,422	1.0%	0.9%
Totals	559,813	100.0%	100.0%

An important data point is the difference between the totals in the above tables: **approximately 75,800 more people leave the North Bay counties than come into them for work.** This underscores the idea of training a workforce where a significant number do not work locally, but are working in the greater Bay Area regional economy.

Labor Market Forecasting Summary

- Health-care jobs, tourism and professional services (legal, accounting, etc.) have seen the most growth in services jobs
- State and national forecasts foresee continued jobs growth through 2022 on average
 - Manufacturing is the one industry predicted to see job losses through 2022; however
 - That prediction does not hold for the NCCPA counties, which have positive manufacturing jobs growth through 2022, primarily in food and beverage manufacturing
- Commuting confounds planning for any region, and the NCCPA region has a history of outbound commuting to the larger, core Bay Area employers:
 - As many as 75,000 people per year may leave the NCCPA counties in net to work outside these areas, most to the core Bay Area counties; and
 - Through Solano County, the reach of outbound commuting of local residents reaches Sacramento, San Joaquin and Yolo counties as well.

Priority Sectors and Occupational Analysis

Based on the preceding labor market forecast, five industries (or industry clusters) can be identified as having a prominent place in the economy of the 6-county North Bay Region:

- Construction (NAICS 23)
- Healthcare & Social Assistance (NAICS 62)
- Hospitality & Tourism (cluster)
- Manufacturing (NAICS 31)
- Professional, Scientific, and Technical Services (NAICS 54)

For purposes of this regional plan, the following analysis focuses on **Healthcare and Social Assistance; and Manufacturing.** An analysis for Hospitality and Tourism is available as

Appendix B. Through state Slingshot funding, the North Bay RPU is in the process of launching industry sector partnerships in those two sectors. (The process for selecting the sectors and for launching the industry partnerships is described in greater detail in Section C.)

Health Care and Social Assistance

The Health Care and Social Assistance industry sector is comprised of establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities as some establishments provide both health care and social assistance services.

The Health Care and Social Assistance sector provides nearly 89,000 jobs in the region and is projected to add another 18,000+ jobs over the next decade, based on a robust 21% projected growth rate. The sector is growing in all the region’s counties, with the strongest growth (28% over the next decade) expected in Lake County.

The average compensation (including benefits) is about \$64,000 per year. The highest average compensation in the region is found in Solano County, while the lowest average compensation is found in Lake and Mendocino Counties.

The Location Quotient (LQ) for the sector is 1.15, which indicates that this is an export industry sector and a key economic driver for the region’s economy.

Health Care and Social Assistance Sector

	Region	Lake	Marin	Mendo	Napa	Sonoma	Solano
2015 Jobs	88,764	4,378	16,669	5,477	8,227	30,487	23,526
2025 Jobs	107,134	5,597	19,831	6,629	9,751	36,387	28,939
Growth Rate	21%	28%	19%	21%	19%	19%	23%
Job Growth	18,370	1,219	3,162	1,152	1,524	5,900	5,413
Avg Comp	\$64,227	\$35,597	\$67,188	\$42,288	\$62,617	\$62,661	\$75,157
Employers	17,367	1,907	2,529	1,660	1,295	5,899	4,077
LQ	1.15	2.09	1.09	1.29	0.8	1.13	1.31
GRP	\$6,731.1M	\$183.3M	\$1,470.3M	\$278.9M	\$619.5M	\$2,236.4M	\$1,930.2M

Source: EMSI

The industries in this sector range from hospitals to child day care services. The largest industry is Individual and Family Services (with 24,000+ jobs in the region), followed by General Medical and Surgical Hospitals (12,000+ jobs), and Outpatient Care Centers (11,000 jobs).

While Individual and Family Services is a large industry, it is also the lowest paying industry with an average compensation (including benefits) of about \$20,000 per year.

The fastest growing industries in this sector include Specialty Hospitals (75% growth projected for this region over the next decade), Psychiatric and Substance Abuse Hospitals (64%), Other Ambulatory Health Care Services (57%), Outpatient Care Centers (56%), and Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly (44%).

As healthcare services continue to shift from hospital to outpatient services, the General Medical and Surgical Hospitals industry is projected to decline from about 12,000 jobs to 8,000 jobs over the next decade. However, because hospitals employ so many workers and many of them will be entering retirement age over the next decade, they will continue to have a strong demand for new workers.

Top Industries within the Health Care and Social Assistance Sector

Industries	2015 Jobs	2025 Jobs	Growt h Rate	Job Growt h	Avg Comp	Firms	LQ
Individual and Family Services	24,412	32,847	34.6%	8,435	\$20,342	13,720	2.75
General Medical and Surgical Hospitals	12,441	8,060	-35.2%	-4,381	\$103,262	33	0.66
Outpatient Care Centers	10,743	16,763	56.0%	6,020	\$127,186	187	3.42
Offices of Physicians	8,454	9,685	14.6%	1,231	\$112,550	852	0.80
Offices of Dentists	5,248	5,490	4.6%	242	\$61,151	806	1.39
Nursing Care Facilities (Skilled Nursing Facilities)	5,146	6,178	20.1%	1,032	\$47,157	67	0.76
Continuing Care Retirement Communities and Assisted Living Facilities	4,990	7,192	44.1%	2,202	\$36,151	258	1.39
Child Day Care Services	2,867	2,847	-0.7%	-20	\$34,602	392	0.83
Home Health Care Services	2,768	3,641	31.5%	873	\$47,398	91	0.49
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	2,486	2,560	3.0%	74	\$43,865	168	1.00
Offices of Other Health Practitioners	2,395	2,853	19.1%	458	\$55,731	527	0.69
Other Ambulatory Health Care Services	2,133	3,347	56.9%	1,214	\$59,778	36	1.83
Vocational Rehabilitation Services	1,512	1,536	1.6%	24	\$29,816	62	1.14
Community Food and Housing, and Emergency and Other Relief Services	948	1,158	22.2%	210	\$41,941	75	1.47
Medical and Diagnostic Laboratories	763	1,050	37.6%	287	\$96,758	64	0.73
Psychiatric and Substance Abuse Hospitals	697	1,146	64.4%	449	\$81,961	2	1.50
Other Residential Care Facilities	436	215	-50.7%	-221	\$48,280	25	0.65

Specialty (except Psychiatric and Substance Abuse) Hospitals	325	567	74.5%	242	\$63,736	2	0.35
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Source: EMSI

Top Occupations within the Health Care and Social Assistance Sector

The largest occupations in this sector include Registered Nurses (nearly 9,000 jobs in the region) and Personal Care Aides (8,000+ jobs), followed by Medical Assistants and Nursing Assistants (3,000+ jobs each).

The fastest growing occupations (with at least 100 jobs in this sector) include Emergency Medical Technicians and Paramedics (68% growth rate projected for this region over the next decade), Home Health Aides (64%), Ambulance Drivers and Attendants (62%), and Personal Care Aides (50%).

The highest-paying middle skill occupations in this sector (for this region) include Diagnostic Medical Sonographers (\$56 per hour), Registered Nurses (\$53), Dental Hygienists (\$46), Radiologic Technologists (\$44), and Respiratory Therapists (\$42). Some might argue that Registered Nurse is a higher skill occupation rather than a middle skill occupation. But we're choosing to count it as a middle skill occupation because the majority of RNs have an Associate Degree (rather than a Bachelor's Degree).

See Appendix C for a comprehensive table with data on the occupations within the Health Care and Social Assistance Sector.

Manufacturing

The Manufacturing industry sector is comprised of establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. It includes both durable goods and non-durable goods manufacturers. This sector also includes establishments engaged in both manufacturing and selling products to the general public (a bakery, for example). Advanced Manufacturing is a subset of the industry that employs advanced manufacturing technologies, processes, or materials in the manufacture of their products.

The manufacturing sector provides over 52,000 jobs in the region and is projected to add another 6,900 jobs over the next decade, based on a slightly-higher-than-average 13% projected growth rate. The sector is projected to grow in all of the region's counties except for Mendocino County, where the sector is projected to sustain its current number of manufacturing jobs over the next decade.

The average compensation (including benefits) is just over \$101,000 per year. The highest average compensation in the region is found in Marin and Solano Counties, while the lowest average compensation is found in Lake and Mendocino Counties.

The Location Quotient (LQ) for the sector is 1.06, which indicates that this is an export industry sector and a key economic driver for the region's economy.

Manufacturing Sector

	Region	Lake	Marin	Mendo	Napa	Sonoma	Solano
2015 Jobs	52,527	319	4,045	2,500	12,004	21,802	11,858
2025 Jobs	59,427	400	6,374	2,508	13,822	22,806	13,517
	Region	Lake	Marin	Mendo	Napa	Sonoma	Solano
Growth Rate	13%	25%	58%	0%	15%	5%	14%
Job Growth	6,900	81	2,329	8	1,818	1,004	1,659
Avg Comp	\$101,639	\$53,387	\$183,641	\$62,746	\$85,553	\$87,400	\$125,629
Employers	2,061	39	224	133	516	898	251
LQ	1.06	0.24	0.41	0.91	1.81	1.25	1.02
GRP	\$12,746.6M	\$42.5M	\$1,819.7M	\$303.4M	\$2,065.3M	\$3,926.2M	\$4,589M

Source:EMSI

The industries in this sector range from winemakers to primary metal manufacturers. The largest industries are Beverage Product Manufacturing (nearly 20,000 jobs in the region), Food Manufacturing (about 7,500 jobs), and Chemical Manufacturing (over 6,000 jobs).

The latter is also the sector's highest paying industry with an average compensation (including benefits) of just over \$231,000 per year.

The fastest growing industries in this sector include Primary Metal Manufacturing (56% growth rate projected for this region over the next decade), Chemical Manufacturing (48%), and Electrical Equipment, Appliance and Component Manufacturing (39%).

Top Industries within the Manufacturing Sector

Industries	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Avg Comp	Firms	LQ
Beverage Product Manufacturing	19,706	22,522	14.3%	2,816	\$85,938	841	20.42
Food Manufacturing	7,583	9,075	19.7%	1,492	\$62,427	181	1.22
Chemical Manufacturing	6,370	9,403	47.6%	3,033	\$231,125	69	1.92
Computer and Electronic Product Manufacturing	3,225	3,221	-0.1%	-4	\$117,463	81	0.76
Fabricated Metal Product Manufacturing	2,879	3,246	12.7%	367	\$79,776	156	0.50
Machinery Manufacturing	2,500	2,649	6.0%	149	\$85,371	78	0.57
Miscellaneous Manufacturing	2,044	1,714	-16.1%	-330	\$126,641	137	0.85
Nonmetallic Mineral Product Manufacturing	1,820	1,288	-29.2%	-532	\$67,487	68	1.12
Wood Product Manufacturing	1,574	1,585	0.7%	11	\$59,935	80	1.00
Plastics and Rubber Products Manufacturing	926	779	-15.9%	-147	\$60,329	31	0.33

Printing and Related Support Activities	866	721	-16.7%	-145	\$63,671	100	0.48
Furniture and Related Product Manufacturing	835	835	0.0%	0	\$59,048	106	0.53
Industries	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Avg Comp	Firms	LQ
Transportation Equipment Manufacturing	519	507	-2.3%	-12	\$77,575	36	0.08
Petroleum and Coal Products Manufacturing	448	382	-14.7%	-66	\$240,063	3	1.00
Electrical Equipment, Appliance, Component Manufacturing	383	534	39.4%	151	\$90,194	24	0.25
Apparel Manufacturing	318	379	19.2%	61	\$77,058	18	0.60
Textile Product Mills	184	168	-8.7%	-16	\$49,476	27	0.39
Paper Manufacturing	104	134	28.8%	30	\$90,276	6	0.07
Primary Metal Manufacturing	97	151	55.7%	54	\$75,051	9	0.06
Textile Mills	79	79	0.0%	0	\$56,206	3	0.17
Leather and Allied Product Manufacturing	69	55	-20.3%	-14	\$65,987	6	0.57

Source: EMSI

Top Occupations within the Manufacturing Sector

The largest occupations in this sector include Packaging and Filling Machine Operators and Tenders (about 2,800 jobs in the region), Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (just over 2,500 jobs), Laborers and Freight, Stock, and Material Movers, Hand (just over 1,600 jobs), and First-Line Supervisors of Production and Operating Workers (nearly 1,500 jobs).

The fastest growing occupations (with at least 100 jobs in this sector) include Biological Technicians (51% growth rate projected for this region over the next decade), Chemical Technicians (49%), and Industrial Machinery Mechanics (39%).

The highest-paying middle skill occupations in this sector (for this region) include Electrical and Electronics Engineering Technicians (\$34 per hour), Industrial Engineering Technicians (\$27), Chemical Technicians (\$24), Bookkeeping, Accounting, and Auditing Clerks (\$22), Heavy and Tractor-Trailer Truck Drivers (\$21), and Agricultural and Food Science Technicians (\$20).

See Appendix D for a comprehensive table with data on the occupations within the Manufacturing Sector.

Priority Occupations

Priority Occupations are those that pay at or above the region's median wage and reflect those occupations on our Top Demand Occupations list and/or on one of our Top Occupations lists for

our Priority Industry Sectors (see comprehensive data tables for all candidate occupations in Appendix E:

Occupations	Median Wage	Typical Ed Level
Diagnostic Medical Sonographers	\$55.88	AA/AS
Registered Nurses	\$52.99	AA/AS
Dental Hygienists	\$46.06	AA/AS
Radiologic Technologists	\$43.62	AA/AS
Respiratory Therapists	\$42.30	AA/AS
Magnetic Resonance Imaging Technologists	\$34.95	AA/AS
Electrical and Electronics Engineering Technicians	\$33.62	AA/AS
Cardiovascular Technologists and Technicians	\$33.03	AA/AS
Physical Therapist Assistants	\$32.06	AA/AS
Telecommunications Equipment Installers and Repairers, Except Line Installers	\$29.52	SC/CERT
Surgical Technologists	\$28.76	SC/CERT
Psychiatric Technicians	\$27.79	SC/CERT
Industrial Engineering Technicians	\$27.39	AA/AS
Licensed Practical and Licensed Vocational Nurses	\$26.54	SC/CERT
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$24.62	SC/CERT
Medical and Clinical Laboratory Technicians	\$23.90	AA/AS
Chemical Technicians	\$23.82	AA/AS

Knowledge and Skills Analysis

In analyzing knowledge and skill requirements for middle skill occupations and higher, there are clearly a wide variety of requirements. However, some knowledge and skills are more common than others, and represent competencies that are in-demand by the North Bay's employers. They include:

- Active Listening Skills - Giving full attention to what other people are saying, taking time to understand the points being made, and asking questions as appropriate.
- Critical Thinking Skills - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Reading Comprehension Skills - Understanding written sentences and paragraphs in work related documents.
- Monitoring Skills - Monitoring/Assessing performance of oneself, other individuals, or organizations to make improvements or to take corrective action.
- Speaking Skills - Talking to others to convey information effectively.
- Active Learning Skills - Understanding the implications of new information for both current and future problem-solving and decision-making.
- Coordination Skills - Adjusting actions in relation to others' actions.
- Service Orientation Skills - Actively looking for ways to help people.
- Social Perceptiveness Skills - Being aware of others' reactions and understanding why they react as they do.

- Customer and Personal Service Knowledge - Knowledge of principles and processes for providing customer and personal services.
- English Language Knowledge - Knowledge of the structure and content of the English language, including the meaning and spelling of words, composition, and grammar.
- Education and Training Knowledge - Knowledge of principles and methods for curriculum and training design, teaching and instruction.
- Clerical Knowledge - Knowledge of administrative procedures and systems, such as word processing, file/records management, and other office procedures.
- Computers and Electronics Knowledge - Knowledge of computer hardware and software.
- Mathematics Knowledge - Knowledge of arithmetic, which may include algebra, geometry, calculus, or statistics, and their applications.
- Psychology Knowledge - Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation.
- Administration and Management Knowledge - Knowledge of management principles involved in strategic planning, resource allocation, human resources, and leadership.
- Medicine and Dentistry Knowledge - Knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and deformities.

See Appendix F for tables detailing the skills and knowledge necessary for the region's in-demand occupations.

Workforce Development Activities

The North Bay workforce development system includes four Workforce Boards, six community college districts, five adult education consortia, six county offices of education, six county welfare departments, dozens of economic development entities hundreds community based organizations, numerous state agencies, and organizations representing labor. This section provides an overview of workforce and education activities in the region, client populations and an assessment of the strengths and weaknesses of the core partners.

Workforce Development Boards: The North Bay RPU includes the workforce boards of Mendocino, Solano, and Sonoma Counties, as well as a Joint Powers Agency representing Marin, Napa, and Lake Counties. The Workforce Boards operate to ensure the provision and coordination of WIOA Title I services in the four local workforce development areas, as designated by the Governor. Local Boards provide day to day administrative and policy oversight for the delivery of services to job seekers and businesses. The client population of Workforce Boards includes adult, dislocated worker, youth, and universal access clients, as well as businesses in the region, with an emphasis on those in priority sectors.

Employment Development Department (EDD): EDD administers the WIOA Title I, federal Wagner-Peyser Act (WPA, WIOA Title III), labor market information, Disability Insurance, Paid Family Leave, Unemployment Insurance (UI), Trade Adjustment Assistance (TAA), and youth, disability, and veterans programs. EDD is collocated within the AJCC in every local area, although not necessarily in every AJCC. The client population of EDD includes UI and disability insurance claimants, job seekers through Wagner Peyser, veterans, people with disabilities, youth, and TAA participants.

Community Colleges: The community colleges in the North Bay are a primary provider of workforce training. Among the programs offered by the community colleges are those administered with Carl D. Perkins Act funds, as well as CTE programs, the community college CalWORKs program, and Disabled Student Programs and Services. In 2012 the North Bay community colleges awarded 3,521 certificates (three of four from Santa Rosa Junior College) and 3,722 degrees. The client population of the community colleges is very diverse, including students who: seek to transfer to four year institutions; lack basic skills; need short term vocational training; take community based education courses for personal enrichment.

Adult Education Consortia: Adult education programs provide adult basic and secondary education skills including English, math, and ESL foundational competencies needed to enter postsecondary education and citizenship preparation. Services in the North Bay include but are not limited to: adult secondary education, adult basic education, CTE courses, remediation at community colleges, English as a Second Language courses, classes for adults with disabilities, and high school equivalency/GED preparation. Clients include limited English proficient individuals; those lacking basic skills; and people with disabilities. Services and number of clients served (by type) are discussed in much greater detail in Section E: Accessibility and Inclusivity.

K-12 Education System: The North Bay public K-12 system includes 89 districts and six County Offices of Education. This system offers some CTE courses, which integrate core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers. Students with disabilities may be served in the Workability Program, which provides an array of transition services to middle and high school students, including work experience for high school students. The system also serves English language learners and their families. For data on the number of students, numbers receiving free and reduced lunch, numbers enrolled in special education, and other wellness indicators, please see kidsdata.org.

Economic Development organizations: Economic development organizations in the North Bay range from the Sonoma county-wide Economic Development Board to entities representing individual cities or industries, like the Napa Vintners' Association. Economic development partners may provide services including labor market information and analysis, business attraction, retention and expansion services, site selection, permit streamlining, clearing of regulatory hurdles, small business assistance, international trade development, and assistance in accessing state government programs.

Department of Rehabilitation (DOR): DOR works in partnership with consumers and other stakeholders to provide services and advocacy resulting in employment, independent living, and equality for individuals with disabilities in California. DOR provides services throughout the North Bay region. DOR provides a comprehensive menu of services to clients, including but not limited to counseling and guidance, vocational and other training services, evaluation of physical and mental impairments, supported employment services, tools, equipment, and other supportive services, assistance technology devices, and benefits counseling. DOR clients include individuals who may have the following disabilities: blind or visually impaired; cognitive disabilities; learning disabilities; intellectual or developmental disabilities; deaf or hard of

hearing; physical disabilities; psychiatric disabilities; traumatic brain injury; and other disabilities.

The following table delineates some of the strengths and weaknesses of the core WIOA partners in the region. Through the regional stakeholder meetings as well as the regular, ongoing partnerships, a number of common threads have emerged. Every organization deals with the challenge of not enough resources, although for some this challenge is more significant than others. Furthermore, organizations can always continue to improve in the area of cross organizational partnering and not working in silos.

Strengths and Challenges of the NBEC workforce development system

Partner	Strengths	Challenges
Workforce Boards	Seasoned staff and leadership; business-led boards; performance driven	Complex regulations that are difficult to convey to the board; limited funding
EDD	Good local relationships and collaborations	Not enough staff to provide services for the region
Community college system	Strong name recognition; many excellent workforce training programs	Speed at which curriculum can be changed to meet needs of industry
Adult education	Flexible; increased focus on CTE	Need for services is greater than resources available
K-12 education	Embedded within local communities	Tension between dual missions of preparing students for 4 year degrees and CTE
Economic development	Excellent source of data; connections with business community	Resources and type of efforts vary greatly across the region
Dept of Rehabilitation	Good local relationships and collaborations	Limited local decision making ability; very constrained in who they can enroll

Addressing the education and skill needs of individuals with barriers to employment will be discussed in greater detail in section E: Accessibility and Inclusivity.

C. REGIONAL SECTOR PATHWAYS

In order to address upward income mobility within the NBEC region and to improve economic self-sufficiency, significant shifts in workforce development strategies are needed that focus more squarely on building a pipeline that can transition low-skill students and jobseekers into middle skill jobs/careers. But without consistent, continuous and authentic industry leadership, workforce strategies run the risk of not adequately or accurately responding to true demand. As a result, jobseekers will continue to miss the mark in terms of marketable skills and will continue to be stuck in low-quality jobs.

To address these challenges, NBEC is engaged in two key initiatives. The Northern California Career Pathways Alliance (NCCPA) is a \$15 million, 5-year grant to the region from the state Department of Education’s California Career Pathways Trust (CPT), created by Assembly Bill 86. The NCCPA is a collaborative alliance of the County Offices of Education, Community Colleges, Workforce Investment Boards, local schools and businesses in the 6 county North Bay, and its goal is “to create a regional approach to Career Pathways that inspire students through high-quality experiences in school and in professional workplace settings, engage more employers in education, and provide the region with the focused, diverse and highly-qualified workforce needed for a vibrant economy.”

The second major initiative underway in the North Bay is the North Bay Business Sector Alliance (NBBSA), funded by the California Workforce Development Board’s Slingshot Initiative. In order to strengthen regional economic prosperity and improve income mobility by creating stronger relationships between businesses and community partners within key industry sectors, NBBSA’s vision is to create and foster regional industry sector partnerships, establish a region-wide staff capacity-building effort to create Sector Specialists, and create an identification/recognition amongst businesses of the local Workforce Development Boards (WDB) as comprehensive business “solution providers.” Both initiatives are described in further detail below.

Northern California Career Pathways Alliance (NCCPA)

Through funding from the CPT, the NCCPA will invest \$15 million over five years plus an additional \$10 million in cash and in kind contributions from the community and businesses to create and enhance education pathways for high school and community college students. The governance committee of NCCPA consists of six County Offices of Education, five Community Colleges, and the four Workforce Development Boards of NBEC. In addition, NCCPA includes 165 employers and community partners. (Please see Appendix G for a complete listing of partner organizations and businesses.) NCCPA is providing services and supports to 22 school districts throughout the region, and working in eight industry sectors and 16 career pathways. The table below outlines the sectors and pathways.

Industry Sector	Pathways
Health Sciences & Medical Technology	Biotechnology; Patient Care
Engineering & Architecture	Engineering Technology Pathway; Environmental Engineering Pathway
Business & Finance	Financial Services
Hospitality, Tourism & Recreation	Food Services and Hospitality
Manufacturing and Product Development	Matching and Forming Technologies
Information & Communication Technologies	Game and Simulation; Information Support & Services
Public Services	Public Safety
Agriculture and Natural Resources	Agricultural Business; Agricultural

In preparing for the NCCPA effort, education partners utilized their industry advisory committees at both the high school and community college levels to assess industry workforce needs, and to determine whether existing training and education programs in the region were meeting those needs. As outlined in the labor market and economic analysis in section two, the economic needs of the region are diverse, as well as the conditions in each community which may help to facilitate success. Based on industry input, data analysis and an environmental scan of local conditions, the above sectors and pathways were identified.

NCCPA is working to meet the following objectives (Please see Attachment B for the 2015-16 NCCPA Regional Plan):

- Create policies and practices that facilitate grade 6-16 pathways and grade 10-14 course curriculum alignment
- Provide professional development and teacher externships on integrated CTE and core curriculum
- Create regional grade 10-14 pathway communities of practice to share pathway resources and strategies
- Facilitate transitions from secondary to postsecondary education
- Strengthen meaningful partnerships with business and industry that includes Work Based Learning (WBL) internships, involving student in field trips / job shadows to industry sites and engaging business/industry in working with teachers to ensure alignment and relevance of course curriculum and projects
- Work with WDBs to re-envision sector based advisory groups/skill panels
- Work with economic development groups to build upon existing county-level career events to create and sustain a regional Economic Development Summit
- Expand and develop maker events (which emphasize learning-through-doing particularly with novel uses of technologies) that engage student leadership groups in addressing local issues/product development driven by business/industry partners
- Create local, county and regional awareness of college and career readiness
- Provide governance structure and financial oversight for the alliance

In addition to the ongoing industry advisory groups at the community colleges and K-12 levels, the NCCPA hosted a major employer convening in May 2015, in Santa Rosa, CA. On October 24, 2016, the NBBSA co-hosted with NCCPA a convening for healthcare and manufacturing employers in Napa, CA. Industry representatives who attended included Kaiser Permanente, Northbay Healthcare, Synder Filtration, ICON Aircraft, Altec Industries, and Ghiringhelli Specialty Foods. Economic development, education, labor, and Employment Training Panel representatives were also in attendance. The agenda included a panel discussion of industry champions highlight the benefits of industry sector partnerships (ISP's) facilitated by consultant Lindsey Woolsey, a group discussion on what is needed in the region to support industry growth, and highlights of current resources in place to support the development of regional ISPs and a call to action for next achievable steps. The summit generated general interest/commitments from community partners and industry representatives to establish ISPs in the North Bay. The group decided that the Napa-Solano Healthcare ISP launch meeting would be held during first few weeks of December 2016, with others to follow in early 2017. The primary function of the

Workforce Boards in the NCCPA effort is to continuously reinforce the need for the voice of businesses to be driving the direction of career pathway development. Toward that end, the North Bay Business Sector Alliance (NBBSA) will provide a complementary “deeper dive” into a number of the sectors selected by NCCPA.

North Bay Business Sector Alliance (NBBSA)

NBEC was awarded \$1 million from the Slingshot Initiative to coordinate with community partners (education and economic development) to establish regional Industry Sector Partnerships that put business out front to identify specific industry priorities, workforce challenges and opportunities. NBBSA will focus on engaging industry representatives to foster “Business Champions” and create Industry Sector Partnerships (ISP), which will advise community partners on industry workforce trends and demands. Although still in the early stages, the NBBSA will allow NBEC to ensure that the voice of businesses are integral in determining policy priorities and strategies; that there is a robust mechanism by which businesses help to identify training and education deficiencies and the approaches to solving them; that businesses help to identify the career pathways most critical to regional economic success and any necessary adjustments to further develop career pathway programs to meet regional industry needs; and that industry leads the discussion and process on determining industry-valued and recognized post secondary credentials.

In preparation for this initiative, each member workforce board conducted an analysis of labor market and economic data to determine two to three priority sectors locally. Across the region, the two sectors which had priority in more than one county and were identified as part of the project deliverables are **Healthcare** (all six counties), **Manufacturing** (three counties). Other sectors which may also be explored include Hospitality (efforts already underway in Napa), Agriculture and Public Sector.

NBEC has engaged a nationally renowned technical assistance consultant, Lindsey Woolsey, to guide the launch of Industry Sector Partnerships (ISP) in each of the six counties. Through initial launch forums, NBEC will strive to identify Business Champions to take the lead on advising and collaborating with education, training, workforce development, and economic development partners to address specific industry needs. Representing the interests of fellow business stakeholders, they will advise partnering entities on the creation of new workforce development approaches and help identify other key industry priorities. Ideally, the Business Champions will engage and recruit other high profile industry leaders to promote strategies and initiatives aimed at addressing the major challenges of key North Bay industry sectors.

In order to effect systemic change to the way business engagement occurs in the North Bay, NBEC is committed to a major staff development effort through NBBSA. NBEC will deploy a region-wide staff capacity-building training program focused on effective and sustainable business engagement practices, and will elevate staff knowledge of specific industry sectors to create “Sector Specialists.” This investment in training will advance the skills sets of professional staff charged with carrying forward specific NBBSA activities 1) ISP launch forums 2) Industry Sector Specialists 3) Implementation and use of new business engagement technology. This investment in staff and technology are critical components of ensuring the sustainability of efforts incubated under NBBSA.

In addition to the October 2016 joint NCCPA/NBBSA employer convening described above, the Napa-Lake Workforce Board launched a Hospitality ISP in early 2016 using the ISP methodology championed by Ms. Woolsey. The ISP launch was well attended with about 15 prospective industry partners representing various Napa Valley employers – mostly restaurants, hotels and resorts. Community support partners were also on hand for the ISP launch, but were in listening mode as the industry leaders talked about their needs, challenges and opportunities, and made commitments to work together on areas of common priority ranging from workforce, to marketing, to regulatory topics. Since then, the partnership, now called Napa HIP (for “Hospitality Industry Partnership”) has held a number of convenings with industry partners to develop and prioritize their working agenda for the partnership. The November 2016 convening expanded to include a group of community support partners and a focus was put on the issue of hospitality training programs available to the industry. Another topic of discussion for the Napa HIP industry partners has been the lack of affordable housing. While this may seem to be more of a social services concern, the industry partners have made it clear that it is an issue that negatively affects their workers, their businesses, and their industry.

The launch of the Napa-Solano Healthcare ISP, on December 15, 2016, was attended by 28 employers and 25 stakeholder entities. Almost 20 healthcare employers were present, including Kaiser Permanente, Sutter Solano Medical Center, Napa State Hospital, La Clinica De La Raza, and the Hospital Council of Northern & Central California. Industry representatives in attendance decided to establish and support the Healthcare ISP, and established five priority areas of action:

- Innovation (shared financial & system of care resources)
- Use of Shared Information/Data
- Launch a Residency Program
- Ageing Population Issues (Senior Support Services)
- Workforce Training & Education

The Marin/Sonoma Healthcare ISP launch will take place in February 2017. A Manufacturing Solano/Napa ISP launch is planned for spring 2017.

By March 2018, NBEC has committed to the following:

1. Establish Industry Sector Partnerships in each of the workforce board areas.
2. Identify/recruit Business Champions for selected industry sectors.
3. Deploy a region-wide staff capacity-building training program focused on new effective and sustainable business engagement practices.
4. Elevate staff knowledge of specific industry sector workforce development systems and opportunities to create “Sector Specialists.”
5. Implement new technology for coordinated business engagement.
6. Host two regional summits to highlight the economic and community benefits of ISPs.

In summary, the goals of NBBSA are a critical component of this regional strategic plan. NBEC envisions the NBBSA initiative as its flagship initiative to ensure that business needs are guiding

workforce development efforts. The NBBSA will undoubtedly spawn numerous initiatives impacting many parties in both workforce and economic development fields. Matching appropriate education/training and employment efforts with demonstrated local/regional demand with businesses will raise the skills sets of workers, and in a more timely fashion meet the hiring/upskilling needs of businesses.

Critical outcomes will include: 1) enhancing worker earnings and benefits; 2) increasing employment productivity/stability/longevity (which benefits both worker and business); and 3) building robust local and regional economies.

Existing Career Pathways Programs

As identified in the NCCPA table above, career pathway programs have been identified for each of the targeted sectors. The development of these pathways is the primary work of the NCCPA initiative and is ongoing in nature. Staff have begun mapping several of the pathways; in particular, the advanced manufacturing, healthcare, and hospitality pathway maps can be found as Attachment 3. The pathway maps are in draft form, but at a minimum illustrate some of the identified certificates and training institutions for priority occupations. With the development of Industry Sector Partnerships via NBBSA, NBEC intends to solicit Business Champion and other industry expert input into the continuing refinement of the region's career pathway programs. This feedback will be shared via the NCCPA collaborative with education and economic development partners, in order to inform any necessary adjustments in order to meet regional industry needs.

D. INDUSTRY-VALUED POST-SECONDARY CREDENTIAL ATTAINMENT

As mentioned previously, the region's education partners have ongoing industry advisory groups of business leaders to provide input into curriculum development and to ensure that credentials offered are industry-recognized and valued. The NCCPA and NBBSA initiatives are serving as opportunities to ensure that businesses lead this discussion and process, that the credentials and training being emphasized in career pathways (as described earlier in this plan) remain relevant, and that any necessary adjustments are made along the way. NBEC anticipates that its Industry Sector Partnerships and identified business champions will be an integral component in ensuring that the system is industry-driven. Through the work of the ISP's and gained labor market intelligence, the regional planning partners will be able to establish goals for the number of industry recognized credentials produced in the region. The education and training partners will be able to track the credential attainment numbers through their reporting systems, and the NBEC RPU will be able to track its contribution to the overall state goal of one million new credentials statewide over the next decade.

The below table lists the postsecondary education and training institutions in the region and the number of completers they each have for their various certificate and degree programs in a recent year (2012). Note that apprenticeship programs are not included in this list because, while they are a significant source for quality workforce training, their apprentices are already employed. The institutions on this list are those whose students – for the most part – have not yet started to work in their chosen professions. At the program level, the completer numbers from these

institutions can help determine the projected balance between worker supply and demand so that oversupplying the labor market can be avoided or minimized.

Institution	Certificates awarded in 2012	Degrees awarded in 2012	Total program completions in 2012
Santa Rosa Junior College	3,012	1,665	4,677
Sonoma State University	0	2,074	2,074
Solano Community College	180	996	1,176
Napa Valley College	224	561	785
Dominican University of California	0	554	554
Touro University California	0	419	419
Pacific Union College	1	307	308
College of Marin	67	252	319
Mendocino College	48	248	296
Blake Austin College	212	0	212
California Maritime Academy	0	169	169
Empire College	120	126	246
Lytles Redwood Empire Beauty College	99	0	99
Milan Institute of Cosmetology-Fairfield	84	0	84
San Francisco Theological Seminary	10	53	63
LeMelange Academy of Hair	41	0	41
Hinton Barber and Beauty College	24	0	24
Bergin University of Canine Studies	0	19	19
TOTAL	4,122	7,443	11,565

Of the 11,565 postsecondary program completers in 2012, about two out of three completed certificates or associate degree. About 30% completed a bachelor's degree or higher.

E. ACCESSIBILITY AND INCLUSIVITY

Resources will always be too limited for any one entity to be alone in tackling the challenges facing the workforce development system. Therefore, the NBEC leadership will continue to collaborate with partners to ensure that resources are leveraged to the fullest extent possible, and that job seekers are able to access the resources needed for their success. In addition to the WIOA core partners, the North Bay region is reliant on a robust and critical system of

community based organizations (CBO’s) to reach and work with groups that have some of the most significant barriers to employment. CBO’s participate in program development, outreach, and specialized supportive services, in coordination with one-stop partner groups across the region. By working with these community-embedded organizations and ensuring appropriate referral and co-enrollment, the workforce system is better able to assist individuals with accessing regional sector pathways and connecting them with needed supportive services and resources to ensure that they will remain in relevant programs as they work their way through career pathways. (As supportive services and client case management are primarily delivered at the local level, please see the attached local plans for further detail.)

Toward that end, and as outlined in section A, an extensive stakeholder input process was conducted throughout the six county region. Stakeholders and organizations representing populations with barriers to employment and/or historically disadvantaged communities took part in these sessions. Furthermore, AEBG consortia staff were invited and attended within every workforce board’s area. As part of the public comment process, the draft regional and local plans were made available online. Please see Attachment 4 for a complete list of stakeholders invited to participate in the planning process.

The following is a description of the need for basic skills education in the RPU, the types of services being offered, and plans for addressing unmet needs.

Basic Skills Education

The North Bay RPU has lower percentages of people who have not completed high school, compared to the state average. Overall the percentage of high school graduates is higher than the state average, although Marin’s figure appears low because of their high percentage of college graduates. With regards to percentages who have earned their bachelor’s degree or higher, wide variation exists within the region, with Marin having the most Bachelor degreed (or higher) population (54.8%) and the more rural counties having the lowest percentages (Lake, 16.2%, Mendocino 22.5%) compared to 31% statewide. The table below is for those ages 25 and older.

County	Less than HS degree	HS graduate	Some college, no degree	AA degree	BA or higher
California	18.5%	20.7%	22.0%	7.8%	31.0%
Lake	15.1%	28.3%	39.4%	11.0%	16.2%
Marin	7.5%	12.2%	19.0%	6.5%	54.8%
Mendocino	14.1%	26.4%	28.7%	8.2%	22.5%
Napa	17.2%	19.2%	22.5%	9.2%	31.9%
Solano	12.4%	24.1%	29.5%	9.7%	24.3%
Sonoma	13.2%	20.1%	25.3%	8.9%	32.6%

SOURCE: FactFinder.Census.gov

As detailed in Section B, 10.6% of the region’s population over the age of five speak English “less than well,” compared to 43.7% statewide. Of those with LEP, Spanish is the most commonly spoken language across all counties in the region, with Asian languages having a

significant presence in a few of the counties. (Further detail on serving individuals with LEP and the challenges common across the RPU appears later in this section.)

For those who have less than a high school degree, the following table provides both the percentage and number of people for each county.

County	Less than HS degree	# of people
Lake	15.1%	6,990
Marin	7.5%	13,876
Mendocino	14.1%	8,633
Napa	17.2%	16,104
Solano	12.4%	34,084
Sonoma	13.2%	44,391
TOTAL FOR RPU	12.5%	124,079

To meet the educational needs of these individuals, a range of adult basic education services are offered across the region, although there is variation from county to county, and even within individual counties. Services include but are not limited to: adult secondary education, adult basic education, remediation at community colleges, English as a Second Language courses, classes for adults with disabilities, and high school equivalency/GED preparation.

High School Equivalency preparation is offered by the following adult schools in the RPU: Petaluma Adult School (Sonoma County); Tamalpais Adult School (Marin County); Novato Adult School (Marin County); Vallejo Regional Education Center (Solano County); Fairfield-Suisun Adult School (Solano County); Vacaville Education Extension Program (Solano County); Ukiah Adult School (Mendocino/Lake); Kelseyville Adult School (Mendocino/Lake); Anderson Valley Adult School (Mendocino/Lake); Napa Valley Adult Education (Napa County).

Although figures were not available for every type of adult education service, the following is a sampling of enrollment numbers across the region. It is apparent that resources are insufficient to meet the apparent demand, as indicated by the number of individuals who have not achieved a high school diploma or equivalent. For example, 44,391 individuals in Sonoma County have less than a high school diploma, compared to the figures below for the numbers being served at Petaluma Adult School.

Provider	Adult Secondary Education (ASE)	Adult Basic Ed (ABE)
Petaluma Adult School	348	82
Tamalpais Adult School	200	194
Novato Adult School	100	173
Marin County Office of Ed	-	499
College of Marin	-	2,248
Vallejo Regional Ed Center	580	262
Fairfield Suisun Adult School	849	343
Vacaville Education Extension Program	400	-

Provider	Adult Secondary Education (ASE)	Adult Basic Ed (ABE)
Solano Community College	-	English 2,249 (FTE's)
Solano Community College		Math 1,575 (FTE's)
Napa State Hospital Education Center	-	160-250

In addition to the need for more resources, the vast geographical spread of the region as well as within individual counties presents a big challenge in the provision of adult basic education. For example, in Sonoma County, Petaluma Joint Unified High School District in the south part of the county is the only secondary provider of services leading to a high school diploma. While they offer online and independent study programs, students must be able to provide their own transportation to the school site for registration and testing services.

In addition to geographical challenges, community colleges in the region are finding that the majority of students are not prepared for college level course work. For example, based on student performance on Napa College's placement exam, 84.8% placed below the college-level coursework in English, and in math, 93.9% placed below college level coursework. The College of Marin (COM) Assessment Office reported that 77.3% of students tested below college-readiness on the English test, and in math, 84.2%. Community colleges find a significant demand for remediation courses, which often have waitlists because of insufficient resources to meet demand.

Education partners, Workforce Development Boards, economic development organizations and businesses throughout the region have been working together for a number of years to identify system gaps and solutions. Partners are working to streamline and coordinate intake, assessment, and referrals of individuals needing basic skills remediation, and to accelerate the progress of students.

Information has been gleaned through the work of AEBG Consortia, career technical education advisory groups, Workforce Board convenings, and labor market data and analysis. With regards to adult basic education, the following gaps have been identified across program areas:

1. Bridges, transitions and pathways. There is a strong need for bridges between institutions, transitions from one institution to another and pathways that lead to the academic and career goals being met.
2. Geographic Access. Both across the RPU and within individual counties, distance to services presents a challenge to students.
3. Capacity and Resources. Recent budget cuts and on-going rapid changes in teaching methods, technology and subject matter content have created a high demand for capacity and resource building in both the infrastructure and professional development.
4. Comprehensive Student Support Systems. The complex lives of students, the ever increasing demand for focused learning, and the intricacies of navigating education systems require a comprehensive approach to student support.
5. Service Delivery. From outreach to course content to job placement and follow up, every point of service delivery has some gaps for some students.

6. Common Data/Accountability Systems and Communications – Data driven policy and approaches require solid information. Students, in order to make informed decisions require up to date information on their interests, aptitudes abilities and progress, as well as current academic and career options. Faculty needs an efficient and effective method for tracking student progress, for communicating clearly with students and one another, and understanding good outcomes.

To address these gaps, streamline and coordinate intake, assessment, and referrals of individuals needing basic skills remediation, and accelerate student progress, AB 86 plans in the North Bay include, but are not limited to:

1. Improve communication and curriculum alignment between community college and adult education programs
2. Increase the number and variety of adult education courses across all program areas
3. Increase the geographic diversity where courses and classes are held
4. Increase outreach and engagement across the region and particularly to underserved adult learners
5. Increase student support services and resources to assist students in meeting their designated goals such as transitioning to post-secondary education, counseling referrals, childcare, income assistance, and physical and mental health
6. Embed bridge curriculum for adult learners with disabilities and students gaining basic skills/education prior to the transition into post-secondary education
7. Enhance courses that address the soft-skills of students including resume writing, professional presence, interviewing skills, and teamwork
8. Increase outreach to workforce trainers to discover and create basic skills courses that meet the needs of students working toward vocational certificates or licenses

Given the significant barrier that a lack of basic skills presents to employment as well as progress toward prosperity, NBEC will continue to collaborate with our regional education partners and assist as possible with advancing the above strategies. In particular, WDBs will look for ways to support efforts to align curriculum that support industry specific pathways, including providing relevant labor market information; assist with student outreach and the provision of supportive services, including transportation support; and partner in convenings of stakeholders, particularly members of the business community. Individual AJCC's may provide WIOA enrolled clients with supportive services, or refer them to other partners such as the Department of Rehabilitation, County Welfare Agencies, or community based organizations, as appropriate.

Alignment with Regional Sector Pathways

Although some strong models exist in the RPU, work remains to ensure that adult basic education programs are integrated into and feeding students into sector pathways. The most notable gaps in the area of short-term CTE are the need for more direct coordination with other program areas, and for direct links to ever changing demands of local businesses. Although the quality of the existing CTE programs is commendable, strong and consistent connections are lacking between these programs and local businesses to identify emerging high employment potential careers. As described in Section C, NBEC will work to address these issues through the NCCPA and NBBSA initiatives. Adult education and CTE providers will be included in

information sharing from those efforts, to assist them with the development of industry-recognized and “stackable” certificates.

Although half of the RPU counties do not have apprenticeship training centers within their boundaries (Lake, Mendocino, Marin), stakeholders across the RPU identified the need for courses that introduce adult education students to the wide variety of opportunities in the trades. This need is being addressed by a Proposition 39 grant for the Trades Introduction Program (TIP). Through a collaboration with the Workforce Alliance North Bay (WDB of Marin/Napa/Lake) and the Marin Building and Construction Trades Council, the RPU is participating in a planning grant for a pre-apprenticeship program which provides education and orientation for adults interested in becoming a trade apprentice. Classes are being offered throughout the North Bay region and are based on the Multi-Craft Core Curriculum designed by the National Building Trades Department of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO). Initial data on the placement of students into apprenticeships or jobs following the course has been excellent – the first cohort’s placement rate exceeded the goal at 126%, with all 19 completers ending up in construction-related employment.

The following are strategies identified by AEBG consortia and through the regional stakeholder sessions to strengthen the connection of adult education, CTE, and regional sector pathways:

- Expand and develop career pathways consisting of courses and training programs based on high priority sectors as determined by the WDBs’ sector strategy work.
- Continuously communicate and collaborate with agencies involved in federal, state and county-wide career pathway and sector strategy initiatives.
- Include and integrate employability skills (‘soft skills’) training, plus career readiness training (e.g. resume writing, interviewing, etc.) within the CTE programs to prepare students for work-based learning activities and the workplace.
- Work with WDBs, K-12, community colleges and other career pathway partners to effectively market the trades and middle-skilled career pathways (e.g. post-secondary training programs).
- Address the shortage of work and training sites by collaborating with employers in high demand industries.
- Create articulation agreements for CTE between adult education and community colleges.

Services for Individuals with Limited English Proficiency (LEP)

English language development courses are available throughout the region, via community colleges, adult schools, and community based organizations. Of particular note, Mendocino College was recently designated a Hispanic Serving Institution. Additionally, Mendocino College received a High School Equivalency Program (HEP) grant which specifically provides migrant workers with curriculum and support in preparing for and taking a High School Equivalency test.

Despite pockets of excellence, several challenges are common across the RPU. Due to decreased funding, all counties in the region report an inadequate number of classes are available to meet existing need. The following sampling of ESL enrollment numbers at some of the major adult

education providers illustrates the small numbers served, given the apparent level of need based on Census data.

- Petaluma Adult School, Sonoma County - 566
- College of Marin, Marin County – 564 (credit courses)
- Tamalpais Adult School Marin County - 300
- Novato Adult School, Marin County - 125
- Solano College, Solano County 85
- Vallejo Regional Education Center, Solano County - 300
- Fairfield-Suisun Adult School, Solano County - 399

Another challenge is that given the vast geographical spread of the RPU as well as individual counties, more classes are needed in remote areas to adequately fill the need for English language instruction. All areas are also grappling with how to offer classes in ways that are supportive of individuals with jobs and families.

In order to reach all English learners, information and services need to be provided in smaller non-English language communities through a variety of modes. Service hubs that are located in population centers and meet several family needs such as health care and social services can provide information and English language courses to constituents if space is available. Underutilized classroom space in neighborhood elementary schools where parents and family members can avail themselves of English language instruction while their young children are attending school are also attractive options.

NBEC recognizes the importance of English language acquisition for individuals to be able to successfully participate in community, citizenship, and jobs. As such, NBEC will look for ways to support the following list of recommendations from regional adult education consortiums:

- Support the expansion of the number and geographic locations of ESL classes throughout the region, particularly GED preparation for non-native English speakers
- Expand child care and transportation support for participants (supportive services)
- Provide staff development to train AJCC staff on the system of educational resources for English Learners as well as the transition to community college level work
- Create and implement contextualized ESL/CTE programs that have industry certification options
- Provide bilingual outreach services to better inform public of adult ESL education and training programs in the region

Accessibility for People with Disabilities (PWD)

Local boards are working closely with partners to ensure the accessibility and participation in regional sector pathway programs for people with disabilities (PWD). As part of the AB 86 planning process, education partners throughout the RPU (community colleges, adult schools, AEBG consortia) mapped programs and any existing gaps in services for PWD.

The following example highlights a theme across the RPU – the need for bridge programs and curriculum which help individuals transition from high school or adult education to community college level work. The Marin County Office of Education’s Workability and Transition Partnership programs provide pre-employment and marketable job skills training, employment

placement, and follow up to assist PWD in pursuing their goals and meeting their needs. Stakeholders identified the primary gap in programs for PWD as the need for a bridge program and curriculum to provide enhanced academic support for those who are able to pursue community college coursework. The AEBG Consortium recommended addressing this gap through developing more systematic and consistent collaboration between the Workability Program and the College of Marin Student Accessibility Services.

Geographic limitations to services is another theme throughout the RPU. Many of the services for PWD are provided by non-academic community based organizations. More conversation needs to take place to identify what types of educational services are needed for PWD and how those services will be distributed and delivered throughout the RPU. In some counties, partners are working toward implementing an intake and navigator system established in geographically strategic locations, with resources and options for PWD to offer consistent information, guidance, and support.

Throughout the RPU, Workforce Boards and service providers partner closely with organizations serving PWD, which provide programs that play a critical role in providing opportunities for this population to gain marketable job skills, find placement opportunities, and obtain ongoing support for maintaining employment and living independently. Opportunities for partnering to ensure accessibility include, but are not limited to: one stop steering committees and other partner meetings and community convenings; Workforce Board membership; and co-location in AJCC's. These points of collaboration serve to ensure that stakeholders are aware of the system of resources available to job seekers, and that cross referrals occur as seamlessly as possible.

A number of years ago, the original NBEC consortium of Marin, Napa, Solano and Sonoma Counties was awarded a five year grant from the Department of Labor, Project INCLUSION, to enhance the employment resources for people with disabilities in the region. As a result, the infrastructure of the regional one stop system was enhanced with better services for this target population in mind, including contractual arrangements with community based organizations serving PWD; assistive technology in the one stop centers; and staff training. Staff training has been on going, and future staff development will particularly focus on assisting people with barriers to employment in accessing career pathways.

TANF/CalWORKs

With regards to TANF/CalWORKs, every workforce board within NBEC works with the county welfare agency. The service providers in Marin, Sonoma, and Napa Counties are within the same budget center as Welfare to Work, and the Solano WDB has contracted with Solano County in the past to serve CalWORKs clients. As such, a lot of strategic alignment has already taken place, with co-enrollment of CalWORKs clients into WIOA. Looking toward the future, CalWORKs staff will be included as possible in sector trainings under NBBSA to ensure that they also have the knowledge and background to guide their clients toward regional sector pathways which will assist them in progressing toward livable wage jobs and careers.

F. JOB QUALITY

The Workforce Boards in the NBEC RPU are committed to assisting job seekers with careers that move them toward greater economic prosperity, and working with employers who offer jobs with good wages and benefits. A comparison of median hourly wages throughout the region to the priority occupations in the targeted sector pathways illustrates alignment with that commitment. The median wage over the entire RPU is \$23.41/hour. As to be expected, entry level positions have lower than median wages, but they are the initial steps in career pathways leading to higher earnings, and may be appropriate entry points for some job seekers. Please see the following two tables.

County/ Area	Lake	Marin	Mendo- cino	Napa	Solano	Sonom a	REGIO N	CA
Median Hourly	\$19.07	\$27.24	\$18.73	\$22.26	\$23.74	\$22.55	\$23.41	\$24.47
Median Annual	\$39,66 6	\$56,65 9	\$38,95 8	\$46,30 1	\$49,37 9	\$46,90 4	\$48,693	\$50,89 8

Occupation	2016 Jobs	2026 Jobs	Growth Rate	New Jobs	Replace- ments	Median Wage	Typical Ed Level
<i>SECTOR: HEALTH CARE AND SOCIAL ASSISTANCE >> PATHWAY: HEALTH SCIENCES</i>							
Registered Nurses	11,271	12,186	8.10%	915	2,787	\$52.99	BA/BS
Physical Therapists	937	1,041	11.10%	104	270	\$48.02	Mas/Doc
Physical Therapist Assistants	173	221	27.80%	48	59	\$32.06	AA/AS
Licensed Practical and Licensed Vocational Nurses	2,618	3,193	22.00%	575	849	\$26.54	SC/CERT
Firefighters/Paramedics	1,635	1,798	10.00%	163	501	\$25.26	SC/CERT
Emergency Medical Technicians and Paramedics	1,321	2,112	59.90%	791	296	\$17.50	SC/CERT
Nursing Assistants/Certified Nurse Assistants	3,419	4,462	30.50%	1,043	917	\$14.62	SC/CERT
Home Health Aides	2,138	3,477	62.60%	1,339	692	\$11.20	SC/CERT
<i>SECTOR: MANUFACTURING >> PATHWAY: ADVANCED MANUFACTURING (SONOMA)</i>							
Engineers, All Other/Robotics Engineers	276	307	11.20%	31	59	\$48.08	BA/BS
Engineering Technicians, Except Drafters, All Other/Manufacturing Production Techs	264	282	6.80%	18	69	\$29.61	AA/AS
Occupation	2016	2026	Growth	New	Replace-	Median	Typical

	Jobs	Jobs	Rate	Jobs	ments	Wage	Ed Level
Industrial Machinery Mechanics	1,062	1,421	33.80%	359	330	\$28.38	HS/GED
Electro-Mechanical Technicians/Robotics Technicians	32	35	9.30%	3	9	\$26.42	AA/AS
Computer Numerically Controlled Machine Tool Programmers	50	63	26.20%	13	17	\$26.04	HS/GED
Computer-Controlled Machine Tool Operators	159	206	29.50%	47	57	\$16.84	HS/GED

SECTOR: MANUFACTURING >> PATHWAY: ADVANCED MANUFACTURING (SOLANO)

Architectural and Engineering Managers/Drafting Managers	666	720	8.10%	54	219	\$69.63	BA/BS
Engineers, All Other/Mechanics Engineers	276	307	11.20%	31	59	\$48.08	BA/BS
Commercial and Industrial Designers	84	94	11.90%	10	22	\$31.66	BA/BS
Electrical and Electronics Drafters	112	121	8.10%	9	16	\$30.70	AA/AS
First-Line Supervisors of Production and Operating Workers	2,057	2,355	14.50%	298	353	\$30.42	HS/GED
Mechanical Drafters	125	129	3.20%	4	17	\$29.19	AA/AS
Surveying and Mapping Technicians	199	198	-0.50%	-1	32	\$29.16	HS/GED

SECTOR: HOSPITALITY & TOURISM >> PATHWAY: HOSPITALITY & TOURISM (NAPA)

Lodging Managers	288	341	18.40%	53	67	\$26.63	HS/GED
Food Service Managers	1,399	1,573	12.40%	174	303	\$23.55	HS/GED
First-Line Supervisors of Personal Service Workers	870	1,074	23.40%	204	192	\$18.33	HS/GED
Concierges	163	193	18.40%	30	36	\$16.72	HS/GED
First-Line Supervisors of Food Preparation and Serving Workers	3,858	4,600	19.20%	742	1,279	\$16.29	HS/GED
Hotel, Motel, and Resort Desk Clerks	1,663	2,006	20.60%	343	998	\$12.64	HS/GED
Waiters and Waitresses	13,323	14,712	10.40%	1,389	6,819	\$12.38	<HS
Bartenders	2,689	3,107	15.50%	418	1,103	\$11.86	<HS

Source: EMSI

In addition to front-lining employers who are within the targeted sectors and pathways, business services staff in the region may conduct an analysis of potential business customers in order to prioritize those that pay higher wages and offer benefits. This analysis may include the following:

- A successful multi-year business history;
- History of hiring individuals with barriers to employment;
- Immediate job opportunities, with avenues for job advancement;
- Preferably higher-than-entry-level opportunities;
- Starting pay at \$12.00 per hour or higher;
- Employee benefits;
- Demonstrated ability to supervise and oversee a training or orientation effort

Incumbent worker training: In addition to benefiting existing employees by moving them to jobs with higher sustainable wages, a robust career ladder strategy for incumbent workers can open entry-level positions to be filled with un- and underemployed individuals. Workforce boards throughout the region are at varying stages of offering incumbent worker training, with the more experienced boards sharing policies and procedures and best practices within the RPU. Going forward, when offering incumbent worker trainings, business services units will take into account whether 1) the business falls within a targeted sector and 2) whether an incumbent worker training will help to ensure the participants' progression along career pathways.

G. REGIONAL ASSESSMENT

The State CalJOBS system has the ability to track occupational areas of training for Title I enrolled participants, and then record whether the job placement that follows is in that occupation. This data is regularly examined by WDB staff to ensure that staff are best matching jobseekers to quality training in demand occupations, and that training schools or providers produce highly qualified graduates that are readily hired by industry.

As other WIOA-Titled programs come online to utilize CalJOBS, an expanded ability will be created to similarly analyze the effectiveness of multiple training programs, and direct efforts at continuous improvement.

H. FEDERAL WIOA PLANNING REQUIREMENTS NOT COVERED BY STATE PLAN

As described previously, NBEC has a long and successful history of working together for the greater good of the North Bay region. Despite - or maybe because - the group regularly meets and collaborates out of a collective desire to do so, rather than because of any formal agreements, NBEC is in the vanguard of regional workforce development efforts in the state. The group, which also includes the EDD regional manager, shares the values of collaboration, inclusivity, efficiency and innovation. A range of administrative and programmatic efforts have been successfully undertaken together, and include: grant writing, grant administration, staff

development, procurement, the publication of Occupational Outlook analyses, a joint website, and a Trades Introduction Program, to name a few. The NBEC partnership has a long history of producing results, and looks forward to exploring further possibilities under the A-H RPU requirements.

The following A-H RPU requirements have been addressed earlier in the plan: preparation of a regional plan; the development and implementation of sector initiatives (pages 18-23) ; the collection and analysis of regional labor market data, in conjunction with the State (pages 2-16, plus appendices); the coordination of transportation and other supportive services (29, 31, local plans); and coordination of services with economic development (1, 17-18, 20-21, 27).

In 2016, the NBEC Directors agreed to collectively negotiate each local area's performance goals with the State, during a group telephone conference. Over the course of 2017, the NBEC Directors will explore the establishment of regional service strategies, including the potential use of cooperative service delivery agreements and formal cost sharing arrangements to pool administrative costs, if necessary. With the pending retirement of two of the Workforce Board Directors, the group consensus is that it is important to take the necessary time to have these discussions and explore options, and allow new incoming Directors the opportunity to be part of the decision making process.

I. REGIONAL SERVICE AGREEMENTS

None at this time. See section H.

J. COMMUNITY COLLEGE SWP AND AEBG RELATED ATTACHMENTS

The AEBG plans for consortia in the NBEC region as well as the community college Strong Workforce Program documents were reviewed for the preparation of this plan. In the interest of conservation, and upon the advice of EDD assigned regional advisor Tim Reynaga, we are providing the links to those documents rather than hard copies.

AEBG Consortia: <http://aebg.cccco.edu/Consortia/Consortia-List>

Strong Workforce: <http://doingwhatmatters.cccco.edu/ResourceMap/NorthBay.asp>

**Appendix A
Regional Stakeholder Input Sessions
And Invitation List**

Date	Description	Attendance
11/3/16	College of Marin Nursing program advisory committee, Kentfield CA	6 attendees, including Kaiser Permanente, Marin General, Mission College, USF, College of Marin
11/4/16	Napa County stakeholder session @ Strong Workforce meeting, Napa College, Napa CA	17 attendees, including business, education, WDB, economic development
11/9/16	Mendocino County stakeholder session @ Workforce Development Board meeting, Ukiah CA	15 attendees, Workforce Board members as well as Strong Workforce
11/9/16	Sonoma County stakeholder session @ Workforce Development Board meeting, Santa Rosa CA	20 WDB and 16 staff and community attendees
11/9/16	Marin Adult Education Consortium, San Rafael CA	8 attendees, representing K-12, adult education, and community college
11/17/16	College of Marin CIS/Business Systems program advisory committee, Novato CA	8 attendees representing business, education, workforce development, MCOE
11/18/16	Lake County stakeholder input @ one stop partner meeting, Lakeport CA	6 attendees, representing DOR, DSS, Tribal TANF, EDD
12/1/16	Solano County stakeholder session, Fairfield CA	11 attendees, representing Tribal TANF, education, CBO's, county welfare agency
12/6/16	Marin County stakeholder session, San Rafael CA	24 attendees, representing business, economic development, county welfare agency, EDD, education, CBOs
12/8/16	Solano stakeholder session, Vallejo CA	19 attendees, representing education, DOR, public libraries, public health, county welfare agency, EDD, CBOs, economic development

Please see Attachment 4 for a complete list of organizations invited to provide stakeholder input.

Appendix B Hospitality and Tourism Labor Market Analysis

The Hospitality and Tourism industry cluster is comprised of establishments providing accommodation and food services for immediate consumption, and tourism services. For the purposes of this analysis, we will focus mostly on the accommodation and food services sector which accounts for approximately 93% of the jobs in the cluster, and the vast majority of its projected job growth as well.

The Hospitality and Tourism cluster provides 64,000 to 69,000 jobs in the region and is projected to add another 10,000+ jobs over the next decade, based on a faster-than-average 16% projected growth rate. The industry cluster is growing in all of the region’s counties except for Lake County, where the cluster is projected to lose just over 100 hospitality jobs over the next decade. Looking more closely at Lake County, however, it would be a reasonable guess that the projected job losses – most of which may have already occurred – are a result of the recent devastating fires in that area.

The average compensation in the region (including benefits) is about \$27,000 per year. The highest average compensation is found in Napa County, while the lowest average compensation is found in Lake and Solano Counties.

The Location Quotient (LQ) for the sector is 1.19, which indicates that this is an export industry cluster and a key economic driver for the region’s economy.

Hospitality and Tourism Cluster							
	Region	Lake	Marin	Mendo	Napa	Sonoma	Solano
2015 Jobs	63,988*	1,045	12,745	3,918	12,661	21,356	12,264
2025 Jobs	73,991	932	14,613	4,305	15,840	24,159	14,141
Growth Rate	16%	-11%	15%	10%	25%	13%	15%
Job Growth	10,003	-113	1,868	387	3,179	2,803	1,877
Avg Comp	\$26,699	\$18,133	\$29,336	\$22,039	\$35,422	\$24,677	\$20,696
Employers	3,330	110	686	307	377	1,157	693
LQ	1.19	0.71	1.18	1.32	1.76	1.13	0.97
GRP	\$2,599.7M	\$34.1M	\$558M	\$145.3M	\$676.1M	\$806.2M	\$380M

Source: EMSI, Accommodation and Food Services Sector (*Tourism industries add another 4,660 jobs to the cluster (not reflected in the above table), but the additional data are not available by county and so are not included in the above table.)

The industries in this cluster range from hotels and restaurants to convention and visitors bureaus. The largest industries are Restaurants and Other Eating Places (over 48,000 jobs in the region), and Traveler Accommodations (12,000+ jobs).

The cluster’s highest paying industries include Convention and Visitors Bureaus and All Other Travel Arrangement and Reservation Services with average compensations (including benefits) of \$80,000 and \$78,000 per year, respectively. Many of the industries in this cluster have low

average compensations which is due to the preponderance of part-time and relatively low-paying “service jobs.”

The fastest growing industries in this cluster include Tour Operators (42% growth rate projected for this region over the next decade), RV (Recreational Vehicle) Parks (24%), Museums (24%), and Traveler Accommodation (21%).

Top Industries within the Hospitality and Tourism Cluster

Industries	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Avg Comp	Firms	LQ
Restaurants and Other Eating Places	48,317	55,584	15.0%	7,267	\$24,583	2,577	1.16
Traveler Accommodation	12,157	14,749	21.3%	2,592	\$35,665	397	1.61
Special Food Services	2,029	2,077	2.4%	48	\$25,713	168	0.75
Amusement and Theme Parks	1,211	1,423	17.5%	212	\$25,027	5	1.61
Drinking Places (Alcoholic Beverages)	1,109	1,094	-1.4%	-15	\$20,873	142	0.72
All Other Amusement and Recreation Industries	786	843	7.3%	57	\$27,236	106	1.14
Scenic and Sightseeing Transportation, Land	379	456	20.3%	77	\$41,969	11	7.30
RV (Recreational Vehicle) Parks	334	415	24.3%	81	\$30,920	39	1.30
Museums	287	355	23.7%	68	\$43,488	36	0.77
Travel Agencies	266	256	-3.8%	-10	\$61,506	51	0.75
Tour Operators	261	371	42.1%	110	\$43,112	29	2.31
Zoos and Botanical Gardens	193	300	55.4%	107	\$32,496	5	1.17
Marinas	165	190	15.2%	25	\$51,559	14	1.19
Casinos (except Casino Hotels)	163	192	17.8%	29	\$29,251	2	0.46
Racetracks	143	89	-37.8%	-54	\$41,853	6	1.04
Scenic and Sightseeing Transportation, Other	138	158	14.5%	20	\$31,984	8	11.38
Art Dealers	136	81	-40.4%	-55	\$43,942	47	1.95
Nature Parks and Other Similar Institutions	116	102	-12.1%	-14	\$49,078	15	2.83
Other Spectator Sports	106	115	8.5%	9	\$47,114	14	1.15
Sports Teams and Clubs	81	146	80.2%	65	\$65,186	8	0.22
All Other Travel Arrangement and Reservation Services	66	50	-24.2%	-16	\$77,598	7	0.20
Amusement Arcades	54	92	70.4%	38	\$18,119	4	0.58

Industries	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Avg Comp	Firms	LQ
Rooming and Boarding Houses	42	71	69.0%	29	\$33,435	7	0.86
Recreational Goods Rental	34	30	-11.8%	-4	\$11,843	12	0.62
Convention and Visitors Bureaus	33	26	-21.2%	-7	\$80,349	8	0.90
Historical Sites	27	30	11.1%	3	\$20,849	5	0.41
Scenic and Sightseeing Transportation, Water	17	22	29.4%	5	\$23,218	8	0.29

Source: EMSI, Harvard Hospitality and Tourism Cluster

Top Occupations within the Hospitality and Tourism Cluster

The largest occupations in this cluster include Waiters and Waitresses (about 11,900 jobs in the region), Combined Food Preparation and Serving Workers (just over 11,000 jobs), Restaurant Cooks (about 5,600 jobs), Fast Food Cooks (about 3,100 jobs), Dishwashers (just over 3,000 jobs), Food Preparation Workers (just over 3,000 jobs), First-Line Supervisors of Food Preparation and Serving Workers (about 3,000 jobs), and Maids and Housekeeping Cleaners (about 2,900 jobs).

The fastest growing occupations (with at least/approximately 100 jobs in this cluster) include Laundry and Dry-Cleaning Workers (26% growth rate projected for this region over the next decade), Maids and Housekeeping Cleaners (24%), General Maintenance and Repair Workers (24%), Combined Food Preparation and Serving Workers (24%), and Meeting, Convention, and Event Planners (24%).

The highest-paying middle skill occupations in this sector (for this region) include Massage Therapists and Bookkeeping, Accounting, and Auditing Clerks (both \$22 per hour). Some occupations in this cluster are dominated by minimum wage jobs but also include tip earnings that can vary widely. In some cases, tips can add an additional 10% to one's earnings; in other cases, tips can double one's earnings. So, to an extent, the apparent lack of high-paying jobs in this cluster is clouded by the issue of (largely hidden) tip earnings.

Hospitality and Tourism Cluster Occupations with the Most Jobs in the North Bay Region

Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level
Waiters and Waitresses	11,856	13,027	9.9%	1,171	\$12.38	<HS
Combined Food Preparation and Serving Workers, Including Fast Food	11,265	13,940	23.7%	2,675	\$10.02	<HS
Cooks, Restaurant	5,640	6,774	20.1%	1,134	\$12.71	<HS
Cooks, Fast Food	3,102	2,992	-3.5%	-110	\$9.72	<HS
Dishwashers	3,079	3,130	1.7%	51	\$10.22	<HS
Food Preparation Workers	3,053	3,487	14.2%	434	\$10.50	<HS
Occupations	2015	2025	Growth	Job	Median	Typical

	Jobs	Jobs	Rate	Growth	Wage	Ed Level
First-Line Supervisors of Food Preparation and Serving Workers	2,948	3,582	21.5%	634	\$16.29	HS/GED
Maids and Housekeeping Cleaners	2,890	3,583	24.0%	693	\$11.65	<HS
Dining Room and Cafeteria Attendants and Bartender Helpers	2,107	2,366	12.3%	259	\$10.63	<HS
Bartenders	2,037	2,345	15.1%	308	\$11.86	<HS
Hotel, Motel, and Resort Desk Clerks	1,606	1,944	21.0%	338	\$12.64	HS/GED
Cashiers	1,598	1,829	14.5%	231	\$10.78	<HS
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	1,387	1,580	13.9%	193	\$9.93	<HS
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1,200	1,438	19.8%	238	\$11.49	<HS
Food Service Managers	1,129	1,280	13.4%	151	\$23.55	HS/GED
Chefs and Head Cooks	816	917	12.4%	101	\$19.90	HS/GED
Driver/Sales Workers	601	741	23.3%	140	\$14.50	HS/GED
Maintenance and Repair Workers, General	586	726	23.9%	140	\$20.94	HS/GED
Cooks, Short Order	566	586	3.5%	20	\$11.40	<HS
Amusement and Recreation Attendants	564	647	14.7%	83	\$10.25	<HS
General and Operations Managers	528	618	17.0%	90	\$47.95	BA/BS
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	467	554	18.6%	87	\$13.26	<HS
Food Servers, Nonrestaurant	360	413	14.7%	53	\$12.51	<HS
Massage Therapists	286	328	14.7%	42	\$21.83	SC/CERT
Lodging Managers	274	327	19.3%	53	\$26.63	HS/GED
Reservation and Transportation Ticket Agents and Travel Clerks	261	290	11.1%	29	\$19.88	HS/GED
First-Line Supervisors of Housekeeping and Janitorial Workers	244	300	23.0%	56	\$18.46	HS/GED
Bakers	239	279	16.7%	40	\$14.26	<HS
Bookkeeping, Accounting, and Auditing Clerks	231	243	5.2%	12	\$21.69	SC/CERT
Baggage Porters and Bellhops	223	272	22.0%	49	\$10.51	HS/GED
Tour Guides and Escorts	212	251	18.4%	39	\$14.29	HS/GED
Cashiers	207	226	9.2%	19	\$10.78	<HS
Travel Agents	202	206	2.0%	4	\$17.45	HS/GED
First-Line Supervisors of Office and Administrative Support Workers	199	245	23.1%	46	\$27.26	HS/GED
Laundry and Dry-Cleaning Workers	192	242	26.0%	50	\$11.74	<HS
Landscaping and Groundskeeping Workers	183	220	20.2%	37	\$15.16	<HS
Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level

Landscaping and Groundskeeping Workers	163	179	9.8%	16	\$15.16	<HS
Security Guards	146	176	20.5%	30	\$13.41	HS/GED
Waiters and Waitresses	143	163	14.0%	20	\$12.38	<HS
Office Clerks, General	141	163	15.6%	22	\$17.45	HS/GED
Cooks, Institution and Cafeteria	139	167	20.1%	28	\$14.92	<HS
Retail Salespersons	130	132	1.5%	2	\$12.37	<HS
Light Truck or Delivery Services Drivers	126	151	19.8%	25	\$16.47	HS/GED
Reservation and Transportation Ticket Agents and Travel Clerks	125	145	16.0%	20	\$19.88	HS/GED
Amusement and Recreation Attendants	113	136	20.4%	23	\$10.25	<HS
General and Operations Managers	104	117	12.5%	13	\$47.95	BA/BS
Meeting, Convention, and Event Planners	97	120	23.7%	23	\$25.69	BA/BS
Nonfarm Animal Caretakers	97	101	4.1%	4	\$14.23	HS/GED

Source: EMSI, 6-County North Bay Region

Education/Skill Level Key

Abbrev.	Typical Education Requirement	Skill Level
<HS	No education requirement	Lower Skill
HS/GED	High school diploma or GED	Lower Skill
SC/CERT	Some college or a postsecondary certificate	Middle Skill
AA/AS	Associate of arts or sciences degree	Middle Skill
BA/BS	Bachelor of arts or sciences degree	Higher Skill
Mas/Doc	Master's or doctoral degree	Higher Skill

Appendix C
Health Care and Social Assistance Sector
Occupations With the Most Jobs in the North Bay Region

Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level
Registered Nurses	8,974	9,701	8%	727	\$52.99	AA/AS
Personal Care Aides	8,096	12,137	49.9%	4,041	\$11.34	<HS
Medical Assistants	3,295	4,025	22.2%	730	\$18.55	SC/CERT
Nursing Assistants	3,045	4,044	32.8%	999	\$14.62	SC/CERT
Social and Human Service Assistants	2,345	2,852	21.6%	507	\$17.63	HS/GED
Dental Assistants	2,301	2,443	6.2%	142	\$21.61	SC/CERT
Medical Secretaries	2,294	2,584	12.6%	290	\$21.37	HS/GED
Licensed Practical and Licensed Vocational Nurses	2,279	2,849	25.0%	570	\$26.54	SC/CERT
Receptionists and Information Clerks	2,101	2,514	19.7%	413	\$15.95	HS/GED
Home Health Aides	2,068	3,398	64.3%	1,330	\$11.20	SC/CERT
Office Clerks, General	1,947	2,254	15.8%	307	\$17.45	HS/GED
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,513	1,718	13.5%	205	\$18.98	HS/GED
Childcare Workers	1,452	1,491	2.7%	39	\$13.70	HS/GED
Maids and Housekeeping Cleaners	1,313	1,504	14.5%	191	\$11.65	<HS
Medical and Health Services Managers	1,289	1,504	16.7%	215	\$62.38	BA/BS
General and Operations Managers	1,195	1,450	21.3%	255	\$47.95	BA/BS
First-Line Supervisors of Office and Administrative Support Workers	1,187	1,381	16.3%	194	\$27.26	HS/GED
Preschool Teachers, Except Special Education	1,129	1,156	2.4%	27	\$15.72	AA/AS
Emergency Medical Technicians and Paramedics	1,117	1,879	68.2%	762	\$17.50	SC/CERT
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	921	1,016	10.3%	95	\$13.26	<HS
Recreation Workers	896	1,110	23.9%	214	\$12.16	HS/GED
Bookkeeping, Accounting, and Auditing Clerks	846	879	3.9%	33	\$21.69	SC/CERT

Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level
Physical Therapists	823	922	12.0%	99	\$48.02	Mas/Doc
Cooks, Institution and Cafeteria	813	1,012	24.5%	199	\$14.92	<HS
Billing and Posting Clerks	795	979	23.1%	184	\$20.85	HS/GED
Radiologic Technologists	778	772	-0.8%	-6	\$43.62	AA/AS
Teacher Assistants	763	850	11.4%	87	\$14.96	SC/CERT
Dental Hygienists	694	754	8.6%	60	\$46.06	AA/AS
Food Preparation Workers	686	729	6.3%	43	\$10.50	<HS
Food Servers, Nonrestaurant	676	834	23.4%	158	\$12.51	<HS
Maintenance and Repair Workers, General	652	768	17.8%	116	\$20.94	HS/GED
First-Line Supervisors of Personal Service Workers	611	770	26.0%	159	\$18.33	HS/GED
Medical and Clinical Laboratory Technicians	603	668	10.8%	65	\$23.90	AA/AS
Social and Community Service Managers	573	727	26.9%	154	\$30.42	BA/BS
Dentists, General	552	603	9.2%	51	\$70.80	Mas/Doc
Medical Records and Health Information Technicians	550	615	11.8%	65	\$20.45	SC/CERT
Healthcare Social Workers	535	746	39.4%	211	\$32.34	Mas/Doc
Mental Health and Substance Abuse Social Workers	507	615	21.3%	108	\$24.00	BA/BS
Nurse Practitioners	498	693	39.2%	195	\$59.28	Mas/Doc
Psychiatric Technicians	476	508	6.7%	32	\$27.79	SC/CERT
Customer Service Representatives	473	613	29.6%	140	\$18.88	HS/GED
Child, Family, and School Social Workers	460	586	27.4%	126	\$22.56	BA/BS
Rehabilitation Counselors	441	559	26.8%	118	\$17.42	Mas/Doc
Family and General Practitioners	437	505	15.6%	68	\$102.14	Mas/Doc
Respiratory Therapists	435	362	-16.8%	-73	\$42.30	AA/AS
Mental Health Counselors	420	530	26.2%	110	\$23.40	Mas/Doc
Clinical, Counseling, and School Psychologists	417	471	12.9%	54	\$43.03	Mas/Doc
Phlebotomists	406	461	13.5%	55	\$19.60	SC/CERT
Executive Secretaries and Executive Administrative Assistants	391	399	2.0%	8	\$28.53	HS/GED

Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level
Substance Abuse and Behavioral Disorder Counselors	370	459	24.1%	89	\$20.48	BA/BS
Surgical Technologists	364	428	17.6%	64	\$28.76	SC/CERT
Human Resources Specialists	340	383	12.6%	43	\$32.01	BA/BS
Accountants and Auditors	334	397	18.9%	63	\$36.22	BA/BS
Massage Therapists	328	371	13.1%	43	\$21.83	SC/CERT
Combined Food Preparation and Serving Workers, Including Fast Food	324	380	17.3%	56	\$10.02	<HS
Physician Assistants	322	445	38.2%	123	\$52.69	Mas/Doc
Bus Drivers, School or Special Client	315	409	29.8%	94	\$16.34	HS/GED
Pharmacists	308	294	-4.5%	-14	\$68.41	Mas/Doc
Taxi Drivers and Chauffeurs	297	387	30.3%	90	\$12.77	<HS
Marriage and Family Therapists	291	336	15.5%	45	\$32.29	Mas/Doc
Pharmacy Technicians	285	281	-1.4%	-4	\$20.48	HS/GED
Medical Equipment Preparers	282	283	0.4%	1	\$22.18	HS/GED
Administrative Services Managers	272	314	15.4%	42	\$41.48	BA/BS
Residential Advisors	268	331	23.5%	63	\$14.68	HS/GED
Interviewers, Except Eligibility and Loan	259	261	0.8%	2	\$20.73	HS/GED
Diagnostic Medical Sonographers	255	264	3.5%	9	\$55.88	AA/AS
Dietitians and Nutritionists	249	318	27.7%	69	\$37.13	BA/BS
Occupational Therapists	249	303	21.7%	54	\$44.81	Mas/Doc
Educational, Guidance, School, and Vocational Counselors	244	272	11.5%	28	\$25.29	Mas/Doc
Education Administrators, Preschool and Childcare Center/Program	236	241	2.1%	5	\$26.61	BA/BS
Dishwashers	230	275	19.6%	45	\$10.22	<HS
First-Line Supervisors of Food Preparation and Serving Workers	225	266	18.2%	41	\$16.29	HS/GED

Occupations	2015	2025	Growth	Job	Median	Typical Ed
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	Jobs	Jobs	Rate	Growth	Wage	Level
Medical and Clinical Laboratory Technologists	223	250	12.1%	27	\$40.01	BA/BS
Physical Therapist Aides	220	252	14.5%	32	\$15.23	HS/GED
Financial Managers	215	248	15.3%	33	\$56.35	BA/BS
Internists, General	213	232	8.9%	19	\$111.79	Mas/Doc
Stock Clerks and Order Fillers	209	209	0.0%	0	\$12.53	<HS
Health Educators	207	252	21.7%	45	\$30.37	BA/BS
Community Health Workers	205	263	28.3%	58	\$19.36	HS/GED
Waiters and Waitresses	203	260	28.1%	57	\$12.38	<HS
Security Guards	198	210	6.1%	12	\$13.41	HS/GED
File Clerks	198	199	0.5%	1	\$13.31	HS/GED
Chief Executives	192	214	11.5%	22	\$74.43	BA/BS
Speech-Language Pathologists	190	237	24.7%	47	\$38.54	Mas/Doc
Cardiovascular Technologists and Technicians	175	160	-8.6%	-15	\$33.03	AA/AS
Light Truck or Delivery Services Drivers	173	216	24.9%	43	\$16.47	HS/GED
Bill and Account Collectors	172	200	16.3%	28	\$21.93	HS/GED
Magnetic Resonance Imaging Technologists	168	147	-12.5%	-21	\$34.95	AA/AS
Laundry and Dry-Cleaning Workers	167	195	16.8%	28	\$11.74	<HS
Payroll and Timekeeping Clerks	166	177	6.6%	11	\$21.93	HS/GED
Physical Therapist Assistants	160	206	28.8%	46	\$32.06	AA/AS
Surgeons	157	181	15.3%	24	\$113.03	Mas/Doc
Training and Development Specialists	155	187	20.6%	32	\$34.10	BA/BS
Market Research Analysts and Marketing Specialists	152	193	27.0%	41	\$37.40	BA/BS
Switchboard Operators, Including Answering Service	150	110	-26.7%	-40	\$18.41	HS/GED
Dietetic Technicians	146	153	4.8%	7	\$18.01	AA/AS
Opticians, Dispensing	144	176	22.2%	32	\$22.84	HS/GED
Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level

Laborers and Freight, Stock, and Material Movers, Hand	144	155	7.6%	11	\$13.09	<HS
Landscaping and Groundskeeping Workers	140	156	11.4%	16	\$15.16	<HS
Ambulance Drivers and Attendants, Except Emergency Medical Technicians	138	224	62.3%	86	\$13.36	HS/GED

Source: EMSI, 6-County North Bay Region

Education/Skill Level Key

Abbrev.	Typical Education Requirement	Skill Level
<HS	No education requirement	Lower Skill
HS/GED	High school diploma or GED	Lower Skill
SC/CERT	Some college or a postsecondary certificate	Middle Skill
AA/AS	Associate of arts or sciences degree	Middle Skill
BA/BS	Bachelor of arts or sciences degree	Higher Skill
Mas/Doc	Master's or doctoral degree	Higher Skill

Appendix D
Manufacturing Sector
Occupations With the Most Jobs in the North Bay Region

Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level
Packaging and Filling Machine Operators and Tenders	2,807	3,469	23.6%	662	\$14.02	HS/GED
Separating, Filtering, Clarifying, Precipitating, Still Machine Setters, Operators, Tenders	2,553	2,879	12.8%	326	\$18.49	HS/GED
Laborers and Freight, Stock, and Material Movers, Hand	1,675	1,896	13.2%	221	\$13.09	<HS
First-Line Supervisors of Production and Operating Workers	1,486	1,704	14.7%	218	\$30.42	HS/GED
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,389	1,543	11.1%	154	\$29.87	HS/GED
Team Assemblers	1,369	1,498	9.4%	129	\$15.70	HS/GED
General and Operations Managers	1,330	1,456	9.5%	126	\$47.95	BA/BS
Retail Salespersons	1,210	1,432	18.3%	222	\$12.37	<HS
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	1,104	1,124	1.8%	20	\$11.24	<HS
Demonstrators and Product Promoters	1,035	1,144	10.5%	109	\$15.30	HS/GED
Helpers--Production Workers	1,004	1,069	6.5%	65	\$13.53	<HS
Inspectors, Testers, Sorters, Samplers, and Weighers	1,002	1,207	20.5%	205	\$18.07	HS/GED
Industrial Truck and Tractor Operators	914	1,066	16.6%	152	\$16.41	<HS
Shipping, Receiving, and Traffic Clerks	863	910	5.4%	47	\$16.79	HS/GED
Food Batchmakers	860	1,034	20.2%	174	\$13.17	HS/GED
Industrial Production Managers	787	870	10.5%	83	\$46.09	BA/BS
Maintenance and Repair Workers, General	781	908	16.3%	127	\$20.94	HS/GED
Packers and Packagers, Hand	758	844	11.3%	86	\$10.66	<HS
Industrial Machinery Mechanics	711	991	39.4%	280	\$28.38	HS/GED
Stock Clerks and Order Fillers	703	800	13.8%	97	\$12.53	<HS
Occupations	2015	2025	Growth	Job	Median	Typical

	Jobs	Jobs	Rate	Growth	Wage	Ed Level
Heavy and Tractor-Trailer Truck Drivers	683	730	6.9%	47	\$20.94	SC/CERT
Office Clerks, General	613	663	8.2%	50	\$17.45	HS/GED
Mixing and Blending Machine Setters, Operators, and Tenders	561	728	29.8%	167	\$15.71	HS/GED
Waiters and Waitresses	545	620	13.8%	75	\$12.38	<HS
Bookkeeping, Accounting, and Auditing Clerks	541	528	-2.4%	-13	\$21.69	SC/CERT
Driver/Sales Workers	516	600	16.3%	84	\$14.50	HS/GED
Machinists	509	613	20.4%	104	\$30.05	HS/GED
Light Truck or Delivery Services Drivers	496	558	12.5%	62	\$16.47	HS/GED
Industrial Engineers	495	563	13.7%	68	\$45.37	BA/BS
Welders, Cutters, Solderers, and Brazers	470	514	9.4%	44	\$20.03	HS/GED
Sales Managers	451	494	9.5%	43	\$47.02	BA/BS
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	427	465	8.9%	38	\$18.98	HS/GED
Customer Service Representatives	421	486	15.4%	65	\$18.88	HS/GED
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	413	479	16.0%	66	\$13.26	<HS
Accountants and Auditors	405	456	12.6%	51	\$36.22	BA/BS
Production, Planning, and Expediting Clerks	387	439	13.4%	52	\$26.16	HS/GED
Bakers	366	401	9.6%	35	\$14.26	<HS
Cabinetmakers and Bench Carpenters	361	368	1.9%	7	\$20.18	HS/GED
Electrical and Electronic Equipment Assemblers	327	357	9.2%	30	\$19.88	HS/GED
Market Research Analysts and Marketing Specialists	324	394	21.6%	70	\$37.40	BA/BS
Chemists	306	418	36.6%	112	\$39.49	BA/BS
Cashiers	298	325	9.1%	27	\$10.78	<HS
First-Line Supervisors of Office and Administrative Support Workers	298	336	12.8%	38	\$27.26	HS/GED
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	289	262	-9.3%	-27	\$16.65	HS/GED
Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level

Purchasing Agents, Except Wholesale, Retail, and Farm Products	279	314	12.5%	35	\$30.61	BA/BS
Bartenders	266	311	16.9%	45	\$11.86	<HS
Financial Managers	253	294	16.2%	41	\$56.35	BA/BS
Architectural and Engineering Managers	251	262	4.4%	11	\$69.63	BA/BS
Sawing Machine Setters, Operators, and Tenders, Wood	244	251	2.9%	7	\$15.23	HS/GED
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	237	246	3.8%	9	\$13.13	HS/GED
First-Line Supervisors of Mechanics, Installers, and Repairers	220	256	16.4%	36	\$36.82	HS/GED
Dental Laboratory Technicians	213	189	-11.3%	-24	\$18.05	HS/GED
Cleaners of Vehicles and Equipment	211	256	21.3%	45	\$11.02	<HS
Mechanical Engineers	208	235	13.0%	27	\$43.98	BA/BS
Printing Press Operators	207	187	-9.7%	-20	\$18.20	HS/GED
Executive Secretaries and Executive Administrative Assistants	207	214	3.4%	7	\$28.53	HS/GED
Molders, Shapers, and Casters, Except Metal and Plastic	202	116	-42.6%	-86	\$16.54	HS/GED
Food Preparation Workers	200	240	20.0%	40	\$10.50	<HS
Food Cooking Machine Operators and Tenders	199	249	25.1%	50	\$15.05	HS/GED
Slaughterers and Meat Packers	195	205	5.1%	10	\$11.96	<HS
Sewing Machine Operators	195	207	6.2%	12	\$13.87	<HS
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	184	210	14.1%	26	\$39.81	BA/BS
Medical Scientists, Except Epidemiologists	178	245	37.6%	67	\$52.68	Mas/Doc
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	172	190	10.5%	18	\$15.22	<HS
Marketing Managers	172	209	21.5%	37	\$68.51	BA/BS
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	171	159	-7.0%	-12	\$15.18	HS/GED
Human Resources Specialists	170	192	12.9%	22	\$32.01	BA/BS
Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level

Cutting and Slicing Machine Setters, Operators, and Tenders	169	174	3.0%	5	\$14.94	HS/GED
Maintenance Workers, Machinery	169	228	34.9%	59	\$21.83	HS/GED
Graphic Designers	169	170	0.6%	1	\$26.21	BA/BS
Software Developers, Systems Software	164	164	0.0%	0	\$59.48	BA/BS
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	160	177	10.6%	17	\$12.88	HS/GED
Electronics Engineers, Except Computer	159	162	1.9%	3	\$49.30	BA/BS
Machine Feeders and Offbearers	157	169	7.6%	12	\$15.21	<HS
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	154	174	13.0%	20	\$16.00	HS/GED
Order Clerks	151	151	0.0%	0	\$17.18	HS/GED
Computer-Controlled Machine Tool Operators, Metal and Plastic	150	195	30.0%	45	\$16.84	HS/GED
Meat, Poultry, and Fish Cutters and Trimmers	148	116	-21.6%	-32	\$11.95	<HS
Merchandise Displayers and Window Trimmers	147	176	19.7%	29	\$15.42	HS/GED
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	145	167	15.2%	22	\$22.62	HS/GED
Administrative Services Managers	145	157	8.3%	12	\$41.48	BA/BS
Electrical and Electronics Engineering Technicians	144	161	11.8%	17	\$33.62	AA/AS
Chief Executives	142	144	1.4%	2	\$74.43	BA/BS
Biomedical Engineers	140	158	12.9%	18	\$50.68	BA/BS
Management Analysts	139	169	21.6%	30	\$41.11	BA/BS
First-Line Supervisors of Retail Sales Workers	139	154	10.8%	15	\$19.69	HS/GED
First-Line Supervisors of Non-Retail Sales Workers	136	159	16.9%	23	\$28.15	HS/GED
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	136	114	-16.2%	-22	\$13.91	HS/GED
Biological Technicians	135	204	51.1%	69	\$26.57	BA/BS
Occupations	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Median Wage	Typical Ed Level

Carpenters	135	137	1.5%	2	\$29.77	HS/GED
Electricians	133	154	15.8%	21	\$35.51	HS/GED
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	133	146	9.8%	13	\$26.29	HS/GED
Computer Systems Analysts	133	172	29.3%	39	\$43.65	BA/BS
Industrial Engineering Technicians	128	177	38.3%	49	\$27.39	AA/AS
Software Developers, Applications	128	132	3.1%	4	\$52.57	BA/BS
Agricultural and Food Science Technicians	126	148	17.5%	22	\$20.30	AA/AS
Chemical Technicians	120	179	49.2%	59	\$23.82	AA/AS
Transportation, Storage, and Distribution Managers	116	136	17.2%	20	\$44.98	HS/GED
Structural Metal Fabricators and Fitters	114	132	15.8%	18	\$22.88	HS/GED
Compliance Officers	110	149	35.5%	39	\$35.53	BA/BS
Network and Computer Systems Administrators	110	126	14.5%	16	\$40.57	BA/BS
Computer Hardware Engineers	110	109	-0.9%	-1	\$57.01	BA/BS

Source: EMSI, 6-County North Bay Region

Education/Skill Level Key

Abbrev.	Typical Education Requirement	Skill Level
<HS	No education requirement	Lower Skill
HS/GED	High school diploma or GED	Lower Skill
SC/CERT	Some college or a postsecondary certificate	Middle Skill
AA/AS	Associate of arts or sciences degree	Middle Skill
BA/BS	Bachelor of arts or sciences degree	Higher Skill
Mas/Doc	Master's or doctoral degree	Higher Skill

Appendix E Top Demand Occupations, NBEC RPU

The table below includes a list of the Top Demand Occupations for the 6-County North Bay Region (including Lake, Marin, Mendocino, Napa, Solano and Sonoma counties) based on current data from EMSI (Economic Modeling Specialists Intl.) and BLS (Bureau of Labor Statistics).

Demand Occupation means that it meets our criteria of being ranked in the top 10% of all occupations for at least one of three demand indicators:

1. Fastest job growth rate (with minimum occupation size of 200+ jobs)
2. Most new jobs
3. Most replacement openings

In addition, occupations with extremely low pay (less than \$11/hour median) were eliminated from the list.

Being identified as a Demand Occupation, however, doesn't necessarily mean that (for each one) there will be employment opportunities locally, or that the occupations have the potential to pay a living wage. Demand Occupations simply means that employers in the region have a substantial need for qualified workers in these types of jobs. But beyond that, it is not an assessment of the *quality* of those jobs.

Replacements is when job openings are projected to occur due to workers retiring or otherwise leaving the occupation or labor force. As such, Replacement Openings create net employment opportunities for qualified job seekers. In the North Bay Region, about 69% of all net employment opportunities are due to Replacement Openings, with 31% due to new job growth. Replacement Openings is not the same thing as turnover, although it is a part of turnover.

Median Wages are based on wage data from the Occupational Employment Statistics (OES) Program (www.bls.gov/oes/) operated by the BLS. The data are collected from about 2/3 of all employers over a 3-year cycle.

Level 1: Occupations typically requiring no formal educational credential (<HS)	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replacements	Median Wage
Painters, Construction and Maintenance	1,760	2,110	19.9%	350	334	\$23.10
Construction Laborers	4,338	5,199	19.8%	861	989	\$19.92
Landscaping and Groundskeeping Workers	5,862	6,302	7.5%	440	1,168	\$15.16
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	9,331	10,189	9.2%	858	1,970	\$13.26
Laborers and Freight, Stock, and Material Movers, Hand	8,340	9,351	12.1%	1,011	2,643	\$13.09

Level 1: Occupations typically requiring no formal educational credential (<HS)	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replacements	Median Wage
Counter and Rental Clerks	3,432	3,687	7.4%	255	890	\$12.90
Cooks, Restaurant	6,048	7,230	19.5%	1,182	1,786	\$12.71
Stock Clerks and Order Fillers	9,311	10,583	13.7%	1,272	3,188	\$12.53
Waiters and Waitresses	13,323	14,712	10.4%	1,389	6,819	\$12.38
Automotive and Watercraft Service Attendants	572	710	24.1%	138	260	\$12.38
Retail Salespersons	20,594	23,474	14.0%	2,880	7,695	\$12.37
Bartenders	2,689	3,107	15.5%	418	1,103	\$11.86
Laundry and Dry-Cleaning Workers	698	836	19.8%	138	112	\$11.74
Maids and Housekeeping Cleaners	5,621	6,497	15.6%	876	1,517	\$11.65
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	2,001	2,300	14.9%	299	1,313	\$11.49
Personal Care Aides	8,579	12,603	46.9%	4,024	922	\$11.34
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	9,835	9,358	-4.8%	-477	3,105	\$11.24
Home Health Aides	2,138	3,477	62.6%	1,339	692	\$11.20
Cleaners of Vehicles and Equipment	1,946	2,339	20.2%	393	757	\$11.02

Level 2: Occupations typically requiring a high school diploma or equivalent (HS/GED)	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replacements	Median Wage
Police and Sheriff's Patrol Officers	2,005	2,220	10.7%	215	701	\$48.02
Electrical Power-Line Installers and Repairers	455	663	45.7%	208	230	\$47.52
Correctional Officers and Jailers	2,669	2,800	4.9%	131	756	\$44.15
First-Line Supervisors of Construction Trades and Extraction Workers	2,015	2,335	15.9%	320	201	\$38.94
Structural Iron and Steel Workers	364	441	21.1%	77	68	\$32.15
First-Line Supervisors of Production and Operating Workers	2,057	2,355	14.5%	298	353	\$30.42
Machinists	651	789	21.2%	138	212	\$30.05
Telecommunications Line Installers and Repairers	428	579	35.2%	151	94	\$29.88
Level 2: Occupations typically requiring a high school diploma or	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replacements	Median Wage

equivalent (HS/GED)						
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	5,165	6,068	17.5%	903	1,169	\$29.87
Carpenters	5,279	5,831	10.5%	552	808	\$29.77
Industrial Machinery Mechanics	1,062	1,421	33.8%	359	330	\$28.38
First-Line Supervisors of Office and Administrative Support Workers	5,831	6,577	12.8%	746	944	\$27.26
Bus and Truck Mechanics and Diesel Engine Specialists	739	904	22.3%	165	143	\$26.97
Glaziers	364	447	22.8%	83	59	\$23.55
Opticians, Dispensing	249	323	29.7%	74	78	\$22.84
Maintenance Workers, Machinery	232	306	31.9%	74	44	\$21.83
Medical Secretaries	2,562	2,874	12.2%	312	289	\$21.37
Maintenance and Repair Workers, General	5,670	6,355	12.1%	685	1,587	\$20.94
Billing and Posting Clerks	1,662	1,942	16.8%	280	383	\$20.85
First-Line Supervisors of Retail Sales Workers	5,193	5,891	13.4%	698	1,247	\$19.69
Community Health Workers	268	333	24.3%	65	61	\$19.36
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	8,438	9,102	7.9%	664	928	\$18.98
Customer Service Representatives	5,512	6,558	19.0%	1,046	1,500	\$18.88
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	2,656	2,991	12.6%	335	904	\$18.49
First-Line Supervisors of Personal Service Workers	870	1,074	23.4%	204	192	\$18.33
Inspectors, Testers, Sorters, Samplers, and Weighers	1,454	1,792	23.2%	338	417	\$18.07
Social and Human Service Assistants	2,892	3,426	18.5%	534	643	\$17.63
Office Clerks, General	10,211	11,186	9.5%	975	2,318	\$17.45
Shipping, Receiving, and Traffic Clerks	2,796	2,984	6.7%	188	630	\$16.79
Photographers	232	341	47.1%	109	94	\$16.67
Light Truck or Delivery Services Drivers	3,318	3,708	11.8%	390	602	\$16.47
First-Line Supervisors of Food Preparation and Serving Workers	3,858	4,600	19.2%	742	1,279	\$16.29
Receptionists and Information Clerks	4,085	4,595	12.5%	510	1,184	\$15.95
Level 2: Occupations typically requiring a high school diploma or	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replacements	Median Wage

equivalent (HS/GED)						
Mixing and Blending Machine Setters, Operators, and Tenders	606	782	29.0%	176	154	\$15.71
Merchandise Displayers and Window Trimmers	357	435	21.8%	78	96	\$15.42
Food Cooking Machine Operators and Tenders	224	279	24.5%	55	54	\$15.05
Residential Advisors	305	375	23.0%	70	108	\$14.68
Driver/Sales Workers	2,052	2,387	16.3%	335	383	\$14.50
Tellers	2,023	2,236	10.5%	213	859	\$14.44
Packaging and Filling Machine Operators and Tenders	3,165	3,896	23.1%	731	1,288	\$14.02
Childcare Workers	3,069	3,115	1.5%	46	1,118	\$13.70
Security Guards	2,795	3,293	17.8%	498	438	\$13.41
Food Batchmakers	951	1,139	19.8%	188	230	\$13.17
Hotel, Motel, and Resort Desk Clerks	1,663	2,006	20.6%	343	998	\$12.64
Recreation Workers	2,052	2,395	16.7%	343	420	\$12.16

Level 3: Occupations typically requiring some college or a postsecondary cert. (SC/CERT)

	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replace- ments	Median Wage
Telecommunications Equipment Installers and Repairers, Except Line Installers	693	884	27.6%	191	73	\$29.52
Licensed Practical and Licensed Vocational Nurses	2,618	3,193	22.0%	575	849	\$26.54
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	714	885	23.9%	171	123	\$24.62
Automotive Service Technicians and Mechanics	3,176	3,549	11.7%	373	902	\$22.44
Bookkeeping, Accounting, and Auditing Clerks	7,107	6,951	-2.2%	-156	900	\$21.69
Dental Assistants	2,365	2,511	6.2%	146	606	\$21.61
Heavy and Tractor-Trailer Truck Drivers	4,360	4,987	14.4%	627	800	\$20.94
Medical Assistants	3,534	4,295	21.5%	761	836	\$18.55
Emergency Medical Technicians and Paramedics	1,321	2,112	59.9%	791	296	\$17.50
Teacher Assistants	5,552	5,966	7.5%	414	1,392	\$14.96
Nursing Assistants	3,419	4,462	30.5%	1,043	917	\$14.62
Hairdressers, Hairstylists, and Cosmetologists	1,046	1,291	23.4%	245	310	\$11.27

Level 4: Occupations

2015	2025	Growth	Job	Replacement	Median
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typically requiring an associate degree (AA/AS)	Jobs	Jobs	Rate	Growth	s	Wage
Registered Nurses	11,271	12,186	8.1%	915	2,787	\$52.99
Chemical Technicians	202	300	48.5%	98	78	\$23.82
Veterinary Technologists and Technicians	721	865	20.0%	144	80	\$19.24

Level 5: Occupations typically requiring a bachelor's degree (BA/BS)	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replace- ments	Median Wage
Natural Sciences Managers	282	337	19.5%	55	66	\$71.58
General and Operations Managers	10,600	11,835	11.7%	1,235	2,859	\$47.95
Personal Financial Advisors	986	1,187	20.4%	201	284	\$44.74
Operations Research Analysts	242	294	21.5%	52	48	\$44.42
Chemists	523	683	30.6%	160	138	\$39.49
Market Research Analysts and Marketing Specialists	2,172	2,607	20.0%	435	288	\$37.40
Dietitians and Nutritionists	344	419	21.8%	75	30	\$37.13
Accountants and Auditors	4,282	4,803	12.2%	521	1,216	\$36.22
Secondary School Teachers, Except Special and Career/Technical Education	3,163	3,388	7.1%	225	781	\$32.53
Elementary School Teachers, Except Special Education	7,226	7,633	5.6%	407	1,650	\$32.34
Social and Community Service Managers	700	866	23.7%	166	217	\$30.42
Biological Technicians	354	436	23.2%	82	112	\$26.57
Substance Abuse and Behavioral Disorder Counselors	437	527	20.6%	90	105	\$20.48
Substitute Teachers	3,508	3,718	6.0%	210	684	\$16.89

Level 6: Occupations typically requiring a graduate degree (Mas/Doc)	2015 Jobs	2025 Jobs	Growth Rate	Job Growth	Replace- ments	Median Wage
Nurse Practitioners	556	761	36.9%	205	160	\$59.28
Physician Assistants	356	485	36.2%	129	97	\$52.69
Occupational Therapists	322	385	19.5%	63	70	\$44.81
Postsecondary Teachers	4,295	4,877	13.6%	582	818	\$32.68
Healthcare Social Workers	607	825	35.9%	218	183	\$32.34
Mental Health Counselors	487	600	23.2%	113	118	\$23.40
Rehabilitation Counselors	492	614	24.8%	122	121	\$17.42

Appendix F Knowledge and Skills Necessary for Top 25 Middle Skill, Middle Wage Occupations

Skill Requirements for Top 25 Middle-Skill, Middle-Wage or Higher Occupations

Occupations	Skills																										
	Active Learning	Active Listening	Complex Problem Solving	Coordination	Critical Thinking	Equipment Maintenance	Installation	Instructing	Judgment and Decision Making	Learning Strategies	Management of Personnel Resources	Monitoring	Operation and Control	Operation Monitoring	Operations Analysis	Programming	Quality Control Analysis	Reading Comprehension	Repairing	Science	Service Orientation	Social Perceptiveness	Speaking	Time Management	Troubleshooting	Writing	
Registered Nurses	•	•		•	•			•				•						•			•	•	•				
Heavy and Tractor-Trailer Truck Drivers		•	•		•	•						•	•	•				•					•	•			
Licensed Practical and Licensed Vocational Nurses		•		•	•				•			•						•				•	•	•	•		
Emergency Medical Technicians and Paramedics	•	•		•	•				•			•						•				•	•	•			
Medical Assistants	•	•		•	•							•						•				•	•	•			•
Preschool Teachers, Except Special Education		•		•	•					•		•						•				•	•	•	•		
Dental Assistants	•	•		•	•			•				•						•				•	•	•			•
Firefighters*		•		•	•				•			•		•				•				•	•	•			
First-Line Supervisors of Production and Operating Workers		•	•	•	•						•							•					•	•	•		•
Computer User Support Specialists	•	•		•	•			•				•						•				•	•	•			•
Heating, Air Conditioning, and Refrigeration Mechanics and Installers*		•		•	•	•	•						•				•	•	•							•	
Medical and Clinical Laboratory Technicians	•	•	•	•	•				•			•						•			•		•				
Dental Hygienists	•	•	•	•	•							•						•				•	•	•			•
Web Developers	•	•	•		•				•			•			•	•		•									•
Massage Therapists	•	•			•				•			•						•				•	•	•			•
Medical Records and Health Information Technicians		•	•		•				•	•		•						•						•	•		•
Library Technicians	•	•		•	•			•				•						•				•	•	•			•
Paralegals and Legal Assistants	•	•		•	•							•						•					•	•	•		•
Radiologic Technologists	•	•		•	•							•						•					•	•	•		•
Veterinary Technologists and Technicians	•	•		•	•				•			•						•				•	•	•			
Respiratory Therapists	•	•			•				•			•						•			•	•	•	•			
Telecommunications Equipment Installers and Repairers, Except Line Installers	•	•	•		•							•		•			•	•	•							•	
Phlebotomists	•	•		•	•			•				•						•				•	•	•			
Surgical Technologists	•	•	•	•	•			•			•							•				•	•	•			
Psychiatric Technicians	•	•		•	•				•			•						•				•	•	•			

Source: U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.

* Skills listed for the occupation represent a specialty occupation.

Knowledge Requirements for Top 25 Middle-Skill, Middle-Wage or Higher Occupations

Occupations	Knowledge																											
	Administration and Management	Biology	Building and Construction	Chemistry	Clerical	Communications and Media	Computers and Electronics	Customer and Personal Service	Design	Economics and Accounting	Education and Training	Engineering and Technology	English Language	Geography	Law and Government	Mathematics	Mechanical	Medicine and Dentistry	Personnel and Human Resources	Philosophy and Theology	Physics	Production and Processing	Psychology	Public Safety and Security	Sales and Marketing	Sociology and Anthropology	Telecommunications	Therapy and Counseling
Registered Nurses		•			•			•			•		•			•		•					•			•		•
Heavy and Tractor-Trailer Truck Drivers	•							•		•		•	•	•	•	•							•					•
Licensed Practical and Licensed Vocational Nurses				•	•			•			•					•		•		•			•					•
Emergency Medical Technicians and Paramedics				•				•			•					•		•					•	•				•
Medical Assistants	•				•			•	•		•		•					•					•	•				•
Preschool Teachers, Except Special Education	•							•			•		•	•						•			•	•		•		•
Dental Assistants				•	•			•	•		•							•					•	•				
Firefighters*	•		•	•				•			•				•			•				•		•				
First-Line Supervisors of Production and Operating Workers	•				•			•	•		•					•	•		•				•					
Computer User Support Specialists	•				•	•	•	•			•	•	•														•	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers*			•	•				•	•		•	•				•	•				•							
Medical and Clinical Laboratory Technicians		•		•	•			•	•				•					•					•					
Dental Hygienists		•		•	•			•	•		•							•					•		•			
Web Developers	•				•	•	•	•	•		•					•									•			
Massage Therapists	•	•			•			•			•							•					•	•				•
Medical Records and Health Information Technicians	•				•	•	•	•			•					•	•							•				
Library Technicians	•				•	•	•	•	•		•					•	•											
Paralegals and Legal Assistants	•				•	•	•	•			•					•	•						•					
Radiologic Technologists		•			•	•	•	•			•					•	•				•		•					
Veterinary Technologists and Technicians	•	•			•	•	•	•			•					•	•							•				
Respiratory Therapists		•	•			•	•	•			•					•	•						•					•
Telecommunications Equipment Installers and Repairers, Except Line Installers					•	•	•	•			•	•				•	•							•			•	
Phlebotomists				•	•			•	•		•							•		•			•	•				
Surgical Technologists		•	•			•	•	•			•							•					•	•				•
Psychiatric Technicians	•				•			•	•		•				•								•	•		•		•

Source: U.S. Department of Labor's Occupational Information Network (O*NET) at www.onetonline.org.

* Knowledge listed for the occupation represent a specialty occupation.

Appendix G
Northern CA Career Pathways Alliance Partner List

Governing Partners

Sonoma County

Sonoma County Office of Education:
Lead Agency
Santa Rosa Junior College
Sonoma County Workforce Investment
Board

Lake County

Lake County Office of Education
Mendocino-Lake Community College
Workforce Alliance of the North Bay

Mendocino County

Mendocino County Office of Education
Mendocino College
Mendocino County Workforce Investment
Board

K-12 Partners

Sonoma County

Cloverdale Unified School District
Cotati-Rohnert Park Unified School District
Healdsburg Unified School District
Petaluma Joint Union High School District
Santa Rosa City High School District
Sonoma Valley Unified School District
West Sonoma County Union High School
Windsor Unified School District

Marin County

Novato Unified School District
San Rafael City Schools
Shoreline Unified School District
Tamalpais Union High School District

Business & Community Partners

American Ag Credit

American Canyon Chamber of Commerce

American Medical Response

Annette's Chocolate Factory

Marin County

Marin County Office of Education
College of Marin
Workforce Alliance of the North Bay

Napa County

Napa County Office of Education
Napa Valley College
Workforce Alliance of the North Bay

Solano County

Solano County Office of Education
Solano Community College
The Workforce Investment Board of Solano
County

Mendocino County

Fort Bragg Unified School District
Ukiah Unified School District
Willits Unified School District

Napa County

Napa Valley Unified School District
St Helena Unified School District

Solano County

Benicia Unified School District
Dixon Unified School District
Fairfield-Suisun Unified School District
Mare Island Technology Academy
Vacaville Unified School District
Travis Unified School District

Audubon Society

Autodesk

Bank of Marin

Bay Area Rapid Transit (BART)

Belkorp Ag
Bell Products
Bianc Small Business Development Consulting
Bickford Precision Machine & Design
BioMarin
Bio-Rad Laboratories
Bioresearch Technologies
Brad Walton CPA
Buck Institute for Aging
California Commission on Peace Officers Standards and Training
California Highway Patrol
California Human Development
California Machine Works
California Restaurant Association
Canal Community Clinic
City of Napa
Clear Lake Chamber of Commerce
Clover Stornetta
Collotype Labels
Conservation Corp
County of Marin
CSW Engineers
CTE Foundation Sonoma County
David Grant Medical Center, Travis Airforce Base
Dominican University of California
Double Tree - Hilton
Economic Development & Financing Corporation
Edutopia
EMC
Fairfield Police Department
Fairfield-Suisun Chamber of Commerce
Farmstead
Fireman's Fund
Gaia Energy System
General Dynamics
Golden Living
Harvest Market
Homeward Bound
Intel Clubhouse
JDS Uniphase
Junior Achievement
Kaiser Permanente

LabCon
Lamb Consulting
Marker Ed.
Marconi Conference Center
Marin Builders Association
Marin County Dept. of Health & Human Services
Marin County Sheriff's Department
Marin County Convention & Visitors Bureau
Marin General Hospital
Meadow Wood
Mendo Bistro
Mendocino Community Health Clinic
Mendocino Private Industry Council
Mere Cie, Inc.
Microsoft
MIT Media Lab
Napa Chamber of Commerce
Napa State Hospital
Napa Valley Wine Train
North Bay Leadership Council
North Coast Builders Exchange
North Coast Opportunities
NorthBay Health Care
Novato Community Hospital
Noyo Food Forest
One Sun
Oxbow School
Oxbow Wine Market
P&L Specialties
PAX Scientific Environmental
Piner's
Pixar
Point Reyes National Seashore
PR&P Architects
Queen of the Valley Hospital
R. Campbell Molds & Consulting
Rainbow Ag
Raptor Pharmaceuticals, Inc.
Redwood Children's Services
Redwood Credit Union
Redwood Hill Farm & Creamery
Resources for Innovation
San Rafael Chamber of Commerce
Small Precision Tools

Social Advocates for Youth
Solano County District Attorney's Office
Solano County Library
Solano County Probation
Solano Economic Development Corporation
Solano Resource Conservation District
Sonoma County Department of Health Services
Sonoma County Economic Development Board
Sonoma County Farm Bureau
Sonoma County Winegrape Commission
Sonoma State University
Strategic Energy Innovations (SEI)
Straus Farms
Suisun Fire Department
Sunpower
Sutter Health
Timeline Media Productions
Touro University
Traditional Medicinals
Travis Air Force Base
Travis Credit Union
Tschida Engineering, Inc.
UC Davis Biotechnology Program & BioTech System
UC Davis, California Animal Health & Food Safety Laboratory
Ukiah Valley Medical Center/Adventist Health
Vacaville Fire Department
Vacaville Public Education Foundation
Walter Creek Ranch
West County Health Centers
XOM

