



LMI, Student, and Outcomes Data North/Far North Strategic Plan February 2023

Sara Phillips, COE Director, Far North
Aaron Wilcher, COE Director, North
Ebony Benzing, COE Research Manager



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

Centers of Excellence (COE) Regional Offices



Region	Director
San Diego/Imperial	Tina Bartel
Inland Empire/Desert	Michael Goss
Los Angeles	Luke Meyer
Orange	Jesse Crete
South Central	Adele Hermann
Central	Nora Seronello
Bay Area	John Carrese
North (Greater Sacramento)	Aaron Wilcher
Far North	Sara Phillips
Statewide	Laura Coleman

COE: Informing data-driven program investments

California Community Colleges need to ensure that CTE curriculum provides workers with the skills relevant to the regional and statewide economies.

The COE provide **quality labor market data and information** to help colleges respond to workforce needs.

Uses of the data:



Investing in new and relevant programs



Assessing labor market needs



Reviewing existing programs



Pursuing grants

COE: Research to identify labor market targets and outlook - EVIDENCE and CONTEXT



Presentation Overview

1. Overview of COE (Aaron)
2. Discussion questions, LMI Basics (Sara)
3. Overview of LMI and Analysis in SWP SP (Ebony)
4. Regional overview (Aaron)
5. Industry analysis (Ebony)
6. Employment and gap analysis (Aaron)
7. Outcomes and demographics (Sara)
8. Q&A and discussion (Sara)

Goals:

- Orientation/review of COE elements in SP
- Education on LMI data
- Invite discussion of findings and investment context

Presentation Questions

- Please hold your questions until the end of the presentation
- Type questions into the chat
- Discussion questions
 - What sticks out to you?
 - What questions do you have?

A few terms...

LMI mostly refers to data about industry and occupations.

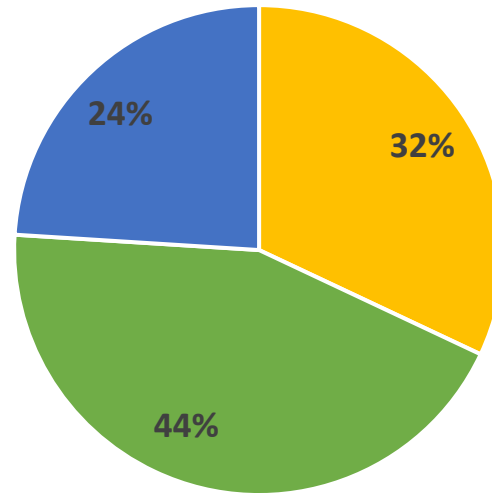
Industry data provides a count of firms, a count of employment, estimates of future jobs, average salaries and typical staffing (the types of occupations employed by firms). Organized by NAICS.

Occupational data is a count of workers, estimates of future jobs, wages, typical educational level. Organized by SOCs.

Middle Skill Occupations

Middle-skill occupations meet one or more of the following criteria:

- Some college, a postsecondary non-degree award, or an associate degree
- High school diploma or equivalent + more than short-term OJT (usually long-term)
- High school diploma or equivalent with a significant amount of postsecondary educational attainment levels
- Bachelor's degree if a large share (a third or more) have educational attainment at the community college level
- On-the-job Apprenticeship



■ Above Middle-Skill ■ Middle-Skill ■ Below Middle-Skill

NFN COE provided LMI for 2022-24 NFN regional plan

Two sources for “NFN Regional Plan” LMI Data

Go to nfnc.org > SWP > NFN Regional Plan

(1) NFNRC Online “Infogram” booklet



(2) COE Supplement, p. 5 and 6 of Infogram booklet



Types of LMI in the current regional plan

“Infogram” booklet LMI and student data:



- NFN demographics, including labor force and unemployment data
- Detailed at-a-glance overview by priority sector
 - Historic and projected job changes
 - Annual job opening by skill level
 - Top occupations
 - Program enrollment trends
 - Award conferment trends
 - Planned investments 2022-24
- Overall gap (openings vs. awards)
- Student outcomes, including progress toward SWP metrics

Types of LMI in the current regional plan

COE-produced supplemental report:



- Detailed analysis of sectors, occupations, enrollment, awards, and more, including:
 - A summary of findings
 - Gap analysis by sector and overall
 - Job projections by sector
 - Program enrollment and awards trends
 - Student outcomes and SWP metrics

Prepared by Center of Excellence
North/Far North Region

Aaron Wilcher, Director, Greater Sacramento COE
Sara Phillips, Director, Far North COE

Ebony Benzing, Research Manager, North/Far North COE

NFN Strategic LMI centered around 11 Priority Sectors across the Region

- Advanced Manufacturing
- Advanced Transportation & Logistics
- Ag, Water, & Environmental Technologies
- Business & Entrepreneurship
- Education & Human Development
- Energy, Construction & Utilities
- Health
- ICT/Digital Media
- Life Sciences/Biotechnology
- Public Safety & Government
- Retail, Hospitality & Tourism



Industry Analysis

- High-level business activity
- Includes all jobs that may be found in the sector
- Gives a sense of sector size and performance



Occupation Analysis

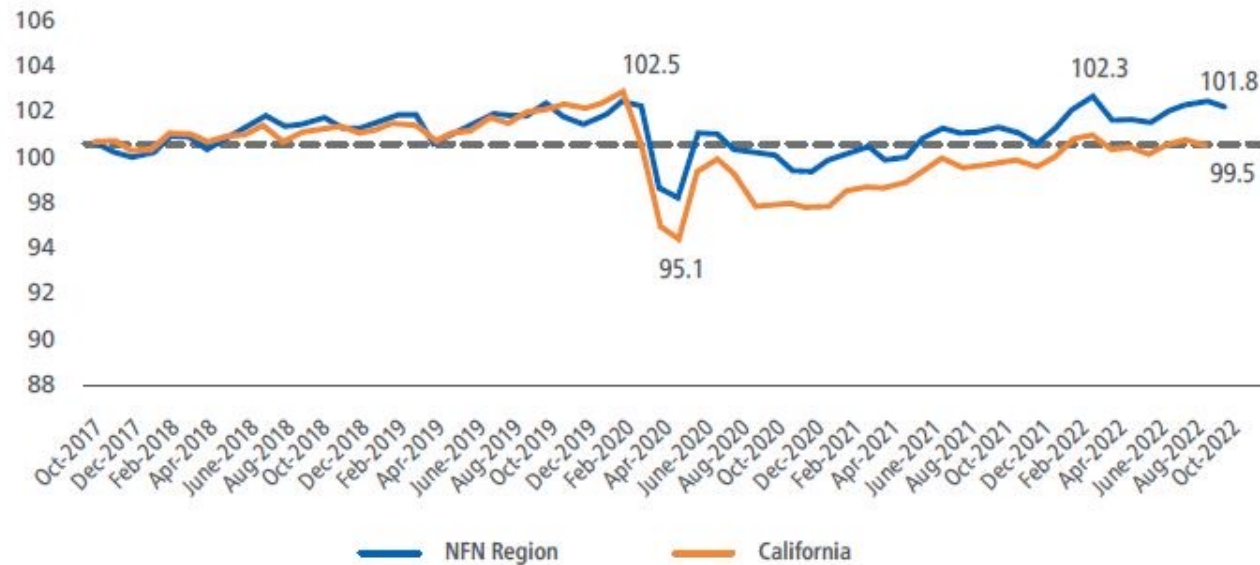
- Detailed job activity by sector, including job counts, openings, wages, skills, etc.
- Focused on specific job roles
- Targets for community college programming

North/Far North Regional Overview

- What are the population and labor force trends in the North/Far North region?
- How do unemployment rates, poverty rates, and educational attainment in the North/Far North compare to California?

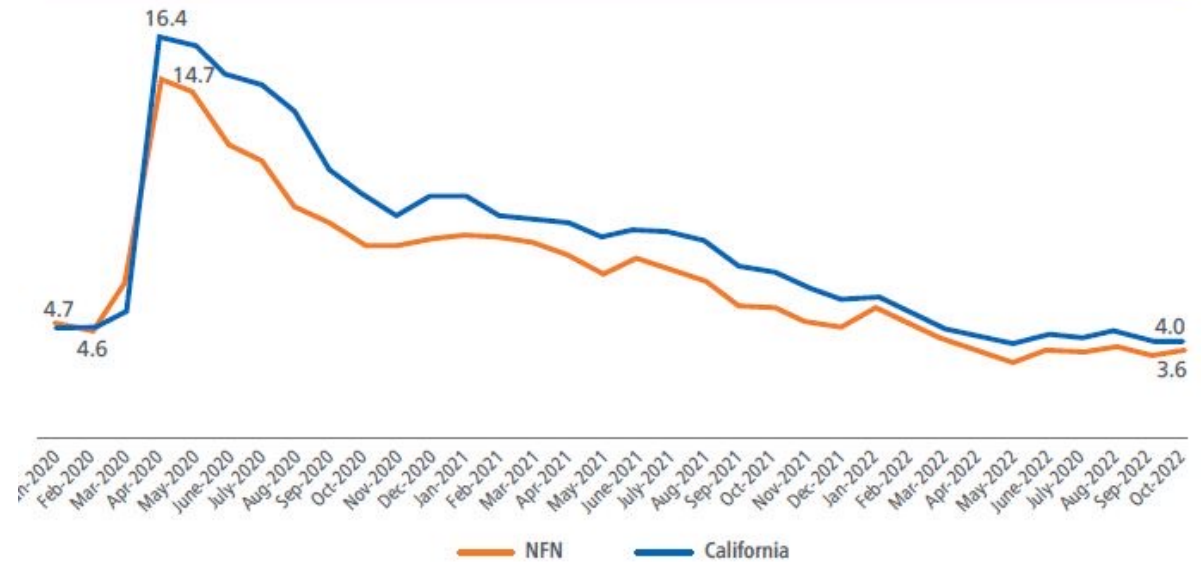
COE data – Regional overview – Population / LMI Basics

Exhibit 4. Civilian labor force, North Far North region and California, October 2017–October 2022 (indexed to October 2017)



Source: California Employment Development Department, Labor Market Information Division (LMID), Labor Force and Unemployment, <https://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html>

Exhibit 3. Unemployment rates (%), North Far North region and California, January 2020–October 2022



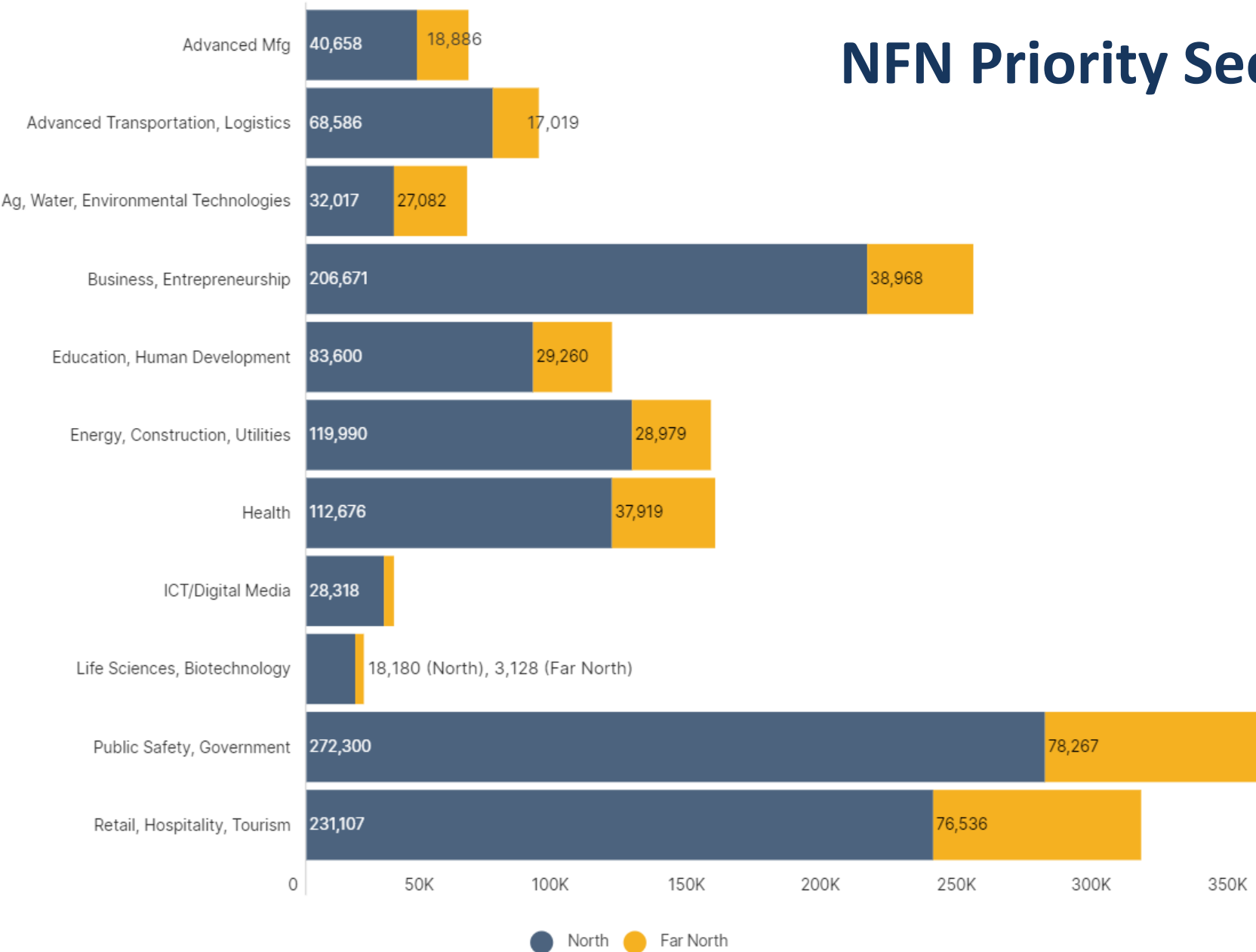
Source: California Employment Development Department, Labor Market Information Division (LMID), Labor Force and Unemployment, <https://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html>
 Note: Unemployment rates are averaged across the counties of the North Far North region.

- Labor Force – Unemployed + Employed >> North / Far North generally outpacing CA in recovery
- Unemployment rates vary by county but North / Far North average lower than the state

North/Far North Employment by Priority Sector

- What does the job market look like?
- Which sectors are projected to have the fastest growth?

NFN Priority Sector Employment

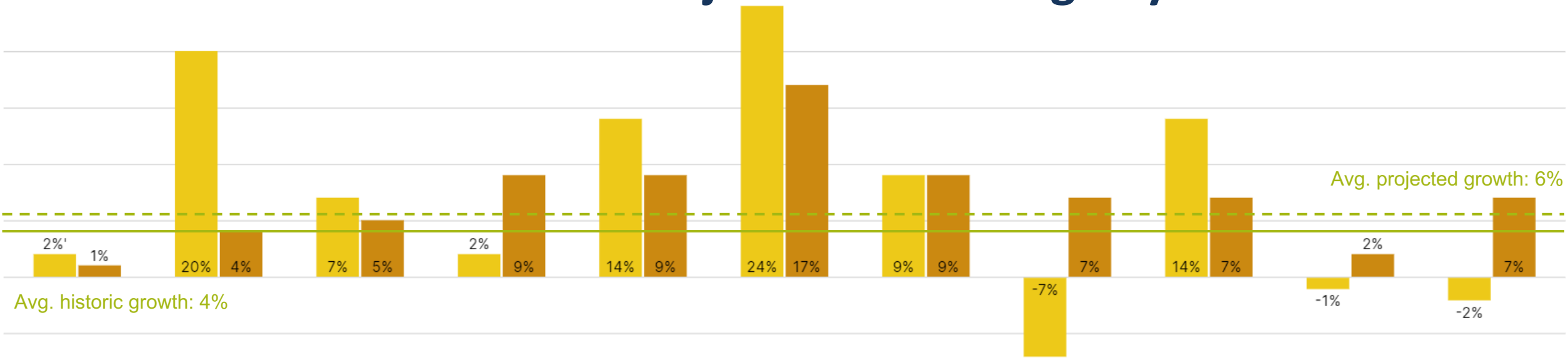


80% NFN employment found in six priority sectors:

1. Public Safety & Government
2. Retail, Hospitality & Tourism
3. Business & Entrepreneurship
4. Health
5. Energy, Construction & Utilities
6. Education & Human Development

Source: NFNRC Vision for Success 2022-2024 Strategic Plan, Pg. 5
 Detailed employment data for each subregion: NFN COE Labor Market, Enrollment, and Awards Data report, pgs. 12-13

NFN Historic and Projected Job Change by Sector



Advanced Manufacturing	Advanced Transportation, Logistics	Ag, Water, Environmental Technologies	Business, Entrepreneurship	Education, Human Development	Energy, Construction, Utilities	Health	ICT/Digital Media	Life Sciences, Biotechnology	Public Safety, Government	Retail, Hospitality, Tourism
------------------------	------------------------------------	---------------------------------------	----------------------------	------------------------------	---------------------------------	--------	-------------------	------------------------------	---------------------------	------------------------------

● Historic Employment Growth (2016-2021) ● Projected Employment Growth (2021-2026)

Faster-than-average historic job growth (2016-2021):

- Energy, Construction & Utilities (24%)
- Adv. Transportation & Logistics (20%)
- Education & Human Development (14%)
- Life Sciences & Biotechnology (14%)
- Health (9%)
- Agriculture, Water & Environmental Technologies (7%)

Faster-than-average projected job growth (2021-2026):

- Energy, Construction & Utilities (17%)
- Education & Human Development (9%)
- Business & Entrepreneurship (9%)
- Health (9%)
- ICT/DM, RHT, Life Sciences & Biotechnology (7%)

Priority Middle Skill Occupations by Sector

List on pg. 10 of NFN Infogram. More details are in Appendix A of the COE Supplemental Report.

Exhibit A8. Information and Communication Technologies/Digital Media

NFN Sector Employment, 2021	32,449
Annual Middle-Skill Job Openings (2021–26)	1,769
Student Enrollment, 3-Yr Avg (2018/19–2020/21)	22,494
Avg. Annual Awards Conferred (2019/20–2021/22)	1,076

Priority middle-skill occupations:

- 15-1232.00—Computer User Support Specialists
- 27-4021.00—Photographers (does not meet living-wage criteria)
- 15-1244.00—Network and Computer Systems Administrators
- 15-1231.00—Computer Network Support Specialists
- 15-1241.00—Computer Network Architects
- 15-1254.00—Web Developers
- 27-4011.00—Audio and Video Technicians
- 15-1255.00—Web and Digital Interface Designers
- 27-4012.00—Broadcast Technicians (does not meet living-wage criteria)
- 27-4014.00—Sound Engineering Technicians (fewer than 20 ajo)

- These occupations:
 - Are middle-skilled
 - Pay at least a median wage of \$24.40 per hour (the avg. living wage needed to support a small family)
 - Have at least 20 annual job openings across the region
- Some sectors include exceptions, esp. if programming already exists in the area
- There will be some differences in Far North vs. North

NFN Priority Sector Employment Takeaways

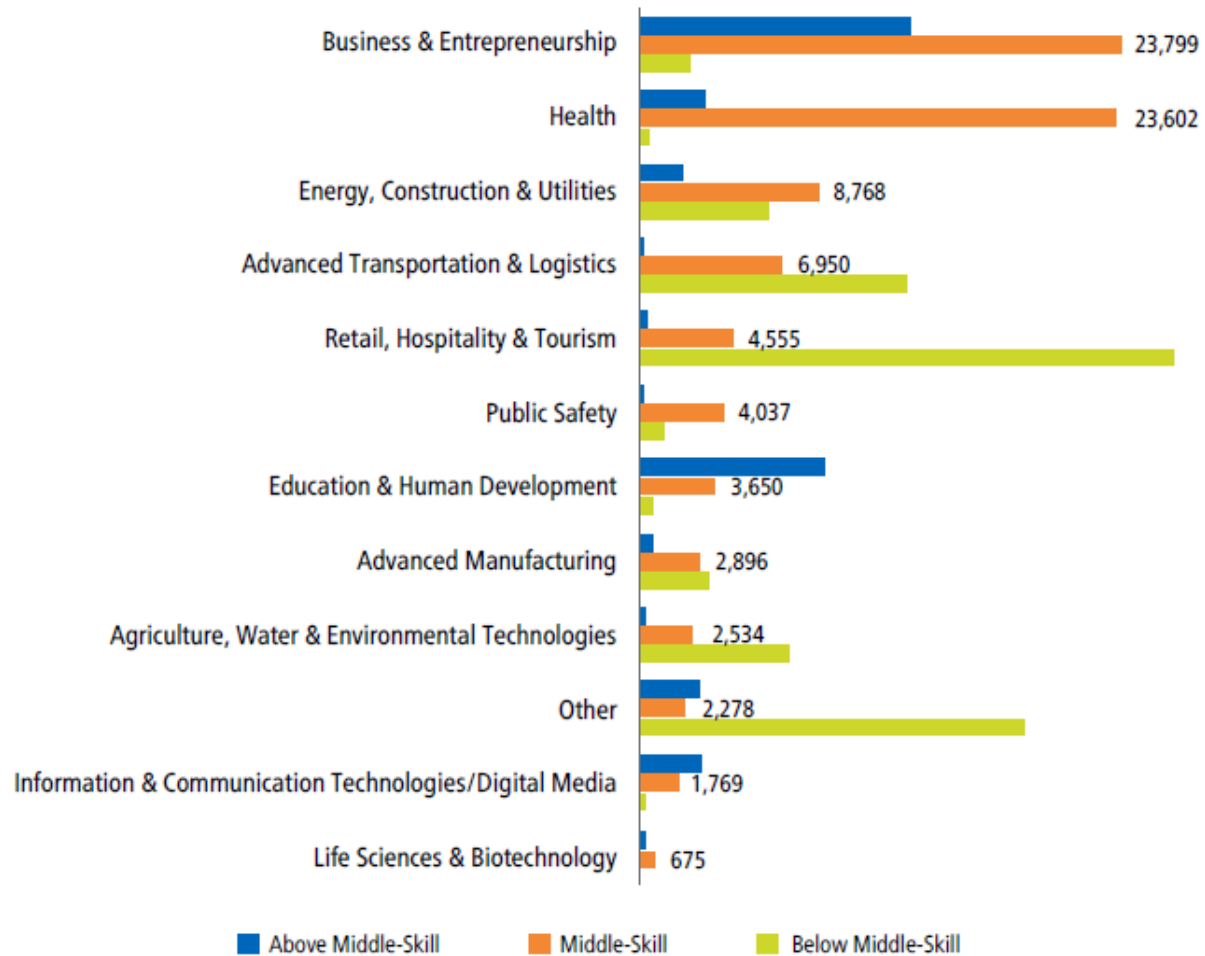
- While there are jobs in every sector, four out of every five NFN jobs are concentrated in six sectors: Public Safety & Govt, RHT, Business, Health, ECU, and Education.
- Most NFN priority sectors were resilient to pandemic shocks. Sectors that lost jobs (ICT/DM, PS/Govt, RHT) are still recovering.
- Four NFN sectors are having a moment with faster-than-average historic and projected job growth: ECU, Education, Health, and Life Sciences/Biotech.

North/Far North Supply & Demand

- What are the enrollment and award trends in the North/Far North?
- Where are there gaps in the labor market?

Highlight of middle-skill annual openings by priority sector

Exhibit 15. Projected occupational annual openings, by skill level and priority sector, North Far North region, 2021–2026



What are middle skill jobs and why are they important?

- Alignment with CC and workforce education and training
- Mobility for underserved and students in non-traditional pathways

What are annual openings?

- New jobs (growth) + turnover (retirements and changing jobs)

Enrollments, Awards, gap

Exhibit 18. Average annual enrollments and awards compared to projected annual openings and planned investment, by priority sector, North Far North region

Sector	3-Yr. Avg Annual Enrollments (2018–2021)	Annual Openings (2021–2026)	3-Yr. Avg. Annual Awards (2019–2022)	Difference-awards: openings
Advanced Manufacturing	3,098	2,896	451	2,445
Advanced Transportation & Logistics	1,817	6,950	234	6,716
Agriculture, Water & Environmental Technologies	5,116	2,534	360	2,174
Business & Entrepreneurship	22,312	23,799	2,704	21,095
Education & Human Development	14,654	3,650	1,097	2,553
Energy, Construction & Utilities	7,761	8,768	433	8,335
Health	23,855	23,602	2,364	21,238
Information & Communication Technologies/Digital Media	22,494	1,769	1,076	693
Life Sciences & Biotechnology	135	675	27	648
Public Safety & Government	14,484	4,037	1,594	2,443
Retail, Hospitality & Tourism	2,982	4,555	138	4,417

Sources: Lightcast, 2022.3 QCEW, Non-QCEW, Self-Employed; Cal-PASS Plus LaunchBoard, Management Information Systems (MIS) Data Mart, California Community Colleges Chancellor's Office

Largest enrollments in >

- Health
- ICT / DM
- Business & entrepreneurship

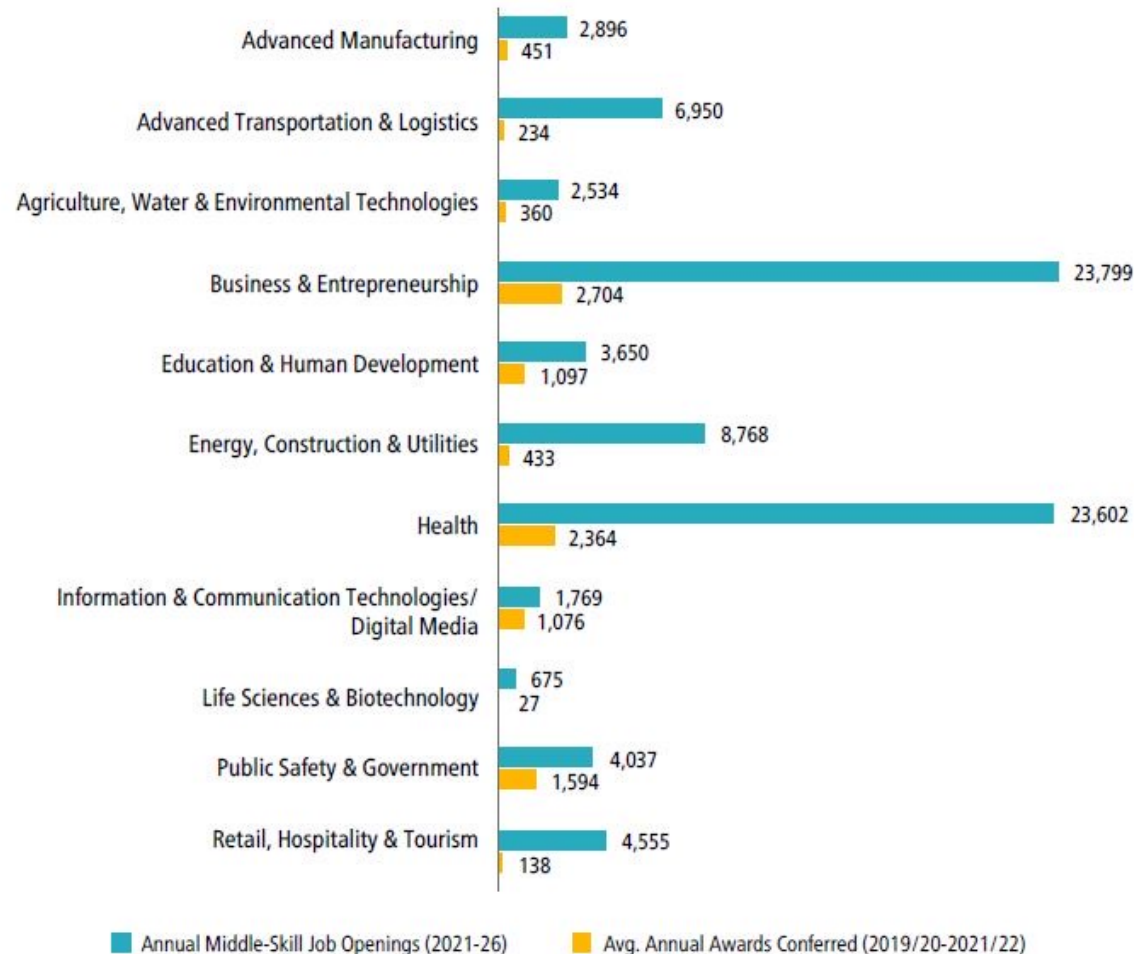
Add public safety when considering awards

Smallest enrollments/awards in >

- Life Sciences and Biotechnology
- Advanced Transportation & Logistics
- RHT
- AgWET
- ECU

Enrollments, Awards, gap

Exhibit 19. Supply-demand gap analysis, comparing middle-skill occupation projected annual openings (2021–2026) and three-year average annual community college awards (2019–2020 to 2021–2022), by priority sector, North Far North region



Largest gap >

- Health
- Business & entrepreneurship
- ECU
- Advanced Transportation & Logistics

Narrowest gap in >

- Public Safety
- ICT / DM

Summary takeaways

- Pandemic accelerated enrollment declines – several sectors hardest hit
- Awards trends generally more positive than enrollments
- Gap analysis provides context for investment
- What does the data tell us about sectors like...
 - ❖ Advanced transportation
 - ❖ ICT / Digital media
 - ❖ Life Sciences / Biotechnology
 - ❖ Public safety
 - ❖ Education and human development

North/Far North Student Outcomes

- Are we meeting Strong Workforce goals through our CE programs?

LaunchBoard Metrics for SWP

Student Outcomes in the NFN Region

2020-2021

CTE Enrollment Numbers:

North/Far North: 87,969

North: 66,104

Northern Inland: 17,261

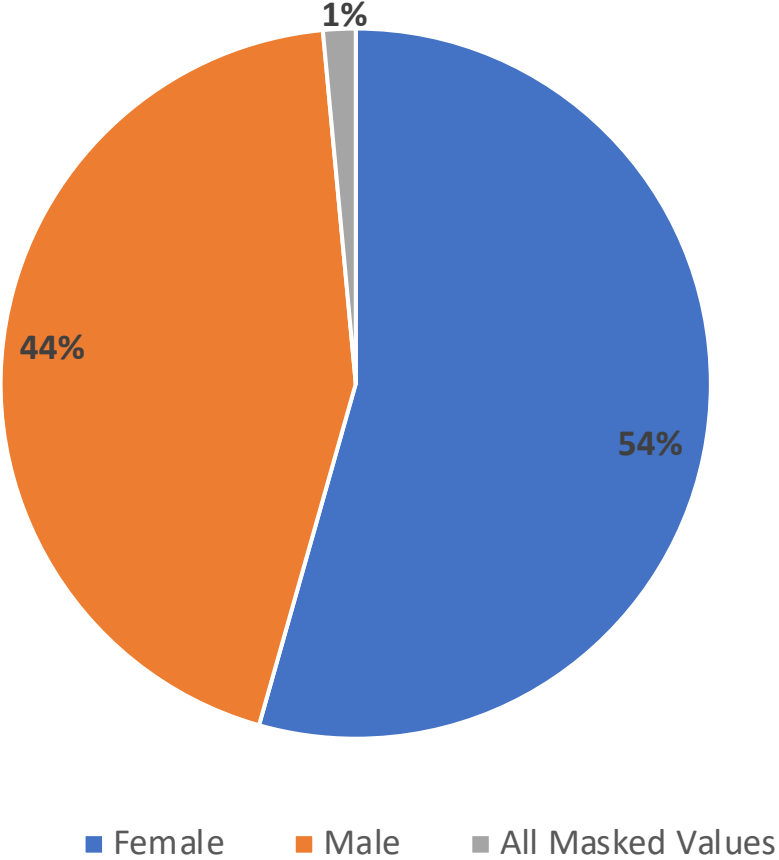
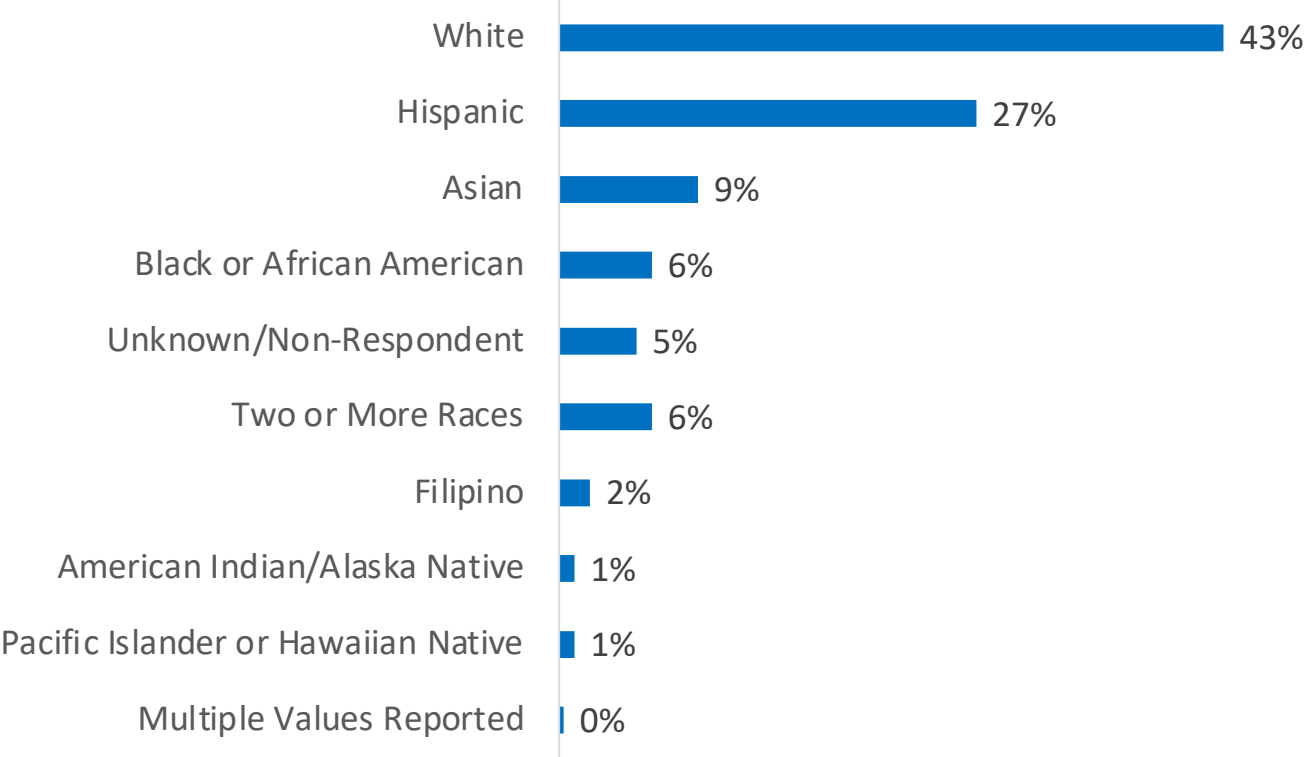
Northern Coastal: 4,604

Metrics	North/Far North	Northern Inland	Northern Coastal	North (Greater Sacramento)
Career Education Student Enrollments	(18%)	(28%)	(27%)	(14%)
Students Earning 9+ Career Education Units	(4%)	(3%)	(14%)	(4%)
Completion of Noncredit CTE or Workforce Prep Course	36%	72%	50%	11%
Students Earning Degree, Certificate, or Attaining Apprenticeship Journey Status	53%	(33%)	19%	66%
Transfer to 4-Year Institution	18%	(1%)	6%	26%
Employment in a Related Field of Study	11%	17%	(1%)	14%
Median Earnings	28%	21%	24%	35%
Change in Median Earnings	11%	21%	6%	10%
Attainment of Living Wage	12%	9%	15%	11%

1: Unless otherwise noted, the analysis compares data from the 2013-14 academic year (as the baseline year) with the 2020-21 academic year. Data for students who attained a living wage was not available for 2020-21; as a result, 2019-20 data has been used. Data for students who obtained a job closely related to their field of study also was not available for 2020-21; as a result, 2018-19 data, the most recent available, has been used. Data for student transfers is derived from the most recent year available, the 2019-20 academic year.

2: Due to low baseline numbers, the percentages for non-credit awards are substantially higher than for other student outcomes metrics. Baseline year for this metric is 2015-16.

CTE Student Demographics North/Far North

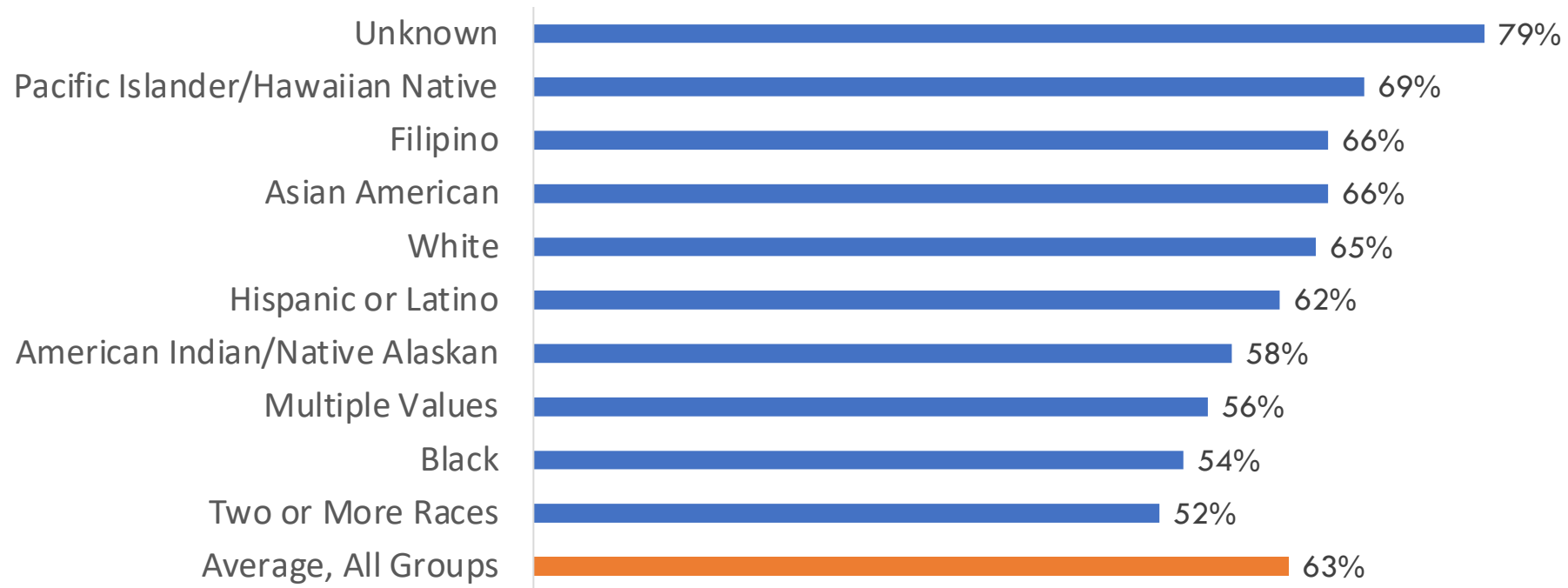


Source: NFNRC Vision for Success 2022-2024 Strategic Plan, Pg. 17, <https://infogram.com/nfn-2022-2024-swp-2023-update-1h0n25yvdr5l6p?live>

Attained a Living Wage

Gender- Analysis shows that female CTE students are disproportionately impacted in terms of attainment of a living wage. Of CTE students who exited college and did not transfer to a postsecondary institution, a lower percentage, 57%, of female students attained a living wage, compared to male students, 67%.

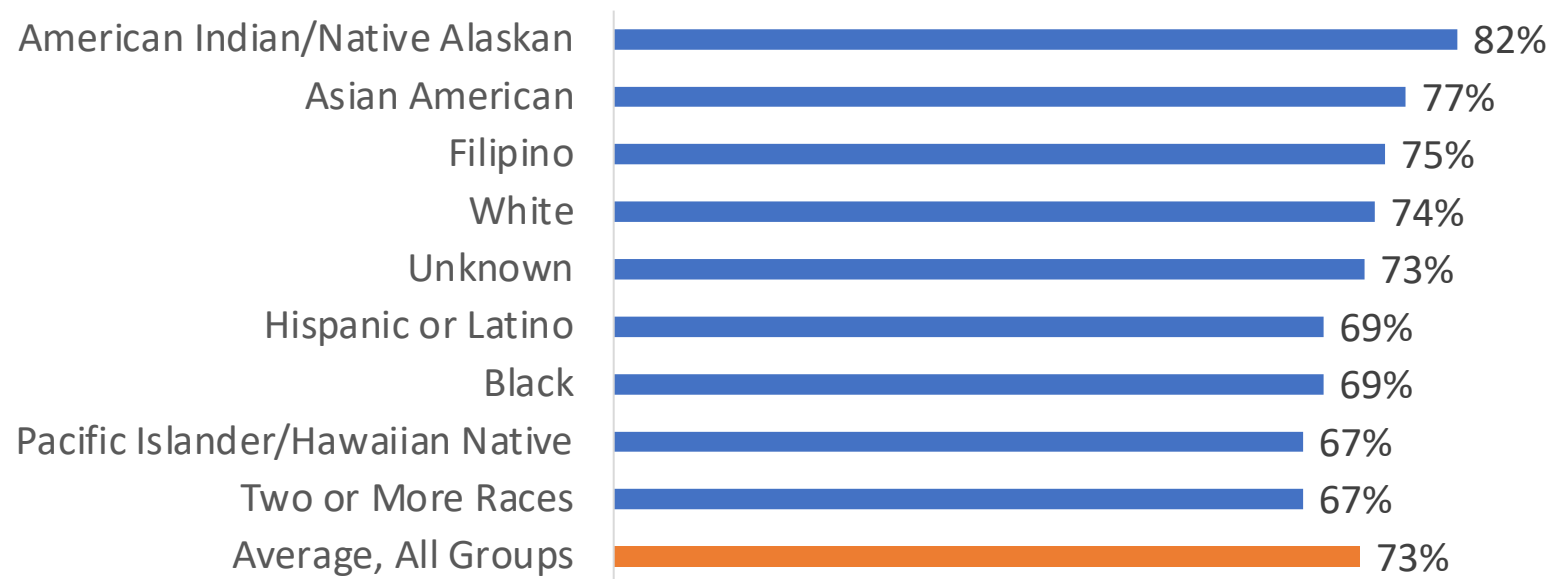
Race/ethnicity- Analysis shows a disproportionate impact affecting three groups in terms of race/ethnicity, namely students who identify as: two or more races, Black, and American Indian/Alaska Native.



Employed in a Related Field of Study

Gender- Analysis shows that male CTE students are disproportionately impacted in terms of attainment of employment in a related field of study. A lower percentage, 70%, of male students reported employment in a related field of study, compared to female students, 75%.

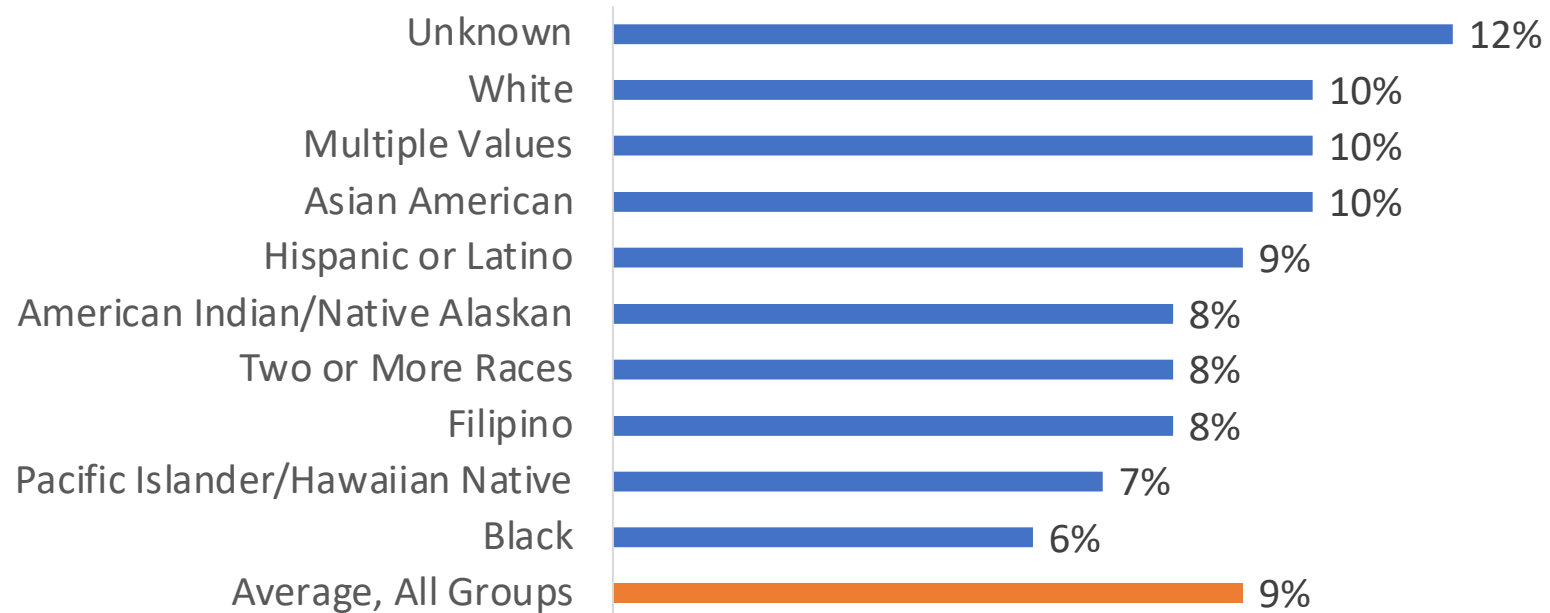
Race/ethnicity- Analysis shows a disproportionate impact affecting three groups in terms of race/ethnicity, namely students who identify as: two or more races, Black, and American Indian/Alaska Native.



Earned Awards

Gender- No disproportionate impact was found. However, a slightly higher percentage of male students, 8.7%, are earning awards, compared to female students, 7.9%.

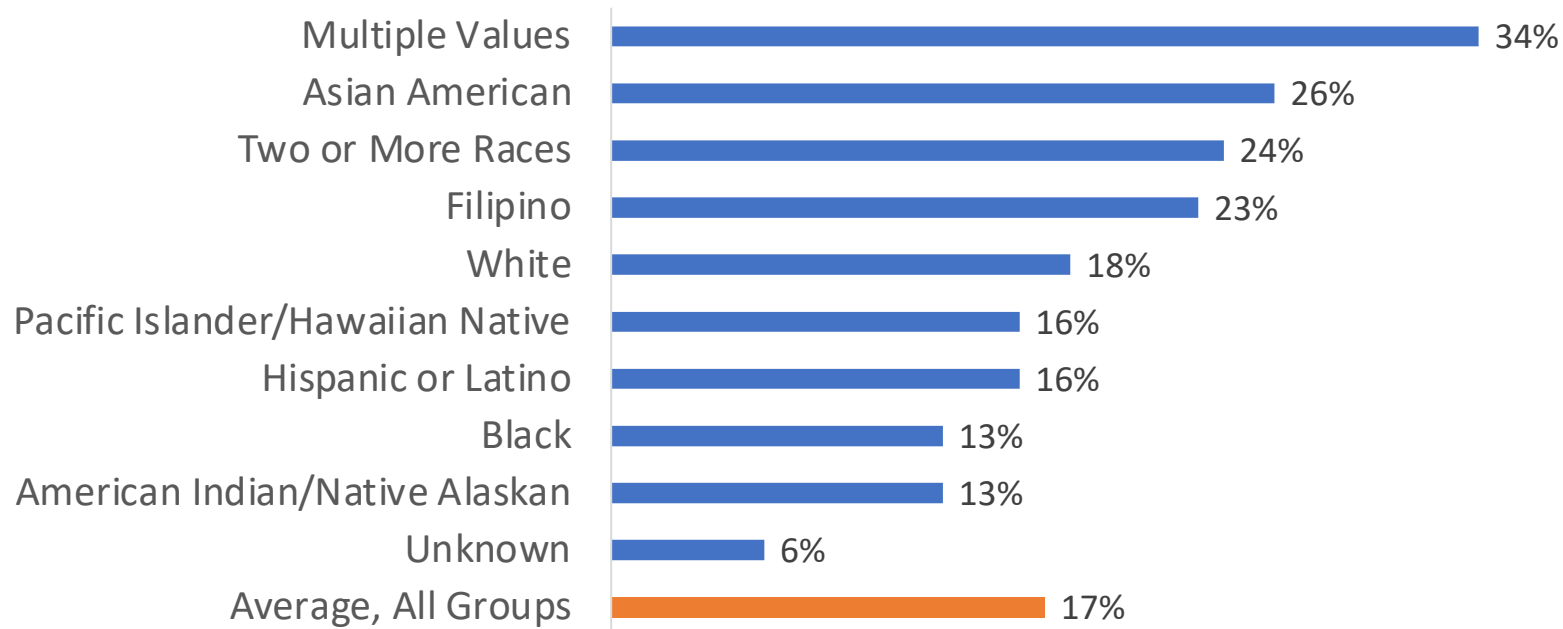
Race/ethnicity- Analysis shows disproportionate impact affecting Black students.



Student Transfers

Gender- Analysis shows a disproportionate impact for male CTE students compared to female students. A lower percentage of male students, 15%, are transferring compared to female students, 22%.

Race/ethnicity- Disproportionate impacts exist for two groups of students in terms of race/ethnicity: unknown/nonrespondent and Black.



NFN Student Outcomes Takeaways

- LaunchBoard Strong Workforce Program metrics show a counterposing trend for decreasing enrollments and increasing awards in the North Far North region. Transfer rates also increased.
- Students exiting Strong Workforce Program CTE programs make 28% more in annual earnings compared to the 2013–2014 academic year. Students are increasing their earnings, attaining a living wage, and getting jobs in their field of study at higher rates.
- Student outcomes data on wage and employment outcomes for living wages reveal several demographic groups that merit further attention.
- Student outcomes data on awards and transfers also reveals demographic groups that perform lower than average, having disproportionate impacts.

Open questions, answers, responses

- What does this generate for you?
- What data sticks out? Surprising? Missing?
- Are there concepts or data that you find confusing?

Helpful LMI Resources

Web Resource	Content	Web Link
ONet Online	<ul style="list-style-type: none"> • Detailed information on occupations and the skills, knowledge, and abilities needed to gain entry in a job • Also information about work 	<ul style="list-style-type: none"> • https://www.onetonline.org/
Center of Excellence	<ul style="list-style-type: none"> • Labor market reports for each subregion • Occupational demand tool • Crosswalk • LMI Guide 	<ul style="list-style-type: none"> • Main website • North reports • Far North reports • COE Supply and Demand Tables
North/Far North Regional Consortium	<ul style="list-style-type: none"> • The strategic plan has a wealth of information, including information about regional priority sectors, major initiatives, existing programs, and data about occupations and industries 	<ul style="list-style-type: none"> • Main website • Strategic Plan • NFN COE Labor Market, Enrollment, and Awards Data report
Industry Sectors and Pathway Alignment	<ul style="list-style-type: none"> • How CDE career education pathways map to CCC industry sectors and pathways 	<ul style="list-style-type: none"> • CDE to CCC Pathway Alignment • Pathway Alignment - CDE to CCC to US Dept of Ed to US Dept of Labor
State of California Employment Development Department Labor Market Information Division (CA EDD LMID)	<ul style="list-style-type: none"> • Comprehensive information about California's labor market 	<ul style="list-style-type: none"> • Main website • Unemployment data • Occupation profiles • Industry data

Contact Your North/Far North COE Team:

- Sara Phillips, Director, Far North
 - sphillips@shastacollege.edu
- Aaron Wilcher, Director, North
 - wilchea@losrios.edu
- Ebony Benzing, Research Manager, North/Far North
 - ebony.benzing@losrios.edu

