Public Safety Telecommunications

Inland Empire/Desert Region (Riverside and San Bernardino counties)

This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The C.O.E. is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.

Summary

- Public safety telecommunicators is a community college-level occupation and is projected to have 88 annual job openings through 2025, increasing employment by 9%.

- This occupation's 25th percentile hourly earnings are $25.13 per hour, above the regional $24.36 per hour self-sustainable earnings standard for a single adult with one child.

- Only one regional community college currently offers a program related to public safety telecommunicators under TOP 2105.00, Administration of Justice. However, this program has not issued any known awards over the last three academic years.

- The Centers of Excellence recommends developing a public safety telecommunications program to meet the region's regional demand for public safety telecommunicators.

Introduction

This report aims to determine regional supply and demand related to public safety telecommunications. The California Community Colleges Taxonomy of Program manual does not have a definition or TOP code for a public safety telecommunications program. However, one regional program offers a basic public safety dispatch program under TOP 1205.00, Administration of Justice. The best occupational match to public safety telecommunications training is the public safety telecommunicators occupation. The definition for this occupation, including common job titles, is available below.

Public Safety Telecommunicators (43-5031)
Operate telephone, radio, or other communication systems to receive and communicate requests for emergency assistance at 9-1-1 public safety answering points and emergency operations centers. Take information from the public and other sources regarding crimes, threats, disturbances, acts of terrorism, fires, medical emergencies, and other public safety matters. May coordinate and provide information to law enforcement and emergency response personnel. May access sensitive databases and other information sources as needed. May provide additional instructions to callers based on knowledge of and certification in law enforcement, fire, or emergency medical procedures.

Sample job titles: 911 Dispatcher, Communications Officer, Communications Operator, Communications Specialist, Dispatcher, Emergency Communications Operator (E.C.O.), Police Dispatcher, Public Safety Dispatcher, Telecommunicator

Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Between one and twelve months on-the-job training
Work Experience Required: None
Incumbent workers with a Community College Award or Some Postsecondary Coursework: 54%

Job Counts and Projections

In 2020, there were 831 public safety telecommunicator jobs in the Inland Empire/Desert Region. This occupation is projected to have 88 annual job openings to fill new or backfill jobs that workers are permanently vacating (includes occupational transfers and retirements). Employment for public safety telecommunicators is expected to increase by 9% through 2025. Exhibit 1 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers age 55 years and greater.

Exhibit 1: Five-year projections, 2020-2025

2020 Jobs	2025 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
831	905	9%	442	88	18%

Source: Emsi 2021.3

Exhibit 2 shows the number of job ads posted during the last 12 months and the regional and statewide average time fill. On average, regional employers fill online job advertisements for public safety telecommunicators within 40 days, four days longer than statewide time to fill.

Exhibit 2: Job ads and time to fill

| Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
179	40	36

Source: Burning Glass – Labor Insights

Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide self-sustainable income. The University of Washington estimates that a self-sufficient hourly rate for a single adult with one school-age child is $24.36 per hour or $51,452 annually in Riverside County; $23.73 per hour or

$50,119 annually in San Bernardino County (Pearce, 2021). For this study, the higher hourly earnings requirement in Riverside County is adopted as the self-sufficiency standard for the two-county region.

The 25th percentile hourly earnings for public safety telecommunicators surpass the self-sufficiency standard, indicating that the top 75% of workers in the field earn a self-sustainable wage. Exhibit 3 displays the hourly earnings for public safety telecommunicators.

Exhibit 3: Hourly earnings by percentile
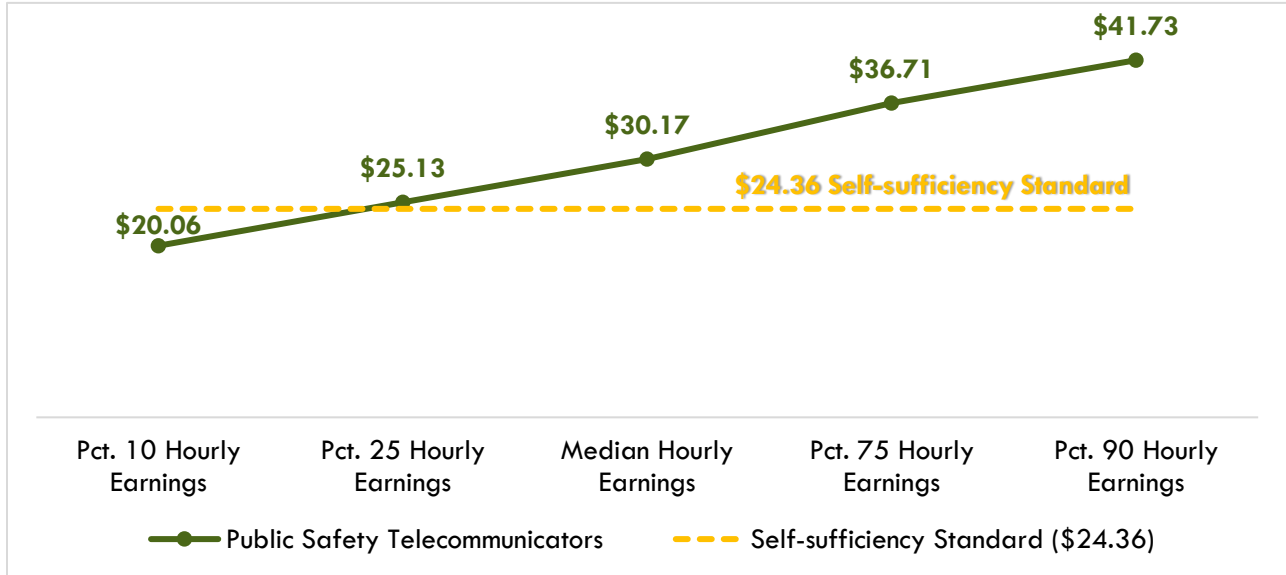
Source: Emsi 2021.3

According to the California Labor Market Information Division's occupational guides, public safety telecommunicator benefits typically include health, dental, vision, and life insurance, as well as vacation and sick leave, holidays, and retirement plans (Detailed Occupational Guides, 2021).

Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for public safety telecommunicators over the last 12 months in the Inland Empire/Desert Region. Online job ad salary information reveals that employers are willing to pay this occupational group $60,000 annually, above the region's $51,452 annual ($24.36 hourly) self-sufficiency standard. Consider the salary information with caution since only 63% (113 out of 179) of online job postings for these occupations provided salary information. The salary figures are prorated to reflect full-time, annual wage status.

Exhibit 4: Advertised salary information

Number of job postings	Less than $35,000	$35,000 to $49,999	$50,000 to $74,999	More than $75,000	Average Annual Salary
113	4%	39%	44%	13%	$60,000

Source: Burning Glass – Labor Insights

Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers that posted the most job ads for public safety telecommunicators in the Inland Empire/Desert Region over the last 12 months. Displaying employer names provides some insight into where students may find employment after completing a program. Agua Caliente Resort Casino Spa posted the most advertisements for public safety telecommunicators in the region.

Exhibit 5: Employers posting the most job ads for public safety telecommunicators

Top Employers	Job Ads
Agua Caliente Resort Casino Spa	11
San Bernardino County	10
City of Ontario	10
City of Hemet	10
City of Cathedral	10
Global Medical Response	10
City of Corona	7
Riverside County	6
California State University, San Bernardino	5
City of San Bernardino	5
All other employers	*95*
Total	**179**

Source: Burning Glass – Labor Insights

Exhibit 6 lists a sample of specialized and employability skills employers' seek when looking for workers to fill public safety telecommunicator positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized to guide curriculum development.

Exhibit 6: Sample of in-demand skills from employer job ads

Specialized skills	Employability skills
• Data Entry • Computer-Aided Dispatch • Cardiopulmonary Resuscitation (C.P.R.) • Customer Service • Record Keeping	• Typing • Writing • Computer Literacy • Building Effective Relationships • Communication Skills

Source: Burning Glass – Labor Insights

According to the Bureau of Labor Statistics, approximately 54% of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree" and an "associate degree." Online job advertisements indicate that the majority (97%) of employers seeking public safety telecommunicators sought candidates with a high school diploma or vocational training. Exhibit 7 displays the typical entry-level education, educational attainment, and minimum advertised education requirements for public safety telecommunicators.

Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements

| Typical Entry-Level Education Requirement | CC-Level Educational Attainment* | Real-Time Minimum Advertised Education Requirement | | |
		Number of Job Ads	High school or vocational training	Associate degree	Bachelor's degree or higher
High school diploma or equivalent	54%	142	97%	-	3%

Source: Emsi 2021.3, Burning Glass – Labor Insights
*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 8 displays the work experience typically required before employment and the real-time work experience requirements from employer job ads for public safety telecommunicators. Job advertisements indicate that the majority of employers sought candidates with zero to two years of work experience.

Exhibit 8: Work experience required and real-time work experience requirements

| Work Experience Typically Required | Real-Time Work Experience | | | |
	Number of job postings	0 – 2 years	3 – 5 years	6+ years
None	127	83%	13%	4%

Source: Emsi 2021.3, Burning Glass – Labor Insights

Certifications

Approximately 81% of job advertisements that included certification information sought candidates with their Peace Officer Standards and Training (POST) Public Safety Dispatcher Basic Certificate. The Public Safety Dispatcher Certificate is awarded by the California Peace Officer Standards and Training Commission to those who have satisfactorily completed the Public Dispatchers' Basic Course and the agency's probationary period. Please visit the POST website for more information regarding public safety dispatcher certification (POST, 2021). Exhibit 9 displays the certifications typically required by employers seeking public safety telecommunicators.

Exhibit 9: Certifications typically required in advertisements for public safety telecommunicators

Certifications	Job Ads *(n=108)*
P.O.S.T. Public Safety Dispatcher Basic Certificate	87
Driver's License	48
Typing Certification	29
First Aid CPR AED	27
Emergency Medical Dispatcher	20

Source: Burning Glass – Labor Insights

Student Completions for Programs

The occupation, public safety telecommunicators is not formally associated with any current Taxonomy of Programs (TOP) code or Classification of Instructional Programs (C.I.P.) code. According to the Chancellor's Office Curriculum Inventory (C.O.C.I.), two community college programs in California appear to offer training related to public safety telecommunicators (C.O.C.I., 2021). Napa Valley College in the Bay region has a 911 Dispatcher certificate program under TOP 2105.50, Police Academy. Locally, Moreno Valley College offers an Administration of Justice/Basic Public Safety Dispatch program coded within the Administration of Justice (TOP 2105.00) program code. Moreno Valley College's program requires 8< 16-semester units. According to California Community Colleges Chancellor's Office Management Information Systems (M.I.S.) Data Mart, Moreno Valley College has not issued any awards for this program over the last three academic years (M.I.S. Data Mart, 2021).

Moreno Valley College's program may be useful for curriculum development. The program description and program learning outcomes are displayed below (Moreno Valley, pg. 107, 2021):

> This program provides basic skills and knowledge in emergency and non-emergency situations for proper telephone etiquette, customary radio protocols, accessing local emergency service systems, and individual stress management. Limitations on enrollment include the following: Must be a minimum of 18 years old, have no felony convictions, have no misdemeanor convictions involving weapons or acts of violence, and have a valid driver's license or I.D. card. Upon successful completion of this program, students should be able to:
>
> • Demonstrate proper skills and etiquette on the telephone.
>
> • Demonstrate usual and customary radio protocols.
>
> • Explain how to access local emergency services systems.
>
> • Discuss individual stress management skills.
>
> • Demonstrate effective communications skills in handling complex situations.

This course is a basic overview of public safety dispatching and satisfies the July 1, 2011, revised curriculum set by the Peace Officer Standards and Training (P.O.S.T.) for basic public safety dispatching.

Recommendation for Public Safety Telecommunications Programs

Public safety telecommunicators are expected to have 88 annual job openings and increase employment by 9% over the next five years in the region. This occupation's 25th percentile hourly earnings surpass the $24.36 per hour self-sustainability rate, indicating that the top 75% of workers in the field earn a self-sustainable wage.

Moreno Valley College is the only regional institution to offer an Administration of Justice/Basic Public Safety training program. No known awards have been issued from this program over the last three academic years.

The Centers of Excellence recommends developing a public safety telecommunications program to meet the need for qualified workers in the region. In addition, colleges considering this program should partner with applicable employers to document the skills and certifications needed for public safety telecommunication students to earn self-sustainable earnings after exiting the program.

Contact
Michael Goss
Paul Vaccher
Centers of Excellence, Inland Empire/Desert Region
michael.goss@chaffey.edu
September 2021

References

Burning Glass Technologies. (2021). *Labor Insights/Jobs*. Retrieved from https://www.burning-glass.com/

California Community Colleges Chancellor's Office. LaunchBoard. (2021). *California Community Colleges LaunchBoard*. Retrieved from https://www.calpassplus.org/Launchboard/Home.aspx

California Community Colleges Chancellor's Office. LaunchBoard. (2021a). *Strong Workforce Program Metrics Data Element Dictionary*. Pg. 3. Retrieved from https://www.calpassplus.org/MediaLibrary/calpassplus/launchboard/Documents/SWP-DED.PDF

California Community Colleges Chancellor's Office. (2021). *Chancellor's Office Curriculum Inventory (C.O.C.I.), version 3.0*. Retrieved from https://coci2.ccctechcenter.org/programs

California Community Colleges Chancellor's Office Management Information Systems (M.I.S.) Data Mart. (2021). *Data Mart*. Retrieved from https://datamart.cccco.edu/datamart.aspx

California Community Colleges Chancellor's Office, Curriculum and Instructional Unit, Academic Affairs Division. (2012). *Taxonomy of Programs, 6th Edition, Corrected Version*. Retrieved from https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Digital-Innovation-and-

Infrastructure/Research/Files/TOPmanual6200909corrected12513.ashx?la=en&hash=94C709CA83C03808
28415579395A5F536736C7C1

Carnevale, A. P., Jayasundera, T., & Repnikov, D. (n.d.). Understanding Online Job Ads Data. Retrieved from
https://cew.georgetown.edu/wp-content/uploads/2014/11/OCLM.Tech_.Web_.pdf

Centers of Excellence for Labor Market Research (C.O.E.). (2021). *TOP-SOC Crosswalk*. Retrieved from
http://coeccc.net/

Economic Modeling Specialists International (Emsi). (2021). *Datarun 2021.3*. Retrieved from
https://www.economicmodeling.com/

Labor Market Information Division. Employment Development Department of California. (2021). *Detailed
Occupational Guides*. Retrieved from https://www.labormarketinfo.edd.ca.gov/OccGuides/Search.aspx

Moreno Valley College. (2021). 2021-2022 Catalog. *Administration of Justice/Basic Public Safety Dispatch*.
(p. 107). Retrieved from https://mvc.edu/files/Catalogs/Catalog-2021-22.pdf

National Center for O* N.E.T. Development. (2021). *O* N.E.T. OnLine*. Retrieved from
https://www.onetonline.org/

Peace Officer Standards and Training (POST). (2021). *How Do I Become a Dispatcher?* Retrieved from
https://post.ca.gov/How-Do-I-Become-A-Dispatcher

Pearce, D. University of Washington. (2021). *Self Sufficiency Standard – California*. Retrieved from
http://www.selfsufficiencystandard.org/california

U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics.
Integrated Postsecondary Education System (I.P.E.D.S.). (2021). Retrieved from
https://nces.ed.gov/ipeds/use-the-data

Appendix: Methodology

Exhibit 10 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2017 and 2020, from the California Community Colleges Chancellor's Office Management Information Systems (M.I.S.) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (M.I.S.) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from records provided by California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce

Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2021a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the C.T.E. Employment Outcomes Survey (C.T.E.O.S.), administered by Santa Rosa Junior College (LaunchBoard, 2021a).

Job advertisement data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job advertisements often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collect resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2020 to 2025 job growth, wages, entry-level education, training, and work experience required for public safety telecommunicators in the Inland Empire/Desert Region (Riverside and San Bernardino counties combined)

Occupation (S.O.C.)	2020 Jobs	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10th to 90th percentile)	Median Hourly Wage (50th percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Public Safety Telecommunicators (43-5031)	831	74	9%	88	$20.06 to $41.73	$30.17	$63,700	High school diploma or equivalent & 1 to 12 months	None

Source: Emsi 2021.3