

Fire Science Technology Occupation Report

CIP 43.0203



Cochise, Pima, SC

Fire Science/Fire-fighting








CIP 2010: A program focusing on the theory and practice of fires and fire-fighting. Includes instruction in fire chemistry and physics, combustible materials, computer science, building construction, fire codes and related laws, fire hydraulics, fire command, fire prevention/inspection, fire protection systems, fire suppression systems, fire/arson investigation, occupational safety, equipment operation, emergency medicine and communications.

* Program Description – Settings

Occupation Gender Breakdown 2016

	Gender	Jobs	Percent
●	Males	1,210	95.2% 
●	Females	61	4.8% 

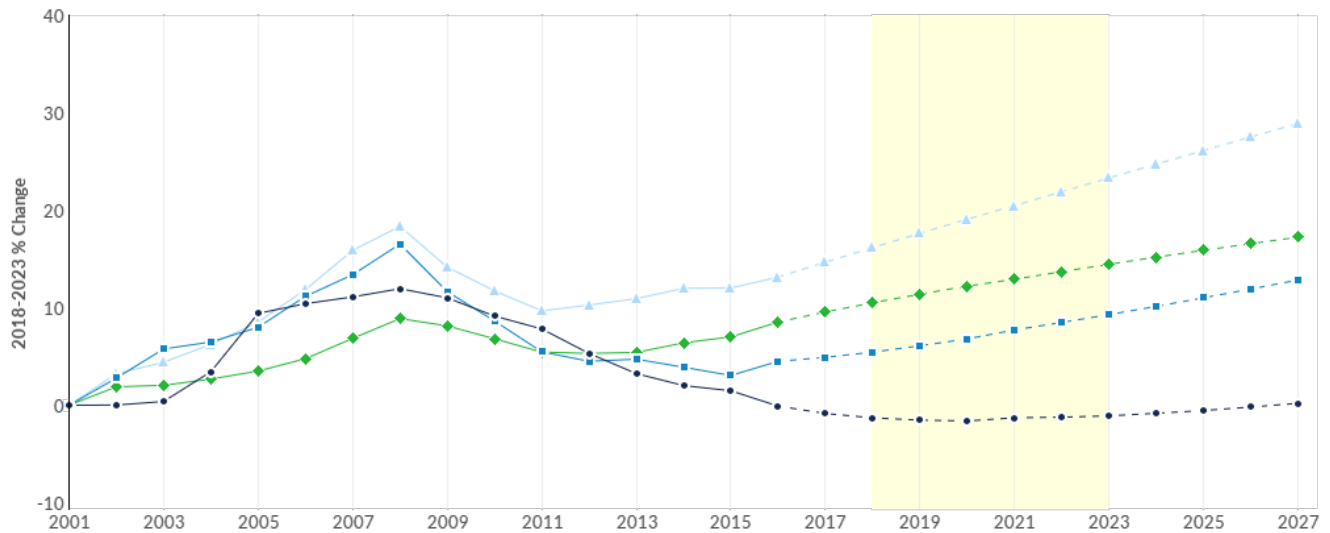
Occupation Age Breakdown 2016

	Age	Jobs	Percent
●	14-18	2	0.2% 
●	19-24	82	6.5% 
●	25-34	380	29.9% 
●	35-44	383	30.1% 
●	45-54	295	23.2% 
●	55-64	121	9.5% 
●	65+	7	0.6% 

Occupation Summary for 43.0203

1,271 Jobs (2016) 28% above National average	3.7% % Change (2018-2023) Nation: 3.6%	\$19.26/hr Median Hourly Earnings Nation: \$23.25/hr
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Occupation Change Summary



	Region	2018 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings
●	Cochise County, AZ	218	218	0	0%	\$21.45
●	Cochise, Pima, SC	1,282	1,329	47	4%	\$19.26
●	Arizona (AZ)	8,165	8,667	502	6%	\$22.06
●	United States	339,150	351,269	12,119	4%	\$23.25

SOC	Description	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
33-2011	Firefighters	Postsecondary non-degree award	None	Long-term on-the-job training
33-2021	Fire Inspectors and Investigators	Postsecondary non-degree award	5 years or more	Moderate-term on-the-job training
33-2022	Forest Fire Inspectors and Prevention Specialists	High school diploma or equivalent	Less than 5 years	Moderate-term on-the-job training

Occupation Breakdown - 2018 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
33-2011	Firefighters	217	1,234	7,845	324,731
33-2021	Fire Inspectors and Investigators	<10	44	291	12,377
33-2022	Forest Fire Inspectors and Prevention Specialists	0	<10	29	2,042
	Total	218	1,282	8,165	339,150

Occupation Breakdown - 2023 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
33-2011	Firefighters	217	1,278	8,327	336,236
33-2021	Fire Inspectors and Investigators	<10	46	309	12,873
33-2022	Forest Fire Inspectors and Prevention Specialists	0	<10	31	2,161
	Total	218	1,329	8,667	351,269

Occupation Breakdown - Change

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
33-2011	Firefighters	0	44	482	11,505
33-2021	Fire Inspectors and Investigators	--	2	18	496
33-2022	Forest Fire Inspectors and Prevention Specialists	0	--	2	119
	Total	0	47	502	12,119

Occupation Breakdown - Median Hourly Earnings

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
33-2021	Fire Inspectors and Investigators	--	\$27.09	\$29.91	\$28.10
33-2011	Firefighters	\$21.42	\$18.99	\$21.82	\$23.09
33-2022	Forest Fire Inspectors and Prevention Specialists	\$0.00	--	\$11.54	\$17.42
	Total	\$21.46	\$19.24	\$22.07	\$23.24








Top Industries - Change

NAICS Code	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
902999	State Government, Excluding Education and Hospitals	--	3	6	204
903999	Local Government, Excluding Education and Hospitals	1	42	456	11,180
488190	Other Support Activities for Air Transportation	--	--	--	5
561990	All Other Support Services	--	1	24	342
901199	Federal Government, Civilian, Excluding Postal Service	-1	1	2	-106
	Total	0	47	489	11,624

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - Emsi 2017.3 Class of Worker








National Educational Attainment

Firefighters (33-2011)

Education Level	2016 Percent
Less than high school diploma	1.0% 
High school diploma or equivalent	16.1% 
Some college, no degree	43.5% 
Associate's degree	20.1% 
Bachelor's degree	17.3% 
Master's degree	1.8% 
Doctoral or professional degree	0.2% 








* National Educational Attainment - Settings

National Educational Attainment
 Fire Inspectors and Investigators (33-2021)

	Education Level	2016 Percent
●	Less than high school diploma	3.4% 
●	High school diploma or equivalent	18.4% 
●	Some college, no degree	33.4% 
●	Associate's degree	16.0% 
●	Bachelor's degree	22.8% 
●	Master's degree	5.5% 
●	Doctoral or professional degree	0.5% 

* National Educational Attainment – Settings

National Educational Attainment
 Forest Fire Inspectors and Prevention Specialists (33-2022)

	Education Level	2016 Percent
●	Less than high school diploma	3.4% 
●	High school diploma or equivalent	18.4% 
●	Some college, no degree	33.4% 
●	Associate's degree	16.0% 
●	Bachelor's degree	22.8% 
●	Master's degree	5.5% 
●	Doctoral or professional degree	0.5% 

* National Educational Attainment - Settings

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

State Data Sources

This report uses state data from the following agencies: Arizona Department of Administration, Office of Employment and Population Statistics