



SAN DIEGO COUNTY LABOR MARKET ANALYSIS

PUBLIC SECTOR

Employment Trends and Career Opportunities

SAN DIEGO
WORKFORCE
PARTNERSHIP[®]

NOVEMBER 2017

The Public Sector is made up of publically controlled and funded entities, providing public goods and services to people living in San Diego County. This study focuses on 36 in-demand occupations in five key occupational clusters within the Public Sector: Administration, K-12 Educators, Maintenance and Landscaping, Public Utilities and Safety. It serves to inform the workforce development system—educational training institutions, the Workforce Development Board and community organizations—on how best to prepare the future workforce for these five occupational clusters.

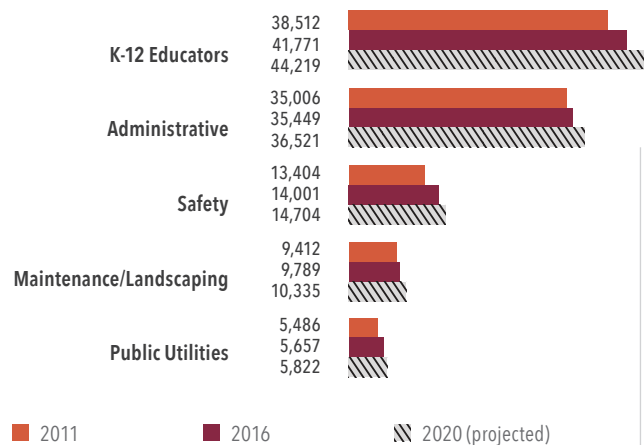
Visit workforce.org/reports to read the full report.



Total jobs in the Public Sector increased by 1.3 percent from 2011 to 2016

IN-DEMAND OCCUPATIONS IN THE PUBLIC SECTOR

The Public Sector accounts for over 340,000 jobs in the region, spread over more than 780 occupations. The 36 occupations represented in the below clusters comprise about 31 percent of the jobs in the sector. These occupations have grown by 9.4 percent in the past five years.



SKILLS GAP

Soft skills gap — Employers noted a soft skills gap in **political acumen**. Proximity to government makes it necessary to understand political boundaries and policies. Further, employees must navigate the motivations of various offices/individuals that influence decisions. Other soft skill gaps were noted in the following competencies:

- Creative thinking
- Customer service
- Communication
- Teamwork

Hard skills gap — To move up in many of the positions in the Public Sector, attaining certifications (especially in safety and utilities) is important. Writing skills adapted to the workplace are also valuable, especially when considering different audiences and styles of writing needed in different environments.

Some examples include:

- Certifications/licensing: Single Subject or Multiple Subject Teaching Credentials, Engineer-in-Training (EIT), Drinking Water Operator Certification
- Writing skills: memos, technical/policy writing, various styles of business writing

TEACHER SPOTLIGHT

- K-12 educators make up over 12 percent of total jobs in Public Sector
- K-12 Education subsector is facing a shortage of qualified applicants
 - STEM (Science, Technology, Engineering, Math)
 - Special education
 - Substitute teacher

Some employers are recruiting out-of-state for areas of need, but many of these applicants do not possess the credentials required for California.



KNOWLEDGE AND SKILLSET FOR TEACHING OCCUPATIONS

- Pedagogy
- Lesson planning
- Scheduling
- Incorporating technology into classroom activities (e.g., personal tablets, educational software)
- Teamwork—need to collaborate with fellow teachers and administrators on curriculum design, coordination of school-wide events and other initiatives
- Interpersonal skills
- Bilingualism—Spanish fluency is in particularly high demand due to San Diego’s proximity to the international border. It is vital for communication with both students and parents.
- Cultural competency—understanding challenges faced by students and families from varying backgrounds, including the difficulties associated with learning a second language

IN-DEMAND OCCUPATIONS IN THE PUBLIC SECTOR*



ADMINISTRATIVE

- Business Operations Specialists, All Other (\$35.27)
- Office Clerks, General (\$16.10)
- Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (\$18.20)



K-12 EDUCATORS

- Secondary School Teachers, Except Special and Career/Technical Education (\$35.27)
- Elementary School Teachers, Except Special Education (\$29.65)
- Teacher Assistants (\$14.93)



MAINTENANCE AND LANDSCAPING

- Janitors and Cleaners, Except Maids and Housekeeping Cleaners (\$11.95)
- Maintenance and Repair Workers, General (\$18.54)
- Landscaping and Groundskeeping Workers (\$12.51)



PUBLIC UTILITIES

- Water and Wastewater Treatment Plant and System Operators (\$30.37)
- Civil Engineers (\$42.34)
- Electronics Engineers, Except Computer (\$54.16)



SAFETY

- Police and Sheriff's Patrol Officers (\$39.41)
- Firefighters (\$29.28)
- Detectives and Criminal Investigators (\$42.20)

*Occupations accompanied by median wage

Visit [ONetOnline.org](https://www.onetonline.org) to learn more about these occupations

CHALLENGES FINDING AND RECRUITING QUALIFIED EMPLOYEES

Nearly 62 percent of survey respondents are having difficulty finding and recruiting qualified employees for occupations identified in the report. Employers most frequently cited the following contributing factors:



67%

Lack of experience



54%

Competition from other employers



54%

Lack of technical or occupational skills



52%

Candidates missing necessary certifications



51%

Low number of applicants



46%

Unable to meet salary/benefit demands



46%

Lack of soft skills



DID YOU KNOW?

A unique aspect of the Public Sector is the frequency and relative ease of transferring between departments within the same organization. As an individual's skills and interests grow throughout their career, they have several pathways open to them. If an employee starts their career in a department with limited career advancement opportunities, this fluidity gives them the chance to pursue new opportunities in another division. Networking is key to opening up these opportunities.

i

RECOMMENDATIONS FOR WORKFORCE DEVELOPMENT

- Public entities and educational/training institutions should partner to expand internship opportunities for students to equip them with the work experience desired by employers.
- Training programs should stress the importance of technical writing skills to improve the competitiveness of graduates. This is just as relevant for public safety employees writing reports as it is for administrative employees.
- Emphasis should be placed on identifying and training individuals with management potential. Employers in every occupational cluster noted lacking leadership and management skills among employees, and sometimes a lack of interest in advancing to management positions.
- Education and training programs for this sector should address social media awareness. The highly-scrutinized nature of the public sector makes it especially important for employees to be aware of how they portray themselves.

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INTRODUCTION

The public sector is the part of the economy that provides services benefiting all of society, such as infrastructure, transportation services, safety and public education. Organizations in this sector provide services ranging from education, fire protection and law enforcement to public utilities.

A number of public agencies in San Diego County have reported challenges filling vacancies and retaining employees. A 2016 study by the Learning Policy Institute identified 2,117 vacancy listings on EdJoin, an education job search portal, over a 12-month period in San Diego County in 2015.¹ This was an 83.9 percent growth in vacancies from 2013. The San Diego Police Department also shared similar concerns, with approximately nine percent of budgeted positions remaining vacant in 2016.² With a variety of public organizations encountering similar obstacles, it has become increasingly important to highlight these positions to job seekers and to understand the employment needs of the sector.

To address these concerns and gain a stronger comprehension of the public sector, the San Diego Workforce Partnership (SDWP) commissioned University of California, San Diego Extension to conduct this study.

This report analyzes the labor market landscape and workforce needs of the public sector, and presents its existing career pathways. This report also provides an overview of the public sector in San Diego County, examining 36 in-demand occupations across the sector. Due to the breadth and scope of positions in this sector, the primary research focused on the following five occupational clusters: 1) Administrative, 2) Education, 3) Maintenance and Landscaping, 4) Public Utilities, and 5) Safety. Refer to Appendix A for a complete list of occupations identified for the report.

UC San Diego Extension conducted 30 executive interviews and collected 102 survey responses from human resources personnel and senior level public employees. UCSD Extension also analyzed and incorporated data from employment statistics and job postings.³ The resulting report provides information on hiring trends, employee retention methods, valued skill sets and qualifications, existing local education initiatives, and challenges faced by public sector agencies. This report also identifies recommendations that employers and educators should consider in order to ensure the development and sustainment of a qualified workforce.

¹ learningpolicyinstitute.org/sites/default/files/product-files/LPI-Report-AddressingCA_TeacherShortage.pdf

² sandiegouniontribune.com/news/politics/sd-me-council-action-20161114-story.html

³ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker; Burning Glass Labor Insight

SECTOR OVERVIEW

The public sector provides services and goods that benefit all of society rather than just the individual who uses the service. Governmental services include military, police, infrastructure (e.g., roads, telecommunications, water supply, and bridges), transportation, education, health care and housing.⁴

As of 2016, the public sector in San Diego County had an estimated 106,664 jobs and 1,869 establishments.⁵ These establishments include the following categories from Economic Modeling Specialists, Intl. (Emsi), a labor market database:⁶

- 491110 Postal Service
- 901149 US Postal Service
- 901199 Federal Government, Civilian, Excluding Postal Service
- 901200 Federal Government, Military
- 902611 Elementary and Secondary Schools (State Government)
- 902612 Colleges, Universities, and Professional Schools (State Government)
- 902619 All Other Schools and Educational Support Services (State Government)
- 902622 Hospitals (State Government)
- 902999 State Government, Excluding Education and Hospitals
- 903611 Elementary and Secondary Schools (Local Government)
- 903612 Colleges, Universities, and Professional Schools (Local Government)
- 903619 All Other Schools and Educational Support Services (Local Government)
- 903622 Hospitals (Local Government)
- 903999 Local Government, Excluding Education and Hospitals

This sector is projected to grow by 6.5 percent in San Diego County from 2016 to 2026, compared to 8.3 percent statewide and 4.9 percent nationwide in the same timeframe. An additional 10,649 public sector jobs are projected to be added to the county by 2026.⁷

To gain a better understanding of the challenges and needs of organizations in the public sector, a survey was sent out and completed by 102 employers in this sector. Nearly 62 percent of survey respondents have difficulty finding and recruiting qualified employees.⁸ Employers were asked to select factors contributing to these challenges. As seen in Figure 1, of the 63 employers who indicated having difficulty finding qualified employees, 67 percent reported that candidates lack desired work experience and 54 percent reported applicants lacked technical or occupational skills.

⁴ investorwords.com/3947/public_sector.html

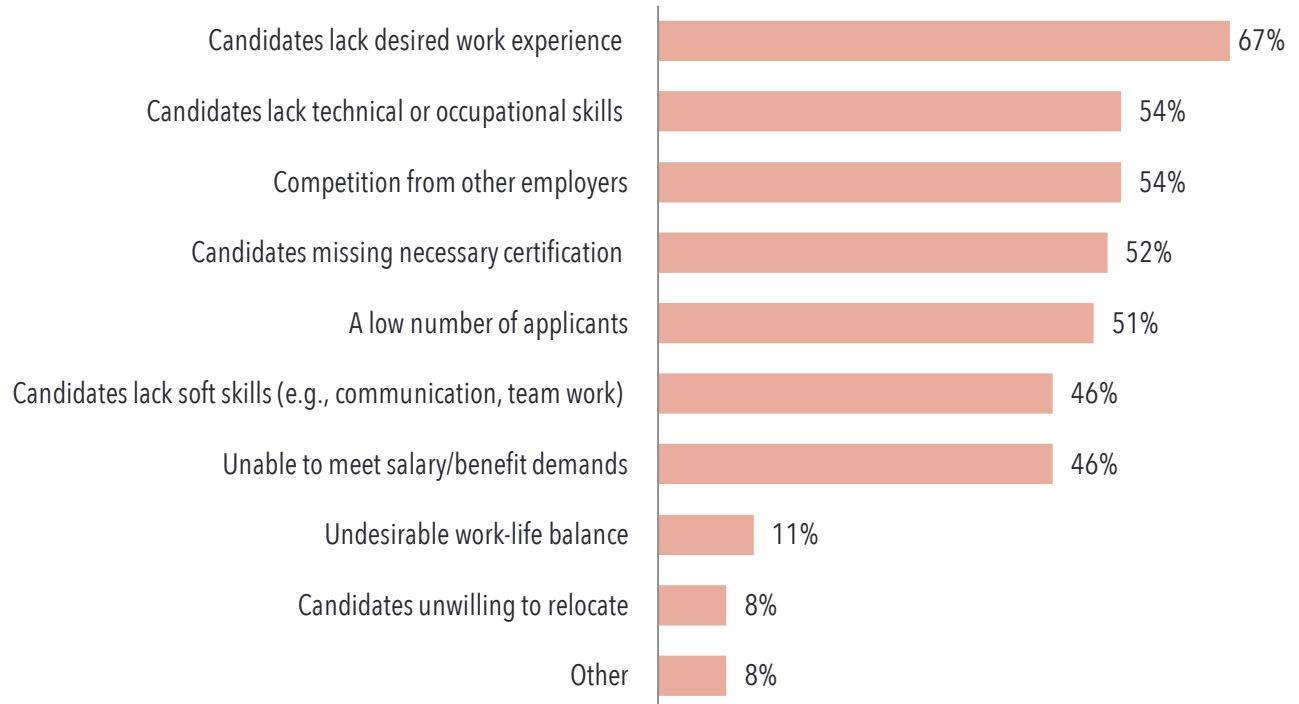
⁵ Establishments refer to a single physical location of a business. A business could have multiple physical locations.

⁶ Emsi does not utilize the standard North American Industry Classification System (NAICS) categories for Public Administration (NAICS 92).

⁷ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

⁸ 63 out of a total of 102 employers responded they had difficulty finding and recruiting qualified employees

Figure 1: Percent of Employers Reporting Difficulty Finding and Recruiting Qualified Employees by Challenge⁹



While most of the public sector occupations identified for this report require minimal work experience for entry-level positions, it is important that individuals obtain valuable work experience to remain competitive for non-entry level positions. Of the 34 respondents that reported their department is experiencing a skill deficiency of some kind, 40 percent selected communication and interpersonal skills, 33 percent selected technical or occupational skills, and 30 percent selected managerial and leadership skills, as areas of deficiencies. Over half of the respondents also mentioned competition from other employers as a key challenge to recruitment.

During executive interviews, employers also identified key soft skills that are necessary for employment in the public sector:

- **Creative Thinking:** Employers underscored the importance of creative thinking. With the public sector spanning numerous industries, finding creative solutions to existing issues and thinking of innovative ways to provide goods, services and programs are essential.
- **Political Acumen:** The proximity of the public sector to government necessitates a fundamental understanding of political boundaries and policies.
- **Customer Service:** Providing excellent customer service was repeatedly mentioned as an important skill set. Employers explained that because employees are regarded as the face of the organization, it is important that they are customer service oriented.

⁹ n=63

- **Communication:** Employees must know how to digest complicated and technical information, and produce communication pieces that are easily understood by the general public. Additionally, possessing strong verbal communication skills is highly valued for positions that require substantial communication with government officials and attendance at public forums.
- **Teamwork:** The ability to work in a team and collaborate with others was often mentioned as an important soft skill, as there is a lot of cross-departmental collaboration in the public sector.

Employers also discussed other skills that are increasingly important in the public sector, which include:

- **Computer Literacy:** Conversations with employers revealed that computer literacy is becoming an increasingly required skill in the workplace. Although the level of expected ability largely depended on the position, the majority of occupations required at least a basic understanding of computers. Some employers mentioned encountering challenges due to current employees not willing to keep up with advances in technology. The computer skill sets valued across the occupational groups include using Microsoft Office (specifically Microsoft Word and Microsoft Excel), understanding the importance of cybersecurity, and conducting web searches.
- **Social Media:** Employers frequently mentioned the importance of social media as a tool. Examples include police officers utilizing social media to investigate crimes, and administrative assistants using social media platforms for marketing purposes.

OCCUPATIONAL OVERVIEW

Overall, the public sector accounts for more than 780 occupations from financial managers to postsecondary teachers. This study analyzes 36 in-demand public sector occupations, which were identified by reviewing 2016 employment numbers and projected 10-year growth rates in the county. Due to this extensive list, occupations with similar characteristics were grouped together and clustered into five key occupational clusters: 1) Administrative, 2) Education, 3) Maintenance and Landscaping, 4) Public Utilities, and 5) Safety.¹⁰

Education occupations are the most represented positions in the public sector, with Postsecondary Teachers making up 5.8 percent of total jobs in the public sector and Secondary School Teachers, Except Special and Career/Technical Education making up 3.7 percent. Registered Nurses are the only non-education occupation in the top five largest jobs, making up approximately 3.1 percent of overall employment in the public sector. Refer to Appendix A for a comprehensive list of the in-demand public sector occupations.

The top three professions by employment numbers in each cluster are:

1. Administrative
 - Business Operations Specialists, All Other
 - Office Clerks, General
 - Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
2. Education
 - Secondary School Teachers, Except Special and Career/Technical Education
 - Elementary School Teachers, Except Special Education
 - Teacher Assistants
3. Maintenance and Landscaping
 - Janitors and Cleaners, Except Maids and Housekeeping Cleaners
 - Maintenance and Repair Workers, General
 - Landscaping and Groundskeeping Workers
4. Public Utilities
 - Water and Wastewater Treatment Plant and System Operators
 - Civil Engineers
 - Electronics Engineers, Except Computer
5. Safety
 - Police and Sheriff's Patrol Officers
 - Firefighters
 - Detectives and Criminal Investigators

¹⁰ Administrative occupations perform clerical and organizational tasks. Education occupations focused on in this report include K-12 educator occupations. Maintenance and landscaping occupations fix and maintain buildings and the grounds surrounding a building. Public Utilities occupations work on city infrastructure systems such as a city's water system or sewage system. Safety occupations relate to maintaining the public's safety, such as firefighters and police officers.

The public sector is projected to grow by approximately 10,649 jobs between 2016 and 2026. Of the five occupational clusters, Education and Maintenance and Landscaping occupations are projected to have the largest employment growth (Figure 2).

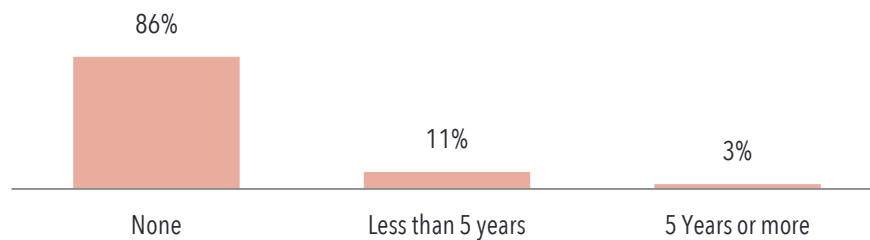
Figure 2: Projected Employment Growth by Occupational Cluster

Occupational Cluster	2016 Jobs	2026 Jobs	Change	Growth
Education	41,771	47,155	5,384	13%
Administration	35,448	37,656	2,207	9%
Safety	14,001	15,552	1,552	11%
Maintenance and Landscaping	9,787	10,993	1,205	12%
Public Utilities	5,657	5,958	301	5%
Total	106,664	117,314	10,649	

While the identified occupations have a wide range of entry-level education requirements, employers reported requiring minimal work experience for entry-level positions (Figure 3).¹¹ Occupations requiring little work experience and education include:

- Teacher Assistants
- Correctional Officers and Jailers
- Bookkeeping, Accounting, and Auditing Clerks
- Maintenance and Repair Workers, General
- Water and Wastewater Treatment Plant and System Operators

Figure 3: Percent of Employers Requiring Work Experience for Entry-level Occupations¹²

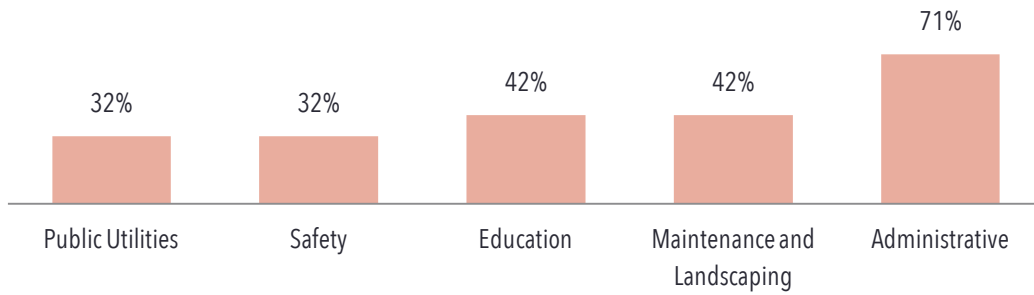


Among the 102 employers surveyed for this report, 71 percent reported employing administrative positions (Figure 4). Administrative occupations support operations across multiple industries and agencies, which may explain why this occupational cluster is the most heavily represented.

¹¹ Source: QCEW Employees & Non-QCEW Employees – EMSI 2017.2 Class of Worker.

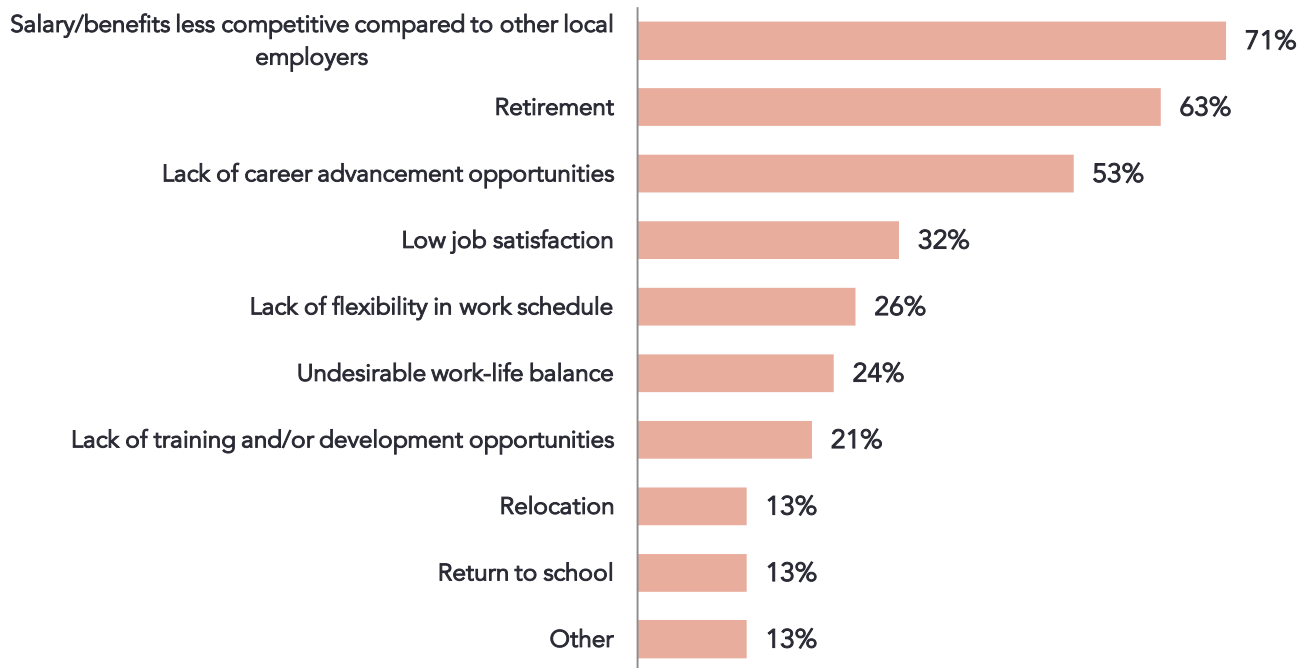
¹² n=36

Figure 4: Public Sector Occupational Clusters Employed by Survey Respondents¹³



Of the 102 employers surveyed, 38 also indicated retention issues in maintaining a qualified workforce. Seventy-one percent of these employers who experienced retention issues reported that salary and benefits at their organization are less competitive than other local employers, which generate turnover (Figure 5). Other factors that contribute to turnover include retirement of current employees and a lack of advancement opportunities. These retention issues were also commonly brought up during executive interviews with public sector employers.

Figure 5: Factors Contributing to Retention Concerns by Percent of Employers¹⁴



Opportunities for career advancement are critical to recruiting, retaining and motivating employees. Seventy-two percent of surveyed employers offer career advancement opportunities while 18 percent do not. Ten percent of respondents were uncertain.¹⁵ Organizations offering such advancement

¹³ n=102

¹⁴ n=38

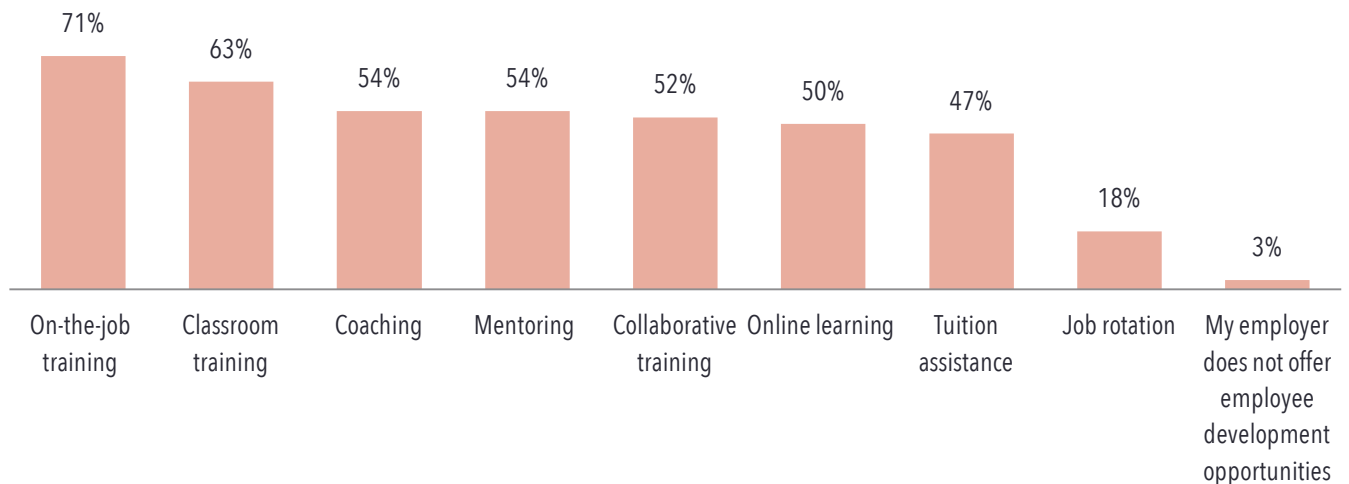
¹⁵ n=100

opportunities make efforts to promote internally, providing current employees with listings of internal transfer and/or advancement opportunities. However, opportunities for promotions are also dependent on the occupation and size of the organization. Smaller employers mentioned that opportunities are limited due to the finite number of available positions within their agency.

A unique aspect of the public sector is the frequency and relative ease of intra-organizational transfers. Employers commonly discussed instances where employees transferred to other departments or followed different career paths within the same agency. For example, an interviewee described how one of their employees initially started in the administrative series in the personnel department and eventually transferred into the planning series in the planning department. This flexibility allows individuals employed in departments lacking career advancement to find new opportunities at other divisions.

Although not all employers offer career advancement, most provide professional development opportunities for their employees (Figure 6). Employers primarily provide on-the-job training, classroom training and coaching sessions. Some employers encourage their employees to pursue job-specific certifications to enhance job performance or personal marketability and others cover the costs associated with obtaining a professional license or certification, such as an Engineering License or the Wastewater Operator Certification. Only three percent of employers surveyed do not offer employee development opportunities. The agencies representing this three percent of employers all reported retention concerns.

Figure 6: Percent of Employers Who Provide Career Development Opportunities¹⁶



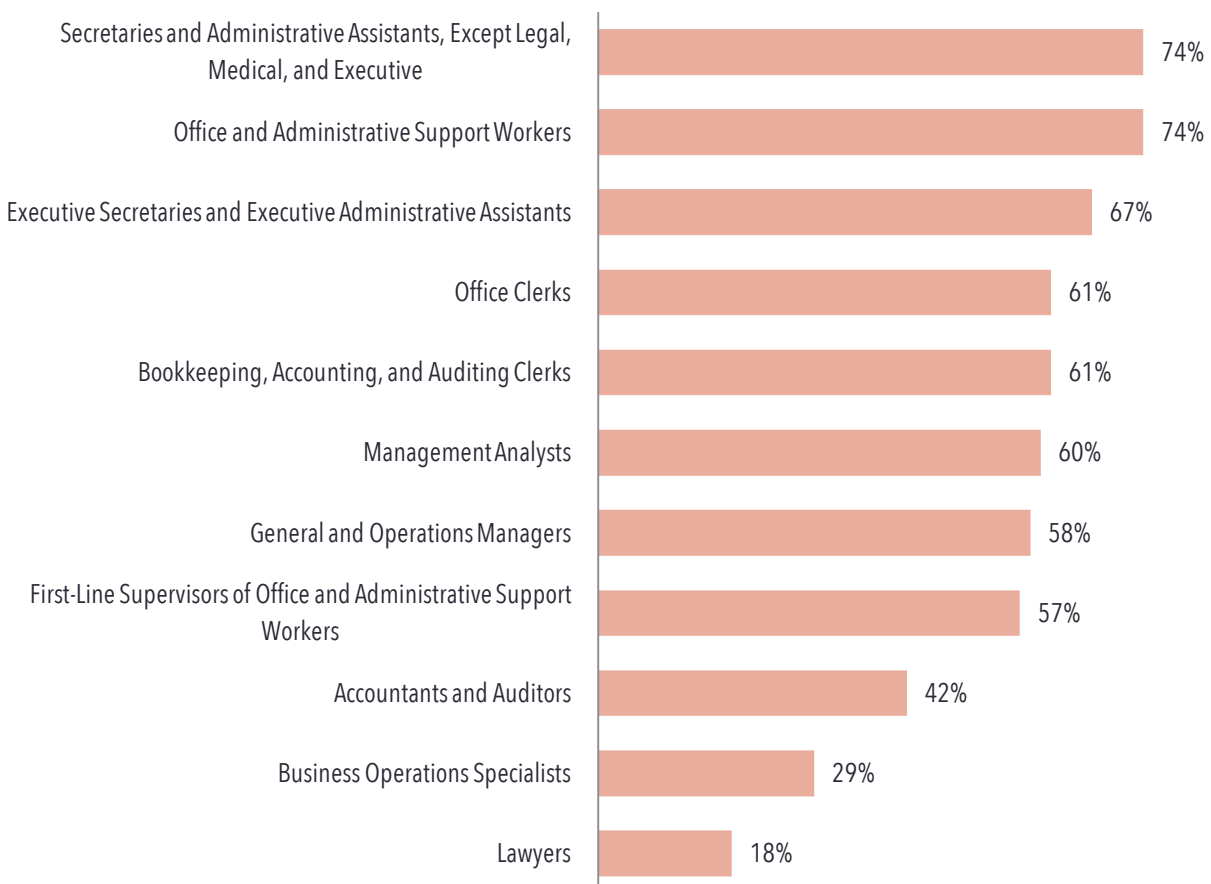
¹⁶ n=102

Administrative Occupations

Administrative occupations are projected to grow by six percent from 2016 to 2026 in San Diego County. Of the five occupational clusters identified for this report, the administrative cluster has the second smallest growth rate, projected to add 2,207 jobs within the next 10 years. However, as indicated in Figure 4, administrative positions are an essential component of the public sector, as they are employed by 71 percent of the employers surveyed.

Figure 7 presents the distribution of occupations employed in this cluster by survey responses. Surveyed respondents largely employed an equal distribution of managerial and non-managerial positions.

Figure 7: Percent of Administrative Occupations Employed by Survey Respondents¹⁷



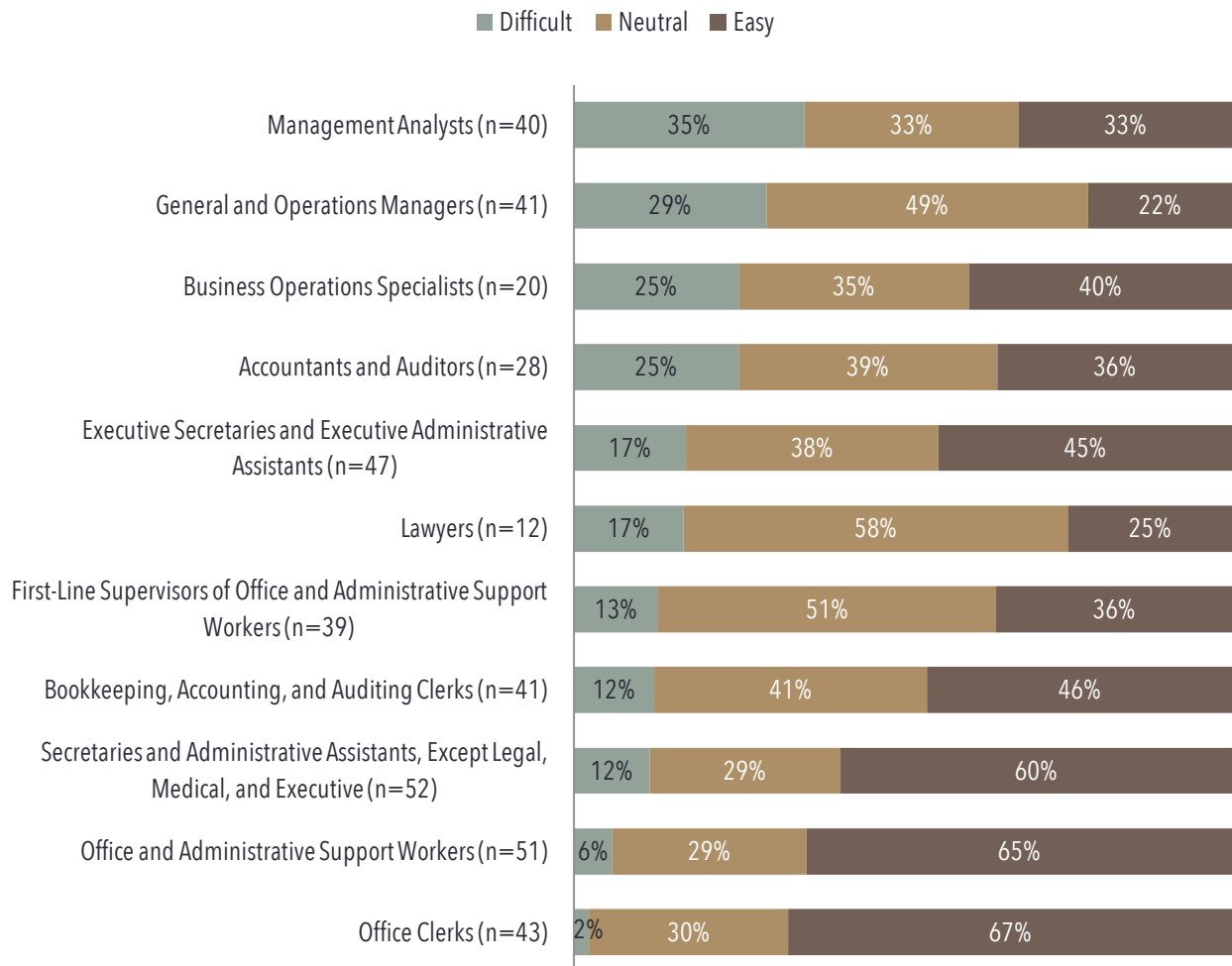
Hiring and Retention

Employers were asked to rate the level of difficulty in finding qualified employees for administrative positions (Figure 8). Responses indicate that employers experience the greatest difficulty hiring Management Analysts and General Operations Managers, as these positions require specialized

¹⁷ n=72

knowledge and management skills. With employers receiving hundreds of applications per job posting, however, administrative positions are relatively easier to fill compared to other occupations.

Figure 8: Percent of Employers Having Difficulty Finding Qualified Employees for Specific Administrative Occupations



Executive interviews were also conducted with six employers to gain further insight on administrative occupations. Most interviewees do not experience significant retention concerns for administrative occupations. Organizations with turnover cite retirement as the primary reason, and have been hiring additional employees to fill vacancies. Employers also noted the following trends:

- Attrition is higher for mid-level employees, as they would like to obtain management roles.
- Organizations not currently facing retention concerns foresee brain drain in the near future due to impending retirement among staff members.

Knowledge and Skill Sets

With a wide range of administrative positions in the public sector, employers advised that interested individuals should frequently review job postings to stay up to date on required qualifications. Valued technical skill sets for administrative positions include the ability to utilize Microsoft Office, provide administrative support, and understand budgeting. Top technical skills listed in online job postings for administrative occupations are included below:¹⁸

Microsoft Excel	Budgeting
Accounting	Microsoft Word
Microsoft Office	Customer Service
Administrative Support	Microsoft PowerPoint
Scheduling	Budgeting

In addition to these technical skill sets, employers highlighted the importance of strong communication, teamwork and customer service. With many positions requiring collaboration across departments and with the public, employers stressed the significance of excellent soft skills. Interviews with industry also revealed the value of fit. Although technical skills can be learned, fit cannot necessarily be taught. Interviewing is thus perceived as an important tool for employers to learn more about potential employees and their personalities. For supervisory and managerial positions, project management, leadership, and management skills are valued, in addition to the aforementioned abilities.

Additionally, the knowledge of social media was repeatedly mentioned as an emerging skill set for all administrative positions. With these platforms ingrained in the daily lives of many, they are a valuable guerilla marketing tool to inform the public of events and happenings.

None of the employers interviewed experienced a technical skills gap among job applicants or current employees. Rather, interviewees mentioned the lack of soft skills. This was also mirrored in survey results, where soft skills such as critical thinking and communication were mentioned as lacking. One employer explained that a number of recent hires lacked professional writing skills despite possessing a graduate degree in the field.

Education and Training Program

The desired educational and training requirements for administrative positions differ substantially by employer. The following lists key trends obtained from executive interviews:

- Administrative support positions generally require a high school diploma or equivalent with some college education preferred. None of the employers mentioned specific certifications or training programs as valuable for these roles.
- Accountants and Auditors and Management Analysts require a bachelor's degree in a related field, with some employers preferring a master's degree. The Uniform Certified Public

¹⁸ Technical skills taken from Burning Glass, a job posting analytics database

Accountant (CPA) examination and the Chartered Financial Analyst (CFA) credential are valuable certifications for senior level financial roles.

- Lawyers must graduate from law school and pass the bar exam.
- Individuals interested in assuming managerial and leadership positions must possess at least a bachelor’s degree and demonstrate relevant work experience.

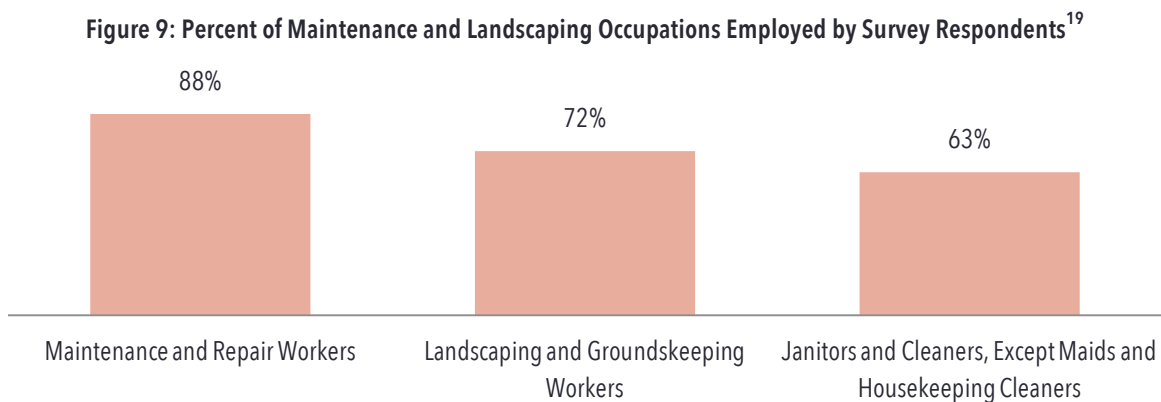
Refer to Appendix C for a summary of educational programs for the occupations identified.

Career Advancement

Career advancement opportunities are largely contingent upon the size of the employer and the occupation. Some mentioned limited opportunities due to the finite number of positions within smaller organizations, while others described numerous potential pathways for qualified employees. A few employers also described instances where administrative employees were able to develop their skill sets, obtain further education, and transfer to other departments within the organization. According to employer interviews and surveys, most opportunities were available for specialized positions, such as accountants, auditors or management analysts.

Maintenance and Landscaping Occupations

Employment in the maintenance and landscaping occupational cluster is projected to increase by 12 percent from 2016 to 2026 in San Diego County. Data was obtained from 43 survey responses and six executive interviews with local employers. Nearly 90 percent of survey respondents within this occupational cluster employed maintenance and repair workers, and 72 percent employed landscaping and groundskeeping workers (Figure 9).

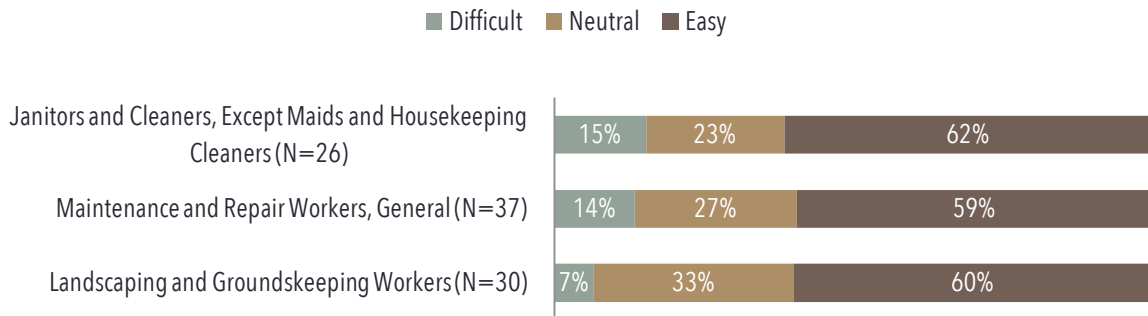


Hiring and Retention

Most employers do not experience a shortage of candidates for maintenance and landscaping occupations; hundreds of applications are submitted per vacancy. This abundance of applications gives employers a wide pool of applicants to evaluate, enabling them to select qualified individuals. Approximately 60 percent of respondents who hire for these positions find it easy to recruit skilled candidates (Figure 10).

¹⁹ n=43

Figure 10: Percent of Employers with Difficulty Finding Qualified Employees for Maintenance and Landscaping Occupations



Employers are, however, experiencing challenges recruiting for more specialized positions, such as horticulturists because of the level of expertise required. Discussions with industry revealed the undersupply of individuals entering this field; many job seekers search for employment in the private sector due to significantly higher compensation rates.

Knowledge and Skill Sets

The understanding of tools and equipment are the most commonly desired areas of knowledge, according to the employers interviewed. Employers value candidates with experience operating heavy equipment, with some even desiring previous work experience in the trades. Knowledge in storm water and irrigation are also sought after due to the increasing importance of water conservation. Top technical skills listed in online job postings for maintenance and landscaping occupations are included below:²⁰

Repair	Inspection
Plumbing	Carpentry
Cleaning	Customer Service
HVAC	Scheduling
Painting	Power Tools

Supervisory and management positions require knowledge of Microsoft Office, budgeting and contract negotiation, in addition to the technical skill sets associated with this occupational cluster. Individuals with management experience are also well-regarded, with a number of organizations providing training to interested employees. Soft skills like communication, teamwork and interpersonal skills are important as well. The ability to organize, prioritize and complete tasks are essential for these positions, as employees are expected to work on numerous work orders at once. A number of employers also emphasized the significance of attention to detail for those working in specialized departments.

²⁰ Burning Glass analyzes job postings data. The top technical skill sets data for maintenance and landscaping occupations was pulled between January 1 and December 31, 2016.

Employers commonly reported the lack of skilled candidates for management roles, as these positions require expert communication and leadership skills. Some also mentioned that current lower-level employees are not interested in transitioning to mid-level management positions often enough, either because they do not possess the requisite skill sets, are not willing to develop essential abilities, or are not interested in assuming greater responsibility. Employers explained that although these positions entail greater responsibilities and require additional competencies, compensation is not significantly more substantial. Additionally, individuals in these roles must possess leadership and communication skills, which many lower-level employees currently lack.

Education and Training

Most blue-collar positions require a high school diploma or equivalent. A Class B Commercial Driver's License is also valuable. Further formal education is generally not necessary, with employers placing greater emphasis on previous work experience in a related field to demonstrate technical ability.

Employees can often obtain management positions without a degree if they possess relevant work experience. Only one employer specifically mentioned that a bachelor's degree in public administration, business administration, or civil engineering is required for a managerial position. While formal education is not required for most senior level or management positions, applicants are more favorably perceived if they take the initiative and acquire further education in a related field.

Refer to Appendix C for a summary of local training programs for the identified occupations.

Career Advancement

Most employers interviewed described ample career advancement opportunities in this occupational cluster. Skilled employees have the opportunity to assume greater responsibility. Obtaining further education, such as an associate degree, is beneficial but not required for advancement in most organizations. Employees also have the option to transition to other departments. Employers have encountered applicants that accept entry-level positions to get their foot in the door, and work towards advancing and/or transferring to other departments of interest within the agency. Employees that demonstrate strong work ethic and show initiative are most competitive for these opportunities.

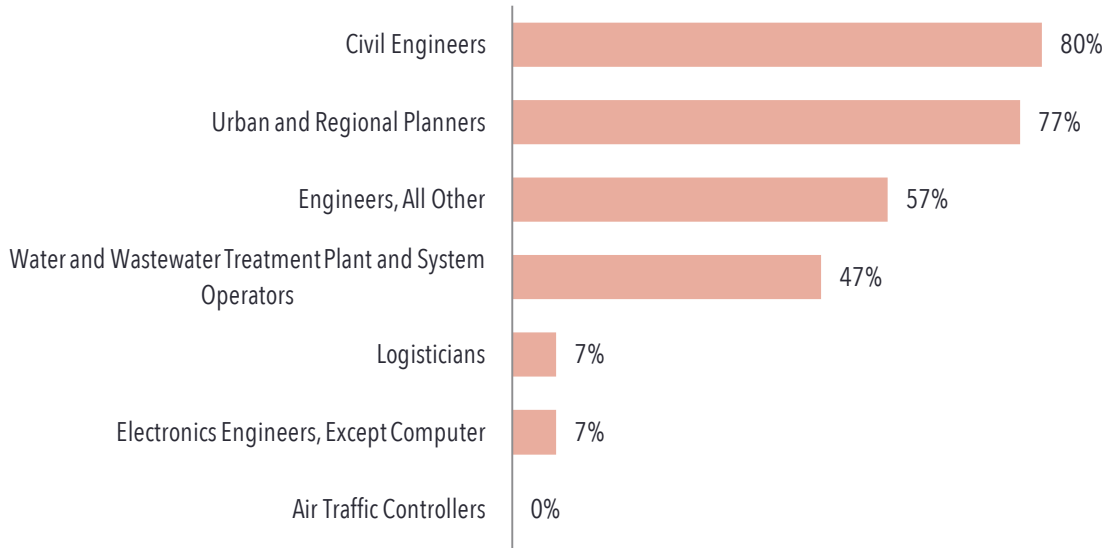
Public Utilities Occupations

The public utilities cluster employs a wide spectrum of occupations, from professional engineers to wastewater plant operators. This occupational cluster is projected to add 301 jobs within the next 10 years, experiencing a five percent growth from 2016 to 2026 in San Diego County.²¹

Thirty employers who responded to the survey indicated employing public utilities occupations. Seven executive interviews were also conducted to provide deeper insight on occupational trends. Figure 11 shows the distribution of occupations employed in this cluster by survey responses. Because none of the employers surveyed employed air traffic controllers, this occupation was excluded from further analysis.

²¹ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

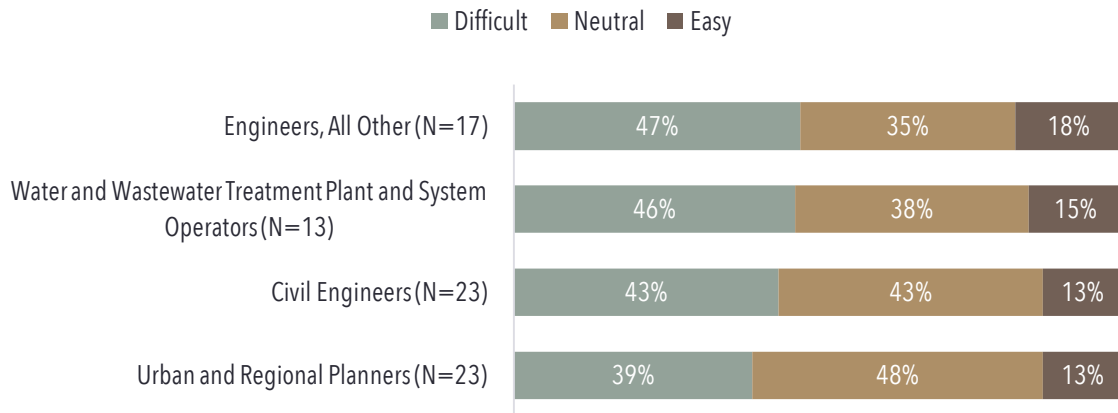
Figure 11: Percent of Public Utilities Occupations Employed by Survey Respondents²²



Hiring and Retention

Over 40 percent of employers who employed engineers (all other), water and wastewater treatment plant and system operators and civil engineers indicated that they had difficulty finding qualified employees (Figure 12). Electronics engineers, except computer and logisticians have been excluded from this portion due to the low number of employer responses.

Figure 12: Percent of Employers Having Difficulty Finding Qualified Employees for Specific Public Utilities Occupations



Employers experienced hiring challenges at varying degrees. For the same occupation (e.g., engineers, fleet managers), one employer may have an abundance of job applicants, while another may have little

²² n=30

to no prospective candidates. A couple of organizations indicated that they found candidates from local training programs, such as the Water & Wastewater Technology program at Cuyamaca College.

Due to the specialized nature of these different occupations in public utilities, finding qualified candidates with the specific skills related to the position can be challenging to employers. Job titles that are specific to a company such as “Accident Reconstruction Specialists” may not exist at another company.

Employee attrition due to turnover and retirement is also a challenge for firms that employ this occupational cluster. Employers expressed difficulty in succession planning and employee retention for occupations that have few job openings, but are very specialized.

Knowledge and Skill Sets

Due to the breadth and variety of positions employed in this occupational group, specific skills sets are not included by occupation, but employers did generally state that all occupations must be knowledgeable of local, state and federal laws and regulations. For specific skills by occupation, refer to Appendix A.

Additionally, employers frequently underscored the importance of soft skills in executive interviews such as leadership, management skills, communication skills and computer literacy.

Education and Training

Water and Wastewater Treatment Plant and System Operators generally require a high school diploma or equivalent. Employers listed the following credentials as important for these positions:

- Cal/OSHA Confined Space Entry Training Certification
- Hazardous Waste Operations and Emergency Response
- Drinking Water Operator Certification
- Wastewater Operator Certification Program
- Commercial Class B License

Engineers must have a bachelor’s degree in engineering. Some organizations require the Engineer-in-Training (EIT) certification and the Professional Engineering (PE) license for lower and senior level roles, respectively. A number of employers were willing to pay for employees to obtain their PE license.

Employers largely prefer Urban and Regional Planner to possess a bachelor’s degree in a related field. Job applicants with membership in the American Planning Association were also viewed favorably.

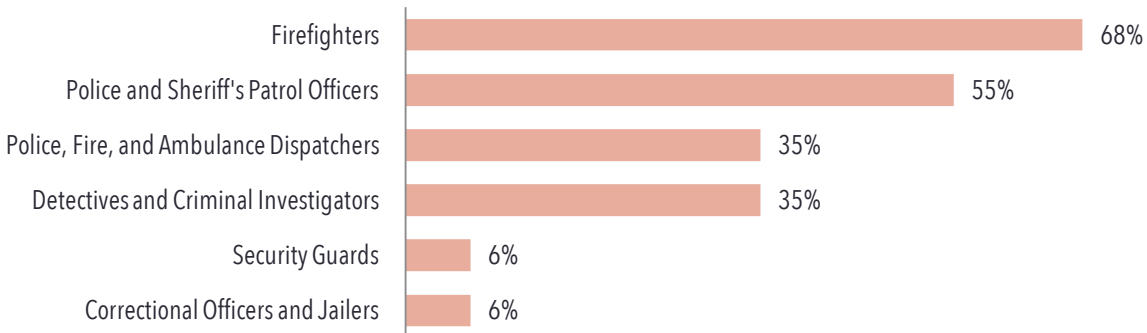
Career Advancement

The public utilities occupational cluster provides significant career advancement opportunities. Individuals hired in entry-level positions can advance to the next level with appropriate experience. One human resources manager explained that junior employees can advance to management positions in less than five years if they possess the requisite skill sets. Employees that stay up-to-date with projects and technologies, and who demonstrate strong teamwork, communication and leadership skills, are best positioned for these opportunities. It is important to note, however, that advancement is also largely dependent upon the availability of positions within the department and budget allocations.

Safety Occupations

The safety occupational cluster is projected to grow by 11 percent from 2016 to 2026, and is projected to add approximately 1,552 jobs over the next 10 years.²³ Of the employers who responded to the survey, 31 employed safety occupations. Interviews were also conducted with six establishments to obtain a deeper understanding of industry needs. Figure 13 presents the distribution of occupations employed in the safety cluster by survey responses.

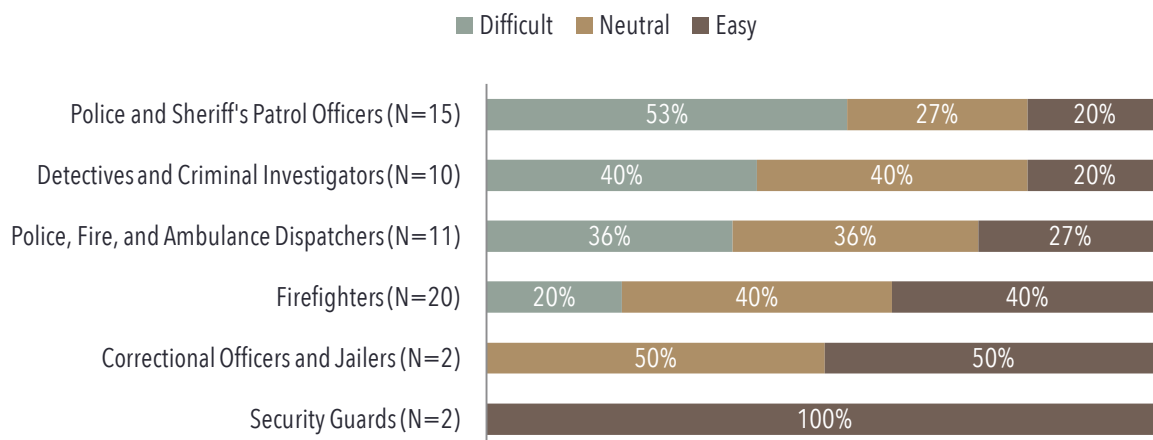
Figure 13: Percent of Safety Occupations Employed by Survey Respondents²⁴



Hiring and Retention

According to executive interviews, there has been a drop in the number of applicants and a lack of diversity among job candidates. Survey results illustrate that police and sheriff's patrol officers are the most challenging positions to find qualified employees for in the sector (Figure 14). Employers explained that the disqualification of candidates during background checks, coupled with the overall decrease in the number of applicants, has exacerbated these concerns.

Figure 14: Percent of Employers Having Difficulty Finding Qualified Employees for Specific Safety Occupations



²³ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

²⁴ n = 31

Employers also voiced retention concerns, largely due to retirement, pay and benefits. Some described losing employees to other municipalities and counties that offer greater incentives for employment. While the degree of turnover varies by employer, most anticipate retention concerns in the near future and have been hiring accordingly.

Knowledge and Skill Sets

Because employers expect new hires to obtain technical knowledge through mandatory training programs, they placed greater emphasis on soft skills and the ability to learn new information. Similar to other executive interviews, employers of safety occupations stressed the need for soft skills such as communication skills, creative thinking and public image awareness. Because safety professionals tend to interact directly with the public, other skills such as cultural sensitivity, memory recall, coherent thinking under stress, and understanding the chain of command were also valued.

The ability to utilize and remain current on technology is described to be an emerging skill set in this occupational cluster. With the number of applications and computer software increasing, having a good command of technology is especially essential during investigative work. For example, employers mentioned the ability to use various social media platforms to obtain information and conduct investigations for cases. The understanding of behavioral health and restorative justice is also another emerging skill set in the cluster.

Although employees generally possess strong technical knowledge, quite a few lack management and leadership skills. The shortage of experienced paramedics applying to become firefighters in the County, and in Southern California, is also a concern for employers.

Education and Training

Required education and training vary based on the occupational classification. Employers recommended that interested individuals review online job postings to obtain a better understanding of requirements. The minimum requirement for most positions is a high school diploma. Those with a high school diploma or equivalent can apply for positions and enter training programs once selected. However, employers also added that applicants with advanced schooling and/or adult education are more competitive, as this illustrates the ability to understand information and shows initiative.

Many community colleges in the county also offer training and academies for individuals interested in obtaining safety occupations. Safety departments generally have contractual or business relationships with these schools, and actively recruit from the graduating class. Refer to Appendix C for a summary of educational and training programs offered in the county.

Career Advancement

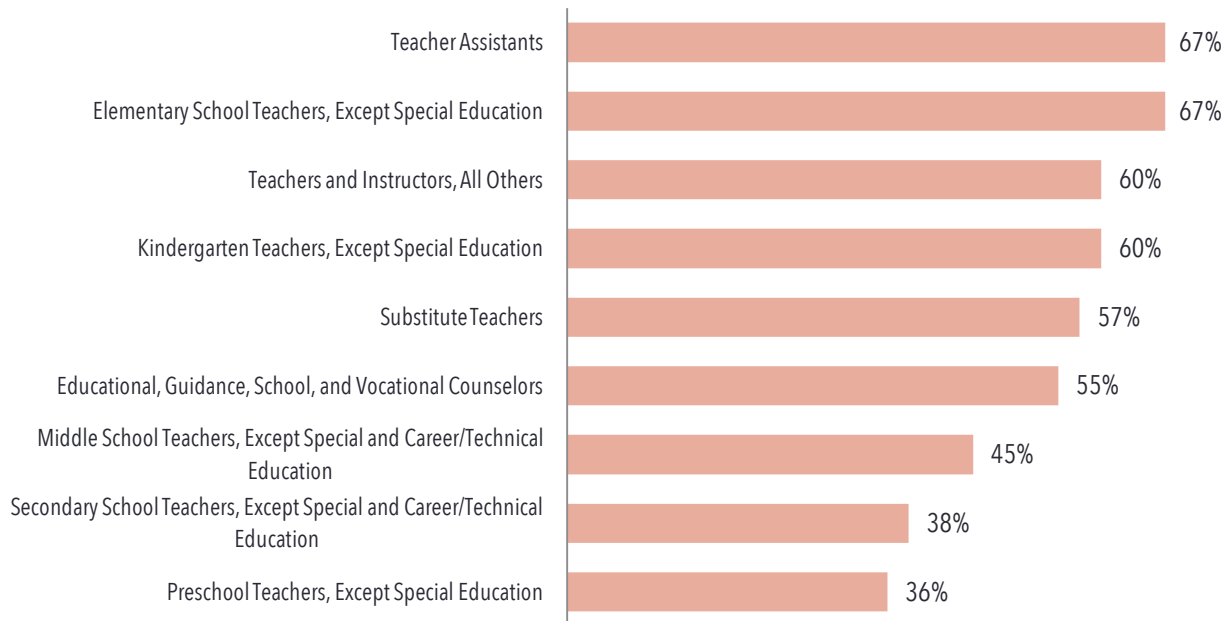
There are significant career advancement opportunities, largely through rank promotional examinations based upon qualifications. Competent employees can obtain specialized roles such as Detentions, Special Weapons and Tactics (SWAT), and Airborne. Eligible employees can also receive promotions to become supervisors in each unit. It is important that employees continue to build upon knowledge and skills to remain competitive for these promotions. Similar to the other occupational clusters, interdepartmental transfers are also possible, with many law enforcement personnel switching career paths to become professional staff members.

K-12 Education Occupations

The education occupational cluster composes a large segment of the jobs employed in the public sector and is projected to add 5,384 jobs — a 13 percent increase — from 2016 to 2026.²⁵

Forty-two responses were obtained from local school districts. Interviews were also conducted with seven employers to obtain a deeper understanding of industry needs. Figure 15 presents the distribution of occupations employed in the K–12 education cluster by survey responses.

Figure 15: Percent of K-12 Educator Occupations Employed by Survey Respondents²⁶



Hiring and Retention

Discussions with industry revealed that the teacher shortage has impacted specific teaching specialties more than others. Based on executive interviews, the following four specialties were the most challenging to fill: 1) mathematics, 2) science, 3) special education and 4) substitute teachers. Due to the extensive demand for these specialties, some districts began hiring interns who have yet to complete their student teaching component to expedite the recruitment process.

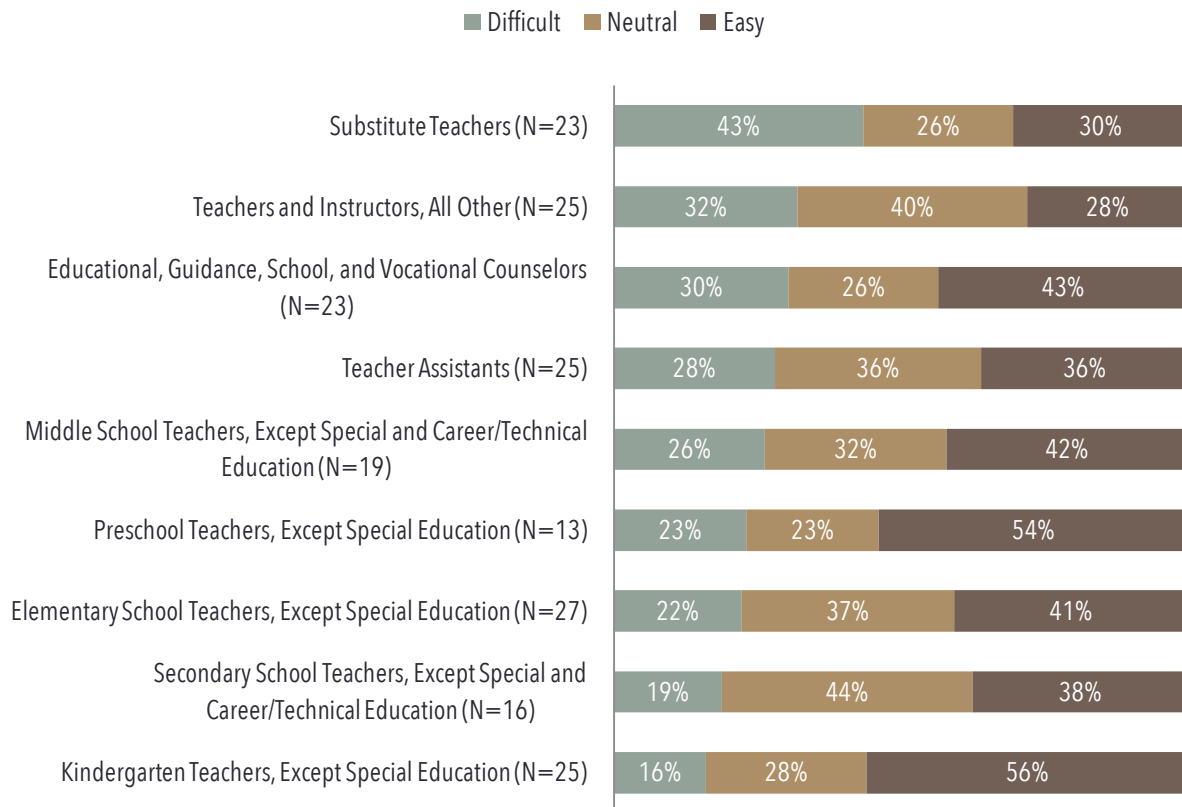
According to employers, it is especially challenging to hire qualified employees for the aforementioned specialties, as few individuals enter education to become teachers in these subjects. To remedy this issue, some employers are planning to recruit out-of-state applicants especially for areas in need. However, this has also created challenges of its own due to San Diego County's higher cost of living. Additionally, many out-of-state applicants do not possess the requisite credentials as requirements differ by state.

²⁵ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

²⁶ n=42

Many districts are also experiencing a shortage of substitute teachers (Figure 16). Some have not been able to send current teachers to professional development opportunities because no one has been available to take over their classes. Employers explained that these positions are generally not suitable for all personalities and do not provide the same level of benefits as regular teaching positions. This discourages individuals from becoming substitute teachers. Consequently, applicants for substitute roles tend to be those without a full-time teaching position or those that graduate mid-year when school districts are not recruiting.

Figure 16: Percent of Employers Having Difficulty Finding Qualified Employees for Specific K-12 Educator Occupations



Knowledge and Skill Sets

Having a genuine fondness for children was first and foremost for employment in education. Subject knowledge, lesson planning and the ability to teach were also commonly mentioned to be critical technical abilities. Top technical skills listed in online job postings for education occupations are included below:²⁷

- Teaching
- Workshops
- Child Development
- Microsoft Excel

²⁷ Burning Glass analyzes job postings data. The top technical skill sets data was pulled for Education occupations between January 1 and December 31, 2016.

Scheduling	Child Care
Early Childhood Education	Supervisory Skills
Lesson Planning	Instruction

In addition to the aforementioned specialized skill sets, collaboration, teamwork and interpersonal skills are tremendously valuable for educators. Employers also seek individuals that value and view partnerships with parents as critical.

Bilingualism was noted as an increasingly esteemed skill set, especially due to San Diego's location on the U.S.-Mexico border. Many students come from diverse communities and various socioeconomic backgrounds and may not be native English speakers. Employers have thus been seeking teachers who have an understanding of the challenges associated with learning a second language, as well as educators who understand and value cultural competency. Districts offering dual immersion programs have also been actively recruiting bilingual teachers, commenting on the difficulty associated with finding qualified employees. Bilingualism is also valued as it allows teachers to communicate not only with the students but also with the parents.

Knowing how to incorporate technology in the classroom was described to be an emerging yet tremendously important skill set. This includes the ability to use projectors, smart boards and online resources to enhance student learning. In addition to utilizing technology in lesson plans, it is also important that individuals are well-versed in Microsoft Office for non-teaching tasks.

Unfortunately, some districts are experiencing a skills gap in technology among job applicants and current employees. As the current educational workforce ages, employers noted a degree of aversion to technology. Some districts have been offering internal training on new technologies to remedy this issue, but explained that not all existing employees are willing to participate. Recent hires, who tend to have more exposure to technology, have also had difficulty utilizing technology as a tool to impact education. Some explained that new hires do not necessarily know how to transform the classroom so that technology becomes a component that is enhancing the program, not simply supplementing it.

Education and Training

All teachers must obtain a bachelor's degree and have the requisite credentials based on the grade level they would like to teach, and whether they would like to work in special education. Candidates must complete a teacher training program approved by the California Commission on Teacher Credentialing (CCTC) after their four-year degree.

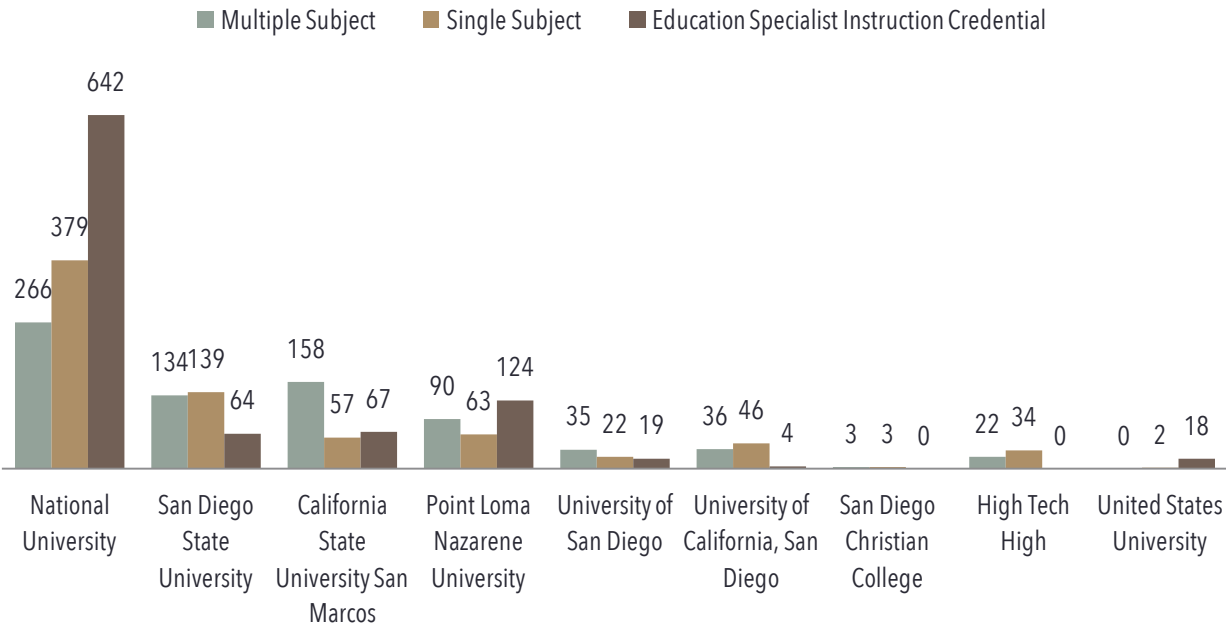
This training can be completed through multiple avenues, such as colleges, universities, school districts or community centers. Upon completing this component, teachers must pass the appropriate certification tests. For instance, elementary school teachers must have a Multiple Subject Teaching Credential and secondary school teachers a Single Subject Teaching Credential. Special education teachers must possess an Education Specialist Instruction Credential. According to local employers, the following are highly valued certifications:

- Cross-cultural, Language and Academic Development (CLAD) certification
- English Learner Authorization if least one student in the class is an English learner

Large suppliers of credentialed graduates in the field include National University, San Diego State University and California State University San Marcos. Some school districts have established partnerships with local universities to recruit qualified graduates for entry-level positions.

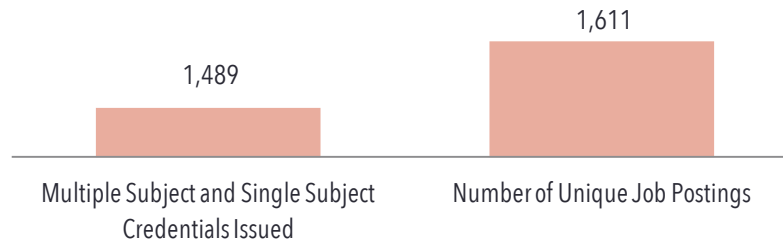
Figure 17 summarizes the number of credential documents issued between July 1, 2015 and June 30, 2016 for teaching at public schools in San Diego County.²⁸ This data includes individuals obtaining their initial certification and individuals who previously held another type of certification. The data is segmented by the credential area and the recommending institution. Findings show that 2,427 credentials were issued during this timeframe for the three credential areas in the county.

Figure 17: Number of K-12 Credentials Issued in San Diego County between July 2015 and June 2016



A supply gap analysis was conducted to better understand the availability of teachers in the region for the occupations highlighted in this report. A supply gap is created when the number of workers trained in programs related to the occupations does not mirror the number of available job openings. Figure 18 shows the number of Multiple Subject and Single Subject credentials²⁹ issued between July 1, 2015 and June 30, 2016 compared with the number of unique job postings in the county.³⁰ As these credentials are for K-12 teaching positions, data was obtained for the following occupations: 1) Kindergarten Teachers, Except Special Education, 2) Elementary School Teachers, Except Special Education, 3) Middle School Teachers, Except Special and Career/Technical Education, and 4) Secondary School Teachers, Except Special and Career/Technical Education.

²⁸ California Commission on Teacher Credentialing
²⁹ California Commission on Teacher Credentialing
³⁰ Burning Glass Labor Insight

Figure 18: Supply and Demand for K-12 Education Occupations (July 2015–June 2016)

Findings suggest an undersupply of trained individuals for the occupations listed above. It should be noted, however, that the number of unique job postings reported includes vacancies at both public and private schools. Thus, a percentage of the 1,611 job postings could be for private schools. Based on the data obtained, San Diego County will not be able to keep up with the demand for education occupations if local programs continue to produce this many workers moving forward.

Career Advancement

There are various advancement opportunities for educators in this occupational cluster. Teachers can obtain credentials in non-teaching services to support student learning. Many employers referred to the Administrative Services Credential as a commonly opted path for teachers. Employers also mentioned that teachers can opt to work in areas of curriculum development or as mentors. Teachers not interested in the aforementioned roles can become team leaders in a professional learning community, which are meetings for educators to share expertise and collaborate, and receive stipends.

In addition to obtaining the requisite credential, employees that possess strong critical thinking, problem solving and communication skills are most competitive for these opportunities. It is important to note, however, that advancement also depends on the availability and number of positions.

CONCLUSION AND RECOMMENDATIONS

The public sector in San Diego County is growing steadily, and is projected to grow by 6.5 percent from 2016 to 2026.³¹ The five occupational clusters (comprised of 36 in-demand occupations indicated in Appendix A) are projected to add 10,649 jobs in the county during this timeframe.³² With a stable increase in employment numbers forecasted, it is important to ensure that job seekers are equipped with the knowledge and skills to become competitive candidates for these roles. Out of the 102 employers surveyed in the sector, nearly 62 percent are experiencing challenges finding and recruiting qualified employees, further highlighting this need.

Valued technical skills and education requirements differ significantly by occupation, and are presented in Appendix A. However, employers across multiple occupational groups commonly mentioned the following competencies as critical for success in the public sector:

- Creative thinking
- Political acumen
- Customer service
- Communication skills
- Teamwork

Ample career advancement opportunities exist within the public sector, with qualified employees eligible for promotions or interdepartmental transfers. Many public sector employees change career paths and departments during their time of employment. However, these opportunities largely depend on the organization, the availability of positions and budget constraints.

Key findings from this report lead to the following recommendations for workforce development and job seekers.

Workforce Development

Provide more training for soft skills and stress their importance: While technical skills are an important component of the public sector, employers commonly cited the lack of soft skills among job applicants and current employees. Education and training programs in the county should further stress the importance of soft skills and dedicate time to equip students with core competencies such as communication, management and leadership. Some employers mentioned the need to develop these skills at the K-12 level to establish a strong foundation for higher education and the workplace. Furthermore, a number of employers strongly emphasized the lack of writing skills among university graduates, and suggested that education and training programs place greater emphasis on improving practical writing skills, such as memo or technical writing, commonly used in the workforce.

Incorporate an internship component to training and education programs: Internships are a valuable component of learning and should be incorporated into training programs. Encouraging students to seek internships will ensure that graduates have a more realistic understanding of the industry. This is especially important as many employers commented on the stark difference between the private and

³¹ Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

³² Source: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

public sectors. By participating in internships, students can also further develop and apply the skills and knowledge obtained during their education program to a professional setting, and can obtain tangible work experience.

Develop computer literacy among job seekers: All occupational clusters mentioned the importance of computer literacy in the workplace. While the level of application differs by the occupation and the responsibilities entailed, developing computer literacy among job seekers is critical. Examples of computer skills mentioned across various occupational groups include operating Microsoft Office, specifically Microsoft Word, Microsoft Excel, Microsoft Outlook, and conducting web searches. Individuals interested in securing employment in the public sector should review job postings to learn more about the computer skills desired for each position, and aim to develop these skills. Computer literacy is critical, with some employers experiencing challenges due to current employees refusing to learn and incorporate computer skills.

Train teachers to utilize technology in classroom: With K-12 programs increasingly incorporating technology into the classroom, it is especially important for teachers to know how to effectively utilize these tools. Furthermore, employers mentioned that many educators lack the ability to use technology to enhance and impact student learning. While colleges and universities training prospective teachers also use technology as a learning tool, employers did not believe these institutions set a valuable example to students.

Job Seekers

Develop soft skills: Job seekers interested in the public sector should focus on improving key soft skills, such as communication and management skills. With many employers reporting a lack of the aforementioned competencies among job applicants and current employees, individuals possessing these skill sets can become more competitive candidates. Strong soft skills will continue to help individuals throughout their career, and make them strong competitors for career advancement and promotional opportunities. In addition to the core set of soft skills mentioned throughout the report, job seekers should also focus on improving their writing skills through coursework, finding exercises online to practice with, or by working with someone who can critique their writing and help them improve their writing skills.

Obtain industry-specific professional licensure and certifications: More than 50 percent of the employers surveyed reported that candidates lack the necessary certification(s) for the position, resulting in more difficulty finding and recruiting qualified employees. Conversations with industry revealed this to be especially true for occupations identified in the public utilities occupational cluster. Job seekers should obtain certifications or complete training in areas deemed valuable for this occupational group, and should continue to build upon their knowledge even after gaining employment for future advancement in their career.

Understand importance of accountability: It is essential for job seekers to understand the accountability associated with working in the public sector, as this differs significantly from most industries. As public servants, employees must uphold strong integrity, morals and ethics, both in the real and digital realm (such as on social media platforms). Employees are often viewed as the face of the organization, and are expected to maintain these principles.

APPENDIX A: OCCUPATIONAL PROFILES

Sources:

Reported Job Titles: National Center for O*NET Development. O*NET OnLine.

Employment Projections: QCEW Employees & Non-QCEW Employees - EMSI 2017.2 Class of Worker.

Salary: Bureau of Labor Statistics, U.S. Department of Labor, May 2016 Occupational Employment and Wage Estimates for San Diego County







Skill Sets: Burning Glass Labor Insight

Business Operations Specialists, All Other

Standard Occupational Code: 13-1199.00

Other Job Title(s): Data not available

Description: All business operations specialists not listed separately.

Fast Facts		San Diego County		
Current Employment (2016)		5,945		
Projected Employment (2026)		6,077		
Growth Rate (2016-2026)		3%		
Average Annual Openings (2016-2026)		282		
Hourly Pay Range		\$17.76	\$35.37	\$59.98
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Microsoft Excel	Communication Skills
Microsoft Word	Writing
Microsoft PowerPoint	Research
Microsoft Office	Planning
Budgeting	Organizational Skills

Office Clerks, General

Standard Occupational Code: 43-9061.00

Other Job Title(s): Administration Assistant, Administrative Assistant, Clerk, Customer Service Representative, Office Assistant, Office Clerk, Office Coordinator, Office Manager, Receptionist, Secretary

Description: Perform duties too varied and diverse to be classified in any specific office clerical occupation, requiring knowledge of office systems and procedures. Clerical duties may be assigned in accordance with the office procedures of individual establishments and may include a combination of answering telephones, bookkeeping, typing or word processing, stenography, office machine operation, and filing.

Fast Facts	San Diego County			
Current Employment (2016)		7,053		
Projected Employment (2026)		7,669		
Growth Rate (2016-2026)		9%		
Average Annual Openings (2016-2026)		904		
Hourly Pay Range		\$9.51	\$15.51	\$23.49
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Microsoft Excel	Communication Skills
Data Entry	Organizational Skills
Microsoft Office	Detail-Oriented
Customer Service	Computer Skills
Scheduling	Writing

Secretaries and Administrative Assistants, Except Legal, Medical, and Executive

Standard Occupational Code: 43-6014.00

Other Job Title(s): Administrative Assistant, Administrative Associate, Administrative Secretary, Administrative Specialist, Administrative Technician, Clerk Typist, Department Secretary, Office Assistant, Secretary, Staff Assistant

Description: Perform routine clerical and administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers.

Fast Facts	San Diego County			
Current Employment (2016)		6,061		
Projected Employment (2026)		6,618		
Growth Rate (2016-2026)		9%		
Average Annual Openings (2016-2026)		443		
Hourly Pay Range		\$11.42	\$18.34	\$28.24
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Administrative Support	Communication Skills
Microsoft Excel	Organizational Skills
Microsoft Office	Writing
Scheduling	Detail-Oriented
Microsoft Word	Computer Skills

Office and Administrative Support Workers, All Other

Standard Occupational Code: 43-9199.00

Other Job Title(s): Data not available.

Description: All office and administrative support workers not listed separately.

Fast Facts		San Diego County		
Current Employment (2016)		4,563		
Projected Employment (2026)		4,897		
Growth Rate (2016-2026)		7%		
Average Annual Openings (2016-2026)		270		
Hourly Pay Range		\$9.23	\$11.11	\$20.60
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies

Technical

Scheduling

Scanners

Repair

Cash Management

Labeling

Non-Technical

Writing

Detail-Oriented

Communication Skills

Troubleshooting







Organizational Skills

Executive Secretaries and Executive Administrative Assistants

Standard Occupational Code: 43-6011.00

Other Job Title(s): Administrative Aide, Administrative Assistant, Administrative Associate, Administrative Coordinator, Administrative Secretary, Executive Administrative Assistant, Executive Assistant, Executive Secretary, Office Manager, Secretary

Description: Provide high-level administrative support by conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings. May also train and supervise lower-level clerical staff.

Fast Facts		San Diego County		
Current Employment (2016)		1,636		
Projected Employment (2026)		1,591		
Growth Rate (2016-2026)		-0.12%		
Average Annual Openings (2016-2026)		82		
Hourly Pay Range		\$19.03	\$27.73	\$38.30
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Administrative Support	Communication Skills
Microsoft Excel	Organizational Skills
Scheduling	Writing
Microsoft PowerPoint	Detail-Oriented
Microsoft Office	Research

Management Analysts

Standard Occupational Code: 13-1111.00

Other Job Title(s): Administrative Analyst, Business Analyst, Employment Programs Analyst, Leadership Development Manager, Management Analyst, Management Consultant, Organizational Development Consultant, Principal Consultant, Program Management Analyst, Quality Control Analyst

Description: Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.

Fast Facts		San Diego County		
Current Employment (2016)		1,795		
Projected Employment (2026)		1,874		
Growth Rate (2016-2026)		4%		
Average Annual Openings (2016-2026)		225		
Hourly Pay Range		\$25.26	\$39.60	\$69.00
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Business Analysis	Communication Skills
Microsoft Excel	Writing
Project Management	Problem Solving
Business Process	Planning
Microsoft Office	Team Work/ Collaboration

General and Operations Managers

Standard Occupational Code: 11-1021.00

Other Job Title(s): Business Manager, Facilities Manager, Facility Manager, General Manager (GM), Operations Director, Operations Manager, Plant Manager, Plant Superintendent, Production Manager, Store Manager

Description: Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services.

Fast Facts	San Diego County			
Current Employment (2016)		1,740		
Projected Employment (2026)		1,861		
Growth Rate (2016-2026)		7%		
Average Annual Openings (2016-2026)		876		
Hourly Pay Range		\$22.97	\$50.27	\$117.21
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Budgeting	Communication Skills
Supervisory Skills	Planning
Operations Management	Writing
Scheduling	Problem Solving
Microsoft Excel	Team Work/ Collaboration

Bookkeeping, Accounting, and Auditing Clerks

Standard Occupational Code: 43-3031.00

Other Job Title(s): Account Clerk, Account Receivable Clerk, Accounting Assistant, Accounting Associate, Accounting Clerk, Accounts Payable Clerk, Accounts Payable Specialist, Accounts Payables Clerk, Accounts Receivable Clerk, Bookkeeper

Description: Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

Fast Facts		San Diego County		
Current Employment (2016)		2,027		
Projected Employment (2026)		1,996		
Growth Rate (2016-2026)		-2%		
Average Annual Openings (2016-2026)		155		
Hourly Pay Range		\$12.31	\$20.25	\$29.17
		Entry-level	Median	Experienced
Typical Educational Attainment		Some college, no degree		

Top Skills and Competencies







Technical	Non-Technical
Accounting	Communication Skills
Microsoft Excel	Detail-Oriented
Accounts Payable / Accounts Receivable	Organizational Skills
Data Entry	Research
Microsoft Office	Writing

First-Line Supervisors of Office and Administrative Support Workers

Standard Occupational Code: 43-1011.00

Other Job Title(s): Accounting Manager, Accounts Payable Supervisor, Accounts Receivable Manager, Administrative Supervisor, Customer Service Manager, Customer Service Supervisor, Office Coordinator, Office Manager, Office Supervisor, Staff Services Manager

Description: Directly supervise and coordinate the activities of clerical and administrative support workers.

Fast Facts	San Diego County			
Current Employment (2016)		1,653		
Projected Employment (2026)		1,771		
Growth Rate (2016-2026)		12%		
Average Annual Openings (2016-2026)		403		
Hourly Pay Range		\$16.65	\$25.91	\$39.49
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Supervisory Skills	Communication Skills
Customer Service	Organizational Skills
Office Management	Writing
Microsoft Excel	Problem Solving
Scheduling	Detail-Oriented

Lawyers

Standard Occupational Code: 23-1011.00

Other Job Title(s): Assistant Attorney General, Assistant Counsel, Associate Attorney, Attorney, Attorney at Law, City Attorney, Deputy Attorney General, General Counsel, Lawyer, Partner

Description: Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, or manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.

Fast Facts	San Diego County			
Current Employment (2016)		1,604		
Projected Employment (2026)		1,775		
Growth Rate (2016-2026)		13%		
Average Annual Openings (2016-2026)		194		
Hourly Pay Range		\$31.21	\$59.71	\$130.22
		Entry-level	Median	Experienced
Typical Educational Attainment		Doctoral or professional degree		

Top Skills and Competencies







Technical	Non-Technical
Litigation	Communication Skills
Legal Research	Writing
Contract Preparation	Research
Contract Drafting	Organizational Skills
Mergers and Acquisitions	Team Work/ Collaboration

Accountants and Auditors

Standard Occupational Code: 13-2011.00

Other Job Title(s): No data available.

Description: Examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others. Install or advise on systems of recording costs or other financial and budgetary data.

Fast Facts	San Diego County			
Current Employment (2016)		1,371		
Projected Employment (2026)		1,473		
Growth Rate (2016-2026)		13%		
Average Annual Openings (2016-2026)		481		
Hourly Pay Range		\$20.70	\$34.38	\$58.47
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Accounting	Communication Skills
Microsoft Excel	Writing
Account Reconciliation	Detail-Oriented
General Ledger	Research
Financial Statements	Organizational Skills

Secondary School Teachers, Except Special and Career/Technical Education

Standard Occupational Code: 25-2031.00

Other Job Title(s): Art Teacher, English Teacher, High School English Teacher, History Teacher, Math Teacher, Science Teacher, Secondary Teacher, Social Studies Teacher, Spanish Teacher, Teacher

Description: Teach students in one or more subjects, such as English, mathematics, or social studies at the secondary level in public or private schools. May be designated according to subject matter specialty.

Fast Facts	San Diego County			
Current Employment (2016)		8,483		
Projected Employment (2026)		9,546		
Growth Rate (2016-2026)		13%		
Average Annual Openings (2016-2026)		360		
Hourly Pay Range		\$25.00	\$36.46	\$47.05
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	English
Lesson Planning	Communication Skills
Instruction	Planning
Supervisory Skills	Writing
Social Studies	Team Work/ Collaboration

Elementary School Teachers, Except Special Education

Standard Occupational Code: 25-2021.00

Other Job Title(s): 1st Grade Teacher, 6th Grade Teacher, Art Teacher, Classroom Teacher, Elementary Education Teacher, Elementary School Teacher, Elementary Teacher, Kindergarten Teacher, Second Grade Teacher, Teacher

Description: Teach students basic academic, social, and other formative skills in public or private schools at the elementary level.

Fast Facts	San Diego County			
Current Employment (2016)		8,021		
Projected Employment (2026)		9,283		
Growth Rate (2016-2026)		16%		
Average Annual Openings (2016-2026)		372		
Hourly Pay Range		\$20.89	\$33.80	\$46.27
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Communication Skills
Lesson Planning	Planning
Instruction	Writing
Supervisory Skills	Building Effective Relationships
Special Education	Team Work/ Collaboration

Teacher Assistants

Standard Occupational Code: 25-9041.00

Other Job Title(s): Educational Technician, Instructional Aide, Instructional Assistant, Paraeducator, Paraprofessional, Special Education Paraprofessional, Special Education Teaching Assistant, Teacher Aide, Teacher Assistant, Teaching Assistant

Description: Perform duties that are instructional in nature or deliver direct services to students or parents. Serve in a position for which a teacher has ultimate responsibility for the design and implementation of educational programs and services.

Fast Facts	San Diego County			
Current Employment (2016)		7,878		
Projected Employment (2026)		8,973		
Growth Rate (2016-2026)		15%		
Average Annual Openings (2016-2026)		406		
Hourly Pay Range		\$9.99	\$13.74	\$19.06
		Entry-level	Median	Experienced
Typical Educational Attainment		Some college, no degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Communication Skills
Special Education	Writing
Child Development	Physical Demand
Child Care	English
Early Childhood Education	Mathematics

Substitute Teachers

Standard Occupational Code: 25-3098.00

Other Job Title(s): No data available.

Description: No data available.

Fast Facts		San Diego County		
Current Employment (2016)		6,945		
Projected Employment (2026)		7,705		
Growth Rate (2016-2026)		11%		
Average Annual Openings (2016-2026)		232		
Hourly Pay Range		\$15.32	\$17.40	\$22.30
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		







Top Skills and Competencies: No data available.

Middle School Teachers, Except Special and Career/Technical Education

Standard Occupational Code: 25-2022.00

Other Job Title(s): English Teacher, Language Arts Teacher, Math Teacher, Middle School Teacher, Music Teacher, Physical Education Teacher, Reading Teacher, Science Teacher, Social Studies Teacher

Description: Teach students in one or more subjects in public or private schools at the middle, intermediate, or junior high level, which falls between elementary and senior high school as defined by applicable laws and regulations.

Fast Facts	San Diego County			
Current Employment (2016)		3,471		
Projected Employment (2026)		4,037		
Growth Rate (2016-2026)		13%		
Average Annual Openings (2016-2026)		164		
Hourly Pay Range		\$21.53	\$31.62	\$43.21
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Communication Skills
Lesson Planning	Mathematics
Instruction	Planning
Special Education	Writing
Supervisory Skills	Team Work/ Collaboration

Teachers and Instructors, All Other

Standard Occupational Code: 25-3099.00

Other Job Title(s): No data available.

Description: No data available.

Fast Facts	San Diego County			
Current Employment (2016)		3,352		
Projected Employment (2026)		3,569		
Growth Rate (2016-2026)		6%		
Average Annual Openings (2016-2026)		184		
Hourly Pay Range		\$11.29	\$25.42	\$48.94
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Writing
Lecturer	Communication Skills
Supervisory Skills	Planning
Lesson Planning	Research
Instruction	Physical Demand

Educational, Guidance, School, and Vocational Counselors

Standard Occupational Code: 21-1012.00

Other Job Title(s): Academic Advisor, Academic Counselor, Advisor, Career Center Director, Career Counselor, Career Services Director, College Counselor, Counselor, Guidance Counselor, School Counselor.

Description: Counsel individuals and provide group educational and vocational guidance services.

Fast Facts		San Diego County		
Current Employment (2016)		1,890		
Projected Employment (2026)		2,090		
Growth Rate (2016-2026)		11%		
Average Annual Openings (2016-2026)		89		
Hourly Pay Range		\$17.04	\$27.39	\$47.98
		Entry-level	Median	Experienced
Typical Educational Attainment		Master's degree		

Top Skills and Competencies







Technical	Non-Technical
Microsoft Office	Communication Skills
Customer Service	Writing
Academic Advisement	Planning
Microsoft Excel	Organizational Skills
Scheduling	Computer Skills

Preschool Teachers, Except Special Education

Standard Occupational Code: 25-2011.00

Other Job Title(s): Early Childhood Teacher, Group Teacher, Head Start Teacher, Headstart Teacher, Lead Teacher, Pre-Kindergarten Teacher, Preschool Teacher, Teacher Assistant, Toddler Teacher

Description: Instruct preschool-aged children in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility. May be required to hold State certification.

Fast Facts		San Diego County		
Current Employment (2016)		866		
Projected Employment (2026)		951		
Growth Rate (2016-2026)		10%		
Average Annual Openings (2016-2026)		178		
Hourly Pay Range		\$9.90	\$16.01	\$23.52
		Entry-level	Median	Experienced
Typical Educational Attainment		Associates degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Communication Skills
Early Childhood Education	Writing
Child Development	Planning
Child Care	Organizational Skills
Lesson Planning	Physical Demand

Kindergarten Teachers, Except Special Education

Standard Occupational Code: 25-2012.00

Other Job Title(s): 4 Year Olds Kindergarten Teacher, Bilingual Kindergarten Teacher, Classroom Teacher, Elementary Teacher, Kinder Teacher, Kindergarten / First Grade Teacher, Kindergarten Teacher, Teacher, Title One Kindergarten Teacher

Description: Teach elemental natural and social science, personal hygiene, music, art, and literature to kindergarten students. Promote physical, mental, and social development. May be required to hold State certification.

Fast Facts	San Diego County			
Current Employment (2016)		865		
Projected Employment (2026)		1,001		
Growth Rate (2016-2026)		16%		
Average Annual Openings (2016-2026)		51		
Hourly Pay Range		\$16.77	\$28.40	\$43.25
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Teaching	Communication Skills
Child Care	Planning
Early Childhood Education	Team Work/ Collaboration
Child Care Facility	Physical Demand
Faculty Training	Writing

Janitors and Cleaners, Except Maids and Housekeeping Cleaner

Standard Occupational Code: 37-2011.00

Other Job Title(s): Building Custodian, Building Service Worker, Building Services Technician, Cleaner, Custodial Worker, Custodian, Floor Tech (Floor Technician), Heavy Duty Custodian, Institutional Custodian, Janitor

Description: Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as cleaning floors, shampooing rugs, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs, and cleaning snow or debris from sidewalk.

Fast Facts		San Diego County		
Current Employment (2016)		5,710		
Projected Employment (2026)		6,422		
Growth Rate (2016-2026)		12%		
Average Annual Openings (2016-2026)		288		
Hourly Pay Range		\$9.25	\$12.45	\$21.38
		Entry-level	Median	Experienced
Typical Educational Attainment		No formal educational credential		

Top Skills and Competencies







Technical	Non-Technical
Cleaning	Physical Demand
Repair	Communication Skills
Equipment Cleaning	English
Inspection	Organizational Skills
Scheduling	Preventive Maintenance

Maintenance and Repair Workers, General

Standard Occupational Code: 49-9071.00

Other Job Title(s): Building Maintenance Mechanic, Building Mechanic, Equipment Engineering Technician, Facilities Manager, Maintenance Engineer, Maintenance Man, Maintenance Mechanic, Maintenance Supervisor, Maintenance Technician, Maintenance Worker

Description: Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.

Fast Facts	San Diego County			
Current Employment (2016)		2,405		
Projected Employment (2026)		2,720		
Growth Rate (2016-2026)		13%		
Average Annual Openings (2016-2026)		478		
Hourly Pay Range		\$11.07	\$18.51	\$29.89
Typical Educational Attainment		High school diploma or equivalent		
		Entry-level	Median	Experienced

Top Skills and Competencies







Technical	Non-Technical
Repair	Preventive Maintenance
Plumbing	Troubleshooting
HVAC	Physical Demand
Inspection	Communication Skills
Painting	Computer Skills

Landscaping and Groundskeeping Workers

Standard Occupational Code: 37-3011.00

Other Job Title(s): Gardener, Greenskeeper, Grounds Maintenance Worker, Grounds Person, Grounds Worker, Grounds/Maintenance Specialist, Groundskeeper, Landscape Specialist, Landscape Technician, Outside Maintenance Worker

Description: Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortar-less segmental concrete masonry wall units.

Fast Facts	San Diego County			
Current Employment (2016)		1,673		
Projected Employment (2026)		1,851		
Growth Rate (2016-2026)		11%		
Average Annual Openings (2016-2026)		178		
Hourly Pay Range		\$9.25	\$12.45	\$21.38
Typical Educational Attainment		No formal educational credential		
		Entry-level	Median	Experienced

Top Skills and Competencies







Technical	Non-Technical
Repair	Physical Demand
Irrigation	Communication Skills
Cleaning	English
Inspection	Organizational Skills
Hand Tools	Writing

Water and Wastewater Treatment Plant and System Operators

Standard Occupational Code: 51-8031.00

Other Job Title(s): Operator, Process Operator, SCADA Operator (Supervisory Control and Data Acquisition Operator), Waste Water Operator, Waste Water Treatment Plant Operator (WWTP Operator), Wastewater Operator, Wastewater Treatment Plant Operator, Water Operator, Water Plant Operator, Water Treatment Plant Operator

Description: Operate or control an entire process or system of machines, often through the use of control boards, to transfer or treat water or wastewater.

Fast Facts	San Diego County			
Current Employment (2016)		1,244		
Projected Employment (2026)		1,369		
Growth Rate (2016-2026)		10%		
Average Annual Openings (2016-2026)		125		
Hourly Pay Range		\$19.13	\$27.01	\$37.51
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Water Treatment	Physical Demand
Wastewater Treatment	Writing
Repair	Communication Skills
Inspection	Troubleshooting
Water Quality	Preventive Maintenance

Civil Engineers

Standard Occupational Code: 17-2051.00

Other Job Title(s): Bridge/Structure Inspection Team Leader, City Engineer, Civil Engineer, Civil Engineering Manager, County Engineer, Design Engineer, Project Engineer, Railroad Design Consultant, Structural Engineer, Traffic Engineer

Description: Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.

Fast Facts	San Diego County			
Current Employment (2016)		1,029		
Projected Employment (2026)		1,106		
Growth Rate (2016-2026)		7%		
Average Annual Openings (2016-2026)		214		
Hourly Pay Range		\$30.44	\$42.66	\$61.89
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Civil Engineering	Communication Skills
Project Management	Writing
AutoCAD	Planning
Budgeting	Research
Professional Engineer	Problem Solving

Electronics Engineers, Except Computer

Standard Occupational Code: 17-2072.00

Other Job Title(s): Design Engineer, Electronics Design Engineer, Engineering Manager, Evaluation Engineer, Integrated Circuit Design Engineer, Product Engineer, Radio Frequency Engineer (RF Engineer), Research and Development Engineer, Test Engineer, Test Engineering Manager

Description: Research, design, develop, or test electronic components and systems for commercial, industrial, military, or scientific use employing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls.

Fast Facts	San Diego County			
Current Employment (2016)		749		
Projected Employment (2026)		761		
Growth Rate (2016-2026)		2%		
Average Annual Openings (2016-2026)		12		
Hourly Pay Range		\$36.34	\$53.96	\$77.83
Typical Educational Attainment		Bachelor's degree		
		Entry-level	Median	Experienced

Top Skills and Competencies







Technical	Non-Technical
Electrical Engineering	Communication Skills
Electronic Engineering	Writing
Simulation	Troubleshooting
Test Equipment	Research
Project Management	Problem Solving

Engineers, All Other

Standard Occupational Code: 17-2199.00

Other Job Title(s): Data not available.

Description: Data not available.

Fast Facts	San Diego County			
Current Employment (2016)		725		
Projected Employment (2026)		743		
Growth Rate (2016-2026)		2%		
Average Annual Openings (2016-2026)		79		
Hourly Pay Range		\$23.64	\$47.93	\$73.90
		Entry-level	Median	Experienced
Typical Educational Attainment		Bachelor's degree		

Top Skills and Competencies







Technical	Non-Technical
Project Management	Communication Skills
Microsoft Office	Writing
Repair	Planning
Scheduling	Troubleshooting
JAVA	Problem Solving

Logisticians

Standard Occupational Code: 13-1081.00

Other Job Title(s): Client Services Administrator, Logistician, Logistics Director, Logistics Team Lead, Logistics Vice President, Operations Vice President, Production Planner, Program Manager, Supervisory Supply Management Specialist, Supportability Engineer

Description: Analyze and coordinate the logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

Fast Facts	San Diego County			
Current Employment (2016)		680		
Projected Employment (2026)		693		
Growth Rate (2016-2026)		2%		
Average Annual Openings (2016-2026)		57		
Hourly Pay Range		\$26.89	\$40.04	\$55.78
Typical Educational Attainment		Bachelor's degree		
		Entry-level	Median	Experienced

Top Skills and Competencies







Technical	Non-Technical
Logistics	Planning
Microsoft Excel	Communication Skills
Scheduling	Problem Solving
Microsoft Office	Organizational Skills
Supply Chain Knowledge	Writing

Air Traffic Controllers

Standard Occupational Code: 53-2021.00

Other Job Title(s): Air Traffic Control Specialist; Air Traffic Control Specialist, Terminal; Air Traffic Control Specialist/Certified Professional Controller; Air Traffic Controller; Air Traffic Controller (Enroute Option); Air Traffic Controller; Air Traffic Controller, Center; Certified Professional Controller; Control Tower Operator; Radar Air Traffic Controller

Description: Control air traffic on and within vicinity of airport and movement of air traffic between altitude sectors and control centers according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and ensure flight safety.

Fast Facts	San Diego County			
Current Employment (2016)		631		
Projected Employment (2026)		638		
Growth Rate (2016-2026)		2%		
Average Annual Openings (2016-2026)		22		
Hourly Pay Range		\$30.73	\$51.48	\$68.85
		Entry-level	Median	Experienced
Typical Educational Attainment		Associates degree		

Top Skills and Competencies







Technical	Non-Technical
Microsoft Excel	Communication Skills
Air Traffic Management	Writing
Microsoft Office	Organizational Skills
Scheduling	Detail-Oriented
Customer Service	Physical Demand

Urban and Regional Planners

Standard Occupational Code: 19-3051.00

Other Job Title(s): City Planner, Community Development Director, Community Development Planner, Housing Development Specialist, Housing Grant Analyst, Neighborhood Planner, Planner, Planning Director, Regional Planner, Urban Design Consultant

Description: Develop comprehensive plans and programs for use of land and physical facilities of jurisdictions, such as towns, cities, counties, and metropolitan areas.

Fast Facts	San Diego County			
Current Employment (2016)		600		
Projected Employment (2026)		649		
Growth Rate (2016-2026)		8%		
Average Annual Openings (2016-2026)		21		
Hourly Pay Range		\$26.10	\$36.13	\$54.84
		Entry-level	Median	Experienced
Typical Educational Attainment		Master's degree		

Top Skills and Competencies







Technical	Non-Technical
Land Use	Planning
Scheduling	Writing
Urban Planning	Communication Skills
Project Management	Research
Microsoft Excel	Problem Solving

Police and Sheriff's Patrol Officers

Standard Occupational Code: 33-3051.00

Other Job Title(s): Alcohol Law Enforcement Agent (ALE Agent), Law Enforcement Officer, Officer, Patrol Officer, Peace Officer, Police Officer, Police Patrol Officer, Public Safety Officer, State Trooper, Uniform Patrol Police Officer

Description: Maintain order and protect life and property by enforcing local, tribal, State, or Federal laws and ordinances. Perform a combination of the following duties: patrol a specific area; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts.

Fast Facts	San Diego County			
Current Employment (2016)		6,231		
Projected Employment (2026)		6,973		
Growth Rate (2016-2026)		12%		
Average Annual Openings (2016-2026)		294		
Hourly Pay Range		\$26.04	\$36.54	\$52.24
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Law Enforcement or Criminal Justice Experience	Writing
Prevention of Criminal Activity	Physical Demand
Public Health and Safety	Communication Skills
Supervisory Skills	Computer Skills
Law Enforcement or Criminal Justice Experience	Building Effective Relationships

Firefighters

Standard Occupational Code: 33-2011.00

Other Job Title(s): No data available.

Description: Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

Fast Facts		San Diego County		
Current Employment (2016)		3,881		
Projected Employment (2026)		4,275		
Growth Rate (2016-2026)		10%		
Average Annual Openings (2016-2026)		164		
Hourly Pay Range		\$20.32	\$29.56	\$44.74
		Entry-level	Median	Experienced
Typical Educational Attainment		Postsecondary non-degree award		

Top Skills and Competencies







Technical	Non-Technical
Fire Suppression	Physical Demand
Inspection	Writing
Cardiopulmonary Resuscitation (CPR)	Communication Skills
Fire Protection	English
HAZMAT	Building Effective Relationships

Detectives and Criminal Investigators

Standard Occupational Code: 33-3021.00

Other Job Title(s): No data available.

Description: Conduct investigations related to suspected violations of Federal, State, or local laws to prevent or solve crimes.

Fast Facts	San Diego County			
Current Employment (2016)		3,600		
Projected Employment (2026)		3,761		
Growth Rate (2016-2026)		4%		
Average Annual Openings (2016-2026)		106		
Hourly Pay Range		\$34.23	\$40.39	\$61.84
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Intelligence Analysis	Research
Surveillance	Writing
Microsoft Office	Communication Skills
Business Planning	Planning
Microsoft Excel	Team Work/ Collaboration

Security Guards

Standard Occupational Code: 33-9032.00

Other Job Title(s): Campus Security Officer, Custom Protection Officer, Customer Service Security Officer, Hotel Security Officer, Loss Prevention Officer, Safety and Security Officer, Security Agent, Security Guard, Security Officer, Security Supervisor

Description: Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules. May operate x-ray and metal detector equipment.

Fast Facts	San Diego County			
Current Employment (2016)		1,587		
Projected Employment (2026)		1,730		
Growth Rate (2016-2026)		14%		
Average Annual Openings (2016-2026)		426		
Hourly Pay Range		\$9.48	\$11.80	\$23.33
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies







Technical	Non-Technical
Handling of Crisis or Emergency Situations	Writing
Notepad	Physical Demand
Law Enforcement or Criminal Justice Experience	Communication Skills
Deterrence of Rule or Safety Violations	English
Report Writing	Detail-Oriented

Correctional Officers and Jailers

Standard Occupational Code: 33-3012.00

Other Job Title(s): Correctional Officer, Correctional Sergeant, Corrections Officer (CO), Custody Assistant, Deputy Jailer, Detention Deputy, Detention Officer, Jail Officer, Jailer, Jailor

Description: Guard inmates in penal or rehabilitative institutions in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point. Includes deputy sheriffs and police who spend the majority of their time guarding prisoners in correctional institutions.

Fast Facts	San Diego County		
Current Employment (2016)		1,222	
Projected Employment (2026)		1,457	
Growth Rate (2016-2026)		19%	
Average Annual Openings (2016-2026)		66	
Hourly Pay Range		\$26.78	\$40.44
		Entry-level	Median
Typical Educational Attainment		\$42.92	
		Experienced	
		High school diploma or equivalent	

Top Skills and Competencies







Technical	Non-Technical
Supervisory Skills	Writing
Criminal Justice	Communication Skills
Public Health and Safety	Preparing Reports
Inspection	Problem Solving
Law Enforcement or Criminal Justice Experience	Building Effective Relationships

Police, Fire, and Ambulance Dispatchers

Standard Occupational Code: 43-5031.00

Other Job Title(s): 911 Dispatcher, Communications Officer, Communications Operator, Communications Specialist, Communications Supervisor, Dispatcher, Emergency Communications Operator (ECO), Police Dispatcher, Public Safety Dispatcher, Telecommunicator

Description: Operate radio, telephone, or computer equipment at emergency response centers. Receive reports from the public of crimes, disturbances, fires, and medical or police emergencies. Relay information to law enforcement and emergency response personnel. May maintain contact with caller until responders arrive.

Fast Facts	San Diego County			
Current Employment (2016)		971		
Projected Employment (2026)		997		
Growth Rate (2016-2026)		3%		
Average Annual Openings (2016-2026)		37		
Hourly Pay Range		\$19.66	\$25.94	\$35.64
		Entry-level	Median	Experienced
Typical Educational Attainment		High school diploma or equivalent		

Top Skills and Competencies:

Technical	Non-Technical
Law Enforcement or Criminal Justice Experience	Writing
Prevention of Criminal Activity	Physical Demand
Public Health and Safety	Communication Skills
Supervisory Skills	Computer Skills
Law Enforcement or Criminal Justice Experience	Building Effective Relationships

APPENDIX B: METHODOLOGY

The research design followed a mixed-methods approach using qualitative and quantitative analyses to better understand the public sector, identify and assess the specific skills and knowledge valued by employers, perform a jobs gap assessment, and conduct a career pathways analysis. The research study relied on a combination of surveys, semi-structured interviews, and quantitative analyses to elucidate the major phases of research identified below.

1. Defining Occupations

In the first phase of the research project, UC San Diego Extension identified a large number of occupations employed in the Public sector utilizing Economic Modeling Specialist Intl. (Emsi). The research team subsequently worked with the San Diego Workforce Partnership and Advisory Committee members to narrow the list of occupations for the report. The following table lists the industry codes used in this study to obtain the list of occupations employed:

6-digit NAICS	Description
491110	Postal Service
901149	US Postal Service
901199	Federal Government, Civilian, Excluding Postal Service
901200	Federal Government, Military
902611	Elementary and Secondary Schools (State Government)
902612	Colleges, Universities, and Professional Schools (State Government)
902619	All Other Schools and Educational Support Services (State Government)
902622	Hospitals (State Government)
902999	State Government, Excluding Education and Hospitals
903611	Elementary and Secondary Schools (Local Government)
903612	Colleges, Universities, and Professional Schools (Local Government)
903619	All Other Schools and Educational Support Services (Local Government)
903622	Hospitals (Local Government)
903999	Local Government, Excluding Education and Hospitals

With input from the San Diego Workforce Partnership and industry experts, the research team focused on 36 in-demand occupations for the study. Due to the extensive list of occupations identified, those with similar characteristics were grouped to form an occupational cluster, listed below by SOC:

Occupational Cluster	SOC	Description
Administrative	13-1199	Business Operations Specialists, All Other
	43-9061	Office Clerks, General
	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
	43-9199	Office and Administrative Support Workers, All Other
	43-6011	Executive Secretaries and Executive Administrative Assistants
	13-1111	Management Analysts
	11-1021	General and Operations Managers
	43-3031	Bookkeeping, Accounting, and Auditing Clerks
	43-1011	First-Line Supervisors of Office and Administrative Support Workers
	23-1011	Lawyers
	13-2011	Accountants and Auditors
Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education
	25-2021	Elementary School Teachers, Except Special Education
	25-9041	Teacher Assistants
	25-3098	Substitute Teachers
	25-2022	Middle School Teachers, Except Special and Career/Technical Education
	25-3099	Teachers and Instructors, All Other
	21-1012	Educational, Guidance, School, and Vocational Counselors
	25-2011	Preschool Teachers, Except Special Education
	25-2012	Kindergarten Teachers, Except Special Education
Maintenance/Landscaping	37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners
	49-9071	Maintenance and Repair Workers, General
	37-3011	Landscaping and Groundskeeping Workers
Public Works	51-8031	Water and Wastewater Treatment Plant and System Operators
	17-2051	Civil Engineers
	17-2072	Electronics Engineers, Except Computer
	17-2199	Engineers, All Other
	13-1081	Logisticians
	53-2021	Air Traffic Controllers
	19-3051	Urban and Regional Planners
Safety	33-3051	Police and Sheriff's Patrol Officers
	33-2011	Firefighters
	33-3021	Detectives and Criminal Investigators
	33-9032	Security Guards
	33-3012	Correctional Officers and Jailers
	43-5031	Police, Fire, and Ambulance Dispatchers

2. Overall assessment of Employers' Workforce Needs

The research team obtained a database of employers in the Public sector from ReferenceUSA. As the study was initially conducted based on Emsi's classifications of the industry group, the research team identified the following North American Industry Classification Systems (NAICS) codes for this phase:

NAICS 92 - Public Administration

NAICS 611000 - Educational Services (including private, state, and local government schools)

The database was cleaned to remove mis-categorized and private entities. Contact information, such as e-mail addresses and phone numbers, of human resources personnel or senior level employees was acquired from online web searches. This database was utilized to conduct interviews and surveys.

Interviews: A sample of employers in the public sector was interviewed to obtain insight based on stratified random sampling. The research team worked closely with the San Diego Workforce Partnership and industry experts to create an interview guide that would best capture industry trends and workforce needs. Interviews discussed hiring and retention trends, education and skill set requirements valued, and advancement opportunities and career pathways. Each interview was semi-structured creating a common core of questions but leaving latitude to explore differences in attitudes, perceptions, and challenges.

Surveys: A survey was also developed to better understand the occupational landscape and workforce needs of employers in this industry group. The research team worked with the San Diego Workforce Partnership to construct the survey, including items relating to a) identifying occupations employed in the public sector, b) assessing occupations with challenges finding qualified employees, c) uncovering hiring and retention concerns, and d) examining career development opportunities and various career pathways. The survey also took into consideration interview responses from employers.

The survey was distributed via Qualtrics to 805 public sector establishments in San Diego County. The research team received 102 completed responses. Responses were collapsed across individual survey items to create a single composite score for each construct, rather than attempting to interpret individual scores from multiple questions. Preliminary data was scored and presenting using exploratory data analysis.

Collectively, the utility of interviews and the survey enabled a nuanced and sophisticated understanding of employer perceptions, education and skill requirements, and career advancement opportunities.

Specific In-Demand Skill Sets: Job market intelligence data from Burning Glass was utilized to uncover the top technical and soft skills in-demand for each occupation from online job postings.

3. Career Pathway Diagrams

Using employer feedback and occupational data from secondary sources, the research team obtained career pathway diagrams to illustrate various insertion points for various occupations. These diagrams serve as a guidepost for those seeking employment in the public sector and identify clear channels to specific occupations.

APPENDIX C: TRAINING AND EDUCATION PROGRAMS

Administrative Occupations

Institution	Accountants and Auditors (CIP: 52.0301, 52.0304, 52.0305, 52.1601)	Bookkeeping, Accounting, and Auditing Clerks (CIP: 52.0302)	Business Operations Specialists, All Other (CIP: 52.9999)	Executive Secretaries and Executive Administrative Assistants (CIP: 52.0401, 51.0716)
Ashford University	Bachelor's Master's		Bachelor's	
California College San Diego	Bachelor's		Associates	
Cuyamaca College	Certificate Associates	Certificate Associates		Certificate Associates
Grossmont College	Certificate Associates			Certificate Associates
MiraCosta College	Certificate Associates	Certificate Associates		Certificate Associates
National University	Certificate Bachelor's Masters			
Occupational Training Services Inc		Certificate		Certificate
Palomar College	Certificate Associates	Certificate		Certificate Associates
Point Loma Nazarene University	Bachelor's			
San Diego City College	Certificate	Certificate Associates		Certificate Associates
San Diego Continuing Education				Certificate
San Diego Mesa College	Certificate Associates	Certificate Associates		Certificate Associates
San Diego Miramar College	Certificate Associates	Certificate Associates		Certificate Associates
San Diego State University	Certificate Bachelor's Master's		Master's	
Southwestern College	Certificate Associates	Certificate Associates		Certificate Associates
University of Phoenix-San Diego Campus	Associates Bachelor's Master's			
University of San Diego	Bachelor's Master's			

Institution	First-Line Supervisors of Office and Administrative Support Workers (CIP: 52.0204, 52.0207)	General and Operations Managers (CIP: 52.0201, 52.0101, 44.0101)	Lawyers (CIP 22.0001, 22.0101, 22.0201, 22.0202, 22.0203, 22.0205, 22.0206, 22.0208, 22.0209, 22.0210, 22.0211)	Management Analysts (CIP: 52.0201, 52.0213, 52.0101)
Alliant International University-San Diego		Bachelor's Master's Doctoral	Doctoral	Bachelor's Master's Doctoral
Argosy University-San Diego		Associates Bachelor's Master's Doctoral		Associates Bachelor's Master's Doctoral
Ashford University	Bachelor's	Bachelor's Master's		Associates Bachelor's Master's
Brightwood College-San Diego		Associates		Associates
California College San Diego		Associates Bachelor's		Associates Bachelor's
California International Business University		Bachelor's Master's		Doctoral
California Miramar University		Associates Bachelor's Master's Doctoral		Associates Bachelor's Master's
California State University-San Marcos		Bachelor's Master's		Bachelor's Master's
California Western School of Law			Master's Doctoral	
Coleman University		Master's		Master's
Cuyamaca College	Certificate Associates	Certificate Associates		Associates Bachelor's
Grossmont College		Certificate Associates		Certificate Associates
Horizon University				Bachelor's
MiraCosta College	Certificate Associates	Certificate Associates		Certificate Associates
National University	Bachelor's	Certificate Associates Bachelor's Master's		Certificate Associates Bachelor's Master's
Newbridge College-San Diego East		Certificate		Certificate
Palomar College	Certificate	Certificate Associates	Associates	Certificate Associates

Point Loma Nazarene University		Bachelor's Master's		Bachelor's Master's
San Diego Christian College		Bachelor's		Bachelor's
San Diego City College	Certificate	Certificate Associates		Certificate Associates
San Diego Mesa College		Certificate Associates		Certificate Associates
San Diego Miramar College		Certificate Associates		Certificate Associates
San Diego State University		Bachelor's Master's		Bachelor's Master's
Southwestern College	Certificate Associates	Certificate Associates		Certificate Associates
Thomas Jefferson School of Law			Master's Doctoral	
United Education Institute-Chula Vista		Associates		Associates
United States University		Bachelor's Master's		Bachelor's Master's
University of California-San Diego		Master's	Master's	Master's
University of Phoenix-San Diego Campus		Certificate Associates Bachelor's Master's		Certificate Associates Bachelor's Master's
University of San Diego		Bachelor's Master's	Master's Doctoral	Bachelor's Master's

Institution	Office and Administrative Support Workers, All Other (CIP: 52.0408, 52.0499)	Office Clerks, General (CIP: 52.0408)	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (CIP: 52.0401)
Cuyamaca College			Certificate Associates
Grossmont College			Certificate Associates
MiraCosta College			Certificate Associates
Newbridge College-San Diego East	Certificate		
Occupational Training Services Inc			Certificate
Palomar College			Certificate Associates
San Diego City College			Certificate

				Associates
San Diego Continuing Education				Certificate
San Diego Mesa College				Certificate Associates
San Diego Miramar College				Certificate Associates
Southwestern College				Certificate Associates
United Education Institute- Chula Vista	Certificate		Certificate	
United Education Institute- UEI College San Marcos	Certificate		Certificate	

Education Occupations

				Middle School Teachers, Except Special and Career/Technical Education (CIP: 13.0101, 13.1302, 13.1305, 13.1307, 13.1309, 13.1311, 13.1312, 13.1314, 13.1315, 13.1316, 13.1321, 13.1399)
Institution	Educational, Guidance, School, and Vocational Counselors (CIP: 13.1101, 13.1102, 13.1199, 44.0000)	Elementary School Teachers, Except Special Education (CIP: 13.0101, 13.1202, 13.1206)	Kindergarten Teachers, Except Special Education (CIP: 13.0101, 13.1210)	
Alliant International University-San Diego	Certificate	Certificate Master's	Master's	Certificate Master's Doctoral
Argosy University-San Diego	Master's			
Ashford University		Bachelor's Master's	Associates Bachelor's Master's	Bachelor's Master's
California State University-San Marcos		Master's	Master's	Master's
Cuyamaca College	Associates	Associates	Associates	Associates
Life Purpose Institute Inc	Certificate			
MiraCosta College	Associates			Associates
National University	Certificate	Certificate Bachelor's Master's	Certificate Associates Bachelor's Master's	Certificate Bachelor's Master's
Palomar College		Associates	Associates	Associates

Point Loma Nazarene University		Bachelor's Master's	Master's	Bachelor's Master's
San Diego Christian College		Certificate Bachelor's		
San Diego City College	Certificate Associates			
San Diego State University	Master's	Master's Doctoral	Certificate Bachelor's Master's Doctoral	Bachelor's Master's Doctoral
Southwestern College	Associates			
United States University		Master's	Master's	Certificate Master's
University of California-San Diego		Master's Doctoral	Master's Doctoral	Master's Doctoral
University of Phoenix-San Diego Campus	Bachelor's	Master's Certificate	Master's	
University of San Diego	Certificate Master's	Master's	Master's	Master's

Institution	Preschool Teachers, Except Special Education (CIP: 13.0101, 13.1210, 19.0706, 19.0708)	Secondary School Teachers, Except Special and Career/Technical Education (CIP: 13.0101, 13.1205, 13.1206, 13.1301, 13.1302, 13.1303, 13.1305, 13.1307, 13.1309, 13.1311, 13.1312, 13.1314, 13.1315, 13.1316, 13.1321, 13.1322, 13.1399)	Substitute Teachers (CIP: 13.1001)
Alliant International University-San Diego	Master's	Certificate Master's Doctoral	Certificate Master's
Ashford University	Associates Bachelor's Master's	Bachelor's Master's	
California State University-San Marcos	Master's	Master's	
Cuyamaca College	Certificate Associates	Associates	
Grossmont College	Certificate Associates		
MiraCosta College	Certificate Associates	Associates	
National University	Certificate Associates	Certificate Bachelor's	Certificate Master's

	Bachelor's Master's	Master's	
Palomar College	Certificate Associates	Associates	
Point Loma Nazarene University	Bachelor's Master's	Bachelor's Master's	Master's
San Diego Christian College		Certificate	
San Diego City College	Certificate Associates		
San Diego Mesa College	Certificate Associates		
San Diego Miramar College	Certificate Associates		
San Diego State University	Certificate Bachelor's Master's Doctoral	Bachelor's Master's Doctoral	
Southwestern College	Certificate Associates		
United States University	Master's	Certificate Master's	
University of California-San Diego	Master's Doctoral	Master's Doctoral	
University of Phoenix-San Diego Campus	Master's	Certificate Master's	
University of San Diego	Master's	Master's	

Institution	Teacher Assistants (CIP: 13.1501)	Teachers and Instructors, All Other (CIP: 13.0201, 13.0202, 13.1001, 13.1299, 13.9999)
Alliant International University-San Diego		Certificate Master's Doctoral
Ashford University		Certificate Bachelor's Master's
National University		Certificate Master's
Palomar College		Certificate Associates
Point Loma Nazarene University		Master's
San Diego City College	Associates	
San Diego Mesa College		Certificate Associates
San Diego State University		Certificate Master's

Southwestern College	Certificate	
University of San Diego		Certificate Master's
University of California-San Diego		Certificate
California State University-San Marcos		Certificate

Maintenance and Landscaping Occupations

Institution	Landscaping and Groundskeeping Workers (CIP: 01.0605, 01.0607)	Maintenance and Repair Workers, General (CIP: 46.0401)
CET-Escondido		Certificate
CET-San Diego		Certificate
Cuyamaca College	Certificate Associates	
MiraCosta College	Certificate Associates	
Southwestern College	Certificate Associates	

Public Utilities Occupations

Institution	Civil Engineers (CIP: 14.0801)	Electronics Engineers, Except Computer (CIP: 14.1001, 14.1004)	Engineers, All Other (CIP: 14.0101, 14.1201, 14.2701, 14.3301, 14.3601, 14.9999)
Cuyamaca College	Certificate Associates	Certificate Associates	Certificate Associates
National University			Bachelor's
Palomar College			Associates
Point Loma Nazarene University			Bachelor's
San Diego City College		Certificate Associates	Certificate Associates
San Diego Mesa College			Certificate Associates
San Diego Miramar College			Associates
San Diego State University	Bachelor's Master's	Bachelor's Master's	Bachelor's Master's Doctoral
Southwestern College			Associates
University of California-San Diego		Bachelor's Master's Doctoral	Bachelor's Master's Doctoral

University of San Diego

Bachelor's

Bachelor's

Institution	Logisticians (CIP: 52.0203, 52.0205)	Urban and Regional Planners (CIP: 04.0301)	Water and Wastewater Treatment Plant and System Operators (CIP: 15.0506)
Ashford University	Bachelor's		
Cuyamaca College			Certificate Associates
Palomar College			Certificate Associates
San Diego State University	Master's	Master's	
Southwestern College	Certificate Associates		
University of San Diego	Master's		

Safety Occupations

Institution	Correctional Officers and Jailers (CIP: 43.0102, 43.0110, 43.0199)	Detectives and Criminal Investigators (CIP: 43.0107, 43.0111)	Firefighters (CIP: 43.0103)
Argosy University-San Diego	Bachelor's		
Brightwood College-San Diego	Associates		
Brightwood College-Vista	Associates		
Grossmont College	Certificate Associates	Certificate Associates	
MiraCosta College		Certificate Associates	
National University	Master's		
Palomar College	Associates	Certificate Associates	Certificate Associates Academy
San Diego Miramar College	Certificate Associates	Certificate Associates	Certificate Associates Academy
San Diego State University			Academy
Southwestern College	Certificate	Certificate Associates	Certificate Associates Academy
University of Phoenix-San Diego Campus	Bachelor's		

Institution	Police and Sheriff's Patrol Officers (CIP: 43.0107, 43.0111)	Security Guards (CIP: 43.0102, 43.0112)
Grossmont College	Certificate Associates	Certificate Associates
MiraCosta College	Certificate Associates	
National University		Bachelor's
Palomar College	Certificate Associates Academy	Certificate
San Diego Miramar College	Certificate Associates Academy	
Southwestern College	Certificate Associates Academy	
San Diego State University	Bachelor's Master's	
United Education Institute-Chula Vista		Certificate
United Education Institute-UEI College San Marcos		Certificate
University of Phoenix-San Diego Campus		Master's

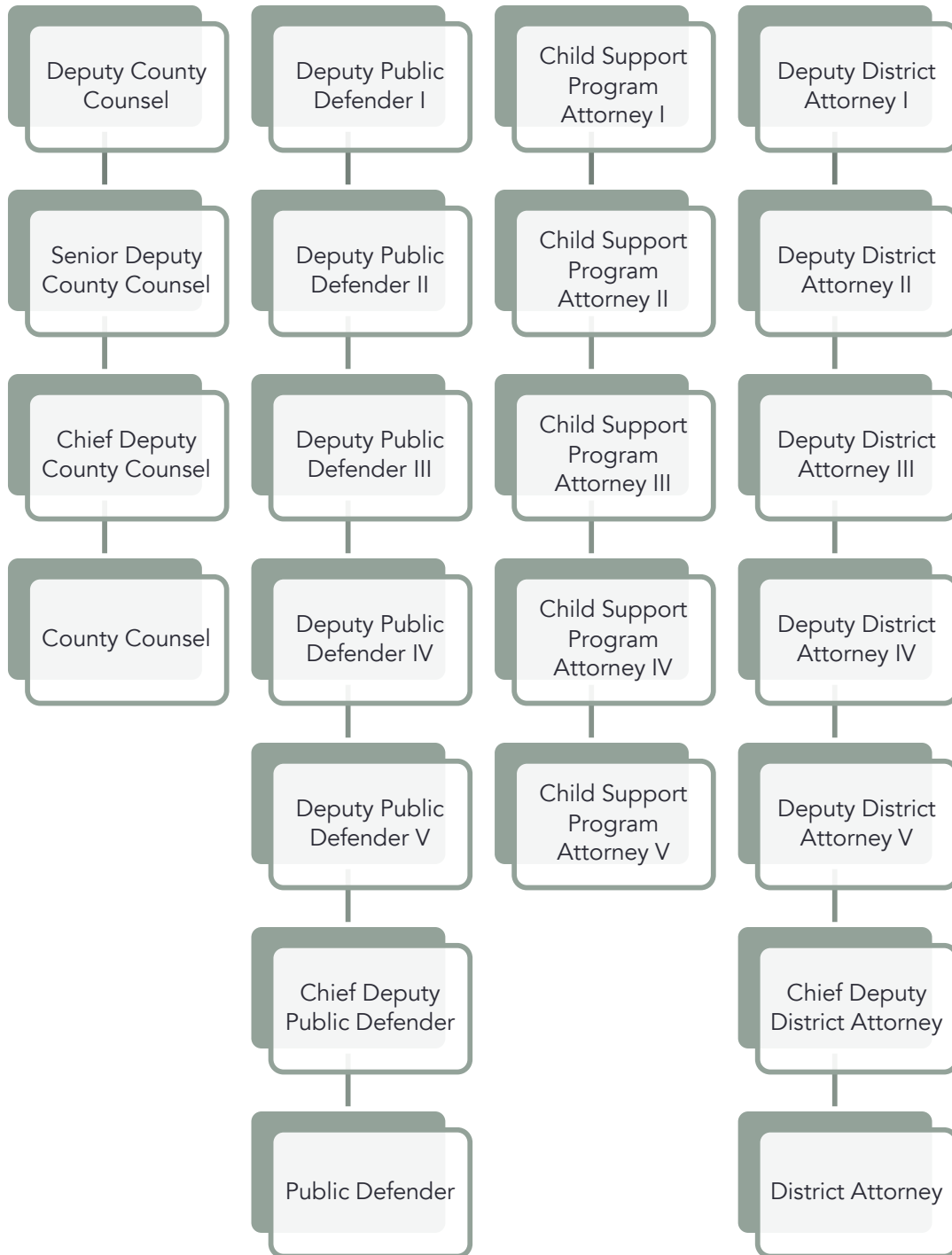
APPENDIX D: EXAMPLES OF CAREER PATHWAYS IN PUBLIC SECTOR³³

Accounting Career Pathway

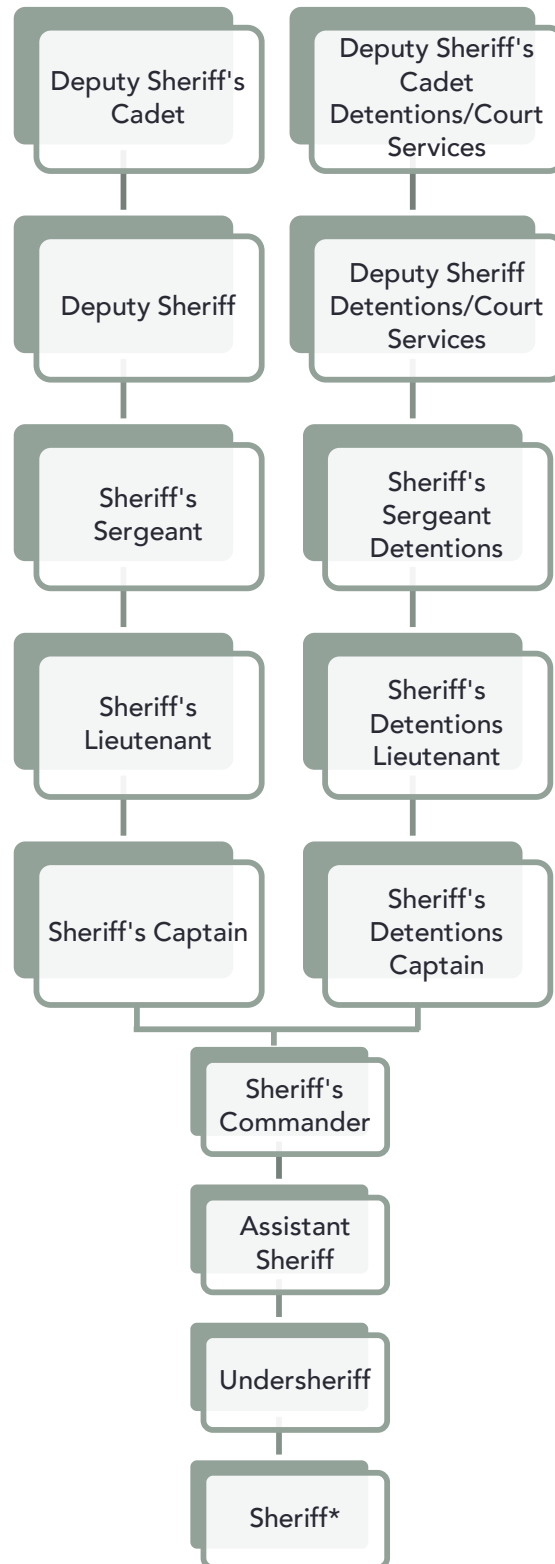


³³ Source: County of San Diego, Department of Human Resources. For more information, go to: www.sdcounty.ca.gov/hr

Attorney Career Pathway

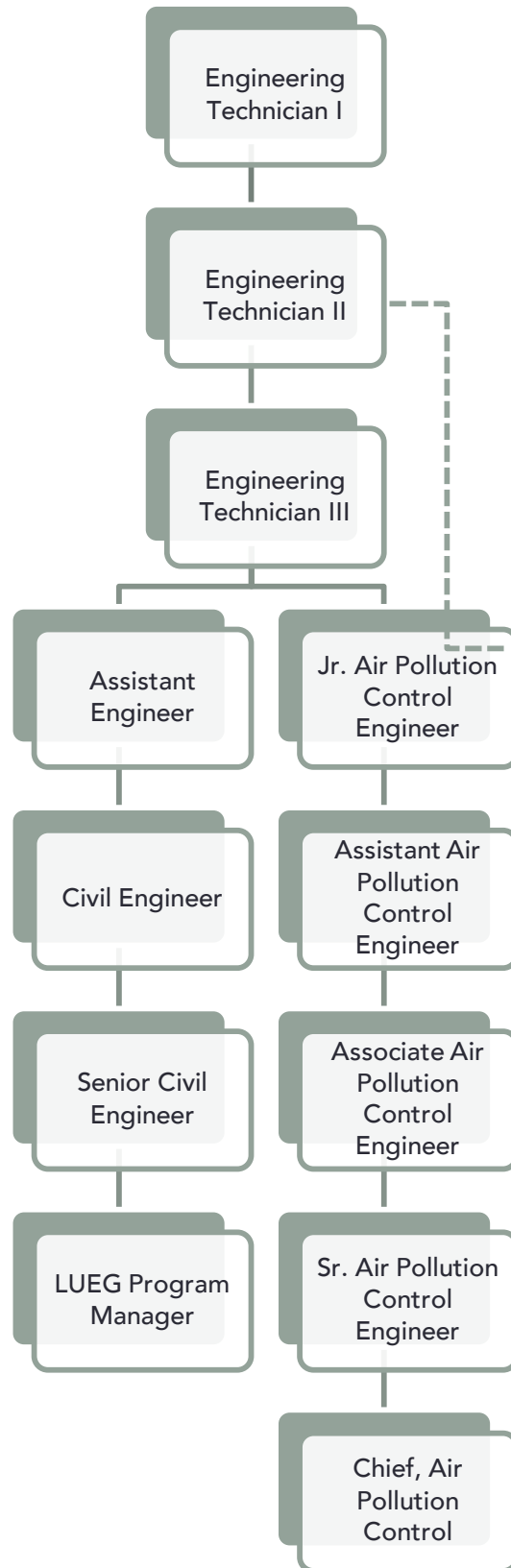


Deputy Sheriff Career Pathway



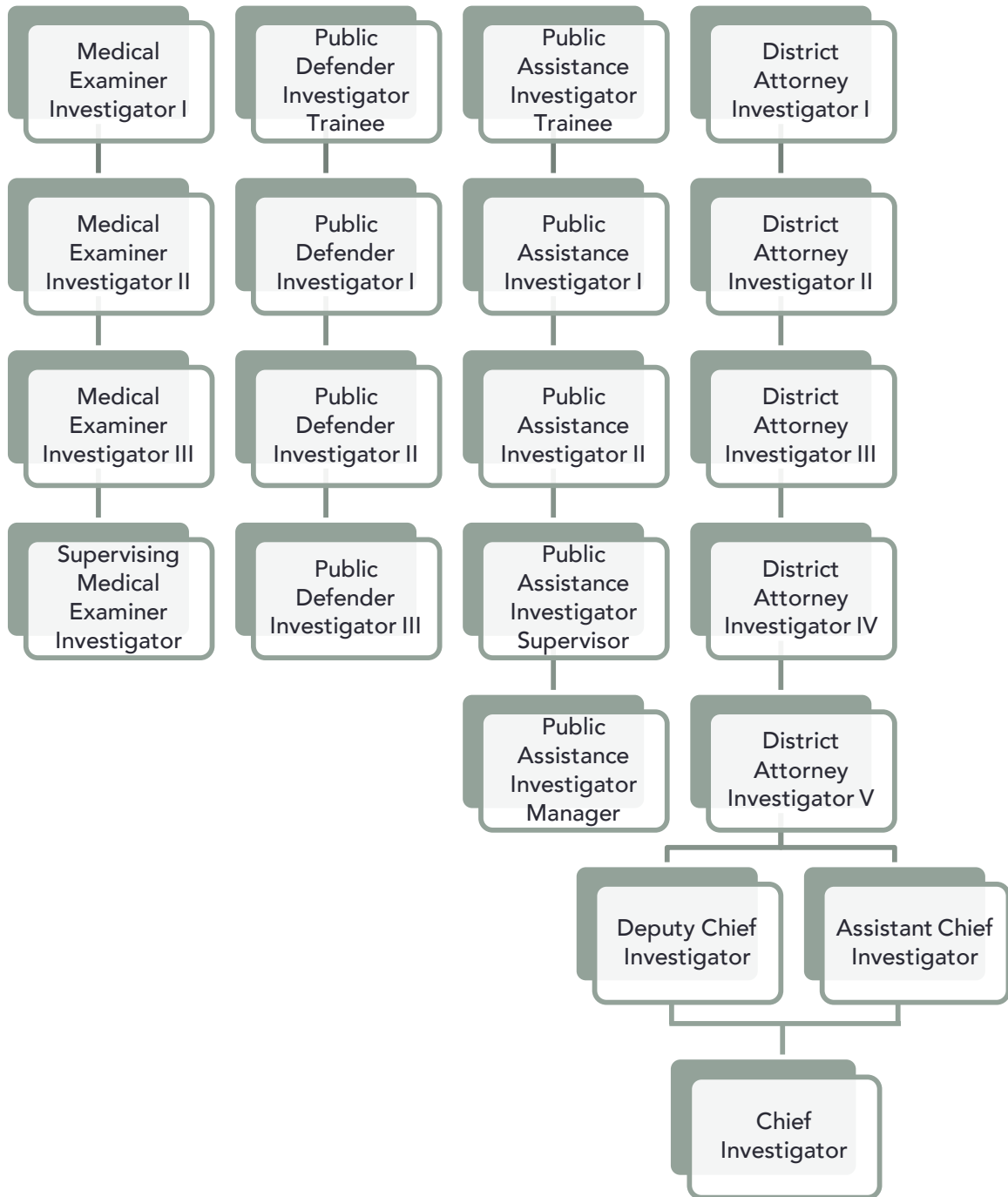
*Elected Official

Engineering Career Pathway





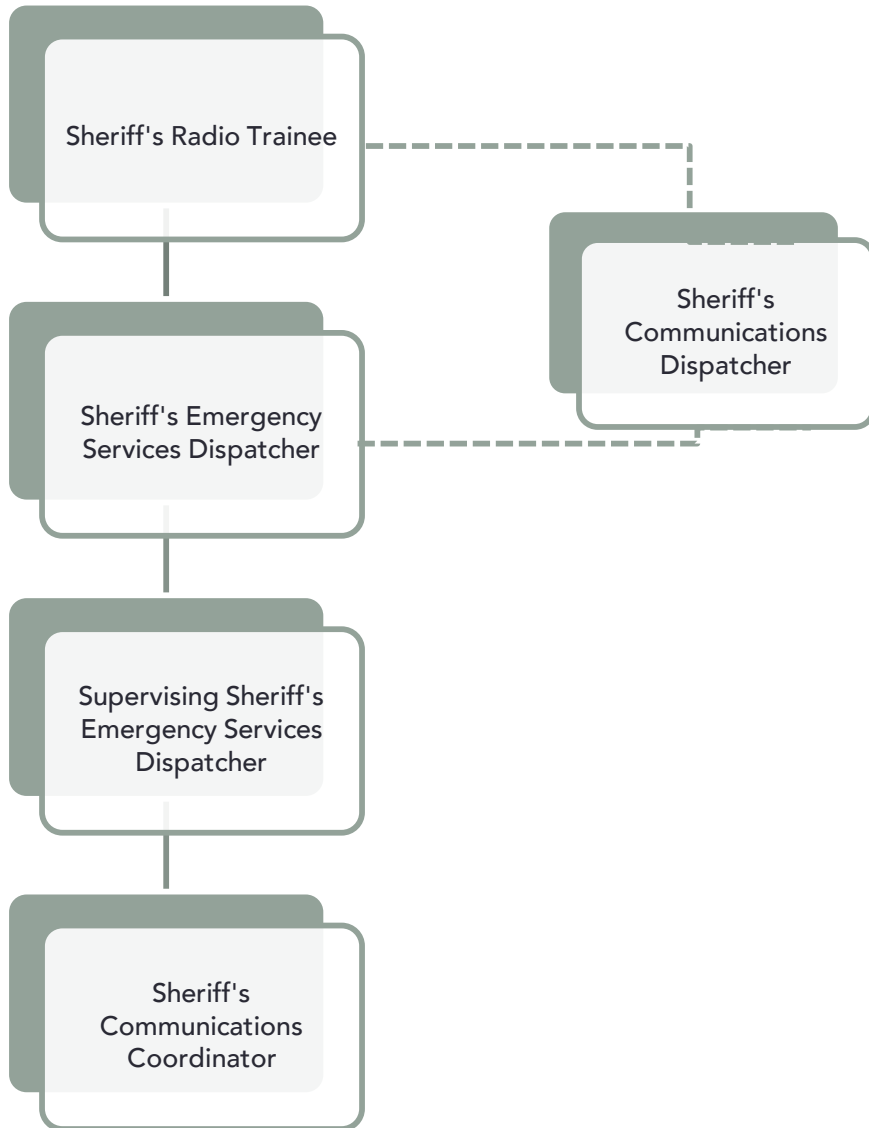
Investigator Career Pathway



Land Use/Environmental Career Pathway



Sheriff's Emergency Services Dispatcher Career Pathway



ACKNOWLEDGMENTS

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