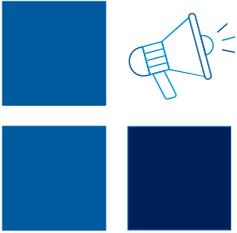


# Student Debt in State and Local Government:

Impacts on Select Occupations



February 2024



### **Acknowledgements**

This report was prepared by Margaret Tait, PhD, MPH; Amanda Tran, MPH; and Jonathon P. Leider, PhD, with the Center for Public Health Systems, Division of Health Policy and Management, University of Minnesota School of Public Health. Additional input and contributions were provided by Rivka Liss-Levinson, PhD, and Gerald Young, MissionSquare Research Institute.

## Executive Summary

### Background

Debt associated with higher education, whether undergraduate- or graduate-level training, presents a financial hurdle for individuals entering the workforce. In 2022, student loan debt in the United States amounted to \$1.774 trillion. Individuals may take out loans from the federal government or private lenders; federal student loans are more common, representing more than 92% of the \$1.774 trillion total.<sup>1</sup> Student loans impose a financial and emotional burden on loan holders, who include a substantial portion of the state and local government workforce. A 2022 MissionSquare Research Institute survey of 1,000+ state and local government employees' morale and public service motivation found that, regarding their financial concerns, 46% were extremely or very worried about paying back their student loans.<sup>2</sup>

### Purpose of Study

The goal of this study was to explore the burden of student debt on positions that have been harder for state and local governments to fill and that may be important to target in student loan forgiveness policy.

### Methods

Publicly available data from the National Center for Education Statistics (NCES) College Scorecard and Integrated Postsecondary Education Data System were used to estimate the median level of student debt for federal student loans across different degree levels. This analysis does not include any information on the burden of private student loans relative to the selected careers; estimates of student loan debt are degree-specific.

### Key Findings

Across the careers and programs observed as part of this analysis, the average student loan debt was estimated to be \$12,785 for associate's degree holders, \$23,052 for bachelor's degree holders, \$37,598 for master's degree holders, and \$70,404 for doctoral degrees holders.



**46%** of state and local government employees said they were **extremely or very worried** about paying back their student loans.

Source: [State and Local Government Employees: Morale, Public Service Motivation, Financial Concerns and Retention](#)

As discussed further below, there are public sector employees who do not have the specific degrees or levels of education analyzed here or who do not currently have any student debt. But given the level of concern expressed by state and local employees about the impact of their student debt,<sup>3</sup> employers may be better able to manage recruitment and retention by understanding the underlying data by occupation and degree.

For borrowers, loan repayment must be factored into financial decisions, including whether a salary at a particular job will be sufficient to meet their needs and what additional benefits (e.g., loan forgiveness or a contribution to retirement) will be available to them and at what point during their career. Results from a survey of individuals aged 35 and younger and working in the public sector provide evidence that employees may have different preferences for the benefits they have access to, relative to their age. Just 21% of respondents indicated strong agreement with the statement "My employer provides benefits that are relevant to people my age," indicating a potential disconnect as well as an opportunity for different benefits (e.g., student loan forgiveness programs) that may be more in-demand among younger workers.<sup>4</sup> This may motivate job seekers to pursue jobs with higher immediate-term compensation and not to consider those with greater non-monetary benefits (e.g., societal contributions) or standard public sector benefits (e.g., a defined benefit pension). Such a reality disadvantages state and local governments that may not have the resources or the authority to provide wage compensation commensurate with private sector companies. Yet state and local governments must staff the agencies responsible for providing key services in communities, including police and fire departments, K-12 education, and public health services.

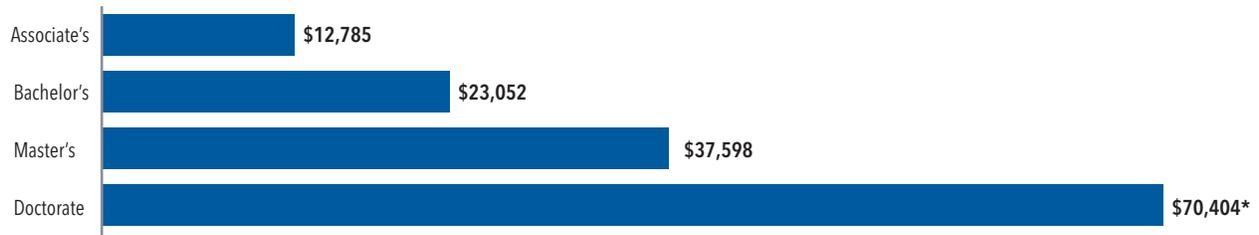
## Introduction

This report explores the burden of student debt on individuals in state and local government positions that are increasingly difficult for governments to fill.<sup>5</sup> Student debt may be one obstacle preventing individuals from exploring and pursuing careers in state and local government. This report, developed in collaboration with the Center for Public Health Systems at the University of Minnesota School of Public Health, estimates the debt associated with 15

careers. The goal is to provide an estimate of the levels of student debt associated with possible pathways to state and local government employment. Data from the National Center for Education Statistics (NCES) College Scorecard,<sup>6</sup> Integrated Postsecondary Education Data System (IPEDS), and Lightcast™ were utilized to provide these estimates. Information about these data sources and the methods that were used is included in the appendices.



### Mean debt (for the degrees analyzed in this report)



\*Doctoral degrees are only analyzed here in relation to those working in post-secondary education.

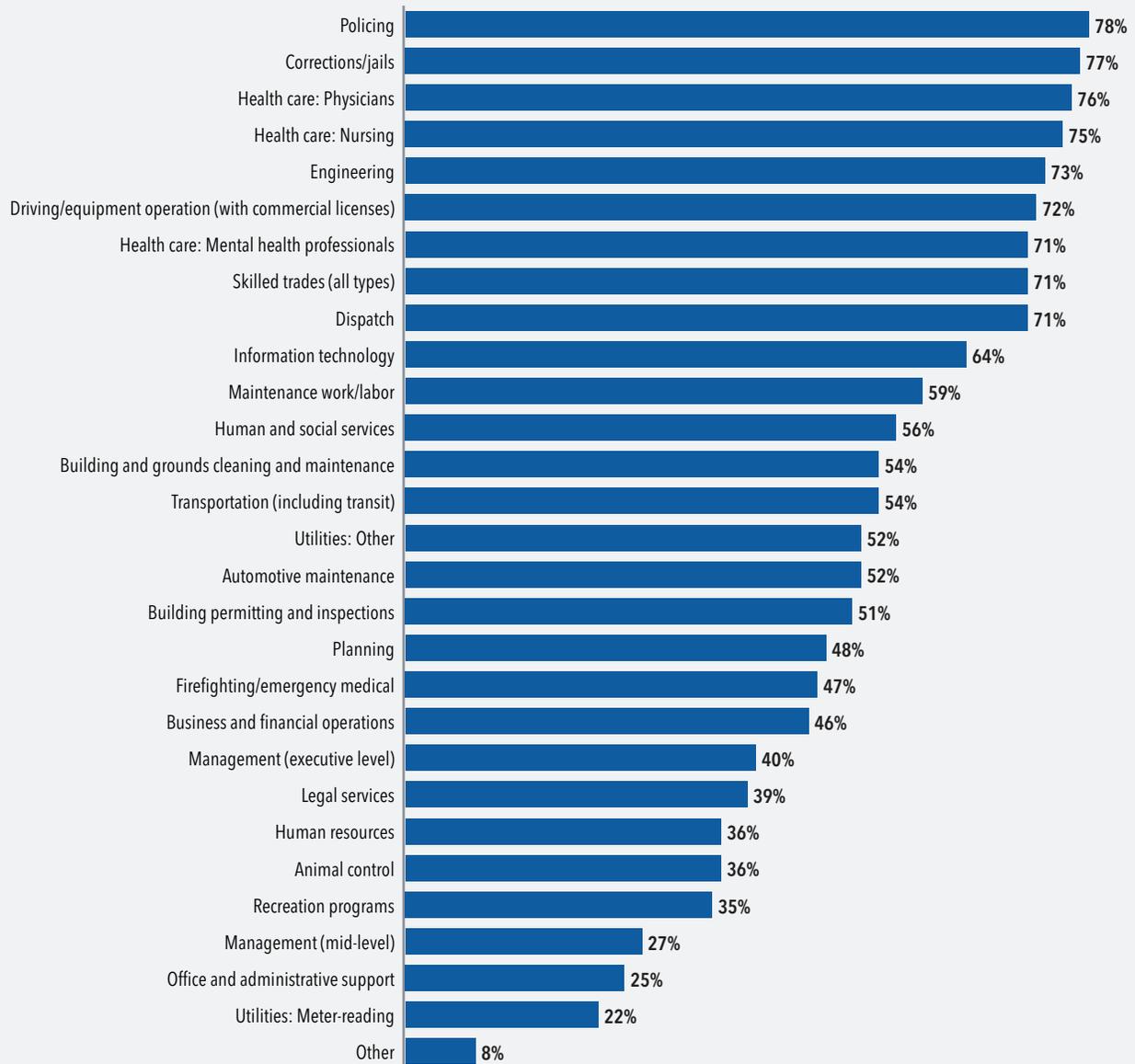
## Trends in State and Local Government Employment

The 15 careers that are the focus of this report are among those that were identified by a national survey of state and local government human resource managers as hard to fill in 2023.

The final list studied here was informed by this data about hard to fill positions and related data available through the U.S. Bureau of Labor Statistics (BLS), including: the total employment in each of these occupations; the level

Figure 1 **Over the past year, what positions, if any, has the organization had a hard time filling?**

(Check all that apply) (n = 249)



Source: [State and Local Workforce: 2023 Survey Findings](#), MissionSquare Research Institute

## 6 | Student Debt in State and Local Government: Impacts on Select Occupations

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of education typically required for the position (if any); a range of median annual compensation; and a balance of municipal-, county-, and state-level functions. The positions studied are the following:

- Accountants and auditors
- Child, family, and school social workers
- Civil engineers
- Civil engineering technicians
- Computer user support specialists
- Elementary school teachers, except special education
- Firefighters
- Librarians
- Management analysts
- Police, fire, and ambulance dispatchers
- Police and sheriff's patrol officers
- Postsecondary teachers, all other
- Registered nurses
- Substance abuse, behavioral disorder, and mental health counselors
- Urban and regional planners

Where some positions do not require a degree and employees are unlikely to have incurred student debt (e.g., maintenance work/laborers), they have been excluded from

the analysis. Since public safety positions are among the most difficult positions to fill and often have incumbents who had pursued at least some post-secondary education (e.g., in criminal justice, fire science, or other fields), those positions remain a part of the study.

In addition to other recruitment difficulties shared, more than a third of managers (36%) reported an increase in the time it took to hire employees, and more than half (51%)<sup>7</sup> responded that they frequently have to reopen recruitments because applicant pools lack sufficient qualified candidates. These trends are happening amidst creative efforts from local and state government employers to try to meet their staffing needs, including using mobile apps for applications, offering hiring bonuses, and rehiring retired staff.

Another trend in employment observed was more than half (59%) of state and local government employees indicated they were considering voluntarily leaving their jobs in 2022.<sup>8</sup> This is an increase from 52% of employees signaling an intent to leave in 2021. While some planned to retire or step away from the workforce temporarily, others indicated their intent to leave was based on a desire for a different job.

## Student Debt Relief

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Student debt relief – which currently exists at the federal level through the Public Service Loan Forgiveness (PSLF) and Income-Based-Repayment programs – may be a way to incentivize potential employees to work and remain in the state or local government workforce. These programs, referred to here as “student debt relief,” are also commonly referred to as loan forgiveness and repayment. Through PSLF, eligible borrowers working for qualifying employers (e.g., government and nonprofits) make 120 payments on their loans and have the remaining loan balance forgiven. Individuals may work for different qualifying employers over the 10-year time period.<sup>9</sup> Through income-based-repayment, borrowers with incomes that are low relative to the amount of debt they carry are eligible for reduced monthly payments.

Both of these programs have the potential to reduce the burden of debt among state and local government employees. Program implementation has not been without issues, though. Since PSLF's inception in 2007, many borrowers have faced challenges to their eligibility and the program was notorious for a very high denial rate.

Individuals were denied loan forgiveness after finding out their loans did not qualify or they were under the wrong repayment program.<sup>10</sup> In 2022, a temporary change to PSLF was implemented that allowed individuals to receive credit for past periods of repayment, deferment, and forbearance. As a result, more people were eligible for and benefitted from PSLF. This policy was only in effect until October 31, 2022.

Organizations working on student loan reform have advocated for a straightforward application process and clearer guidance about PSLF, including more detailed information about the types of employers and payments that qualify for forgiveness. Student loans have been a focus of the Biden administration as part of its pandemic response – loan repayments were paused for borrowers and did not accrue interest until September 1, 2023 – and as part of a plan to provide more targeted debt relief and address issues with the student loan system.<sup>11</sup> As proposed, the plan would have allowed individuals who meet income eligibility requirements to have up to \$20,000 in federal student loans forgiven. Eligible borrowers who received

Pell grants would have a maximum of \$20,000 of their federal student loans forgiven while other borrowers would have up to \$10,000 forgiven. This plan also included a proposal to revise income-based repayments: borrowers would pay no more than 5% of their discretionary income toward undergraduate federal loans; loan balances would be forgiven upon 10 years of repayment rather than 20; and the program would cover the cost of unpaid interest, ensuring that a borrower's balance does not grow while

they are paying it down. Policy makers on both sides of the aisle criticized the plan, and the Supreme Court moved to invalidate the plan, claiming that the administration did not have authority to implement it.<sup>12</sup>

Alternate approaches to the issue via more targeted debt relief continue to be implemented or considered, both at the federal level and other levels of government.

## Student Loan Debt Associated with Careers in State and Local Government

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For each of the 15 careers explored, the median level of federal student loan debt relative to the degrees that may be recruited for that career is listed below (e.g., psychology, social work, or other related degrees for substance abuse counselors). Select results are included in the main body of the report and others are included in Appendix 2. Lightcast data pulled from job postings and information from the Bureau of Labor Statistics "Typical Entry-Level Education" report were used to arrive at the levels of education to explore. (Lightcast is a commercial provider of labor market data.) Some of these occupations, such as police and sheriff's patrol officers, may not require a degree, although historically, related education has been a pathway to employment or a factor in hiring decisions. Absent such a degree requirement, associate- and bachelor-level education and debt levels are shown as indicative of the potential debt levels of current staff. These data should be interpreted as an idea of, but not a definitive statement on, the degree paths common to select careers in state and local government.

Also reported are the number of degrees that were conferred across two academic years: 2019-2020 and 2020-2021. These are the number of total degrees conferred,

and represent neither the number of degree holders with federal student debt nor the number who are employed in state or local government.

The Bureau of Labor Statistics identifies the "Typical Entry-Level Education" by occupation, and these are noted at the top of each of the tables below. The data columns that follow show the debt for that level of education (e.g., bachelor's degree for engineering), and potentially other similar paths that may be taken (in that case, a master's degree).

All debt values are presented in U.S. dollars.

Note: Select observations were suppressed to protect individuals' privacy. Privacy suppression is common among small degree programs where in theory the amount of debt could be associated with a specific individual.

Table 1 is annotated to discuss the elements common to each of the tables that follow.

Table 1 **Police and Sheriff's Patrol Officers**  
**Typical Entry-Level Education:** High school diploma or equivalent  
**High:** \$25,238 | **Low:** \$10,749

Degree Program	Associate's \$, (N)	Degree Program	Bachelor's \$, (N)
Criminal Justice and Corrections	\$16,075 (60,008)	Psychology, General	\$23,131 (225,272)
Psychology, General	\$13,546 (34,592)	Criminal Justice and Corrections	\$25,238 (104,445)
Sociology	\$10,749 (13,175)	Sociology	\$22,228 (59,067)
Security Science and Technology	\$13,357 (1,326)	Security Science and Technology	\$22,969 (5,995)
Environmental/Natural Resource Management and Policy	\$11,500 (388)	Environmental/Natural Resource Management and Policy	\$23,931 (2,848)

NOTE: Neither an associate's or a bachelor's degree is typically required, but they are both shown here as frequent entry points to the profession.

**Debt (in \$) and conferrals (N)** associated with degree programs common among public sector careers, where columns represent common degree pathways and the order of rows (top to bottom) represents common degree programs.

**High/low debt amounts** reflect the highest and lowest levels of debt associated across all degree programs and levels common to this career path.

**Degree programs** reflect the common paths to this career, per review of job postings (from Lightcast) and Typical Entry-Level Education as reported by the Bureau of Labor Statistics.



### Education Levels Among Public Safety Employees

In the Research Institute's study of state and local employees 35 and under, among those working in public safety (n = 160), 11% had some college education, 12% had an associate's degree, 49% had a bachelor's degree, and 11% had a graduate or professional degree. While this data includes staff from various roles in their organizations, the age limit means it is less likely to include those in more senior leadership, and thus would tend to indicate that despite entry-level education requirements being minimal, many employees exceed those standards.

Table 2 **Substance Abuse, Behavioral Disorder, and Mental Health Counselors**

Typical Entry-Level Education: Bachelor's degree

High: \$66,058 | Low: \$22,999

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Psychology, General	\$23,131 (225,272)	Social Work	\$39,329 (64,603)
Social Work	\$22,999 (44,076)	Clinical, Counseling, and Applied Psychology	\$50,708 (43,498)
Human Services, General	\$28,098 (12,418)	Mental and Social Health Services and Allied Professions	\$57,130 (27,999)
Clinical, Counseling, and Applied Psychology	\$24,004 (8,008)	Psychology, General	\$41,728 (12,315)
Mental and Social Health Services and Allied Professions	\$24,768 (6,160)	Human Services, General	\$40,581 (2,248)
Behavioral Science	\$31,786 (3,462)	Behavioral Science	\$66,058 (2,001)

Table 3 **Librarians**

Typical Entry-Level Education: Master's Degree

High: \$36,248 | Low: \$21,948

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
English Language and Literature, General	\$21,948 (64,501)	Teacher Education and Professional Development, Specific Subject Areas	\$27,979 (34,773)
Teacher Education and Professional Development, Specific Subject Areas	\$23,929 (42,240)	Educational/Instructional Media Design	\$26,422 (12,990)
Library Science and Administration	\$23,433 (237)	Library Science and Administration	\$36,248 (10,241)
Educational/Instructional Media Design	\$27,546 (190)	English Language and Literature, General	\$32,441 (7,902)

## Data and Methods

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Lightcast was utilized as a source for labor market data to explore degrees – or Classification of Instructional Programs (CIP) codes – associated with the 15 careers of interest. These careers are identified using Standard Occupational Classification (SOC) codes. To ensure that all unique degrees were captured for each career of interest, the Lightcast-identified CIP and SOC codes were then cross-referenced to the NCES 2020 CIP SOC codes crosswalk. As a result, data for a range of related academic disciplines were collected across the 15 careers. The most recent data on degrees, student debt, and repayment (2020-2021), as well as total conferral of degrees (spanning two academic years, 2019-20 and 2020-21), were obtained from NCES College Scorecard and Integrated

Postsecondary Education Data System (IPEDs), respectively. IPEDS reports values for degree conferrals under the field 'Total' for each academic year, and these values were summed up for each academic year for this analysis. These data files were then merged in STATA 17.1 (StataCorp LLC, College Station, TX) prior to data analysis. Exploratory data analysis was undertaken using R statistical software to investigate the burden of student debt among the public sector workforce. Four award levels were evaluated: associate, bachelor, master, and doctorate. The average median federal loan debt and counts of degrees awarded were then calculated for each CIP code at each award level and year of available data.

## Considerations for Data Interpretation

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The data presented in this study report degrees conferred during the 2019-20 and 2020-21 academic years only, which may not fully capture the trends in federal student loan debt and enrollment since the start of the pandemic.

It also should be noted that current public employees who earned their degrees and accumulated debt during that time period were doing so in a very different labor market. For example, in 2018, only one occupation was considered hard to recruit for by more than 25% of employers (policing was considered hard to fill by 27% of respondents).<sup>13</sup> As a result, education or prior work experience would have been a more significant differentiator among job candidates, regardless of whether a degree was required.

Additionally, given the current impact of inflation on enrollment and student loan debt, it is likely that these values may underreport or underestimate the problem. Between 2020-2022, it was estimated that the cost of tuition increased by nearly 13.8%,<sup>14</sup> while enrollment rates decreased by upwards of 3% year-over-year.<sup>15</sup> Because this analysis only reported average federal student loan debt between 2018 and 2020, a future analysis could further

quantify year-over-year changes in enrollment rates or federal student loan debt as a result of external factors.

As noted above, some programs had values for federal student loan debt identified as "privacy suppressed," as a result of a small cohort size. While some small sample sizes are represented in this analysis, the data likely represents enrollment sizes and federal student loan debt from larger institutions and/or larger programs.

Lastly, 4-digit SOC and CIP codes were used for this analysis to broadly capture the 15 target careers and associated degree programs. As a result, there was some degree overlap across some careers (e.g., the criminal justice and corrections programs were observed in both the police and sheriff's patrol officers and police, fire, and ambulance dispatchers career paths, not to mention other potential careers in or out of government). Given the overlap, it cannot definitively be said that these degrees correspond with these occupations. For greater specificity in degree-to-career path, 6-digit SOC and CIP codes should be used to further define the careers and programs, although different data systems would need to be developed to do so.

## Implications for State and Local Governments

Federal, state, and local policy levers may be employed to effectively alleviate the burden of federal student loan debt and continuously attract a diverse and talented workforce to these hard-to-fill positions. The PSLF program is designed to attract individuals to state and local government work, but it presents bureaucratic obstacles to potential beneficiaries that limit the potential of policy to meet workforce needs. While some of these are being addressed, more can and should be done to ensure debt relief is accessible. These activities include providing clear guidance to borrowers who are interested in enrolling and confirmation that the payments they make will qualify for the program. Part of this work must also include strategic outreach to recent graduates with student loans to share information about the program, as well as the benefits of working in state and local governments. State and local governments could consider including materials about PSLF as part of a recruitment or new hire packet. [Data suggest](#) that financial wellness programs – which include retirement and also student loan forgiveness, among others – are effective ways of enhancing recruitment and retention.

As such, state and local governments should prioritize sharing information with current employees about opportunities for student loan forgiveness during open enrollment or as part of their annual benefits discussion.

As proposed, the Biden administration debt relief plan did not include a public service component. This was a point of contention, but may also suggest a future opportunity.<sup>16</sup> State and local government agencies could advocate for a public service component as part of a future debt relief plan. Advocacy efforts could include suggestions to incorporate a public service component structured such that borrowers assuming harder-to-fill positions receive a higher amount of their loans forgiven. (This type of tiered approach was in the earlier proposed policy: individuals who received Pell grants to support their education would have qualified for a higher level of loan forgiveness.) Any such advocacy efforts should take into account the lessons learned from PSLF – namely, the issues limiting eligibility and uptake – and take steps to ensure that similar obstacles are avoided.



### Next Steps for State and Local Government

- Provide **clear guidance** to borrowers on the applicability of debt assistance.
- Incorporate a discussion of Public Service Loan Forgiveness (PSLF) into **recruitment campaigns**, both in outreach to college students and to those who may have accumulated debt several years before.
- Familiarize yourself with the **likely debt loads** of staff by occupation or department.
- Consider special challenges in each organization around **hard to fill positions** that may benefit from employer-based student debt assistance programs, tuition reimbursement, hiring bonuses, professional development, or other benefits offerings that may be tailored to meet the needs of the variety of ages, education levels, and life-stages of the workforce.
- Establish or fine-tune **financial wellness education** programs for employees to ensure they include student debt, as well as key issues like budgeting and inflation.
- **Repeat messaging regularly**, not just at recruitment or onboarding, but throughout an employee's career. Whether as part of annual open enrollment, one-on-one 'stay interviews,' or other engagement methods, such discussions can help to reduce the likelihood talented staff will seek jobs elsewhere.

## Conclusion

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The public sector faces challenges in recruiting and retaining a talented and diverse workforce. Given the current trends in state and local government workforce, this report sought to explore the burden of student debt among hard-to-hire positions in state and local governments, as a way to better understand recruitment and retention of talent. The results of the exploratory data analysis show varying levels of student loan debt associated with pathways to public sector careers. On average, however, associate's degrees had the lowest federal student loan debt (\$12,785) and doctoral degrees had the highest federal student loan debt (\$70,404), although there was only one occupation as a part of this analysis where a doctorate would be typical.

Even as some degree requirements may be reduced or reconsidered in favor of more flexible standards for training, skills, or experience, education remains a component in assessing the qualifications of job candidates and a likely source of financial concern among many applicants. Based on these findings and the survey results on employees' morale and public service motivation, student debt relief may be an effective part of overall benefits offerings for public sector employees, particularly for hard to fill positions. This relief could be structured in a way that is not only supported by the federal government, but also requires individuals to remain in their roles for a set amount of time (similar to Public Service Loan Forgiveness).

## Appendix 1: Data and Methods

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Lightcast.io, a source of labor market analysis, was utilized to explore degrees associated with the 15 careers of interest. Classification of Instructional Programs (CIP) codes – specifically 4-digit CIP codes – were used to identify degrees, and Standard Occupational Classification (SOC) codes were used to identify the target careers. To ensure that all unique degrees were captured for each career of interest, the Lightcast-identified SOC and CIP codes were cross-referenced to the NCES 2020 CIP SOC codes crosswalk. In total, data for 60 academic disciplines were collected across the 15 careers, with the most relevant degrees to each career displayed in each data table. Of note, a significant number of degrees were redundant across these 15 careers (e.g., psychology was present as an associated degree common to four careers).

The most recent data on degrees and student debt and repayment (2020-2021) were obtained from the NCES College Scorecard.<sup>17</sup> In order to evaluate the burden of student debt, the field cumulative loan debt name (field: debt\_all\_stgp\_eval\_mdn) was used to capture the median federal loan debt accumulated by student borrowers. It should be noted that some values for median federal loan debt were indicated as “privacy suppressed.” In these cases, given the small cohort size, student debt and repayment information was unavailable due to the risk of releasing individually identifiable information. The most recent data on degrees conferred at a CIP code and award level was obtained from Integrated Postsecondary Education Data

System (IPEDS).<sup>18</sup> Depending on the occupation, four award levels were evaluated: associate, bachelor, master, and doctorate. Counts of degrees awarded for the 2019-20 and 2020-21 academic years were also included in this analysis.

Prior to starting the data analysis, the NCES College Scorecard and IPEDs dataset were merged in STATA 17.1 (StataCorp LLC, College Station, TX) using the unique identification number assigned to postsecondary institutions ('unitid') as the reference field. Some data cleaning and manipulation were completed to ensure correct spelling and correct data types of columns or fields (e.g., 'unitid' was formatted to the numeric data type). The merged file was then exported and loaded into R for data analysis (identifying information on R). Observations or records with “privacy suppressed” were dropped, and null values were replaced with 0. The data were then filtered by the award levels and CIP codes. The average median federal loan debt was calculated for each CIP code at each award level and year. The summation of degrees conferred for 2019-20 and 2020-21 was also calculated using the same technique. The aggregation results were merged. Lastly, to determine if there was an association between student loan debt and degrees conferred, Spearman’s rank correlation was calculated.

Exploratory data analysis was undertaken using R statistical software to investigate the burden of student debt among the public sector workforce.

## Appendix 2: Additional Results

Debt (in \$) and conferrals (N) associated with degree programs common among public sector careers, where columns represent common degree pathways and

the order of rows (top to bottom) represents common degree programs.

Table 4 **Police, Fire, and Ambulance Dispatchers**

**Typical Entry-Level Education:** High school diploma or equivalent

**High:** \$25,238 | **Low:** \$10,749

Degree Program	Associate's \$, (N)
Criminal Justice and Corrections	\$16,075 (60,008)
Psychology, General	\$13,546 (34,592)
Sociology	\$10,749 (13,175)

Degree Program	Bachelor's \$, (N)
Psychology, General	\$23,131 (225,272)
Criminal Justice and Corrections	\$25,238 (104,445)
Sociology	\$22,228 (59,067)

Table 5 **Firefighters**

**Typical Entry-Level Education:** High school diploma or equivalent

**High:** \$23,932 | **Low:** \$11,500

Degree Program	Associate's \$, (N)
Allied Health, Diagnostic, Intervention, and Treatment Professions	\$16,835 (54,948)
Fire Protection	\$12,664 (8,017)
Environment/Natural Resource Management and Policy	\$11,500 (388)

Degree Program	Bachelor's \$, (N)
Allied Health, Diagnostic, Intervention, and Treatment Professions	\$23,932 (19,253)
Fire Protection	\$21,661 (3,013)
Environment/Natural Resource Management and Policy	\$23,931 (2,848)

Table 6 **Civil Engineers**

Typical Entry-Level Education: Bachelor's degree  
 High: \$32,669 | Low: \$22,451

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Civil Engineering	\$22,451 (30,353)	Civil Engineering	\$25,377 (9,926)
Engineering, General	\$23,625 (5,597)	Engineering, General	\$32,669 (5,795)
Architectural Engineering	\$25,379 (1,453)	Construction Engineering	Privacy suppressed (540)
Construction Engineering	\$23,093 (1,118)	Architectural Engineering	Privacy suppressed (340)
Surveying Engineering	Privacy suppressed (68)	Surveying Engineering	Privacy suppressed (19)

Table 7 **Civil Engineering Technicians**

Typical Entry-Level Education: Associate's degree  
 High: \$25,063 | Low: \$10,792

Degree Program	Associate's \$, (N)	Degree Program	Bachelor's \$, (N)
Engineering Technologies/ Technicians, General	\$10,792 (2,708)	Construction Engineering Technology/Technician	\$22,712 (5,472)
Building/ Construction Finishing, Management, and Inspection	\$11,686 (2,648)	Engineering Technologies/ Technicians, General	\$24,150 (3,364)
Civil Engineering Technologies/ Technicians	\$12,285 (1,394)	Architectural Engineering Technologies/ Technicians	\$23,662 (805)
Construction Engineering Technology/Technician	\$14,187 (1,329)	Civil Engineering Technologies/ Technicians	\$25,063 (638)
Architectural Engineering Technologies/ Technicians	\$12,500 (1,133)	Building/ Construction Finishing, Management, and Inspection	\$20,610 (395)
Engineering-Related Technologies/ Technicians	Privacy suppressed (650)	Engineering-Related Technologies/ Technicians	Privacy suppressed (403)

Values were suppressed for privacy due to the small number of individuals reflected in estimates and efforts to protect their privacy.

Table 8 **Computer User Support Specialists**  
**Typical Entry-Level Education:** Some college, no degree  
**High:** \$24,207 | **Low:** \$10,879

Degree Program	Associate's \$, (N)	Degree Program	Bachelor's \$, (N)
Liberal Arts And Sciences, General Studies and Humanities	\$10,879 (804,562)	Business Administration, Management, and Operations	\$24,207 (344,402)
Business Administration, Management, and Operations	\$16,566 (124,208)	Liberal Arts and Sciences, General Studies And Humanities	\$22,816 (87,538)
Computer and Information Sciences, General	\$14,780 (21,094)	Computer and Information Sciences, General	\$23,283 (81,186)
Multi/Interdisciplinary Studies, Other	\$11,048 (10,729)	Computer Science	\$22,013 (75,150)
Computer Science	\$15,774 (7,511)	Multi/Interdisciplinary Studies, Other	\$21,829 (49,602)

Table 9 **Accountants and Auditors**  
**Typical Entry-Level Education:** Bachelor's degree  
**High:** \$43,106 | **Low:** \$22,969

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Business Administration, Management, and Operations	\$24,207 (344,402)	Business Administration, Management, and Operations	\$38,051 (244,173)
Accounting and Related Services	\$23,877 (103,519)	Accounting and Related Services	\$30,492 (37,214)
Security Science and Technology	\$22,969 (5,995)	Security Science and Technology	\$43,106 (3,044)
Accounting and Computer Science	Privacy suppressed (14)	Taxation	\$31,645 (2,968)
Taxation	Privacy suppressed (9)	Accounting and Computer Science	Privacy suppressed (12)

Values were suppressed for privacy due to the small number of individuals reflected in estimates and efforts to protect their privacy.

Table 10 **Management Analysts**  
**Typical Entry-Level Education:** Bachelor's degree  
**High:** \$44,927 | **Low:** \$20,032

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Business Administration, Management, and Operations	\$24,207 (344,402)	Business Administration, Management, and Operations	\$38,051 (244,173)
Political Science and Government	\$21,526 (87,197)	Management Sciences and Quantitative Methods	\$40,800 (52,390)
Business / Commerce, General	\$25,382 (49,716)	Public Administration	\$43,187 (24,794)
Multi / Interdisciplinary Studies, Other	\$21,829 (49,602)	Business / Commerce, General	\$38,414 (17,270)
Mathematics	\$20,032 (43,521)	Public Policy (Public Policy Analysis)	\$44,007 (6,313)
Management Sciences and Quantitative Methods	\$22,129 (20,364)	Mathematics	\$24,958 (5,116)
Management Information Systems and Services	\$22,560 (18,822)	Management Information Systems and Services	\$38,183 (5,049)
Business / Managerial Economics	\$20,900 (11,151)	Political Science and Government	\$43,143 (3,786)
Business, Management, Marketing, and Related Support Services, Other	\$23,578 (6,501)	Multi / Interdisciplinary Studies, Other	\$44,927 (3,551)
Public Administration	\$25,448 (6,193)	Business, Management, Marketing, and Related Support Services, Other	\$37,827 (1,854)
Public Policy (Public Policy Analysis)	\$20,191 (5,127)	Educational Assessment, Evaluation, and Research	\$36,443 (1,223)
Educational Assessment, Evaluation, and Research	\$25,762 (1,290)	Data Analytics	Privacy suppressed (876)
Data Analytics	Privacy suppressed (780)	Applied Statistics	Privacy suppressed (442)
Applied Statistics	Privacy suppressed (112)	Business / Managerial Economics	\$39,422 (277)

Values were suppressed for privacy due to the small number of individuals reflected in estimates and efforts to protect their privacy. For this table, those with degrees in 'Clinical counseling, and applied psychology' were omitted due to likely issues with the coding of 'analysts.'

Table 11 **Postsecondary Teachers, All Other<sup>19</sup>**  
**Typical Entry-Level Education:** Doctoral or professional degree  
**High:** \$190,629 | **Low:** \$21,658

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)	Degree Program	Doctoral \$, (N)
Teacher Education and Professional Development, Specific Levels And Methods	\$23,540 (104,777)	English Language and Literature, General	\$32,441 (7,902)	English Language and Literature, General	\$62,220 (2,031)
Liberal Arts and Sciences, General Studies and Humanities	\$22,816 (87,538)	History	\$39,075 (6,711)	History	Privacy suppressed (1,599)
English Language and Literature, General	\$21,948 (64,501)	Teacher Education and Professional Development, Specific Levels And Methods	\$30,348 (55,620)	Teacher Education and Professional Development, Specific Levels and Methods	\$60,891 (831)
History	\$21,658 (51,776)	Liberal Arts and Sciences, General Studies and Humanities	\$41,527 (4,034)	Liberal Arts and Sciences, General Studies and Humanities	\$190,629 (204)

Table 12 **Elementary School Teachers, Except Special Education**

Typical Entry-Level Education: Bachelor's degree

High: \$42,040 | Low: \$19,615

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Teacher Education and Professional Development, Specific Levels and Methods	\$23,540 (104,777)	Teacher Education and Professional Development, Specific Levels and Methods	\$30,348 (55,620)
Liberal Arts and Sciences, General Studies And Humanities	\$22,816 (87,538)	Education, General	\$29,474 (36,594)
Teacher Education and Professional Development, Specific Subject Areas	\$23,929 (42,240)	Teacher Education and Professional Development, Specific Subject Areas	\$27,979 (34,773)
Social Sciences, General	\$22,380 (12,967)	Teaching English or French as a Second or Foreign Language	\$28,001 (6,923)
Education, General	\$23,464 (10,409)	Liberal Arts and Sciences, General Studies and Humanities	\$41,527 (4,034)
Teaching English or French as a Second or Foreign Language	\$24,927 (821)	Bilingual, Multilingual, and Multicultural Education	\$27,781 (1,595)
Bilingual, Multilingual, and Multicultural Education	\$19,615 (266)	Social Sciences, General	\$42,040 (1,227)

Table 13 **Child, Family, and School Social Workers**  
**Typical Entry-Level Education:** Bachelor's degree  
**High:** \$66,058 | **Low:** \$22,999

Degree Program	Bachelor's \$, (N)
Psychology, General	\$23,131 (225,272)
Teacher Education and Professional Development, Specific Levels and Methods	\$23,540 (104,777)
Criminal Justice and Corrections	\$25,238 (104,445)
Social Work	\$22,999 (44,076)
Human Development, Family Studies, and Related Services	\$23,320 (25,909)
Human Services, General	\$28,098 (12,418)
Mental Health and Social Health Services and Allied Professions	\$24,768 (6,160)
Behavioral Sciences	\$31,786 (3,462)

Degree Program	Master's \$, (N)
Social Work	\$39,329 (64,603)
Teacher Education and Professional Development, Specific Levels and Methods	\$30,348 (55,620)
Mental Health and Social Health Services and Allied Professions	\$57,130 (27,999)
Criminal Justice and Corrections	\$36,014 (13,788)
Psychology, General	\$41,728 (12,315)
Human Development, Family Studies, and Related Services	\$37,652 (2,682)
Human Services, General	\$40,581 (2,248)
Behavioral Sciences	\$66,058 (2,001)

Table 14 **Urban and Regional Planners**  
**Typical Entry-Level Education:** Master's degree  
**High:** \$73,699 | **Low:** \$17,375

Degree Program	Bachelor's \$, (N)	Degree Program	Master's \$, (N)
Social Sciences/General	\$22,380 (12,967)	Public Administration	\$43,187 (24,794)
Architecture	\$25,831 (7,531)	City/Urban, Community, and Regional Planning	\$43,912 (2,855)
Public Administration	\$25,448 (6,193)	Sustainability Studies	\$49,985 (2,314)
Sustainability Studies	\$19,777 (2,314)	Architecture	\$43,778 (2,002)
Urban Studies / Affairs	\$19,737 (2,092)	Social Sciences/General	\$42,040 (1,227)
City/Urban, Community, and Regional Planning	\$21,500 (1,581)	Real Estate Development	\$73,699 (519)
Environmental Design	\$19,543 (1,199)	Urban Studies / Affairs	\$33,446 (651)
Real Estate Development	\$17,375 (235)	Environmental Design	Privacy suppressed (85)

Values were suppressed for privacy due to the small number of individuals reflected in estimates and efforts to protect their privacy.

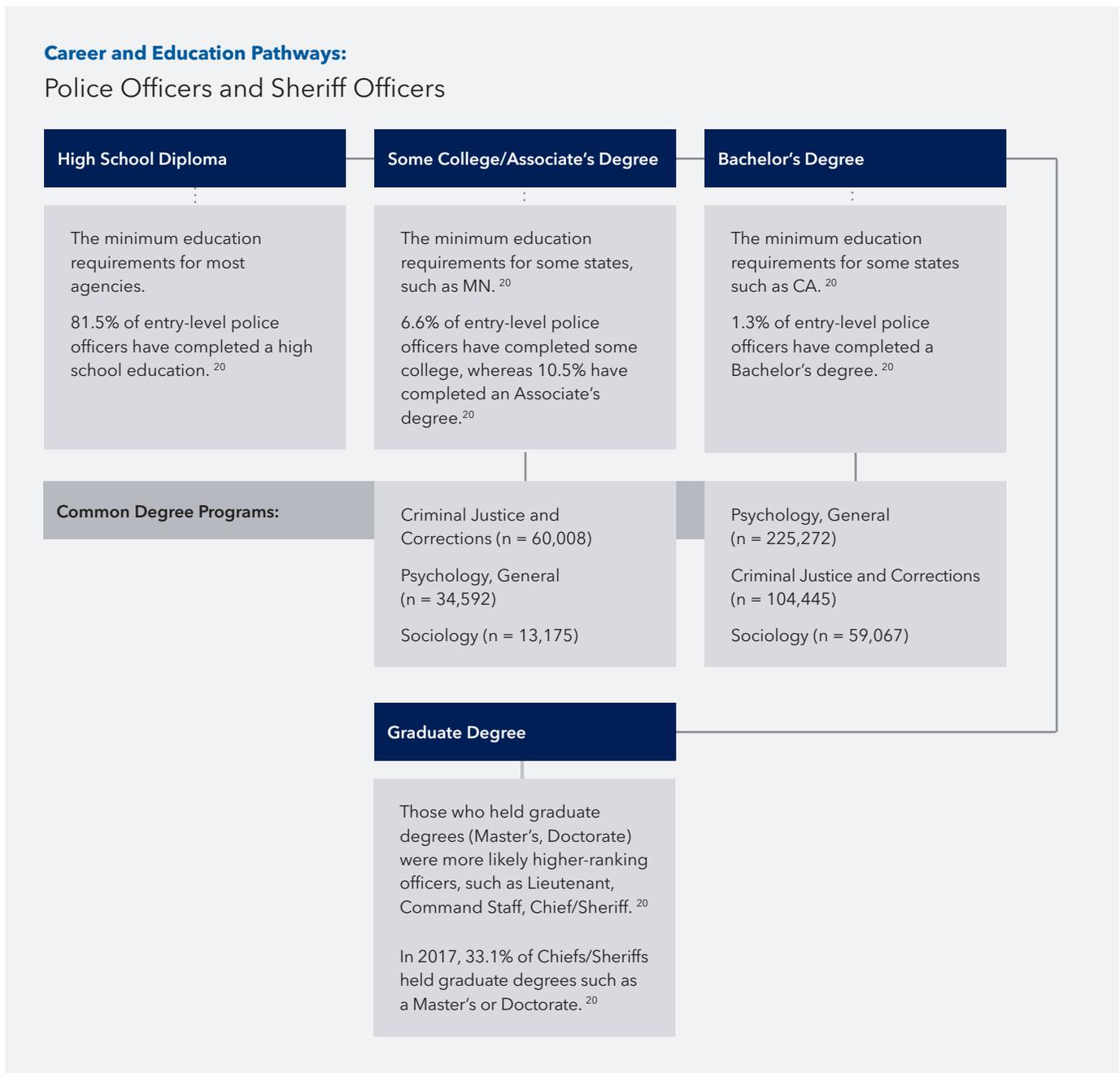
Table 15 **Registered Nurses**  
**Typical Entry-Level Education:** Bachelor's degree  
**High:** \$22,124 | **Low:** \$16,307

Degree Program	Associate's \$, (N)	Bachelor's \$, (N)
Registered Nursing, Nursing Administration, Nursing Research, and Clinical Nursing	\$16,307 (170,299)	\$22,124 (325,496)

## Appendix 3: Career and Education Pathways<sup>20</sup>

Career and education pathway for entry-level police and sheriff officers. The pathway includes conferral data (with their respective n-values) from this report, as well as surveyed education statuses from a 2017 nationally

representative sample of local law enforcement agencies on education requirements.



Career and education pathway for entry-level civil engineers. The pathway includes conferral data (with their respective n-values) from this report.<sup>21,22</sup>

**Career and Education Pathways:**

Civil Engineers

Associate's Degree	Bachelor's Degree	Master's Degree
Individuals with an Associate's can enter the Civil Engineering industry as Civil Engineering Technicians. <sup>19</sup>	The average minimum education requirements (ABET accredited) <sup>18</sup>	Not required as an entry-level minimum education requirement.  May be helpful with career advancement. <sup>18</sup>
Common Degree Programs:		
Engineering Technologies/ Technicians, General (n = 2,708)  Building/Construction Finishing, Management, and Inspection (n = 2,648)  Civil Engineering Technologies/ Technicians (n = 1,394)	Civil Engineering (n = 30,353)  Engineering, General (n = 5,597)  Architectural Engineering (n = 1,453)	Civil Engineering (n = 9,926)  Engineering, General (n = 5,795)  Construction Engineering (n = 540)

## Endnotes

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