



Understanding State Police Personnel Costs

All state agencies are faced with the reality of operating within the fiscal constraints created by a chronic structural budget deficit. When operating in these difficult margins, one variable that agencies, like the state police, can most directly control is the number of positions to fill. But in doing so, it must monitor the impact of funding decisions year-over-year and ask the question: have we found the right tradeoff between controlling budget growth and serving the needs of Pennsylvanians?

The Pennsylvania State Police employs more than 4,200 troopers and 2,000 administrative, management, and other staff. The cost? \$1 billion annually, or 86 percent of the state police budget.

Even at that cost, by the agency’s own measure, PSP is short valuable troopers and the unpredictability of retirements and recruitment adds uncertainty. Simply, PSP has reported over the years that 4,500 troopers is the ideal minimum to effectively carry out its mission, but this month, the number of troopers is 231 fewer than that benchmark. If those additional 231 trooper positions were filled now, it would amount to an extra \$48 million over the course of a year and would still leave more than 150 vacancies below the full authorized trooper complement. Is this the optimal balance between controlling costs and filling the state police complement?

This primer examines the nuances of state police personnel cost drivers and key personnel related budgeting challenges – from the cost of a trooper, to predicting retirements, and how Pennsylvania compares to other states.

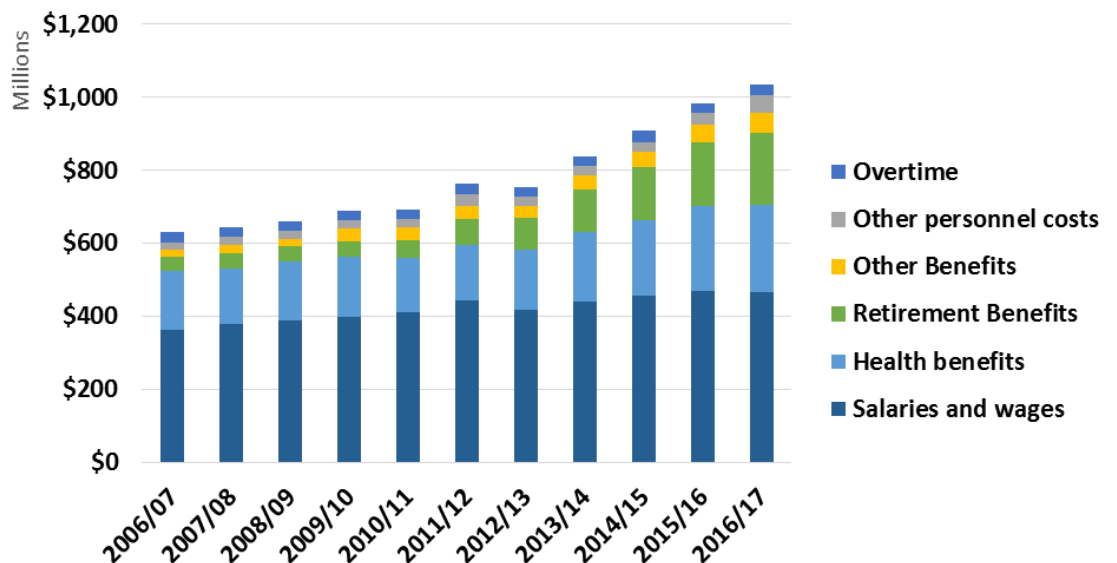
Overview

Over the past 10 years, annual state police payroll has grown about 3 percent; benefit costs have grown more than 8 percent. The primary component of payroll – which includes salaries and wages, overtime, and other personnel costs like shift differentials and leave payout – is union-negotiated pay. The most costly benefits are retirement and health (including retiree health benefits).

Retirement and health benefit costs have grown by 17 and 4 percent per year, respectively. In each of these big ticket items – pay, health benefits, and retirement benefits – there is an added cost for state troopers relative to the average state employee. (See Appendix Table 1 for annual expenditures.)

Figure 1

State Police Personnel Expenditures, 2006-2016



Cadets

Any discussion of state police personnel would be incomplete without acknowledging the unique set of challenges associated with maintaining a full complement of troopers. PSP recruits cadets year-round and enrolls them in 180-day training classes, typically three times per year or as budgetary constraints allow. Since 2011/12, between two and four classes have graduated each year. In 2016/17, three classes graduated yielding 253 new troopers; another 302 new troopers are expected in 2017/18.

The rate of new cadets graduating has kept pace with retirements and other departures in recent years, aided by two consecutive years with four graduating classes each. Whether the three scheduled classes will be enough to maintain the trooper complement in 2017/18 will depend on agency retirement rates, and attrition rates within the cadet classes. Despite these efforts, the state police complement remains below the law enforcement agency's target of 4,500 troopers, and it is even further below the maximum number of troopers established in statute of 4,719.

Cadets are employed as wage employees and earn \$1,343 per pay period for 6 months. After graduation, a new trooper's salary is \$59,567, plus benefits. When 100 cadets graduate and become troopers, PSP's payroll jumps by about \$100,000 per pay period. This fluctuation and the continuous challenge of anticipating the rate of retirement, are part of the state police budgeting process.

■ Salaries and Wages

At \$465 million in 2016/17, salaries and wages made up about half of total personnel costs, though this percentage is declining as benefit costs increase. Collective bargaining determines pay for 94 percent of Pennsylvania State Police employees, and provides for base pay increases, longevity increases, health benefits, and other terms of employment. Union representation is led by the Pennsylvania State Troopers Association (PSTA) and the American Federation of State, County, and Municipal Employees (AFSCME), representing 69 percent and 22 percent of PSP employees, respectively.

PSTA represents enlisted members, including troopers, corporals, sergeants, lieutenants, captains, and majors. From 2004/05 through the end of the upcoming fiscal year (2018/19), troopers represented by PSTA will receive an average annual base pay increase of 2.78 percent, as well as annual step increments, and annual longevity increases (after six years of service). A required pay differential between ranks means each promotion by rank is accompanied by an increase in base pay. The annual salary for a typical member of the trooper's union as of fiscal year end 2016/17, is \$90,612 – a 3.18 percent increase per year since 2006/07.

The next largest group of PSP employees, which includes clerical employees, is represented by AFSCME. From 2004/05 through the end of the upcoming fiscal year (2018/19) these employees will receive an average annual base pay increase of 1.85 percent. AFSCME is the largest collective bargaining group in the state (41 percent of state employees) and the second largest in PSP (22 percent of employees). The median annual salary for a PSP employee represented by AFSCME at the end of 2016/17 was \$42,034, a 1.79 percent increase per year over the past 10 years. (See Appendix Table 2 for PSTA and AFSCME negotiated general salary increases by year.)

Cadets are not represented by a union and receive a fixed wage. The bi-weekly wage for cadets in 2016/17 was \$1,316.80. Other unions represent healthcare, liquor law enforcement, and government security employees. The median wage among these groups at the end of 2016/17 was \$52,056. The remaining 3 percent of PSP employees are management, trainees other than cadets, or have no elected representation. The median wage within this group is \$68,283.96. (See Appendix Table 3 for complement and pay by bargaining unit.)

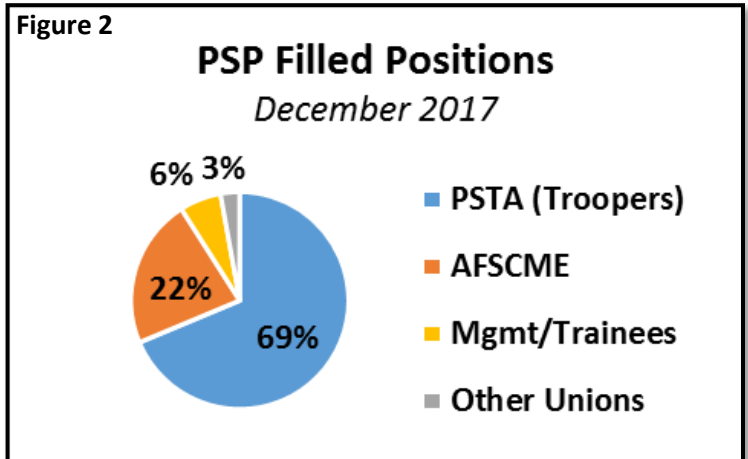
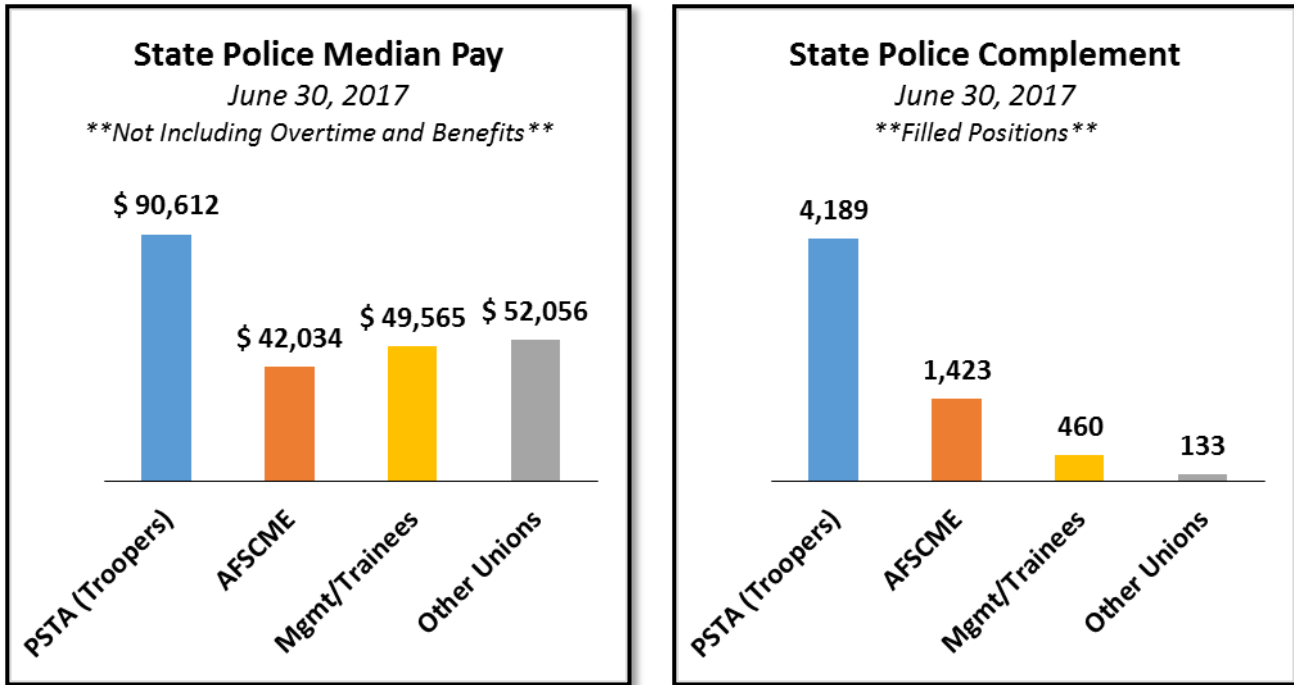


Figure 3



Healthcare

Healthcare benefit costs make up the largest category of employee benefits, and the second largest component of overall personnel expenditures for state police (pay is the largest category of personnel spending). Spending on healthcare benefits increased 50.93 percent from 2006/07 to 2016/17, about \$8 million in growth per year.

Healthcare being the largest category of employee benefit spending is not unique to the state police. What is unique, is the fact that healthcare benefits cost more for troopers, particularly for retirees, than for other state employees. Because of this, in 2016/17, troopers made up 69 percent of the state police complement but 83 percent of the state's total spending on healthcare benefits for PSP employees.

Healthcare is a fixed benefit, meaning the commonwealth contributes a set amount for each employee each pay period, no matter the salary or rank of the employee. The benefits themselves are largely determined by collective bargaining agreements.

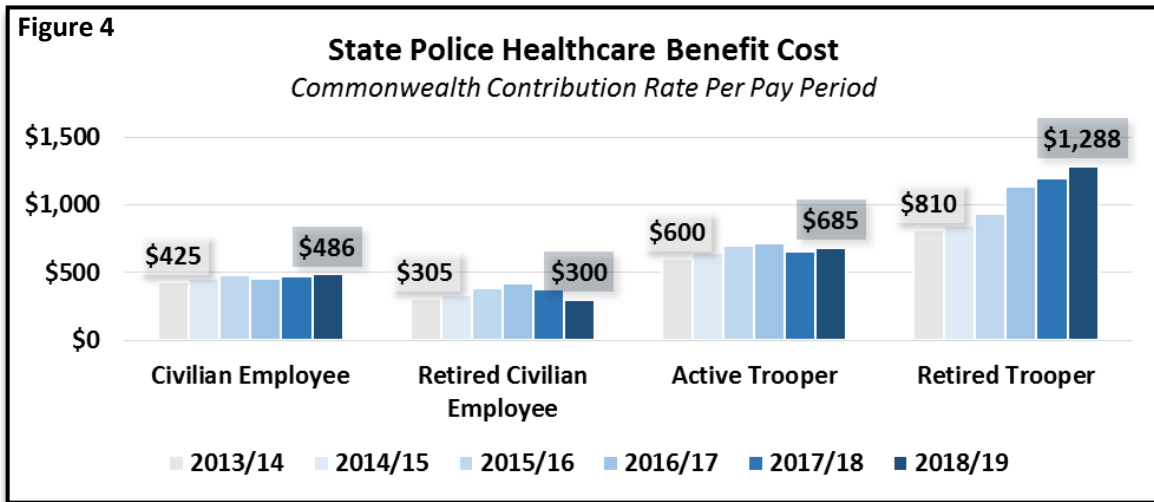
$$\text{Number of Employees} \times \text{State Contribution Rate} \times 26.08 \text{ Pay Periods} = \text{Total State Cost for Health Benefits}$$

Fiscal Year 2016/17	Average Filled Positions	Bi-Weekly Cost Per Employee	Annual Cost Per Employee	Total State Cost for Health Benefits
Troopers	4,121	\$1,858	\$48,457	\$200 million
Civilian Employees	1,821	\$873	\$22,768	\$41 million
% Troopers	69%			83%

Health benefits negotiated by the trooper's union result in higher costs for the state because of what the plans include and how employees do (or don't) contribute to the cost. Most state employees are required to contribute a percentage of their pay for healthcare benefits. AFSCME-represented state employees paid 2 percent of their salary toward the cost of their health benefits in 2016/17. Trooper health benefits on the other hand, are 100 percent state-paid, and this difference continues into retirement.

Another factor contributing to higher retiree healthcare costs for troopers is a retirement benefit, known as the DiLauro Award (see The DiLauro Award, page 5), which allows troopers to retire with full health benefits after 20 years of service. This means troopers may, comparatively, spend more years in retirement with state-paid health benefits.

The benefit packages also differ; troopers receive more comprehensive benefits. These factors add up to a total per-person cost to the commonwealth for state trooper healthcare benefits that is more than double that of other state employees. The amounts shown in figure 4 represent how much the commonwealth pays each pay period per current employee. The amounts shown for retired employees are also paid by the commonwealth per pay period per current employee, but these dollars provide for retiree healthcare.



(Annual contribution rates shown in Appendix Table 4.)

■ Retirement Benefits

State police retirement benefit costs have increased \$156 million, or 380 percent, since 2006/07. They are the largest component of PSP’s total increase in personnel expenditures and their costs are driven by two factors: total payroll, and the employer contribution rate for retirement benefits.

$$\text{Payroll} \times \text{Contribution Rate} = \text{Retirement Benefit Cost}$$

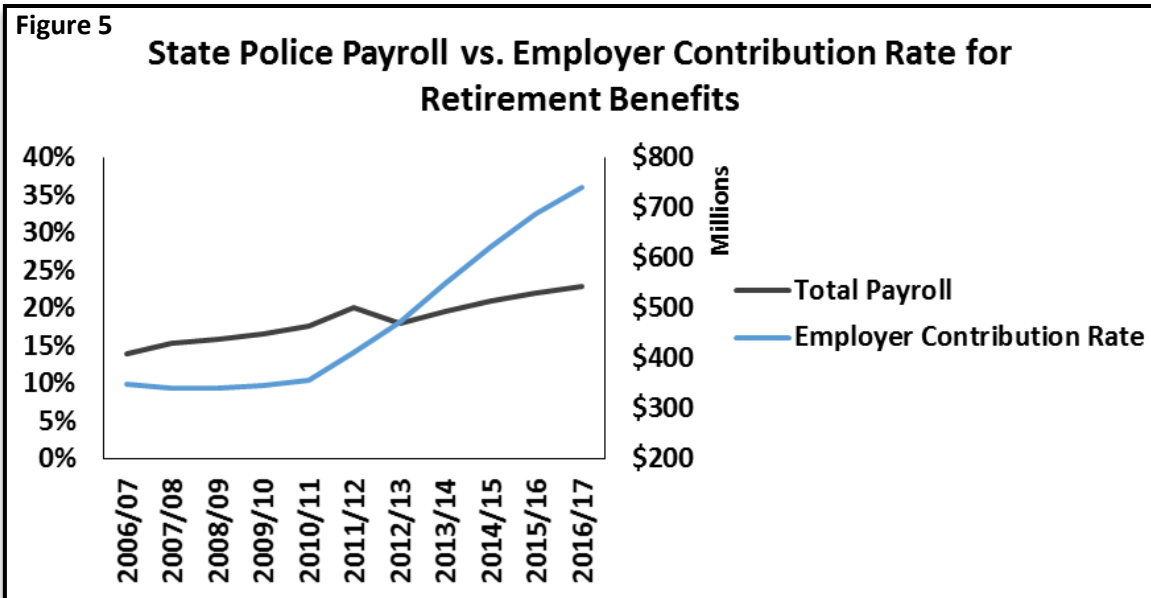
	Payroll	Contribution Rate	Retirement Benefit Cost
2006/07	410,510,971	9.99%	41,027,250
2016/17	544,891,864	36.12%	196,810,190

Shown in figure 5, page 5, the employer contribution rate grew nearly five times faster than payroll, with a noticeable spike beginning in 2011 after the passage of Act 120 of 2010. Total state police retirement benefit costs grow with the contribution rate, amplified by payroll growth.

The employer contribution rate for retirement benefits is set in statute and varies by the type of employee, known as [retirement class](#). The employer contribution rate for state troopers is higher than other state employees – 42 percent of payroll compared to 33 percent for all state employees in 2017/18 (see The DiLauro Award, page 5). Rates shown in the table above and in figure 5 are the average for all state police employees in the fiscal year.

Quick Take: *Long term artificially lowered retirement contributions led to higher rates as the commonwealth scrambled to catch up and regain stable fiscal ground.*

For nearly 15 years, the commonwealth kept rates below the actuarially required contributions (ARC), trading fiscal responsibility for short-term savings to help balance annual budgets. Act 120 required the commonwealth to return to making the ARC. But the “debt” had already accumulated and compounded as the Great Recession trampled investment returns. While policymakers were able to postpone the resolution of a chronic budget deficit, we are now paying a heavy price.



The commonwealth is finally on a predictable debt repayment plan, but prior payment deferrals have garnered costs tantamount to interest and are unavoidable. As a rule of thumb, Pennsylvania’s repayment costs for prior “debt” are expected to average between roughly 75 percent and 85 percent of retirement benefit expenditures for state agency employees over nearly two decades. Also, the recently enacted state retirement benefit reductions under Act 5 of 2017 will not offset the debt. Pennsylvania must pay its bill and cannot reform its way out of this obligation.

Although Act 5 established a limit to the percent of voluntary overtime that may be included in the retirement benefit calculation, Act 5 exempted police officers from participation in the new hybrid plans and deferred compensation plan, forgoing estimated savings to PSP of 6 to 23 percent for officers who might have selected one of the new plans.

The State Employees Retirement System (SERS) reports that the employer contribution rate will begin to fall in 2018/19, declining 5.43 percent by 2028/29. However if payroll continues to grow at a rate of 3 percent per year, the net change in retirement benefit expenditures for state police will continue to rise, albeit at a slower pace.

The DiLauro Award

The DiLauro Award is named after Thomas J. DiLauro, the chairman of the American Arbitration Association and the lead arbitrator in a 1988 complaint, brought by PSTA on behalf of a 46-year-old retired state trooper with 25 years of experience, John Little, against the State Employees’ Retirement System.

That 1988 arbitration established specific rules for when state troopers could retire, and what level of pay and medical benefits they would be entitled to after retirement. This change was ultimately upheld by Commonwealth Court.

Under the DiLauro Award, state troopers employed on or after July 1, 1989, are allowed to retire after 20 years of service (with benefits based on 50 percent of their highest year’s earnings), or after 25 years of service (with benefits based on 75 percent of their highest year’s earnings).

In comparison, using rough estimates, state police civilian employees and other state employees hired before Jan. 1, 2011, would have to work approximately 30 years (an additional 5 years) to retire with benefits equal to 75 percent of their peak earnings. Employees hired any time after Jan. 1, 2011, or after Jan. 1, 2017, would have to work for 37.5 or 41.25 years, respectively, to achieve commensurate retirement benefits. A higher employer contribution rate is necessary to absorb the added cost of paying out higher benefit rates for longer periods of time.

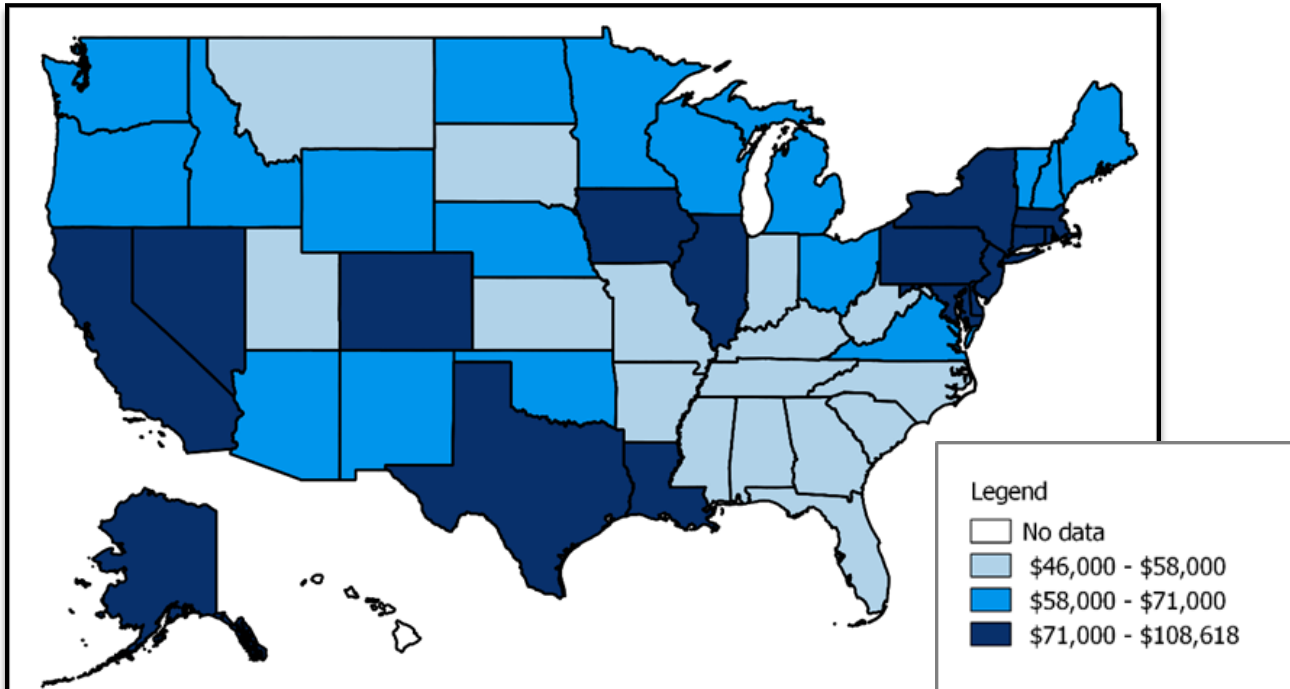
Notably, Act 29 of 1994 made it so that similar changes to retirement benefits in the future could only be made through statute, and not through any collective bargaining or arbitration.

State Police in other States

To put this analysis in context, we look at how state police personnel costs in Pennsylvania compare to other states. The role of a state police force varies widely across the country, which presents a significant challenge in comparing costs to other states. In Pennsylvania and [neighboring states](#), like New Jersey, Maryland, and Delaware, state police agencies provide patrols throughout the state and are the primary law enforcement in rural and unincorporated areas that do not have local police departments. Conversely, in other parts of the country, state police have a more limited set of duties, such as highway patrol and specialized services (i.e. crime labs, SWAT teams).

With this caveat, here are two ways to compare PA to other states and regions of the country. First, compared to other state police departments, average Pennsylvania State Police pay is in the top one-third of states (14th out of 49 states, or \$77,009). There are regional trends for higher pay in the Northeast and Pacific Coast, and lower pay in the Southeast and rural Northwest. PA is in line with other states in the Northeast, which is also where state police commonly have more comprehensive duties as the primary law enforcement agency for rural and unincorporated areas.

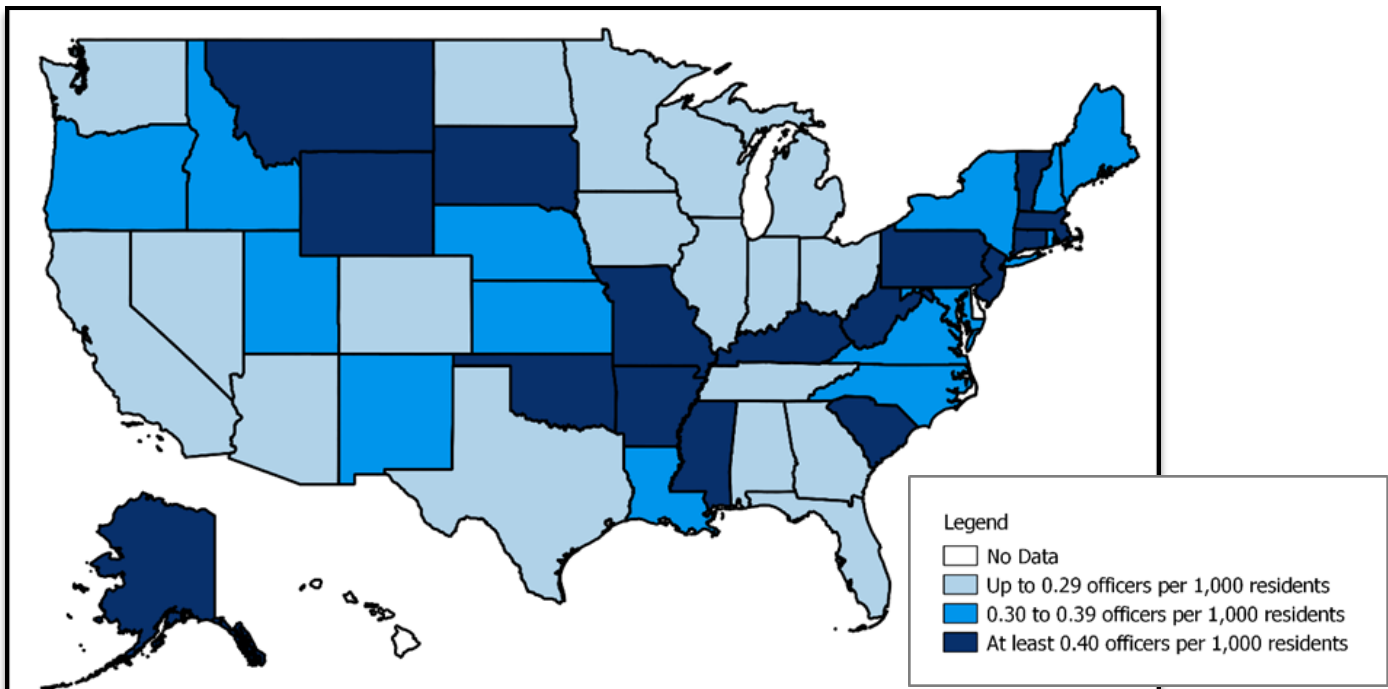
Figure 6: Annual Pay for State Police, 2016



Data Source: US Census, State Government Employee and Payroll Data, March 2016, Annualized

Next, we look at the number of state police employees per resident (Figure 7, page 7). In general, state police tend to be the primary law enforcement in Northeastern states. In these areas there are 0.53 state police employees for every 1,000 residents. Conversely, in Western and Southern regions of the country, policing is often provided by counties and the state provides a more limited set of highway patrol and specialized law enforcement services. In those areas, there are fewer state police (0.31 per 1,000 residents).

Figure 7: Number of State Police Employees per 1,000 Residents in each State, 2016



Data Source: US Census, State Government Employee and Payroll Data, March 2016

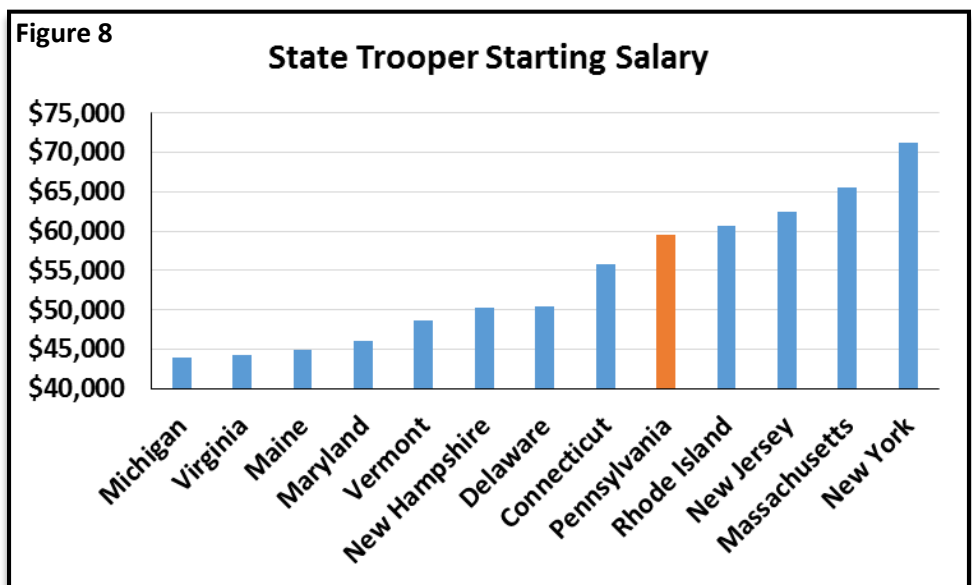
Because the role of state police and highway patrol departments varies widely, looking at pay and the number of employees is often not an apples-to-apples comparison. To minimize differences, another way to understand how Pennsylvania stacks up is to analyze the starting salaries for state troopers in the sample of Northeastern states that operate similarly to Pennsylvania. Figure 8 shows the starting salary for troopers who have graduated from the state police training academy in these 13 states.

In most of these states, new hires receive a pay bump when they graduate from the training academy and become troopers. In Virginia and Vermont, starting pay is lower, in part, because the pay rate does not increase until one year after graduation from the academy. Overall, the average starting salary for a newly graduated trooper in this group of states is \$54,000 (it ranges from \$44,000 in Michigan and Virginia to \$71,000 in New York). Pennsylvania troopers start at just under \$60,000.

Conclusion

Personnel is a major budgetary cost driver in state government. The primary components of these costs are determined, for the most part, by negotiated collective bargaining agreements (wage and health benefits) and state statute (retirement benefits). The simple reality is that there is an added cost for state troopers in nearly every component of payroll and benefits compared to the average cost for civilian employees.

Ultimately, the one variable in this equation that agencies, like the state police, can most directly control is the number of positions to fill. This begs the question of how many troopers and civilian personnel the Pennsylvania State Police need to effectively carry out their mission of public safety in the commonwealth.



Appendix

Table A1. State Police Payroll Expenditures and Summary

Fiscal Year	Health benefits	Retirement Benefits	Other fixed benefits	Other variable benefits	Salaries and wages	Overtime	Other personnel costs	Total
2006/07	159,771,555	41,027,250	907,421	17,554,278	364,374,200	26,281,546	19,855,226	629,771,475
2007/08	153,479,980	40,778,104	945,843	19,910,718	379,338,636	26,212,960	24,556,305	645,222,545
2008/09	160,672,979	41,558,954	791,315	19,598,919	390,925,940	26,155,917	20,576,695	660,280,719
2009/10	162,202,341	43,615,387	785,839	35,806,263	399,802,016	28,239,702	19,846,550	690,298,099
2010/11	147,759,083	48,342,862	780,793	32,993,786	413,438,167	27,076,969	23,135,420	693,527,081
2011/12	152,189,674	71,121,778	871,346	35,567,096	442,809,809	28,006,639	32,113,026	762,679,369
2012/13	163,549,713	85,499,688	801,734	34,230,420	419,796,122	25,210,447	25,766,832	754,854,957
2013/14	189,191,425	114,558,875	812,302	40,144,832	442,486,985	25,184,377	25,622,704	838,001,499
2014/15	206,993,078	145,395,736	842,406	39,616,279	457,016,697	32,353,670	25,721,506	907,939,371
2015/16	234,620,570	172,382,540	859,688	46,749,610	468,967,090	26,448,025	34,149,555	984,177,078
2016/17	241,150,165	196,810,190	844,519	51,824,101	465,396,588	30,671,352	48,823,924	1,035,520,840
Change (\$)	81,378,609	155,782,940	-62,901	34,269,823	101,022,389	4,389,807	28,968,698	405,749,365
Change (%)	50.93%	379.71%	-6.93%	195.22%	27.72%	16.70%	145.90%	64.43%
% of Tot Δ	20.06%	38.39%	-0.02%	8.45%	24.90%	1.08%	7.14%	100.00%
CAGR¹	4.20%	16.98%	-0.72%	11.43%	2.48%	1.56%	9.41%	5.10%
AAGR²	4.45%	17.81%	-0.45%	13.56%	2.53%	2.29%	11.51%	5.17%
% '06 Exp.	25.37%	6.51%	0.14%	2.79%	57.86%	4.17%	3.15%	100.00%
% '16 Exp.	23.29%	19.01%	0.08%	5.00%	44.94%	2.96%	4.71%	100.00%

Data Source: SAP, Payroll Postings - Legislative Reporting

¹Compound Annual Growth Rate

²Average Annual Growth Rate

Table A2. Negotiated Base Pay Increase, PSTA and AFSCME

PSTA (68% of PSP employees)				AFSCME (23% of PSP employees)			
Contract Period	Fiscal Year	Effective Date	Base Pay Increase	Contract Period	Fiscal Year	Effective Date	Base Pay Increase
	2004/05	7/1/2004	3.00%		2003/04	7/1/2003	0.00%
2004-2008	2005/06	7/1/2005	3.50%	2003-2007	2004/05	N/A	0.00%
	2006/07	7/1/2006	3.50%		2005/06	7/1/2005	3.00%
	2007/08	7/1/2007	4.00%		2006/07	N/A	0.00%
	2008/09	7/1/2008	3.00%		2007/08	7/1/2007	3.50%
2008-2012	2009/10	7/1/2009	3.00%	2007-2011	2008/09	7/1/2008	3.00%
	2010/11	7/1/2010	4.00%		2009/10	7/1/2009	3.00%
	2011/12	7/1/2011	4.00%		2010/11	10/1/2010	4.00%
	2012/13	7/1/2012	1.00%		2012/13	7/1/2012	1.00%
2012-2017	2013/14	7/1/2013	2.00%	2011-2015	2013/14	7/1/2013	0.50%
	2014/15	7/1/2014	2.50%		2013/14	1/1/2014	0.50%
	2015/16	7/1/2015	2.50%		2014/15	7/1/2014	2.00%
	2016/17	7/1/2016	3.00%		2015-16	2015/16	N/A
2017-2020	2017/18	7/1/2017	1.00%	2016-2019	2016/17	10/1/2016	2.75%
	2018/19	7/1/2018	1.75%		2017/18	7/1/2017	2.00%
	2019/20	7/1/2019	2.00%		2018/19	7/1/2018	2.50%

Data Source: Summarized from PSTA and AFSCME agreements, [Office of Administration](#)

Table A3. State Police Pay by Bargaining Unit, 2007 and 2017

Collective Bargaining Group	Filled Positions 2006/07	Filled Positions 2016/17	Median Salary FYE 2006/07	Median Salary FYE 2016/17	10-Year Change \$	10-Year Change %
PA State Troopers Association Subtotal	4,330	4,189	\$ 68,746.88	\$ 90,612.35	\$ 21,865.47	31.81%
State Police Trooper	3,137	3,045	\$ 65,617.28	\$ 85,688.45	\$ 20,071.17	30.59%
State Police Corporal	786	777	\$ 74,693.12	\$ 99,333.50	\$ 24,640.38	32.99%
State Police Sargent	239	203	\$ 82,433.66	\$ 110,537.47	\$ 28,103.81	34.09%
State Police Lieutenant	116	112	\$ 92,865.66	\$ 123,494.02	\$ 30,628.35	32.98%
State Police Captain	36	36	\$ 102,066.69	\$ 136,784.38	\$ 34,717.70	34.01%
State Police Major	16	16	\$ 113,562.75	\$ 153,371.26	\$ 39,808.51	35.05%
All Positions Not Represented by PSTA	1,936	2,016	\$ 36,428.54	\$ 42,914.64	\$ 6,486.10	17.80%
AFSCME Subtotal	1,373	1,423	\$ 35,638.32	\$ 42,034.44	\$ 6,396.12	17.95%
Other Collective Bargaining Groups	147	133	\$ 41,498.50	\$ 52,055.68	\$ 10,557.18	25.44%
No Collective Bargaining Representation						
Cadets	208	197	\$ 29,126.14	\$ 34,342.14	\$ 5,216.00	17.91%
No Elected Representation	17	19	\$ 61,868.28	\$ 71,394.00	\$ 9,525.72	15.40%
Management / Trainee	191	244	\$ 57,878.04	\$ 66,856.08	\$ 8,978.04	15.51%
Total Filled Positions	6,266	6,205	\$ 64,428.03	\$ 79,726.56	\$ 15,298.53	23.75%

Data Source: Calculated using annualized pay for filled positions as of fiscal year end, SAP, Complement

Table A4. State Cost for PSP Healthcare Benefits per Employee per Pay Period, 2013-2019

Fiscal Year	Civilian Employee	Retired Civilian	Retired Trooper	Retired Trooper
2013/14	\$425	\$305	\$600	\$810
2014/15	\$455	\$334	\$650	\$850
2015/16	\$485	\$388	\$695	\$931
2016/17	\$455	\$418	\$718	\$1,140
2017/18	\$473	\$380	\$655	\$1,200
2018/19	\$486	\$300	\$685	\$1,288

Data Source: Governor's Annual Budget Instructions

House Appropriations Committee (D)

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