The background of the cover features a collage of financial data visualizations. In the upper right, there is a bar chart with green bars and a line graph with white circles. Below it, a line graph shows a fluctuating trend with labels for 'min' and 'max 1.6'. The lower half of the cover is dominated by a large, semi-transparent blue area containing a complex line chart with multiple colored lines (red, yellow, blue) and numerical data points such as 5.6631, 9.334, 4.25647, and 7.2235. The overall design is modern and professional, using a color palette of blues, purples, and greens.

# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

Forty-Seventh  
Comprehensive  
Annual Financial  
Report

2018

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# Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension  
Trustees and Prepared by the Office of  
Pensions Fiscal Year Ended June 30, 2018

- State Employees' Pension Plan

- Special Fund

- New State Police Pension Plan

- Judiciary Pension Plans

- County & Municipal Police  
and Firefighters' Plans

- County & Municipal Other  
Employees' Pension Plan

- Closed State Police Pension Plan

- Diamond State Port  
Corporation Pension Plan

- Delaware Volunteer  
Firemen's Fund

- County & Municipal Police  
and Firefighters' COLA Fund

- Post-Retirement  
Increase Fund

- Delaware Local Government  
Retirement Investment Pool

Delaware  
Public  
Employees'  
Retirement System

— A component unit of the State of Delaware

2018

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# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

# INTRODUCTORY SECTION

# 2018



2012

2017

2013

2014

2015

2016



GOVERNMENT FINANCE OFFICERS ASSOCIATION

Certificate of Achievement  
for Excellence  
in Financial Reporting

Presented to

Delaware Public  
Employees' Retirement System

*Jeffrey A. Crum*  
Executive Director / CEO



STATE OF DELAWARE  
STATE BOARD OF PENSION TRUSTEES  
AND  
OFFICE OF PENSIONS  
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[www.delawarepensions.com](http://www.delawarepensions.com)

November 21, 2018

The Honorable John Carney  
and  
Members of the 149th General Assembly

Dear Governor and Members of the General Assembly:

The Board of Pension Trustees for the Delaware Public Employees' Retirement System (DPERS or the System) is proud to present its 47th Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2018.

This report provides information on nine plans [State Employees', Special Fund, New State Police, Judiciary, County & Municipal Police and Firefighters', County & Municipal Other Employees', Delaware Volunteer Firemen's Fund, Diamond State Port Corporation, and Closed State Police] plus three commingled investment funds [County & Municipal Police and Firefighters' COLA (COLA Fund), Post-Retirement Increase (PRI) and Delaware Local Government Retirement Investment Pool (DELRIP)]. Responsibility for both the accuracy of the data and the completeness and fairness of presentation rests with the State Board of Pension Trustees (Board). To the best of our knowledge and belief, the enclosed data are accurate in all material respects and present fairly the System's financial position and operational results for the Fiscal Year ended June 30, 2018.

The Fund's time-weighted return in Fiscal Year 2018 was 10.6% which was 3.6% above the policy benchmark of 7.0%, driven by positive returns for many sectors of the market. In fiscal 2018, the Fund's 10.6% return compares with the 14.4% return of the S&P 500 stock index, the 7.3% return of the MSCI All-Country World ex-USA Index, the (0.1)% return of the Barclays Aggregate bond index, and the Delaware Benchmark of 7.0%.

The Honorable John Carney  
and  
Members of the 149th General Assembly  
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November 21, 2018

The System's longer-term results have been achieved with lower observed return volatility than the median for the universe, reflecting the System's long standing focus on risk management. The Board, along with its Investment Committee and staff, will continue to actively monitor and proactively manage the System in a manner fully consistent with its fiduciary duty to the System's beneficiaries.

The Management's Discussion and Analysis (MD&A), located in the Financial Section of this report, provides a narrative introduction, overview, and analysis to accompany the basic financial statements. This Letter of Transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the report of the independent auditors.

The System was established on June 11, 1970, with the incorporation of the State Employees', Judiciary, Closed State Police, and Retired & Disabled Teachers Pension Plans. The State Employees' and the Judiciary Plans were changed to actuarial reserve funding shortly thereafter. The Closed State Police Pension Plan remains a pay-as-you-go plan. Fiscal Year 1994 was the last year the Retired & Disabled Teachers' Pension Plan had members entitled to benefits.

When calendar year 1971 ended, the four pension plans totaled \$14.7 million in assets with 2,766 pensioners. The State's contribution was 13.1% of payroll. At the end of Fiscal Year 2018, monies from the nine plans and two pension commingled investment funds totaled \$10.1 billion. The State's contribution rate for the State Employees' Plan for Fiscal Year 2018 was 10.4% of payroll. Employer rates in the other plans that the Board administers range from 7.1% to 21.2% of covered payroll. Benefit coverage varies by plan as shown on pages 30-33. The majority of beneficiaries' pension benefits are well funded, with a majority of the System's total membership covered by plans with a funded ratio greater than or equal to 87.5%. The net pension liability of each plan is detailed on page 60.

### **Governmental Accounting Standards Board (GASB) Accounting**

DPERS follows the provision of GASB Statement 67, which replaced those of Statement 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and Statement 50, Pension Disclosures. These provisions affect the financial reporting primarily through enhanced note disclosures and schedules of required supplemental information. These statements do not affect the funding requirements for the defined benefit plans, which continue to be calculated based on annual actuarial valuations in conformity with generally accepted actuarial principles and practices with the Actuarial Standards of Practice issued by the Actuarial Standards Board and applicable statutes.

DPERS provided information to participating employers on GASB Statement 68 for the year ended June 30, 2017. Statement 68 amends GASB Statement 27, Accounting for Pensions by State and Local Government Employers, by requiring the System to determine and allocate the net pension liability (asset), pension expense, and pension deferred outflows of resources and deferred inflows of resources attributable to each employer in the pension plans. The employers will report these amounts on their respective financial statements for the year ended June 30, 2018.

The Honorable John Carney  
and  
Members of the 149th General Assembly  
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November 21, 2018

### **Major Accomplishments**

*Best Practices* – The Board, with the help of its legal counsel and various Committee members, continued its “Best Practices Review” during Fiscal Year 2018. Now in its fourteenth year, the process provides the benefit of annually comparing reviews of the System’s operations and efficiency with similar public pension funds. Those reviews assist the System in identifying future initiatives. The Board promoted Trustee training opportunities including presentations by the founder of a highly successful private equity firm, the System’s independent auditors, Chief Security Officer for the State's Department of Technology about cyber security and the investment advisor. Following recommendations from a best practice review conducted in a prior year by a third party consultant, the Board established an Internal Audit function during Fiscal Year 2018 and hired a director to oversee this function. In addition, with the help of outside legal counsel, the Board continued its review of the structure of the System and each of its nine plans as established in the Delaware Code for compliance with the Internal Revenue Code and its rules, regulations, and interpretive opinions. See the Tax Status update in Note 8 to the financial statements on page 50 for more details.

*GFOA Certificate of Achievement* – The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to DPERS for its comprehensive annual financial report (CAFR) for the Fiscal Year ended June 30, 2017. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. This is the twenty-second consecutive year that DPERS has received a Certificate of Achievement. DPERS believes that its current comprehensive annual financial report continues to meet the Certificate of Achievement Program’s requirements, and we will submit the Fiscal Year 2018 CAFR to the GFOA to determine its eligibility for another certificate of achievement.

*Public Pension Coordinating Council Award* – The Public Pension Coordinating Council (PPCC) granted the System the Public Pension Standards Award for 2017. This is the fifteenth consecutive year the award has been received. The PPCC is a coalition of National Association of State Retirement Administrators (NASRA), National Council on Teacher Retirement (NCTR), and National Conference on Public Employee Retirement Systems (NCPERS). The major PPCC goal is to promote excellence in plan design and administration among state and local public retirement systems. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration and serve as a benchmark by which all defined benefit public plans should be measured. Public Pension Standards include: comprehensive benefit programs, funding adequacy, receipt of GFOA award in current year, independent actuarial valuation, independent audit review resulting in an unqualified opinion from the auditor, independent investment performance evaluation, adoption of written fiduciary standards by Board and Investment Committee, and communications with membership.

The Honorable John Carney  
and  
Members of the 149th General Assembly  
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November 21, 2018

### **Investments and Economic Climate**

The System's investment activity is governed by the "prudent person rule," a fiduciary standard which applies to anyone with System authority. Fiduciaries must discharge their duties solely in the interests of System participants and beneficiaries and with the degree of diligence, care and skill which prudent people would ordinarily exercise under similar circumstances.

The System continues to manage its investments by focusing on risk control and diversification. For a further discussion of portfolio diversification and investment strategy, see the Investment Section beginning on page 73 of this report.

The System's investments were positioned to benefit from market gains with an over-weighted exposure to public and private equities while under weighted in fixed income, where holdings were more focused on credit. Equity allocation and manager changes during the year had the net impact of profit-taking in domestic equity, shifts to take advantage of relative value opportunities elsewhere in the world, and an increase in the Fund's liquidity position.

The Board's investment policy is summarized on pages 43-44. Investment objectives are outlined in the investment policy established by the Board, including the appropriate degree of risk. Investment managers are hired to execute the investment policy and have discretion for investment decisions within statutory authority, Board policy, and their respective guidelines. A list of the investment managers under contract with the System as of June 30, 2018, may be found on page 84 of this report. A summary of the total System's asset allocation can be found on page 83.

The System's investments had a 10.6% time-weighted return in Fiscal Year 2018. The System's annualized total returns for the last five, ten, and fifteen years are 8.2%, 7.3% and 8.3%, respectively. Relative to other large public pension funds, the System's performance ranks in the top quartile of the Trust Universe Comparison Service (TUCS) universe for the ten-year period ended June 30, 2018.

### **Funding Status**

A pension plan is well funded when it has sufficient assets invested to meet all expected future obligations to participants. The greater the level of funding, the larger the ratio of assets to the net pension liability. Seven of the plans/funds included in the System – the State Employees', New State Police, Judiciary, County & Municipal Police & Firefighters' Plan, County & Municipal Other Employees' Plan, Diamond State Port Corporation, and Special Fund – have funded ratios greater than or equal to 87.5% of the net pension liability. The Delaware Volunteer Firemen's plan is making annual contributions at the actuarially determined rate to reach full funding and the Closed State Police Pension Plan remains a pay-as-you-go plan.

The Honorable John Carney  
and  
Members of the 149th General Assembly  
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November 21, 2018

### **Internal Controls**

System internal accounting controls are designed to reasonably assure the safekeeping of assets and the reliability of financial reporting. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived and second, the valuation of costs and benefits requires estimates and judgments by management. Control procedures and responsibilities are well documented both in writing and with graphic flowcharts. These are reviewed and updated annually. The Audit Committee, a committee appointed by the Board, monitors operations and controls throughout the year. An independent auditing firm audits the System's basic financial statements annually and reports any findings to the Audit Committee and the Board.

### **Professional Services**

The Board appoints professional consultants to perform ongoing services essential to the effective and efficient operation of the System. An opinion on the System's basic financial statements from the independent auditors, BDO USA, LLP, is included in the Financial Section of this report. The Northern Trust Company is the global custodian for the System. Cheiron, Inc. performs the actuarial valuations for the System and advises the Board on funding matters. The System's Investment Advisor, Windmark Investment Partners, provides the Board and the Investment Committee with periodic investment performance updates, ongoing market insights, asset allocation recommendations, investment manager research, manager recommendations, performance and attribution analysis, and additional investment-related services. TBV Advisors provides analysis of the System's operational and investment risk. Financial Recovery Technologies provides securities litigation monitoring to the System. The System has engaged several law firms to assist in specific areas: Ice Miller acts as tax counsel to the System and Chapman and Cutler LLP, Morgan, Lewis & Bockius LLP and Reinhart Boerner VanDeuren s.c. provide advice related to investment documentation and regulatory matters.

### **Acknowledgments**

The Board thanks the many people who work so diligently to assure the successful operation and financial soundness of the Delaware Public Employees' Retirement System. These include the Pension Office staff; the Director of the Office of Management & Budget, who provides administrative supervision to the Pension Office; other State support personnel; professional consultants; members of the Governance Subcommittee, Investment and Audit Committees, Internal Auditors; and the Pension Advisory Council.

The Board welcomes Stephenie Tatman as the new Director of Internal Audit. Prior to joining the Pension Office, she was the System's liaison with the State of Delaware's Office of Auditor of Accounts.

The Honorable John Carney  
and  
Members of the 149th General Assembly  
Page 6  
November 21, 2018

**Acknowledgments (continued)**

I am honored to work with a very fine Board and its Governance subcommittee, Investment and Audit Committees. We appreciate the ongoing support of both the Executive and Legislative branches of our state government, the Director of the Office of Management and Budget, the Executive Director and the Pension Office Staff, Deputy Attorney General, other state support personnel, our investment advisors and managers, professional consultants and the Pension Advisory Council. This remarkable team works tirelessly to produce one of the best managed pension funds in the country. Operationally we compare favorably or very favorably with other public funds across a host of measures. The System ranks in the top quartile for the ten-year period ended June 30, 2018, in investment performance for public funds in excess of \$5 billion in assets by the Trust Universe Comparison Service (TUCS). The System's longer-term results have been achieved with lower observed return volatility than the median for the universe, reflecting the System's long standing focus on risk management. I look forward to continuing the longstanding working relationship with these various entities.

On behalf of our Board, I wish the State, the wider DPERS team and all of our beneficiaries only the very best going forward.

Respectfully submitted,



Suzanne B. Grant, Chair  
Board of Pension Trustees

## Board of Pension Trustees, Board Committees, & Professional Consultants

### Board of Pension Trustees

**Suzanne B. Grant, Chair**  
*Former Senior Vice President*  
Salomon Smith Barney, Consulting Group

**Arturo F. Agra**  
*Vice President of Strategic Planning*  
Pepco Holdings Inc.

**Thomas S. Shaw**  
*Former Executive Vice President and  
Chief Operating Officer*  
Pepco Holdings Inc.

**Nancy J. Shevock**  
*Former Director*  
Delaware Transit Corporation

**Helen R. Foster, J.D.**  
*Consultant*

### Ex-Officio Board Members

**Richard J. Geisenberger**  
*State Secretary of Finance*

**Michael S. Jackson**  
*Director, Office of Management & Budget*

### Executive Secretary to the Board and Pension Administrator

**David C. Craik**

### Legal Counsel

**Ann Marie Johnson, Esq.**  
*Deputy Attorney General*

### Investment Committee

**George J. Saxon, Chair**  
**Arturo F. Agra**  
**Suzanne B. Grant**  
**Nancy J. Shevock**  
**Mark E. Stalnecker**  
**A. Dale Stratton**

### Audit Committee

**Mark Finfrock, Chair**  
**James A. Burke**  
**Araya Debessay, Ph.D.**  
**Robert L. Paretta, Ph.D., CPA**  
**Stephen D. Ritchie, CPA**  
**Kathy White, CPA**

### Governance Subcommittee

**Tom Shaw, Chair**  
**Arturo F. Agra**  
**James A. Burke**  
**George J. Saxon**  
**A. Dale Stratton**

### Pension Advisory Council

**Joseph Malloy, Chair**  
*Firefighter, City of Wilmington*

### Consulting Actuary

**Cheiron, Inc.**

### Investment Advisor

**Windmark Investment Partners**

### Risk Advisor

**TBV Advisors, LLC**

### Independent Auditors

**BDO USA, LLP**

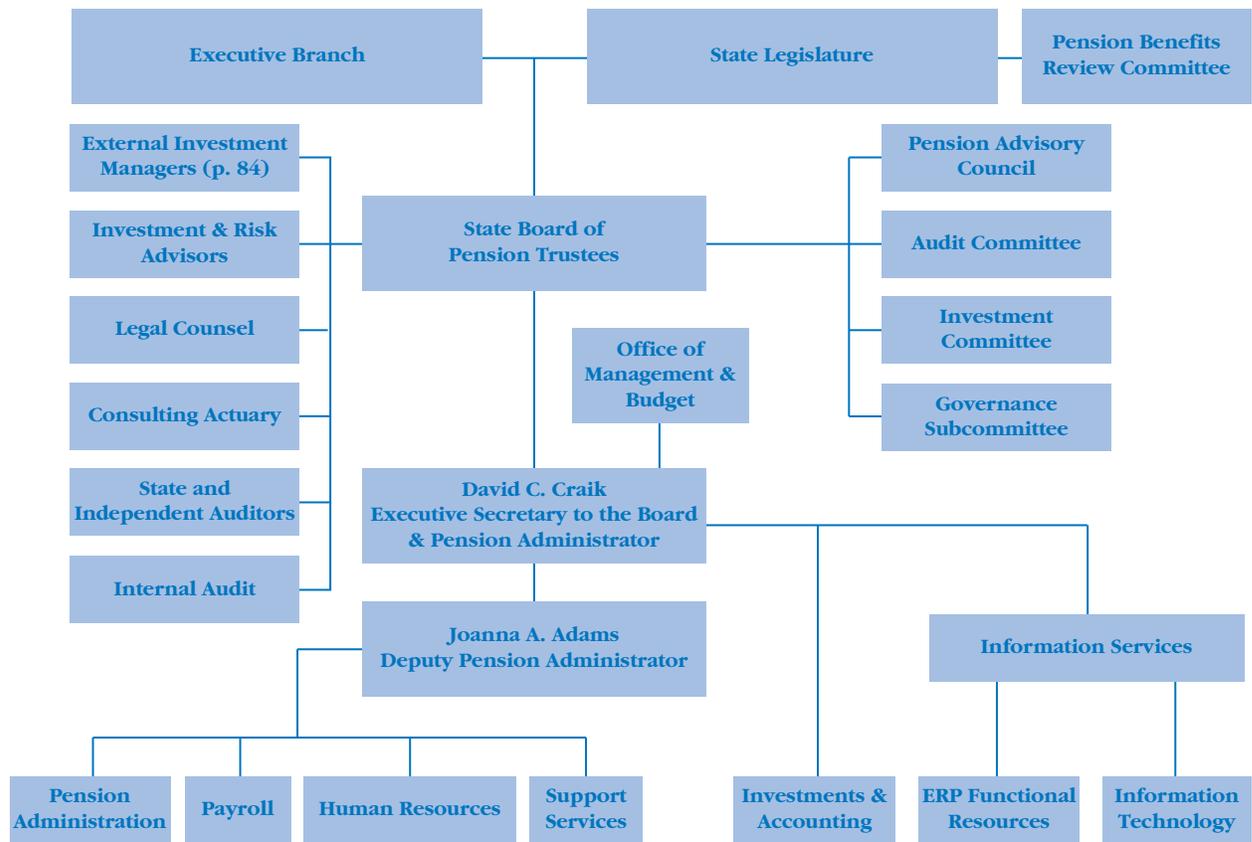
### Global Custody Bank

**Northern Trust Co.**

### Internal Audit

**Stephenie Tatman, CPA**  
*Director*

## Organizational Chart



### Management Team:

- Investments & Accounting:** Khairat Makanjuola, *CPA, Pension Cash/Debt Manager*  
Joshua Hitchens, *Pension Cash/Debt Manager*
- Information Services:** John McCartney, *Information Systems Manager*
- ERP Functional Resources:** Robin Hartnett-Sterner, *Strategic Information Systems Manager*
- Information Technology:** Robert Eckstine, *Strategic Information Systems Project Leader*
- Pension Administration:** Mary Wood, *Human Resource Specialist V*
- Support Services:** Terri L. Timmons, *Office Manager*
- Payroll:** Amy Cole, *Human Resource Specialist IV*
- Human Resources:** Kristal Diaz, *Human Resource Specialist IV*

## Highlights of Board Activities

The Board of Pension Trustees (Board) – comprised of five members appointed by the Governor and confirmed by the Senate, and two ex-officio members – is responsible for the general administration of these plans/funds:

- State Employees' Pension Plan
- Special Fund
- New State Police Pension Plan
- Judiciary Pension Plans (Closed and Revised)
- County & Municipal Police and Firefighters' Pension Plans
- County & Municipal Other Employees' Pension Plan
- Diamond State Port Corporation Pension Plan
- Closed State Police Pension Plan
- Delaware Volunteer Firemen's Fund

The following retirement funds/plans have been established under the custody of the Board for investment purposes only:

- County & Municipal Police and Firefighters' COLA Fund
- Post-Retirement Increase Fund
- Delaware Local Government Retirement Investment Pool

In addition to its general administrative responsibilities, the Board is responsible for these specific functions:

- Maintain and oversee the investment of the Delaware Public Employees' Retirement System (System) and the Delaware OPEB Fund Trust (OPEB)
- Appoint an independent actuary to perform annual actuarial valuations used as the basis for contributions to the System
- Control and manage State pension payments
- Hear appeals from State Pension Office decisions regarding eligibility for pension benefits
- Adopt rules and regulations for the general administration of State pension plans
- Prepare and publish an annual report to the Governor and General Assembly
- To contract with State agencies and others for assistance in the general administration and the investing or advising as to the investment of pension system and OPEB assets
- Determine interest rates to be credited to members' contributions and rates to be charged on repayment of contributions previously withdrawn

The day-to-day administration of these plans/funds is performed by the State Pension Office, which also determines the eligibility of individual employees for pension benefits. The Pension Administrator reports to the Director of the Office of Management and Budget and also serves as Executive Secretary to the Board.

The seven-person Audit Committee of the Board monitors operations and internal controls throughout the year to identify issues requiring Board and Pension Office action. They are responsible for interfacing with the Delaware Auditor of Accounts and the independent auditing firm to assure System compliance with generally accepted accounting principles and practices.

## Highlights of Board Activities (continued)

The Investment Committee of the Board is currently comprised of seven members. This Committee operates within the investment guidelines established by the Board. The Committee establishes policies to meet these objectives and monitors these policies with the assistance of the Investment Advisor. The Committee also reviews prospective risk levels and rates of return of all classes of assets. Hence, the Committee assures investment diversification by selecting managers who demonstrate different management styles and asset class expertise. Most importantly, the Committee closely monitors the performance of all investment managers, not only in relation to specific absolute objectives, but also in relation to other fund managers following the same investment objectives. Further discussion of the Investment Committee's activities may be found in the Investment Section of this report beginning on page 73.

The Board has approved the creation of a Governance subcommittee to oversee and advise the Board on the governance matters relating to DPERS administration, and consistent with the governance review undertaken of DPERS at the request of the Board. The Governance Subcommittee is comprised of five members, drawn from the Board and the other committees.

The Board retains Windmark Investment Partners, as investment advisor for the System. Windmark provides a variety of services to the System including: investment manager and custody contract negotiations, investment manager searches, performance analysis/attribution, and investment policy and asset allocation recommendations. The firm is prohibited by contract terms from managing any of the System's assets. A list of investment managers under contract with the System as of June 30, 2018, may be found on page 84 of this report. In addition, the schedule of fees and commissions paid by the System is disclosed on pages 85-86.

The Board retains the firm of Cheiron, Inc., to provide professional actuarial and consulting services. Such services include the preparation of comprehensive actuarial valuations and reports, analysis of the costs and other aspects of proposed changes in pension provisions, general consulting advice, and background information on other public pension plans.

The Board also retains TBV Advisors, LLC, to provide risk assessment consulting services. TBV reports to the Board and its Committees the inherent and control risks in the System's operations and investments.

The Department of Justice assigns a Deputy Attorney General to serve as general counsel to the Board. The Deputy deals with legal questions involving interpretation and administration of pension laws, advises the Board in connection with appeals hearings, works with the Board on drafting legislation and regulations, and negotiates contracts.

The major activities of the Board and its committees during the 12-month period July 2017 through June 2018 were:

- As part of its continuing best practices review, continued to retain additional outside counsel to ensure full compliance with the IRS Code. Outside counsel was also retained for the purpose of drafting and reviewing alternative investment contracts. In addition, the Governance Subcommittee held regular meetings to continue addressing the recommendations entailed in the System's most recent review of best practices, that was performed by a third party consultant.
- Held regular monthly meetings and met with representatives of investment management firms and the custodial bank on a regular basis
- Held hearings for individual plan members who appealed decisions of the Pension Office, including eligibility of individual employees for disability pension benefits, or questioned the Board's interpretation of State pension laws
- Participated in meetings with the Governor's staff, members of the General Assembly, officials of State agencies and school districts, the Pension Advisory Council, representatives of employee organizations, and other interested parties.



Public Pension Coordinating Council

# Recognition Award for Funding 2017

Presented to

Delaware Public Employees' Retirement System

In recognition of meeting professional standards for  
plan funding as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

A handwritten signature in blue ink that reads "Alan H. Winkle". The signature is written in a cursive, flowing style.

Alan H. Winkle  
Program Administrator

## 2018 Legislation Affecting Pensions

<b>HS1 for House Bill 179</b> (81 Del. Laws, C445)	Adds 911 workers to the definition of "specified peace officers" in the State Employees' Pension Plan.
<b>House Bill 312</b> (81 Del. Laws, C368)	Changes the definition of an employee in the Delaware County Municipal Police/Firefighter Pension Plan to include paid EMTs who are employed by a volunteer fire company.
<b>Senate Bill 7</b> (81 Del. Laws, C397)	Provides burial benefits to the County/Municipal Police/Firefighter plan for active employee deaths effective 7/1/16.
<b>Senate Bill 11</b> (81 Del. Laws, C398)	Provides another type of distribution from the County/Municipal COLA fund for the City of Wilmington.
<b>Senate Bill 236</b> (81 Del. Laws, C281)	Section 10 of this Act provides for a one-time pension supplement of \$400 for the State Employees', New State Police, and Judicial Pension Plans to be paid in November 2018.



# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

# FINANCIAL SECTION

# 2018



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Wilmington, DE 19805

## Independent Auditor's Report

Board of Pension Trustees  
Delaware Public Employees' Retirement System  
Dover, Delaware

### Report on the Financial Statements

We have audited the accompanying financial statements of Delaware Public Employees' Retirement System (the System), a component unit of the State of Delaware, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Delaware Public Employees' Retirement System as of June 30, 2018, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### Other Matters

*Prior-Year Comparative Information:* We have previously audited the System's 2017 financial statements, and we expressed an unmodified opinion on those financial statements in our report dated November 13, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2017 is consistent, in all material respects, with the audited financial statements from which it has been derived.

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Board of Pension Trustees  
Delaware Public Employees' Retirement System  
Dover, Delaware  
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*Required Supplementary Information:* Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 20 – 23 and Schedules 1, 2, 3, and 4, and the related notes to the required supplementary information on pages 51- 64 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by Governmental Accounting Standards Board, who considers it to be an essential part of the financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods for preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Supplementary and Other Information:* The audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The Schedule of Administrative Expenses, Schedule of Investment Expenses, and the Schedules for Delaware Local Government Retirement Investment Pool (the Schedules) on pages 66-69 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States. In our opinion, the Schedules are fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, and Statistical sections as listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

### **Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated November 21, 2018 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the System's internal control over financial reporting and compliance.

*BDO USA, LLP*

Wilmington, Delaware  
November 21, 2018

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## Management's Discussion and Analysis

This section presents management's discussion and analysis of the Delaware Public Employees' Retirement System's (System) financial performance and provides an overview of the System's financial activities for the Fiscal Year ended June 30, 2018. It is intended to be a narrative supplement to the System's financial statements, which begin on page 24 of this report.

### Financial Highlights

The following financial highlights occurred during the Fiscal Year ended June 30, 2018, versus Fiscal Year 2017:

- Plan net position of all the funds administered by the System increased by \$618.9 million.
- Fiscal Year 2018 covered employee payroll totaled \$2,195.4 million. Employer contributions increased by 0.8% while Member contributions increased by 4.0%. The increase in Member contributions is attributed to a higher amount of covered payroll.
- Net investment earnings (net increase/(decrease) in fair value, plus investment earnings, less investment-related expenses) increased by \$970.9 million as a result of a higher market driven investment return of 10.6% in Fiscal Year 2018.
- Transfer of Contributions from PRI Fund decreased by 64.9% per planned schedule of transfers as disclosed in Note 2 of the financial statements.
- Pension benefits paid to retirees and beneficiaries increased \$32.7 million bringing the total benefit payments to \$674.1 million.

### Using this Financial Report

The System's 2018 Financial Statements, Notes to the Financial Statements and Required Supplementary Information (RSI) were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25*. This financial report consists of two basic financial statements as follows:

- The *Statement of Fiduciary Net Position* which reports the pension trust funds' assets, liabilities, and resulting net position where Assets – Liabilities = Net Position held in trust for pension benefits available at the end of the fiscal year. It is a snapshot of the financial position of the pension trust funds at that specific point in time.
- The *Statement of Changes in Fiduciary Net Position* summarizes the pension trust funds' financial transactions that have occurred during the fiscal year where Additions – Deductions = Net Change in Net Position. It supports the change that has occurred to the prior year's net position on the *Statement of Fiduciary Net Position*.

Because of the long-term nature of a defined benefit pension plan, the basic financial statements alone cannot provide sufficient information to properly reflect the System's ongoing plan perspective. The *Required Supplementary Information* includes four required schedules of historical trend information as follows:

The Schedule of Changes in Net Pension Liability (pages 51-59) presents sources of changes in the net pension liability.

The Schedule of Net Pension Liability (page 60) includes historical information about the components of the net pension liability and related ratios, including fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percentage of covered payroll.

The Schedule of Employer Contributions (pages 61-63) includes information about the actuarially determined contribution, contributions to the pension plan, and related ratios. Additionally, significant methods and assumptions used in calculating the actuarially determined contributions are presented in the notes to required supplementary information.

The Schedule of Investment Returns (page 63) includes the annual money-weighted rate of return on pension plan investments for each year.

#### *Rates of Return on Investments*

The System has elected to disclose both the money-weighted and time-weighted rates of return. The money-weighted rate of return is disclosed, by plan, in the notes to the financial statements (Note 7 – Deposits and Investments) and in the required supplementary information (Schedule of Investment Returns). The time-weighted rate of return is disclosed in the Introductory Section and Investment Section of this report.

A money-weighted rate of return provides information about the actual performance of a pension plan's investment portfolio because it takes into account the effects of transactions that increase the amount of pension plan investments (such as contributions) and those that decrease the amount of pension plan investments (such as benefit payments). Additionally, the money-weighted rate of return provides information that is comparable with the long-term expected rate of return on pension plan investments, which is used in calculating information presented in the financial section of this report.

In contrast, a time-weighted rate of return considers investment performance of a hypothetical dollar invested from the beginning of an investment period to the period's end. The time-weighted rate of return does not consider the effect of varying amounts invested due to, for example, the receipt of contributions or the payment of benefits. A time-weighted rate of return communicates information that is suitable for comparisons to relevant benchmark rates, provides information to assess investment manager performance, and provides comparability among pension plans and investment managers.

## Summary Statement of Fiduciary Net Position

(dollar values expressed in thousands)

Fiscal Years Ended June 30,	2018	2017	Increase/ (Decrease) Amount	Increase/ (Decrease) Percent
Cash and Investments at Fair Value	\$ 10,096,178	\$ 9,500,174	\$ 596,004	6%
Receivables	50,746	57,276	(6,530)	(11)%
<b>Total Assets</b>	<b>\$ 10,146,924</b>	<b>\$ 9,557,450</b>	<b>\$ 589,474</b>	<b>6%</b>
<b>Total Liabilities</b>	<b>\$ 21,585</b>	<b>\$ 50,967</b>	<b>\$ (29,382)</b>	<b>(58)%</b>
<b>Total Net Position</b>	<b>\$ 10,125,339</b>	<b>\$ 9,506,483</b>	<b>\$ 618,856</b>	<b>7%</b>

## Summary Statement of Changes in Fiduciary Net Position

(dollar values expressed in thousands)

Fiscal Years Ended June 30,	2018	2017	Increase/ (Decrease) Amount	Increase/ (Decrease) Percent
<b>Additions:</b>				
Employer Contributions	\$ 271,472	\$ 269,265	\$ 2,207	0.8%
Transfer of Contributions from PRI Fund	10,944	31,137	(20,193)	(64.9)%
Transfer of Assets from Outside the System	5,812	3,263	2,549	78.1%
Member Contributions	76,520	73,595	2,925	4.0%
Other	36	-	36	-
Net Investment Earnings (Losses)	969,887	959,595	10,292	1.1%
Net Securities Lending Income	1,040	1,166	(126)	(10.8)%
<b>TOTAL ADDITIONS</b>	<b>\$ 1,335,711</b>	<b>\$ 1,338,021</b>	<b>(2,310)</b>	<b>(0.2)%</b>
<b>Deductions:</b>				
Transfer of Contributions from PRI Fund	10,945	31,137	\$ (20,192)	(64.8)%
Transfer of Assets Outside the System	12,092	12,657	\$ (565)	(4.5)%
Pension Payments	674,118	641,471	\$ 32,647	5.1%
Refunds of Contributions to Members	6,859	6,331	\$ 528	8.3%
Burial Benefit Payments	6,603	5,932	\$ 671	11.3%
Administrative Expenses:				
General Administrative Expenses	6,193	6,044	\$ 149	2.5%
Best Practices Review	45	45	\$ -	0.0%
<b>Total Administrative Expenses</b>	<b>\$ 6,238</b>	<b>\$ 6,089</b>	<b>\$ 149</b>	<b>2.4%</b>
<b>TOTAL DEDUCTIONS</b>	<b>\$ 716,855</b>	<b>\$ 703,617</b>	<b>\$ 13,238</b>	<b>1.9%</b>
<b>INCREASE/(DECREASE) IN NET POSITION</b>	<b>\$ 618,856</b>	<b>\$634,404</b>	<b>\$ (15,548)</b>	<b>(2.5)%</b>

### **Analysis of Fiduciary Net Position**

The System was created to provide retirement, survivor, and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments as designated by the various plans, refunds of member contributions to terminated employees, and the cost of administering the System. Combined Fiduciary net position increased by \$618.9 million during Fiscal Year 2018. The year's investment return of 10.6% or \$970.9 million in investment gains, employer contributions of \$271.5 million, employee contribution of \$76.5 million and benefit payments and administration expenses of \$680.3 million are the primary reasons for this year's increase in total plan net position.

On a year to year basis, plans had decreases/increases in required actuarial determined contribution rates that ranged from -17.07% to 16.4%. Employer contributions increased by \$2.2 million or 0.8% primarily due to the large decrease in contributions to the Post-Retirement Increase Fund, County Municipal Police and Firefighters' Plan and Judiciary Plan. These decreases were offset by increased contributions in other plans. Member contributions increased by \$2.9 million. Transfers from the Post-Retirement Increase Fund decreased by \$20.2 million, which is in accordance with planned schedule of transfers for previously granted increases in retiree benefits.

Pension benefit payments increased by approximately 5.1% as a result of a net increase of 857 members/beneficiaries during Fiscal Year 2018. Transfers of Assets Outside the System include transfers from the County & Municipal Police and Firefighters' COLA Fund (COLA Fund) to individual participating entities. This fund invests non-pension contributions designated for distribution to pension plans outside the System that meet certain program criteria.

## Combining Statement of Fiduciary Net Position

as of June 30, 2018 with Comparative Totals for June 30, 2017

(expressed in thousands)

	State Employees' Plan	Special Fund	New State Police Plan	Judiciary Pension Plans	County & Municipal Police and Firefighters' Plans	County & Municipal Other Employees' Plan
<b>Assets:</b>						
Cash & Cash Equivalents	\$ 687,839	\$ 14	\$ 36,148	\$ 6,447	\$ 28,285	\$ 4,069
Receivables:						
Accrued Investment Income	10,970	1	353	78	160	19
Pending Trade Sales	16,325	-	853	152	665	96
Employer Contributions	13,723	-	861	137	375	146
Member Contributions	4,247	-	249	17	229	60
<b>Total Receivables:</b>	\$ 45,265	\$ 1	\$ 2,316	\$ 384	\$ 1,429	\$ 321
Investments at Fair Value:						
Domestic Fixed Income	928,871	20	48,558	8,673	37,832	5,457
Domestic Equities	1,668,095	36	87,203	15,575	67,939	9,799
Pooled Equity & Fixed Income	2,963,872	64	154,942	27,673	120,715	17,412
Alternative Investments	2,203,362	48	115,185	20,573	89,740	12,944
Foreign Fixed Income	71,026	2	3,713	663	2,893	417
Foreign Equities	479,356	10	25,059	4,476	19,524	2,816
<b>Total Investments:</b>	\$ 8,314,582	\$ 180	\$ 434,660	\$ 77,633	\$ 338,643	\$ 48,845
<b>TOTAL ASSETS:</b>	\$ 9,047,686	\$ 195	\$ 473,124	\$ 84,464	\$ 368,357	\$ 53,235
<b>Liabilities:</b>						
Pending Purchases Payable	14,812	-	774	138	603	87
Benefits Payable	944	-	11	-	24	4
Accrued Investment Expenses	3,242	-	166	30	132	19
Accrued Administrative Expenses	241	-	3	-	5	3
Other Liabilities	-	-	-	-	123	-
<b>TOTAL LIABILITIES:</b>	\$ 19,239	\$ -	\$ 954	\$ 168	\$ 887	\$ 113
<b>NET POSITION - RESTRICTED</b>						
<b>FOR PENSION BENEFITS:</b>	\$ 9,028,447	\$ 195	\$ 472,170	\$ 84,296	\$ 367,470	\$ 53,122

The notes to the financial statements are an integral part of this Statement.

Delaware Volunteer Firemen's Fund	Diamond State Port Corporation Plan	County & Municipal Police and Firefighters' COLA Fund	Post-Retirement Increase Fund	Delaware Local Gov't Retirement Investment Pool	Closed State Police Plan	Totals as of June 30,	
						2018	2017
\$ 576	\$ 2,571	\$ 917	\$ 612	\$ 3,084	\$ 374	\$ 770,936	\$ 345,253
1	21	3	2	53	(4)	11,657	13,611
-	61	22	14	73	9	18,270	26,369
-	111	-	638	-	-	15,991	13,052
-	26	-	-	-	-	4,828	4,244
\$ 1	\$ 219	\$ 25	\$ 654	\$ 126	\$ 5	\$ 50,746	\$ 57,276
-	3,450	1,225	802	4,171	488	1,039,547	1,008,626
-	6,196	2,200	1,441	7,491	876	1,866,851	2,100,653
19,964	11,008	3,909	2,560	13,309	1,558	3,336,986	3,298,266
-	8,184	2,906	1,903	9,894	1,158	2,465,897	2,154,595
-	264	94	61	319	37	79,489	97,817
-	1,780	632	414	2,153	252	536,472	494,964
\$ 19,964	\$ 30,882	\$ 10,966	\$ 7,181	\$ 37,337	\$ 4,369	\$ 9,325,242	\$ 9,154,921
\$ 20,541	\$ 33,672	\$ 11,908	\$ 8,447	\$ 40,547	\$ 4,748	\$ 10,146,924	\$ 9,557,450
-	55	20	13	67	8	16,577	45,645
6	-	-	-	-	9	998	1,021
4	15	4	2	15	3	3,632	3,989
-	1	-	-	-	2	255	312
-	-	-	-	-	-	123	-
\$ 10	\$ 71	\$ 24	\$ 15	\$ 82	\$ 22	\$ 21,585	\$ 50,967
\$ 20,531	\$ 33,601	\$ 11,884	\$ 8,432	\$ 40,465	\$ 4,726	\$ 10,125,339	\$ 9,506,483

# Combining Statement of Changes in Fiduciary Net Position

for the fiscal year ended June 30, 2018 with Comparative Totals for June 30, 2017

(expressed in thousands)

	State Employees' Plan	Special Fund	New State Police Plan	Judiciary Pension Plans	County & Municipal Police and Firefighters' Plans	County & Municipal Other Employees' Plan
<b>Additions:</b>						
<b>Contributions:</b>						
Employer Contributions	\$ 206,883	\$ -	\$ 13,202	\$ 2,112	\$ 9,484	\$ 2,826
Transfer of Contributions from PRI Fund	10,600	-	280	64	-	-
Transfer of Assets from Outside the System	15	-	-	-	-	-
Member Contributions	64,312	-	4,329	354	6,068	1,032
Misc. Receipts	-	-	36	-	-	-
<b>Total Contributions:</b>	<b>\$ 281,810</b>	<b>\$ -</b>	<b>\$ 17,847</b>	<b>\$ 2,530</b>	<b>\$ 15,552</b>	<b>\$ 3,858</b>
<b>Investments:</b>						
Investment Income	127,776	3	6,552	1,186	5,035	717
Net Appreciation (Depreciation)						
in Fair Value	759,971	18	38,916	7,048	29,909	4,258
<b>Total Investment Earnings/(Loss):</b>	<b>\$ 887,747</b>	<b>\$ 21</b>	<b>\$ 45,468</b>	<b>\$ 8,234</b>	<b>\$ 34,944</b>	<b>\$ 4,975</b>
Less Investment Manager/Advisor Fees	(20,396)	-	(1,051)	(190)	(810)	(116)
Less Investment Administrative Expenses	(754)	-	(11)	-	(16)	(10)
<b>Net Investment Earnings/(Loss):</b>	<b>\$ 866,597</b>	<b>\$ 21</b>	<b>\$ 44,406</b>	<b>\$ 8,044</b>	<b>\$ 34,118</b>	<b>\$ 4,849</b>
Securities Lending Income	1,094	-	56	10	43	6
Less Bank Fees	(164)	-	(8)	(2)	(6)	(1)
<b>Total Securities Lending Expense:</b>	<b>(164)</b>	<b>-</b>	<b>(8)</b>	<b>(2)</b>	<b>(6)</b>	<b>(1)</b>
<b>Total Net Securities Lending Income:</b>	<b>930</b>	<b>-</b>	<b>48</b>	<b>8</b>	<b>37</b>	<b>5</b>
<b>TOTAL ADDITIONS</b>	<b>\$ 1,149,337</b>	<b>\$ 21</b>	<b>\$ 62,301</b>	<b>\$ 10,582</b>	<b>\$ 49,707</b>	<b>\$ 8,712</b>
<b>Deductions:</b>						
Transfer of Contributions from PRI Fund	-	-	-	-	-	-
Withdrawal of funds COLA/DelRIP	-	-	-	-	-	-
Pension/Benefit Payments	616,085	26	18,584	4,793	7,751	1,268
Refunds of Contributions to Members	6,418	-	11	2	208	116
Burial Benefit Payments	6,435	7	-	-	-	-
Administrative Expenses	5,781	1	100	13	145	80
<b>TOTAL DEDUCTIONS</b>	<b>\$ 634,719</b>	<b>\$ 34</b>	<b>\$ 18,695</b>	<b>\$ 4,808</b>	<b>\$ 8,104</b>	<b>\$ 1,464</b>
<b>NET INCREASE (DECREASE)</b>	<b>\$ 514,618</b>	<b>\$ (13)</b>	<b>\$ 43,606</b>	<b>\$ 5,774</b>	<b>\$ 41,603</b>	<b>\$ 7,248</b>
<b>NET POSITION - RESTRICTED</b>						
<b>FOR PENSION BENEFITS:</b>						
<b>BALANCE BEGINNING OF YEAR</b>	<b>\$ 8,513,829</b>	<b>\$ 208</b>	<b>\$ 428,564</b>	<b>\$ 78,522</b>	<b>\$ 325,867</b>	<b>\$ 45,874</b>
<b>BALANCE END OF YEAR</b>	<b>\$ 9,028,447</b>	<b>\$ 195</b>	<b>\$ 472,170</b>	<b>\$ 84,296</b>	<b>\$ 367,470</b>	<b>\$ 53,122</b>

The notes to the financial statements are an integral part of this Statement.

Delaware Volunteer Firemen's Fund	Diamond State Port Corporation Plan	County & Municipal Police and Firefighters' COLA Fund	Post-Retirement Increase Fund	Delaware Local Gov't Retirement Investment Pool	Closed State Police Plan	Totals as of June 30,	
						2018	2017
\$ 2,019	\$ 1,175	\$ -	\$ 11,021	\$ -	\$ 22,750	\$ 271,472	\$ 269,265
-	-	-	-	-	-	10,944	31,137
-	-	3,497	-	2,300	-	5,812	3,263
145	280	-	-	-	-	76,520	73,595
-	-	-	-	-	-	36	-
\$ 2,164	\$ 1,455	\$ 3,497	\$ 11,021	\$ 2,300	\$ 22,750	\$ 364,784	\$ 377,260
256	462	167	113	653	203	143,123	153,017
1,033	2,742	956	665	3,767	1,129	850,412	830,921
\$ 1,289	\$ 3,204	\$ 1,123	\$ 778	\$ 4,420	\$ 1,332	\$ 993,535	\$ 983,938
(26)	(74)	(27)	(18)	(103)	(36)	(22,847)	(23,581)
-	(4)	-	-	-	(6)	(801)	(762)
\$ 1,263	\$ 3,126	\$ 1,096	\$ 760	\$ 4,317	\$ 1,290	\$ 969,887	\$ 959,595
-	4	1	1	6	2	1,223	1,372
-	(1)	-	-	(1)	-	(183)	(206)
-	(1)	-	-	(1)	-	(183)	(206)
-	3	1	1	5	2	\$ 1,040	1,166
\$ 3,427	\$ 4,584	\$ 4,594	\$ 11,782	\$ 6,622	\$ 24,042	\$ 1,335,711	\$ 1,338,021
-	-	-	10,945	-	-	10,945	31,137
-	-	3,367	-	8,725	-	12,092	12,657
2,167	964	-	-	-	22,480	674,118	641,471
87	17	-	-	-	-	6,859	6,331
-	-	-	-	-	161	6,603	5,932
35	40	-	1	2	40	6,238	6,089
\$ 2,289	\$ 1,021	\$ 3,367	\$ 10,946	\$ 8,727	\$ 22,681	\$ 716,855	\$ 703,617
\$ 1,138	\$ 3,563	\$ 1,227	\$ 836	\$ (2,105)	\$ 1,361	\$ 618,856	\$ 634,404
\$ 19,393	\$ 30,038	\$ 10,657	\$ 7,596	\$ 42,570	\$ 3,365	\$ 9,506,483	\$ 8,872,079
\$ 20,531	\$ 33,601	\$ 11,884	\$ 8,432	\$ 40,465	\$ 4,726	\$ 10,125,339	\$ 9,506,483

**Notes to Financial Statements**  
**June 30, 2018**

**1. Plan Descriptions and Contribution Information**

The following plans/funds (the Plans) in the Delaware Public Employees' Retirement System (DPERS or System) are sponsored by the State of Delaware (the State) and are established in the Delaware Code:

- State Employees' Pension Plan
- Special Fund
- New State Police Pension Plan
- Judiciary Pension Plans (Closed and Revised)
- County & Municipal Police and Firefighters' Pension Plans
- County & Municipal Other Employees' Pension Plan
- Delaware Volunteer Firemen's Fund
- Diamond State Port Corporation Plan
- Closed State Police Pension Plan

With the exception of the Diamond State Port Corporation Pension Plan, the General Assembly is responsible for setting benefits and contributions and amending plan provisions; administrative rules and regulations are adopted and maintained by the Board. The Board of Directors for the Diamond State Port Corporation is responsible for setting benefits and contributions and amending their plan provisions.

The management of all the Plans and Funds in the System is the responsibility of the Board of Pension Trustees (Board). The Board's oversight includes management of investment funds and pools included in the System, the Post-Retirement Increase Fund, the County & Municipal Police & Firefighters' COLA Fund, and the Delaware Local Government Retirement Investment Pool. These funds are commingled for investment purposes only. These funds are more fully explained in Note 2 to the financial statements.

The Board is comprised of five members appointed by the Governor and confirmed by the State Senate, plus two ex-officio members. The daily operation of the System is the responsibility of the Office of Pensions. Although most of the assets of the Plans and Funds are commingled for investment purposes, each Plan's or Fund's assets may be used only for the payment of benefits to the members of that Plan or Fund in accordance with the terms of that Plan or Fund. Although separate financial statements are presented for the System as a whole, the System is considered a component unit of the State of Delaware financial reporting entity and its financial statements are included as Pension Trust Funds within the Fiduciary Funds of the State's financial report.

A component unit is defined as a legally separate organization for which the elected officials of the primary government are financially accountable. The System is thus classified as a component unit of the State of Delaware because the State Senate retains certain significant governing powers over the System as described in the Board structure above. The System's financials are not intended to present the financial position and results of operations of the State.

The following employee membership data related to each Plan is based on an actuarial valuation as of June 30, 2017, updated as of June 30, 2018 using roll forward procedures in accordance with actuarial standards of practice:

<b>Plan</b>	<b>Inactive Plan Members or Beneficiaries Currently Receiving Benefits</b>	<b>Inactive Plan Members Entitled to But Not Yet Receiving Benefits<sup>(1)</sup></b>	<b>Active Plan Members</b>	<b>Total Plan Members</b>	<b>Participating Employers<sup>(2)</sup></b>
State Employees'	26,879	4,043	37,119	68,041	2
Special	7			7	N/A
New State Police	262	9	705	976	1
Judiciary	51	1	57	109	1
County & Municipal Police & Firefighters'	190	27	1,228	1,445	33
County & Municipal Other Employees'	115	50	781	946	45
Delaware Volunteer Firemen's	1,901	142	4,479	6,522	63
Diamond State Port Corporation	92	12	272	376	1
Closed State Police	494	-	-	494	1
<b>Total Membership:</b>	<b>29,991</b>	<b>4,284</b>	<b>44,641</b>	<b>78,916</b>	<b>147</b>

(1) Includes individuals on long-term disability.

(2) Participating employers are not unique; an employer can sponsor more than one plan.

The following are brief descriptions of the individual plans in effect as of June 30, 2018. For a more complete description, please refer to the respective plan documents.

## State Employees' Pension Plan

**Plan Description and Eligibility:** The State Employees' Pension Plan is a cost-sharing multiple employer defined benefit plan that covers virtually all full-time or regular part-time employees of the State, including employees of other affiliated entities.

There are two tiers within this plan:

1) employees hired prior to January 1, 2012 (Pre-2012). 2) employees hired on or after January 1, 2012 (Post-2011).

**Service Benefits:** Final average monthly compensation (employee hired Post-2011 may not include overtime in pension compensation) multiplied by 2.0% and multiplied by years of credited service prior to January 1, 1997, plus final average monthly compensation multiplied by 1.85% and multiplied by years of credited service after December 31, 1996, subject to minimum limitations. For this plan, final average monthly compensation is the monthly average of the highest three periods of twelve consecutive months of compensation.

**Vesting:** Pre-2012 date of hire: 5 years of credited service. Post-2011 date of hire: 10 years of credited service (5 of which must be consecutive).

**Retirement:** Pre-2012 date of hire: Age 62 with 5 years of credited service; age 60 with 15 years of credited service; or after 30 years of credited service at any age. Post-2011 date of hire: age 65 with at least 10 years of credited service; Age 60 with 20 years of credited service; 30 years of credited service at any age.

**Disability Benefits:** Pre-2012 date of hire: Same as Service Benefits. Employee must have 5 years of credited service. In lieu of disability pension benefits, over 90% of the members of this plan opted into a Disability Insurance Program offered by the State effective January 1, 2006. Post-2011 date of hire – in the Disability Insurance Program.

**Survivor Benefits:** If employee is receiving a pension, the eligible survivor receives 50% of pension (or 67.7% with 2% reduction of benefit, 75% with 3% reduction of benefit, or 100% with 6% reduction of benefit.); if employee is active with at least 5 years of credited service, eligible survivor receives 75% of the benefit the employee would have received at age 62. Amount payable to a surviving spouse under age 50 at the time the survivor's pension begins, shall be reduced for each month under age 50 in accordance with actuarial tables approved by the Board. Any actuarial reduction for such a spouse shall however not apply for the period during which the spouse has in his or her care, an unmarried child or children.

### **Contributions:**

**Employer** - determined by Board of Pension Trustees. Employer contributions was 10.42% and 9.58% in Fiscal Years 2018 and 2017 respectively.

**Pre-2012 date of hire Member** - 3% of earnings in excess of \$6,000.

**Post-2011 date of hire Member** - 5% of earnings in excess of \$6,000.

**Correctional Officers** - additional 2% of earnings in excess of \$6,000.

**Burial Benefit:** \$7,000 per member.

## Special Fund

**Plan Description and Eligibility:** The Special Fund provides certain benefits granted to individuals identified through legislation passed by the General Assembly.

**Service Benefits:** Defined by special legislation.

**Vesting:** Defined by special legislation.

**Retirement:** Defined by special legislation.

**Disability Benefits:** Defined by special legislation.

**Survivor Benefits:** Same as State Employees' Plan.

**Contributions:** Employer contributions are actuarially determined and fully funded in advance by the General Assembly.

**Burial Benefit:** \$7,000 per member.

## New State Police Pension Plan

**Plan Description and Eligibility:** The New State Police Pension Plan is a single-employer defined benefit plan that covers all State police officers appointed on or after July 1, 1980.

**Service Benefits:** 2.5% of final average monthly compensation multiplied by years of credited service up to 20 years, plus 3.5% of final average monthly compensation multiplied by years of service in excess of 20 years. For this plan, final average monthly compensation is the monthly average of the highest three consecutive years of compensation.

**Vesting:** 10 years of credited service at age 62.

**Retirement:** Age plus credited service (but not less than 10 years) equals 75; has 10 years of service and is retired due to age 55; or 20 years of credited service.

### Disability Benefits:

*Duty - Total Disability* - 75% of final average monthly compensation plus 10% for each dependent not to exceed 25% for all dependents.

*Duty - Partial Disability* - calculated the same as Service Benefits, subject to minimum 50% of final average monthly compensation.

*Non-Duty* - Same as Service Benefits, total disability subject to a minimum 50% of final average monthly compensation plus 5% for each dependent not to exceed 20% for all dependents. Partial disability to a minimum of 30% of final average monthly compensation.

**Survivor Benefits:** If employee is receiving a pension, the eligible survivor receives a minimum of 50% of pension; if employee is active, eligible survivor receives 50% of pension. If member is killed in the line of duty, eligible survivor receives 75% of member's compensation.

### Contributions:

*Employer* - determined by Board of Pension Trustees. Employer contributions were 21.17% and 18.2% of earnings for the Fiscal Year 2018 and 2017 respectively.

*Member* - 7% of compensation.

**Burial Benefit:** \$7,000 per member.

## Judiciary Pension Plans (Closed and Revised)

**Plan Description and Eligibility:** The Closed Judiciary Pension Plan is a single-employer defined benefit plan that covers members of State Judiciary appointed before July 1, 1980.

The Revised Judiciary Pension Plan is a single-employer defined benefit plan that covers members of State Judiciary appointed on or after July 1, 1980 or members appointed before July 1, 1980 who accept the provisions of this Plan.

Assets of one plan can be used to satisfy the liabilities of the other plan.

### Service Benefits:

*Revised* - 1/24th of final average monthly compensation multiplied by years of service up to 12 years, plus 1/48th of final average monthly compensation, multiplied by years of service from 13 to 24 years, subject to maximum limitations.

For this plan, final average monthly compensation is the monthly average of the highest three consecutive years of compensation.

**Vesting:** 12 years of credited service.

### Retirement:

*Revised* - Age 62 with 12 years of credited service, or any age with 24 years of credited service.

**Disability Benefits:** Same as Service Benefits.

### Survivor Benefits:

*Closed* - If employee is receiving a pension, then eligible survivor receives 2/3 of pension; if employee is active with 12 years of credited service, then eligible survivor receives 2/3 of pension the employee would have been eligible to receive.

*Revised* - If employee is receiving a pension, the eligible survivor receives a minimum of 50% of pension (or 2/3 with 2% reduction of pensioner's benefit); if employee is active, eligible survivor receives 2/3 of the benefit the employee would have received at age 62.

**Contributions:**

*Employer* - determined by Board of Pension Trustees. Employer contributions were 19.87% and 22.13% of earnings for the Fiscal Year 2018 and 2017, respectively.

*Member - Closed* - \$500 per year for the first 25 years of service.

*Member - Revised* - 3% of earnings that exceed \$6,000 per year, plus 2% of earnings that exceed the Social Security Wage Base for the first 24 years of service.

**Burial Benefit:** Not applicable.

## County & Municipal Police and Firefighters' Pension Plan

**Plan Description and Eligibility:** County & Municipal Police and Firefighters' Pension Plan, is a cost-sharing multiple-employer defined benefit plan that covers police officers and firefighters employed by a county or municipality of the State which has become part of the Plan.

**Service Benefits:** 2.5% of final average monthly compensation multiplied by years of credited service up to 20 years, plus 3.5% of final average monthly compensation multiplied by years of service in excess of 20 years. For this plan, final average monthly compensation is the monthly average of the highest three consecutive years of compensation (excluding overtime and special pay).

**Vesting:** 5 years of credited service.

**Retirement:** Age 62 with 5 years of service; age plus credited service (but not less than 10 years) equals 75; or 20 years of credited service.

**Disability Benefits:**

*Duty - Total Disability* - 75% of final average monthly compensation plus 10% for each dependent not to exceed 25% for all dependents.

*Duty - Partial Disability* - calculated the same as Service Benefits, subject to minimum 50% of final average monthly compensation.

*Non-Duty* - Same as Service Benefits, total disability subject to a minimum 50% of final average monthly compensation plus 5% for

each dependant not to exceed 20% for all dependants. Partial disability to a minimum of 30% of final average monthly compensation.

**Survivor Benefits:** If employee is receiving a pension, then eligible survivor receives a minimum of 50% of pension; if employee is active, eligible survivor receives 75% of pension the employee would have received at age 62. If the member is killed in the line of duty, the eligible survivor receives 75% of the member's compensation.

**Contributions:**

*Employer* - determined by Board of Pension Trustees. Employer contributions were 11.42% and 13.8% of earnings for the Fiscal Year 2018 and 2017, respectively.

*Member* - 7% of compensation.

**Burial Benefit:** Not applicable.

## County & Municipal Other Employees' Pension Plan

**Plan Description and Eligibility:** County & Municipal Other Employees' Pension Plan is a cost-sharing multiple-employer defined benefit plan that covers employees of counties or municipalities which have become part of the Plan.

**Service Benefits:** 1/60th of final average monthly compensation multiplied by years of credited service, subject to maximum limitations. For this plan, final average monthly compensation is the monthly average of the highest five years of compensation.

**Vesting:** 5 years of credited service.

**Retirement:** Age 62 with 5 years of credited service; age 60 with 15 years of credited service; or after 30 years of credited service.

**Disability Benefits:** Same as Service Benefits. Employee must have 5 years of credited service.

**Survivor Benefits:** If employee is receiving a pension, then eligible survivor receives a minimum of 50% of pension; if employee is active, eligible survivor receives 50% of pension the employee would have received at age 62.

**Contributions:**

*Employer* - determined by Board of Pension Trustees. Employer contributions were 7.1% and 6.8% of earnings for the Fiscal Year 2018 and 2017, respectively.

*Member* - 3% of earnings in excess of \$6,000.

**Burial Benefit:** Not applicable.

## Delaware Volunteer Firemen's Fund

**Plan Description and Eligibility:** The Delaware Volunteer Firemen's Fund is a cost-sharing multiple-employer defined benefit pension plan that covers all actively participating volunteers of fire departments, ladies auxiliaries, or ambulance organizations within the State of Delaware.

**Service Benefits:** \$5 multiplied by years of credited service (not to exceed 25 years) per month.

**Vesting:** 10 years of credited service.

**Retirement:** Age 60 with 10 years credited service.

**Disability Benefits:** Not applicable.

**Survivor Benefits:** Not applicable.

**Contributions:**

*Employer* - determined by Board of Pension Trustees. Employer contributions were \$450.30 and \$431.53 per member for the Fiscal Year of 2018 and 2017, respectively.

*Volunteer Member* - \$60 per member per calendar year.

**Burial Benefit:** Not applicable.

## Diamond State Port Corporation Plan

**Plan Description and Eligibility:** The Diamond State Port Corporation Pension Plan is a single-employer defined benefit plan which covers all employees of the Diamond State Port Corporation.

**Service Benefits:** 1.75% of final average monthly compensation multiplied by the years of credited service (not to exceed 30 years). For this plan, final average monthly compensation is the monthly average of the highest consecutive five years of compensation within the last ten years of employment.

**Vesting:** 5 years of credited service.

**Retirement:** Age 65 with 5 years of credited service; or age (not less than 55 years) plus credited service equals 90.

**Disability Benefits:** Same as Service Benefits. Employee must have 15 years of credited service.

**Survivor Benefits:** If employee is receiving a pension, the eligible survivor receives 50% of pension; if employee is active with at least 15 years of credited service, then eligible survivor receives 50% of pension the employee would have received at age 65.

**Contributions:**

*Employer* - determined by the Board of Pension Trustees. Employer contributions were 8.4% and 9.4% of earnings for the Fiscal Year 2018 and 2017, respectively.

*Member* - 2% of compensation.

**Burial Benefit:** Not applicable.

**Plan Status:** Frozen as of October 3, 2018.

**New Participants:** N/A

**Payroll Contributions:** N/A

**Vesting:** Automatic for all employer contributions up to date of freeze.

**Benefits/Refunds:** Processed in accordance with existing plan provisions.

## Closed State Police Pension Plan

**Plan Description and Eligibility:** The Closed State Police Pension Plan is a single-employer defined benefit plan that covers all State police officers appointed before July 1, 1980.

**Survivor Benefits:** If employee is active or is receiving a service or service-related disability pension, the eligible survivor receives 75% of pension; if employee is receiving a non-service related disability pension, eligible survivor receives 50% of pension.

**Contributions:**

*Employer* - The Closed State Police Plan is funded on a pay-as-you-go basis.

**Burial Benefit:** \$7,000 per member.

## 2. Fund Descriptions and Contributions

### County & Municipal Police and Firefighters' COLA Fund

During 1990, the State of Delaware established a mechanism for funding post-retirement increases granted by employers who participate in the County & Municipal Police and Firefighters' Pension Plan and manage a non-DPERS system "closed" pension plan for former employees.

Closed pension groups pertain to employees, for whom the employer elected not to become a part of the system when their employers joined the system. Currently, five employers maintain such closed groups. They include City of Dover, City of Elsmere, City of New Castle, City of Wilmington and New Castle County.

The COLA Fund is financed through a 0.25% tax on the value of certain homeowners' insurance premiums written within the State. The proceeds of the tax are directed into the Fund on a semi-annual basis and are managed by the Board of Pension Trustees (Board) for investment purposes. Unused amounts revert to the State General Fund after a period of 10 years per 80 Del. C419. Each participating employer receives an allocation of these contributions, earnings on investments of the Fund and expenses attributed to the Fund based on the headcount of retired members of its police force.

Any new employer, with a closed police pension plan, that joins the system is eligible to receive money from the COLA Fund ("Fund"). In accordance with 18 Del. C. S708(c), when a participating employer grants a post-retirement increase for a closed plan outside of the County & Municipal Police and Firefighters' Pension Plan, funds are transferred from the Fund to the trust account(s) of the closed pension group maintained by the employer. However, the entity must first provide 25% of the cost estimated by an actuary while the Fund provides the remaining 75% of the cost.

These increases are not the responsibility of DPERS. Each employer entity is solely responsible for any post-retirement increase granted even if the actuarial cost calculated at the onset of the increase exceeds the employer's share of the Fund's balance. There is no joint liability amongst existing employers.

### Post-Retirement Increase Fund

The State of Delaware passed legislation which established a mechanism for funding ad hoc post-retirement increases granted by the General Assembly to members retired under the State Employees' Plan, the New State Police Plan, and the Judiciary Plans (Closed and Revised) beginning in Fiscal Year 1994. The mechanism allows the State to appropriate actuarially determined employer contributions to a separate Post-Retirement Increase Fund (PRI) managed by the Board. With the exception of the Closed State Police Plan, projected benefit payments do not include the effects of projected ad hoc cost-of-living adjustments (ad hoc COLAs) as they are not substantively automatic. The primary considerations relevant to making this determination include the historical pattern of granting the changes and the consistency in the amounts of the changes. The actuary uses the current actuarial assumptions, methods, and population data to calculate the estimated additional liability resulting from granted ad hoc benefit increases. When the Legislature grants an ad hoc post-retirement adjustment, funds are transferred from this PRI Fund on a monthly basis based on a five-year actuarial funding schedule to the appropriate pension plan from which the additional benefits are disbursed. For the Fiscal Year ended June 30, 2018, \$10.9 million was transferred to the appropriate plans in the System.

As of June 30, 2018, recently granted post-retirement increases have outstanding liabilities totaling \$17.1 million, which are anticipated to be funded by the State and transferred to the appropriate plans over the next two fiscal years as follows:

Fiscal Year 2019	\$ 11,300,400
Fiscal Year 2020	\$ 5,833,800

The Board adopts actuarially determined funding for the Post-Retirement Increase Fund. Funding for Fiscal Year 2018 was 0.54% of covered payroll. Funding for Fiscal Year 2019 will be 0.53%.

### **Local Government Retirement Investment Pool**

In June 1996, the State of Delaware established the Delaware Local Government Retirement Investment Pool (DEL RIP) in the custody of the Board to allow local governments within the State of Delaware the option to pool their pension assets with the System for investment purposes. The DEL RIP is an external investment pool that allows local governments to potentially maximize their rate of return and reduce administrative expenses related to the investment of funds. Participation in the pool is voluntary. There were two participating entities in DEL RIP as of June 30, 2018, which comprise the pool in its entirety: Sussex County and the Town of Newport.

DEL RIP is subject to the oversight of the System's Investment Committee and not subject to the regulatory oversight of the Securities and Exchange Commission (SEC). The System has not provided or obtained any legally binding guarantees during the year to support the value of shares. The fair value of the pool is determined in the same manner as the value of the Master Trust shares (see pages 37-39). Since this pool is a portion of the total System, the same accounting and investment policies described in the following financial footnotes apply.

### **3. Summary of Significant Accounting Policies**

The accompanying financial statements of the Delaware Public Employees' Retirement System (DPERS or the System) have been prepared in conformity with Accounting Principles Generally Accepted in the United States (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB).

#### **Basis of Accounting**

The financial statements are presented on the accrual basis. Employer contributions to each plan are recognized when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of each Plan or Fund.

The accompanying financial statements include certain prior year summarized comparative information. Such information does not include sufficient detail to constitute a presentation in conformity with U.S. generally accepted accounting principles.

#### **Method Used to Estimate Values**

Management of the System has made certain estimates and assumptions relative to the reporting of assets and liabilities, and the disclosure of contingent assets and liabilities, to prepare these financial statements in conformity with U.S. generally accepted accounting principles. Actual results could differ from those estimates.

#### **Administrative Expenses**

General expenses for the administration of the System are budgeted and approved as part of the annual State budget process and are paid from the assets of the System. Expenses for some professional services, including outside legal counsel, auditor, investment manager, investment advisor, and actuarial services are paid directly from the System. In addition, the Board reviews and approves proposals for one-time, special projects as they arise. The cost of administrative expenses for the System are financed through plan contributions and investment earnings.

### **4. Fair Value Measurements**

All of the investment assets of the Plans and Funds, with the exception of the Delaware Volunteer Firemen's Fund (which is a length of service award plan), are pooled and invested in a common Master Trust. Each of the Plans or Funds described herein shares in the Master Trust based on funds contributed and earnings/(losses) allocated. The investment assets of the Delaware Volunteer Firemen's Fund are separately invested in a short-term investment fund, and in domestic equity, domestic fixed income, and international stock index funds.

Pooled investments are funds wherein the System owns units or shares of commingled equity, fixed income, and cash funds. These investments are redeemable with the underlying funds at net asset values (NAV) under the terms of the partnership agreements and/or subscription agreements. As of June 30, 2018, fixed income items classified as cash equivalents include \$34.8 million in short-term investments and \$670.2 million in pooled investments. The fair value of other pooled investments totaled \$3,337.0 million. The asset allocation (in millions) was \$1,226.1 in domestic fixed income, \$1,235.6 in domestic equity, and \$875.3 in international equity.

Alternative investments are ownership interests in investment limited partnerships or private LLCs, some of which may be illiquid. As of June 30, 2018, alternative investment values of \$2,465.9 million represent 24.4% of the System's net position.

The fair value of the System's investments is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair values for fixed income and equity securities are derived from published market prices and quotations from national security exchanges or security pricing vendors. Where published prices, quotations, or vendor prices are not available, alternate valuation methods are used.

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

In instances where inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability.

Equity and Fixed Income securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Equity securities classified in Level 2 are valued using the latest available estimates of price bids or actual price bids quoted in active and inactive markets for those securities.

Fixed Income securities and pooled investments classified in level 2 are valued using other inputs including, but not limited to, interest rates and yield curves that are observable at commonly quoted intervals as well as the latest available estimates of price bids or actual bids quoted in active and inactive markets for those, or similar, securities.

Fixed Income securities classified in level 3 are privately placed subordinated notes, valued using a discounted cash flow model. Unobservable inputs include projected cash flows and the discount rate.

Pooled investments classified in Level 1 of the fair value hierarchy are investments in open-end, non-exchange-traded mutual funds for which fair value per share (unit) is determined and published and is the basis for current transactions. These securities are valued at their NAV on the date of valuation, and are classified as Level 1 in the fair value hierarchy since they may be purchased or sold at their publically quoted NAV on the date of valuation.

The System has the following recurring fair value measurements as of June 30, 2018. Investments that are measured using the NAV per share (or its equivalent) as a practical expedient to fair value are not classified in the fair value hierarchy below.

## Investments by Fair Value

(dollar values expressed in thousands)

	June 30, 2018	Level 1	Level 2	Level 3
<b>Equity Securities:</b>				
Common Stock	\$ 2,396,223	\$ 2,393,658	\$ 2,565	\$ -
Convertible Equity	3,501	218	3,283	-
Preferred Stock	3,599	3,599	-	-
Total Equity Securities	\$ 2,403,323	\$ 2,397,475	\$ 5,848	\$ -
<b>Fixed Income Securities:</b>				
Asset Backed Securities	\$ 2	\$ -	\$ 2	\$ -
Bank Loans	356,550	-	356,550	-
Corporate Bonds	285,131	-	279,687	5,444
Corporate Convertible Bonds	12,704	-	12,704	-
Government Bonds	115,589	-	115,589	-
Indexed Linked Government Bonds	344,730	-	344,730	-
Municipal/Provincial Bonds	4,330	-	4,330	-
Total Fixed Income Securities	\$ 1,119,036	\$ -	\$ 1,113,592	\$ 5,444
<b>Pooled Investments:</b>				
Equity Funds	\$ 315,137	\$ 315,137	\$ -	\$ -
Total Pooled Investments	\$ 315,137	\$ 315,137	\$ -	\$ -
Total Investments by Fair Value Level	\$ 3,837,496	\$ 2,712,612	\$ 1,119,440	\$ 5,444
Total Investments Measured at NAV	\$ 5,487,746			
<b>TOTAL INVESTMENTS MEASURED AT FAIR VALUE</b>	<b>\$ 9,325,242</b>			

The valuation method for pooled and alternative investments that do not have a readily determinable fair value is such that the System establishes fair value by using the NAV per share (or its equivalent), such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed. These values are calculated by the management of each investment fund as of the System's measurement date, generally in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies. The NAV received from each investment fund are reviewed by Pension Office staff and its investment advisor; and both the System's management and the custodian receive periodic and audited annual financial reports from the management of each investment fund.

The System has the following recurring NAV measurements as of June 30, 2018. Excluded from pooled investments below is a short-term stable value fund that the System classifies as Cash Equivalents in the amount of \$670.2 million. At year end, the NAV, unfunded commitments, and redemption terms are as follows:

## Investments Measured at NAV

(dollar values expressed in thousands)

	Fair Value	Unfunded Commitments <sup>(1)</sup>	Redemption Frequency (if currently available)	Redemption Notice Period
<b>Pooled Investments:</b>				
Equity Funds	\$ 1,795,772	-	Daily, Monthly	1 to 12 days
Fixed Income Funds	1,226,077	-	Daily	1 day
<b>Total Pooled Investments<sup>(2)</sup></b>	<b>\$ 3,021,849</b>			
<b>Alternative Investments:</b>				
<b>Funds Primarily Invested in Public Securities</b>				
Credit/Distressed Debt Focused Multi-Strategy <sup>(3)</sup>	\$ 174,685	\$ -	Quarterly, Annual	90 days
Equity Focused Strategy <sup>(4)</sup>	61,442	-	Annual	45 to 90 days
Multi Strategy <sup>(5)</sup>	189,409	-	Monthly	5 days
<b>Funds Primarily Invested in Private Securities<sup>(6)</sup></b>				
Buyout	\$ 215,288	\$ 159,618		
International	409,415	95,987		
Private Debt	52,712	63,156		
Private Equity	1,059,450	271,750		
Real Assets	303,496	116,509		
<b>Total Alternatives</b>	<b>\$ 2,465,897</b>			
<b>Total Investments Measured at NAV</b>	<b>\$ 5,487,746</b>			

**1. Unfunded Commitments.** The System has commitments to invest additional amounts, to be drawn down as called upon at any time during the term of each relationship. The lengths of these terms are discussed below. Generally, these commitments are self-funding; in that the capital calls are met using cash flows generated by distributions received from alternative investment funds as the underlying investments of the funds are liquidated.

**2. Pooled Investments.** This type includes four index tracking funds, four global value equity funds, and one short-term investment fund. The index funds maintain a portfolio constructed to match or track the components of the following market indices: S&P 500, Russell 1000 Value, Barclays Capital U.S High Yield, and the Barclays Capital U.S. Aggregate. The global value equity funds invest in both U.S. and non-U.S. equities, seeking quality companies that are attractively valued and have growth potential. The short-term investment fund is a stable-value (money market-like) investment vehicle for cash reserves, which the System classifies as Cash Equivalents. It is managed by the System's Custodian to offer a competitive rate of return through a portfolio of obligations of the U.S. Government, its agencies or instrumentalities, and related money market instruments. Principal preservation and liquidity management are the prime objectives.

**3. Credit/Distressed Debt Focused Strategy.** This type includes three funds that engage in multiple investment strategies across the credit spectrum, with the objective of achieving superior risk-adjusted returns through opportunistic investment. The composite portfolio for this type includes investments in distressed corporate securities, convertible hedging, residential and consumer debt, real estate debt, merger arbitrage, and real estate. In limited circumstances, these funds have the ability to impose a suspension or postponement of redemptions (a "gate"), or in the case of a withdrawal greater than 90% they may hold up to 10% of the redemption amount (a "holdback") until the completion of the funds' annual audit. There have been no gates imposed during the reporting period. These funds may also segregate a portion of the portfolio, commonly illiquid securities with no active market, from other investments of the portfolio (a

“side pocket”). Investments in a side pocket are redeemable only upon liquidation of the underlying assets in the side pocket. Investments representing approximately 11% of the value of the investments in this type are held in side pockets. Investments representing approximately 3% of the value of the investments in this type cannot be redeemed because the investments include restrictions (a “lock-up”) that do not allow for initial redemption in the first 24-36 months after acquisition, with a rolling two-year lock-up thereafter. The remaining restriction period for these investments was 15 months at June 30, 2018.

**4. Equity Focused Strategy.** This type includes two funds that engage in a fundamental equity investing strategy. The composite portfolio for this type invests both long and short primarily in global common stocks, but also in debt, credit, private equity, derivative and other financial instruments. In limited circumstances, these funds have the ability to impose a gate, or in the case of a withdrawal greater than 95% they may hold back up to 5% of the redemption amount until the completion of the funds’ annual audit. These funds may also segregate a portion of the portfolio in a side pocket. Investments in a side pocket are redeemable only upon liquidation of the underlying assets in the side pocket. Investments representing approximately 49% of the value of the investments in this type are held in side pockets. Investments representing approximately 100% of the value of the investments in this type cannot be redeemed because the investments include an initial lock-up that does not allow for redemption in the first five years after acquisition. The remaining restriction period for these investments is approximately 27 months at June 30, 2018.

**5. Multi-Strategy.** This type of fund is such that may invest in a wide range of asset classes in order to meet fund objectives. In limited circumstances, this fund has the ability to impose a suspension or postponement of redemptions (a “gate”), or in the case of a withdrawal greater than 90%; may hold back 10% for approximately 15 days while the fund NAV is being finalized. There have been no gates imposed during the current reporting period.

**6. Funds Primarily Invested in Private Securities.** These investments can never be redeemed with the funds. Instead, the nature of the investments in these types is that distributions are received through the liquidation of the underlying assets of the funds. It is expected that the underlying assets of the funds will be liquidated over the next 1 to 14 years. The strategy of each type is as follows:

Buyout. This type includes three funds that make equity investments in mature, private companies.

International. This type includes 13 funds that invest in private equity and buyout strategies operating principally outside of the U.S.

Private Debt. This type includes seven funds that invest in debt or equity securities of financially stressed (distressed) companies, as well as convertible bonds and subordinated debt in private companies.

Private Equity. This type includes 46 funds that invest in the equity securities of growing private companies, primarily in the technology and healthcare sectors.

Real Assets. This type includes six funds that invest in commercial real estate and private energy companies including commercial real estate, exploration and production, midstream, power and services businesses.

## 5. Net Pension Liability of Employers

The components of the Net Pension Liability/(Asset) of each Plan as of June 30, 2018 were as follows:  
(*dollar values expressed in thousands*)

Plan	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers' Net Pension Liability/(Asset) (1) - (2)	(4) Plan Fiduciary Net Position as a % of the Total Pension Liability (2)/(1)	(5) Covered Employee Payroll	(6) Net Pension Liability/(Asset) as a % of Covered Payroll (3)/(5)
State Employees'	\$10,319,912	\$ 9,028,447	\$1,291,465	87.5%	\$ 1,985,446	65.0%
Special	121	195	(74)	161.2%	N/A	N/A
New State Police	529,104	472,170	56,934	89.2%	62,360	91.3%
Judiciary	80,284	84,296	(4,012)	105.0%	10,629	(37.7%)
County & Municipal Police and Firefighters'	390,500	367,470	23,030	94.1%	83,049	27.7%
County & Municipal Other Employees'	56,269	53,122	3,147	94.4%	39,856	7.9%
Diamond State Port Corporation	37,637	33,601	4,036	89.3%	14,022	28.8%
Closed State Police <sup>+</sup>	377,627	4,726	372,901	1.3%	N/A	N/A
					<b>Active Members<sup>++</sup></b>	<b>UAAL Per Active Member<sup>++</sup></b>
Delaware Volunteer Firemen's	\$ 34,099	\$ 20,531	\$ 13,568	60.2%	4,479	\$3,029

<sup>+</sup> *The Closed State Police Plan is a pay-as-you-go plan.*

<sup>++</sup> *Not expressed in thousands.*

The Schedule of Changes in Net Pension Liability, presented on pages 51-59 is required supplementary information (RSI) following the Notes to the Financial Statements.

## 6. Plan Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2017, and update procedures were used to roll forward the total pension liability to June 30, 2018. The following actuarial assumptions were used, applied to all periods included in the measurement:

Plan	State Employees'	Special	New State Police	Judiciary	Closed State Police
<b>Actuarial Assumptions:</b>					
Investment rate of return/Discount rate <sup>(1)</sup>	7.0%	7.0%	7.0%	7.0%	3.87%
Projected Salary Increases <sup>(1)</sup>	2.5% + Merit	N/A	2.5% + Merit	2.5% + Merit	N/A
Cost-of-living adjustments	0.0%	0.0%	0.0%	0.0%	2.5%

Plan	County & Municipal Police and Firefighters'	County & Municipal Other Employees'	Delaware Volunteer Firemen's	Diamond State Port Corporation
<b>Actuarial Assumptions:</b>				
Investment rate of return/Discount rate <sup>(1)</sup>	7.0%	7.0%	7.0%	7.0%
Projected Salary Increases <sup>(1)</sup>	2.5% + Merit	2.5% + Merit	N/A	2.5% + Merit
Cost-of-living adjustments	0.0%	0.0%	0.0%	0.0%

*(1) Inflation is included at 2.5%.*

The total pension liabilities are measured based on assumptions pertaining to the interest rates, inflation rates and employee demographic behavior in future years. It is likely that future experience will not exactly conform to these assumptions. To the extent that actual experience deviates from these assumptions, the emerging liabilities may be higher or lower than anticipated. The more the experience deviates the larger the impact on future financial statements.

Mortality assumptions are based on the RP-2014 tables with gender adjustments for healthy annuitants and disabled retirees and an adjusted version on MP-2015 mortality improvement scale on a fully generational basis.

With the exception of the Closed State Police Plan, projected benefit payments do not include the effects of projected ad hoc cost-of-living adjustments (ad hoc COLAs) as they are not substantively automatic. The primary considerations relevant to making this determination include the historical pattern of granting the changes and the consistency in the amounts of the changes.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by an asset allocation percentage which is based on the nature and mix of current and expected plan investments, and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the System's current and expected asset allocation as of June 30, 2018 are summarized in the following table:

<b>Asset Class</b>	<b>Long-Term Expected Real Rate of Return</b>
Domestic Equity	5.7%
International Equity	5.7
Fixed Income	2.0
Alternative Investments	7.8
Cash & Equivalents	---

*Discount rate.* The discount rate for all plans, except Closed State Police, used to measure the total pension liability was 7.0 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at rates determined by the Board of Pension Trustees, actuarially determined. Based on those assumptions, the pension plans' fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The Closed State Police Plan used a discount rate of 3.87%, which represents the 20-year AA Municipal Bond rate since this plan is pay as you go.

*Sensitivity of the net pension liability/(asset) to changes in the discount rate.* The following presents the net pension liability/(asset) of the Plans, calculated using the discount rate of 7.0 percent (3.87% for Closed State Police), as well as what the Plans' net pension liability/(asset) would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

*(dollar values expressed in thousands)*

<b>Plans</b>	<b>1% Decrease (6.0%)</b>	<b>Discount Rate (7.0%)</b>	<b>1% Increase (8.0%)</b>
State Employees'	\$2,506,229	1,291,466	271,487
Special Fund	(68)	(74)	(79)
Judiciary Pension	3,459	(4,011)	(10,477)
New State Police	128,830	56,934	(2,513)
County and Municipal P&F	84,424	23,031	(26,664)
County and Municipal Other	11,893	3,147	(3,917)
Delaware Volunteer Fire	17,388	13,567	10,329
Closed State Police	417,317	372,902	337,898
Diamond State Port Corporation	8,846	4,035	(31)
<b>Total</b>	<b>\$3,178,318</b>	<b>1,760,997</b>	<b>576,033</b>

## 7. Deposits and Investments

### Investment Policy

The Board of Pension Trustees is authorized by 29 Del. C. § 8308 to maintain and invest the funds of the System. There are no State statutes limiting allowable investments for the System. The investment decisions are dictated by the prudent person rule and the internal investment guidelines which are established, and may be amended by the Board as outlined below:

- Allocate a minimum of 20% of assets to fixed income investments such as bonds, cash equivalents, and certain real estate investments
- Maintain a diversified portfolio, to minimize the risk of overexposure in any one market segment or investment style
- Monitor the performance of all investment managers using specific benchmarks
- Control exposure in illiquid asset classes
- Review, re-examine, and reconfirm the operation of results of the investment process regularly
- Identify new long-term opportunities for risk reduction and improved investment returns
- Review actuarial assumptions to ensure consistency with capital market expectations.

The Board delegates the operation of the System's investments to the Investment Committee. The Committee establishes asset allocations to various investment markets. The following were the System's adopted asset allocation ranges as of June 30, 2018:

Asset Class	Percent of Total Fund Allocation <sup>(1)</sup>	
	Minimum	Maximum
<b>Marketable Investments</b>		
Equity	20%	80%
Fixed Income (including Cash) <sup>(2)</sup>	20% <sup>(2)</sup>	80%
<b>Total Marketable Investments</b>	<b>30%</b>	<b>100%</b>
<b>Alternative Investments</b>		
Illiquid Investments	0%	30%
Other Diversification Strategies	0%	20%
<b>Total Alternative Investments</b>	<b>0%</b>	<b>30%</b>
<b>Total Fund</b>		<b>100%</b>

*(1) The Fund will rarely be fully invested at the minimum or maximum limits, and some assets will be held in cash.*

*(2) A minimum of 15% of the Fund is to be invested in investment grade fixed income securities or cash equivalents.*

The current policy was adopted by the Board on May 30, 2014. There were no significant changes to the policy from the prior version, although there were some changes to reflect current Board practices with regard to regulatory requirements under Dodd-Frank, and SEC rules.

For the Fiscal Year ended June 30, 2018, management of the System believes it has operated in all material respects in accordance with these policies.

Within the broad asset allocation ranges noted above, the System does not rebalance to a specific target allocation. While the System does not utilize a target allocation approach, the following is the average asset allocation for the 10-year period ended June 30, 2018, which is representative of the nature and mix of current and expected System investments.

<b>Asset Class</b>	<b>10-year Average Allocation</b>
Domestic Equity	34.0%
International Equity	13.1%
Fixed Income	24.7%
Cash & Short-Term	5.6%
Alternative Investments	22.6%
	<u>100.0%</u>

### **Rate of Return**

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the year ended June 30, 2018, the annual money-weighted rates of return on pension plan investments, net of pension plan investment expenses, were as follows:

<b>Plan</b>	<b>Money-Weighted Rate</b>
State Employees'	10.4%
Special	10.3%
New State Police	10.4%
Judiciary	10.4%
County & Municipal Police and Firefighters'	10.4%
County & Municipal Other Employees'	10.4%
Delaware Volunteer Firefighters	6.9%
Diamond State Port Corporation	10.4%
County & Municipal COLA	10.0%
Post-Retirement Increase Fund	10.8%
DELRIIP-Sussex Co.	10.1%
DELRIIP-Newport	10.4%
Closed State Police	10.4%

### **Securities Lending**

Effective October 15, 2013, the System entered into a security lending agreement with its custodian bank, which acts as security lending agent for the System. The objective of securities lending is to earn income through a conservatively operated and well-controlled program. The custodian is authorized to lend securities within the borrower limits and guidelines established by the System. The System lends fixed income, domestic equity, and international equity securities to approved broker/dealers. Collateral for securities loaned equals 102 percent of fair market value for domestic securities and 105 percent for international securities.

The only types of collateral received from borrowers are obligations issued by the U.S. Government. All rights of ownership to securities pledged as collateral remain with the borrower except in the event of default. The System has the authority to sell collateral securities only upon a borrower default. As of June 30, 2018, there were no violations of legal or contractual provisions. The System has not experienced any losses resulting from the default of a borrower or lending agent during the year ended June 30, 2018.

At year-end, the System has no credit risk exposure to borrowers because the amounts the System owes the borrowers exceed the amounts the borrowers owe the System. The contract with the System's custodian requires it to indemnify the System if the borrowers fail to return the securities or fail to pay the System for income distributions by the securities' issuers while the securities are on loan. The System manages its market risk by recording investments at fair value daily and maintaining the value of the

collateral held by the System in excess of the value of the securities loaned. As of June 30, 2018, the fair value of securities on loan was \$129.5 million. The associated collateral was \$132.9 million.

All open security loans can be terminated on demand by either the System or borrower. The collateral is valued at fair value obtained from independent pricing services.

## Investments

The following is a listing of fixed income investments and cash equivalents and related maturity schedule which shows the System's exposure to interest rate risk as of June 30, 2018. The System holds \$1,046.0 million in domestic fixed income and \$80.4 million in foreign fixed income instruments. The table below also includes \$670.2 million in pooled stable value fund, \$34.8 million in short term bills and notes collectively reported as cash equivalents, and \$1,226.0 million in pooled fixed income investments. These are reported on the Statement of Fiduciary Net Position, respectively, as cash and equivalents and pooled equity and fixed income.

### Investment Maturities (in Years) *(expressed in thousands)*

Investment Type	Fair Value	Less than 1	1 - 6	6 - 10	10 +
Asset Backed Securities	\$ 2	2	-	-	-
Bank Loans	356,550	2,255	215,427	138,868	-
Cash Equivalents	704,989	704,989	-	-	-
Corporate Bonds	285,131	13,559	113,787	67,889	89,896
Corporate Convertible Bonds	12,704	1,513	8,108	397	2,686
Government Bonds	115,589	76,289	16,574	7,647	15,079
Index Linked Government Bonds	344,730	-	136,926	113,933	93,871
Municipal/Provincial Bonds	4,330	441	-	-	3,889
Pooled Investments	1,226,077	-	130,915	1,095,162	-
<b>Total:</b>	<b>\$ 3,050,102</b>	<b>799,048</b>	<b>621,737</b>	<b>1,423,896</b>	<b>205,421</b>

## Interest Rate Risk

The State has delegated investment policy for the System to the Board and its Committees. The Investment Committee sets its own guidelines in conjunction with the Board to manage and review the System's exposure to fluctuating interest rates. Interest rate risk is a consideration when establishing and reviewing investment manager guidelines and asset allocation. Both topics are included in the statement of Investment Policies and Objectives which are published on the System's web site.

## Custodial Credit Risk

### Deposits

For deposits, custodial credit risk is the risk that, in the event of the failure of a depository financial institution, the deposits or collateral securities may not be recovered from an outside party. At June 30, 2018, the \$770.9 million carrying amount of the System's cash and cash equivalents was comprised of \$705.0 million of short-term investments and \$65.9 million in deposits. Of the \$65.9 million in deposits, \$65.5 million was subject to custodial credit risk because it was held by outside institutions and uninsured and uncollateralized. The remaining \$0.4 million was held as pooled cash management account by the State Treasurer's Office, which includes deposit accounts, short- and long-term investments.

### Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the value of the investment or collateral securities that are in the possession of an outside party may not be recovered. Investments are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the government, and are held by either the counterparty or the counterparty's trust department or agent but not in the government's name. The System's investments are not exposed to custodial credit risk as they are held by the System's custodian in the name of the System or its nominee.

## Credit Risk

The System's general investment policy is to apply the prudent-person rule to all risks incurred by the fund. Investments are made as a prudent person would be expected to act, with discretion and intelligence, to seek reasonable income, preserve capital and, in general, avoid speculative investments. The System has no investment policy that would further limit its investment choices related to credit risk. As of June 30, 2018, the System's fixed income investments and cash equivalents had the following credit risk characteristics:

### Ratings Detail by Security Type (expressed in thousands)

Fixed Income Security Type	Asset Backed Securities	Bank Loans	Cash Equivalents	Corporate Bonds	Corporate Convertible Bonds
AAA	\$ -	\$ -	\$ -	\$ 4,055	\$ -
Aaa	-	-	34,786	-	-
AA+	-	-	-	6,813	-
AA-	-	-	-	3,272	-
A+	-	-	-	13,494	-
A	-	-	670,203	2,043	-
A-	2	-	-	9,712	1,428
BBB+	-	-	-	18,882	-
BBB	-	-	-	49,289	159
BBB-	-	15,718	-	32,932	-
BB+	-	5,789	-	16,964	-
BB	-	29,650	-	10,285	-
Ba2	-	2,479	-	-	-
BB-	-	45,595	-	18,634	4,951
Ba1	-	652	-	-	-
Ba3	-	-	-	518	-
B+	-	38,736	-	26,080	-
B1	-	3,475	-	-	-
B	-	70,265	-	18,241	-
B2	-	2,675	-	-	-
B-	-	14,883	-	23,104	-
CCC+	-	12,286	-	14,210	3,591
CCC	-	6,883	-	5,427	-
Caa2	-	105	-	-	-
CCC-	-	-	-	188	-
CC	-	-	-	-	-
C	-	-	-	1,394	-
D	-	-	-	-	-
No Rating	-	107,359	-	9,594	2,575
<b>Total:</b>	\$ 2	\$ 356,550	\$ 704,989	\$ 285,131	\$ 12,704

*(Continued)*

Fixed Income Security Type	Government Bonds	Index Linked Government Bonds	Municipal/ Provincial Bonds	Pooled Investments	Total	Percentage of Total Net Position
AAA	\$ 3,805	\$ -	\$ 440	\$ 1,095,162	\$ 1,103,462	10.90%
Aaa	99,390	344,730	-	-	478,906	4.73%
AA+	803	-	-	-	7,616	0.08%
AA-	-	-	-	-	3,272	0.03%
A+	-	-	-	-	13,494	0.13%
A	-	-	-	-	672,246	6.64%
A-	8,524	-	-	-	19,666	0.19%
BBB+	-	-	-	-	18,882	0.19%
BBB	-	-	-	-	49,448	0.49%
BBB-	-	-	-	-	48,650	0.48%
BB+	-	-	-	-	22,753	0.22%
BB	-	-	-	130,915	170,850	1.69%
Ba2	251	-	-	-	2,730	0.03%
BB-	2,816	-	-	-	71,996	0.71%
Ba1	-	-	-	-	652	0.01%
Ba3	-	-	-	-	518	0.01%
B+	-	-	-	-	64,816	0.64%
B1	-	-	-	-	3,475	0.03%
B	-	-	-	-	88,506	0.87%
B2	-	-	-	-	2,675	0.03%
B-	-	-	3,890	-	41,877	0.41%
CCC+	-	-	-	-	30,087	0.30%
CCC	-	-	-	-	12,310	0.12%
Caa2	-	-	-	-	105	0.00%
CCC-	-	-	-	-	188	0.00%
CC	-	-	-	-	-	0.00%
C	-	-	-	-	1,394	0.01%
D	-	-	-	-	-	0.00%
No Rating	-	-	-	-	119,528	1.18%
<b>Total:</b>	<b>\$ 115,589</b>	<b>\$ 344,730</b>	<b>\$ 4,330</b>	<b>\$ 1,226,077</b>	<b>\$ 3,050,102</b>	<b>30.12%</b>

### Investment Concentration Risk

As of June 30, 2018, the System held no concentration of investments (excluding pooled investments) in an individual issuer in excess of 5% of the fair value of the System's net position.

### Management Fees

In addition to the \$27.3 million paid in Manager/Advisor fees shown in the Statement of Changes in Fiduciary Net Position, the System paid \$31.9 million in management fees to the alternative investment funds and partnerships for the Fiscal Year ended June 30, 2018. These fees are netted against investment income.

### Foreign Investments

Foreign investments include equity securities, bonds, and cash and cash equivalents. The following is a listing of foreign assets included in the Statement of Fiduciary Net Position as of June 30, 2018. The listing includes \$5.3 million of investments of domestic issuers which have been classified as domestic on the Statement of Fiduciary Net Position, but are denominated in a foreign currency.

## Currency Risk

(expressed in thousands)

Currency	Fair Value in U.S. Dollars	Equities	Fixed Income	Cash and Cash Equivalents
Australian dollar	\$ 3,717	\$ 2,446	\$ 1,271	\$ -
Brazilian real	5,932	3,116	2,816	-
British pound sterling	34,457	33,714	743	-
Canadian dollar	25,620	24,311	1,309	-
Danish krone	4,773	4,773	-	-
Euro	99,970	96,231	3,591	148
Hong Kong dollar	10,480	10,480	-	-
Indonesian rupiah	65,621	65,621	-	-
Japanese yen	20,238	20,238	-	-
Mexican peso	27,030	26,909	-	121
New Zealand dollar	12,115	3,856	8,259	-
Nigerian naira	2,864	-	2,864	-
Norwegian krone	1,647	1,647	-	-
Philippine peso	3,805	-	3,805	-
Singapore dollar	26,882	26,876	-	6
South African rand	4,062	4,062	-	-
South Korean won	2,451	2,451	-	-
Swedish krona	14,754	14,754	-	-
Swiss franc	7,970	7,970	-	-
Thai baht	3,739	3,739	-	-
Turkish lira	2,638	2,638	-	-
<b>Total Foreign Currencies</b>	<b>\$ 380,765</b>	<b>\$ 355,832</b>	<b>\$ 24,658</b>	<b>\$ 275</b>
Foreign issued investments denominated in U.S. Dollars	240,775	180,639	60,136	-
Pooled international investments denominated in U.S. Dollars	1,278,813	1,278,813	-	-
<b>Total:</b>	<b>\$ 1,900,353</b>	<b>\$ 1,815,284</b>	<b>\$ 84,794</b>	<b>\$ 275</b>

## Derivatives

Derivatives are instruments (securities or contracts) whose value is dependent on such things as stock or bond prices, interest rate levels, or currency exchange rates. The Board adopted a formal written policy on the use of derivatives which is reviewed periodically and incorporated in the formalized investment policy adopted by the Board. Some selected managers are permitted to use derivatives. In every case, the types of derivatives used and limits on their use are stated in the manager's contract and are monitored on an ongoing basis. Derivatives serve a variety of useful purposes for the System, including the reduction of foreign exchange risk, the minimization of transaction costs and as a means of implementing value added strategies to enhance returns. If the use of derivatives in a portfolio strategy results in some leverage, that leverage is never permitted to expose the Fund to a loss greater than the amount committed to that strategy.

The following lists principal categories of derivatives and their possible uses during the year:

<b>Category</b>	<b>Purpose</b>
Foreign exchange forward contracts	Hedge currency risk of investments denominated in foreign currencies; enhance return
Exchange traded futures contracts	Reduce transaction costs; hedge equity market risk; control fixed income; counterbalance portfolio duration; enhance return
Exchange traded options contracts	Enhance return; reduce transaction costs
Total return equity swaps	Hedge equity market risk exposure

Generally, derivatives are subject both to market risk and counterparty risk. The derivatives utilized by the System typically have no greater risk than their physical counterparts, and in many cases are offset by exposures elsewhere in the portfolio (for example, a short S&P 500 futures contract partially hedging a long position in S&P 500 securities). Counterparty risk, the risk that the "other party" to a contract will default, is managed by utilization of exchange traded futures and options where practical (in which case the futures exchange is the counterparty and guarantees performance) and by careful screening of counterparties where use of exchange traded products is impractical or uneconomical.

Derivative securities are priced and accounted for at their fair value. For exchange traded securities such as futures and options, closing prices from the securities exchanges are used. Foreign exchange contracts are valued at the price at which the transaction could be settled by offset in the forward markets.

The Investment Committee monitors the System's derivative holdings on a regular basis to ensure that the derivatives used by managers of the System will not have a material adverse impact on its financial condition. Total derivative instruments at June 30, 2018 were not material to the System.

## Risk and Uncertainty

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk inherent in investment securities, it is possible that changes in the values of investment securities will occur in the near term and that such changes could affect the amounts reported in the Statement of Fiduciary Net Position.

## 8. Tax Status

The System currently operates seven of its plans as tax qualified governmental retirement plans under the Internal Revenue Code (“IRC”). The seven plans include the State Employees’, New State Police, Judiciary, County & Municipal Police and Firefighters’, County & Municipal Other Employees’, and Diamond State Port Corporation, and Closed State Police (“Qualified Retirement Plans”). The Internal Revenue Service made favorable determinations by letters dated April 23, 2014 for the State Employees’, New State Police, Judiciary, County & Municipal Police and Firefighters’, County & Municipal Other Employees’, and April 28, 2014 for the Closed State Police that the Qualified Retirement Plans are designed in accordance with applicable sections of the IRC. The Diamond State Port Corporation received a favorable determination letter and compliance statement dated August 28, 2014. The System and its tax counsel believe the Qualified Plans are designed and are currently being operated in compliance with the applicable provisions of the IRC. The favorable determination letters for the Qualified Retirement Plans are valid through January 31, 2019.

The Delaware Volunteer Firemen’s Fund (“Firemen’s Fund”) operates as a length of service award plan under IRC section 457(e)(11). The Firemen’s Fund received a favorable private letter ruling from the Internal Revenue Service (“IRS”) on January 13, 2009.

Additionally, the System submitted a private letter ruling request in November 2012 with respect to the establishment of the Delaware Public Employees’ Retirement System Qualified Excess Benefit Arrangement Plan and Trust, (“QEBA”). On June 16, 2015, the System received a favorable letter ruling, which concluded that the QEBA was a qualified excess benefit arrangement pursuant to Sec. 415(m) of the IRC, and that benefits payable pursuant to the plans will be includible in gross income in the year that they are paid or otherwise become available to a participant or participant’s beneficiary, and that income accruing to the QEBA plans is exempt from federal income tax as income derived from an essential government function.

## 9. Subsequent Events

During Fiscal Year 2018, the Board of Directors of the Diamond State Port approved a concession agreement, which effectively transferred operations and ownership of the Port to GT USA Wilmington, LLC.

The System has developed a statement to provide information about accrued benefits to the employees of Port Pension Plan. All employees are vested in employer contributions up to effective transaction date and will have the option to cash out or retire at normal retirement age in the future. The System is working with our legal counsel on any plan resolutions required to be adopted by the Port’s Board after the transaction is finalized. The transaction was finalized on October 3, 2018.

While the system will no longer enroll new participants and process payroll contributions for the plan after the transaction date, the System is still responsible for the administration of pension benefits for retirees and refunds for vested employees. The Board of Directors of the Diamond State Port is however responsible for plan valuations used to determine the liability for these future benefits, and to provide funding for the pension liability.

In addition, the System will make a one-time pension supplement payment of approximately \$10.9 million to retirees of the State Employees, New State Police and Judicial Pension plans in November 2018, pursuant to the provisions of section 10 of Senate Bill 236.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability

(dollar values expressed in thousands)  
(unaudited)

#### State Employees' Plan

	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ 197,184	\$ 180,696	\$ 180,782	\$ 192,046	\$ 190,156
Interest	696,055	676,524	656,475	627,925	599,144
Changes in Benefit Terms	11,028	4,814	-	54,191	-
Differences between Expected and Actual experience	64,746	20,308	(25,340)	(17,907)	-
Changes in Assumptions	-	211,698	167,454	-	-
Benefit Payments, Including Refunds of Member Contributions	(628,938)	(598,686)	(569,492)	(539,630)	(509,818)
Net Change in Total Pension Liability	\$ 340,075	\$ 495,354	\$ 409,879	\$ 316,625	\$ 279,482
Total Pension Liability – Beginning (as reported)	\$ 9,979,837	\$ 9,484,483	\$ 9,074,604	\$ 8,757,979	\$ 8,478,498
Total Pension Liability – Ending (a)	\$10,319,912	\$ 9,979,837	\$ 9,484,483	\$ 9,074,604	\$ 8,757,980

#### Plan Fiduciary Net Position

Contributions – Employer	\$ 206,883	\$ 186,625	\$ 182,707	\$ 178,293	\$ 174,863
Contributions – Non-Employer	10,615	30,302	38,778	32,654	26,877
Contributions – Member	64,312	61,686	59,145	55,782	52,793
Net Investment Income	867,527	861,997	(137,038)	299,825	1,254,715
Benefit Payments, including refunds of Member Contributions	(628,938)	(598,686)	(569,492)	(539,630)	(509,818)
Administrative Expenses	(5,781)	(5,636)	(5,895)	(7,353)	(5,242)
Net Change in Plan Fiduciary Net Position	514,618	536,288	(431,795)	19,571	994,188
Plan Fiduciary Net Position – Beginning	\$ 8,513,829	\$ 7,977,541	\$ 8,409,336	\$ 8,389,765	\$ 7,395,577
Plan Fiduciary Net Position – Ending (b)	\$ 9,028,447	\$ 8,513,829	\$ 7,977,541	\$ 8,409,336	\$ 8,389,765
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 1,291,465	\$ 1,466,008	\$ 1,506,942	\$ 665,268	\$ 368,215

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	Special Fund				
	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ -	\$ -	\$ -	\$ -	\$ -
Interest	9	10	14	14	15
Changes in Benefit Terms	-	-	-	-	-
Differences between Expected and Actual experience	11	(31)	24	18	-
Changes in Assumptions	-	1	4	-	-
Benefit Payments, Including Refunds of Member Contributions	(33)	(27)	(47)	(46)	(42)
Net Change in Total Pension Liability	\$ (13)	\$ (47)	\$ (5)	\$ (14)	\$ (27)
Total Pension Liability – Beginning (as reported)	\$ 134	\$ 181	\$ 186	\$ 200	\$ 227
Total Pension Liability – Ending (a)	\$ 121	\$ 134	\$ 181	\$ 186	\$ 200
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	-	-	-	-	-
Net Investment Income	21	22	(5)	10	48
Benefit Payments, including refunds of Member Contributions	(33)	(27)	(47)	(46)	(42)
Administrative Expenses	(1)	(1)	(1)	(1)	(1)
Net Change in Plan Fiduciary Net Position	(13)	(6)	(53)	(37)	5
Plan Fiduciary Net Position – Beginning	\$ 208	\$ 214	\$ 267	\$ 304	\$ 299
Plan Fiduciary Net Position – Ending (b)	\$ 195	\$ 208	214	\$ 267	\$ 304
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ (74)	\$ (74)	\$ (33)	\$ (81)	\$ (104)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	New State Police				
	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ 14,833	\$ 13,671	\$ 13,493	\$ 12,686	\$ 12,378
Interest	35,226	33,038	30,376	28,395	26,137
Changes in Benefit Terms	105	-	-	1,154	-
Differences between Expected and Actual experience	2,054	8,657	(3,098)	(3,520)	-
Changes in Assumptions	-	12,092	2,199	-	-
Benefit Payments, Including Refunds of Member Contributions	(18,595)	(16,714)	(14,804)	(12,188)	(10,619)
Net Change in Total Pension Liability	\$ 33,623	\$ 50,744	\$ 28,166	\$ 26,527	\$ 27,896
Total Pension Liability – Beginning (as reported)	\$ 495,481	\$ 444,737	\$ 416,571	\$ 390,044	\$ 362,148
Total Pension Liability – Ending (a)	\$ 529,104	\$ 495,481	\$ 444,737	\$ 416,571	\$ 390,044
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 13,202	\$ 11,096	\$ 11,001	\$ 10,730	\$ 10,500
Contributions – Non-Employer	316	649	797	639	525
Contributions – Member	4,329	4,233	4,146	4,121	3,862
Net Investment Income	44,454	42,584	(5,965)	13,741	54,635
Benefit Payments, including refunds of Member Contributions	(18,595)	(16,714)	(14,803)	(12,188)	(10,619)
Administrative Expenses	(100)	(88)	(91)	(113)	(82)
Net Change in Plan Fiduciary Net Position	43,606	41,760	(4,915)	16,930	58,821
Plan Fiduciary Net Position – Beginning	\$ 428,564	\$ 386,804	\$ 391,719	\$ 374,789	\$ 315,968
Plan Fiduciary Net Position – Ending (b)	\$ 472,170	\$ 428,564	\$ 386,804	\$ 391,719	\$ 374,789
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 56,934	\$ 66,917	\$ 57,933	\$ 24,852	\$ 15,255

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	<b>Judiciary Pension Plan</b>				
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Total Pension Liability:</b>					
Service Cost	\$ 2,909	\$ 2,802	\$ 2,759	\$ 2,568	\$ 2,542
Interest	5,410	5,378	5,266	5,147	4,869
Changes in Benefit Terms	21	-	-	263	-
Differences between Expected and Actual experience	(2,254)	(2,018)	(156)	(1,361)	-
Changes in Assumptions	-	1,344	(1,953)	-	-
Benefit Payments, Including Refunds of Member Contributions	(4,795)	(4,752)	(4,277)	(3,985)	(3,588)
Net Change in Total Pension Liability	\$ 1,291	\$ 2,754	\$ 1,639	\$ 2,632	\$ 3,823
Total Pension Liability – Beginning (as reported)	\$ 78,993	\$ 76,239	\$ 74,600	\$ 71,968	\$ 68,145
Total Pension Liability – Ending (a)	\$ 80,284	\$ 78,993	\$ 76,239	\$ 74,600	\$ 71,968
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 2,112	\$ 2,347	\$ 2,237	\$ 2,640	\$ 2,839
Contributions – Non-Employer	64	186	236	200	165
Contributions – Member	354	355	339	327	317
Net Investment Income	8,052	7,898	(1,173)	2,659	10,783
Benefit Payments, including refunds of Member Contributions	(4,795)	(4,752)	(4,277)	(3,985)	(3,588)
Administrative Expenses	(13)	(11)	(14)	(15)	(13)
Net Change in Plan Fiduciary Net Position	5,774	6,023	(2,652)	1,826	10,503
Plan Fiduciary Net Position – Beginning	\$ 78,522	\$ 72,499	\$ 75,151	\$ 73,325	\$ 62,822
Plan Fiduciary Net Position – Ending (b)	\$ 84,296	\$ 78,522	\$ 72,499	\$ 75,151	\$ 73,325
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ (4,012)	\$ 471	\$ 3,740	\$ (551)	\$ (1,357)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

#### County & Municipal Police and Firefighters Plan

	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ 17,010	\$ 14,621	\$ 14,174	\$ 14,690	\$ 14,297
Interest	25,811	22,143	20,330	18,120	15,863
Changes in Benefit Terms	-	-	4,390	319	-
Differences between Expected and Actual experience	19,690	(4,157)	3,015	(3,309)	-
Changes in Assumptions	-	9,457	(4,643)	-	-
Benefit Payments, Including Refunds of Member Contributions	(7,959)	(6,310)	(4,911)	(3,826)	(3,160)
Net Change in Total Pension Liability	\$ 54,552	\$ 35,754	\$ 32,355	\$ 25,994	\$ 27,000
Total Pension Liability – Beginning (as reported)	\$ 335,948	\$ 300,194	\$ 267,839	\$ 241,845	\$ 214,845
Total Pension Liability – Ending (a)	\$ 390,500	\$ 335,948	\$ 300,194	\$ 267,839	\$ 241,845

#### Plan Fiduciary Net Position

Contributions – Employer	\$ 9,484	\$ 10,260	\$ 14,789	\$ 10,067	\$ 10,283
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	6,068	5,939	5,327	4,980	4,897
Net Investment Income	34,155	31,834	(3,881)	9,394	36,003
Benefit Payments, including refunds of Member Contributions	(7,959)	(6,310)	(4,911)	(3,826)	(3,160)
Administrative Expenses	(145)	(154)	(135)	(168)	(100)
Net Change in Plan Fiduciary Net Position	41,603	41,569	11,189	20,447	47,923
Plan Fiduciary Net Position – Beginning	\$ 325,867	\$ 284,298	\$ 273,109	\$ 252,662	\$ 204,739
Plan Fiduciary Net Position – Ending (b)	\$ 367,470	\$ 325,867	\$ 284,298	\$ 273,109	\$ 252,662
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 23,030	\$ 10,081	\$ 15,896	\$ (5,270)	\$ (10,817)

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	<b>County &amp; Municipal Other Employees Fund</b>				
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Total Pension Liability:</b>					
Service Cost	\$ 3,238	\$ 2,894	\$ 2,545	\$ 2,415	\$ 2,207
Interest	3,727	3,462	3,087	2,569	2,235
Changes in Benefit Terms	-	-	-	-	-
Differences between Expected and Actual experience	(1,665)	324	1,893	(439)	-
Changes in Assumptions	-	1,437	1,018	-	-
Benefit Payments, Including Refunds of Member Contributions	(1,384)	(1,252)	(938)	(722)	(659)
Net Change in Total Pension Liability	\$ 3,916	\$ 6,865	\$ 7,605	\$ 3,823	\$ 3,783
Total Pension Liability – Beginning (as reported)	\$ 52,353	\$ 45,488	\$ 37,883	\$ 34,060	\$ 30,277
Total Pension Liability – Ending (a)	\$ 56,269	\$ 52,353	\$ 45,488	\$ 37,883	\$ 34,060
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 2,826	\$ 2,515	\$ 2,077	\$ 1,921	\$ 2,049
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	1,032	985	946	757	748
Net Investment Income	4,854	4,428	(553)	1,291	4,882
Benefit Payments, including refunds of Member Contributions	(1,384)	(1,252)	(938)	(722)	(659)
Administrative Expenses	(80)	(94)	(80)	(95)	(60)
Net Change in Plan Fiduciary Net Position	7,248	6,582	1,452	3,152	6,960
Plan Fiduciary Net Position – Beginning	\$ 45,874	\$ 39,292	\$ 37,840	\$ 34,688	\$ 27,728
Plan Fiduciary Net Position – Ending (b)	\$ 53,122	\$ 45,874	\$ 39,292	\$ 37,840	\$ 34,688
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 3,147	\$ 6,479	\$ 6,196	\$ 43	\$ (628)

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	Delaware Volunteer Firemen's Fund				
	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ 731	\$ 714	\$ 667	\$ 290	\$ 847
Interest	2,306	2,276	2,302	2,340	2,156
Changes in Benefit Terms	-	-	-	-	-
Differences between Expected and Actual experience	(128)	(1,218)	(2,222)	1,615	-
Changes in Assumptions	-	688	772	-	-
Benefit Payments, Including Refunds of Member Contributions	(2,254)	(2,205)	(2,148)	(2,003)	(1,887)
Net Change in Total Pension Liability	\$ 655	\$ 255	\$ (629)	\$ 2,242	\$ 1,116
Total Pension Liability – Beginning (as reported)	\$ 33,444	\$ 33,189	\$ 33,818	\$ 31,576	\$ 30,460
Total Pension Liability – Ending (a)	\$ 34,099	\$ 33,444	\$ 33,189	\$ 33,818	\$ 31,576
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 2,019	\$ 2,000	\$ 1,764	\$ 1,668	\$ 1,561
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	145	157	179	164	166
Net Investment Income	1,263	1,813	227	412	2,271
Benefit Payments, including refunds of Member Contributions	(2,254)	(2,205)	(2,148)	(2,003)	(1,887)
Administrative Expenses	(35)	(32)	(33)	(32)	(34)
Net Change in Plan Fiduciary Net Position	1,138	1,733	(11)	209	2,077
Plan Fiduciary Net Position – Beginning	\$ 19,393	\$ 17,660	\$ 17,671	\$ 17,462	\$ 15,385
Plan Fiduciary Net Position – Ending (b)	\$ 20,531	\$ 19,393	\$ 17,660	\$ 17,671	\$ 17,462
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 13,568	\$ 14,051	\$ 15,529	\$ 16,147	\$ 14,114

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

**Required Supplementary Information****Schedule 1 - Schedule of Changes in Net Pension Liability (continued)**

(dollar values expressed in thousands)  
(unaudited)

	<b>Diamond State Port Corporation Plan</b>				
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Total Pension Liability:</b>					
Service Cost	\$ 1,042	\$ 942	\$ 899	\$ 951	\$ 870
Interest	2,495	2,314	2,218	2,160	1,873
Changes in Benefit Terms	-	-	-	-	-
Differences between Expected and Actual experience	265	(975)	(600)	1,402	-
Changes in Assumptions	-	815	(873)	-	-
Benefit Payments, Including Refunds of Member Contributions	(981)	(892)	(822)	(729)	(629)
Net Change in Total Pension Liability	\$ 2,821	\$ 2,204	\$ 822	\$ 3,784	\$ 2,114
Total Pension Liability – Beginning (as reported)	\$ 34,816	\$ 32,612	\$ 31,790	\$ 28,006	\$ 25,892
Total Pension Liability – Ending (a)	\$ 37,637	\$ 34,816	\$ 32,612	\$ 31,790	\$ 28,006
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 1,175	\$ 1,134	\$ 1,200	\$ 1,052	\$ 1,009
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	280	240	246	234	236
Net Investment Income	3,129	2,949	(394)	916	3,612
Benefit Payments, including refunds of Member Contributions	(981)	(892)	(822)	(729)	(629)
Administrative Expenses	(40)	(30)	(32)	(37)	(43)
Net Change in Plan Fiduciary Net Position	3,563	3,401	198	1,436	4,185
Plan Fiduciary Net Position – Beginning	\$ 30,038	\$ 26,637	\$ 26,439	\$ 25,003	\$ 20,818
Plan Fiduciary Net Position – Ending (b)	\$ 33,601	\$ 30,038	\$ 26,637	\$ 26,439	\$ 25,003
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 4,036	\$ 4,778	\$ 5,975	\$ 5,351	\$ 3,003

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

## Required Supplementary Information

### Schedule 1 - Schedule of Changes in Net Pension Liability (continued)

(dollar values expressed in thousands)  
(unaudited)

	Closed State Police Plan				
	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>					
Service Cost	\$ -	\$ -	\$ -	\$ -	\$ -
Interest	14,023	12,238	12,512	16,173	16,319
Changes in Benefit Terms	-	-	-	-	-
Differences between Expected and Actual experience	6,599	860	717	18,518	-
Changes in Assumptions	(16,687)	(33,784)	45,205	23,078	12,942
Benefit Payments, Including Refunds of Member Contributions	(22,641)	(22,896)	(23,098)	(23,125)	(23,301)
Net Change in Total Pension Liability	\$ (18,706)	\$ (43,582)	\$ 35,336	\$ 34,644	\$ 5,960
Total Pension Liability – Beginning (as reported)	\$ 396,333	\$ 439,915	\$ 404,578	\$ 369,934	\$ 363,974
Total Pension Liability – Ending (a)	\$ 377,627	\$ 396,333	\$ 439,914	\$ 404,578	\$ 369,934

#### Plan Fiduciary Net Position

Contributions – Employer	\$ 22,750	\$ 23,067	\$ 23,300	\$ 23,473	\$ 23,064
Contributions – Non-Employer	-	-	-	-	-
Contributions – Member	-	-	-	-	-
Net Investment Income	1,292	1,268	(840)	364	(3)
Benefit Payments, including refunds of Member Contributions	(22,641)	(22,896)	(23,098)	(23,125)	(23,301)
Administrative Expenses	(40)	(42)	(48)	(60)	(46)
Net Change in Plan Fiduciary Net Position	1,361	1,397	(686)	652	(286)
Plan Fiduciary Net Position – Beginning	\$ 3,365	\$ 1,968	\$ 2,654	\$ 2,002	\$ 2,288
Plan Fiduciary Net Position – Ending (b)	\$ 4,726	\$ 3,365	\$ 1,968	\$ 2,654	\$ 2,002
Plan Net Pension Liability (Asset) – Ending (a) - (b)	\$ 372,901	\$ 392,968	\$ 437,946	\$ 401,924	\$ 367,932

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

**Required Supplementary Information (continued)**

**Schedule 2 - Schedule of Net Pension Liability**

(dollar values expressed in thousands)  
(unaudited)

Plan	Actuarial Valuation Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers' Net Pension Liability/(Asset) (1) - (2)	(4) Plan Fiduciary Net Position as a % of the Total Pension Liability	(5) Covered Payroll	(6) Net Pension Liability/(Asset) as a % of Covered Payroll (3)/(5)
					(2)/(1)		
State Employees'	30-Jun-2018	\$ 10,319,912	\$ 9,028,447	\$ 1,291,465	87.5%	\$ 1,985,446	65.0%
	30-Jun-2017	9,979,837	8,513,829	1,466,008	85.4%	1,948,072	75.0%
	30-Jun-2016	9,484,483	7,977,541	1,506,942	84.1%	1,907,169	79.0%
	30-Jun-2015	9,074,604	8,409,336	665,268	92.7%	1,864,991	35.7%
	30-Jun-2014	8,757,980	8,389,765	368,215	95.8%	1,840,521	20.0%
Special	30-Jun-2018	\$ 121	\$ 195	\$ (74)	161.2%	N/A	N/A
	30-Jun-2017	134	208	(74)	156.0%	N/A	N/A
	30-Jun-2016	181	214	(33)	118.2%	N/A	N/A
	30-Jun-2015	186	267	(81)	144.0%	N/A	N/A
	30-Jun-2014	200	304	(104)	152.0%	N/A	N/A
New State Police	30-Jun-2018	\$ 529,104	\$ 472,170	\$ 56,934	89.2%	\$ 62,360	91.3%
	30-Jun-2017	495,481	428,564	66,917	86.5%	61,002	109.7%
	30-Jun-2016	444,737	386,804	57,933	87.0%	59,144	98.0%
	30-Jun-2015	416,571	391,719	24,852	94.0%	57,973	42.9%
	30-Jun-2014	390,044	374,789	15,255	96.1%	55,067	27.7%
Judiciary	30-Jun-2018	\$ 80,284	\$ 84,296	\$ (4,012)	105.0%	\$ 10,629	(37.7)%
	30-Jun-2017	78,993	78,522	471	99.4%	10,604	4.4%
	30-Jun-2016	76,239	72,499	3,740	95.1%	10,400	36.0%
	30-Jun-2015	74,600	75,151	(551)	100.7%	9,988	(5.5)%
	30-Jun-2014	71,968	73,325	(1,357)	101.9%	10,244	(13.3)%
County & Municipal Police and Firefighters'	30-Jun-2018	\$ 390,500	\$ 367,470	\$ 23,030	94.1%	\$ 83,049	27.7%
	30-Jun-2017	335,948	325,867	10,081	97.0%	82,164	12.3%
	30-Jun-2016	300,194	284,298	15,896	94.7%	72,855	21.82%
	30-Jun-2015	267,839	273,109	(5,270)	102.0%	70,997	(7.5)%
	30-Jun-2014	241,845	252,662	(10,817)	104.5%	66,268	(16.3)%
County & Municipal Other Employees'	30-Jun-2018	\$ 56,269	\$ 53,122	\$ 3,147	94.4%	\$ 39,856	7.9%
	30-Jun-2017	52,353	45,874	6,479	87.6%	37,191	17.4%
	30-Jun-2016	45,488	39,292	6,196	86.4%	33,453	18.5%
	30-Jun-2015	37,883	37,840	43	99.9%	29,644	0.1%
	30-Jun-2014	34,060	34,688	(628)	101.8%	30,937	(2.0)%
Diamond State Port Corporation	30-Jun-2018	\$ 37,637	\$ 33,601	\$ 4,036	89.3%	\$ 14,022	28.8%
	30-Jun-2017	34,816	30,038	4,778	86.3%	12,028	39.7%
	30-Jun-2016	32,613	26,637	5,976	81.7%	12,374	48.3%
	30-Jun-2015	31,790	26,439	5,351	83.2%	11,679	45.8%
	30-Jun-2014	28,006	25,003	3,003	89.3%	11,771	25.5%
Closed State Police+	30-Jun-2018	\$ 377,627	\$ 4,726	\$ 372,901	1.3%	N/A	N/A
	30-Jun-2017	396,333	3,365	392,968	0.8%	N/A	N/A
	30-Jun-2016	439,915	1,968	437,947	0.4%	N/A	N/A
	30-Jun-2015	404,578	2,654	401,924	0.7%	N/A	N/A
	30-Jun-2014	369,934	2,002	367,932	0.5%	N/A	N/A
Delaware Volunteer Firefighters Plan	30-Jun-2018	\$ 34,099	\$ 20,531	\$ 13,568	60.2%	4,479	\$ 3,029
	30-Jun-2017	33,444	19,393	14,051	58.0%	4,617	\$ 3,043
	30-Jun-2016	33,189	17,660	15,529	53.2%	4,742	3,275
	30-Jun-2015	33,818	17,671	16,147	52.3%	4,828	3,345
	30-Jun-2014	31,576	17,462	14,114	55.3%	4,882	2,891

+ The Closed State Police Plan is a pay-as-you-go plan.

++ Not expressed in thousands

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information (continued)

### Schedule 3 - Schedule of Employer Contributions

(dollar values expressed in thousands)

(unaudited)

Plan	Fiscal Year Ended	Actuarial Determined Contribution	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
State Employees**	30-Jun-2018	\$ 206,883	\$ 206,883	\$ -	\$ 1,985,446	10.4%
	30-Jun-2017	186,625	186,625	-	1,948,072	9.6%
	30-Jun-2016	182,707	182,707	-	1,907,169	9.6%
	30-Jun-2015	178,293	178,293	-	1,864,991	9.6%
	30-Jun-2014	174,863	174,863	-	1,840,521	9.5%
	30-Jun-2013	160,651	160,651	-	1,877,105	8.6%
	30-Jun-2012	147,464	147,464	-	1,881,097	7.8%
	30-Jun-2011	128,019	128,019	-	1,783,603	7.2%
	30-Jun-2010	101,457	101,457	-	1,740,622	5.8%
	30-Jun-2009	96,576	96,576	-	1,753,129	5.5%
Special	30-Jun-2017	\$ -	\$ -	\$ -	\$ N/A	N/A
	30-Jun-2017	-	-	-	N/A	N/A
	30-Jun-2016	-	-	-	N/A	N/A
	30-Jun-2015	-	-	-	N/A	N/A
	30-Jun-2014	-	-	-	N/A	N/A
	30-Jun-2013	-	-	-	N/A	N/A
	30-Jun-2012	-	-	-	N/A	N/A
	30-Jun-2011	-	-	-	N/A	N/A
	30-Jun-2010	-	-	-	N/A	N/A
30-Jun-2009	-	-	-	N/A	N/A	
New State Police*	30-Jun-2018	\$ 13,202	\$ 13,202	\$ -	\$ 62,360	21.2%
	30-Jun-2017	11,096	11,096	-	61,002	18.2%
	30-Jun-2016	11,001	11,001	-	59,144	18.6%
	30-Jun-2015	10,730	10,730	-	57,973	18.5%
	30-Jun-2014	10,500	10,500	-	55,067	19.1%
	30-Jun-2013	9,292	9,292	-	56,289	16.5%
	30-Jun-2012	8,309	8,309	-	54,412	15.3%
	30-Jun-2011	7,810	7,810	-	50,556	15.4%
	30-Jun-2010	6,562	6,562	-	49,896	13.2%
	30-Jun-2009	6,791	6,791	-	50,425	13.5%
Judiciary*	30-Jun-2018	\$ 2,112	\$ 2,112	\$ -	\$ 10,629	19.9%
	30-Jun-2017	2,347	2,347	-	10,604	22.1%
	30-Jun-2016	2,237	2,237	-	10,400	21.5%
	30-Jun-2015	2,640	2,640	-	9,988	26.4%
	30-Jun-2014	2,839	2,839	-	10,244	27.7%
	30-Jun-2013	2,762	2,762	-	10,416	26.5%
	30-Jun-2012	2,674	2,674	-	10,387	25.7%
	30-Jun-2011	2,557	2,557	-	9,624	26.6%
	30-Jun-2010	2,473	2,473	-	9,798	25.2%
30-Jun-2009	2,549	2,549	-	9,814	26.0%	

**Required Supplementary Information (continued)**

**Schedule 3 - Schedule of Employer Contributions (continued)**

*(dollar values expressed in thousands)*

*(unaudited)*

<b>Plan</b>	<b>Fiscal Year Ended</b>	<b>Actuarial Determined Contribution</b>	<b>Contributions in Relation to the Actuarial Determined Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Contributions as a Percentage of Covered Payroll</b>
County & Municipal	30-Jun-2018	\$ 9,484	\$ 9,484	\$ -	\$ 83,049	11.4%
Police and Firefighters'	30-Jun-2017	11,314	11,314***	-	82,164	13.8%
	30-Jun-2016	10,090**	10,090**	-	72,855	13.9%
	30-Jun-2015	10,067	10,067	-	70,997	14.2%
	30-Jun-2014	10,283	10,283	-	66,268	15.5%
	30-Jun-2013	8,671	8,671	-	68,122	12.7%
	30-Jun-2012	9,265	9,265	-	67,091	13.8%
	30-Jun-2011	7,569	7,569	-	59,418	12.7%
	30-Jun-2010	7,307	7,307	-	56,917	12.8%
	30-Jun-2009	12,007	12,007	-	55,478	21.6%
County & Municipal	30-Jun-2018	\$ 2,826	\$ 2,826	\$ -	\$ 39,856	7.1%
Other Employees'	30-Jun-2017	2,515	2,515	-	37,191	6.8%
	30-Jun-2016	2,077	2,077	-	33,453	6.2%
	30-Jun-2015	1,921	1,921	-	29,644	6.5%
	30-Jun-2014	2,049	2,049	-	30,937	6.6%
	30-Jun-2013	1,604	1,604	-	26,332	6.1%
	30-Jun-2012	1,362	1,362	-	22,435	6.1%
	30-Jun-2011	1,186	1,186	-	20,580	5.8%
	30-Jun-2010	1,276	1,276	-	20,591	6.2%
	30-Jun-2009	2,293	2,293	-	19,046	12.0%
Delaware Volunteer Firemen's	30-Jun-2018	\$ 2,017	\$ 2,017	\$ -	N/A	N/A
	30-Jun-2017	1,992	2,000	(8)	N/A	N/A
	30-Jun-2016	2,036	1,764	272	N/A	N/A
	30-Jun-2015	1,990	1,668	322	N/A	N/A
	30-Jun-2014	2,006	1,561	445	N/A	N/A
	30-Jun-2013	2,002	1,456	546	N/A	N/A
	30-Jun-2012	1,896	1,311	585	N/A	N/A
	30-Jun-2011	1,762	1,221	541	N/A	N/A
	30-Jun-2010	1,703	1,191	512	N/A	N/A
	30-Jun-2009	1,604	1,108	496	N/A	N/A
Diamond State Port Corporation	30-Jun-2018	\$ 1,175	\$ 1,175	\$ -	\$ 14,022	8.4%
	30-Jun-2017	1,134	1,134	-	12,028	9.4%
	30-Jun-2016	1,200	1,200	-	12,374	9.7%
	30-Jun-2015	1,052	1,052	-	11,679	9.0%
	30-Jun-2014	1,009	1,009	-	11,771	8.6%
	30-Jun-2013	854	854	-	11,381	7.5%
	30-Jun-2012	814	814	-	12,229	6.7%
	30-Jun-2011	704	704	-	11,150	6.3%
	30-Jun-2010	594	594	-	11,224	5.3%
	30-Jun-2009	694	694	-	11,071	6.3%

## Required Supplementary Information (continued)

### Schedule 3 - Schedule of Employer Contributions (continued)

(dollar values expressed in thousands)

(unaudited)

Plan	Fiscal Year Ended	Actuarial Determined Contribution	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
Closed State Police	30-Jun-2018	\$ 25,552	\$ 22,750	\$ 2,802	N/A	N/A
	30-Jun-2017	25,978	23,067	2,911	N/A	N/A
	30-Jun-2016	23,300	23,300	-	N/A	N/A
	30-Jun-2015	26,310	23,473	2,837	N/A	N/A
	30-Jun-2014	25,696	23,064	2,632	N/A	N/A
	30-Jun-2013	25,696	23,064	2,632	-	N/A
	30-Jun-2012	24,678	23,064	1,614	124	18600.0%
	30-Jun-2011	26,638	23,367	3,271	114	20497.4%
	30-Jun-2010	27,214	23,367	3,847	339	6892.9%
	30-Jun-2009	26,423	21,775	4,648	619	3517.8%

\* Actuarial Determined Contributions do not include Post-Retirement Increase funding (see Note 2 to the Basic Financial Statements).

\*\* Contribution amount differs from amount reported in the Combining Statement of Changes in Fiduciary Net Position due to a buy-in remitted by a new participating entity in the plan.

\*\*\*Contribution amount differs from amount reported in the Combining Statement of Changes in Fiduciary Net Position due to a refund to a participating entity in the plan.

### Schedule 4 - Schedule of Investment Returns\*

(dollar values expressed in thousands)

(unaudited)

Plan	Annual Money-Weighted Rate of Return, net of investment expense				
	2018	2017	2016	2015	2014
State Employees'	10.4%	11.0%	(1.7%)	3.6%	17.2%
Special	10.3%	11.0%	(2.0%)	3.6%	17.2%
New State Police	10.4%	11.0%	(1.5%)	3.7%	17.2%
Judiciary	10.4%	11.0%	(1.6%)	3.7%	17.2%
County & Municipal Police and Firefighters'	10.4%	11.0%	(1.5%)	3.7%	17.3%
County & Municipal Other Employees'	10.4%	11.0%	(1.5%)	3.6%	17.3%
Delaware Volunteer Firefighters	6.9%	10.6%	1.4%	2.4%	15.1%
Diamond State Port Corporation	10.4%	11.0%	(1.5%)	3.7%	17.3%
County & Municipal COLA	10.0%	11.6%	(3.2%)	3.9%	17.6%
Post-Retirement Increase Fund	10.8%	13.9%	(1.4%)	4.5%	19.4%
DEL RIP-Sussex Co.	10.1%	11.0%	(1.5%)	3.7%	17.3%
DEL RIP-Elsmere	N/A	0.4%	(1.7%)	3.6%	17.2%
DEL RIP-Newport	10.4%	10.6%	(2.0%)	3.7%	17.3%
Closed State Police	10.4%	10.0%	(6.4%)	2.9%	(0.1%)

\*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

## Required Supplementary Information (continued)

### Notes to Required Supplementary Information

*Factors that significantly affect trends in amounts reported.* For the periods presented, there were no changes of benefit terms or, changes in the size or composition of the population covered by the benefit terms which significantly affect trends in the amounts reported. The changes in assumptions used to determine total pension liability are described in Note 5 of the financial statements.

*Method and assumptions used in calculations of actuarially determined contributions.* The actuarially determined contribution rates in the Schedule of Employers' Contributions are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported, with the exception of Special, Delaware Volunteer Firemen and Closed State Police plans whose contributions are calculated one year prior to the end of the fiscal year. Complete descriptions of the methods and assumptions used to determine contribution rates for Fiscal Year 2018 can be found in the June 30, 2016 (2017 for Special, Delaware Volunteer Firemen and Closed State Police plans) actuarial valuation reports. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

Plan	State Employees'	Special	New State Police	Judiciary	Closed State Police
Valuation Date	30-Jun-2016	30-Jun-2017	30-Jun-2016	30-Jun-2016	30-Jun-2017
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Open 20-Year Level Percent of Payroll	N/A	Open 20-Year Level Percent of Payroll	Open 15-Year Level Percent of Payroll	Closed 19-Year Level Dollar Amortization
Remaining Amortization Period	20 years	N/A	20 years	15 years	19 years
Asset Valuation Method	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market
<b>Actuarial Assumptions:</b>					
Discount Rate	7.2%	7.0%	7.2%	7.2%	7.0%
Amortization Growth Rate	2.5%	N/A	2.5%	2.5%	N/A
Price Inflation	2.5%	N/A	2.5%	2.5%	2.5%

Plan	County & Municipal Police and Firefighters'	County & Municipal Other Employees'	Delaware Volunteer Firemen's	Diamond State Port Corporation
Valuation Date	30-Jun-2016	30-Jun-2016	30-Jun-2017	30-Jun-2016
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Open 10-Year Level Percent of Payroll	Open 10-Year Level Percent of Payroll	Open 15-Year Level Dollar Amortization	Open 15-Year Level Percent of Payroll
Remaining Amortization Period	10 years	10 years	15 years	15 years
Asset Valuation Method	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market
<b>Actuarial Assumptions:</b>				
Discount Rate	7.2%	7.2%	7.0%	7.2%
Amortization Growth Rate	2.5%	2.5%	N/A	2.5%
Price Inflation	2.5%	2.5%	2.5%	2.5%



# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

### SUPPORTING SCHEDULES

# 2018

## Schedule 5 – Schedule of Administrative Expenses

(dollar values expressed in thousands)

		Fiscal 2018	Fiscal 2017	Change	
				Dollars	Percent
<b>Personnel Services:</b>	Salaries	\$ 2,349	\$ 2,266	83	3.7%
	Fringe Benefits	1,299	1,277	22	1.7%
	<b>Total Personnel Services:</b>	\$ 3,648	\$ 3,543	105	3.0%
<b>Professional Services:</b>	Actuarial	189	234	(45)	(19.2%)
	Audit	638	332	306	92.2%
	Medical Services	7	7	-	0.0%
	State Agency Support Services	32	33	(1)	(3.0%)
	Other Professional Services	51	23	28	121.7%
	<b>Total Professional Services:</b>	\$ 917	\$ 629	288	45.8%
<b>Communication:</b>	Printing	90	105	(15)	(14.3%)
	Telephone	17	18	(1)	(5.6%)
	Postage	163	168	(5)	(3.0%)
	Travel	15	13	2	15.4%
	Other Communications	30	30	-	0.0%
	<b>Total Communications:</b>	\$ 315	\$ 334	(19)	(5.7%)
<b>Data Processing:</b>	Contracting Services	270	483	(213)	(44.1%)
	Maintenance	316	303	13	4.3%
	Equipment - Hardware	19	61	(42)	(68.9%)
	Equipment - Software	50	27	23	85.2%
	<b>Total Data Processing:</b>	\$ 655	\$ 874	(219)	(25.1%)
<b>Rental:</b>	Equipment Leasing	3	3	-	0.0%
	Fleet Services	1	1	-	0.0%
	Office Space	629	601	28	4.7%
	<b>Total Rentals:</b>	\$ 633	\$ 605	28	4.6%
<b>Miscellaneous:</b>	Supplies and Equipment	18	22	(4)	(18.2%)
	Maintenance	7	11	(4)	(36.4%)
	Other Miscellaneous	-	-	-	-
	<b>Total Miscellaneous:</b>	\$ 25	\$ 33	(8)	(24.2%)
<b>General Administrative Expenses:</b>		\$ 6,193	\$ 6,018	175	2.9%
<b>Special Projects:</b>	Best Practices Review	45	71	(26)	(36.6%)
	<b>Total Special Projects:</b>	\$ 45	\$ 71	(26)	(36.6%)
<b>Grand Total Administrative Expenses:</b>		\$ 6,238	\$ 6,089	149	2.4%

See accompanying independent auditors report.

## Schedule 6 – Schedule of Investment Expenses

(dollar values expressed in thousands)

	Fiscal 2018	Fiscal 2017	Change	
			Dollars	Percent
Custody Fees	\$ 382	\$ 175	\$ 207	118.3%
Investment Manager/Advisor Fees	22,255	23,217	(962)	(4.1)%
Legal	210	189	21	11.1%
Pension Office Support Staff	801	762	39	5.1%
<b>Total Investment Expenses:</b>	<b>\$ 23,648</b>	<b>\$ 24,343</b>	<b>\$ (695)</b>	<b>(2.9)%</b>

See accompanying independent auditors' report.

Schedule of Fiduciary Net Position  
of the Delaware Local Government Retirement Investment Pool  
as of June 30, 2018 with Comparative Totals for June 30, 2017

(expressed in thousands)

	Sussex County Government	Town of Newport	Totals as of June 30	
			2018	2017
<b>Assets:</b>				
Cash & Cash Equivalents	\$ 2,950	\$ 134	\$ 3,084	\$ 1,547
Receivables:				
Accrued Investment Income	50	3	53	60
Pending Trade Sales	70	3	73	119
<b>Total Receivables:</b>	\$ 120	\$ 6	\$ 126	\$ 179
Investments at Fair Value:				
Domestic Fixed Income	3,990	181	4,171	4,534
Domestic Equities	7,165	326	7,491	9,442
Pooled Equity & Fixed Income	12,731	578	13,309	14,742
Alternative Investments	9,464	430	9,894	9,686
Foreign Fixed Income	305	14	319	439
Foreign Equities	2,059	94	2,153	2,225
<b>Total Investments:</b>	\$ 35,714	\$ 1,623	\$ 37,337	\$ 41,068
<b>Total Assets:</b>	\$ 38,784	\$ 1,763	\$ 40,547	\$ 42,794
<b>Liabilities:</b>				
Pending Purchases Payable	64	3	67	206
Accrued Investment Expenses	14	1	15	18
<b>Total Liabilities:</b>	\$ 78	\$ 4	\$ 82	\$ 224
<b>Balance End Of Year</b>	\$ 38,706	\$ 1,759	\$ 40,465	\$ 42,570

See accompanying independent auditors' report.

Schedule of Changes in Fiduciary Net Position  
of the Delaware Local Government Retirement Investment Pool  
for the Year Ended June 30, 2018 with Comparative Totals  
for June 30, 2017

(expressed in thousands)

	Sussex County Government	Town of Newport	Totals as of June 30	
			2018	2017
<b>Additions:</b>				
<b>Contributions:</b>				
Transfer of Assets from Outside the System	\$ 2,300	\$ -	\$ 2,300	\$ -
<b>Total Contributions:</b>	\$ 2,300	\$ -	\$ 2,300	\$ -
<b>Investments:</b>				
Investment Income	629	24	653	716
Net Appreciation (Depreciation) in Fair Value	3,622	145	3,767	3,949
<b>Total Investment Earnings/(Loss):</b>	\$ 4,251	\$ 169	\$ 4,420	\$ 4,665
Less Investment Manager/Advisor Fees	(99)	(4)	(103)	(106)
<b>Net Investment Earnings/(Loss):</b>	\$ 4,152	\$ 165	\$ 4,317	\$ 4,559
Securities Lending Income	5	1	6	6
Less Bank Fees	(1)	-	(1)	(1)
<b>Total Securities Lending Expense</b>	\$ (1)	\$ -	\$ (1)	\$ (1)
<b>Total Net Securities Lending Income</b>	\$ 4	\$ 1	\$ 5	\$ 5
<b>Total Additions:</b>	\$ 6,456	\$ 166	\$ 6,622	\$ 4,564
<b>Deductions:</b>				
Withdrawal of funds COLA/DelRIP	8,725	-	8,725	12,212
Administrative Expenses	2	-	2	1
<b>Total Deductions</b>	\$ 8,727	\$ -	\$ 8,727	\$ 12,213
<b>Net Increase/Decrease</b>	\$ (2,271)	\$ 166	\$ (2,105)	\$ (7,649)
<b>Balance Beginning Of Year</b>	\$ 40,977	\$ 1,593	\$42,570	\$ 50,219
<b>Balance End Of Year</b>	\$ 38,706	\$ 1,759	\$40,465	\$ 42,570

See accompanying independent auditors report.



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## **Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

Board of Pension Trustees  
Delaware Public Employees' Retirement System  
Dover, Delaware

We have audited, in accordance with the auditing standards generally accepted in the United States of America and by the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Delaware Public Employees' Retirement System (the System) as of June 30, 2018 and have issued our report thereon dated November 21, 2018.

### ***Internal Control over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### ***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

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Board of Pension Trustees  
Delaware Public Employees' Retirement System  
Page 2 of 2

***Purpose of this Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the System's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*BDO USA, LLP*

Wilmington, Delaware  
November 21, 2018

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# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

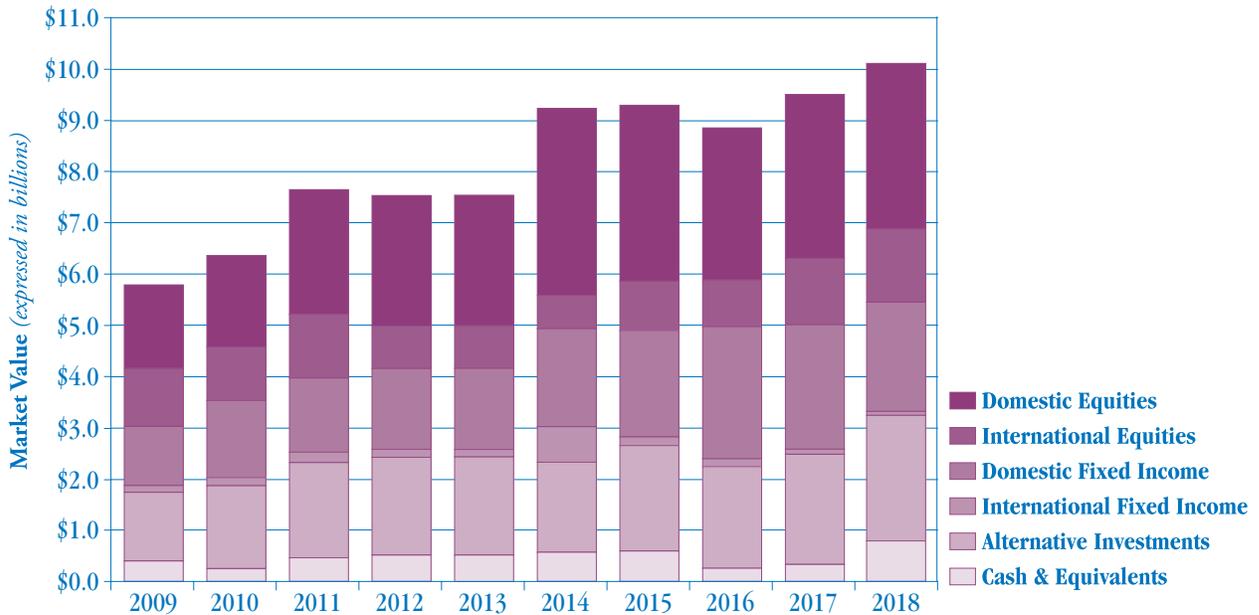
## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

### INVESTMENT SECTION

# 2018

## Ten-Year Investment Comparison



Investment Portfolio  
Fiscal Years Ended June 30,  
(expressed in millions)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Domestic Equities	\$ 1,632.9	\$ 1,779.2	\$ 2,432.8	\$ 2,538.8	\$ 3,400.8	\$ 3,649.1	\$ 3,434.4	\$ 2,976.0	\$ 3,182.9	\$ 3,104.3
International Equities	1,134.9	1,056.8	1,244.5	842.6	981.0	642.1	967.3	903.8	1,302.7	1,412.2
Domestic Fixed Income	1,148.4	1,509.1	1,448.4	1,565.3	1,612.0	1,925.8	2,071.8	2,589.8	2,427.7	2,272.1
International Fixed Income	121.5	138.0	193.5	163.5	148.3	687.8	172.5	155.6	99.1	80.4
Alternative Investments	1,348.6	1,630.2	1,866.1	1,902.5	1,528.1	1,754.8	2,064.0	1,970.5	2,154.6	2,465.9
Cash & Short Term	398.7	248.8	452.8	517.3	426.9	572.9	587.9	265.1	327.5	774.6
	\$ 5,785.0	\$ 6,362.1	\$ 7,638.1	\$ 7,530.0	\$ 8,097.1	\$ 9,232.5	\$ 9,297.9	\$ 8,860.8	\$ 9,494.5	\$ 10,109.5

Note: For this section, Pooled Investments are included in their respective equity and fixed income asset classes and, therefore, are different from the categories used in the Financial Section on pages 24-25. In addition, the fair value of investments represented in this section includes cash and cash equivalents, accrued interest, investment sales pending, and investment purchases pending, as indicated in the Financial Section on pages 24-25.

## Reconciliation to Plan Net Position

(expressed in millions)

	2018
<b>Total Investment Portfolio Value</b>	\$ 10,109.5
<b>Receivables</b>	
Employer Contributions	16.0
Member Contributions	4.8
<b>Liabilities</b>	
Benefits Payable	(1.0)
Accrued Investment Expenses	(3.6)
Accrued Administrative Expenses	(0.2)
Other Liabilities	(0.1)
<b>Net Position Held in Trust</b>	\$ 10,125.4



STATE OF DELAWARE  
STATE BOARD OF PENSION TRUSTEES  
AND  
OFFICE OF PENSIONS  
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Telephone (302) 739-4208  
Fax (302) 739-6129  
[www.delawarepensions.com](http://www.delawarepensions.com)

August 20, 2018

Dear Board Members, Participants, and Beneficiaries:

The Board of Pension Trustees' Investment Committee oversees the investment of the retirement funds of the Delaware Public Employees' Retirement System (System). The Investment Committee's investment oversight includes the nine plans/funds [State Employees', Special, New State Police, Judiciary, County & Municipal Police and Firefighters', County & Municipal Other Employees', Delaware Volunteer Firemen's, Diamond State Port Corporation, and Closed State Police]. In addition, the Investment Committee also oversees the three commingled pension investment funds [County & Municipal Police/Firefighters' COLA, Post-Retirement Increase (PRI), and Delaware Local Government Retirement Investment Pool (DEL RIP)]. The Investment Committee consists of seven members appointed by the Board. The Investment Committee seeks to achieve the following investment objectives established by the Board:

- To realize a real return of 3% per year over long periods
- To manage portfolio risk so as to limit downside price fluctuation of the total System portfolio
- To realize as high a rate of total return as possible consistent with the above.

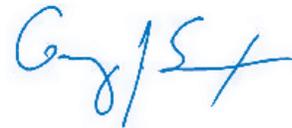
While not governed by mandated target asset allocations, investment decisions are shaped by the Board's internal investment guidelines which provide for a minimum of 20% of the total assets of the System to be invested in fixed income investments, such as bonds and cash equivalents. The Investment Committee continuously reviews expected rates of return and risk levels for all asset classes and seeks to construct portfolios consistent with the System's return objectives and risk management guidelines. The Investment Committee strives for appropriate investment diversification by allocating funds across a variety of asset classes and by selecting managers whose demonstrated performance reflects different management styles and asset class expertise. The performance of all investment managers is closely monitored, not only in relation to specific absolute objectives, but also in relation to other fund managers following the same or similar investment objectives. All investment guidelines are monitored with the assistance of the Investment Advisor.

The dedicated members of the Investment Committee met seventeen times over the course of the fiscal year. The System's investments continued to be allocated with a focus on liquidity and risk management. Asset allocation moves over the year involved shifting equity exposures toward international markets and repositioning the Fund's fixed income to benefit more from rising interest rates. Four manager accounts were closed and two new manager accounts were opened during the fiscal year. To help maintain exposure to private investments there were five new commitments to private investment funds during the year.

The Fund's return for the 2018 fiscal year was 10.6%. The total System's annualized returns for the last 5, 10, 15, and 20 years are 8.2%, 7.3%, 8.3%, and 7.2%, respectively, comfortably achieving the Fund's long-term real return objective of 3% over inflation. The System's long-term performance rankings in the TUCS large public plan universe are top quartile for the ten-year period and third quartile for the five-year period ending June 30, 2018. The System's longer-term results have been achieved with lower observed return volatility than the median for the universe, reflecting the System's longstanding focus on risk management. For the year ending June 30, 2018, the System's assets had a net increase of \$618.9 million, with investment gains comprising \$970.9 million. Investment gains include an adjustment of \$202 million in unrealized appreciation from Alternative Investments for the quarter ended June 30, 2018.

We thank our dedicated professional staff at the Office of Pensions, our Investment Advisor, our custodian bank, and our money managers, who all work diligently to ensure the successful operation of the Board of Pension Trustees' Investment Committee.

Respectfully submitted,



George J. Saxon, Chair  
Board of Pension Trustees'  
Investment Committee

## Investment Activity and Economic Climate

Entering the fiscal year, signs of synchronized global economic growth, accelerating corporate earnings, as well as accommodative global monetary policies appeared to present a favorable backdrop for equity markets. Market action through early 2018 did provide investors with generous returns, but long-dormant volatility re-emerged as the period progressed. While equity markets reacted favorably to the passage of the Tax Reform and Jobs Act in late 2017, worries began to emerge in January that faster economic growth may lead to higher inflation and force the Federal Reserve to pursue a more aggressive pace of monetary tightening. Seeking better trade deals, the White House announced a series of tariffs against China as well as close allies, including Canada, Mexico and the European Union. These countries quickly reacted with retaliatory tariffs against the US, raising investors' concerns that the growing conflict could evolve into a trade war impacting global economic growth.

While economic growth in the current expansion has been generally uneven across regions, positive global growth was in rare harmony during the period. In fact, according to the Organisation for Economic Co-operation and Development (OECD), each of the 45 largest economies had positive GDP growth for the first time in a decade. Strength in the US economy helped the unemployment rate fall to the lowest level since 2000, while manufacturing activity was robust across most countries, particularly in Europe. Earnings growth in the US so far in 2018 has jumped due to tax reform package, while internationally, earnings were broadly higher. For fiscal 2018, the broad Russell 3000 index of US stocks rallied 14.8%, while the MSCI All-Country ex-USA index of international stocks advanced 7.3%.

Global monetary conditions remained accommodative, which supported economic growth and risk assets, even though policy is gradually shifting to tightening. While the Federal Reserve continued on a path of monetary policy normalization by raising interest rates three times during the period, monetary policies of major central banks abroad remained more accommodative. The European Central Bank announced plans to wind down bond purchases at the end of the year but committed to keeping benchmark interest rates at the current levels until mid to late 2019. Meanwhile, the Bank of Japan is continuing to buy bonds and stocks as part of its unprecedented monetary stimulus program.

Returns for fixed income investments were challenged by interest rates that moved notably higher over the period (prices move inversely to the direction of interest rates). The magnitude of interest rate increases varied across maturities, with shorter term yields moving up more than longer term yields. As a result, the yield curve flattened and the difference between the 2-year and 10-year Treasury yields reached the tightest spread since 2007. Investors closely watch the yield curve spread as it has historically been a strong predictor of recessions, though it does not predict the timing of a recession. Credit spreads were little changed over the fiscal year and remained near historically low levels. For the year, the broad Barclays Universal bond index fell 0.3%, while the Barclays High Yield index gained 2.6% and the Barclays TIPS index was up 2.1%.

Given the conditions described above, the System's investments were positioned to benefit from market gains, with an over-weighted exposure to public and private equities, while the System was substantially under-weighted in fixed income, where holdings were more focused on credit and investments more sensitive to inflation and higher rates. Asset allocation and manager changes during the year had the net impact of profit-taking in domestic equity to try and benefit from relative value opportunities elsewhere in the world and repositioning the Fund's fixed income to benefit more from rising interest rates.

Looking forward to fiscal year 2019, the global economy is generally healthy, but faces many challenges. The economic expansion that began in mid-2009 is now nine years old, making it the second-longest expansion on record. While an expansion does not end because of age, there are some signs that the US economy is transitioning towards the later stages of the economic cycle. The Federal Reserve is moving towards tighter monetary policy, interest rates are moving higher, and the addition of fiscal stimulus to an economy already operating at or near full capacity may push inflation higher. While economies abroad are likely earlier in the economic cycle, their central banks are signaling they too will move towards less accommodative monetary policies. The escalating trade conflict between the US and its trading partners is a threat to global growth, while political developments in Washington and abroad are likely to be a source of uncertainty.

In the face of these uncertainties, we will continue to rely on the investment principles and risk management guidelines that have served us well in the past and do our best to execute a sound investment strategy for the benefit of the System's stakeholders.

## Investment Philosophy and Objectives

In the investment of public funds, adequate funding of employee pensions is a paramount concern. Excessive risk taking could jeopardize that funding. An appropriate balance must be struck between risks taken and returns sought to ensure the long-term health and affordability of the plans involved. For more than 30 years, the System has been managed to control the extent of downside risk to which assets are exposed while maximizing the potential for long-term gain.

Specific investment objectives are:

- Achieve a real return objective (DPERS return less CPI) of 3% over long periods (approximately 15 years)
- Manage portfolio risk by controlling downside price fluctuations of the Fund in any 12-month period
- Maximize total investment returns, consistent with Board objectives.

To achieve these objectives, these investment guidelines are employed:

- Allocate a minimum of 20% of assets to fixed income investments such as bonds, cash equivalents, and certain real estate investments
- Maintain a widely diversified portfolio, to minimize the risk of overexposure in any one market segment or investment style
- Monitor the performance of all investment managers using specific benchmarks
- Control exposure in illiquid asset classes
- Review, re-examine, and reconfirm the operation of the investment process regularly
- Identify new long-term opportunities for risk reduction and improved investment returns
- Review actuarial assumptions to ensure consistency with capital market expectations.

## Investment Process

While the objectives and policies have been repeatedly reaffirmed, the implementation process undergoes continuous evolution. The increasing volume of investment information and the complexities of the global marketplace necessitate the continuous review of data, trends, and markets. Ongoing enhancements are employed in every aspect of investment management, from asset allocation decisions to manager selection and performance measurement.

## Basis of Presentation

Investment returns for the total System are based on data made available by the fund's custodian, The Northern Trust Company (Northern Trust) and/or Investment Managers. These returns are calculated gross of directly paid fees, on a time-weighted basis in accordance with accepted practices. Valuations, where available, are based on published pricing from national securities exchanges. Returns for periods longer than one year are annualized.

## General Management

During each year the Investment Committee, with Board of Pension Trustees' (Board) oversight, carries out a number of general management practices to assure that the appropriate policies, controls, and resources are in place. Areas that are reviewed at least annually include:

- Investment objectives and policies based on an analysis of cash flow and liabilities
- Management tools for decision making
- Long-term risk and return levels for various investment options
- Manager organization, performance, transaction costs, fees and expenses, proxy voting procedures, and adherence to investment philosophy
- System performance versus externally measured universes of similar funds
- Contacts with other leading state investment funds to compare management practices
- Policy objectives and performance of alternative investments (including limited partnerships, and private LLCs).

## Investment Results

In Fiscal Year 2018, the investment process experienced:

- Fair value annual rate of return of 10.6% on the beginning of year investable balance and before investment expenses
- Benefit and expense payments exceeded net employer and member contributions by \$345.7 million
- Net investment gains of \$970.9 million (investment gains less investment expenses)
- Increase in fair value of investment portfolio from \$9.5 billion to \$10.1 billion
- Overall volatility well below that of an all common stock portfolio.

## Fifteen-Year Total Investment Rates of Return

	<b>Total Investment Portfolio</b>			
	<b>Fair Value</b> <i>(in millions)</i>	<b>Time-Weighted</b> <b>Annual Rate of Return</b>	<b>Annual Consumer</b> <b>Price Index</b>	<b>Real Rate of Return</b>
2009	\$5,785.0	(15.5%)	(1.4%)	(14.1%)
2010	\$6,362.1	14.4%	1.1%	13.3%
2011	\$7,638.1	24.3%	3.6%	20.7%
2012	\$7,530.0	2.0%	1.7%	0.3%
2013	\$8,097.1	11.1%	1.8%	9.3%
2014	\$9,232.3	17.5%	2.1%	15.4%
2015	\$9,297.9	3.9%	0.1%	3.8%
2016	\$8,860.8	(1.3%)	1.0%	(2.3%)
2017	\$9,494.5	11.3%	1.6%	9.7%
2018	\$10,109.5	10.6%	2.9%	7.7%
Five Year		8.2%	1.5%	6.7%
Ten Year		7.3%	1.4%	5.9%
Fifteen Year		8.3%	2.1%	6.2%

	<b>Periods Ended June 30, 2018</b> <i>(All Returns Greater Than One Year Are Annualized)</i>		
	<b>Five Years</b>	<b>Ten Years</b>	<b>Fifteen Years</b>
Total Fund Return	8.2%	7.3%	8.3%
S&P 500 Index Return	13.4%	10.2%	9.3%
Excess Return vs. S&P 500 Index	(5.2%)	(2.9%)	(1.0%)
Relative Risk vs. S&P 500 Index	63.6%	59.3%	59.7%

Funds are invested for long-term results and each single year's returns must be viewed in relation to longer periods.

One investment objective is to achieve an annualized rate of total return over any 15-year period that is at least 3 percentage points greater than inflation. The most recent 15-year result is a real rate of return of 6.2% (8.3% system return less 2.1% CPI) measured on a time-weighted basis. During this period, risk, as measured by relative volatility, was approximately 59.7% of the level that would have been experienced by a fund invested 100% in the S&P 500. The real rate of return from such a 100% stock portfolio would have been 7.2% (9.3% S&P 500 less 2.1% CPI). While 15-year investment market returns have been characterized by increased volatility, the portfolio has been successful at meeting the real return objective of 3.0% (DPERS return less 3%) over the 15-year period.

## Comparative Investment Results

*(time-weighted rate of return)*

	1 Year	3 Year	5 Year	10 Year
<b>Domestic Equities<sup>(1)</sup></b>	<b>8.5%</b>	<b>6.7%</b>	<b>8.8%</b>	<b>7.1%</b>
S&P 500	14.4%	11.9%	13.4%	10.2%
Russell 3000 Index	14.8%	11.6%	13.3%	10.2%
<b>Global Equities<sup>(2)</sup></b>	<b>17.1%</b>	<b>12.6%</b>	<b>14.4%</b>	<b>8.2%</b>
MSCI All Country World Index	10.7%	8.2%	9.4%	5.8%
<b>International Equities<sup>(3)</sup></b>	<b>4.9%</b>	<b>4.1%</b>	<b>5.2%</b>	<b>4.9%</b>
MSCI All Country World Index ex-US	7.3%	5.1%	6.0%	2.5%
<b>Total Equities</b>	<b>10.3%</b>	<b>8.1%</b>	<b>9.8%</b>	<b>7.4%</b>
Equity Section Benchmark <sup>(4)</sup>	12.2%	9.4%	10.8%	7.6%
<b>Fixed Income &amp; Cash</b>	<b>1.3%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>4.2%</b>
Fixed Income Section Benchmark <sup>(5)</sup>	(0.1)%	2.0%	2.5%	3.9%
<b>Alternative Strategies<sup>(6)</sup></b>	<b>24.7%</b>	<b>9.5%</b>	<b>12.1%</b>	<b>10.9%</b>
Policy Benchmark <sup>(7)</sup>	7.0%	6.4%	7.4%	6.3%
<b>Total System</b>	<b>10.6%</b>	<b>6.7%</b>	<b>8.2%</b>	<b>7.3%</b>
Policy Benchmark <sup>(7)</sup>	7.0%	6.4%	7.4%	6.3%
<b>Delaware Volunteer Firemen's Fund<sup>(8)</sup></b>	<b>6.8%</b>	<b>6.1%</b>	<b>7.1%</b>	<b>6.6%</b>
VFF Benchmark <sup>(9)</sup>	6.9%	6.2%	7.2%	6.2%
<b>Consumer Price Index</b>	<b>2.9%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>1.4%</b>

*(1) Includes domestic convertible securities and real estate investments; includes pooled domestic allocation portfolios.*

*(2) Includes pooled global allocation portfolios.*

*(3) Includes international convertible securities.*

*(4) 65.52% Russell 3000, 34.48% MSCI ACWI ex US (Net)*

*(5) 91.67% Barclays Universal, 3.57% Barclays TIPS, 4.76% 90-Day T-Bills*

*(6) Includes Private Equity and other non-marketable investments. All returns are on a lagged basis, with the exception of quarter ended 6/30/18.*

*(7) Since July 1, 2006: 38% Russell 3000, 20% MSCI ACWI ex-US, 38.5% Barclays Universal, 1.5% Barclays TIPS, 2% 90-day T-bills*

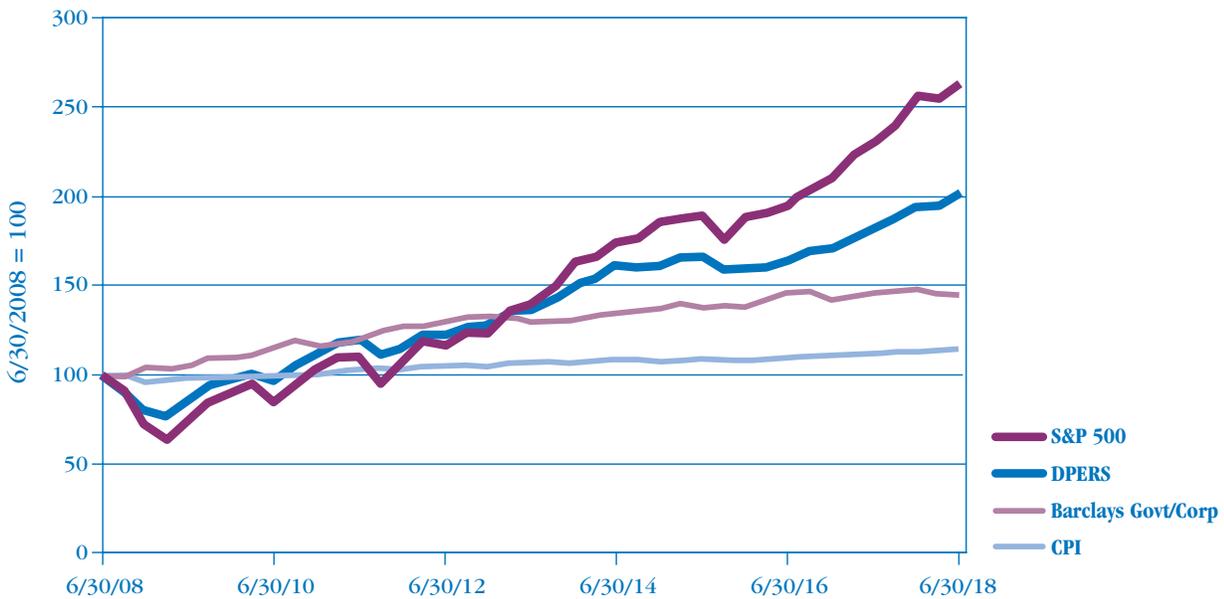
*(8) Delaware Volunteer Firemen's Fund investments are invested separately from the other plans of DPERS.*

*(9) Since July 1, 2008: 38% Russell 3000, 20% MSCI ACWI ex-US, 40% Barclays Aggregate, 2% 90-day T-bills*

## Total Return Performance Comparison - 5 Years



## Total Return Performance Comparison - 10 Years



## List of Largest Assets Directly Held as of June 30, 2018

*(excludes investments in pooled vehicles)*

Ten Largest Equity Holdings (Includes Convertibles)	Fair Value	% of Total Fund	Shares
Amazon.com Incorporated	\$ 68,677,019	0.68%	40,403 shares
Facebook Incorporated	52,056,191	0.51%	267,889 shares
Microsoft Corporation	51,665,625	0.51%	523,939 shares
UnitedHealth Group Inc.	44,416,844	0.44%	181,042 shares
Tencent Holdings Limited	42,765,883	0.42%	852,000 shares
Johnson & Johnson Company	41,283,872	0.41%	340,233 shares
Alibaba Group Holdings LTD	39,319,930	0.39%	211,933 shares
Pepsico Incorporated	36,936,216	0.37%	339,269 shares
American Express Co.	36,348,592	0.36%	370,904 shares
Tesla Incorporated	35,275,494	0.35%	102,859 shares
	<u>\$ 448,745,666</u>	<u>4.44%</u>	

Ten Largest Bond Holdings (excludes US Treasuries)	Fair Value	% of Total Fund	Par (\$)
Bank of Nova Scotia 2.15% 07/14/20	\$ 8,854,005	0.09%	9,030,000
Merrill Lynch & Company 6.110% 01/29/37	8,385,481	0.08%	7,300,000
Weyerhaeuser Company 7.375% 03/15/32	5,567,400	0.06%	4,380,000
International Paper Company 8.700% 06/15/38	5,567,131	0.06%	3,990,000
Asurion, LLC 7.980% 08/04/25	5,210,578	0.05%	5,175,000
Chesapeake Energy Corporation 4.875% 04/15/22	5,049,600	0.05%	5,260,000
ArcelorMittal 7.500% 03/01/41	4,831,778	0.05%	4,280,000
US Legal Support Inc. 8.00% 12/31/22	4,715,098	0.05%	5,360,746
Navient Corporation 5.875% 10/25/24	4,691,144	0.05%	4,855,000
U S W Capital Funding Inc. 6.875% 07/15/28	4,455,994	0.04%	4,875,000
<b>Total</b>	<u>\$ 57,328,209</u>	<u>0.58%</u>	

## Asset Allocation

Funds are deployed in diverse asset classes offering the desired risk and return characteristics in an effort to achieve stated investment objectives. The accompanying table shows the most recent five-year history and trends in asset allocation. For these asset classifications, the Pooled Equity and Fixed Income accounts are included in their respective equity and fixed income asset classes and, therefore, are different from the asset classes used in the financial section on pages 24-25.

	2018	2017	2016	2015	2014
Domestic Equities	30.7%	33.5%	33.6%	36.9%	39.5%
International Equities	13.9%	13.7%	10.2%	10.4%	7.0%
Domestic Fixed Income	22.5%	25.6%	29.2%	22.3%	20.9%
International Fixed Income	0.8%	1.0%	1.8%	1.9%	7.4%
Alternative Investments	24.4%	22.7%	22.2%	22.2%	19.0%
Cash and Equivalents	7.7%	3.5%	3.0%	6.3%	6.2%

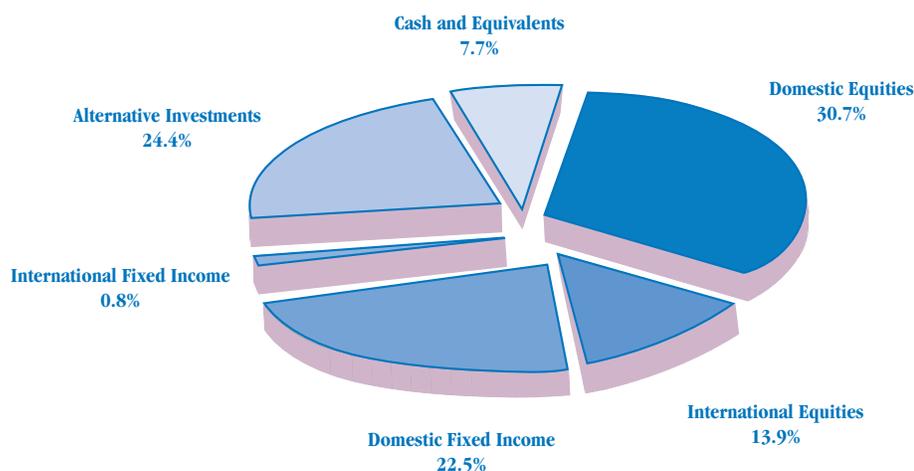
Individual investment managers are selected for each asset class based on a rigorous set of performance and organizational criteria. In addition to a proven track record of managing a given class of assets, they must have a clearly stated and consistently applied investment policy and decision making process, continuity of personnel, and a well-defined plan for retaining key personnel and controlling growth.

All investment managers are expected to maintain those organizational criteria in order to continue as managers.

The System's investments continued to be allocated with a focus on liquidity and risk management. Asset allocation moves over the year involved shifting equity exposures toward international markets and repositioning the Fund's fixed income to benefit more from rising interest rates. Manager activity over the fiscal year saw two new manager accounts opened and four accounts terminated, while one existing account was increased and nine accounts were reduced. To help maintain exposure to private investments there were five new commitments to private investment funds during the year.

## Asset Allocation

*as of June 30, 2018*



At the end of the fiscal year, the money managers of the System and their responsibilities were:

<b>Investment Manager</b>	<b>Mandate</b>	<b>Fiscal Year Retained</b>
<b>Domestic Equities</b>		
AJO	Large Cap Equities	2017
Focused Investors	Large Cap Equities	2011
Mellon Capital Management	Large Cap Equities	1984
T. Rowe Price Associates	Domestic Equities	1989
Vanguard	Domestic Equities	2009
Wellington Management Company	Large Cap Equities	2011
<b>International Equities</b>		
Baillie Gifford	Global Equities	2008
Dimensional Fund Advisors	International Equities	2017
Dodge and Cox	International Equities	2007
Kiltearn Global Equity	Global Equities	2013
Orbis Investments	International Equities	2018
T. Rowe Price Associates	International Equities	2018
T. Rowe Price Associates	Global Equities	2010
Sanderson Asset Management, Inc.	International Equities	2010
Vanguard	International Equities	2009
<b>Domestic Fixed Income</b>		
Loomis Sayles & Company	Long Term Corporate Bonds	1999
Mellon Capital Management	Domestic Fixed Income	1984
T. Rowe Price Associates	Floating Rate Bank Loans	2011
<b>Alternative Investments</b>		
Accel Partners	Venture Capital	1984
Accel-KKR Company	Venture Capital	2001
Allegis Capital	Venture Capital	2005
Advanced Technology Ventures	Venture Capital	1990
Angelo, Gordon & Co	Hedge Fund and Distressed Debt	2007
Atalaya Capital Management	Distressed Debt	2011
Bridgewater Associates	Hedge Fund	2017
The Carlyle Group	Private Equity	1996
Centerbridge Partners	Hedge Fund	2009
Cherry Tree Ventures	Venture Capital	1984
Flagship Pioneering	Venture Capital	2005
IDG Capital Partners	Venture Capital	2006
Lightstone Ventures	Venture Capital	2013
Liquid Realty Partners	Real Assets	2008
Main Post Capital	Venture Capital	2013
Marcus Capital Partners	Real Assets	2014
MeriTech Capital Partners	Venture Capital	1999
Oaktree Capital Management	Distressed Debt	1998
One Liberty Ventures	Venture Capital	1995
ONSET Enterprise Associates	Venture Capital	1990
Pecks Management Partners	Private Debt	1986
Riverstone	Real Assets	2006
Summit Ventures	Venture Capital	1988
Trident Capital	Venture Capital	2000
Viking Global Investors	Hedge Fund	2012
<b>Cash &amp; Short-Term</b>		
Northern Trust	Cash & Equivalents	2007

# Investment Summary and Schedule of Investment Fees

(dollar values expressed in millions)

	Fair Value as of June 30, 2018	Percent of Total Investment Assets	Total Fiscal Year 2018 Investment Fees	Basis Points
<b>Equities</b>				
Domestic Equities	\$ 3,104.3	30.7%	\$ 4.6	
International Equities	\$ 1,412.2	13.9%	\$ 9.2	
Sub-Total	\$ 4,516.5	44.6%	\$ 13.8	
<b>Fixed Income</b>				
Domestic Fixed Income	\$ 2,272.1	22.5%	\$ 3.7	
International Fixed Income	\$ 80.4	0.8%	0.0	
Sub-Total	\$ 2,352.5	23.3%	\$ 3.7	
<b>Other Asset Allocations</b>				
Alternative Investments	\$ 2,465.9	24.4%	0.0	
Cast and Short Term	\$ 774.6	7.7%	0.0	
Sub-Total	\$ 3,240.5	32.1%	0.0	
<b>Other Investment Services</b>				
Custodian/Investment Advisor Fees	\$ -	-	\$ 5.4	
Pension Office Support Staff Expenses	\$ -	-	\$ 0.8	
Sub-Total	\$ -	-	\$ 6.2	
	<u>\$ 10,109.5</u>	<u>100.0%</u>	<u>\$ 23.7</u>	<u>24bp</u>

\* Other fees include Alternative Investment fees detailed on page 47. These fees have been excluded from the table above and the basis points calculation since they have already been netted from income. Basis point calculation is the weighted average based on the quarterly fund valuations.

## Glossary of Terms Used

### *Fair Value:*

The fair value of the System's investments is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair values for fixed income and equity securities are derived from published market prices and quotations from national security exchanges or security pricing vendors. Where published prices, quotations, or vendor prices are not available, alternate valuation methods are used.

### *Time-Weighted Total Return:*

The measure used for judging investment management of the System. It is based on fair value and minimizes or eliminates any distortion in the rate of return caused by the timing of cash flows into or out of the System.

### *Alternative Investments:*

Alternative investments are ownership interests in investment limited partnerships or private LLCs, some of which may be illiquid.

## Schedule of Broker Commissions

The System has no commission recapture, directed payment, or “soft dollar” arrangements; however, such arrangements may exist between brokers and investment managers. Broker selection is the responsibility of individual investment managers.

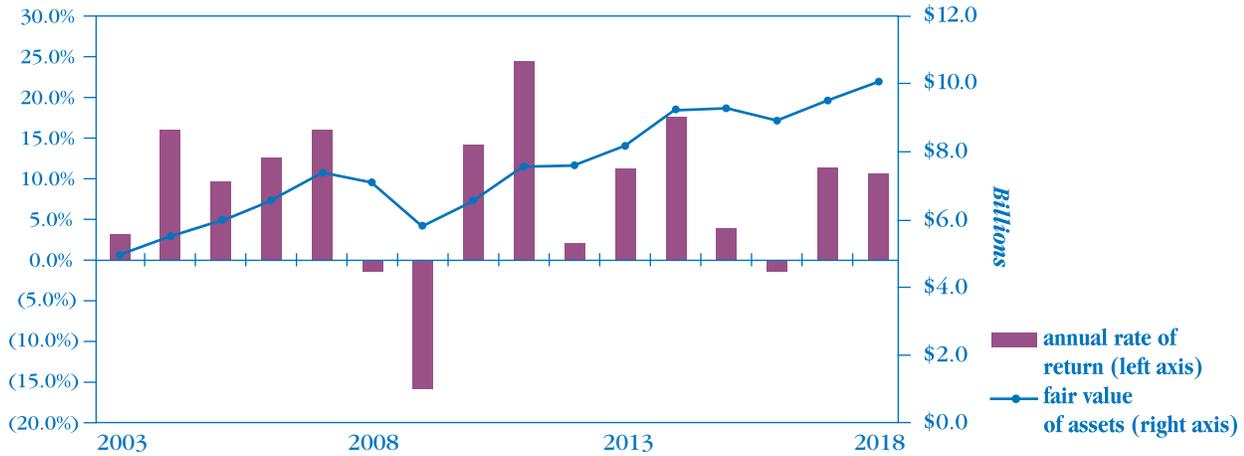
The following is a list of brokers who received \$10,000 or more in commissions during Fiscal Year 2018.

Broker	# of Shares	Commission Per Share	Total Dollar Amount of Trades	Total Commission
MORGAN STANLEY & CO. LLC	15,170,194	\$0.00	\$ 125,020,422	\$ 70,979
JEFFERIES LLC	19,525,559	\$0.00	290,561,407	59,209
CITIGROUP GLOBAL MARKETS INC.	7,558,973	\$0.01	139,248,316	45,410
CREDIT SUISSE (HONG KONG) LIMITED	8,521,513	\$0.01	32,799,288	44,891
FRIEDMAN BILLING AND RAMSEY	1,485,557	\$0.03	29,876,062	44,567
GOLDMAN, SACHS & CO.	7,942,869	\$0.01	144,742,525	44,563
J.P. MORGAN SECURITIES LLC	3,617,623	\$0.01	166,103,567	43,091
WELLS FARGO BANK, N.A.	6,661,435	\$0.01	176,093,680	38,149
UBS LIMITED	2,952,648	\$0.01	37,998,830	32,229
DEUTSCHE BANK SECURITIES	2,277,978	\$0.01	133,550,818	30,893
CLSA LIMITED	23,982,555	\$0.00	19,298,923	27,952
MERRILL LYNCH PIERCE FENNER & SMITH	751,875	\$0.03	17,010,725	21,286
BANK OF AMERICA CORPORATION	1,583,840	\$0.01	138,590,977	20,553
MERRILL LYNCH INTERNATIONAL LIMITED	5,412,910	\$0.00	24,614,100	18,444
SANFORD C. BERNSTEIN LTD	7,422,974	\$0.00	64,239,343	15,860
MACQUARIE BANK LIMITED	15,427,488	\$0.00	8,455,941	15,047
INSTINET, LLC	1,793,163	\$0.01	105,843,570	14,545
UBS SECURITIES LLC	486,834	\$0.03	8,332,783	14,214
BARCLAYS CAPITAL	755,510	\$0.02	32,984,667	14,108
RBC CAPITAL MARKETS, LLC	1,756,448	\$0.01	87,814,754	13,640
DEUTSCHE SECURITIES ASIA LIMITED	13,032,890	\$0.00	6,731,117	13,307
BANCO SANTANDER S.A. NEW YORK	1,905,325	\$0.01	6,949,717	12,562
CREDIT SUISSE SECURITIES (USA) LLC	545,260	\$0.02	26,159,635	12,562
CREDIT SUISSE SECURITIES(EUROPE)LTD	813,416	\$0.01	15,359,523	12,035
SG AMERICAS SECURITIES, LLC	1,426,380	\$0.01	73,062,922	11,715
All Others ( 132 Brokers Not Listed)	34,205,511	\$0.01	601,093,947	208,191
Totals	187,016,728		\$ 2,512,537,559	\$ 900,002
Average Commission, Per Share		\$ -		

## Delaware Public Employees' Retirement System

### Annual Fair Value of Fund and Rate of Return

For the 15-Year Period 2003-2018



The Investment Section is prepared by the Pension Office staff with input from the Board of Pension Trustees, the Investment Committee, and the Investment Advisor.

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# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

# ACTUARIAL SECTION

# 2018

October 26, 2018

Board of Pension Trustees  
Delaware Public Employees' Retirement System  
McArdle Building  
860 Silver Lake Blvd., Suite 1  
Dover, DE 19904-2402

Dear Board Members:

At your request, we have prepared our annual actuarial valuations of each of the funded pension plans administered by the Board as of June 30, 2017. The results of these valuations are contained in the enclosed exhibits. Any distribution of the exhibits must be in their entirety, including this cover letter, unless prior written consent is obtained. The contributions actually made during FY 2018 were developed in the 2016 actuarial valuations. The basis for the GASB No. 67 net pension liability is the 2017 actuarial valuations rolled forward to June 30, 2018.

### **Funding Objective**

The funding objective of the System is to establish contribution rates that, over time, will remain level as a percentage of payroll. In order to achieve this, we developed a contribution rate that will provide for current cost (i.e., normal cost expressed as a level percentage of payroll) plus a level percentage of payroll amortizations of each layer of the unfunded liability over a specified period. In addition, unfunded liabilities due to cost-of-living adjustments to retirees are funded through a schedule of future transfers from the Post-Retirement Increase Fund.

To our knowledge, the State has consistently funded the full amounts required based on the actuarial valuations and specific statutory provisions.

### **Assumptions and Methods**

The actuarial assumptions and methods used in the 2017 funding valuations were based on the most recent experience study completed during the fiscal year ended June 30, 2016. The Board set the investment return assumption based on advice from its investment consultant and did reduce this assumption from 7.2% to 7.0% for the 2017 valuations.

We believe that all costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods that are individually reasonable (taking into account the experience of the System and reasonable expectations) and that, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs rely on future plan experience conforming to the underlying assumptions and methods outlined in this report. To the extent that the actual experience of the Programs deviates from the underlying assumptions and methods, or there are any changes in plan provisions or applicable law, the results will vary accordingly.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations under GASB Statement No. 67 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ. The calculations in the enclosed exhibits have been made on a basis consistent with our understanding of the System's funding requirements and goals and of GASB Statement No. 67. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

This report was prepared for the Delaware Public Employees' Retirement System for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

### **Reliance on Others**

In performing our report, we relied on information, some oral and some written, supplied by the Delaware Public Employees' Retirement System. This information includes, but is not limited to, the plan provisions, membership data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable. Such a review was beyond the scope of our assignment.

### **Supporting Schedules**

Cheiron is responsible for providing all figures in the following schedules of the Financial Section: Membership Data, Current Funded Status of the Plans, Plan Actuarial Methods, Schedule of Changes in Net Pension Liability, and Schedule of Employer Contributions. In addition, we were responsible for the information provided in the following schedules found in the Actuarial Section: Actuarial Assumptions and Methods, Schedule of Active Member Valuation Data, Solvency Test, and Analysis of Financial Experience for the State Employees' Pension Plan.

### **Certification**

I hereby certify that, to the best of my knowledge, this report and its contents are work products of Cheiron, Inc. These work products are complete and accurate and have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Standard of Practice set out by the Actuarial Standards Board, including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as a credentialed actuary, I meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal service or advice.

Sincerely,  
Cheiron



Fiona E. Liston, FSA, EA  
Principal Consulting Actuary



## **Actuarial Assumptions and Methods**

### **Asset Valuation Method**

The market value of assets, representing the realizable value of the assets on a particular day, is not necessarily an appropriate value for the purpose of setting contribution rates. This is because funding will take place over a long period of time during which market values can be expected to fluctuate significantly from year to year. If market values were used to develop contribution rates, the resulting contribution rates would also fluctuate from year to year.

In order to produce a stable pattern of contribution rates, market values are adjusted to remove some of the volatility. The actuarial value of assets is equal to 1/5th of the market value plus 4/5th of the expected value, where the expected value is equal to last year's actuarial value and subsequent cash flows into and out of the fund accumulated with interest at the prior year valuation rate of 7.0 percent per annum.

### **Funding Method**

We used the Individual Entry Age Normal Method to determine costs for all plans. Under an Entry Age method, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded liability rate (UAL). In addition, the overall contribution rate includes a provision for the plan's expenses.

For each State plan, an Entry Age Normal cost rate is determined for each member of each respective plan. This rate represents the member's expected future employer-paid normal costs divided by his expected future salary, where both measurements are made as of the member's original entry date to the System.

In addition to contributions required to meet the normal cost, contributions are required to meet each plan's unfunded actuarial liability. Actuarial liability equals the present value of future benefits less the present value of future normal costs and future employee contributions. The unfunded liability is the total actuarial liability for all members less the actuarial value of the System's assets.

A portion of the unfunded liability will be paid through future, scheduled transfers from the Post-Retirement Increase Fund. These transfers will cover the liability increases due to the cost-of-living increases granted on January 1, 2015. The remaining unfunded actuarial liability will be amortized over an open 20-year period for the State Employees' Plan and State Police Plan and over an open period of 15 years for the Judiciary Plan, the Volunteer Firemen's Plan, and the Diamond State Port Corporation plan through the unfunded liability amortization component of the total contribution. We note that in the case where amortization is being performed over an open period, the unfunded liability amount is projected to decrease over time but not actually reach zero when all assumptions are met.



**Actuarial Assumptions**

The actuarial assumptions for valuation purposes are based on the experience study completed in 2016. The investment return assumption has since been reduced after analysis and recommendation by the Board’s Investment Committee. Please refer to the 2016 study for rationale in choosing the assumptions. Differences between assumed and actual experience (actuarial gains and losses) are part of the unfunded actuarial liabilities. The following significant assumptions were used in the actuarial valuations as of July 1, 2017:

1. *Rate of return on investments:*  
 7.0% compounded annually (adopted 2017)
2. *Salary increases attributable to inflation:*  
 2.5% compounded annually (adopted 2016)
3. *Salary increases attributable to merit and productivity:*  
 Increases for State Employees ranging from 0.0% to 9.0% per year (adopted 2014)
4. *Mortality:*  
 Rates of mortality vary by gender. For retirees, the assumption anticipates future improvements in mortality through the use of a fully generational projection scale (adopted 2016). Sample retiree mortality rates from the State Employees plan are as follows:

Sample Rates in 2017		
Age	Male	Female
50	0.43%	0.27%
55	0.62%	0.36%
60	0.83%	0.52%
65	1.18%	0.80%
70	1.83%	1.29%
75	2.99%	2.11%

*Male:* 110% of RP-2014 Total Dataset Male Healthy Annuitant Mortality Table adjusted back to 2006 with MP-2014 prior to application of generational mortality improvement scale.

*Female:* 100% of RP-2014 Total Dataset Female Healthy Annuitant Mortality Table adjusted back to 2006 with MP-2014 prior to application of generational mortality improvement scale.

5. *Rates of termination of service, disablement, and retirement:*  
 Based on the results of the Experience Study completed in 2016 (adopted 2016).
6. *Aggregate active member payroll:*  
 2.50% annually (adopted 2016).

**Summary of Plan Provisions and Changes in Plan Provisions**

The plans valued are those described on pages 30-33 of the Financial Section.



## Schedule of Active Member Valuation Data

Plan	Fiscal Year Ended	Number of Members	Annualized Covered Payroll (expressed in thousands)	Annual Average Pay	% Increase/ (Decrease) in Average Pay
State Employees'	30-Jun-2017	37,119	\$ 1,979,138	\$ 53,319	1.5%
	30-Jun-2016	36,198	1,900,764	52,510	(1.1%)
	30-Jun-2015	35,998	1,911,643	53,104	0.0%
	30-Jun-2014	35,825	1,902,293	53,100	0.6%
	30-Jun-2013	35,571	1,877,105	52,771	(0.6%)
	30-Jun-2012	35,427	1,881,097	53,098	5.9%
	30-Jun-2011	35,572	1,783,603	50,141	1.4%
	30-Jun-2010	35,217	1,740,622	49,426	(0.1%)
	30-Jun-2009	35,430	1,753,129	49,481	0.5%
	30-Jun-2008	34,764	1,711,473	49,231	2.3%
Special	The Special Fund has no Active Members				
New State Police	30-Jun-2017	705	\$ 62,083	\$ 88,061	3.2%
	30-Jun-2016	703	59,980	85,320	2.8%
	30-Jun-2015	714	59,250	82,983	0.2%
	30-Jun-2014	695	57,543	82,796	1.3%
	30-Jun-2013	689	56,289	81,697	0.7%
	30-Jun-2012	671	54,412	81,091	6.2%
	30-Jun-2011	662	50,556	76,369	(0.4%)
	30-Jun-2010	651	49,896	76,645	(0.9%)
	30-Jun-2009	652	50,425	77,339	5.0%
	30-Jun-2008	651	47,971	73,688	1.1%
Judiciary	30-Jun-2017	57	\$ 10,622	\$ 186,351	1.2%
	30-Jun-2016	58	10,679	184,121	(0.6%)
	30-Jun-2015	56	10,370	185,179	(1.0%)
	30-Jun-2014	55	10,290	187,091	1.3%
	30-Jun-2013	56	10,416	186,000	(1.5%)
	30-Jun-2012	55	10,387	188,855	6.0%
	30-Jun-2011	54	9,624	178,222	0.0%
	30-Jun-2010	55	9,798	178,145	(0.2%)
	30-Jun-2009	55	9,814	178,436	(0.6%)
	30-Jun-2008	54	9,689	179,426	0.4%
County & Municipal Police and Firefighters'	30-Jun-2017	1228	\$ 85,354	\$ 69,507	8.1%
	30-Jun-2016	1196	76,873	64,275	0.6%
	30-Jun-2015	1175	75,058	63,879	0.2%
	30-Jun-2014	1,096	69,849	63,731	1.2%
	30-Jun-2013	1,082	68,122	62,959	(0.6%)
	30-Jun-2012	1,059	67,091	63,353	3.7%
	30-Jun-2011	973	59,418	61,067	3.8%
	30-Jun-2010	967	56,917	58,859	1.2%
	30-Jun-2009	954	55,478	58,153	2.1%
	30-Jun-2008	866	49,328	56,961	3.8%

## Schedule of Active Member Valuation Data (continued)

Plan	Fiscal Year Ended	Number of Members	Annualized Covered Payroll (expressed in thousands)	Annual Average Pay	% Increase/ (Decrease) in Average Pay
County & Municipal	30-Jun-2017	781	\$ 38,483	\$ 49,274	1.9%
Other Employees'	30-Jun-2016	743	35,937	48,367	(2.3%)
	30-Jun-2015	646	31,983	49,509	1.0%
	30-Jun-2014	586	28,716	49,003	1.1%
	30-Jun-2013	543	26,332	48,494	4.4%
	30-Jun-2012	483	22,435	46,449	2.5%
	30-Jun-2011	454	20,580	45,330	1.0%
	30-Jun-2010	459	20,591	44,861	1.0%
	30-Jun-2009	429	19,046	44,396	1.7%
	30-Jun-2008	427	18,632	43,635	8.4%
Closed State Police	The Closed State Police Fund has no Active Members				
Diamond State Port Corporation	30-Jun-2017	272	\$ 12,912	\$ 47,471	(0.7%)
	30-Jun-2016	259	12,376	47,784	3.3%
	30-Jun-2015	255	11,791	46,239	0.2%
	30-Jun-2014	274	12,644	46,146	(3.5%)
	30-Jun-2013	238	11,381	47,819	3.6%
	30-Jun-2012	265	12,229	46,147	5.5%
	30-Jun-2011	255	11,150	43,725	0.1%
	30-Jun-2010	257	11,224	43,673	10.1%
	30-Jun-2009	279	11,071	39,681	8.6%
	30-Jun-2008	281	10,270	36,548	(3.5%)
Delaware Volunteer Firemen's	30-Jun-2017	4,479	\$ -	\$ -	0.0%
	30-Jun-2016	4,617	-	-	-
	30-Jun-2015	4,742	-	-	-
	30-Jun-2014	4,882	-	-	-
	30-Jun-2013	4,882	-	-	-
	30-Jun-2012	4,871	-	-	-
	30-Jun-2011	4,933	-	-	-
	30-Jun-2010	4,898	-	-	-
	30-Jun-2009	5,074	-	-	-
	30-Jun-2008	5,066	-	-	-

## Schedule of Retirants and Beneficiaries Added to and Removed from Rolls

Plan	Fiscal Year Ended	Added to Rolls		Removed from Rolls	
		Additions	Annual Allowance <i>(expressed in thousands)</i>	Deletions	Annual Allowances <i>(expressed in thousands)</i>
State Employees'	30-Jun-2017	1,579	\$ 35,508	879	\$ 12,336
	30-Jun-2016	1,924	44,774	837	11,530
	30-Jun-2015	1,637	41,817	901	10,181
	30-Jun-2014	1,622	34,371	845	10,532
	30-Jun-2013	1,603	36,118	835	9,846
	30-Jun-2012	1,459	35,304	824	9,285
	30-Jun-2011	1,339	36,190	839	8,567
	30-Jun-2010	1,673	38,613	843	10,472
	30-Jun-2009	1,330	31,401	750	8,613
	30-Jun-2008	1,363	29,455	680	7,497
Special	30-Jun-2017	-	\$ -	-	\$ -
	30-Jun-2016	1	7	3	23
	30-Jun-2015	-	-	-	-
	30-Jun-2014	-	-	-	-
	30-Jun-2013	-	-	2	7
	30-Jun-2012	-	(1)	1	3
	30-Jun-2011	1	3	3	9
	30-Jun-2010	-	-	4	12
	30-Jun-2009	1	4	6	22
	30-Jun-2008	-	-	2	4
New State Police	30-Jun-2017	21	\$ 1,515	1	\$ 56
	30-Jun-2016	36	3,213	-	-
	30-Jun-2015	22	1,823	1	40
	30-Jun-2014	13	1,028	1	-
	30-Jun-2013	16	1,117	2	66
	30-Jun-2012	31	2,089	2	16
	30-Jun-2011	18	1,231	1	20
	30-Jun-2010	27	1,535	2	-
	30-Jun-2009	18	1,006	1	40
	30-Jun-2008	12	613	1	39
Judiciary	30-Jun-2017	6	\$ 665	6	\$ 342
	30-Jun-2016	5	421	1	62
	30-Jun-2015	4	568	5	289
	30-Jun-2014	5	470	2	68
	30-Jun-2013	3	308	-	-
	30-Jun-2012	1	79	2	99
	30-Jun-2011	3	322	2	68
	30-Jun-2010	3	308	1	75
	30-Jun-2009	4	378	2	158
	30-Jun-2008	2	153	3	148
County & Municipal Police and Firefighters'	30-Jun-2017	44	\$ 1,575	3	\$ 80
	30-Jun-2016	24	1,138	-	-
	30-Jun-2015	23	839	-	-
	30-Jun-2014	15	584	-	-
	30-Jun-2013	9	297	1	16
	30-Jun-2012	13	453	2	14
	30-Jun-2011	13	358	1	27
	30-Jun-2010	12	450	-	-
	30-Jun-2009	8	252	-	-
	30-Jun-2008	5	132	1	7

**Schedule of Retirants and Beneficiaries Added to and Removed from Rolls (continued)**

Plan	Fiscal Year Ended	Added to Rolls		Removed from Rolls	
		Additions	Annual Allowance <i>(expressed in thousands)</i>	Deletions	Annual Allowances <i>(expressed in thousands)</i>
County & Municipal Other Employees'	30-Jun-2017	21	\$ 318	3	\$ 24
	30-Jun-2016	16	217	2	13
	30-Jun-2015	9	100	3	14
	30-Jun-2014	10	122	3	15
	30-Jun-2013	15	114	1	1
	30-Jun-2012	12	117	2	42
	30-Jun-2011	10	66	2	18
	30-Jun-2010	9	99	1	41
	30-Jun-2009	6	75	-	-
	30-Jun-2008	3	17	-	-
Delaware Volunteer Firemen's	30-Jun-2017	146	\$ 161	68	\$ 61
	30-Jun-2016	146	156	72	64
	30-Jun-2015	111	128	69	60
	30-Jun-2014	125	134	58	44
	30-Jun-2013	90	100	67	56
	30-Jun-2012	97	108	63	52
	30-Jun-2011	115	126	53	46
	30-Jun-2010	110	118	66	46
	30-Jun-2009	104	114	61	51
	30-Jun-2008	123	132	48	41
Diamond State Port Corporation	30-Jun-2017	15	\$ 142	4	\$ 53
	30-Jun-2016	8	74	7	46
	30-Jun-2015	16	155	1	8
	30-Jun-2014	18	224	2	5
	30-Jun-2013	5	41	1	7
	30-Jun-2012	2	19	1	16
	30-Jun-2011	7	77	3	25
	30-Jun-2010	6	48	1	10
	30-Jun-2009	2	12	-	-
	30-Jun-2008	1	3	1	14
Closed State Police	30-Jun-2017	9	\$ 293	20	\$ 910
	30-Jun-2016	5	537	7	290
	30-Jun-2015	3	425	16	687
	30-Jun-2014	8	723	16	657
	30-Jun-2013	5	1,018	13	453
	30-Jun-2012	11	1,572	21	767
	30-Jun-2011	8	234	9	271
	30-Jun-2010	12	415	14	585
	30-Jun-2009	12	1,403	10	385
	30-Jun-2008	13	1,115	13	437

**Schedule of Retirants and Beneficiaries Added to and Removed from Rolls (continued)**

Plan	Fiscal Year Ended	On Roll at Year End			
		Year End Total	Annual Allowance <i>(expressed in thousands)</i>	Average Annual Allowance	% Change in Annual Allowance
State Employees'	30-Jun-2017	26,879	\$ 594,895	\$ 22,132	4.1%
	30-Jun-2016	26,179	571,723	21,839	6.2%
	30-Jun-2015	25,092	538,480	21,460	6.7%
	30-Jun-2014	24,356	504,593	20,844	4.5%
	30-Jun-2013	23,579	483,005	20,485	5.8%
	30-Jun-2012	22,811	456,733	20,070	6.0%
	30-Jun-2011	22,176	430,713	19,496	6.9%
	30-Jun-2010	21,676	403,091	18,686	7.5%
	30-Jun-2009	20,846	374,950	18,071	6.5%
	30-Jun-2008	20,266	352,161	17,450	6.6%
Special	30-Jun-2017	7	\$ 27	\$ 3,872	0.0%
	30-Jun-2016	7	27	3,872	(37.2%)
	30-Jun-2015	9	43	4,725	1.3%
	30-Jun-2014	9	42	4,678	-
	30-Jun-2013	9	42	4,667	(13.2%)
	30-Jun-2012	11	48	4,408	(7.2%)
	30-Jun-2011	12	52	4,352	(10.4%)
	30-Jun-2010	14	58	4,163	(17.58%)
	30-Jun-2009	18	70	3,929	(20.5%)
	30-Jun-2008	23	89	3,866	(4.3%)
New State Police	30-Jun-2017	262	\$ 17,423	\$ 66,499	9.1%
	30-Jun-2016	242	15,964	65,965	25.2%
	30-Jun-2015	206	12,751	61,896	16.2%
	30-Jun-2014	185	10,975	59,008	10.4%
	30-Jun-2013	173	9,940	57,457	11.8%
	30-Jun-2012	159	8,889	56,258	30.4%
	30-Jun-2011	130	6,815	52,829	21.6%
	30-Jun-2010	113	5,604	49,593	37.72%
	30-Jun-2009	88	4,069	47,317	31.2%
	30-Jun-2008	71	3,102	43,701	22.7%
Judiciary	30-Jun-2017	51	\$ 4,760	\$ 93,326	7.3%
	30-Jun-2016	51	4,436	86,976	8.8%
	30-Jun-2015	47	4,077	86,738	12.9%
	30-Jun-2014	48	3,612	80,270	6.4%
	30-Jun-2013	45	3,396	75,467	10.0%
	30-Jun-2012	42	3,088	73,520	(0.6%)
	30-Jun-2011	43	3,107	72,257	8.9%
	30-Jun-2010	42	2,853	67,917	8.92%
	30-Jun-2009	40	2,618	65,471	9.2%
	30-Jun-2008	38	2,399	63,122	0.2%
County & Municipal Police and Firefighters'	30-Jun-2017	190	\$ 6,708	\$ 35,304	28.7%
	30-Jun-2016	149	5,213	34,989	28.0%
	30-Jun-2015	125	4,074	32,596	25.9%
	30-Jun-2014	102	3,236	31,723	22.0%
	30-Jun-2013	87	2,652	30,483	11.8%
	30-Jun-2012	79	2,371	30,018	22.7%
	30-Jun-2011	68	1,933	28,845	20.7%
	30-Jun-2010	56	1,602	28,599	39.05%
	30-Jun-2009	44	1,151	26,176	28.1%
	30-Jun-2008	36	899	24,979	16.1%

## Schedule of Retirants and Beneficiaries Added to and Removed from Rolls (continued)

Plan	Fiscal Year Ended	On Roll at Year End			
		Year End Total	Annual Allowance (expressed in thousands)	Average Annual Allowance	% Change in Annual Allowance
County & Municipal	30-Jun-2017	115	\$ 1,203	\$ 10,458	32.3%
Other Employees'	30-Jun-2016	97	909	9,371	28.9%
	30-Jun-2015	83	705	8,493	15.4%
	30-Jun-2014	77	611	8,147	19.3%
	30-Jun-2013	70	512	7,314	28.6%
	30-Jun-2012	56	398	7,109	23.2%
	30-Jun-2011	46	323	7,023	17.7%
	30-Jun-2010	38	275	7,224	26.79%
	30-Jun-2009	30	216	7,218	53.7%
	30-Jun-2008	24	141	5,871	14.6%
Delaware Volunteer Firemen's	30-Jun-2017	1,901	\$ 2,062	\$ 1,085	5.1%
	30-Jun-2016	1,823	1,961	1,076	4.9%
	30-Jun-2015	1,749	1,870	1,069	4.1%
	30-Jun-2014	1,707	1,796	1,057	4.9%
	30-Jun-2013	1,640	1,712	1,044	2.6%
	30-Jun-2012	1,617	1,668	1,034	3.5%
	30-Jun-2011	1,583	1,612	1,022	5.2%
	30-Jun-2010	1,521	1,532	1,007	4.95%
	30-Jun-2009	1,477	1,459	994	4.5%
	30-Jun-2008	1,434	1,397	977	7.0%
Diamond State Port Corporation	30-Jun-2017	92	\$ 884	\$ 9,610	11.2%
	30-Jun-2016	81	795	9,816	3.7%
	30-Jun-2015	80	767	9,587	21.7%
	30-Jun-2014	65	630	9,135	57.6%
	30-Jun-2013	49	400	8,163	9.2%
	30-Jun-2012	45	366	8,143	0.8%
	30-Jun-2011	44	364	8,262	16.6%
	30-Jun-2010	40	312	7,795	13.96%
	30-Jun-2009	35	273	7,817	5.0%
	30-Jun-2008	33	261	7,897	(3.7%)
Closed State Police	30-Jun-2017	494	\$ 23,200	\$ 46,964	(2.6%)
	30-Jun-2016	505	23,816	47,161	1.0%
	30-Jun-2015	507	23,569	46,488	2.6%
	30-Jun-2014	520	22,982	44,218	(3.3%)
	30-Jun-2013	528	23,764	45,008	2.4%
	30-Jun-2012	536	23,200	43,364	3.6%
	30-Jun-2011	546	22,395	41,168	(0.2%)
	30-Jun-2010	547	22,432	41,161	(0.75%)
	30-Jun-2009	549	22,602	41,170	4.7%
	30-Jun-2008	547	21,584	39,459	3.2%

## Solvency Test

(dollar values expressed in thousands)

Plan	Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
		Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member Employer Financed Contributions (3)		(1)	(2)	(3)
State Employees'	30-Jun-2017	\$ 704,684	\$ 5,932,584	\$ 3,407,315	\$ 8,688,641	100%	100%	60%
	30-Jun-2016	666,617	5,641,344	3,196,831	8,460,614	100%	100%	67%
	30-Jun-2015	657,050	5,172,570	3,221,414	8,289,879	100%	100%	76%
	30-Jun-2014	633,353	4,901,957	3,204,762	8,067,032	100%	100%	79%
	30-Jun-2013	606,874	4,600,135	3,050,261	7,519,770	100%	100%	76%
	30-Jun-2012	629,639	4,370,623	2,949,593	7,270,430	100%	100%	77%
	30-Jun-2011	558,065	4,123,360	2,866,526	7,091,821	100%	100%	84%
	30-Jun-2010	527,578	3,873,286	2,695,462	6,808,957	100%	100%	89%
	30-Jun-2009	508,790	3,608,850	2,709,366	6,744,050	100%	100%	97%
	30-Jun-2008	470,813	3,390,993	2,688,050	6,751,949	100%	100%	108%
Special	30-Jun-2017	\$ -	\$ 145	\$ -	\$ 226	N/A	156%	N/A
	30-Jun-2016	-	151	-	242	N/A	160%	N/A
	30-Jun-2015	-	210	-	279	N/A	133%	-
	30-Jun-2014	-	218	-	308	N/A	142%	-
	30-Jun-2013	-	224	-	329	N/A	147%	-
	30-Jun-2012	-	264	-	366	N/A	139%	-
	30-Jun-2011	-	287	-	406	N/A	141%	-
	30-Jun-2010	-	333	-	457	N/A	137%	-
	30-Jun-2009	-	399	-	516	N/A	129%	-
	30-Jun-2008	-	492	-	614	N/A	125%	-
New State Police	30-Jun-2017	\$ 59,849	\$ 213,938	\$ 223,748	\$ 437,917	100%	100%	73%
	30-Jun-2016	56,169	193,065	204,159	411,481	100%	100%	79%
	30-Jun-2015	53,739	153,510	206,783	388,587	100%	100%	88%
	30-Jun-2014	53,289	132,801	200,434	358,663	100%	100%	86%
	30-Jun-2013	49,201	117,660	184,024	317,814	100%	100%	82%
	30-Jun-2012	45,534	105,829	173,535	292,262	100%	100%	81%
	30-Jun-2011	43,865	81,299	161,726	270,625	100%	100%	90%
	30-Jun-2010	40,955	65,550	153,753	245,303	100%	100%	90%
	30-Jun-2009	38,619	47,700	154,932	229,457	100%	100%	92%
30-Jun-2008	35,707	36,474	142,740	216,368	100%	100%	101%	

Aggregate accrued Liability at June 30, 2017 is calculated using the funding assumptions and does not agree with the Total Pension Liability shown as of the same date in the Financial Section.

## Solvency Test (continued)

(dollar values expressed in thousands)

Plan	Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
		Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member Employer Financed Contributions (3)		(1)	(2)	(3)
Judiciary	30-Jun-2017	\$ 5,193	\$ 44,075	\$ 27,472	\$ 80,445	100%	100%	113%
	30-Jun-2016	5,834	39,411	28,976	77,302	100%	100%	111%
	30-Jun-2015	5,804	35,262	33,082	74,659	100%	100%	102%
	30-Jun-2014	5,841	32,803	31,963	70,335	100%	100%	99%
	30-Jun-2013	5,896	28,458	32,213	63,512	100%	100%	91%
	30-Jun-2012	5,986	25,953	34,007	59,279	100%	100%	80%
	30-Jun-2011	5,400	26,482	31,208	55,784	100%	100%	77%
	30-Jun-2010	5,047	23,928	31,129	51,550	100%	100%	73%
	30-Jun-2009	4,816	22,315	30,668	49,036	100%	100%	71%
	30-Jun-2008	4,382	20,398	31,076	47,209	100%	100%	72%
County & Municipal Police and Firefighters'	30-Jun-2017	\$ 63,747	\$ 83,685	\$ 208,206	\$ 331,534	100%	100%	88%
	30-Jun-2016	58,179	63,653	174,205	301,144	100%	100%	103%
	30-Jun-2015	53,346	49,405	166,818	270,256	100%	100%	100%
	30-Jun-2014	48,597	39,168	150,771	240,744	100%	100%	101%
	30-Jun-2013	42,945	31,217	133,578	203,832	100%	100%	97%
	30-Jun-2012	38,013	28,007	120,881	179,816	100%	100%	94%
	30-Jun-2011	33,031	22,870	104,249	157,394	100%	100%	97%
	30-Jun-2010	28,585	18,613	94,232	135,684	100%	100%	94%
	30-Jun-2009	24,808	13,383	84,382	119,712	100%	100%	97%
	30-Jun-2008	20,669	10,380	72,862	102,423	100%	100%	98%
County & Municipal Other Employees'	30-Jun-2017	\$ 6,159	\$ 12,399	\$ 32,131	\$ 46,687	100%	100%	88%
	30-Jun-2016	5,749	9,241	30,821	41,660	100%	100%	87%
	30-Jun-2015	5,047	6,913	27,804	37,477	100%	100%	92%
	30-Jun-2014	4,423	6,076	23,122	33,077	100%	100%	98%
	30-Jun-2013	3,886	4,872	20,554	27,492	100%	100%	91%
	30-Jun-2012	3,423	3,887	17,879	23,851	100%	100%	93%
	30-Jun-2011	3,098	3,096	16,665	20,664	100%	100%	87%
	30-Jun-2010	2,653	2,637	14,537	17,596	100%	100%	85%
	30-Jun-2009	2,172	2,091	12,524	15,074	100%	100%	86%
	30-Jun-2008	1,756	1,302	11,250	12,980	100%	100%	88%

Aggregate accrued Liability at June 30, 2017 is calculated using the funding assumptions and does not agree with the Total Pension Liability shown as of the same date in the Financial Section.

## Solvency Test (continued)

(dollar values expressed in thousands)

Plan	Valuation Date	Aggregate Accrued Liabilities for			Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets			
		Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Member Employer Financed Contributions (3)		(1)	(2)	(3)	
Delaware	30-Jun-2017	\$ 5,302	\$ 18,326	\$ 10,713	\$ 19,911	100%	80%	-	
Volunteer	30-Jun-2016	5,268	17,169	10,520	18,773	100%	79%	-	
Firemen's	30-Jun-2015	5,282	15,850	12,507	18,002	100%	80%	-	
	30-Jun-2014	5,210	15,326	12,656	17,066	100%	77%	-	
	30-Jun-2013	5,087	14,291	11,663	15,773	100%	75%	-	
	30-Jun-2012	4,896	13,998	11,255	14,972	100%	72%	-	
	30-Jun-2011	4,797	13,457	11,261	14,379	100%	71%	-	
	30-Jun-2010	4,727	12,692	9,963	13,663	100%	70%	-	
	30-Jun-2009	4,702	12,050	9,810	13,241	100%	71%	-	
	30-Jun-2008	4,531	11,513	9,675	12,972	100%	73%	-	
	Diamond State Port Corporation	30-Jun-2017	\$ 4,719	\$ 9,087	\$ 21,276	\$ 30,687	100%	100%	79%
		30-Jun-2016	4,374	7,882	19,381	28,341	100%	100%	83%
30-Jun-2015		3,975	7,387	19,766	26,263	100%	100%	75%	
30-Jun-2014		3,906	5,980	19,523	23,955	100%	100%	72%	
30-Jun-2013		3,550	3,870	17,716	20,964	100%	100%	76%	
30-Jun-2012		3,480	3,564	15,995	18,930	100%	100%	74%	
30-Jun-2011		3,043	3,602	13,987	17,198	100%	100%	75%	
30-Jun-2010		2,689	2,991	12,674	15,418	100%	100%	77%	
30-Jun-2009		2,528	2,658	11,098	14,353	100%	100%	83%	
30-Jun-2008		2,181	2,576	9,382	13,391	100%	100%	92%	
Closed State Police	30-Jun-2017	\$ -	\$ 275,757	\$ -	\$ 3,085	N/A	1%	N/A	
	30-Jun-2016	-	283,043	-	2,990	N/A	1%	N/A	
	30-Jun-2015	-	288,849	-	2,879	N/A	1%	-	
	30-Jun-2014	-	297,523	-	2,460	N/A	1%	-	
	30-Jun-2013	-	294,533	-	2,668	N/A	1%	-	
	30-Jun-2012	125	292,866	817	2,748	100%	1%	-	
	30-Jun-2011	119	285,185	706	2,414	100%	1%	-	
	30-Jun-2010	326	296,089	2,078	1,440	100%	-	-	
	30-Jun-2009	519	302,526	3,859	727	100%	-	-	
	30-Jun-2008	515	292,027	7,370	618	100%	-	-	

Aggregate accrued Liability at June 30, 2017 is calculated using the funding assumptions and does not agree with the Total Pension Liability shown as of the same date in the Financial Section.

## Analysis of Financial Experience for all plans

### Gains/(Losses) in Accrued Liability During Years Ended June 30, Resulting from Differences Between Assumed Experience and Actuarial Experience

(expressed in thousands)

Plan	Type of Activity	Gain/(Loss) for the Fiscal Years Ended June 30,						
		2017	2016	2015	2014	2013	2012	2011
State Employees'	Investment Income/(Loss) on Actuarial Assets	\$ (43,703)	\$ (120,768)	\$ 10,364	\$ 115,262	\$ (31,048)	\$ (88,902)	\$ (8,726)
	Combined Liability Experience	(64,746)	(20,308)	23,571	17,908	71,572	(79,092)	26,105
	(Loss)/Gain During Year from Financial Experience	(108,449)	(141,076)	33,935	133,170	40,524	(167,994)	17,379
	Non-Recurring Items	(211,698)	(167,455)	(132,191)	(98,842)	(84,221)	(39,896)	(173,261)
	Composite (Loss)/Gain During Year	\$ (320,147)	\$ (308,531)	\$ (98,256)	\$ 34,328	\$ (43,697)	\$ (207,890)	\$ (155,882)
	Judiciary	Investment Income/(Loss) on Actuarial Assets	\$ (481)	\$ (1,201)	\$ 123	\$ 1,068	\$ (172)	\$ (639)
Combined Liability Experience		2,254	2,017	451	1,361	2,889	1,215	2,169
(Loss)/Gain During Year from Financial Experience		1,773	816	574	2,429	2,717	576	2,176
Non-Recurring Items		(1,344)	1,953	(263)	(410)	589	(252)	(1,083)
Composite (Loss)/Gain During Year		\$ 429	\$ 2,769	\$ 311	\$ 2,019	\$ 3,306	\$ 324	\$ 1,093
New State Police		Investment Income/(Loss) on Actuarial Assets	\$ (2,338)	\$ (6,169)	\$ 783	\$ 5,759	\$ (461)	\$ (2,738)
	Combined Liability Experience	(2,055)	(8,657)	2,539	3,520	4,887	(12,064)	5,030
	(Loss)/Gain During Year from Financial Experience	(4,393)	(14,826)	3,322	9,279	4,426	(14,802)	5,511
	Non-Recurring Items	(12,092)	(2,199)	(1,154)	(5,164)	(3,664)	(803)	(5,996)
	Composite (Loss)/Gain During Year	\$ (16,485)	\$ (17,025)	\$ 2,168	\$ 4,115	\$ 762	\$ (15,605)	\$ (485)
	County & Municipal Police and Firefighters'	Investment Income/(Loss) on Actuarial Assets	\$ (1,430)	\$ (4,237)	\$ 675	\$ 4,184	\$ 163	\$ (1,150)
Combined Liability Experience		(19,690)	4,157	(1,731)	3,309	10,625	(3,898)	420
(Loss)/Gain During Year from Financial Experience		(21,120)	(80)	(1,056)	7,493	10,788	(5,048)	1,276
Non-Recurring Items		(9,457)	252	(319)	(2,595)	(5,179)	-	2,502
Composite (Loss)/Gain During Year		\$ (30,577)	\$ 172	\$ (1,375)	\$ 4,898	\$ 5,609	\$ (5,048)	\$ 3,778
County & Municipal Other Employees'		Investment Income/(Loss) on Actuarial Assets	\$ (203)	\$ (592)	\$ 91	\$ 576	\$ 35	\$ (137)
	Combined Liability Experience	1,664	(324)	(1,881)	669	539	776	323
	(Loss)/Gain During Year from Financial Experience	1,461	(916)	(1,790)	1,275	574	639	452
	Non-Recurring Items	(1,437)	(1,018)	-	(603)	(1,265)	-	(402)
	Composite (Loss)/Gain During Year	\$ 24	\$ (1,934)	\$ (1,790)	\$ 672	\$ (691)	\$ 639	\$ 50

## Analysis of Financial Experience for all plans

### Gains/(Losses) in Accrued Liability During Years Ended June 30, Resulting from Differences Between Assumed Experience and Actuarial Experience (continued)

(expressed in thousands)

Plan	Type of Activity	Gain/(Loss) for the Fiscal Years Ended June 30,						
		2017	2016	2015	2014	2013	2012	2011
Delaware Volunteer Firemen's	Investment Income/(Loss) on Actuarial Assets	\$ (130)	\$ (278)	\$ (83)	\$ 141	\$ (97)	\$ (200)	\$ (27)
	Combined Liability Experience	6	142	505	230	161	388	29
	(Loss)/Gain During Year from Financial Experience	(124)	(136)	422	371	64	188	2
	Non-Recurring Items	(634)	1,271	-	(1,287)	(28)	-	(1,132)
	Composite (Loss)/Gain During Year	\$ (758)	\$ 1,135	\$ 422	\$ 916	\$ 36	\$ 188	\$ (1,130)
Diamond State Port Corporation	Investment Income/(Loss) on Actuarial Assets	\$ (162)	\$ (426)	\$ 44	\$ 374	\$ (37)	\$ (181)	\$ 24
	Combined Liability Experience	(265)	975	662	(1,403)	147	(499)	186
	(Loss)/Gain During Year from Financial Experience	(427)	549	706	(1,029)	110	(680)	210
	Non-Recurring Items	(815)	873	-	(361)	6	-	(571)
	Composite (Loss)/Gain During Year	\$ (1,242)	\$ 1,422	\$ 706	\$ (1,390)	\$ 116	\$ (680)	\$ (361)
Special	Investment Income/(Loss) on Actuarial Assets	\$ (4)	\$ (7)	\$ (3)	\$ (1)	\$ (8)	\$ (11)	\$ (8)
	Combined Liability Experience	11	31	(25)	(18)	4	(13)	(22)
	(Loss)/Gain During Year from Financial Experience	7	24	(28)	(19)	(4)	(24)	(30)
	Non-Recurring Items	-	(4)	-	(3)	-	-	16
	Composite (Loss)/Gain During Year	\$ 7	\$ 20	\$ (28)	\$ (22)	\$ (4)	\$ (24)	\$ (14)
Closed State Police	Investment Income/(Loss) on Actuarial Assets	\$ (279)	\$ (256)	\$ (56)	\$ (114)	\$ (95)	\$ (69)	\$ (38)
	Combined Liability Experience	(9,197)	(54)	6,154	3,391	(2,739)	(9,977)	6,882
	(Loss)/Gain During Year from Financial Experience	(9,476)	(310)	6,098	3,277	(2,834)	(10,046)	6,844
	Non-Recurring Items	(5,447)	2,557	-	(9,314)	-	-	6,197
	Composite (Loss)/Gain During Year	\$ (14,923)	\$ 2,247	\$ 6,098	\$ (6,037)	\$ (2,834)	\$ (10,046)	\$ 13,041



# Delaware Public Employees' Retirement System

— A component unit of the State of Delaware

## Forty-Seventh Comprehensive Annual Financial Report

Presented by the DPERS Board of Pension Trustees  
For the Fiscal Year Ended June 30

### STATISTICAL SECTION

# 2018

## About the Statistical Section

This section provides the reader with detailed information about the economic and demographic trends experienced over the past ten years in the System:

*Schedule of Principal Participating Employers* lists the entities that make up at least 50% of the System's two multiple-employer plans (County Municipal Police & Firefighter and County & Municipal Other Employees').

*Schedules of Additions by Source and Deductions by Type* display for each plan/fund the changes in plan/fund net assets as a result of payments made to and by the System.

*Schedule of Benefit Deductions by Type* identifies the type of payments made to beneficiaries and to former employees.

*Schedule of Retired Members by Type of Benefit by Plan* identifies the range of benefit payments made to retirees sorted by plan and type of retirement for the current fiscal year.

*Schedule of Average Benefit Payments by Plan* presents the average monthly benefit paid as of June 30, 2017, for plans that calculate benefits based on years of service or salary.

*Schedule of Participating Employers* lists all the current participating entities in the plans and funds within the System.

## Principal Participating Employers in Multiple-Employer Plans of the Delaware Public Employees' Retirement System

*Current Year and Nine Years Ago*

County & Municipal Police and Firefighters' Plan	2017		2008	
	# of Participants	% of total	# of Participants	% of total
City of Wilmington Police/Fire	399	32.5%	293	33.8%
New Castle County Police/Fire	381	31.0%	244	28.2%
City of Dover Police	100	8.1%	94	10.9%
All Others	348	28.4%	235	27.1%
	1,228	100.0%	866	100.0%

County & Municipal Other Employees' Plan	2017		2008	
	# of Participants	% of total	# of Participants	% of total
City of Wilmington	192	24.6%	-	-
Kent Conservation District	88	11.3%	67	15.7%
City of Milford	64	8.2%	80	18.7%
Town of Bethany Beach	27	3.5%	23	5.4%
Sussex Conservation District	33	4.2%	29	6.8%
Town of Smyrna	22	2.8%	-	-
Town of Georgetown	23	2.9%	26	6.1%
City of Harrington	23	2.9%	21	4.9%
Town of Laurel	20	2.6%	-	-
City of New Castle	18	2.3%	21	4.9%
All Others	271	34.7%	160	37.5%
	781	100.0%	427	100.0%

## Schedule of Additions by Source

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Employer Contributions	Transfer of Contributions From PRI Fund	Transfer of Assets from Outside the System	Member Contributions	Other	Net Investment Income	Net Increase/ (Decrease) in Fair Value of Investments	Total Additions	Employer Contributions As a Percent of Covered Payroll
State Employees'	2018	\$ 206,883	10,600	15	64,312	-	107,496	759,971	\$ 1,149,277	10.4%
	2017	186,625	30,302	-	61,686	-	116,473	745,524	1,140,610	9.6%
	2016	182,707	38,778	-	59,146	-	100,375	(237,413)	143,593	9.6%
	2015	178,293	32,654	-	55,782	-	96,394	203,431	566,554	9.6%
	2014	174,863	26,877	-	52,793	-	93,944	1,160,771	1,509,248	9.5%
	2013	160,651	25,949	-	50,555	-	108,849	627,223	973,227	8.6%
	2012	147,464	8,179	-	47,850	-	86,946	25,782	316,221	7.8%
	2011	128,019	13,640	-	46,403	-	113,771	1,277,375	1,579,208	7.2%
	2010	101,457	26,116	-	44,915	-	75,498	681,066	929,052	5.8%
	2009	96,576	38,835	-	45,899	-	71,803	(1,120,066)	(866,953)	5.5%
Special	2018	\$ -	-	-	-	-	3	18	\$ 21	-
	2017	-	-	-	-	-	3	19	22	-
	2016	-	-	-	-	-	3	(8)	(5)	-
	2015	-	-	-	-	-	3	7	10	-
	2014	-	-	-	-	-	3	45	48	-
	2013	-	-	-	-	-	5	28	33	-
	2012	-	-	-	-	-	4	-	4	-
	2011	-	-	-	-	-	6	64	70	-
	2010	-	-	-	-	-	4	48	52	-
	2009	-	-	-	-	-	7	(103)	(96)	-
New State Police	2018	\$ 13,202	280	-	4,329	36	5,537	38,916	\$ 62,300	21.2%
	2017	11,096	649	-	4,233	-	5,771	36,813	58,562	18.2%
	2016	11,001	793	-	4,146	4	4,780	(10,745)	9,979	18.6%
	2015	10,730	639	-	4,121	12	4,409	9,320	29,231	18.5%
	2014	10,500	494	-	3,862	31	4,115	50,520	69,522	19.1%
	2013	9,292	477	-	3,772	9	4,655	26,058	44,263	16.5%
	2012	8,309	143	-	3,560	29	3,446	1,385	16,872	15.3%
	2011	7,810	86	-	3,434	-	4,254	47,611	63,195	15.4%
	2010	6,562	151	-	3,276	38	2,677	23,358	36,062	13.2%
	2009	6,791	205	-	3,422	40	2,276	(35,658)	(22,924)	13.5%

## Schedule of Deductions by Type

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Transfer of Contributions from PRI Fund	Transfer of Assets Outside the System	Benefit Payments	Refund of Contributions	Burial Benefit Payments	Administrative Expenses	Total Deductions	Total Change in Net Position
State Employees'	2018	\$ -	-	616,085	6,418	6,435	5,721	\$ 634,659	\$ 514,618
	2017	-	-	587,115	5,772	5,799	5,636	604,322	536,288
	2016	-	-	558,498	5,078	5,917	5,895	575,388	(431,795)
	2015	-	-	529,576	5,168	4,886	7,353	546,983	19,571
	2014	-	-	500,978	3,624	5,216	5,242	515,060	994,188
	2013	-	-	478,018	3,640	5,270	5,548	492,476	480,751
	2012	-	-	443,919	4,024	4,976	5,392	458,311	(142,090)
	2011	-	-	418,585	2,988	4,843	5,035	431,451	1,147,757
	2010	-	-	399,253	3,099	4,825	5,376	412,553	516,499
	2009	-	-	369,243	3,072	4,966	6,148	383,429	(1,250,382)
Special	2018	\$ -	-	26	-	7	1	\$ 34	\$ (13)
	2017	-	-	27	-	-	1	28	(6)
	2016	-	-	29	-	18	1	48	(53)
	2015	-	-	42	-	4	1	47	(37)
	2014	-	-	42	-	-	1	43	5
	2013	-	-	46	-	7	1	54	(21)
	2012	-	-	48	-	7	1	56	(52)
	2011	-	-	56	-	21	1	78	(8)
	2010	-	-	61	-	14	2	77	(25)
	2009	-	-	78	-	35	3	116	(212)
New State Police	2018	\$ -	-	18,584	11	-	99	\$ 18,694	\$ 43,606
	2017	-	-	16,629	78	7	88	16,802	41,760
	2016	-	-	14,800	3	-	91	14,894	(4,915)
	2015	-	-	12,173	15	-	113	12,301	16,930
	2014	-	-	10,591	21	7	82	10,701	58,821
	2013	-	-	9,456	60	-	88	9,604	34,659
	2012	-	-	7,949	78	7	76	8,110	8,762
	2011	-	-	6,213	22	-	78	6,313	56,882
	2010	-	-	5,182	60	-	74	5,316	30,746
	2009	-	-	3,662	63	14	71	3,810	(26,734)

## Schedule of Additions by Source (continued from page 108)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Employer Contributions	Transfer of Contributions From PRI Fund	Transfer of Assets from Outside the System	Member Contributions	Other	Net Investment Income	Net Increase/ (Decrease) in Fair Value of Investments	Total Additions	Employer Contributions As a Percent of Covered Payroll
Judiciary	2018	\$ 2,112	64	-	354	-	1,003	7,048	\$ 10,581	19.9%
	2017	2,347	186	-	355	-	1,071	6,827	10,786	22.1%
	2016	2,237	237	-	339	-	909	(2,082)	1,640	21.5%
	2015	2,640	200	-	327	-	856	1,803	5,826	26.4%
	2014	2,839	165	-	317	-	813	9,970	14,104	27.7%
	2013	2,762	159	-	310	-	918	5,223	9,372	26.5%
	2012	2,674	49	-	305	-	701	260	3,989	25.7%
	2011	2,557	99	-	298	-	881	9,852	13,687	26.6%
	2010	2,473	190	-	304	-	564	4,953	8,484	25.2%
	2009	2,549	294	-	304	-	498	(7,723)	(4,078)	26.0%
County & Municipal Police and Firefighters'	2018	\$ 9,535	-	-	6,068	-	4,245	29,909	\$ 49,757	11.4%
	2017	10,260	-	-	5,939	-	4,304	27,530	48,033	13.8%
	2016	14,789	-	-	5,328	-	3,403	(7,283)	16,237	13.9%
	2015	10,067	-	-	4,980	-	3,007	6,387	24,441	14.2%
	2014	10,283	-	-	4,897	-	2,706	33,297	51,183	15.5%
	2013	8,671	-	-	4,166	-	2,866	16,411	32,114	12.7%
	2012	9,265	-	-	4,569	-	2,063	1,033	16,930	13.8%
	2011	7,569	-	-	3,986	-	2,420	27,158	41,133	12.7%
	2010	7,307	-	-	3,734	-	1,446	12,316	24,803	12.8%
	2009	12,007	-	-	3,852	-	1,057	(16,658)	258	21.6%
County & Municipal Other Employees'	2018	\$ 2,826	-	-	1,032	-	595	4,258	\$ 8,711	7.1%
	2017	2,515	-	-	985	-	593	3,835	7,928	6.8%
	2016	2,077	-	-	946	-	465	(1,019)	2,469	6.2%
	2015	1,921	-	-	757	-	410	881	3,969	6.5%
	2014	2,049	-	-	748	-	363	4,519	7,679	6.6%
	2013	1,604	-	-	600	-	380	2,196	4,780	6.1%
	2012	1,362	-	-	547	-	270	144	2,323	6.1%
	2011	1,186	-	-	489	-	314	3,556	5,545	5.8%
	2010	1,276	-	-	509	-	182	1,559	3,526	6.2%
	2009	2,293	-	-	481	-	135	(2,122)	787	12.0%

## Schedule of Deductions by Type (continued from page 109)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Transfer of Contributions from PRI Fund	Transfer of Assets Outside the System	Benefit Payments	Refund of Contributions	Burial Benefit Payments	Administrative Expenses	Total Deductions	Total Change in Net Position
Judiciary	2018	\$ -	-	4,793	2	-	12	\$ 4,807	\$ 5,774
	2017	-	-	4,752	-	-	11	4,763	6,023
	2016	-	-	4,278	-	-	14	4,292	(2,652)
	2015	-	-	3,985	-	-	15	4,000	1,826
	2014	-	-	3,588	-	-	13	3,601	10,503
	2013	-	-	3,261	-	-	11	3,272	6,100
	2012	-	-	3,067	-	-	10	3,077	912
	2011	-	-	2,844	-	-	10	2,854	10,833
	2010	-	-	2,726	-	-	15	2,741	5,743
	2009	-	-	2,643	15	-	8	2,666	(6,744)
County & Municipal	2018	\$ -	-	7,751	208	-	144	\$ 8,103	\$ 41,654
	2017	-	-	6,179	131	-	154	6,464	41,569
Police and Firefighters'	2016	-	-	4,782	131	-	135	5,048	11,189
	2015	-	-	3,714	112	-	168	3,994	20,447
	2014	-	-	2,989	171	-	100	3,260	47,923
	2013	-	-	2,586	193	-	116	2,895	29,219
	2012	-	-	2,254	227	-	109	2,590	14,340
	2011	-	-	1,810	116	-	113	2,039	39,094
	2010	-	-	1,365	142	-	101	1,608	23,195
	2009	-	-	1,054	177	-	110	1,341	(1,083)
County & Municipal	2018	\$ -	-	1,268	116	-	79	\$ 1,463	\$ 7,248
	2017	-	-	1,082	170	-	94	1,346	6,582
Other	2016	-	-	855	81	-	81	1,017	1,452
Employees'	2015	-	-	658	64	-	95	817	3,152
	2014	-	-	581	78	-	60	719	6,960
	2013	-	-	448	50	-	50	548	4,232
	2012	-	-	345	53	-	44	442	1,881
	2011	-	-	301	64	-	48	413	5,132
	2010	-	-	236	30	-	43	309	3,217
	2009	-	-	164	34	-	62	260	527

## Schedule of Additions by Source (continued from page 110)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Employer Contributions	Transfer of Contributions From PRI Fund	Transfer of Assets from Outside the System	Member Contributions	Other	Net Investment Income	Net Increase/ (Decrease) in Fair Value of Investments	Total Additions	Employer Contributions As a Percent of Covered Payroll
Delaware	2018	\$ 2,019	-	-	145	-	230	1,033	\$ 3,427	-
Volunteer	2017	2,000	-	-	157	-	241	1,572	3,970	-
Firemen's	2016	1,764	-	-	180	-	212	15	2,171	-
	2015	1,668	-	-	164	-	207	205	2,244	-
	2014	1,561	-	-	166	-	315	1,956	3,998	-
	2013	1,456	-	-	172	-	397	1,033	3,058	-
	2012	1,311	-	-	177	-	341	(165)	1,664	-
	2011	1,221	-	-	180	-	317	2,008	3,726	-
	2010	1,191	-	-	181	-	346	785	2,503	-
	2009	1,108	-	-	185	-	377	(1,714)	(44)	-
Diamond	2018	\$ 1,175	-	-	280	-	387	2,742	\$ 4,584	8.4%
State Port	2017	1,134	-	-	240	-	396	2,553	4,323	9.4%
	2016	1,200	-	-	246	-	323	(716)	1,053	9.7%
	2015	1,052	-	-	234	-	293	623	2,202	9.0%
	2014	1,009	-	-	236	-	270	3,342	4,857	8.6%
	2013	854	-	-	223	-	292	1,692	3,061	7.5%
	2012	814	-	-	216	-	218	94	1,342	6.7%
	2011	704	-	-	209	-	265	2,992	4,170	6.3%
	2010	594	-	-	204	-	164	1,452	2,414	5.3%
	2009	694	-	-	211	-	138	(2,166)	(1,123)	6.3%
Closed	2018	\$ 22,750	-	-	-	-	163	1,129	\$ 24,042	-
State Police	2017	23,067	-	-	-	-	185	1,083	24,335	-
	2016	23,300	-	-	-	-	147	(988)	22,459	-
	2015	23,473	-	-	-	-	50	314	23,837	-
	2014	23,064	-	-	-	-	(3)	-	23,061	-
	2013	23,064	-	-	-	-	(2)	-	23,062	-
	2012	23,064	-	-	2	-	(1)	-	23,065	-
	2011	23,367	-	-	4	-	4	-	23,375	-
	2010	23,367	-	-	6	-	2	-	23,375	-
	2009	21,775	-	-	20	-	24	-	21,819	-

## Schedule of Deductions by Type (continued from page 111)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Transfer of Contributions from PRI Fund	Transfer of Assets Outside the System	Benefit Payments	Refund of Contributions	Burial Benefit Payments	Administrative Expenses	Total Deductions	Total Change in Net Position
Delaware	2018	\$ -	-	2,167	87	-	35	\$ 2,289	\$ 1,138
Volunteer	2017	-	-	2,077	128	-	32	2,237	1,733
Firemen's	2016	-	-	2,064	85	-	33	2,182	(11)
	2015	-	-	1,879	124	-	32	2,035	209
	2014	-	-	1,819	68	-	34	1,921	2,077
	2013	-	-	1,742	71	-	32	1,845	1,213
	2012	-	-	1,660	72	-	30	1,762	(98)
	2011	-	-	1,644	65	-	29	1,738	1,988
	2010	-	-	1,520	99	-	34	1,653	850
	2009	-	-	1,487	65	-	45	1,597	(1,641)
Diamond	2018	\$ -	-	964	17	-	40	\$ 1,021	\$ 3,563
State Port	2017	-	-	840	52	-	30	922	3,401
	2016	-	-	803	20	-	32	855	198
	2015	-	-	714	15	-	37	766	1,436
	2014	-	-	611	18	-	43	672	4,185
	2013	-	-	400	14	-	37	451	2,610
	2012	-	-	366	36	-	27	429	913
	2011	-	-	363	23	-	25	411	3,759
	2010	-	-	342	56	-	29	427	1,987
	2009	-	-	270	24	-	43	337	(1,460)
Closed	2018	\$ -	-	22,480	-	161	40	\$ 22,681	\$ 1,361
State Police	2017	-	-	22,770	-	126	42	22,938	1,397
	2016	-	-	23,042	-	55	48	23,145	(686)
	2015	-	-	23,027	-	98	60	23,185	652
	2014	-	-	23,196	-	105	46	23,347	(286)
	2013	-	-	23,118	-	84	47	23,249	(187)
	2012	-	-	22,666	-	140	47	22,853	212
	2011	-	-	22,401	-	63	44	22,508	867
	2010	-	-	22,592	-	91	50	22,733	642
	2009	-	-	21,605	-	70	70	21,745	74

## Schedule of Additions by Source (continued from page 112)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Employer Contributions	Transfer of Contributions From PRI Fund	Transfer of Assets from Outside the System	Member Contributions	Other	Net Investment Income	Net Increase/ (Decrease) in Fair Value of Investments	Total Additions	Employer Contributions As a Percent of Covered Payroll
County & Municipal	2018	\$ -	-	3,497	-	-	141	956	\$ 4,594	-
	2017	-	-	3,263	-	-	115	756	4,134	-
Police and Firefighters'	2016	-	-	3,156	-	-	97	(370)	2,883	-
	2015	-	-	2,999	-	-	140	320	3,459	-
COLA Fund	2014	-	-	2,938	-	-	115	1,430	4,483	-
	2013	-	-	3,018	-	-	107	636	3,761	-
	2012	-	-	2,918	-	-	66	38	3,022	-
	2011	-	-	3,108	-	-	71	815	3,994	-
	2010	-	-	2,901	-	-	63	949	3,913	-
	2009	-	-	2,963	-	-	128	(2,010)	1,081	-
Post-Retirement Increase Fund	2018	\$ 11,021	-	-	-	-	96	665	\$ 11,782	-
	2017	30,221	-	-	-	-	73	460	30,754	-
	2016	40,361	-	-	-	-	91	(202)	40,250	-
	2015	32,436	-	-	-	-	96	225	32,757	-
	2014	28,899	-	-	-	-	76	935	29,910	-
	2013	27,786	-	-	-	-	73	385	28,244	-
	2012	9,799	-	-	-	-	60	198	10,057	-
	2011	13,985	-	-	-	-	35	364	14,384	-
	2010	23,380	-	-	-	-	45	537	23,962	-
	2009	37,692	-	-	-	-	35	(533)	37,194	-
Delaware Local Gov't Retirement Investment Pool	2018	\$ -	-	2,300	-	-	555	3,767	\$ 6,622	-
	2017	-	-	-	-	-	615	3,949	4,564	-
	2016	-	-	-	-	-	627	(1,427)	(800)	-
	2015	-	-	-	-	-	584	1,229	1,813	-
	2014	-	-	-	-	-	552	6,774	7,326	-
	2013	-	-	-	-	-	620	3,550	4,170	-
	2012	-	-	-	-	-	480	174	654	-
	2011	-	-	-	-	-	607	6,792	7,399	-
	2010	-	-	-	-	-	392	3,443	3,835	-
	2009	-	-	5	-	-	355	(5,504)	(5,144)	-

## Schedule of Deductions by Type (continued from page 113)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30,	Transfer of Contributions from PRI Fund	Transfer of Assets Outside the System	Benefit Payments	Refund of Contributions	Burial Benefit Payments	Administrative Expenses	Total Deductions	Total Change in Net Position
County & Municipal	2018	\$ -	3,367	-	-	-	-	\$ 3,367	\$ 1,227
	2017	-	445	-	-	-	-	445	3,689
Police and Firefighters'	2016	-	8,794	-	-	-	-	8,794	(5,911)
	2015	-	2,367	-	-	-	-	2,367	1,092
COLA Fund	2014	-	971	-	-	-	-	971	3,512
	2013	-	1,954	-	-	-	-	1,954	1,807
	2012	-	2,318	-	-	-	3	2,321	701
	2011	-	1,822	-	-	-	-	1,822	2,172
	2010	-	10,331	-	-	-	-	10,331	(6,418)
	2009	-	3,045	-	-	-	-	3,045	(1,964)
Post-Retirement Increase Fund	2018	\$ 10,945	-	-	-	-	1	\$ 10,946	\$ 836
	2017	31,137	-	-	-	-	-	31,137	(383)
	2016	39,808	-	-	-	-	-	39,808	442
	2015	33,493	-	-	-	-	-	33,493	(736)
	2014	27,536	-	-	-	-	-	27,536	2,374
	2013	26,585	-	-	-	-	-	26,585	1,659
	2012	8,371	-	-	-	-	-	8,371	1,686
	2011	13,825	-	-	-	-	-	13,825	559
	2010	26,457	-	-	-	-	-	26,457	(2,495)
	2009	39,334	-	-	-	-	-	39,334	(2,140)
Delaware Local Gov't Retirement Investment Pool	2018	\$ -	8,725	-	-	-	2	\$ 8,727	\$ (2,105)
	2017	-	12,212	-	-	-	1	12,213	(7,649)
	2016	-	504	-	-	-	1	505	(1,305)
	2015	-	60	-	-	-	1	61	1,752
	2014	-	166	-	-	-	1	167	7,159
	2013	-	167	-	-	-	1	168	4,002
	2012	-	233	-	-	-	1	234	420
	2011	-	190	-	-	-	1	191	7,208
	2010	-	119	-	-	-	-	119	3,716
	2009	-	4,326	-	-	-	-	4,326	(9,470)

## Schedule of Benefit Deductions by Type

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30	Benefit Deductions			Total	Refund Deductions		Total
		Service	Survivor	Disability		Death Refunds	Separation Refunds	
State Employees'	2018	\$ 559,216	38,118	18,751	\$ 616,085	\$ 700	\$ 5,718	\$ 6,418
	2017	531,380	36,184	19,551	587,115	1,057	4,715	5,772
	2016	503,689	34,759	20,050	558,498	775	4,303	5,078
	2015	475,683	33,601	20,292	529,576	963	4,205	5,168
	2014	448,106	32,268	20,604	500,978	455	3,169	3,624
	2013	426,144	30,765	21,109	478,018	587	3,053	3,640
	2012	393,801	29,158	20,960	443,919	809	3,215	4,024
	2011	369,593	28,064	20,928	418,585	391	2,597	2,988
	2010	350,695	26,958	21,600	399,253	546	2,553	3,099
	2009	321,214	25,791	22,238	369,243	426	2,646	3,072
Special	2018	\$ -	23	3	\$ 26	\$ -	\$ -	\$ -
	2017	-	19	8	27	-	-	-
	2016	4	17	8	29	-	-	-
	2015	16	18	8	42	-	-	-
	2014	16	18	8	42	-	-	-
	2013	16	23	7	46	-	-	-
	2012	16	25	7	48	-	-	-
	2011	24	24	8	56	-	-	-
	2010	29	25	7	61	-	-	-
	2009	38	33	7	78	-	-	-
New State Police	2018	\$ 17,151	274	1,159	\$ 18,584	\$ -	\$ 11	\$ 11
	2017	15,339	168	1,122	16,629	-	78	78
	2016	13,587	150	1,063	14,800	-	3	3
	2015	10,949	151	1,073	12,173	-	15	15
	2014	9,337	187	1,067	10,591	-	21	21
	2013	8,240	184	1,032	9,456	2	58	60
	2012	6,781	180	988	7,949	-	78	78
	2011	5,095	198	920	6,213	-	22	22
	2010	4,137	198	847	5,182	27	33	60
	2009	2,655	198	809	3,662	-	63	63
Judiciary	2018	\$ 4,045	703	45	\$ 4,793	\$ -	\$ 2	\$ 2
	2017	3,888	792	72	4,752	-	-	-
	2016	3,450	709	119	4,278	-	-	-
	2015	3,196	671	118	3,985	-	-	-
	2014	2,874	596	118	3,588	-	-	-
	2013	2,502	642	117	3,261	-	-	-
	2012	2,327	625	115	3,067	-	-	-
	2011	2,129	601	114	2,844	-	-	-
	2010	2,068	544	114	2,726	-	-	-
	2009	2,028	501	114	2,643	-	15	15

## Schedule of Benefit Deductions by Type (continued)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30	Benefit Deductions			Total	Refund Deductions		Total
		Service	Survivor	Disability		Death Refunds	Separation Refunds	
County & Municipal Police and Firefighters'	2018	\$ 6,100	431	1,220	\$ 7,751	\$ 3	\$ 205	\$ 208
	2017	5,006	312	861	6,179	7	124	131
	2016	3,945	191	646	4,782	-	131	131
	2015	3,143	185	386	3,714	-	112	112
	2014	2,159	183	647	2,989	-	171	171
	2013	1,787	179	620	2,586	-	193	193
	2012	1,516	170	568	2,254	-	227	227
	2011	1,386	115	309	1,810	43	73	116
	2010	1,046	66	253	1,365	-	142	142
	2009	745	60	249	1,054	-	177	177
County & Municipal Other Employees'	2018	\$ 1,135	64	69	\$ 1,268	\$ 20	\$ 96	\$ 116
	2017	961	44	77	1,082	9	161	170
	2016	741	35	79	855	3	78	81
	2015	547	30	81	658	2	62	64
	2014	494	28	59	581	1	77	78
	2013	383	27	38	448	-	50	50
	2012	288	23	34	345	2	51	53
	2011	267	9	25	301	-	64	64
	2010	213	6	17	236	13	17	30
	2009	143	4	17	164	6	28	34
Delaware Volunteer Firemen's	2018	\$ 2,167	-	-	\$ 2,167	\$ 48	\$ 39	\$ 87
	2017	2,077	-	-	2,077	28	100	128
	2016	2,064	-	-	2,064	27	58	85
	2015	1,879	-	-	1,879	30	94	124
	2014	1,819	-	-	1,819	52	16	68
	2013	1,742	-	-	1,742	20	51	71
	2012	1,660	-	-	1,660	21	51	72
	2011	1,644	-	-	1,644	7	58	65
	2010	1,520	-	-	1,520	13	86	99
	2009	1,483	4	-	1,487	13	52	65
Diamond State Port Corporation	2018	\$ 704	200	60	\$ 964	\$ 16	\$ 1	\$ 17
	2017	639	151	50	840	28	24	52
	2016	658	96	49	803	20	-	20
	2015	578	87	49	714	-	15	15
	2014	486	76	49	611	5	13	18
	2013	284	67	49	400	-	14	14
	2012	261	56	49	366	14	22	36
	2011	259	55	49	363	5	18	23
	2010	244	49	49	342	33	23	56
	2009	181	43	46	270	-	24	24

## Schedule of Benefit Deductions by Type (continued)

(dollar values expressed in thousands)

Plan	Fiscal Year Ended June 30	Benefit Deductions			Total	Refund Deductions		Total
		Service	Survivor	Disability		Death Refunds	Separation Refunds	
Closed State	2018	\$ 15,365	4,012	3,103	\$ 22,480	\$ -	\$ -	\$ -
Police	2017	15,783	3,838	3,149	22,770	-	-	-
	2016	16,069	3,696	3,277	23,042	-	-	-
	2015	16,014	3,687	3,326	23,027	-	-	-
	2014	16,198	3,688	3,310	23,196	-	-	-
	2013	16,169	3,707	3,242	23,118	-	-	-
	2012	15,781	3,714	3,171	22,666	-	-	-
	2011	15,745	3,547	3,109	22,401	-	-	-
	2010	15,918	3,483	3,191	22,592	-	-	-
	2009	15,249	3,162	3,194	21,605	-	-	-

## Schedule of Retired Members by Type of Benefit by Plan

As of June 30, 2017

	Amount of Monthly Benefit	Number of Retirants	Type of Retirement		
			Service	Survivor	Disability
State Employees'	Deferred	4,043	-	-	-
	\$1 - 499	4,561	2,548	1,492	521
	500 - 999	4,817	3,313	1,031	473
	1,000 - 1,499	4,166	3,364	532	270
	1,500 - 1,999	3,386	2,974	282	130
	2,000 - 2,499	2,664	2,457	121	86
	2,500 - 2,999	2,088	1,972	72	44
	over \$3,000	5,197	5,057	81	59
Special	Deferred	-	-	-	-
	\$1 - 499	5	-	5	-
	500 - 999	2	-	1	1
	over \$1,000	-	-	-	-
New State Police	Deferred	9	-	-	-
	\$1 - 499	5	5	-	-
	500 - 999	3	2	1	-
	1,000 - 1,499	3	2	-	1
	1,500 - 1,999	-	-	-	-
	2,000 - 2,499	9	3	-	6
	2,500 - 2,999	13	9	3	1
	over \$3,000	229	210	3	16

## Schedule of Retired Members by Type of Benefit by Plan (continued)

As of June 30, 2017

	Amount of Monthly Benefit	Number of Retirants	Type of Retirement		
			Service	Survivor	Disability
Judiciary	Deferred	1	-	-	-
	\$1 - 499	-	-	-	-
	500 - 999	-	-	-	-
	1,000 - 1,499	-	-	-	-
	1,500 - 1,999	-	-	-	-
	2,000 - 2,499	-	-	-	-
	2,500 - 2,999	3	1	2	-
	over \$3,000	48	35	12	1
County & Municipal	Deferred	27	-	-	-
Police and	\$1 - 499	4	3	1	-
Firefighters'	500 - 999	13	10	3	-
	1,000 - 1,499	16	6	4	6
	1,500 - 1,999	10	4	2	4
	2,000 - 2,499	21	11	3	7
	2,500 - 2,999	37	33	1	3
	over \$3,000	89	77	2	10
County & Municipal	Deferred	50	-	-	-
Other Employees'	\$1 - 499	47	32	14	1
	500 - 999	39	37	2	-
	1,000 - 1,499	12	10	1	1
	1,500 - 1,999	8	7	-	1
	2,000 - 2,499	2	1	-	1
	2,500 - 2,999	1	1	-	-
	over \$3,000	6	6	-	-
Delaware Volunteer	Deferred	142	-	-	-
Firemen's	\$1 - 74	654	654	-	-
	75 - 99	471	471	-	-
	over \$100	776	776	-	-
Diamond State Port	Deferred	12	-	-	-
Corporation	\$1 - 499	35	21	14	-
	500 - 999	31	18	11	2
	1,000 - 1,499	13	9	2	2
	1,500 - 1,999	10	10	-	-
	over \$2,000	3	2	1	-
Closed State Police	Deferred	-	-	-	-
	\$1 - 499	-	-	-	-
	500 - 999	-	-	-	-
	1,000 - 1,499	-	-	-	-
	1,500 - 1,999	2	-	2	-
	2,000 - 2,499	21	-	19	2
	2,500 - 2,999	68	-	64	4
	over \$3,000	403	317	30	56

## Schedule of Average Benefit Payments by Plan

The following schedules are presented only for those plans with retirees and/or beneficiaries as of June 30, 2017, whose benefits are based on years of service or salary. Accordingly, the Special Pension Plan is not included.

Credited Service	2017 State Employees' Pension Plan			2017 New State Police Pension Plan		
	Retirants	Beneficiaries	Disabilities	Retirants	Beneficiaries	Disabilities
<b>Less than 5 years</b>						
Average Monthly Benefit	\$ 633	\$ 656	\$ 515	\$ 17	\$ 3,438	\$ 2,345
Average Final Salary	\$ 19,499	\$ -	\$ 52,331	\$ 16,807	\$ -	\$ 46,507
Number of Active Retirees	56	23	3	4	1	1
<b>5 - 9.99 years</b>						
Average Monthly Benefit	\$ 460	\$ 235	\$ 325	\$ 420	\$ 2,495	\$ 2,310
Average Final Salary	\$ 49,750	\$ -	\$ 27,355	\$ 30,900	\$ -	\$ 42,454
Number of Active Retirees	1,838	521	344	1	3	3
<b>10 - 14.99 years</b>						
Average Monthly Benefit	\$ 769	\$ 404	\$ 611	\$ 1,035	\$ 2,976	\$ 3,709
Average Final Salary	\$ 48,310	\$ -	\$ 35,999	\$ 86,865	\$ -	\$ 66,514
Number of Active Retirees	2,102	543	373	4	1	7
<b>15 - 19.99 years</b>						
Average Monthly Benefit	\$ 1,199	\$ 593	\$ 958	\$ 2,607	\$ 3,306	\$ 4,050
Average Final Salary	\$ 51,285	\$ -	\$ 45,919	\$ 78,595	\$ -	\$ 36,835
Number of Active Retirees	3,014	592	337	10	2	9
<b>20 - 24.99 years</b>						
Average Monthly Benefit	\$ 1,698	\$ 781	\$ 1,353	\$ 4,253	\$ -	\$ 6,203
Average Final Salary	\$ 55,018	\$ -	\$ 48,270	\$ 89,679	\$ -	\$ 64,158
Number of Active Retirees	3,432	558	261	78	-	4
<b>25 - 29.99 years</b>						
Average Monthly Benefit	\$ 2,305	\$ 1,043	\$ 1,931	\$ 6,701	\$ -	\$ -
Average Final Salary	\$ 57,606	\$ -	\$ 44,392	\$ 98,167	\$ -	\$ -
Number of Active Retirees	4,315	504	169	101	-	-
<b>30 - 34.99 years</b>						
Average Monthly Benefit	\$ 2,989	\$ 1,372	\$ 2,471	\$ 8,959	\$ -	\$ -
Average Final Salary	\$ 60,709	\$ -	\$ 56,338	\$ 93,429	\$ -	\$ -
Number of Active Retirees	4,722	541	72	33	-	-
<b>35 - 39.99 years</b>						
Average Monthly Benefit	\$ 3,872	\$ 1,887	\$ 3,072	\$ -	\$ -	\$ -
Average Final Salary	\$ 71,466	\$ -	\$ 47,040	\$ -	\$ -	\$ -
Number of Active Retirees	1,735	251	21	-	-	-
<b>40 years and over</b>						
Average Monthly Benefit	\$ 4,653	\$ 2,347	\$ 3,881	\$ -	\$ -	\$ -
Average Final Salary	\$ 78,143	\$ -	\$ 36,285	\$ -	\$ -	\$ -
Number of Active Retirees	471	78	3	-	-	-

**Schedule of Average Benefit Payments by Plan (continued)**

Credited Service	2017 Judiciary Pension Plan			2017 County & Municipal Police and Firefighters' Pension Plan		
	Retirants	Beneficiaries	Disabilities	Retirants	Beneficiaries	Disabilities
<b>Less than 5 years</b>						
Average Monthly Benefit	\$ 8,788	\$ -	\$ -	\$ 70	\$ 2,318	\$ 1,808
Average Final Salary	\$ 72,650	\$ -	\$ -	\$ 42,000	\$ -	\$ 36,680
Number of Active Retirees	2	-	-	2	1	3
<b>5 - 9.99 years</b>						
Average Monthly Benefit	\$ -	\$ 4,948	\$ -	\$ 796	\$ 2,188	\$ 1,624
Average Final Salary	\$ -	\$ -	\$ -	\$ 41,495	\$ -	\$ 52,565
Number of Active Retirees	-	1	-	10	2	7
<b>10 - 14.99 years</b>						
Average Monthly Benefit	\$ 6,080	\$ 2,876	\$ 5,659	\$ 1,352	\$ 1,282	\$ 2,847
Average Final Salary	\$ 147,061	\$ -	\$ 48,635	\$ 61,531	\$ -	\$ 61,759
Number of Active Retirees	11	2	1	8	9	10
<b>15 - 19.99 years</b>						
Average Monthly Benefit	\$ 8,258	\$ 3,551	\$ -	\$ 2,434	\$ 5,210	\$ 3,197
Average Final Salary	\$ 177,280	\$ -	\$ -	\$ 67,942	\$ -	\$ 66,205
Number of Active Retirees	1	3	-	13	1	9
<b>20 - 24.99 years</b>						
Average Monthly Benefit	\$10,096	\$ 4,227	\$ -	\$ 3,215	\$ 2,310	\$ 3,169
Average Final Salary	\$ 141,117	\$ -	\$ -	\$ 70,792	\$ -	\$ 63,929
Number of Active Retirees	10	3	-	92	3	1
<b>25 - 29.99 years</b>						
Average Monthly Benefit	\$ 11,167	\$ 4,325	\$ -	\$ 5,374	\$ -	\$ -
Average Final Salary	\$ 181,929	\$ -	\$ -	\$ 82,088	\$ -	\$ -
Number of Active Retirees	5	2	-	16	-	-
<b>30 - 34.99 years</b>						
Average Monthly Benefit	\$ 11,622	\$ 6,485	\$ -	\$ 6,357	\$ -	\$ -
Average Final Salary	\$ 245,412	\$ -	\$ -	\$ 83,086	\$ -	\$ -
Number of Active Retirees	6	2	-	3	-	-
<b>35 - 39.99 years</b>						
Average Monthly Benefit	\$ 11,143	\$ -	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 168,844	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	1	-	-	-	-	-
<b>40 years and over</b>						
Average Monthly Benefit	\$ -	\$ 4,931	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	-	1	-	-	-	-

## Schedule of Average Benefit Payments by Plan (continued)

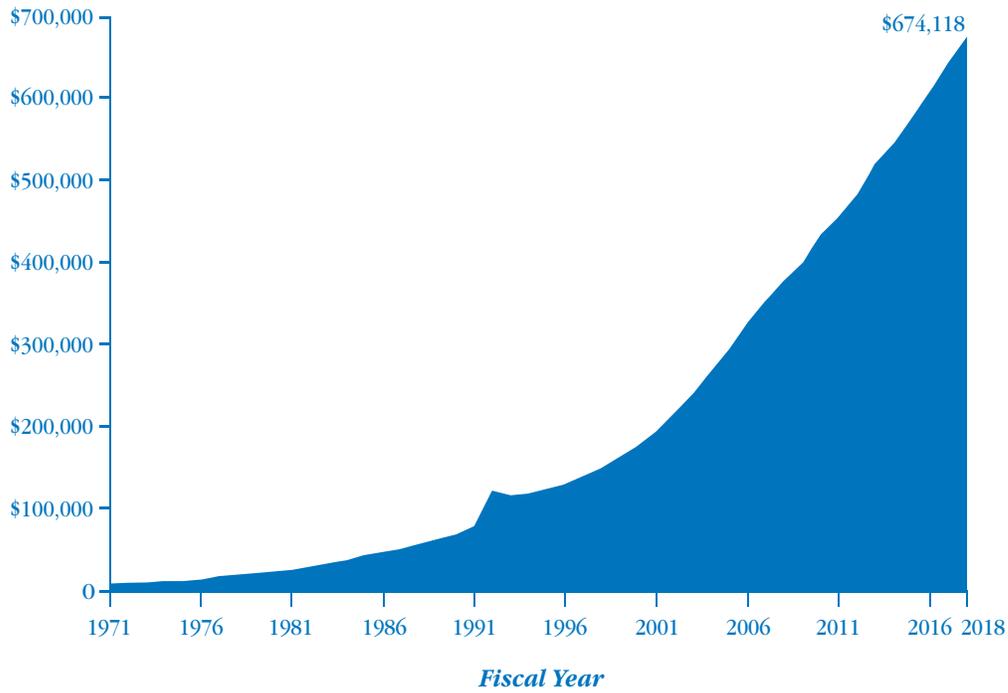
Credited Service	2017 County & Municipal Other Employees' Pension Plan			2017 Delaware Volunteer Firemen's Pension Plan		
	Retirants	Beneficiaries	Disabilities	Retirants	Beneficiaries	Disabilities
<b>Less than 5 years</b>						
Average Monthly Benefit	\$ 111	\$ 38	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 15,577	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	3	1	-	-	-	-
<b>5 - 9.99 years</b>						
Average Monthly Benefit	\$ 364	\$ 142	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 57,724	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	30	8	-	-	-	-
<b>10 - 14.99 years</b>						
Average Monthly Benefit	\$ 706	\$ 296	\$ 375	\$ 57	\$ -	\$ -
Average Final Salary	\$ 58,488	\$ -	\$ 24,099	\$ -	\$ -	\$ -
Number of Active Retirees	29	5	1	650	-	-
<b>15 - 19.99 years</b>						
Average Monthly Benefit	\$ 942	\$ 925	\$ -	\$ 84	\$ -	\$ -
Average Final Salary	\$ 48,626	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	13	2	-	388	-	-
<b>20 - 24.99 years</b>						
Average Monthly Benefit	\$ 2,021	\$ 697	\$ 2,020	\$ 109	\$ -	\$ -
Average Final Salary	\$ 65,210	\$ -	\$ 45,160	\$ -	\$ -	\$ -
Number of Active Retirees	11	1	2	334	-	-
<b>25 - 29.99 years</b>						
Average Monthly Benefit	\$ 2,844	\$ -	\$ 1,368	\$ 125	\$ -	\$ -
Average Final Salary	\$ 120,794	\$ -	\$ 57,632	\$ -	\$ -	\$ -
Number of Active Retirees	1	-	1	529	-	-
<b>30 - 34.99 years</b>						
Average Monthly Benefit	\$ 2,531	\$ -	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 66,844	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	6	-	-	-	-	-
<b>35 - 39.99 years</b>						
Average Monthly Benefit	\$ 4,995	\$ -	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 94,344	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	1	-	-	-	-	-
<b>40 years and over</b>						
Average Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	-	-	-	-	-	-

**Schedule of Average Benefit Payments by Plan (continued)**

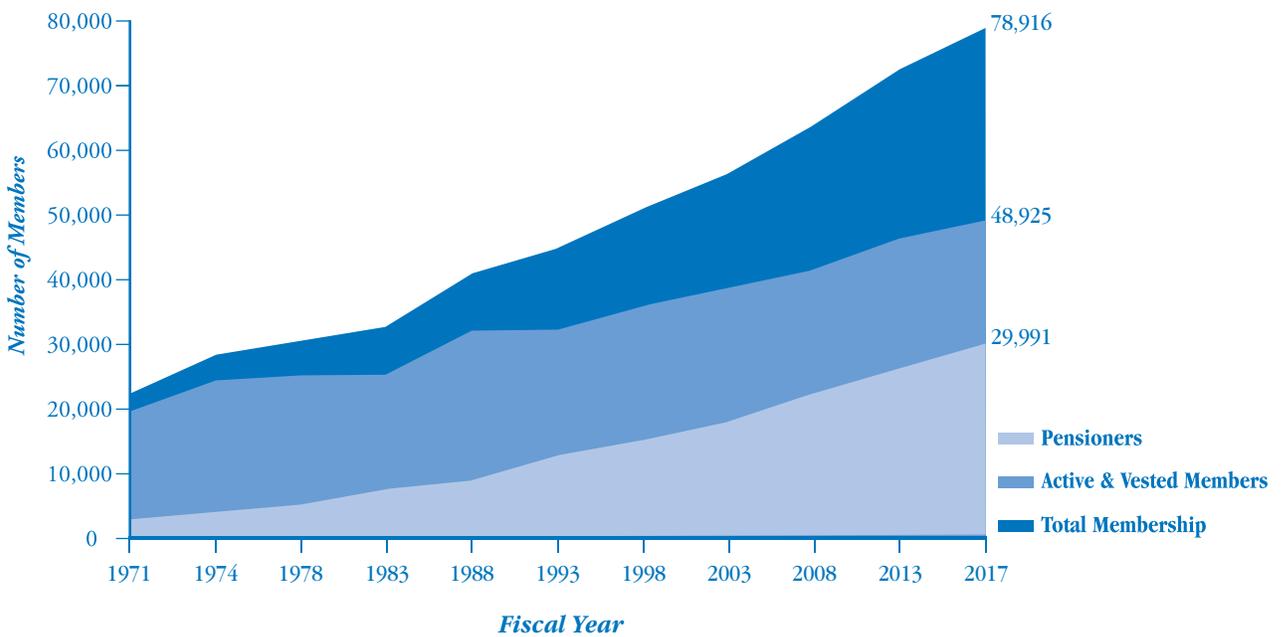
Credited Service	2017 Diamond State Port Corporation Pension Plan			2017 Closed State Police Pension Plan		
	Retirants	Beneficiaries	Disabilities	Retirants	Beneficiaries	Disabilities
<b>Less than 5 years</b>						
Average Monthly Benefit	\$ 247	\$ 139	\$ -	\$ -	\$ 2,951	\$ 3,300
Average Final Salary	\$ 45,660	\$ -	\$ -	\$ -	\$ -	\$ 22,172
Number of Active Retirees	1	3	-	-	2	3
<b>5 - 9.99 years</b>						
Average Monthly Benefit	\$ 489	\$ 166	\$ 1,213	\$ -	\$ 2,548	\$ 3,703
Average Final Salary	\$ 40,297	\$ -	\$ 24,000	\$ -	\$ -	\$ 25,793
Number of Active Retirees	11	7	1	-	6	15
<b>10 - 14.99 years</b>						
Average Monthly Benefit	\$ 792	\$ 467	\$ 990	\$ -	\$ 2,827	\$ 3,804
Average Final Salary	\$ 53,644	\$ -	\$ 25,500	\$ -	\$ -	\$ 28,825
Number of Active Retirees	18	5	2	-	9	20
<b>15 - 19.99 years</b>						
Average Monthly Benefit	\$ 832	\$ 652	\$ -	\$ -	\$ 3,551	\$ 4,428
Average Final Salary	\$ 67,698	\$ -	\$ -	\$ -	\$ -	\$ 47,695
Number of Active Retirees	16	4	-	-	6	15
<b>20 - 24.99 years</b>						
Average Monthly Benefit	\$ 1,427	\$ 765	\$ -	\$ 3,789	\$ 2,766	\$ 5,604
Average Final Salary	\$ 48,486	\$ -	\$ -	\$ 63,167	\$ -	\$ 51,154
Number of Active Retirees	11	6	-	251	88	9
<b>25 - 29.99 years</b>						
Average Monthly Benefit	\$ 1,629	\$ 1,541	\$ 917	\$ 4,878	\$ 2,883	\$ -
Average Final Salary	\$ 87,010	\$ -	\$ 34,585	\$ 85,305	\$ -	\$ -
Number of Active Retirees	2	2	1	47	4	-
<b>30 - 34.99 years</b>						
Average Monthly Benefit	\$ -	\$ -	\$ -	\$ 5,604	\$ -	\$ -
Average Final Salary	\$ -	\$ -	\$ -	\$ 94,307	\$ -	\$ -
Number of Active Retirees	-	-	-	19	-	-
<b>35 - 39.99 years</b>						
Average Monthly Benefit	\$ 2,245	\$ -	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ 51,306	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	1	-	-	-	-	-
<b>40 years and over</b>						
Average Monthly Benefit	\$ -	\$ 1,082	\$ -	\$ -	\$ -	\$ -
Average Final Salary	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Number of Active Retirees	-	1	-	-	-	-

# Total Benefit Payments Chart

*expressed in thousands*



# Total Membership Chart



# Schedule of Participating Employers

## State Employees' Pension Plan (established 1970)

State of Delaware, which includes:

- Delaware Department of Finance, State Lottery Office
- Delaware Department of Transportation
- Delaware Solid Waste Authority (1986)
- Delaware State University
- Delaware Technical & Community College

University of Delaware (excluding most faculty and designated professional staff)

## Closed State Police Plan (established 1970)

Delaware State Police (Appointed before July 1, 1980)

## New State Police Plan (established 7/1980)

Delaware State Police (Appointed after July 1, 1980)

## Judiciary Pension Plans (established 1970)

Appointed members of the State Judiciary

## Diamond State Port Corporation Plan (established 1996)

Diamond State Port Corporation Employees

## County & Municipal Police and Firefighters' Plans

Town of Bethany Beach (7/2006)	Town of Felton (1/2001)	City of New Castle (7/1995)
Town of Blades (1/2011)	Town of Fenwick Island (8/2007)	New Castle County (2/1993)
Town of Bridgeville (2/2009)	Town of Georgetown (7/1990)	Town of Newport (8/2005)
Town of Camden (7/2003)	Town of Greenwood (7/2010)	Town of Ocean View (5/2003)
Town of Cheswold (9/2002)	City of Harrington (7/1989)	City of Rehoboth Beach (4/2005)
Town of Clayton (7/2006)	Town of Laurel (1/2006)	City of Seaford (12/2008)
Town of Dagsboro (7/1989)	City of Lewes (7/2008)	Town of Selbyville (2/2012)
Town of Delmar (7/1990)	Town of Middletown (1/2007)	Town of Smyrna (1/2016)
Town of Dewey Beach (5/1991)	City of Milford (1/2005)	Town of South Bethany (7/2005)
City of Dover (7/1985)	Town of Millsboro (7/1999)	City of Wilmington (8/1991)
Town of Elsmere (7/2001)	Town of Milton (10/2003)	Town of Wyoming (5/2003)

## County & Municipal Other Employees' Plan

Aetna Hose Hook & Ladder Company (7/2015)	Lewes Fire Company (7/2002)
Bethany Beach Fire (1/2015)	City of Milford (1/2005)
Town of Bethany Beach (7/2006)	Mill Creek Fire Company (1/2007)
Town of Blades (1/2001)	Town of Millsboro (7/1999)
Bowers/Frederica EMS (7/2009)	Millville Fire Company (11/2003)
Town of Camden (10/2006)	Town of Milton (10/2003)
Town of Cheswold (9/2002)	Minquadale Fire Company (7/2015)
Cheswold Fire Company (7/2007)	City of New Castle (7/1995)
Town of Clayton (7/2004)	Town of Newport (7/2004)
Cranston Heights Fire Company (1/2013)	Town of Ocean View (5/2003)
Delaware City Fire Company (7/2002)	Port Penn Fire Co. (11/2003)
Elsmere Fire Company (8/2007)	Rehoboth Beach Fire (7/2014)
Felton Fire Company (7/2000)	Riverfront Development Corp. (7/2006)
Town of Felton (4/2006)	Town of Selbyville (2/2012)
Five Points Fire Company (10/2007)	Town of Smyrna (1/2015)
Town of Frederica (1/2018)	Town of South Bethany (5/2003)
Town of Georgetown (7/1990)	Sussex Conservation District (7/1987)
Georgetown EMS (7/2015)	Talleyville Fire Company (7/2009)
Good-Will Fire Company (7/2002)	Townsend Fire Company (7/1999)
City of Harrington (7/2002)	Volunteer Hose Co. of Middletown (5/1998)
Harrington Fire Company (7/1999)	City of Wilmington (7/2011)
Kent Conservation District (11/2002)	Town of Wyoming (5/2003)
Town of Laurel (7/2009)	

### **Delaware Local Gov't Retirement Investment Pool**

Town of Newport (2/2005)  
Sussex County Government (12/1996)

### **County & Municipal COLA Fund**

City of Dover (1991)  
Town of Elsmere (2011)  
City of New Castle (1996)  
New Castle County (1993)  
City of Wilmington (1992)

### **Delaware Volunteer Firemen's Plan (established 1987)**

Aetna Hose, Hook & Ladder Co. & Auxiliary	Hartly Fire Co. & Auxiliary
Belvedere Fire Co. & Auxiliary	Hockessin Fire Co. & Auxiliary
Bethany Beach Fire Co. & Auxiliary	Holloway Terrace Fire Co. & Auxiliary
Blades Fire Co.	Houston Fire Co. & Auxiliary
Bowers Fire Co. & Auxiliary	Indian River Fire Co. & Auxiliary
Brandywine Hundred Fire Co. & Auxiliary	Laurel Fire Co. & Auxiliary
Bridgeville Fire Co. & Auxiliary	Leipsic Fire Co. & Auxiliary
Camden-Wyoming Fire Co. & Auxiliary	Lewes Fire Co. & Auxiliary
Carlisle Fire Co. & Auxiliary	Little Creek Fire Co. & Auxiliary
Cheswold Fire Co. & Auxiliary	Magnolia Fire Co. & Auxiliary
Christiana Fire Co. & Auxiliary	Marydel Fire Co. & Auxiliary
Citizens Hose Co. No. 1 & Auxiliary	Memorial Fire Co. & Auxiliary
Claymont Fire Co. & Auxiliary	Mid-Sussex Rescue Squad
Clayton Fire Co. & Auxiliary	Mill Creek Fire Co. & Auxiliary
Cranston Heights Fire Co. & Auxiliary	Millsboro Fire Co. & Auxiliary
Dagsboro Fire Co. & Auxiliary	Millville Fire Co. & Auxiliary
Delaware City Fire Co. & Auxiliary	Milton Fire Co. & Auxiliary
Delmar Fire Co. & Auxiliary	Minquadale Fire Co. & Auxiliary
Ellendale Fire Co. & Auxiliary	Minquas Fire Co. & Auxiliary
Elsmere Fire Co. & Auxiliary	Odessa Fire Co. & Auxiliary
Farmington Fire Co. & Auxiliary	Port Penn Volunteer Fire Co.
Felton Community Fire Co. & Auxiliary	Rehoboth Beach Fire Co. & Auxiliary
Five Points Fire Co. No. 1 & Auxiliary	Robbins Hose Fire Co.
Frankford Fire Co. & Auxiliary	Roxanna Fire Co. & Auxiliary
Frederica Fire Co. & Auxiliary	Seaford Fire Co. & Auxiliary
Georgetown Fire Co. & Auxiliary	Selbyville Fire Co. & Auxiliary
Georgetown Volunteer Ambulance Service	Smyrna American Legion Ambulance
Good-Will Fire Co. & Auxiliary	South Bowers Fire Co. & Auxiliary
Greenwood Fire Co. & Auxiliary	Talleyville Fire Co. & Auxiliary
Gumboro Fire Co. & Auxiliary	Townsend Fire Co. & Auxiliary
Harrington Fire Co. & Auxiliary	Volunteer Hose Co. of Middletown
	Wilmington Manor Fire Co. & Auxiliary

***Pension Office Programmatic Goal*** is to maintain comprehensive and responsive systems for benefits and funds management, which helps retain a quality workforce and provides a secure and supportive retirement commitment.

