



**Powers &  
Sullivan, LLC**  
CPAs AND ADVISORS

**HAMPDEN COUNTY REGIONAL  
RETIREMENT SYSTEM**

**FINANCIAL STATEMENTS**

**YEAR ENDED DECEMBER 31, 2022**

HAMPDEN COUNTY REGIONAL RETIREMENT SYSTEM

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2022

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# ***Financial Section***

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## **Independent Auditor's Report**

To the Honorable Hampden County Regional Retirement Board  
Hampden County Regional Retirement System  
Agawam, Massachusetts

### **Opinion**

We have audited the accompanying financial statements of the Hampden County Regional Retirement System (HCRRS) as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the HCRRS's financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the HCRRS as of December 31, 2022, and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### **Basis for Opinion**

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. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the HCRRS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Responsibilities of Management 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, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the HCRRS's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

### **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a

guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform auditing procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 HCRRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate, that raise substantial doubt about the HCRRS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### **Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis; the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information is the responsibility of management and, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the 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 of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the 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.

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

In accordance with *Government Auditing Standards*, we have also issued our report dated October 5, 2023, on our consideration of the HCRRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report

is solely 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 the effectiveness of HCRRS's 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 HCRRS's internal control over financial reporting and compliance.

**Restriction on Use**

This report is intended solely for the information and use of HCRRS, the Public Employee Retirement Administration Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

A handwritten signature in cursive script, appearing to read "Powers & Sullivan LLC".

October 5, 2023

## ***Management's Discussion and Analysis***

As management of the Hampden County Regional Retirement System (HCRRS), we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2022. The HCRRS complies with financial reporting requirements issued by the Governmental Accounting Standards Board (GASB).

The GASB is the authoritative standard setting body that provides guidance on how to prepare financial statements in conformity with generally accepted accounting principles (GAAP). Users of these financial statements rely on the GASB to establish consistent reporting standards for all governments in the United States. This consistent application is the only way users can assess the financial condition of a public retirement system compared to others.

### **Financial Highlights**

- The HCRRS's assets exceeded its liabilities at the close of the most recent year by \$477.0 million (net position).
- The HCRRS's net position decreased by \$62.7 million for the year ended December 31, 2022.
- Total investment loss was \$58.3 million; investment expenses were \$2.5 million; and net investment loss was \$60.8 million.
- Total contributions were \$55.8 million, including \$39.0 million from employers and \$12.5 million from members.
- Retirement benefits, refunds and transfers amounted to \$56.8 million.
- Administrative expenses were \$900,000.
- The total pension liability was \$917.0 million as of December 31, 2022 while the net pension liability was \$440.0 million.
- The Plan fiduciary net position as a percentage of the total pension liability was 52.02%.

### ***Overview of the Financial Statements***

This discussion and analysis is intended to serve as an introduction to the HCRRS's fiduciary financial statements. These fiduciary financial statements comprise of four components: 1) management's discussion and analysis, 2) fiduciary financial statements, 3) notes to the financial statements and 4) required supplementary information.

### **Fiduciary Financial Statements**

The *statement of fiduciary net position* presents information on all assets and deferred outflows less deferred inflows and liabilities with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position is improving or deteriorating.

The *statement of changes in fiduciary net position* presents information showing how the HCRRS's net position changed during the most recent year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, *regardless of the timing of related cash flows*. Thus, additions and deductions are reported in this statement for some items that will only result in cash flows in future periods.

### **Notes to the Financial Statements**

The notes provide additional information that is essential to a full understanding of the data provided in the fiduciary financial statements.

**Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context.

**Financial Analysis**

As noted earlier, net position may serve over time as a useful indicator of the HCRRS's financial position. The HCRRS's net position exceeded liabilities by \$477.0 million at the close of 2022.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year-end the HCRRS's net position includes investments of \$472.9 million, cash of \$3.1 million and current accounts receivable of \$1.0 million.

In 2022, the HCRRS's contributions were \$55.8 million while retirement benefit payments, refunds, transfers and administration expenses were \$57.7 million which resulted in a current deficiency of \$1.9 million. In 2021, the HCRRS's contributions were \$50.5 million while retirement benefit payments, refunds, transfers and administration expenses were \$54.4 million which resulted in a prior year deficiency of \$3.9 million. During 2021, the HCRRS supported the deficiency with net investment income, however, during 2022, there was a net investment loss.

In 2022, net investment loss was \$60.8 million, while the net investment income was \$86.9 million in 2021. The annual money weighted rate of return was (11.48)% and 19.85% in 2022, and 2021, respectively. The HCRRS's investment policy is designed to achieve a long-term rate of return of 7.00% and fluctuation in annual investment returns is expected.

The following tables present summarized financial information for the past two years.

<b>Statement of Fiduciary Net Position</b>	2022	2021
Cash.....	\$ 3,062,797	\$ 6,320,969
Investments.....	472,900,391	531,792,978
Receivables.....	1,018,198	1,568,425
Other assets.....	4,177	4,177
Net Position Restricted for Pension Benefits.....	\$ 476,985,563	\$ 539,686,549

<b>Statement of Changes in Fiduciary Net Position</b>	2022	2021
Additions:		
Contributions:		
Member contributions.....	\$ 12,541,363	\$ 11,863,496
Employer contributions.....	39,045,566	36,180,780
Other contributions.....	4,223,585	2,429,443
Total contributions.....	55,810,514	50,473,719
Net investment income (loss):		
Total investment income (loss).....	(58,343,476)	89,371,157
Less, investment expenses.....	(2,450,848)	(2,443,092)
Net investment income (loss).....	(60,794,324)	86,928,065
Total additions.....	(4,983,810)	137,401,784
Deductions:		
Administration.....	899,805	928,916
Retirement benefits, refunds and transfers.....	56,817,371	53,482,300
Total deductions.....	57,717,176	54,411,216
Net increase (decrease) in fiduciary net position....	(62,700,986)	82,990,568
Fiduciary net position at beginning of year.....	539,686,549	456,695,981
Fiduciary net position at end of year.....	\$ 476,985,563	\$ 539,686,549

### ***Requests for Information***

This financial report is designed to provide a general overview of the HCRRS's finances for all those with an interest in the HCRRS's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the HCRRS's Board, 16 Hunt Street, Suite 116, Agawam, Massachusetts, 01001.

**STATEMENT OF FIDUCIARY NET POSITION**

DECEMBER 31, 2022

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<b>Assets</b>	
Cash and cash equivalents.....	\$ 3,062,797
Investments:	
Investments in Pension Reserve Investment Trust.....	<u>472,900,391</u>
Receivables, net of allowance for uncollectibles:	
Member deductions.....	782,808
Employer pension appropriation.....	<u>235,390</u>
Total receivables.....	<u>1,018,198</u>
Other assets.....	<u>4,177</u>
Total Assets.....	<u>476,985,563</u>
<b>Net Position Restricted for Pensions.....</b>	<b>\$ <u>476,985,563</u></b>

See notes to financial statements.

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**

YEAR ENDED DECEMBER 31, 2022

Additions:	
Contributions:	
Employer pension appropriation.....	\$ 39,045,566
Member contributions.....	12,541,363
Transfers from other systems.....	2,719,274
3(8)(c) contributions from other systems.....	1,079,014
Workers' compensation settlements.....	25,750
State COLA reimbursements.....	172,845
Members' makeup payments and redeposits.....	200,601
Reimbursement of 91A overearnings.....	1,002
Other revenue.....	25,099
	<hr/>
Total contributions.....	55,810,514
	<hr/>
Net investment income (loss):	
Investment income (loss).....	(58,343,476)
Less: investment expense.....	(2,450,848)
	<hr/>
Net investment income (loss).....	(60,794,324)
	<hr/>
Total additions.....	(4,983,810)
	<hr/>
Deductions:	
Administration.....	899,805
Retirement benefits and refunds.....	51,525,217
Transfers to other systems.....	2,535,099
3(8)(c) transfer to other systems.....	2,757,055
	<hr/>
Total deductions.....	57,717,176
	<hr/>
Net increase (decrease) in fiduciary net position.....	(62,700,986)
	<hr/>
Fiduciary net position at beginning of year.....	539,686,549
	<hr/>
Fiduciary net position at end of year.....	\$ 476,985,563
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See notes to financial statements.

**NOTE 1 – PLAN DESCRIPTION**

The Hampden County Regional Retirement System (HCRRS) is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Hampden County Regional Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the HCRRS is mandatory immediately upon the commencement of employment for nearly all full time employees. The HCRRS had 32 participating employers.

Originally established in 1937, the HCRRS is governed by a five-member Board who establish the policies under which the System operates. Board members also approve all of the HCRRS's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the HCRRS are managed by the Executive Director.

The legislative body for the HCRRS is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi-annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The HCRRS is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation for those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement system; Group 1, Group 2 and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension.

Active members contribute between 7% and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the PERAC actuary. When a member's retirement becomes effective, his/her deductions and related interest are transferred to the Annuity Reserve Fund. Any cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by the Commonwealth of Massachusetts' state law during those years are borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the HCRRS and all costs are borne by the HCRRS.

The pension portion of any retirement benefit is paid from the Pension Fund of the HCRRS. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The HCRRS's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

## **NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The accompanying financial statements of the HCRRS have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles.

HCRRS is a special-purpose government engaged only in fiduciary activities. Accordingly, the financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, additions are recorded when earned and deductions are recorded when the liabilities are incurred.

### Cash and Investments

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition. Investments are carried at fair value. The fair values were determined by the closing price for those securities traded on national stock exchanges and at the average bid-and-asked quotation for those securities traded in the over-the-counter market. The fair value of private equities are based on management's valuation of estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values. Real estate assets are reported at fair value utilizing an income approach to valuation along with

independent appraisals and estimates by management.

### Fair Value Measurements

The HCRRS reports required types of financial instruments in accordance with the fair value standards. These standards require the System to maximize the use of observable inputs (such as quoted prices in active markets) and minimize the use of unobservable inputs (such as appraisals or valuation techniques) to determine fair value. Fair value standards also require the government to classify these financial instruments into a three-level hierarchy, based on the priority of inputs to the valuation technique or in accordance with net asset value practical expedient rules, which allow for either Level 2 or Level 3 depending on lock up and notice periods associated with the underlying funds.

Instruments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1 – Quoted prices are available in active markets for identical instruments as of the reporting date. Instruments, which are generally included in this category, include actively traded equity and debt securities, U.S. government obligations, and mutual funds with quoted market prices in active markets.

Level 2 – Pricing inputs are other than quoted in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies. Certain fixed income securities, primarily corporate bonds, are classified as Level 2 because fair values are estimated using pricing models, matrix pricing, or discounted cash flows.

Level 3 – Pricing inputs are unobservable for the instrument and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

In some instances the inputs used to measure fair value may fall into different levels of the fair value hierarchy and is based on the lowest level of input that is significant to the fair value measurement.

Market price is affected by a number of factors, including the type of instrument and the characteristics specific to the instrument. Instruments with readily available active quoted prices generally will have a higher degree of market price observability and a lesser degree of judgment used in measuring fair value. It is reasonably possible that change in values of these instruments will occur in the near term and that such changes could materially affect amounts reported in these financial statements. For more information on the fair value of the HCRRS's financial instruments, see Note 4 – Cash and Investments.

### Accounts Receivable

Accounts receivable consist of member deductions and pension fund contributions. These receivables are considered 100% collectible and therefore do not report an allowance for uncollectibles.

### Deferred Outflows/Inflows of Resources

In addition to assets, the statement of fiduciary net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of fiduciary net position that applies to a future period(s) and so will not be recognized as an outflow of resources (deduction) until then. The HCRRS did not have any elements that qualify for reporting in this category.

In addition to liabilities, the statement of fiduciary net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*,

represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (addition) until that time. The HCRRS did not have any elements that qualify for reporting in this category.

**NOTE 3 – PLAN ADMINISTRATION**

The HCRRS is administered by a five-person Board of Retirement consisting of the County Chairman/Treasurer who is elected by the board, a second member who is the Treasurer’s representative and elected by the advisory council, a third and fourth member who shall be elected by the members in or retired from the service in such system, and a fifth member appointed by the board.

Chairman.....	Karl. J. Schmaelzle	Term Expires:	12/31/2027
Board Member.....	Michelle Hill	Term Expires:	12/31/2024
Board Member.....	Robert Taylor	Term Expires:	1/10/2025
Board Member.....	Patrick E. O’Neil	Term Expires:	12/1/2024
Board Member.....	Thomas Sullivan	Term Expires:	5/3/2025

Board members are required to meet at least once a month and the Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the HCRRS. The Board must annually file a financial statement of condition for the HCRRS with the Executive Director of PERAC.

The investment of the HCRRS’s funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the HCRRS has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the HCRRS must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian.....	MACRS Blanket Policy
Ex-Officio Member.....	\$50,000,000 Fiduciary Liability
Elected Members.....	\$1,000,000 Fidelity (ERISA) Bond
Appointed Members.....	Travelers Insurance Company
Staff Employees.....	National Union Fire Arch Insurance Company

**NOTE 4 – CASH AND INVESTMENTS**

Custodial Credit Risk - Deposits

At December 31, 2022, the carrying amount of the HCRRS’s deposits totaled \$3,062,797 and the bank balance totaled \$4,124,881. Of the bank balance, \$250,000 was covered by Federal Depository Insurance, \$3,850,814 was covered by the Depositor’s Insurance Fund, and \$24,067 was exposed to custodial credit risk because it was uninsured and uncollateralized.

Investments

The HCRRS’s investments of \$472,900,391 were in Pension Reserve Investment Trust (PRIT). This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool’s shares. The HCRRS does not have the ability to control any of the investment decisions relative to its funds in PRIT. The effective weighted duration rate for PRIT investments ranged from 1.98 to 14.64 years.

The HCRRS’s annual money-weighted rate of return on pension plan investments was (11.48)%. The money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

Fair Value of Investments

The HCRRS holds investments that are measured at fair value on a recurring basis. Investing is a key part of the System’s activities. The HCRRS categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles.

The HCRRS had \$472,900,391 PRIT investments which were valued using the net asset value (NAV) method:

**NOTE 5 – MEMBERSHIP**

The following table represented the HCRRS’s membership at December 31, 2022:

Active members.....	2,824
Inactive members due a refund of employee contributions.....	617
Inactive members with a vested right to a deferred or immediate benefit.....	95
Retired members or beneficiaries currently receiving benefits.....	<u>1,952</u>
Total.....	<u><u>5,488</u></u>

**NOTE 6 – ACTUARIAL VALUATION**

Components of the net pension liability as of December 31, 2022, were as follows:

Total pension liability.....	\$	916,964,706
Less: HCRRS's fiduciary net position.....		<u>(476,985,563)</u>
Net pension liability.....	\$	<u>439,979,143</u>
The HCRRS's fiduciary net position as a percentage of the total pension liability.....		52.02%

The total pension liability was determined by an actuarial valuation as of January 1, 2022, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2022:

Valuation date.....	January 1, 2022.
Actuarial cost method.....	Entry Age Normal Cost Method.
Amortization method.....	Appropriations increase 8.00% per year. For fiscal 2031 and later years, each year's total appropriation increases 3.75% per year, with a smaller payment in fiscal 2036.
Investment rate of return/Discount rate.....	7.00%
Wage inflation rate.....	3.25%
Projected salary increases.....	Varies by length of service with ultimate rates of 4.00% for Group 1, 4.25% for Group 2 and 4.50% for Group 4.
Cost of living adjustments.....	3.0% of the first \$18,000 of retirement income.
Mortality Rates:	
Pre-Retirement.....	RP-2014 Blue Collar Employee Mortality Table projected generationally with Scale MP-2021.
Healthy Retiree.....	RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2021.
Disabled Retiree.....	RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year and projected generationally with Scale MP-2021.

*Investment policy:* The HCRRS's policy in regard to the allocation of invested assets is established by PRIT. Plan assets are managed on a total return basis with a long-term objective of achieving a fully funded status for the benefits provided through the pension plan.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected future real rates of return by weighting the

expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting investment expenses and a risk margin.

Best estimates of arithmetic real rates of return for each major asset class included in the HCRRS’s target asset allocation as of December 31, 2022, are summarized in the following table:

Asset Class	Long-Term Expected Asset Allocation	Long-Term Expected Real Rate of Return
Domestic Equity.....	20.50%	6.59%
International Developed Markets Equity.....	12.00%	6.87%
International Emerging Market Equity.....	4.50%	8.30%
Core Fixed Income.....	15.00%	1.53%
High Yield Fixed Income.....	8.00%	3.54%
Real Estate.....	10.00%	3.44%
Timber.....	4.00%	4.01%
Hedge Fund, GTAA, Risk Parity.....	10.00%	3.06%
Private Equity.....	16.00%	9.49%
Total.....	<u>100.00%</u>	

*Discount rate:* The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that contributions will be made at rates equal to the actuarially determined contribution rate. Based on those assumptions, the HCRRS’s 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.

*Sensitivity of the net pension liability to changes in the discount rate:* The following presents the net pension liability, calculated using the discount rate of 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease 6.00%	Current Discount 7.00%	1% Increase 8.00%
Hampden County Regional Retirement System's net pension liability as of December 31, 2022.....	\$ 544,045,548	\$ 439,979,143	\$ 352,419,541

*Contributions:* Governmental employers are required to pay an annual appropriation as established by PERAC. The total appropriation includes the amounts to pay the pension portion of each member’s retirement allowance, an amount to amortize the actuarially determined unfunded liability to zero in accordance with the HCRRS’s funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

**NOTE 7 – COMMITMENTS AND CONTINGENCIES**

The HCRRS had no significant commitments and contingencies at year-end.

**NOTE 8 – SUBSEQUENT EVENTS**

Management has evaluated subsequent events through October 5, 2023, which is the date the financial statements were available to be issued.

**NOTE 9 – IMPLEMENTATION OF GASB PRONOUNCEMENTS**

There were no GASB pronouncements required to be implemented in 2022, that impacted the HCRRS's financial statements.

None of the issued GASB statements that are required to be implemented in future years are anticipated to impact the HCRRS's financial statements.

# ***Required Supplementary Information***

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY  
AND RELATED RATIOS**

	December 31, 2014	December 31, 2015	December 31, 2016	December 31, 2017
<b>Total pension liability:</b>				
Service cost.....	\$ 13,453,422	\$ 13,991,559	\$ 14,551,221	\$ 15,456,357
Interest.....	44,294,119	46,197,308	48,122,945	52,743,788
Changes in benefit terms.....	-	-	-	-
Differences between expected and actual experience.....	-	-	8,215,868	(6,187,366)
Changes in assumptions.....	-	-	36,253,033	20,207,084
Benefit payments.....	<u>(33,022,469)</u>	<u>(35,213,923)</u>	<u>(37,378,079)</u>	<u>(39,758,337)</u>
Net change in total pension liability.....	24,725,072	24,974,944	69,764,988	42,461,526
Total pension liability - beginning.....	<u>565,522,818</u>	<u>590,247,890</u>	<u>615,222,834</u>	<u>684,987,822</u>
Total pension liability - ending (a).....	<u>\$ 590,247,890</u>	<u>\$ 615,222,834</u>	<u>\$ 684,987,822</u>	<u>\$ 727,449,348</u>
<b>Plan fiduciary net position:</b>				
Employer pension appropriation.....	\$ 21,373,733	\$ 22,876,301	\$ 24,644,961	\$ 26,603,693
Member contributions.....	9,339,992	9,676,034	9,992,326	10,231,077
Other contributions.....	1,389,820	1,599,102	1,880,923	1,980,443
Net investment income (loss).....	21,257,662	3,012,669	21,516,801	52,667,942
Administrative expenses.....	(739,359)	(764,647)	(913,882)	(943,440)
Retirement benefits and refunds.....	(33,022,469)	(35,213,923)	(37,378,079)	(39,758,337)
Other retirement deductions.....	<u>(1,389,819)</u>	<u>(1,599,102)</u>	<u>(1,880,923)</u>	<u>(1,807,638)</u>
Net increase (decrease) in fiduciary net position.....	18,209,560	(413,566)	17,862,127	48,973,740
Fiduciary net position - beginning of year.....	<u>285,041,653</u>	<u>303,251,213</u>	<u>302,837,647</u>	<u>320,699,774</u>
Fiduciary net position - end of year (b).....	<u>\$ 303,251,213</u>	<u>\$ 302,837,647</u>	<u>\$ 320,699,774</u>	<u>\$ 369,673,514</u>
<b>Net pension liability - ending (a)-(b).....</b>	<u>\$ 286,996,677</u>	<u>\$ 312,385,187</u>	<u>\$ 364,288,048</u>	<u>\$ 357,775,834</u>
Plan fiduciary net position as a percentage of the total pension liability.....	51.38%	49.22%	46.82%	50.82%
Covered payroll.....	\$ 100,077,260	\$ 104,080,350	\$ 107,528,616	\$ 109,713,930
Net pension liability as a percentage of covered payroll.....	286.78%	300.14%	338.78%	326.10%

Note: this schedule is intended to present information for 10 years.  
Until a 10-year trend is compiled, information is presented for those years for which information is available.

See notes to required supplementary information.

	December 31, 2018	December 31, 2019	December 31, 2020	December 31, 2021	December 31, 2022
\$	16,386,887	\$ 16,819,341	\$ 19,150,797	\$ 19,802,858	\$ 20,608,490
	54,206,895	56,291,147	58,165,906	60,277,759	61,715,865
	-	-	-	-	-
	-	3,340,090	-	(6,993,389)	-
	-	29,220,129	-	16,795,884	-
	<u>(42,031,857)</u>	<u>(44,563,969)</u>	<u>(45,519,253)</u>	<u>(51,345,470)</u>	<u>(52,812,752)</u>
	28,561,925	61,106,738	31,797,450	38,537,642	29,511,603
	<u>727,449,348</u>	<u>756,011,273</u>	<u>817,118,011</u>	<u>848,915,461</u>	<u>887,453,103</u>
\$	<u>756,011,273</u>	<u>817,118,011</u>	<u>848,915,461</u>	<u>887,453,103</u>	<u>916,964,706</u>
\$	28,726,521	\$ 30,986,922	\$ 33,416,529	\$ 36,180,780	\$ 39,045,566
	10,837,968	11,274,416	11,733,599	11,863,496	12,541,363
	2,297,247	2,691,885	2,513,780	2,429,443	4,223,585
	(8,582,056)	55,640,493	47,418,693	86,928,065	(60,794,324)
	(890,776)	(838,798)	(867,476)	(928,916)	(899,805)
	(42,031,857)	(44,563,969)	(45,519,253)	(51,345,470)	(52,812,752)
	<u>(2,242,070)</u>	<u>(2,539,363)</u>	<u>(2,439,968)</u>	<u>(2,136,830)</u>	<u>(4,004,619)</u>
	(11,885,023)	52,651,586	46,255,904	82,990,568	(62,700,986)
	<u>369,673,514</u>	<u>357,788,491</u>	<u>410,440,077</u>	<u>456,695,981</u>	<u>539,686,549</u>
\$	<u>357,788,491</u>	<u>410,440,077</u>	<u>456,695,981</u>	<u>539,686,549</u>	<u>476,985,563</u>
\$	<u>398,222,782</u>	<u>406,677,934</u>	<u>392,219,480</u>	<u>347,766,554</u>	<u>439,979,143</u>
	47.33%	50.23%	53.80%	60.81%	52.02%
\$	114,355,356	\$ 120,106,229	\$ 125,225,926	\$ 125,635,569	\$ 130,874,871
	348.23%	338.60%	313.21%	276.81%	336.18%

**SCHEDULE OF CONTRIBUTIONS**

Year	Actuarially determined contribution	Contributions in relation to the actuarially determined contribution	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
December 31, 2022.....	\$ 39,043,214	\$ (39,045,566)	\$ (2,352)	\$ 130,874,871	29.83%
December 31, 2021.....	36,176,306	(36,180,780)	(4,474)	125,635,569	28.80%
December 31, 2020.....	33,416,529	(33,416,529)	-	125,225,926	26.68%
December 31, 2019.....	30,980,826	(30,986,622)	(5,796)	120,106,229	25.80%
December 31, 2018.....	28,726,521	(28,726,521)	-	114,355,356	25.12%
December 31, 2017.....	26,603,693	(26,603,693)	-	109,713,930	24.25%
December 31, 2016.....	24,644,961	(24,644,961)	-	107,528,616	22.92%
December 31, 2015.....	22,876,301	(22,876,301)	-	104,080,350	21.98%
December 31, 2014.....	21,373,733	(21,373,733)	-	100,077,260	21.36%

Note: this schedule is intended to present information for 10 years.  
 Until a 10-year trend is compiled, information is presented for those years for which information is available.

See notes to required supplementary information.

**SCHEDULE OF INVESTMENT RETURNS**

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<u>Year</u>	<u>Annual money-weighted rate of return, net of investment expense</u>
December 31, 2022.....	-11.48%
December 31, 2021.....	19.85%
December 31, 2020.....	12.13%
December 31, 2019.....	16.36%
December 31, 2018.....	-2.52%
December 31, 2017.....	16.51%
December 31, 2016.....	7.15%
December 31, 2015.....	1.00%
December 31, 2014.....	7.57%

Note: this schedule is intended to present information for 10 years. Until a 10-year trend is compiled, information is presented for those years for which information is available.

See notes to required supplementary information.

**NOTE A – CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS**

The Schedule of Changes in the Net Pension Liability and Related Ratios includes the detailed changes in the systems total pension liability, changes in the systems net position, and the ending net pension liability. It also demonstrates the HCRRS's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

**NOTE B – CONTRIBUTIONS**

Governmental employers are required to pay an annual appropriation as established by PERAC. The total appropriation includes the amounts to pay the pension portion of each member's retirement allowance, an amount to amortize the actuarially determined unfunded liability to zero in accordance with the HCRRS's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The total appropriations are payable on July 1 and January 1. Employers may choose to pay the entire appropriation in July at a discounted rate. Accordingly, actual employer contributions may be less than the "total appropriation". The pension fund appropriations are allocated amongst employers based on covered payroll.

**NOTE C – MONEY WEIGHTED RATE OF RETURN**

The money weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense. A money weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. Inputs to the money weighted rate of return calculation are determined monthly.

**NOTE D – CHANGES IN ASSUMPTIONS AND PLAN PROVISIONS**Changes in Assumptions:

The following assumption changes were reflected in the January 1, 2022, actuarial valuation:

- The investment rate of return was lowered from 7.15% to 7.00%.
- The mortality assumption was revised to update the mortality improvement scale from MP-2017 to MP-2021 and to remove the age set forward for females.
- The administrative expense assumption was increased from \$950,000 to \$1 million for calendar 2022.

Changes in Plan Provisions:

None.

# ***Audit of Specific Elements, Accounts and Items of Financial Statements***

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## **Independent Auditor's Report**

To the Honorable Hampden County Regional Retirement Board  
Hampden County Regional Retirement System  
Agawam, Massachusetts

### **Report on the Audit of the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer**

#### **Opinions**

We have audited the accompanying schedule of employer allocations of the Hampden County Regional Retirement System (HCRRS) as of and for the year ended December 31, 2022, and the related notes. We have also audited the total for all entities of the rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense included in the accompanying schedule pension amounts by employer of the HCRRS Pension Plan as of and for the year ended December 31, 2022, and the related notes.

In our opinions, the accompanying schedule of employer allocations and schedule of pension amounts by employer present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense for the total of all participating entities for the HCRRS as of and for the year ended December 31, 2022, in accordance with accounting principles generally accepted in the United States of America.

#### **Basis for Opinions**

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Schedules section of our report.

We are required to be independent of the HCRRS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### **Responsibilities of Management for the Schedules**

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

## **Auditor's Responsibilities for the Audit of the Schedules**

Our objectives are to obtain reasonable assurance about whether the schedule of employer allocations and the specified row totals included in the schedule of pension amounts by employer as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions.

Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgement made by a reasonable user based on the schedules.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedules, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedules.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the HCRRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedules.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### **Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the HCRRS as of and for the year ended December 31, 2022, and our report thereon, dated October 5, 2023, expressed an unmodified opinion on those financial statements.

### **Restriction on Use**

This report is intended solely for the information and use of the HCRRS management, the HCRRS employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.



October 5, 2023

**SCHEDULE OF EMPLOYER ALLOCATIONS**

FOR THE YEAR ENDED DECEMBER 31, 2022

Employer	Fiscal Year	Share of Net Pension Liability	Percent of Total Net Pension Liability
	2023 Total Appropriation		
Town of Agawam.....	\$ 8,644,142	\$ 96,135,441	21.850%
Agawam Housing Authority.....	130,552	1,451,931	0.330%
Town of Blandford.....	102,859	1,143,946	0.260%
Town of Brimfield.....	450,999	5,015,762	1.140%
Town of Chester.....	193,850	2,155,898	0.490%
Chester Electric Light.....	75,166	835,960	0.190%
Town of East Longmeadow.....	3,283,588	36,518,269	8.300%
East Longmeadow Schools.....	1,404,426	15,619,260	3.550%
East Longmeadow Housing Authority.....	98,903	1,099,948	0.250%
Town of Granville.....	158,245	1,759,917	0.400%
Town of Hampden.....	672,542	7,479,645	1.700%
Hampden Housing Authority.....	31,649	351,983	0.080%
Hampden/Wilbraham Regional School District.....	2,076,968	23,098,905	5.250%
Town of Holland.....	371,876	4,135,804	0.940%
Town of Longmeadow.....	4,529,768	50,377,612	11.450%
Town of Ludlow.....	3,390,402	37,706,213	8.570%
Town of Ludlow - School.....	1,962,240	21,822,965	4.960%
Ludlow Housing Authority.....	79,123	879,958	0.200%
Town of Monson.....	1,301,566	14,475,314	3.290%
Town of Monson - Schools.....	886,173	9,855,533	2.240%
Monson Housing Authority.....	102,859	1,143,946	0.260%
Town of Montgomery.....	51,430	571,973	0.130%
Town of Palmer.....	1,246,181	13,859,343	3.150%
Town of Palmer - Schools.....	890,129	9,899,531	2.250%
Town of Palmer - Library.....	154,289	1,715,919	0.390%
Town of Palmer - WWTP.....	197,806	2,199,896	0.500%
Palmer Fire/Water District.....	185,938	2,067,902	0.470%
Pathfinder Regional Vocational Technical School....	447,043	4,971,764	1.130%
Town of Russell.....	181,982	2,023,904	0.460%
Town of Southwick.....	1,396,513	15,531,264	3.530%
Town of Southwick Water.....	98,903	1,099,948	0.250%
Southwick/Tolland Regional School District.....	933,646	10,383,508	2.360%
Southwick Housing Authority.....	15,825	175,992	0.040%
Three Rivers Fire.....	55,386	615,971	0.140%
Town of Tolland.....	106,815	1,187,944	0.270%
Town of Wales.....	189,894	2,111,900	0.480%
Western Hampden Veterans.....	47,474	527,975	0.120%
Western Massachusetts Emergency Communications & Regional Dispatch Center.....	466,823	5,191,754	1.180%
Town of Wilbraham.....	2,662,475	29,610,596	6.730%
Wilbraham Solid Waste.....	35,605	395,981	0.090%
Wilbraham Sewer.....	71,210	791,962	0.180%
Wilbraham Water Department.....	134,508	1,495,929	0.340%
Wilbraham Housing Authority.....	43,517	483,977	0.110%
<b>Total.....</b>	<b>\$ 39,561,288</b>	<b>\$ 439,979,143</b>	<b>100.000%</b>

See notes to schedule of employer allocations and schedule of pension amounts by employer.

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2022

	Town of Agawam	Agawam Housing Authority	Town of Blandford	Town of Brimfield
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 77,134,624	\$ 1,008,523	\$ 1,078,076	\$ 3,999,315
Ending net pension liability.....	\$ 96,135,441	\$ 1,451,931	\$ 1,143,946	\$ 5,015,762
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 243,273	\$ 3,674	\$ 2,895	\$ 12,692
Net difference between projected and actual investment earnings on pension plan investments.....	7,235,782	109,282	86,101	377,519
Changes of assumptions.....	4,574,800	69,093	54,437	238,685
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	3,551,472	276,467	224,883	493,436
Total Deferred Outflows of Resources.....	\$ 15,605,327	\$ 458,516	\$ 368,316	\$ 1,122,332
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 1,018,702	\$ 15,385	\$ 12,122	\$ 53,150
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	2,534,728	117,557	157,090	274,705
Total Deferred Inflows of Resources.....	\$ 3,553,430	\$ 132,942	\$ 169,212	\$ 327,855
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 10,666,374	\$ 161,092	\$ 126,923	\$ 556,507
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	306,360	22,822	27,790	(6,054)
Total Employer Pension Expense.....	\$ 10,972,734	\$ 183,914	\$ 154,713	\$ 550,453
<b>Contributions</b>				
Statutory required contribution.....	\$ 8,545,219	\$ 129,058	\$ 102,859	\$ 445,838
Contribution in relation to statutory required contribution.....	(8,547,571)	(129,058)	(102,859)	(445,838)
Contribution deficiency/(excess).....	\$ (2,352)	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.88%	29.88%	30.23%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 1,810,470	\$ 38,910	\$ 65,187	\$ 98,727
June 30, 2025.....	2,781,369	85,038	63,825	213,507
June 30, 2026.....	2,396,779	55,096	58,381	149,725
June 30, 2027.....	5,269,432	121,181	43,129	338,726
June 30, 2028.....	(206,153)	25,349	(31,418)	(6,208)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 12,051,897	\$ 325,574	\$ 199,104	\$ 794,477
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 118,873,950	\$ 1,795,350	\$ 1,414,519	\$ 6,202,119
Current discount rate (7.00%).....	\$ 96,135,441	\$ 1,451,931	\$ 1,143,946	\$ 5,015,762
1% increase (8.00%).....	\$ 77,003,667	\$ 1,162,984	\$ 916,291	\$ 4,017,583
Covered Payroll.....	\$ 28,596,159	\$ 431,887	\$ 340,275	\$ 1,491,973
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2022

	Brimfield Housing Authority	Town of Chester	Chester Electric Light	Town of East Longmeadow
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ -	\$ 973,746	\$ 695,533	\$ 41,175,560
Ending net pension liability.....	\$ -	\$ 2,155,898	\$ 835,960	\$ 36,518,269
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ 5,455	\$ 2,115	\$ 92,409
Net difference between projected and actual investment earnings on pension plan investments.....	-	162,267	62,920	2,748,604
Changes of assumptions.....	-	102,593	39,781	1,737,796
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	11,050	618,729	199,614	1,691,987
Total Deferred Outflows of Resources.....	\$ 11,050	\$ 889,044	\$ 304,430	\$ 6,270,796
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ 22,845	\$ 8,858	\$ 386,968
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	176,965	130,411	59,468	12,015,833
Total Deferred Inflows of Resources.....	\$ 176,965	\$ 153,256	\$ 68,326	\$ 12,402,801
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ -	\$ 239,201	\$ 92,752	\$ 4,051,757
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(44,547)	60,104	105,938	(2,060,494)
Total Employer Pension Expense.....	\$ (44,547)	\$ 299,305	\$ 198,690	\$ 1,991,263
<b>Contributions</b>				
Statutory required contribution.....	\$ -	\$ 117,921	\$ 74,306	\$ 3,246,010
Contribution in relation to statutory required contribution.....	-	(117,921)	(74,306)	(3,246,010)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	N/A	18.39%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ (49,784)	\$ 86,496	\$ 118,231	\$ (1,319,076)
June 30, 2025.....	(60,834)	169,020	31,343	(831,414)
June 30, 2026.....	(55,297)	153,483	33,184	(1,070,432)
June 30, 2027.....	-	206,128	59,655	(671,698)
June 30, 2028.....	-	120,661	(6,309)	(2,239,385)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (165,915)	\$ 735,788	\$ 236,104	\$ (6,132,005)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ -	\$ 2,665,823	\$ 1,033,686	\$ 45,155,781
Current discount rate (7.00%).....	\$ -	\$ 2,155,898	\$ 835,960	\$ 36,518,269
1% increase (8.00%).....	\$ -	\$ 1,726,856	\$ 669,597	\$ 29,250,822
Covered Payroll.....	\$ -	\$ 641,287	\$ 248,662	\$ 10,862,614
See notes to schedule of employer allocations and schedule of pension amounts by employer.				(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of East Longmeadow School	East Longmeadow Housing Authority	Town of Granville	Town of Hampden
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ -	\$ 765,086	\$ 1,530,173	\$ 6,711,894
Ending net pension liability.....	\$ 15,619,260	\$ 1,099,948	\$ 1,759,917	\$ 7,479,645
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 39,524	\$ 2,783	\$ 4,453	\$ 18,927
Net difference between projected and actual investment earnings on pension plan investments.....	1,175,608	82,789	132,463	562,967
Changes of assumptions.....	743,274	52,343	83,749	355,934
Changes in proportion and differences between employer contributions and proportionate	11,234,785	196,803	343,182	498,467
Total Deferred Outflows of Resources.....	<u>\$ 13,193,191</u>	<u>\$ 334,718</u>	<u>\$ 563,847</u>	<u>\$ 1,436,295</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 165,510	\$ 11,656	\$ 18,649	\$ 79,258
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	98,069	217,184	751,989
Total Deferred Inflows of Resources.....	<u>\$ 165,510</u>	<u>\$ 109,725</u>	<u>\$ 235,833</u>	<u>\$ 831,247</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,732,981	\$ 122,042	\$ 195,266	\$ 829,878
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	2,246,952	23,701	72,384	57,006
Total Employer Pension Expense.....	<u>\$ 3,979,933</u>	<u>\$ 145,743</u>	<u>\$ 267,650</u>	<u>\$ 886,884</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 1,388,354	\$ 97,771	\$ 158,245	\$ 664,845
Contribution in relation to statutory required contribution.....	<u>(1,388,354)</u>	<u>(97,771)</u>	<u>(158,245)</u>	<u>(664,845)</u>
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	29.88%	29.88%	30.23%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 2,476,692	\$ 20,414	\$ 114,022	\$ 145,777
June 30, 2025.....	2,681,960	41,406	159,146	172,636
June 30, 2026.....	2,617,861	46,388	6,419	119,313
June 30, 2027.....	3,004,211	97,774	73,397	312,697
June 30, 2028.....	2,246,957	19,011	(24,970)	(145,375)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ 13,027,681</u>	<u>\$ 224,993</u>	<u>\$ 328,014</u>	<u>\$ 605,048</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 19,313,617	\$ 1,360,114	\$ 2,176,183	\$ 9,248,774
Current discount rate (7.00%).....	\$ 15,619,260	\$ 1,099,948	\$ 1,759,917	\$ 7,479,645
1% increase (8.00%).....	\$ 12,510,894	\$ 881,049	\$ 1,409,679	\$ 5,991,132
Covered Payroll.....	\$ 4,646,058	\$ 327,187	\$ 523,500	\$ 2,224,873
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2022

	Hampden Housing Authority	Hampden/ Wilbraham Reg. Sch. Dist.	Town of Holland	Town of Longmeadow
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 312,990	\$ 18,049,084	\$ 3,095,122	\$ 38,497,758
Ending net pension liability.....	\$ 351,983	\$ 23,098,905	\$ 4,135,804	\$ 50,377,612
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 891	\$ 58,452	\$ 10,466	\$ 127,480
Net difference between projected and actual investment earnings on pension plan investments.....	26,493	1,738,575	311,288	3,791,748
Changes of assumptions.....	16,750	1,099,208	196,811	2,397,321
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	49,805	527,663	223,311	1,638,546
Total Deferred Outflows of Resources.....	\$ 93,939	\$ 3,423,898	\$ 741,876	\$ 7,955,095
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 3,730	\$ 244,769	\$ 43,825	\$ 533,829
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	36,969	425,943	150,774	3,157,075
Total Deferred Inflows of Resources.....	\$ 40,699	\$ 670,712	\$ 194,599	\$ 3,690,904
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 39,052	\$ 2,562,859	\$ 458,871	\$ 5,589,474
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	6,760	(57,686)	4,420	(704,773)
Total Employer Pension Expense.....	\$ 45,812	\$ 2,505,173	\$ 463,291	\$ 4,884,701
<b>Contributions</b>				
Statutory required contribution.....	\$ 31,287	\$ 2,053,199	\$ 367,620	\$ 4,477,930
Contribution in relation to statutory required contribution.....	(31,287)	(2,053,199)	(367,620)	(4,477,930)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.88%	29.88%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 11,914	\$ 280,062	\$ 79,884	\$ 134,727
June 30, 2025.....	21,910	711,655	138,715	943,298
June 30, 2026.....	8,629	526,141	89,439	920,879
June 30, 2027.....	17,107	1,196,807	207,498	2,023,607
June 30, 2028.....	(6,320)	38,521	31,741	241,680
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 53,240	\$ 2,753,186	\$ 547,277	\$ 4,264,191
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 435,236	\$ 28,562,391	\$ 5,114,028	\$ 62,293,215
Current discount rate (7.00%).....	\$ 351,983	\$ 23,098,905	\$ 4,135,804	\$ 50,377,612
1% increase (8.00%).....	\$ 281,935	\$ 18,502,026	\$ 3,312,744	\$ 40,352,038
Covered Payroll.....	\$ 104,700	\$ 6,870,931	\$ 1,230,224	\$ 14,985,173
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of Ludlow	Town of Ludlow Schools	Ludlow Housing Authority	Town of Monson
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 30,673,010	\$ 16,831,901	\$ 556,426	\$ 11,476,296
Ending net pension liability.....	\$ 37,706,213	\$ 21,822,965	\$ 879,958	\$ 14,475,314
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 95,415	\$ 55,223	\$ 2,227	\$ 36,630
Net difference between projected and actual investment earnings on pension plan investments.....	2,838,016	1,642,539	66,231	1,089,507
Changes of assumptions.....	1,794,327	1,038,490	41,875	688,837
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	411,592	761,248	149,632	402,853
Total Deferred Outflows of Resources.....	\$ 5,139,350	\$ 3,497,500	\$ 259,965	\$ 2,217,827
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 399,556	\$ 231,248	\$ 9,325	\$ 153,388
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	931,274	100,094	69,376	1,306,351
Total Deferred Inflows of Resources.....	\$ 1,330,830	\$ 331,342	\$ 78,701	\$ 1,459,739
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 4,183,564	\$ 2,421,291	\$ 97,633	\$ 1,606,057
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	66,537	98,995	42,305	(43,112)
Total Employer Pension Expense.....	\$ 4,250,101	\$ 2,520,286	\$ 139,938	\$ 1,562,945
<b>Contributions</b>				
Statutory required contribution.....	\$ 3,351,602	\$ 1,939,784	\$ 79,123	\$ 1,286,671
Contribution in relation to statutory required contribution.....	(3,351,602)	(1,939,784)	(79,123)	(1,286,671)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.88%	29.88%	30.23%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 416,658	\$ 500,787	\$ 25,527	\$ 80,808
June 30, 2025.....	946,197	714,741	38,227	225,956
June 30, 2026.....	829,316	663,160	23,756	80,606
June 30, 2027.....	1,773,660	1,211,008	68,268	376,701
June 30, 2028.....	(157,311)	76,462	25,486	(5,983)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 3,808,520	\$ 3,166,158	\$ 181,264	\$ 758,088
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 46,624,704	\$ 26,984,659	\$ 1,088,091	\$ 17,899,099
Current discount rate (7.00%).....	\$ 37,706,213	\$ 21,822,965	\$ 879,958	\$ 14,475,314
1% increase (8.00%).....	\$ 30,202,355	\$ 17,480,009	\$ 704,839	\$ 11,594,603
Covered Payroll.....	\$ 11,215,977	\$ 6,491,393	\$ 261,750	\$ 4,305,783
See notes to schedule of employer allocations and schedule of pension amounts by employer.				(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of Monson Schools	Monson Housing Authority	Town of Montgomery	Town of Palmer
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 8,346,397	\$ 834,640	\$ 521,650	\$ 11,650,180
Ending net pension liability.....	\$ 9,855,533	\$ 1,143,946	\$ 571,973	\$ 13,859,343
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 24,939	\$ 2,895	\$ 1,447	\$ 35,071
Net difference between projected and actual investment earnings on pension plan investments.....	741,792	86,101	43,050	1,043,145
Changes of assumptions.....	468,996	54,437	27,218	659,525
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	752,913	218,871	57,024	68,658
Total Deferred Outflows of Resources.....	<u>\$ 1,988,640</u>	<u>\$ 362,304</u>	<u>\$ 128,739</u>	<u>\$ 1,806,399</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 104,435	\$ 12,122	\$ 6,061	\$ 146,861
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	645,462	6,660	68,590	1,158,135
Total Deferred Inflows of Resources.....	<u>\$ 749,897</u>	<u>\$ 18,782</u>	<u>\$ 74,651</u>	<u>\$ 1,304,996</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,093,488	\$ 126,923	\$ 63,462	\$ 1,537,716
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	9,926	65,896	1,152	(14,068)
Total Employer Pension Expense.....	<u>\$ 1,103,414</u>	<u>\$ 192,819</u>	<u>\$ 64,614</u>	<u>\$ 1,523,648</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 876,032	\$ 101,682	\$ 50,841	\$ 1,231,920
Contribution in relation to statutory required contribution.....	(876,032)	(101,682)	(50,841)	(1,231,920)
Contribution deficiency/(excess).....	-	-	-	-
Contributions as a percentage of covered payroll.....	29.88%	29.88%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 174,688	\$ 84,018	\$ 9,518	\$ (48,533)
June 30, 2025.....	444,570	105,711	22,410	64,949
June 30, 2026.....	305,449	72,951	19,709	97,141
June 30, 2027.....	415,056	68,158	15,094	514,083
June 30, 2028.....	(101,020)	12,684	(12,643)	(126,237)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ 1,238,743</u>	<u>\$ 343,522</u>	<u>\$ 54,088</u>	<u>\$ 501,403</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 12,186,621	\$ 1,414,519	\$ 707,259	\$ 17,137,435
Current discount rate (7.00%).....	\$ 9,855,533	\$ 1,143,946	\$ 571,973	\$ 13,859,343
1% increase (8.00%).....	\$ 7,894,198	\$ 916,291	\$ 458,145	\$ 11,101,216
Covered Payroll.....	\$ 2,931,597	\$ 340,275	\$ 170,137	\$ 4,122,558
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of Palmer Schools	Town of Palmer Library	Town of Palmer WWTP	Palmer Fire District
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 6,120,691	\$ 1,460,620	\$ 1,738,833	\$ 1,738,833
Ending net pension liability.....	\$ 9,899,531	\$ 1,715,919	\$ 2,199,896	\$ 2,067,902
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 25,051	\$ 4,342	\$ 5,567	\$ 5,233
Net difference between projected and actual investment earnings on pension plan investments.....	745,103	129,151	165,579	155,644
Changes of assumptions.....	471,089	81,655	104,687	98,405
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	1,800,866	157,125	68,871	191,115
Total Deferred Outflows of Resources.....	<u>\$ 3,042,099</u>	<u>\$ 372,273</u>	<u>\$ 344,704</u>	<u>\$ 450,397</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 104,901	\$ 18,183	\$ 23,311	\$ 21,913
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	859,500	196,552	-	103,358
Total Deferred Inflows of Resources.....	<u>\$ 964,401</u>	<u>\$ 214,735</u>	<u>\$ 23,311</u>	<u>\$ 125,271</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,098,369	\$ 190,385	\$ 244,080	\$ 229,436
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	221,647	(39,834)	(50,645)	61,466
Total Employer Pension Expense.....	<u>\$ 1,320,016</u>	<u>\$ 150,551</u>	<u>\$ 193,435</u>	<u>\$ 290,902</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 879,942	\$ 152,523	\$ 195,542	\$ 185,938
Contribution in relation to statutory required contribution.....	(879,942)	(152,523)	(195,542)	(185,938)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.88%	29.88%	29.88%	30.23%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 320,091	\$ 36,859	\$ 53,755	\$ 70,873
June 30, 2025.....	471,030	15,740	82,454	108,502
June 30, 2026.....	395,637	59,613	72,040	69,571
June 30, 2027.....	580,612	64,270	113,092	94,761
June 30, 2028.....	310,328	(18,944)	52	(18,581)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ 2,077,698</u>	<u>\$ 157,538</u>	<u>\$ 321,393</u>	<u>\$ 325,126</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 12,241,025	\$ 2,121,778	\$ 2,720,228	\$ 2,557,014
Current discount rate (7.00%).....	\$ 9,899,531	\$ 1,715,919	\$ 2,199,896	\$ 2,067,902
1% increase (8.00%).....	\$ 7,929,440	\$ 1,374,436	\$ 1,762,098	\$ 1,656,372
Covered Payroll.....	\$ 2,944,685	\$ 510,412	\$ 654,374	\$ 615,112

See notes to schedule of employer allocations and schedule of pension amounts by employer.

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Palmer Housing Authority	Pathfinder Regional Voc. Tech. School	Town of Russell	Town of Southwick
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ -	\$ 3,721,102	\$ 1,564,949	\$ 12,276,159
Ending net pension liability.....	\$ -	\$ 4,971,764	\$ 2,023,904	\$ 15,531,264
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ 12,581	\$ 5,121	\$ 39,302
Net difference between projected and actual investment earnings on pension plan investments.....	-	374,207	152,332	1,168,984
Changes of assumptions.....	-	236,591	96,312	739,087
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	266,180	111,233	222,478
Total Deferred Outflows of Resources.....	\$ -	\$ 889,559	\$ 364,998	\$ 2,169,851
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ 52,684	\$ 21,446	\$ 164,578
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	209,211	32,176	1,128,558
Total Deferred Inflows of Resources.....	\$ -	\$ 261,895	\$ 53,622	\$ 1,293,136
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ -	\$ 551,626	\$ 224,555	\$ 1,723,217
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(15,475)	(41,792)	5,520	(241,528)
Total Employer Pension Expense.....	\$ (15,475)	\$ 509,834	\$ 230,075	\$ 1,481,689
<b>Contributions</b>				
Statutory required contribution.....	\$ -	\$ 441,927	\$ 179,899	\$ 1,380,531
Contribution in relation to statutory required contribution.....	-	(441,927)	(179,899)	(1,380,531)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	N/A	29.88%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ -	\$ 71,549	\$ 40,278	\$ (41,739)
June 30, 2025.....	-	168,343	66,673	(32,106)
June 30, 2026.....	-	114,994	74,455	190,296
June 30, 2027.....	-	234,689	123,593	759,893
June 30, 2028.....	-	38,089	6,377	371
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ -	\$ 627,664	\$ 311,376	\$ 876,715
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ -	\$ 6,147,714	\$ 2,502,609	\$ 19,204,808
Current discount rate (7.00%).....	\$ -	\$ 4,971,764	\$ 2,023,904	\$ 15,531,264
1% increase (8.00%).....	\$ -	\$ 3,982,341	\$ 1,621,130	\$ 12,440,410
Covered Payroll.....	\$ -	\$ 1,478,886	\$ 602,024	\$ 4,819,883
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of Southwick Water	Southwick Toland Reg. Sch. Dist.	Southwick Housing Authority	Three Rivers Fire District
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 904,193	\$ 8,520,281	\$ 173,883	\$ 486,873
Ending net pension liability.....	\$ 1,099,948	\$ 10,383,508	\$ 175,992	\$ 615,971
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 2,783	\$ 26,275	\$ 445	\$ 1,559
Net difference between projected and actual investment earnings on pension plan investments.....	82,789	781,531	13,246	46,362
Changes of assumptions.....	52,343	494,120	8,375	29,312
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	24,750	19,210	992	36,964
Total Deferred Outflows of Resources.....	<u>\$ 162,665</u>	<u>\$ 1,321,136</u>	<u>\$ 23,058</u>	<u>\$ 114,197</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 11,656	\$ 110,029	\$ 1,865	\$ 6,527
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	58,981	2,392,387	31,465	5,318
Total Deferred Inflows of Resources.....	<u>\$ 70,637</u>	<u>\$ 2,502,416</u>	<u>\$ 33,330</u>	<u>\$ 11,845</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 122,041	\$ 1,152,066	\$ 19,526	\$ 68,343
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(5,010)	(753,647)	(5,838)	7,880
Total Employer Pension Expense.....	<u>\$ 117,031</u>	<u>\$ 398,419</u>	<u>\$ 13,688</u>	<u>\$ 76,223</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 97,771	\$ 922,961	\$ 15,825	\$ 54,752
Contribution in relation to statutory required contribution.....	(97,771)	(922,961)	(15,825)	(54,752)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	29.88%	29.88%	30.23%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 5,915	\$ (560,958)	\$ (3,294)	\$ 21,992
June 30, 2025.....	31,119	(263,002)	(1,030)	35,405
June 30, 2026.....	14,258	(315,219)	(1,931)	15,053
June 30, 2027.....	47,038	14,607	2,276	29,887
June 30, 2028.....	(6,302)	(56,708)	(6,293)	15
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ 92,028</u>	<u>\$ (1,181,280)</u>	<u>\$ (10,272)</u>	<u>\$ 102,352</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 1,360,114	\$ 12,839,475	\$ 217,619	\$ 761,664
Current discount rate (7.00%).....	\$ 1,099,948	\$ 10,383,508	\$ 175,992	\$ 615,971
1% increase (8.00%).....	\$ 881,049	\$ 8,317,101	\$ 140,968	\$ 493,388
Covered Payroll.....	\$ 327,187	\$ 3,088,647	\$ 52,350	\$ 183,225
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2022

	Town of Totland	Town of Wates	Western Hampden Veterans	Western Mass Emergency Communications & Dispatch Center
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 904,193	\$ 1,634,503	\$ 486,873	\$ 4,068,869
Ending net pension liability.....	\$ 1,187,944	\$ 2,111,900	\$ 527,975	\$ 5,191,754
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 3,006	\$ 5,344	\$ 1,336	\$ 13,138
Net difference between projected and actual investment earnings on pension plan investments.....	89,412	158,955	39,739	390,765
Changes of assumptions.....	56,531	100,499	25,125	247,060
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	83,421	241,543	27,137	2,709,374
Total Deferred Outflows of Resources.....	\$ 232,370	\$ 506,341	\$ 93,337	\$ 3,360,337
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 12,588	\$ 22,379	\$ 5,595	\$ 55,015
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	65,226	165,212	63,220	-
Total Deferred Inflows of Resources.....	\$ 77,814	\$ 187,591	\$ 68,815	\$ 55,015
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 131,804	\$ 234,319	\$ 58,580	\$ 576,034
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(15,287)	16,022	(10,660)	742,017
Total Employer Pension Expense.....	\$ 116,517	\$ 250,341	\$ 47,920	\$ 1,318,051
<b>Contributions</b>				
Statutory required contribution.....	\$ 105,593	\$ 189,894	\$ 46,931	\$ 461,481
Contribution in relation to statutory required contribution.....	(105,593)	(189,894)	(46,931)	(461,481)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.88%	30.23%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 8,538	\$ 68,282	\$ 2,212	\$ 818,379
June 30, 2025.....	30,690	58,403	9,093	886,609
June 30, 2026.....	32,112	94,910	6,545	865,303
June 30, 2027.....	76,859	90,414	19,316	728,579
June 30, 2028.....	6,357	6,741	(12,644)	6,452
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 154,556	\$ 318,750	\$ 24,522	\$ 3,305,322
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 1,468,923	\$ 2,611,419	\$ 652,855	\$ 6,419,738
Current discount rate (7.00%).....	\$ 1,187,944	\$ 2,111,900	\$ 527,975	\$ 5,191,754
1% increase (8.00%).....	\$ 951,533	\$ 1,691,614	\$ 422,903	\$ 4,158,551
Covered Payroll.....	\$ 353,362	\$ 628,199	\$ 157,050	\$ 1,544,324
See notes to schedule of employer allocations and schedule of pension amounts by employer.				(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Town of Wilbraham	Wilbraham Solid Waste	Wilbraham Sewer	Wilbraham Water Dept.
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 23,543,796	\$ 312,990	\$ 695,533	\$ 1,112,853
Ending net pension liability.....	\$ 29,610,596	\$ 395,981	\$ 791,962	\$ 1,495,929
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 74,929	\$ 1,002	\$ 2,004	\$ 3,785
Net difference between projected and actual investment earnings on pension plan investments.....	2,228,687	29,804	59,608	112,593
Changes of assumptions.....	1,409,080	18,844	37,687	71,187
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	230,220	125	80,618	84,279
Total Deferred Outflows of Resources.....	<u>\$ 3,942,916</u>	<u>\$ 49,775</u>	<u>\$ 179,917</u>	<u>\$ 271,844</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 313,770	\$ 4,196	\$ 8,392	\$ 15,852
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	644,898	47,171	119,994	133,370
Total Deferred Inflows of Resources.....	<u>\$ 958,668</u>	<u>\$ 51,367</u>	<u>\$ 128,386</u>	<u>\$ 149,222</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 3,285,342	\$ 43,934	\$ 87,869	\$ 165,977
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(108,277)	(17,433)	(5,253)	(26,850)
Total Employer Pension Expense.....	<u>\$ 3,177,065</u>	<u>\$ 26,501</u>	<u>\$ 82,616</u>	<u>\$ 139,127</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 2,632,006	\$ 35,198	\$ 70,395	\$ 132,969
Contribution in relation to statutory required contribution.....	(2,632,006)	(35,198)	(70,395)	(132,969)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	29.88%	29.88%	29.88%	29.88%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2024.....	\$ 221,430	\$ (11,644)	\$ 1,165	\$ (4,990)
June 30, 2025.....	672,549	(6,499)	6,043	25,365
June 30, 2026.....	646,347	(2,672)	31,194	29,745
June 30, 2027.....	1,468,529	19,213	25,767	59,809
June 30, 2028.....	(24,607)	10	(12,638)	12,693
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ 2,984,248</u>	<u>\$ (1,592)</u>	<u>\$ 51,531</u>	<u>\$ 122,622</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 36,614,265	\$ 489,641	\$ 979,281	\$ 1,849,755
Current discount rate (7.00%).....	\$ 29,610,596	\$ 395,981	\$ 791,962	\$ 1,495,929
1% increase (8.00%).....	\$ 23,717,835	\$ 317,177	\$ 634,355	\$ 1,198,226
Covered Payroll.....	\$ 8,807,879	\$ 117,787	\$ 235,575	\$ 444,975

See notes to schedule of employer allocations and schedule of pension amounts by employer.

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

**FOR THE YEAR ENDED DECEMBER 31, 2022**

	Wilbraham Ambulance	Wilbraham Housing Authority	Totals
<b>Net Pension Liability</b>			
Beginning net pension liability.....	\$ -	\$ 382,543	\$ 347,766,554
Ending net pension liability.....	\$ -	\$ 483,977	\$ 439,979,143
<b>Deferred Outflows of Resources</b>			
Differences between expected and actual experience.....	\$ -	\$ 1,225	\$ 1,113,364
Net difference between projected and actual investment earnings on pension plan investments.....	-	36,427	33,115,705
Changes of assumptions.....	-	23,031	20,937,300
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	185,742	51,695	31,196,919
Total Deferred Outflows of Resources.....	\$ 185,742	\$ 112,378	\$ 86,363,288
<b>Deferred Inflows of Resources</b>			
Differences between expected and actual experience.....	\$ -	\$ 5,128	\$ 4,662,260
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	294,918	54,702	31,196,919
Total Deferred Inflows of Resources.....	\$ 294,918	\$ 59,830	\$ 35,859,179
<b>Pension Expense</b>			
Proportionate share of plan pension expense.....	\$ -	\$ 53,698	\$ 48,816,364
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(5,435)	98	-
Total Employer Pension Expense.....	\$ (5,435)	\$ 53,796	\$ 48,816,364
<b>Contributions</b>			
Statutory required contribution.....	\$ -	\$ 43,019	\$ 39,043,214
Contribution in relation to statutory required contribution.....	-	(43,019)	(39,045,566)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ (2,352)
Contributions as a percentage of covered payroll.....	N/A	29.88%	29.83%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>			
June 30, 2024.....	\$ (5,435)	\$ 2,026	\$ 6,471,408
June 30, 2025.....	(5,435)	8,327	12,253,614
June 30, 2026.....	(98,306)	5,989	10,448,010
June 30, 2027.....	-	36,194	21,331,077
June 30, 2028.....	-	12	-
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (109,176)	\$ 52,548	\$ 50,504,109
<b>Discount Rate Sensitivity</b>			
1% decrease (6.00%).....	\$ -	\$ 598,450	\$ 544,045,548
Current discount rate (7.00%).....	\$ -	\$ 483,977	\$ 439,979,143
1% increase (8.00%).....	\$ -	\$ 387,661	\$ 352,419,541
Covered Payroll.....	\$ -	\$ 143,962	\$ 130,874,871
See notes to schedule of employer allocations and schedule of pension amounts by employer.			(concluded)

### **Schedule of Employer Allocations**

Governmental Accounting Standards Board (GASB) Statement #68 requires employers participating in a cost-sharing pension plan to recognize pension liabilities as employees provide services to the government and earn their pension benefits. Employers participating in cost-sharing plans are required to recognize their proportionate share of the plan's collective pension amounts for all benefits provided through the plan including the net pension liability, deferred outflows of resources, deferred inflows of resources, contributions and pension expense.

GASB Statement #68 requires the allocation of the collective pension amounts be consistent with the manner in which contributions to the plan are determined. As permissible under GASB Statement #68, The Schedule of Employer Allocations is used to demonstrate the allocation of HCRRS's collective pension amounts.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans allocate the annual required pension fund appropriation to employer units based on their proportionate share of the aggregate of the annual rates of regular compensation of all members in service of the system who are employees of any government unit at the close of business on the September 30th immediately preceding the fiscal year. Accordingly, the proportionate aggregate rates of regular compensation as of the close of business on September 30, 2021 were applied to allocate the HCRRS's fiscal year 2023 pension fund appropriation by member unit.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC completes an analysis of the costs and liabilities attributable to the additional benefits payable in accordance with the ERIP. The accrued liability for the members who accept the ERIP as retirees including the ERIP less the accrued liability for the members as active employees excluding the ERIP represents the increase in accrued liability due to the ERIP. The net increase is amortized for each member unit accepting the ERIP and is separately identified in the HCRRS's funding schedule, when applicable.

The allocation percentage of the total net pension liability is a blended rate of the following two items. (1) The proportionate share of active employer's covered payroll is applied to the annual pension fund appropriation calculated by the actuary and (2) ERI is a direct charge calculated by PERAC for only the employers that accepted the ERI.

### **Schedule of Pension Amounts by Employer**

The Schedule of Pension Amounts by Employer presents the net pension liability, the various categories of deferred outflows of resources and deferred inflows of resources, and pension expense and contributions for all participating employers including differences between expected and actual economic experience; differences between projected and actual investment earnings, net; and changes of assumptions. Additionally, the changes in proportion and differences between employer contributions and proportionate share of contributions are presented in accordance with GASB Statements.

**Changes in Assumptions and Plan Provisions**

Changes in Assumptions

The following assumption changes were reflected in the January 1, 2022, actuarial valuation:

- The investment rate of return was lowered from 7.15% to 7.00%.
- The mortality assumption was revised to update the mortality improvement scale from MP-2017 to MP-2021 and to remove the age set forward for females.
- The administrative expense assumption was increased from \$950,000 to \$1 million for calendar 2022.

Changes in Plan Provisions

None.