



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

***HAMPDEN COUNTY REGIONAL  
RETIREMENT SYSTEM***

***FINANCIAL STATEMENTS***

***YEAR ENDED DECEMBER 31, 2021***

**HAMPDEN COUNTY REGIONAL RETIREMENT SYSTEM**

**FINANCIAL STATEMENTS**

**YEAR ENDED DECEMBER 31, 2021**

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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

### **Opinions**

We have audited the accompanying financial statements of the Hampden County Regional Retirement System (HCRRS) as of and for the year ended December 31, 2021, 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, 2021, 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 Opinions**

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 opinions.

### **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 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 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 December 15, 2022, 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 black ink, appearing to read "Bowers & Sullivan LLC". The signature is written in a cursive, flowing style.

December 15, 2022

## ***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, 2021. 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 \$539.7 million (net position).
- The HCRRS's net position increased by \$83 million for the year ended December 31, 2021.
- Total investment income was \$89.4 million; investment expenses were \$2.4 million; and net investment income was \$86.9 million.
- Total contributions were \$50.5 million including \$36.2 million from employers and \$11.9 million from members.
- Retirement benefits, refunds and transfers amounted to \$53.5 million.
- Administrative expenses were \$929,000.
- The total pension liability was \$887.5 million as of December 31, 2021 while the net pension liability was \$347.8 million.
- The Plan fiduciary net position as a percentage of the total pension liability was 60.81%.

### ***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 \$539.7 million at the close of 2021.

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 \$531.8 million, cash of \$6.3 million and current accounts receivable of \$1.6 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 current deficiency of \$3.9 million. In 2020, the HCRRS’s contributions were \$47.7 million while retirement benefit payments, refunds, transfers and administration expenses were \$48.8 million which resulted in a prior year deficiency of \$1.1 million. Therefore, for these two years the HCRRS supported these deficiencies with net investment income.

In 2021, net investment income was \$86.9 million, while the net investment income was \$47.4 million in 2020. The annual money weighted rate of return was 19.85% and 12.13% in 2021, and 2020, 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.

	2021	2020
<b>Statement of Fiduciary Net Position</b>		
Cash.....	\$ 6,320,969	\$ 8,879,413
Investments.....	531,792,978	446,567,451
Receivables.....	1,568,425	1,244,940
Other assets.....	4,177	4,177
Net Position Restricted for Pension Benefits.....	\$ 539,686,549	\$ 456,695,981

<b>Statement of Changes in Fiduciary Net Position</b>	<u>2021</u>	<u>2020</u>
Additions:		
Contributions:		
Member contributions.....	\$ 11,863,496	\$ 11,733,599
Employer contributions.....	36,180,780	33,416,529
Other contributions.....	<u>2,429,443</u>	<u>2,513,780</u>
Total contributions.....	<u>50,473,719</u>	<u>47,663,908</u>
Net investment income:		
Total investment income.....	89,371,157	49,392,310
Less, investment expenses.....	<u>(2,443,092)</u>	<u>(1,973,617)</u>
Net investment income.....	<u>86,928,065</u>	<u>47,418,693</u>
Total additions.....	<u>137,401,784</u>	<u>95,082,601</u>
Deductions:		
Administration.....	928,916	867,476
Retirement benefits, refunds and transfers.....	<u>53,482,300</u>	<u>47,959,221</u>
Total deductions.....	<u>54,411,216</u>	<u>48,826,697</u>
Net increase (decrease) in fiduciary net position....	82,990,568	46,255,904
Fiduciary net position at beginning of year.....	<u>456,695,981</u>	<u>410,440,077</u>
Fiduciary net position at end of year.....	<u>\$ 539,686,549</u>	<u>\$ 456,695,981</u>

### ***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, 2021

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<b>Assets</b>	
Cash and cash equivalents.....	\$ 6,320,969
Investments:	
Investments in Pension Reserve Investment Trust.....	531,131,064
Pooled real estate funds.....	<u>661,914</u>
Total investments.....	<u>531,792,978</u>
Receivables, net of allowance for uncollectibles:	
Member contributions.....	1,313,841
Employer pension appropriation.....	<u>254,584</u>
Total receivables.....	<u>1,568,425</u>
Other assets.....	<u>4,177</u>
Total Assets.....	<u>539,686,549</u>
<b>Net Position Restricted for Pensions.....</b>	<b>\$ <u>539,686,549</u></b>

See notes to financial statements.

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**

YEAR ENDED DECEMBER 31, 2021

Additions:	
Contributions:	
Employer pension appropriation.....	\$ 36,180,780
Member contributions.....	11,863,496
Transfers from other systems.....	960,044
3(8)(c) contributions from other systems.....	987,067
State COLA reimbursements.....	189,719
Members' makeup payments and redeposits.....	292,353
Interest not refunded.....	<u>260</u>
 Total contributions.....	 <u>50,473,719</u>
Net investment income:	
Investment income.....	89,371,157
Less: investment expense.....	<u>(2,443,092)</u>
 Net investment income.....	 <u>86,928,065</u>
 Total additions.....	 <u>137,401,784</u>
Deductions:	
Administration.....	928,916
Retirement benefits and refunds.....	48,514,512
Transfers to other systems.....	1,453,269
3(8)(c) transfer to other systems.....	<u>3,514,519</u>
 Total deductions.....	 <u>54,411,216</u>
 Net increase in fiduciary net position.....	 82,990,568
 Fiduciary net position at beginning of year.....	 <u>456,695,981</u>
 Fiduciary net position at end of year.....	 \$ <u><u>539,686,549</u></u>

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 33 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, 2021, the carrying amount of the HCRRS's deposits totaled \$6,320,969 and the bank balance totaled \$7,104,113. Of the bank balance, \$250,000 was covered by Federal Depository Insurance, \$6,786,180 was covered by the Depositor's Insurance Fund, and \$67,933 was exposed to custodial credit risk because it was uninsured and uncollateralized.

Investments

The HCRRS's investments were as follows:

<u>Investment Type:</u>	<u>December 31, 2021</u>
PRIT Pooled Funds.....	\$ 531,131,064
Pooled Real Estate Funds.....	<u>661,914</u>
Total Investments.....	<u>\$ 531,792,978</u>

Approximately 99.9% of the HCRRS's investments 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 1.33 to 15.12 years.

Approximately 0.1% of the HCRRS's funds are invested in pooled real estate funds.

The HCRRS's annual money-weighted rate of return on pension plan investments was 19.85%. 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. Because investing is a key part of the System's activities, the plan shows greater disaggregation in its disclosures. The plan chooses a tabular format for disclosing the levels within the fair value hierarchy.

The HCRRS categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles.

The HCRRS had the following recurring fair value measurements as of December 31, 2021:

Investment Type	12/31/2021	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level:</b>				
Pooled Real Estate Funds.....	\$ 661,914	\$ -	\$ -	\$ 661,914
<b>Investments measured at NAV:</b>				
PRIT Investments.....	531,131,064			
Total Investments.....	\$ 531,792,978			

Pooled real estate funds classified in level 3 are valued using either a discounted cash flow or market comparable company’s technique.

PRIT investments are valued using the net asset value (NAV) method.

**NOTE 5 – MEMBERSHIP**

The following table represents the HCRRS’s membership at December 31, 2021:

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

**NOTE 6 – ACTUARIAL VALUATION**

Components of the net pension liability as of December 31, 2021, were as follows:

Total pension liability.....	\$ 887,453,103
Less: HCRRS’s fiduciary net position.....	(539,686,549)
Net pension liability.....	\$ 347,766,554
The HCRRS’s fiduciary net position as a percentage of the total pension liability.....	60.81%

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 rolled back to December 31, 2021:

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%, previously 7.15%.
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, 2021, are summarized in the following table:

Asset Class	Long-Term Expected Asset Allocation	Long-Term Expected Real Rate of Return
Domestic Equity.....	22.00%	6.11%
International Developed Markets Equity.....	11.50%	6.49%
International Emerging Market Equity.....	4.50%	8.12%
Core Fixed Income.....	15.00%	0.38%
High Yield Fixed Income.....	8.00%	2.48%
Real Estate.....	10.00%	3.72%
Timber.....	4.00%	3.44%
Hedge Fund, GTAA, Risk Parity.....	10.00%	2.63%
Private Equity.....	15.00%	9.93%
Total.....	100.00%	

*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, 2021.....	\$ 449,245,547	\$ 347,766,554	\$ 262,349,960

*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 December 15, 2022, which is the date the financial statements were available to be issued.

The HCRRS carries its investments at fair (market) value in accordance with Generally Accepted Accounting Principles (GAAP). Market value adjustments are recorded monthly. The HCRRS's investments had declined in value consistent with recent trends in the overall financial securities market.

In accordance with GAAP, the HCRRS has not recorded the losses in its financial statements as the impairments were not known as of December 31, 2021. The HCRRS has recorded the losses associated with the investment during the year 2022.

**NOTE 9 – IMPLEMENTATION OF GASB PRONOUNCEMENTS**

There were no GASB pronouncements required to be implemented in 2021, 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.

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# ***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
\$	16,386,887	\$ 16,819,341	\$ 19,150,797	\$ 19,802,858
	54,206,895	56,291,147	58,165,906	60,277,759
	-	-	-	-
	-	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>
	28,561,925	61,106,738	31,797,450	38,537,642
	<u>727,449,348</u>	<u>756,011,273</u>	<u>817,118,011</u>	<u>848,915,461</u>
\$	<u>756,011,273</u>	<u>817,118,011</u>	<u>848,915,461</u>	<u>887,453,103</u>
\$	28,726,521	\$ 30,986,922	\$ 33,416,529	\$ 36,180,780
	10,837,968	11,274,416	11,733,599	11,863,496
	2,297,247	2,691,885	2,513,780	2,429,443
	(8,582,056)	55,640,493	47,418,693	86,928,065
	(890,776)	(838,798)	(867,476)	(928,916)
	(42,031,857)	(44,563,969)	(45,519,253)	(51,345,470)
	<u>(2,242,070)</u>	<u>(2,539,363)</u>	<u>(2,439,968)</u>	<u>(2,136,830)</u>
	(11,885,023)	52,651,586	46,255,904	82,990,568
	<u>369,673,514</u>	<u>357,788,491</u>	<u>410,440,077</u>	<u>456,695,981</u>
\$	<u>357,788,491</u>	<u>410,440,077</u>	<u>456,695,981</u>	<u>539,686,549</u>
\$	<u>398,222,782</u>	<u>406,677,934</u>	<u>392,219,480</u>	<u>347,766,554</u>
	47.33%	50.23%	53.80%	60.81%
\$	114,355,356	\$ 120,106,229	\$ 125,225,926	\$ 125,635,569
	348.23%	338.60%	313.21%	276.81%

**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, 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, 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, 2021, 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, 2021, 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, 2021, 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, 2021, and our report thereon, dated December 15, 2022, 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.



December 15, 2022



**SCHEDULE OF EMPLOYER ALLOCATIONS**

FOR THE YEAR ENDED DECEMBER 31, 2021

Employer	Fiscal Year	Share of Net Pension Liability	Percent of Total Net Pension Liability
	2022 Total Appropriation		
Town of Agawam.....	\$ 8,124,716	\$ 77,134,624	22.180%
Agawam Housing Authority.....	106,229	1,008,523	0.290%
Town of Blandford.....	113,556	1,078,076	0.310%
Town of Brimfield.....	421,254	3,999,315	1.150%
Town of Chester.....	102,566	973,746	0.280%
Chester Electric Light.....	73,262	695,533	0.200%
Town of East Longmeadow.....	4,337,089	41,175,560	11.840%
East Longmeadow Housing Authority.....	80,588	765,086	0.220%
Town of Granville.....	161,176	1,530,173	0.440%
Town of Hampden.....	706,975	6,711,894	1.930%
Hampden Housing Authority.....	32,968	312,990	0.090%
Hampden/Wilbraham Regional School District.....	1,901,140	18,049,084	5.190%
Town of Holland.....	326,014	3,095,122	0.890%
Town of Longmeadow.....	4,055,032	38,497,758	11.070%
Town of Ludlow.....	3,230,838	30,673,010	8.820%
Town of Ludlow - School.....	1,772,932	16,831,901	4.840%
Ludlow Housing Authority.....	58,609	556,426	0.160%
Town of Monson.....	1,208,817	11,476,296	3.300%
Town of Monson - Schools.....	879,140	8,346,397	2.400%
Monson Housing Authority.....	87,914	834,640	0.240%
Town of Montgomery.....	54,946	521,650	0.150%
Town of Palmer.....	1,227,133	11,650,180	3.350%
Town of Palmer - Schools.....	644,702	6,120,691	1.760%
Town of Palmer - Library.....	153,849	1,460,620	0.420%
Town of Palmer - WWTP.....	183,154	1,738,833	0.500%
Palmer Fire/Water District.....	183,154	1,738,833	0.500%
Pathfinder Regional Vocational Technical School....	391,950	3,721,102	1.070%
Town of Russell.....	164,839	1,564,949	0.450%
Town of Southwick.....	1,293,068	12,276,159	3.530%
Town of Southwick Water.....	95,240	904,193	0.260%
Southwick/Tolland Regional School District.....	897,455	8,520,281	2.450%
Southwick Housing Authority.....	18,315	173,883	0.050%
Three Rivers Fire.....	51,283	486,873	0.140%
Town of Tolland.....	95,240	904,193	0.260%
Town of Wales.....	172,165	1,634,503	0.470%
Western Hampden Veterans.....	51,283	486,873	0.140%
Western Massachusetts Emergency Communications & Regional Dispatch Center.....	428,581	4,068,869	1.170%
Town of Wilbraham.....	2,479,907	23,543,796	6.770%
Wilbraham Solid Waste.....	32,968	312,990	0.090%
Wilbraham Sewer.....	73,262	695,533	0.200%
Wilbraham Water Department.....	117,219	1,112,853	0.320%
Wilbraham Housing Authority.....	40,294	382,543	0.110%
<b>Total.....</b>	<b>\$ 36,630,822</b>	<b>\$ 347,766,554</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, 2021

	Town of Agawam	Agawam Housing Authority	Town of Blandford	Town of Brimfield
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 81,973,872	\$ 980,553	\$ 1,098,207	\$ 3,882,965
Ending net pension liability.....	\$ 77,134,624	\$ 1,008,523	\$ 1,078,076	\$ 3,999,315
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 370,419	\$ 4,843	\$ 5,177	\$ 19,206
Changes of assumptions.....	7,091,940	92,726	99,121	367,707
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	4,658,728	204,414	304,662	638,394
Total Deferred Outflows of Resources.....	\$ 12,121,087	\$ 301,983	\$ 408,960	\$ 1,025,307
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 1,521,334	\$ 19,891	\$ 21,263	\$ 78,879
Net difference between projected and actual investment earnings on pension plan investments.....	13,024,799	170,297	182,042	675,316
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	2,098,711	174,773	20,567	388,467
Total Deferred Inflows of Resources.....	\$ 16,644,844	\$ 364,961	\$ 223,872	\$ 1,142,662
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 7,654,426	\$ 100,079	\$ 106,984	\$ 396,869
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	339,829	17,050	69,015	49,370
Total Employer Pension Expense.....	\$ 7,994,255	\$ 117,129	\$ 175,999	\$ 446,239
<b>Contributions</b>				
Statutory required contribution.....	\$ 8,031,737	\$ 105,013	\$ 112,256	\$ 416,433
Contribution in relation to statutory required contribution.....	(8,031,737)	(105,013)	(112,256)	(416,433)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	28.82%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (297,612)	\$ (13,116)	\$ 47,889	\$ (41,848)
June 30, 2024.....	(2,330,885)	(46,150)	38,779	(120,937)
June 30, 2025.....	(1,340,909)	(2,335)	40,308	(5,579)
June 30, 2026.....	(1,731,459)	(31,554)	33,961	(69,541)
June 30, 2027.....	1,177,108	30,177	24,151	120,550
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (4,523,757)	\$ (62,978)	\$ 185,088	\$ (117,355)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 99,642,666	\$ 1,302,812	\$ 1,392,661	\$ 5,166,323
Current discount rate (7.00%).....	\$ 77,134,624	\$ 1,008,523	\$ 1,078,076	\$ 3,999,315
1% increase (8.00%).....	\$ 58,189,222	\$ 760,815	\$ 813,285	\$ 3,017,024
Covered Payroll.....	\$ 27,865,971	\$ 364,343	\$ 389,470	\$ 1,444,809
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, 2021

	Brimfield Housing Authority	Town of Chester	Chester Electric Light	Town of East Longmeadow	East Longmeadow Housing Authority
<b>Net Pension Liability</b>					
Beginning net pension liability.....	\$ -	\$ 1,215,880	\$ 627,551	\$ 47,693,889	\$ 705,991
Ending net pension liability.....	\$ -	\$ 973,746	\$ 695,533	\$ 41,175,560	\$ 765,086
<b>Deferred Outflows of Resources</b>					
Differences between expected and actual experience.....	\$ -	\$ 4,676	\$ 3,340	\$ 197,733	\$ 3,674
Changes of assumptions.....	-	89,529	63,949	3,785,779	70,344
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	27,337	28,104	322,925	2,285,699	146,646
Total Deferred Outflows of Resources.....	\$ 27,337	\$ 122,309	\$ 390,214	\$ 6,269,211	\$ 220,664
<b>Deferred Inflows of Resources</b>					
Differences between expected and actual experience.....	\$ -	\$ 19,205	\$ 13,718	\$ 812,112	\$ 15,090
Net difference between projected and actual investment earnings on pension plan investments.....	-	164,425	117,446	6,952,822	129,191
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	237,799	203,659	38,989	1,233,738	138,280
Total Deferred Inflows of Resources.....	\$ 237,799	\$ 387,289	\$ 170,153	\$ 8,998,672	\$ 282,561
<b>Pension Expense</b>					
Proportionate share of plan pension expense.....	\$ -	\$ 96,628	\$ 69,021	\$ 4,086,046	\$ 75,923
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(44,489)	(65,100)	112,248	136,987	(15,970)
Total Employer Pension Expense.....	\$ (44,489)	\$ 31,528	\$ 181,269	\$ 4,223,033	\$ 59,953
<b>Contributions</b>					
Statutory required contribution.....	\$ -	\$ 101,392	\$ 72,424	\$ 4,287,456	\$ 79,666
Contribution in relation to statutory required contribution.....	-	(101,392)	(72,424)	(4,287,456)	(79,666)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	N/A	28.82%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>					
June 30, 2023.....	\$ (44,547)	\$ (70,795)	\$ 104,940	\$ (253,572)	\$ (3,348)
June 30, 2024.....	(49,784)	(102,908)	85,792	(1,182,767)	(43,873)
June 30, 2025.....	(60,834)	(32,526)	(517)	(490,415)	(24,615)
June 30, 2026.....	(55,297)	(44,271)	1,143	(793,351)	(19,091)
June 30, 2027.....	-	(14,480)	28,703	(9,356)	29,030
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (210,462)	\$ (264,980)	\$ 220,061	\$ (2,729,461)	\$ (61,897)
<b>Discount Rate Sensitivity</b>					
1% decrease (6.00%).....	\$ -	\$ 1,257,887	\$ 898,491	\$ 53,190,673	\$ 988,340
Current discount rate (7.00%).....	\$ -	\$ 973,746	\$ 695,533	\$ 41,175,560	\$ 765,086
1% increase (8.00%).....	\$ -	\$ 734,580	\$ 524,700	\$ 31,062,235	\$ 577,170
Covered Payroll.....	\$ -	\$ 351,779	\$ 251,271	\$ 14,875,251	\$ 276,398

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, 2021

	Town of Granville	Town of Hampden	Hampden Housing Authority	Hampden/ Wilbraham Reg. Sch. Dist.
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 1,647,318	\$ 6,981,503	\$ 313,776	\$ 20,120,859
Ending net pension liability.....	\$ 1,530,173	\$ 6,711,894	\$ 312,990	\$ 18,049,084
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 7,348	\$ 32,232	\$ 1,503	\$ 86,675
Changes of assumptions.....	140,688	617,108	28,777	1,659,476
Changes in proportion and differences between employer contributions and proportionate	501,730	709,218	68,254	466,181
Total Deferred Outflows of Resources.....	\$ 649,766	\$ 1,358,558	\$ 98,534	\$ 2,212,332
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 30,180	\$ 132,380	\$ 6,173	\$ 355,985
Net difference between projected and actual investment earnings on pension plan investments.....	258,382	1,133,357	52,851	3,047,732
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	153,529	33,485	10,738	653,276
Total Deferred Inflows of Resources.....	\$ 442,091	\$ 1,299,222	\$ 69,762	\$ 4,056,993
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 151,846	\$ 666,050	\$ 31,060	\$ 1,791,093
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	58,163	256,465	8,241	(16,485)
Total Employer Pension Expense.....	\$ 210,009	\$ 922,515	\$ 39,301	\$ 1,774,608
<b>Contributions</b>				
Statutory required contribution.....	\$ 161,176	\$ 698,884	\$ 32,591	\$ 1,879,383
Contribution in relation to statutory required contribution.....	(161,176)	(698,884)	(32,591)	(1,879,383)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.16%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ 81,282	\$ 131,887	\$ 9,793	\$ (285,774)
June 30, 2024.....	54,912	(74,122)	1,154	(784,633)
June 30, 2025.....	102,350	(33,964)	11,728	(356,510)
June 30, 2026.....	(51,100)	(91,440)	(1,733)	(540,941)
June 30, 2027.....	20,231	126,975	7,830	123,197
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 207,675	\$ 59,336	\$ 28,772	\$ (1,844,661)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 1,976,681	\$ 8,670,438	\$ 404,321	\$ 23,315,844
Current discount rate (7.00%).....	\$ 1,530,173	\$ 6,711,894	\$ 312,990	\$ 18,049,084
1% increase (8.00%).....	\$ 1,154,340	\$ 5,063,354	\$ 236,115	\$ 13,615,963
Covered Payroll.....	\$ 552,797	\$ 2,424,766	\$ 113,072	\$ 6,520,486
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, 2021

	Town of Holland	Town of Longmeadow	Town of Ludlow	Town of Ludlow Schools
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 3,647,641	\$ 47,497,783	\$ 33,966,215	\$ 18,512,763
Ending net pension liability.....	\$ 3,095,122	\$ 38,497,758	\$ 30,673,010	\$ 16,831,901
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 14,863	\$ 184,874	\$ 147,298	\$ 80,830
Changes of assumptions.....	284,573	3,539,575	2,820,150	1,547,565
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	96,909	573,528	718,966	528,299
Total Deferred Outflows of Resources.....	<u>\$ 396,345</u>	<u>\$ 4,297,977</u>	<u>\$ 3,686,414</u>	<u>\$ 2,156,694</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 61,046	\$ 759,297	\$ 604,968	\$ 331,978
Net difference between projected and actual investment earnings on pension plan investments.....	522,636	6,500,654	5,179,383	2,842,201
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	210,397	4,246,918	228,247	226,919
Total Deferred Inflows of Resources.....	<u>\$ 794,079</u>	<u>\$ 11,506,869</u>	<u>\$ 6,012,598</u>	<u>\$ 3,401,098</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 307,144	\$ 3,820,314	\$ 3,043,826	\$ 1,670,307
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(16,771)	(1,331,417)	314,361	106,939
Total Employer Pension Expense.....	<u>\$ 290,373</u>	<u>\$ 2,488,897</u>	<u>\$ 3,358,187</u>	<u>\$ 1,777,246</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 326,014	\$ 4,008,626	\$ 3,193,864	\$ 1,752,643
Contribution in relation to statutory required contribution.....	(326,014)	(4,008,626)	(3,198,338)	(1,752,643)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (4,474)</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	29.16%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (59,827)	\$ (1,350,790)	\$ (98,303)	\$ (154,244)
June 30, 2024.....	(130,399)	(2,312,038)	(1,147,157)	(536,792)
June 30, 2025.....	(74,459)	(1,525,440)	(603,163)	(329,776)
June 30, 2026.....	(122,832)	(1,540,998)	(724,557)	(379,190)
June 30, 2027.....	(10,217)	(479,626)	246,996	155,598
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	<u>\$ (397,734)</u>	<u>\$ (7,208,892)</u>	<u>\$ (2,326,184)</u>	<u>\$ (1,244,404)</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 3,998,285	\$ 49,731,483	\$ 39,623,457	\$ 21,743,484
Current discount rate (7.00%).....	\$ 3,095,122	\$ 38,497,758	\$ 30,673,010	\$ 16,831,901
1% increase (8.00%).....	\$ 2,334,914	\$ 29,042,141	\$ 23,139,266	\$ 12,697,738
Covered Payroll.....	\$ 1,118,156	\$ 13,907,858	\$ 11,081,057	\$ 6,080,761
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, 2021

	Ludlow Housing Authority	Town of Monson	Town of Monson Schools	Monson Housing Authority
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 627,551	\$ 14,865,122	\$ 9,177,940	\$ 941,319
Ending net pension liability.....	\$ 556,426	\$ 11,476,296	\$ 8,346,397	\$ 834,640
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 2,672	\$ 55,112	\$ 40,081	\$ 4,008
Changes of assumptions.....	51,159	1,055,158	767,388	76,739
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	62,906	684,832	1,024,023	216,619
Total Deferred Outflows of Resources.....	\$ 116,737	\$ 1,795,102	\$ 1,831,492	\$ 297,366
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 10,974	\$ 226,349	\$ 164,617	\$ 16,462
Net difference between projected and actual investment earnings on pension plan investments.....	93,957	1,937,864	1,409,356	140,936
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	93,259	1,595,545	300,530	14,615
Total Deferred Inflows of Resources.....	\$ 198,190	\$ 3,759,758	\$ 1,874,503	\$ 172,013
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 55,216	\$ 1,138,846	\$ 828,252	\$ 82,826
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	15,540	(6,789)	43,588	37,313
Total Employer Pension Expense.....	\$ 70,756	\$ 1,132,057	\$ 871,840	\$ 120,139
<b>Contributions</b>				
Statutory required contribution.....	\$ 58,609	\$ 1,148,057	\$ 869,079	\$ 86,908
Contribution in relation to statutory required contribution.....	(58,609)	(1,148,057)	(869,079)	(86,908)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.16%	27.69%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ 10,977	\$ (157,662)	\$ 23,283	\$ 44,447
June 30, 2024.....	(34,063)	(562,573)	(186,674)	22,766
June 30, 2025.....	(23,676)	(416,848)	92,460	43,303
June 30, 2026.....	(37,425)	(562,378)	(49,550)	10,904
June 30, 2027.....	2,734	(265,195)	77,470	3,933
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (81,453)	\$ (1,964,656)	\$ (43,011)	\$ 125,353
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 718,792	\$ 14,825,103	\$ 10,781,893	\$ 1,078,190
Current discount rate (7.00%).....	\$ 556,426	\$ 11,476,296	\$ 8,346,397	\$ 834,640
1% increase (8.00%).....	\$ 419,760	\$ 8,657,548	\$ 6,296,399	\$ 629,640
Covered Payroll.....	\$ 201,017	\$ 4,145,974	\$ 3,015,254	\$ 301,525
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, 2021

	Town of Montgomery	Town of Palmer	Town of Palmer Schools	Town of Palmer Library
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 588,329	\$ 13,335,466	\$ 8,197,383	\$ 1,647,318
Ending net pension liability.....	\$ 521,650	\$ 11,650,180	\$ 6,120,691	\$ 1,460,620
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 2,505	\$ 55,947	\$ 29,393	\$ 7,014
Changes of assumptions.....	47,962	1,071,145	562,751	134,293
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	76,199	375,633	391,042	238,608
Total Deferred Outflows of Resources.....	\$ 126,666	\$ 1,502,725	\$ 983,186	\$ 379,915
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 10,289	\$ 229,778	\$ 120,719	\$ 28,808
Net difference between projected and actual investment earnings on pension plan investments.....	88,085	1,967,226	1,033,528	246,637
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	10,754	721,753	1,090,007	204,203
Total Deferred Inflows of Resources.....	\$ 109,128	\$ 2,918,757	\$ 2,244,254	\$ 479,648
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 51,766	\$ 1,156,102	\$ 607,384	\$ 144,944
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	13,835	306,433	(131,828)	57,142
Total Employer Pension Expense.....	\$ 65,601	\$ 1,462,535	\$ 475,556	\$ 202,086
<b>Contributions</b>				
Statutory required contribution.....	\$ 54,317	\$ 1,213,090	\$ 637,324	\$ 152,088
Contribution in relation to statutory required contribution.....	(54,317)	(1,213,090)	(637,324)	(152,088)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	28.82%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ 8,317	\$ (10,186)	\$ (152,965)	\$ (36,228)
June 30, 2024.....	(6,091)	(569,213)	(368,620)	(24,984)
June 30, 2025.....	7,957	(444,167)	(246,013)	(44,369)
June 30, 2026.....	4,896	(415,586)	(312,559)	(1,037)
June 30, 2027.....	2,459	23,120	(180,911)	6,885
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ 17,538	\$ (1,416,032)	\$ (1,261,068)	\$ (99,733)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 673,869	\$ 15,049,726	\$ 7,906,721	\$ 1,886,832
Current discount rate (7.00%).....	\$ 521,650	\$ 11,650,180	\$ 6,120,691	\$ 1,460,620
1% increase (8.00%).....	\$ 393,525	\$ 8,788,724	\$ 4,617,359	\$ 1,101,870
Covered Payroll.....	\$ 188,453	\$ 4,208,792	\$ 2,211,186	\$ 527,670
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, 2021

	Town of Palmer WWTP	Palmer Fire District	Palmer Housing Authority	Pathfinder Regional Voc. Tech. School
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 1,921,872	\$ 1,882,657	\$ -	\$ 4,471,306
Ending net pension liability.....	\$ 1,738,833	\$ 1,738,833	\$ -	\$ 3,721,102
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 8,350	\$ 8,350	\$ -	\$ 17,869
Changes of assumptions.....	159,872	159,872	-	342,127
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	89,961	281,619	-	111,962
Total Deferred Outflows of Resources.....	\$ 258,183	\$ 449,841	\$ -	\$ 471,958
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 34,295	\$ 34,295	\$ -	\$ 73,392
Net difference between projected and actual investment earnings on pension plan investments.....	293,616	293,616	-	628,338
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	72,049	20,909	15,475	325,319
Total Deferred Inflows of Resources.....	\$ 399,960	\$ 348,820	\$ 15,475	\$ 1,027,049
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 172,555	\$ 172,553	\$ -	\$ 369,263
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(1,827)	65,764	(30,051)	(39,886)
Total Employer Pension Expense.....	\$ 170,728	\$ 238,317	\$ (30,051)	\$ 329,377
<b>Contributions</b>				
Statutory required contribution.....	\$ 181,058	\$ 183,154	\$ -	\$ 387,465
Contribution in relation to statutory required contribution.....	(181,058)	(183,154)	-	(387,465)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	28.82%	29.16%	N/A	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (68,961)	\$ 61,786	\$ (15,475)	\$ (118,963)
June 30, 2024.....	(44,784)	(7,092)	-	(181,184)
June 30, 2025.....	(16,085)	32,272	-	(87,860)
June 30, 2026.....	(26,499)	(7,201)	-	(140,126)
June 30, 2027.....	14,552	21,256	-	(26,958)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (141,777)	\$ 101,021	\$ (15,475)	\$ (555,091)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 2,246,228	\$ 2,246,228	\$ -	\$ 4,806,927
Current discount rate (7.00%).....	\$ 1,738,833	\$ 1,738,833	\$ -	\$ 3,721,102
1% increase (8.00%).....	\$ 1,311,750	\$ 1,311,750	\$ -	\$ 2,807,144
Covered Payroll.....	\$ 628,178	\$ 628,178	\$ -	\$ 1,344,301
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, 2021

	Town of Russell	Town of Southwick	Town of Southwick Water	Southwick Toland Reg. Sch. Dist.
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 1,647,318	\$ 13,806,134	\$ 1,019,767	\$ 12,276,474
Ending net pension liability.....	\$ 1,564,949	\$ 12,276,159	\$ 904,193	\$ 8,520,281
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 7,515	\$ 58,953	\$ 4,342	\$ 40,916
Changes of assumptions.....	143,885	1,128,699	83,134	783,375
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	99,571	450,293	42,369	28,815
Total Deferred Outflows of Resources.....	\$ 250,971	\$ 1,637,945	\$ 129,845	\$ 853,106
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 30,866	\$ 242,125	\$ 17,834	\$ 168,047
Net difference between projected and actual investment earnings on pension plan investments.....	264,254	2,072,928	152,680	1,438,717
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	53,254	1,600,124	43,798	2,815,391
Total Deferred Inflows of Resources.....	\$ 348,374	\$ 3,915,177	\$ 214,312	\$ 4,422,155
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 155,297	\$ 1,218,222	\$ 89,728	\$ 845,508
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	18,766	(259,220)	(18,089)	(654,877)
Total Employer Pension Expense.....	\$ 174,063	\$ 959,002	\$ 71,639	\$ 190,631
<b>Contributions</b>				
Statutory required contribution.....	\$ 162,953	\$ 1,278,270	\$ 94,150	\$ 887,185
Contribution in relation to statutory required contribution.....	(162,953)	(1,278,270)	(94,150)	(887,185)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	28.82%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (17,291)	\$ (370,829)	\$ (8,204)	\$ (786,425)
June 30, 2024.....	(55,384)	(737,426)	(38,349)	(981,010)
June 30, 2025.....	(29,568)	(727,793)	(12,567)	(677,850)
June 30, 2026.....	(21,605)	(505,391)	(29,608)	(731,692)
June 30, 2027.....	26,445	64,207	4,261	(392,072)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (97,403)	\$ (2,277,232)	\$ (84,467)	\$ (3,569,049)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 2,021,604	\$ 15,858,367	\$ 1,168,038	\$ 11,006,516
Current discount rate (7.00%).....	\$ 1,564,949	\$ 12,276,159	\$ 904,193	\$ 8,520,281
1% increase (8.00%).....	\$ 1,180,574	\$ 9,260,953	\$ 682,110	\$ 6,427,574
Covered Payroll.....	\$ 565,360	\$ 4,434,935	\$ 326,652	\$ 3,078,072
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, 2021

	Southwick Housing Authority	Three Rivers Fire District	Town of Tolland	Town of Wales
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 196,114	\$ 549,103	\$ 941,319	\$ 1,961,097
Ending net pension liability.....	\$ 173,883	\$ 486,873	\$ 904,193	\$ 1,634,503
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 835	\$ 2,338	\$ 4,342	\$ 7,849
Changes of assumptions.....	15,987	44,764	83,134	150,280
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	1,452	55,124	64,545	302,210
Total Deferred Outflows of Resources.....	\$ 18,274	\$ 102,226	\$ 152,021	\$ 460,339
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 3,430	\$ 9,603	\$ 17,834	\$ 32,238
Net difference between projected and actual investment earnings on pension plan investments.....	29,362	82,212	152,680	275,999
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	15,686	99,778	250,302
Total Deferred Inflows of Resources.....	\$ 32,792	\$ 107,501	\$ 270,292	\$ 558,539
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 17,256	\$ 48,315	\$ 89,727	\$ 162,200
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	497	(35,819)	(17,975)	(10,744)
Total Employer Pension Expense.....	\$ 17,753	\$ 12,496	\$ 71,752	\$ 151,456
<b>Contributions</b>				
Statutory required contribution.....	\$ 18,315	\$ 50,696	\$ 95,240	\$ 172,165
Contribution in relation to statutory required contribution.....	(18,315)	(50,696)	(95,240)	(172,165)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	29.16%	28.82%	29.16%	29.16%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (1,366)	\$ 2,754	\$ (31,139)	\$ (7,885)
June 30, 2024.....	(6,203)	(5,599)	(49,679)	(31,684)
June 30, 2025.....	(3,360)	7,814	(28,106)	(42,140)
June 30, 2026.....	(4,442)	(12,538)	(26,503)	(5,453)
June 30, 2027.....	853	2,294	17,156	(11,038)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (14,518)	\$ (5,275)	\$ (118,271)	\$ (98,200)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 224,622	\$ 628,944	\$ 1,168,038	\$ 2,111,454
Current discount rate (7.00%).....	\$ 173,883	\$ 486,873	\$ 904,193	\$ 1,634,503
1% increase (8.00%).....	\$ 131,175	\$ 367,290	\$ 682,110	\$ 1,233,045
Covered Payroll.....	\$ 62,818	\$ 175,890	\$ 326,652	\$ 590,487
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, 2021

	Western Hampden Veterans	Western Mass Emergency Communications & Dispatch Center	Town of Wilbraham	Wilbraham Solid Waste	Wilbraham Sewer
<b>Net Pension Liability</b>					
Beginning net pension liability.....	\$ 509,889	\$ 1,686,544	\$ 26,200,257	\$ 353,001	\$ 784,439
Ending net pension liability.....	\$ 486,873	\$ 4,068,869	\$ 23,543,796	\$ 312,990	\$ 695,533
<b>Deferred Outflows of Resources</b>					
Differences between expected and actual experience.....	\$ 2,338	\$ 19,540	\$ 113,062	\$ 1,503	\$ 3,340
Changes of assumptions.....	44,764	374,101	2,164,673	28,777	63,949
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	34,229	3,412,678	393,595	176	116,404
Total Deferred Outflows of Resources.....	\$ 81,331	\$ 3,806,319	\$ 2,671,330	\$ 30,456	\$ 183,693
<b>Deferred Inflows of Resources</b>					
Differences between expected and actual experience.....	\$ 9,603	\$ 80,251	\$ 464,358	\$ 6,173	\$ 13,718
Net difference between projected and actual investment earnings on pension plan investments.....	82,212	687,061	3,975,558	52,851	117,446
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	5,107	-	768,907	64,712	85,206
Total Deferred Inflows of Resources.....	\$ 96,922	\$ 767,312	\$ 5,208,823	\$ 123,736	\$ 216,370
<b>Pension Expense</b>					
Proportionate share of plan pension expense.....	\$ 48,316	\$ 403,772	\$ 2,336,361	\$ 31,060	\$ 69,021
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	2,022	735,565	(32,611)	(12,527)	7,456
Total Employer Pension Expense.....	\$ 50,338	\$ 1,139,337	\$ 2,303,750	\$ 18,533	\$ 76,477
<b>Contributions</b>					
Statutory required contribution.....	\$ 50,696	\$ 423,676	\$ 2,451,527	\$ 32,591	\$ 72,424
Contribution in relation to statutory required contribution.....	(50,696)	(423,676)	(2,451,527)	(32,591)	(72,424)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	28.82%	28.82%	28.82%	28.82%	28.82%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>					
June 30, 2023.....	\$ (3,128)	\$ 692,830	\$ (330,942)	\$ (20,727)	\$ 79
June 30, 2024.....	(11,426)	580,821	(1,084,884)	(29,381)	(24,298)
June 30, 2025.....	(3,388)	648,473	(631,451)	(24,236)	(18,263)
June 30, 2026.....	(6,298)	627,347	(658,376)	(20,409)	6,527
June 30, 2027.....	8,649	489,536	168,160	1,473	3,278
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (15,591)	\$ 3,039,007	\$ (2,537,493)	\$ (93,280)	\$ (32,677)
<b>Discount Rate Sensitivity</b>					
1% decrease (6.00%).....	\$ 628,944	\$ 5,256,173	\$ 30,413,924	\$ 404,321	\$ 898,491
Current discount rate (7.00%).....	\$ 486,873	\$ 4,068,869	\$ 23,543,796	\$ 312,990	\$ 695,533
1% increase (8.00%).....	\$ 367,290	\$ 3,069,495	\$ 17,761,093	\$ 236,115	\$ 524,700
Covered Payroll.....	\$ 175,890	\$ 1,469,936	\$ 8,505,528	\$ 113,072	\$ 251,271

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, 2021

	Wilbraham Water Dept.	Wilbraham Ambulance	Wilbraham Housing Authority	Totals
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 1,411,994	\$ -	\$ 353,001	\$ 392,219,480
Ending net pension liability.....	\$ 1,112,853	\$ -	\$ 382,543	\$ 347,766,554
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 5,344	\$ -	\$ 1,837	\$ 1,670,046
Changes of assumptions.....	102,318	-	35,172	31,974,485
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	27,900	278,613	69,958	21,211,330
Total Deferred Outflows of Resources.....	\$ 135,562	\$ 278,613	\$ 106,967	\$ 54,855,861
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ 21,949	\$ -	\$ 7,545	\$ 6,859,051
Net difference between projected and actual investment earnings on pension plan investments.....	187,914	-	64,595	58,723,162
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	179,995	393,224	72,936	21,211,330
Total Deferred Inflows of Resources.....	\$ 389,858	\$ 393,224	\$ 145,076	\$ 86,793,543
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 110,433	\$ -	\$ 37,961	\$ 34,510,500
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(39,410)	(5,435)	14,731	-
Total Employer Pension Expense.....	\$ 71,023	\$ (5,435)	\$ 52,692	\$ 34,510,500
<b>Contributions</b>				
Statutory required contribution.....	\$ 115,878	\$ -	\$ 39,833	\$ 36,176,306
Contribution in relation to statutory required contribution.....	(115,878)	-	(39,833)	(36,180,780)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ (4,474)
Contributions as a percentage of covered payroll.....	28.82%	N/A	28.82%	28.80%
<b>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</b>				
June 30, 2023.....	\$ (51,227)	\$ (5,435)	\$ (3,929)	\$ (3,652,479)
June 30, 2024.....	(82,009)	(5,435)	(19,654)	(13,225,920)
June 30, 2025.....	(52,810)	(5,435)	(13,352)	(7,443,714)
June 30, 2026.....	(48,069)	(98,306)	(15,690)	(9,249,318)
June 30, 2027.....	(20,181)	-	14,516	1,633,749
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.....	\$ (254,296)	\$ (114,611)	\$ (38,109)	\$ (31,937,682)
<b>Discount Rate Sensitivity</b>				
1% decrease (6.00%).....	\$ 1,437,586	\$ -	\$ 494,170	\$ 449,245,547
Current discount rate (7.00%).....	\$ 1,112,853	\$ -	\$ 382,543	\$ 347,766,554
1% increase (8.00%).....	\$ 839,520	\$ -	\$ 288,585	\$ 262,349,960
Covered Payroll.....	\$ 402,034	\$ -	\$ 138,199	\$ 125,635,569
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, 2020 were applied to allocate the HCRRS's fiscal year 2022 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.

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.