

**South Central Connecticut Regional Water Authority**

Location: via Remote Access\*\*

**AGENDA**

**Regular Meeting of Thursday, April 16, 2020 at 12:30 p.m.**

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- A. Safety Moment
- B. Meet as Pension & Benefit Committee: S. Sack
  - 1. Approve Minutes – January 16, 2020 meeting
  - 2. Review 1/1/2020 Actuarial Reports for pension and VEBA and related contribution amounts: The Angell Pension Group, Inc.
  - 3. Review Actuarial Assumptions: The Angell Pension Group, Inc.
  - 4. Quarterly Investment Performance Review (Pension, VEBA, 401K): S. Kelliher and J. McLaughlin
  - 5. FY 2021 Committee Work Plan
- C. Consent Agenda
  - 1. Approve Minutes – March 19, 2020 meeting
  - 2. Capital Budget Authorization - May 2020
  - 3. Monthly Financial Report – March 2020
  - 4. Accounts Receivable Update – March 2020
  - 5. Derby Tank Project Update
- D. Consider and act on resolutions authorizing the program selected under Executive Order 7W: R. Kowalski
- E. Updates: L. Bingaman and B. Nesteriak
- F. Reports on RPB Committee Meetings
- G. Meet as Strategic Planning Committee: A. DiSalvo
  - 1. Approve Minutes – January 16, 2020 meeting
  - 2. \*Enterprise Strategy – Including Executive Session: P. Singh
- H. Act on matters arising from Committee meetings
- I. Executive Session to discuss personnel matters

*\*RPB is excused at Item G.2*

**\*\*In accordance with the Governor Lamont's, Executive Order No. 7B for the Protection of Public Health and Safety during COVID-19 Pandemic and Response, the public hearing will be held remotely under the requirements of Paragraph 1 of Executive Order No. 7B - Suspension of In-Person Open Meeting Requirements. Members of the public may attend the meeting via conference call, videoconference or other technology. For information on attending the meeting via remote access, and to view meeting documents, please visit <https://www.rwater.com/about-us/our-boards/board-meetings-minutes>. For questions, contact the board office at 203-401-2515.**

Jennifer Slubowski is inviting you to a scheduled Zoom meeting.

**Topic: Authority Meeting**

Time: Apr 16, 2020 12:30 PM Eastern Time (US and Canada)

Join Zoom Meeting (via conference call only)

Dial by your location

+1 646 876 9923 US (New York)

+1 312 626 6799 US (Chicago)

+1 253 215 8782 US

+1 301 715 8592 US

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

Meeting ID: 916 1854 9195

Password: 569172

Find your local number: <https://zoom.us/j/abz2m1OXsY>

Questions regarding the meeting can be submitted to Jennifer Slubowski at the board office at [jslubowski@rwater.com](mailto:jslubowski@rwater.com) or call 203-401-2515.

**South Central Connecticut Regional Water Authority  
Pension & Benefit Committee  
Minutes of the January 16, 2020 Meeting**

The regular meeting of the South Central Connecticut Regional Water Authority (“RWA”) Pension & Benefit Committee took place on Thursday, January 16, 2020, at the office of the Authority, 90 Sargent Drive, New Haven, Connecticut, Chairman Sack presided.

Present: Committee – Ms. Sack and Messrs. Borowy, Cermola, Curseaden, and DiSalvo  
Management – Ms. Collins, Discepolo, Kowalski, Nesteriak, Reckdenwald and Messrs. Bingaman, Norris and Singh  
RPB – Mr. Eitzer  
Morgan Stanley – Mr. Kelliher  
Staff – Mrs. Slubowski

The Chair called the meeting to order at 12:31 p.m.

On motion made by Mr. Cermola, seconded by Mr. Borowy, and unanimously carried, the Committee approved the minutes of its October 17, 2019 meeting, as presented.

Borowy	Aye
Cermola	Aye
Curseaden	Aye
DiSalvo	Aye
Sack	Aye

Mr. Kelliher, of Morgan Stanley, the RWA’s pension investment advisor, reported on the Authority’s Quarterly Pension Investment Performance Review for its Salaried and Union plans, and RWA’s Voluntary Employees Beneficiary Association Plan (VEBA), for the period ended December 31, 2019, which included:

- Asset class returns
- S&P 500 Index and volatility
- Unemployment and wages
- Asset allocation
- Investment results
- Target allocations & expected asset class return
- Investment cost and fee schedule

Discussion took place regarding fixed income and equities, timing, and retrospective advisory fee credit to include VEBA. Mr. Kelliher agreed it was a fair and reasonable question and would look into a retrospective fee credit, reflecting the inclusion of the VEBA and would get back to the Committee.

At 1:43 p.m., on motion made by Mr. Curseaden, seconded by Mr. Borowy, and unanimously carried, the meeting adjourned.

Borowy	Aye
Cermola	Aye
Curseaden	Aye
DiSalvo	Aye
Sack	Aye

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Suzanne Sack, Chairperson

**South Central Connecticut Regional Water  
Authority Salaried Employees' Retirement Plan**

**Actuarial Valuation as of January 1, 2020 For the  
Plan Year Beginning January 1, 2020 and Ending  
December 31, 2020**

Prepared By:

**The Angell Pension Group, Inc.  
88 Boyd Avenue  
East Providence, RI 02914  
Telephone (401) 438-9250**

March 2020

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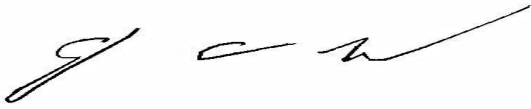
## I. INTRODUCTION

This report presents the results of the actuarial valuation as of January 1, 2020 of the South Central Connecticut Regional Water Authority Salaried Employees' Retirement Plan. The purpose of this report is to illustrate the current position of the plan and to present information which will assist the South Central Connecticut Regional Water Authority in determining the contribution levels which are sufficient to meet accruing liabilities and to maintain the plan on a sound actuarial basis.

The mortality assumptions have been updated to reflect the most recent mortality tables and improvements issued by the Society of Actuaries. Please see Section VI for a description of the actuarial assumptions. The changes in the mortality assumptions increased the Actuarial Present Value of Accumulated Plan Benefits by \$57,341.

This report was based on information submitted to our firm in the form of census data and ancillary material pertaining to the plan. We have not independently verified, nor do we make any representation as to, the accuracy of such information.

I meet the GASB No. 67 and 68 Qualification Standards of the American Academy of Actuaries, based on my education, experience and continuing education.



Jeffrey C. Liter, PhD, EA, MAAA  
Enrolled Actuary

March 5, 2020

Date

## II. SUMMARY OF PLAN CONTRIBUTIONS

### A. Normal Cost Calculation

The Normal Cost is the portion of plan benefit costs which is allocated to the current plan year by the Actuarial Cost Method being used. The following represents the development of the Normal Cost under the chosen Actuarial Cost Method, unless the method was changed to determine the normal cost on an individual participant basis.

1	Actuarial Present Value of Projected Benefits		
	a. Actives	\$	22,077,797
	b. Terminated Vested		2,494,655
	c. Retired		28,915,694
	d. Total		53,488,146
2	Actuarial Value of Plan Assets		37,350,933
3	Present Value of Future Normal Cost [(1) - (2)]		16,137,213
4	Present Value of Future Compensation		67,459,593
5	Compensation		8,465,818
6	Normal Cost [(3) / (4) * (5)]		2,025,134
7	Expected Employee Contributions		5,248
8	Employer Normal Cost [(6) - (7)]		2,019,886
9	Employer Normal Cost with 1/2 Year Interest	\$	2,089,386

### III. PARTICIPANT DATA

	<u>2020</u>	<u>2019</u>
<b>A. Classification of Funded Participants</b>		
1. Actives Under Retirement Age	82	90
2. Actives Over Retirement Age	2	1
3. Terminated Vested (includes transfers)	71	71
4. Retired and Beneficiaries Receiving Benefits	162	158
5. Other	-	-
6. Total	<u>317</u>	<u>320</u>
<b>B. Averages for Active Participants</b>		
1. Average Eligibility Age	33.67	33.44
2. Average Attained Age	54.10	54.01
3. Average Compensation	\$ 106,661	\$ 101,324
4. Average Past Service	21.01	21.16



## IV. SUMMARY OF PLAN PROVISIONS

*Plan Effective Date:* May 15, 1969

*Eligibility Requirements:* A person who is a full time employee of the Authority and is paid on a salaried basis will be eligible on his/her date of hire. Employees hired on or after January 1, 2011 are ineligible to participate. Employees rehired on or after January 1, 2011 shall not accrue additional benefits.

Effective June 30, 2012, Police Union members are also eligible, following participation through March 31, 2010, transfer to the Union Pension Plan effective April 1, 2010, and transfer of assets and liabilities back to the Salaried Plan effective June 30, 2012.

If an individual is transferred from another job classification to status as a salaried employee, he shall be covered by this provision if his initial employment date is before January 1, 2011. The service prior to the transfer date is not counted for Credited Service.

*Year of Service:* Elapsed time starting with the first day of the month of covered employment.

Special provisions apply to the President or CEO,

*Normal Retirement Date:* First day of the month coincident with or next following age 65

*Accrued Benefit (Normal Retirement Benefit):* The greater of (a), (b), (c), or (d) below, subject to (e).

(a) 1.60% of Final Average Compensation multiplied by Years of Credited Service, not to exceed 30 years.

(b) The Union plan benefit level (\$64.5 multiplied by Years of Credited Service, not to exceed 40 years, effective April 15, 2017. Please see end of Section IV for description of additional Union plan benefit enhancements.

(c) For active participants as of December 31, 1998, 1.80% of Final Average Compensation, less .371% of Average Final Compensation, both multiplied by Years of Credited Service not to exceed 30, as of December 31, 1998

(d) \$130 per month

(e) A cash balance account equal to the lump sum value of (a) above, as of January 1, 1999, calculated using 1983 Group Annuity Mortality and 6.50% interest, plus 5% of compensation annually, credited with interest at 6.50% annually. Beginning January 1, 2017, the interest crediting rate is 6.00%.

## IV. SUMMARY OF PLAN PROVISIONS

At the time of payment, the cash balance account is compared to the present value of the accrued benefit from (a)-(d) above, and if the lump sum value of the pension exceeds the cash balance, the benefit payable is separated into components, the residual pension and the cash balance. Separate payment elections are made for each component.

### *Accrued Benefit for Police Union Members:*

Police Union Members receive the benefits that they had earned up to March 31, 2010, adjusted for final average compensation if applicable, plus the following future benefit schedule:

- (a) 1.90% of Final Average Compensation multiplied by Credited Service from April 1, 2010 to December 31, 2010.
- (b) 2.2% of Final Average Compensated multiplied by Credited Service for 2011.
- (c) 2.5% Final Average Compensated multiplied by Credited Service for 2012 and later.

Credited Service earned prior to April 1, 2010, combined with future Credited Service is limited to 30 years. No additional service is credited once 30 years are credited, but final average compensation may continue to increase.

### *Other Provisions for Police Union Members*

The provisions of the Union Pension plan dealing with Early Retirement, Termination of Employment, Vesting, Forms of payment and pre-retirement death benefits apply for benefits earned after April 1, 2010.

Unreduced disability benefits are available in the event of total and permanent disability if 10 or more years of Continuous Service have been credited. The 10 year provision shall not apply if disability occurred in the line of duty.

Police Union Members are required to contribute 6% of compensation annually (effective January 1, 2012)

*Normal Form of Benefit:* Life Annuity

*Early Retirement Benefit:* Age 55 with 3 Years of Continuous (Vesting) Service – 3% annual reduction from NRA

If a participant's age plus service is greater than or equal to 80, no Early Retirement reduction is applied.

## IV. SUMMARY OF PLAN PROVISIONS

*Death Benefit:* A spousal Joint & 50% Survivor Annuity is provided for participants with 3 or more Years of Continuous Service, with no reduction for early payment. A benefit is payable to surviving children, if any, if the participant does not have a surviving spouse. Alternatively, the cash balance may be paid.

*Disability:* Total and Permanent Disability with 3 or more Years of Continuous Service

The benefit payable upon Disability Retirement in an amount equal to the Accrued Benefit plus continued accruals until benefits start at early or normal retirement age.

*Vesting:* 3 Years of Continuous Service 50%  
4 Years of Continuous Service 75%  
5 Years of Continuous Service 100%

*Union Plan Accrued Benefit (Normal Retirement Benefit):* Years of Service multiplied by Benefit Multiplier in effect.  
Years of Service for Accrued Benefit purposes are limited to 40.

### Recent Benefit Multipliers

Effective April 15, 2011, \$62.00 per month  
Effective April 15, 2012, \$63.00 per month  
Effective April 15, 2015, \$63.50 per month  
Effective April 15, 2016, \$64.00 per month  
Effective April 15, 2017, \$64.50 per month  
Effective April 15, 2018, \$66.50 per month  
Effective January 1, 2020, \$67.50 per month  
Effective January 1, 2021, \$68.50 per month  
Effective January 1, 2022, \$69.50 per month

## V. ACTUARIAL COST METHODS

*Actuarial Cost Method:* Costs have been computed in accordance with the Aggregate Actuarial Cost method.

The normal cost is computed in the aggregate equal to the excess of the actuarial present value of future benefits less the actuarial value of assets divided by a temporary annuity. The temporary annuity equals the actuarial present value of future compensation divided by the current compensation of active participants who have not attained their assumed retirement age.

Actuarial gains and losses are not separately amortized under this method. Rather, the impact is spread through the normal cost component over the future working lifetime of the participant.

*Asset Valuation Method:* An actuarial smoothing method is being used; refer to Section VII C.

*Changes:* No changes have been made in actuarial methods since the prior valuation.

## VI. ACTUARIAL ASSUMPTIONS

### For the Current Plan Year

<i>Pre-Retirement Discount Rate:</i>	7.00%
<i>Post-Retirement Discount Rate:</i>	7.00%
<i>Pre-Retirement Mortality:</i>	PubG-2010 Above Median Employee with Scale MP-2019 generational improvements (M/F)
<i>Post-Retirement Mortality:</i>	PubG-2010 Above Median Annuitant with Scale MP-2019 generational improvements (M/F)
<i>Post-Retirement Disability Mortality:</i>	PubG-2010 Disabled Retiree with Scale MP-2019 generational improvements (M/F)
<i>Incidence of Disability:</i>	Sample Rates Attached
<i>Withdrawal Rate:</i>	50% of the Crocker-Sarason-Strait Table T-5
<i>Salary Scale:</i>	4% per Year
<i>Assumed Retirement Age:</i>	Sample Rates Attached
<i>Expense Load:</i>	Interest is assumed to be net of expenses
<i>Percent Married:</i>	It is assumed that 80% of participants will be married. It is further assumed that the male spouse is 3 years older than the female.

### For the Prior Plan Year

<i>Pre-Retirement Discount Rate:</i>	7.00%
<i>Post-Retirement Discount Rate:</i>	7.00%
<i>Pre-Retirement Mortality:</i>	RP-2014 White Collar Employee (M/F) with MP-2018 Generational Projection (projected from 2006)
<i>Post-Retirement Mortality:</i>	RP-2014 White Collar Healthy Annuitant (M/F) with MP-2018 Generational Projection (Projected from 2006)
<i>Post-Retirement Disability Mortality:</i>	RP-2014 Disabled Retiree (M/F) with MP-2018 Generational Projection (Projected from 2006)
<i>Incidence of Disability:</i>	Sample Rates Attached
<i>Withdrawal Rate:</i>	50% of the Crocker-Sarason-Strait Table T-5
<i>Salary Scale:</i>	4% per Year
<i>Assumed Retirement Age:</i>	Sample Rates Attached
<i>Expense Load:</i>	Interest is assumed to be net of expenses
<i>Percent Married:</i>	It is assumed that 80% of participants will be married. It is further assumed that the male spouse is 3 years older than the female.

## VI. ACTUARIAL ASSUMPTIONS (continued)

### Sample Retirement Rates

Age	Number of Assumed Retirements Per Thousand Employees
55-59	50
60-64	100
65-69	200
70	1,000

Special Retirement Rates for Employees who are assumed to retire under the Rule of 80 options are as follows:

Ages 55-60	80
Ages 61-70	same as above table

### Sample Disability Rates

Age	Assumed Disability Percentage (Male and Female)
25	0.100%
30	0.112%
35	0.129%
40	0.164%
45	0.221%
50	0.347%
55	0.712%
60	1.260%
64	1.790%

## South Central Connecticut Regional Water Authority Salaried Employees' Retirement Plan

Summary of Actuarial Assumptions as of January 1, 2020

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Discount Rate	7.00%	South Central Connecticut Regional Water Authority	The discount rate is developed based on the allocation of the Plan's assets by investment class and the capital market outlook for each investment class. This information is provided by the Plan's investment advisor.	None
Salary Scale	4.00%	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Taxable Wage Base Increase	N/A	N/A	Plan benefits do not depend on the taxable wage base.	None
Pre-Retirement Mortality	PubG-2010 Above Median Employee (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. public pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan are include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 White Collar Employee (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in post-retirement mortality and disability mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 0.12%.
Post-Retirement Mortality	PubG-2010 Above Median Healthy Annuitant (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. public pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan are include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 White Collar Healthy Annuitant (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement mortality and disability mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 0.12%.
Disability Mortality	PubG-2010 Disabled Retiree (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. public pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan are include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 Disabled Retiree (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement mortality and post-retirement mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 0.12%.

# South Central Connecticut Regional Water Authority Salaried Employees' Retirement Plan

Summary of Actuarial Assumptions as of January 1, 2020

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Disability Rates	<div>Age Assumed Disability (M/F)</div> <div>25 0.100%</div> <div>30 0.112%</div> <div>35 0.129%</div> <div>40 0.164%</div> <div>45 0.221%</div> <div>50 0.347%</div> <div>55 0.712%</div> <div>60 1.260%</div> <div>64 1.790%</div>	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Withdrawal Rates	50% of the Crocker-Sarason-Strait Table T-5	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Retirement Rates	<div>Assumed Retirements Per Thousand Employees</div> <div>Age</div> <div>55-59 50</div> <div>60-64 100</div> <div>65-69 200</div> <div>70 1,000</div> <div>Rule of 80 Retirement Rates:</div> <div>55-60 80</div> <div>61-70 same as above</div>	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Administrative Expense Load	None	South Central Connecticut Regional Water Authority	The discount rate is assumed to be net of administrative expenses.	None
Percent Married	80% of males and 80% of females are assumed to be married.	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Age of Spouse	The female spouse is assumed to be 3 years younger than the male spouse.	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan and general experience from similarly situated plans.	None



## VII. STATEMENT OF PLAN ASSETS AS OF JANUARY 1, 2020

A.	<u>Description</u>	<u>Market Value</u>
	Proportionate Share of Master Trust custodied by	
1.	Bank of America	\$ 38,351,879
<b>B. <u>Reconciliation of Assets</u></b>		
1.	Market Value as of Prior Valuation Date	\$ 31,497,375
2.	Employer Contributions	3,966,825
3.	Employee Contributions	5,248
4.	Net Investment Income (before expenses)	5,877,099
5.	Expenses	(188,076)
6.	Benefit Payments	(2,806,592)
7.	Transfers and Adjustment	-
8.	Market Value as of Current Valuation Date	\$ 38,351,879
	Estimated Rate of Return	17.73%
<b>C. <u>Actuarial Value of Assets</u></b>		
1.	Actuarial Value as of Prior Valuation Date	\$ 33,650,159
2.	Employer Contributions	3,966,825
3.	Employee Contributions	5,248
4.	Expenses	(188,076)
5.	Benefit Payments	(2,806,592)
6.	Transfers and Adjustment	-
7.	Expected Earnings (7.00% x (1+.5 x (2+3+4+5+6)))	2,389,720
8.	Expected Assets as of Current Valuation Date	\$ 37,017,284
9.	Market Value as of Current Valuation Date	38,351,879
10.	Actuarial Value (9+ 75%*(8-9))	37,350,933

## VIII. ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

	<u>January 1, 2020</u>	<u>January 1, 2019</u>
1. Actives	\$ 14,967,626	\$ 15,498,700
2. Terminated Vested	2,494,655	2,317,172
3. Retired and Beneficiaries Receiving Payments	28,915,694	26,548,771
4. Disabled	-	-
5. Other	-	-
6. Total Accrued Benefits	\$ 46,377,975	\$ 44,364,643
Non-Vested Actives included above	\$ -	\$ -

### Basis of Determination

The actuarial assumptions used are described in Section VI of this report, except that no salary scale is used.

## **SECTION IX**

### **RECONCILIATION OF PLAN PARTICIPANTS**

	<b>Active</b>	<b>Vested Terminated</b>	<b>Retired /Beneficiaries</b>	<b>Total</b>
Participants included in the prior valuation	91	71	158	320
Data corrections				0
Terminated vested				0
Retired	-8		8	0
Died with beneficiary			-1	-1
Died without beneficiary			-4	-4
Transferred out				0
Transferred in	1			1
Lump sum				0
Terminated non-vested				0
Rehired				0
Data adjustment				0
New beneficiaries			1	1
Participants included in the January 1, 2020 valuation	84	71	162	317

Note: There are 3 police officers who have in the past periodically transferred to/from the Salaried and Union plans.

## Section X

### Additional Actuarial Disclosures

Actuarial Standards of Practice require an actuary to identify risks that may be reasonably expected to impact the Plan's financial stability. The following risks have been identified by the Plan's actuary as potential risks that may have a material impact on the Plan's funding, including future contribution requirements and the ability to pay benefits when due, if experience varies from that expected in the valuation.

The identification of the risks below does not imply that the Plan *will* experience adverse consequences. Rather, the identification of the specific risks is intended to equip the Plan Sponsor with qualitative information regarding the environment in which the Plan is currently operating, and the potential risks inherent in the environment. Although the provision of quantitative analysis with respect to the risks below is outside of the scope of the annual valuation, we are available to provide additional analysis with respect to any or all of the risks identified below, including stochastic modeling, forecasting, and cash flow projections, at your request, to better assist your organization with understanding these risks. Please contact your plan administrator or actuary at The Angell Pension Group, Inc. ("Angell") for more information.

#### **I. Identification and Measurement of Risk:**

- **Investment Risk** – Pension plans are subject to the inherent risks associated with the various investment classes that comprise the asset portfolio. Plans with higher allocation toward equities may be subject to higher risk, both positive and negative. To the extent that the Plan's investments return a rate less than necessary to maintain certain asset levels, there is a risk that the Plan could become underfunded, and additional cash contributions would be required from the Plan sponsor to make benefit payments when they become due.
- **Asset/Liability Mismatch Risk** – Pension plan investments have a "duration" over which investments are expected to mature. Similarly, pension plan liabilities have a duration based on the length of time over which benefits are expected to be paid. To the extent that the duration of the assets is different from the liabilities, changes in asset values may not be matched by changes in plan liabilities. We recommend you consult with your financial advisor to discuss the Plan's asset duration. Additional information regarding the Plan's liability duration is presented below in the Plan Maturity Measures section.
- **Interest Rate Risk** – Pension plan liabilities are calculated using various assumptions, including a defined set of interest rates. As the interest rates for valuing pension liabilities decrease, the liability increases. As liabilities increase, the funded status of the Plan may decrease. Government plans are subject to an interest discount rate based on the allocation of the Plan's assets, and the capital market outlook for each investment class in the portfolio. If the actual investment returns are lower than the assumed return, the Plan may experience funding shortfall, and higher required contributions in future years.

- Mortality/Longevity Risk – Pension plans provide benefits payable for the lifetimes of Plan participants. To the extent participants live longer than expected, the Plan may become underfunded as a result of higher benefit payments than expected over the life of the Plan. For funding purposes, the mortality tables are selected by the Plan actuary and used to calculate the Plan liability for cash contribution purposes. We continue to monitor that the tables are appropriate based on the specific demographics of your Plan.
- Retirement/Demographic Risk – Pension plan participants may be assumed to retire at various ages. The assumption is based on prior experience of the Plan, and industry-wide retirement trends. To the extent actual retirements deviate from the expected retirements, the Plan may experience liability gains or losses. Plans with actively accruing benefit formulas may be subject to additional risk of underfunding as participants continue to age and earn benefit accruals, particularly if accruals continue after the Plan's Normal Retirement Age. Plans that offer a full or partially subsidized early retirement provision may be subject to additional risk of being underfunded if participants retire earlier than expected.
- Other Demographic Risk – To the extent that demographic experience varies from that assumed in the funding calculations, the Plan may experience funding shortfalls and higher contributions in future years. We monitor the demographic experience under the Plan each year, and recommend changes to the demographic assumptions as necessary. We are available to provide specific demographic analysis upon request.
- Contribution Risk – The continued funding of the Plan depends on the Plan Sponsor maintaining certain levels of funding that are sufficient to pay benefits as they become due. To the extent the Plan Sponsor does not make sufficient contributions, the Plan may be subject to underfunding.

## **II. Plan Maturity Measures**

As identified above, pension plans have inherent longevity risks. Plan maturity measures provide qualitative guidance on the longevity risks of a specific plan. We are including the following maturity measures and are available to consult with you regarding the impact that various decisions may have on your Plan's maturity and the ability of your Plan to meet future benefit obligations.

The duration of the actuarial accrued liability as of the measurement date is 11 years.

The duration of the Plan's liabilities provides a measure of the sensitivity of the liability to changes in the interest rate. A higher duration value implies a higher sensitivity to interest rate changes. As outlined in the risk identification disclosures, your Plan is exposed to Interest Rate Risk, and with the duration measure of 11 years, the liability can be reasonably expected to change by approximately 1.1%, for every 10 basis point shift in the effective interest rate.

The Plan's liability duration also provides numerical information with respect to the longevity of the Plan, by outlining the period over which the Plan may reasonably expect to make distributions. If participants live longer than expected, the Plan's exposure to longevity/mortality risk may increase, as a result of making payments longer than expected.

Finally, the duration is also relevant for measuring the balance of the Plan liabilities compared to the Plan assets. As outlined in the risk identification disclosures, your Plan may be exposed to asset/liability mismatch if the duration measures are not aligned. You may wish to discuss the Plan's asset duration with your investment advisor, to better assess this identified risk. We are available to provide you with additional information for mitigating the risks presented, as they relate to your Plan's duration. Please contact your consultant at Angell for more information.

### III. Historical Plan Values

The following historical values are included to provide additional background regarding the Plan.

- Actual Asset Rate of Return/Discount Rate - The Plan's historical asset rate of return is shown below for the current and prior measurement dates, based on asset information provided by the Plan Sponsor.

The discount rate corresponds to the liability value as of the measurement date. The discount rate can be used as a benchmark for the growth in the Plan's liability from the beginning of the Plan year to the end of the Plan year. To the extent the actual rate of return on Plan assets does not keep pace with the discount rate, the Plan may experience a funding shortfall, which may increase the required minimum contributions in future years.

Valuation Year	2020	2019	2018	2017	2016	2015
Actual Rate of Return on Assets	TBD	17.73%	-5.20%	15.03%	6.03%	-1.37%
Discount Rate	7.0%	7.0%	7.0%	7.0%	7.0%	7.25%

- Actual contributions compared to actuarially recommended contributions - The Plan's actual contributions compared to actuarially recommended contributions are shown below for the current and prior measurement dates, based on asset information provided by the Plan Sponsor.

Valuation Year	2020	2019	2018	2017	2016	2015
Actual contributions	TBD	3,966,825	4,001,646	4,817,011	4,609,223	3,277,265
Actuarially recommended contributions	2,089,386	2,390,534	2,379,603	2,648,702	3,356,514	2,749,435
Ratio of Actual to Recommended	TBD	165.94%	168.16%	181.86%	137.32%	119.20%

**South Central Connecticut Regional Water  
Authority Retirement Plan (Union)**

**Actuarial Valuation as of January 1, 2020  
For the Plan Year Beginning January 1,  
2020 and Ending December 31, 2020**

Prepared By:

**The Angell Pension Group, Inc.  
88 Boyd Avenue  
East Providence, RI 02914  
Telephone (401) 438-9250**

March 2020

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## I. INTRODUCTION

This report presents the results of the actuarial valuation as of January 1, 2020 of the South Central Connecticut Regional Water Authority Retirement Plan (Union). The purpose of this report is to illustrate the current position of the plan and to present information which will assist the South Central Connecticut Regional Water Authority in determining the contribution levels which are sufficient to meet accruing liabilities and to maintain the plan on a sound actuarial basis.

The major provisions of the plan upon which this valuation is based are outlined in Section IV.

The mortality assumptions have been updated to reflect most recent mortality improvements issued by the Society of Actuaries. Please see Section VI for a description of the actuarial assumptions. The change in the mortality assumptions increased the Actuarial Present Value of Accumulated Plan Benefits by \$1,445,113.

This report was based on information submitted to our firm in the form of census data and ancillary material pertaining to the plan. We have not independently verified, nor do we make any representation as to, the accuracy of such information.

I meet the GASB No. 67 and 68 Qualification Standards of the American Academy of Actuaries, based on my education, experience and continuing education.



---

Jeffrey C. Liter, PhD, EA, MAAA  
Enrolled Actuary

March 5, 2020

Date

## II. SUMMARY OF PLAN CONTRIBUTIONS

### A. Normal Cost Calculation

The Normal Cost is the portion of plan benefit costs which is allocated to the current plan year by the Actuarial Cost Method being used. The following represents the development of the Normal Cost under the chosen Actuarial Cost Method, unless the method was changed to determine the normal cost on an individual participant basis.

1	Actuarial Present Value of Projected Benefits		
	a. Actives	\$	13,151,331
	b. Terminated Vested	\$	1,335,984
	c. Retired	\$	14,826,930
	d. Total		29,314,245
2	Actuarial Value of Plan Assets		23,131,886
3	Present Value of Future Normal Cost [(1) - (2)]		6,182,359
4	Present Value of Future Service for active participants under retirement age		466.9856
5	Active Participants under retirement age		79
6	Normal Cost [(3) / (4) * (5)]		1,045,870
7	Normal Cost with 1/2 Year Interest	\$	1,081,857

### III. PARTICIPANT DATA

	<u>2020</u>	<u>2019</u>
<b>A. Classification of Funded Participants</b>		
1. Actives Under Retirement Age	79	87
2. Actives Over Retirement Age	4	4
3. Terminated Vested (includes transfers)	40	38
4. Retired and Beneficiaries Receiving Benefits	108	107
5. Other	-	-
6. Total	231	236
<b>B. Averages for Active Participants</b>		
1. Average Eligibility Age	29.35	29.64
2. Average Attained Age	57.51	56.96
3. Average Compensation	N/A	N/A
4. Average Past Service	28.71	27.87

## IV. SUMMARY OF PLAN PROVISIONS

*Plan Effective Date:* May 15, 1969

*Eligibility Requirements:* A person must be represented by Local 12160, United Steel Workers of America, AFL-CIO and must work 1,000 hours per year. Employees hired on or after April 15, 2010 are ineligible to participate.

*Year of Service:* Elapsed time starting with the first day of the month of covered employment.

*Normal Retirement Date:* First day of the month coincident with or next following age 65

*Accrued Benefit (Normal Retirement Benefit):* Years of Service multiplied by Benefit Multiplier in effect. Years of Service for Accrued Benefit purposes are limited to 40.

### Recent Benefit Multipliers

Effective April 15, 2011, \$62.00 per month  
Effective April 15, 2012, \$63.00 per month  
Effective April 15, 2015, \$63.50 per month  
Effective April 15, 2016, \$64.00 per month  
Effective April 15, 2017, \$64.50 per month  
Effective April 15, 2018, \$66.50 per month  
Effective January 1, 2020, \$67.50 per month  
Effective January 1, 2021, \$68.50 per month  
Effective January 1, 2022, \$69.50 per month

*Normal Form of Benefit:* Life Annuity

*Early Retirement Benefit:* Age 55 with 3 Years of Vesting Service – 3% annual reduction from NRA

If a participant's age plus continuous service is greater than or equal to 80, no Early Retirement reduction is applied.

*Death Benefit:* A spousal Joint & 50% Survivor Annuity is provided for participants with 3 or more Years of Continuous Service. The benefit is unreduced for early payment.

## IV. SUMMARY OF PLAN PROVISIONS

*Disability:* Total and Permanent Disability with 10 or more Years of Continuous Service

The benefit payable upon Disability Retirement in an amount equal to the Accrued Benefit plus 50% of additional Credited Service that would have been earned assuming continuous employment until Normal Retirement Age

*Vesting:* 3 Years of Continuous Service 50%  
4 Years of Continuous Service 75%  
5 Years of Continuous Service 100%

*Disability Benefit:* Continued Accrual until payments start (on or after age 55). Benefits are reduced for early payment in the same manner as Early Retirement benefits.

*Changes:* New benefit rate multipliers were adopted since the last valuation cycle.

## V. ACTUARIAL COST METHODS

*Actuarial Cost Method:* Costs have been computed in accordance with the Aggregate Actuarial Cost method.

The normal cost is computed in the aggregate equal to the excess of the actuarial present value of future benefits less the actuarial value of assets divided by a temporary annuity. The temporary annuity equals the actuarial present value of future service divided by the current number of active participants who have not attained their assumed retirement age.

Actuarial gains and losses are not separately amortized under this method. Rather, the impact is spread through the normal cost component over the future working lifetime of the participant.

*Asset Valuation Method:* An actuarial smoothing method is being used; refer to Section VII C.

*Changes:* No changes have been made in actuarial methods since the prior valuation.

## VI. ACTUARIAL ASSUMPTIONS

### For the Current Plan Year

<i>Pre-Retirement Discount Rate:</i>	7.00%
<i>Post-Retirement Discount Rate:</i>	7.00%
<i>Pre-Retirement Mortality:</i>	PubG-2010 Total Employee with Scale MP-2019 generational improvements (M/F)
<i>Post-Retirement Mortality:</i>	PubG-2010 Healthy Annuitant with Scale MP-2019 generational improvements (M/F)
<i>Post-Retirement Disability Mortality:</i>	PubG-2010 Disabled Retiree with Scale MP-2019 generational improvements (M/F)
<i>Incidence of Disability:</i>	Sample Rates Attached
<i>Withdrawal Rate:</i>	Crocker-Sarason-Strait Table T-5
<i>Salary Scale:</i>	N/A
<i>Assumed Retirement Age:</i>	Sample Rates Attached
<i>Expense Load:</i>	Interest is assumed to be net of expenses
<i>Percent Married:</i>	It is assumed that 80% of participants will be married. It is further assumed that the male spouse is 3 years older than the female.

### For the Prior Plan Year

<i>Pre-Retirement Discount Rate:</i>	7.00%
<i>Post-Retirement Discount Rate:</i>	7.00%
<i>Pre-Retirement Mortality:</i>	RP-2014 Blue Collar Employee (M/F) with MP-2018 Generational Projection (projected from 2006)
<i>Post-Retirement Mortality:</i>	RP-2014 Blue Collar Healthy Annuitant (M/F) with MP-2018 Generational Projection (Projected from 2006)
<i>Post-Retirement Disability Mortality:</i>	RP-2014 Disabled Retiree (M/F) with MP-2018 Generational Projection (Projected from 2006)
<i>Incidence of Disability:</i>	Sample Rates Attached
<i>Withdrawal Rate:</i>	Crocker-Sarason-Strait Table T-5
<i>Salary Scale:</i>	N/A
<i>Assumed Retirement Age:</i>	Sample Rates Attached
<i>Expense Load:</i>	Interest is assumed to be net of expenses
<i>Percent Married:</i>	It is assumed that 80% of participants will be married. It is further assumed that the male spouse is 3 years older than the female.

## VI. ACTUARIAL ASSUMPTIONS (continued)

### Sample Retirement Rates

Age	Number of Assumed Retirements Per Thousand Employees
55-64	20
65-69	200
70	1,000

Special Retirement Rates for Employees who are assumed to retire under the Rule of 80 options are as follows:

Ages 55-60	90
Ages 61-70	same as above table

### Sample Disability Rates

Age	Assumed Disability Percentage (Male and Female)
25	0.100%
30	0.112%
35	0.129%
40	0.164%
45	0.221%
50	0.347%
55	0.712%
60	1.260%
64	1.790%



## South Central Connecticut Regional Water Authority Retirement Plan (Union)

Summary of Actuarial Assumptions as of January 1, 2020

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Discount Rate	7.00%	South Central Connecticut Regional Water Authority	The discount rate is developed based on the allocation of the Plan's assets by investment class and the capital market outlook for each investment class. This information is provided by the Plan's investment advisor.	None
Salary Scale	N/A	N/A	Plan benefits do not depend on salary.	None
Taxable Wage Base Increase	N/A	N/A	Plan benefits do not depend on the taxable wage base.	None
Pre-Retirement Mortality	PubG-2010 Employee (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. private pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Employee (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in post-retirement mortality and disability mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 5.55%.
Post-Retirement Mortality	PubG-2010 Healthy Annuitant (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. private pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Healthy Annuitant (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement mortality and disability mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 5.55%.
Disability Mortality	PubG-2010 Disabled Retiree (M/F) with MP-2019 Generational Projection	The Angell Pension Group, Inc.	The Society of Actuaries published a study of retirement experience in 2019. The Pub-2010 tables presented in the study represent the most current and complete benchmarks of U.S. private pension plan mortality experience. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2019 projection scale.	The mortality tables changed from the RP-2014 Disabled Retiree (M/F) with MP-2018 Generational Projection (Projected from 2006) as of the prior valuation date, January 1, 2019. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement mortality and post-retirement mortality, increased the Actuarial Present Value of Accumulated Plan Benefits as of the current valuation date, January 1, 2020, by 5.55%.

# South Central Connecticut Regional Water Authority Retirement Plan (Union)

Summary of Actuarial Assumptions as of January 1, 2020

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Disability Rates	<div>Age      Assumed Disability (M/F)</div> <div>25              0.100%</div> <div>30              0.112%</div> <div>35              0.129%</div> <div>40              0.164%</div> <div>45              0.221%</div> <div>50              0.347%</div> <div>55              0.712%</div> <div>60              1.260%</div> <div>64              1.790%</div>	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Withdrawal Rates	Crocker-Sarason-Strait Table T-5	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Retirement Rates	<div>Assumed Retirements Per</div> <div>Age      Thousand Employees</div> <div>55-64              20</div> <div>65-69              200</div> <div>70              1,000</div> <div>Rule of 80 Retirement Rates:</div> <div>55-60              90</div> <div>61-70      same as above</div>	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Administrative Expense Load	None	South Central Connecticut Regional Water Authority	The discount rate is assumed to be net of administrative expenses.	None
Percent Married	80% of males and 80% of females are assumed to be married.	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan.	None
Age of Spouse	The female spouse is assumed to be 3 years younger than the male spouse.	The Angell Pension Group, Inc.	This assumption was set based on a review of experience under the Plan and general experience from similarly situated plans.	None

## VII. STATEMENT OF PLAN ASSETS AS OF JANUARY 1, 2020

A.	<u>Description</u>	<u>Market Value</u>
	Proportionate Share of Master Trust custodied by	
1.	Bank of America	\$ 23,723,928
B.	<u>Reconciliation of Assets</u>	
1.	Market Value as of Prior Valuation Date	\$ 20,251,636
2.	Employer Contributions	1,449,250
3.	Employee Contributions	-
4.	Net Investment Income (before expenses)	3,701,280
5.	Expenses	(123,079)
6.	Benefit Payments	(1,555,159)
7.	Transfers and Adjustment	-
8.	Market Value as of Current Valuation Date	\$ 23,723,928
	 Estimated Rate of Return	 17.72%
C.	<u>Actuarial Value of Assets</u>	
1.	Actuarial Value as of Prior Valuation Date	\$ 21,655,646
2.	Employer Contributions	1,449,250
3.	Employee Contributions	-
4.	Expenses	(123,079)
5.	Benefit Payments	(1,555,159)
6.	Transfers and Adjustment	-
7.	Expected Earnings (7.00% x (1+.5 x (2+3+4+5+6)))	1,507,881
8.	Expected Assets as of Current Valuation Date	\$ 22,934,539
9.	Market Value as of Current Valuation Date	23,723,928
10.	Actuarial Value (9+75%*(8-9))	23,131,886

## VIII. ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

	<u>January 1, 2020</u>	<u>January 1, 2019</u>
1. Actives	\$ 11,304,744	\$ 10,549,099
2. Terminated Vested	1,335,984	1,094,377
3. Retired and Beneficiaries Receiving Payments	13,928,395	12,614,567
4. Disabled	898,535	601,453
5. Other	<u>-</u>	<u>-</u>
6. Total Accrued Benefits	\$ 27,467,658	\$ 24,859,496
 Non-Vested Actives included above	 \$ -	 \$ -

### Basis of Determination

The actuarial assumptions used are described in Section VI of this report.

## **SECTION IX**

### **RECONCILIATION OF PLAN PARTICIPANTS**

	<b>Active</b>	<b>Vested Terminated</b>	<b>Retired /Beneficiaries</b>	<b>Total</b>
Participants included in the prior valuation	91	38	107	236
Data corrections				0
Terminated vested	-1	1		0
Retired	-6		6	0
Died with beneficiary				0
Died without beneficiary			-5	-5
Transferred out	-1			-1
Transferred in				0
Lump sum				0
Terminated non-vested				0
Rehired				0
Data adjustment				0
New alternate payees		1		1
Participants included in the January 1, 2020 valuation	83	40	108	231

Note: There are 3 police officers who have in the past periodically transferred to/from the Salaried and Union plans

## Section X

### Additional Actuarial Disclosures

Actuarial Standards of Practice require an actuary to identify risks that may be reasonably expected to impact the Plan's financial stability. The following risks have been identified by the Plan's actuary as potential risks that may have a material impact on the Plan's funding, including future contribution requirements and the ability to pay benefits when due, if experience varies from that expected in the valuation.

The identification of the risks below does not imply that the Plan *will* experience adverse consequences. Rather, the identification of the specific risks is intended to equip the Plan Sponsor with qualitative information regarding the environment in which the Plan is currently operating, and the potential risks inherent in the environment. Although the provision of quantitative analysis with respect to the risks below is outside of the scope of the annual valuation, we are available to provide additional analysis with respect to any or all of the risks identified below, including stochastic modeling, forecasting, and cash flow projections, at your request, to better assist your organization with understanding these risks. Please contact your plan administrator or actuary at The Angell Pension Group, Inc. ("Angell") for more information.

#### **I. Identification and Measurement of Risk:**

- **Investment Risk** – Pension plans are subject to the inherent risks associated with the various investment classes that comprise the asset portfolio. Plans with higher allocation toward equities may be subject to higher risk, both positive and negative. To the extent that the Plan's investments return a rate less than necessary to maintain certain asset levels, there is a risk that the Plan could become underfunded, and additional cash contributions would be required from the Plan sponsor to make benefit payments when they become due.
- **Asset/Liability Mismatch Risk** – Pension plan investments have a "duration" over which investments are expected to mature. Similarly, pension plan liabilities have a duration based on the length of time over which benefits are expected to be paid. To the extent that the duration of the assets is different from the liabilities, changes in asset values may not be matched by changes in plan liabilities. We recommend you consult with your financial advisor to discuss the Plan's asset duration. Additional information regarding the Plan's liability duration is presented below in the Plan Maturity Measures section.
- **Interest Rate Risk** – Pension plan liabilities are calculated using various assumptions, including a defined set of interest rates. As the interest rates for valuing pension liabilities decrease, the liability increases. As liabilities increase, the funded status of the Plan may decrease. Government plans are subject to an interest discount rate based on the allocation of the Plan's assets, and the capital market outlook for each investment class in the portfolio. If the actual investment returns are lower than the assumed return, the Plan may experience funding shortfall, and higher required contributions in future years.

- Mortality/Longevity Risk – Pension plans provide benefits payable for the lifetimes of Plan participants. To the extent participants live longer than expected, the Plan may become underfunded as a result of higher benefit payments than expected over the life of the Plan. For funding purposes, the mortality tables are selected by the Plan actuary and used to calculate the Plan liability for cash contribution purposes. We continue to monitor that the tables are appropriate based on the specific demographics of your Plan.
- Retirement/Demographic Risk – Pension plan participants may be assumed to retire at various ages. The assumption is based on prior experience of the Plan, and industry-wide retirement trends. To the extent actual retirements deviate from the expected retirements, the Plan may experience liability gains or losses. Plans with actively accruing benefit formulas may be subject to additional risk of underfunding as participants continue to age and earn benefit accruals, particularly if accruals continue after the Plan's Normal Retirement Age. Plans that offer a full or partially subsidized early retirement provision may be subject to additional risk of being underfunded if participants retire earlier than expected.
- Other Demographic Risk – To the extent that demographic experience varies from that assumed in the funding calculations, the Plan may experience funding shortfalls and higher contributions in future years. We monitor the demographic experience under the Plan each year, and recommend changes to the demographic assumptions as necessary. We are available to provide specific demographic analysis upon request.
- Contribution Risk – The continued funding of the Plan depends on the Plan Sponsor maintaining certain levels of funding that are sufficient to pay benefits as they become due. To the extent the Plan Sponsor does not make sufficient contributions, the Plan may be subject to underfunding.

## **II. Plan Maturity Measures**

As identified above, pension plans have inherent longevity risks. Plan maturity measures provide qualitative guidance on the longevity risks of a specific plan. We are including the following maturity measures and are available to consult with you regarding the impact that various decisions may have on your Plan's maturity and the ability of your Plan to meet future benefit obligations.

The duration of the actuarial accrued liability as of the measurement date is 12 years.

The duration of the Plan's liabilities provides a measure of the sensitivity of the liability to changes in the interest rate. A higher duration value implies a higher sensitivity to interest rate changes. As outlined in the risk identification disclosures, your Plan is exposed to Interest Rate Risk, and with the duration measure of 12 years, the liability can be reasonably expected to change by approximately 1.2%, for every 10 basis point shift in the effective interest rate.

The Plan's liability duration also provides numerical information with respect to the longevity of the Plan, by outlining the period over which the Plan may reasonably expect to make distributions. If participants live longer than expected, the Plan's exposure to longevity/mortality risk may increase, as a result of making payments longer than expected.

Finally, the duration is also relevant for measuring the balance of the Plan liabilities compared to the Plan assets. As outlined in the risk identification disclosures, your Plan may be exposed to asset/liability mismatch if the duration measures are not aligned. You may wish to discuss the Plan's asset duration with your investment advisor, to better assess this identified risk. We are available to provide you with additional information for mitigating the risks presented, as they relate to your Plan's duration. Please contact your consultant at Angell for more information.

### III. Historical Plan Values

The following historical values are included to provide additional background regarding the Plan.

- Actual Asset Rate of Return/Discount Rate - The Plan's historical asset rate of return is shown below for the current and prior measurement dates, based on asset information provided by the Plan Sponsor.

The discount rate corresponds to the liability value as of the measurement date. The discount rate can be used as a benchmark for the growth in the Plan's liability from the beginning of the Plan year to the end of the Plan year. To the extent the actual rate of return on Plan assets does not keep pace with the discount rate, the Plan may experience a funding shortfall, which may increase the required minimum contributions in future years.

Valuation Year	2020	2019	2018	2017	2016	2015
Actual Rate of Return on Assets	<i>TBD</i>	17.72%	-5.19%	15.32%	6.07%	-1.40%
Discount Rate	7.0%	7.0%	7.0%	7.0%	7.0%	7.25%

- Actual contributions compared to actuarially recommended contributions - The Plan's actual contributions compared to actuarially recommended contributions are shown below for the current and prior measurement dates, based on asset information provided by the Plan Sponsor.

Valuation Year	2020	2019	2018	2017	2016	2015
Actual contributions	TBD	1,449,250	1,291,023	1,883,594	2,180,354	1,820,902
Actuarially recommended contributions	1,081,857	840,922	918,295	1,126,333	1,815,386	1,707,164
Ratio of Actual to Recommended	TBD	172.34%	140.59%	167.23%	120.10%	106.66%



**South Central Connecticut  
Regional Water Authority  
Retired Employees'  
Contributory Welfare Trust**

**Actuarial Valuation as of January 1, 2020**

Prepared By:

**The Angell Pension Group, Inc.  
88 Boyd Avenue  
East Providence, RI 02914  
Telephone (401) 438-9250**

March, 2020

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## I. INTRODUCTION

The purpose of this report is to present certain financial information relative to the South Central Connecticut Regional Water Authority Retired Employees' Contributory Welfare Trust for funding purposes.


The report presents information regarding the South Central Connecticut Regional Water Authority Retired Employees' Contributory Welfare Trust as of January 1, 2020 for the fiscal year beginning June 1, 2020 and ending May 31, 2021. This information includes the determination of Annual Recommended Contribution (ARC) and Funding Progress.

This report was based on information submitted to our firm in the form of census data, medical insurance premiums, rates, and other plan claims information and descriptions of Plan benefits provided by South Central Connecticut Regional Water Authority. Although the data has been reviewed for reasonableness, an audit of the data was not performed. We have relied on the information provided, including plan provisions and participant data, as complete and accurate.

The valuation of the underlying medical claims costs assumes the premium rates, in connection with the aging assumption, reflect a reasonable expectation of the expected claims costs for the self insured pre-65 retiree coverage. It is recommended that the premium rates be established by an actuary specializing in health care pricing.

This report has been prepared based on an 7.00% discount rate and assumes South Central Connecticut Regional Water Authority will continue to make contributions to the OPEB Trust in the amount of the Annual Recommended Contribution. Discontinuing contributions to the OPEB Trust at a level below the Annual Recommended Contribution may result in the requirement of using a lower discount rate in future valuations which will increase the present value of future benefit obligations.

I meet the Qualification Standards of the American Academy of Actuaries, based upon our education, experience and continuing education.



Simon R. Encarnacion, F.S.A., E.A.  
Consulting Actuary

March 6, 2020

Date

## II. DESCRIPTIVE INFORMATION

*Plan Description:* Single-employer, defined benefit postretirement health, dental, and life insurance program.

*Groups Covered & Eligibility:* South Central Connecticut Regional Water Authority employees become eligible for retiree benefits if they retire on or after (a) age 65 with 10 years of service, or (b) the sum of age and service is at least 80 ("points"), with at least 10 years of service.

*Benefit Formula:* Medical coverage for retirees and spouses over 65 is provided by an indemnity plan. Medical and dental coverage for retirees and dependents under 65 is provided by the Authority's self-insurance plan. Death benefits (i.e., life insurance) are funded on a pay-as-you-go basis.

### **Union Employees and Spouses**

- Until they are eligible for Medicare, retired employees under 65 are subject to the same contribution levels and increases in contributions as active employees.
- Employees who retired on or before April 15, 2006 receive full benefits from the Medicare Supplemental Plan F (or comparable coverage) and Medicare Part B reimbursement for pensioner and spouse if qualified.
- Employees who retire after April 15, 2006 receive benefits from the Medicare Supplemental Plan F (or comparable coverage) and Medicare Part B reimbursement for pensioner and for such of their dependents as qualified at levels in place as of December 31, 2005. Retirees and qualifying dependents are responsible for costs above \$158.14 per individual per month for the Medicare Supplemental Plan and \$78.00 per individual per month for Medicare Part B.
- Retired employees who were hired on or after January 1, 2006 are entitled to continue in the group health coverage by paying the entire monthly cost for the appropriate coverage based on their age. Coverage ends at age 65.

## II. DESCRIPTIVE INFORMATION (cont'd)

*Benefit Formula*  
(cont'd):

### **Nonunion Employees and Spouses**

- Until they are eligible for Medicare, retired employees under 65 are subject to the same contribution levels and increases in contributions as active employees.
- Employees who retired on or before January 1, 2006 receive full benefits from the Medicare Supplemental Plan F (or comparable coverage) and Medicare Part B reimbursement for pensioner and spouse if qualified.
- Employees who retire after January 1, 2006 receive benefits from the Medicare Supplemental Plan F (or comparable coverage) and Medicare Part B reimbursement for pensioner and for such of their dependents as qualified at levels in place as of December 31, 2004. Retirees and qualifying dependents are responsible for costs above \$158.14 per individual per month for the Medicare Supplemental Plan and \$66.60 per individual per month for Medicare Part B.
- Retired employees who were hired on or after January 1, 2005 are entitled to continue in the group health coverage by paying the entire monthly cost for the appropriate coverage based on their age. Coverage ends at age 65.

Life Insurance coverage of \$13,000 is available for all eligible retirees.

*Significant Events:*      None.

### III. ACTUARIAL METHODS

*Measurement Date:* January 1, 2020 for all purposes.

*Actuarial Cost Method:* Costs have been computed in accordance with the Entry Age Actuarial Cost Method.

The service cost is the sum of the service costs for all participants. For a current participant, the individual service cost is (a) the present value of future benefits as of the participant's entry age divided by (b) the present value of future compensation as of the participant's entry age. For other than a current active participant, the service cost equals \$0.

The accrued liability is the sum of the individual accrued liabilities for all participants. The individual accrued liability is equal to the present value of future benefits less the service cost accrual rate multiplied by the present value of future compensation.

*Asset Valuation Method:* South Central Connecticut Regional Water Authority has established a fund, separate and apart from the general revenues of the Authority known as the OPEB Trust Fund. The Authority has historically funded the Annual Required Contribution to the OPEB Trust Fund.

For purposes of determining the unfunded actuarial liability, the actuarial value of assets is equal to the fair market value.

*Amortization of Unfunded Liabilities:* The portion of unfunded actuarial liabilities included in the ARC is determined using the level dollar 30 year closed amortization beginning on June 1, 2008. As of the valuation date, 20 years remain to be amortized.

*Census Information:* Census data and premium information as of January 1, 2020 were used to calculate the ARC.

## IV. ACTUARIAL ASSUMPTIONS

Actuarial assumptions are estimates as to the occurrence of future events impacting the costs of the plan such as mortality rates, withdrawal rates, medical trend rates, retirement ages, rates of investment earnings, etc. The assumptions have been chosen to anticipate the long-term experience of the plan.

### Assumptions for the Current Valuation

*Discount Rate:* 7.00%

South Central Connecticut Regional Water Authority's OPEB Trust Fund has been established. As a result, the discount rate selected reflects the estimated proportionate amounts of the Authority and Trust's assets expected to be used to fund benefits under this Plan. It is assumed that if the Trust were fully prefunded the long term rate of return would be 7.00%; if the Trust was not partially prefunded the long term rate of return would be approximately 3.26% based on the S&P Municipal Bond 20 Year High Grade Rate Index.

*Long Term Rate of Return  
on Assets:* 7.00%

*Healthy Mortality:* PubG.H-2010 Employee and Healthy Annuitant with Scale MP-2019 generational improvements (Male/Female)

*Turnover:* Sarason Crocker Straight Table T-5 with a minimum of 2%. Sample rates below:

Age	Rate
25	7.7%
35	6.3%
45	4.0%
55	2.0%

*Disability:* None assumed.

#### IV. ACTUARIAL ASSUMPTIONS (cont'd)

*Health Care Cost Trend Rates*  
*Medical:* 6.71% per year graded down using the Getzen Model to an ultimate rate of 4.04% per year.

*Health Care Cost Trend Rates*  
*Dental:* 4.50% per year.

*Retirement Rates:* Retirement eligibility is (a) age 65 with 10 years of service or (b) 80 points (age plus service) with at least 10 years of service. The following retirement rates are assumed for pre-65 retirement:

Age	Rate
Before 55	0%
55-60	8%
61	6%
62	15%
63-64	6%
65	100%

*Participation:*

95% of eligible future retirees that receive a portion of their premium paid by South Central Connecticut Regional Water Authority (i.e., union employees hired before January 1, 2006 and non-union employees hired before January 1, 2005) are assumed to elect medical coverage under the Plan.

50% of eligible future retirees that are allowed to continue non-COBRA coverage under the Plan, but contribute 100% of the premium (i.e., union employees hired on or after January 1, 2006 and non-union employees hired on or after January 1, 2005), are assumed to elect medical coverage under the Plan.

100% of current retirees are assumed to participate for their lifetime.

*Plan Election:* 35% of eligible retirees are assumed to elect Blue Care pre-65 coverage. 50% of eligible retirees are assumed to elect Century Preferred pre-65 coverage. 15% of eligible retirees are assumed to elect High Deductible pre-65 coverage.



#### IV. ACTUARIAL ASSUMPTIONS (cont'd)

*Health Care Claims Costs/Premiums:* The premium rates, in connection with the aging assumption below, reflect a reasonable expectation of the expected claims costs for the self insured pre-65 retiree coverage. It is recommended that the rates be established by an actuary specializing in health care pricing. See Per Capita Medical Costs in Section IX for additional details.

*Marital Status:* 55% of future retirees are assumed to be married and elect spousal coverage. Female spouses are assumed to be 3 years younger than males. It is assumed that 15% of active participants who retire have at least one covered child under age 26 and elect family coverage.

Actual spousal and children coverage, including dates of birth if available, are used for current retirees.

*Salary Scale:* 4.00%

<i>Aging Assumption:</i>	Age	Rate
	<75	2.5%
	75-84	1.5%
	85-89	0.5%
	90+	0.0%

## V. CHANGES IN ACTUARIAL ASSUMPTIONS

The table below indicates which assumptions, other than the Health Care Working Rates, have changed from the prior valuation. In the opinion of the actuary, these changes were made to better reflect current expectations of future experience.

	January 1, 2019	January 1, 2020
<i>Mortality:</i>	PubG.H-2010 Employee and Healthy Annuitant with Scale MP-2018 generational improvements (Male/Female)	PubG.H-2010 Employee and Healthy Annuitant with Scale MP-2019 generational improvements (Male/Female)
<i>Health Care Cost Trend Rates:</i>	7.00% per year graded down using the Getzen Model to an ultimate rate of 3.84% per year.	6.71% per year graded down using the Getzen Model to an ultimate rate of 4.04% per year.

*NOTE: Actuarial Assumptions are changed to reflect current expectations of future experience. The change in mortality tables decreased liabilities by 0.22%. The change in health care cost trend rates increased liabilities by 0.22%.*

## VI. CALCULATION OF ANNUAL RECOMMENDED CONTRIBUTION

The Annual Recommended Contribution (ARC) of the employer is the portion of the present value of future benefits that is to be recognized in the current fiscal year. It is made of the following components:

- A. Normal cost, or the portion of the APV attributable to service in the current year
- B. Amortization of the unfunded AAL-EAN resulting from plan amendments, actuarial (gains)/losses or initial adoption(s) of the plan
- C. Interest Cost, or the expected increase in the AAL attributable to the passage of time (during the year)

**A. Normal cost as of January 1, 2020** \$ 201,437

**B. Amortization of Unfunded Liability**

- 1. Amortization of initial unfunded liability \$ 1,683,300
- 2. Amortization of UAAL: plan amendments 0
- 3. Amortization of UAAL: (gains)/losses 0
- 4. Amortization of UAAL, [(1) + (2) + (3)] \$ 1,683,300

**C. Interest on Normal Cost and Unfunded Liability**

- 1. Normal Cost + Amortization of UAAL, [(A) + (B.4)] \$ 1,884,737
- 2. Interest to May 31, 2021, end of fiscal year, at 7.00% \$ 189,593

<b>D. Annual Recommended Contribution for the Fiscal Year Ending May 31, 2021, [(A) + (B.4) + (C.2)]:</b>	<b>\$ 2,074,330</b>
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**E. Expected Benefit Payments**

- 1. Expected Authority premium payments, net of retiree contributions \$ 1,635,303
- 2. Expected allocation for implicit rate subsidy \$ 218,912
- 3. Total Expected Benefit Payment, [(1) + (2)] \$ 1,854,215

**F. Increase in ARC over Pay-as-you-go [(D) - (E.3)]** \$ 220,115

<b>G. Recommended Cash Contribution to Trust, [(D)-(E.2)]</b>	<b>\$ 1,855,418</b>
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<b>H. Expected Minimum Cash Contribution, [(E.1) - FMVA]</b> <i>FMVA is the fair market value of assets as of January 1, 2020</i>	<b>\$ 0</b>
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## VI. CALCULATION OF ANNUAL RECOMMENDED CONTRIBUTION (cont'd)

The following is a summary of past and current ARCs and the employer contributions:

Fiscal Year End May 31	Annual Recommended Contribution	Actual Plan Contributions	Percentage of Annual OPEB Cost Contributed
2009	1,114,000	1,435,225	128.80%
2010	1,330,000	1,276,308	96.00%
2011	1,330,510	1,330,510	100.00%
2012	1,427,435	1,427,435	100.00%
2013	1,717,500	1,717,500	100.00%
2014	2,727,659	2,428,461	89.00%
2015	2,604,191	2,655,179	102.00%
2016	2,506,691	2,485,516	99.20%
2017	2,486,586	2,485,216	99.90%
2018	2,509,764	2,289,292	91.20%
2019	2,552,006	2,310,104	90.50%
2020	2,242,921	TBD	TBD
2021	2,074,330	TBD	TBD

## VII. SCHEDULE OF FUNDING PROGRESS

### A. Actuarial Present Value of Total Projected Benefits

Actuarial Present Value of Total Projected Benefits (APV) is the actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Set forth below are the results of the valuation of the present value of future benefits as of the valuation date, January 1, 2020.

1. Actuarial Present Value of total projected benefits	
a. APV, Active participants total	\$ 14,098,034
b. APV, Retirees	13,327,374
c. Total APV, [(a) + (b)]	\$ 27,425,408

### B. Actuarial Accrued Liability

Actuarial Accrued Liability (AAL-EAN) is defined as the actuarial present value of benefits allocated to all periods prior to the valuation date. The Entry Age Normal (EAN) Actuarial Cost Method was used to allocate costs to various years. Set forth below are the results of the valuation of the AAL-EAN as of the valuation date, January 1, 2020.

2. Actuarial Accrued Liability	
a. AAL-EAN, Active participants total	\$ 12,497,963
b. AAL-EAN, Retirees	13,327,374
c. Total AAL-EAN, [(a) + (b)]	\$ 25,825,337
3. Fair Value of Assets as of January 1, 2020	\$ 7,707,645
4. Statement of Funded Status as of January 1, 2020	
a. Actuarial Present Value - total projected benefits, [(1.c)]	\$ 27,425,408
b. Future accruals for active participants	1,600,071
c. Actuarial Accrued Liability, [(2.c)]	25,825,337
d. Fair Value of Assets, [(3)]	7,707,645
e. Funded status, [(d) - (c)]	\$ (18,117,692)
f. Unfunded Actuarial Accrued Liability (UAAL)	18,117,692
5. Funding Percentage as of January 1, 2020	29.85%

## VII. SCHEDULE OF FUNDING PROGRESS (cont'd)

### C. Summary Breakout of Actuarial Accrued Liability

	<u>Pre-65</u>	<u>Post-65</u>	<u>Total</u>
1. Retired Participants			
a. Retirees	\$2,078,961	\$6,364,791	\$8,443,752
b. Dependents	<u>\$1,692,227</u>	<u>\$2,331,099</u>	<u>\$4,023,326</u>
c. Total	\$3,771,188	\$8,695,890	\$12,467,078
2. Active Participants - Hired Prior to Soft Freeze			
a. Active Participants - Fully Eligible			
i. Actives	\$2,113,947	\$1,485,117	\$3,599,064
ii. Dependents	<u>\$2,574,969</u>	<u>\$590,586</u>	<u>\$3,165,555</u>
iii. Total	\$4,688,916	\$2,075,703	\$6,764,619
b. Active Participants - Not Fully Eligible			
i. Actives	\$1,631,375	\$1,146,094	\$2,777,469
ii. Dependents	<u>\$1,896,078</u>	<u>\$434,878</u>	<u>\$2,330,956</u>
iii. Total	\$3,527,453	\$1,580,972	\$5,108,425
3. Active Participants - Hired After Soft Freeze			
a. Actives	\$129,991	\$0	\$129,991
b. Dependents	<u>\$146,237</u>	<u>\$0</u>	<u>\$146,237</u>
c. Total	\$276,228	\$0	\$276,228
4. Total Medical Accrued Liability			
a. Retirees	\$5,954,274	\$8,996,002	\$14,950,276
b. Dependents	<u>\$6,309,511</u>	<u>\$3,356,563</u>	<u>\$9,666,074</u>
c. Total	\$12,263,785	\$12,352,565	\$24,616,350
5. Life Insurance			
a. Retirees	n/a	n/a	\$860,297
b. Actives	<u>n/a</u>	<u>n/a</u>	<u>\$348,690</u>
c. Total	n/a	n/a	\$1,208,987

The "soft freeze" occurred on January 1, 2005 for Non-Union employees and January 1, 2006 for Union employees.

## VII. SCHEDULE OF FUNDING PROGRESS (cont'd)

### D. Fair Value of Assets - Reconciliation of Plan Assets through January 1, 2020

The following table projects the reconciliation of the change in the market value of assets over the past plan year based upon financial information provided by the South Central Connecticut Regional Water Authority:

1. Market Value of Assets as of January 1, 2019		\$ 6,187,150
2. Additions during the year		
a. Town's contributions to OPEB Trust	2,145,426	
b. Town's benefit outside of OPEB Trust	0	
c. Estimated allocation for implicit rate subsidy	215,123	
d. Retiree contributions	209,132	
e. Interest earned (net of expenses)	1,124,420	
f. Total additions		\$ 3,694,101
3. Disbursements during the year		
a. Actual benefit payments	\$ (1,958,483)	
b. Estimated allocation for implicit rate subsidy	(215,123)	
c. Other disbursements from fund	0	
d. Total disbursements		\$(2,173,606)
4. Market Value of Assets as of January 1, 2020		\$ 7,707,645
5. Estimated investment rate of return (net of expenses)		17.61%

## VII. SCHEDULE OF FUNDING PROGRESS (cont'd)

### E. Funded Ratio and UAAL as a Percentage of Covered Payroll (\$000s)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
1/1/2009	N/A	N/A	9,892	N/A	17,900	55.3%
1/1/2010	N/A	N/A	13,130	N/A	17,100	76.8%
1/1/2011	N/A	N/A	13,878	N/A	17,800	78.0%
1/1/2012	N/A	N/A	16,172	N/A	18,100	89.3%
1/1/2013	1,032	27,978	26,946	3.7%	N/A	N/A
1/1/2014	1,433	27,296	25,863	5.2%	N/A	N/A
1/1/2015	2,294	27,432	25,138	8.4%	N/A	N/A
1/1/2016	3,187	28,031	24,844	11.4%	N/A	N/A
1/1/2017	4,643	39,284	34,641	11.8%	N/A	N/A
1/1/2018	5,925	30,298	24,373	19.6%	23,217	105.0%
1/1/2019	6,187	26,376	20,189	23.5%	23,941	84.3%
1/1/2020	7,708	25,825	18,117	29.8%	24,118	75.1%



## VIII. AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Actuarial Accrued Liability must be amortized over 30 or fewer years. The 30 year level dollar amortization has been established on an closed amortization basis as of January 1, 2008. Each year, the Unfunded Actuarial Accrued Liability is amortized over the remaining period. As of January 1, 2020, the amortization is over 18 years.

	<u>Initial Amount</u>	<u>Date of First Charge or (Credit)</u>	<u>Amort. Period (years)</u>	<u>Amort. Interest Rate</u>	<u>Outstanding Balance (boy)</u>	<u>Amort. Charge or (Credit)</u>
Initial UAAL	18,117,692	1/1/2020	18.00	7.00%	18,117,692	1,683,300
UAAL from amendments	0	N/A	N/A	N/A	0	0
UAAL (gain)/loss	0	N/A	N/A	N/A	0	0

## IX. PER CAPITA MEDICAL COSTS

### A. Pre-65 Per Capita Claims Costs, January 1, 2020

	<u>Union</u>	<u>Non-Union</u>
1. Current monthly premium for employee coverage		
a. Blue Care	1,152.65	1,171.92
b. Century Preferred	1,049.29	1,233.65
c. High Deductible	844.32	844.32
d. Dental	46.54	47.84
e. Average Premium for individual coverage [35% x (a) + 50% x (b) + 15%(c)+(d)]	1,101.26	1,201.49
2. Current monthly premium for employee +1 coverage		
a. Blue Care	2,478.19	2,519.63
b. Century Preferred	2,255.99	2,652.36
c. High Deductible	1,814.54	1,814.54
d. Dental	76.46	85.30
e. Average Premium for individual coverage [35% x (a) + 50% x (b) + 15%(c)+(d)]	2,344.00	2,565.53
3. Current monthly premium for family coverage		
a. Blue Care	3,121.24	3,173.48
b. Century Preferred	2,843.60	3,341.53
c. High Deductible	2,284.56	2,284.56
d. Dental	112.49	115.38
e. Average Premium for individual coverage [35% x (a) + 50% x (b) + 15%(c)+(d)]	2,969.41	3,239.55
4. Expected monthly premium per person [100% x (1.e) + 46.75% x (2.e) + 8.25% x (3.e)]/1.55	1,575.52	1,721.38
5. Average age of covered participants:	51.10	51.10
6. Factor to adjust to age 65 per assumptions [1.025 ^ (65.00 - (3))]	140.95%	140.95%
7. Estimate 2020 individual claims costs adjusted to age 65 basis: [(4) x (6)]	2,220.68	2,426.26

## IX. PER CAPITA MEDICAL COSTS (cont'd)

### B. Post-65 Per Capita Claims Costs, January 1, 2020

1.	Current monthly premium for coverage per person - Un-Capped		
a.	Group Retiree Plan F (#002)		220.83
b.	Medicare Part B Premium		144.60
c.	Current monthly premium for coverage per person [(a) + (b)]		365.43
2.	Average age of covered participants		77.95
3.	Factor to adjust to age 65 per assumptions [1.025 ^ (65.00 - 75.00)*1.015^(75 - (2))]		74.76%
4.	Estimate 2020 individual claims costs adjusted to age 65 basis: [(1) x (3)]		273.21
		<u>Union</u>	<u>Non-Union</u>
5.	Current monthly premium for coverage per person- Capped		
a.	Group Retiree Plan F (#002)	158.14	158.14
b.	Medicare Part B Premium	78.00	66.60
c.	Current monthly premium for coverage per person [(a) + (b)]	236.14	224.74

### C. Sample projected un-capped monthly claims costs per age:

<u>Age</u>	<u>Aging Assumption</u>	<u>Union Per Capita Health</u>	<u>Non-Union Per Capita Health</u>
40	2.50%	1,197.81	1,308.70
45	2.50%	1,355.22	1,480.68
50	2.50%	1,533.30	1,675.25
55	2.50%	1,734.79	1,895.39
60	2.50%	1,962.76	2,144.46
<b>65</b>	2.50%	273.21	273.21
70	2.50%	309.11	309.11
75	1.50%	349.73	349.73
80	1.50%	376.76	376.76
85	0.50%	405.87	405.87
90+	0.00%	416.12	416.12

## IX. PER CAPITA MEDICAL COSTS (cont'd)

<b>D. Historical Pre-65 Monthly Premiums</b>	<u>1/1/2018</u>	<u>1/1/2019</u>	<u>1/1/2020</u>
1. Blue Care Union			
a. Employee Coverage	1,248.72	1,176.31	1,152.65
b. Employee Coverage + 1	2,684.76	2,529.05	2,478.19
c. Family Coverage	3,381.72	3,185.30	3,121.24
2. Century Preferred Union			
a. Employee Coverage	1,173.06	1,070.62	1,049.29
b. Employee Coverage + 1	2,522.10	2,301.86	2,255.99
c. Family Coverage	3,179.01	2,901.41	2,843.60
3. Blue Care Non-Union			
a. Employee Coverage	1,270.28	1,195.98	1,171.92
b. Employee Coverage + 1	2,731.09	2,571.35	2,519.63
c. Family Coverage	3,440.14	3,238.62	3,173.48
4. Century Preferred Non-Union			
a. Employee Coverage	1,353.13	1,259.89	1,233.65
b. Employee Coverage + 1	2,909.26	2,708.77	2,652.36
c. Family Coverage	3,665.39	3,412.58	3,341.53
5. High Deductible Plan			
a. Employee Coverage	923.02	859.21	844.32
b. Employee Coverage + 1	1,984.12	1,846.92	1,814.54
c. Family Coverage	2,499.61	2,326.66	2,284.56
6. Dental Union			
a. Employee Coverage	46.30	44.90	46.54
b. Employee Coverage + 1	76.07	73.77	76.46
c. Family Coverage	111.91	108.53	112.49
7. Preventative Dental			
a. Employee Coverage	24.76	24.01	N/A
b. Employee Coverage + 1	42.09	40.82	N/A
c. Family Coverage	69.82	67.71	N/A

## IX. PER CAPITA MEDICAL COSTS (cont'd)

	<u>1/1/2018</u>	<u>1/1/2019</u>	<u>1/1/2019</u>
<b>D. Historical Pre-65 Monthly Premiums (cont'd)</b>			
8. Comprehensive Dental			
a. Employee Coverage	47.59	46.15	47.84
b. Employee Coverage + 1	84.86	82.30	85.30
c. Family Coverage	114.79	111.32	115.38
<b>E. Historical Post-65 Monthly Premiums</b>			
1. Group Retiree Plan F (#002)	233.78	223.04	220.83
2. BC65 Plan 81	103.60	103.60	103.60
3. BC65 High Option (#001)	115.75	115.75	115.75
4. BC65 High Option (#004)	335.10	365.81	365.81
5. Medicare Part B Premiums	134.00	134.00	144.60

## X. PARTICIPANT DATA

### A. Reconciliation of Participant Data

	<u>Actives</u>	<u>Retirees &amp; Spouses</u>	<u>Total</u>
Total as of January 1, 2019	276	240	516
New Entrants/Rehires	20	n/a	20
Terminations	(6)	n/a	(6)
Active deaths	-	n/a	0
New retirees	(15)	15	0
New beneficiaries	n/a	1	1
Retiree/beneficiary deaths	n/a	(8)	(8)
Dropped coverage	n/a	-	0
Data adjustments	-	0	0
Total as of January 1, 2020	275	248	523

### B. Age and Service Distribution of Members

#### 1. Eligible Active Members:

Complete Years of Service as of January 1, 2020

<u>Attained Age</u>	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>Total</u>
Under 25	8	-	-	-	-	-	-	8
25 - 29	14	2	-	-	-	-	-	16
30-34	13	7	2	-	-	-	-	22
35-39	7	4	2	1	-	-	-	14
40-44	7	3	3	7	2	-	-	22
45-49	10	6	2	6	6	6	-	36
50-54	5	-	2	9	10	6	5	37
55-59	11	3	6	8	5	10	20	63
60-64	4	5	2	7	2	9	16	45
65+	-	1	2	2	1	1	5	12
Total	79	31	21	40	26	32	46	275

## X. PARTICIPANT DATA (cont'd)

### 2. Retired Members:

<i>Attained Age</i>	<i>Retiree</i>	<i>Spouse</i>	<i>Total</i>
Under 55	1	3	4
55-59	10	2	12
60-64	21	11	32
65-69	43	19	62
70-74	40	18	58
75-79	22	17	39
80-84	19	4	23
85+	14	4	18
Total	170	78	248

## X. PARTICIPANT DATA (cont'd)

C. Participant Statistics	<u>1/1/2020</u>	<u>1/1/2019</u>
1. Active Participants		
Number fully eligible	88	94
Number not fully eligible	187	182
Total number of actives	275	276
Number hired before soft freeze	145	162
Number hired after soft freeze	130	114
Average age	50.0	50.6
Average years of service	16.3	17.3
Average future service until retirement	9.9770	9.5449
Average future service full eligibility	9.7373	9.2637
2. Retired Members and Spouses:		
Retirees	170	159
Spouses	78	81
Total Retirees and Spouses	248	240
Average age of Retirees	72.3	72.9
Average age for Retirees under age 65	61.1	61.3
Average age for Retirees over age 65	74.9	75.0
Average future lifetime	16.6782	15.5549
3. Average age of all active and retired participants under age 65	51.10	51.37



## South Central Connecticut Regional Water Authority Retirement Plans

### Illustration of Hypothetical Level Funding Results - 7-year Window

#### PROJECTIONS OF CONTRIBUTIONS AND FUNDED PERCENTAGE

Fiscal Year End	Valuation Interest Rate and Investment Return	Salaried Plan Contribution	Union Plan Contribution	Total	Salaried Funded Percentage (MVA/EANAL) at Fiscal Year End	Union Funded Percentage (MVA/EANAL) at Fiscal Year End
5/31/2017	7.00%	5,001,252	2,175,166	7,176,418	66.56%	79.71%
5/31/2018	7.00%	4,341,521	1,519,216	5,860,737	74.08%	83.90%
5/31/2019	7.00%	3,897,275	1,239,632	5,136,907	73.24%	82.75%
5/31/2020	7.00%	3,301,077	1,314,032	4,615,109	80.91%	85.53%
5/31/2021	7.00%	4,011,587	1,782,590	5,794,177	86.89%	89.93%
5/31/2022	7.00%	4,011,587	1,782,590	5,794,177	93.22%	94.52%
5/31/2023	7.00%	4,011,587	1,782,590	5,794,177	100.00%	100.00%
<b>Total:</b>		<b>28,575,886</b>	<b>11,595,816</b>	<b>40,171,702</b>		

Assumptions: Based on 2020 Actuarial Valuation reports: (1) interest rate and investment return as noted above and (2) 2010 Public Plan General Mortality Tables (M/F) with MP-2019 Generational Projections are used for Union Plan, and 2010 Public Plan General Above Median Tables (M/F) with MP-2019 are used for Salaried Plan, in 2020 and later years.

Plan Provisions: Reflect latest Union rate increases negotiated in 2019.

Assets: Based on 12/31/2019 asset values for both plans.

South Central CT  
Regional Water Authority  
Defined Benefit Plans - Review

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Corporate Client Group Director

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The Kelliher Corbett Group  
at Morgan Stanley

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## Market Commentary

# S&P 500 Index at inflection points

GTM - U.S. | 4

Equities

## S&P 500 Price Index

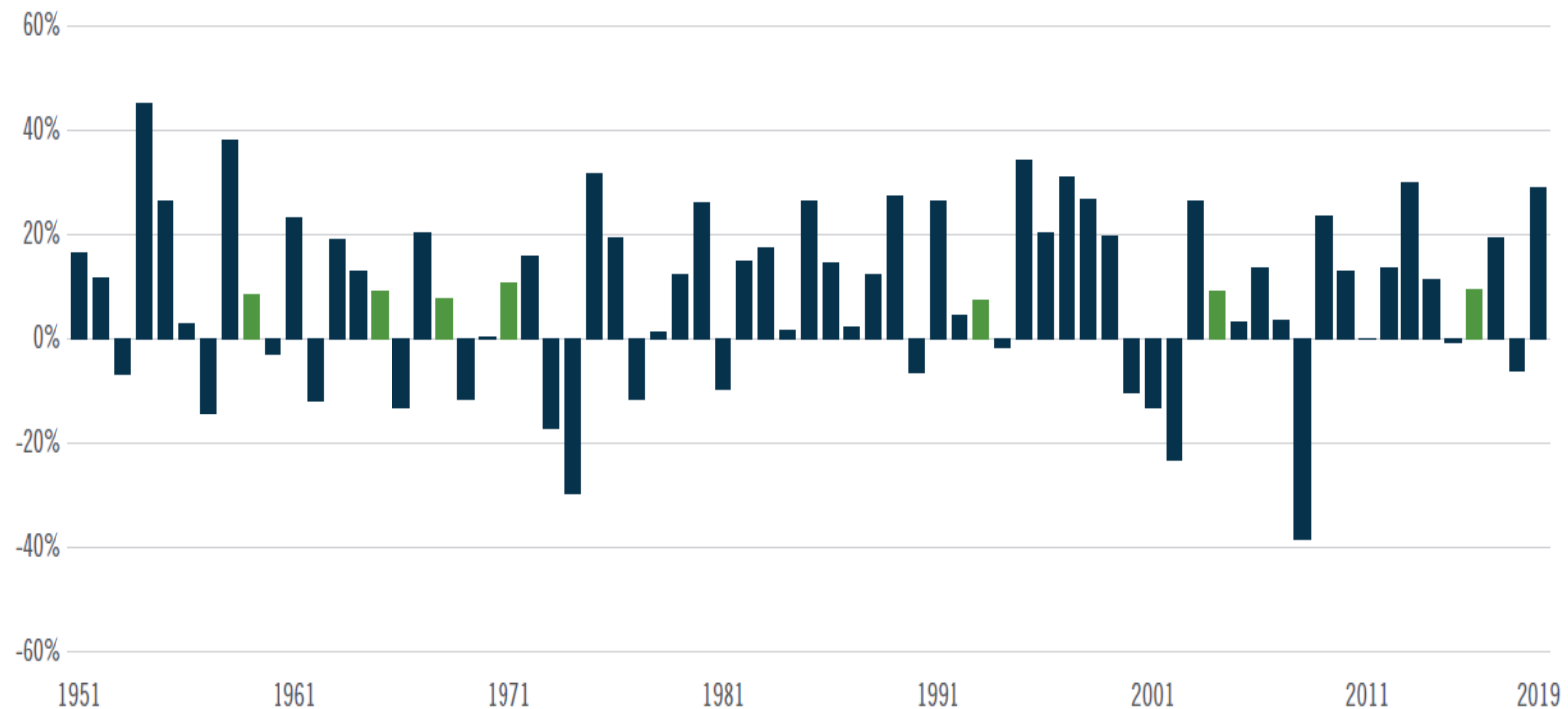


Source: Compustat, FactSet, Federal Reserve, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price to earnings ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of April 8, 2020.

**J.P.Morgan**  
Asset Management

Over the course of modern history, U.S. Stocks have had an annualized average return of 9.0%, doubling an investor's money every eight years or so, on average. However, this does not mean that you should expect to see 9% returns every year, or even close to it. In fact, only seven times in the last 69 years did we have an annual return that was even close to the average.

## S&P 500® INDEX ANNUAL RETURNS

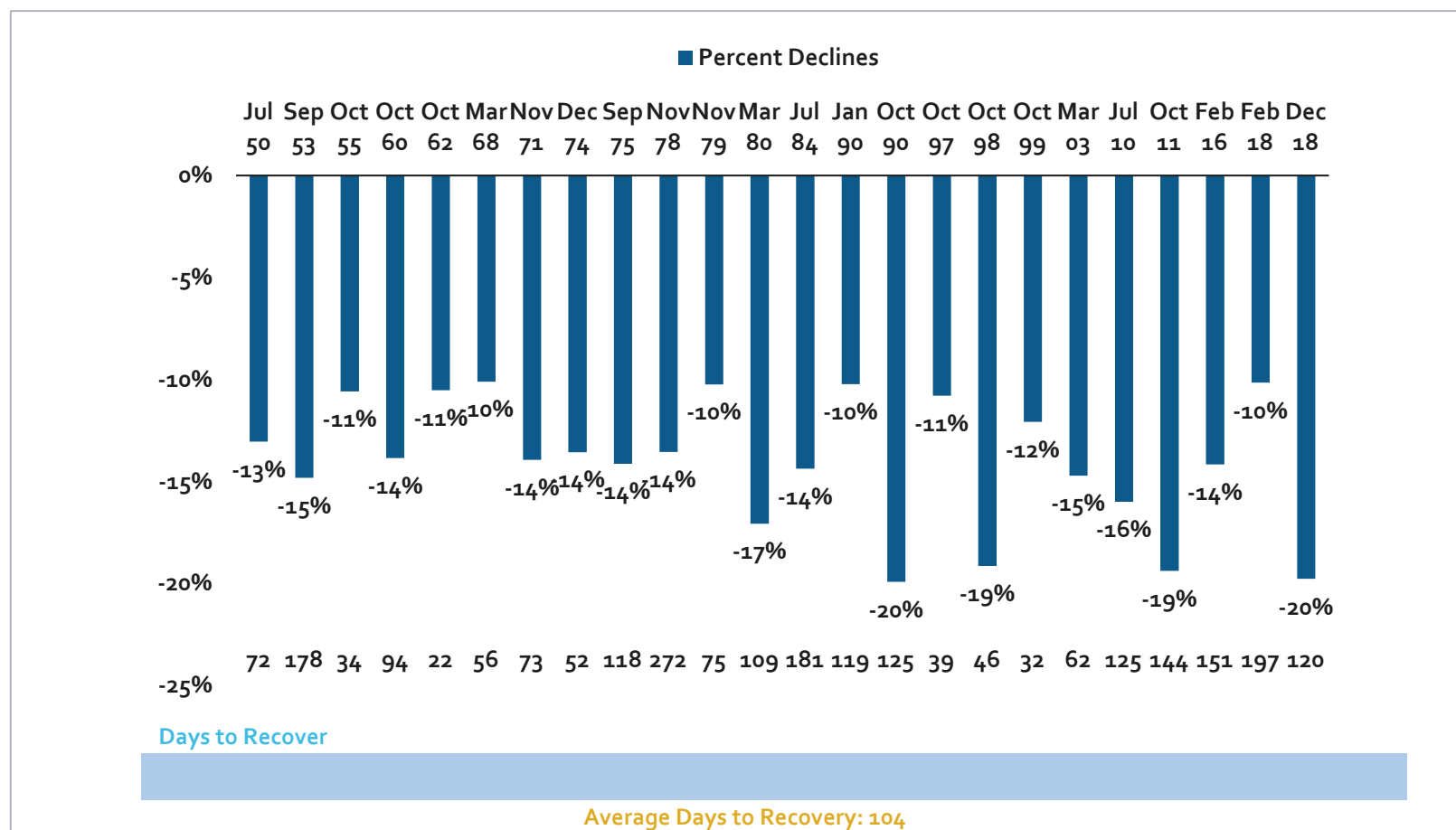


Past performance is not indicative of future results. Data source: YCharts.  
Source: Virtus Investment Partners

# Days to Recovery During S&P 500 Corrections

S&P 500 Corrections: Declines Greater than 10% but less than 20%

January 1950 – December 2019



Source: Bloomberg, Morgan Stanley Wealth Management GIC.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Significant Market Drawdowns

## S&P 500 25%+ Declines and Recoveries Since 1929

Performance as of January 31, 2020

There Have Been 8 Recessions in the Past 86 Years

Downturn from Peak S&P 500	Decline (%)	Duration (Months)	Subsequent Return (%)			Price/Earnings Ratio		Price/Book Ratio		Duration from Trough to Prior Peak (Months)
			3 Months	6 Months	12 Months	Peak	Trough	Peak	Trough	
Sep 1929 - Jun 1932	-86.2	33	93	53	121	20.7	8.5	4.0	0.4	267
Jul 1933 - Mar 1935	-33.9	20	27	46	77	25.7	13.4	1.1	1.0	7
Mar 1937 - Apr 1942	-60.0	62	15	25	54	16.8	7.7	2.1	0.9	45
May 1946 - Jun 1949	-29.6	37	16	23	42	21.3	5.9	1.7	1.0	12
Dec 1961 - Jun 1962	-28.0	6	7	20	33	22.7	17.4	2.1	1.7	14
Nov 1968 - May 1970	-36.1	18	17	23	44	18.2	14.6	2.2	1.6	21
Jan 1973 - Oct 1974	-48.2	21	14	31	38	18.2	6.9	2.0	1.0	69
Nov 1980 - Aug 1982	-27.1	21	36	44	58	8.7	7.7	1.3	1.0	3
Aug 1987 - Dec 1987	-33.5	5	21	21	26	20.2	13.1	2.2	1.6	20
Mar 2000 - Oct 2002	-47.4	31	20	13	36	25.7	17.6	5.0	2.5	56
Oct 2007 - Mar 2009	-55.3	17	40	55	72	17.5	10.2	3.0	1.5	37
Average:	-44.1	24.6	27.8	32.1	54.6	19.6	11.2	2.4	1.3	50.1

Great Depression

Cuban Missile Crisis

1987 Crash

Grey bars indicate periods of recession

It took 37 months after the '09 trough to climb back to the pre-crisis peak.

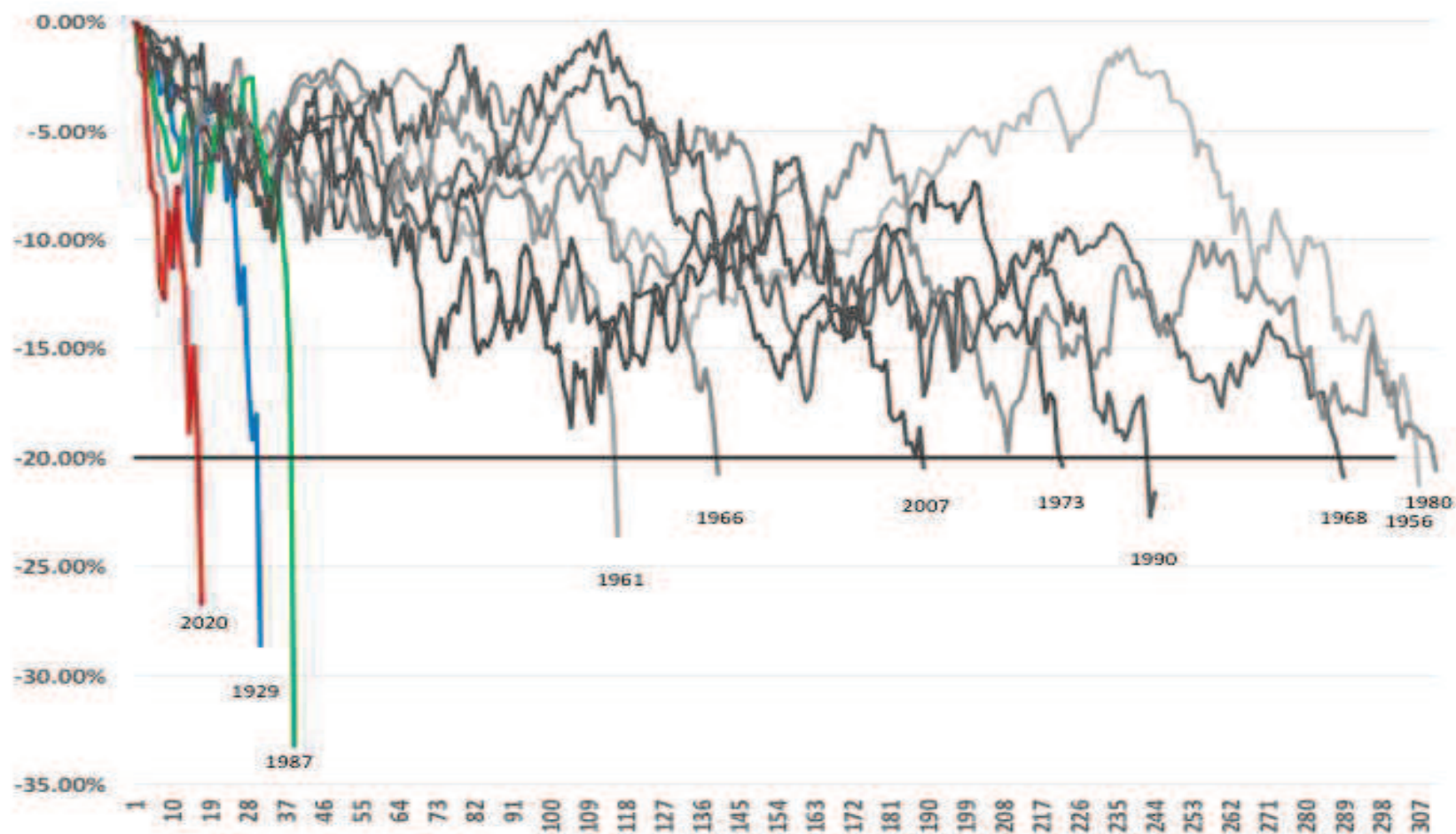
Source: FactSet, Bloomberg, Morgan Stanley Wealth Management GIC. Returns prior to 1988 are price only and subsequent returns are total returns. (1) Downturns defined as declines of 25% or greater.

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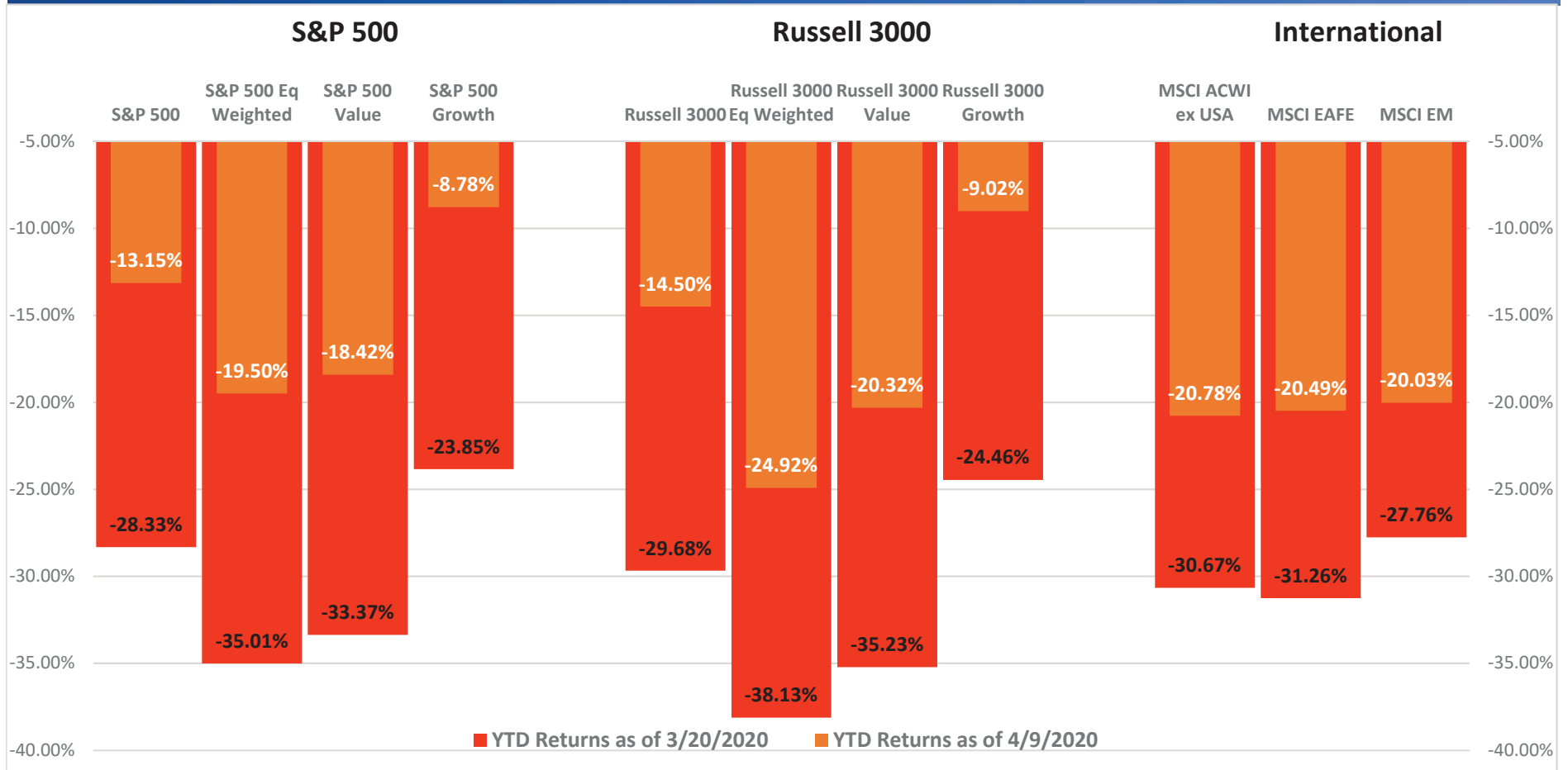
**Exhibit 1: The S&P500 has dropped 20% from peak faster than in any other stock market crash before**

*Performance until the day it surpassed the -20% threshold (vertical axis); Trading days from peak (horizontal axis)*



Source: Bloomberg, Goldmoney Research

# Unusual Degree of Dispersion in the Markets

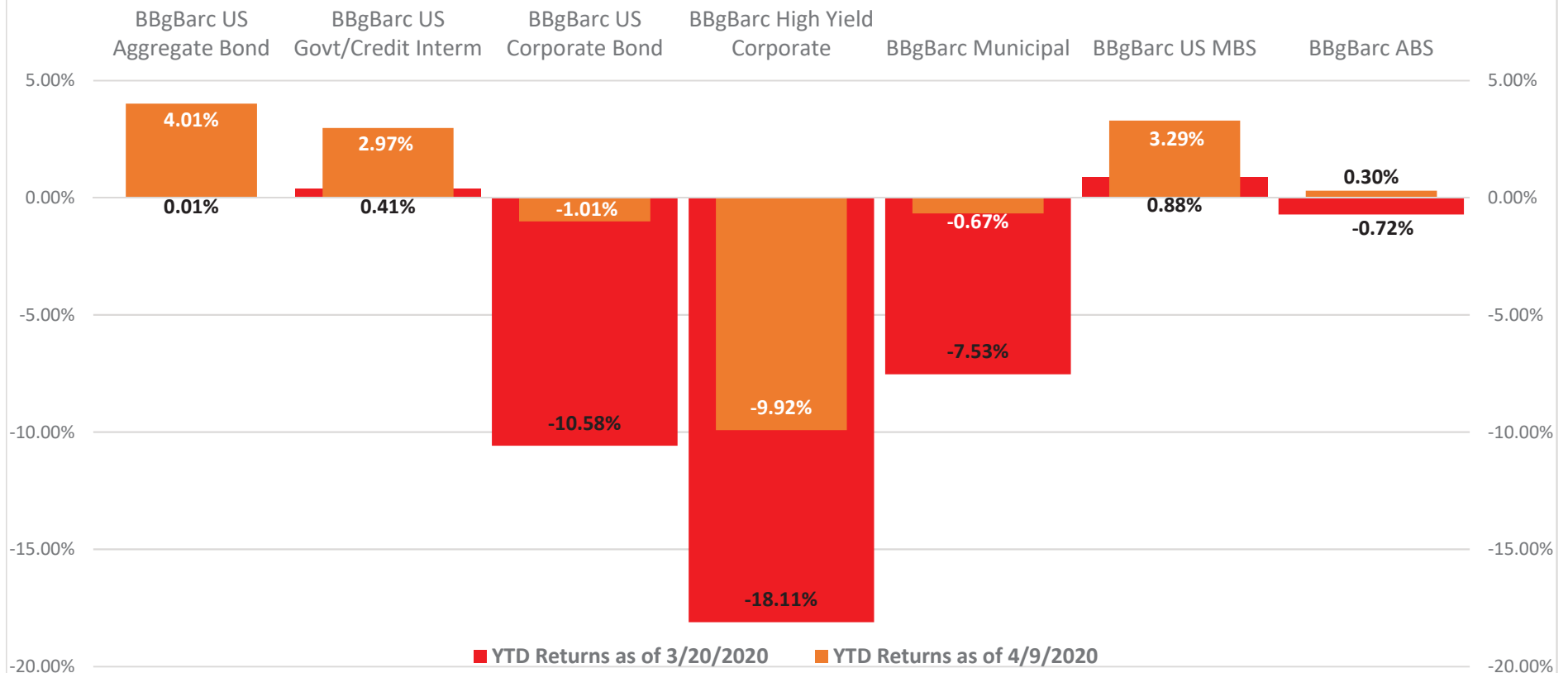


Returns as of 3/20/2020 & 4/9/2020. Data from Morningstar

The information and data contained in this report are from sources considered reliable, but their accuracy and completeness is not guaranteed. This report has been prepared for illustrative purposes only

# Unusual Degree of Dispersion in the Markets

## Fixed Income



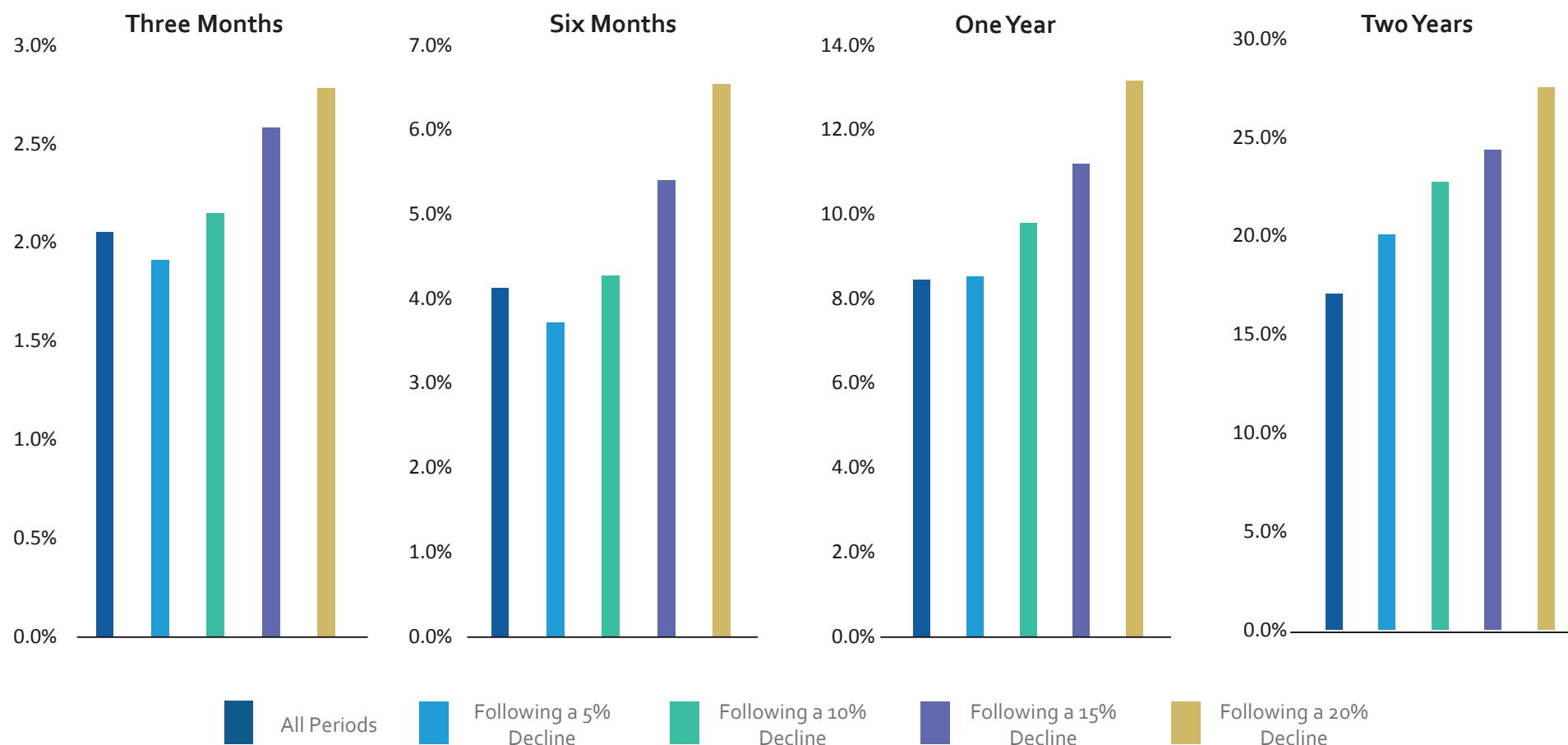
Returns as of 3/20/2020 & 4/9/2020. Data from Morningstar

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# Investors Who Held Through Market Declines Have Earned Above-Average Returns

## MSCI All Country World Index (ACWI) Returns Following Market Selloffs

Data from Jan 1, 1988 to Feb 28, 2020



Source: Bloomberg, Morgan Stanley Wealth Management GIC

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The Kelliher Corbett Group  
at Morgan Stanley

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## IPS Executive Summary

## South Central Connecticut Regional Water Authority

# EXECUTIVE SUMMARY

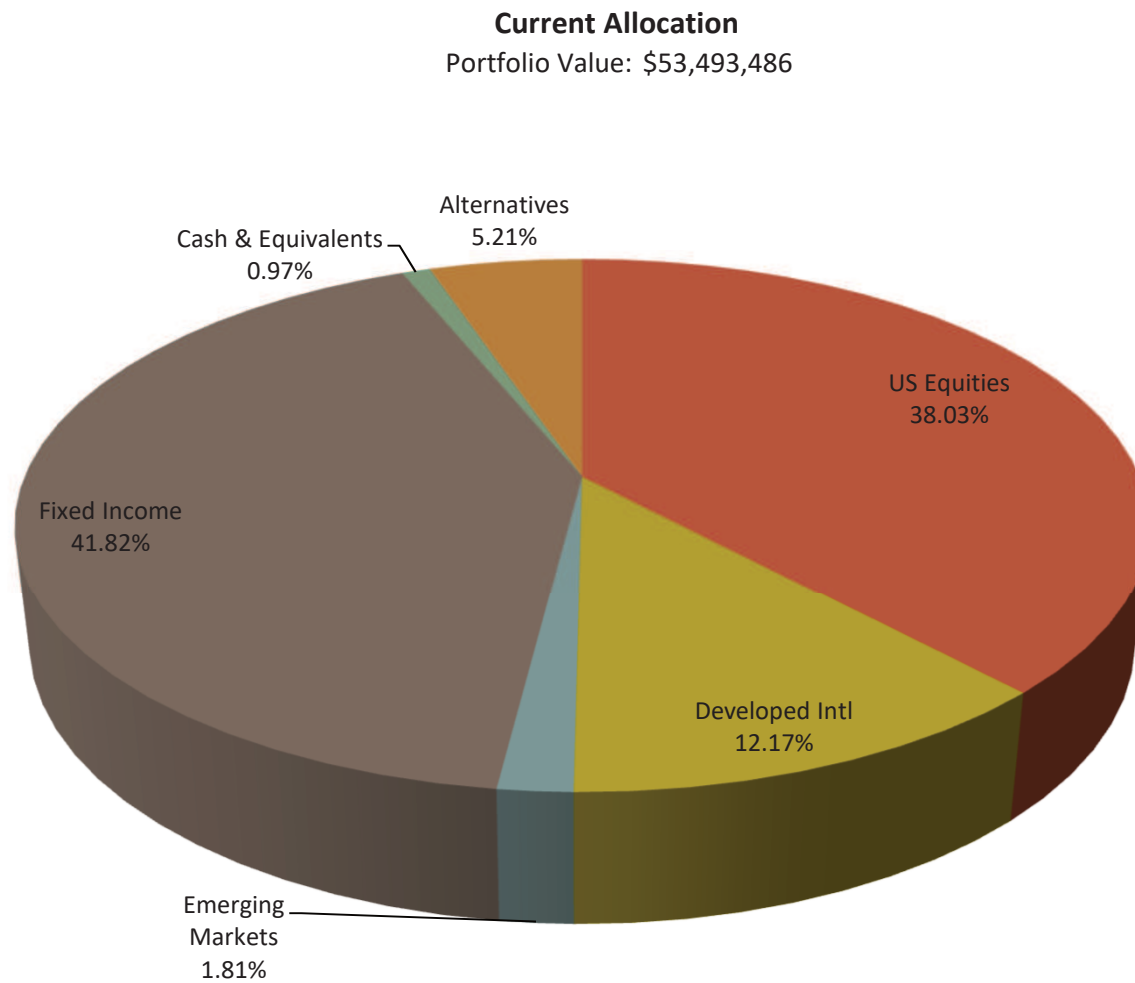
<b><i>Plans Names:</i></b>	This Investment Policy Statement covers three separate portfolios for the South Central Connecticut Regional Water Authority (“the Plans”) <ol style="list-style-type: none"><li>1. South Central Connecticut Regional Water Authority Salaried Employees’ Retirement Plan</li><li>2. South Central Connecticut Regional Water Authority Retirement Plan</li><li>3. South Central Connecticut Regional Water Authority Retired Employees’ Contributory Welfare Trust (VEBA)</li></ol>			
<b><i>Plan Trustee:</i></b>	Broadridge Matrix Trust Company			
<b><i>Primary Investment Custodian:</i></b>	Morgan Stanley & Co			
<b><i>Pension Payroll Custodian:</i></b>	Broadridge Matrix Trust Company			
<b><i>Plan Administrator:</i></b>	Regional Water Authority Board			
<b><i>Plan Actuary:</i></b>	The Angell Pension Group, Inc.			
<b><i>Plan Advisor:</i></b>	The Kelliher Corbett Group at Morgan Stanley			
<b><i>Primary Objectives:</i></b>	<ol style="list-style-type: none"><li>1) Milestone goal of being fully funded, for the pension plans by end of Fiscal Year 2023, excluding ongoing plan service costs, subject to prevailing market conditions</li><li>2) To achieve a long-term rate of return that meets the assumed actuarial rate of return</li></ol>			
<b><i>Target Rate of Return:</i></b>	To meet the assumed actuarial rate of return			
<b><i>Time Horizon:</i></b>	Aligned with actuarial liabilities of the South Central Connecticut Regional Water Authority Pension plans and VEBA			
<b><i>Asset Allocation:</i></b>	<b>Asset Class</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Preferred</b>
	Equities	45%	60%	55%
	Fixed Income	20%	45%	30%
	Alternative/Hedge/Balanced	5%	20%	15%
	The maximum allowable allocation to illiquid securities is 10%			
	When investing in alternative investments, the VEBA plan permits the use of liquid investments only			
<b><i>Cash Limits:</i></b>	The investor wishes to maintain sufficient liquidity to fund benefit obligations			
<b><i>Restrictions:</i></b>	Average bond quality rated Investment Grade or Better (excluding mutual fund/ETFs) Maximum Average Bond Maturity: 20 years Maximum Individual Bond Maturity: 30 years Maximum Portion of Portfolio in a Single Diversified Fund: 20% Maximum Portion of Portfolio in a Single Security/Individual Company: 3% (excluding U.S. Government Securities)			
<b><i>Meeting Frequency:</i></b>	Quarterly			

The Kelliher Corbett Group  
at Morgan Stanley

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## Asset Allocation & Investment Matrices

# SCCT Regional Water Authority - Salary & Union Plans



Total Equity	
52.00%	
<u>% of Total Equity</u>	
US Equity	= 73.13%
Intl Equity	= 26.87%
<u>% of Intl Equity</u>	
Developed Intl	= 87.08%
Emerging Markets	= 12.92%
<u>Equity Style Analysis*</u>	
Value	= 33.76%
Core	= 35.58%
Growth	= 30.66%

Assets as of 3/31/2020

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\*Equity Style Analysis provided by Morningstar "Asset Scan"

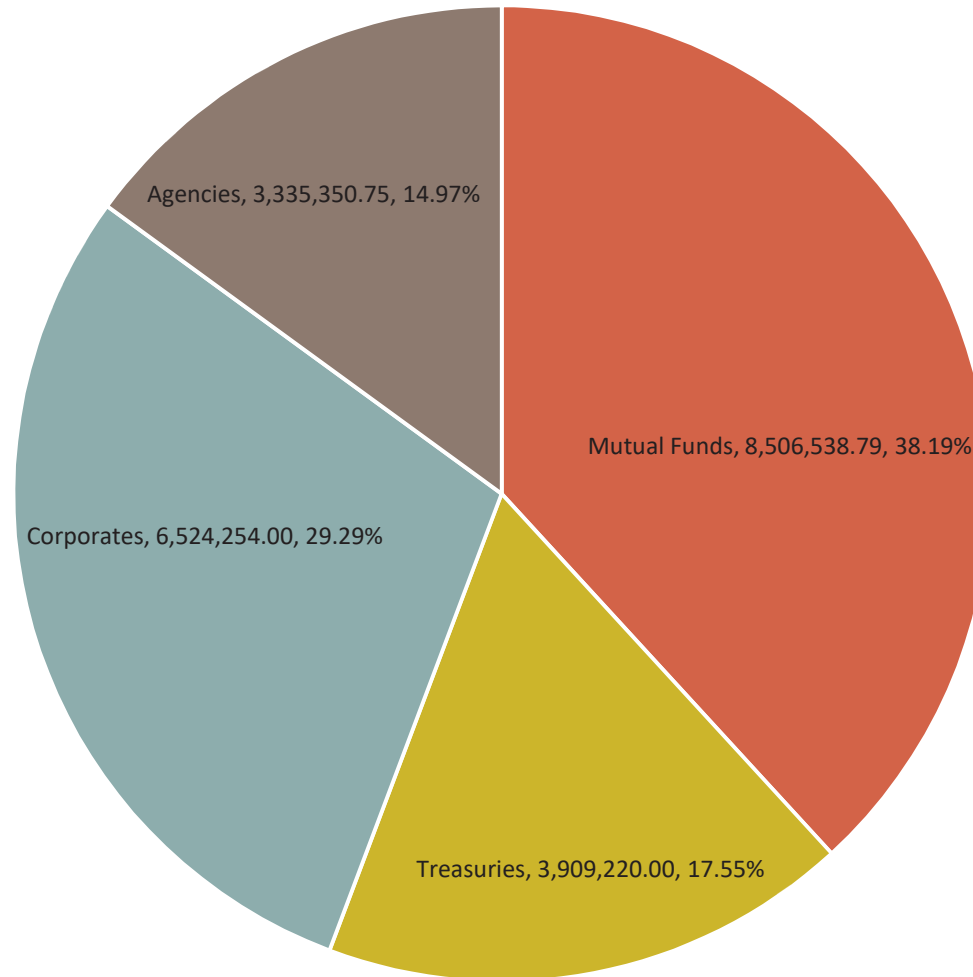


# SCCT Regional Water Authority - Salary & Union Plans (Fixed Income Detail)

## Fixed Income Investment Structure

Portfolio Value: \$22,275,364

Individual Treasuries, Corporates, & Agencies*	
Average Coupon:	2.60%
Average Maturity:	3.42 Yrs
Longest Maturity:	9.43 Yrs
Duration:	3.02 Yrs
Yield to Worst:	1.31%
Yield to Maturity:	1.32%



Fixed Income Mutual Funds**	
<ul style="list-style-type: none"> <li>• Doubleline Core Bond</li> <li>• Pimco Investment Grade Credit</li> <li>• Pimco Income</li> <li>• Loomis Sayles Core Plus</li> <li>• Pioneer Dynamic Credit</li> </ul>	
Average Coupon:	3.48%
Average Maturity:	7.87 Yrs
Duration:	5.21 Yrs
Average Yield:	3.71%

Assets as of 3/31/2020

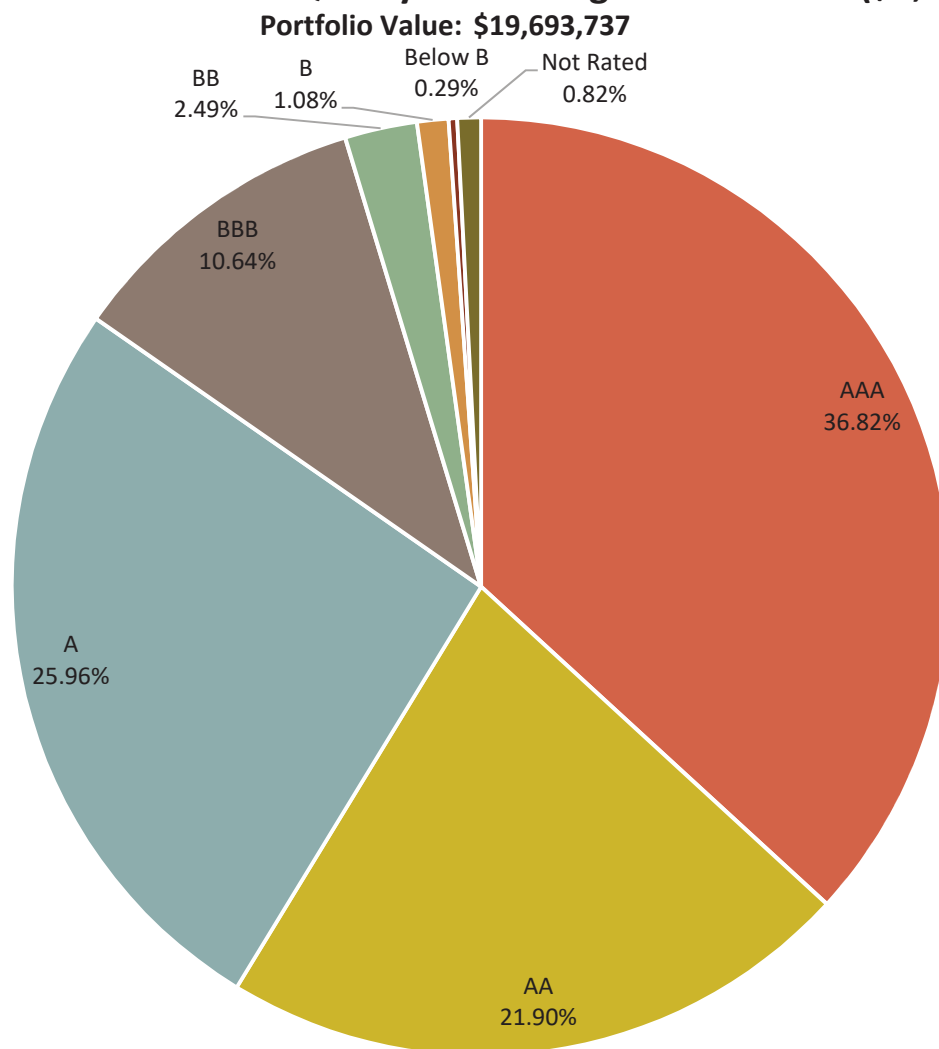
\*Data produced by BondDesk

\*\*Data produced by Morningstar Advisor Workstation

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# SCCT Regional Water Authority - Salary & Union Plans (Fixed Income Quality Breakdown)

## Fixed Income Investment Quality - Excluding PIMCO Funds (\$2,581,626)



Fixed Income Portfolio Statistics*	
Average Coupon:	3.41%
Average Maturity:	4.38 Yrs
Duration:	4.08 Yrs
Total % Investment Grade	95.32%

Assets as of 3/31/2020

\*Data produced by Morningstar Advisor Workstation

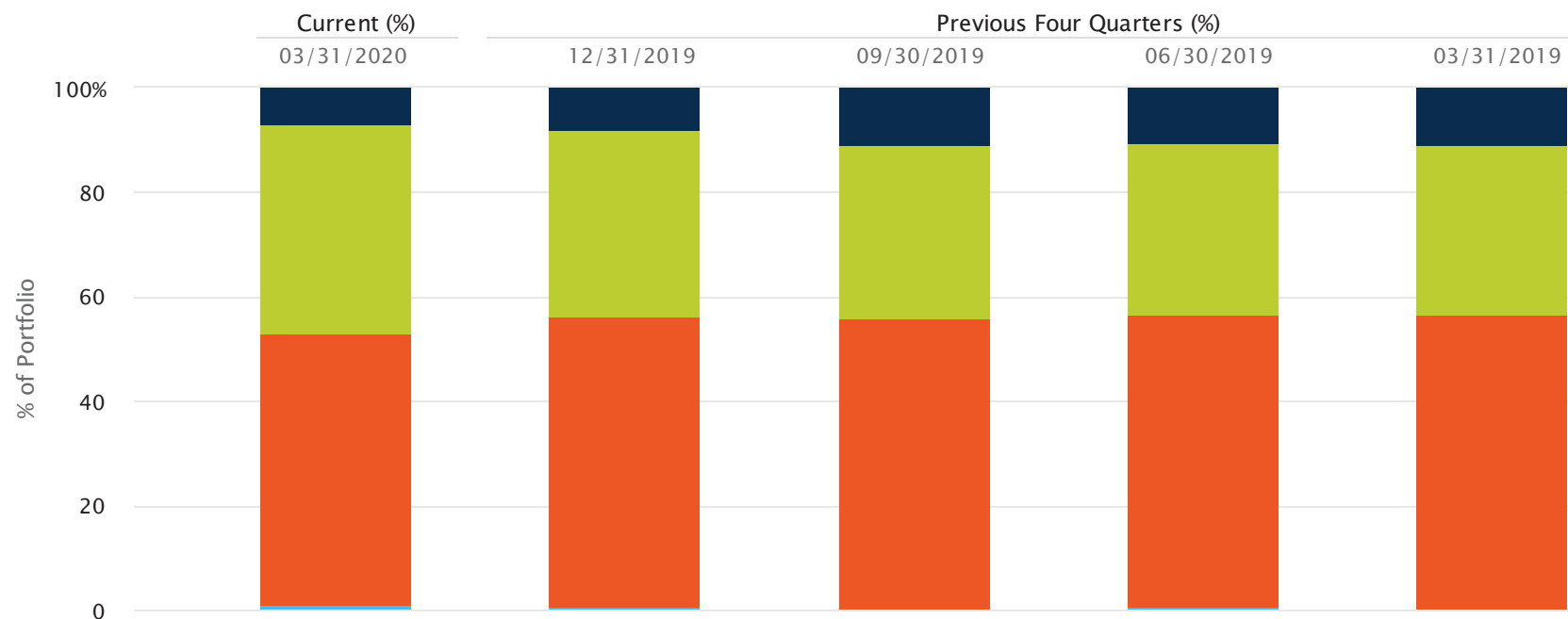
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## ASSET ALLOCATION OVER TIME - ADVISORY ASSETS ONLY

Salaried &amp; Union

As of March 31, 2020 | Reporting Currency: USD

## HISTORICAL ALLOCATION



% OF PORTFOLIO	Current				
	03/31/2020 (%)	12/31/2019 (%)	09/30/2019 (%)	06/30/2019 (%)	03/31/2019 (%)
Cash	1.0	0.6	0.4	0.6	0.3
Equities	52.0	55.8	55.6	56.1	56.4
Fixed Income & Preferreds	40.3	35.8	33.2	32.7	32.5
Alternatives	6.7	7.8	10.7	10.7	10.8
% of Portfolio	100.0	100.0	100.0	100.0	100.0

Change in Total Values does not denote performance and may be due to contributions/withdrawals, fees, market fluctuations and other causes.

## PORTFOLIO CHANGES

## Salary & Union Plans

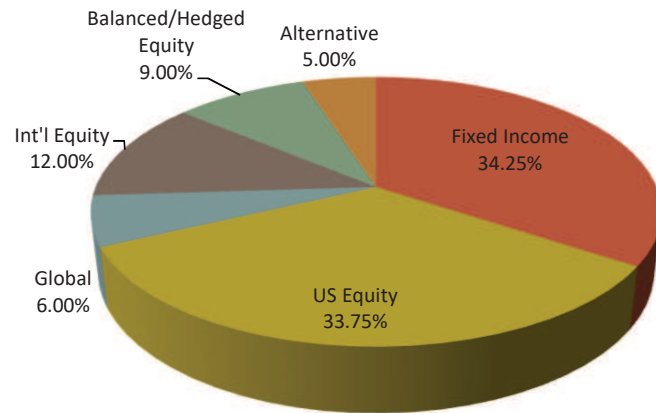
### Changes in Q1

- Gateway target weight decreased from 2.0% to 0.0%
  - American Funds American Balanced target weight increased from 3.5% to 4.5%
  - Janus Henderson Balanced target weight increased from 3.5% to 4.5%
- Loomis Sayles Strategic Bond target weight decreased from 1.0% to 0.0%
  - Loomis Sayles Core Plus target weight increased from 1.0% to 2.0%
- Pioneer Strategic Income target weight decreased from 1.5% to 0.0%
  - Proceeds invested in U.S. Treasuries
- Pimco Income target weight decreased from 2.5% to 1.5%
  - Proceeds invested in U.S. Treasuries
- Pimco Investment Grade Corp target weight Increased from 0.0% to 3.0%
  - Funds reallocated from U.S. Treasuries
- Calamos Phineus Long/Short Income target weight decreased from 1.0% to 0.0%
  - Calamos Market Neutral target weight increased from 0.0% to 1.0%

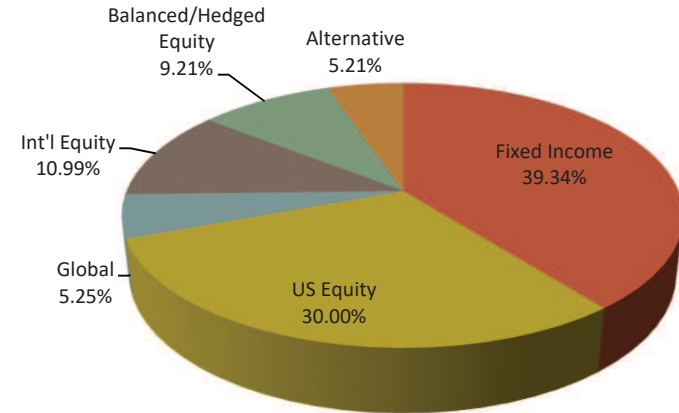
SCCT Regional Water Authority - Salary & Union Plans  
Asset Allocation Matrix Summary  
As of 3/31/2020

As of 3/31/2020	IPS Target %	Current Target \$	Current Target %	Actual \$	Actual %	\$ +/-	% +/-
Fixed Income	30%	\$ 18,321,519	34.25%	\$ 21,046,768	39.34%	\$ (2,725,249)	-5.09%
US Equity	55%	\$ 18,054,052	33.75%	\$ 16,046,235	30.00%	\$ 2,007,817	3.75%
Global		\$ 3,209,609	6.00%	\$ 2,810,586	5.25%	\$ 399,023	0.75%
Int'l Equity		\$ 6,419,218	12.00%	\$ 5,878,369	10.99%	\$ 540,850	1.01%
Balanced/Hedged Equity	15%	\$ 4,814,414	9.00%	\$ 4,924,579	9.21%	\$ (110,166)	-0.21%
Alternative		\$ 2,674,674	5.00%	\$ 2,786,950	5.21%	\$ (112,275)	-0.21%
Total	100%	\$ 53,493,486	100.00%	\$ 53,493,486	100.00%	\$ (0)	0.00%

**Target**



**Actual**



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SCCT Regional Water Authority - Salary Plan  
Asset Allocation Matrix  
As of 3/31/2020

	IPS Target %	Current Target \$	Current Target %	% of Cat	Actual \$	Actual %	% of Cat	+/- \$	+/- %
Fixed Income		\$ 11,329,628	34.25%	100.00%	\$ 13,117,292	39.65%	100.00%	\$ (1,787,664)	-5.40%
Cash/T-Bills		\$ 826,980	2.50%	7.30%	\$ 2,000,064	6.05%	15.25%	\$ (1,173,083)	-3.55%
Individual Bond Ladder		\$ 6,698,539	20.25%	59.12%	\$ 6,895,993	20.85%	52.57%	\$ (197,454)	-0.60%
DoubleLine Core Fixed Income		\$ 1,157,772	3.50%	10.22%	\$ 1,288,916	3.90%	9.83%	\$ (131,144)	-0.40%
Pimco Investment Gd Credit Bond		\$ 992,376	3.00%	8.76%	\$ 1,015,216	3.07%	7.74%	\$ (22,840)	-0.07%
<b>Total Core</b>				<b>90.51%</b>			<b>90.83%</b>		
PIMCO Income I2 (1/2 Core)	30.00%	\$ 496,188	1.50%	4.38%	\$ 691,141	2.09%	5.27%	\$ (194,953)	-0.59%
Pioneer Strategic Income Y (1/2 Core)		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Loomis Sayles Core Plus (1/2 Core)		\$ 661,584	2.00%	5.84%	\$ 738,066	2.23%	5.63%	\$ (76,481)	-0.23%
Loomis Sayles Strategic Income		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Pioneer Dynamic Credit		\$ 496,188	1.50%	4.38%	\$ 487,896	1.47%	3.72%	\$ 8,292	0.03%
<b>Total Plus</b>				<b>9.49%</b>			<b>9.17%</b>		
US Equity		\$ 11,164,232	33.75%	100.00%	\$ 9,894,698	29.91%	100.00%	\$ 1,269,534	3.84%
Columbia Dividend Income		\$ 1,736,658	5.25%	15.56%	\$ 1,618,526	4.89%	16.36%	\$ 118,132	0.36%
MFS Massachusetts Investors Gr Stk		\$ 1,488,564	4.50%	13.33%	\$ 1,423,189	4.30%	14.38%	\$ 65,375	0.20%
Janus Henderson Enterprise		\$ 661,584	2.00%	5.93%	\$ 579,792	1.75%	5.86%	\$ 81,793	0.25%
<b>Total Active</b>				<b>34.81%</b>			<b>36.60%</b>		
SPDR S&P Dividend		\$ 1,323,168	4.00%	11.85%	\$ 1,102,068	3.33%	11.14%	\$ 221,100	0.67%
Vanguard Value ETF		\$ 661,584	2.00%	5.93%	\$ 569,984	1.72%	5.76%	\$ 91,600	0.28%
Invesco S&P 500 Equal Weight		\$ 1,323,168	4.00%	11.85%	\$ 1,062,853	3.21%	10.74%	\$ 260,315	0.79%
Vanguard Total Stk Mkt ETF		\$ 2,646,336	8.00%	23.70%	\$ 2,346,162	7.09%	23.71%	\$ 300,174	0.91%
Vanguard Russell 1000 Growth Index		\$ 661,584	2.00%	5.93%	\$ 665,124	2.01%	6.72%	\$ (3,540)	-0.01%
Schwab Mid Cap ETF		\$ 661,584	2.00%	5.93%	\$ 527,000	1.59%	5.33%	\$ 134,584	0.41%
<b>Total Passive</b>	55.00%			<b>65.19%</b>			<b>63.40%</b>		
Global		\$ 1,984,752	6.00%	100.00%	\$ 1,725,961	5.22%	112.51%	\$ 258,792	0.78%
First Eagle Global		\$ 1,323,168	4.00%	66.67%	\$ 1,214,045	3.67%	70.34%	\$ 109,123	0.33%
WisdomTree Global High Div		\$ 661,584	2.00%	33.33%	\$ 511,916	1.55%	42.17%	\$ 149,669	0.45%
Int'l Equity		\$ 3,969,505	12.00%	100.00%	\$ 3,609,656	10.91%	100.00%	\$ 359,849	1.09%
American Funds EuroPacific Gr		\$ 1,240,470	3.75%	31.25%	\$ 1,107,279	3.35%	30.68%	\$ 133,191	0.40%
MFS Intl Intrinsic Value		\$ 1,240,470	3.75%	31.25%	\$ 1,219,982	3.69%	33.80%	\$ 20,488	0.06%
Invesco Oppenheimer Developing Markets		\$ 661,584	2.00%	16.67%	\$ 598,925	1.81%	16.59%	\$ 62,659	0.19%
<b>Total Active</b>				<b>79.17%</b>			<b>81.07%</b>		
Vanguard FTSE Developed Markets		\$ 826,980	2.50%	20.83%	\$ 683,470	2.07%	18.93%	\$ 143,510	0.43%
<b>Total Passive</b>				<b>20.83%</b>			<b>18.93%</b>		
Balanced/Hedged Equity		\$ 2,977,128	9.00%	100.00%	\$ 3,036,752	9.18%	100.00%	\$ (59,624)	-0.18%
American Funds American Balanced		\$ 1,488,564	4.50%	50.00%	\$ 1,517,240	4.59%	49.96%	\$ (28,676)	-0.09%
Janus Henderson Balanced		\$ 1,488,564	4.50%	50.00%	\$ 1,519,512	4.59%	50.04%	\$ (30,948)	-0.09%
Gateway		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Alternative		\$ 1,653,960	5.00%	100.00%	\$ 1,694,848	5.12%	100.00%	\$ (40,888)	-0.12%
BlackRock Event Driven Equity	15.00%	\$ 330,792	1.00%	20.00%	\$ 376,231	1.14%	22.20%	\$ (45,439)	-0.14%
Calamos Market Neutral		\$ 330,792	1.00%	20.00%	\$ 344,353	1.04%	20.32%	\$ (13,561)	-0.04%
Calamos Phineus Long/Short		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Cohen & Steers Global Realty		\$ 330,792	1.00%	20.00%	\$ 303,239	0.92%	17.89%	\$ 27,553	0.08%
Skybridge*		\$ 661,584	2.00%	40.00%	\$ 671,025	2.03%	39.59%	\$ (9,441)	-0.03%
<b>Total</b>	100.00%	\$ 33,079,205	100.00%		\$ 33,079,205	100.00%		\$ (0)	0.00%

Disclaimer: The information contained herein was prepared by your Financial Advisor and does not represent an official statement of your account at the Firm (or other outside custodians, if applicable). Please refer to your monthly statement for a complete record of your transactions, holdings and balances.

\*Skybridge as of 2/29/2020

Green = Fund added in Q1, Red = Fund removed in Q1

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SCCT Regional Water Authority - Union Plan  
Asset Allocation Matrix  
As of 3/31/2020

	IPS Target %	Current Target \$	Current Target %	% of Cat	Actual \$	Actual %	% of Cat	+/- \$	+/- %
Fixed Income		\$ 6,991,891	34.25%	100.00%	\$ 7,929,477	38.84%	100.00%	\$ (937,585)	-4.59%
Cash/T-Bills		\$ 510,357	2.50%	7.30%	\$ 1,318,748	6.46%	16.63%	\$ (808,391)	-3.96%
Individual Bond Ladder		\$ 4,133,892	20.25%	59.12%	\$ 4,172,098	20.44%	52.62%	\$ (38,206)	-0.19%
DoubleLine Core Fixed Income		\$ 714,500	3.50%	10.22%	\$ 803,067	3.93%	10.13%	\$ (88,568)	-0.43%
Pimco Investment Gd Credit Bond		\$ 612,428	3.00%	8.76%	\$ 609,129	2.98%	7.68%	\$ 3,299	0.02%
<b>Total Core</b>				<b>90.51%</b>			<b>91.63%</b>		
PIMCO Income I2 (1/2 Core)	30.00%	\$ 306,214	1.50%	4.38%	\$ 266,140	1.30%	3.36%	\$ 40,074	0.20%
Pioneer Strategic Income Y (1/2 Core)		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Loomis Sayles Core Plus (1/2 Core)		\$ 408,286	2.00%	5.84%	\$ 459,049	2.25%	5.79%	\$ (50,763)	-0.25%
Loomis Sayles Strategic Income		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Pioneer Dynamic Credit		\$ 306,214	1.50%	4.38%	\$ 301,245	1.48%	3.80%	\$ 4,969	0.02%
<b>Total Plus</b>				<b>9.49%</b>			<b>8.37%</b>		
US Equity		\$ 6,889,820	33.75%	100.00%	\$ 6,151,537	30.13%	100.00%	\$ 738,283	3.62%
Columbia Dividend Income		\$ 1,071,750	5.25%	15.56%	\$ 1,012,723	4.96%	16.46%	\$ 59,026	0.29%
MFS Massachusetts Investors Gr Stk		\$ 918,643	4.50%	13.33%	\$ 894,958	4.38%	14.55%	\$ 23,684	0.12%
Janus Henderson Enterprise		\$ 408,286	2.00%	5.93%	\$ 368,831	1.81%	6.00%	\$ 39,454	0.19%
<b>Total Active</b>				<b>34.81%</b>			<b>37.01%</b>		
SPDR S&P Dividend		\$ 816,571	4.00%	11.85%	\$ 690,789	3.38%	11.23%	\$ 125,782	0.62%
Vanguard Value ETF		\$ 408,286	2.00%	5.93%	\$ 367,373	1.80%	5.97%	\$ 40,913	0.20%
Invesco S&P 500 Equal Weight		\$ 816,571	4.00%	11.85%	\$ 697,366	3.42%	11.34%	\$ 119,205	0.58%
Vanguard Total Stk Mkt ETF		\$ 1,633,142	8.00%	23.70%	\$ 1,371,602	6.72%	22.30%	\$ 261,540	1.28%
Vanguard Russell 1000 Growth Index		\$ 408,286	2.00%	5.93%	\$ 425,370	2.08%	6.91%	\$ (17,084)	-0.08%
Schwab Mid Cap ETF		\$ 408,286	2.00%	5.93%	\$ 322,524	1.58%	5.24%	\$ 85,762	0.42%
<b>Total Passive</b>	55.00%			<b>65.19%</b>			<b>62.99%</b>		
Global		\$ 1,224,857	6.00%	100.00%	\$ 1,084,626	5.31%	112.74%	\$ 140,231	0.69%
First Eagle Global		\$ 816,571	4.00%	66.67%	\$ 760,412	3.72%	70.11%	\$ 56,159	0.28%
WisdomTree Global High Div		\$ 408,286	2.00%	33.33%	\$ 324,213	1.59%	42.64%	\$ 84,072	0.41%
Int'l Equity		\$ 2,449,714	12.00%	100.00%	\$ 2,268,713	11.11%	100.00%	\$ 181,001	0.89%
American Funds EuroPacific Gr		\$ 765,536	3.75%	31.25%	\$ 705,560	3.46%	31.10%	\$ 59,975	0.29%
MFS Intl Intrinsic Value		\$ 765,536	3.75%	31.25%	\$ 791,993	3.88%	34.91%	\$ (26,458)	-0.13%
Invesco Oppenheimer Developing Markets		\$ 408,286	2.00%	16.67%	\$ 366,912	1.80%	16.17%	\$ 41,374	0.20%
<b>Total Active</b>				<b>79.17%</b>			<b>82.18%</b>		
Vanguard FTSE Developed Markets		\$ 510,357	2.50%	20.83%	\$ 404,248	1.98%	17.82%	\$ 106,110	0.52%
<b>Total Passive</b>				<b>20.83%</b>			<b>17.82%</b>		
Balanced/Hedged Equity		\$ 1,837,285	9.00%	100.00%	\$ 1,887,827	9.25%	100.00%	\$ (50,542)	-0.25%
American Funds American Balanced		\$ 918,643	4.50%	50.00%	\$ 946,510	4.64%	50.14%	\$ (27,867)	-0.14%
Janus Henderson Balanced		\$ 918,643	4.50%	50.00%	\$ 941,317	4.61%	49.86%	\$ (22,674)	-0.11%
Gateway		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Alternative		\$ 1,020,714	5.00%	100.00%	\$ 1,092,102	5.35%	100.00%	\$ (71,388)	-0.35%
BlackRock Event Driven Equity	15.00%	\$ 204,143	1.00%	20.00%	\$ 221,644	1.09%	20.30%	\$ (17,501)	-0.09%
Calamos Market Neutral		\$ 204,143	1.00%	20.00%	\$ 215,592	1.06%	19.74%	\$ (11,449)	-0.06%
Calamos Phineus Long/Short		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Cohen & Steers Global Realty		\$ 204,143	1.00%	20.00%	\$ 204,303	1.00%	18.71%	\$ (160)	0.00%
Skybridge*		\$ 408,286	2.00%	40.00%	\$ 450,563	2.21%	41.26%	\$ (42,277)	-0.21%
<b>Total</b>	100.00%	\$ 20,414,281	100.00%		\$ 20,414,281	100.00%		\$ (0)	0.00%

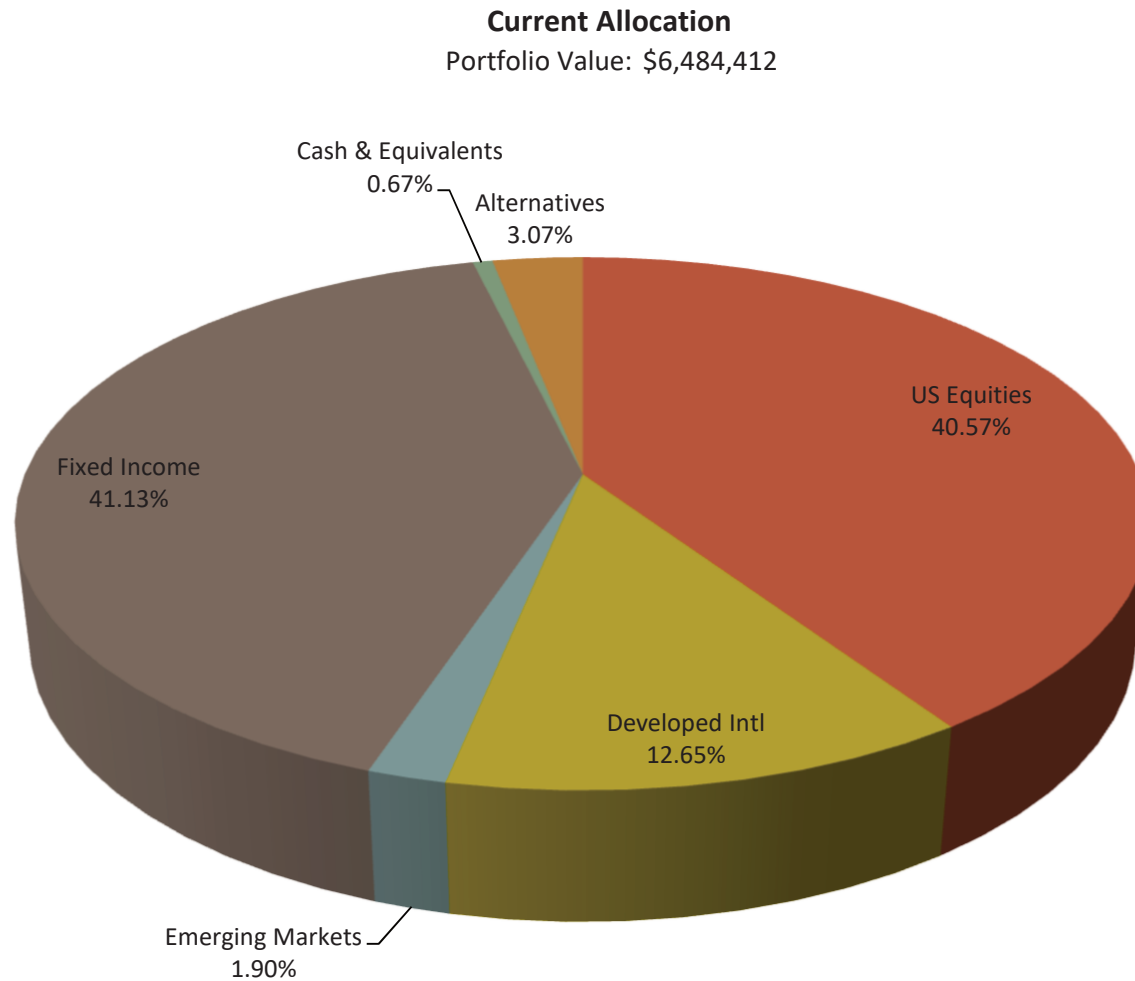
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\*Skybridge as of 2/29/2020

Green = Fund added in Q1, Red = Fund removed in Q1

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# SCCT Regional Water Authority - VEBA Plan



**Total Equity**  
**55.13%**

**% of Total Equity**

US Equity = 73.60%  
Intl Equity = 26.40%

**% of Intl Equity**

Developed Intl = 86.93%  
Emerging Markets = 13.07%

**Equity Style Analysis\***

Value = 33.76%  
Core = 35.58%  
Growth = 30.66%

**Assets as of 3/31/2020**

The information and data contained in this report are from sources considered reliable, but their accuracy and completeness is not guaranteed. This report has been prepared for illustrative purposes only and is not intended to be used as a substitute for monthly transaction statements you receive on a regular basis from Morgan Stanley & Co. Incorporated Please compare the data on this document carefully with your monthly statements to verify its accuracy. The Company strongly encourages you to consult with your own accountants or other advisors with respect to any tax questions."

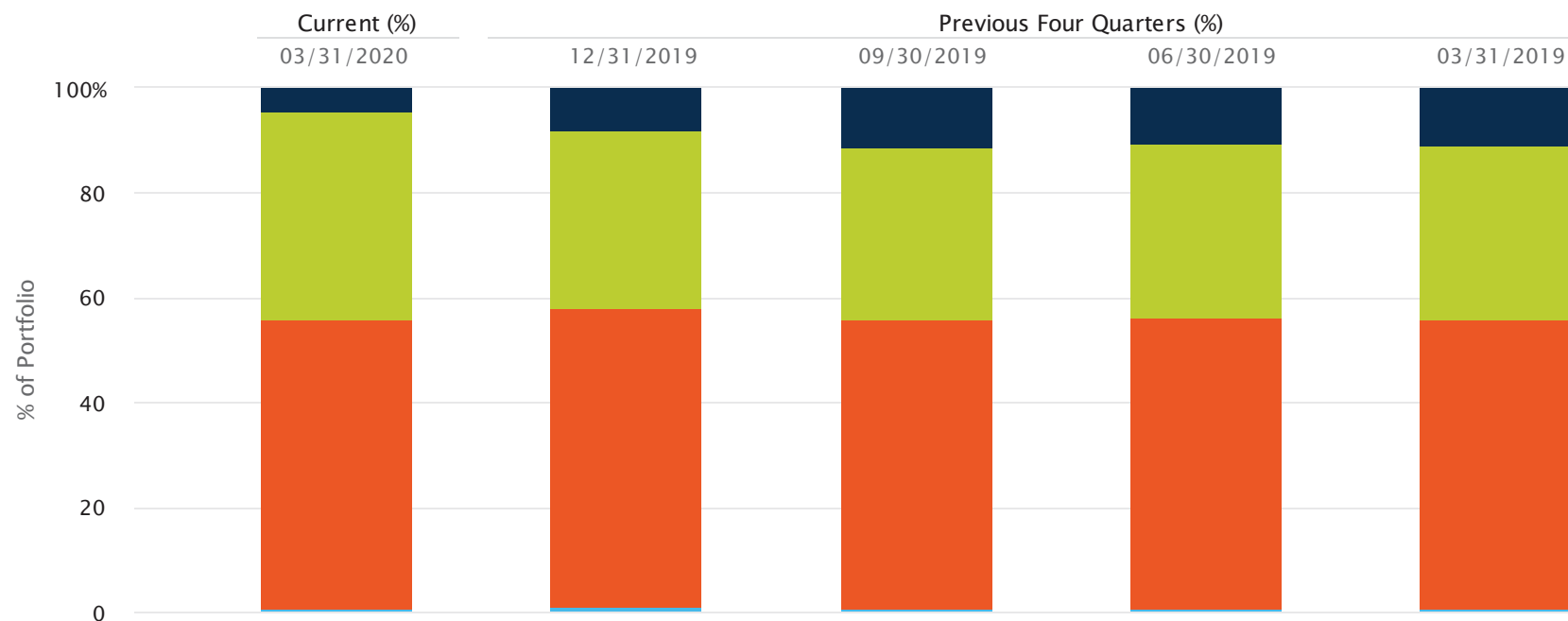


## ASSET ALLOCATION OVER TIME - ADVISORY ASSETS ONLY

SC CT REGIONAL WATER AUTHORITY 447-XXX456 - Portfolio Management RPM - RPM...

As of March 31, 2020 | Reporting Currency: USD

## HISTORICAL ALLOCATION



% OF PORTFOLIO	Current				
	03/31/2020 (%)	12/31/2019 (%)	09/30/2019 (%)	06/30/2019 (%)	03/31/2019 (%)
Cash	0.7	1.0	0.9	0.7	0.6
Equities	55.2	57.1	54.9	55.6	55.5
Fixed Income & Preferreds	39.6	33.8	33.1	33.2	33.2
Alternatives	4.6	8.1	11.0	10.5	10.7
% of Portfolio	100.0	100.0	100.0	100.0	100.0

Change in Total Values does not denote performance and may be due to contributions/withdrawals, fees, market fluctuations and other causes.

## PORTFOLIO CHANGES

## VEBA Plan

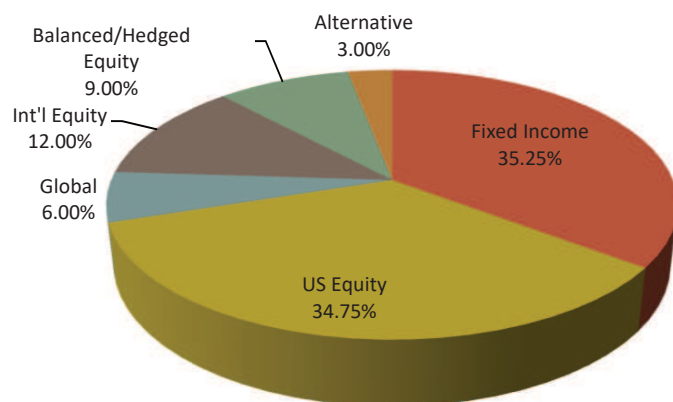
### Changes in Q1

- Gateway target weight decreased from 2.0% to 0.0%
  - American Funds American Balanced target weight increased from 3.5% to 4.5%
  - Janus Henderson Balanced target weight increased from 3.5% to 4.5%
- Loomis Sayles Strategic Bond target weight decreased from 1.0% to 0.0%
  - Loomis Sayles Core Plus target weight increased from 1.0% to 2.0%
- Pioneer Strategic Income target weight decreased from 1.5% to 0.0%
  - Proceeds invested in U.S. Treasuries
- Pimco Income target weight decreased from 2.5% to 1.5%
  - Proceeds invested in U.S. Treasuries
- Pimco Investment Grade Corp target weight Increased from 0.0% to 3.0%
  - Funds reallocated from U.S. Treasuries
- Calamos Phineus Long/Short Income target weight decreased from 1.0% to 0.0%
  - Calamos Market Neutral target weight increased from 0.0% to 1.0%
- Catalyst/Millburn Hedge Strategy target weight decreased from 2.0% to 1.0%
  - SPDR S&P 500 target weight increased from 0.0% to 1.0%
  - 1% moved to Cash

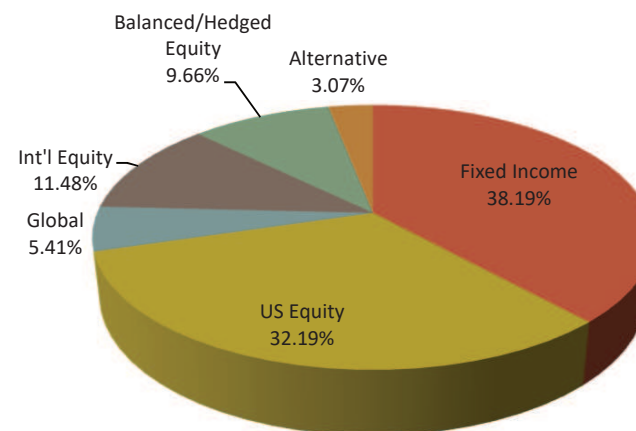
SCCT Regional Water Authority - VEBA Plan  
Asset Allocation Matrix Summary  
As of 3/31/2020

As of 3/31/2020	IPS Target %	Current Target \$	Current Target %	Actual \$	Actual %	\$ +/-	% +/-
Fixed Income	30%	\$ 2,285,755	35.25%	\$ 2,476,177	38.19%	\$ (190,422)	-2.94%
US Equity	55%	\$ 2,253,333	34.75%	\$ 2,087,554	32.19%	\$ 165,779	2.56%
Global		\$ 389,065	6.00%	\$ 350,977	5.41%	\$ 38,087	0.59%
Int'l Equity		\$ 778,129	12.00%	\$ 744,131	11.48%	\$ 33,999	0.52%
Balanced/Hedged Equity	15%	\$ 583,597	9.00%	\$ 626,270	9.66%	\$ (42,673)	-0.66%
Alternative		\$ 194,532	3.00%	\$ 199,303	3.07%	\$ (4,770)	-0.07%
Total	100%	\$ 6,484,412	100.00%	\$ 6,484,412	100.00%	\$ 0	0.00%

**Target**



**Actual**



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SCCT Regional Water Authority - VEBA Plan  
Asset Allocation Matrix  
As of 3/31/2020

	IPS Target %	Current Target \$	Current Target %	% of Cat	Actual \$	Actual %	% of Cat	+/- \$	+/- %
Fixed Income		\$ 2,285,755	35.25%	100.00%	\$ 2,476,177	38.19%	100.00%	\$ (190,422)	-2.94%
Cash/T-Bills		\$ 259,376	4.00%	11.35%	\$ 368,674	5.69%	14.89%	\$ (109,297)	-1.69%
Guggenheim Limited Duration		\$ 162,110	2.50%	7.09%	\$ 188,067	2.90%	7.60%	\$ (25,957)	-0.40%
Vanguard Short-Term Bond ETF		\$ 291,799	4.50%	12.77%	\$ 349,265	5.39%	14.11%	\$ (57,466)	-0.89%
SPDR Doubleline ST Total Return		\$ 178,321	2.75%	7.80%	\$ 156,715	2.42%	6.33%	\$ 21,606	0.33%
Pimco Investment Gd Credit Bond		\$ 194,532	3.00%	8.51%	\$ 203,043	3.13%	8.20%	\$ (8,511)	-0.13%
Pioneer Bond Y		\$ 324,221	5.00%	14.18%	\$ 296,579	4.57%	11.98%	\$ 27,641	0.43%
DoubleLine Core Fixed Income		\$ 324,221	5.00%	14.18%	\$ 299,416	4.62%	12.09%	\$ 24,804	0.38%
Janus Henderson Flexible Bond	30.00%	\$ 226,954	3.50%	9.93%	\$ 262,515	4.05%	10.60%	\$ (35,561)	-0.55%
<b>Total Core</b>				<b>90.78%</b>			<b>90.91%</b>		
PIMCO Income I2 (1/2 Core)		\$ 97,266	1.50%	4.26%	\$ 102,947	1.59%	4.16%	\$ (5,681)	-0.09%
Pioneer Strategic Income Y (1/2 Core)		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Loomis Sayles Core Plus (1/2 Core)		\$ 129,688	2.00%	5.67%	\$ 150,886	2.33%	6.09%	\$ (21,197)	-0.33%
Loomis Sayles Strategic Income		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Pioneer Dynamic Credit Y		\$ 97,266	1.50%	4.26%	\$ 98,070	1.51%	3.96%	\$ (804)	-0.01%
<b>Total Plus</b>				<b>9.22%</b>			<b>9.09%</b>		
US Equity		\$ 2,253,333	34.75%	100.00%	\$ 2,087,554	32.19%	100.00%	\$ 165,779	2.56%
Columbia Dividend Income		\$ 340,432	5.25%	15.11%	\$ 332,244	5.12%	15.92%	\$ 8,188	0.13%
MFS Massachusetts Investors Gr Stk		\$ 291,799	4.50%	12.95%	\$ 292,009	4.50%	13.99%	\$ (211)	0.00%
Janus Henderson Enterprise		\$ 129,688	2.00%	5.76%	\$ 114,288	1.76%	5.47%	\$ 15,401	0.24%
<b>Total Active</b>				<b>33.81%</b>			<b>35.38%</b>		
SPDR S&P Dividend		\$ 259,376	4.00%	11.51%	\$ 223,608	3.45%	10.71%	\$ 35,768	0.55%
Vanguard Value ETF		\$ 129,688	2.00%	5.76%	\$ 113,552	1.75%	5.44%	\$ 16,137	0.25%
Invesco S&P 500 Equal Weight		\$ 259,376	4.00%	11.51%	\$ 218,452	3.37%	10.46%	\$ 40,924	0.63%
SPDR S&P 500		\$ 64,844	1.00%	2.88%	\$ 70,881	1.09%	3.40%	\$ (6,037)	-0.09%
Vanguard Total Stk Mkt ETF		\$ 518,753	8.00%	23.02%	\$ 489,858	7.55%	23.47%	\$ 28,895	0.45%
Vanguard Russell 1000 Growth Index		\$ 129,688	2.00%	5.76%	\$ 131,478	2.03%	6.30%	\$ (1,790)	-0.03%
Schwab Mid Cap ETF		\$ 129,688	2.00%	5.76%	\$ 101,184	1.56%	4.85%	\$ 28,504	0.44%
<b>Total Passive</b>	55.00%			<b>66.19%</b>			<b>64.62%</b>		
Global		\$ 389,065	6.00%	100.00%	\$ 350,977	5.41%	113.01%	\$ 38,087	0.59%
First Eagle Global		\$ 259,376	4.00%	66.67%	\$ 245,182	3.78%	69.86%	\$ 14,195	0.22%
WisdomTree Global High Div		\$ 129,688	2.00%	33.33%	\$ 105,796	1.63%	43.15%	\$ 23,892	0.37%
Int'l Equity		\$ 778,129	12.00%	100.00%	\$ 744,131	11.48%	100.00%	\$ 33,999	0.52%
American Funds EuroPacific Gr		\$ 243,165	3.75%	31.25%	\$ 227,675	3.51%	30.60%	\$ 15,490	0.24%
MFS Intl Intrinsic Value		\$ 243,165	3.75%	31.25%	\$ 251,376	3.88%	33.78%	\$ (8,211)	-0.13%
Invesco Oppenheimer Developing Markets		\$ 129,688	2.00%	16.67%	\$ 123,384	1.90%	16.58%	\$ 6,304	0.10%
<b>Total Active</b>				<b>79.17%</b>			<b>80.96%</b>		
Vanguard FTSE Developed Markets		\$ 162,110	2.50%	20.83%	\$ 141,695	2.19%	19.04%	\$ 20,415	0.31%
<b>Total Passive</b>				<b>20.83%</b>			<b>19.04%</b>		
Balanced/Hedged Equity		\$ 583,597	9.00%	100.00%	\$ 626,270	9.66%	100.00%	\$ (42,673)	-0.66%
American Funds American Balanced		\$ 291,799	4.50%	50.00%	\$ 313,450	4.83%	50.05%	\$ (21,651)	-0.33%
Janus Henderson Balanced		\$ 291,799	4.50%	50.00%	\$ 312,820	4.82%	49.95%	\$ (21,021)	-0.32%
Gateway		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Alternative		\$ 194,532	3.00%	100.00%	\$ 199,303	3.07%	100.00%	\$ (4,770)	-0.07%
BlackRock Event Driven Equity	15.00%	\$ 64,844	1.00%	33.33%	\$ 71,928	1.11%	36.09%	\$ (7,084)	-0.11%
Calamos Market Neutral		\$ 64,844	1.00%	33.33%	\$ 70,393	1.09%	35.32%	\$ (5,549)	-0.09%
Calamos Phineus Long/Short		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
Cohen & Steers Global Realty		\$ 64,844	1.00%	33.33%	\$ 56,982	0.88%	28.59%	\$ 7,862	0.12%
Catalyst/Millburn Hedge Strategy		\$ -	0.00%	0.00%	\$ -	0.00%	0.00%	\$ -	0.00%
<b>Total</b>	100.00%	\$ 6,484,412	100.00%		\$ 6,484,412	100.00%		\$ (0)	0.00%

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Green = Fund added in Q1, Red = Fund removed in Q1

The Kelliher Corbett Group  
at Morgan Stanley

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## Investment Results

SCCT Regional Water Authority  
2019 Investment Results  
December 31, 2018 - December 31, 2019

Account Number	Account Type	Beg. Asset Value 31-Dec-2018	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 31-Dec-2019	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$30,370,008	\$0	\$1,212,600	\$31,582,608	\$37,352,140	\$5,769,532	18.68%	19.15%
447-xxx451	Union	\$19,480,341	\$0	(\$92,891)	\$19,387,450	\$23,019,531	\$3,632,080	18.62%	19.09%
447-xxx456	VEBA	\$5,904,957	\$0	\$520,695	\$6,425,652	\$7,563,265	\$1,137,613	18.38%	18.85%
447-xxx626	Skybridge (Salaried)	\$630,172	\$0	\$0	\$630,172	\$665,899	\$35,728	5.67%	5.67%
447-xxx627	Skybridge (Union)	\$423,144	\$0	\$0	\$423,144	\$447,122	\$23,978	5.87%	5.87%
axx15a	Matrix Trust (Salaried)	\$500,000	\$957,125	(\$1,062,034)	\$395,091	\$395,091	\$0	-	-
axx15b	Matrix Trust (Union)	\$350,000	(\$271,359)	\$217,331	\$295,973	\$295,973	\$0	-	-
axx16	Matrix Trust(VEBA)	\$284,962	\$658,843	(\$795,702)	\$148,104	\$148,104	\$0	-	-
Consolidated		\$57,943,584	\$1,344,609	\$0	\$59,288,193	\$69,887,123	\$10,598,930	18.39%	18.84%

December 31, 2018 - December 31, 2019

Actuarial Assumed Rate of Return

<b>Actuarial Assumed Rate of Return: 7.00%</b>	7.00%
<b>Guidelines/Benchmarks - Market Cap Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	17.43%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	20.01%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	20.88%
<b>Guidelines/Benchmarks - Equal Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	15.28%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	17.35%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	18.10%
	Russell 3000 31.02%
	Russell 3000 Equal Weight 24.70%
	S&P 500 31.49%
	S&P 500 Equal Weight 29.24%
	Russell 1000 Value 26.54%
	Russell 1000 31.43%
	Russell 1000 Growth 36.39%
	Russell 2000 25.52%
	MSCI All Country World ex. US 21.51%
	MSCI EAFE 22.01%
	MSCI EM 18.42%
	BBgBarc Aggregate 8.72%
	BBgBarc Govt/Credit Intermediate 6.80%
	BBgBarc US Corp Bond 14.54%
	HFRI Fund of Funds Index 6.43%
	DJ Global World Real Estate 25.33%
	Morningstar US Real Asset 9.87%
	FTSE WGBI Index 5.90%
	S&P GSCI 17.63%
	30 Day T-Bill 2.20%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

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SCCT Regional Water Authority  
Year to Date Investment Results  
December 31, 2019 - March 31, 2020

Account Number	Account Type	Beg. Asset Value 31-Dec-2019	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 31-Mar-2020	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$37,352,140	\$0	\$12,151	\$37,364,290	\$32,408,181	(\$4,956,110)	-13.27%	-13.19%
447-xxx451	Union	\$23,019,531	\$0	\$9,971	\$23,029,502	\$19,963,718	(\$3,065,784)	-13.31%	-13.24%
447-xxx456	VEBA	\$7,563,265	\$0	\$0	\$7,563,265	\$6,484,412	(\$1,078,853)	-14.26%	-14.19%
447-xxx626	Skybridge (Salaried)*	\$665,899	\$0	\$0	\$665,899	\$671,025	\$5,126	0.77%	0.77%
447-xxx627	Skybridge (Union)*	\$447,122	\$0	\$0	\$447,122	\$450,563	\$3,440	0.77%	0.77%
axx15a	Matrix Trust (Salaried)	\$395,091	(\$301,748)	\$0	\$93,343	\$93,343	\$0	-	-
axx15b	Matrix Trust (Union)	\$295,973	(\$103,130)	\$0	\$192,843	\$192,843	\$0	-	-
axx16	Matrix Trust(VEBA)	\$148,104	\$243,718	(\$22,122)	\$369,700	\$369,700	\$0	-	-
Consolidated		\$69,887,123	(\$161,160)	\$0	\$69,725,964	\$60,633,784	(\$9,092,180)	-13.17%	-13.09%

December 31, 2019 - March 31, 2020

Actuarial Assumed Rate of Return

<b>Actuarial Assumed Rate of Return: 7.00% x (3/12)</b>	1.75%
<b>Guidelines/Benchmarks - Market Cap Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	-8.73%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	-11.82%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	-13.87%
<b>Guidelines/Benchmarks - Equal Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	-12.15%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	-16.04%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	-18.29%
	Russell 3000 -20.90%
	Russell 3000 Equal Weight -30.95%
	S&P 500 -19.60%
	S&P 500 Equal Weight -26.70%
	Russell 1000 Value -26.73%
	Russell 1000 -20.22%
	Russell 1000 Growth -14.10%
	Russell 2000 -30.61%
	MSCI All Country World ex. US -23.36%
	MSCI EAFE -22.83%
	MSCI EM -23.60%
	BBgBarc Aggregate 3.15%
	BBgBarc Govt/Credit Intermediate 2.40%
	BBgBarc US Corp Bond -3.63%
	HFRI Fund of Funds Index* -1.29%
	DJ Global World Real Estate -25.86%
	Morningstar US Real Asset -10.55%
	FTSE WGBI Index 2.00%
	S&P GSCI -42.34%
	30 Day T-Bill 0.38%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

\*Skybridge & HFRI FoF Index as of February 29, 2020

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SCCT Regional Water Authority  
Year to Date Investment Results  
December 31, 2019 - April 9, 2020

Account Number	Account Type	Beg. Asset Value 31-Dec-2019	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 9-Apr-2020	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$37,352,140	\$0	\$12,151	\$37,364,290	\$33,782,619	(\$3,581,671)	-9.59%	-9.48%
447-xxx451	Union	\$23,019,531	\$0	\$9,971	\$23,029,502	\$20,815,718	(\$2,213,784)	-9.61%	-9.51%
447-xxx456	VEBA	\$7,563,265	\$0	\$0	\$7,563,265	\$6,772,317	(\$790,948)	-10.46%	-10.36%
447-xxx626	Skybridge (Salaried)*	\$665,899	\$0	\$0	\$665,899	\$671,025	\$5,126	0.77%	0.77%
447-xxx627	Skybridge (Union)*	\$447,122	\$0	\$0	\$447,122	\$450,563	\$3,440	0.77%	0.77%
axx15a	Matrix Trust (Salaried)	\$395,091	(\$284,672)	\$0	\$110,418	\$110,418	\$0	-	-
axx15b	Matrix Trust (Union)	\$295,973	(\$141,890)	\$0	\$154,083	\$154,083	\$0	-	-
axx16	Matrix Trust(VEBA)	\$148,104	\$293,643	(\$22,122)	\$419,625	\$419,625	\$0	-	-
Consolidated		\$69,887,123	(\$132,919)	\$0	\$69,754,204	\$63,176,368	(\$6,577,836)	-9.53%	-9.42%

December 31, 2019 - April 9, 2020

Actuarial Assumed Rate of Return

**Actuarial Assumed Rate of Return: 7.00% x (100/366)** 1.91%

Guidelines/Benchmarks - Market Cap Weighted

**Least Equity Risk:** 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills -5.84%

**Strategic:** 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills -8.30%

**Most Equity Risk:** 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills -10.11%

Guidelines/Benchmarks - Equal Weighted

**Least Equity Risk:** 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills -9.38%

**Strategic:** 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills -12.67%

**Most Equity Risk:** 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills -14.70%

Russell 3000	-14.50%
Russell 3000 Equal Weight	-24.92%
S&P 500	-13.15%
S&P 500 Equal Weight	-19.50%
Russell 1000 Value	-19.65%
Russell 1000	-13.77%
Russell 1000 Growth	-8.24%
Russell 2000	-24.96%
MSCI All Country World ex. US	-20.48%
MSCI EAFE	-20.49%
MSCI EM	-20.03%
BBgBarc Aggregate	4.01%
BBgBarc Govt/Credit Intermediate	2.97%
BBgBarc US Corp Bond	-1.01%
HFRI Fund of Funds Index*	-1.29%
DJ Global World Real Estate	-19.05%
Morningstar US Real Asset	-6.50%
FTSE WGBI Index	1.95%
S&P GSCI	-39.82%
30 Day T-Bill	0.38%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

\*Skybridge & HFRI FoF Index as of February 29, 2020

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SCCT Regional Water Authority  
Trailing Twelve Month Investment Results  
March 31, 2019 - March 31, 2020

Account Number	Account Type	Beg. Asset Value 31-Mar-2019	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 31-Mar-2020	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$33,195,108	\$0	\$1,146,424	\$34,341,532	\$32,408,181	(\$1,933,352)	-5.57%	-5.21%
447-xxx451	Union	\$21,246,586	\$0	(\$92,707)	\$21,153,879	\$19,963,718	(\$1,190,161)	-5.66%	-5.30%
447-xxx456	VEBA	\$6,688,754	\$0	\$270,404	\$6,959,157	\$6,484,412	(\$474,746)	-6.76%	-6.40%
447-xxx626	Skybridge (Salaried)*	\$645,926	\$0	\$0	\$645,926	\$671,025	\$25,099	3.87%	3.87%
447-xxx627	Skybridge (Union)*	\$433,717	\$0	\$0	\$433,717	\$450,563	\$16,846	3.88%	3.88%
axx15a	Matrix Trust (Salaried)	\$486,616	\$602,075	(\$995,348)	\$93,343	\$93,343	\$0	-	-
axx15b	Matrix Trust (Union)	\$183,744	(\$208,232)	\$217,331	\$192,843	\$192,843	\$0	-	-
axx16	Matrix Trust(VEBA)	\$339,342	\$576,461	(\$546,104)	\$369,700	\$369,700	\$0	-	-
Consolidated		\$63,219,793	\$970,304	\$0	\$64,190,097	\$60,633,784	(\$3,556,314)	-5.57%	-5.22%

March 31, 2019 - March 31, 2020

Actuarial Assumed Rate of Return

Actuarial Assumed Rate of Return: 7.00%		7.00%
Guidelines/Benchmarks - Market Cap Weighted		
Least Equity Risk: 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills		-0.95%
Strategic: 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills		-3.41%
Most Equity Risk: 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills		-5.41%
Guidelines/Benchmarks - Equal Weighted		
Least Equity Risk: 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills		-6.39%
Strategic: 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills		-10.12%
Most Equity Risk: 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills		-12.45%
	Russell 3000	-9.13%
	Russell 3000 Equal Weight	-25.12%
	S&P 500	-6.98%
	S&P 500 Equal Weight	-17.56%
	Russell 1000 Value	-17.17%
	Russell 1000	-8.03%
	Russell 1000 Growth	0.91%
	Russell 2000	-23.99%
	MSCI All Country World ex. US	-15.57%
	MSCI EAFE	-14.38%
	MSCI EM	-17.69%
	BBgBarc Aggregate	8.93%
	BBgBarc Govt/Credit Intermediate	6.88%
	BBgBarc US Corp Bond	4.98%
	HFRI Fund of Funds Index*	3.22%
	DJ Global World Real Estate	-19.57%
	Morningstar US Real Asset	-7.87%
	FTSE WGBI Index	6.17%
	S&P GSCI	-41.01%
	30 Day T-Bill	1.97%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

\*Skybridge & HFRI FoF Index as of February 29, 2020

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SCCT Regional Water Authority  
Trailing Three Year Investment Results  
March 31, 2017 - March 31, 2020

Account Number	Account Type	Beg. Asset Value 31-Mar-2017	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 31-Mar-2020	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$25,827,308	\$0	\$4,598,870	\$30,426,177	\$32,408,181	\$1,982,003	2.52%	2.92%
447-xxx451	Union	\$18,648,285	\$0	(\$140,265)	\$18,508,020	\$19,963,718	\$1,455,699	2.47%	2.87%
447-xxx456	VEBA	\$4,838,374	\$0	\$1,345,911	\$6,184,285	\$6,484,412	\$300,127	2.05%	2.46%
447-xxx626	Skybridge (Salaried)*	\$483,868	\$0	\$100,000	\$583,868	\$671,025	\$87,156	5.27%	5.27%
447-xxx627	Skybridge (Union)*	\$349,461	\$0	\$40,000	\$389,461	\$450,563	\$61,102	5.30%	5.30%
axx15a	Matrix Trust (Salaried)	\$342,048	\$4,030,633	(\$4,279,337)	\$93,343	\$93,343	\$0	-	-
axx15b	Matrix Trust (Union)	\$69,900	(\$335,288)	\$458,231	\$192,843	\$192,843	\$0	-	-
axx16	Matrix Trust(VEBA)	\$140,737	\$2,352,372	(\$2,123,409)	\$369,700	\$369,700	\$0	-	-
Consolidated		\$50,699,981	\$6,047,716	\$0	\$56,747,697	\$60,633,784	\$3,886,087	2.50%	2.89%

March 31, 2017 - March 31, 2020

Actuarial Assumed Rate of Return

<b>Actuarial Assumed Rate of Return: 7.00%</b>	7.00%
<b>Guidelines/Benchmarks - Market Cap Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	3.47%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	3.16%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	2.70%
<b>Guidelines/Benchmarks - Equal Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	0.42%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	-0.60%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	-1.24%
	Russell 3000 4.00%
	Russell 3000 Equal Weight -4.96%
	S&P 500 5.10%
	S&P 500 Equal Weight -0.44%
	Russell 1000 Value -2.18%
	Russell 1000 4.64%
	Russell 1000 Growth 11.32%
	Russell 2000 -4.64%
	MSCI All Country World ex. US -1.96%
	MSCI EAFE -1.82%
	MSCI EM -1.62%
	BBgBarc Aggregate 4.82%
	BBgBarc Govt/Credit Intermediate 3.79%
	BBgBarc US Corp Bond 4.20%
	HFRI Fund of Funds Index* 2.78%
	DJ Global World Real Estate -1.09%
	Morningstar US Real Asset -0.19%
	FTSE WGBI Index 4.27%
	S&P GSCI -13.33%
	30 Day T-Bill 1.70%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

\*Skybridge & HFRI FoF Index as of February 29, 2020

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SCCT Regional Water Authority  
Trailing Five Year Investment Results  
March 31, 2015 - March 31, 2020

Account Number	Account Type	Beg. Asset Value 31-Mar-2015	Net Deposits/Withdrawals	Transfers	Net Invested	Ending Asset Value 31-Mar-2020	Net \$ Gain/Loss	Gain/Loss (net) %	Gain/Loss (gross) %
447-xxx450	Salaried	\$22,258,378	\$0	\$6,196,519	\$28,454,897	\$32,408,181	\$3,953,284	3.12%	3.52%
447-xxx451	Union	\$15,994,096	\$0	\$1,097,427	\$17,091,523	\$19,963,718	\$2,872,196	3.09%	3.49%
447-xxx456	VEBA	\$2,730,464	\$0	\$3,063,640	\$5,794,103	\$6,484,412	\$690,308	2.68%	3.09%
447-xxx626	Skybridge (Salaried)**	\$0	\$0	\$550,434	\$550,434	\$671,025	\$120,591	5.17%	5.17%
447-xxx627	Skybridge (Union)**	\$0	\$0	\$365,314	\$365,314	\$450,563	\$85,249	5.44%	5.44%
axx15a	Matrix Trust (Salaried)	\$282,155	\$6,091,132	(\$6,279,944)	\$93,343	\$93,343	\$0	-	-
axx15b	Matrix Trust (Union)	\$159,040	\$1,048,177	(\$1,014,374)	\$192,843	\$192,843	\$0	-	-
axx16	Matrix Trust(VEBA)	\$10,869	\$4,337,847	(\$3,979,016)	\$369,700	\$369,700	\$0	-	-
Consolidated		\$41,435,000	\$11,477,156	\$0	\$52,912,156	\$60,633,784	\$7,721,628	3.09%	3.49%

March 31, 2015 - March 31, 2020

Actuarial Assumed Rate of Return

<b>Actuarial Assumed Rate of Return: 7.00%</b>	7.00%
<b>Guidelines/Benchmarks - Market Cap Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	3.50%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	3.57%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	3.33%
<b>Guidelines/Benchmarks - Equal Weighted</b>	
<b>Least Equity Risk:</b> 34%R3000, 11%MSCI ACWxUS, 39%BBgBarc Agg, 4% FTSE WGBI, 9% HFRI FOF, 1% Global RE, 2% T-Bills	1.39%
<b>Strategic:</b> 42%R3000, 15%MSCI ACWxUS, 31%BBgBarc Agg, 3% FTSE WGBI, 5% HFRI FOF, 2% Global RE, 2% T-Bills	0.96%
<b>Most Equity Risk:</b> 44%R3000, 16%MSCI ACWxUS, 16%BBgBarc Agg, 2% FTSE WGBI, 15% HFRI FOF, 5% Global RE, 2% T-Bills	0.59%
	Russell 3000 5.77%
	Russell 3000 Equal Weight -0.44%
	S&P 500 6.73%
	S&P 500 Equal Weight 2.79%
	Russell 1000 Value 1.90%
	Russell 1000 6.22%
	Russell 1000 Growth 10.36%
	Russell 2000 -0.25%
	MSCI All Country World ex. US -0.64%
	MSCI EAFE -0.62%
	MSCI EM -0.37%
	BBgBarc Aggregate 3.36%
	BBgBarc Govt/Credit Intermediate 2.76%
	BBgBarc US Corp Bond 3.36%
	HFRI Fund of Funds Index* 1.72%
	DJ Global World Real Estate 0.27%
	Morningstar US Real Asset -0.32%
	FTSE WGBI Index 2.96%
	S&P GSCI -12.82%
	30 Day T-Bill 1.08%

Performance for accounts held outside of Morgan Stanley are calculated using simple math

\*\*Skybridge accounts opened on 4/25/2016

\*Skybridge & HFRI FoF Index as of February 29, 2020

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The Kelliher Corbett Group  
at Morgan Stanley

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## Investment Holdings Analysis

# Mutual Funds/ETFs

## Results

Data as of 3/31/2020		Morningstar		Market Returns (%)						\$		% of		
		Category	3 Month	YTD	1-Yr		3-Yr	5-Yr	10-Yr	Assets	Total			
Cash & Equivalents														
Cash & Equivalents		-	-	-	-	-	-	-	\$	3,687,485	6.15%			
Fixed Income														
Guggenheim Limited Duration Instl	Short-Term Bond	-0.40	-0.40	●	1.39	●	1.94	●	2.33	-	\$	188,067	0.31%	
SPDR® DoubleLine Shrt Dur Ttl RetTactETF	Short-Term Bond	-1.78	-1.78	●	1.08	●	1.58	-	-	-	\$	156,715	0.26%	
Vanguard Short-Term Bond ETF	Short-Term Bond	2.18	2.18	●	5.47	●	3.02	●	2.20	●	2.13	\$	349,265	0.58%
Cat: Short-Term Bond	Short-Term Bond	-2.14	-2.14		0.73		1.48		1.40		1.81			
PIMCO Investment Grade Credit Bond I-2	Corporate Bond	-6.05	-6.05	●	2.08	●	3.55	●	3.38	●	5.54	\$	1,827,388	3.05%
Cat: Corporate Bond	Corporate Bond	-4.74	-4.74		2.64		2.96		2.77		4.36			
DoubleLine Core Fixed Income I	Intermediate Core-Plus Bond	-3.29	-3.29	●	1.42	●	2.54	●	2.35	-	\$	2,391,400	3.99%	
Janus Henderson Flexible Bond I	Intermediate Core-Plus Bond	0.10	0.10	●	6.34	●	3.73	●	2.61	●	3.94	\$	262,515	0.44%
Loomis Sayles Core Plus Bond Y	Intermediate Core-Plus Bond	1.54	1.54	●	6.93	●	4.30	●	3.45	●	5.05	\$	1,348,000	2.25%
Pioneer Bond Y	Intermediate Core-Plus Bond	-5.81	-5.81	●	-0.34	●	1.88	●	2.00	●	3.82	\$	296,579	0.49%
Cat: Intermediate Core-Plus Bond	Intermediate Core-Plus Bond	-1.10	-1.10		4.24		3.27		2.57		3.87			
Loomis Sayles Strategic Income Y	Multisector Bond	-12.29	-12.29	●	-7.01	●	-0.45	●	0.58	●	4.41	\$	-	0.00%
Pioneer Dynamic Credit Y	Multisector Bond	-14.50	-14.50	●	-10.12	●	-1.77	●	0.83	-	\$	887,211	1.48%	
Pioneer Strategic Income Y	Multisector Bond	-12.31	-12.31	●	-6.40	●	-0.36	●	1.18	●	3.61	\$	-	0.00%
PIMCO Income I2	Multisector Bond	-7.69	-7.69	●	-3.26	●	1.84	●	3.49	●	7.24	\$	1,060,228	1.77%
Cat: Multisector Bond	Multisector Bond	-8.95	-8.95		-4.16		0.53		1.66		3.73			
Idx: BBgBarc US Agg Bond TR USD	-	3.15	3.15		8.93		4.82		3.36		3.88			
Idx: BBgBarc US Govt/Credit Interm TR USD	-	2.40	2.40		6.88		3.79		2.76		3.14			
Idx: FTSE WGBI USD	-	2.00	2.00		6.17		4.27		2.96		2.19			
Sub-Total Fixed Income											\$	8,767,369	14.62%	
US Equity														
Columbia Dividend Income Inst	Large Value	-19.37	-19.37	●	-7.71	●	4.33	●	6.45	●	9.77	\$	2,963,494	4.94%
SPDR® S&P Dividend ETF	Large Value	-25.03	-25.03	●	-17.22	●	0.17	●	4.51	●	9.08	\$	2,016,465	3.36%
Vanguard Value ETF	Large Value	-25.03	-25.03	●	-14.83	●	0.41	●	4.02	●	8.64	\$	1,050,908	1.75%
Cat: Large Value	Large Value	-26.77	-26.77		-17.73		-2.11		1.42		6.89			
Invesco S&P 500® Equal Weight ETF	Large Blend	-26.63	-26.63	●	-17.62	●	-0.60	●	2.52	●	8.83	\$	1,978,671	3.30%
SPDR® S&P 500 ETF Trust	Large Blend	-19.50	-19.50	●	-6.96	●	5.04	●	6.65	●	10.43	\$	70,881	0.12%
Vanguard Total Stock Market ETF	Large Blend	-20.89	-20.89	●	-9.26	●	3.99	●	5.74	●	10.15	\$	4,207,622	7.02%
Cat: Large Blend	Large Blend	-20.92	-20.92		-9.97		2.80		4.46		8.84			
MFS Massachusetts Inv Gr Stk I	Large Growth	-17.76	-17.76	●	-2.03	●	11.20	●	9.52	●	11.91	\$	2,610,156	4.35%
Vanguard Russell 1000 Growth ETF	Large Growth	-14.13	-14.13	●	0.82	●	11.21	●	10.24	-	\$	1,221,972	2.04%	
Cat: Large Growth	Large Growth	-15.48	-15.48		-3.72		8.65		7.64		10.99			
Schwab US Mid-Cap ETF™	Mid-Cap Blend	-29.61	-29.61	●	-22.47	●	-2.33	●	1.04	-	\$	950,708	1.59%	
Cat: Mid-Cap Blend	Mid-Cap Blend	-28.28	-28.28		-20.69		-3.71		-0.58		6.60			
Janus Henderson Enterprise I	Mid-Cap Growth	-24.06	-24.06	●	-12.83	●	6.33	●	6.89	●	11.67	\$	1,062,911	1.77%
Cat: Mid-Cap Growth	Mid-Cap Growth	-20.64	-20.64		-11.17		4.66		4.33		9.46			
Idx: Russell 3000 TR USD	-	-20.90	-20.90		-9.13		4.00		5.77		10.15			
Idx: Russell 1000 Value TR USD	-	-26.73	-26.73		-17.17		-2.18		1.90		7.67			
Idx: Russell 1000 TR USD	-	-20.22	-20.22		-8.03		4.64		6.22		10.39			
Idx: Russell 1000 Growth TR USD	-	-14.10	-14.10		0.91		11.32		10.36		12.97			
Idx: MSCI EM NR USD	-	-23.60	-23.60		-17.69		-1.62		-0.37		0.68			
Idx: Morningstar Dividend Yield Focus TR USD	-	-26.09	-26.09		-20.27		-1.57		2.78		8.88			
Sub-Total US Equity											\$	18,133,788	25.29%	

● Green = exceeds peer group

● Yellow = trails peer group

□ Red = fails to meet criteria (on watch/remove and/or replacement)

Green = Fund added in Q1

Red = Fund removed in Q1

Assets as of 3/31/2020

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# Mutual Funds/ETFs/Hedge Fund

## Results

Data as of 3/31/2020		Morningstar	Market Returns (%)							\$	% of
		Category	3 Month	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Assets	Total	
Global/International Equity											
Vanguard FTSE Developed Markets ETF	Foreign Large Blend	-24.01	-24.01	● -15.80	● -2.37	● -0.56	● 2.76	\$ 1,229,413	2.05%		
Cat: Foreign Large Blend	Foreign Large Blend	-23.39	-23.39	● -15.67	● -2.74	● -1.14	2.15				
American Funds Europacific Growth F2	Foreign Large Growth	-22.47	-22.47	● -12.81	● 0.18	● 0.81	● 3.86	\$ 2,040,514	3.40%		
MFS International Intrinsic Value I	Foreign Large Growth	-13.48	-13.48	● -2.92	● 5.50	● 5.61	● 8.37	\$ 2,263,352	3.77%		
Cat: Foreign Large Growth	Foreign Large Growth	-19.08	-19.08	● -8.32	2.03	1.79	4.46				
Invesco Oppenheimer Developing Markets Y	Diversified Emerging Mkts	-22.83	-22.83	● -14.65	● 0.92	● 1.31	● 3.03	\$ 1,089,221	1.82%		
Cat: Diversified Emerging Mkts	Diversified Emerging Mkts	-25.26	-25.26	● -19.17	-3.34	-1.35	0.49				
WisdomTree Global High Dividend ETF	World Large Stock	-28.73	-28.73	● -22.43	● -4.91	● -1.24	● 2.26	\$ 941,925	1.57%		
Cat: World Large Stock	World Large Stock	-21.05	-21.05	● -11.91	1.13	2.45	5.72				
First Eagle Global I	World Allocation	-19.43	-19.43	● -11.70	● -1.33	● 1.76	● 5.45	\$ 2,219,639	3.70%		
Cat: World Allocation	World Allocation	-17.47	-17.47	● -11.01	-1.46	0.13	3.57				
Idx: MSCI ACWI Ex USA NR USD	-	-23.36	-23.36	● -15.57	-1.96	-0.64	2.05				
Idx: MSCI ACWI NR USD	-	-21.37	-21.37	● -11.26	1.50	2.85	5.88				
Idx: MSCI EAFE NR USD	-	-22.83	-22.83	● -14.38	-1.82	-0.62	2.72				
Sub-Total Global/International Equity									\$ 9,784,063	16.31%	
Balanced											
American Funds American Balanced F2	Allocation--50% to 70% Equity	-11.58	-11.58	● -2.18	● 4.53	● 5.55	● 8.56	\$ 2,777,200	4.63%		
Janus Henderson Balanced I	Allocation--50% to 70% Equity	-11.51	-11.51	● -0.12	● 7.28	● 6.11	● 7.83	\$ 2,773,649	4.62%		
Cat: Allocation--50% to 70% Equity	Allocation--50% to 70% Equity	-14.74	-14.74	● -7.01	1.48	2.40	5.75				
Gateway Y	Options-based	-10.01	-10.01	● -4.77	● 0.80	● 2.42	● 3.69	\$ -	0.00%		
Cat: Options-based	Options-based	-12.93	-12.93	● -6.94	-0.46	0.93	3.40				
Sub-Total Balanced									\$ 5,550,849	9.25%	
Alternative											
BlackRock Event Driven Equity Instl	Market Neutral	-5.06	-5.06	● -0.38	● 3.57	● 3.61	● 8.41	\$ 669,802	1.12%		
Calamos Market Neutral Income I	Market Neutral	-3.83	-3.83	● -0.25	● 2.43	● 2.97	● 3.61	\$ 630,339	1.05%		
Cat: Market Neutral	Market Neutral	-4.07	-4.07	● -3.13	-0.10	-0.01	0.59				
Calamos Phineus Long/Short I	Long-Short Equity	-11.48	-11.48	● -10.87	● -2.76	-	-	\$ -	0.00%		
Cat: Long-Short Equity	Long-Short Equity	-12.40	-12.40	● -7.56	-0.50	0.23	3.05				
Catalyst/Millburn Hedge Strategy I	Multialternative	-23.75	-23.75	● -18.79	● -2.96	-	-	\$ -	0.00%		
Cat: Multialternative	Multialternative	-9.71	-9.71	● -6.65	-0.85	-0.80	1.67				
Cohen & Steers Global Realty I	Global Real Estate	-24.49	-24.49	● -17.99	● 0.07	● 0.79	● 5.25	\$ 564,524	0.94%		
Cat: Global Real Estate	Global Real Estate	-26.19	-26.19	● -20.31	-1.83	-0.93	4.54				
SkyBridge Multi-Adviser HF Portfolios G*	Hedge Fund	1.52	0.74	● 3.96	● 4.96	● 2.06	● 6.39	\$ 1,121,587	1.87%		
Idx: HFRI FoF Composite*	-	0.31	-1.29	3.22	2.78	1.72	2.71				
Idx: S&P 500 TR USD	-	-19.60	-19.60	● -6.98	5.10	6.73	10.53				
Idx: BBgBarc US Agg Bond TR USD	-	3.15	3.15	8.93	4.82	3.36	3.88				
Idx: Russell 3000 TR USD	-	-20.90	-20.90	● -9.13	4.00	5.77	10.15				
Idx: MSCI ACWI NR USD	-	-21.37	-21.37	● -11.26	1.50	2.85	5.88				
Idx: DJ Global World Real Estate TR USD	-	-25.86	-25.86	● -19.57	-1.09	0.27	5.49				
Sub-Total Alternative									\$ 2,986,252	4.98%	
Total									\$ 48,909,807	76.61%	

● Green = exceeds peer group

● Yellow = trails peer group

■ Red = fails to meet criteria (on watch/remove and/or replacement)

Green = Fund added in Q1

Red = Fund removed in Q1

\*Skybridge &HFRI results as of 2/29/2020

Assets as of 3/31/2020

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# Mutual Funds/ETFs

## Statistics

Data as of 3/31/2020	Expense Ratio	Beta 3 Yr vs. S&P or Barc Agg	Alpha 3 Yr vs. S&P or Barc Agg	Std 3 Yr	R2 3 Yr vs. S&P or Barc Agg	P/E Ratio	P/B Ratio	Geo Avg Mkt Cap \$MM	Mstar Risk 5 Yr
<b>Fixed Income</b>									
Guggenheim Limited Duration Instl	0.52	0.18	-0.36	1.33	20	-	-	-	Below Avg
SPDR® DoubleLine Shrt Dur Ttl RetTactETF	0.45	0.32	-1.12	1.89	31	-	-	-	-
Vanguard Short-Term Bond ETF	0.07	0.43	-0.07	1.50	88	-	-	-	Below Avg
<b>Cat: Short-Term Bond</b>	<b>0.73</b>	<b>0.35</b>	<b>-1.30</b>	<b>2.49</b>	<b>36</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
PIMCO Investment Grade Credit Bond I-2	0.87	1.20	-1.67	6.51	35	-	-	3283	Above Avg
<b>Cat: Corporate Bond</b>	<b>0.81</b>	<b>1.02</b>	<b>-1.75</b>	<b>5.78</b>	<b>39</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
DoubleLine Core Fixed Income I	0.48	0.88	-1.78	4.39	41	5.2	0.5	1180	Above Avg
Janus Henderson Flexible Bond I	0.52	0.95	-0.90	3.50	76	-	-	-	Below Avg
Loomis Sayles Core Plus Bond Y	0.48	0.88	-0.15	3.17	79	-	-	-	Average
Pioneer Bond Y	0.46	0.98	-2.68	5.61	31	-	-	-	High
<b>Cat: Intermediate Core-Plus Bond</b>	<b>0.79</b>	<b>0.91</b>	<b>-1.18</b>	<b>3.92</b>	<b>62</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Loomis Sayles Strategic Income Y	0.71	0.25	-2.67	7.45	1	20.3	1.8	116326	Above Avg
Pioneer Dynamic Credit Y	0.92	0.72	-5.24	9.43	6	-	-	-	High
Pioneer Strategic Income Y	0.73	0.85	-4.31	8.17	11	-	-	-	Above Avg
PIMCO Income I2	1.15	0.32	-0.74	5.20	4	-	-	4893	Below Avg
<b>Cat: Multisector Bond</b>	<b>1.09</b>	<b>0.56</b>	<b>-2.60</b>	<b>6.85</b>	<b>12</b>	<b>15.9</b>	<b>1.7</b>	<b>39612</b>	<b>-</b>
<b>US Equity</b>									
Columbia Dividend Income Inst	0.71	0.88	-0.45	13.73	96	17.9	2.9	109940	Low
SPDR® S&P Dividend ETF	0.35	0.94	-4.54	15.22	89	15.3	1.9	16995	Below Avg
Vanguard Value ETF	0.04	1.03	-4.56	16.07	95	14.6	2.0	81302	Below Avg
<b>Cat: Large Value</b>	<b>0.99</b>	<b>1.07</b>	<b>-7.09</b>	<b>17.04</b>	<b>91</b>	<b>14.9</b>	<b>2.0</b>	<b>100243</b>	<b>-</b>
Invesco S&P 500® Equal Weight ETF	0.20	1.14	-5.75	17.69	96	14.9	2.0	23845	Above Avg
SPDR® S&P 500 ETF Trust	0.09	1.00	-0.05	15.15	100	18.0	2.7	112768	Average
Vanguard Total Stock Market ETF	0.03	1.04	-1.14	15.83	99	19.3	2.9	68919	Average
<b>Cat: Large Blend</b>	<b>0.93</b>	<b>1.01</b>	<b>-2.20</b>	<b>15.73</b>	<b>95</b>	<b>18.3</b>	<b>3.2</b>	<b>174845</b>	<b>-</b>
MFS Massachusetts Inv Gr Stk I	0.47	0.96	5.78	14.91	97	25.8	5.4	107462	Below Avg
Vanguard Russell 1000 Growth ETF	0.08	0.98	5.77	15.40	94	26.1	7.1	141518	Average
<b>Cat: Large Growth</b>	<b>1.07</b>	<b>1.00</b>	<b>3.43</b>	<b>16.10</b>	<b>89</b>	<b>25.9</b>	<b>5.2</b>	<b>175597</b>	<b>-</b>
Schwab US Mid-Cap ETF™	0.04	1.25	-7.54	19.79	92	13.9	1.8	5919	Average
<b>Cat: Mid-Cap Blend</b>	<b>1.07</b>	<b>1.18</b>	<b>-8.84</b>	<b>19.01</b>	<b>89</b>	<b>17.5</b>	<b>2.1</b>	<b>7568</b>	<b>-</b>
Janus Henderson Enterprise I	0.75	1.08	1.22	17.48	88	27.9	3.9	15441	Average
<b>Cat: Mid-Cap Growth</b>	<b>1.17</b>	<b>1.11</b>	<b>-0.43</b>	<b>18.45</b>	<b>85</b>	<b>28.0</b>	<b>4.0</b>	<b>13405</b>	<b>-</b>

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Green = Fund added in Q1

Red = Fund removed in Q1

# Mutual Funds/ETFs/Hedge Fund

## Statistics

Data as of 3/31/2020	Expense Ratio	Beta 3 Yr vs. S&P or Barc Agg	Alpha 3 Yr vs. S&P or Barc Agg	Std 3 Yr	R2 3 Yr vs. S&P or Barc Agg	P/E Ratio	P/B Ratio	Geo Avg Mkt Cap \$MM	Mstar Risk 5 Yr
<b>Global/International Equity</b>									
Vanguard FTSE Developed Markets ETF	0.05	1.00	-0.38	15.31	98	15.2	1.4	22570	Average
Cat: Foreign Large Blend	1.01	0.99	-0.80	15.33	95	15.2	1.5	37329	-
American Funds Europacific Growth F2	0.58	1.01	2.26	15.59	97	20.8	2.6	48011	Average
MFS International Intrinsic Value I	0.73	0.68	6.03	11.61	79	22.8	3.0	25559	Low
Cat: Foreign Large Growth	1.13	0.92	3.70	14.77	88	22.3	2.9	39497	-
Invesco Oppenheimer Developing Markets Y	1.00	1.05	3.24	16.66	90	18.1	3.4	51692	Below Avg
Cat: Diversified Emerging Mkts	1.33	1.08	-0.81	17.77	84	13.9	1.9	36095	-
WisdomTree Global High Dividend ETF	0.58	1.00	-2.89	15.89	91	11.0	1.1	39446	Above Avg
Cat: World Large Stock	1.14	0.94	2.89	15.31	87	17.3	2.3	73854	-
First Eagle Global I	0.85	1.25	-3.98	11.80	95	17.5	1.7	37878	Average
Cat: World Allocation	1.21	1.17	-4.09	11.40	90	15.6	1.7	41284	-
<b>Balanced/Hedged Equity</b>									
American Funds American Balanced F2	0.37	0.96	1.88	8.94	97	22.1	3.0	133676	Below Avg
Janus Henderson Balanced I	0.65	0.97	4.51	9.33	92	22.3	4.7	133907	Below Avg
Cat: Allocation--50% to 70% Equity	1.10	1.11	-1.14	10.58	93	18.6	2.5	73522	-
Gateway Y	0.70	0.45	-2.68	7.06	94	19.3	3.0	118380	Below Avg
Cat: Options-based	1.49	0.58	-4.18	10.71	77	19.1	3.0	147596	-
<b>Alternative</b>									
BlackRock Event Driven Equity Instl	1.50	0.18	1.34	4.41	2	19.9	2.3	10662	-
Calamos Market Neutral Income I	1.01	-0.09	0.97	2.76	1	22.5	3.3	129734	Below Avg
Cat: Market Neutral	2.15	-0.02	-1.71	5.49	7	19.7	2.4	36386	-
Calamos Phineus Long/Short I	2.73	0.37	-5.85	7.88	50	16.3	1.9	78039	-
Cat: Long-Short Equity	2.16	0.55	-4.12	10.93	63	14.2	1.8	48247	-
Catalyst/Millburn Hedge Strategy I	2.02	1.33	-5.39	14.13	75	19.7	2.3	12344	-
Cat: Multialternative	1.78	0.56	-3.06	7.02	60	16.5	2.1	31086	-
Cohen & Steers Global Realty I	0.90	0.82	-1.09	15.70	60	18.8	1.6	11255	Average
Cat: Global Real Estate	1.27	0.89	-2.93	16.56	64	16.9	1.3	10332	-
SkyBridge Multi-Adviser HF Portfolios G	1.87	0.10	2.30	2.09	35	-	-	-	-

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Assets as of 3/31/2020

Data Source: Morningstar; as of 3/31/2020

# Important Disclosures

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# Glossary of Terms

## The Kelliher Corbett Group at Morgan Stanley

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**Accrued Income:** The dividends and interest earned but not yet received at both the beginning and end of each reporting period.

**Advisory Account:** An investment advisory relationship is designed for clients who prefer that their Financial Advisor act as an investment consultant, with their assets invested in a mutual fund asset allocation program or in a Advisory account that is directed by a professional money manager either at Morgan Stanley or at an external money management firm. There are important differences in your relationship with your Financial Advisor and Morgan Stanley in brokerage accounts and in advisory accounts. Additional information about these differences is available at <http://www.morganstanley.com/ourcommitment>

**Annualized Standard Deviation:** A measure of volatility, it quantifies how much a series of numbers, such as portfolio returns, deviates around its average. Since it measures the portfolio's investment volatility, the account's gross rate of return is used.

**Brokerage Account:** In a brokerage relationship, your Financial Advisor will work with you to facilitate the execution of securities transactions on your behalf. Your Financial Advisor also provides investor education and professional, personalized information about financial products and services in connection with these brokerage services. You can choose how you want to pay for these services and you will receive the same services regardless of which pricing option you choose. There are important differences in your relationship with your Financial Advisor and Morgan Stanley in brokerage accounts and in advisory accounts. Additional information about these differences is available at <http://www.morganstanley.com/ourcommitment>

**Comparative Indices:** A complete description of the comparative indices included in this Performance Report is available upon request.

**Dollar-Weighted Return:** Rate of return calculation methodology that reflects both the timing and magnitude of external contributions and withdrawals and measures the portfolio's performance. The return for each month is calculated as the average return on all dollars invested.

**Gross Return:** The return of the portfolio before the deduction of fees/commissions and other expenses.

**Net Contributions/Withdrawals:** The total value of capital contributed to or withdrawn from the account during the reporting period. The dollar amount represented by contribution or withdrawal transactions is excluded from the calculation of Portfolio Appreciation.

**Net Invested Capital:** The sum of the Total Beginning Value and the net of additional capital Contributions and Withdrawals for each reporting period.

**Net Portfolio Appreciation:** The total dollar gain/loss of the portfolio for each reporting period. The Net Portfolio Appreciation includes the impact of income received and is calculated as the difference between Net Invested Capital and Total Ending Value.

**Net Return:** The return of the portfolio for the period reduced by the amount of fees/commissions paid. The net of fees return is calculated gross of certain custody fees.

**Time-Weighted Return:** Rate of return calculation methodology that eliminates the impact of external contributions and withdrawals to the portfolio value and measures the manager's performance. Portfolio returns are calculated at least monthly and individual monthly returns are geometrically linked to calculate total cumulative return.

**Total Beginning Value:** The total market value of the portfolio, valued on a trade date basis, at the beginning of each reporting period. The Total Beginning Value includes Accrued Income.

**Total Ending Value:** The total market value of the portfolio, valued on a trade date basis, at the end of each reporting period. The Total Ending Value includes Accrued Income.

**Weighted Average:** The average in which each yield to be averaged is assigned a weight. These weightings determine the relative importance or frequency of each yield on the average.

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# Pension & Benefit Committee

## FY2020 Work Plan

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The Pension and Benefit Committee will assist the Regional Water Authority (RWA) in fulfilling its fiduciary responsibilities for oversight relating to RWA's Defined Benefit Pension Plan, Defined Contribution Plan and Voluntary Retired Employees' Contributory Welfare Trust (collectively, the "Employee Retirement Plan").

### **July 2020**

- Quarterly investment performance review – pension, VEBA and 401K

### **October 2020**

- Quarterly investment performance review - pension, VEBA and 401K

### **January 2020**

- Quarterly investment performance review - pension, VEBA and 401K

### **April 2021**

- Review 1/1/2021 Actuary Reports for pension and VEBA and related contribution amounts
- Review actuarial assumptions
- Quarterly investment performance review - pension, VEBA and 401K
- Review Committee FY 2022 work plan

### ***Possible May 2021***

- Discuss potential additional year-end pension contribution