

JULY 1, 2018
ACTUARIAL VALUATION OF
THE NEW PENSION PLAN
OF
THE CITY OF CENTRAL FALLS

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Report Summary:

<u>Highlights</u>	<u>July 1, 2017</u>	<u>July 1, 2018</u>
<u>Contributions</u>		
Funding Schedule FY 2019	\$2,585,270	\$2,819,857
Funding Schedule FY 2020	\$2,659,284	\$2,903,769
<u>Funded Ratios</u>		
GAS No. 25	26.4%	26.5%
<u>Participants</u>		
Actives	81	76
Retirees and Beneficiaries	64	66
Vested	0	0
Inactives	0	0
Disabled	<u>55</u>	<u>53</u>
Total	200	195
<u>Payroll</u>		
Payroll of Active Members	\$4,717,866	\$4,684,587
Average Payroll	58,245	61,639
<u>Normal Cost</u>		
Employer	156,426	264,072
Employee	426,679	460,141
Administrative Expenses	<u>0</u>	<u>0</u>
Total	583,105	724,213
<u>Actuarial Accrued Liabilities</u>		
Actives	10,176,603	11,359,649
Retirees, Beneficiaries, Disabilities and Inactives	<u>24,594,038</u>	<u>26,272,340</u>
Total	34,770,641	37,631,989
<u>Actuarial Value of Assets</u>	<u>9,170,268</u>	<u>9,988,424</u>
<u>Unfunded Actuarial Accrued Liabilities</u>	\$25,600,373	\$27,643,565

Introduction

The purpose of this report is to present the findings of an actuarial valuation as of July 1, 2018, of the Central Falls New Pension Plan for the purpose of funding the plan. Separate report was prepared for accounting and financial disclosure purposes.

The actuarial valuation is based on:

- Negotiated provisions with the Fire and Police unions as of July 1, 2018.
- Employee data provided by the City
- Asset information reported by the City of Central Falls

During the last twelve months, the total unfunded actuarial accrued liability increased by 3.1% to \$26,395,895 based on experience of the plan. There was an actuarial gain of \$1,300,138. Sources of (gains) and losses are as follows:

	<u>(Gain) / Loss</u>
Assets	214,520
Salary Increases	(17,254)
New Participants	45,443
Active - Retirements	(107,793)
Active - Terminations	(318,311)
Active - Mortality	865
Active - Disabilities	(165,374)
Inactive - Mortality and data adjustments	(507,386)
Other and assumption changes	<u>(442,306)</u>
Total (Gain) / Loss	(1,300,138)

The plan provisions were changed since the last valuation based on union negotiations with both Fire and Police. The effect of the changes was an increase in the unfunded liability from \$26,395,895 to \$27,643,565 and an increase in the employer Normal Cost from \$219,496 to \$264,072.

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Superannuation	\$340,303	\$456,103
Termination	22,416	24,584
Death	44,061	45,887
Disability	176,325	197,639
Administrative Expenses	<u>0</u>	<u>0</u>
Total Normal Cost	583,105	724,213
% of Pay	12.4%	15.5%
Employee Contributions	426,679	460,141
% of Pay	9.0%	9.8%
Employer Normal Cost	\$156,426	\$264,072
% of Pay	3.3%	5.6%

Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactive. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Actives		
Superannuations	\$8,578,547	\$9,957,051
Termination	(107,634)	(111,417)
Death	234,096	221,189
Disability	1,471,594	1,292,826
Retirees and Inactives		
Retirees and Beneficiaries	10,838,875	12,655,764
Vested	0	175,222
Terminated (Refund)	0	0
Disabled	<u>13,755,163</u>	<u>13,441,354</u>
Total	\$34,770,641	\$37,631,989

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Actives		
Superannuation	11,868,284	\$14,193,182
Termination	112,990	119,810
Death	647,246	630,470
Disability	3,174,601	3,119,148
Retirees and Inactives		
Retirees and Beneficiaries	10,838,875	12,655,764
Vested	0	175,222
Terminated (Refund)	0	0
Disabled	<u>13,755,163</u>	<u>13,441,354</u>
Total	\$40,397,159	\$44,334,950

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Cash equivalents	\$0	\$594,404
Fixed income securities	0	4,073,414
Century / Equity	9,170,268	4,818,065
Venture Capital	0	0
Other	0	0
Accounts receivable	0	502,541
Accounts payable	0	<u>0</u>
Total Market Value	\$9,170,268	\$9,988,424
Total Actuarial Value	\$9,170,268	\$9,988,424

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table V.

Table V

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Actuarial Accrued Liability	\$34,770,641	\$37,631,989
Actuarial Assets	<u>9,170,268</u>	<u>9,988,424</u>
Unfunded Actuarial Accrued Liability	\$25,600,373	\$27,643,565
Funded Status	26.4%	26.5%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the policy setforth in 2002. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2033
 \$ 27,643,565 over 15 years with 3.0% increasing payments
- Interest adjustment for payments deposited at the middle of the fiscal year.

The pension appropriation is shown in Table VI.

Table VI

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
Normal cost	\$166,400	\$264,072
Amortization payment of the unfunded accrued liability	<u>1,943,918</u>	<u>2,503,345</u>
Total cost	\$2,110,318	\$2,767,417
% of Pay	44.2%	59.1%
Fiscal 2019 cost	\$2,585,270	\$2,819,857
Fiscal 2020 cost	\$2,659,284	\$2,903,769

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 3% per year. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 14 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents about 60% of payroll until the time the unfunded liabilities are fully paid off, leaving only a normal cost of 5.7% in 2034.

[https://shermanactuary-my.sharepoint.com/personal/dan_shermanactuary_com/Documents/Recovered Data/Central Falls/Pension2018/\[2018_Val_v2.xlsx\]ProVal](https://shermanactuary-my.sharepoint.com/personal/dan_shermanactuary_com/Documents/Recovered%20Data/Central%20Falls/Pension2018/[2018_Val_v2.xlsx]ProVal)

Appropriation Forecast

Fiscal Year	Employee Payroll	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %*
2019	\$4,684,587	\$460,141	\$273,796	\$2,546,061	\$2,819,857	60.2	26.5
2020	\$4,825,125	\$474,604	\$281,326	\$2,622,443	\$2,903,769	60.2	30.0
2021	\$4,969,878	\$489,521	\$289,062	\$2,701,116	\$2,990,178	60.2	33.6
2022	\$5,118,975	\$504,906	\$297,009	\$2,782,150	\$3,079,159	60.2	37.4
2023	\$5,272,544	\$520,773	\$305,173	\$2,865,614	\$3,170,787	60.1	41.3
2024	\$5,430,720	\$537,138	\$313,559	\$2,951,583	\$3,265,142	60.1	45.5
2025	\$5,593,642	\$554,016	\$322,174	\$3,040,130	\$3,362,304	60.1	50.0
2026	\$5,761,451	\$571,424	\$331,023	\$3,131,334	\$3,462,357	60.1	54.6
2027	\$5,934,295	\$589,377	\$340,113	\$3,225,274	\$3,565,387	60.1	59.5
2028	\$6,112,323	\$607,893	\$349,451	\$3,322,032	\$3,671,483	60.1	64.6
2029	\$6,295,693	\$626,990	\$359,043	\$3,421,693	\$3,780,736	60.1	70.0
2030	\$6,484,564	\$646,685	\$368,896	\$3,524,344	\$3,893,240	60.0	75.6
2031	\$6,679,101	\$666,998	\$379,017	\$3,630,075	\$4,009,092	60.0	81.4
2032	\$6,879,474	\$687,947	\$389,414	\$3,738,977	\$4,128,391	60.0	87.6
2033	\$7,085,858	\$708,586	\$401,096	\$3,477,927	\$3,879,023	54.7	94.0
2034	\$7,298,434	\$729,843	\$413,129	\$0	\$413,129	5.7	100.0
2035	\$7,517,387	\$751,739	\$425,523	\$0	\$425,523	5.7	100.0
2036	\$7,742,909	\$774,291	\$438,288	\$0	\$438,288	5.7	100.0
2037	\$7,975,196	\$797,520	\$451,437	\$0	\$451,437	5.7	100.0
2038	\$8,214,452	\$821,445	\$464,980	\$0	\$464,980	5.7	100.0
2039	\$8,460,885	\$846,089	\$478,930	\$0	\$478,930	5.7	100.0
2040	\$8,714,712	\$871,471	\$493,297	\$0	\$493,297	5.7	100.0
2041	\$8,976,153	\$897,615	\$508,096	\$0	\$508,096	5.7	100.0
2042	\$9,245,438	\$924,544	\$523,339	\$0	\$523,339	5.7	100.0
2043	\$9,522,801	\$952,280	\$539,039	\$0	\$539,039	5.7	100.0
2044	\$9,808,485	\$980,848	\$555,211	\$0	\$555,211	5.7	100.0
2045	\$10,102,739	\$1,010,274	\$571,867	\$0	\$571,867	5.7	100.0
2046	\$10,405,822	\$1,040,582	\$589,023	\$0	\$589,023	5.7	100.0
2047	\$10,717,996	\$1,071,800	\$606,694	\$0	\$606,694	5.7	100.0
2048	\$11,039,536	\$1,103,954	\$624,894	\$0	\$624,894	5.7	100.0
2049	\$11,370,722	\$1,137,072	\$643,641	\$0	\$643,641	5.7	100.0
2050	\$11,711,844	\$1,171,184	\$662,951	\$0	\$662,951	5.7	100.0

* Beginning of Fiscal Year

GASB Statements No. 25 and No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. Some of the required disclosure information is shown in Table VII.

Table VII

	<u>July 1, 2017</u>	<u>July 1, 2018</u>
(1) Actuarial Accrued Liability	\$34,770,641	\$37,631,989
(2) Actuarial Value of Assets	<u>9,170,268</u>	<u>9,988,424</u>
(3) Unfunded Actuarial Accrued Liability	25,600,373	27,643,565
(4) Funded Ratio (2)/(1)	26.4%	26.5%
(5) Covered Payroll	\$4,717,866	\$4,684,587
(6) UAAL as a percentage of payroll: (3)/(5)	542.6%	590.1%

EXHIBITS

Exhibit 1 - Age/Service Distribution with Salary as of July 1, 2018

Attained Age	Average Salary	<5	5-9	10-14	15-19	20-24	25-29	30+	Total
< 20		0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0
20-24		1	0	0	0	0	0	0	1
		31,971	0	0	0	0	0	0	31,971
25-29		8	0	0	0	0	0	0	8
		42,360	0	0	0	0	0	0	42,360
30-34		10	6	1	0	0	0	0	17
		35,750	56,359	58,841	0	0	0	0	44,382
35-39		2	2	9	0	0	0	0	13
		35,221	55,743	58,511	0	0	0	0	54,502
40-44		0	0	5	5	0	0	0	10
		0	0	60,908	64,995	0	0	0	62,951
45-49		1	2	3	7	1	0	0	14
		53,993	57,833	58,005	63,553	67,509	0	0	61,147
50-54		0	1	0	2	1	3	0	7
		0	57,846	0	60,405	69,144	77,586	0	68,651
55-59		0	0	0	1	1	1	0	3
		0	0	0	60,141	69,144	85,708	0	71,664
60-64		0	0	0	0	0	1	1	2
		0	0	0	0	0	60,773	69,144	64,959
65-69		0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0
70+		0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0
Total Employees		22	11	18	15	3	5	1	75
Average Salary		38,763	56,650	59,111	63,386	68,599	75,848	69,144	55,265

Exhibit 2 - Retiree Distribution as of July 1, 2018

Attained Age	Number of Employees			Total Payments		
	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	0	1	1	0	16,477	16,477
50-54	0	8	8	0	122,587	122,587
55-59	0	8	8	0	135,384	135,384
60-64	2	7	9	43,320	123,723	167,043
65-69	2	10	12	12,100	134,095	146,195
70-74	1	6	7	13,540	152,163	165,703
75-79	4	0	4	60,691	0	60,691
80-84	3	2	5	61,818	31,530	93,348
85-89	5	2	7	50,828	6,283	57,111
90-94	1	0	1	4,883	0	4,883
95+	3	0	3	18,691	0	18,691
Total	21	44	65	265,871	722,243	988,114
Average (Age/Payment)	80.96	63.73	69.47	12,661	16,415	15,202
Frequency Percent	32.3	67.7	100.0	26.9	73.1	100.0

Exhibit 3 - Disabled Retiree Distribution as of July 1, 2018

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	1	0	1	24,388	0	24,388
45-49	0	0	0	0	0	0
50-54	5	0	5	134,603	0	134,603
55-59	5	0	5	127,085	0	127,085
60-64	11	0	11	261,287	0	261,287
65-69	6	0	6	151,824	0	151,824
70-74	11	0	11	230,020	0	230,020
75-79	7	0	7	135,535	0	135,535
80-84	5	0	5	104,650	0	104,650
85-89	0	0	0	0	0	0
90-94	2	0	2	42,367	0	42,367
95-99	0	0	0	0	0	0
Total	53	0	53	1,211,758	0	1,211,758
Average (Age/Payment)	68.1	0.0	68.1	22,863	0	22,863
Frequency Percent	100.0	-	100.0	100.0	-	100.0

EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments, contribution income and investment returns.

Fiscal Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2019	\$2,461,665	\$460,141	\$2,819,857	\$796,831	\$1,615,164
2020	2,549,389	474,604	2,903,769	918,914	1,747,898
2021	2,636,233	489,521	2,990,178	1,051,109	1,894,575
2022	2,695,489	504,906	3,079,159	1,195,450	2,084,026
2023	2,754,544	520,773	3,170,787	1,354,141	2,291,158
2024	2,811,127	537,138	3,265,142	1,528,597	2,519,749
2025	2,868,120	554,016	3,362,304	1,720,322	2,768,523
2026	2,971,515	571,424	3,462,357	1,929,145	2,991,410
2027	3,041,337	589,377	3,565,387	2,156,070	3,269,497
2028	3,121,042	607,893	3,671,483	2,403,642	3,561,977
2029	3,201,936	626,990	3,780,736	2,673,267	3,879,058
2030	3,296,345	646,685	3,893,240	2,966,340	4,209,920
2031	3,367,075	666,998	4,009,092	3,285,269	4,594,284
2032	3,443,143	687,947	4,128,391	3,633,003	5,006,197
2033	3,529,436	708,586	3,879,023	3,997,656	5,055,830
2034	3,615,165	729,843	413,129	4,247,659	1,775,466
2035	3,700,241	751,739	425,523	4,379,785	1,856,806
2036	3,791,942	774,291	438,288	4,517,831	1,938,468
2037	3,910,990	797,520	451,437	4,661,058	1,999,025
2038	4,011,990	821,445	464,980	4,809,560	2,083,994
2039	4,115,599	846,089	478,930	4,964,405	2,173,825
2040	4,221,883	871,471	493,297	5,125,962	2,268,847
2041	4,330,912	897,615	508,096	5,294,617	2,369,416
2042	4,442,757	924,544	523,339	5,470,785	2,475,912
2043	4,557,490	952,280	539,039	5,654,913	2,588,742
2044	4,675,185	980,848	555,211	5,847,472	2,708,345
2045	4,795,921	1,010,274	571,867	6,048,972	2,835,193
2046	4,919,774	1,040,582	589,023	6,259,956	2,969,787
2047	5,046,826	1,071,800	606,694	6,481,004	3,112,672
2048	5,159,959	1,103,954	624,894	6,713,371	3,282,260

EXHIBIT 5 - SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Fire and Police union contracts as of July 1, 2018 and does not take into account any subsequent changes.

1. Administration

The New Pension Plan is administered by the City of Central Falls.

2. Participation

Participation is mandatory for all full-time employees whose employment.

3. Salary

Salary is defined as regular compensation plus Holiday Pay and Longevity. Salary does not include bonuses, overtime, severance pay, unused sick leave credit or other similar compensation.

4. Member Contributions

Member contributions are as follows:

<u>Member Contribution Rate</u>
10.5% of Salary

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the five consecutive-year period within the final 10 years of employment that produces the highest average.

6. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirementa. Eligibility:

Completion of 5 years of service and age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times the Early Retirement Reduction Factor. At 25 years of credited service, the Benefit Rate is 50%. For each year after 25, up to 5 additional years, the Benefit Rate is increased 1%. The Early Retirement Reduction Factor based on the RP2000 Mortality Table and 7.5%. Factors at whole ages are shown in the following table:

<u>Age at Commencement</u>	<u>Factor</u>
53 or Over	1.000
52	.9189
51	.8452
50	.7779

8. Deferred Vested Retirementa. Eligibility:

A participant who has completed five or more years of creditable service is eligible for a deferred vested retirement benefit.

b. Benefit Amount:

The participant's accrued benefit is based on 2% per year of credited service up to 25 years, plus 1% per year (up to 5 years) times the applicable Early Retirement Reduction Factor.

b. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions with credited interest.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 66 2/3rd% of annual salary.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have five years of service.

b. Benefit Amount:

The ordinary disability amount is based on 2% per year of credited service up to 25 years, plus 1% per year (up to 5 years) times the applicable Early Retirement Reduction Factor.

11. Survivor Benefits

a. Occupational Death:

The survivors of a firefighter who dies due to an occupational injury will be entitled to a one year's salary plus a one-year deferred pension benefit equal to 66 2/3rd% of the participant's annual Salary. The survivors of a police officer who dies due to an occupational injury will be entitled to a lump sum payment of \$10,000 plus a pension benefit equal to 66 2/3rd% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

The amount of annual increase will be 2% of the November 23, 2011 pension amount for those receiving a pension benefit at that time, or the initial amount of pension amount for those commencing pension payments after November 23, 2011.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement.

EXHIBIT 6 - ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

July 1, 2018.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 7.5% per annum, net of investment management fees.

5. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 2.0% per year without compounding.

6. Salary Scale

The assumed annual rates for salary increases including longevity and holiday pay is 3%.

7. Value of Investments

Assets held by the fund are valued at market value as reported by the City. The actuarial value of assets is equal to the market value.

8. Annual Rate of Withdrawal Prior to Retirement

Based on the Rhode Island MERS termination rates for Class B. The assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	<u>Rates</u>
0	0.1000
5	0.0354
10	0.0191
15	0.0090
20	0.0000

9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the SOA RP-2014 Adjusted to 2006 Blue Collar Mortality with improvements under scale MP-2016 for males and females. Mortality for disabled members is represented by the SOA RP-2014 Adjusted to 2006 Disabled Retiree Mortality with mortality improvements under MP-2016.

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following rates at the following ages:

<u>Attained Age</u>	
20	0.0010
30	0.0030
40	0.0030
50	0.0125

In addition, it is assumed for the 10% of all disabilities are assumed to be ordinary and 90% are service connected.

12. Family Composition

It is assumed that 80% of all male members and 60% of all female members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

No provisions are made for administrative expenses.

EXHIBIT 7 - GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Pension Plan such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the Central Falls New Pension Plan contributing as of July 1, 2018, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, each actuarial assumption used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Sherman Actuarial Services, LLC



Daniel W. Sherman

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January, 2019