

Purpose and Background

The Orange County Employees Retirement System (OCERS) is charged with administering defined benefit plans for its members. Administering the system includes establishing systematic funding of current and future benefit payments for members of OCERS. In doing so, the Board of Retirement engages the services of an actuary to assist in establishing contributions that will fully fund the System's liabilities, and that, as a percentage of payroll, will remain as level as possible for each generation of active members. In order for the actuary to perform the requested services, the Board must approve specific funding objectives, methods, and assumptions to be used in the actuarial valuation for the purpose of funding member benefits.

Policy Objectives

- Achieve long-term full funding of the cost of benefits provided by OCERS;
- Seek reasonable and equitable allocation of the cost of benefits over time;
- Minimize volatility of the plan sponsor's contribution to the extent reasonably possible, consistent with other policy goals; and,
- Support the general public policy goals of accountability and transparency by being clear as to both intent and effect, allowing for an assessment of how and when plan sponsors will meet the funding requirements of the plan.

Definitions

1. **Actuarial Accrued Liability (AAL)** – The portion of the present value of projected benefits that is attributed to past service by the actuarial funding method.
2. **Actuarial Funding Method** – A process used to allocate present value of projected benefits among past and future periods of service.
3. **Actuarial Gains and Losses** – changes in unfunded actuarial accrued liability or surplus due to actual experience different from what is assumed in the actuarial valuation. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in unfunded actuarial accrued liability, or "actuarial gain" as of the next valuation.
4. **Actuarial Surplus** – the positive difference, if any, between the Valuation Value of Assets and the Actuarial Accrued Liability
5. **Actuarial Value of Assets (AVA)** – The market value of assets less the deferred investment gains or losses not yet recognized by the asset smoothing method.

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6. **Entry Age Method** - An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to produce stable employer and employee contributions in amounts that increase at the same rate as the members' payroll (i.e., level % of payroll).
7. **Market Value of Assets (MVA)** – the fair value of assets of the plan as reported under generally accepted accounting principles.
8. **Normal Cost** – The portion of the present value of projected benefits that is attributed to current service by the actuarial funding method.
9. **Unfunded Actuarial Accrued Liability (UAAL)** – the portion of the Actuarial Accrued Liability that is not currently covered by plan assets. It is calculated by subtracting the Valuation Value of Assets from the Actuarial Accrued Liability.
10. **Valuation Value of Assets (VVA)** –the value of assets used in the actuarial valuation to determine contribution rate requirements. It is equal to the Actuarial Value of Assets reduced by the value of any non-valuation reserves.
11. **Valuation Period** – The year for which the actuarial valuation is being performed, which is the calendar year preceding the December 31 actuarial valuation date.

Policy Guidelines

OCERS annual funding requirement is comprised of a payment of the Normal Cost and a payment on the Unfunded Actuarial Accrued Liability (UAAL). The Normal Cost and the amount of payment on UAAL are determined by the following three components of this funding policy

- a. Actuarial Cost Method: the process used to allocate the total present value of future benefits to each year (Normal Cost), and all past years (Actuarial Accrued Liability);
- b. Asset Smoothing Method: the process used that spreads the recognition of investment gains or losses over a period of time for the purposes of determining the Actuarial Value of Assets used in the actuarial valuation process; and
- c. Amortization Policy: the decisions on how, in terms of duration and pattern, to reduce the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after adjustment for non-valuation reserves) in a systematic manner.

Actuarial Cost Method

The Entry Age cost method with Normal Cost developed as a level percentage of pay of shall be applied to each member's retirement benefit in determining the Normal Cost and the Actuarial Accrued Liability.

Asset Smoothing Method

The investment gains or losses of each Valuation Period, as a result of comparing the actual return on the Market Value of Assets at the end of the period with what the expected return on the Market Value of Assets would have been if the assumed rate of return on assets was realized during the period, shall be recognized in a level amount over a fixed five (5) years in calculating the Actuarial Value of Assets.

Amortization Policy

- a. The Unfunded Actuarial Accrued Liability, the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after again adjustment for non-valuation reserves), shall be amortized over various periods of time, depending on how the unfunded liability arose;
- b. The total Unfunded Actuarial Accrued Liability as of December 31, 2013 (which consists of the outstanding balance of the UAAL from the December 31, 2012 valuation and any new actuarial gains or losses from calendar year 2013) shall be amortized over twenty (20) years;
- c. Actuarial Gains or Losses incurred in a single year shall be amortized over twenty (20) years;
- d. Changes in actuarial assumptions and cost methods shall be amortized over twenty (20) years;
- e. Plan amendments other than Early Retirement Incentives shall be amortized over fifteen (15) years;
- f. Early Retirement Incentives shall be amortized over a period not to exceed five (5) years;
- g. Unfunded Actuarial Accrued Liabilities shall be amortized in multiple layers by source over "closed" amortization periods;
- h. Unfunded Actuarial Accrued Liabilities shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase;
- i. If an overfunding or "surplus" exists (i.e., the adjusted Actuarial Value of Assets is greater than the Actuarial Accrued Liability) and the amount of such surplus is in excess of 20% of the AAL per Section 7522.52 of California Public Employee Pension Reform Act, such actuarial surplus in excess of 20% of the AAL and any subsequent surpluses will be amortized over an "open" amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

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Other Policy Considerations

- a. The Unfunded Actuarial Accrued Liability, the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets (after again adjustment for non-valuation reserves), shall be amortized over various periods of time, depending on how the unfunded liability arose;
- b. The total Unfunded Actuarial Accrued Liability as of December 31, 2013 (which consists of the outstanding balance of the UAAL from the December 31, 2012 valuation and any new actuarial gains or losses from calendar year 2013) shall be amortized over twenty (20) years;
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- h. Unfunded Actuarial Accrued Liabilities shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase;
- i. If an overfunding or "surplus" exists (i.e., the adjusted Actuarial Value of Assets is greater than the Actuarial Accrued Liability) and the amount of such surplus is in excess of 20% of the AAL per Section 7522.52 of California Public Employee Pension Reform Act, such actuarial surplus in excess of 20% of the AAL and any subsequent surpluses will be amortized over an "open" amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

Other Policy Considerations

- a. In order to allow Plan Sponsors to more accurately budget for pension contributions and other practical considerations, the contribution rates determined in each actuarial valuation (as of December 31) will generally apply to the fiscal year beginning eighteen months after the Actuarial Valuation date. The UAAL contribution rates in the current actuarial valuation are adjusted to account for any shortfall or excess contributions as a result of the implementation lag;
- b. Any change in contribution rate requirement that results from a plan amendment is generally implemented as of the effective date of the plan amendment or as soon as administratively feasible;
- c. When calculating a retirement benefit amount under allowable optional benefit allowances per Government Code sections 31761-31764 (known as Options 2,3 and 4), the actuary shall include a cost of living assumption;

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- d. When calculating both employer and member contribution rates (basic and COLA portions) for Legacy members, the actuary shall include an assumption for the additional cash out of accumulated annual leave, sick leave or compensatory leave both earned and permitted to be cashed out during the final average measuring period, applied on a pooled basis (General, Safety-Probation, Safety-Law and Safety-Fire).
- e. The actuarial assumptions adopted by the Board for use in the actuarial valuation affect only the timing of contributions; the ultimate contribution level is determined by the benefits and the expense actually paid offset by actual investment returns. To the extent that actual experience deviates from the assumptions, experience gains and losses will occur. These gains (or losses) then serve to reduce (or increase) the future contribution requirements.

Actuarial assumptions are generally grouped into two major categories:

- Demographic assumptions – including rates of withdrawal, service retirement, disability retirement, mortality etc.
- Economic assumptions – including price inflation, wage inflation, investment return, salary increase, etc.

The actuarial assumptions represent the Board’s best estimate of anticipated experience under OCERS and are intended to be long term in nature. Therefore, in developing the actuarial assumptions, the Board considers not only past experience but also trends, external forces and future expectations. The Board will review all assumptions triennially. The current assumptions used by the actuary are listed in Appendix A.

Policy Review


The Board of Retirement will review this policy every three years or more frequently if recommended by the actuary to ensure that it remains relevant and appropriate.

Policy History

The Board adopted this policy on January 21, 2014. This policy was revised on December 15, 2014.

Secretary’s Certificate

I, the undersigned, the duly appointed Secretary of the Orange County Employees Retirement System, hereby certify the adoption of this Policy.



Steve Delaney
Secretary of the Board

12/15/14

Date

The following are current assumptions used by the actuary when producing the annual actuarial valuation for OCERS.

Economic Assumptions

INFLATION

3.00% per annum, retiree cost of living adjustments are subject to a 3.0% maximum change per year.

INVESTMENT RETURN

7.25% per annum net of investment and administrative expenses.

INDIVIDUAL SALARY INCREASES:

- ▶ Inflationary Increases: 3.00%
- ▶ Real “across the board” increases: 0.50%
- ▶ Merit and promotion increases:

<u>YEARS OF SERVICE</u>	<u>GENERAL</u>	<u>SAFETY</u>
Less than 1	10.00%	14.00%
1	7.25	10.00
2	6.00	8.50
3	4.75	6.75
4	4.00	5.25
5	3.25	4.50
6	2.25	3.50
7	2.00	3.25
8	1.50	2.25
9	1.25	2.25
10	1.25	1.75
11	1.25	1.75
12	1.25	1.75
13	1.25	1.75
14	1.25	1.75
15	1.25	1.75
16	0.75	1.50

YEARS OF SERVICE	GENERAL	SAFETY
17	0.75	1.50
18	0.75	1.50
19	0.75	1.50
20 & over	0.75	1.50

ACTIVE MEMBER PAYROLL INCREASES

3.50% per annum

Non-Economic Assumptions

Post-Retirement Mortality Rates:

HEALTHY

- ▶ For General Members and all Beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.
- ▶ For Safety Members: RP-2000 Combined Healthy Mortality projected with Scale BB to 2020 with ages set back two years.

DISABLED

- ▶ For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set forward six years for males and set forward three years for females.
- ▶ For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.

BENEFICIARIES

- ▶ Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who is receiving a service (non-disability) retirement.

EMPLOYEE CONTRIBUTION RATES

- ▶ For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, weighted 40% male and 60% female.
- ▶ For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set back two years, weighted 80% male and 20% female.

Termination Rates Before Retirement

Age	RATE (%) MORTALITY ¹			
	General		Safety	
	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.06	0.04
40	0.10	0.07	0.09	0.06
45	0.14	0.11	0.12	0.09
50	0.20	0.16	0.18	0.14
55	0.34	0.25	0.27	0.21
60	0.59	0.41	0.48	0.33
65	1.00	0.76	0.82	0.60

All General pre-retirement deaths are assumed to be non-service connected. For Safety, 90% of pre-retirement deaths are assumed to be non-service connected. The other 10% are assumed to be service connected.

Age	RATE (%)DISABILITY			
	General All Other(1)	General OCTA(2)	Safety-Law & Fire (3)	Safety-Probation (3)
20	0.00	0.00	0.00	0.00
25	0.00	0.00	0.01	0.03
30	0.01	0.03	0.04	0.08
35	0.03	0.20	0.14	0.10
40	0.08	0.36	0.26	0.10
45	0.11	0.43	0.42	0.16
50	0.14	0.48	0.92	0.20
55	0.18	0.74	1.98	0.23
60	0.29	1.41	5.20	0.10

- (1) 55% of General All Other disabilities are assumed to be service connected disabilities. The other 45% are assumed to be non-service connected.
- (2) 65% of General – OCTA disabilities are assumed to be service connected disabilities. The other 35% are assumed to be non-service connected.
- (3) 100% of Safety – Law Enforcement, Fire and Probation disabilities are assumed to be service connected disabilities.

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Appendix A

Years of Service	RATE (%) TERMINATION			
	General All Other (1)	General OCTA (1)	Safety- Law & Fire (2)	Safety – Probation (2)
0	11.0	17.50	4.00	16.00
1	8.0	13.50	3.00	13.00
2	7.0	10.50	2.00	10.00
3	5.0	10.00	1.00	6.00
4	4.0	9.00	1.00	4.00
5	3.75	7.00	1.00	3.50
6	3.50	5.00	0.95	3.00
7	3.00	5.00	0.90	2.50
8	2.75	4.00	0.85	2.25
9	2.50	3.50	0.80	2.00
10	2.25	3.50	0.75	1.75
11	2.00	3.50	0.65	1.75
12	2.00	3.00	0.60	1.50
13	1.75	3.00	0.50	1.25
14	1.75	3.00	0.50	1.00
15	1.75	3.00	0.50	1.00
16	1.50	3.00	0.50	1.00
17	1.50	2.75	0.50	0.50
18	1.50	2.75	0.50	0.50
19	1.50	2.75	0.50	0.50
20 or more	1.25	1.75	0.25	0.50

- (1) 40% of all terminated members with less than 5 years of service and 25% of all terminated members with 5 or more years of service will choose a refund of contributions.
- (2) 45% of all terminated members with less than 5 years of service and 35% of all terminated members with 5 or more years of service will choose a refund of contributions.
- (3) 20% of all terminated members with less than 5 years of service and 20% of all terminated members with 5 or more years of service will choose a refund of contributions.
- (4) 40% of all terminated members with less than 5 years of service and 30% of all terminated members with 5 or more years of service will choose a refund of contributions.

Retirement Rates

Age	RATE (%)							
	General Enhanced	General-Non-Enhanced (1)	General SJC (31676.12)	Safety – Law (31664.1) (2)	Safety – Law (31664.2) (2)	Safety – Fire (31664.1) (2)	Safety – Fire (31664.2) (2)	Safety – Probation (2)
Under 50	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
50	2.5	2.5	3.0	16.0	11.5	6.0	8.0	3.0
51	2.0	2.5	3.0	16.0	12.0	8.0	10.0	3.0
52	2.0	2.5	3.0	16.0	12.7	9.0	11.0	4.0
53	2.0	2.5	3.0	16.0	17.9	10.0	12.0	4.0
54	5.0	2.5	3.0	22.0	18.8	16.0	14.0	6.0
55	15.0	3.0	4.0	22.0	30.7	19.0	24.0	11.0
56	10	3.5	5.0	20.0	20.0	20.0	23.0	11.0
57	10.0	5.0	6.0	20.0	20.0	23.0	27.0	17.0
58	10.0	5.0	7.0	20.0	25.0	30.0	27.0	20.0
59	11.0	7.0	9.0	26.0	30.0	30.0	36.0	20.0
60	12.0	9.0	11.0	45.0	100.0	45.0	100.0	20.0
61	12.0	10.0	13.0	45.0	100.0	45.0	100.0	20.0
62	15.0	16.0	15.0	45.0	100.0	45.0	100.0	25.0
63	16.0	16.0	15.0	45.0	100.0	45.0	100.0	50.0
64	16.0	18.0	20.0	45.0	100.0	45.0	100.0	50.0
65	21.0	21.0	20.0	100.0	100.0	100.0	100.0	100.0
66	22.0	26.0	24.0	100.0	100.0	100.0	100.0	100.0
67	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
68	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
69	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
70	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
71	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
72	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0

	RATE (%)							
73	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
74	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

- (1) These assumptions are also used for the CalPEPRA 1.62% @ 65 formula (Plan T).
- (2) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

	RATE (%)			
Age	CalPEPRA 2.5% @ 67 General Formula	CalPEPRA Safety – Probation Formula (1)	CalPEPRA Safety – Law Formula (1)	CalPEPRA Safety – Fire Formula (1)
50	0.0	2.5	11.0	6.5
51	0.0	2.5	11.5	8.0
52	4.0	3.0	12.0	9.0
53	1.5	3.0	16.0	10.0
54	1.5	5.5	17.0	12.0
55	2.5	10.0	28.0	21.0
56	3.5	10.0	18.0	20.0
57	5.5	15.0	17.5	22.0
58	7.5	20.0	22.0	25.0
59	7.5	20.0	26.0	31.5
60	7.5	100.0	100.0	100.0
61	7.5	100.0	100.0	100.0
62	14.0	100.0	100.0	100.0
63	14.0	100.0	100.0	100.0
64	14.0	100.0	100.0	100.0
65	18.0	100.0	100.0	100.0
66	22.0	100.0	100.0	100.0
67	23.0	100.0	100.0	100.0
68	23.0	100.0	100.0	100.0

	RATE (%)			
69	23.0	100.0	100.0	100.0
70	30.0	100.0	100.0	100.0
71	30.0	100.0	100.0	100.0
72	30.0	100.0	100.0	100.0
73	30.0	100.0	100.0	100.0
74	30.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0

(1) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Retirement Age and Benefit for
 Deferred Vested Members:

For deferred vested members, the following
 assumptions are made:

General Retirement Age: 58

Safety Retirement Age: 53

Assume that 20% of future General and 30% of future
 Safety deferred vested members are reciprocal. For
 reciprocals, assume 4.25% compensation increases for
 General and 5.00% for Safety per annum.

Liability Calculation for Current
 Deferred Vested Members:

Liability for a current deferred vested member is
 calculated based on salary, service, and eligibility for
 reciprocal benefit as provided by the Retirement System.
 For those members without salary information that have
 3 or more years of service, use an average salary. For
 those members without salary information that have
 less than 3 years of service or for those members
 without service information, assume a refund of account
 balance.

Future Benefit Accruals:

1.0 year of service per year of employment. There is no
 assumption to anticipate conversion of unused sick leave
 at retirement.

Unknown Data for Members:

Same as those exhibited by members with similar known

characteristics. If not specified, members are assumed to be male.

Percent married: 75% of male members and 50% of female members are assumed to be married at retirement or time of pre-retirement death.

Age of Spouse: Female (or male) three years younger (or older) than spouse.

Employee Contribution Crediting Rate: 5.00%, compounded semi-annually.

<p>Non-CalPEPRA Formulas</p>	<p>Additional compensation amounts are expected to be received during a member's final average earnings period. The percentages used in this valuation are:</p> <table border="1" data-bbox="706 1123 1365 1564"> <thead> <tr> <th></th> <th>Final One Year Salary</th> <th>Final Three Year Salary</th> </tr> </thead> <tbody> <tr> <td>General Members</td> <td>3.50%</td> <td>2.80%</td> </tr> <tr> <td>Safety – Probation</td> <td>3.80%</td> <td>2.80%</td> </tr> <tr> <td>Safety – Law</td> <td>5.20%</td> <td>4.70%</td> </tr> <tr> <td>Safety – Fire</td> <td>2.00%</td> <td>2.00%</td> </tr> </tbody> </table> <p>The annual payoffs assumptions are the same for service and disability retirements.</p>		Final One Year Salary	Final Three Year Salary	General Members	3.50%	2.80%	Safety – Probation	3.80%	2.80%	Safety – Law	5.20%	4.70%	Safety – Fire	2.00%	2.00%
	Final One Year Salary	Final Three Year Salary														
General Members	3.50%	2.80%														
Safety – Probation	3.80%	2.80%														
Safety – Law	5.20%	4.70%														
Safety – Fire	2.00%	2.00%														
<p>CalPEPRA Formulas</p>	<p>None</p>															