

ORANGE COUNTY  
EMPLOYEES RETIREMENT SYSTEM

**ACTUARIAL VALUATION AND INVESTIGATION**

as of

December 31, 2001

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Principal

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# *Towers Perrin*

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December 23, 2002

Board of Retirement  
Orange County Employees Retirement System  
2223 Wellington Avenue  
Santa Ana, CA 92701

Dear Members of the Board:

We are pleased to present this report giving the results of the December 31, 2001, actuarial valuation and investigation of your Retirement System. The System continues to be a well-funded system determined using reasonable actuarial methods and assumptions.

This year in addition to the valuation, an actuarial investigation was completed. The investigation studied the non-investment experience of the system during the last three years. We compared the assumptions used for retirement, turnover (termination of employment with deferred rights to benefits), withdrawal, disability and mortality against actual experience.

This year, for the first time, we reviewed experience separately by employer. For this purpose, we combined small employers with the County. After a review of experience, we recommended certain changes in demographic assumptions. We further recommended that we create two sets of assumptions for General Members (OCTA and all others) and two sets for Safety Members (Law Enforcement and Fire Authority).

The valuation was based on financial statement and employee data furnished by the Retirement Office. The data provided was generally excellent.

The results shown in this report are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results, since the Actuarial Standards of Practice describe a "best-estimate range" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this report could have been developed by selecting different points within the best-estimate ranges for various assumptions.

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We would like to take this opportunity to express our appreciation for the courtesy and cooperation accorded us by the Retirement Office during the course of our work.



Timothy J. Marnell, M.A.A.A., A.S.A.

TJM:mlb

Enclosure

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**SECTION I****INTRODUCTION****Overview**

An agreement between the Board of Retirement of the Orange County Employees Retirement System (OCERS) and Towers Perrin authorized us to conduct an actuarial valuation of the System as of December 31, 2001. We have completed the study, pursuant to this agreement, and the results are set forth in the following sections of this report.

The results shown in this report are based on demographic assumptions that are different from those shown in the prior valuation. In particular,

- Separate assumptions were developed for Law Enforcement versus Fire Authority Safety Members. This was done in part to reflect the fact that benefits have changed to the 3% at 50 benefits for Law Enforcement. It was also done to reflect the different pattern of termination, withdrawal and retirement exhibited by these groups.
- The General Member population was divided into the Orange County Transit Authority and all other employers. Originally, separate assumptions were considered for all employers. After an initial review, however, it was decided to combine small employers with the County of Orange. In addition, experience for the Orange County Sanitation District (OCSD), a sufficiently large enough employer to warrant separate assumptions, was quite similar to experience for the County of Orange. Hence, OCSD was combined with the County of Orange. This pattern will be reviewed in future experience studies.
- Details of the changes are shown in Section II, with detailed assumptions shown in Section VII.

No changes were made to the economic assumptions. We should note, however, that the economic assumptions will be reviewed during the asset liability study that has been commissioned by the Board. Any changes in economic assumptions will be reflected in the December 31, 2002 actuarial valuation.

Overall, the changes in demographic assumptions resulted in a small decrease in employer contributions.

Section II of this report provides more information concerning the results of the actuarial investigation.

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The current actuarial valuation fulfills the statutory requirement of Section 31453 of the County Employees Retirement Law of 1937 ('37 Act) and provides information needed for compliance with Government Accounting Standards Board Statement Number 25.

We were provided with a magnetic tape containing the pertinent employee information on which our study was based. We found the quality of the data to be generally excellent. We did not, however, audit the data on a person-by-person basis. The schedules on the following pages summarize the employee data provided to us relating to active employees and members receiving benefits.

We were provided with a statement of assets and liabilities of the System as of December 31, 2001. We summarize these fund assets and liabilities in Section IV. We accepted this information without further audit.

Section III discusses member contribution rates. The results of the valuation are shown in Section IV. The recommended employer contributions are summarized and explained in Section V. Section VI analyzes the experience gains and losses. The schedules in Section VII show statistical information pertinent to the valuation.

## Orange County Employees Retirement System

### A. ACTIVE MEMBERS AS OF DECEMBER 31, 2001

General Members		Number	Annual Salary	Average	
				Age	Monthly Salary
Tier I	12/31/01	2,026	\$121,381,219	54.0	\$4,993
	12/31/00	2,177	122,298,177	53.5	4,681
Percent Increase		-6.9%	-0.7%		6.7%
Tier II	12/31/01	17,627	\$799,675,981	41.9	\$3,781
	12/31/00	16,205	686,756,435	41.9	3,532
Percent Increase		8.8%	16.4%		7.0%
Total	12/31/01	19,653	\$921,057,200	43.1	\$3,905
	12/31/00	18,382	809,054,612	43.3	3,668
Percent Increase		6.9%	13.8%		6.5%
Safety Members		Number	Annual Salary	Average	
				Age	Monthly Salary
Tier I	12/31/01	270	\$23,929,839	51.8	\$7,386
	12/31/00	285	24,908,012	51.2	7,283
Percent Increase		-5.3%	-3.9%		1.4%
Tier II	12/31/01	2,406	\$177,775,767	40.0	\$6,157
	12/31/00	2,320	160,706,408	39.6	5,773
Percent Increase		3.7%	10.6%		6.7%
Total	12/31/01	2,676	\$201,705,606	41.2	\$6,281
	12/31/00	2,605	185,614,420	40.9	5,938
Percent Increase		2.7%	8.7%		5.8%
Grand Total		Number	Annual Salary	Average	
				Age	Monthly Salary
Total	12/31/01	22,329	\$1,122,762,806	42.9	\$4,190
	12/31/00	20,987	994,669,032	43.0	3,950
Percent Increase		6.4%	12.9%		6.1%

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**Orange County Employees Retirement System**
**B. RETIRED MEMBERS AS OF DECEMBER 31, 2001**

<b>General Members</b>		<b>Number</b>	<b>Total Annual Allowance</b>	<b>Average Monthly Allowance</b>
Tier I	12/31/01	5,721	112,657,312	\$1,641
	12/31/00	5,683	105,650,368	1,549
Percent Increase		0.7%	6.6%	5.9%
Tier II	12/31/01	1,645	\$19,758,320	\$1,001
	12/31/00	1,436	16,395,060	951
Percent Increase		14.6%	20.5%	5.3%
Total	12/31/01	7,366	\$132,415,632	\$1,498
	12/31/00	7,119	122,045,428	1,429
Percent Increase		3.5%	8.5%	4.8%
<b>Safety Members</b>		<b>Number</b>	<b>Total Annual Allowance</b>	<b>Average Monthly Allowance</b>
Tier I	12/31/01	613	\$23,407,856	\$3,182
	12/31/00	597	21,490,128	3,000
Percent Increase		2.7%	8.9%	6.1%
Tier II	12/31/01	237	\$6,729,061	\$2,366
	12/31/00	199	5,466,962	2,289
Percent Increase		19.1%	23.1%	3.4%
Total	12/31/01	850	\$30,136,917	\$2,955
	12/31/00	796	26,957,090	2,822
Percent Increase		6.8%	11.8%	4.7%
<b>Grand Total</b>		<b>Number</b>	<b>Total Annual Allowance</b>	<b>Average Monthly Allowance</b>
Total	12/31/01	8,216	\$162,552,549	\$1,649
	12/31/00	7,915	149,002,518	1,569
Percent Increase		3.8%	9.1%	5.1%

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**Orange County Employees Retirement System**
**C. VESTED TERMINATED MEMBERS AS OF DECEMBER 31, 2001**

<b>General Members</b>	<b>Number</b>	<b>Annual Salary</b>	<b>Average Age</b>	<b>Average Monthly Salary</b>
Tier I	330	\$11,309,351	52.6	\$2,856
Tier II	992	41,723,157	44.7	3,505
Total	1,322	53,032,508	46.7	3,343
<b>Safety Members</b>	<b>Number</b>	<b>Annual Salary</b>	<b>Average Age</b>	<b>Average Monthly Salary</b>
Tier I	6	\$163,069	51.3	\$2,265
Tier II	86	3,750,855	41.0	3,635
Total	92	3,913,924	41.7	3,545
<b>Grand Total</b>	<b>Number</b>	<b>Annual Salary</b>	<b>Average Age</b>	<b>Average Monthly Salary</b>
Total	1,414	\$56,946,432	46.3	\$3,356

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**SECTION II****SUMMARY OF ACTUARIAL INVESTIGATION**

To carry out an actuarial valuation of the assets and liabilities of the System, the actuary must first adopt assumptions with respect to the following items:

1. Interest earnings that will be realized on the funds over many years into the future
2. The relative increases in the salary of a member from the date of the valuation to the date of separation from active service
3. Increases in the Consumer Price Index that would increase allowance payments to retired employees
4. The mortality rates to be experienced among retired persons
5. The probabilities of members separating from active service on account of withdrawal, death, and disability
6. The ages at which members will retire.

We have examined the experience of the members of the System during the three-year period ending December 31, 2001. In the following paragraphs of this section, we discuss the above items. The schedules in Section VII set forth the probabilities of separation from active service used in the current valuation.

For purposes of this investigation, we considered the experience of members of Tier I and Tier II together. Therefore, the recommended assumptions are the same for Tier I and Tier II. As the membership of Tier I ages, it may be advisable to develop assumptions specific for each Tier. However, we have examined the separate experience of each employer where sufficient data was available.

**A. INTEREST EARNINGS, SALARY INCREASES,  
AND COST-OF-LIVING INCREASES**

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We would like to consider these three items together since their levels are all strongly influenced by the level of inflation. Conventional actuarial practice holds that interest earnings over long periods are equal to inflation plus a real return of about 3% to 4%. Conventional actuarial practice also holds that salary increases over long periods are equal to inflation plus merit and productivity increases. The financial impact of the merit increase can be approximated by an increase of about ½% to 1% per year. Conventional actuarial practice then leads us to believe that a "spread" of about 2% to 2½% between the interest and salary assumptions is proper. This spread has proved plausible over long periods.

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We recommend continuing the existing economic assumptions, namely, an interest assumption of 8% and a salary increase assumption of 5.5% per annum. The Board of Retirement has commenced an asset/liability study. As part of that study, the economic assumptions will be reviewed. This may lead to a change in the interest rate and/or salary increase assumption for the December 31, 2002 valuation.

Using the above scenarios, we have also assumed 3% automatic cost-of-living increases for both Tier I and Tier II.

## **B. MORTALITY AFTER SERVICE RETIREMENT**

During the investigation period there were 409 deaths among members on service retirement. Under the assumptions developed and used for the prior report, we would have expected 450 deaths. Combining this result with prior investigations indicates that Orange County is beginning to exhibit the "lighter" mortality trend we have seen in recent investigations for other clients. We recommend not changing the assumption at the present time, however, because OCERS' trend toward lower mortality rates is very recent. If this trend continues, however, we will recommend a change in three years.

## **C. MORTALITY AFTER DISABILITY RETIREMENT**

Fifty-nine deaths occurred among disabled retired members during the investigation period and the mortality table currently in use "expected" 62 such deaths. We recommend that the current assumption of 1981 disabled mortality, reduced by 40%, be continued.

## **D. RATES OF SEPARATION FROM ACTIVE SERVICE**

### Service Retirement

- Recent experience continues a trend toward retirement at later ages. However, it may be assumed that some Safety Members are delaying retirement in anticipation of "3% at 50" benefits.
- Our recommendations are for lower retirement rates at younger ages and higher rates at older ages. We also recommend that the current ultimate retirement ages of 62 for Safety and 70 for General be continued. It should be noted that currently there are active Safety members older than 62 and active General members older than 70. This pattern is expected to continue. The number of such members, however, is small and the difference in liability between establishing an "ultimate retirement age" and extending retirement decrements to later ages is not material.



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### Service-Connected Disability

Our recommendations for both General and Safety members reflect somewhat lower rates at older ages.

### Termination with Deferred Vested Benefits

In general, we recommend higher rates for younger ages and lower rates for older ages.

### Termination with Withdrawal

We recommend the following:

- Only minor changes for male General Members
- Lower rates for both female General Members and all Safety Members.

### Employer Specific Rates of Decrement

- While many employer groups are too small to be statistically significant, we did have enough data to determine separate rates for the following groups:
  - General Members
    - OCTA
    - All other General Members
  - Safety Members
    - Law Enforcement
    - Fire Authority
- For General Members, our analysis between employers shows no significant variation across assumptions except for service-connected disability and withdrawal. In particular,
  - OCTA's service-connected disability rates are about double that for other General Members
  - OCTA's withdrawal rates are higher, especially at younger ages, than for all other General Members.
- Once the change to Safety member status becomes effective, we recommend using slightly different assumptions for Probation Officers. These assumptions will be reviewed with the December 31, 2002 actuarial valuation. At that time, the conversions of past service will also be reviewed to determine the impact on the actuarial accrued liability.

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**SECTION III**

**MEMBER CONTRIBUTIONS**

**A. MEMBER NORMAL CONTRIBUTIONS**

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In this section, we present employee contribution rates for members of the Retirement System. The basis for determining normal rates of contributions for System Members are the following sections of the County Employees Retirement Law:

	<b>General</b>	<b>Safety</b>
Tier I	31621.5	31639.5
Tier II	31621	31639.25

To calculate the rates of contribution in accordance with these sections, it is necessary to use only the following actuarial assumptions (as summarized in Section VII):

1. Interest rate expected to be earned on System funds,
2. Annual salary increase rate,
3. Mortality anticipated among service-retired members.

Because none of these assumptions have changed since the last investigation (December 31, 1998), there is no change to the current member normal contribution rates.

**B. COST-OF-LIVING CONTRIBUTIONS**

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Section 31873 of the County Employees Retirement Law states:

“Any increases in contributions shall be shared equally between the county or district and the contributing members, with the individual member’s contributions based upon the member’s age at his or her nearest birthday at time of entrance into the retirement system...”

Such contributions will be refunded in the event the member’s normal contributions are refunded. The member’s cost-of-living contribution rates are based on all assumptions (not just interest, salary, and mortality as for normal contributions). Since some of these assumptions have changed since the last investigation, new member cost-of-living contribution rates have been determined.

The employee portion of the cost of the cost-of-living provisions of the different tiers is expressed as a percentage of their normal contribution rates. The following chart shows the recommended percentages for each Tier and employer:

	<b>General Members</b>		<b>Safety Members</b>	
	<b>All Other</b>	<b>OCTA</b>	<b>Law</b>	<b>Fire</b>
Tier I	47.63	46.94	102.25	64.55
Tier II	28.50	32.15	51.75	33.39

In comparing the above percentages, we should remember that Tier I's normal contribution rates are lower than the normal rates for Tier II. Naturally, to fund cost-of-living benefits that are roughly equivalent, Tier I members must contribute nearly equivalent dollar amounts, which in terms of the percentage of normal rate must be higher than those of Tier II.

Section VII of this report contains a complete listing of all member contribution rates.

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**SECTION IV**
**RESULTS OF VALUATION**

Our valuation of the Retirement System as of December 31, 2001 was based on the Statement of Assets and Liabilities furnished to us by the Retirement Office. We accepted this statement of assets of the System without audit.

**A. DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**


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The total value of applicable assets for the valuation of the Retirement System was determined as follows:

	December 31, 2001	December 31, 2000
1. Total assets - book value	\$5,004,913,877	\$5,292,879,103
2. Less reserves and liabilities established for the following:		
a. unallocated fund balance	0	173,835,680
b. accounts payable - miscellaneous	348,133,764	614,214,985
c. unclaimed member deposits	1,043,177	1,145,919
d. insurance reserve - miscellaneous	0	20,000,000
e. ARBA	363,077,019	384,217,489
f. Total	\$712,253,960	\$1,193,414,073
3. Investment account	\$221,642,594	\$272,789,400
4. Net applicable assets on a book value basis (item 1 minus item 2(f) minus item 3)	\$4,071,017,323	\$3,826,675,630
5. Appreciation in market value	\$(277,960,558)	\$188,585,536
6. Net applicable assets on a market value basis (items 4 plus item 5)	\$3,793,056,765	\$4,015,261,166

Due to poor investment return during 2001, the unallocated fund balance and the insurance reserve were used to credit interest to the statutory reserves. Since the total unallocated fund balance (UFB) as defined by the County Employees Retirement Law of 1937 includes the ARBA balance, the statutory UFB exceeds one percent of the assets.

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## Explanation of Various Reserves

In the past, the unallocated fund balance (item 2.a) has been funded by investment income that has exceeded the interest crediting benchmark. During 2001, it was used to supplement investment income. The following describes its importance in the financial operations of the 1937 Act and the setting of actuarial interest rates.

There are two aspects to the application of the actuarial interest rate in 1937 Act retirement systems:

1. The expected long-term total rate of return on the fund, and
2. A short-term benchmark for the semi-annual crediting of interest on the fund's reserves.

With respect to aspect number 2, six-month returns on the fund are volatile due to the short measuring period. In some six-month periods, the return will exceed the benchmark, and in others, it will fall short. Given that the actuarial rate serves as a benchmark, there is a natural tendency to minimize the probability of a shortfall by setting a lower benchmark. The unallocated fund balance counteracts this tendency by serving as a stabilizing mechanism, which allows OCERS to consistently maintain a higher level of interest crediting on reserve accounts that are used to determine employer contribution rates.

Thus, the unallocated fund balance reserve mechanism is a factor in the actuarial interest rate setting process. It allows us to base the interest rate assumption upon the expected long-term total rate of return by greatly reducing the need to focus on short-term downside risks.

The insurance reserve — miscellaneous (item 2.d) is an actuarially determined reserve necessary to cover certain obligations. It is technically part of the UFB and was used this year to credit interest on the fund's reserves. ARBA (item 2.e) was established to help fund retiree medical subsidies and is less than the actuarially determined amount of these benefits. A portion of ARBA was used at December 31, 2001 to credit interest on the fund's reserves. The remaining reserves and liabilities are payables and are not includable in the assets.

The Investment Account (item 3) represents the remaining amount from a contribution made by the County in September 1994. This contribution was used to pay the County's portion of the then unfunded actuarial accrued liability (UAAL). Because other participating employers did not fund their UAALs, this account is removed from the assets to determine the employer contribution rate. The County's contribution is then adjusted based on a separate schedule.

## Development of Actuarial Value of Assets

The actuarial value of assets is a five-year moving average of book and market values and was determined as follows:

1.	(a)	(b)	(a)/(b) Ratio of Market Value to Book Value
Year	Market Value	Book Value	
2001	\$3,793,056,765	\$4,071,017,323	0.931722
2000	4,015,261,166	3,826,675,630	1.049282
1999	4,183,305,471	3,277,313,800	1.276443
1998	3,643,078,679	3,045,622,732	1.196169
1997	3,263,314,979	2,765,715,751	1.179917
1996	2,829,039,344	2,408,673,997	1.174521

2.	Actuarial value of assets on December 31:	
	2001	2000
(a) Average ratio in five preceding years	1.126707	1.175266
(b) Book value on December 31	\$4,071,017,323	\$3,826,675,630
(c) Actuarial value of assets: (a)x(b)	\$4,586,843,715	\$4,497,361,761

The actuarial value of assets (AVA) increased this year even in the face of a significant decline in the market. This is expected under the smoothing implicit in the AVA. The market losses will be reflected into the AVA gradually over time just as the market gains of the 1990s were reflected in the AVA gradually over time.

## B. ACTUARIAL BALANCE SHEET

Our first view of your System's funding is given by an Actuarial Balance Sheet as shown on page 16. In this approach, we first determine the amount and timing of all future expected payments the System will make. We then discount these payments at 8.0% per annum to the date of the valuation, thereby determining their present value. We see from the Balance Sheet that the total present value of benefits to be paid equals \$6,779 million. We title this present value the "liability" of the System. Second, we determine how these liabilities will be met. Item 1 in the Balance Sheet represents the amount of applicable assets already accumulated by the System (\$4,587 million). Item 2 is the present value of the contributions expected to be received from the members, which is \$893 million.

Item 3 is the present value of future employer normal costs. Using the Projected Unit Credit Cost Method, the employers are, as a first step, budgeting the following percentages of payroll to the System:

	General		Safety	
	All Others	OCTA	Law	Fire
Tier I	16.57%	14.78%	25.57%	21.78%
Tier II	3.28%	2.63%	13.98%	10.11%

These contribution percentages are known as normal cost percentages. The Projected Unit Credit normal cost percentage is, simply stated, the employers' percentage of payroll needed to fund benefits earned in the coming year. The present value of these contributions for all future years amounts to \$1,042 million.

Finally, we compare the existing assets plus the present value of the employer normal costs plus the present value of future member contributions with the present value of the benefits to be paid from the System. We see that the system is "unfunded" by \$257 million (\$6,779 million – \$4,587 million – \$893 million – \$1,042 million).

This unfunded amount (or balancing item) of \$257 million is known as the Unfunded Actuarial Accrued Liability of your System. In the text, we have abbreviated it as UAAL. To bring the System into actuarial balance, we must also budget a pattern of contributions that has a present value of (\$257) million. Because the System currently has a positive UAAL, this pattern of contributions will increase the overall employer contributions.

An actuarial valuation is a long-term budgeting challenge. Contribution rates will change over time as the System matures, as benefits change, and as experience (investment and other) emerges. In the prior year, OCERS had a negative UAAL (i.e., a surplus). Changes in benefits and the generally poor capital market conditions have combined to produce a positive UAAL this year. This is not unexpected and, in isolation, nothing to be concerned about. As the capital markets recover and the increase in actuarial accrued liability from the recent benefit improvements is paid with higher contributions, the UAAL will decrease.



### Amortization of UAAL

The UAAL is being amortized over varying periods depending on its source. In particular, the UAAL as of December 31, 1995, is being amortized as a level dollar amount over a 28-year period. Actuarial gains and losses arising after that date are amortized as a level dollar amount over a 15-year period. Plan changes are being amortized over a 30-year period.

Combining this, we have determined that the appropriate percentages of payroll to amortize the December 31, 1995 UAAL are:

	General		Safety	
	All Other	OCTA	Law	Fire
Basic	(0.81)%	(0.81)%	8.79%	8.79%
COL	0.18%	0.18%	3.03%	3.03%
Total	(0.63)%	(0.63)%	11.82%	11.82%

Amortization of actuarial gains and losses arising after December 31, 1995, have been developed and are shown in Section V. The amortization of the change in UAAL due to the Ventura County Ruling is also shown in Section V. This change is being treated as a plan change and is being amortized over 30 years. The change in UAAL due to assumption changes is being amortized over a 30-year period. The recent change in benefits for Law Enforcement created a UAAL that is being amortized over 30 years.

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**ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 2001**

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**ASSETS**

1. Actuarial value of assets now held	\$4,586,843,715
2. Present value of future contributions by members	893,177,633
3. Present value of future employer contributions for normal cost	1,041,948,604
4. Present value of other future employer contributions (UAAL)	257,055,672
5. Total actuarial assets	\$6,779,025,624

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**LIABILITIES**

6. Present value of allowances already granted and retiree death benefits	\$1,924,909,368
7. Present value of service retirement allowances payable to currently active members and their survivors	3,933,933,969
8. Present value of allowances payable to vested terminated members	160,788,000
9. Present value of disability retirement allowances payable to currently active members and their survivors	362,634,295
10. Present value of death benefits payable on behalf of currently active members	101,463,946
11. Present value of deferred retirement benefits payable to currently active members	52,024,348
12. Present value of members' contributions to be returned upon withdrawal and death	243,271,698
13. Total actuarial liabilities	\$6,779,025,624

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### C. FUNDED RATIO

Our second view of the funding of your System involves measuring the present value of accrued (earned) benefits and then comparing them with accumulated assets. This view focuses on benefits earned to date and assumes that no benefits will be earned in the future as opposed to the balance sheet view, which projects all benefits for current members.

There is more than one way to define benefits earned to date. We will use the definition specified in GASB Statement No. 5 such that the present value of accrued benefits is determined using the unit credit actuarial cost method with benefits based on projected salary increases. While this definition is no longer used for reporting purposes, it provides a good basis for year-over-year comparison.

This definition of an accrued benefit assumes future salary increases. The following example should be helpful. In a plan that provides 2% of final average pay for each year of service beginning at age 60, a person who entered the plan at age 30 and is now age 50 is two-thirds of the way to retirement and therefore has earned two-thirds of the projected benefit expected at age 60. If the member's current average monthly salary were \$1,000, projected final salary would be about \$1,800 and total earned or accrued monthly benefit would be \$720 ( $\$1,800 \times 2\% \times 30 \text{ years} \times 2/3$ ). We then determine the present value of \$720 per month, taking into account the probability the member will receive the benefit, the likely duration of the benefit, and any cost-of-living increases expected.

Applying the above methodology to your System, we have determined the following:

	December 31, 2001	December 31, 2000
(1) Present value of accrued benefits	\$4,308,857,368	\$3,864,361,825
(2) Actuarial value of assets	4,586,843,715	4,497,361,761
(3) Percentage funded	106.5%	116.4%

In the absence of large variations from actuarial assumptions, one would generally expect the Projected Unit Credit Cost Method to cause the percentage funded to increase year-over-year. The December 31, 2001, valuation indicates a decrease in the percentage funded due to the combined effects of asset losses, assumption changes, and plan changes.

### D. FUNDING — OVERALL CONSIDERATIONS

There are two basic considerations in contemplating the current funding status of a system. The first is the value of the assets accumulated to pay benefits and how that value compares with the current liability for benefits already earned. Subsection C above is intended to evaluate this aspect of funding. However, the second consideration is normally more important: what is the financial commitment of the plan sponsor to continue to fund both benefits earned to date and benefits to be earned in the future, and does the plan sponsor have the financial resources to meet future budgetary obligations, both next year and in the future? Paragraph B of this section indicates the future financial commitment of the plan sponsor. We summarize the recommended commitment of the plan sponsor in the next section.

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**SECTION V**
**EMPLOYER CONTRIBUTIONS**
**A. RECOMMENDED RATES**


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In the Balance Sheet subsection of Section IV, we set forth employer normal cost contributions for Tier I and Tier II separately. We were asked, however, to provide single contribution rates for General Members (separately for OCTA and all other Employers) and for Safety Members (separately for Law Enforcement and Fire Protection), combining Tier I and Tier II rates:

	General Members				Safety Members			
	All Other		OCTA		Law Enforcement		Fire Protection	
	2001	2000	2001	2000	2001	2000	2001	2000
<b>A. Basic Benefits</b>								
1. Normal cost	3.86%	3.77%	3.40%	3.77%	12.65%	6.63%	7.64%	6.63%
2. UAAL amortization <sup>(1)</sup>	(0.32)%	(3.34)%	(0.42)%	(3.34)%	9.13%	1.90%	2.69%	1.90%
3. Total	3.54%	0.43%	2.98%	0.43%	21.78%	8.53%	10.33%	8.53%
<b>B. Cost-of-Living Benefits</b>								
1. Normal cost	1.18%	1.17%	0.80%	1.17%	3.22%	1.94%	2.66%	1.94%
2. UAAL amortization <sup>(1)</sup>	0.44%	(0.64)%	0.69%	(0.64)%	(0.48)%	(1.74)%	(1.30)%	(1.74)%
3. Total	1.62%	0.53%	1.49%	0.53%	2.74%	0.20%	1.36%	0.20%
<b>C. Total Benefits</b>								
1. Normal cost	5.04%	4.94%	4.20%	4.94%	15.87%	8.57%	10.30%	8.57%
2. UAAL amortization <sup>(1)</sup>	0.12%	(3.98)%	0.27%	(3.98)%	8.65%	0.16%	1.39%	0.16%
3. Preliminary total	5.16%	0.96%	4.47%	0.96%	24.52%	8.73%	11.69%	8.73%
4. Additional contribution <sup>(2)</sup>	0.50%	N/A	0.50%	N/A	0.50%	N/A	0.50%	N/A
5. Total	5.66%	0.96%	4.97%	0.96%	25.02%	8.73%	12.19%	8.73%

(1) The UAAL amortization is developed on the following page.

(2) The unallocated fund balance (UFB) is less than 3% of the System's assets requiring an additional contribution for 2001.

## B. UAAL AMORTIZATION RATES

	Effective Date	Amortization Period (yrs.)	County			OCTA		
			Basic	Col	Total	Basic	Col	Total
1. 12/31/1995 UAAL amortization	12/31/1995	28	-0.81%	0.18%	-0.63%	-0.81%	0.18%	-0.63%
2. 1996 loss (gain) amortization	12/31/1996	15	-0.07%	-0.02%	-0.09%	-0.07%	-0.02%	-0.09%
3. 1997 loss (gain) amortization	12/31/1997	15	-1.38%	-0.52%	-1.90%	-1.38%	-0.52%	-1.90%
4. Ventura amendment amortization	12/31/1997	30	0.85%	0.44%	1.29%	0.85%	0.44%	1.29%
5. 1998 loss (gain) amortization	12/31/1998	15	-0.82%	-0.30%	-1.12%	-0.82%	-0.30%	-1.12%
6. 1999 assumption change amortization	12/31/1998	30	0.50%	0.15%	0.65%	0.50%	0.15%	0.65%
7. 1999 loss (gain) amortization	12/31/1999	15	-0.77%	-0.32%	-1.09%	-0.77%	-0.32%	-1.09%
8. 2000 loss (gain) amortization	12/31/2000	15	-0.43%	-0.18%	-0.61%	-0.43%	-0.18%	-0.61%
9. 2001 loss (gain) amortization	12/31/2001	15	2.47%	0.99%	3.46%	2.27%	1.19%	3.46%
10. 2002 assumption change amortization	12/31/2001	30	0.14%	0.02%	0.16%	0.24%	0.07%	0.31%
11. 2002 plan change amortization	12/31/2001	30	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Basic UAAL Amortization			-0.32%	0.44%	0.12%	-0.42%	0.69%	0.27%

  

	Effective Date	Amortization Period (yrs.)	Law			Fire		
			Basic	Col	Total	Basic	Col	Total
1. 12/31/1995 UAAL amortization	12/31/1995	28	8.79%	3.03%	11.82%	8.79%	3.03%	11.82%
2. 1996 loss (gain) amortization	12/31/1996	15	0.08%	0.02%	0.10%	0.08%	0.02%	0.10%
3. 1997 loss (gain) amortization	12/31/1997	15	-1.12%	-0.61%	-1.73%	-1.12%	-0.61%	-1.73%
4. Ventura amendment amortization	12/31/1997	30	2.31%	1.02%	3.33%	2.31%	1.02%	3.33%
5. 1998 loss (gain) amortization	12/31/1998	15	-0.53%	-0.40%	-0.93%	-0.53%	-0.40%	-0.93%
6. 1999 assumption change amortization	12/31/1998	30	0.20%	-0.03%	0.17%	0.20%	-0.03%	0.17%
7. 1999 loss (gain) amortization	12/31/1999	15	-0.44%	-0.32%	-0.76%	-0.44%	-0.32%	-0.76%
8. 2000 loss (gain) amortization	12/31/2000	15	-7.67%	-4.17%	-11.84%	-7.67%	-4.17%	-11.84%
9. 2001 loss (gain) amortization	12/31/2001	15	2.34%	0.98%	3.32%	2.34%	0.98%	3.32%
10. 2002 assumption change amortization	12/31/2001	30	-1.50%	-0.88%	-2.38%	-1.27%	-0.82%	-2.09%
11. 2002 plan change amortization	12/31/2001	30	6.67%	0.88%	7.55%	0.00%	0.00%	0.00%
Total Basic UAAL Amortization			9.13%	-0.48%	8.65%	2.69%	-1.30%	1.39%

## B. UAAL RATES (Cont'd)

As mentioned earlier, the UAAL is being amortized over varying periods depending on its source. In particular, the UAAL as of December 31, 1995 continues to be amortized as a level dollar amount over the 28-year period, beginning on that date. Emerging gains and losses for 1996 and later years are amortized over separate 15-year periods. The plan amendment reflecting the Ventura County Ruling is amortized over a 30-year period beginning on December 31, 1997. The increase in the UAAL due to assumption changes is amortized over a 30-year period beginning on the effective date of the change. Plan changes are amortized over a 30-year period beginning with the valuation date coincident with or next following the effective date of the change.

The gain and loss fluctuations are analyzed in more detail in Section VI of this report.

## C. "PICK-UP" PERCENTAGES

In addition to our recommendations concerning contribution rates, we were also asked to provide "pick-up" percentages:

	Recommended "Pick-Up" Percentages							
	General Members				Safety Members			
	All Other Tier I	All Other Tier II	OCTA Tier I	OCTA Tier II	Law Tier I	Law Tier II	Fire Tier I	Fire Tier II
<b>Proposed July 1, 2002</b>	84.30%	76.16%	68.01%	72.56%	99.56%	97.82%	99.41%	98.70%
<b>Existing Pick-Up %</b>	78.78%	70.38%	78.78%	70.38%	98.90%	96.28%	98.90%	96.28%

For every dollar of member contribution "picked-up" by the employer and not deposited in the member's contribution account, the employer can contribute less than a dollar. The reason for this is the fact that the picked-up amount is not payable to a member who withdraws his or her contributions following termination of employment.

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**D. ADJUSTMENT TO RETIRED RESERVES**


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Finally, we were asked to provide our recommendations concerning adjustments to the System's retired reserves to bring them in line with current retiree liability determined as of December 31, 2001.

<b>System Retired Reserve Balance (From Assets)</b>	
Basic	\$1,189,738,042
COLA	691,658,135
Total	\$1,881,396,177
<b>Actuarially Computed Present Value</b>	
Basic	\$1,217,254,468
COLA	707,654,900
Total	\$1,924,909,368
<b>Recommended Transfer from County Advance Reserves to Retired Reserves</b>	
Basic	\$27,516,426
COLA	15,996,765
Total	\$43,513,191



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**SECTION VI****GAIN AND LOSS ANALYSIS**

The purpose of this section is to analyze the change in the unfunded actuarial accrued liability (UAAL) from December 31, 2000, to December 31, 2001, and to identify the sources of experience gains and losses that have occurred during that period.

Exhibit A indicates how the UAAL changed during 2001 due to interest, amortization payments, experience gains and losses, assumption changes, and plan changes.

Exhibit B develops the asset gain or loss, indicating the effect on assets of contributions, benefit payments, and investment return.

Exhibit C develops the aggregate liability gain or loss, indicating the impact on liabilities of actuarial experience during 2001. Note that changes in liabilities due to assumption changes and plan changes are not reflected.

Exhibit D analyzes the liability gain or loss by source and shows its impact on the contribution.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
CHANGE IN  
UNFUNDED ACTUARIAL ACCRUED LIABILITY

12/31/2000 UAAL (surplus)	\$(162,336,848)
Change in UAAL due to:	
— Interest (8%)	(7,117,033)
— Amortization payment	<u>11,193,795</u>
	4,076,762
Expected UAAL (surplus) at 12/31/2001	(158,260,086)
Actuarial (gain)/loss	
— Assets	221,191,812
— Liability	<u>108,729,305</u>
	329,921,117
12/31/2001 UAAL (surplus) before assumption changes	171,661,031
Impact of assumption changes	
— Assets	0
— Liability	(34,094,126)
Actual UAAL (surplus) at 12/31/2001 after assumption changes	137,566,905
Impact of plan changes (Law Enforcement only)	119,488,767
Actual UAAL (surplus) at 12/31/2001 after plan changes	\$257,055,672

## ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

**(GAIN) AND LOSS ANALYSIS****ASSETS**

Actuarial Value of Assets 12/31/2000	\$4,497,361,761
Contributions for 2001:	
— Employer	53,378,000
— Member	<u>68,635,000</u>
	122,013,000
Benefit payments	(169,274,099)
Expected return	357,934,865
Expected AVA 12/31/2001	4,808,035,527
Actual AVA 12/31/2001	4,586,843,715
(Gain)/loss	221,191,812
Change in contribution due to asset (gain)/loss*	25,841,739

\* Asset (gain)/loss amortized over 15 years at 8.0%.

## ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

**(GAIN) AND LOSS ANALYSIS****LIABILITY**

Accrued liability 12/31/2000	\$4,335,024,913
2001 employer normal cost	55,891,770
2001 member normal cost	77,315,025
Benefit payments	(169,274,099)
Interest	350,817,832
Expected accrued liability 12/31/2001	4,649,775,441
Actual accrued liability 12/31/2001 before assumption changes and plan changes	4,758,504,746
Actuarial (gain)/loss	108,729,305
Change in contribution due to liability (gain)/loss*	12,702,795

\* Liability (gain)/loss amortized over 15 years at 8.0%.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
ANALYSIS OF LIABILITY (GAIN)/LOSS BY SOURCE

Source	Change in UAAL	Change as a Percentage of AL	Amortization Payment*
Salary increases	\$ 40,447,786	0.84%	\$ 4,725,496
Mortality	3,021,386	0.06	352,987
Terminations	13,932,497	0.29	1,627,727
Retirements	48,490,180	1.01	5,665,086
Disabilities	(17,695,981)	(0.37)	(2,067,413)
New entrants	16,765,587	0.35	1,958,716
Data adjustments and miscellaneous	3,767,850	0.08	440,196
Total	\$ 108,729,305	2.27%	\$ 12,702,795

\* Amortized over 15 years at 8.0%.

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**SECTION VII**  
**STATISTICAL INFORMATION**

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■ Summary of Actuarial Assumptions	29
■ 1983 GAM Male and Female Mortality Table (Schedule 1)	30
■ 1981 Disability Mortality Table (Schedule 2)	33
■ Probabilities of Termination of Employment (Schedule 3)	34
■ Assumptions Specific to the Ventura County Ruling	41
■ Summary of Major Plan Provisions	42
■ Age/Service Distribution of Active Members	44
■ Age/Retirement Year Distribution of Pensioners	49
■ Member Contribution Rates	54

## ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

## RECONCILIATION OF PARTICIPANT DATA

	Valuation Group		
	Active Participants	Retired Participants and Beneficiaries	All Participants
1. As reported in December 31, 2000 valuation	20,987	7,915	28,902
2. Withdrawals:			
(a) nonvested	(418)	N/A	(418)
(b) vested	(398)	N/A	(398)
3. Death:			
(a) ordinary	(5)	(305)	(310)
(b) service connected	0	N/A	0
(c) DWE service retirement	0	N/A	0
(d) DWE disability retirement	0	N/A	0
(e) no continuance	(12)	N/A	(12)
4. Disability:			
(a) ordinary	(26)	N/A	(26)
(b) service connected	(45)	N/A	(45)
5. Service retirement	(300)	N/A	(300)
6. Reemployed	N/A	0	0
7. New entrants to valuation group	2,546	606	3,152
8. Data corrections	0	0	0
9. As reported in December 31, 2001 valuation: (1)+(2)+(3)+(4)+(5)+(6)+(7)+(8)	22,329	8,216	30,545



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ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

**SUMMARY OF ACTUARIAL ASSUMPTIONS**

The Projected Unit Credit Actuarial Cost Method was used in conjunction with the following actuarial assumptions.

1. *Interest:* 8.00% per annum.
2. *Salary Scale:* 5.5% per annum per individual.
3. *Consumer Price Index:* Increase of 4.50% per annum subject to Tier maximum.
4. *Spouses and Dependents:* 80% of male employees and 50% of female employees assumed married at retirement, with wives assumed four years younger than husbands.
5. *Rehire of Former Employees:* Assumed not to be rehired.
6. *Asset Valuation:* Asset values taken directly from statement furnished by the Retirement System. The actuarial value of assets is a five-year moving average of the ratio of market value to book value multiplied by the current year's book value.
7. *Expectations of Life After Retirement:* As shown in Schedule 1, which follows.
8. *Expectations of Life After Disability:* 60% of values shown in Schedule 2, which follows.
9. *Rates of Termination of Employment:* As shown in Schedule 3, which follows.
10. *Assumptions Specific to the Ventura County Ruling:* As shown on page 41.

**SCHEDULE 1****MORTALITY TABLE****1983 Group Annuity — Rates of Mortality**

<i>Age</i>	<i>Male</i>	<i>Female</i>
15	.000325	.000140
16	.000333	.000149
17	.000343	.000159
18	.000353	.000168
19	.000365	.000179
20	.000377	.000189
21	.000392	.000201
22	.000408	.000212
23	.000424	.000225
24	.000444	.000239
25	.000464	.000253
26	.000488	.000268
27	.000513	.000284
28	.000542	.000302
29	.000572	.000320
30	.000607	.000342
31	.000645	.000364
32	.000687	.000388
33	.000734	.000414
34	.000785	.000443
35	.000860	.000476
36	.000907	.000502
37	.000966	.000536
38	.001039	.000573
39	.001128	.000617
40	.001238	.000665
41	.001370	.000716
42	.001527	.000775
43	.001715	.000842
44	.001932	.000919
45	.002183	.001010
46	.002471	.001117
47	.002790	.001237
48	.003138	.001366
49	.003513	.001505

**SCHEDULE 1**  
**MORTALITY TABLE**

**1983 Group Annuity — Rates of Mortality**

<i>Age</i>	<i>Male</i>	<i>Female</i>
50	.003909	.001647
51	.004324	.001793
52	.004755	.001949
53	.005200	.002120
54	.005660	.002315
55	.006131	.002541
56	.006618	.002803
57	.007139	.003103
58	.007719	.003443
59	.008384	.003821
60	.009158	.004241
61	.010064	.004703
62	.011133	.005210
63	.012391	.005769
64	.013868	.006386
65	.015592	.007064
66	.017579	.007817
67	.019804	.008681
68	.022229	.009702
69	.024817	.010922
70	.027530	.012385
71	.030354	.014128
72	.033370	.016160
73	.036680	.018481
74	.040388	.021092
75	.044597	.023992
76	.049388	.027185
77	.054758	.030672
78	.060678	.034459
79	.067125	.038549
80	.074070	.042945
81	.081484	.047655
82	.089320	.052691
83	.097525	.058071
84	.106047	.063807

**SCHEDULE 1****MORTALITY TABLE****1983 Group Annuity — Rates of Mortality**

<i>Age</i>	<i>Male</i>	<i>Female</i>
85	.114836	.069918
86	.124170	.076570
87	.133870	.083870
88	.144073	.091935
89	.154859	.101354
90	.166307	.111750
91	.178214	.123076
92	.190460	.135630
93	.203007	.149577
94	.217904	.165103
95	.234086	.182419
96	.248436	.201757
97	.263954	.222044
98	.280803	.243899
99	.299154	.268185
100	.319185	.295187
101	.341086	.325225
102	.365052	.358897
103	.393102	.395843
104	.427255	.438360
105	.469531	.487816
106	.521945	.545886
107	.586518	.614309
108	.665268	.694885
109	.760215	.789474
110	1.000000	1.000000

**SCHEDULE 2**  
**1981 DISABILITY MORTALITY TABLE**

<i>Age</i>	<i>General</i>	<i>Safety</i>	<i>Age</i>	<i>General</i>	<i>Safety</i>
20	.0066	.0019	65	.0379	.0368
21	.0074	.0020	66	.0390	.0385
22	.0080	.0021	67	.0400	.0400
23	.0085	.0022	68	.0411	.0411
24	.0091	.0023	69	.0422	.0422
25	.0096	.0024	70	.0437	.0437
26	.0100	.0026	71	.0454	.0454
27	.0106	.0027	72	.0472	.0472
28	.0112	.0028	73	.0496	.0496
29	.0116	.0030	74	.0526	.0526
30	.0122	.0031	75	.0553	.0553
31	.0127	.0033	76	.0601	.0601
32	.0132	.0034	77	.0659	.0659
33	.0137	.0036	78	.0726	.0726
34	.0143	.0338	79	.0797	.0797
35	.0148	.0040	80	.0874	.0874
36	.0154	.0042	81	.0955	.0955
37	.0159	.0044	82	.1037	.1037
38	.0165	.0046	83	.1123	.1123
39	.0170	.0049	84	.1211	.1211
40	.0176	.0051	85	.1301	.1301
41	.0182	.0054	86	.1393	.1393
42	.0188	.0057	87	.1487	.1487
43	.0194	.0060	88	.1585	.1585
44	.0201	.0064	89	.1687	.1687
45	.0208	.0067	90	.1795	.1795
46	.0215	.0071	91	.1905	.1905
47	.0222	.0076	92	.2017	.2017
48	.0229	.0081	93	.2123	.2123
49	.0236	.0086	94	.2265	.2265
50	.0244	.0092	95	.2412	.2412
51	.0252	.0099	96	.2562	.2562
52	.0259	.0107	97	.2725	.2725
53	.0267	.0117	98	.2902	.2902
54	.0275	.0130	99	.3091	.3091
55	.0284	.0150	100	.3298	.3298
56	.0293	.0177	101	.3525	.3525
57	.0303	.0210	102	.3772	.3772
58	.0312	.0236	103	.4062	.4062
59	.0321	.0260	104	.4415	.4415
60	.0330	.0280	105	.4852	.4852
61	.0339	.0298	106	.5393	.5393
62	.0348	.0315	107	.6061	.6061
63	.0358	.0332	108	.6874	.6874
64	.0369	.0350	109	.7856	.7856
			110	1.0000	1.0000

---

**SCHEDULE 3****PROBABILITIES OF TERMINATION OF EMPLOYMENT**

The following pages indicate the probability of termination of employment for each of nine separate sources of termination:

- *Ordinary Withdrawal:* Member terminates and elects refund of member contributions.
- *Vested Withdrawal:* Member terminates and contributions are left on deposit.
- *Ordinary Death:* Member dies before eligible for retirement; death not employment-related.
- *Ordinary Disability:* Member receives disability retirement where the member's disability is not employment-related.
- *Service Retirement:* Member retires, for reasons other than disability, after satisfying requirements of age and/or service.
- *Service Disability:* Member receives disability retirement as the result of employment-related disability.
- *Service Death:* Member dies before retiring as the result of performance of assigned duties.
- *DWE - Service Retirement:* Member dies before retiring but after satisfying age and/or service requirements for service retirement.
- *DWE - Disability Retirement:* Member dies before retiring but after satisfying age and/or service requirements for disability retirement.

The probabilities shown for each cause of termination represent the probability that a given member will terminate at a particular age for the indicated reason. For example, if the probability of ordinary withdrawal at age 25 is .1000, then we are assuming that 10% of the active members at age 25 will terminate without vested rights during the next year.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
COUNTY - GENERAL MEMBERS - MALE  
PROBABILITY OF OCCURRENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.1700	0.0000	0.000377	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
21	0.1700	0.0000	0.000392	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
22	0.1704	0.0000	0.000408	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
23	0.1576	0.0000	0.000424	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
24	0.1464	0.0000	0.000444	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
25	0.1256	0.0070	0.000464	0.0000	0.0000	0.0001	0.0000	0.000000	0.0000
26	0.1152	0.0070	0.000488	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
27	0.1072	0.0080	0.000513	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
28	0.1000	0.0080	0.000542	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
29	0.0928	0.0090	0.000572	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
30	0.0888	0.0090	0.000607	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
31	0.0832	0.0100	0.000645	0.0001	0.0000	0.0005	0.0000	0.000000	0.0000
32	0.0768	0.0100	0.000687	0.0001	0.0000	0.0006	0.0000	0.000000	0.0000
33	0.0720	0.0100	0.000734	0.0002	0.0000	0.0006	0.0000	0.000000	0.0000
34	0.0680	0.0102	0.000785	0.0002	0.0000	0.0006	0.0000	0.000000	0.0000
35	0.0616	0.0100	0.000860	0.0002	0.0000	0.0010	0.0000	0.000000	0.0000
36	0.0552	0.0097	0.000907	0.0002	0.0000	0.0010	0.0000	0.000000	0.0000
37	0.0496	0.0105	0.000966	0.0003	0.0000	0.0010	0.0000	0.000000	0.0000
38	0.0472	0.0111	0.001039	0.0003	0.0000	0.0010	0.0000	0.000000	0.0000
39	0.0448	0.0110	0.001128	0.0004	0.0000	0.0010	0.0000	0.000000	0.0000
40	0.0432	0.0110	0.001238	0.0004	0.0000	0.0010	0.0000	0.000000	0.0000
41	0.0408	0.0100	0.001370	0.0006	0.0000	0.0012	0.0000	0.000000	0.0000
42	0.0384	0.0100	0.001527	0.0006	0.0000	0.0013	0.0000	0.000000	0.0000
43	0.0368	0.0100	0.001715	0.0006	0.0000	0.0013	0.0000	0.000000	0.0000
44	0.0344	0.0073	0.001932	0.0006	0.0000	0.0014	0.0000	0.000000	0.0000
45	0.0328	0.0074	0.002183	0.0006	0.0000	0.0014	0.0000	0.000000	0.0000
46	0.0296	0.0073	0.002471	0.0007	0.0000	0.0015	0.0000	0.000000	0.0000
47	0.0280	0.0070	0.002790	0.0008	0.0000	0.0015	0.0000	0.000000	0.0000
48	0.0264	0.0061	0.003138	0.0009	0.0000	0.0016	0.0000	0.000000	0.0000
49	0.0264	0.0052	0.003513	0.0010	0.0000	0.0016	0.0000	0.000000	0.0000
50	0.0264	0.0041	0.000000	0.0011	0.0200	0.0016	0.0000	0.003909	0.0000
51	0.0248	0.0033	0.000000	0.0012	0.0144	0.0018	0.0000	0.004755	0.0000
52	0.0240	0.0026	0.000000	0.0014	0.0190	0.0018	0.0000	0.005200	0.0000
53	0.0224	0.0023	0.000000	0.0016	0.0215	0.0018	0.0000	0.005660	0.0000
54	0.0216	0.0019	0.000000	0.0018	0.0237	0.0019	0.0000	0.006131	0.0000
55	0.0216	0.0016	0.000000	0.0021	0.0326	0.0019	0.0000	0.006618	0.0000
56	0.0208	0.0013	0.000000	0.0025	0.0410	0.0019	0.0000	0.007139	0.0000
57	0.0160	0.0011	0.000000	0.0029	0.0486	0.0019	0.0000	0.007719	0.0000
58	0.0112	0.0009	0.000000	0.0034	0.0508	0.0019	0.0000	0.008384	0.0000
59	0.0072	0.0008	0.000000	0.0045	0.0595	0.0019	0.0000	0.009158	0.0000
60	0.0000	0.0000	0.000000	0.0052	0.0632	0.0019	0.0000	0.010064	0.0000
61	0.0000	0.0000	0.000000	0.0060	0.0829	0.0019	0.0000	0.011133	0.0000
62	0.0000	0.0000	0.000000	0.0069	0.1198	0.0019	0.0000	0.012391	0.0000
63	0.0000	0.0000	0.000000	0.0078	0.1144	0.0019	0.0000	0.013868	0.0000
64	0.0000	0.0000	0.000000	0.0089	0.1200	0.0019	0.0000	0.015592	0.0000
65	0.0000	0.0000	0.000000	0.0000	0.1500	0.0000	0.0000	0.017579	0.0000
66	0.0000	0.0000	0.000000	0.0000	0.1312	0.0000	0.0000	0.019804	0.0000
67	0.0000	0.0000	0.000000	0.0000	0.1455	0.0000	0.0000	0.022229	0.0000
68	0.0000	0.0000	0.000000	0.0000	0.2114	0.0000	0.0000	0.024817	0.0000
69	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
70	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
COUNTY - GENERAL MEMBERS - FEMALE  
PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.1254	0.0000	0.000189	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
21	0.1182	0.0000	0.000201	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
22	0.1122	0.0000	0.000212	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
23	0.1056	0.0010	0.000225	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
24	0.0990	0.0011	0.000239	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
25	0.0990	0.0020	0.000253	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
26	0.0878	0.0030	0.000268	0.0000	0.0000	0.0000	0.0000	0.000008	0.0000
27	0.0827	0.0050	0.000284	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
28	0.0782	0.0060	0.000302	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
29	0.0737	0.0070	0.000320	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
30	0.0720	0.0080	0.000342	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
31	0.0686	0.0100	0.000364	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
32	0.0653	0.0100	0.000388	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
33	0.0630	0.0100	0.000414	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
34	0.0608	0.0100	0.000443	0.0003	0.0000	0.0005	0.0000	0.000000	0.0000
35	0.0551	0.0100	0.000476	0.0004	0.0000	0.0006	0.0000	0.000000	0.0000
36	0.0518	0.0100	0.000502	0.0005	0.0000	0.0006	0.0000	0.000000	0.0000
37	0.0484	0.0100	0.000536	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
38	0.0473	0.0100	0.000573	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
39	0.0456	0.0100	0.000617	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
40	0.0444	0.0102	0.000665	0.0007	0.0000	0.0006	0.0000	0.000000	0.0000
41	0.0428	0.0109	0.000716	0.0008	0.0000	0.0008	0.0000	0.000000	0.0000
42	0.0399	0.0114	0.000775	0.0008	0.0000	0.0009	0.0000	0.000000	0.0000
43	0.0377	0.0120	0.000842	0.0009	0.0000	0.0013	0.0000	0.000000	0.0000
44	0.0360	0.0121	0.000919	0.0010	0.0000	0.0013	0.0000	0.000000	0.0000
45	0.0354	0.0118	0.001010	0.0010	0.0000	0.0014	0.0000	0.000000	0.0000
46	0.0338	0.0107	0.001117	0.0010	0.0000	0.0015	0.0000	0.000000	0.0000
47	0.0315	0.0095	0.001237	0.0011	0.0000	0.0015	0.0000	0.000000	0.0000
48	0.0304	0.0083	0.001366	0.0012	0.0000	0.0016	0.0000	0.000000	0.0000
49	0.0281	0.0072	0.001505	0.0014	0.0000	0.0016	0.0000	0.000000	0.0000
50	0.0253	0.0060	0.000000	0.0015	0.0293	0.0016	0.0000	0.001647	0.0000
51	0.0242	0.0050	0.000000	0.0017	0.0190	0.0018	0.0000	0.001793	0.0000
52	0.0236	0.0050	0.000000	0.0018	0.0203	0.0018	0.0000	0.001949	0.0000
53	0.0219	0.0039	0.000000	0.0018	0.0225	0.0018	0.0000	0.002120	0.0000
54	0.0208	0.0033	0.000000	0.0020	0.0405	0.0019	0.0000	0.002315	0.0000
55	0.0186	0.0028	0.000000	0.0021	0.0370	0.0019	0.0000	0.002541	0.0000
56	0.0180	0.0024	0.000000	0.0023	0.0514	0.0019	0.0000	0.002803	0.0000
57	0.0174	0.0021	0.000000	0.0025	0.0523	0.0019	0.0000	0.003103	0.0000
58	0.0152	0.0017	0.000000	0.0026	0.0558	0.0019	0.0000	0.003443	0.0000
59	0.0146	0.0013	0.000000	0.0026	0.0721	0.0019	0.0000	0.003821	0.0000
60	0.0000	0.0000	0.000000	0.0026	0.0925	0.0019	0.0000	0.004241	0.0000
61	0.0000	0.0000	0.000000	0.0026	0.1300	0.0019	0.0000	0.004703	0.0000
62	0.0000	0.0000	0.000000	0.0026	0.1152	0.0019	0.0000	0.005210	0.0000
63	0.0000	0.0000	0.000000	0.0026	0.1207	0.0019	0.0000	0.005769	0.0000
64	0.0000	0.0000	0.000000	0.0026	0.1940	0.0019	0.0000	0.006386	0.0000
65	0.0000	0.0000	0.000000	0.0000	0.1946	0.0000	0.0000	0.007064	0.0000
66	0.0000	0.0000	0.000000	0.0000	0.2089	0.0000	0.0000	0.007817	0.0000
67	0.0000	0.0000	0.000000	0.0000	0.2094	0.0000	0.0000	0.008681	0.0000
68	0.0000	0.0000	0.000000	0.0000	0.3725	0.0000	0.0000	0.009702	0.0000
69	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.010922	0.0000
70	0.0000	0.0000	0.000000	0.0000		0.0000	0.0000	0.000000	0.0000



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - MALE  
 PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.2200	0.0000	0.000377	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
21	0.2040	0.0000	0.000392	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
22	0.2045	0.0000	0.000408	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
23	0.1891	0.0000	0.000424	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
24	0.1757	0.0000	0.000444	0.0000	0.0000	0.0001	0.0000	0.000000	0.0000
25	0.1507	0.0070	0.000464	0.0000	0.0000	0.0001	0.0000	0.000000	0.0000
26	0.1382	0.0070	0.000488	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
27	0.1286	0.0080	0.000513	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
28	0.1200	0.0080	0.000542	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
29	0.1114	0.0090	0.000572	0.0000	0.0000	0.0002	0.0000	0.000000	0.0000
30	0.1066	0.0090	0.000607	0.0001	0.0000	0.0003	0.0000	0.000000	0.0000
31	0.0998	0.0100	0.000645	0.0001	0.0000	0.0003	0.0000	0.000000	0.0000
32	0.0922	0.0100	0.000687	0.0002	0.0000	0.0003	0.0000	0.000000	0.0000
33	0.0864	0.0100	0.000734	0.0002	0.0000	0.0003	0.0000	0.000000	0.0000
34	0.0816	0.0102	0.000785	0.0002	0.0000	0.0004	0.0000	0.000000	0.0000
35	0.0739	0.0100	0.000860	0.0002	0.0000	0.0004	0.0000	0.000000	0.0000
36	0.0662	0.0097	0.000907	0.0002	0.0000	0.0004	0.0000	0.000000	0.0000
37	0.0595	0.0105	0.000966	0.0003	0.0000	0.0004	0.0000	0.000000	0.0000
38	0.0566	0.0111	0.001039	0.0004	0.0000	0.0004	0.0000	0.000000	0.0000
39	0.0538	0.0110	0.001128	0.0004	0.0000	0.0005	0.0000	0.000000	0.0000
40	0.0518	0.0110	0.001238	0.0004	0.0000	0.0006	0.0000	0.000000	0.0000
41	0.0490	0.0100	0.001370	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
42	0.0461	0.0100	0.001527	0.0006	0.0000	0.0008	0.0000	0.000000	0.0000
43	0.0442	0.0073	0.001932	0.0006	0.0000	0.0008	0.0000	0.000000	0.0000
44	0.0413	0.0073	0.002183	0.0006	0.0000	0.0015	0.0000	0.000000	0.0000
45	0.0394	0.0073	0.002471	0.0007	0.0000	0.0019	0.0000	0.000000	0.0000
46	0.0355	0.0070	0.002790	0.0008	0.0000	0.0021	0.0000	0.000000	0.0000
47	0.0336	0.0061	0.003138	0.0009	0.0000	0.0022	0.0000	0.000000	0.0000
48	0.0317	0.0052	0.003513	0.0010	0.0000	0.0024	0.0000	0.000000	0.0000
49	0.0317	0.0041	0.000000	0.0011	0.0200	0.0026	0.0000	0.000000	0.0000
50	0.0298	0.0033	0.000000	0.0012	0.0144	0.0031	0.0000	0.004324	0.0000
51	0.0288	0.0026	0.000000	0.0014	0.0190	0.0036	0.0000	0.004755	0.0000
52	0.0269	0.0023	0.000000	0.0016	0.0237	0.0040	0.0000	0.005200	0.0000
53	0.0259	0.0019	0.000000	0.0018	0.0326	0.0050	0.0000	0.005660	0.0000
54	0.0250	0.0016	0.000000	0.0021	0.0410	0.0055	0.0000	0.006131	0.0000
55	0.0192	0.0011	0.000000	0.0025	0.0486	0.0060	0.0000	0.006618	0.0000
56	0.0134	0.0009	0.000000	0.0034	0.0508	0.0063	0.0000	0.007139	0.0000
57	0.0086	0.0008	0.000000	0.0045	0.0595	0.0063	0.0000	0.007719	0.0000
58	0.0000	0.0000	0.000000	0.0052	0.0632	0.0065	0.0000	0.008384	0.0000
59	0.0000	0.0000	0.000000	0.0060	0.0829	0.0070	0.0000	0.009158	0.0000
60	0.0000	0.0000	0.000000	0.0069	0.1198	0.0070	0.0000	0.010064	0.0000
61	0.0000	0.0000	0.000000	0.0078	0.1144	0.0070	0.0000	0.011133	0.0000
62	0.0000	0.0000	0.000000	0.0089	0.1200	0.0070	0.0000	0.012391	0.0000
63	0.0000	0.0000	0.000000	0.0089	0.1500	0.0000	0.0000	0.013868	0.0000
64	0.0000	0.0000	0.000000	0.0000	0.1312	0.0000	0.0000	0.015592	0.0000
65	0.0000	0.0000	0.000000	0.0000	0.1455	0.0000	0.0000	0.017579	0.0000
66	0.0000	0.0000	0.000000	0.0000	0.2114	0.0000	0.0000	0.019804	0.0000
67	0.0000	0.0000	0.000000	0.0000	0.2142	0.0000	0.0000	0.022229	0.0000
68	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.024817	0.0000
69	0.0000	0.0000	0.000000	0.0000				0.000000	0.0000
70	0.0000	0.0000	0.000000	0.0000				0.000000	0.0000

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - FEMALE  
 PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.2200	0.0000	0.000189	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
21	0.2040	0.0000	0.000201	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
22	0.2040	0.0000	0.000212	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
23	0.1890	0.0010	0.000225	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
24	0.1800	0.0011	0.000239	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
25	0.1700	0.0020	0.000253	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
26	0.1600	0.0030	0.000268	0.0000	0.0000	0.0000	0.0000	0.000008	0.0000
27	0.1580	0.0050	0.000284	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
28	0.1550	0.0060	0.000302	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
29	0.1530	0.0070	0.000320	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
30	0.1510	0.0080	0.000342	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
31	0.1500	0.0100	0.000364	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
32	0.1490	0.0100	0.000388	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
33	0.1410	0.0100	0.000414	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
34	0.1350	0.0100	0.000443	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
35	0.1200	0.0100	0.000476	0.0003	0.0000	0.0005	0.0000	0.000000	0.0000
36	0.1100	0.0100	0.000502	0.0004	0.0000	0.0006	0.0000	0.000000	0.0000
37	0.0900	0.0100	0.000536	0.0004	0.0000	0.0006	0.0000	0.000000	0.0000
38	0.0850	0.0100	0.000573	0.0005	0.0000	0.0006	0.0000	0.000000	0.0000
39	0.0800	0.0100	0.000617	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
40	0.0750	0.0102	0.000665	0.0006	0.0000	0.0006	0.0000	0.000000	0.0000
41	0.0600	0.0109	0.000716	0.0007	0.0000	0.0007	0.0000	0.000000	0.0000
42	0.0533	0.0114	0.000775	0.0008	0.0000	0.0008	0.0000	0.000000	0.0000
43	0.0503	0.0120	0.000842	0.0009	0.0000	0.0009	0.0000	0.000000	0.0000
44	0.0480	0.0121	0.000919	0.0010	0.0000	0.0010	0.0000	0.000000	0.0000
45	0.0473	0.0118	0.001010	0.0010	0.0000	0.0010	0.0000	0.000000	0.0000
46	0.0450	0.0107	0.001117	0.0010	0.0000	0.0009	0.0000	0.000000	0.0000
47	0.0420	0.0095	0.001237	0.0011	0.0000	0.0010	0.0000	0.000000	0.0000
48	0.0405	0.0083	0.001366	0.0012	0.0000	0.0100	0.0000	0.000000	0.0000
49	0.0375	0.0072	0.001505	0.0014	0.0000	0.0100	0.0000	0.000000	0.0000
50	0.0338	0.0060	0.000000	0.0015	0.0000	0.0100	0.0000	0.001647	0.0000
51	0.0323	0.0050	0.000000	0.0017	0.0190	0.0100	0.0000	0.001793	0.0000
52	0.0315	0.0050	0.000000	0.0018	0.0203	0.0100	0.0000	0.001949	0.0000
53	0.0293	0.0039	0.000000	0.0018	0.0229	0.0100	0.0000	0.002120	0.0000
54	0.0278	0.0033	0.000000	0.0020	0.0225	0.0100	0.0000	0.002315	0.0000
55	0.0248	0.0028	0.000000	0.0021	0.0405	0.0100	0.0000	0.002541	0.0000
56	0.0240	0.0024	0.000000	0.0023	0.0370	0.0100	0.0000	0.002803	0.0000
57	0.0233	0.0021	0.000000	0.0025	0.0514	0.0100	0.0000	0.003103	0.0000
58	0.0203	0.0017	0.000000	0.0026	0.0523	0.0100	0.0000	0.003443	0.0000
59	0.0195	0.0013	0.000000	0.0026	0.0558	0.0100	0.0000	0.003821	0.0000
60	0.0000	0.0000	0.000000	0.0026	0.0721	0.0100	0.0000	0.004241	0.0000
61	0.0000	0.0000	0.000000	0.0026	0.0925	0.0000	0.0000	0.004703	0.0000
62	0.0000	0.0000	0.000000	0.0026	0.1300	0.0000	0.0000	0.005210	0.0000
63	0.0000	0.0000	0.000000	0.0026	0.1152	0.0000	0.0000	0.005769	0.0000
64	0.0000	0.0000	0.000000	0.0026	0.1207	0.0000	0.0000	0.006386	0.0000
65	0.0000	0.0000	0.000000	0.0000	0.1940	0.0000	0.0000	0.007064	0.0000
66	0.0000	0.0000	0.000000	0.0000	0.1946	0.0000	0.0000	0.007817	0.0000
67	0.0000	0.0000	0.000000	0.0000	0.2089	0.0000	0.0000	0.008681	0.0000
68	0.0000	0.0000	0.000000	0.0000	0.2094	0.0000	0.0000	0.009702	0.0000
69	0.0000	0.0000	0.000000	0.0000	0.3725	0.0000	0.0000	0.010922	0.0000
70	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
LAW ENFORCEMENT - SAFETY MEMBERS  
PROBABILITY OF OCCURRENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWC SVC RET	DWC DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.0358	0.0000	0.000377	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
21	0.0340	0.0000	0.000392	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
22	0.0322	0.0000	0.000408	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
23	0.0305	0.0000	0.000424	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
24	0.0262	0.0000	0.000444	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
25	0.0175	0.0034	0.000464	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
26	0.0163	0.0032	0.000488	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
27	0.0150	0.0034	0.000513	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
28	0.0136	0.0031	0.000542	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
29	0.0124	0.0030	0.000572	0.0000	0.0000	0.0011	0.0000	0.000000	0.0000
30	0.0118	0.0028	0.000607	0.0001	0.0000	0.0015	0.0000	0.000000	0.0000
31	0.0114	0.0028	0.000645	0.0001	0.0000	0.0019	0.0000	0.000000	0.0000
32	0.0100	0.0027	0.000687	0.0001	0.0000	0.0024	0.0000	0.000000	0.0000
33	0.0086	0.0026	0.000734	0.0002	0.0000	0.0029	0.0000	0.000000	0.0000
34	0.0073	0.0026	0.000785	0.0002	0.0000	0.0032	0.0000	0.000000	0.0000
35	0.0067	0.0025	0.000860	0.0002	0.0000	0.0038	0.0000	0.000000	0.0000
36	0.0057	0.0027	0.000907	0.0002	0.0000	0.0043	0.0000	0.000000	0.0000
37	0.0047	0.0028	0.000966	0.0003	0.0000	0.0049	0.0000	0.000000	0.0000
38	0.0041	0.0028	0.001039	0.0004	0.0000	0.0058	0.0000	0.000000	0.0000
39	0.0037	0.0027	0.001128	0.0004	0.0000	0.0066	0.0000	0.000000	0.0000
40	0.0026	0.0026	0.001238	0.0005	0.0000	0.0066	0.0000	0.000000	0.0000
41	0.0026	0.0025	0.001370	0.0007	0.0000	0.0066	0.0000	0.000000	0.0000
42	0.0024	0.0025	0.001527	0.0008	0.0000	0.0066	0.0000	0.000000	0.0000
43	0.0024	0.0023	0.001715	0.0010	0.0000	0.0066	0.0000	0.000000	0.0000
44	0.0022	0.0023	0.001932	0.0012	0.0000	0.0066	0.0000	0.000000	0.0000
45	0.0000	0.0022	0.002183	0.0014	0.0000	0.0066	0.0000	0.000000	0.0000
46	0.0000	0.0020	0.002471	0.0017	0.0000	0.0066	0.0000	0.000000	0.0000
47	0.0000	0.0019	0.002790	0.0019	0.0000	0.0066	0.0000	0.000000	0.0000
48	0.0000	0.0017	0.003138	0.0022	0.0000	0.0066	0.0000	0.000000	0.0000
49	0.0000	0.0016	0.003513	0.0023	0.0500	0.0066	0.0000	0.003909	0.0000
50	0.0000	0.0015	0.000000	0.0025	0.0500	0.0066	0.0000	0.004324	0.0000
51	0.0000	0.0012	0.000000	0.0026	0.0500	0.0066	0.0000	0.004755	0.0000
52	0.0000	0.0011	0.000000	0.0028	0.0500	0.0070	0.0000	0.005200	0.0000
53	0.0000	0.0010	0.000000	0.0030	0.1000	0.0073	0.0000	0.005660	0.0000
54	0.0000	0.0007	0.000000	0.0000	0.2500	0.0100	0.0000	0.006131	0.0000
55	0.0000	0.0000	0.000000	0.0000	0.1500	0.0100	0.0000	0.006618	0.0000
56	0.0000	0.0000	0.000000	0.0000	0.1800	0.0110	0.0000	0.007139	0.0000
57	0.0000	0.0000	0.000000	0.0000	0.1400	0.0120	0.0000	0.007719	0.0000
58	0.0000	0.0000	0.000000	0.0000	0.1700	0.0140	0.0000	0.008384	0.0000
59	0.0000	0.0000	0.000000	0.0000	0.1500	0.0100	0.0000	0.009158	0.0000
60	0.0000	0.0000	0.000000	0.0000	0.2000	0.0000	0.0000	0.010064	0.0000
61	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
62	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
63	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
64	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
65	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
66	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
67	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
68	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
69	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
70	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
FIRE AUTHORITY - SAFETY MEMBERS  
PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABILITY	SERVICE RETIRE	SERVICE DISABILITY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
19	0.0000	0.0000	0.000000	0.0000	0.0000	0.0000	0.0000	0.000000	0.0000
20	0.0358	0.0000	0.000377	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
21	0.0340	0.0000	0.000392	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
22	0.0322	0.0000	0.000408	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
23	0.0305	0.0000	0.000424	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
24	0.0262	0.0000	0.000444	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
25	0.0175	0.0034	0.000464	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
26	0.0163	0.0034	0.000488	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
27	0.0150	0.0032	0.000513	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
28	0.0136	0.0031	0.000542	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
29	0.0124	0.0030	0.000572	0.0000	0.0000	0.0003	0.0000	0.000000	0.0000
30	0.0118	0.0029	0.000607	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
31	0.0114	0.0027	0.000645	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
32	0.0100	0.0027	0.000687	0.0001	0.0000	0.0004	0.0000	0.000000	0.0000
33	0.0086	0.0026	0.000734	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
34	0.0073	0.0026	0.000785	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
35	0.0067	0.0025	0.000860	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
36	0.0057	0.0027	0.000907	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
37	0.0047	0.0028	0.000966	0.0002	0.0000	0.0005	0.0000	0.000000	0.0000
38	0.0041	0.0028	0.001039	0.0003	0.0000	0.0007	0.0000	0.000000	0.0000
39	0.0037	0.0027	0.001128	0.0004	0.0000	0.0009	0.0000	0.000000	0.0000
40	0.0026	0.0026	0.001238	0.0004	0.0000	0.0010	0.0000	0.000000	0.0000
41	0.0024	0.0025	0.001370	0.0005	0.0000	0.0020	0.0000	0.000000	0.0000
42	0.0024	0.0025	0.001527	0.0007	0.0000	0.0040	0.0000	0.000000	0.0000
43	0.0024	0.0023	0.001715	0.0008	0.0000	0.0050	0.0000	0.000000	0.0000
44	0.0022	0.0023	0.001932	0.0010	0.0000	0.0050	0.0000	0.000000	0.0000
45	0.0000	0.0022	0.002183	0.0012	0.0000	0.0050	0.0000	0.000000	0.0000
46	0.0000	0.0020	0.002471	0.0014	0.0000	0.0060	0.0000	0.000000	0.0000
47	0.0000	0.0019	0.002790	0.0017	0.0000	0.0080	0.0000	0.000000	0.0000
48	0.0000	0.0017	0.003138	0.0019	0.0000	0.0110	0.0000	0.000000	0.0000
49	0.0000	0.0016	0.003513	0.0022	0.0000	0.0120	0.0000	0.003909	0.0000
50	0.0000	0.0015	0.000000	0.0023	0.0300	0.0120	0.0000	0.004324	0.0000
51	0.0000	0.0012	0.000000	0.0025	0.0300	0.0120	0.0000	0.004755	0.0000
52	0.0000	0.0011	0.000000	0.0026	0.0300	0.0150	0.0000	0.005200	0.0000
53	0.0000	0.0010	0.000000	0.0028	0.0300	0.0150	0.0000	0.005660	0.0000
54	0.0000	0.0007	0.000000	0.0030	0.1500	0.0200	0.0000	0.006131	0.0000
55	0.0000	0.0000	0.000000	0.0000	0.1500	0.0220	0.0000	0.006618	0.0000
56	0.0000	0.0000	0.000000	0.0000	0.1500	0.0220	0.0000	0.007139	0.0000
57	0.0000	0.0000	0.000000	0.0000	0.2500	0.0220	0.0000	0.007719	0.0000
58	0.0000	0.0000	0.000000	0.0000	0.2500	0.0220	0.0000	0.008384	0.0000
59	0.0000	0.0000	0.000000	0.0000	0.4000	0.0000	0.0000	0.009158	0.0000
60	0.0000	0.0000	0.000000	0.0000	0.4000	0.0000	0.0000	0.010064	0.0000
61	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
62	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
63	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
64	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
65	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
66	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
67	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
68	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
69	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000
70	0.0000	0.0000	0.000000	0.0000	1.0000	0.0000	0.0000	0.000000	0.0000

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ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

**ASSUMPTIONS SPECIFIC TO THE  
VENTURA COUNTY RULING**

The Ventura County Ruling changed the definition of compensation earnable, a key variable in the determination of benefits payable from the Orange County Employees Retirement System. Because many of the elements of compensation were unavailable, assumptions were made to complete the December 31, 2001, actuarial valuation. The following describes the key assumptions that were made and the rationale behind the assumptions. Overall, the assumptions used in the actuarial valuation are conservative but not overly conservative. As more information becomes available, changes to these assumptions will be considered.

**Compensation Earnable**

Data on premium pay for individual members was included in the participant data supplied by OCERS.

Compensation earnable also includes vacation, sick time and compensatory time that is earned and can be cashed out in the measurement period. The amount of these items that are included in final compensation will change over time as members learn the impact that these items can have on their retirement benefits. For the purpose of this valuation, it was assumed that members would cash out the maximum amount available.

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ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

**SUMMARY OF MAJOR PLAN PROVISIONS**

1. **Membership Requirements**

Date of employment.

2. **Monthly Salary Base for Benefits**

Highest one-year average (three-year average for Tier II members).

3. **Service Retirement**

A. **Eligibility**

10 years of service and age 50, or 30 years of service.

B. **Benefit Formula per Year of Service**

General Members

Tier I – 2.0% times final one-year average pay

Tier II – 1.67% times final three-year average pay

Safety Members — Law Enforcement

Tier I – 3.0% times final one-year average pay

Tier II – 3.0% times final three-year average pay

Safety Members — All Other Safety

Tier I – 2.0% times final one-year average pay

Tier II – 2.0% times final three-year average pay

Reduced for retirement before age 57 (50 for Safety Members) and increased for retirement after age 57 (50 for Safety Members). Tier II General Plan Factors are found in Section 31676.1.

4. **Ordinary Disability**

A. **Eligibility**

Five years of service.

B. **Benefit Formula per Year of Service**

For Tier I members, 1.8% per year of service (in most cases a minimum of one-third salary).

Tier II members receive 1.5% per year of service. Member receives service retirement benefit if greater and member otherwise qualifies for this benefit.

5. **Line-of-Duty Disability**

A. **Eligibility**

No age or service requirement.

B. **Benefit**

50% of salary or service retirement benefit, if greater and member otherwise eligible for this benefit.

6. **Ordinary Death Before Eligible to Retire**

Refund of employee contributions with interest plus one month's salary for each year of service to a maximum of six months' salary.

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7. **Ordinary Death After Eligible to Retire for Service or Ordinary Disability**  
60% of earned benefit payable to surviving eligible spouse.
8. **Line-of-Duty Death**  
50% of salary payable to spouse.
9. **Death After Retirement**
- A. **Service or Ordinary Disability Retirement**  
60% of member's unmodified allowance continued to eligible spouse.
  - B. **Line-of-Duty Disability**  
100% of member's allowance continued to spouse.
  - C. **\$1,000 Lump Sum**
10. **Withdrawal Benefits**
- A. **Fewer than Five Years of Service**  
Refund of accumulated member contributions with interest.
  - B. **Five or More Years of Service**  
If contributions left on deposit, entitled to earned benefits commencing at any time after member would have been eligible to retire.
11. **Postretirement Cost-of-Living Benefits**  
Based on changes in Consumer Price Index to maximum of 3% per year; excess "banked."
12. **Employer Contributions**  
Determined by Projected Unit Credit funding method with amortization of Unfunded Actuarial Accrued Liability over varying periods.
13. **Member Contributions - Tier I (Tier II in parentheses)**  
Normal based on entry age, 1/200 (1/120) at 60 for General Members; 1/200 (1/100) at 50 for Safety Members. Cost-of-living contributions equal to percentage of normal:

	<b>County</b>	<b>OCTA</b>	<b>Law</b>	<b>Fire</b>
Tier I	47.63%	46.94%	102.25%	64.55%
Tier 2	28.50%	32.15%	51.75%	33.39%

AGE/SERVICE DISTRIBUTION GENERAL MEMBERS TIER I

AGE	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35-	TOTAL
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
15-19	1	0	0	0	0	0	0	0	0	0	0	0	1
*NO.*	25750	0	0	0	0	0	0	0	0	0	0	0	25750
*TOT.AMT*	25750	0	0	0	0	0	0	0	0	0	0	0	25750
AVE.AMT*													
20-24	1	0	0	0	0	0	0	0	0	0	0	0	1
*NO.*	59737	0	0	0	0	0	0	0	0	0	0	0	59737
*TOT.AMT*	59737	0	0	0	0	0	0	0	0	0	0	0	59737
AVE.AMT*													
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34	1	0	0	0	0	0	0	0	0	0	0	0	1
*NO.*	26353	0	0	0	0	0	0	0	0	0	0	0	26353
*TOT.AMT*	26353	0	0	0	0	0	0	0	0	0	0	0	26353
AVE.AMT*													
35-39	1	0	0	0	0	0	0	0	0	0	0	0	1
*NO.*	30721	0	0	0	0	0	0	0	0	0	0	0	30721
*TOT.AMT*	30721	0	0	0	0	0	0	0	0	0	0	0	30721
AVE.AMT*													
40-44	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	1	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	38792	0	0	0	0	0	0	0	0	0	38792
*TOT.AMT*	0	0	38792	0	0	0	0	0	0	0	0	0	38792
AVE.AMT*	0	0		0	0	0	0	0	0	0	0	0	
50-54	0	0	0	1	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	31304	0	0	0	0	0	0	0	0	31304
*TOT.AMT*	0	0	0	31304	0	0	0	0	0	0	0	0	31304
AVE.AMT*	0	0	0		0	0	0	0	0	0	0	0	
55-59	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
65-	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.*	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4	0	1	1	0	0	0	0	0	0	0	0	4
*NO.*	142561	0	38792	31304	0	0	0	0	0	0	0	0	142561
*TOT.AMT*	35640	0	38792	31304	0	0	0	0	0	0	0	0	35640
AVE.AMT*													

AVERAGE AGE \* 54.0 \* AVERAGE SERVICE \* 25.6 \*



AGE/SERVICE DISTRIBUTION GENERAL MEMBERS TIER II

AGE	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35-	TOTAL
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
15-19 *NO.	18	3	0	0	0	0	0	0	0	0	0	0	21
*TOT.AMT*	612610	69647	0	0	0	0	0	0	0	0	0	0	682257
AVE.AMT*	34034	23216	0	0	0	0	0	0	0	0	0	0	32488
20-24 *NO.	381	140	108	38	19	1	0	0	0	0	0	0	687
*TOT.AMT*	11251267	4360694	3441245	1249648	654293	40308	0	0	0	0	0	0	20997455
AVE.AMT*	29531	31148	31863	32885	34436	40308	0	0	0	0	0	0	30564
25-29 *NO.	592	348	358	270	170	164	6	0	0	0	0	0	1908
*TOT.AMT*	19980098	12532630	13718250	10809179	7160315	6715220	238323	0	0	0	0	0	71154015
AVE.AMT*	33750	36013	38319	40034	42120	40946	39721	0	0	0	0	0	37292
30-34 *NO.	425	329	307	282	227	659	338	3	0	0	0	0	2570
*TOT.AMT*	15724965	12863982	12369612	11568694	9995514	30464980	15113660	125721	0	0	0	0	0108227128
AVE.AMT*	37000	39100	40292	41024	44033	46229	44715	41907	0	0	0	0	42112
35-39 *NO.	312	232	213	201	166	547	747	163	8	0	0	0	2589
*TOT.AMT*	11454798	9507643	8926311	9243739	7651867	26029768	36337034	7876436	427366	0	0	0	0117454962
AVE.AMT*	36714	40981	41908	45989	46096	47586	48644	48322	53421	0	0	0	45367
40-44 *NO.	272	193	182	162	117	465	829	378	118	0	0	0	2716
*TOT.AMT*	9553891	8114841	7921146	7067005	5471458	23355288	42608053	19807349	6147973	0	0	0	0130047004
AVE.AMT*	35125	42046	43523	43623	46765	50226	51397	52400	52101	0	0	0	47882
45-49 *NO.	219	154	141	131	95	392	691	404	209	0	0	0	2436
*TOT.AMT*	8810394	6434032	6371721	6365886	4714645	19926729	35753845	23058968	11348056	0	0	0	0122784276
AVE.AMT*	40230	41779	45190	48595	49628	50833	51742	57077	54297	0	0	0	50404
50-54 *NO.	193	143	126	127	95	326	588	276	167	2	0	0	2043
*TOT.AMT*	7926690	6060766	5339575	6114699	5189542	16087320	30305863	15395845	9324027	119745	0	0	0101864072
AVE.AMT*	41071	42383	42378	48147	54627	49348	51541	55782	55832	59873	0	0	49860
55-59 *NO.	117	74	87	69	79	268	434	232	122	1	0	0	1483
*TOT.AMT*	4338499	2772884	4064452	3202311	3893270	13157888	22005877	12238648	6389522	121014	0	0	72184365
AVE.AMT*	37081	37471	46718	46410	49282	49097	50705	52753	52373	121014	0	0	48675
60-64 *NO.	44	27	30	34	39	147	262	146	76	0	1	0	806
*TOT.AMT*	1519252	1115793	1137887	1508357	2091911	7062638	11901292	7469197	3916752	0	61131	0	037784210
AVE.AMT*	34528	41326	37930	44363	53639	48045	45425	51159	51536	0	61131	0	46879
65- *NO.	12	13	18	12	15	70	129	55	44	0	0	0	368
*TOT.AMT*	377215	432117	625558	416829	750088	3047875	6308474	2579120	1958961	0	0	0	016496237
AVE.AMT*	31435	33240	34753	34736	50006	43541	48903	46893	44522	0	0	0	44827
TOTAL *NO.	2585	1656	1570	1326	1022	3039	4024	1657	744	3	1	0	17627
*TOT.AMT*	91549679	64265029	63915757	57546347	47572903	145888014	200572421	88551284	39512657	240759	61131	0	0799675981
AVE.AMT*	35416	38807	40711	43398	46549	48005	49844	53441	53108	80253	61131	0	45367

AVERAGE AGE \* 41.9 \* AVERAGE SERVICE \* 7.0 \*

AGE/SERVICE DISTRIBUTION SAFETY MEMBERS TIER I

AGE	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35-	TOTAL
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
15-19 *NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24 *NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29 *NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34 *NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
35-39 *NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
40-44 *NO.	0	0	0	0	0	0	0	0	9	0	0	0	9
*TOT.AMT*	0	0	0	0	0	0	0	0	738937	0	0	0	738937
AVE.AMT*	0	0	0	0	0	0	0	0	82104	0	0	0	82104
45-49 *NO.	0	0	0	0	0	0	0	2	46	30	0	0	78
*TOT.AMT*	0	0	0	0	0	0	0	160384	4068322	2765127	0	0	6993833
AVE.AMT*	0	0	0	0	0	0	0	80192	88442	92171	0	0	89665
50-54 *NO.	0	0	0	0	0	0	0	1	28	60	12	0	101
*TOT.AMT*	0	0	0	0	0	0	0	91112	2268061	5449802	1016852	0	8825827
AVE.AMT*	0	0	0	0	0	0	0	91112	81002	90830	84738	0	87384
55-59 *NO.	0	0	0	0	0	1	0	1	14	29	30	1	76
*TOT.AMT*	0	0	0	0	0	87542	0	95703	1168530	2553618	2759259	107758	6772410
AVE.AMT*	0	0	0	0	0	87542	0	95703	83466	88056	91975	107758	89111
60-64 *NO.	0	0	0	0	0	0	0	1	0	2	2	0	5
*TOT.AMT*	0	0	0	0	0	0	0	100484	0	198759	232436	0	531679
AVE.AMT*	0	0	0	0	0	0	0	100484	0	99380	116218	0	106336
65- *NO.	0	0	0	0	0	0	0	0	0	0	1	0	1
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	67153	0	67153
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	67153	0	67153
TOTAL *NO.	0	0	0	0	0	1	0	5	97	121	45	1	270
*TOT.AMT*	0	0	0	0	0	87542	0	447683	8243850	10967306	4075700	107758	23929839
AVE.AMT*	0	0	0	0	0	87542	0	89537	84988	90639	90571	107758	88629

AVERAGE AGE \* 51.8 \* AVERAGE SERVICE \* 26.1 \*

AGE/SERVICE DISTRIBUTION SAFETY MEMBERS TIER II

AGE	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35-	TOTAL
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.	*NO.
*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*	*TOT.AMT*
AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*	AVE.AMT*
15-19	0	0	0	0	0	0	0	0	0	0	0	0	0
*NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
*TOT.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
AVE.AMT*	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	10	7	6	0	1	0	0	0	0	0	0	0	24
*NO.	447054	361718	342017	0	53421	0	0	0	0	0	0	0	1204210
*TOT.AMT*	44705	51674	57003	0	53421	0	0	0	0	0	0	0	50175
AVE.AMT*	15	27	53	50	28	34	0	0	0	0	0	0	207
*NO.	774943	1453460	2998322	3236602	1810566	2352702	0	0	0	0	0	0	12626595
*TOT.AMT*	51663	53832	56572	64732	64663	69197	0	0	0	0	0	0	60998
AVE.AMT*	13	25	34	31	41	184	71	0	0	0	0	0	399
*NO.	721650	1513741	2071666	1980912	2762612	12870891	5044465	0	0	0	0	0	26965937
*TOT.AMT*	55512	60550	60931	63900	67381	69950	71049	0	0	0	0	0	67584
AVE.AMT*	22	19	16	16	17	106	249	121	0	0	0	0	566
*NO.	1463954	1388898	1075859	1082351	1150775	7571989	18221397	9345164	0	0	0	0	41300387
*TOT.AMT*	66543	73100	67241	67647	67693	71434	73178	77233	0	0	0	0	72969
AVE.AMT*	6	10	7	11	13	73	134	216	67	0	0	0	537
*NO.	373562	700708	415008	842529	936303	5541281	9960656	16869017	5429277	0	0	0	41068341
*TOT.AMT*	62260	70071	59287	76594	72023	75908	74333	78097	81034	0	0	0	76477
AVE.AMT*	3	1	2	1	3	48	61	89	129	0	0	0	337
*NO.	213112	78275	131595	78958	215227	3930052	4563972	6950636	10550229	0	0	0	26712056
*TOT.AMT*	71037	78275	65798	78958	71742	81876	74819	78097	81785	0	0	0	79264
AVE.AMT*	5	2	3	2	2	31	32	35	100	2	0	0	214
*NO.	361611	124455	218842	121626	156018	2612274	2516546	3012393	8290874	155499	0	0	17570138
*TOT.AMT*	72322	62228	72947	60813	78009	84267	78642	86068	82909	77750	0	0	82103
AVE.AMT*	2	2	1	3	0	22	9	17	52	0	0	0	108
*NO.	181014	175326	150384	216240	0	1853364	750132	1474219	4480962	0	0	0	9281641
*TOT.AMT*	90507	87663	150384	72080	0	84244	83348	86719	86172	0	0	0	85941
AVE.AMT*	0	1	0	0	0	3	4	3	0	0	0	0	11
*NO.	55460	55460	0	0	0	223489	298840	225599	0	0	0	0	803388
*TOT.AMT*	0	0	0	0	0	74496	74710	75200	0	0	0	0	73035
AVE.AMT*	0	0	0	0	0	1	2	0	0	0	0	0	3
*NO.	0	0	0	0	0	69433	173641	0	0	0	0	0	243074
*TOT.AMT*	0	0	0	0	0	69433	86821	0	0	0	0	0	81025
AVE.AMT*	76	94	122	114	105	502	562	481	348	2	0	0	2406
*NO.	4536900	5852041	7403693	7559218	7084922	37025475	41529649	37877028	28751342	155499	0	0	0177775767
*TOT.AMT*	59696	62256	60686	66309	67475	73756	73896	78746	82619	77750	0	0	73889
AVE.AMT*	AVERAGE AGE * 40.0 * AVERAGE SERVICE * 11.0 *												





DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 12/01

GENERAL MEMBERS - TIER I

ATTAINED AGE *****	PRE '82 ***	'83 ***	'84 ***	'85 ***	'86 ***	'87 ***	'88 ***	'89 ***	'90 ***	'91 ***	'92 ***	'93 ***	'94 ***	'95 ***	'96 ***	'97 ***	'98 ***	'99 ***	'00 ***	'01 ***	TOTAL *****	AVG AMT *****
0- 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4043
30- 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35- 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40- 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45- 49	3	0	0	1	0	0	0	0	0	0	0	0	1	2	0	2	0	0	0	0	6	17764
50- 54	10	0	1	4	2	3	1	3	1	0	0	2	5	0	2	0	0	4	1	1	30	16027
55- 59	13	3	4	5	2	7	4	9	4	5	12	32	43	65	58	46	36	43	36	45	237	15773
60- 64	25	5	6	8	5	7	19	36	43	44	46	48	43	82	39	62	47	49	62	64	485	19706
65- 69	38	18	21	25	40	39	52	41	32	35	37	57	45	121	50	62	56	45	42	27	774	25749
70- 74	164	58	31	40	38	30	54	61	65	53	60	57	66	69	14	18	16	11	11	4	926	24151
75- 79	323	40	47	69	82	50	83	62	61	39	32	37	24	23	5	5	3	1	4	0	976	21609
80- 84	396	42	54	62	56	41	31	28	12	8	12	8	7	5	10	1	2	1	0	0	1013	17876
85- 89	272	21	11	14	11	6	7	0	3	1	1	2	0	1	0	0	0	0	0	0	777	15273
90- 94	111	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351	11844
95- 99	25	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	8645
100-104	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	9291
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5495
TOT NUM	1384	187	177	230	241	179	260	239	233	189	195	223	213	228	378	172	214	194	197	205	5721	0
AVG AMT	9901113051494615558156981761219649188571845822663231952177127668255892933229742883426968311482907831923																					

\* AVG AMT \* 19692  
\* TOT.PEN. 112657312 \*

DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 12/01

GENERAL MEMBERS - TIER II

ATTAINED AGE	** YEAR OF RETIREMENT **																	TOTAL	AVG AMT			
	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98			'99	'00	'01
0-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4	5076
30-34	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2	2	1	9	16796
35-39	0	0	0	0	0	0	0	0	0	1	2	0	2	4	3	0	0	5	4	2	23	15473
40-44	0	0	0	0	2	0	0	2	2	0	2	5	3	5	7	8	5	5	8	1	55	14794
45-49	0	0	1	0	0	2	2	0	3	2	4	3	3	3	11	8	8	4	7	1	62	17612
50-54	0	0	1	0	1	4	3	4	2	1	2	4	2	9	8	11	19	21	45	37	176	12278
55-59	0	0	0	0	0	2	3	1	2	1	5	7	10	16	22	22	33	30	59	33	246	11527
60-64	0	0	0	0	1	0	2	0	4	4	12	10	19	33	26	33	28	36	44	33	285	10987
65-69	0	0	0	1	1	3	12	3	8	10	12	12	13	33	26	39	60	43	60	40	376	12237
70-74	1	3	1	0	0	0	2	1	5	10	12	22	32	44	27	27	32	20	24	12	275	11387
75-79	0	0	0	0	0	1	2	1	9	9	6	16	15	14	7	8	17	3	3	1	112	11277
80-84	1	0	1	0	0	0	0	1	1	2	1	4	3	1	1	1	1	0	1	0	19	9782
85-89	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	5392
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95-99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100-104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT NUM	2	3	2	2	8	12	27	11	37	39	58	83	101	163	142	161	203	171	257	161	1645	

AVG AMT 8841 2593 9409 6233217651380113984147691468810505 927910892127641082412271121861207112369114371194512883

\* AVG AMT \* 12011  
 \* TOT.PEN. 19758320 \*



DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 12/01

SAFETY MEMBERS - TIER I

ATTAINED AGE	PRE '82	** YEAR OF RETIREMENT **																			TOTAL	AVG AMT		
		'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01				
0- 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30- 34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
35- 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40- 44	0	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
45- 49	1	0	0	1	1	1	0	0	0	3	1	0	1	2	1	0	0	1	1	0	0	0	0	14
50- 54	3	3	1	2	0	0	2	1	2	1	3	1	0	3	0	2	1	3	2	3	0	0	34	
55- 59	11	7	4	1	4	2	2	2	0	7	1	6	11	2	3	6	9	12	14	15	11	0	130	
60- 64	10	4	6	1	6	2	1	4	2	5	4	2	13	10	17	12	16	8	13	1	3	0	140	
65- 69	22	7	4	5	6	8	6	3	10	5	7	5	11	7	11	1	3	3	1	0	3	0	128	
70- 74	35	9	7	4	7	1	4	1	1	0	1	2	1	1	0	0	0	1	0	0	0	0	76	
75- 79	36	4	0	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	
80- 84	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	
85- 89	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
90- 94	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
95- 99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
100-104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOT NUM	156	34	22	19	27	15	17	11	16	18	17	18	38	21	37	20	30	24	34	19	20	0	613	

AVG AMT 190132514423329262323002430357347022948446801378663975136270473555103452782569195804953841629065797069983

\* AVG AMT \* 38186  
 \* TOT.PEN. 23407856 \*

DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 12/01

SAFETY MEMBERS - TIER II

ATTAINED AGE	PRE '82	** YEAR OF RETIREMENT **																		TOTAL	AVG AMT	
		'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00			'01
0- 29	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	11785
30- 34	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	3	30996
35- 39	0	0	0	0	0	0	0	0	1	1	0	2	0	1	3	3	0	2	6	4	23	30766
40- 44	0	0	1	1	0	1	0	0	0	1	5	3	2	7	4	2	8	5	2	4	47	27673
45- 49	1	0	0	0	1	1	1	1	2	1	3	0	6	2	1	1	3	0	4	3	31	28533
50- 54	0	0	0	1	0	2	0	2	1	1	3	2	2	4	2	2	1	2	4	6	35	27193
55- 59	0	0	0	0	0	0	0	0	0	0	3	0	1	4	1	1	5	9	15	6	47	30643
60- 64	0	0	0	1	0	1	0	0	3	1	2	0	0	3	3	4	2	1	11	3	35	28951
65- 69	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	0	1	2	2	2	11	17869
70- 74	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	4	32430
75- 79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80- 84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85- 89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90- 94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95- 99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100-104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT NUM	1	0	1	5	2	3	4	3	3	9	5	17	8	11	23	15	13	20	20	45	29	237

AVG AMT 15971 01543825802223472635126407299012976824476277342322267562948728814317312991631042320212757628905

\* AVG AMT \* 28393  
 \* TOT.PEN. 6729061 \*



DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 12/01

TOTAL OF ALL MEMBERS

ATTAINED AGE	PRE '82	** YEAR OF RETIREMENT **												TOTAL	AVG AMT							
		'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93			'94	'95	'96	'97	'98	'99	'00
0-29	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0	0	2	0	0	7	5739
30-34	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	1	2	3	1	13	19726
35-39	0	0	0	0	0	0	0	0	1	1	1	4	0	3	7	6	0	7	10	6	46	23120
40-44	0	0	1	4	1	3	2	0	2	2	1	7	8	6	14	11	12	13	11	10	113	20470
45-49	5	0	0	5	2	3	5	4	4	6	6	8	5	15	7	15	9	11	9	13	137	20953
50-54	13	3	3	7	3	9	9	13	9	8	5	10	12	21	12	33	55	69	87	91	482	16543
55-59	24	10	7	7	9	4	11	9	10	13	7	26	50	56	88	87	78	86	96	138	908	21608
60-64	35	9	12	9	12	10	21	42	45	56	55	64	57	72	135	80	115	85	99	118	1234	25023
65-69	60	25	30	47	48	62	62	56	46	49	54	74	69	63	167	77	104	119	90	104	1441	22456
70-74	200	70	39	45	31	58	64	68	59	71	70	90	89	114	41	45	48	32	35	17	1331	20035
75-79	359	44	47	72	85	50	85	64	63	48	41	43	40	38	37	12	13	20	4	7	1173	17377
80-84	423	42	54	63	56	41	31	28	13	9	14	9	8	9	13	2	2	3	1	1	822	15231
85-89	279	21	11	14	11	6	8	0	3	2	1	3	0	1	1	0	0	0	0	0	361	11835
90-94	115	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118	8978
95-99	25	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	9291
100-104	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5495
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT NUM	1543	224	202	256	272	205	293	280	263	253	256	316	342	361	601	349	418	441	422	526	8216	393

AVG AMT 108241328915807164771721418523203821899920154220312226320678262172305726128209062450821895257612162225837

\* AVG AMT \* 19785  
 \* TOT.PEN. 162552549 \*

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
COUNTY - GENERAL MEMBERS - TIER I  
MEMBER CONTRIBUTION RATES  
NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	2.97%	38	3.97%
17	3.01%	39	4.03%
18	3.06%	40	4.08%
19	3.10%	41	4.13%
20	3.14%	42	4.18%
21	3.18%	43	4.23%
22	3.22%	44	4.29%
23	3.27%	45	4.34%
24	3.31%	46	4.39%
25	3.36%	47	4.45%
26	3.40%	48	4.50%
27	3.45%	49	4.56%
28	3.49%	50	4.61%
29	3.54%	51	4.67%
30	3.59%	52	4.73%
31	3.63%	53	4.79%
32	3.68%	54	4.84%
33	3.73%	55	4.90%
34	3.78%	56	4.96%
35	3.83%	57	5.02%
36	3.87%	58	5.08%
37	3.92%	59	5.14%

INTEREST: 8.00%  
SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 COUNTY - GENERAL MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	4.39%	38	5.87%
17	4.45%	39	5.94%
18	4.51%	40	6.02%
19	4.57%	41	6.10%
20	4.63%	42	6.17%
21	4.70%	43	6.25%
22	4.76%	44	6.33%
23	4.83%	45	6.41%
24	4.89%	46	6.49%
25	4.96%	47	6.57%
26	5.02%	48	6.65%
27	5.09%	49	6.73%
28	5.16%	50	6.81%
29	5.22%	51	6.90%
30	5.29%	52	6.98%
31	5.36%	53	7.06%
32	5.43%	54	7.15%
33	5.50%	55	7.24%
34	5.58%	56	7.32%
35	5.65%	57	7.41%
36	5.72%	58	7.50%
37	5.79%	59	7.59%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
COUNTY - GENERAL MEMBERS - TIER II  
MEMBER CONTRIBUTION RATES  
NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	4.70%	38	6.29%
17	4.77%	39	6.37%
18	4.83%	40	6.45%
19	4.90%	41	6.53%
20	4.96%	42	6.61%
21	5.03%	43	6.69%
22	5.10%	44	6.78%
23	5.17%	45	6.86%
24	5.24%	46	6.95%
25	5.31%	47	7.03%
26	5.38%	48	7.12%
27	5.45%	49	7.21%
28	5.52%	50	7.30%
29	5.60%	51	7.39%
30	5.67%	52	7.48%
31	5.74%	53	7.57%
32	5.82%	54	7.66%
33	5.90%	55	7.75%
34	5.97%	56	7.84%
35	6.05%	57	7.94%
36	6.13%	58	8.03%
37	6.21%	59	8.13%

INTEREST: 8.00%  
SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
COUNTY - GENERAL MEMBERS - TIER II  
MEMBER CONTRIBUTION RATES  
NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	6.04%	38	8.08%
17	6.12%	39	8.18%
18	6.21%	40	8.28%
19	6.29%	41	8.39%
20	6.38%	42	8.49%
21	6.47%	43	8.60%
22	6.55%	44	8.71%
23	6.64%	45	8.82%
24	6.73%	46	8.93%
25	6.82%	47	9.04%
26	6.91%	48	9.15%
27	7.00%	49	9.26%
28	7.10%	50	9.38%
29	7.19%	51	9.49%
30	7.29%	52	9.61%
31	7.38%	53	9.72%
32	7.48%	54	9.84%
33	7.58%	55	9.96%
34	7.67%	56	10.08%
35	7.77%	57	10.20%
36	7.87%	58	10.32%
37	7.97%	59	10.44%

INTEREST: 8.00%  
SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	2.97%	38	3.97%
17	3.01%	39	4.03%
18	3.06%	40	4.08%
19	3.10%	41	4.13%
20	3.14%	42	4.18%
21	3.18%	43	4.23%
22	3.22%	44	4.29%
23	3.27%	45	4.34%
24	3.31%	46	4.39%
25	3.36%	47	4.45%
26	3.40%	48	4.50%
27	3.45%	49	4.56%
28	3.49%	50	4.61%
29	3.54%	51	4.67%
30	3.59%	52	4.73%
31	3.63%	53	4.79%
32	3.68%	54	4.84%
33	3.73%	55	4.90%
34	3.78%	56	4.96%
35	3.83%	57	5.02%
36	3.87%	58	5.08%
37	3.92%	59	5.14%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	4.37%	38	5.84%
17	4.43%	39	5.92%
18	4.49%	40	5.99%
19	4.55%	41	6.07%
20	4.61%	42	6.14%
21	4.68%	43	6.22%
22	4.74%	44	6.30%
23	4.80%	45	6.38%
24	4.87%	46	6.46%
25	4.93%	47	6.54%
26	5.00%	48	6.62%
27	5.06%	49	6.70%
28	5.13%	50	6.78%
29	5.20%	51	6.86%
30	5.27%	52	6.95%
31	5.34%	53	7.03%
32	5.41%	54	7.12%
33	5.48%	55	7.20%
34	5.55%	56	7.29%
35	5.62%	57	7.38%
36	5.69%	58	7.46%
37	5.77%	59	7.55%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	4.70%	38	6.29%
17	4.77%	39	6.37%
18	4.83%	40	6.45%
19	4.90%	41	6.53%
20	4.96%	42	6.61%
21	5.03%	43	6.69%
22	5.10%	44	6.78%
23	5.17%	45	6.86%
24	5.24%	46	6.95%
25	5.31%	47	7.03%
26	5.38%	48	7.12%
27	5.45%	49	7.21%
28	5.52%	50	7.30%
29	5.60%	51	7.39%
30	5.67%	52	7.48%
31	5.74%	53	7.57%
32	5.82%	54	7.66%
33	5.90%	55	7.75%
34	5.97%	56	7.84%
35	6.05%	57	7.94%
36	6.13%	58	8.03%
37	6.21%	59	8.13%

INTEREST: 8.00%  
 SALARY: 5.50%



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 OCTA - GENERAL MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
16	6.21%	38	8.31%
17	6.30%	39	8.41%
18	6.38%	40	8.52%
19	6.47%	41	8.63%
20	6.56%	42	8.74%
21	6.65%	43	8.85%
22	6.74%	44	8.96%
23	6.83%	45	9.07%
24	6.92%	46	9.18%
25	7.01%	47	9.30%
26	7.11%	48	9.41%
27	7.20%	49	9.53%
28	7.30%	50	9.64%
29	7.39%	51	9.76%
30	7.49%	52	9.88%
31	7.59%	53	10.00%
32	7.69%	54	10.12%
33	7.79%	55	10.24%
34	7.89%	56	10.37%
35	7.99%	57	10.49%
36	8.10%	58	10.61%
37	8.20%	59	10.74%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 LAW ENFORCEMENT - SAFETY MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE -----	CONTRIBUTION RATE -----	ENTRY AGE -----	CONTRIBUTION RATE -----
18	3.81%	34	4.67%
19	3.86%	35	4.73%
20	3.91%	36	4.79%
21	3.96%	37	4.85%
22	4.01%	38	4.91%
23	4.07%	39	4.97%
24	4.12%	40	5.03%
25	4.17%	41	5.09%
26	4.23%	42	5.16%
27	4.28%	43	5.22%
28	4.33%	44	5.28%
29	4.39%	45	5.35%
30	4.45%	46	5.41%
31	4.50%	47	5.47%
32	4.56%	48	5.54%
33	4.62%	49	5.60%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 LAW ENFORCEMENT - SAFETY MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	7.70%	34	9.45%
19	7.80%	35	9.57%
20	7.91%	36	9.69%
21	8.01%	37	9.81%
22	8.12%	38	9.93%
23	8.22%	39	10.05%
24	8.33%	40	10.18%
25	8.44%	41	10.30%
26	8.55%	42	10.43%
27	8.66%	43	10.55%
28	8.77%	44	10.68%
29	8.88%	45	10.81%
30	8.99%	46	10.94%
31	9.11%	47	11.07%
32	9.22%	48	11.20%
33	9.34%	49	11.34%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 LAW ENFORCEMENT - SAFETY MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	7.23%	34	8.87%
19	7.32%	35	8.98%
20	7.42%	36	9.09%
21	7.52%	37	9.21%
22	7.62%	38	9.32%
23	7.71%	39	9.43%
24	7.81%	40	9.55%
25	7.92%	41	9.67%
26	8.02%	42	9.78%
27	8.12%	43	9.90%
28	8.23%	44	10.02%
29	8.33%	45	10.14%
30	8.44%	46	10.26%
31	8.54%	47	10.39%
32	8.65%	48	10.51%
33	8.76%	49	10.63%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 LAW ENFORCEMENT - SAFETY MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	10.97%	34	13.46%
19	11.11%	35	13.63%
20	11.26%	36	13.80%
21	11.41%	37	13.97%
22	11.56%	38	14.14%
23	11.71%	39	14.32%
24	11.86%	40	14.49%
25	12.01%	41	14.67%
26	12.17%	42	14.85%
27	12.32%	43	15.03%
28	12.48%	44	15.21%
29	12.64%	45	15.39%
30	12.80%	46	15.58%
31	12.96%	47	15.76%
32	13.13%	48	15.95%
33	13.29%	49	16.14%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 FIRE PROTECTION - SAFETY MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	3.81%	34	4.67%
19	3.86%	35	4.73%
20	3.91%	36	4.79%
21	3.96%	37	4.85%
22	4.01%	38	4.91%
23	4.07%	39	4.97%
24	4.12%	40	5.03%
25	4.17%	41	5.09%
26	4.23%	42	5.16%
27	4.28%	43	5.22%
28	4.33%	44	5.28%
29	4.39%	45	5.35%
30	4.45%	46	5.41%
31	4.50%	47	5.47%
32	4.56%	48	5.54%
33	4.62%	49	5.60%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 FIRE PROTECTION - SAFETY MEMBERS - TIER I  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	6.27%	34	7.69%
19	6.35%	35	7.79%
20	6.43%	36	7.88%
21	6.52%	37	7.98%
22	6.60%	38	8.08%
23	6.69%	39	8.18%
24	6.78%	40	8.28%
25	6.86%	41	8.38%
26	6.95%	42	8.48%
27	7.04%	43	8.59%
28	7.13%	44	8.69%
29	7.22%	45	8.80%
30	7.32%	46	8.90%
31	7.41%	47	9.01%
32	7.50%	48	9.11%
33	7.60%	49	9.22%

INTEREST: 8.00%  
 SALARY: 5.50%



ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 FIRE PROTECTION - SAFETY MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL RATES ONLY

ENTRY AGE -----	CONTRIBUTION RATE -----	ENTRY AGE -----	CONTRIBUTION RATE -----
18	7.23%	34	8.87%
19	7.32%	35	8.98%
20	7.42%	36	9.09%
21	7.52%	37	9.21%
22	7.62%	38	9.32%
23	7.71%	39	9.43%
24	7.81%	40	9.55%
25	7.92%	41	9.67%
26	8.02%	42	9.78%
27	8.12%	43	9.90%
28	8.23%	44	10.02%
29	8.33%	45	10.14%
30	8.44%	46	10.26%
31	8.54%	47	10.39%
32	8.65%	48	10.51%
33	8.76%	49	10.63%

INTEREST: 8.00%  
 SALARY: 5.50%

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM  
 FIRE PROTECTION - SAFETY MEMBERS - TIER II  
 MEMBER CONTRIBUTION RATES  
 NORMAL PLUS COST OF LIVING RATES

ENTRY AGE	CONTRIBUTION RATE	ENTRY AGE	CONTRIBUTION RATE
18	9.64%	34	11.83%
19	9.77%	35	11.98%
20	9.90%	36	12.13%
21	10.03%	37	12.28%
22	10.16%	38	12.43%
23	10.29%	39	12.58%
24	10.42%	40	12.74%
25	10.56%	41	12.89%
26	10.70%	42	13.05%
27	10.83%	43	13.21%
28	10.97%	44	13.37%
29	11.11%	45	13.53%
30	11.25%	46	13.69%
31	11.40%	47	13.85%
32	11.54%	48	14.02%
33	11.68%	49	14.19%

INTEREST: 8.00%  
 SALARY: 5.50%