APPENDIX B

ACTUARIAL ASSUMPTIONS AND ACTUARIAL COST METHOD SUMMARY

Actuarial Concepts

### **ACTUARIAL ASSUMPTIONS AND ACTUARIAL COST METHOD SUMMARY**

#### **Actuarial Assumptions**

1. Discount Rate:

9% per annum, compounded annually, net of

investment expenses.

2. Health Care Cost Trend Rate:

7%.

3. Mortality Rates:

1983 Group Annuity Mortality Table:

Probability of Death Within One Year

After Attaining Age Shown

<u>Age</u>	<u>Male_</u>	<u>Female</u>
25	0.05%	0.03%
35	0.09	0.05
45	0.22	0.10
55	0.61	0.25
65	1.56	0.71

4. Withdrawal Rates:

#### General/GRU Employees

Probability of Terminating Service (for reasons other than death, disability or retirement) Within One Year

After Attaining Age Shown

<u>Age</u>	<u>Male</u>	<u>Female</u>
25	14.2%	16.4%
35	8.9	11.1
45	7.6	9.8
55	5.2	7.4

#### Police/Fire Employees

Probability of Terminating Service (for reasons other than death, disability or retirement) Within One Year

After Attaining Age Shown

		THE CALLOTT
<u>Age</u>	<u>Male</u>	Female
55	10.0%	10.0%
57	6.0	6.0
60	3.0	3.0
62	0.0	0.0

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Concepts

5. Disability Rates:

Probability of Disability
Within One Year
After Attaining Age Show

	After Attaining A	<u>Age Shown</u>
<u>Age</u>	General/GRU	Police/Fire
25	0.15%	0.30%
35	0.26	0.53
<b>4</b> 5	0.62	1.23
55	1.82	3.64

6. Retirement Rates\*:

Probability of Retiring Within One Year After Attaining Age and Service Shown

General/GRU Employees

				Years of Serv	vice		
<u>Age</u> 56 and Under 57-59 60-64 65 and Over	0-9 0.0% 0.0 0.0 0.0	10 - 19 0.0% 0.0 0.0 100.0	20 7.5% 7.5 20.0 100.0	21 - 26 2.5% 2.5 20.0 100.0	27 – 31 2.5% 2.5 2.5 2.5 100.0	32 - 34 25.0% 35.0 40.0 100.0	35+ 100.0% 100.0 100.0 100.0

Police/Fire Employees

Years of Service

			rears	or service		
<u>Age</u>	0-9	<u> 10 – 19</u>	20	21 – 24	25 – 29	30+
40 - 54	0.0%	0.0%	2.5%	2.5%	2.5%	100.0%
55-59	0.0	20.0	20.0	2.5	2.5	100.0
60-64	0.0	100.0	100.0	45.0	2.5	100.0
65 and Over	0.0	100.0	100.0	100.0	100.0	100.0

\*All retirees were assumed to have retiree medical coverage start at the later of retirement and age 55.

7. Dependent Coverage and Ages:

Retiring participants were assumed to elect the same coverage they currently have under the City Health Care Plan while active employees. Actual current coverage was used and status was assumed to continue.

8. Growth Rate of Future Active Employee Payroll:

4% per year.

9. Actuarial Value of Assets:

Market value.

10. Current Premium Rate:

\$233.72 per month

11. Medical Plan Elected:

Preferred Patient Care

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Concepts

12. Expenses:

Assumed included in current premium rate.

#### **Actuarial Cost Method**

The Individual Entry Age Actuarial Cost Method was used. Under this method, the cost of each member's projected disability benefit is funded through a series of annual payments, determined as a level percentage of each year's earnings, from age at hire to assumed exit age. This level percentage, known as normal cost, is thus computed as though the Plan had always been in effect. A yearly normal cost for each member is individually determined by multiplying each member's level percentage by the applicable yearly earnings, then adding together to obtain the normal cost amount for the Plan for that year. The accrued value of normal cost payments due prior to the valuation date is termed the actuarial accrued liability (AAL). This amount minus actuarial value of assets is known as the unfunded actuarial accrued liability (UAAL). The annual cost of a plan consists of two components: normal cost and a payment, which may vary between prescribed limits, toward the UAAL.

Actuarial gains (or losses), a measure of the difference between actual experience and that expected based upon the actuarial assumptions during the period between two valuation dates, as they occur, reduce (or increase) the UAAL.

It is intended that the UAAL be amortized over a 20-year period from October 1, 1994, through monthly contributions expressed as a level percentage of each month's total payroll, incorporating an assumption that future payroll will grow at the rate of 4% per year. Payments were assumed to begin on October 1, 1994, and to continue monthly for the 20 remaining years. Changes in the UAAL resulting from actuarial gains or losses, or changes in actuarial assumptions, will be amortized over the remaining portion of the 20-year period, but not less than 10 years.

#### **Miscellaneous Valuation Procedures**

The assumed retirement rates reflect expected election of retiree medical benefit coverage at the end of DROP participation in both City pension plans. The assumed retirement rate structure is based on when the employee terminates employment, rather than at the point of "retirement" from the pension plans. There will be some employees whose "retirement" and termination of employment will be the same, since they can elect to retire before eligibility for DROP. Thus, the retirement rates before DROP

Actuarial Concepts eligibility reflect this anticipated behavior. Note, however, the employees who elect to retire pre-DROP are assumed not to start medical coverage until age 55, due to the relatively low grid point at the younger ages.

The deferral of receipt of retiree medical benefits through the end of the DROP period reduces the liability otherwise applicable if benefits were not deferred, as the assumed escalation in medical costs is more than made up for by the delay in receipt and the freezing of the grid point value as of the date of DROP.

APPENDIX C

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

Actuarial Conc<u>epts</u>

#### FUND BALANCE AS OF 9/30/2003

Equity in Pooled Cash \$ 9,233,011

Reserve - Encumbrances · 17,985

Accounts Payable 240,105

Fund Balance \$ 8,974,921

### **ANALYSIS OF CHANGE IN ACTUARIAL VALUE OF ASSETS**

Actuarial Value of Assets as of 9/30/2000	\$ 4,674,726
Prior Period Adj. (FY2000 EHAB Cost Alloc to REHAB)	(189,745)
Actuarial Value of Assets as of 10/1/2000	\$ 4,484,981
Add:	
General Government Contributions	1,537,814
GRU Contributions	832,207
Retiree Contributions	797,848
Gain/(Loss) on Investments	249,350
Unrealized Gain/(Loss)	117,309
Realized Gain (Loss) - Mutual Funds	42,755
Transfers In/(Out)	(69,700)
Total Additions	\$ 3,507,583
Deduct:	
General Government Claims	1,184,582
GRU Claims	961,410
Administrative Expenses	250,720
Stop Loss Insurance	52,194
Contingent Claims	72,000
Personal Services	1,295
Other Operating Expenses	38,191
Total Deductions	\$ 2,560,392
Actuarial Value of Assets as of 9/30/2001	5,432,172
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## ANALYSIS OF CHANGE IN ACTUARIAL VALUE OF ASSETS

Actuarial Value of Assets as of 9/30/2001	\$	5,432,172
Add:		
General Government Contributions		2,132,817
GRU Contributions		1,153,083
Retiree Contributions		954,286
Interest Income - Investments		305,238
Unrealized Gain/(Loss) on Investments		(2,663)
Transfers In/(Out)		(99,610)
Total Additions	\$	4,443,151
Deduct:		, , , ,
General Government Claims		1,114,321
GRU Claims		1,043,815
Reserve - Encumbrances		311,325
Other Operating Expenses		514,939
Total Deductions	\$	2,984,400
	•	. , ,
Actuarial Value of Assets as of 9/30/2002		6,890,923

# ANALYSIS OF CHANGE IN ACTUARIAL VALUE OF ASSETS

Actuarial Value of Assets as of 9/30/2002	\$	6,890,923
Add:		
General Government Contributions		2,133,676
GRU Contributions		1,246,541
Retiree Contributions		1,256,247
Gain/(Loss) on Investments		(93,592)
Interest Income - Investments		359,702
Prior Year Reserve - Encumbrances		311,325
Transfers In/(Out)		(410,891)
Total Additions	\$	4,803,008
Deduct:	т	
General Government Claims		1,447,622
GRU Claims		861,116
Reserve - Encumbrances		17,985
Other Operating Expenses		392,287
Total Deductions	\$	2,719,010
Actuarial Value of Assets as of 9/30/2003		8,974,921

APPENDIX D

**CENSUS DATA** 

Actuarial Conc<u></u>epts

### SUMMARY OF CENSUS DATA USED IN THE VALUATION

The data used in the actuarial valuation was furnished by the City current as of October 1, 2003. A summary of the data follows:

1.	Future Retirees Under Age 65	
	(a) Currently Eligible Upon Retirement	275
	(b) Not Yet Eligible	1,268
	(c) Total	1,543
2.	Future Retirees Over Age 65	7
3.	Retired Participants Receiving Benefits	
	(a) Under Age 65	399
	(b) Age 65 and Over	253
4.	Disabled Participants Receiving Benefits	25
5.	Spouses Receiving Benefits*	248
6.	Other Dependents Receiving Benefits*	58
7.	Total Number of Participants and Dependents	
	Included in Valuation	2,533

Statistical breakdowns for future retirees by age and service are presented on the following page.

<sup>\*</sup> Includes all spouses and dependents with coverage, regardless of City contributions.

# DISTRIBUTION OF FUTURE RETIREES BY ATTAINED AGE AND COMPLETED YEARS OF SERVICE AS OF 10/01/2003

Comple	ted	Y	ears	of	Serv	rice

Completed Teals of Dervice												
Attained Age	0	1	2	3-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Under 25	22	23	11	11	2	0	0	0	0	0	0	69
25-29	26	29	22	20	32	0	0	0	0	0	0	129
30-34	28	36	18	30	61	17	1	0	0	0	0	191
35-39	13	25	9	19	68	46	41	3	0	0	0	224
40-44	14	15	11	20	50	56	87	28	0	0	0	281
45-49	9	12	7	13	36	49	59	50	25	2	0	262
50-54	11	10	9	17	27	20	52	33	30	18	2	229
55-59	. 6	7	3	6	17	19	27	10	17	12	1	125
60	0	0	1	1	0	1	5	2	2	2	0	14
61	0	0	1	. 1	0	3	3	0	0	1	0	9
2	0	0	0	2	1	1	1	0	2	0	0	7
63	0	0	0	0	0	0	1	0	0	0	0	1
64	0	0	0	0	1	1	0	0	0	0	0	2
65 & Over	1	0,	0	0	1	0	2	3	0	0	0	7
Total	130	157	92	140	296	213	279	129	76	35	3	1550