



Municipal Employees' Retirement System of Michigan

Ingham County (3303)

in the

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
OF MICHIGAN

Annual Actuarial Valuation as of December 31, 2002





GABRIEL, ROEDER, SMITH & COMPANY

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July 18, 2003

The Retirement Board
Municipal Employees' Retirement System of Michigan

Ladies and Gentlemen:

This report presents the results of the Annual Actuarial Valuation, prepared as of December 31, 2002. The report includes the determination of liabilities and contribution rates resulting from the participation of Ingham County in the Municipal Employees' Retirement System of Michigan ("MERS").

There are no material changes in actuarial assumptions or methods reflected in this valuation, with the following exception:

- For closed divisions (no new hires are expected) the amortization period is decreased by 2 years, compared to the December 31, 2001 actuarial valuation, as explained on page 141.

The valuation utilized information furnished by the MERS administrative staff concerning Retirement System benefits, financial transactions, and individual member information. Data was checked for consistency with the prior year, but was not otherwise audited by us.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. The actuarial assumptions used for this valuation produce results that we believe are reasonable. The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

Sincerely,

GABRIEL , ROEDER , SMITH & COMPANY

Alan Sonnanstine, MAAA, ASA

Cathy Nagy, MAAA, FSA

Jim Koss, MAAA, ASA

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Ingham County (3303)

Table 1

Benefit Provisions Evaluated and/or Considered

Division	2002 Valuation	2001 Valuation
1 - Confidential	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-3 E (2.0%) (01/01/1988) 5.36% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1988) 4.50% Member Contrib.
2 - Sheriff FOP Spvs	3.20% - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(25) FAC-3 E (2.0%) (01/01/1988) 19.61% Member Contrib. Act 88 Election	3.20% - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(25) FAC-3 E (2.0%) (01/01/1988) 19.61% Member Contrib.
4 - MCF	C-1 Old Normal Ret Age: 60 V-10 FAC-5 E (2.0%) (01/01/1995) 0.00% Member Contrib.	C-1 Old Normal Ret Age: 60 V-10 FAC-5 E (2.0%) (01/01/1995) 0.00% Member Contrib.
9 - Judges	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 3.14% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 0.00% Member Contrib.
10 - Gnrl Mgmt	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-3 E (2.0%) (01/01/1988) 6.39% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1988) 5.00% Member Contrib.

Ingham County (3303)

Table 1 (continued)

Benefit Provisions Evaluated and/or Considered

Division	2002 Valuation	2001 Valuation
11 - Gnrl Library	C-1 Old Normal Ret Age: 60 V-10 FAC-5 E (2.0%) (01/01/1994) 0.00% Member Contrib. Act 88 Election	C-1 Old Normal Ret Age: 60 V-10 FAC-5 E (2.0%) (01/01/1994) 0.00% Member Contrib.
12 - Gnrl ICEA Profs	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1988) E-2 (2.5%) (01/01/2003) 6.08% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1988) 6.08% Member Contrib.
13 - Gnrl OPEIU Prob	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-3 E (2.0%) (01/01/1988) 7.13% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1988) 7.13% Member Contrib.
14 - Gnrl TOPS UAW	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1988) 1.60% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1988) 1.60% Member Contrib.
15 - Animal Cntrl FOP	B-4 - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(25) FAC-3 E-2 (2.5%) (01/01/2001) 15.49% Member Contrib. Act 88 Election	B-4 - 80% Max Normal Ret Age: 60 V-10 F50(25) F55(15) FAC-3 E-2 (2.5%) (01/01/2001) 14.28% Member Contrib.

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Table 1 (continued)

Benefit Provisions Evaluated and/or Considered

Division	2002 Valuation	2001 Valuation
16 - Gnrl Commsnrs	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1988) 3.56% Member Contrib. Act 88 Election	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1988) 3.56% Member Contrib.
17 - ICEA Nurses	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-3 E-2 (2.5%) (07/01/1995) 11.87% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-3 E-2 (2.5%) (07/01/1995) 11.87% Member Contrib.
18 - ICEA Ct. Prof	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(20) FAC-5 9.84% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(20) FAC-5 9.84% Member Contrib.
19 - Cnstutnl Offcls	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-3 8.46% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 5.00% Member Contrib.
21 - FOP Shrf Deputies	3.20% - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(25) FAC-5 10.96% Member Contrib. Act 88 Election	3.20% - 80% Max Normal Ret Age: 60 V-10 F55(15) F/N(25) FAC-5 10.96% Member Contrib.

Ingham County (3303)

Table 1 (continued)

Benefit Provisions Evaluated and/or Considered

Division	2002 Valuation	2001 Valuation
40 - ICEA Unit 111	C-2 (B-1 Base) Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1995) 3.00% Member Contrib. Act 88 Election	C-2 (B-1 Base) Normal Ret Age: 60 V-10 F55(15) FAC-5 E (2.0%) (01/01/1995) 3.00% Member Contrib.
41 - MCF Management	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1995) 0.00% Member Contrib. Act 88 Election	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 E (2.0%) (01/01/1995) 0.00% Member Contrib.
42 - ICEA Unit 11	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-3 3.95% Member Contrib. Act 88 Election	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-3 3.95% Member Contrib.
43 - ICEA Unit 1	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 3.50% Member Contrib. Act 88 Election	C-2 (B-1 Base) Normal Ret Age: 60 V-6 F55(15) FAC-5 3.50% Member Contrib.
90 - Asst Pros Attnys	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 1.40% Member Contrib. Act 88 Election	B-4 - 80% Max Normal Ret Age: 60 V-6 F55(15) FAC-5 1.40% Member Contrib.

Ingham County (3303)

Table 1 (continued)

Benefit Provisions Evaluated and/or Considered

Division	2002 Valuation	2001 Valuation
91 - Parks Union Empl	B-3 - 80% Max Normal Ret Age: 60 V-10 FAC-5 0.00% Member Contrib. Act 88 Election	B-3 - 80% Max Normal Ret Age: 60 V-10 FAC-5 0.00% Member Contrib.
92 - Parks Non Union	B-4 - 80% Max Normal Ret Age: 60 V-10 F55(25) FAC-3 0.00% Member Contrib. Act 88 Election	B-4 - 80% Max Normal Ret Age: 60 V-10 F55(25) FAC-5 0.00% Member Contrib.
93 - Lgl Rsrch Clerks	C-1 Old Normal Ret Age: 60 V-10 FAC-5 0.00% Member Contrib. Act 88 Election	C-1 Old Normal Ret Age: 60 V-10 FAC-5 0.00% Member Contrib.

Note: Table 1 indicates that Act 88 Election and/or DC Plan New Hires was reflected in the 2002 valuation. Data was not available concerning the 2001 valuation.

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Table 2

Membership Summary

Division	2002 Valuation		2001 Valuation	
	Number	Annual Payroll*	Number	Annual Payroll*
1 - Confidential				
Active Members	32	\$1,178,762	34	\$1,238,366
Vested Former Members	13	86,215	13	65,169
Retirees and Beneficiaries	36	194,074	37	169,678
2 - Sheriff FOP Spvs				
Active Members	32	\$1,964,293	31	\$1,858,730
Vested Former Members	1	4,610	2	16,262
Retirees and Beneficiaries	49	1,317,123	46	1,232,024
4 - MCF				
Active Members	115	\$2,543,513	121	\$2,583,257
Vested Former Members	32	125,436	37	128,533
Retirees and Beneficiaries	68	231,178	71	249,151
9 - Judges				
Active Members	5	\$137,270	7	\$196,106
Vested Former Members	1	4,348	1	4,348
Retirees and Beneficiaries	5	58,089	3	20,722
10 - Gnrl Mgmt				
Active Members	79	\$5,392,347	80	\$5,215,460
Vested Former Members	18	235,668	20	228,041
Retirees and Beneficiaries	50	1,018,286	44	752,492
11 - Gnrl Library				
Active Members	0	0	0	0
Vested Former Members	29	227,023	31	233,523
Retirees and Beneficiaries	21	99,871	20	95,499
12 - Gnrl ICEA Profs				
Active Members	132	\$6,004,201	130	\$5,161,093
Vested Former Members	26	248,517	30	233,096
Retirees and Beneficiaries	20	245,119	19	230,384
13 - Gnrl OPEIU Prob				
Active Members	36	\$1,843,133	38	\$1,851,347
Vested Former Members	8	66,086	8	66,086
Retirees and Beneficiaries	6	89,491	5	72,984

Ingham County (3303)

Table 2 (continued)

Membership Summary

Division	2002 Valuation		2001 Valuation	
	Number	Annual Payroll*	Number	Annual Payroll*
14 - Gnrl TOPS UAW				
Active Members	386	\$11,308,351	374	\$10,692,631
Vested Former Members	56	337,265	61	321,304
Retirees and Beneficiaries	154	1,296,226	149	1,205,706
15 - Animal Cntrl FOP				
Active Members	9	\$310,758	9	\$326,170
Vested Former Members	1	6,172	1	6,172
Retirees and Beneficiaries	4	64,706	2	15,550
16 - Gnrl Commsnrs				
Active Members	10	\$137,720	10	\$133,143
Vested Former Members	4	8,576	5	10,786
Retirees and Beneficiaries	6	20,098	5	17,888
17 - ICEA Nurses				
Active Members	67	\$3,053,506	68	\$2,710,021
Vested Former Members	12	81,263	13	102,192
Retirees and Beneficiaries	28	250,711	26	227,252
18 - ICEA Ct. Prof				
Active Members	37	\$1,883,979	34	\$1,579,323
Vested Former Members	7	51,871	6	50,591
Retirees and Beneficiaries	23	476,523	22	456,377
19 - Cnstutnl Offcls				
Active Members	6	\$485,039	6	\$463,955
Vested Former Members	0	0	0	0
Retirees and Beneficiaries	7	96,192	7	96,192
21 - FOP Shrf Deputies				
Active Members	153	\$6,686,427	154	\$6,621,982
Vested Former Members	18	85,877	20	84,310
Retirees and Beneficiaries	60	1,217,094	57	1,089,816
40 - ICEA Unit 111				
Active Members	28	\$828,543	22	\$657,455
Vested Former Members	5	33,967	7	33,984
Retirees and Beneficiaries	27	231,422	27	231,422

Ingham County (3303)

Table 2 (continued)

Membership Summary

Division	2002 Valuation		2001 Valuation	
	Number	Annual Payroll*	Number	Annual Payroll*
41 - MCF Management				
Active Members	18	\$782,621	18	\$763,973
Vested Former Members	10	61,523	10	62,008
Retirees and Beneficiaries	8	52,672	8	52,672
42 - ICEA Unit 11				
Active Members	10	\$382,838	9	\$381,171
Vested Former Members	2	6,702	4	6,703
Retirees and Beneficiaries	1	10,146	1	10,146
43 - ICEA Unit 1				
Active Members	6	\$233,997	9	\$299,551
Vested Former Members	3	17,326	3	17,326
Retirees and Beneficiaries	5	64,714	5	67,200
90 - Asst Pros Attnys				
Active Members	32	\$1,823,812	30	\$1,626,502
Vested Former Members	15	239,618	14	200,072
Retirees and Beneficiaries	5	97,627	5	97,627
91 - Parks Union Empl				
Active Members	5	\$159,732	5	\$167,040
Vested Former Members	0	0	0	0
Retirees and Beneficiaries	0	0	0	0
92 - Parks Non Union				
Active Members	3	\$181,220	3	\$178,325
Vested Former Members	0	0	0	0
Retirees and Beneficiaries	0	0	0	0
93 - Lgl Rsrch Clerks				
Active Members	6	\$227,014	7	\$235,907
Vested Former Members	0	0	0	0
Retirees and Beneficiaries	0	0	0	0
Total Municipality				
Active Members	1207	\$47,549,076	1199	\$44,941,508
Vested Former Members	261	1,928,063	286	1,870,506
Retirees and Beneficiaries	<u>583</u>	7,131,362	<u>559</u>	6,390,782
Total Participants	2051		2044	

* Annual payroll for active members; annual deferred benefits payable for vested former members; annual benefits being paid for retirees and beneficiaries.

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Table 3

Active Members in the Valuation - Comparative Schedule

Valuation Date 12/31	Number	Annual Payroll	Average Pay		Average Age	Average Benefit Service	Average Vesting Service
			Annual \$	% Increase			
1992	1,197	\$ 31,954,624	\$ 26,696	8.7%	41.0	9.0	
1993	1,191	32,835,580	27,569	3.3	41.8	9.4	
1994	1,214	34,660,368	28,550	3.6	42.1	9.5	
1995	1,210	35,260,750	29,141	2.1	41.9	9.7	
1996	1,222	36,804,795	30,118	3.4	42.1	9.7	
1997	1,198	37,104,777	30,972	2.8	42.3	9.9	
1998	1,161	40,831,800	35,169	13.6	42.5	10.0	
1999	1,183	41,422,262	35,014	(0.4)	42.7	9.8	
2000	1,197	43,006,155	35,928	2.6	42.7	9.6	
2001	1,199	44,941,508	37,482	4.3	42.8	9.4	9.6
2002	1,207	47,549,076	39,394	5.1	42.8	9.4	9.7

Table 4

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Net Transfers	New Member	End of Year
				Vested	Non-Vested			
2001	(26)	(1)		(53)	(78)		160	1199
2002	(31)	(1)		(16)	(91)		147	1207

Ingham County (3303)

Table 5

Vested Former Members in the Valuation - Comparative Schedule

Valuation Date 12/31	Number	Annual Deferred Benefits	Average Age	Average Benefit Service	Average Vesting Service
1992	151	\$			
1993	159				
1994	164				
1995	169				
1996	193				
1997	221	1,870,506	47.7	11.0	12.5
1998	218				
1999	227				
2000	236				
2001	286				
2002	261	1,928,063	48.9	11.8	13.3

Table 6

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Net Transfers*	New	End of Year
2001	(10)			(15)		75	286
2002	(11)	(2)		(29)	(1)	18	261

* Net transfers can include members transferring to a Defined Contribution plan or members who transfer between divisions and subsequently retire or terminate within the same plan year.

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Table 7

Retirees and Beneficiaries in the Valuation - Comparative Schedule

Valuation Date 12/31	Retirees		Beneficiaries		Total Recipients		No. of Actives per Recip.	Benefits As % of Active Payroll
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
1992		\$		\$	290	\$ 1,474,281	4.1	4.6%
1993					312	1,822,113	3.8	5.5
1994					327	2,222,789	3.7	6.4
1995					367	2,727,135	3.3	7.7
1996					392	3,118,939	3.1	8.5
1997					429	3,711,946	2.8	10.0
1998					462	4,564,053	2.5	11.2
1999					494	5,152,654	2.4	12.4
2000					527	5,812,070	2.3	13.5
2001	500	6,045,922	59	344,860	559	6,390,782	2.1	14.2
2002	522	6,749,230	61	382,132	583	7,131,362	2.1	15.0

Table 8

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust. *	Number	Annual Benefits	Benefit Adjust. #	Number	Annual Benefits
1992	20	\$ 200,120	\$	(198)	\$ (846,075)	\$	290	\$ 1,474,281
1993	35	422,897		(13)	(75,065)		312	1,822,113
1994	27	439,064		(12)	(38,388)		327	2,222,789
1995	47	544,633		(7)	(40,287)		367	2,727,135
1996	33	440,912		(8)	(49,108)		392	3,118,939
1997	45	656,395		(8)	(63,389)		429	3,711,946
1998	44	921,125		(11)	(69,017)		462	4,564,053
1999	47	709,648		(15)	(121,047)		494	5,152,654
2000	42	741,352		(9)	(81,935)		527	5,812,070
2001	43	639,794	4,432	(10)	(49,884)	(15,636)	559	6,390,782
2002	48	970,505	7,588	(24)	(194,125)	(43,388)	583	7,131,362

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

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Table 9

Retirees and Beneficiaries on the Rolls as of December 31, 2002

Distribution by Type of Benefit Being Paid

Benefits Being Paid to:	Annual Benefits	
	Number	Amount
Age and service retirants	499	\$6,565,425
Non-duty disability retirants	20	173,209
Duty disability retirants	3	10,596
Beneficiaries of deceased retirants	38	241,816
Beneficiaries of deceased members:		
Non-duty death	22	121,161
Duty death	<u>1</u>	<u>19,155</u>
Total Benefits Being Paid	583	\$7,131,362

Ingham County (3303)

Table 10

Reported Assets (Market Value)

Division	2002 Valuation		2001 Valuation	
	Employer And Retiree*	Employee#	Employer And Retiree*	Employee#
01 - Confidential	\$ 2,846,642	\$ 435,973	\$ 3,331,811	\$ 420,308
02 - Sheriff FOP Spvs	8,592,369	2,448,999	10,411,055	2,093,046
04 - MCF	3,323,838	51,357	3,742,936	57,866
09 - Judges	386,703	22,843	422,715	16,167
10 - Gnrl Mgmt	13,312,215	2,391,199	14,841,654	2,178,529
11 - Gnrl Library	1,570,243	128,663	1,843,289	127,677
12 - Gnrl ICEA Profs	6,421,306	2,282,930	7,089,021	1,878,711
13 - Gnrl OPEIU Prob	3,932,795	1,005,177	4,377,859	872,617
14 - Gnrl TOPS UAW	20,125,185	3,176,714	22,606,900	3,085,476
15 - Animal Cntrl FOP	546,293	171,471	559,637	165,977
16 - Gnrl Commsnrs	182,267	46,917	222,890	41,556
17 - ICEA Nurses	4,376,871	1,612,438	5,005,286	1,261,590
18 - ICEA Ct. Prof	3,740,772	1,036,965	4,451,287	922,191
19 - Cnstutnl Offcls	989,984	247,046	1,187,017	198,088
21 - FOP Shrf Deputies	11,732,685	3,947,286	13,930,284	3,490,503
40 - ICEA Unit 111	2,117,118	196,835	2,567,322	172,334
41 - MCF Management	965,093	57,301	1,055,267	54,847
42 - ICEA Unit 11	202,347	104,255	217,741	86,209
43 - ICEA Unit 1	366,899	91,365	444,656	86,468
90 - Asst Pros Attnys	3,586,389	363,368	3,807,478	211,637
91 - Parks Union Empl	104,007	0	94,276	0
92 - Parks Non Union	519,754	52,315	551,396	50,303
93 - Lgl Rsrch Clerks	83,235	0	72,588	0
Total Municipality	\$ 90,025,010	\$ 19,871,417	\$102,834,365	\$ 17,472,100
Combined Reserves	\$109,896,427		\$120,306,465	

* Reserve for Employer Contributions and Benefit Payments

Reserve for Employee Contributions

The December 31, 2002 Valuation Assets are equal to 1.258454 times the reported Market Value of assets. The derivation of Valuation Assets is described on page 143.

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Table 11

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Net Transfers	Balance
	Employer	Member					
2001	\$ 3,969,561	\$ 2,669,220	\$ 9,655,853	\$ (6,165,634)	\$ (498,267)	\$ 116,076	\$ 133,055,221
2002	4,297,730	3,001,615	4,906,444	(6,903,572)	(216,746)	158,907	138,299,599

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Table 12

Termination Liability and Present Value of Accrued Benefits as of December 31, 2002

Termination Liability*	Division	PVAB* Present Value of Accrued Benefits	Valuation Assets	PVAB Percent Funded	Unfunded (Overfunded) PVAB
\$ 2,263,730 505,786 <u>1,815,503</u> \$ 4,585,019	01 - Confidential Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 1,870,016 505,786 <u>1,815,503</u> \$ 4,191,305	\$ 4,131,020	98.6%	\$ 60,285
\$ 4,174,150 46,771 <u>14,587,821</u> \$ 18,808,742	02 - Sheriff FOP Spvs Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 5,306,053 46,771 <u>14,587,821</u> \$ 19,940,645	\$ 13,895,054	69.7%	\$ 6,045,591
\$ 1,480,171 645,307 <u>1,898,347</u> \$ 4,023,825	04 - MCF Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 1,365,141 645,307 <u>1,898,347</u> \$ 3,908,795	\$ 4,247,528	108.7%	\$ (338,733)
\$ 435,236 43,406 <u>626,225</u> \$ 1,104,867	09 - Judges Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 333,538 43,406 <u>626,225</u> \$ 1,003,169	\$ 515,395	51.4%	\$ 487,774
\$ 12,666,107 1,492,266 <u>10,114,390</u> \$ 24,272,763	10 - Gnrl Mgmt Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 10,044,791 1,492,266 <u>10,114,390</u> \$ 21,651,447	\$ 19,762,024	91.3%	\$ 1,889,423
\$ 0 1,451,791 <u>928,719</u> \$ 2,380,510	11 - Gnrl Library Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 0 1,451,791 <u>928,719</u> \$ 2,380,510	\$ 2,137,995	89.8%	\$ 242,515
\$ 9,262,230 1,542,593 <u>2,211,736</u> \$ 13,016,559	12 - Gnrl ICEA Profs Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 7,858,202 1,542,593 <u>2,211,736</u> \$ 11,612,531	\$ 10,953,881	94.3%	\$ 658,650

Ingham County (3303)

Table 12 (continued)

Termination Liability and Present Value of Accrued Benefits as of December 31, 2002

Termination Liability*	Division	PVAB* Present Value of Accrued Benefits	Valuation Assets	PVAB Percent Funded	Unfunded (Overfunded) PVAB
\$ 5,759,464 494,691 <u>976,173</u> \$ 7,230,328	13 - Gnrl OPEIU Prob Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 4,460,743 494,691 <u>976,173</u> \$ 5,931,607	\$ 6,214,211	104.8%	\$ (282,604)
\$ 12,440,910 1,788,172 <u>12,171,853</u> \$ 26,400,935	14 - Gnrl TOPS UAW Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 11,058,120 1,788,172 <u>12,171,853</u> \$ 25,018,145	\$ 29,324,368	117.2%	\$ (4,306,223)
\$ 403,023 77,965 <u>860,541</u> \$ 1,341,529	15 - Animal Cntrl FOP Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 485,830 77,965 <u>860,541</u> \$ 1,424,336	\$ 903,273	63.4%	\$ 521,063
\$ 90,699 34,428 <u>158,112</u> \$ 283,239	16 - Gnrl Commsnrs Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 73,894 34,428 <u>158,112</u> \$ 266,434	\$ 288,418	108.3%	\$ (21,984)
\$ 5,919,006 689,700 <u>2,755,149</u> \$ 9,363,855	17 - ICEA Nurses Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 4,943,616 689,700 <u>2,755,149</u> \$ 8,388,465	\$ 7,537,270	89.9%	\$ 851,195
\$ 3,316,328 292,487 <u>4,848,958</u> \$ 8,457,773	18 - ICEA Ct. Prof Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 2,872,464 292,487 <u>4,848,958</u> \$ 8,013,909	\$ 6,012,562	75.0%	\$ 2,001,347
\$ 1,051,362 0 <u>755,531</u> \$ 1,806,893	19 - Cnstutnl Offcls Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 850,056 0 <u>755,531</u> \$ 1,605,587	\$ 1,556,745	97.0%	\$ 48,842

Ingham County (3303)

Table 12 (continued)

Termination Liability and Present Value of Accrued Benefits as of December 31, 2002

Termination Liability*	Division	PVAB* Present Value of Accrued Benefits	Valuation Assets	PVAB Percent Funded	Unfunded (Overfunded) PVAB
\$ 6,626,571 485,809 <u>12,859,912</u> \$ 19,972,292	21 - FOP Shrf Deputies Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 7,167,913 485,809 <u>12,859,912</u> \$ 20,513,634	\$ 19,732,522	96.2%	\$ 781,112
\$ 540,624 180,199 <u>2,059,848</u> \$ 2,780,671	40 - ICEA Unit 111 Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 460,215 180,199 <u>2,059,848</u> \$ 2,700,262	\$ 2,912,003	107.8%	\$ (211,741)
\$ 231,713 271,899 <u>440,936</u> \$ 944,548	41 - MCF Management Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 284,890 271,899 <u>440,936</u> \$ 997,725	\$ 1,286,636	129.0%	\$ (288,911)
\$ 262,005 31,523 <u>98,985</u> \$ 392,513	42 - ICEA Unit 11 Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 218,642 31,523 <u>98,985</u> \$ 349,150	\$ 385,845	110.5%	\$ (36,695)
\$ 223,512 49,441 <u>610,765</u> \$ 883,718	43 - ICEA Unit 1 Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 185,145 49,441 <u>610,765</u> \$ 845,351	\$ 576,704	68.2%	\$ 268,647
\$ 3,092,784 1,332,868 <u>1,031,669</u> \$ 5,457,321	90 - Asst Pros Attnys Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 2,488,019 1,332,868 <u>1,031,669</u> \$ 4,852,556	\$ 4,970,587	102.4%	\$ (118,031)
\$ 79,101 0 <u>0</u> \$ 79,101	91 - Parks Union Empl Active Members Vested Former Members Retirees and Beneficiaries Total	\$ 78,697 0 <u>0</u> \$ 78,697	\$ 130,888	166.3%	\$ (52,191)

Ingham County (3303)

Table 12 (continued)

Termination Liability and Present Value of Accrued Benefits as of December 31, 2002

Termination Liability*	Division	PVAB* Present Value of Accrued Benefits	Valuation Assets	PVAB Percent Funded	Unfunded (Overfunded) PVAB
\$ 908,738	92 - Parks Non Union				
0	Active Members	\$ 671,021			
<u>0</u>	Vested Former Members	0			
\$ 908,738	Retirees and Beneficiaries	<u>0</u>			
	Total	\$ 671,021	\$ 719,923	107.3%	\$ (48,902)
\$ 103,904	93 - Lgl Rsrch Clerks				
0	Active Members	\$ 87,584			
<u>0</u>	Vested Former Members	0			
\$ 103,904	Retirees and Beneficiaries	<u>0</u>			
	Total	\$ 87,584	\$ 104,747	119.6%	\$ (17,163)
\$ 71,331,368	Total Municipality				
11,457,102	Active Members	\$ 63,164,590			
<u>71,811,173</u>	Vested Former Members	11,457,102			
\$ 154,599,643	Retirees and Beneficiaries	<u>71,811,173</u>			
	Total	\$ 146,432,865	\$ 138,299,599	94.4%	\$ 8,133,266

* The Termination Liability represents the present value of benefits payable in the event that all active members terminate employment on December 31, 2002, based upon the valuation interest and mortality assumptions. The present value of accrued benefits (PVAB) includes vested and non-vested benefits accrued as of December 31, 2002. For a non-vested active member, the PVAB represents the present value of the non-vested accrued benefit, and may exceed the Termination Liability which represents for that member only the member's accumulated contributions, if any. For some vested active members the Termination Liability may exceed the PVAB, because the Termination Liability assumes that members retire at the earliest possible age for commencement of unreduced deferred benefits, whereas the PVAB assumes continued employment based on actuarial assumptions for retirement, death, disability and withdrawal.

Ingham County (3303)

Table 13

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 -Confidentials				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 2,616,747	\$ 1,441,105	55.1%	\$ 1,175,642
Vested Former Members	438,663	438,663	100.0	0
Retirees and Beneficiaries	<u>1,815,503</u>	<u>1,815,503</u>	100.0	<u>0</u>
Total	\$ 4,870,913	\$ 3,695,271	75.9%	\$ 1,175,642
Reserve for Employee Contributions				
Active Members	\$ 368,626	\$ 368,626		
Vested Former Members	<u>67,123</u>	<u>67,123</u>		
Total	\$ 435,749	\$ 435,749	100.0%	\$ 0
Division Total	\$ 5,306,662	\$ 4,131,020	77.8%	\$ 1,175,642
02 -Sheriff FOP Spvs				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 5,430,129	\$ 0	0.0%	\$ 5,430,129
Vested Former Members	33,456	0	0.0	33,456
Retirees and Beneficiaries	<u>14,587,821</u>	<u>11,446,054</u>	78.5	<u>3,141,767</u>
Total	\$ 20,051,406	\$ 11,446,054	57.1%	\$ 8,605,352
Reserve for Employee Contributions				
Active Members	\$ 2,435,685	\$ 2,435,685		
Vested Former Members	<u>13,315</u>	<u>13,315</u>		
Total	\$ 2,449,000	\$ 2,449,000	100.0%	\$ 0
Division Total	\$ 22,500,406	\$ 13,895,054	61.8%	\$ 8,605,352
04 -MCF				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 2,643,207	\$ 1,668,673	63.1%	\$ 974,534
Vested Former Members	629,865	629,865	100.0	0
Retirees and Beneficiaries	<u>1,898,347</u>	<u>1,898,347</u>	100.0	<u>0</u>
Total	\$ 5,171,419	\$ 4,196,885	81.2%	\$ 974,534
Reserve for Employee Contributions				
Active Members	\$ 35,201	\$ 35,201		
Vested Former Members	<u>15,442</u>	<u>15,442</u>		
Total	\$ 50,643	\$ 50,643	100.0%	\$ 0
Division Total	\$ 5,222,062	\$ 4,247,528	81.3%	\$ 974,534

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
09 - Judges				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 419,282	\$ 0	0.0%	\$ 419,282
Vested Former Members	30,962	0	0.0	30,962
Retirees and Beneficiaries	<u>626,225</u>	<u>494,275</u>	78.9	<u>131,950</u>
Total	\$ 1,076,469	\$ 494,275	45.9%	\$ 582,194
Reserve for Employee Contributions				
Active Members	\$ 8,676	\$ 8,676		
Vested Former Members	<u>12,444</u>	<u>12,444</u>		
Total	\$ 21,120	\$ 21,120	100.0%	\$ 0
Division Total	\$ 1,097,589	\$ 515,395	47.0%	\$ 582,194
10 - Gnrl Mgmt				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 12,720,431	\$ 6,081,506	47.8%	\$ 6,638,925
Vested Former Members	1,223,261	1,223,261	100.0	0
Retirees and Beneficiaries	<u>10,114,390</u>	<u>10,114,390</u>	100.0	<u>0</u>
Total	\$ 24,058,082	\$ 17,419,157	72.4%	\$ 6,638,925
Reserve for Employee Contributions				
Active Members	\$ 2,073,862	\$ 2,073,862		
Vested Former Members	<u>269,005</u>	<u>269,005</u>		
Total	\$ 2,342,867	\$ 2,342,867	100.0%	\$ 0
Division Total	\$ 26,400,949	\$ 19,762,024	74.9%	\$ 6,638,925
11 - Gnrl Library				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Members	1,323,127	1,080,612	81.7	242,515
Retirees and Beneficiaries	<u>928,719</u>	<u>928,719</u>	100.0	<u>0</u>
Total	\$ 2,251,846	\$ 2,009,331	89.2%	\$ 242,515
Reserve for Employee Contributions				
Active Members	\$ 0	\$ 0		
Vested Former Members	<u>128,664</u>	<u>128,664</u>		
Total	\$ 128,664	\$ 128,664	100.0%	\$ 0
Division Total	\$ 2,380,510	\$ 2,137,995	89.8%	\$ 242,515

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
12 - Gnrl ICEA Profs				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 10,845,928	\$ 5,225,090	48.2%	\$ 5,620,838
Vested Former Members	1,340,226	1,340,226	100.0	0
Retirees and Beneficiaries	<u>2,211,736</u>	<u>2,211,736</u>	100.0	<u>0</u>
Total	\$ 14,397,890	\$ 8,777,052	61.0%	\$ 5,620,838
Reserve for Employee Contributions				
Active Members	\$ 1,974,462	\$ 1,974,462		
Vested Former Members	<u>202,367</u>	<u>202,367</u>		
Total	\$ 2,176,829	\$ 2,176,829	100.0%	\$ 0
Division Total	\$ 16,574,719	\$ 10,953,881	66.1%	\$ 5,620,838
13 - Gnrl OPEIU Prob				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 5,653,822	\$ 3,779,897	66.9%	\$ 1,873,925
Vested Former Members	452,965	452,965	100.0	0
Retirees and Beneficiaries	<u>976,173</u>	<u>976,173</u>	100.0	<u>0</u>
Total	\$ 7,082,960	\$ 5,209,035	73.5%	\$ 1,873,925
Reserve for Employee Contributions				
Active Members	\$ 963,450	\$ 963,450		
Vested Former Members	<u>41,726</u>	<u>41,726</u>		
Total	\$ 1,005,176	\$ 1,005,176	100.0%	\$ 0
Division Total	\$ 8,088,136	\$ 6,214,211	76.8%	\$ 1,873,925
14 - Gnrl TOPS UAW				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 16,935,798	\$ 12,615,120	74.5%	\$ 4,320,678
Vested Former Members	1,502,969	1,502,969	100.0	0
Retirees and Beneficiaries	<u>12,171,853</u>	<u>12,171,853</u>	100.0	<u>0</u>
Total	\$ 30,610,620	\$ 26,289,942	85.9%	\$ 4,320,678
Reserve for Employee Contributions				
Active Members	\$ 2,749,223	\$ 2,749,223		
Vested Former Members	<u>285,203</u>	<u>285,203</u>		
Total	\$ 3,034,426	\$ 3,034,426	100.0%	\$ 0
Division Total	\$ 33,645,046	\$ 29,324,368	87.2%	\$ 4,320,678

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
15 - Animal Cntrl FOP				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 722,416	\$ 0	0.0%	\$ 722,416
Vested Former Members	77,965	0	0.0	77,965
Retirees and Beneficiaries	<u>860,541</u>	<u>741,282</u>	86.1	<u>119,259</u>
Total	\$ 1,660,922	\$ 741,282	44.6%	\$ 919,640
Reserve for Employee Contributions				
Active Members	\$ 161,991	\$ 161,991		
Vested Former Members	<u>0</u>	<u>0</u>		
Total	\$ 161,991	\$ 161,991	100.0%	\$ 0
Division Total	\$ 1,822,913	\$ 903,273	49.6%	\$ 919,640
16 - Gnrl Commsnrs				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 99,003	\$ 67,172	67.8%	\$ 31,831
Vested Former Members	26,634	26,634	100.0	0
Retirees and Beneficiaries	<u>158,112</u>	<u>158,112</u>	100.0	<u>0</u>
Total	\$ 283,749	\$ 251,918	88.8%	\$ 31,831
Reserve for Employee Contributions				
Active Members	\$ 28,706	\$ 28,706		
Vested Former Members	<u>7,794</u>	<u>7,794</u>		
Total	\$ 36,500	\$ 36,500	100.0%	\$ 0
Division Total	\$ 320,249	\$ 288,418	90.1%	\$ 31,831
17 - ICEA Nurses				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 5,363,438	\$ 2,585,193	48.2%	\$ 2,778,245
Vested Former Members	613,748	613,748	100.0	0
Retirees and Beneficiaries	<u>2,755,149</u>	<u>2,755,149</u>	100.0	<u>0</u>
Total	\$ 8,732,335	\$ 5,954,090	68.2%	\$ 2,778,245
Reserve for Employee Contributions				
Active Members	\$ 1,507,228	\$ 1,507,228		
Vested Former Members	<u>75,952</u>	<u>75,952</u>		
Total	\$ 1,583,180	\$ 1,583,180	100.0%	\$ 0
Division Total	\$ 10,315,515	\$ 7,537,270	73.1%	\$ 2,778,245

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
18 -ICEA Ct. Prof				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 2,860,305	\$ 0	0.0%	\$ 2,860,305
Vested Former Members	223,012	129,258	58.0	93,754
Retirees and Beneficiaries	<u>4,848,958</u>	<u>4,848,958</u>	100.0	<u>0</u>
Total	\$ 7,932,275	\$ 4,978,216	62.8%	\$ 2,954,059
Reserve for Employee Contributions				
Active Members	\$ 964,871	\$ 964,871		
Vested Former Members	<u>69,475</u>	<u>69,475</u>		
Total	\$ 1,034,346	\$ 1,034,346	100.0%	\$ 0
Division Total	\$ 8,966,621	\$ 6,012,562	67.1%	\$ 2,954,059
19 -Cnstutnl Offcls				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 939,004	\$ 554,168	59.0%	\$ 384,836
Vested Former Members	0	0	0.0	0
Retirees and Beneficiaries	<u>755,531</u>	<u>755,531</u>	100.0	<u>0</u>
Total	\$ 1,694,535	\$ 1,309,699	77.3%	\$ 384,836
Reserve for Employee Contributions				
Active Members	\$ 247,046	\$ 247,046		
Vested Former Members	<u>0</u>	<u>0</u>		
Total	\$ 247,046	\$ 247,046	100.0%	\$ 0
Division Total	\$ 1,941,581	\$ 1,556,745	80.2%	\$ 384,836
21 -FOP Shrf Deputies				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 8,614,397	\$ 2,584,264	30.0%	\$ 6,030,133
Vested Former Members	368,120	368,120	100.0	0
Retirees and Beneficiaries	<u>12,859,912</u>	<u>12,859,912</u>	100.0	<u>0</u>
Total	\$ 21,842,429	\$ 15,812,296	72.4%	\$ 6,030,133
Reserve for Employee Contributions				
Active Members	\$ 3,802,537	\$ 3,802,537		
Vested Former Members	<u>117,689</u>	<u>117,689</u>		
Total	\$ 3,920,226	\$ 3,920,226	100.0%	\$ 0
Division Total	\$ 25,762,655	\$ 19,732,522	76.6%	\$ 6,030,133

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
40 -ICEA Unit 111				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 641,095	\$ 545,352	85.1%	\$ 95,743
Vested Former Members	143,011	143,011	100.0	0
Retirees and Beneficiaries	<u>2,059,848</u>	<u>2,059,848</u>	100.0	<u>0</u>
Total	\$ 2,843,954	\$ 2,748,211	96.6%	\$ 95,743
Reserve for Employee Contributions				
Active Members	\$ 126,604	\$ 126,604		
Vested Former Members	<u>37,188</u>	<u>37,188</u>		
Total	\$ 163,792	\$ 163,792	100.0%	\$ 0
Division Total	\$ 3,007,746	\$ 2,912,003	96.8%	\$ 95,743
41 -MCF Management				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 575,036	\$ 553,818	96.3%	\$ 21,218
Vested Former Members	235,454	235,454	100.0	0
Retirees and Beneficiaries	<u>440,936</u>	<u>440,936</u>	100.0	<u>0</u>
Total	\$ 1,251,426	\$ 1,230,208	98.3%	\$ 21,218
Reserve for Employee Contributions				
Active Members	\$ 19,983	\$ 19,983		
Vested Former Members	<u>36,445</u>	<u>36,445</u>		
Total	\$ 56,428	\$ 56,428	100.0%	\$ 0
Division Total	\$ 1,307,854	\$ 1,286,636	98.4%	\$ 21,218
42 -ICEA Unit 11				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 296,865	\$ 183,297	61.7%	\$ 113,568
Vested Former Members	23,432	23,432	100.0	0
Retirees and Beneficiaries	<u>98,985</u>	<u>98,985</u>	100.0	<u>0</u>
Total	\$ 419,282	\$ 305,714	72.9%	\$ 113,568
Reserve for Employee Contributions				
Active Members	\$ 72,040	\$ 72,040		
Vested Former Members	<u>8,091</u>	<u>8,091</u>		
Total	\$ 80,131	\$ 80,131	100.0%	\$ 0
Division Total	\$ 499,413	\$ 385,845	77.3%	\$ 113,568

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
43 -ICEA Unit 1				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 283,087	\$ 0	0.0%	\$ 283,087
Vested Former Members	22,320	0	0.0	22,320
Retirees and Beneficiaries	<u>610,765</u>	<u>492,321</u>	80.6	<u>118,444</u>
Total	\$ 916,172	\$ 492,321	53.7%	\$ 423,851
Reserve for Employee Contributions				
Active Members	\$ 57,262	\$ 57,262		
Vested Former Members	<u>27,121</u>	<u>27,121</u>		
Total	\$ 84,383	\$ 84,383	100.0%	\$ 0
Division Total	\$ 1,000,555	\$ 576,704	57.6%	\$ 423,851
90 -Asst Pros Attnys				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 3,812,145	\$ 2,423,227	63.6%	\$ 1,388,918
Vested Former Members	1,153,765	1,153,765	100.0	0
Retirees and Beneficiaries	<u>1,031,669</u>	<u>1,031,669</u>	100.0	<u>0</u>
Total	\$ 5,997,579	\$ 4,608,661	76.8%	\$ 1,388,918
Reserve for Employee Contributions				
Active Members	\$ 182,823	\$ 182,823		
Vested Former Members	<u>179,103</u>	<u>179,103</u>		
Total	\$ 361,926	\$ 361,926	100.0%	\$ 0
Division Total	\$ 6,359,505	\$ 4,970,587	78.2%	\$ 1,388,918
91 -Parks Union Empl				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 168,356	\$ 130,888	77.7%	\$ 37,468
Vested Former Members	0	0	0.0	0
Retirees and Beneficiaries	<u>0</u>	<u>0</u>	0.0	<u>0</u>
Total	\$ 168,356	\$ 130,888	77.7%	\$ 37,468
Reserve for Employee Contributions				
Active Members	\$ 0	\$ 0		
Vested Former Members	<u>0</u>	<u>0</u>		
Total	\$ 0	\$ 0	0.0%	\$ 0
Division Total	\$ 168,356	\$ 130,888	77.7%	\$ 37,468

Ingham County (3303)

Table 13 (continued)

Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2002

Division	Actuarial Accrued Liabilities	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
92 -Parks Non Union				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 882,107	\$ 667,608	75.7%	\$ 214,499
Vested Former Members	0	0	0.0	0
Retirees and Beneficiaries	0	0	0.0	0
Total	\$ 882,107	\$ 667,608	75.7%	\$ 214,499
Reserve for Employee Contributions				
Active Members	\$ 52,315	\$ 52,315		
Vested Former Members	0	0		
Total	\$ 52,315	\$ 52,315	100.0%	\$ 0
Division Total	\$ 934,422	\$ 719,923	77.0%	\$ 214,499
93 -Lgl Rsrch Clerks				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 124,042	\$ 104,747	84.4%	\$ 19,295
Vested Former Members	0	0	0.0	0
Retirees and Beneficiaries	0	0	0.0	0
Total	\$ 124,042	\$ 104,747	84.4%	\$ 19,295
Reserve for Employee Contributions				
Active Members	\$ 0	\$ 0		
Vested Former Members	0	0		
Total	\$ 0	\$ 0	0.0%	\$ 0
Division Total	\$ 124,042	\$ 104,747	84.4%	\$ 19,295
Municipality Totals				
Reserve for Employer Contributions and Benefit Payments				
Active Members	\$ 82,646,640	\$ 41,211,125	49.9%	\$ 41,435,515
Vested Former Members	9,862,955	9,361,983	94.9	500,972
Retirees and Beneficiaries	<u>71,811,173</u>	<u>68,299,753</u>	95.1	<u>3,511,420</u>
Total	\$ 164,320,768	\$ 118,872,861	72.3%	\$ 45,447,907
Reserve for Employee Contributions				
Active Members	\$ 17,832,591	\$ 17,832,591		
Vested Former Members	<u>1,594,147</u>	<u>1,594,147</u>		
Total	\$ 19,426,738	\$ 19,426,738	100.0%	\$ 0
Municipality Total	\$ 183,747,506	\$ 138,299,599	75.3%	\$ 45,447,907

Ingham County (3303)

Table 14

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
1988	\$ 44,776,267	\$ 57,889,961	129%	\$(13,113,694)	0%
1989	52,525,297	64,949,909	124	(12,424,612)	0
1990	61,520,840	71,084,865	116	(9,564,025)	0
1991	69,567,734	79,736,359	115	(10,168,625)	0
1992	47,237,433	50,968,120	108	(3,730,687)	0
1993	66,392,574	52,687,283	79	13,705,291	42
1994	82,445,154	56,238,777	68	26,206,377	76
1995	91,267,612	62,529,929	69	28,737,683	82
1996	100,596,375	70,095,587	70	30,500,788	83
1997	113,279,199	83,334,248	74	29,944,951	81
1998	129,697,752	95,427,165	74	34,270,587	84
1999	137,512,089	111,156,340	81	26,355,749	64
2000	152,754,990	123,308,414	81	29,446,576	68
2001	165,645,014	133,055,221	80	32,589,793	73
2002	183,747,506	138,299,599	75	45,447,907	96

Notes: Actuarial assumptions were revised for the 1993, 1997 and 2000 actuarial valuations. The funding method was changed to entry age normal for the 1993 valuation.

Ingham County (3303)

Table 15

Computed Employer Contributions to the Retirement System

For the Fiscal Year Beginning January 1, 2004

Division	Employer Contributions @			
	Normal Cost	Unfunded Accrued Liability #	Total Regular Employer Contribution	Minimum Required Contribution
Percentage of Payroll				
01 - Confidential	6.79%	5.35%	12.14%	12.14%
02 - Sheriff FOP Spvs	(1.98)%	23.50%	21.52%	21.52%
04 - MCF	5.51%	2.05%	7.56%	7.02%
09 - Judges	9.34%	22.75%	32.09%	32.09%
10 - Gnrl Mgmt	6.15%	6.60%	12.75%	12.75%
11 - Gnrl Library	-%	-%	-%	-%
12 - Gnrl ICEA Profs	6.67%	5.02%	11.69%	11.69%
13 - Gnrl OPEIU Prob	3.12%	5.45%	8.57%	8.57%
14 - Gnrl TOPS UAW	8.09%	2.05%	10.14%	10.14%
15 - Animal Cntrl FOP	0.19%	15.87%	16.06%	16.06%
16 - Gnrl Commsnrs	5.34%	1.24%	6.58%	5.82%
17 - ICEA Nurses	4.51%	4.88%	9.39%	9.39%
18 - ICEA Ct. Prof	3.01%	8.41%	11.42%	11.42%
19 - Cnstutnl Offcls	5.33%	4.26%	9.59%	9.59%
21 - FOP Shrf Deputies	4.60%	4.84%	9.44%	9.44%
40 - ICEA Unit 111	5.83%	0.62%	6.45%	6.45%
41 - MCF Management	9.08%	0.15%	9.23%	9.23%
42 - ICEA Unit 11	7.10%	1.59%	8.69%	8.46%
43 - ICEA Unit 1	5.33%	9.71%	15.04%	14.63%
90 - Asst Pros Attnys	9.88%	4.08%	13.96%	13.96%
91 - Parks Union Empl	8.18%	1.26%	9.44%	9.44%
92 - Parks Non Union	7.45%	6.35%	13.80%	13.80%
93 - Lgl Rsrch Clerks	6.70%	0.46%	7.16%	7.16%

Ingham County (3303)

Table 15 (continued)

Computed Employer Contributions to the Retirement System

For the Fiscal Year Beginning January 1, 2004

Division	Employer Contributions @			
	Normal Cost	Unfunded Accrued Liability #	Total Regular Employer Contribution	Minimum Required Contribution
Estimated Monthly Contribution*				
01 - Confidential	\$ 6,670	\$ 5,255	\$ 11,925	\$ 11,925
02 - Sheriff FOP Spvs	(3,241)	38,467	35,226	35,226
04 - MCF	11,679	4,345	16,024	14,879
09 - Judges	1,068	2,602	3,670	3,670
10 - Gnrl Mgmt	27,636	29,658	57,294	57,294
11 - Gnrl Library	0	1,129	1,129	1,129
12 - Gnrl ICEA Profs	33,373	25,118	58,491	58,491
13 - Gnrl OPEIU Prob	4,792	8,371	13,163	13,163
14 - Gnrl TOPS UAW	76,237	19,318	95,555	95,555
15 - Animal Cntrl FOP	49	4,110	4,159	4,159
16 - Gnrl Commsnrs	613	142	755	668
17 - ICEA Nurses	11,476	12,418	23,894	23,894
18 - ICEA Ct. Prof	4,726	13,204	17,930	17,930
19 - Cnstutnl Offcls	2,154	1,722	3,876	3,876
21 - FOP Shrf Deputies	25,631	26,969	52,600	52,600
40 - ICEA Unit 111	4,025	428	4,453	4,453
41 - MCF Management	5,922	98	6,020	6,020
42 - ICEA Unit 11	2,265	507	2,772	2,699
43 - ICEA Unit 1	1,039	1,893	2,932	2,852
90 - Asst Pros Attnys	15,016	6,201	21,217	21,217
91 - Parks Union Empl	1,089	168	1,257	1,257
92 - Parks Non Union	1,125	959	2,084	2,084
93 - Lgl Rsrch Clerks	1,267	87	1,354	1,354
Total Municipality	\$ 234,611	\$ 203,169	\$ 437,780	\$ 436,395
Estimated Annual Contribution*				
Total Municipality	\$ 2,815,332	\$2,438,028	\$ 5,253,360	\$ 5,236,740

@ The above Employer contribution requirements are in addition to the Member contributions, if any, shown in Table 1.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

The amortization method and period are described in Table 16 for each division.

Ingham County (3303)
Division 01 - Confidentials

Table 16A

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	6.79%	\$6,670
Amortization of Unfunded Accrued Liability (30 years)	<u>5.35</u>	<u>5,255</u>
Total Long Term Contribution	12.14	11,925
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	12.14	11,925
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	12.14%	\$11,925

@ The above Employer contribution requirement is based on Member contributions of 5.36% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.90% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$343,724
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	0.75%
Amortization Payment:	1.56%
Total:	2.31%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)

Division 01 - Confidential

Table 17A

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
1988	459	\$ 9,072,947	9.00%	0.00%
1989	142	3,433,518	9.10	0.00
1990	87	2,401,545	8.60	0.00
1991	72	2,255,242	10.50	0.00
1992	71	2,356,550	10.10	2.20
1993	29	826,648	10.95	4.62
1994	25	782,010	12.74	6.65
1995	25	747,190	17.53	12.66
1996	27	868,169	12.91	11.91
1997	29	895,532	11.16	11.16
1998	30	1,002,675	10.29	10.29
1999	31	1,068,662	9.46	9.46
2000	33	1,167,155	8.45	8.45
2001	34	1,238,366	8.94	8.94
2002	32	1,178,762	12.14	12.14

Notes: Adoption of Benefits C-2 and F55 (15 years) reflected in 1991 valuation.
Adoption 1% member contributions reflected in 1991 valuation.
Adoption of Benefit V-6 reflected in 1992 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit B-3 and 4.5% member contributions reflected in 1994.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit FAC-3, B-4 - 80% Maximum, 5.36% Member Contributions reflected in 2002 valuation.

Ingham County (3303)

Division 01 - Confidential

Table 18A
Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001				(1)		(2)	3	1	34
2002	(1)			(1)	(1)	(2)		3	32

Table 19A
Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)				(32)	1	3	13
2002				(1)			1	13

Table 20A
Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 3,457	\$	(1)	\$ (1,149)	\$	37	\$ 169,678
2002	2	42,414		(3)	(15,183)	(2,835)	36	194,074

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 01 - Confidential

Table 21A

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 116,795	\$ 55,393	\$ 283,566	\$ (168,952)	\$ 0	\$ (601,816)	\$ 0	\$ 4,149,727
2002	132,207	67,918	112,514	(180,958)	(4,268)	(146,120)	0	4,131,020

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22A

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 4,916,347	\$ 4,149,727	84%	\$ 766,620	62%
2002	5,306,662	4,131,020	78	1,175,642	100

Ingham County (3303)

Division 02 - Sheriff FOP Spvs

Table 16B

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	(1.98)%	\$(3,241)
Amortization of Unfunded Accrued Liability (30 years)	<u>23.50</u>	<u>38,467</u>
Total Long Term Contribution	21.52	35,226
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	21.52	35,226
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	21.52%	\$35,226

@ The above Employer contribution requirement is based on Member contributions of 19.61% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.82% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 02 - Sheriff FOP Spvs

Table 17B

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
Number	Annual Payroll			
1988	144	\$ 4,124,681	10.40%	0.00%
1989	149	4,442,989	10.30	0.00
1990	161	4,918,912	10.30	0.00
1991	172	5,840,591	9.50	0.00
1992	28	1,371,663	13.80	3.10
1993	28	1,343,669	9.71	4.10
1994	34	1,665,399	8.76	4.58
1995	28	1,421,507	13.89	10.03
1996	28	1,446,119	14.07	12.98
1997	30	1,609,357	17.78	17.78
1998	30	1,699,826	19.86	19.86
1999	30	1,703,939	18.03	18.02
2000	30	1,735,265	19.84	19.83
2001	31	1,858,730	20.07	20.07
2002	32	1,964,293	21.52	21.52

Notes: Adoption of Benefit F50 (25 years) reflected in 1989 valuation.
Adoption of 1% member contributions reflected in 1989 valuation.
Adoption of 1.85% member contributions reflected in 1992 valuation.
Adoption of Benefit B-3 reflected in 1992 valuation.
Adoption of 6.45% member contributions reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Adoption of 10.45% member contributions reflected in 1994 valuation.
Adoption of Benefits B-4, FAC-3 and 25 years and Out reflected in 1994.
Adoption of Benefit 3.2% multiplier and 19.61% member contributions reflected in 1997 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 02 - Sheriff FOP Spvs

Table 18B

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(1)						2		31
2002	(2)						3		32

Table 19B

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001					(4)	1		2
2002	(1)							1

Table 20B

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 46,610	\$	(2)	\$ (27,413)	\$ (1,124)	46	\$ 1,232,024
2002	3	97,241	4,130			(16,272)	49	1,317,123

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 02 - Sheriff FOP Spvs

Table 21B

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 335,049	\$ 364,516	\$ 988,337	\$ (1,220,618)	\$ 0	\$ 0	\$ 77,596	\$ 13,829,148
2002	396,280	391,201	416,706	(1,276,451)	0	0	138,170	13,895,054

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22B

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 21,466,776	\$ 13,829,148	64%	\$ 7,637,628	411%
2002	22,500,406	13,895,054	62	8,605,352	438

Ingham County (3303)

Division 04 - MCF

Table 16C

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	5.51%	\$11,679
Amortization of Unfunded Accrued Liability (30 years)	<u>2.05</u>	<u>4,345</u>
Total Long Term Contribution	7.56	16,024
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	7.56	16,024
Temporary Adjustment ^	<u>(0.54)</u>	<u>(1,145)</u>
Required Contribution	7.02%	\$14,879

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.85% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

^ Adjustments for 2001 and 2002 valuations are determined by the Retirement Board's resolution adopted March 13, 2002. See the December 31, 2001 annual actuarial report for details.

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 04 - MCF****Table 17C****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1988	175	\$ 1,881,671	7.30%	0.00%
1989	167	1,599,788	7.20	0.00
1990	180	1,895,478	6.80	0.00
1991	176	1,966,913	6.80	0.00
1992	190	2,192,337	6.80	1.50
1993	176	2,221,453	4.87	2.06
1994	173	2,282,795	5.85	3.05
1995	178	2,362,440	5.95	4.30
1996	165	2,376,442	5.91	5.45
1997	153	2,185,568	6.04	6.04
1998	128	2,542,201	5.73	5.73
1999	116	2,227,648	5.07	5.07
2000	123	2,410,936	5.66	5.66
2001	121	2,583,257	7.67	6.60
2002	115	2,543,513	7.56	7.02

Notes: Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit E reflected in 1994 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 04 - MCF

Table 18C
Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001		(1)		(5)	(33)			37	121
2002	(1)			(1)	(38)	(1)		35	115

Table 19C
Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(2)			(2)			9	37
2002				(7)			2	32

Table 20C
Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	4	\$ 21,035	\$	(4)	\$ (12,747)	\$	71	\$ 249,151
2002	1	3,602		(4)	(21,575)		68	231,178

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)**Division 04 - MCF****Table 21C****Flow of Valuation Assets (Actuarial Value)**

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 134,202	\$ 582	\$ 298,955	\$ (248,568)	\$ 0	\$ 0	\$ 0	\$ 4,203,569
2002	158,819	624	129,958	(231,899)	0	(13,543)	0	4,247,528

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22C**Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 5,186,800	\$ 4,203,569	81%	\$ 983,231	38%
2002	5,222,062	4,247,528	81	974,534	38

Ingham County (3303)

Division 09 - Judges

Table 16D

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	9.34%	\$1,068
Amortization of Unfunded Accrued Liability (30 years)	<u>22.75</u>	<u>2,602</u>
Total Long Term Contribution	32.09	3,670
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	32.09	3,670
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	32.09%	\$3,670

@ The above Employer contribution requirement is based on Member contributions of 3.14% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.88% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$37,238
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	(1.49%)
Amortization Payment:	1.46%
Total:	(0.03%)

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)**Division 09 - Judges****Table 17D****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	17	\$ 391,399	8.36%	3.53%
1994	16	323,312	10.09	5.27
1995	16	362,941	9.38	6.78
1996	19	463,138	9.21	8.50
1997	10	266,864	17.37	17.37
1998	13	351,771	15.07	15.07
1999	10	282,700	14.89	14.89
2000	7	235,139	11.60	11.59
2001	7	196,106	19.80	19.80
2002	5	137,270	32.09	32.09

Notes: Actuarial assumptions were revised for the 1993 valuation.
 Adoption of Benefits B-3, V-6 and F55 (15 years) reflected in 1997 valuation.
 Actuarial assumptions were revised for the 1997 valuation.
 Actuarial assumptions were revised for the 2000 valuation.
 Adoption of Benefit B-4 - 80% Maximum, 3.14% Member Contributions reflected in 2002 valuation.

Ingham County (3303)

Division 09 - Judges

Table 18D

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001					(1)			1	7
2002	(2)								5

Table 19D

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001				(1)	(1)	1		1
2002								1

Table 20D

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	3	\$ 20,722
2002	3	43,009		(1)	(5,642)		5	58,089

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 09 - Judges

Table 21D

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 29,200	\$ 0	\$ 29,735	\$ (20,722)	\$ (275,653)	\$ (281,056)	\$ 284,731	\$ 485,390
2002	22,269	6,030	19,372	(17,666)	0	0	0	515,395

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22D

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 815,236	\$ 485,390	60%	\$ 329,846	168%
2002	1,097,589	515,395	47	582,194	424

Ingham County (3303)
Division 10 - Gnrl Mgmt

Table 16E

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	6.15%	\$27,636
Amortization of Unfunded Accrued Liability (30 years)	<u>6.60</u>	<u>29,658</u>
Total Long Term Contribution	12.75	57,294
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	12.75	57,294
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	12.75%	\$57,294

@ The above Employer contribution requirement is based on Member contributions of 6.39% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.90% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$1,828,575
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	0.36%
Amortization Payment:	1.82%
Total:	2.18%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)

Division 10 - Gnrl Mgmt

Table 17E

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
Number	Annual Payroll			
1988	68	\$ 2,673,546	8.80%	0.00%
1989	73	3,043,824	8.80	0.00
1990	72	3,199,113	10.70	0.00
1991	69	3,160,627	10.90	0.00
1992	68	3,274,274	11.00	2.40
1993	70	3,428,088	9.31	3.93
1994	74	3,747,657	10.18	5.31
1995	71	3,782,835	10.30	7.44
1996	70	3,881,443	10.92	10.07
1997	68	3,972,349	9.47	9.47
1998	67	4,047,946	9.34	9.34
1999	76	4,643,352	8.30	8.30
2000	73	4,632,650	8.78	8.78
2001	80	5,215,460	9.27	9.27
2002	79	5,392,347	12.75	12.75

Notes: Adoption of Benefit C-2 and 3% member contributions reflected in 1988.
Adoption of 1% member contributions reflected in 1990 valuation.
Adoption of Benefit V-6 reflected in 1992 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit B-3 and 5% member contributions reflected in 1994.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit FAC-3, B-4 - 80% Maximum, 6.39% Member Contributions reflected in 2002 valuation.

Ingham County (3303)

Division 10 - Gnrl Mgmt

Table 18E

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001				(3)	(2)	(2)	6	8	80
2002	(7)			(2)	(1)		5	4	79

Table 19E

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001						2	4	20
2002	(2)			(2)			2	18

Table 20E

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 11,706	\$		\$	\$ (3,507)	44	\$ 752,492
2002	10	337,308		(4)	(71,514)		50	1,018,286

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 10 - Gnrl Mgmt

Table 21E

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 426,804	\$ 257,085	\$ 1,363,992	\$ (744,291)	\$ (15,107)	\$ 0	\$ 180,151	\$ 18,823,795
2002	599,686	351,366	739,404	(924,941)	(20,244)	0	192,958	19,762,024

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22E

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 22,378,557	\$ 18,823,795	84%	\$ 3,554,762	68%
2002	26,400,949	19,762,024	75	6,638,925	123

Ingham County (3303)
Division 11 - Gnrl Library

Table 16F

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	0.00%	\$0
Amortization of Unfunded Accrued Liability (28 years)	<u>0.00</u>	<u>1,129</u>
Total Long Term Contribution	0.00	1,129
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	0.00	1,129
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	0.00%	\$1,129

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 28 year amortization) will decrease/increase by 0.00% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 11 - Gnrl Library

Table 17F

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
Number	Annual Payroll			
1988	53	\$ 693,147	9.10%	0.00%
1989	47	690,914	9.50	0.00
1990	44	726,866	9.60	0.00
1991	84	2,332,009	9.20	0.00
1992	84	2,540,610	9.40	2.10
1993	39	778,240	8.53	3.60
1994	38	787,259	9.55	4.99
1995	36	783,940	10.06	7.26
1996	41	811,292	9.94	9.16
1997	35	717,473	8.81	8.81
1998	25	738,984	10.99	10.99
1999	24	733,396	10.20	10.20
2000	23	718,540	9.86	9.86
2001	0	0	-	-
2002	0	0	-	-

Notes: Actuarial assumptions were revised for the 1993 valuation.
 Actuarial assumptions were revised for the 1997 valuation.
 Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 11 - Gnrl Library

Table 18F

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001				(22)	(1)				0
2002									0

Table 19F

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)						24	31
2002	(1)			(1)				29

Table 20F

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 4,206	\$	(1)	\$ (3,724)	\$	20	\$ 95,499
2002	2	5,913		(1)	(1,541)		21	99,871

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 11 - Gnrl Library

Table 21F

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 71,726	\$ 0	\$ 156,633	\$ (90,139)	\$ 0	\$ 0	\$ 0	\$ 2,179,827
2002	2,787	0	53,795	(98,414)	0	0	0	2,137,995

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22F

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 2,303,218	\$ 2,179,827	95%	\$ 123,391	0%
2002	2,380,510	2,137,995	90	242,515	0

Ingham County (3303)
Division 12 - Gnrl ICEA Profs

Table 16G

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	6.67%	\$33,373
Amortization of Unfunded Accrued Liability (30 years)	<u>5.02</u>	<u>25,118</u>
Total Long Term Contribution	11.69	58,491
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	11.69	58,491
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	11.69%	\$58,491

@ The above Employer contribution requirement is based on Member contributions of 6.08% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.86% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$2,254,351
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	1.97%
Amortization Payment:	2.01%
Total:	3.98%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)

Division 12 - Gnrl ICEA Profs

Table 17G

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
Number	Annual Payroll			
1988	128	\$ 3,254,486	8.10%	0.00%
1989	130	3,588,309	8.30	0.00
1990	183	5,066,968	8.90	0.00
1991	147	4,189,841	9.90	0.00
1992	155	4,724,713	9.50	2.10
1993	93	3,044,030	7.04	2.97
1994	99	3,259,462	7.54	3.94
1995	92	3,079,949	7.88	5.69
1996	104	3,723,923	8.14	7.51
1997	107	3,696,908	6.39	6.39
1998	111	4,375,372	6.32	6.32
1999	107	4,249,788	5.42	5.42
2000	113	4,575,833	6.38	6.38
2001	130	5,161,093	6.98	6.98
2002	132	6,004,201	11.69	11.69

Notes: Adoption of Benefit C-2 and 1% member contributions reflected in 1988.
Adoption of 0.9% (0.7% for some) member contributions reflected in 1990.
Adoption of Benefit C-2 (B-1 base) for some members reflected in 1991.
Adoption of 1.1% member contributions for some members reflected in 1991.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit B-3 reflected in 1994 valuation.
Adoption of Benefit F55 (15 years) and 6.08% member contributions reflected in 1996 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit E-2 (2.5%) reflected in 2002 valuation.

Ingham County (3303)

Division 12 - Gnrl ICEA Profs

Table 18G

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(1)			(6)	(9)	(1)	4	30	130
2002	(1)			(2)	(6)			11	132

Table 19G

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001				(1)	(1)	7	7	30
2002	(1)	(1)		(4)			2	26

Table 20G

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	2	\$ 10,185	\$ 345		\$	\$	19	\$ 230,384
2002	3	36,169		(2)	(21,434)		20	245,119

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 12 - Gnrl ICEA Profs

Table 21G

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 276,700	\$ 310,813	\$ 742,356	\$ (222,486)	\$ (51,984)	\$ 0	\$ 269,808	\$ 9,918,034
2002	391,596	373,448	498,430	(228,904)	(40,116)	(1,063)	42,456	10,953,881

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22G

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 12,197,172	\$ 9,918,034	81%	\$ 2,279,138	44%
2002	16,574,719	10,953,881	66	5,620,838	94

Ingham County (3303)

Division 13 - Gnrl OPEIU Prob

Table 16H

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	3.12%	\$4,792
Amortization of Unfunded Accrued Liability (30 years)	<u>5.45</u>	<u>8,371</u>
Total Long Term Contribution	8.57	13,163
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	8.57	13,163
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	8.57%	\$13,163

@ The above Employer contribution requirement is based on Member contributions of 7.13% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.86% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$292,144
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	0.39%
Amortization Payment:	0.85%
Total:	1.24%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)

Division 13 - Gnrl OPEIU Prob

Table 17H

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
1988	41	\$ 1,091,980	8.90%	0.00%
1989	39	1,108,087	9.20	0.00
1990	37	1,120,341	8.70	0.00
1991	47	1,376,534	8.50	0.00
1992	46	1,481,775	8.70	1.90
1993	36	1,224,600	7.93	3.35
1994	37	1,324,328	10.29	5.37
1995	37	1,421,577	10.34	7.47
1996	38	1,517,127	10.17	9.38
1997	38	1,586,848	9.21	9.21
1998	38	1,635,036	9.07	9.07
1999	38	1,582,996	8.19	8.18
2000	38	1,718,096	6.62	6.62
2001	38	1,851,347	6.91	6.91
2002	36	1,843,133	8.57	8.57

Notes: Adoption of Benefit F55 (15 years) reflected in 1988 valuation.
Adoption of 1% member contributions reflected in 1988 valuation.
Adoption of 1.88% member contributions reflected in 1990 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit C-2 (B-1 Base) reflected in 1994 valuation.
Adoption of Benefit B-3 and 7.13% member contributions reflected in 1997 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit FAC-3 reflected in 2002 valuation.

Ingham County (3303)

Division 13 - Gnrl OPEIU Prob

Table 18H

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001						(2)	2		38
2002	(1)					(1)			36

Table 19H

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001						2		8
2002								8

Table 20H

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	5	\$ 72,984
2002	1	16,507					6	89,491

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 13 - Gnrl OPEIU Prob

Table 21H

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 150,011	\$ 130,848	\$ 441,623	\$ (72,984)	\$ 0	\$ 0	\$ 62,361	\$ 5,806,864
2002	130,566	135,002	248,803	(88,116)	0	(18,908)	0	6,214,211

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22H

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 7,277,059	\$ 5,806,864	80%	\$ 1,470,195	79%
2002	8,088,136	6,214,211	77	1,873,925	102

Ingham County (3303)

Division 14 - Gnrl TOPS UAW

Table 16I

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	8.09%	\$76,237
Amortization of Unfunded Accrued Liability (30 years)	<u>2.05</u>	<u>19,318</u>
Total Long Term Contribution	10.14	95,555
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	10.14	95,555
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	10.14%	\$95,555

@ The above Employer contribution requirement is based on Member contributions of 1.60% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.86% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 14 - Gnrl TOPS UAW

Table 17I

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1989	318	\$ 6,076,867	8.20%	0.00%
1990	314	6,544,556	10.10	0.00
1991	330	6,997,120	10.20	0.00
1992	336	7,457,762	10.40	2.30
1993	333	7,477,050	8.05	3.40
1994	348	7,838,512	9.60	5.01
1995	351	8,343,933	9.62	6.95
1996	343	8,364,912	9.81	9.05
1997	346	8,814,495	8.08	8.08
1998	350	9,430,825	7.35	7.35
1999	364	9,944,587	6.48	6.48
2000	374	10,401,805	6.21	6.21
2001	374	10,692,631	9.83	9.83
2002	386	11,308,351	10.14	10.14

Notes: Adoption of Benefits C-2 and F55 (15 years) reflected in 1989 valuation.
Adoption of 3% member contributions reflected in 1989 valuation.
Adoption of 1% member contributions reflected in 1990 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit B-3 and 4.85 member contributions reflected in 1994.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of 1.60% Member Contributions reflected in 2001 valuation.

Ingham County (3303)

Division 14 - Gnrl TOPS UAW

Table 18I

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(9)			(8)	(12)	(10)	2	37	374
2002	(9)			(5)	(19)	(2)	1	46	386

Table 19I

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(2)			(3)	(1)	9	10	61
2002	(3)			(7)			5	56

Table 20I

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	13	\$ 171,348	\$	(2)	\$ (4,851)	\$ (1,343)	149	\$ 1,205,706
2002	12	150,770		(7)	(43,557)	(16,693)	154	1,296,226

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 14 - Gnrl TOPS UAW

Table 21I

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 1,040,229	\$ 177,309	\$ 2,049,991	\$ (1,134,770)	\$ (34,699)	\$ (177,623)	\$ 0	\$ 28,414,971
2002	1,050,966	184,585	1,006,871	(1,315,853)	(32,307)	(1,434)	16,569	29,324,368

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22I

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 31,926,883	\$ 28,414,971	89%	\$ 3,511,912	33%
2002	33,645,046	29,324,368	87	4,320,678	38

Ingham County (3303)

Division 15 - Animal Cntrl FOP

Table 16J

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	0.19%	\$49
Amortization of Unfunded Accrued Liability (30 years)	<u>15.87</u>	<u>4,110</u>
Total Long Term Contribution	16.06	4,159
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	16.06	4,159
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	16.06%	\$4,159

@ The above Employer contribution requirement is based on Member contributions of 15.49% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.82% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$22,939
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	(0.72%)
Amortization Payment:	0.39%
Total:	(0.33%)

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)

Division 15 - Animal Cntrl FOP

Table 17J

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	9	\$ 248,830	7.13%	3.01%
1994	9	260,831	8.19	4.28
1995	9	269,541	8.24	5.95
1996	9	264,182	8.91	8.21
1997	10	325,176	9.82	9.82
1998	10	317,713	9.11	9.11
1999	9	306,275	9.49	9.49
2000	10	330,848	14.84	14.83
2001	9	326,170	12.74	12.74
2002	9	310,758	16.06	16.06

Notes: Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefits B-4, FAC-3, F50 (25 years) and 8.9% member contributions reflected in 1997 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Adoption of Benefit E-2 reflected in 2000 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of 14.28% Member Contributions reflected in 2001 valuation.
Adoption of Benefit F/N(25), 15.49% Member Contributions reflected in 2002 valuation.

Ingham County (3303)

Division 15 - Animal Cntrl FOP

Table 18J

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001					(2)			1	9
2002	(2)							2	9

Table 19J

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								1
2002								1

Table 20J

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	2	\$ 15,550
2002	2	49,156					4	64,706

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 15 - Animal Cntrl FOP

Table 21J

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 37,177	\$ 50,267	\$ 60,753	\$ (15,549)	\$ 0	\$ 0	\$ 0	\$ 802,507
2002	52,782	49,726	42,675	(44,417)	0	(965)	965	903,273

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22J

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 1,536,591	\$ 802,507	52%	\$ 734,084	225%
2002	1,822,913	903,273	50	919,640	296

Ingham County (3303)

Division 16 - Gnrl Commsnrs

Table 16K

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	5.34%	\$613
Amortization of Unfunded Accrued Liability (30 years)	<u>1.24</u>	<u>142</u>
Total Long Term Contribution	6.58	755
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	6.58	755
Temporary Adjustment ^	<u>(0.76)</u>	<u>(87)</u>
Required Contribution	5.82%	\$668

@ The above Employer contribution requirement is based on Member contributions of 3.56% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.90% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

^ Adjustments for 2001 and 2002 valuations are determined by the Retirement Board's resolution adopted March 13, 2002. See the December 31, 2001 annual actuarial report for details.

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 16 - Gnrl Commsnrs

Table 17K

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
1988	10	\$ 93,654	9.50%	0.00%
1989	19	185,480	6.30	0.00
1990	17	166,560	6.80	0.00
1991	19	185,713	7.10	0.00
1992	9	84,900	8.10	1.80
1993	10	100,880	4.04	1.71
1994	7	70,954	6.75	3.53
1995	8	95,310	6.91	4.99
1996	7	84,500	5.19	4.79
1997	9	103,415	4.56	4.56
1998	8	101,460	5.38	5.38
1999	8	103,005	2.33	2.32
2000	5	63,395	3.23	3.23
2001	10	133,143	6.02	4.51
2002	10	137,720	6.58	5.82

Notes: Adoption of Benefits C-2 and F55 (15 years) reflected in 1988 valuation.
Adoption of 4% member contributions reflected in 1989 valuation.
Adoption of 3.56% member contributions reflected in 1991 valuation.
Adoption of Benefit E reflected in 1993 valuation.
Actuarial assumptions were revised for the 1993 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Adoption of Benefit V- 6 reflected in 1998 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 16 - Gnrl Commsnrs

Table 18K

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001								5	10
2002									10

Table 19K

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								5
2002	(1)							4

Table 20K

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	5	\$ 17,888
2002	1	2,210					6	20,098

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 16 - Gnrl Commsnrs

Table 21K

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 3,089	\$ 4,739	\$ 19,980	\$ (17,888)	\$ 0	\$ (734)	\$ 734	\$ 292,469
2002	4,448	4,903	7,616	(21,018)	0	0	0	288,418

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22K

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 308,598	\$ 292,469	95%	\$ 16,129	12%
2002	320,249	288,418	90	31,831	23

Ingham County (3303)
Division 17 - ICEA Nurses

Table 16L

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	4.51%	\$11,476
Amortization of Unfunded Accrued Liability (30 years)	<u>4.88</u>	<u>12,418</u>
Total Long Term Contribution	9.39	23,894
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	9.39	23,894
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	9.39%	\$23,894

@ The above Employer contribution requirement is based on Member contributions of 11.87% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.89% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 17 - ICEA Nurses

Table 17L

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	60	\$ 1,702,354	8.74%	3.69%
1994	59	1,853,322	9.79	5.11
1995	61	2,003,757	9.86	7.12
1996	64	2,067,117	9.54	8.80
1997	60	2,062,206	8.13	8.13
1998	63	2,321,552	7.68	7.68
1999	66	2,449,404	7.26	7.26
2000	67	2,553,922	6.79	6.79
2001	68	2,710,021	8.40	8.40
2002	67	3,053,506	9.39	9.39

Notes: Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit E-2 reflected in 1994 valuation.
Adoption of Benefit F55 (15 years) reflected in 1994 valuation.
Adoption of 5.07% member contributions reflected in 1994 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Adoption of Benefit B-3 reflected in 1998 valuation.
Adoption of Benefit V- 6 reflected in 1998 valuation.
Adoption of Benefit FAC-3 reflected in 1998 valuation.
Adoption of 11.87% member contributions reflected in 1998 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 17 - ICEA Nurses

Table 18L

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(3)				(1)			5	68
2002				(1)	(4)	(2)		6	67

Table 19L

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001				(2)		2	1	13
2002	(2)	(1)					2	12

Table 20L

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	3	\$ 28,496	\$ 2,723		\$	\$ (4,586)	26	\$ 227,252
2002	2	23,186	3,458			(3,185)	28	250,711

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 17 - ICEA Nurses

Table 21L

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 196,369	\$ 321,184	\$ 515,290	\$ (222,531)	\$ (19,418)	\$ (2,030)	\$ 8,531	\$ 6,930,971
2002	214,553	375,409	321,239	(235,471)	(24,793)	(44,638)	0	7,537,270

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22L

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 8,916,596	\$ 6,930,971	78%	\$ 1,985,625	73%
2002	10,315,515	7,537,270	73	2,778,245	91

Ingham County (3303)

Division 18 - ICEA Ct. Prof

Table 16M

**Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004**

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	3.01%	\$4,726
Amortization of Unfunded Accrued Liability (30 years)	<u>8.41</u>	<u>13,204</u>
Total Long Term Contribution	11.42	17,930
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	11.42	17,930
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	11.42%	\$17,930

@ The above Employer contribution requirement is based on Member contributions of 9.84% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.84% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 18 - ICEA Ct. Prof****Table 17M****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	36	\$ 1,245,240	7.84%	3.31%
1994	42	1,375,365	8.54	4.46
1995	38	1,375,764	9.41	6.80
1996	37	1,442,687	10.09	9.30
1997	32	1,244,090	9.57	9.57
1998	33	1,413,047	11.49	11.49
1999	37	1,559,574	9.66	9.66
2000	35	1,515,603	8.79	8.78
2001	34	1,579,323	10.99	10.99
2002	37	1,883,979	11.42	11.42

Notes: Actuarial assumptions were revised for the 1993 valuation.
 Adoption of Benefits B-3 and F55 (15 years) reflected in 1994 valuation.
 Adoption of 7.5% member contributions reflected in 1994 valuation.
 Adoption of Benefit 20 and Out retirement reflected in 1996 valuation.
 Adoption of 9.84% member contributions reflected in 1996 valuation.
 Actuarial assumptions were revised for the 1997 valuation.
 Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 18 - ICEA Ct. Prof

Table 18M
Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(4)					(1)	3	1	34
2002	(1)			(1)			1	4	37

Table 19M
Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001						2		6
2002							1	7

Table 20M
Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	4	\$ 112,268	\$ 287		\$	\$	22	\$ 456,377
2002	1	20,146					23	476,523

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 18 - ICEA Ct. Prof

Table 21M

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 165,138	\$ 168,083	\$ 436,013	\$ (385,979)	\$ (2,795)	\$ 0	\$ 190,379	\$ 5,942,900
2002	166,027	186,458	186,390	(470,786)	0	0	1,573	6,012,562

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22M

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 8,326,341	\$ 5,942,900	71%	\$ 2,383,441	151%
2002	8,966,621	6,012,562	67	2,954,059	157

Ingham County (3303)
Division 19 - Cnstatnl Offcls

Table 16N

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	5.33%	\$2,154
Amortization of Unfunded Accrued Liability (30 years)	<u>4.26</u>	<u>1,722</u>
Total Long Term Contribution	9.59	3,876
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	9.59	3,876
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	9.59%	\$3,876

@ The above Employer contribution requirement is based on Member contributions of 8.46% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.89% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$147,401
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	(1.22%)
Amortization Payment:	1.63%
Total:	0.41%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)**Division 19 - Cnstatnl Offcls****Table 17N****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	5	\$ 254,947	7.58%	3.20%
1994	5	264,660	10.11	5.28
1995	5	274,083	7.49	5.41
1996	4	206,565	7.36	6.79
1997	5	297,992	7.48	7.48
1998	5	315,294	8.20	8.20
1999	6	404,043	5.88	5.88
2000	6	416,485	6.42	6.42
2001	6	463,955	8.32	8.32
2002	6	485,039	9.59	9.59

Notes: Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefits B-3 and F55 (15 years) reflected in 1994 valuation.
Adoption of 7.0% member contributions reflected in 1994 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Adoption of 5.00% member contributions reflected in 1998 valuation.
Adoption of 6.00% member contributions reflected in 1999 valuation.
Adoption of 5.00% member contributions reflected in 2000 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit V-6 reflected in 2000 valuation.
Adoption of Benefit FAC-3, B-4 - 80% Maximum, 8.46% Member Contributions reflected in 2002 valuation.

Ingham County (3303)

Division 19 - Cnstatnl Offcls

Table 18N

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001									6
2002									6

Table 19N

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								0
2002								0

Table 20N

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	7	\$ 96,192
2002							7	96,192

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 19 - Cnstatnl Offcls

Table 21N

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 27,281	\$ 23,198	\$ 108,386	\$ (96,192)	\$ 0	\$ 0	\$ 0	\$ 1,531,883
2002	31,140	41,034	48,880	(96,192)	0	0	0	1,556,745

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22N

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 1,684,832	\$ 1,531,883	91%	\$ 152,949	33%
2002	1,941,581	1,556,745	80	384,836	79

Ingham County (3303)

Division 21 - FOP Shrf Deputies

Table 160

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	4.60%	\$25,631
Amortization of Unfunded Accrued Liability (30 years)	<u>4.84</u>	<u>26,969</u>
Total Long Term Contribution	9.44	52,600
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	9.44	52,600
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	9.44%	\$52,600

@ The above Employer contribution requirement is based on Member contributions of 10.96% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.84% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 21 - FOP Shrf Deputies

Table 170

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
Number	Annual Payroll			
1992	141	\$ 4,625,892	9.40%	2.10%
1993	147	5,058,670	7.40	3.12
1994	138	4,908,359	8.69	4.54
1995	146	5,180,610	8.56	6.19
1996	153	5,176,592	8.10	7.47
1997	143	4,952,121	8.84	8.84
1998	144	6,128,303	9.38	9.38
1999	152	5,940,955	7.73	7.73
2000	154	6,160,326	6.96	6.96
2001	154	6,621,982	8.54	8.54
2002	153	6,686,427	9.44	9.44

Notes: Adoption of Benefits B-4, E and 6.55% member contributions reflected in 1993 valuation.
 Actuarial assumptions were revised for the 1993 valuation.
 Adoption of Benefit 3.2% multiplier and 10.43% member contributions reflected in 1997 valuation.
 Actuarial assumptions were revised for the 1997 valuation.
 Adoption of 10.43% member contributions reflected in 1998 valuation.
 Actuarial assumptions were revised for the 2000 valuation.
 Adoption of Benefit F/N(25), 10.96% Member Contributions reflected in 2001 valuation.

Ingham County (3303)

Division 21 - FOP Shrf Deputies

Table 180

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(5)			(2)	(4)	(2)		13	154
2002	(4)	(1)		(2)	(8)	(3)		17	153

Table 190

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)			(2)		7	5	20
2002				(3)	(1)		2	18

Table 200

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	7	\$ 179,878	\$ 1,077		\$	\$ (1,720)	57	\$ 1,089,816
2002	5	142,874		(2)	(13,679)	(1,917)	60	1,217,094

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 21 - FOP Shrf Deputies

Table 21O

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 519,780	\$ 735,558	\$ 1,406,277	\$ (1,058,811)	\$ (84,300)	\$ (22,913)	\$ 149,858	\$ 19,266,850
2002	489,336	760,140	653,931	(1,213,814)	(85,751)	(138,170)	0	19,732,522

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22O

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 24,125,583	\$ 19,266,850	80%	\$ 4,858,733	73%
2002	25,762,655	19,732,522	77	6,030,133	90

Ingham County (3303)

Division 40 - ICEA Unit 111

Table 16P

**Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004**

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	5.83%	\$4,025
Amortization of Unfunded Accrued Liability (30 years)	<u>0.62</u>	<u>428</u>
Total Long Term Contribution	6.45	4,453
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	6.45	4,453
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	6.45%	\$4,453

@ The above Employer contribution requirement is based on Member contributions of 3.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.83% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 40 - ICEA Unit 111

Table 17P

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1988	50	\$ 951,173	8.40%	0.00%
1989	60	1,383,191	9.10	0.00
1990	63	1,445,248	9.00	0.00
1991	67	1,491,640	8.90	0.00
1992	68	1,786,644	8.60	1.90
1993	64	1,545,125	4.94	2.08
1994	59	1,491,914	6.62	3.46
1995	38	901,078	6.60	4.77
1996	41	979,006	5.74	5.29
1997	35	920,331	5.56	5.56
1998	35	997,054	5.12	5.12
1999	28	755,810	1.97	1.96
2000	25	736,550	2.41	2.39
2001	22	657,455	3.87	3.87
2002	28	828,543	6.45	6.45

Notes: Adoption of Benefits C-2 and F55 (15 years) reflected in 1988 valuation.
Adoption of 3% member contributions reflected in 1988 valuation.
Adoption of 0% member contributions for some members reflected in 1989.
Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit E reflected in 1994 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 40 - ICEA Unit 111

Table 18P

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001	(3)				(2)			2	22
2002					(5)		2	9	28

Table 19P

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)			(1)			2	7
2002				(2)				5

Table 20P

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	4	\$ 32,213	\$		\$	\$ (3,356)	27	\$ 231,422
2002							27	231,422

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 40 - ICEA Unit 111

Table 21P

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 14,296	\$ 21,972	\$ 210,472	\$ (221,381)	\$ (2,005)	\$ (3,660)	\$ 3,352	\$ 3,029,975
2002	18,721	23,034	63,748	(231,855)	(6,725)	0	15,105	2,912,003

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22P

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 2,918,874	\$ 3,029,975	104%	\$ (111,101)	0%
2002	3,007,746	2,912,003	97	95,743	12

Ingham County (3303)

Division 41 - MCF Management

Table 16Q

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	9.08%	\$5,922
Amortization of Unfunded Accrued Liability (30 years)	<u>0.15</u>	<u>98</u>
Total Long Term Contribution	9.23	6,020
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	9.23	6,020
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	9.23%	\$6,020

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.88% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 41 - MCF Management****Table 17Q****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	11	\$ 471,750	9.43%	3.98%
1994	13	541,500	10.95	5.72
1995	11	293,628	11.28	8.14
1996	12	487,427	11.75	10.84
1997	15	512,335	11.64	11.64
1998	13	545,506	11.03	11.03
1999	22	845,543	9.48	9.48
2000	19	781,285	7.86	7.86
2001	18	763,973	8.14	8.14
2002	18	782,621	9.23	9.23

Notes: Actuarial assumptions were revised for the 1993 valuation.
Adoption of Benefit E reflected in 1994 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 41 - MCF Management

Table 18Q
Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001				(3)	(4)			6	18
2002					(3)			3	18

Table 19Q
Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001							3	10
2002								10

Table 20Q
Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	8	\$ 52,672
2002							8	52,672

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 41 - MCF Management

Table 21Q

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 79,895	\$ 0	\$ 89,535	\$ (52,922)	\$ (649)	\$ 0	\$ 1,022	\$ 1,227,752
2002	64,333	88	46,962	(52,672)	(65)	0	238	1,286,636

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22Q

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 1,172,178	\$ 1,227,752	105%	\$ (55,574)	0%
2002	1,307,854	1,286,636	98	21,218	3

Ingham County (3303)

Division 42 - ICEA Unit 11

Table 16R

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	7.10%	\$2,265
Amortization of Unfunded Accrued Liability (30 years)	<u>1.59</u>	<u>507</u>
Total Long Term Contribution	8.69	2,772
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	8.69	2,772
Temporary Adjustment ^	<u>(0.23)</u>	<u>(73)</u>
Required Contribution	8.46%	\$2,699

@ The above Employer contribution requirement is based on Member contributions of 3.95% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.91% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

^ Adjustments for 2001 and 2002 valuations are determined by the Retirement Board's resolution adopted March 13, 2002. See the December 31, 2001 annual actuarial report for details.

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 42 - ICEA Unit 11****Table 17R****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1995	14	\$ 427,567	5.59%	4.03%
1996	11	285,375	6.08	5.60
1997	16	376,839	5.52	5.52
1998	8	264,468	7.13	7.13
1999	9	318,233	7.12	7.12
2000	9	330,997	6.82	6.81
2001	9	381,171	8.67	8.22
2002	10	382,838	8.69	8.46

Notes: Adoption of Benefit FAC-3 reflected in 1996 valuation.
Adoption of 3.95% member contributions reflected in 1996 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 42 - ICEA Unit 11

Table 18R

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001					(2)			2	9
2002								1	10

Table 19R

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)			(1)			1	4
2002				(2)				2

Table 20R

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 10,146	\$		\$	\$	1	\$ 10,146
2002							1	10,146

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 42 - ICEA Unit 11

Table 21R

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 27,140	\$ 14,818	\$ 24,862	\$ (10,146)	\$ (1,866)	\$ (757)	\$ 44	\$ 336,159
2002	26,108	14,918	19,124	(10,146)	(80)	(238)	0	385,845

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22R

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 458,069	\$ 336,159	73%	\$ 121,910	32%
2002	499,413	385,845	77	113,568	30

Ingham County (3303)

Division 43 - ICEA Unit 1

Table 16S

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	5.33%	\$1,039
Amortization of Unfunded Accrued Liability (30 years)	<u>9.71</u>	<u>1,893</u>
Total Long Term Contribution	15.04	2,932
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	15.04	2,932
Temporary Adjustment ^	<u>(0.41)</u>	<u>(80)</u>
Required Contribution	14.63%	\$2,852

@ The above Employer contribution requirement is based on Member contributions of 3.50% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.90% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

^ Adjustments for 2001 and 2002 valuations are determined by the Retirement Board's resolution adopted March 13, 2002. See the December 31, 2001 annual actuarial report for details.

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 43 - ICEA Unit 1****Table 17S****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1995	8	\$ 313,942	7.53%	5.44%
1996	12	432,683	8.84	8.15
1997	9	323,039	10.39	10.39
1998	6	253,946	11.99	11.99
1999	5	211,746	12.18	12.18
2000	7	243,297	12.55	12.55
2001	9	299,551	12.45	11.63
2002	6	233,997	15.04	14.63

Notes: Actuarial assumptions were revised for the 1997 valuation.
 Adoption of 3.50% member contributions reflected in 1998 valuation.
 Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 43 - ICEA Unit 1

Table 18S

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001					(1)			3	9
2002					(2)	(1)			6

Table 19S

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001				(2)				3
2002								3

Table 20S

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	5	\$ 67,200
2002						(2,486)	5	64,714

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 43 - ICEA Unit 1

Table 21S

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 34,066	\$ 9,884	\$ 40,727	\$ (67,200)	\$ (9,791)	\$ (1,476)	\$ 1,476	\$ 587,407
2002	35,461	9,905	14,187	(66,371)	(2,323)	(5,918)	4,356	576,704

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22S

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 961,401	\$ 587,407	61%	\$ 373,994	125%
2002	1,000,555	576,704	58	423,851	181

Ingham County (3303)

Division 90 - Asst Pros Attnys

Table 16T

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	9.88%	\$15,016
Amortization of Unfunded Accrued Liability (30 years)	<u>4.08</u>	<u>6,201</u>
Total Long Term Contribution	13.96	21,217
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	13.96	21,217
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	13.96%	\$21,217

@ The above Employer contribution requirement is based on Member contributions of 1.40% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.91% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 90 - Asst Pros Attnys****Table 17T****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1993	27	\$ 1,413,378	9.75%	4.12%
1994	29	1,531,585	10.93	5.71
1995	29	1,479,614	10.54	7.61
1996	29	1,607,654	10.68	9.85
1997	29	1,596,005	8.88	8.88
1998	28	1,719,998	14.40	14.40
1999	29	1,534,889	13.77	13.77
2000	29	1,681,667	13.44	13.44
2001	30	1,626,502	13.67	13.67
2002	32	1,823,812	13.96	13.96

Notes: Actuarial assumptions were revised for the 1993 valuation.
 Adoption of Benefit B-3 reflected in 1994 valuation.
 Adoption of 1.4% member contributions reflected in 1994 valuation.
 Actuarial assumptions were revised for the 1997 valuation.
 Adoption of Benefit B-4 reflected in 1998 valuation.
 Adoption of Benefit V- 6 reflected in 1998 valuation.
 Adoption of Benefit F55 (15 years) reflected in 1998 valuation.
 Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 90 - Asst Pros Attnys

Table 18T

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001				(3)	(1)	(1)		6	30
2002				(1)				3	32

Table 19T

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001	(1)					5	6	14
2002							1	15

Table 20T

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001	1	\$ 8,246	\$		\$	\$	5	\$ 97,627
2002							5	97,627

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 90 - Asst Pros Attnys

Table 21T

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 225,254	\$ 22,971	\$ 328,575	\$ (93,505)	\$ 0	\$ (4,527)	\$ 40,928	\$ 4,445,017
2002	247,769	25,826	232,163	(97,628)	(74)	0	117,514	4,970,587

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22T

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 5,629,717	\$ 4,445,017	79%	\$ 1,184,700	73%
2002	6,359,505	4,970,587	78	1,388,918	76

Ingham County (3303)

Division 91 - Parks Union Empl

Table 16U

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	8.18%	\$1,089
Amortization of Unfunded Accrued Liability (30 years)	<u>1.26</u>	<u>168</u>
Total Long Term Contribution	9.44	1,257
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	9.44	1,257
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	9.44%	\$1,257

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.85% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)**Division 91 - Parks Union Empl****Table 17U****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1994	3	\$ 76,666	10.51%	5.48%
1995	3	82,837	11.15	8.06
1996	3	80,234	11.50	10.61
1997	5	144,342	12.37	12.37
1998	5	160,579	10.70	10.70
1999	6	195,920	10.42	10.42
2000	6	199,329	10.37	10.37
2001	5	167,040	11.30	11.30
2002	5	159,732	9.44	9.44

Notes: Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 91 - Parks Union Empl

Table 18U

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001						(1)			5
2002					(2)			2	5

Table 19U

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								0
2002								0

Table 20U

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	0	\$ 0
2002							0	0

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 91 - Parks Union Empl

Table 21U

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 20,080	\$ 0	\$ 5,528	\$ 0	\$ 0	\$ (58,303)	\$ 0	\$ 104,266
2002	18,925	0	7,697	0	0	0	0	130,888

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22U

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 179,060	\$ 104,266	58%	\$ 74,794	45%
2002	168,356	130,888	78	37,468	23

Ingham County (3303)

Division 92 - Parks Non Union

Table 16V

Computed Employer Contributions to the Retirement System For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	7.45%	\$1,125
Amortization of Unfunded Accrued Liability (30 years)	<u>6.35</u>	<u>959</u>
Total Long Term Contribution	13.80	2,084
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	13.80	2,084
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	13.80%	\$2,084

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.84% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Note: A change in benefit provisions and/or member contributions was reflected in the actuarial valuation (see Table 1). The effects of the change(s), as it relates to the benefits of current and future active members, are shown below:

Increase in Actuarial Accrued Liabilities:	\$40,148
Increase in Computed Long Term Employer Contribution As a Percentage of Active Member Payroll	
Normal Cost:	0.34%
Amortization Payment:	1.19%
Total:	1.53%

The full effects of the changes, if any, on the benefits of current retirees and beneficiaries, and the effect of any window benefit provisions are included in the liabilities of retirees and beneficiaries.

Ingham County (3303)**Division 92 - Parks Non Union****Table 17V****Computed Employer Contributions - Comparative Statement**

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1994	5	\$ 210,478	12.50%	6.53%
1995	5	190,147	14.25	10.29
1996	4	168,458	15.00	13.84
1997	5	178,782	13.26	13.26
1998	5	214,974	13.33	13.33
1999	4	196,079	12.49	12.49
2000	3	171,663	12.58	12.58
2001	3	178,325	12.69	12.69
2002	3	181,220	13.80	13.80

Notes: Adoption of Benefit F55 (25 years) reflected in 1995 valuation.
Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.
Adoption of Benefit FAC-3 reflected in 2002 valuation.

Ingham County (3303)

Division 92 - Parks Non Union

Table 18V

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001									3
2002									3

Table 19V

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								0
2002								0

Table 20V

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	0	\$ 0
2002							0	0

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 92 - Parks Non Union

Table 21V

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 22,273	\$ 0	\$ 48,447	\$ 0	\$ 0	\$ 0	\$ 0	\$ 665,460
2002	25,026	0	29,437	0	0	0	0	719,923

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22V

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 851,222	\$ 665,460	78%	\$ 185,762	104%
2002	934,422	719,923	77	214,499	118

Ingham County (3303)
Division 93 - Lgl Rsrch Clerks

Table 16W

Computed Employer Contributions to the Retirement System
For the Fiscal Year Beginning January 1, 2004

Contribution for	Employer Contribution @	
	As Percentage of Active Member Payroll	Estimated Monthly Dollar Contribution *
Normal Cost (in addition to member contributions)	6.70%	\$1,267
Amortization of Unfunded Accrued Liability (30 years)	<u>0.46</u>	<u>87</u>
Total Long Term Contribution	7.16	1,354
Overfunding Credit #	<u>0.00</u>	<u>0</u>
Total Regular Contribution	7.16	1,354
Temporary Adjustment	<u>0.00</u>	<u>0</u>
Required Contribution	7.16%	\$1,354

@ The above Employer contribution requirement is based on Member contributions of 0.00% of pay. If Member contributions are increased/decreased by 1.00% of pay, the Employer long term contribution requirement (based on a 30 year amortization) will decrease/increase by 0.84% of pay.

* Based on Valuation Payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher).

Only applies if assets exceed accrued liabilities.

Ingham County (3303)

Division 93 - Lgl Rsrch Clerks

Table 17W

Computed Employer Contributions - Comparative Statement

Valuation Date December 31,	Active Members		Employer Contribution as Percent of Payroll	
			Regular Contribution	Minimum Required Contribution
	Number	Annual Payroll		
1997	8	\$ 250,777	6.84%	6.84%
1998	5	175,963	7.21	7.21
1999	6	163,718	6.95	6.95
2000	8	225,369	6.73	6.73
2001	7	235,907	7.68	7.68
2002	6	227,014	7.16	7.16

Notes: Actuarial assumptions were revised for the 1997 valuation.
Actuarial assumptions were revised for the 2000 valuation.

Ingham County (3303)

Division 93 - Lgl Rsrch Clerks

Table 18W

Flow of Active Membership

Year Ended 12/31	Retired	Disabled	Died (Survivor Benefit)	Other Termination		Transfer		New Member	End of Year
				Vested	Non-Vested	Out	In		
2001					(3)			2	7
2002					(2)			1	6

Table 19W

Flow of Vested Former Members

Year Ended 12/31	Retired	Return To Work	Died (Survivor Benefit)	Forfeit Benefit	Transfer		New	End of Year
					Out	In		
2001								0
2002								0

Table 20W

Flow of Retirees and Beneficiaries

Year Ended 12/31	Added to Rolls			Removed from Rolls			Year End	
	Number@	Annual Benefits	Benefit Adjust.*	Number	Annual Benefits	Benefit Adjust.#	Number	Annual Benefits
2001		\$	\$		\$	\$	0	\$ 0
2002							0	0

@ Includes beneficiaries of retirees who died during the year.

* Includes where applicable E, E-1, and E-2 benefits, and corrections.

Includes where applicable C-2 and Accelerated Option benefits, and corrections.

Ingham County (3303)

Division 93 - Lgl Rsrch Clerks

Table 21W

Flow of Valuation Assets (Actuarial Value)

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Transfer*		Balance
	Employer	Member				Out	In	
2001	\$ 17,007	\$ 0	\$ 5,820	\$ 0	\$ 0	\$ 0	\$ 0	\$ 80,280
2002	17,925	0	6,542	0	0	0	0	104,747

* Transfers out and in are usually related to the transfer of participants between divisions or municipalities.

Table 22W

Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Accrued Liabilities	Valuation Assets	Funded Percent	Unfunded Accrued Liability	UAL as Percent of Annual Payroll
2001	\$ 107,904	\$ 80,280	74%	\$ 27,624	12%
2002	124,042	104,747	84	19,295	8

Ingham County (3303)

Table 23

GASB 25 And GASB 27 Information

The following information has been prepared to provide the information necessary to comply with GASB Statements Number 25 and 27. Statement 25 is effective for fiscal years beginning after June 15, 1996 and Statement 27 is effective for fiscal years beginning after June 15, 1998.

All entries and the annual employer contribution amount were based on the actuarial methods and assumptions used in the December 31, 2002 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

GASB 25 Information (as of 12/31/2002)

Actuarial Accrued Liability

Retirees and beneficiaries currently receiving benefits	\$71,811,173
Terminated employees (vested former members) not yet receiving benefits	11,457,102
Current employees - Accumulated employee contributions including allocated investment income	17,832,591
Employer financed	<u>82,646,640</u>
Total Actuarial Accrued Liability	\$183,747,506
Net Assets Available for Benefits at Actuarial Value	<u>138,299,599</u>
(Market Value is \$109,896,427)	
Unfunded (Overfunded) Actuarial Accrued Liability	\$45,447,907

GASB 27 Information (as of 12/31/2002)

Fiscal Year Beginning	January 1, 2004
Annual Required Contribution (ARC)	\$ 5,253,360*
Amortization Factor Used - Underfunded Liabilities (30 years)	0.053632
Amortization Factor Used - Underfunded Liabilities (28 years)	0.055889

*Based on valuation payroll, but the actual required contribution will be based on current monthly payroll (during the fiscal year beginning January 1, 2004) times the computed employer contribution rate(s) shown in Tables 15 and 16.

APPENDIX

SUMMARY OF

PLAN PROVISIONS

AND

ACTUARIAL ASSUMPTIONS

AND

ACTUARIAL FUNDING METHOD

AS OF DECEMBER 31, 2002

FOR THE

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM

OF MICHIGAN

INTRODUCTION

An actuarial valuation is the mathematical process that estimates plan liabilities and employer contribution requirements for purposes of financing the retirement system. This process is repeated annually to update the liabilities and contribution requirements for changes in member census and plan features, and to reflect actual plan experience in the process. The valuation reflects the present provisions of the Municipal Employees' Retirement Act of 1984, as amended by 1996 Public Act 220, as embodied in the MERS Plan Document (as revised). The specific benefit provisions in effect for each municipality are listed in Table 1 in the results section of the report.

In addition to utilizing current membership and financial data, an actuarial valuation requires the use of a series of assumptions regarding uncertain future events. The assumptions and methods used in the December 31, 2002 actuarial valuation are those adopted by the Retirement Board. The actuarial assumptions were last revised as of December 31, 2000 to reflect the results of the study of plan experience covering the period from December 31, 1993 through December 31, 1998.

There have been no changes in the funding method which was adopted by the Retirement Board commencing with the December 31, 1993 valuations. The basic funding method is entry age normal and employer contribution amounts are developed as a level percentage of payroll.

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology follow this section.

SUMMARY OF PLAN PROVISIONS

The benefits summarized in this section are intended only as general information regarding the Municipal Employees' Retirement System of Michigan. They are not a substitute for Act. No. 220 of the Public Acts of 1996, and the MERS Plan Document as revised. If any conflict occurs between the information in this summary and Act. No. 220 of the Public Acts of 1996, as amended, or the MERS Plan Document, as revised, the provisions of Act. No. 220 and the MERS Plan Document govern.

Eligibility for Retirement (Plan Section 10)

Age 60 with 10 or more years of credited service (reduced to 8 or 6 years if either Benefit V-8 or V-6, respectively, is adopted).

Age 55 with 15 or more years of credited service (reduced benefit unless Benefit F55 is adopted).

Age 50 with 25 or more years of credited service (reduced benefit unless Benefit F50 is adopted).

The retirement allowance is reduced $\frac{1}{2}$ of 1% for each complete month that the retirement date precedes the age at which full normal retirement benefits are available. The reduction may be partially or fully waived by adopting Benefit F55 and/or Benefit F50 and/or Benefit F(N).

Optional Retirement Programs (Unreduced Benefits) (Plan Section 10)

Benefit F50 - Age 50 with a required period of credited service of either 25 or 30 years.

Benefit F55 - Age 55 with a required period of credited service of 15, 20, 25 or 30 years.

Benefit F(N) - Any age with a required period of credited service of either 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 or 30 years.

Mandatory Retirement

None.

Deferred Retirement (Plan Section 12)

Termination of membership before age 60 other than by retirement or death, after 10 years of credited service (8 or 6 years if Benefit V-8 or V-6 is adopted). Retirement allowance begins upon application and satisfaction of the eligibility requirements for retirement. The deferred retirement allowance is computed in the same manner as a service retirement allowance, based on the benefit program in effect as of the date of termination of membership.

Rights to an allowance are forfeited if the member's accumulated contributions are withdrawn after termination of employment.

Service Retirement Allowance (Plan Sections 13-19)

Credited service at time of termination of membership is multiplied by:

- Benefit A - 1.0% of a member's final average compensation (FAC). Benefit A may not be adopted after January 2, 1986.
- Benefit B - Contact MERS office for details. Benefit B may not be adopted after January 2, 1986.
- Benefit C New - 1.3% of FAC.
- Benefit C Old - Sum of 1.0% times the first \$4,200 of FAC, plus 1.5% times the portion of FAC over \$4,200. Benefit C Old may not be adopted after January 2, 1986.
- Benefit C-1 New - 1.5% of FAC.
- Benefit C-1 Old - Sum of 1.2% times the first \$4,200 of FAC, plus 1.7% times the portion of FAC over \$4,200. Benefit C-1 Old may not be adopted after January 2, 1986.
- Benefit B-1 - 1.7% of FAC.
- Benefit C-2 - 2.0% of FAC, payable until attainment of the age at which unreduced Social Security benefits are available (currently age 65 for normal retirement, gradually increasing to age 67). Upon attainment of this age, the benefit reverts to the basic Benefit A, C New, C Old, C-1 New, C-1 Old or B-1.
- Benefit B-2 - 2.0% of FAC.
- Benefit B-3 - 2.25% of FAC, with a maximum benefit of 80% of FAC.
- Benefit B-4 - 2.5% of FAC, with a maximum benefit of 80% of FAC.

Note for MERS' Defined Contribution Program: The Annual Actuarial Valuation addresses assets and liabilities for participation under MERS' Defined Benefit Programs. MERS' Defined Contribution Program (Benefit Program DC), which first became available for adoption in late 1997, is not addressed in the valuation results as it is not a defined benefit program.

Act 88 Reciprocity

If the municipality has elected to come under the provision of Act 88 (see Table 1), service with former and future public employers in Michigan may be used to satisfy the service eligibility conditions of MERS.

Final Average Compensation (Plan Sections 2A(6) and 2A(11))

MERS plan benefits are based on a member's final average compensation (FAC). For this purpose, final average compensation means one-fifth of the aggregate amount of compensation (as defined in the MERS Plan Document, Section 2A(6)) paid to a member during the period of 5 consecutive years of the member's credited service in which the aggregate compensation paid is highest, known as FAC-5. Adoption of Benefit FAC-3 results in final average compensation being averaged over 3 years, instead of 5 years.

Disability Retirement Allowance (Plan Section 24)

Total and permanent disability while employed by a participating municipality and after meeting the vesting requirement of the benefit program. The service requirement is waived if the disability is the natural and proximate result of duty-connected causes.

The allowance is computed in the same manner as a service retirement allowance, except that the reduction for retirement before age 60 is not applied.

If disability is due to duty-connected causes, the amount of the retirement allowance shall not be less than 25% of the member's final average compensation.

Adoption of optional Benefit Program D-2 will provide a retirement allowance for a duty-connected disability that is the greater of:

- (i) 25% of the member's final average compensation; or
- (ii) A benefit based on 10 years of credited service in addition to the member's actual period of service, provided the total years of service do not exceed the greater of 30 years or the member's actual period of service.

Non-Duty Death Allowance (Plan Sections 26 and 28)

If a member or vested former member with the minimum years of service required to be vested dies before retirement, a monthly survivor allowance may be payable.

If the member is married, the spouse is the automatic beneficiary unless the spouse, in writing, declines a benefit in favor of another named beneficiary.

A contingent survivor beneficiary (named in an Option II Contingent Beneficiary Designation form filed with MERS) will receive a retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at death, but reduced to reflect an Option II (100% joint and survivor) election. The reduction for retirement before age 60 is not applied. Payment of a retirement allowance to the contingent survivor beneficiary of a deceased member commences immediately. Payment of a retirement allowance to the contingent survivor beneficiary of a deceased vested former member commences on the date the member would have first satisfied eligibility for retirement with an unreduced service retirement allowance.

If there is no named beneficiary and the member leaves a spouse, the spouse will receive a survivor allowance. Payment of a retirement allowance to the surviving spouse of a deceased member commences immediately. Payment of a retirement allowance to the surviving spouse of a deceased vested former member commences on the date the member would have first satisfied eligibility for retirement for an unreduced service retirement allowance. The amount of a surviving spouse's retirement allowance shall be 85% of the deceased member's or deceased vested former member's accrued retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at time of death.

The amount of a surviving spouse's benefit is always the larger of i) the benefit computed as a contingent survivor beneficiary, and ii) the 85% of accrued retirement allowance benefit described above.

If there is no named beneficiary and no retirement allowance being paid to a surviving spouse, unmarried children under age 21 will be paid an equal share of 50% of the deceased member's or deceased vested former member's accrued retirement allowance. The reduction for retirement before age 60 is not applied.

If no retirement allowance becomes payable at death, the member's accumulated contributions, if any, are paid to the beneficiary or to the decedent's estate.

Duty-Connected Death Allowance (Plan Section 27)

A duty death allowance, computed in the same manner as a non-duty death allowance, may be payable to a spouse or children if death occurs as the natural and proximate result of performance of duty with a participating municipality. The vesting requirement is waived, and the minimum benefit is 25% of the deceased member's final average compensation.

Adoption of optional Benefit Program D-2 will provide a retirement allowance for a duty-connected death that is the greater of:

- (i) 25% of the member's final average compensation; or
- (ii) A benefit based on 10 years of credited service in addition to the member's actual period of service, provided the total years of service do not exceed the greater of 30 years or the member's actual period of service.

Member Contributions (Plan Sections 32 and 35)

Each member contributes a percent of annual compensation, as selected by the municipality. Any percentage from 0% to 10% (in 0.1% increments) may be selected. A 3%/5% contribution program was available prior to 1985 and may be continued (until any new benefit programs are adopted), but not adopted, after 1984. Under this program the member contributes 3% of the first \$4,200 of annual compensation and 5% of portions of annual compensation over \$4,200.

If a member leaves the employ of the municipality, or dies, without a retirement allowance or other benefit payable on his/her account, the member's accumulated contributions plus interest (at a rate determined by MERS, currently 4%) are refunded with spousal consent, to the member, if living, or to the member's surviving spouse, if any, or to a named beneficiary (after spousal consent, if applicable).

Post-Retirement Adjustments (Plan Sections 20-22)

Benefit E – provides a one-time benefit increase to present retirants and beneficiaries. The amount of the increase is equal to a fixed percentage of the present benefit, or a fixed dollar amount times the number of years since the later of retirement or the date specified in the resolution. Benefit E may be readopted from time to time.

Benefit E-1 – provides automatic 2.5% annual non-compounded benefit increases to persons (and their beneficiaries) retired before the effective date of Benefit E-1. Such increases are further limited to increases in the Consumer Price Index (CPI) if Benefit E-1 was adopted before January 1, 1999. For all adoptions or readoptions after that date, the increase is an automatic 2.5% non-compounded increase without any CPI limitation.

Benefit E-2 – provides automatic 2.5% annual non-compounded benefit increases to persons (and their beneficiaries) retired on or after the effective date of Benefit E-2. Such increases are further limited to increases in the Consumer Price Index (CPI) if Benefit E-2 was adopted before January 1, 1999. For all adoptions or readoptions after that date, the increase is an automatic 2.5% non-compounded increase without any CPI limitation.

Death-After-Retirement Surviving Spouse Benefit (Plan Sections 23 and 23A)

A retiring member electing form of payment SL (straight life retirement allowance) is normally paid a lifetime retirement allowance, with payments terminating at death. The retiring member could provide benefits to a surviving spouse or another named beneficiary (see below) by electing Option II (100% continuation to beneficiary) or Option II-A (75% continuation to beneficiary) or Option III (50% continuation to beneficiary). A surviving spouse is automatically the beneficiary to an Option II, IIA or III allowance unless the spouse, in writing, relinquishes the benefit to the member electing a straight life allowance or to another named beneficiary. Electing these alternate forms of payment would lower the retiring member's retirement allowance.

If Benefit Program RS50% is adopted, a member retiring on or after the effective date of Benefit RS50% may elect form of payment SL and still provide a 50% survivor benefit to the member's spouse. To be eligible for a surviving spouse benefit, the retiring member and spouse must have been married to each other both at the time of death and during the full one-year period just before retirement.

ACTUARIAL ASSUMPTIONS

Actuarial Assumptions

To calculate MERS contribution requirements, assumptions are made about future events that could affect the amount and timing of benefits to be paid and the assets to be accumulated. The economic and demographic assumptions include:

- An assumed rate of investment return that is used to discount liabilities and project what plan assets will earn.
- A mortality table projecting the number of members who will die before retirement and the duration of benefit payments after retirement.
- Assumed retirement rates projecting when members will retire and commence receiving retirement benefits.
- A set of withdrawal and disability rates to estimate the number of members who will leave the work force before retirement.
- Assumed rates of salary increase to project member compensation in future years.

The actuarial assumptions used in connection with this December 31, 2002 actuarial valuation are unchanged from the December 31, 2001 valuation assumptions. The actuarial assumptions currently utilized are summarized below and on the following pages.

Interest Rate

Funding plan benefits involves the accumulation of assets to pay benefits in the future. These assets are invested and the net rate of investment earnings is a significant factor in determining the contributions required to support the ultimate cost of benefits. For the 2002 actuarial valuation, the net long-term investment yield is assumed to be 8%.

The reader should note that, given that the actuarial value of assets is currently 25% higher than the market value, meeting the actuarial assumption will require average future market returns that exceed the 8% investment return assumption.

Salary Increases

Because benefits are based on a member's final average compensation, it is necessary to make an assumption with respect to each member's estimated salary progression. The salary increase

assumption used in the actuarial valuation projects annual salary increases of 4.5% plus a percentage based on an age-related scale to reflect merit, longevity and promotional salary increases.

The salary increase assumption used for the valuation projects the following salary increases for selected ages:

Age	Base (Inflation)	Merit and Longevity	Total Percentage Increase in Salary
20	4.50%	4.16%	8.66%
25	4.50	2.88	7.38
30	4.50	1.98	6.48
35	4.50	1.52	6.02
40	4.50	1.10	5.60
45	4.50	0.66	5.16
50	4.50	0.32	4.82
55	4.50	0.14	4.64
60	4.50	0.00	4.50

Withdrawal Rates

The withdrawal rates are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of withdrawal applied in the current valuation are based on years of service for members with less than 5 years of service, and based on age for members with 5 or more years of service.

Sample rates of withdrawal from active employment are shown below:

Sample Ages	Years of Service	% of Active Members Withdrawing Within the Next Year
	0	18.00%
	1	18.00
	2	16.00
	3	12.00
	4	10.00
20	5 and over	9.00
25		9.00
30		9.00
35		7.00
40		5.00
45		4.00
50		4.00
55		3.00
60		3.00
65		2.00
70		0.00

Retirement Rates

A schedule of retirement rates is used to measure the probability of eligible members retiring during the next year. To reflect the impact plan design may have on retirement experience, separate retirement rates apply to valuation divisions without Benefits F50, F55 or F(N), to those divisions that have adopted F55, to those that have adopted F50, and to those that have adopted F(N). The retirement rates in use for each category are shown below:

NORMAL RETIREMENT - AGE BASED - BENEFIT F(N) NOT ADOPTED

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year		
	Without F50 or F55 or F(N)	With F55	With F50
50			22%
51			22
52			22
53			22
54			24
55		18%	18
56		15	14
57		10	16
58		15	18
59		20	18
60	20%	20	20
61	24	24	24
62	24	24	24
63	24	24	24
64	27	27	27
65	30	30	30
66	30	30	30
67	30	30	30
68	30	30	30
69	30	30	30
70	100	100	100

NORMAL RETIREMENT - SERVICE BASED - BENEFIT F(N) ADOPTED

Years of Service	Percent of Eligible Active Members Retiring Within Next Year	Years of Service	Percent of Eligible Active Members Retiring Within Next Year	Years of Service	Percent of Eligible Active Members Retiring Within Next Year
20	22%	31	22%	41	24%
21	22	32	22	42	24
22	22	33	22	43	24
23	22	34	24	44	27
24	22	35	18	45	30
25	22	36	14	46	30
26	22	37	16	47	30
27	22	38	18	48	30
28	22	39	18	49	30
29	22	40	20	50	100
30	22				

Municipalities that have adopted a non-standard benefit multiplier after December 31, 1996 that is in excess of the B-4, 2.5% multiplier, will have a retirement rate equal to 75% at the first age at which unreduced plan benefits are available.

EARLY RETIREMENT – REDUCED BENEFIT

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	3%
51	3
52	5
53	8
54	15
55	4
56	4
57	4
58	8
59	10

Disability Rates

Disability rates are used in the valuation to estimate the incidence of member disability in future years.

The assumed rates of disablement at various ages are shown below:

Sample Ages	Percent Becoming Disabled Within Next Year
20	0.02%
25	0.02
30	0.02
35	0.02
40	0.05
45	0.12
50	0.25
55	0.40
60	0.45
65	0.50

85% of the disabilities are assumed to be non-duty and 15% of the disabilities are assumed to be duty related. For those plans which have adopted disability provision D-2, 70% of the disabilities are assumed to be non-duty and 30% are assumed to be duty related.

Mortality Table

In estimating the amount of the reserves required at the time of retirement to pay a member's benefit for the remainder of his or her lifetime, it is necessary to make an assumption with respect to the probability of surviving to retirement and the life expectancy after retirement.

The mortality table used to project the mortality experience of plan members is the 1994 Group Annuity Mortality Table. For disabled retirees, the regular mortality tables are used with a 3-year set forward in ages to reflect the higher expected mortality rates of disabled members.

The life expectancies and mortality rates projected by the 1994 Group Annuity Mortality table for **non-disabled** members are shown below for selected ages:

Age	Expected Years of Life Remaining		Mortality Rates	
	Male	Female	Male	Female
20	58.90	63.60	0.05%	0.03%
25	54.06	58.69	0.07	0.03
30	49.25	53.77	0.08	0.04
35	44.45	48.88	0.09	0.05
40	39.64	44.01	0.11	0.07
45	34.88	39.18	0.16	0.10
50	30.19	34.39	0.26	0.14
55	25.65	29.67	0.44	0.23
60	21.33	25.09	0.80	0.44
65	17.34	20.77	1.45	0.86
70	13.79	16.80	2.37	1.37
75	10.62	13.10	3.72	2.27
80	7.87	9.81	6.20	3.94

The life expectancies and mortality rates projected by the 1994 Group Annuity Mortality table for **disabled** members are shown below for selected ages:

Age	Expected Years of Life Remaining		Mortality Rates	
	Male	Female	Male	Female
20	55.99	60.65	0.06%	0.03%
25	51.17	55.74	0.08	0.03
30	46.37	50.83	0.08	0.04
35	41.56	45.95	0.09	0.06
40	36.77	41.11	0.14	0.09
45	32.05	36.30	0.21	0.12
50	27.45	31.55	0.36	0.19
55	23.02	26.89	0.63	0.34
60	18.89	22.46	1.15	0.67
65	15.16	18.36	1.99	1.18
70	11.84	14.54	3.12	1.83
75	8.90	11.07	5.02	3.17
80	6.50	8.08	8.25	5.49

Miscellaneous and Technical Assumptions

Marriage Assumptions	- 70% of males and 70% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing	- Beginning of valuation year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing	- Decrements of all types are assumed to occur mid-year.
Eligibility Testing	- Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service	- Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity	- Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation	- Disability and death-in-service decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit	- The assumed normal form of benefit is the straight life form.
Loads	- None.
Incidence of Contributions	- Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Maximum Compensation	- The dollar compensation limits under Section 401(a)(17) of the Internal Revenue Code are projected to increase 4.5% annually.
Maximum Benefit	- The dollar benefit limitations under Section 415 of the Internal Revenue Code are projected to increase 4.5% annually. Employee divisions 02, 20-29, 05 and 50-59 are presumed eligible for the public safety benefit limits.

ACTUARIAL FUNDING METHOD

The Retirement Board has adopted funding methodology for the Retirement System to achieve the following major objectives:

- Develop level required contribution rates as a percentage of payroll;
- Finance benefits earned by present employees on a current basis;
- Accumulate assets to enhance members' benefit security;
- Produce investment earnings on accumulated assets to help meet future benefit costs;
- Make it possible to estimate the long-term actuarial cost of proposed amendments to System provisions; and
- Assist in maintaining the Retirement System's long-term financial viability.

The basic funding objective is a level pattern of cost as a percentage of salary throughout each member's working lifetime. The funding method used in this actuarial valuation – the entry age normal cost method – is intended to meet this objective and result in a relatively level long-term contribution requirement as a percentage of salary.

Under the entry age normal cost method, the total actuarially-determined contribution requirement is equal to the sum of the normal cost plus the payment required to fund the unfunded actuarial accrued liability over a period of years. Funding or amortizing the unfunded actuarial accrued liability includes a payment toward the liability (principal) plus a payment to reflect the time value of money (interest).

Normal Cost

In general terms, the normal cost is the cost of benefit rights accruing on the basis of current service. Technically, the normal cost rate is the level percentage-of-salary contribution required each year, with respect to each member, to accumulate over his or her projected working lifetime the reserves needed to meet the cost of earned benefits. The normal cost represents the ultimate cost of the Retirement System, if the unfunded liability is paid up and the actual experience of the System conforms to the assumptions.

Actuarial Accrued Liability

The total actuarial present value of future benefits is computed using the valuation's actuarial assumptions. Subtracting the present value of future normal costs results in the actuarial accrued liability.

The total actuarial accrued liability essentially represents the amount that would have been accumulated as of December 31, 2002, if contributions sufficient to meet the normal costs of the Retirement System had been made each year in the past, benefit provisions had always been the same as current benefit provisions, and actual past experience had always conformed to current actuarial assumptions. If assets equaled the total accrued liability, there would be no unfunded liability and future contribution requirements would consist solely of the calculated normal cost rates.

Amortization of Unfunded Actuarial Accrued Liability

Unfunded actuarial accrued liability is amortized by level percent of payroll contributions over a period of years. Active member payroll is assumed to increase 4.5% a year for the purpose of determining the level percent contributions. The standard amortization period to fund the unfunded liability is 30 years for positive unfunded liabilities, and 10 years for negative unfunded liabilities, with these time periods reestablished with each annual actuarial valuation. However, municipalities that entered MERS before January 1, 2000 may currently have an amortization period that is longer than 30 years that reduces annually by 1 year until the period reaches 30 years. At that point, the amortization period will remain at 30 years. All new municipalities entering MERS on and after January 1, 2000 have a 30 year amortization. For divisions that are closed to new hires, the amortization period for positive unfunded liabilities is decreased annually by 2 years until the period reaches 5 years. At that point, the amortization period will remain at 5 years. Shorter amortization periods may be elected by a municipality (but not shorter than 5 years for negative unfunded liabilities). Table 16 in the results section of this report indicates the current length of the amortization period for each division. Note that when the 10 year amortization is used for negative unfunded liabilities, Table 16 reports the amortization in two parts: i) a long term credit based on the long term amortization period (usually 30 years), plus ii) an overfunding credit resulting from using a 10 year amortization.

Present Value of Accrued Benefits

The present value of accrued benefits represents the actuarial value of benefits that have been earned as of the valuation date for all members of the valuation division. This benefit reflects the final average compensation and plan benefit service of each member, and plan features of the member's valuation division as of the valuation date. Included in this value is the current value of vested benefits for members who have met plan vesting requirements and the current value of non-vested benefits for members who have not yet met plan vesting requirements. Regardless of plan vesting service, all member contributions are vested. Active members are assumed to continue in employment until retirement, death, disability or termination, but benefit amounts are frozen on the valuation date.

Termination Liability

The termination liability represents the value of the benefits that have been earned as of the valuation date based on final average compensation and benefit service as of the valuation date. All active members are assumed to terminate employment on the valuation date. Vested active members are assumed to retire at the first age when the member would be eligible for unreduced deferred retirement benefits, assuming no continued employment after the valuation date. Non-vested active members are assumed to only receive a refund of member contributions, if any.

ASSET VALUATION METHOD

The actuarial value of assets is determined on the basis of a method that calculates expected investment income at the valuation rate of return and adds a portion of the difference between the expected investment income and actual investment income earned on a market value basis. The difference in investment income between expected return and market return is recognized over a 5-year period at the rate of 20% per year. This asset valuation method was first adopted for the December 31, 1993 valuation, and is applied as follows:

Actuarial Value equals:

- (a) Actuarial value of assets from the previous actuarial valuation, plus
- (b) Aggregate employer and member contributions since the last valuation, minus
- (c) Benefit payments and refunds of member contributions since the last valuation, plus
- (d) Estimated investment income at the 8% valuation interest rate, plus
- (e) Portion of gain (loss) recognized in the current valuation.

For the above purpose, gain (loss) is defined as the excess during the period of the investment return on the market value of assets over the expected investment income. The portion recognized in the valuation is 20% of the current year's gain (loss) plus 20% of the gain (loss) from each of the 4 preceding years.

During 2002, the approximate net investment return on average total assets at actuarial value (determined as the actuarial value of investment income divided by the average actuarial value of assets during the year) was 3.43%. The corresponding amounts for 2001, 2000, 1999 and 1998 were 7.72%, 10.36%, 15.38% and 12.93%, respectively.

For the December 31, 2002 valuation, the actuarial value of assets is equal to 125.85% of market value (compared to 110.60%, 100.07%, 87.89% and 88.86% in 2001, 2000, 1999 and 1998, respectively). This percentage is applied to each division's reported market value of assets to estimate the actuarial value of assets for the division. The chart on the following page provides the details of the derivation of the actuarial value of assets for the retirement system in the aggregate.

The reader should note that, given that the actuarial value of assets is currently 25% higher than the market value, meeting the actuarial assumption will require average future market returns that exceed the 8% investment return assumption.

Municipal Employees' Retirement System of Michigan
Derivation of Actuarial Value of Assets

Valuation Date December 31:	1998	1999	2000	2001	2002
1. Beginning of Year Assets					
a) Market Value	\$ 3,003,527,525	\$ 3,411,188,529	\$ 3,941,864,651	\$ 3,788,886,471	\$ 3,647,820,869
b) Valuation Assets	2,692,161,219	3,031,278,484	3,464,584,875	3,791,423,339	4,034,377,419
2. End of Year Market Value Assets	3,411,188,529	3,941,864,651	3,788,886,471	3,647,820,869	3,285,304,333
3. Net Additions to Market Value					
a) Net Contributions	144,118,741	161,911,772	162,703,877	154,103,475	167,427,558
b) Net Investment Income = (3d) - (3a) - (3c)	416,174,409	561,188,970	(122,407,374)	(93,269,286)	(324,926,459)
c) Benefit Payments	(152,632,146)	(192,424,619)	(193,274,683)	(201,899,791)	(205,017,635)
d) Total Additions to Market Value = (2) - (1a)	407,661,004	530,676,123	(152,978,180)	(141,065,602)	(362,516,536)
4. Average Valuation Assets = (1b) + .5x[(3a) + (3c)]	2,687,904,516	3,016,022,060	3,449,299,472	3,767,525,181	4,015,582,381
5. Expected Income at Valuation Rate = 8% x (4)	215,032,361	241,281,765	275,943,958	301,402,014	321,246,590
6. Gain (Loss) = (3b) - (5)	201,142,048	319,907,205	(398,351,332)	(394,671,300)	(646,173,049)
7. Phased-In Recognition of Investment Return					
a) Current Year: 0.2 x (6)	40,228,410	63,981,441	(79,670,266)	(78,934,260)	(129,234,610)
b) First Prior Year	43,743,056	40,228,410	63,981,441	(79,670,266)	(78,934,260)
c) Second Prior Year	13,182,671	43,743,056	40,228,410	63,981,441	(79,670,266)
d) Third Prior Year	61,401,895	13,182,671	43,743,056	40,228,410	63,981,441
e) Fourth Prior Year	(25,957,723)	61,401,895	13,182,671	43,743,057	40,228,408
f) Total Recognized Investment Gain (Loss)	132,598,309	222,537,473	81,465,312	(10,651,618)	(183,629,287)
8. Change in Valuation Assets (3a) + (3c) + (5) + (7f)	339,117,265	433,306,391	326,838,464	242,954,080	100,027,226
9. End of Year Assets					
a) Market Value = (2)	3,411,188,529	3,941,864,651	3,788,886,471	3,647,820,869	3,285,304,333
b) Valuation Assets = (1b) + (8)	3,031,278,484	3,464,584,875	3,791,423,339	4,034,377,419	4,134,404,645
c) Difference Between Market & Valuation Assets	379,910,045	477,279,776	(2,536,868)	(386,556,550)	(849,100,312)
10. Recognized Rate of Return = [(5) + (7f)] / (4)	12.93%	15.38%	10.36%	7.72%	3.43%
11. Market Rate of Return	13.88%	16.53%	(3.12%)	(2.48%)	(8.95%)
12. Valuation Asset Adjustment Factor = (9b) / (9a)	0.888628	0.878920	1.000670	1.105969	1.258454



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