

August 2002

**Quadrennial Experience Study of
Actuarial Assumptions for the Five-Year
Period July 1, 1996 - June 30, 2001**

City of Philadelphia Municipal Retirement System

MERCER

Human Resource Consulting



Marsh & McLennan Companies

Contents

1. Introduction.....1

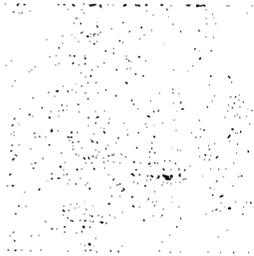
2. Certificaiton5

3. Discussion of Non-economic Experience Results6

4. Discussion of Economic Experience Results.....11

5. Recommended Actuarial Assumptions.....14

6. Tabular and Graphical Summary of Experience Results.....24



Introduction

This Actuarial Experience Study for the City of Philadelphia Municipal Retirement System covers the five years from July 1, 1996 through June 30, 2001. The study contains information for setting actuarial assumptions to use in the July 1, 2001 and future actuarial valuations. Mercer analyzed the System's actuarial experience, compared experience with the expected outcomes using your current actuarial assumptions, and summarized our findings. This study is the most recent in a series of experience studies we've performed. The previous study covered July 1, 1992 through June 30, 1997.

We prepared this report in accordance with the requirements of Act 205 of 1984 which requires the study to cover five years of experience and be performed every four years. Act 205 requires the actuarial valuation reports to be prepared using actuarial assumptions selected jointly by the actuary and the Board. As actuary to the Retirement Board, our recommendations for the actuarial assumptions to be used in the July 1, 2001 actuarial valuation are presented in this report.

Summary of Findings

Non-economic assumptions

Mercer reviewed the actuarial experience for this period and compared it with the results of prior studies. We combined the 1967 Plan and Plan 87 experience for analysis of deaths and disabilities; however, for the first time, we separated those plans' experience for turnover (quits and discharges) and retirements. Experience for municipal members are separated for males and females while police and fire members are shown combined.

Our recommendations reflect two approaches.

Where experience is relatively consistent but shows some change in trends we have adjusted the assumption to better fit future experience. The other approach is to reflect a significant change in our assumption because of changes in behavior or incidence of occurrence.

Minor changes were therefore made to the rates for:

- 1967 Municipal Division active members male turnover
- 1967 Police and Fire Division active members; turnover for males and females
- 1967 Plan active member retirement rates for males and females of the Police and Fire Divisions
- Municipal Division active members disability for males.

More significant changes were made to the following:

- 1987 Municipal Division and Police and Fire Division active member turnover rates for males and females;
 - The turnover assumption captures experience of all City employees who leave the plan as actives prior to retirement. Because Plan 87 is the open program covering all new entrants, changes in short-term employment due to labor markets is experienced in this plan. Turnover during the five-year period ending June 30, 2001 has been much higher than expected. However, this may be a reflection of the tight labor market during the early years covered by this study. Therefore, while we adjusted our assumptions to address more people leaving the System at all ages prior to retirement, we did not change rates to fully reflect the past experience. The turnover experience may reverse itself with the slowing growth of the economy.
 - The net financial impact of assuming higher rates of turnover is a decrease in projected benefits and reduction of liabilities that will reduce future plan costs.
- Police and Fire Division active members disability for males and females;
 - The incidence of disability is combined for Plan 67 and 87 because of the relatively low occurrences. Over the five-year study period, disability retirements from active status have dropped significantly. One contributing factor is the

introduction of the Deferred Retirement Option Plan (DROP). It has been the experience of other public retirement systems that this program has reduced the number of applications for disability retirement. Assuming the DROP is renewed after its initial four-year test period, this experience of reduced disability retirement incidence should continue. Therefore, we adjusted our assumptions, reducing the rate of disability retirement benefits from active status.

- The net impact of reducing disability rates is to reduce the plan liabilities and future costs as disability retirement benefits provide a higher benefit level than service retirement.
- Municipal and Police and Fire Division active and retired member mortality;
 - Mortality experience among all active member divisions has declined over the past five years from what we expected. This may be the result of a number of influences. The biggest reason is improvement of health care which has continuously contributed to the ability for the general population to live longer. Another reason is that many older active participants have elected the DROP program. While in the DROP and prior to actual retirement, this group of participants' experience is tracked as retirees not active members. The result is, the older active employees with the higher mortality risk have been removed from the active experience for two of the five years measured in this study.
 - To address the changes in mortality as well as enhancements in life expectancies at different ages, we replaced the 1984 Unisex Pension mortality table which was modified to match the City's experience with the 1994 Group Annuity Reserving Tables. We then adjusted these tables to match the results from this study with the expectation the changes in trend will continue into the future.
 - Interestingly, the mortality experience for almost all the nonactive member groups was higher than expected. The only exception was among Police and Fire Division disabled retirees. For this group the lower mortality may be a byproduct of the younger ages for these classes of City employees.
 - For the balance of the nonactive participants it is possible the introduction of DROP program participants has reduced the average incidence. However, higher mortality experience occurred throughout the age range of retired participants.
 - We adopted the new 1994 Group Annuity Retirement Tables and modified them to fit the experience of the five-years. The financial impact of assuming lower mortality rates for active participants results in higher liabilities and an increase in cost. However, the financial impact of assuming higher mortality among

nonactive participants – which represents more than half of all liabilities of the fund – is a net reduction of liabilities and subsequent reduction of costs.

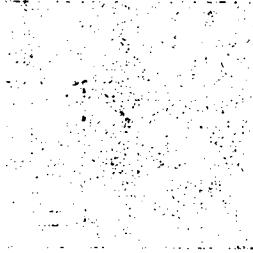
Economic assumptions

During the period covered by this experience study we have seen market volatility exhibited by returns as high as 18.3% and as low as a -6.0%. The dramatic decline in the equity market and current market environment was considered in maintaining the historic 9% investment return rate. The historic returns dating back to 1985, however, support the fact that as a long range assumption, 9% has been realized. Therefore we have not submitted a recommendation at this time to reduce the rate from 9%.

However, the probability of achieving 9% each year has decreased; therefore, the financial implication of retaining this assumption should be studied before the next experience study is presented.

The payroll growth rate during this period was only 2.1% versus our assumption of 5.0%. This assumption is used to calculate the amortization payment of the initial unfunded liability. The funding policy calls for the liability to be funded over a level percent of aggregate pay. We recommend this assumption be reduced to 4.5% to reflect the slower growth of active member salary. The net impact is a higher contribution for the City because two significant past service liabilities are amortized as a level percent of pay. When the payroll growth assumption is reduced, the balance of this unfunded liability is spread over a lower present value of future pay and therefore increases the amount to be funded for the next few years.

Salary increases were slightly higher than our 5.0% assumption. Because the increases don't diverge much and the City's schedule of increases are 3% to 4% in the next few years, we don't recommend a change in assumptions at this time.



Certification

In the preparation of this experience study we relied on data provided to us each year for preparation of the actuarial valuation of the Retirement System. We used generally accepted actuarial principals to value the actual versus expected non-economic and economic experience over the period studied. The assumptions tested were the major assumptions used during the experience study period and reported in the actuarial valuation as presented each year.

The undersigned is a Fellow of the Conference of Consulting Actuaries, and Society of Actuaries and as a member of the American Academy of Actuaries is qualified to present the actuarial opinions presented in this report.

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Discussion of Non-economic Experience Results

This section presents the results of the non-economic experience and includes separate analyses for mortality, disability, turnover, and retirement rates.

Data processing

The demographic data for this study was provided by the City. The data used was the same as that used for the 1997 – 2001 actuarial valuations.

Annual rates of mortality

Active members mortality experience

The mortality experience for active members is summarized in Tables 1 through 3 in Section 6 of this report.

The rate of actual deaths for active members is lower than expected. After the 1989 experience study, the underlying tables for developing the assumed rates of active member mortality were changed and have remained the same since. A change to the preretirement mortality tables is recommended at this time from the UP-84 Mortality Tables to the 1994 Group Annuity Reserving Tables, adjusted to actual City experience.

The actual, expected and recommended rates are presented in graphs 1 through 3 in Section 6.

Service-Connected Death Experience

A comparison of the actual percentage of service-connected deaths with assumptions is as follows:

Although no service-connected deaths were reported, the expected rates are already quite low, having been cut 50% in 1989. We recommend no change at this time. This assumption has a very small impact on overall costs, but is used in determining the difference in the benefit value. The lack of service-connected deaths reported may not be because there were no service-connected deaths, but because the survivors chose to apply for ordinary death benefits instead. Service-connected deaths are offset by workers' compensation and therefore may be lower than ordinary death benefits.

	Number of Service-Connected Deaths	Percentage of Service-Connected Deaths	
		Expected	Actual
Municipal members	0	2.5%	0.0%
Police and fire members	0	5.0%	0.0%

Retired members mortality experience

Mortality experience for retired members and surviving spouses is shown in tables 4 through 6 of Section 6.

The tables show that actual experience was slightly higher than expected. To address changes in mortality, we recommend a change in the base table of the UP-84 Mortality Table to the 1994 Group Annuity Reserving Tables. We then adjust this base table to reflect the City's experience.

The actual, expected and recommended rates are presented in graphs 4 through 6 in Section 6.

In the data, many retirees have "disappeared" from one year to the next. We assume these retirees have died. The "actual no noise" line represents the retirees that the City has identified as deaths in the data.

Disabled Members Mortality Experience

Tables 7 through 9 of Section 6 reflect the postretirement mortality experience for disabled members.

As we mentioned earlier, we recommend changing the base mortality table to reflect the change in retired member mortality rates from the UP-84 Mortality Tables to the 1994 Group Annuity Reserving Tables adjusted for actual City experience.

The annual, expected and recommended rates are presented in graphs 7 through 9 in Section 6.

Annual rates of disability

For our analysis of disability experience, see Section 6, tables 10 through 12.

We have seen a drop in disability occurrences from what we expected, especially in the Police and Fire divisions. Therefore, we recommend lowering the incidences for Municipal male members and Uniform members.

In addition to looking at the number of disabilities during this period, we examined the proportion of disabilities that are service-connected. No change is recommended in the service-connected disability assumption at this time.

The annual, expected and recommended rates are presented in graphs 10 through 12 in Section 6.

Annual rates of turnover

The member turnover analysis is summarized in tables 13 through 18 of Section 6. A summary follows:

This is the first study that we have shown the '87 plans separately from the 1967 plans. The experience for almost all employees is higher than anticipated, especially for the '87 plans. To reflect this increase, we recommend revised turnover rates that are adjusted to better reflect experience. A sample of these new rates is below.

1967 Plans Proposed Turnover Rates

Municipal and Elected

Attained Age	Male	Female	Police and Fire
25	0.086000	0.096000	0.021148
30	0.072000	0.071562	0.019148
35	0.045000	0.056170	0.016148
40	0.0350000	0.043754	0.016148
45	0.030000	0.035597	0.007148
50	0.020000	0.007148	0.000000
55	0.000000	0.000000	0.000000

1987 Plans – Proposed Turnover Rates

Municipal and Elected

Attained Age	Male	Female	Police and Fire
25	0.125000	0.125000	0.027000
30	0.100000	0.100000	0.023000
35	0.080000	0.080000	0.018000
40	0.065000	0.065000	0.011000
45	0.050000	0.050000	0.008000
50	0.035000	0.035000	0.000000
55	0.000000	0.000000	0.000000

The actual, expected and recommended rates are presented in graphs 13 through 18 in Section 6.

Annual rates of retirement

The retirement experience is summarized in tables 19 through 21 of Section 6. The average ages of retirement for the 1967 plan are:

Actual Average Retirement Age

Year Ending June 30	Municipal and Elected		
	Male	Female	Police and Fire
1997	59.60	59.79	50.19
1998	59.81	60.63	50.38
1999	59.71	60.55	50.33
2000	59.63	60.45	50.27
2001	59.49	60.34	50.17

The average retirement age has been consistent from year-to-year as well as the retirement incidence compared to the expected. The DROP, however, did cause a “spike” in retirements when it was first implemented in 2000. We feel the DROP will eventually smooth out retirements over time and therefore do not recommend changes to the majority of the retirement rates. The only change we recommend is to lower the rate for Police and Fire employees when they are first eligible to retire.

Plan 87 has not had a sufficient amount of retirements at this time to justify any changes; therefore, we did not show the analysis of the retirement rates in Plan 87.

The actual, expected and recommended rates are presented in graphs 19 through 21 in Section 6.



Discussion of Economic Experience Results

This section presents economic experience for the five-year period July 1, 1996 through June 30, 2001. We analyzed the rate of investment return, the rate of individual salary growth, and the rate of total payroll growth. These economic actuarial assumptions are considered together rather than separately because of their close relationship.

Assumptions reflect a 9% interest rate, a 5.0% salary growth rate, and a 5.0% covered payroll growth rate. Continued use of the 9% investment return assumption is justified by experience; however, the 1997 experience study lowered both the rate of individual salary growth and the rate of covered payroll growth from 5.5% to 5.0%. Recent experience suggests further revising the payroll growth assumption from 5.0% to 4.5%.

Investment return

Rates of investment return, after investment expenses, were determined on an actuarial asset valuation basis from year-to-year. The actuarial asset valuation method uses a five-year average of the investment gain or loss in excess of the assumption. The five-year average method smoothes the effect of short-term market fluctuations over five years. The actual rates of return on an adjusted market value basis as well as the average market value returns over the five years studied are:

Rate of Return		
Year Ending June 30	Adjusted Market Value	Market Value
1997	12.2%	18.3%

Rate of Return

Year Ending June 30	Adjusted Market Value	Market Value
1998	13.1%	14.3%
1999	13.1%	10.0%
2000	11.1%	9.6%
2001	8.3%	(6.0%)
Average	11.6%	9.2%

The average rate of return during the five-year period is higher than 9% on both the market value basis and an adjusted market value basis. The average rates of return for the previous five-year period (1993 – 1997) were 9.6% on an adjusted market value and 10.0% on a market value basis. We understand that the Board’s investment advisors believe 9% is a reasonable expectation for the future. Because the two experience studies support the 9% rate, we recommend continuing the current 9% assumption.

Rate of salary increase

The five-year average rate of salary increase is 5.6% for municipal members and 5.3% for police and fire members. The rates summarized by year are:

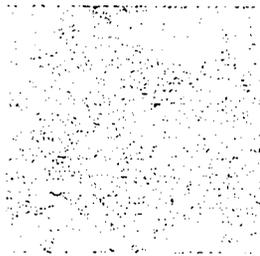
Average Salary Increase

Fiscal Year Ending June 30	Municipal and Elected	Police and Fire
1997	5.2%	2.9%
1998	6.5%	6.0%
1999	6.2%	6.2%
2000	6.8%	6.2%
2001	3.4%	5.4%
Average	5.6%	5.3%

The average rate covered for the study is higher than our 5.0% assumption. However, the average rates for the previous study (1993 – 1997) were 2.4% and 2.3% for the Municipal and Uniform groups, respectively. And scheduled increases for the next three years are below the assumed 5.0% rate. Therefore, we believe no change is needed in this assumption at this time.

Rate of covered payroll growth

In addition to projecting individual salary growth, assumptions are used to project the annual rate of growth for the total covered payroll. This assumption accounts for growth in covered participants, increases in overtime, and increases in merit and longevity pay. This assumption is necessary because the July 1, 1985 unfunded actuarial accrued liability is funded as a level percentage of covered payroll. During the past five years, the rate of growth in covered payroll averaged 2.1%, much less than the expected rate of 5.0%. We therefore recommend lowering the covered payroll growth assumption from 5.0% to 4.5%.



Recommended Actuarial Assumptions

Withdrawal Probabilities at 5-year Intervals

Attained Age	1967 Plan			1987 Plan		
	Municipal		Uniformed	Municipal		Uniformed
	Males	Females	Unisex	Males	Females	Unisex
20	0.100000	0.105319	0.022050	0.150000	0.150000	0.030000
25	0.086000	0.096000	0.021148	0.125000	0.125000	0.027000
30	0.072000	0.071562	0.019148	0.100000	0.100000	0.023000
35	0.045000	0.056170	0.016148	0.080000	0.080000	0.018000
40	0.035000	0.043754	0.012148	0.065000	0.065000	0.011000
45	0.030000	0.035597	0.007148	0.050000	0.050000	0.008000
50	0.020000	0.007148	0.000000	0.035000	0.035000	0.000000
55	0.000000	0.000000		0.000000	0.000000	

In addition, we assumed that a vested employee terminating employment (with 10 years of service) will elect an employee contribution refund unless his or her age plus years of service at termination equal 55 or more (rule of 55) [rule of 45 for 1967 Police and Fire].

Otherwise, we assumed the person would elect a deferred pension beginning at service retirement age.

Annual rate of disability prior to retirement

Disability Probabilities at 5-year Intervals

Attained Age	Municipal and Elected Officials		Uniformed
	Males	Females	Males and Females
20	.000025	.000043	.000795
25	.000070	.000061	.000870
30	.000557	.000263	.001418
35	.001514	.000620	.001918
40	.003000	.001314	.002418
45	.004800	.002359	.002918
50	.007600	.003571	.003418
55	.000000	.000000	.000000

In addition, we assumed that 70% of all disabilities among municipal and elected members are ordinary (30% are service-connected) and 50% of all disabilities among uniformed members are ordinary (50% are service connected).

Annual rate of mortality prior to retirement

We assumed that deaths of active municipal and elected male members would be at 150% of the GAR-94 Mortality Table for males and deaths of municipal and elected female members at 120% of the GAR-94 Mortality Table for females. In addition, we assumed that 97.5% of all deaths of active municipal and elected members are ordinary (2.5% are service-connected).

We assumed that deaths of active uniformed male members would be at 150% of the GAR-94 Mortality Table for males and deaths of uniformed female members would be at 150% of the GAR-94 Mortality Table for females. In addition, we assumed that 95% of all deaths of active uniformed members are ordinary (5% are service-connected).

Service retirement

We assumed that active members in the 1967 plan will retire according to the rates in the following table.

1967 Plan Service Retirement Rates

Attained Age	Municipal and Elected Officials		Uniformed
	Males	Females	Males and Females
45	—	—	.090
46	—	—	.077
47	—	—	.077
48	—	—	.084
49	—	—	.084
50	—	—	.084
51	—	—	.088
52	—	—	.102
53	—	—	.112
54	—	—	.112
55	.270	.226	.119
56	.092	.076	.140
57	.092	.077	.140
58	.077	.077	.140
59	.085	.070	.168

Attained Age	Municipal and Elected Officials		Uniformed
	Males	Females	Males and Females
60	.085	.081	.168
61	.100	.081	.168
62	.231	.175	.196
63	.139	.126	.196
64	.162	.126	.224
65	.246	.196	.245
66	.154	.161	.245
67	.193	.161	.245
68	.154	.161	.245
69	.154	.175	.245
70+	1.000	1.000	1.000

The corresponding rates for members under Plan 87 are in the table below.

Plan 87 Service Retirement Rates

Age	Municipal and Elected Officials		Uniformed	
	Full Benefits		Full Benefits	
	First Year Eligible ^a	Subsequent Years	First Year Eligible ^a	Subsequent Years
40	—	—	.500	.125
41	—	—	.500	.125
42	—	—	.500	.125

	Full Benefits		Full Benefits	
43	—	—	.500	.125
44	—	—	.500	.125
45	—	—	.500	.125
46	—	—	.480	.125
47	—	—	.460	.125
48	—	—	.440	.125
49	—	—	.420	.125
50	—	—	.400	.125
51	—	—	.400	.125
52	.450	.060	.400	.140
53	.420	.060	.400	.150
54	.390	.060	.400	.170
55	.360	.060	.400	.190
56	.330	.060	.400	.215
57	.300	.060	.400	.225
58	.300	.060	.400	.225
59	.300	.080	.400	.230
60	.300	.100	.400	.230
61	.350	.150	.400	.245
62	.430	.300	.400	2.95
63	.500	.187	.400	2.95
64	.500	.199	.400	.260
65	.600	.309	.400	1.000

	Full Benefits		Full Benefits	
66	.600	.232	—	—
67	.600	.214	—	—
68	.600	.214	—	—
69	.600	.238	—	—
70	.600	1.000	—	—

- a. Earlier of age 60 and 10 years of service or 33 years of service for municipal; earlier of age 50 and 10 years of service or 25 years of service for police and fire; and 33 years of service for elected officials.

Annual rate of mortality after retirement

We assumed that postretirement mortality will be as follows:

- Municipal members (male) – 150% of the GAR-94 Mortality Table for Males
- Municipal members (female) – 175% of the GAR-94 Mortality Table for females
- Uniformed members – 175% of the GAR-94 Mortality Table (for males and females as appropriate)

We assumed that post-disability mortality will follow the adjustment factors in the tables below applied to:

- Municipal members – 200% of the GAR-94 Mortality Table (for males and females as appropriate)
- Uniformed members – 150% of the GAR-94 Mortality Table (for males and females as appropriate)

Post-disablement Mortality Adjustment Factors (Municipal)

Age	Adjustment Factor		Age	Adjustment Factor	
	Male	Female		Male	Female
47 and earlier	4.86	6.52	62	1.47	1.89
48	4.38	5.85	63	1.41	1.80
49	3.93	5.30	64	1.35	1.75
50	3.60	4.82	65	1.29	1.70
51	3.28	4.30	66	1.24	1.65
52	3.01	3.84	67	1.21	1.58
53	2.75	3.49	68	1.16	1.51
54	2.51	3.20	69	1.11	1.47
55	2.30	2.90	70	1.08	1.42
56	2.10	2.61	71	1.04	1.37
57	1.94	2.34	72	1.00	1.31
58	1.81	2.23	73	1.00	1.28
59	1.71	2.13	74	1.00	1.24
60	1.61	2.05	75	1.00	1.21
61	1.52	1.96	76	1.00	1.17
			77	1.00	1.14
			78	1.00	1.11
			79	1.00	1.08
			80 and later	1.00	1.05

Post-disablement Mortality Adjustment Factors (Uniformed)

Age	Adjustment Factor Unisex	Age	Adjustment Factor Unisex
42 and earlier	3.68	62	1.37
43	3.44	63	1.34
44	3.23	64	1.31
45	3.03	65	1.27
46	2.83	66	1.24
47	2.63	67	1.21
48	2.45	68	1.19
49	2.29	69	1.17
50	2.15	70	1.14
51	2.02	71	1.12
52	1.89	72	1.09
53	1.80	73	1.06
54	1.72	74	1.03
55	1.66	75	1.02
56	1.62	76 and later	1.00
57	1.57		
58	1.53		
59	1.49		
60	1.44		
61	1.41		

Salary scale

We assumed that salaries, including longevity and overtime, will increase at a compound annual rate of 5.0% per year (3.5% due to inflation and 1.5% based on seniority/merit).

Rate of investment return

We assumed that assets of the fund will accumulate at a compound annual rate of 9% per year, after annual expenses incurred in the investment of the fund's assets by the equity and debt money managers under contract with the Board of Pensions and Retirement.

Expenses

The administrative expenses of operating the Retirement System are based on the previous year's actual expenses increased by the average salary increase for continuing actives. Administrative expenses exclude the fees of the money managers hired to invest the fund's assets.

Value of investments

Assets held by the fund are valued at market value as reported by the City. The actuarial value of assets is the difference between the market value of the assets reported and last year's assets projected forward at the rate of investment return. One-fifth of this difference is recognized immediately and four-fifths is deferred and recognized over the next four years, one-fifth at a time. Also, the actuarial value doesn't include assets held in the Pension Adjustment Fund (PAF).

Family composition

We assumed that 70% of all active members and 60% of all nonactive members will be survived by a spouse and that female (male) spouses are four years younger (older) than members.

Form of annuity

We assumed that all Plan '67 members will elect Option 4 and Plan '87 members will elect Option 1 unless otherwise indicated in the participant's data.

Rate of covered payroll growth

We assume that the annual rate of growth of total covered payroll is 4.5% per year.



Tabular and Graphical Summary of Experience Results

Table/ Graph	Divisions by Membership		Description
1	Municipal Active	Mortality:	Male
2	Municipal Active		Female
3	Police and Fire Active		Male/Female Combined
4	Municipal Retired	Mortality:	Male
5	Municipal Retired		Female
6	Police and Fire Retired		Male/Female Combined
7	Municipal Disabled	Mortality:	Male
8	Municipal Disabled		Female
9	Police and Fire Disabled		Male/Female Combined
10	Municipal Active	Disability:	Male
11	Municipal Active		Female

Table/ Graph	Divisions by Membership		Description
12	Police and Fire Active		Male/Female Combined
13	1967 Municipal Active	Turnover:	Male
14	1967 Municipal Active		Female
15	1967 Police and Fire Active		Male/Female Combined
16	1987 Municipal Active	Turnover:	Male
17	1987 Municipal Active		Female
18	1987 Police and Fire Active		Male/Female Combined
19	Municipal Active	Retirement:	Male
20	Municipal Active		Female
21	Police and Fire Active		Male/Female Combined

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CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 1

MUNICIPAL DIVISION ACTIVE MEMBERS

Mortality for Males

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	1	0	0	0	0	1	0	0	0	0	0	0
25 - 29	1	0	4	1	0	6	1	1	1	1	0	4
30 - 34	1	2	0	0	0	3	1	1	1	1	1	5
35 - 39	1	4	3	1	3	12	3	3	2	2	2	12
40 - 44	8	10	8	2	2	30	5	5	5	5	4	24
45 - 49	9	11	4	5	4	33	9	9	8	8	8	42
50 - 54	9	8	8	12	8	45	11	12	12	14	14	63
55 - 59	2	11	5	3	5	26	8	9	9	10	8	44
60 - 64	3	2	3	3	4	15	6	7	7	7	5	32
65 - 69	1	2	1	0	0	4	3	3	3	3	2	14
70+	1	2	0	3	1	7	3	4	4	4	4	19
Total	37	52	36	30	27	182	50	54	52	55	48	259

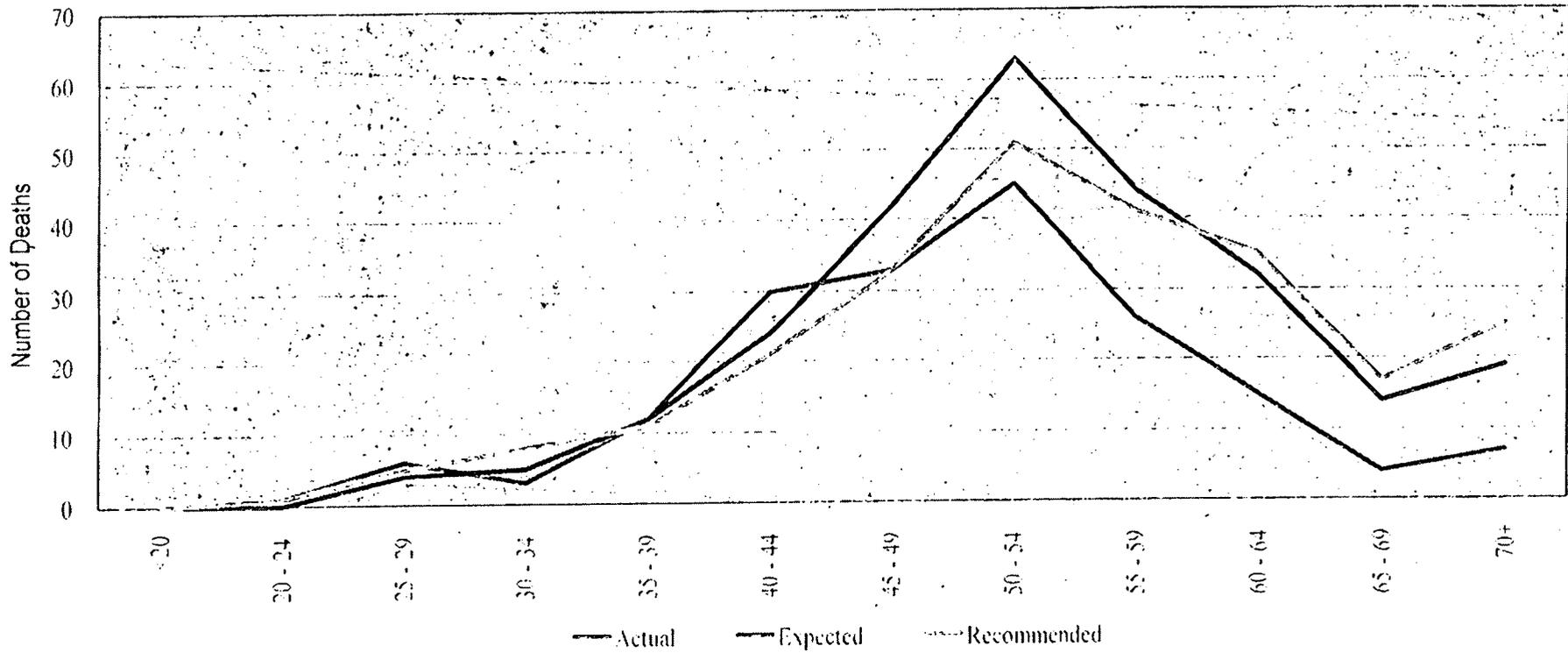
Ratio of Actual to Expected Deaths

1997	74%
1998	96%
1999	69%
2000	55%
2001	56%

MUNICIPAL DIVISION ACTIVE MEMBERS

Mortality for Males

Graph 1



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 2

MUNICIPAL DIVISION ACTIVE MEMBERS

Mortality for Females

Age	Actual Deaths					Expected Deaths					Total	
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001		
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	1	3	0	0	4	1	1	1	1	1	5
30 - 34	0	3	2	1	0	6	1	1	1	1	1	5
35 - 39	1	1	0	2	1	5	1	1	1	1	1	5
40 - 44	2	2	2	1	0	7	2	2	2	2	2	10
45 - 49	2	0	2	2	2	8	4	4	4	4	4	20
50 - 54	0	0	5	2	3	10	5	6	6	6	6	29
55 - 59	2	1	0	3	3	9	5	5	6	6	5	27
60 - 64	3	0	3	0	2	8	4	4	4	4	3	19
65 - 69	2	0	1	2	1	6	2	2	3	3	2	12
70+	2	0	2	1	0	5	2	2	2	3	3	12
Total	14	8	20	14	12	68	27	28	30	31	28	144

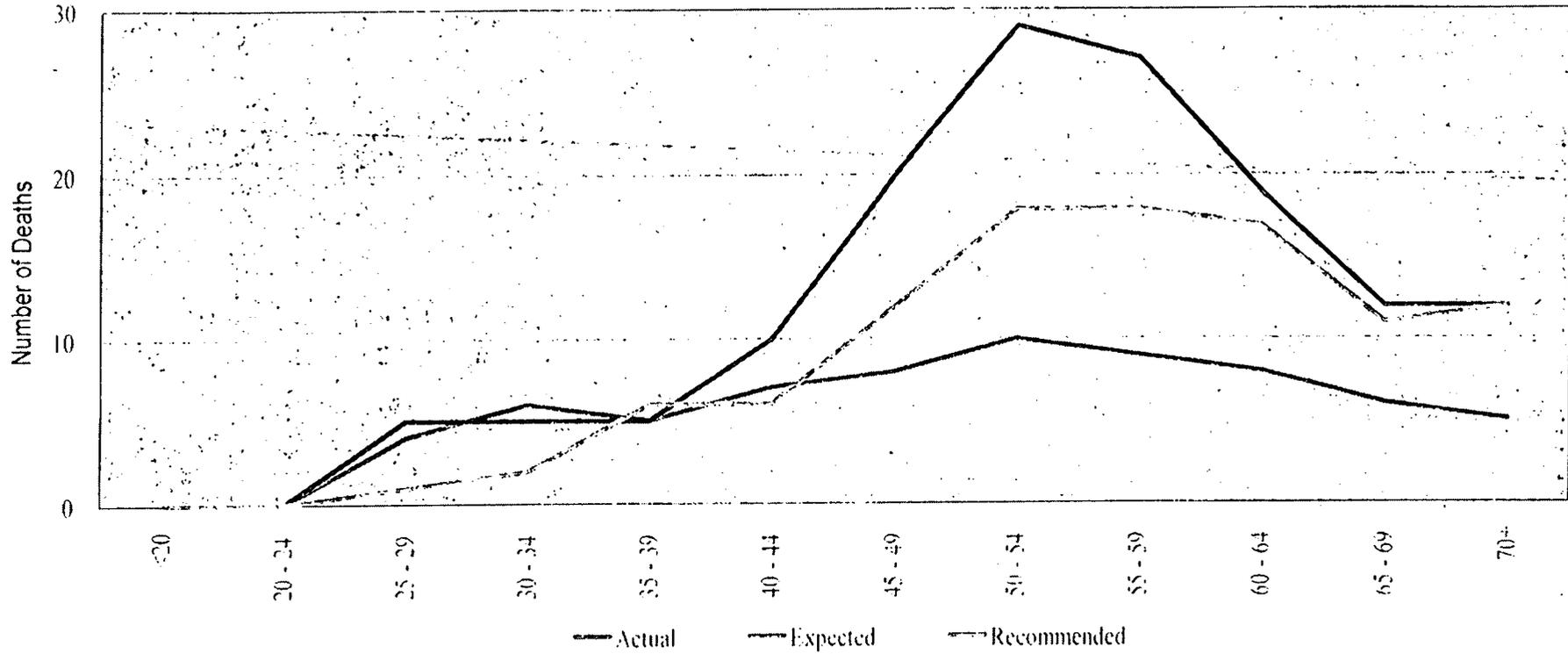
Ratio of Actual to Expected Deaths

1997	52%
1998	29%
1999	67%
2000	45%
2001	43%

MUNICIPAL DIVISION ACTIVE MEMBERS

Mortality for Females

Graph 2



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 3

POLICE AND FIRE DIVISION ACTIVE MEMBERS

Mortality for Males and Females

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	1	0	0	0	1	0	0	0	0	0	0
25 - 29	2	2	0	1	1	6	1	1	1	1	1	5
30 - 34	2	1	3	0	1	7	1	1	1	2	2	7
35 - 39	1	1	1	1	1	5	2	2	2	2	2	10
40 - 44	2	1	1	0	2	6	3	3	3	3	3	15
45 - 49	5	5	3	8	1	22	5	6	6	5	5	27
50 - 54	3	2	7	1	1	14	4	6	6	7	6	29
55 - 59	4	2	1	0	0	7	2	3	4	4	2	15
60 - 64	1	0	1	0	0	2	1	1	1	1	0	4
65 - 69	0	1	0	0	0	1	0	0	0	0	0	0
70+	0	0	0	0	0	0	0	0	0	0	0	0
Total	20	16	17	11	7	71	19	23	24	25	21	112

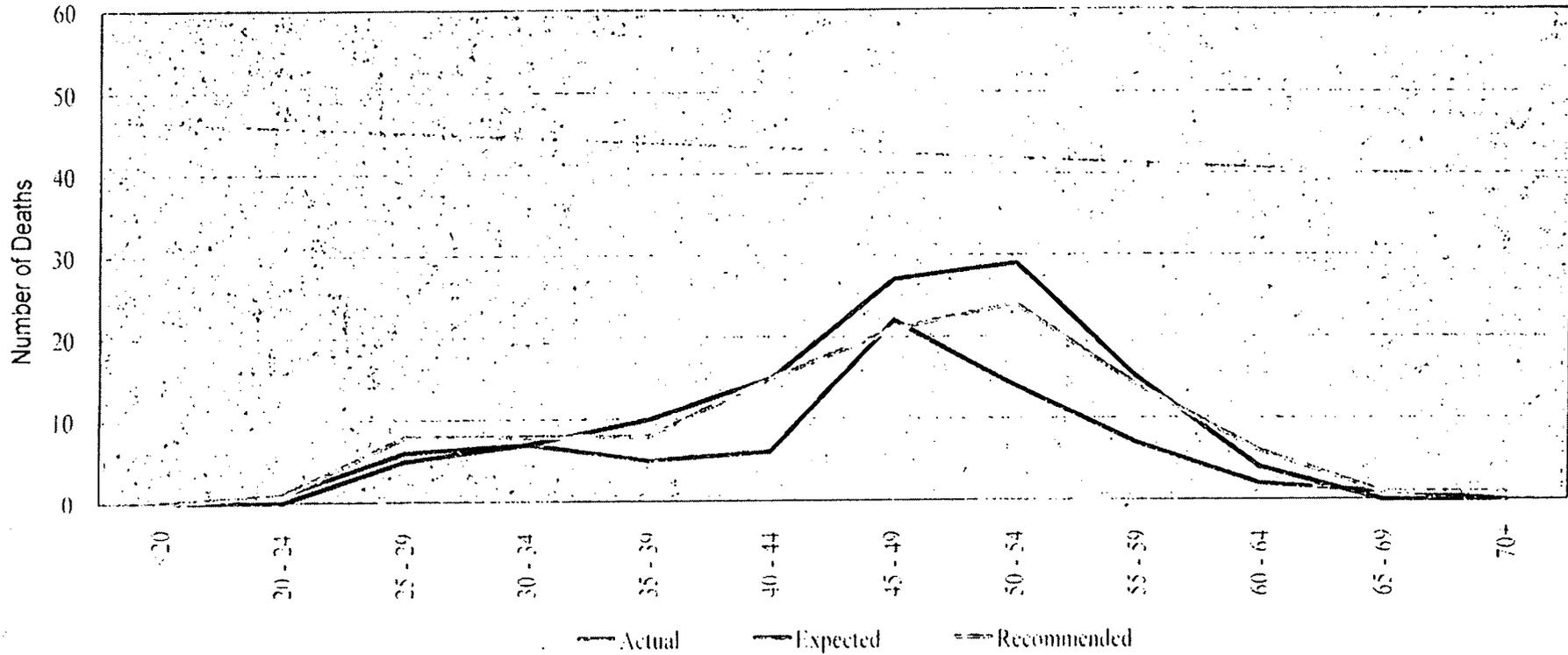
Ratio of Actual to Expected Deaths

1997	105%
1998	70%
1999	71%
2000	44%
2001	33%

POLICE AND FIRE DIVISION ACTIVE MEMBERS

Mortality for Males and Females

Graph 3



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 4

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Retired Males

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
35 - 39	0	3	0	1	0	4	0	0	0	0	0	0
40 - 44	1	1	2	0	2	6	0	0	0	0	0	0
45 - 49	2	7	3	0	0	12	0	0	0	0	0	0
50 - 54	2	8	4	1	1	16	0	1	1	0	0	2
55 - 59	14	30	33	13	13	103	8	7	7	7	9	38
60 - 64	25	36	71	45	31	208	23	18	17	21	22	101
65 - 69	56	52	125	46	50	329	48	35	33	41	41	198
70 - 74	62	53	119	75	67	376	62	43	46	64	63	278
75 - 79	66	42	87	74	76	345	71	48	51	72	73	315
80 - 84	60	40	67	77	66	310	61	37	39	64	68	269
85 - 89	42	14	32	53	43	184	42	22	26	42	42	174
90 - 94	23	8	15	25	29	100	23	11	13	23	24	94
95+	7	0	3	7	8	25	6	2	3	6	6	23
Total	360	294	561	417	386	2018	344	224	236	340	348	1492

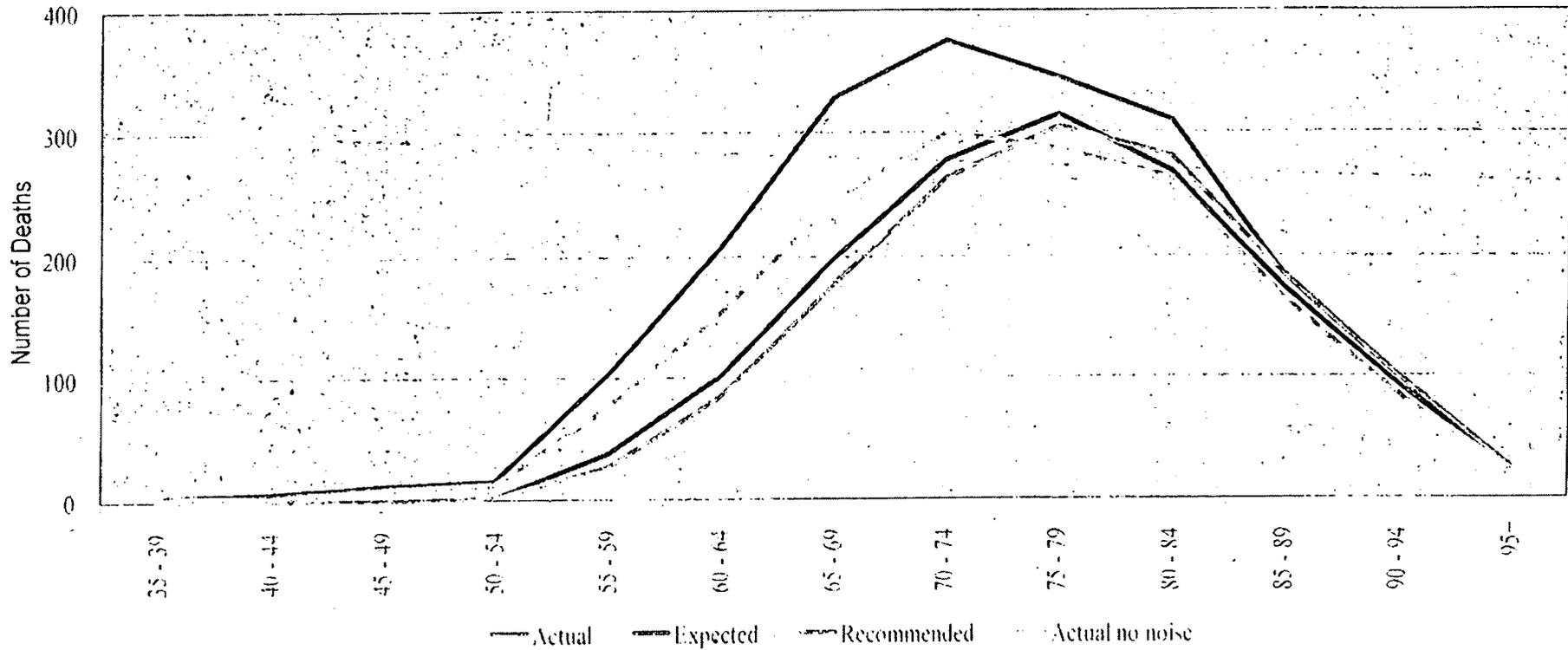
Ratio of Actual to Expected Deaths

1997	105%
1998	131%
1999	238%
2000	123%
2001	111%

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Retired Males

Graph 4



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 5

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Retired Females

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
35 - 39	0	1	0	2	0	3	0	0	0	0	0	0
40 - 44	2	3	1	1	2	9	0	0	0	0	0	0
45 - 49	0	3	7	1	0	11	0	0	0	0	0	0
50 - 54	2	5	5	3	1	16	1	1	0	0	0	2
55 - 59	8	23	51	8	11	101	5	4	4	3	4	20
60 - 64	15	36	85	17	23	176	13	9	9	9	10	50
65 - 69	36	62	131	45	26	300	26	19	18	16	17	96
70 - 74	48	66	121	50	45	330	44	31	30	25	24	154
75 - 79	52	76	143	79	75	425	61	42	41	33	34	211
80 - 84	70	65	139	88	95	457	71	45	46	38	38	238
85 - 89	63	50	69	94	78	354	64	37	41	31	32	205
90 - 94	49	22	40	63	72	246	43	19	24	19	20	125
95+	17	5	8	42	31	103	14	6	8	7	8	43
Total	362	417	800	493	459	2531	342	213	221	181	187	1144

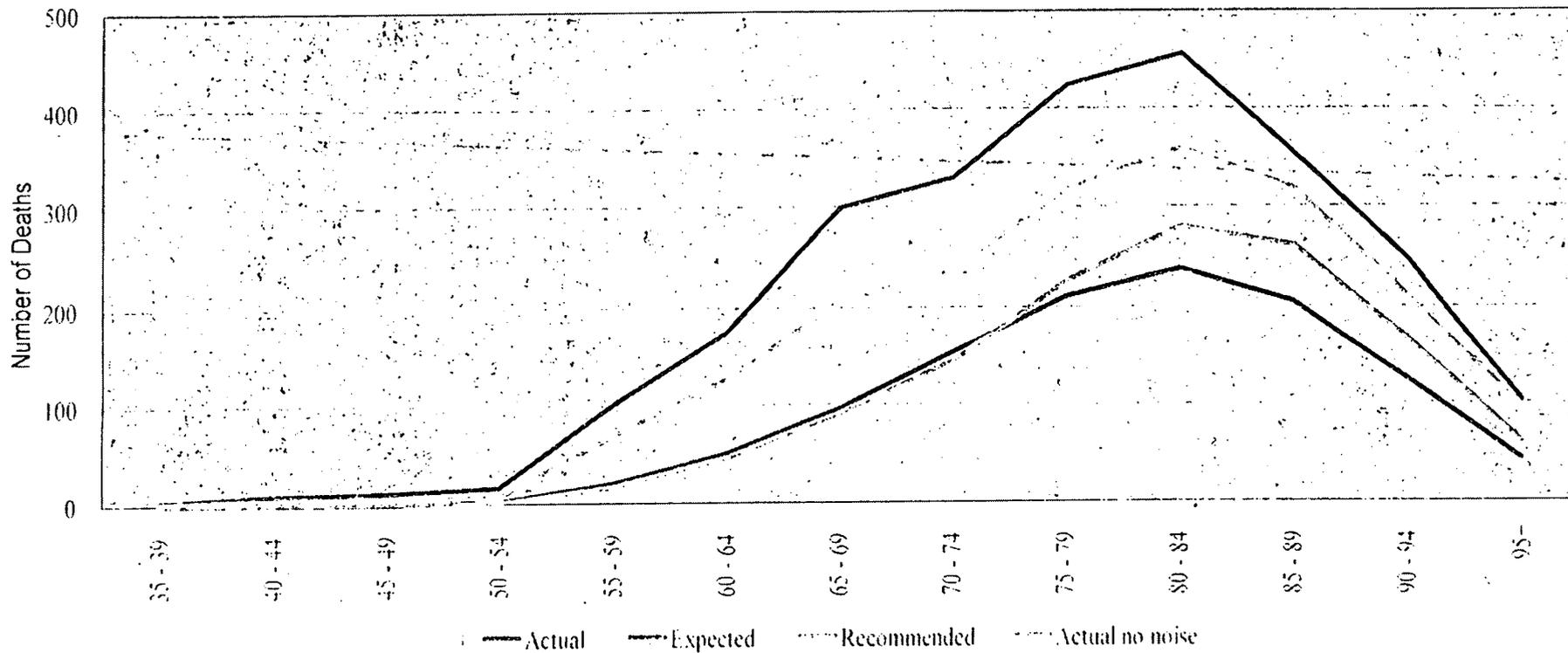
Ratio of Actual to Expected Deaths

1997	106%
1998	196%
1999	362%
2000	272%
2001	245%

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Retired Females

Graph 5



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 6

POLICE AND FIRE DIVISION NONACTIVE MEMBERS

Mortality for Retired Males and Females

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
35 - 39	0	0	0	0	0	0	0	0	0	0	0	0
40 - 44	0	2	1	1	3	7	0	0	0	0	0	0
45 - 49	10	1	13	5	2	31	3	2	2	2	2	11
50 - 54	11	9	24	8	10	62	10	7	7	8	9	41
55 - 59	18	17	48	24	19	126	16	14	15	17	20	82
60 - 64	23	16	42	27	31	139	22	18	19	22	24	105
65 - 69	31	28	71	30	25	185	31	22	22	27	28	130
70 - 74	22	53	79	46	24	224	33	26	26	30	30	145
75 - 79	45	56	98	55	36	290	44	25	25	24	26	144
80 - 84	63	63	127	61	78	392	65	29	30	29	29	182
85 - 89	53	46	87	59	66	311	50	21	22	25	24	142
90 - 94	38	29	42	42	36	187	33	7	8	8	9	65
95+	10	5	11	23	24	73	8	1	1	6	5	21
Total	324	325	643	381	354	2027	315	172	177	198	206	1068

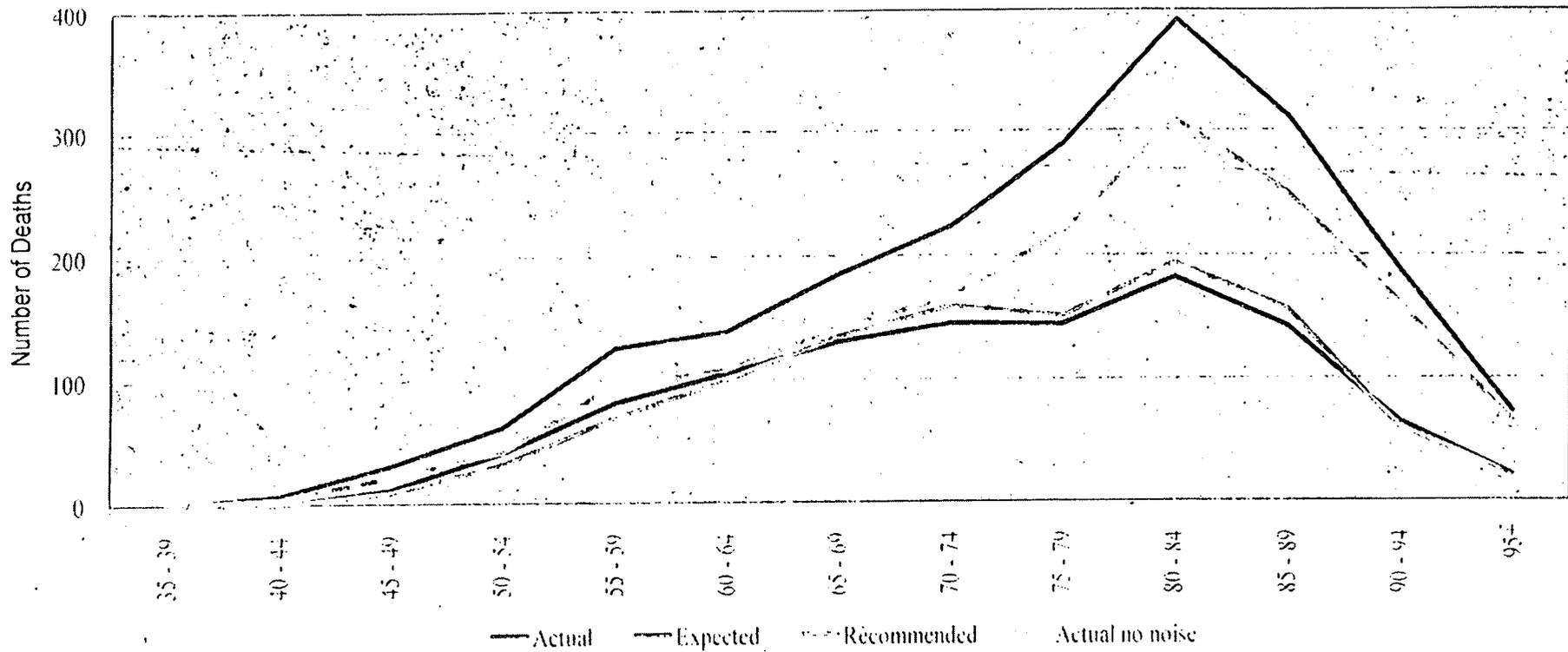
Ratio of Actual to Expected Deaths

1997	103%
1998	189%
1999	363%
2000	192%
2001	172%

POLICE AND FIRE DIVISION NONACTIVE MEMBERS

Mortality for Retired Males and Females

Graph 6



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 7

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Disabled Males

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
35 - 39	0	0	0	0	0	0	0	0	0	0	0	0
40 - 44	1	2	0	3	0	6	2	1	1	1	1	6
45 - 49	3	8	6	2	4	23	6	4	4	3	3	20
50 - 54	3	11	9	5	10	38	8	6	6	6	6	32
55 - 59	13	4	5	8	12	42	10	7	7	6	6	36
60 - 64	11	8	6	9	8	42	12	7	7	6	6	38
65 - 69	15	14	15	10	9	63	14	9	8	9	8	48
70 - 74	17	15	10	12	17	71	16	10	10	9	9	54
75 - 79	9	6	12	13	14	54	14	9	10	11	11	55
80 - 84	11	5	5	7	9	37	11	7	7	7	8	40
85 - 89	1	1	0	3	7	12	4	2	3	5	5	19
90 - 94	0	0	0	2	1	3	1	0	0	1	1	3
95+	0	0	0	0	0	0	0	0	0	0	0	0
Total	84	74	68	74	91	391	98	62	63	64	64	351

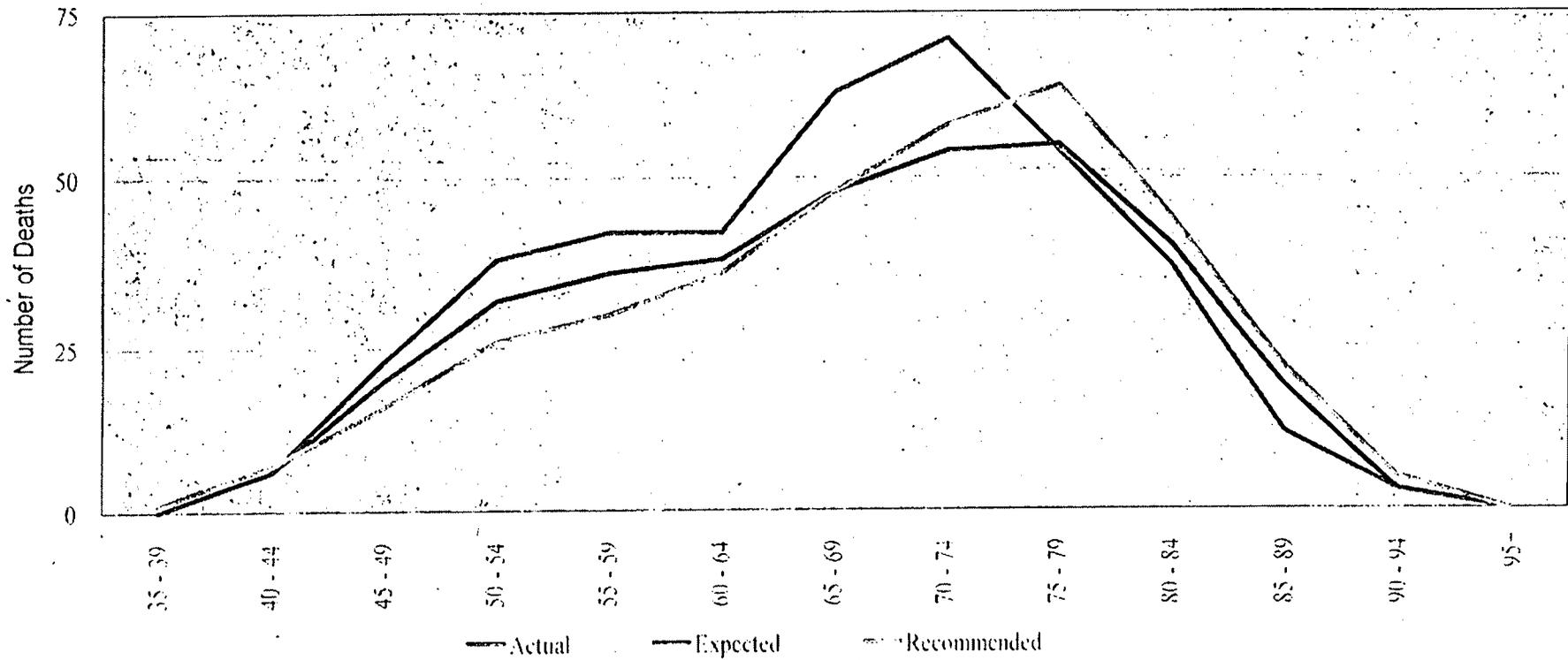
Ratio of Actual to Expected Deaths

1997	86%
1998	119%
1999	108%
2000	116%
2001	142%

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Disabled Males

Graph 7



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 8

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Disabled Females

Age	Actual Deaths					Expected Deaths					Total	
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001		
35 - 39	0	0	0	0	1	1	0	0	0	0	0	0
40 - 44	0	0	0	0	2	2	0	0	0	0	0	0
45 - 49	1	0	2	2	3	8	1	1	1	1	1	5
50 - 54	2	1	3	2	1	9	2	1	1	1	1	6
55 - 59	1	1	1	2	3	8	3	2	2	2	1	10
60 - 64	5	1	1	1	3	11	3	2	2	2	2	11
65 - 69	3	2	4	3	1	13	3	1	2	2	2	10
70 - 74	6	2	2	3	2	15	5	3	2	2	2	14
75 - 79	0	7	0	7	3	17	4	2	2	3	4	15
80 - 84	4	1	1	6	3	15	3	1	1	2	2	9
85 - 89	0	0	0	1	1	2	1	1	1	1	2	6
90 - 94	1	1	0	0	1	3	2	0	0	0	0	2
95+	0	0	0	1	0	1	0	0	0	0	1	1
Total	23	16	14	28	24	105	27	14	14	16	18	89

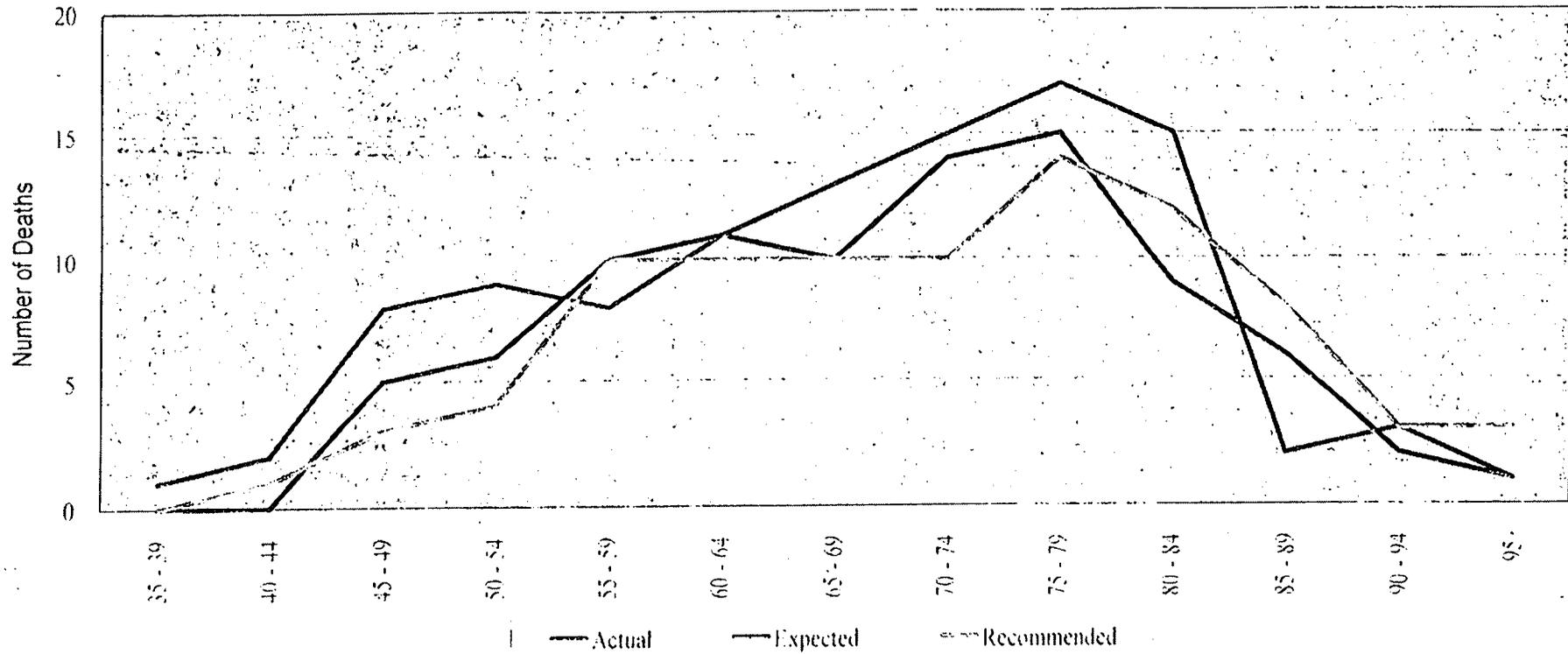
Ratio of Actual to Expected Deaths

1997	85%
1998	114%
1999	100%
2000	175%
2001	133%

MUNICIPAL DIVISION NONACTIVE MEMBERS

Mortality for Disabled Females

Graph 8



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 9

POLICE AND FIRE DIVISION NONACTIVE MEMBERS

Mortality for Disabled Males and Females

Age	Actual Deaths						Expected Deaths					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
35 - 39	0	0	0	0	0	0	0	0	0	0	0	0
40 - 44	1	1	1	4	1	8	1	1	1	1	1	5
45 - 49	0	1	2	2	1	6	5	4	4	4	3	20
50 - 54	4	7	7	3	5	26	8	9	8	8	7	40
55 - 59	4	10	10	9	8	41	8	10	10	11	11	50
60 - 64	8	9	4	8	6	35	8	8	8	9	9	42
65 - 69	15	12	18	5	10	60	13	14	14	13	12	66
70 - 74	8	17	20	10	15	70	14	15	16	14	15	74
75 - 79	7	13	10	18	4	52	10	13	13	12	12	60
80 - 84	5	5	11	7	15	43	8	10	11	10	10	49
85 - 89	2	0	0	5	9	16	4	4	5	5	6	24
90 - 94	0	0	0	1	1	2	1	1	2	2	2	8
95+	0	0	0	1	0	1	0	0	0	0	0	0
Total	54	75	83	73	75	360	80	89	92	89	88	438

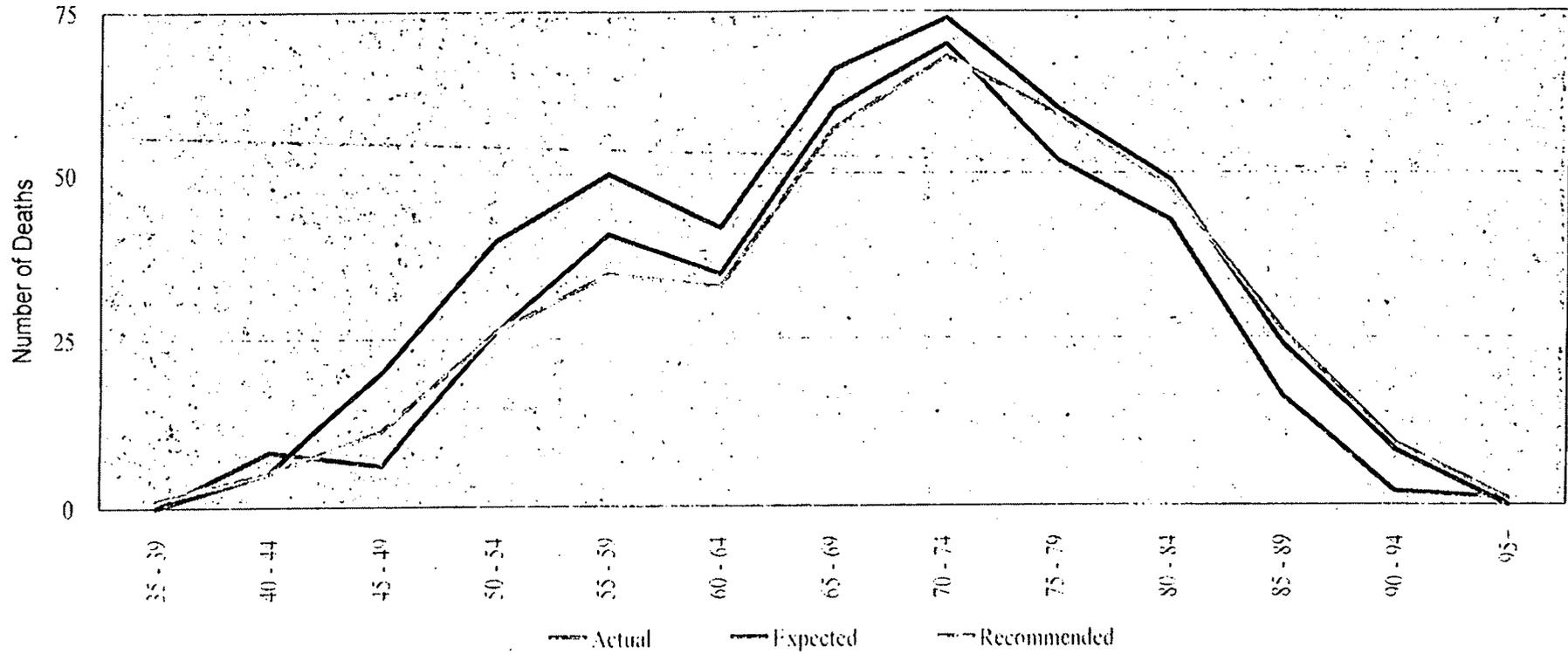
Ratio of Actual to Expected Deaths

1997	68%
1998	84%
1999	90%
2000	82%
2001	85%

POLICE AND FIRE DIVISION NONACTIVE MEMBERS

Mortality for Disabled Males and Females

Graph 9



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 10

MUNICIPAL DIVISION ACTIVE MEMBERS

Disability for Males

Age	Actual Disabilities						Expected Disabilities					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	0	1	0	0	2	0	0	0	0	0	0
30 - 34	0	0	1	0	1	2	2	1	1	1	1	6
35 - 39	2	1	2	1	0	6	4	4	3	3	3	17
40 - 44	9	3	8	7	4	31	10	9	8	9	8	44
45 - 49	17	14	15	8	8	62	18	17	16	15	15	81
50 - 54	18	13	21	12	21	85	20	25	26	29	30	130
55 - 59	2	2	3	1	4	12	0	0	0	0	0	0
60 - 64	1	1	1	1	0	4	0	0	0	0	0	0
65 - 69	0	0	0	0	1	1	0	0	0	0	0	0
70+	0	2	0	1	0	3	0	0	0	0	0	0
Total	50	36	52	31	39	208	54	56	54	57	57	278

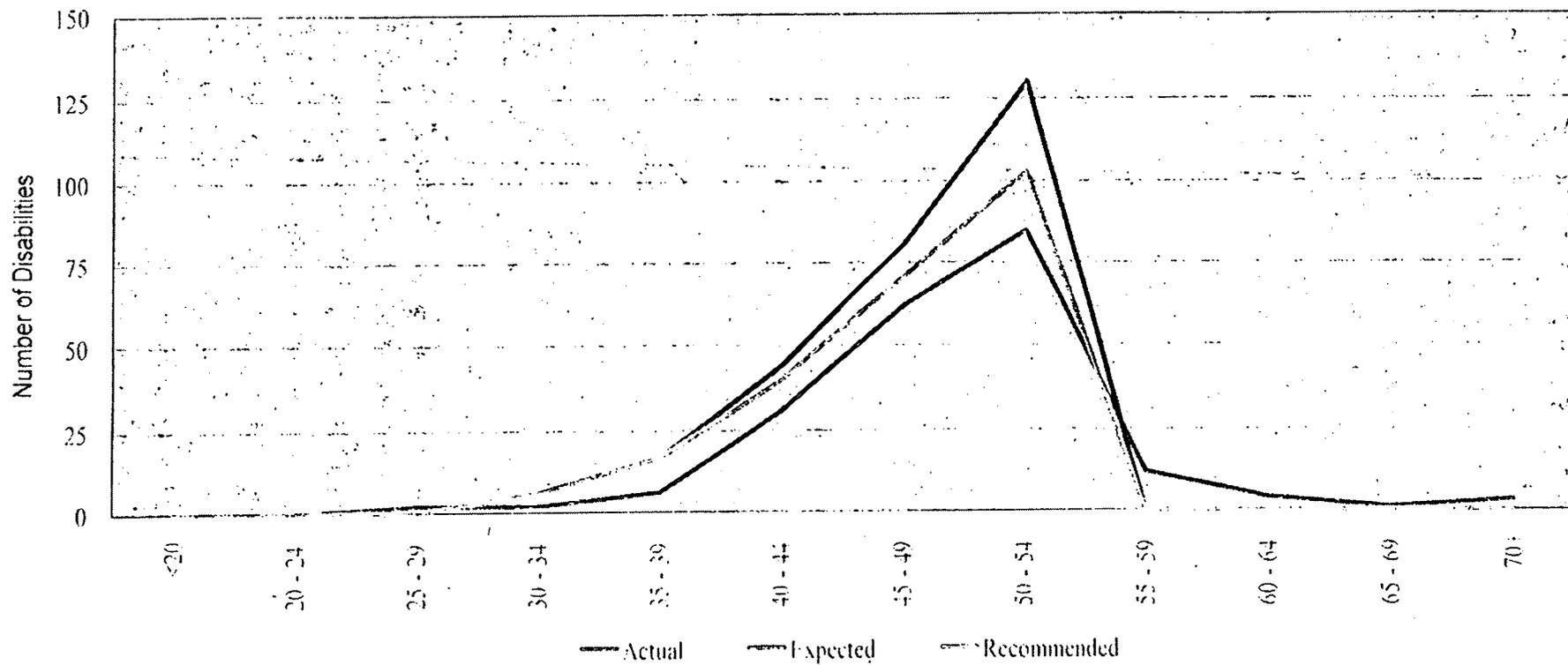
Ratio of Actual to Expected Disabilitys

1997	93%
1998	64%
1999	96%
2000	54%
2001	68%

MUNICIPAL DIVISION ACTIVE MEMBERS

Disability for Males

Graph 10



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 11

MUNICIPAL DIVISION ACTIVE MEMBERS

Disability for Females

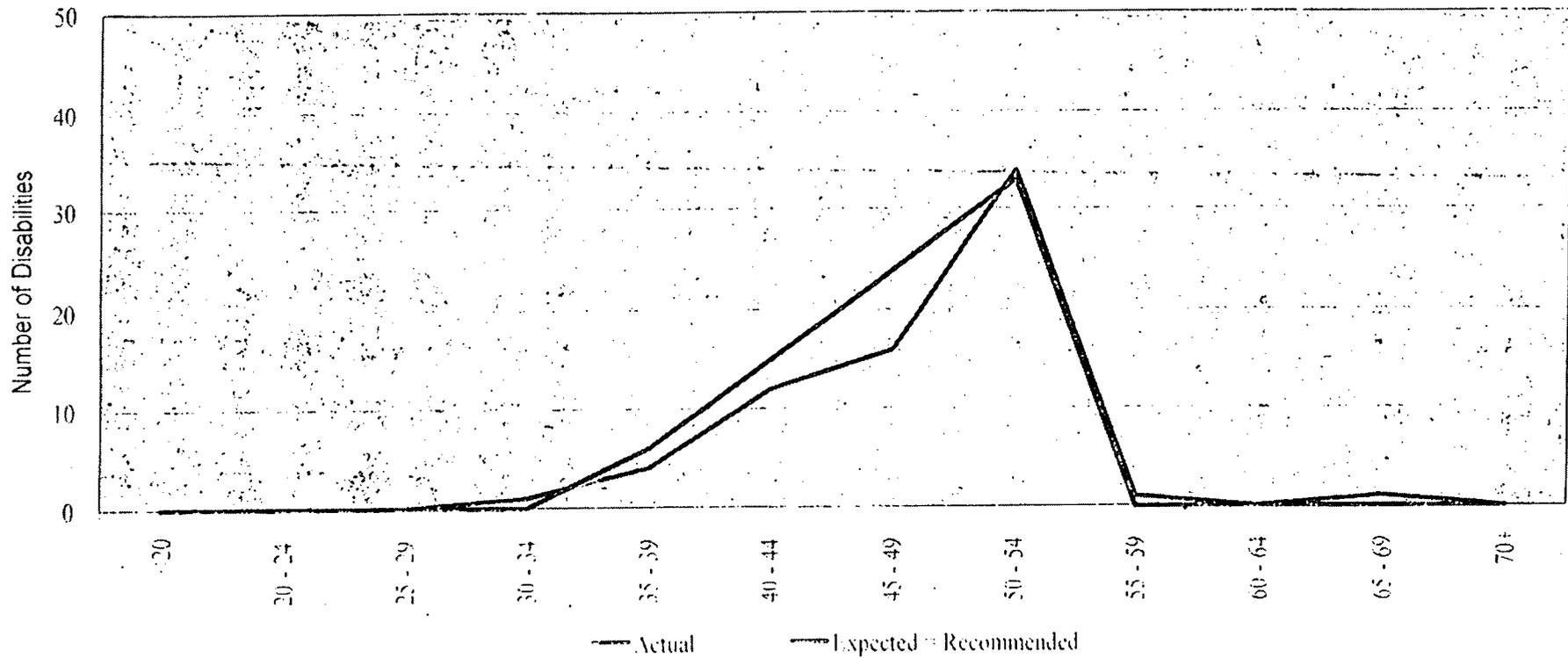
Age	Actual Disabilities						Expected Disabilities					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0	0	0
30 - 34	1	0	0	0	0	1	0	0	0	0	0	0
35 - 39	0	1	1	2	0	4	1	1	1	2	1	6
40 - 44	3	2	1	3	3	12	3	3	3	3	3	15
45 - 49	0	2	4	4	6	16	5	5	5	4	5	24
50 - 54	4	6	3	10	11	34	6	6	6	7	8	33
55 - 59	0	0	0	1	0	1	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65 - 69	1	0	0	0	0	1	0	0	0	0	0	0
70+	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	11	9	20	20	69	15	15	15	16	17	78

Ratio of Actual to Expected Disabilitys

1997	60%
1998	73%
1999	60%
2000	125%
2001	118%

MUNICIPAL DIVISION ACTIVE MEMBERS Disability for Females

Graph 11



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 12

POLICE AND FIRE DIVISION ACTIVE MEMBERS

Disability for Males and Females

Age	Actual Disabilities							Expected Disabilities						
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total		
<20	0	0	0	0	0	0	0	0	0	0	0	0		
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0		
25 - 29	2	1	0	1	0	4	1	1	1	1	1	5		
30 - 34	1	2	7	1	0	11	2	2	2	3	3	12		
35 - 39	1	2	4	1	5	13	4	4	4	4	4	20		
40 - 44	4	3	7	6	5	25	7	6	7	6	6	32		
45 - 49	2	3	3	3	3	14	9	10	9	9	7	44		
50 - 54	0	0	5	0	0	5	6	8	9	9	7	39		
55 - 59	2	0	0	1	1	4	0	0	0	0	0	0		
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0		
65 - 69	0	0	0	0	0	0	0	0	0	0	0	0		
70+	0	0	0	0	0	0	0	0	0	0	0	0		
Total	12	11	26	13	14	76	29	31	32	32	28	152		

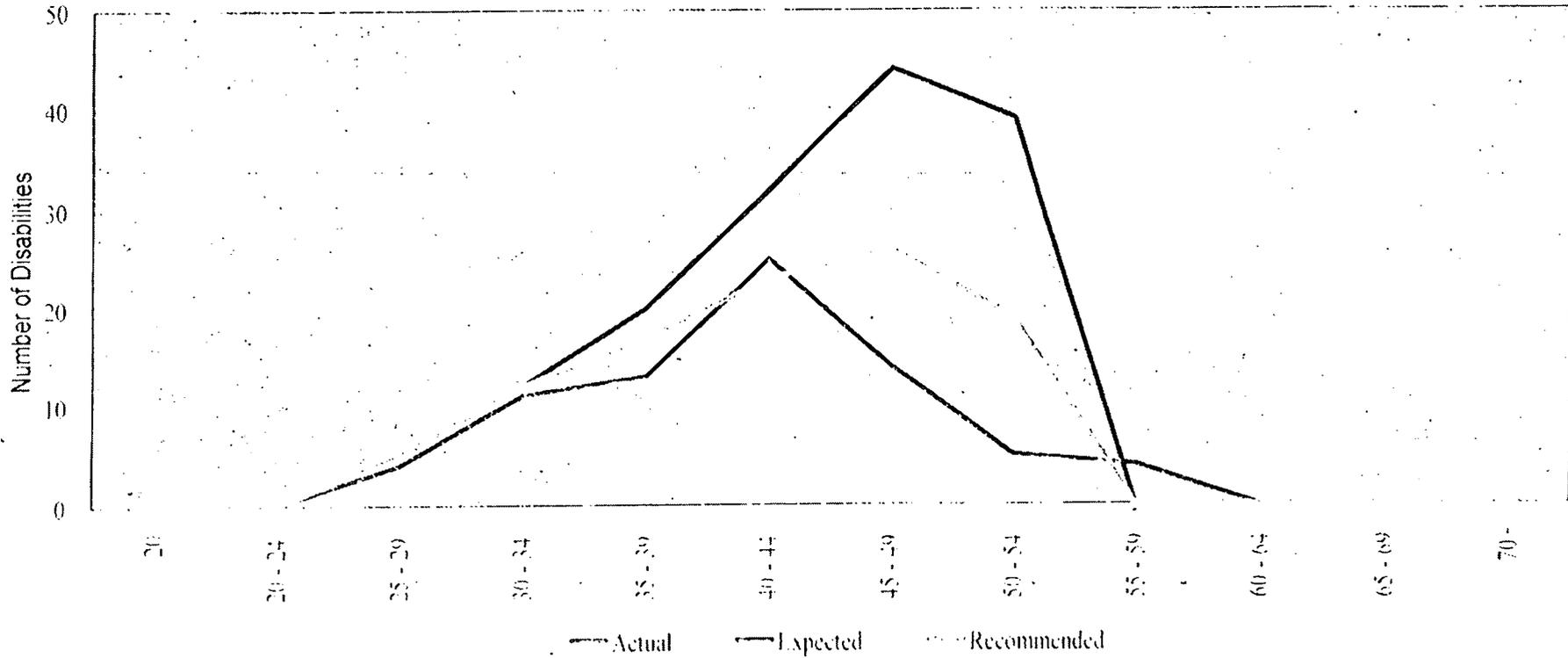
Ratio of Actual to Expected Disabilitys

1997	41%
1998	35%
1999	81%
2000	41%
2001	50%

POLICE AND FIRE DIVISION ACTIVE MEMBERS

Disability for Males and Females

Graph 12



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 13

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Males

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	17	2	1	0	0	20	15	2	1	0	0	18
25 - 29	37	13	9	4	2	65	41	9	6	2	1	59
30 - 34	52	24	37	15	10	138	33	22	17	12	8	92
35 - 39	60	48	57	27	16	208	47	42	35	29	24	177
40 - 44	59	49	58	48	31	245	51	53	50	47	42	243
45 - 49	53	55	54	44	44	250	53	61	54	49	46	263
50 - 54	38	36	39	30	32	175	34	48	50	54	54	240
Total	316	227	255	168	135	1101	274	237	213	193	175	1092

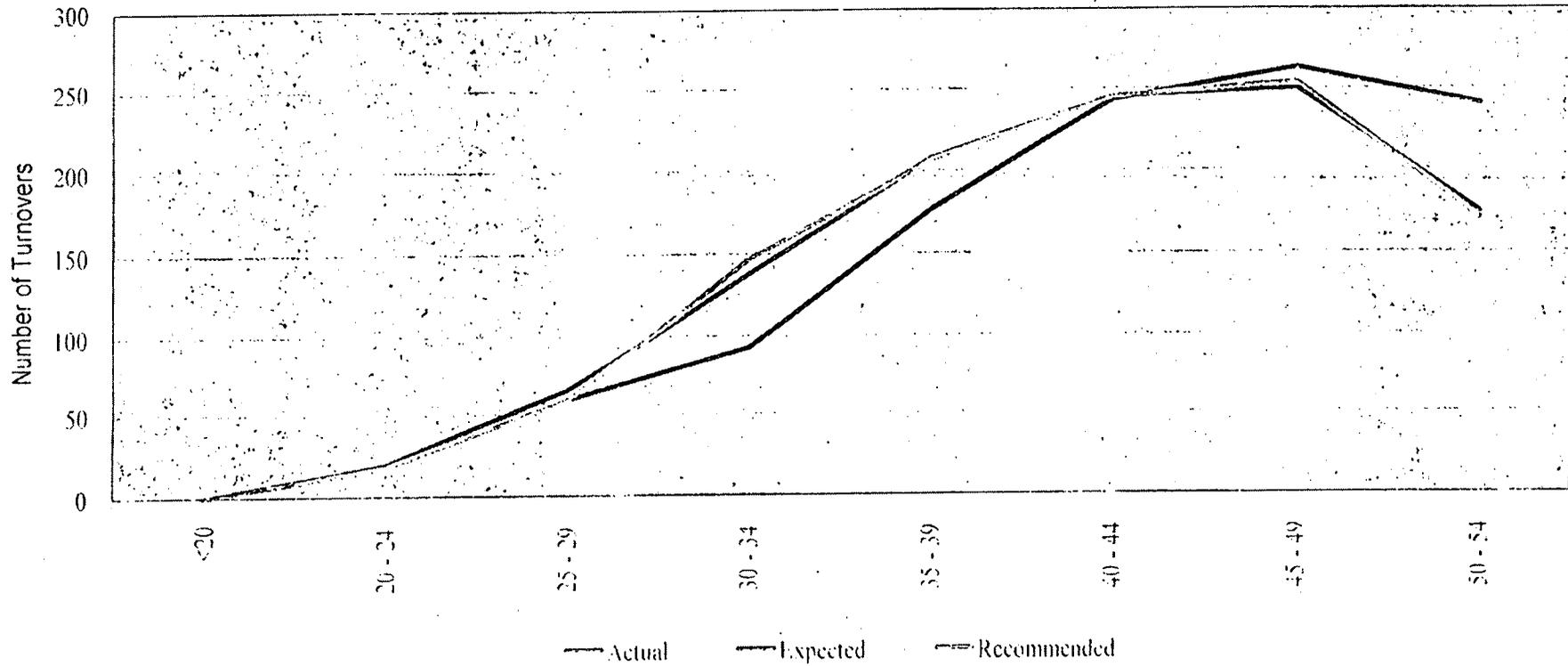
Ratio of Actual to Expected Turnovers

1997	115%
1998	96%
1999	120%
2000	87%
2001	77%

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Males

Graph 13



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 14

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Females

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	18	0	0	0	0	18	16	0	0	0	0	16
25 - 29	54	12	7	1	1	75	54	10	6	3	1	74
30 - 34	55	25	28	14	13	135	55	31	24	18	13	141
35 - 39	48	51	53	26	26	204	55	44	38	32	27	196
40 - 44	46	33	48	52	22	201	50	47	44	43	38	222
45 - 49	44	47	58	48	36	233	43	46	43	41	39	212
50 - 54	21	14	24	30	34	123	31	40	40	41	42	194
Total	286	182	218	171	132	989	304	218	195	178	160	1055

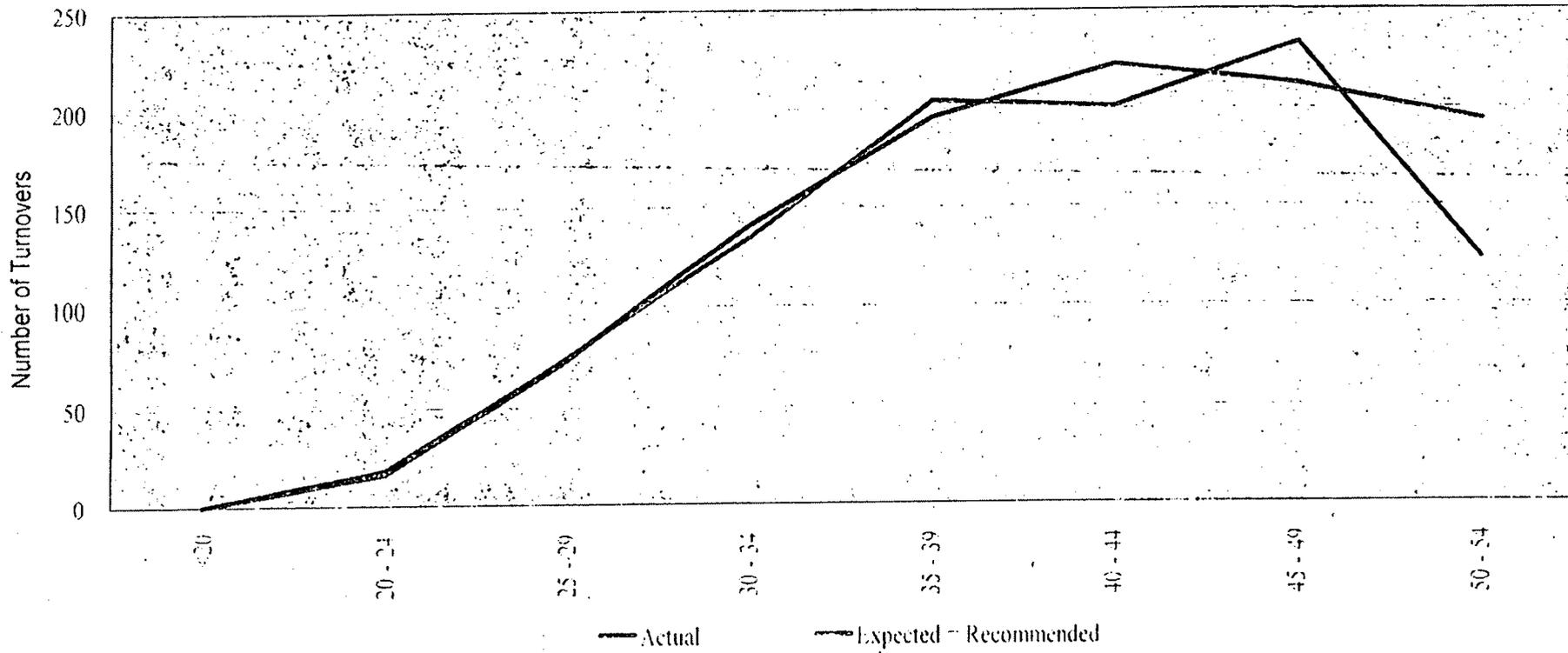
Ratio of Actual to Expected Turnovers

1997	94%
1998	83%
1999	112%
2000	96%
2001	83%

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Females

Graph 14



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 15

1967 POLICE AND FIRE DIVISION ACTIVE MEMBERS

Turnover for Males and Females

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	6	0	0	0	0	6	6	0	0	0	0	6
25 - 29	16	0	0	0	0	16	16	0	0	0	0	16
30 - 34	18	1	2	1	0	22	13	2	1	1	1	18
35 - 39	16	10	14	7	3	50	10	9	8	6	4	37
40 - 44	14	15	12	8	4	53	9	11	10	9	8	47
45 - 49	3	4	1	5	11	24	6	0	0	0	0	6
Total	73	30	29	21	18	171	60	22	19	16	13	130

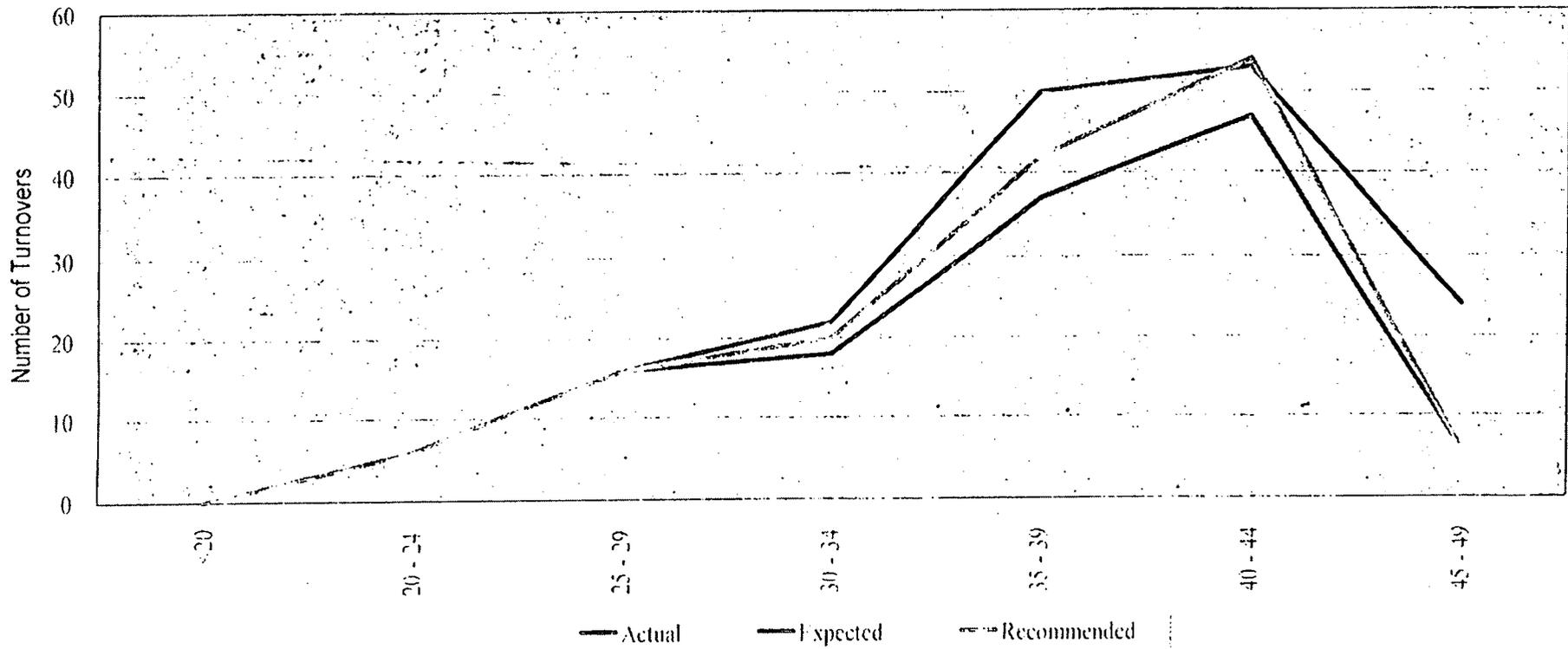
Ratio of Actual to Expected Turnovers

1997	122%
1998	136%
1999	153%
2000	131%
2001	138%

1967 POLICE AND FIRE DIVISION ACTIVE MEMBERS

Turnover for Males and Females

Graph 15



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 16

1987 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Males

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	1	0	1	1	3	0	0	0	0	1	1
20 - 24	6	7	17	25	25	80	5	13	13	17	15	63
25 - 29	12	73	94	78	66	323	14	35	35	37	32	153
30 - 34	18	50	119	83	52	322	11	26	30	30	31	128
35 - 39	20	59	89	58	44	270	16	23	24	26	27	116
40 - 44	20	37	76	49	36	218	17	15	19	21	23	95
45 - 49	18	42	75	38	24	197	18	11	12	15	17	73
50 - 54	13	20	34	20	21	108	12	6	7	9	11	45
55 - 59	0	5	26	13	11	55	0	0	0	0	0	0
Total	107	294	530	365	280	1576	93	129	140	155	157	674

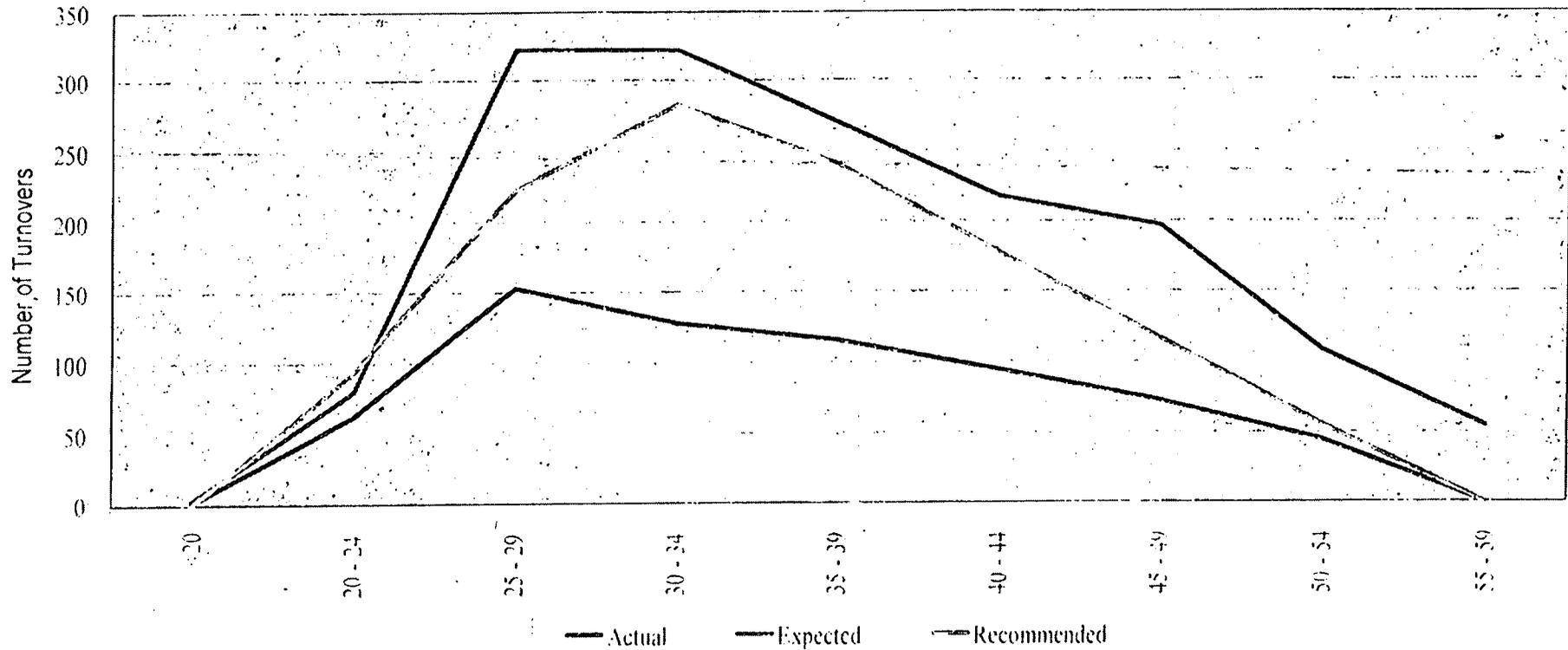
Ratio of Actual to Expected Turnovers

1997	115%
1998	228%
1999	379%
2000	235%
2001	178%

1987 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Males

Graph 16



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 17

1987 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Females

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	1	0	3	0	4	0	0	0	1	0	1
20 - 24	6	21	29	19	23	98	6	13	14	17	16	66
25 - 29	18	62	111	105	69	365	18	47	50	55	49	219
30 - 34	19	51	113	95	81	359	19	39	45	51	55	209
35 - 39	17	53	88	72	52	282	19	26	29	35	38	147
40 - 44	16	50	82	56	40	244	17	19	23	24	26	109
45 - 49	15	29	67	37	44	192	15	12	15	17	20	79
50 - 54	7	21	56	18	14	116	11	7	8	10	12	48
55 - 59	0	13	36	17	16	82	0	0	0	0	0	0
Total	98	301	582	422	339	1742	105	163	184	210	216	878

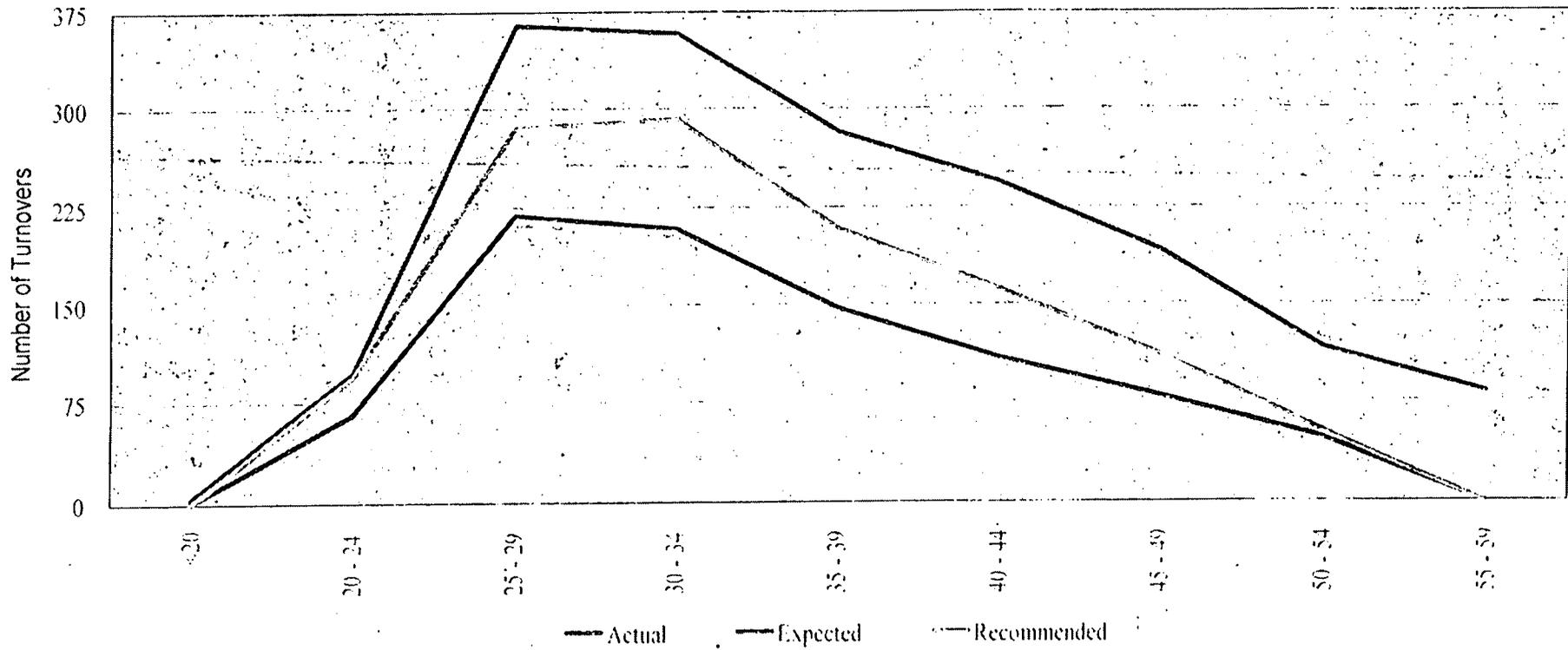
Ratio of Actual to Expected Turnovers

1997	93%
1998	185%
1999	316%
2000	201%
2001	157%

1987 MUNICIPAL DIVISION ACTIVE MEMBERS

Turnover for Females

Graph 17



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 18

1987 POLICE AND FIRE DIVISION ACTIVE MEMBERS

Turnover for Males and Females

Age	Actual Turnovers						Expected Turnovers					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
<20	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	3	12	26	5	7	53	3	7	8	7	6	31
25 - 29	9	21	66	28	33	157	9	21	23	22	19	94
30 - 34	10	18	67	36	32	163	7	20	22	24	25	98
35 - 39	10	14	33	24	17	98	6	9	11	13	15	54
40 - 44	8	7	22	4	9	50	6	10	13	14	16	59
45 - 49	2	5	5	4	0	16	4	3	4	5	7	23
50 - 54	1	0	3	0	0	4	0	0	0	0	0	0
Total	43	77	222	101	98	541	35	70	81	85	88	359

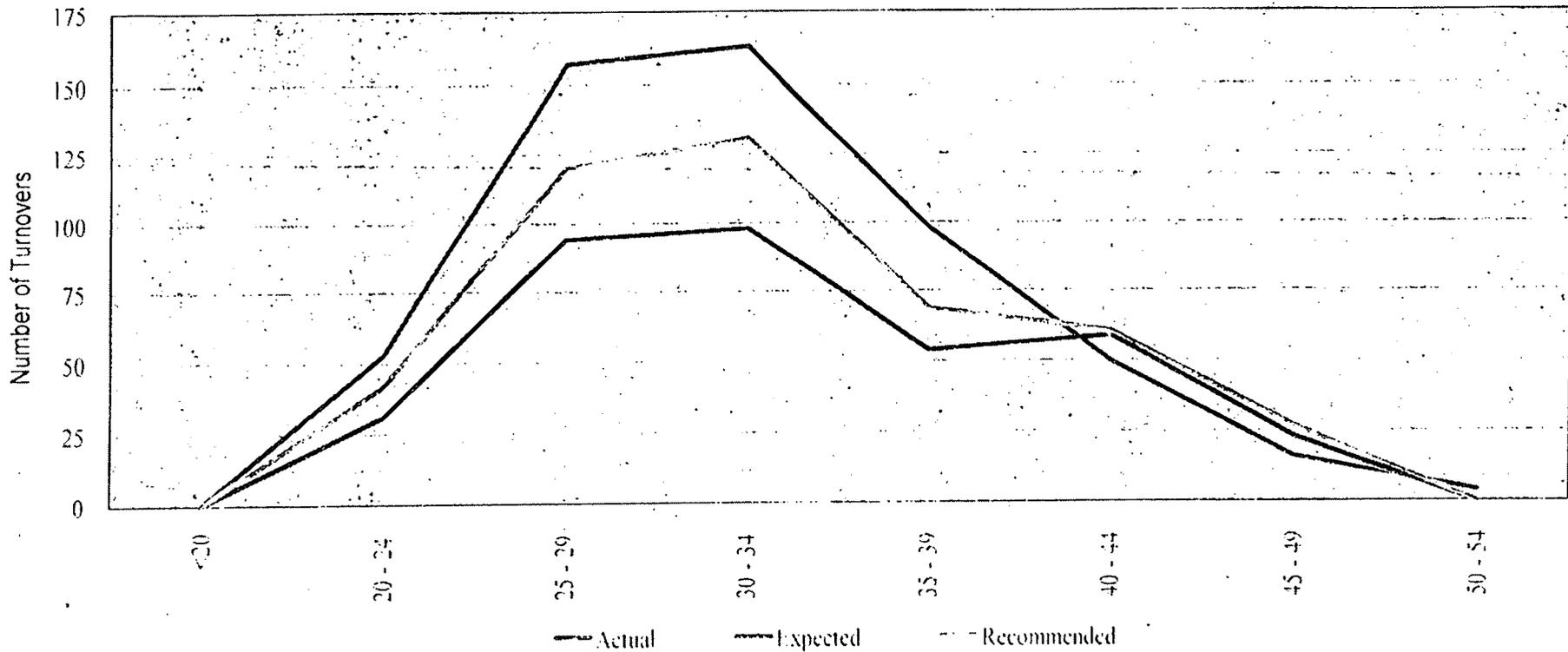
Ratio of Actual to Expected Turnovers

1997	123%
1998	110%
1999	274%
2000	119%
2001	111%

1987 POLICE AND FIRE DIVISION ACTIVE MEMBERS

Turnover for Males and Females

Graph 18



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 19

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Retirement for Males

Age	Actual Retirements						Expected Retirements					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
55	83	63	68	107	116	437	68	73	78	64	71	354
56	24	13	16	98	42	193	18	13	19	20	12	82
57	17	18	14	80	21	150	13	16	11	17	10	67
58	11	7	10	50	30	108	10	9	11	9	8	47
59	15	11	9	68	17	120	12	10	9	12	5	48
60	15	13	10	42	15	95	12	11	9	8	6	46
61	26	24	21	52	16	139	12	11	11	10	5	49
62	24	26	29	56	18	153	20	18	19	21	11	89
63	13	8	11	28	8	68	9	7	8	7	4	35
64	10	5	15	15	4	49	9	7	7	6	4	33
65	17	10	10	21	8	66	9	7	9	7	6	38
66	7	3	3	12	4	29	6	2	3	3	1	15
67	2	5	3	10	2	22	6	5	2	3	2	18
68	3	5	3	4	2	17	4	3	3	1	1	12
69	3	9	2	9	1	24	3	4	2	3	1	13
70	15	2	5	6	1	29	61	16	16	7	9	109
Total	285	222	229	658	305	1699	272	212	217	198	156	1055

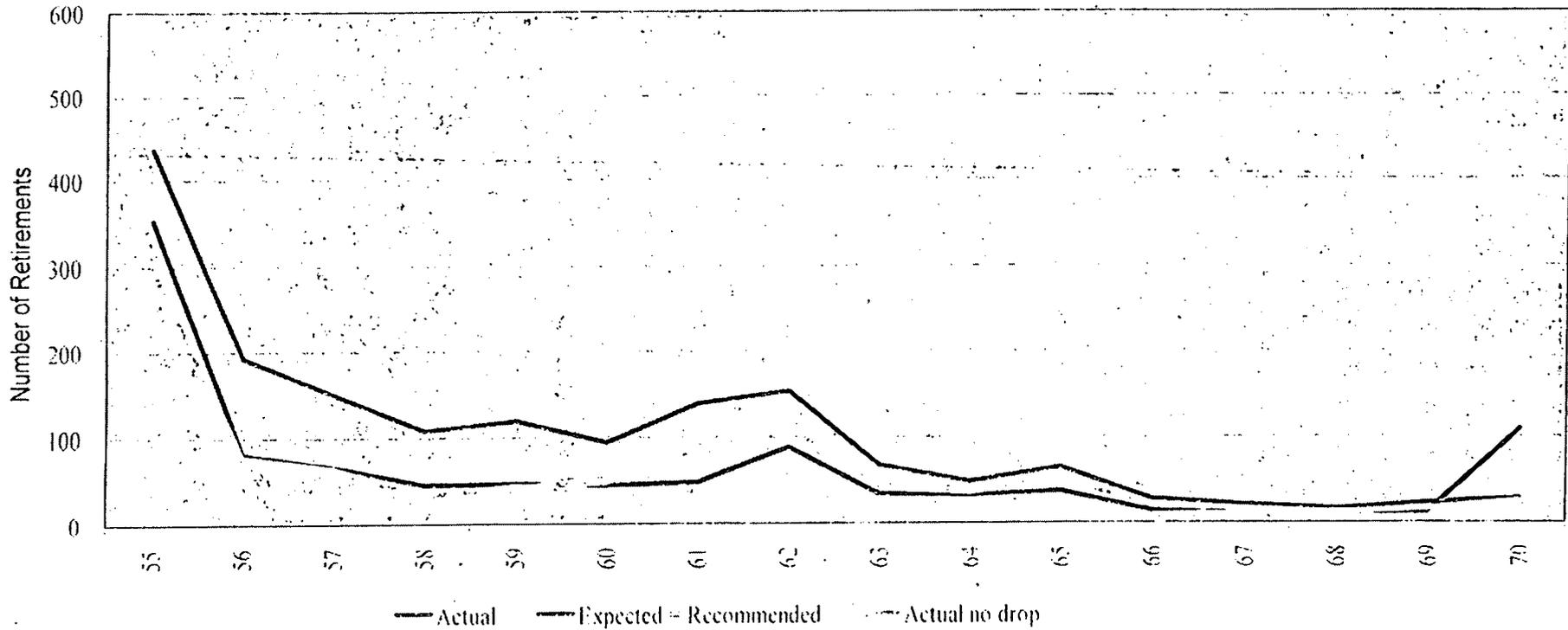
Ratio of Actual to Expected Retirements

1997	105%
1998	105%
1999	106%
2000	332%
2001	196%

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Retirement for Males

Graph 19



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 20

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Retirement for Females

Age	Actual Retirements						Expected Retirements					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
55	50	44	39	77	67	277	50	54	55	48	42	249
56	12	15	21	77	29	154	12	12	15	16	10	65
57	13	10	9	62	23	117	10	10	11	13	10	54
58	6	11	10	53	23	103	10	9	9	10	8	46
59	19	13	12	38	20	102	9	7	7	8	6	37
60	6	11	10	37	16	80	8	9	7	7	6	37
61	12	18	14	34	16	94	8	7	8	6	4	33
62	16	19	19	38	14	106	15	16	12	14	7	64
63	10	8	13	21	11	63	9	7	9	6	5	36
64	9	5	8	33	9	64	7	6	6	7	4	30
65	9	10	10	25	10	64	8	8	8	8	5	37
66	6	4	3	14	6	33	5	3	5	5	2	20
67	2	2	5	8	4	21	5	4	3	4	3	19
68	5	4	6	5	1	21	4	5	4	2	2	17
69	3	1	3	4	0	11	4	1	4	3	1	13
70	7	7	1	9	3	27	57	18	7	21	12	115
Total	185	182	183	535	252	1337	221	176	170	178	127	872

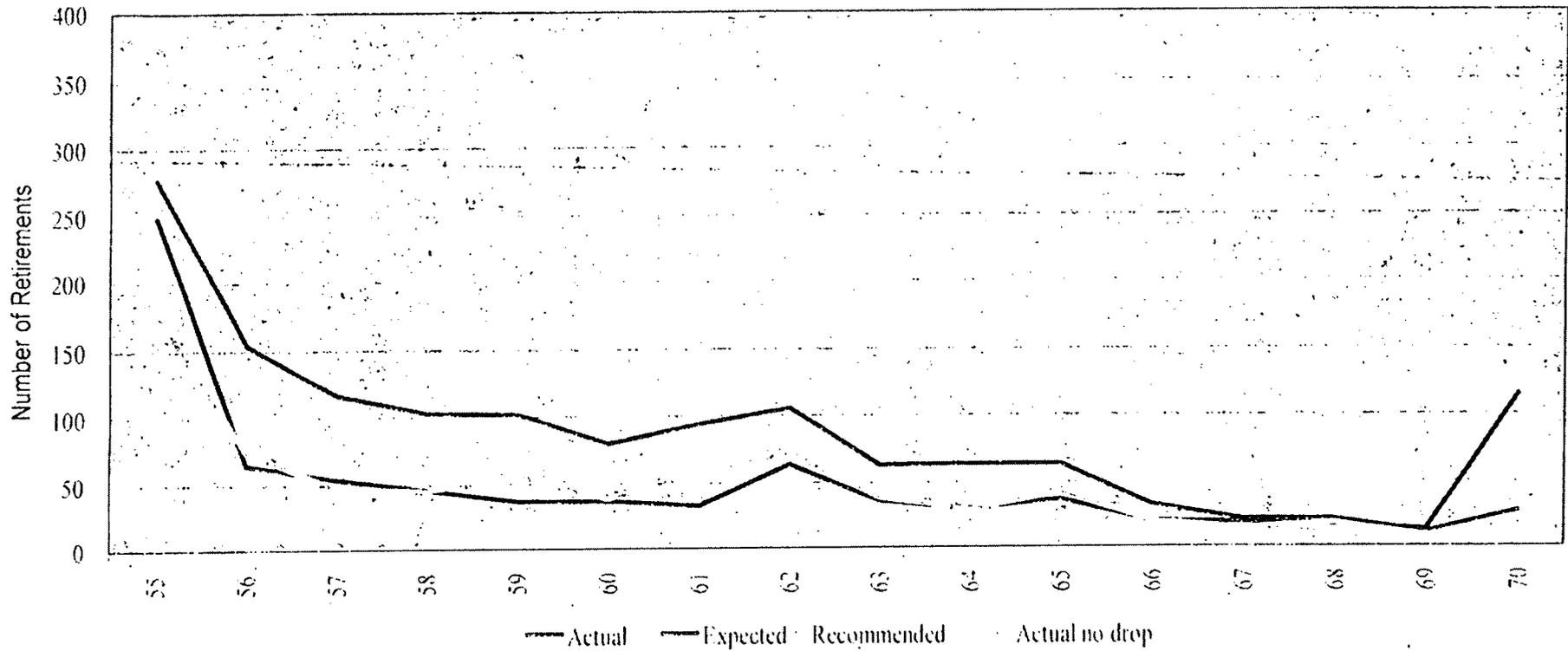
Ratio of Actual to Expected Retirements

1997	84%
1998	103%
1999	108%
2000	301%
2001	198%

1967 MUNICIPAL DIVISION ACTIVE MEMBERS

Retirement for Females

Graph 20



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM

Results of Experience Study for Fiscal Years 1997 - 2001

Table 21

1967 POLICE AND FIRE DIVISION ACTIVE MEMBERS
Retirement for Males and Females

Age	Actual Retirements						Expected Retirements					
	1997	1998	1999	2000	2001	Total	1997	1998	1999	2000	2001	Total
45	47	26	26	34	23	156	75	47	42	45	33	242
46	19	22	21	43	19	124	27	23	22	20	20	112
47	20	20	23	36	23	122	27	26	22	20	16	111
48	23	18	27	40	17	125	28	26	26	22	19	121
49	25	23	17	39	16	120	29	25	25	24	18	121
50	21	22	21	49	34	147	24	26	23	23	21	117
51	17	23	15	69	33	157	17	23	26	22	20	108
52	17	15	22	99	21	174	16	18	25	28	18	105
53	14	7	22	92	34	169	18	15	18	24	20	95
54	11	6	12	68	22	119	15	16	14	15	14	74
55	10	12	9	73	19	123	10	15	16	14	7	62
56	8	3	8	79	17	115	9	11	16	18	6	60
57	5	5	9	75	16	110	8	7	10	15	6	46
58	5	2	3	51	13	74	5	8	6	9	4	32
59	4	4	6	35	5	54	5	6	9	7	2	29
60	6	4	8	34	6	58	4	4	6	8	1	23
61	2	3	3	21	5	34	2	3	4	4	2	15
62	2	4	1	18	1	26	2	3	3	4	0	12
63	2	1	2	8	0	13	1	1	2	2	0	6
64	1	1	3	7	3	15	1	1	1	2	1	6
Total	259	221	258	970	327	2035	323	304	316	326	228	1497

Ratio of Actual to Expected Retirements

1997	80%
1998	73%
1999	82%
2000	298%
2001	143%

1967 POLICE AND FIRE DIVISION ACTIVE MEMBERS

Retirement for Males and Females

Graph 21

