

State of Alaska

Public Employees' Retirement System

Actuarial Valuation Report

as of June 30, 1993

Prepared by:

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April 5, 1994

State of Alaska
Public Employees' Retirement Board
Department of Administration
Division of Retirement & Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Dear Members of the Board:

Actuarial Certification

The actuarial valuation required for the State of Alaska Public Employees' Retirement System has been prepared as of June 30, 1993 by William M. Mercer, Incorporated. The purposes of the report include:

- (1) a review of experience under the Plan for the year ended June 30, 1993;
- (2) a determination of the appropriate contribution rate for each employer in the System;
- (3) the provision of reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us by the System's staff and financial information provided by the audited report from KPMG Peat Marwick, to determine a sound value for the System liability. This data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior years' data. The actuarial assumptions are based on the results of an experience study presented to the Board in October 1991.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY94 and a 25-year rolling amortization of the unfunded accrued liability. The amortization period is set by the Board. Contribution levels are recommended by the Actuary and adopted by the Board each year. The ratio of assets to liabilities increased from 91.2% to 95.4% during the year. Over the years, progress has been made toward achieving the funding objectives of the System.

Public Employees' Retirement Board
April 5, 1994
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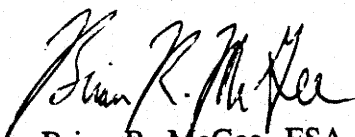
There were no significant changes in the actuarial assumptions or methods used in the determination of system assets and liabilities this year. The assumptions and methods, when applied in combination, fairly represent past and anticipated future experience of the System.

Future contribution requirements may differ from those determined in the valuation because of:

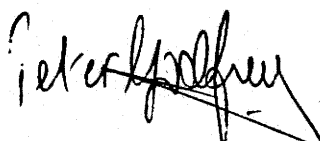
- (1) differences between actual experience and anticipated experience based on the assumptions;
- (2) changes in actuarial assumptions or methods;
- (3) changes in statutory provisions; or
- (4) differences between the contribution rates determined by the valuation and those adopted by the Board.

We believe that this report conforms with the requirements of the Alaska statutes, and where applicable, other federal and accounting laws, regulations and rules, as well as generally accepted actuarial principles and practices.

Sincerely,


Brian R. McGee, FSA
Principal

BRM/JWJ/KMJ/jls


Peter L. Godfrey, FIA
Associate

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Highlights

This report has been prepared by William M. Mercer, Incorporated to:

- (1) present the results of a valuation of the Alaska Public Employees' Retirement System as of June 30, 1993;
- (2) review experience under the plan for the year ended June 30, 1993;
- (3) determine the appropriate contribution rate for each employer in the System;
- (4) provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into three sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 1993 Fiscal Year, the current annual costs, and reporting and disclosure information.

Section 2 describes the basis of the valuation. It summarizes the plan provisions, provides information relating to the plan participants, and describes the funding methods and actuarial assumptions used in determining liabilities and costs.

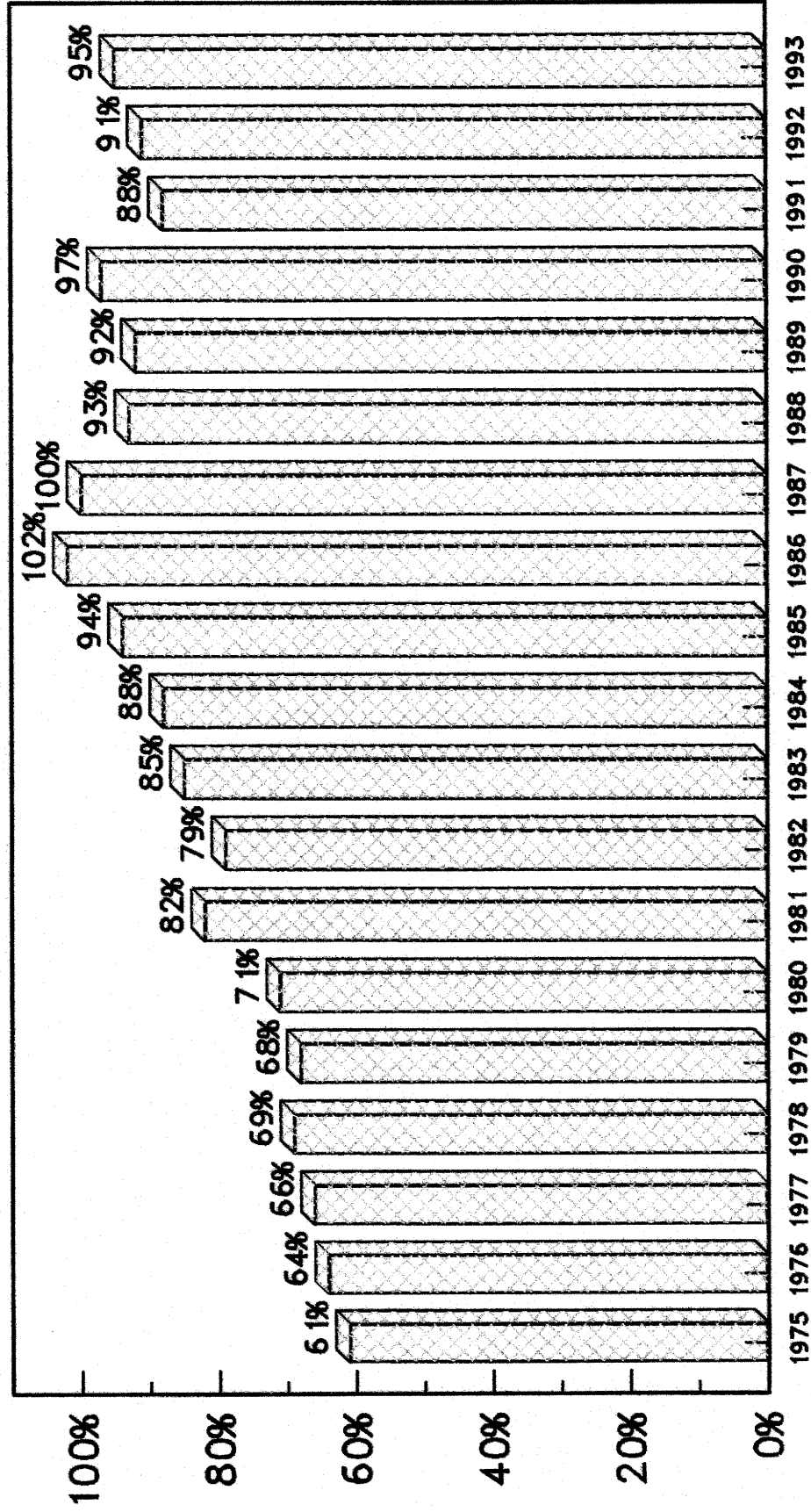
Section 3 contains additional exhibits showing historical information on system experience, unfunded liabilities, and the value of accumulated benefits.

The principle results are as follows:

	<u>1992</u>	<u>1993</u>
Funding Status as of June 30:		
(a) Valuation Assets*	\$3,409,859	\$3,936,776
(b) Accrued Liability*		
i) Non-Medical Benefits	2,735,178	2,963,975
ii) Total Benefits (including medical)	3,740,882	4,125,761
(c) Funding Ratio, (a) / (b)		
i) Non-Medical Benefits	124.7%	132.8%
ii) Total Benefits (including medical)	91.2%	95.4%

* In thousands.

STATE OF ALASKA PERS FUNDING RATIO HISTORY



At June 30

Employer Contribution Rates
for Fiscal Year:

	<u>1995</u>	<u>1996</u>
(a) Consolidated Rate	10.90%	11.29%
(b) Average Past Service Rate	2.80%	1.53%
(c) Average Total Contribution Rate	13.70%	12.82%

Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio as of June 30, 1993 has increased from 91.2% to 95.4%, an increase of 4.2%. The average employer contribution rate has reduced from 13.70% of payroll for FY95 to 12.82% for FY96, a reduction of 0.88% of payroll. The reasons for the change in the funded status and contribution rate are explained below.

(1) Retiree Medical Insurance

As you are aware, retiree medical premium experience has, in recent years, caused large fluctuations in the employer contribution rate. The following table summarizes the monthly premium per benefit recipient since retiree medical benefits have been provided under PERS and TRS.

<u>Fiscal Year</u>	<u>Monthly Premium Per Retiree For Health Coverage</u>	<u>Annual Percentage Increase</u>	<u>Average Annual Increase Since FY78</u>
1977	\$ 34.75	--	--
1978	57.64	66%	--
1979	69.10	20%	20%
1980	64.70	- 6%	6%
1981	96.34	49%	19%
1982	96.34	0%	14%
1983	115.61	20%	15%
1984	156.07	35%	18%
1985	191.85	23%	19%
1986	168.25	-12%	14%
1987	165.00	- 2%	12%
1988	140.25	-15%	9%
1989	211.22	51%	13%
1990	252.83	20%	13%
1991	243.98	- 4%	12%
1992	243.98	0%	11%
1993	226.90	- 7%	10%
1994	309.72	37%	11%
1995	336.05	9%	11%

As you can see from the above table, the monthly retiree medical premium increased during the year, to \$309.72. The premium for the 1995 fiscal year has increased to \$336.05, an increase of 9%. Since FY87, annual premium rate changes have ranged from 51% up to 15% down, but the average annual increase has been about 9%.

Two years ago, in an attempt to better predict the long-term increase in medical premiums, the Board adopted a health cost trend assumption which varies by year, declining to an ultimate rate equal to 7.5% for FY97 and later. If the long-term assumption remains reasonable, short-term gains and losses from the annually-determined medical premium rate will offset each other over time.

To help avoid the volatility in the funding and solvency of the System of bringing large health-related gains and losses into the System every year, we recommend that the Board use the health cost trend assumption to determine actuarial liabilities for retiree medical benefits. The difference between the assumed rate and the actual rate will be tracked annually and reduced if the gap becomes too wide. Also, adjustments will be made, if necessary, to the assumed medical premium rate every four to five years when a formal experience analysis is performed.

The effect of this approach is that no gain or loss emerges this year due to retiree medical insurance.

(2) Investment Performance

The approximate rate of return based on market value of system assets was 13.87%. The five-year smoothing technique produced a rate of return based on valuation assets of 13.27%, compared to the 8.75% investment return assumption. This produced a gain of approximately \$156,000,000 to the System from investment performance which had the effect of increasing the funding ratio by 3.8% and decreasing the average employer contribution rate by 1.41%.

(3) Salary Increases

Last year, salary increases were less than anticipated in the valuation assumptions. Salary experience resulted in an actuarial gain which generated a reduction in the total employer contribution rate equal to 0.21%.

(4) Employee Data

Section 2.2 provides statistics on active and inactive participants. The number of active participants increased .8% from 30,721 at June 30, 1992 to 30,972 at June 30, 1993. The average age of active participants increased from 41.21 to 41.75 and average credited service increased from 7.22 to 7.62 years.

The number of retirees and beneficiaries increased 4.6% from 8,704 to 9,103, and their average age increased from 63.58 to 63.98. There was a 9.9% increase in the number of vested terminated participants from 3,249 to 3,572. Their average age increased from 43.59 to 44.04.

The overall effect of these participant data changes was an actuarial loss to the System, resulting in an increase in the contribution rate equal to 0.74%.

(5) Actuarial Projections

At the Fall 1991 Board Meetings, the PERS Board approved the use of an enhanced actuarial projection system in the valuation report this year. The same actuarial cost method is used, but the enhanced system projects population growth patterns and their associated liabilities 25 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 25 years. Section 1.5, Actuarial Projections, contains the results of this analysis.

This type of information can be especially useful to two-tiered systems, such as PERS. All of the projected new entrants will be covered under the cost savings provisions of the second tier, so that the ultimate effect of the second tier on plan liabilities can be anticipated. As you can see in Section 1.5, based on the actuarial assumptions and cost method, future contribution rates are expected to remain relatively constant, and then slowly increase in 10 to 15 years. This reflects the fact that many second-tier employees are already in PERS and affecting the rate. Also, health premiums are expected to increase faster than salaries, putting upward pressure on the rates.

Summary

The following table summarizes the sources of change in the total employer contribution rate:

Last year's average employer contribution rate	13.70%
Change due to:	
Retiree medical insurance	0.00%
Investment performance	(1.41)%
Salary increases	(.21)%
Demographic experience74%
Average employer contribution rate this year	12.82%

Section 1

Valuation Results

This section sets forth the results of the actuarial valuation.

Section 1.1(a) shows the distribution of net assets as of June 30, 1993.

Section 1.1(b) shows the transactions of the plan's fund during FY93.

Section 1.1(c) develops the valuation assets as of June 30, 1993.

Section 1.2(a) shows the actuarial present values for Police and Fire members as of June 30, 1993.

Section 1.2(b) shows the actuarial present values for "Other" members as of June 30, 1993.

Section 1.3(a) develops the average employer contribution rate for Police and Fire members - FY96.

Section 1.3(b) develops the average employer contribution rate for "Other" members - FY96.

Section 1.3(c) develops the average employer contribution rate for all members - FY96.

Section 1.4 calculates the actuarial gain or loss for FY93.

Section 1.5 contains the financial projections.

1.1(a) Statement of Net Assets as of June 30, 1993 (in thousands)

	<u>Book Value</u>	<u>Actuarial Value</u>
Cash and Cash Equivalents	\$ 5,694	\$ 5,694
United States Government Bonds	850,199	1,003,965
Other United States Government Securities	56,342	61,275
Corporate Bonds	749,392	840,910
Commercial Paper	99,887	99,859
United States Common Stocks	1,384,059	1,540,814
Foreign Stocks	283,239	288,175
Real Estate Equities	155,164	113,438
Mortgages (Net of Reserves)	8,368	8,368
Net Accrued Receivables	<u>45,409</u>	<u>45,409</u>
Total Assets	\$3,637,753	\$4,007,907

1.1(b) Changes in Net Assets During Fiscal Year 1993 (in thousands)

Net Assets, June 30, 1992, (market value)

\$ 3,454,104

Additions:

Employee Contributions	\$ 81,889	
Employer Contributions	141,385	
Contributions for Retirement Incentive Program:		
Employee Contributions	0	
Employer Contributions	(17)	
Interest and Dividend Income	196,616	
Realized Gain (Loss)	201,206	
Unrealized Gain (Loss) on Investments	95,457	
Other	<u>6</u>	716,542

Deductions:

Medical Benefits	\$ 27,879	
Retirement Benefits	114,060	
Refunds of Contributions	11,522	
Administrative Expenses	<u>9,278</u>	162,739

Net Assets, June 30, 1993, (market value)

\$ 4,007,907

Approximate Investment Return Rate During the Year, Net of Administrative Expenses:

Based on Market Values	13.87%
Based on Valuation Assets	13.27%

1.1(c) Development of Valuation Assets as of June 30, 1993 (in thousands)

	A	B	C
	<u>Actuarial Value</u>	<u>Book Value</u>	<u>Ratio (A/B)</u>
(1) June 30, 1993	\$4,007,907	\$3,637,753	1.1018
(2) June 30, 1992	3,454,104	\$3,174,029	1.0882
(3) June 30, 1991	3,017,541	2,825,114	1.0681
(4) June 30, 1990	2,746,555	2,553,305	1.0757
(5) June 30, 1989	2,452,962	2,277,181	1.0772
(6) Average Ratio			1.0822
(7) Book Value at June 30, 1993			\$3,637,753
(8) Valuation Assets at June 30, 1993, (6) x (7) but not outside the range of book and actuarial values			\$3,936,776

1.2(a) Actuarial Present Values as of June 30, 1993
Police and Fire Members (in thousands)

	<u>Normal Cost</u>	<u>Accrued Liabilities</u>
<u>Active Members</u>		
Retirement Benefits	\$ 17,112	\$ 281,321
Termination Benefits	517	5,138
Disability Benefits	616	11,377
Death Benefits	527	10,376
Return of Contributions	313	2,003
Medical Benefits	6,540	82,775
Indebtedness	0	(8,294)
Retiree Incentive Program Receivables	<u>0</u>	<u>(262)</u>
Subtotal	\$ 25,625	\$ 384,434
<u>Inactive Members</u>		
Not Vested	\$ 0	\$ 433
Vested Terminations - Retirement Benefits	0	8,218
- Medical Benefits	0	9,132
Retirees & Beneficiaries - Retirement Benefits	0	202,609
- Medical Benefits	<u>0</u>	<u>34,613</u>
Subtotal	\$ 0	\$ 255,005
<u>Totals</u>	\$ 25,625	\$ 639,439

1.2(b) Actuarial Present Values as of June 30, 1993
"Other" Members (in thousands)

	<u>Normal Cost</u>	<u>Accrued Liability</u>
<u>Active Members</u>		
Retirement Benefits	\$ 79,203	\$ 986,345
Termination Benefits	18,344	177,971
Disability Benefits	3,588	47,181
Death Benefits	4,003	61,287
Return of Contributions	5,982	28,309
Medical Benefits	69,081	552,641
Indebtedness	0	(32,237)
Retirement Incentive Program Receivables	<u>0</u>	<u>(2,137)</u>
Subtotal	\$ 180,201	\$ 1,819,360
<u>Inactive Members</u>		
Not Vested	\$ 0	\$ 11,097
Vested Terminations - Retirement Benefits	0	205,533
- Medical Benefits	0	215,303
Retirees & Beneficiaries - Retirement Benefits	0	967,707
- Medical Benefits	<u>0</u>	<u>267,322</u>
Subtotal	\$ 0	\$ 1,666,962
<u>Totals</u>	\$ 180,201	\$ 3,486,322

1.3(a) Development of Average Employer Contribution Rate - FY96 For Police and Fire Members (in thousands)

Consolidated Rate

(1)	Total Normal Cost	\$ 25,625
(2)	Total Salaries	124,025
(3)	Normal Cost Rate for Police & Fire Members, (1) / (2)	20.66%
(4)	Member Contribution Rate (Police & Fire)	7.50%
(5)	Consolidated Employer Normal Cost Rate For Police & Fire Members, (3) - (4)	13.16%

Past Service Rate

(1)	Accrued Liability	\$ 639,439
(2)	Valuation Assets	610,149*
(3)	Total Unfunded Liability, (1) - (2)	29,290
(4)	Amortization Factor (25 years)	10.902097
(5)	Past Service Cost, (3) / (4)	2,687
(6)	Total Salaries	124,025
(7)	Past Service Rate, (5) / (6)	2.17%

Total Employer Contribution Rate 15.33%

* Allocated in proportion to Accrued Liability.

1.3(b) Development of Average Employer Contribution Rate - FY96 For "Other" Members (in thousands)

Consolidated Rate

(1)	Total Normal Cost	\$ 180,201
(2)	Total Salaries	1,011,864
(3)	Normal Cost Rate for "Other" Members, (1) / (2)	17.81%
(4)	Member Contribution Rate ("Others")	6.75%
(5)	Consolidated Employer Normal Cost Rate For Other Members, (3) - (4)	11.06%

Past Service Rate

(1)	Accrued Liability	\$3,486,322
(2)	Valuation Assets	3,326,627*
(3)	Total Unfunded Liability, (1) - (2)	159,695
(4)	Amortization Factor (25 years)	10.902097
(5)	Past Service Cost, (3) / (4)	\$ 14,648
(6)	Total Salaries	\$1,011,864
(7)	Past Service Rate, (5) / (6)	1.45%

Total Employer Contribution Rate 12.51%

* Allocated in proportion to Accrued Liability.

1.3(c) Development of Average Employer Contribution Rate - FY96 All Members (in thousands)

Consolidated Rate

(1)	Total Normal Cost	\$ 205,826
(2)	Total Salaries	1,135,889
(3)	Normal Cost Rate for All Members, (1) / (2)	18.12%
(4)	Average Member Contribution Rate	6.83%
(5)	Consolidated Employer Normal Cost Rate for All Members, (3) - (4)	11.29%

Past Service Rate

(1)	Accrued Liability	\$4,125,761
(2)	Valuation Assets	3,936,776
(3)	Total Unfunded Liability, (1) - (2)	188,985
(4)	25-Year Amortization Factor	10.902097
(5)	Past Service Cost, (3) / (4)	17,335
(6)	Total Salaries	1,135,889
(7)	Past Service Rate, (5) / (6)	1.53%

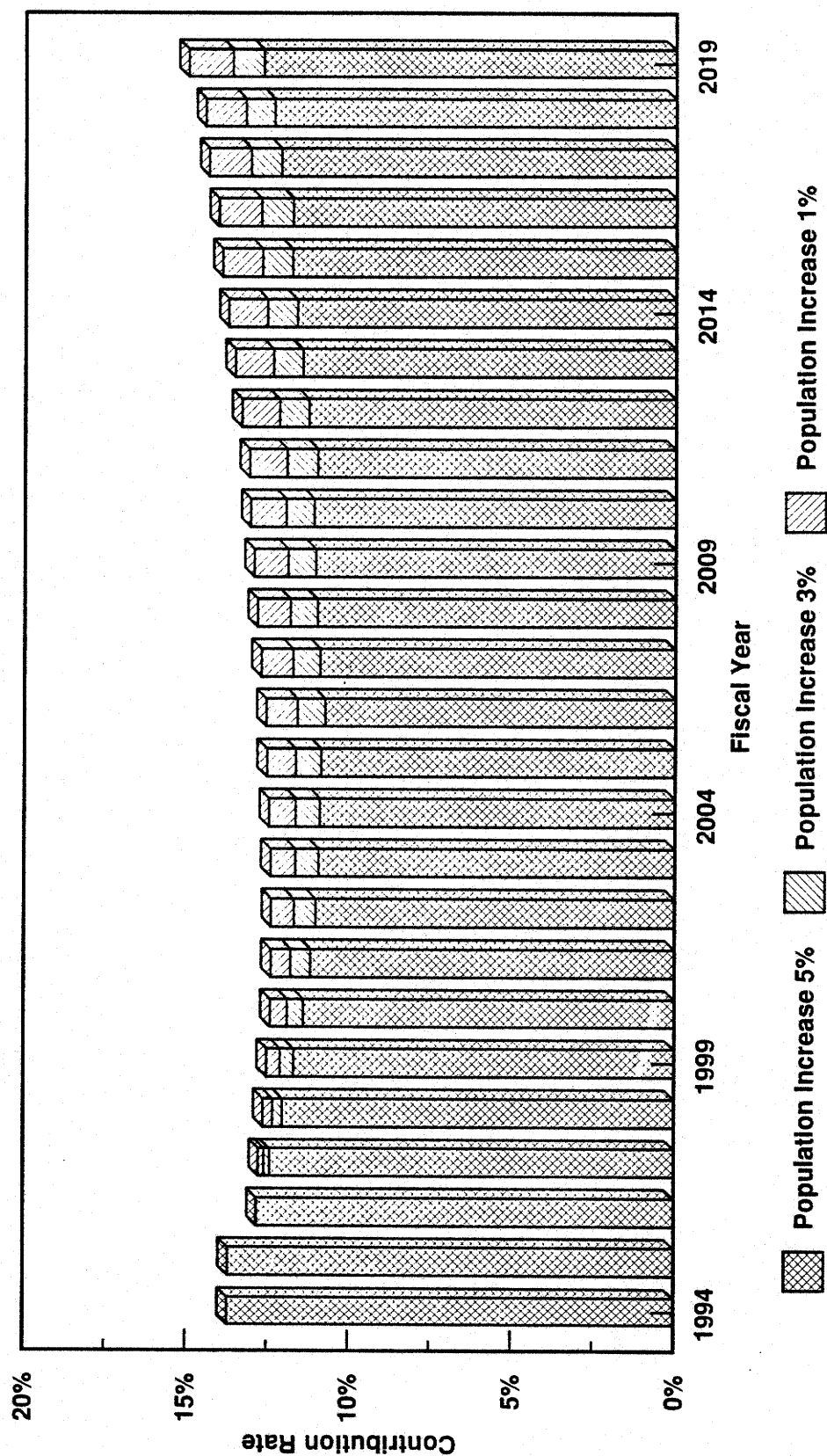
Total Employer Contribution Rate 12.82%

1.4 Development of Actuarial Gain/(Loss) for FY93 (in thousands)

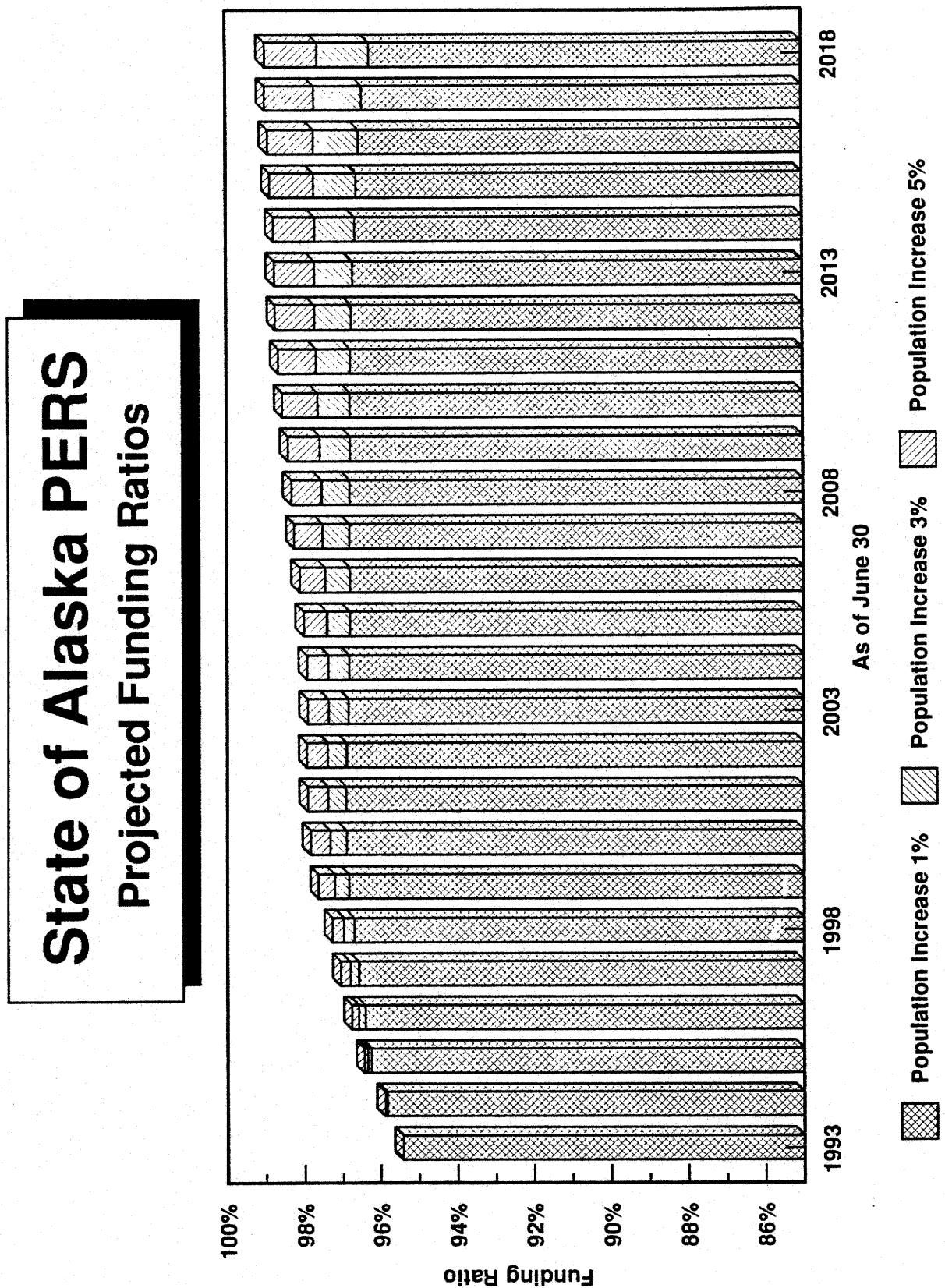
(1) Unfunded Liability, June 30, 1992	\$ 331,023
(2) Normal Cost for FY93	192,136
(3) Interest on (1) and (2) at 8.75%	45,776
(4) Employee Contributions for FY93	81,889
(5) Employer Contributions for FY93	141,368
(6) Interest on (4) and (5) at 8.75% for one-half year	9,767
(7) Expected Unfunded Liability, June 30, 1993, (1) + (2) + (3) - (4) - (5) - (6)	335,911
(8) Actual Unfunded Liability, June 30, 1993	188,985
(9) Actuarial Gain/(Loss) for the Year, (7) - (8)	\$ 146,926

1.5 Actuarial Projections

State of Alaska PERS Projected Contribution Rates



1.5 Actuarial Projections (continued)



1.5 Actuarial Projections (continued)

Table 1
State of Alaska PERS
Financial Projections ('000 omitted)

As of June 30	Investment Return 8.75%			Annual Population Increase 1.00%										Ending	
	Valuation Amounts on July 1			Flow Amounts During Following 12 Months										Investment	
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	Asset Value		
1993	3,936,776	4,125,761	95.4%	(188,985)	1,135,889	13.72%	158,058	78,683	236,741	180,187	56,554	346,942	4,340,272		
1994	4,340,272	4,528,986	95.8%	(188,713)	1,168,158	13.70%	162,237	80,882	243,118	200,330	42,789	381,646	4,764,707		
1995	4,764,707	4,950,423	96.2%	(185,716)	1,200,264	12.82%	156,214	83,225	239,438	219,984	19,455	417,763	5,201,925		
1996	5,201,925	5,395,377	96.4%	(193,452)	1,236,768	12.75%	160,238	85,816	246,054	243,725	2,329	455,270	5,659,524		
1997	5,659,524	5,860,272	96.6%	(200,749)	1,276,155	12.62%	163,780	88,638	252,418	271,322	(18,904)	494,381	6,135,001		
1998	6,135,001	6,345,028	96.7%	(210,027)	1,319,380	12.51%	168,590	92,016	260,606	304,089	(43,483)	534,910	6,626,428		
1999	6,626,428	6,843,638	96.8%	(217,211)	1,375,079	12.41%	174,152	95,820	269,972	336,418	(66,445)	576,905	7,136,888		
2000	7,136,888	7,366,299	96.9%	(229,411)	1,430,778	12.40%	180,898	99,624	280,523	373,997	(93,474)	620,388	7,663,802		
2001	7,663,802	7,909,174	96.9%	(245,372)	1,486,477	12.40%	187,714	103,429	291,143	414,817	(123,674)	665,172	8,205,299		
2002	8,205,299	8,469,239	96.9%	(263,939)	1,542,176	12.42%	195,035	107,233	302,268	459,821	(157,553)	711,071	8,758,817		
2003	8,758,817	9,044,279	96.8%	(285,463)	1,597,875	12.47%	204,071	111,771	315,843	507,455	(191,613)	758,013	9,325,217		
2004	9,325,217	9,632,891	96.8%	(307,674)	1,675,073	12.53%	214,723	117,044	331,767	556,950	(225,183)	806,105	9,906,139		
2005	9,906,139	10,234,482	96.8%	(328,343)	1,752,270	12.56%	224,874	122,316	347,190	607,407	(260,217)	855,403	10,501,325		
2006	10,501,325	10,849,268	96.8%	(347,943)	1,829,468	12.71%	237,355	127,589	364,944	661,296	(296,352)	905,901	11,110,874		
2007	11,110,874	11,478,276	96.8%	(367,403)	1,906,665	12.83%	249,654	132,862	382,516	717,421	(334,906)	957,549	11,733,517		
2008	11,733,517	12,123,347	96.8%	(389,830)	1,983,863	12.95%	263,964	139,263	403,227	773,143	(369,916)	1,010,499	12,374,100		
2009	12,374,100	12,787,127	96.8%	(413,027)	2,094,123	13.05%	280,433	146,794	427,227	829,089	(401,863)	1,065,152	13,037,389		
2010	13,037,389	13,473,076	96.8%	(435,687)	2,204,384	13.10%	295,971	154,325	450,296	885,346	(435,050)	1,121,738	13,724,078		
2011	13,724,078	14,185,465	96.7%	(461,387)	2,314,644	13.33%	315,945	161,856	477,801	940,924	(463,123)	1,180,595	14,441,550		
2012	14,441,550	14,929,372	96.7%	(487,822)	2,424,905	13.54%	335,799	169,386	505,186	998,537	(493,351)	1,242,052	15,190,251		
2013	15,190,251	15,710,689	96.7%	(520,438)	2,535,165	13.74%	359,055	178,480	537,535	1,056,013	(518,479)	1,306,464	15,978,236		
2014	15,978,236	16,536,117	96.6%	(557,881)	2,691,188	13.92%	388,320	190,468	578,788	1,112,510	(533,722)	1,374,745	16,819,259		
2015	16,819,259	17,413,167	96.6%	(593,908)	2,886,194	14.05%	413,910	201,151	615,061	1,167,883	(552,822)	1,447,499	17,713,936		
2016	17,713,936	18,350,163	96.5%	(636,226)	3,004,029	14.35%	442,196	210,517	652,713	1,226,654	(573,941)	1,524,859	18,664,855		
2017	18,664,855	19,356,235	96.4%	(691,381)	3,160,449	14.45%	467,999	221,200	689,199	1,289,038	(599,839)	1,606,932	19,671,948		
2018	19,671,948	20,441,329	96.2%	(769,381)	3,316,870	14.98%	496,790	226,542	723,332	1,353,245	(629,912)	1,693,737	20,735,772		

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

1.5 Actuarial Projections (continued)

Table 2

State of Alaska PERS
Financial Projections ('000 omitted)

As of June 30	Investment Return 8.75%			Annual Population Increase 3.00%										Ending	
	Valuation Amounts on July 1			Flow Amounts During Following 12 Months										Investment	
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employee Ctb Rate	Total Contris	Employee Contris	Total Contris	Benefit Payments	Net Contris	Earnings	Asset Value	
1993	3,936,776	4,125,761	95.4%	(188,985)	1,135,889	13.72%	159,084	79,194	82,492	238,278	180,187	58,091	347,009	4,341,877	
1994	4,341,877	4,529,397	95.9%	(187,520)	1,183,117	13.70%	165,468	82,492	86,100	247,961	200,338	47,623	381,998	4,771,497	
1995	4,771,497	4,953,024	96.3%	(181,527)	1,232,475	12.82%	161,611	86,100	90,139	256,153	220,164	27,548	418,711	5,217,756	
1996	5,217,756	5,402,381	96.6%	(184,625)	1,288,761	12.58%	166,014	90,139	94,608	265,230	244,191	11,961	457,077	5,686,795	
1997	5,686,795	5,874,522	96.8%	(187,727)	1,350,733	12.32%	170,622	94,608	100,136	277,393	272,209	(6,979)	497,289	6,177,105	
1998	6,177,105	6,370,094	97.0%	(192,989)	1,419,642	12.09%	177,257	100,136	106,485	291,885	305,554	(28,161)	539,265	6,688,208	
1999	6,688,208	6,881,379	97.2%	(193,171)	1,512,596	11.89%	185,400	106,485	112,833	307,427	338,594	(46,509)	583,183	7,224,883	
2000	7,224,883	7,424,305	97.3%	(199,422)	1,605,550	11.78%	194,594	112,833	119,182	323,261	376,574	(69,147)	629,152	7,784,888	
2001	7,784,888	7,995,222	97.4%	(210,334)	1,698,504	11.70%	204,078	119,182	125,531	339,754	418,122	(94,862)	677,027	8,367,054	
2002	8,367,054	8,591,681	97.4%	(224,628)	1,791,457	11.66%	214,223	125,531	133,555	361,273	463,976	(124,222)	726,682	8,969,514	
2003	8,969,514	9,212,431	97.4%	(242,917)	1,884,411	11.65%	227,719	133,555	143,253	387,683	512,632	(151,359)	778,211	9,596,366	
2004	9,596,366	9,857,418	97.4%	(261,053)	2,026,410	11.65%	244,430	143,253	152,952	412,543	563,348	(175,665)	831,997	10,252,697	
2005	10,252,697	10,527,789	97.4%	(275,092)	2,168,408	11.59%	259,591	152,952	162,650	441,816	615,254	(202,711)	888,242	10,938,228	
2006	10,938,228	11,225,888	97.4%	(287,660)	2,310,406	11.72%	279,166	162,650	172,348	470,590	670,936	(229,121)	947,071	11,656,179	
2007	11,656,179	11,955,257	97.5%	(299,079)	2,452,405	11.82%	298,242	172,348	184,679	506,384	729,293	(281,325)	1,008,597	12,406,073	
2008	12,406,073	12,720,639	97.5%	(314,566)	2,594,403	11.90%	321,705	184,679	199,641	549,517	846,874	(297,557)	1,073,223	13,197,972	
2009	13,197,972	13,527,973	97.6%	(330,001)	2,813,471	11.96%	349,676	199,641	214,604	589,576	906,937	(317,361)	1,141,804	14,042,219	
2010	14,042,219	14,384,397	97.6%	(342,178)	3,032,540	11.93%	374,972	214,604	229,566	638,606	967,153	(328,547)	1,214,810	14,939,668	
2011	14,939,668	15,298,250	97.7%	(358,582)	3,251,608	12.17%	409,040	229,566	244,528	687,097	1,030,505	(343,408)	1,292,847	15,903,967	
2012	15,903,967	16,279,066	97.7%	(375,099)	3,470,677	12.36%	442,569	244,528	263,435	747,084	1,094,838	(347,754)	1,376,573	16,937,132	
2013	16,937,132	17,337,580	97.7%	(400,448)	3,689,745	12.54%	483,650	263,435	287,603	822,182	1,159,458	(337,276)	1,466,785	18,056,163	
2014	18,056,163	18,485,725	97.7%	(429,562)	4,024,303	12.70%	534,579	287,603	310,453	889,884	1,224,358	(334,474)	1,565,158	19,284,045	
2015	19,284,045	19,736,632	97.7%	(452,586)	4,397,447	12.75%	579,431	310,453	331,986	966,734	1,294,910	(328,175)	1,672,721	20,622,292	
2016	20,622,292	21,104,631	97.7%	(482,339)	4,693,419	13.06%	634,749	331,986	354,836	1,041,786	1,371,577	(329,791)	1,790,093	22,084,210	
2017	22,084,210	22,605,250	97.7%	(521,040)	5,027,977	13.22%	686,950	354,836	366,261	1,096,733	1,452,671	(355,938)	2,055,759	23,672,359	
2018	23,672,359	24,255,217	97.6%	(582,858)	5,362,535	13.62%	730,472	366,261						25,372,180	

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

1.5 Actuarial Projections (continued)

Table 3

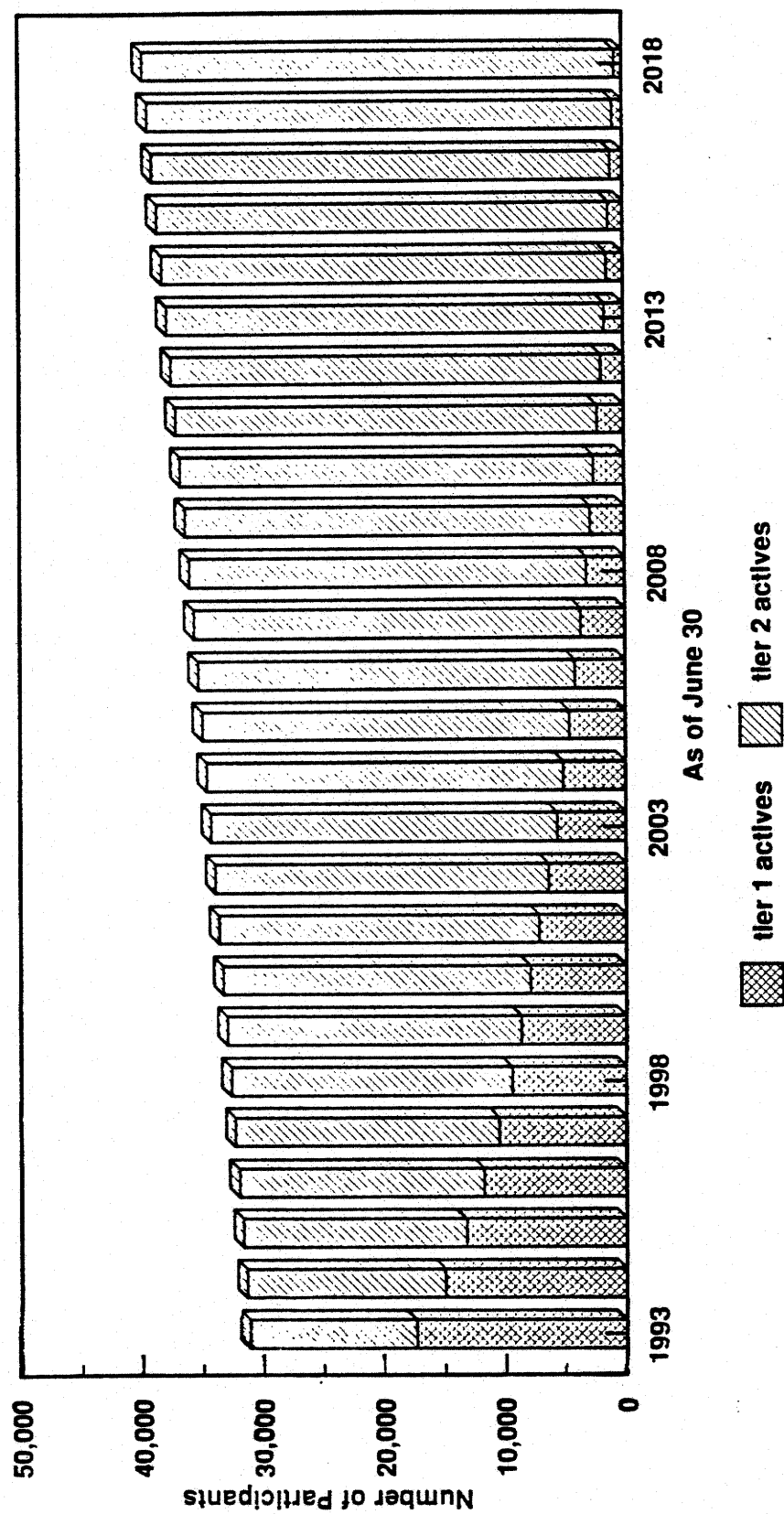
State of Alaska PERS
Financial Projections ('000 omitted)

As of June 30	Investment Return		8.75%	1				Flow Amounts During Following 12 Months				Annual Population Increase		5.00%	Ending Asset Value
	Total Assets	Valuation Amounts on July Accrued Funding Liability		Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings		
1993	3,936,776	4,125,761	95.4%	(188,985)	1,135,889	13.72%	160,110	79,705	239,815	180,187	59,628	347,077	4,343,481		
1994	4,343,481	4,529,808	95.9%	(186,327)	1,198,077	13.70%	168,742	84,125	252,867	200,345	52,523	382,352	4,778,356		
1995	4,778,356	4,955,642	96.4%	(177,286)	1,265,316	12.82%	167,180	89,067	256,248	220,344	35,904	419,677	5,233,937		
1996	5,233,937	5,409,515	96.8%	(175,578)	1,342,802	12.41%	172,008	94,683	266,691	244,664	22,026	458,933	5,714,897		
1997	5,714,897	5,889,210	97.0%	(174,313)	1,429,755	12.02%	177,790	101,005	278,796	273,124	5,672	500,302	6,220,870		
1998	6,220,870	6,396,249	97.3%	(175,379)	1,527,936	11.68%	186,612	109,120	295,732	307,087	(11,356)	543,829	6,753,344		
1999	6,753,344	6,917,880	97.6%	(164,536)	1,667,375	11.39%	197,903	118,644	316,547	340,507	(23,961)	589,869	7,319,252		
2000	7,319,252	7,482,340	97.8%	(163,088)	1,806,814	11.18%	209,854	128,167	338,021	379,385	(41,364)	638,625	7,916,513		
2001	7,916,513	8,085,294	97.9%	(168,781)	1,946,253	11.02%	222,171	137,691	359,861	421,795	(61,933)	689,985	8,544,565		
2002	8,544,565	8,724,347	97.9%	(179,782)	2,085,692	10.93%	235,603	147,215	382,817	468,672	(85,855)	743,893	9,202,604		
2003	9,202,604	9,399,045	97.9%	(196,441)	2,225,132	10.89%	254,986	159,959	414,944	518,583	(103,638)	800,694	9,899,659		
2004	9,899,659	10,110,876	97.9%	(211,217)	2,458,873	10.87%	280,071	175,923	455,994	570,816	(114,823)	861,197	10,646,034		
2005	10,646,034	10,863,270	98.0%	(217,236)	2,692,615	10.74%	301,728	191,888	493,616	624,551	(130,934)	925,800	11,440,899		
2006	11,440,899	11,661,596	98.1%	(220,698)	2,926,356	10.89%	331,270	207,852	539,123	682,505	(143,382)	994,806	12,292,322		
2007	12,292,322	12,513,167	98.2%	(220,845)	3,160,098	10.98%	359,687	223,817	583,504	743,700	(160,196)	1,068,570	13,200,696		
2008	13,200,696	13,427,236	98.3%	(226,540)	3,393,839	11.04%	396,485	245,192	641,677	805,572	(163,895)	1,147,890	14,184,691		
2009	14,184,691	14,414,997	98.4%	(230,307)	3,786,001	11.09%	441,728	271,976	713,704	868,914	(155,210)	1,234,370	15,263,851		
2010	15,263,851	15,489,587	98.5%	(225,736)	4,178,163	10.99%	480,742	298,761	779,503	933,976	(154,472)	1,328,829	16,438,208		
2011	16,438,208	16,666,081	98.6%	(227,874)	4,570,325	11.26%	536,533	325,546	862,079	1,000,315	(138,236)	1,432,295	17,732,267		
2012	17,732,267	17,961,500	98.7%	(229,233)	4,962,487	11.45%	590,890	352,330	943,220	1,071,241	(128,021)	1,545,972	19,150,218		
2013	19,150,218	19,394,802	98.7%	(244,584)	5,354,649	11.63%	660,737	387,967	1,048,704	1,144,707	(96,004)	1,671,444	20,725,659		
2014	20,725,659	20,986,889	98.8%	(261,230)	6,006,027	11.78%	748,147	433,774	1,181,921	1,220,261	(38,340)	1,811,818	22,499,136		
2015	22,499,136	22,760,603	98.9%	(261,466)	6,695,991	11.76%	823,826	478,263	1,302,089	1,298,147	3,942	1,968,847	24,471,925		
2016	24,471,925	24,740,728	98.9%	(268,803)	7,308,783	12.13%	925,822	521,434	1,447,256	1,384,718	62,538	2,144,029	26,678,493		
2017	26,678,493	26,953,988	99.0%	(275,496)	7,960,161	12.34%	1,022,773	565,924	1,588,697	1,480,869	107,828	2,339,086	29,125,406		
2018	29,125,406	29,429,052	99.0%	(303,646)	8,611,539	12.68%	1,091,858	588,168	1,680,026	1,585,225	94,801	2,552,621	31,772,828		

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

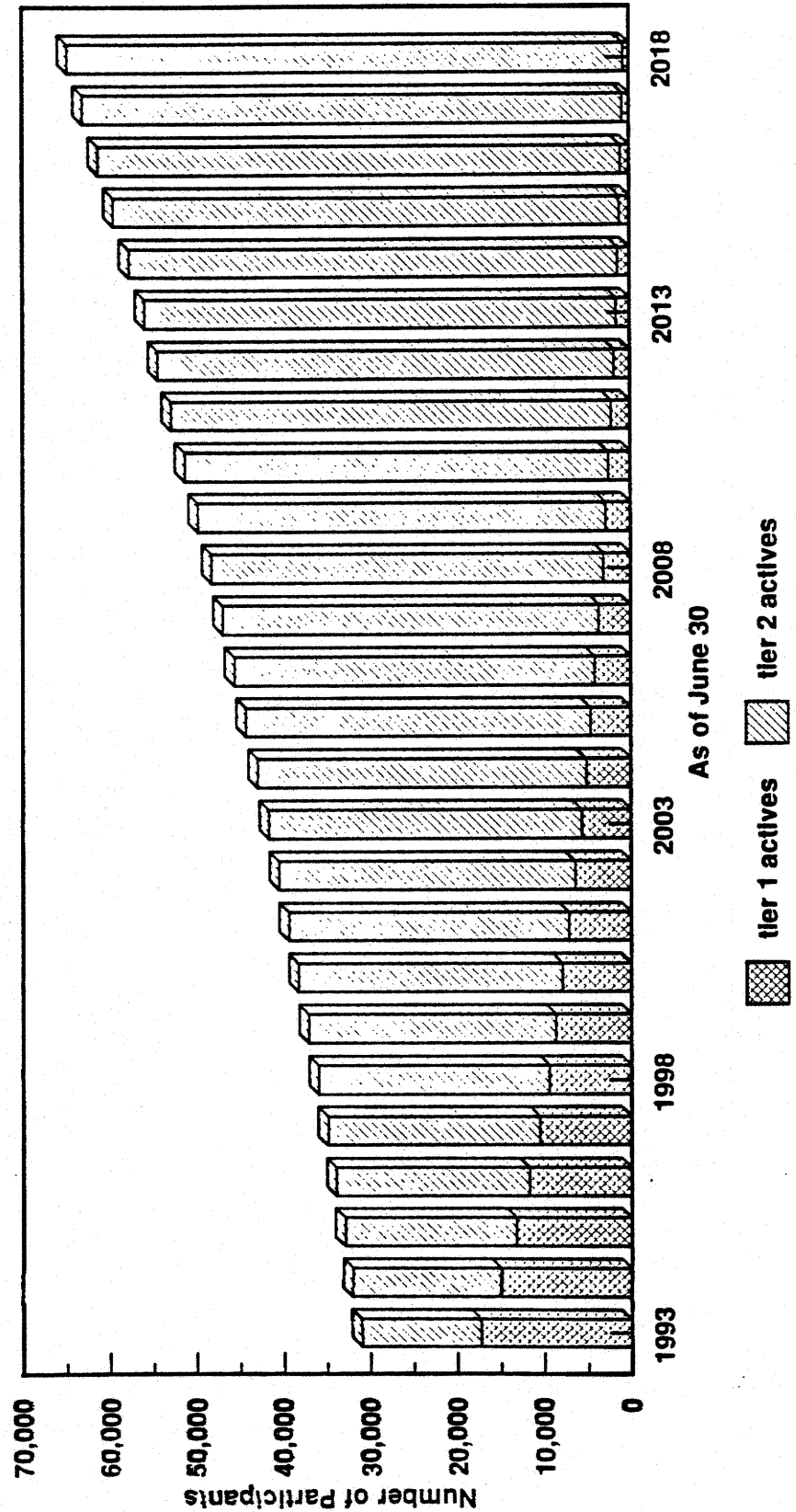
1.5 Actuarial Projections (continued)

State of Alaska PERS Projected Active Participant Count Annual Population Increase of 1%



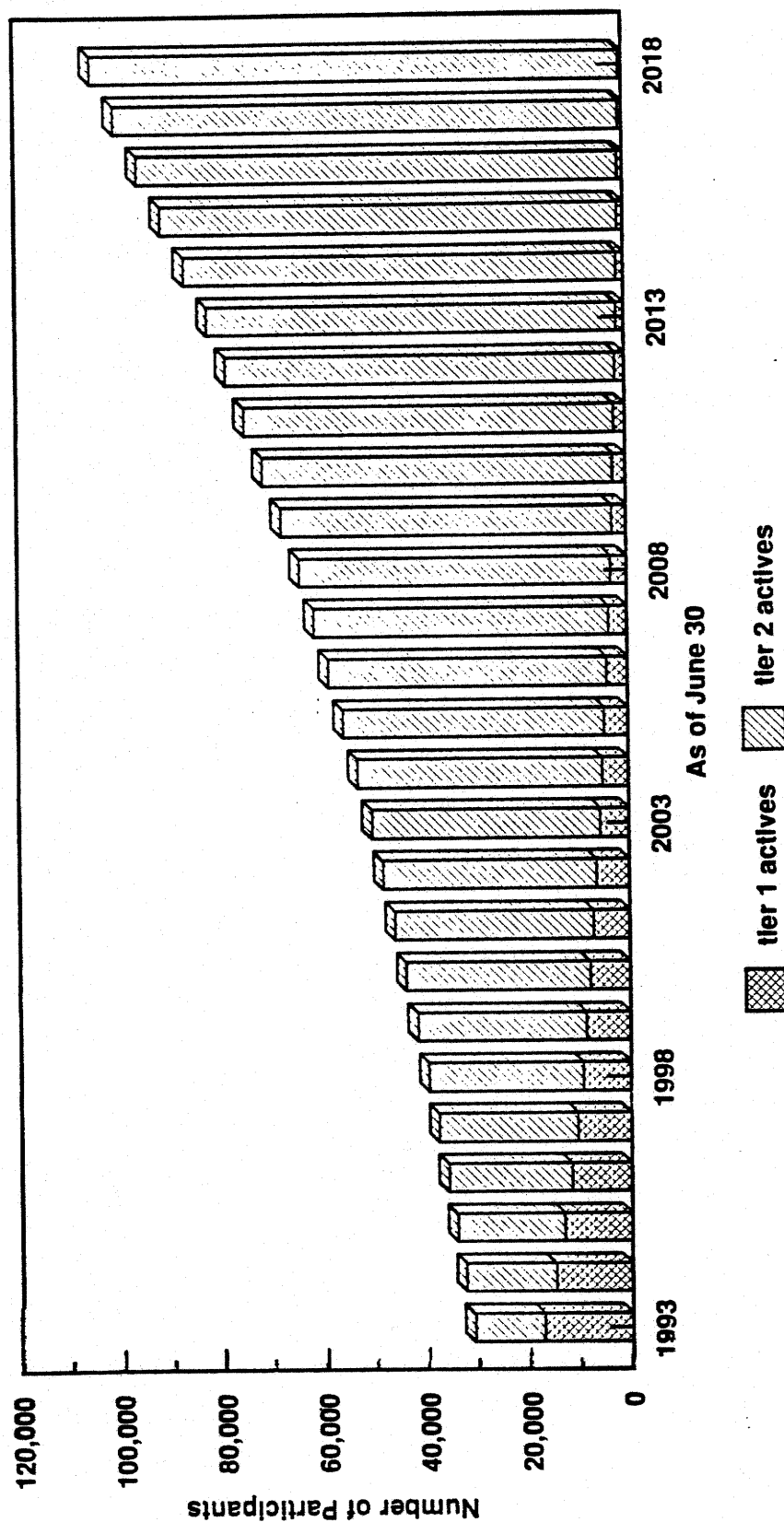
1.5 Actuarial Projections (continued)

State of Alaska PERS
 Projected Active Participant Count
 Annual Population Increase of 3%

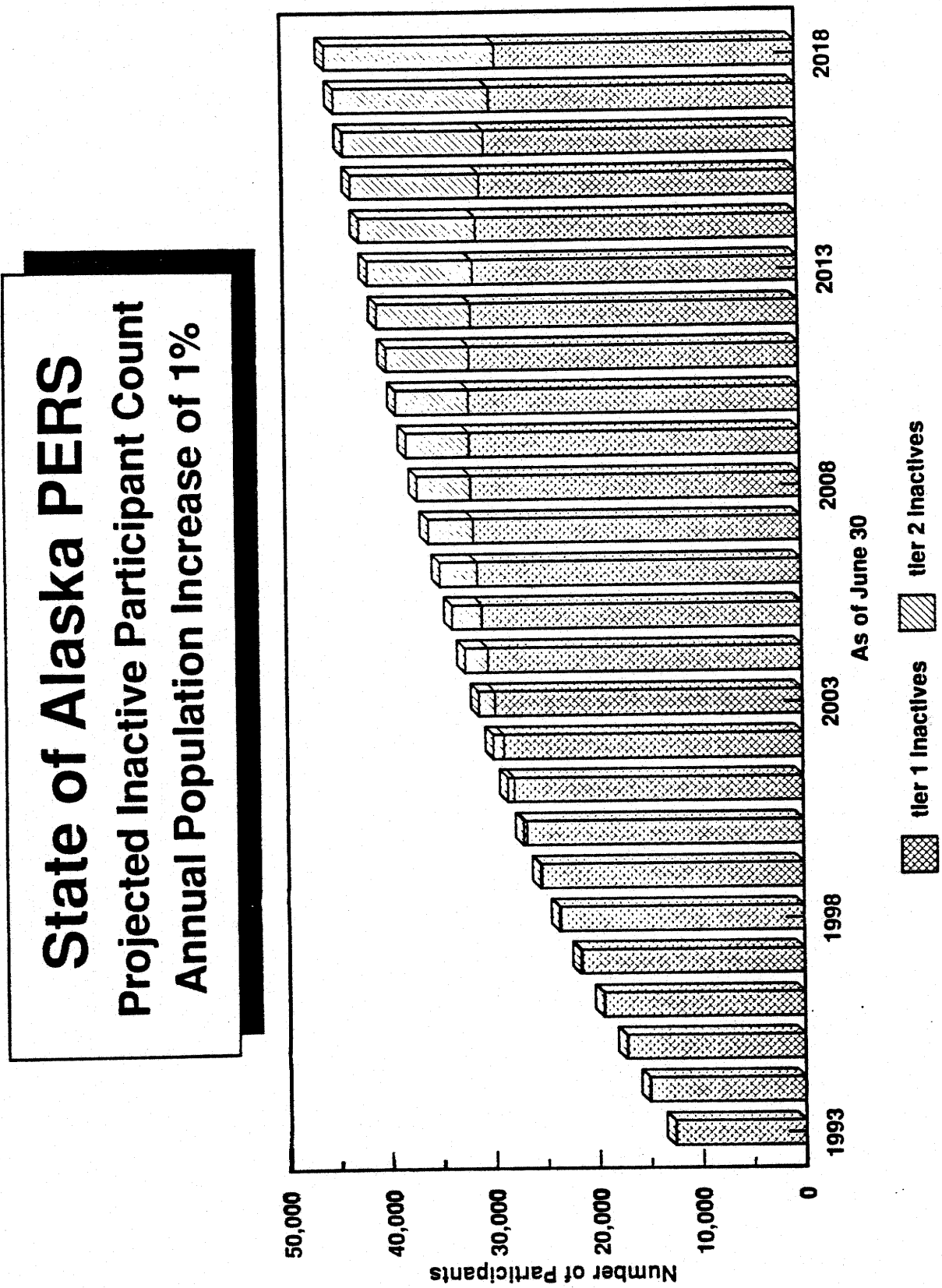


1.5 Actuarial Projections (continued)

State of Alaska PERS Projected Active Participant Count Annual Population Increase of 5%



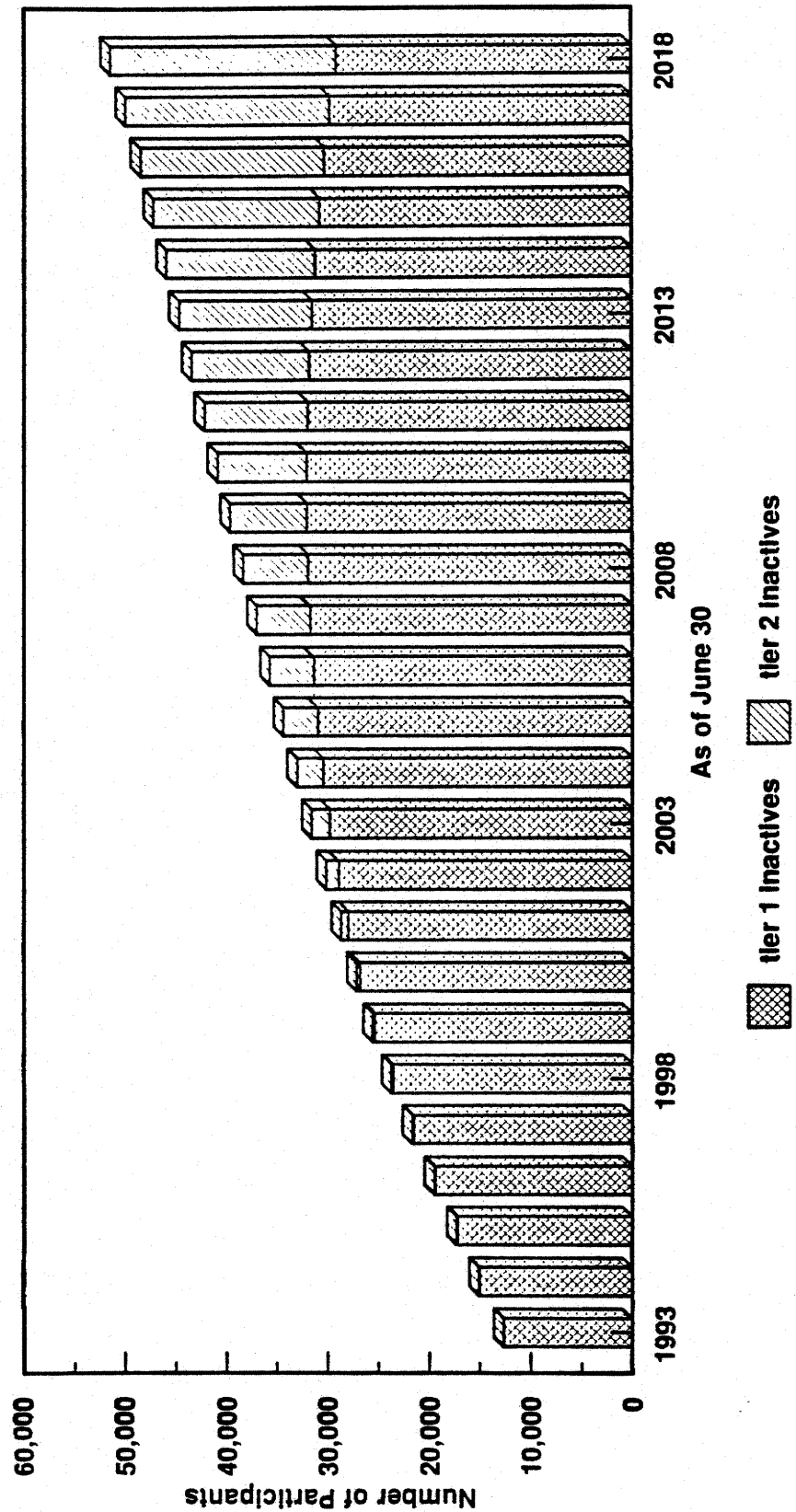
1.5 Actuarial Projections (continued)



1.5 Actuarial Projections (continued)

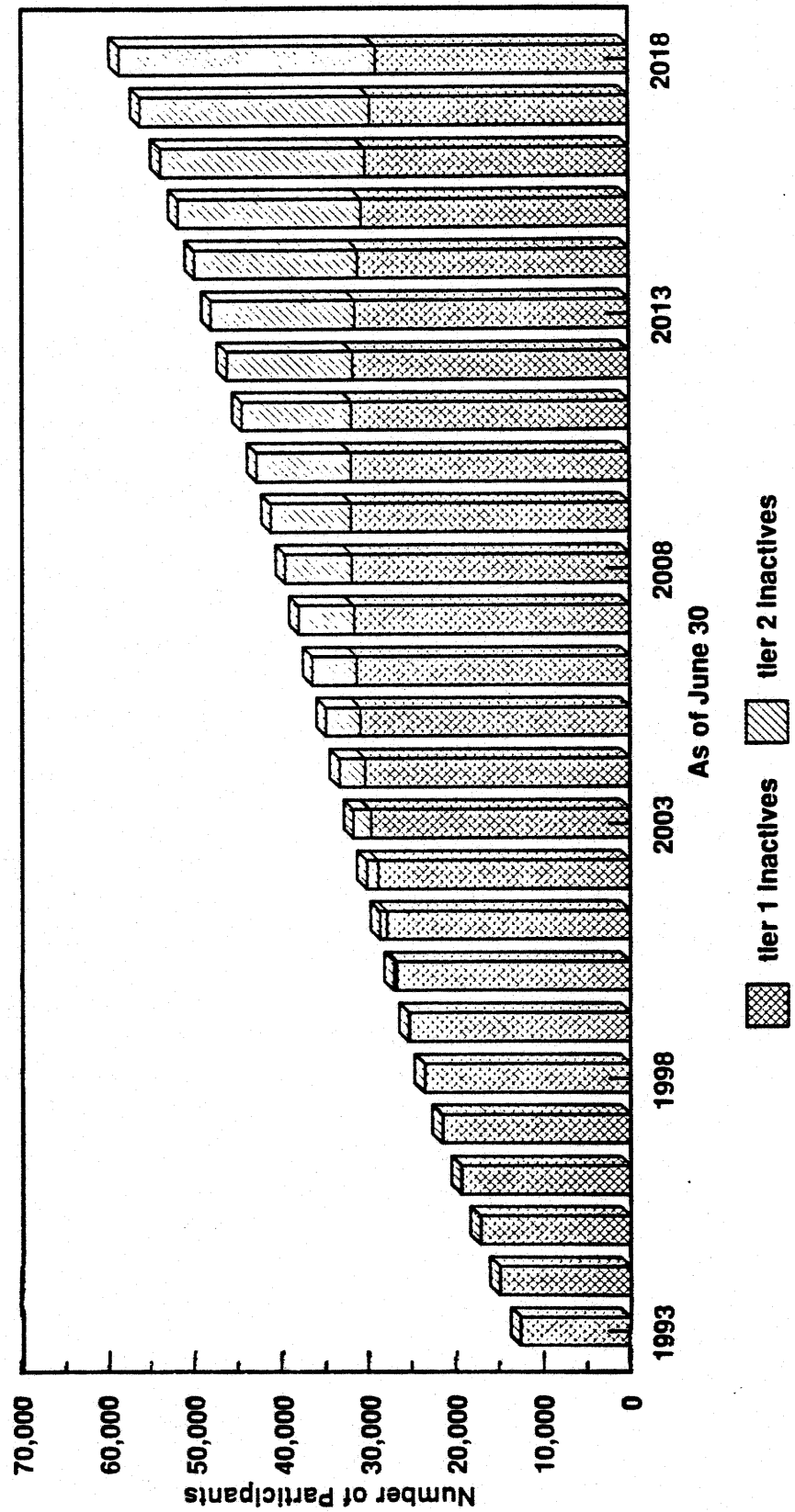
State of Alaska PERS

Projected Inactive Participant Count
Annual Population Increase of 3%



1.5 Actuarial Projections (continued)

State of Alaska PERS Projected Inactive Participant Count Annual Population Increase of 5%



Section 2

Basis of Valuation

In this section, the basis of the valuation is presented and described. This information--the provisions of the plan and the census of participants--is the foundation of the valuation, since these are the present facts upon which benefit payments will depend.

A summary of plan provisions is provided in Section 2.1 and participant census information is shown in Section 2.2.

The valuation is based upon the premise that the plan will continue in existence, so that future events must also be considered. These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund, the number of participants who will retire, die, terminate their services, their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, which have been adopted to guide the sponsor in funding the plan in a reasonable and acceptable manner, are described in Section 2.3.

2.1 Summary of the Alaska Public Employees' Retirement System

(1) Effective Date

January 1, 1961, with amendments through June 30, 1993. Chapter 82, 1986 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the PERS before July 1, 1986, are eligible for different benefits than members hired after June 30, 1986.

(2) Administration of Plan

The Commissioner of Administration is responsible for administering the system. The Public Employees' Retirement Board prescribes policies and regulations and performs other activities necessary to carry out the provisions of the system. The Alaska State Pension Investment Board, Department of Revenue, Treasury Division is responsible for investing PERS funds. The Attorney General represents the system in legal proceedings.

(3) Employers Included

Currently there are 155 employers participating in the PERS, including the State of Alaska and 154 political subdivisions and public organizations.

(4) Members Included

PERS membership is mandatory for all permanent full-time and part-time employees of the State of Alaska and participating political subdivisions and public organizations, unless they are specifically excluded by Alaska Statute or participation agreements. Employees participating in the University of Alaska's Optional Retirement Plan or other retirement plans funded by the State are not covered by the PERS. Elected officials may waive PERS membership.

Certain members of the Alaska Teachers' Retirement System (TRS) are eligible for PERS retirement benefits for their concurrent elected public official service with municipalities. In addition, employees who work half-time in the PERS and TRS simultaneously are eligible for half-time PERS and TRS credit.

(5) Credited Service

Permanent employees who work at least 30 hours a week earn full-time credit; part-time employees working between 15 and 30 hours a week earn partial credit based upon the number of hours worked. Members receiving PERS occupational disability benefits continue to earn PERS credit while disabled.

Members may claim other types of service, including:

- part-time State of Alaska service rendered after December 31, 1960, and before January 1, 1976.
- service with the State, former Territory of Alaska, or U.S. Government in Alaska before January 1, 1961;
- past peace officer, correctional officer, fire fighter, and special officer service after January 1, 1961;
- military service (not more than five years may be claimed);
- temporary service after December 31, 1960;
- elected official service before January 1, 1981;
- Alaska Bureau of Indian Affairs service;
- past service rendered by employees who worked half-time in the PERS and Teachers' Retirement System (TRS) simultaneously; and
- leave without pay service after June 13, 1987, while receiving Workers' Compensation.

Except for service before January 1, 1961, with the State, former Territory of Alaska, or U.S. Government in Alaska, contributions are required for all past service.

Past employment with participating political subdivisions that occurred before the employers joined the PERS is creditable if the employers agree to pay the required contributions.

(6) Employer Contributions

Individual contribution rates are established for PERS employers based upon their consolidated and past service rates.

The consolidated rate is a uniform rate for all participating employers, amortized to include future service liabilities (less the value of members' contributions) for the members' future service.

The past service rate is determined separately for each employer to amortize their unfunded past service liability with level payments over 25 years. Funding surpluses are amortized over five years.

(7) Member Contributions

Mandatory Contributions: Police and fire members are required to contribute 7.5% of their compensation; all other members contribute 6.75%. Members' contributions are deducted from gross wages before federal income taxes are withheld.

Contributions for Claimed Service: Member contributions are also required for most of the claimed service described in (5) above.

Voluntary Contributions: Members may voluntarily contribute up to 5% of their salary. Voluntary contributions are recorded in a separate account and are payable to the:

- (a) member in lump sum payment upon termination of employment;
- (b) member's beneficiary if the member dies; or
- (c) member in a lump sum, life annuity, or payments over a designated period of time when the member retires.

Interest: Members' contributions earn 4.5% interest, compounded semiannually on June 30 and December 31.

Refund of Contributions: Terminated members may receive refunds of their member contribution accounts, which includes their mandatory and voluntary contributions, indebtedness payments, and interest earned. Terminated members' accounts may be attached to satisfy claims under Alaska Statute 09.38.065, federal income tax levies, and valid qualified domestic relations orders.

Reinstatement of Contributions: Refunded accounts and the corresponding PERS service may be reinstated upon reemployment in the PERS. Accounts attached to satisfy claims under Alaska Statute 09.38.065 or a federal tax levy may be reinstated at any time. Interest accrues on refunds until paid in full or members retire.

(8) Retirement Benefits

Eligibility:

- (a) Members, including deferred vested members, are eligible for normal retirement at age 60*, or early retirement at age 55, if they have at least:
 - (i) five years of paid-up PERS service;

* Members participating before July 1, 1986 are eligible for normal retirement at age 55 or early retirement at age 50.

- (ii) 60 days of paid-up PERS service as employees of the legislature during each of five legislative sessions and they were first hired under the PERS before May 30, 1987;
 - (iii) 80 days of paid-up PERS service as employees of the legislature during each of five legislative sessions and they were first hired under the PERS after May 29, 1987; or
 - (iv) two years of paid-up PERS service and they are vested in the Teachers' Retirement System.
- (b) Members may retire at any age when they have:
- (i) 20 paid-up years of PERS police/fire service; or
 - (ii) 30 paid-up years of PERS "all other" service.

Benefit Type: Lifetime benefits are paid to members. Eligible members may receive normal, unreduced benefits when they (1) reach normal retirement age and complete the service required; or (2) satisfy the minimum service requirements under the "20 and out" or "30 and out" provisions. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Members may also select level income or joint and survivor options. Under those options and early retirement, benefits are actuarially adjusted so that members receive the actuarial equivalents of their normal benefit amounts.

Benefit Calculation: Retirement benefits are calculated by multiplying the average monthly compensation (AMC) times the total PERS service times the percentage multiplier. The AMC is determined by averaging the salaries earned during the three highest, consecutive payroll years. Members must earn at least 115 days of credit in the last year worked to include it in the AMC calculation. The PERS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

The percentage multipliers for police/fire members are 2% for the first ten years of service and 2.5% for all service over 10 years.

The percentage multipliers for all other members are 2% for the first ten years, 2.25% for the next ten years, and 2.5% for all remaining service earned on or after July 1, 1986. All service before that date is calculated at 2%.

Indebtedness: Members who terminate and refund their PERS contributions are not eligible to retire, unless they return to PERS employment and pay back their refunds, plus interest, or accrue additional service which qualifies them for retirement. PERS

refunds must be paid in full if the corresponding service is to count toward the minimum service requirements for retirement. Refunded PERS service is included in total service for the purpose of calculating retirement benefits. However, when refunds are not completely paid before retirement, benefits are actuarially reduced for life.

(9) Reemployment of Retired Members

Retirement benefits are suspended while retired members are reemployed under the PERS. During reemployment, members earn additional PERS service and contributions are withheld from their wages.

Members retired under the Retirement Incentive Programs (RIPs) who return to employment under the PERS, Teachers' Retirement System (TRS), or the University of Alaska's Optional Retirement Plan will:

- (a) forfeit the three years of incentive credits that they received;
- (b) owe the PERS 110% of the benefits that they received under the RIP, which may include costs for health insurance, excluding amounts that they paid to participate; and
- (c) be charged 7% interest from the date that they are reemployed until their indebtedness is paid in full or they retire again. If the indebtedness is not completely paid, future benefits will be actuarially reduced for life.

(10) Disability Benefits

Monthly disability benefits are paid to permanently disabled members until they die, recover or become eligible for normal retirement. Members are appointed to normal retirement on the first of the month after they become eligible.

Occupational Disability: Members are not required to satisfy age or service requirements to be eligible for occupational disability. Monthly benefits are equal to 40% of their gross monthly compensation on the date of their disability. Members on occupational disability continue to earn PERS service until they become eligible for normal retirement.

Nonoccupational Disability: Members must be vested (five paid-up years of PERS service) to be eligible for nonoccupational disability benefits. Monthly benefits are calculated based on the member's average monthly compensation and PERS service on the date of termination from employment because of disability. Members do not earn PERS service while on nonoccupational disability.

(11) Death Benefits

Monthly death benefits may be paid to a spouse or dependent children upon the death of a member. If monthly benefits are not payable under the occupational and nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

Occupational Death: When an active member dies from occupational causes, a monthly survivor's pension may be paid to the spouse. The pension equals 40% of the member's gross monthly compensation on the date of death or disability, if earlier. If there is no spouse, the pension may be paid to the member's dependent children. On the member's normal retirement date, the benefit converts to a normal retirement benefit. The normal benefit is based on the member's salary on the date of death and service, including service accumulated from the date of the member's death to the normal retirement date.

Death after Occupational Disability: When a member dies while occupationally disabled, benefits are paid as described above in *Occupational Death*.

Nonoccupational Death: When a vested member dies from nonoccupational causes, the surviving spouse may elect to receive a monthly 50% joint and survivor benefit or a lump sum benefit. The monthly benefit is calculated on the member's average monthly compensation and PERS service at the time of termination or death.

Lump Sum Benefit: Upon the death of a member who has less than one year of service, the designated beneficiary receives the member's contribution account, which includes mandatory and voluntary contributions, indebtedness payments, and interest earned. If the member has more than one year of PERS service, the beneficiary also receives \$1,000 and \$100 for each year of PERS service.

Death After Retirement: When a retired member dies, the designated beneficiary receives the member's contribution account, less any benefits already paid. If the member selected a survivor option at retirement, the eligible spouse receives continuing, lifetime monthly benefits.

(12) Post Retirement Pension Adjustments

Post retirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the consumer price index (CPI) increases during the preceding calendar year. PRPAs are calculated by multiplying the recipient's base benefit, including past PRPAs, times:

- (a) 75% of the CPI increase in the preceding calendar year or 9%, whichever is less, if the recipient is at least age 65 or on PERS disability; or

- (b) 50% of the CPI increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60, or under age 60 if the recipient has been receiving benefits for at least five years.

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who were first hired before July 1, 1986, if the CPI increases and the financial condition of the fund will permit an increase.

(13) Alaska Cost of Living Allowance

Eligible benefit recipients who reside in Alaska receive an Alaska cost of living allowance (COLA) equal to 10% of their base benefits or \$50, whichever is more. The following benefit recipients are eligible:

- (a) members who were first hired under the PERS before July 1, 1986, and their survivors;
- (b) members who were first hired under the PERS after June 30, 1986, and their survivors if they are at least age 65; and
- (c) all disabled members.

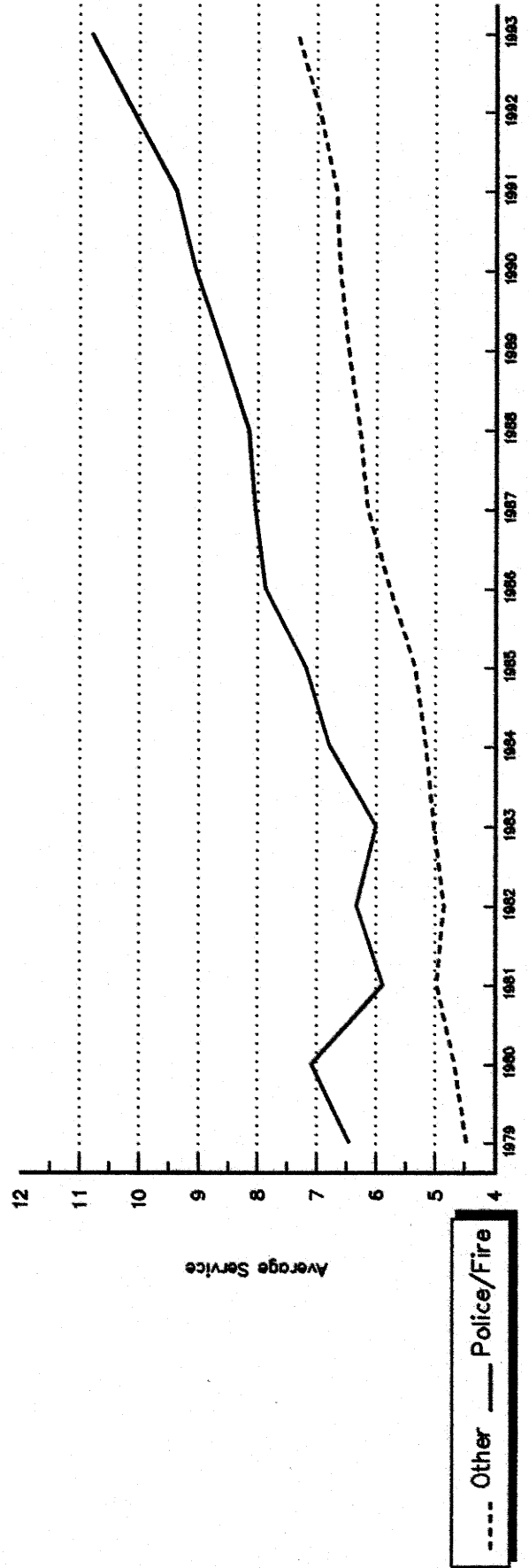
2.2(a) Participant Census Information - Total PERS as of June 30

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Active Members					
(1) Number	28,044	29,086	29,840	30,721	30,972
(2) Average Age	40.17	40.37	40.68	41.21	41.75
(3) Average Credited Service	6.66	6.82	6.91	7.22	7.62
(4) Average Annual Salary	\$ 32,550	\$ 32,733	\$ 34,444	\$ 35,280	\$ 36,675
Retirees and Beneficiaries					
(1) Number	6,967	7,365	8,358	8,704	9,103
(2) Average Age	63.28	63.62	63.15	63.58	63.98
(3) Average Monthly Benefit:					
Base	\$ 795	\$ 797	\$ 864	\$ 867	\$ 855
C.O.L.A.	64	61	66	64	63
P.R.P.A.	98	110	108	144	129
Adjustment	N/A	N/A	N/A	N/A	0
TOTAL	957	968	1,038	1,075	1,047
Vested Terminations					
(1) Number	2,314	2,745	3,015	3,249	3,572
(2) Average Age	42.97	42.96	43.20	43.59	44.04
(3) Average Monthly Benefit	\$ 519	\$ 536	\$ 556	\$ 582	\$ 610
Non-Vested Terminations With Account Balances					
(1) Number	3,365	3,695	4,108	4,380	4,721
(2) Average Account Balance	\$ 1,891	\$ 2,045	\$ 2,124	\$ 2,251	\$ 2,442

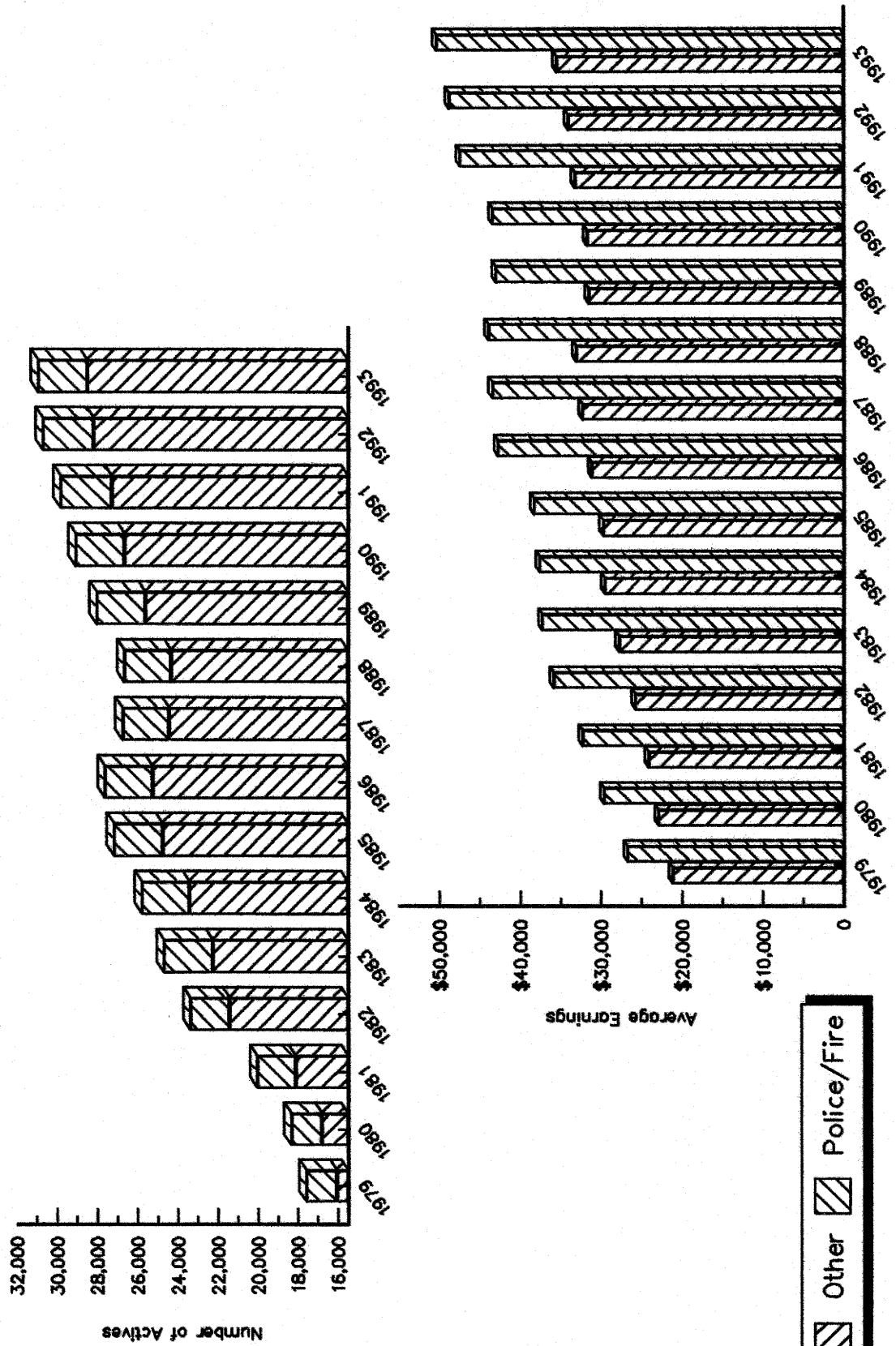
2.2(b) Additional Information - Active Members by Type of Status as of June 30

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Active Police & Fire					
(1) Number	2,414	2,419	2,533	2,515	2,463
(2) Average Age	39.31	39.70	40.35	41.08	41.67
(3) Average Credited Service	8.60	9.05	9.38	10.10	10.80
(4) Average Annual Salary	\$ 43,082	\$ 43,462	\$ 47,470	\$ 48,812	\$ 50,355
(5) Number Vested	1,598	1,683	1,795	1,842	1,907
(6) Percent Who Are Vested	66.2%	69.6%	70.9%	73.2%	77.4%
Active "Other" Members					
(1) Number	25,630	26,667	27,307	28,206	28,509
(2) Average Age	40.25	40.43	40.71	41.22	41.76
(3) Average Credited Service	6.48	6.62	6.68	6.96	7.35
(4) Average Annual Salary	\$ 31,558	\$ 31,760	\$ 33,236	\$ 34,073	\$ 35,493
(5) Number Vested	13,345	14,109	14,234	14,640	15,336
(6) Percent Who Are Vested	52.1%	52.9%	52.1%	51.9%	53.8%

State of Alaska - PERS Actives



State of Alaska - PERS Actives



2.2(c) Distribution of Active Police and Fire Participants

----- Annual Earnings By Age -----				----- Annual Earnings By Credited Service -----			
Age Groups	Number of People	Total Annual Earnings	Average Annual Earnings	Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0	0	77	\$ 1,311,853	\$ 17,037
20-24	37	986,209	26,654	1	76	2,979,335	39,202
25-29	132	5,546,136	42,016	2	107	4,465,290	41,732
30-34	286	13,220,122	46,224	3	131	5,811,859	44,365
35-39	544	27,368,814	50,310	4	165	7,251,588	43,949
40-44	631	33,342,624	52,841	0- 4	556	21,819,925	39,244
45-49	501	26,417,970	52,730	5- 9	618	29,136,584	47,147
50-54	247	13,046,602	52,820	10-14	627	33,086,569	52,770
55-59	71	3,426,054	48,254	15-19	456	26,764,566	58,694
60-64	12	602,860	50,238	20-24	178	11,362,352	63,833
65-69	2	67,412	33,706	25-29	27	1,799,510	66,649
70-74	0	0	0	30-34	1	55,297	55,297
75-79	0	0	0	35-39	0	0	0
80+	0	0	0	40+	0	0	0
Total	2,463	\$124,024,803	\$ 50,355	Total	2,463	\$124,024,803	\$ 50,355

Years of Credited Service By Age

----- Years of Service -----										
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	0	0	0	0	0	0	0	0	0	0
20-24	37	0	0	0	0	0	0	0	0	37
25-29	105	27	0	0	0	0	0	0	0	132
30-34	119	113	51	3	0	0	0	0	0	286
35-39	89	168	196	86	5	0	0	0	0	544
40-44	89	132	191	172	47	0	0	0	0	631
45-49	61	110	116	110	92	12	0	0	0	501
50-54	34	53	53	67	27	13	0	0	0	247
55-59	18	12	18	16	5	1	1	0	0	71
60-64	3	2	2	2	2	1	0	0	0	12
65-69	1	1	0	0	0	0	0	0	0	2
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80+	0	0	0	0	0	0	0	0	0	0
Total	556	618	627	456	178	27	1	0	0	2,463

2.2(d) Schedule of Active Member Valuation Data - "Police/Fire"

Valuation Date	Number	Annual Payroll (000's)	Annual Average Pay	Percent Increase In Average Pay
June 30, 1993	2,463	\$ 124,025	\$ 50,355	3.2%
June 30, 1992	2,515	122,762	48,812	2.8%
June 30, 1991	2,533	120,240	47,470	9.2%
June 30, 1990	2,419	105,135	43,462	.9%
June 30, 1989	2,414	104,000	43,082	-2.0%
June 30, 1988	2,327	102,265	43,947	1.0%
June 30, 1987	2,319	100,839	43,484	1.5%
June 30, 1986	2,371	101,537	42,825	11.6%
June 30, 1985	2,407	92,381	38,380	1.9%
June 30, 1984	2,366	89,118	37,666	.9%

2.2(e) Distribution of Active "Other" Participants

----- Annual Earnings By Age -----

Age Groups	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	42	\$ 577,533	\$ 13,751
20-24	795	17,136,382	21,555
25-29	2,132	58,299,096	27,345
30-34	3,852	120,687,736	31,331
35-39	5,516	191,878,368	34,786
40-44	6,095	229,594,027	37,669
45-49	4,742	186,124,832	39,250
50-54	3,041	121,451,944	39,938
55-59	1,441	55,421,748	38,461
60-64	631	22,799,334	36,132
65-69	172	6,425,272	37,356
70-74	39	1,168,446	29,960
75-79	9	267,632	29,737
80+	2	31,356	15,678
Total	28,509	\$ 1,011,863,706	\$ 35,493

----- Annual Earnings By Credited Service -----

Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0	3,137	\$ 58,876,812	\$ 18,769
1	2,829	79,382,200	28,060
2	2,700	84,662,824	31,357
3	2,417	78,027,968	32,283
4	2,090	69,690,384	33,345
0- 4	13,173	370,640,188	28,136
5- 9	6,906	255,266,923	36,963
10-14	4,877	210,140,096	43,088
15-19	2,447	116,561,160	47,634
20-24	820	42,867,156	52,277
25-29	249	14,196,414	57,014
30-34	33	1,968,848	59,662
35-39	3	169,517	56,506
40+	1	53,404	53,404
Total	28,509	\$ 1,011,863,706	\$ 35,493

Years of Credited Service By Age

Age	Years of Service -----									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	42	0	0	0	0	0	0	0	0	42
20-24	780	15	0	0	0	0	0	0	0	795
25-29	1,806	312	14	0	0	0	0	0	0	2,132
30-34	2,440	1,012	383	17	0	0	0	0	0	3,852
35-39	2,619	1,559	1,018	312	8	0	0	0	0	5,516
40-44	2,299	1,561	1,315	741	176	3	0	0	0	6,095
45-49	1,537	1,172	1,014	615	305	98	1	0	0	4,742
50-54	906	697	672	429	212	107	17	1	0	3,041
55-59	450	351	308	225	73	23	11	0	0	1,441
60-64	200	168	119	86	38	15	3	2	0	631
65-69	71	49	27	17	6	2	0	0	0	172
70-74	17	8	4	5	2	1	1	0	1	39
75-79	5	1	3	0	0	0	0	0	0	9
80+	1	1	0	0	0	0	0	0	0	2
Total	13,173	6,906	4,877	2,447	820	249	33	3	1	28,509

2.2(f) Schedule of Active Member Valuation Data - "Others"

Valuation Date	Number	Annual Payroll (000's)	Annual Average Pay	Percent Increase In Average Pay
June 30, 1993	28,509	\$ 1,011,864	\$ 35,493	4.2%
June 30, 1992	28,206	961,054	34,073	2.5%
June 30, 1991	27,307	907,567	33,236	4.6%
June 30, 1990	26,667	846,935	31,760	.6%
June 30, 1989	25,630	808,835	31,558	-4.7%
June 30, 1988	24,349	806,100	33,106	2.4%
June 30, 1987	24,443	790,463	32,339	3.6%
June 30, 1986	25,272	788,555	31,203	4.7%
June 30, 1985	24,776	738,198	29,795	.7%
June 30, 1984	23,437	693,148	29,575	6.5%

2.2(g) Statistics on New Retirees Police and Fire Members During the Year Ending June 30

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Service					
(1) Number	9	36	96	25	32
(2) Average Age at Retirement	52.55	51.19	50.97	51.77	50.09
(3) Average Monthly Benefit	\$ 1,536	\$ 1,551	\$ 2,008	\$ 1,786	\$ 2,235
Disability					
(1) Number	8	1	6	8	6
(2) Average Age at Retirement	39.71	38.05	40.71	44.00	41.57
(3) Average Monthly Benefit	\$ 1,662	\$ 1,171	\$ 2,216	\$ 1,502	\$ 1,682
Survivor (including surviving spouse)					
(1) Number	1	1	1	2	1
(2) Average Age at Retirement	52.30	52.62	47.9	28.61	57.15
(3) Average Monthly Benefit	\$ 611	\$ 312	\$ 1,114	\$ 1,570	\$ 295
Total					
(1) Number	18	38	103	35	39
(2) Average Age at Retirement	46.83	50.88	50.34	48.67	48.96
(3) Average Monthly Benefit	\$ 1,541	\$ 1,508	\$ 2,011	\$ 1,709	\$ 2,100

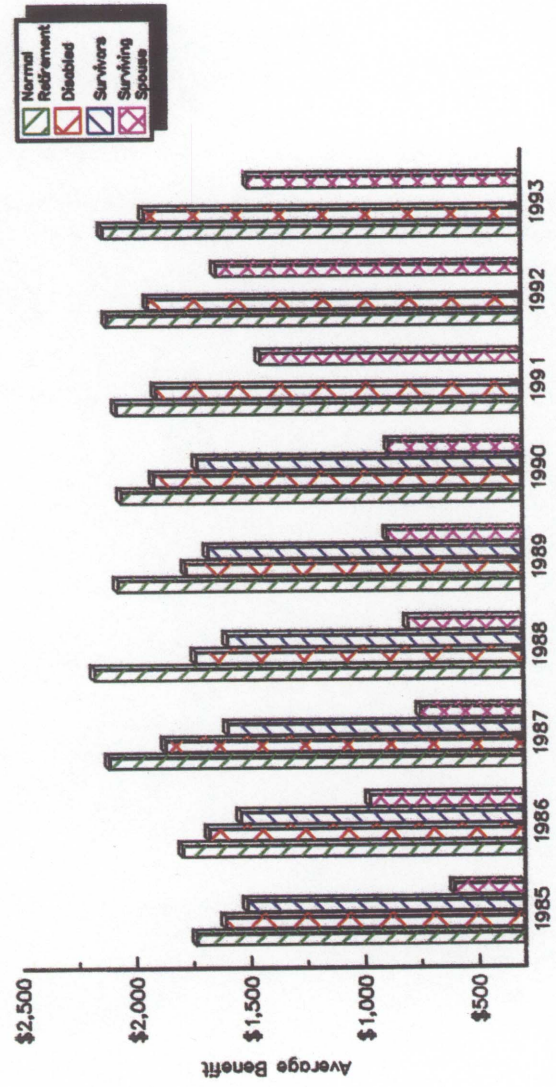
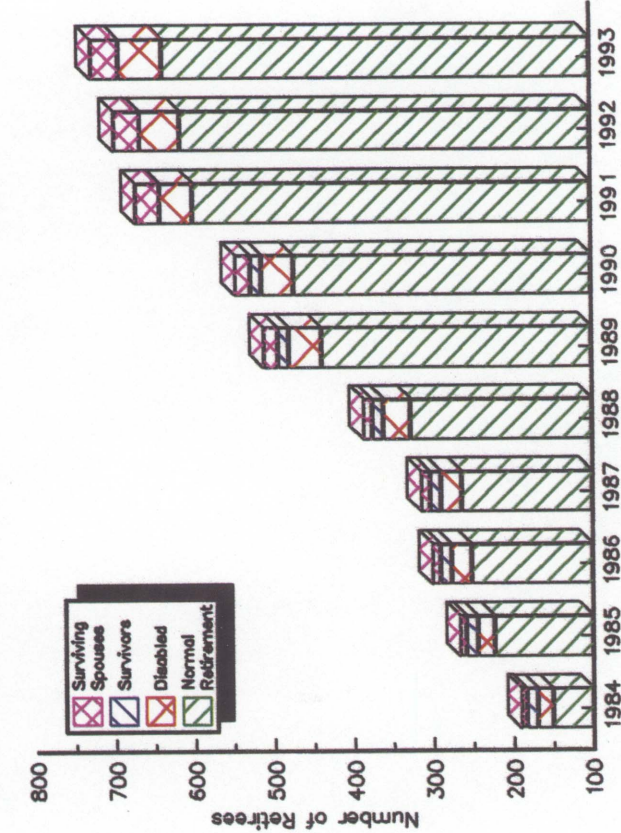
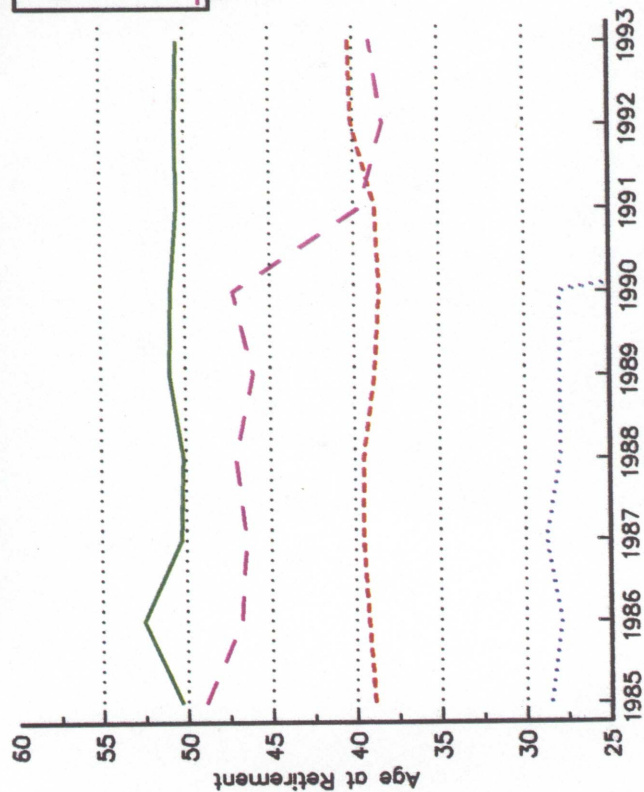
2.2(h) Statistics on New Retirees "Other" Members During the Year Ending June 30

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Service					
(1) Number	309	420	829	404	433
(2) Average Age at Retirement	57.44	56.40	55.82	56.84	56.83
(3) Average Monthly Benefit	\$ 746	\$ 853	\$ 1,121	\$ 912	\$ 984
Disability					
(1) Number	25	22	20	15	17
(2) Average Age at Retirement	46.61	45.85	45.38	43.87	44.46
(3) Average Monthly Benefit	\$ 1,061	\$ 955	\$ 944	\$ 999	\$ 986
Survivor (including surviving spouse)					
(1) Number	18	15	27	16	14
(2) Average Age at Retirement	45.38	53.05	60.35	49.44	53.89
(3) Average Monthly Benefit	\$ 725	\$ 748	\$ 675	\$ 586	\$ 563
Total					
(1) Number	352	457	876	435	464
(2) Average Age at Retirement	56.05	55.78	55.72	56.12	56.29
(3) Average Monthly Benefit	\$ 767	\$ 855	\$ 1,104	\$ 903	\$ 971

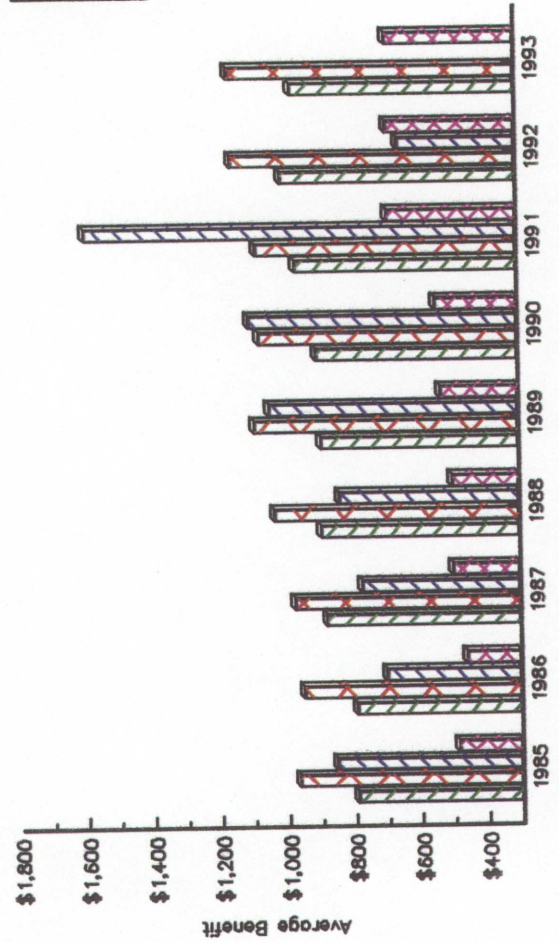
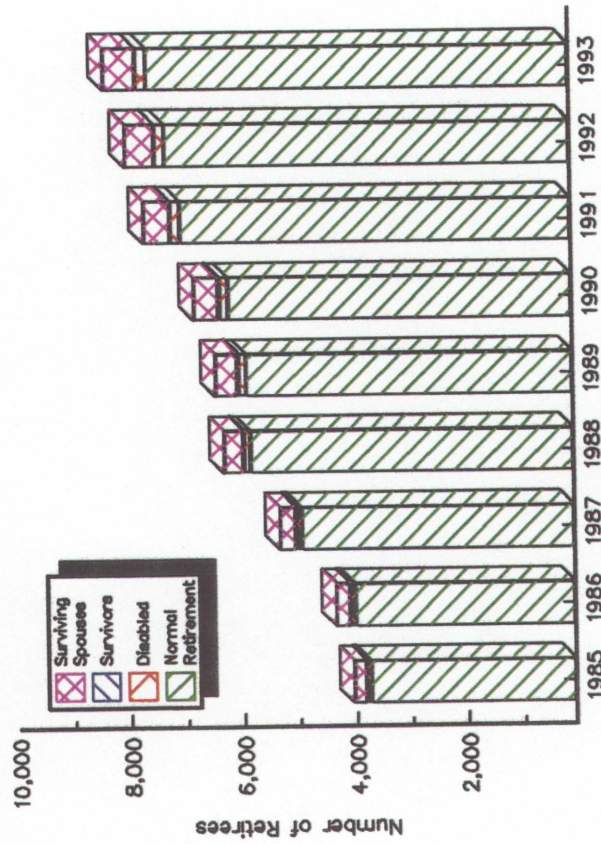
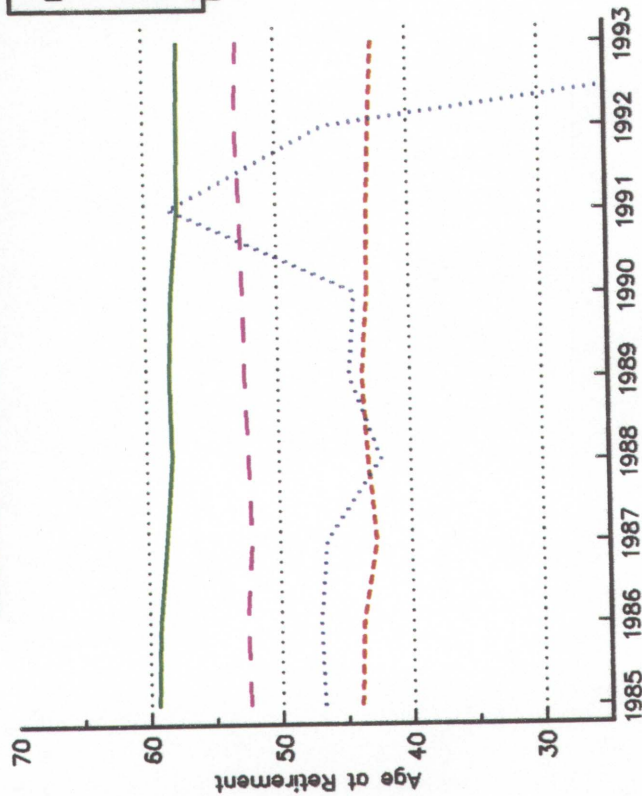
2.2(i) Statistics on All Retirees as of June 30, 1993

	<u>Police & Fire</u>	<u>"Other"</u>
Service Retirement		
(1) Number, June 30, 1992	615	7,304
(2) Net Change During FY93	22	308
(3) Number, June 30, 1993	637	7,612
(4) Average Age At Retirement	50.44	57.40
(5) Average Age Now	57.65	65.20
(6) Average Monthly Benefit	\$ 2,128.09	\$ 972.94
Surviving Spouse's Benefits		
(1) Number, June 30, 1992	33	521
(2) Net Change During FY93	2	53
(3) Number, June 30, 1993	35	574
(4) Average Age At Retirement	39.03	52.91
(5) Average Age Now	50.78	62.84
(6) Average Monthly Benefit	\$ 1,490.34	\$ 686.06
Disabilities		
(1) Number, June 30, 1992	51	180
(2) Net Change During FY93	4	10
(3) Number, June 30, 1993	55	190
(4) Average Age At Retirement	40.27	42.65
(5) Average Age Now	44.55	47.86
(6) Average Monthly Benefit	\$ 1,946.43	\$ 1,161.25
Total Number of Retirees	727	8,376

State of Alaska - PERS Police/Fire Retirees



State of Alaska - PERS "Other" Retirees



2.2(j) Distribution of Annual Benefits for Police and Fire Benefit Recipients

----- Annual Benefit By Age -----

<u>Age Groups</u>	<u>Number of People</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
0-19	0	\$ 0	\$ 0
20-24	1	6,571	6,571
25-29	2	37,684	18,842
30-34	1	20,927	20,927
35-39	11	196,820	17,893
40-44	36	920,455	25,568
45-49	125	3,775,760	30,206
50-54	162	4,349,892	26,851
55-59	153	3,803,761	24,861
60-64	111	2,702,465	24,347
65-69	80	1,606,953	20,087
70-74	31	541,835	17,479
75-79	12	194,046	16,171
80+	2	20,529	10,265
Total	727	\$18,177,698	\$ 25,004

-- Annual Benefit By Years Since Retirement --

<u>Years Since Retirement</u>	<u>Number of People</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
0	39	\$ 982,991	\$ 25,205
1	35	722,794	20,651
2	103	2,519,914	24,465
3	61	1,519,293	24,906
4	22	445,880	20,267
0- 4	260	6,190,872	23,811
5- 9	283	7,987,739	28,225
10-14	118	2,755,504	23,352
15-19	57	1,078,205	18,916
20-24	9	165,378	18,375
25-29	0	0	0
30-34	0	0	0
35-39	0	0	0
40+	0	0	0
Total	727	\$18,177,698	\$ 25,004

Years Since Retirement by Age

<u>Age</u>	<u>Years Since Retirement</u>									<u>Total</u>
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40+</u>	
0-19	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	1	0	0	0	0	0	1
25-29	2	0	0	0	0	0	0	0	0	2
30-34	1	0	0	0	0	0	0	0	0	1
35-39	7	2	2	0	0	0	0	0	0	11
40-44	25	9	0	2	0	0	0	0	0	36
45-49	73	42	5	4	1	0	0	0	0	125
50-54	80	72	7	1	2	0	0	0	0	162
55-59	49	76	20	7	1	0	0	0	0	153
60-64	16	54	35	6	0	0	0	0	0	111
65-69	7	24	33	16	0	0	0	0	0	80
70-74	0	3	10	16	2	0	0	0	0	31
75-79	0	0	6	4	2	0	0	0	0	12
80+	0	1	0	0	1	0	0	0	0	2
Total	260	283	118	57	9	0	0	0	0	727

2.2(k) Schedule of Retired Members by Type of Retirant and Option Selected - "Police/Fire" - June 30, 1993

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			Option Selected #			
		1	2	3	Opt. 1	Opt. 2	Opt. 3	Opt. 4
\$ 1 - \$ 300	12	11	1	0	2	5	4	1
301 - 600	44	34	5	5	26	12	4	2
601 - 900	58	55	2	1	38	9	6	5
901 - 1200	53	41	7	5	35	4	7	7
1201 - 1500	53	42	4	7	30	9	8	6
1501 - 1800	69	52	4	13	41	22	4	2
1801 - 2100	79	68	5	6	35	27	10	7
2101 - 2400	69	62	4	3	29	22	13	5
2401 - 2700	88	86	0	2	36	29	8	15
2701 - 3000	68	64	0	4	26	28	5	9
over 3000	134	122	3	9	52	50	16	16
Totals	727	637	35	55	350	217	85	75

Type of Retirement

- 1 - Normal retirement
- 2 - Survivor payment
- 3 - Disability retirement

- Option 1 - Whole Life Annuity
- Option 2 - 75% Joint and Survivor Annuity
- Option 3 - 50% Joint and Survivor Annuity
- Option 4 - 66⅔% Joint and Survivor Annuity

2.2(l) Distribution of Annual Benefits for "Other" Benefit Recipients

----- Annual Benefit By Age -----				-- Annual Benefit By Years Since Retirement --			
<u>Age Groups</u>	<u>Number of People</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>	<u>Years Since Retirement</u>	<u>Number of People</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
0-19	0	\$ 0	\$ 0	0	464	\$ 5,408,671	\$ 11,657
20-24	0	0	0	1	444	4,821,637	10,860
25-29	1	1,669	1,669	2	882	11,378,992	12,901
30-34	11	108,622	9,875	3	638	7,063,744	11,072
35-39	35	424,535	12,130	4	317	3,092,416	9,755
40-44	56	554,505	9,902	0- 4	2,745	31,765,460	11,572
45-49	121	1,343,698	11,105	5- 9	3,094	38,646,884	12,491
50-54	898	9,262,940	10,315	10-14	1,445	15,179,902	10,505
55-59	1,611	20,000,342	12,415	15-19	935	9,158,460	9,795
60-64	1,752	22,883,797	13,062	20-24	147	1,361,074	9,259
65-69	1,614	17,793,224	11,024	25-29	8	97,516	12,190
70-74	1,190	12,933,792	10,869	30-34	2	36,034	18,017
75-79	658	7,037,888	10,696	35-39	0	0	0
80+	429	3,900,318	9,092	40+	0	0	0
Total	8,376	\$96,245,330	\$11,491	Total	8,376	\$96,245,330	\$ 11,491

Years Since Retirement By Age

----- Years Since Retirement -----										
<u>Age</u>	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40+</u>	<u>Total</u>
0-19	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
25-29	1	0	0	0	0	0	0	0	0	1
30-34	8	3	0	0	0	0	0	0	0	11
35-39	24	7	4	0	0	0	0	0	0	35
40-44	32	15	5	3	1	0	0	0	0	56
45-49	74	33	9	4	1	0	0	0	0	121
50-54	706	156	24	10	2	0	0	0	0	898
55-59	927	648	24	10	1	1	0	0	0	1,611
60-64	539	961	235	15	2	0	0	0	0	1,752
65-69	334	702	458	117	3	0	0	0	0	1,614
70-74	80	448	364	293	5	0	0	0	0	1,190
75-79	14	89	247	289	19	0	0	0	0	658
80+	6	32	75	194	113	7	2	0	0	429
Total	2,745	3,094	1,445	935	147	8	2	0	0	8,376

2.2(m) Schedule of Retired Members by Type of Retirant and Option Selected - "Others" - June 30, 1993

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			Option Selected #			
		1	2	3	Opt. 1	Opt. 2	Opt. 3	Opt. 4
\$ 1 - \$ 300	1,025	867	144	14	709	149	125	42
301 - 600	2,331	2,113	178	40	1,582	368	254	127
601 - 900	1,669	1,542	108	19	1,044	311	168	146
901 - 1200	1,107	1,016	63	28	718	173	128	88
1201 - 1500	729	656	40	33	475	125	72	57
1501 - 1800	475	437	13	25	292	81	56	46
1801 - 2100	328	304	11	13	179	65	42	42
2101 - 2400	243	229	5	9	132	50	27	34
2401 - 2700	168	159	4	5	90	41	23	14
2701 - 3000	103	97	6	0	49	39	10	5
over 3000	198	192	2	4	94	50	30	24
Totals	8,376	7,612	574	190	5,364	1,452	935	625

Type of Retirement

- 1 - Normal retirement
- 2 - Survivor payment
- 3 - Disability retirement

- Option 1 - Whole Life Annuity
- Option 2 - 75% Joint and Survivor Annuity
- Option 3 - 50% Joint and Survivor Annuity
- Option 4 - 66% Joint and Survivor Annuity

2.2(n) Schedule of Retirants and Beneficiaries Added to and Removed from Rolls - Police/Fire

Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percent Increase in Annual Allowances	Average Annual Allowance
	No.*	Annual Allowances*	No.*	Annual Allowances*	No.	Annual Allowances		
June 30, 1993	39	\$ 982,991	11	\$ 212,565	727	\$ 18,177,698	4.4%	\$ 25,004
June 30, 1992	35	1,202,004	8	195,248	699	17,407,272	6.1%	24,903
June 30, 1991	129	3,408,774	4	95,704	672	16,400,516	25.3%	24,406
June 30, 1990	38	907,997	3	71,784	547	13,087,446	6.8%	23,926
June 30, 1989	128	2,686,748	3	74,724	512	12,251,233	27.1%	23,928
June 30, 1988	72	1,991,318	0	0	387	9,639,209	26.0%	24,908
June 30, 1987	96	3,054,160	82	1,720,032	315	7,647,891	21.1%	24,279
June 30, 1986	36	949,954	2	40,482	301	6,313,763	16.8%	20,976
June 30, 1985	77	1,966,581	1	18,093	267	5,404,291	56.4%	20,241
June 30, 1984	16	281,303	4	72,560	191	3,455,803	6.4%	18,093
* Numbers are estimated, and include other internal transfers.								

2.2(o) Schedule of Retirants and Beneficiaries Added to and Removed from Rolls - "Others"

Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percent Increase in Annual Allowances	Average Annual Allowance
	No. *	Annual Allowances*	No. *	Annual Allowances*	No.	Annual Allowances		
June 30, 1993	464	\$ 5,408,670	93	\$ 4,057,669	8,376	\$ 96,245,330	1.4%	\$ 11,491
June 30, 1992	435	8,520,963	116	1,323,560	8,005	94,894,329	8.2%	11,854
June 30, 1991	876	15,277,842	8	85,072	7,686	87,696,926	21.0%	11,410
June 30, 1990	457	5,776,756	94	986,060	6,818	72,504,156	7.1%	10,634
June 30, 1989	352	3,651,450	212	2,225,364	6,455	67,713,460	2.2%	10,490
June 30, 1988	1,014	11,532,405	35	361,515	6,315	66,287,374	20.3%	10,497
June 30, 1987	1,011	14,821,733	31	288,827	5,336	55,116,484	35.8%	10,329
June 30, 1986	416	3,718,750	110	1,029,270	4,356	40,583,578	7.1%	9,317
June 30, 1985	484	7,490,537	102	869,652	4,050	37,894,098	21.2%	9,357
June 30, 1984	365	4,039,978	43	354,535	3,668	31,273,213	13.4%	8,526
* Numbers are estimated, and include other internal transfers.								

2.3 Actuarial Basis

The assumptions used in this valuation were adopted at the Fall 1991 PERS Board Meeting. The funding method used in this valuation was adopted June 30, 1985. The five-year smoothing method used to determine valuation assets was adopted June 30, 1989.

Valuation of Liabilities

- A. **Actuarial Method - Projected Unit Credit (no change).** Liabilities and contributions shown in the report are computed using the Projected Unit Credit method of funding. The unfunded accrued liability is amortized over a rolling 25 years. Any funded surpluses are amortized over five years.

The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, each participant's total pension projected to retirement with salary scale is broken down into units, each associated with a year of past or future service. The principle underlying the method is that each unit is funded in the year for which it is credited. Typically, when the method is introduced there will be an initial liability for benefits credited for service prior to that date, and to the extent that this liability is not covered by Assets of the Plan there is an Unfunded Liability to be funded over a chosen period in accordance with an amortization schedule.

An Accrued Liability is calculated at the valuation date as the present value of benefits credited with respect to service to that date.

The Unfunded Liability at the valuation date is the excess of the Accrued Liability over the Assets of the Plan. The level annual payment to be made over a stipulated number of years to amortize the Unfunded Liability is the Past Service Cost.

The Normal Cost is the present value of those benefits which are expected to be credited with respect to service during the year beginning on the valuation date.

Under this method, differences between the actual experience and that assumed in the determination of costs and liabilities will emerge as adjustments in the Unfunded Liability, subject to amortization.

B. **Actuarial Assumptions -**

- | | |
|----------------------|--|
| 1. Investment Return | 8.75% per year, compounded annually, net of expenses. |
| 2. Salary Scale | 6.5% per year for the first five years of employment and 5.5% per year thereafter. |

- | | |
|------------------------|---|
| 3. Total Inflation | Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 5% annually. |
| 4. Health Cost Trend | FY92 - 12.5%
FY93 - 11.5%
FY94 - 10.5%
FY95 - 9.5%
FY96 - 8.5%
FY97 and later - 7.5% |
| 5. Mortality | 1984 Unisex Pension Mortality Table, set forward one year for male and police/fire members, and set backward four years for female members. Deaths are assumed to be occupational 85% of the time for Police/Fire, 35% for "Others". |
| 6. Turnover | Based upon the 1986-90 actual total turnover experience. (See Table 1). |
| 7. Disability | Incidence rates, based upon the 1986-90 actual experience, in accordance with Table 2. Post-disability mortality in accordance with rates published by the Pension Benefit Guaranty Corporation to reflect mortality of those receiving disability benefits under Social Security. Disabilities are assumed to be occupational 85% of the time for Police/Fire, 35% for "Others". |
| 8. Retirement Age | Retirement rates based upon the 1986-90 actual experience in accordance with Table 3. |
| 9. Spouse's Age | Wives are assumed to be four years younger than husbands. |
| 10. Dependent Children | Benefits to dependent children have been valued assuming members who are not single have one dependent child. |

11. Contribution Refunds 100% of those terminating after age 35 with five or more years of service will leave their contributions in the fund and thereby retain their deferred vested benefit. All others who terminate are assumed to have their contributions refunded.
12. C.O.L.A. Of those benefit recipients who are eligible for the C.O.L.A., 71% are assumed to remain in Alaska and receive the C.O.L.A.
13. New Entrants Growth projections are made for the active PERS population under three scenarios:
- | | |
|--------------|-------------|
| Pessimistic: | 1% per year |
| Median: | 3% per year |
| Optimistic: | 5% per year |
14. Expenses Expenses are covered in the investment return assumption.

Valuation of Assets

Based upon the five-year average ratio between actuarial and book values of the System's assets. Prior to June 30, 1992, the actuarial value of assets equalled the market value, except that fixed income investments were carried at amortized cost value. Effective June 30, 1992, the actuarial value of assets equals the full market value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements provided by KPMG Peat Marwick. Valuation assets cannot be outside the range of book and actuarial values.

Valuation of Medical Benefits

Medical benefits for retirees are provided by the payment of premiums from the fund. A pre-65 cost and lower post-65 cost (due to Medicare) are assumed such that the total rate for all retirees equals the present premium rate. These medical premiums are then increased with the health inflation assumption. The actuarial cost method used for funding retirement benefits is also used to fund health benefits.

For FY95, the pre-65 monthly premium is \$382.93 and the post-65 premium is \$133.52, based on an assumed total blended premium of \$279.55. For FY95 the actual blended premium is \$336.05. The FY95 blended premium was provided by the State of Alaska Division of Retirement and Benefits.

Table 1

Alaska PERS

Total Turnover Assumptions

**Select Rates of Turnover
During the First 10 Years
of Employment**

**Ultimate Rates of Turnover
After the First 10 Years
of Employment**

Police and Fire:

<u>Year of Employment</u>	<u>----- Age at Hire -----</u>			<u>Age</u>	<u>Rate</u>
	<u>20-29</u>	<u>30-39</u>	<u>40+</u>		
1	.22	.18	.10	20-39	.03
2	.19	.13	.10	40+	.01
3	.13	.12	.10		
4	.12	.12	.10		
5	.10	.10	.10		
6	.08	.08	.08		
7	.07	.07	.07		
8	.06	.06	.06		
9	.05	.05	.05		
10	.04	.04	.04		

Others:

<u>Year of Employment</u>	<u>----- Age at Hire -----</u>		<u>Age</u>	<u>Rate</u>
	<u>20-29</u>	<u>30+</u>		
1	.30	.23	20-29	.065
2	.23	.18	30-34	.060
3	.20	.14	35-44	.055
4	.16	.13	45+	.050
5	.16	.13		
6	.14	.13		
7	.12	.12		
8	.11	.11		
9	.09	.09		
10	.08	.08		

Table 2
Alaska PERS
Disability Rates
Annual Rates Per 1,000 Employees

<u>Age</u>	<u>Police & Fire Rate</u>	<u>"Other" Member Rate</u>
20	.85	.14
21	.87	.14
22	.90	.14
23	.94	.15
24	.98	.15
25	1.03	.15
26	1.08	.15
27	1.13	.15
28	1.19	.16
29	1.25	.16
30	1.31	.16
31	1.37	.17
32	1.43	.17
33	1.44	.25
34	1.48	.34
35	1.55	.44
36	1.65	.53
37	1.78	.64
38	1.94	.75
39	2.13	.87
40	2.35	.99
41	2.60	1.12
42	2.88	1.25
43	3.19	1.39
44	3.53	1.53
45	3.90	1.68
46	4.30	1.84
47	4.73	2.00
48	5.19	2.17
49	5.68	2.34
50	6.20	2.52
51	6.75	2.70
52	7.33	2.89
53	7.94	3.08
54	8.58	3.29
55	9.25	3.49
56	9.95	3.70
57	10.68	3.92
58	11.44	4.14
59	12.23	4.37
60	13.05	4.61
61	13.90	4.84
62	14.78	5.09
63	15.69	5.34
64	16.63	5.60

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Table 3
Alaska PERS
Retirement Rates

<u>Age</u>	<u>Police & Fire Rate</u>	<u>"Other" Member Rate</u>
50	.25	.11
51	.14	.08
52	.14	.08
53	.15	.08
54	.15	.08
55	.30	.19
56	.25	.16
57	.21	.13
58	.21	.12
59	.20	.11
60	.20	.17
61	.40	.14
62	1.00	.21
63	1.00	.22
64	1.00	.22
65	1.00	.31
66	1.00	.61
67 & Up	1.00	1.00

For ages less than 50, employees are assumed to retire two years after the earliest age they are eligible to retire.

Section 3

Other Historical Information

3.1 shows the analysis of financial experience.

3.2(a) shows the summary of accrued and unfunded accrued liabilities for Police and Fire members.

3.2(b) shows the summary of accrued and unfunded accrued liabilities for "Other" members.

3.3 shows the solvency test.

3.4(a) shows the statement of actuarial present value of accumulated plan benefits for Police and Fire members.

3.4(b) shows the statement of actuarial present value of accumulated plan benefits for "Other" members.

3.1 Analysis of Financial Experience

Change in Contribution Rate Due to Gains and Losses in Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience					
Type of Gain or Loss	Change in Contribution Rate During Fiscal Year				
	93	92	91	90	89
(1) Health Experience	0%	0%	-3.17%	-1.42%	2.29%
(2) Salary Experience	-.21%	-.56%	.26%	-.07%	-.02%
(3) Investment Experience	-1.41%	-.16%	.48%	-.67%	-.39%
(4) Demographic Experience	.74%	1.58%	2.02%	.68%	.22%
(5) Miscellaneous	0%	0%	0%	.86%	.10%
(6) Gain (or Loss) During Year From Experience, (1)+(2)+(3)+(4)+(5)	-.88%	.86%	-.41%	-.62%	2.20%
Non-recurring Items					
(7) Asset Valuation Method	0%	-.88%	0%	0%	0%
(8) Assumption Changes	0%	0%	.55%	0%	0%
(9) Plan Changes	0%	0%	0%	0%	0%
Composite Gain (or Loss) During Year, (6)+(7)+(8)+(9)	-.88%	-.02%	.14%	-.62%	2.20%

3.2(a) Summary of Accrued and Unfunded Accrued Liabilities - "Police/Fire"

Valuation Date	Aggregate Accrued Liability ('000's)	Valuation Assets ('000's)	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL) ('000's)	Annual Active Member Payroll ('000's)	UAL as a Percent of Annual Active Member Payroll
June 30, 1993	\$639,439	\$ 610,149	95.4%	\$ 29,290	\$ 124,025	23.6%
June 30, 1992 ⁽¹⁾	592,518	540,087	91.2%	52,431	122,762	42.7%
June 30, 1991 ⁽²⁾	523,326	461,103	88.1%	62,223	120,240	51.7%
June 30, 1990	422,275	410,615	97.2%	11,660	105,135	11.1%
June 30, 1989 ⁽²⁾	402,021	368,325	91.6%	33,696	104,000	32.4%
June 30, 1988	324,634	301,780	93.0%	22,854	102,265	22.3%
June 30, 1987	283,535	282,530	99.6%	1,005	100,839	1.0%
June 30, 1986	249,673	254,643	102.0%	0	101,537	0%
June 30, 1985 ⁽²⁾⁽³⁾	213,967	201,164	93.9%	12,803	92,381	13.9%
June 30, 1984	175,668	154,101	87.7%	21,567	89,118	24.2%
⁽¹⁾ Change in Asset Valuation Method.						
⁽²⁾ Change of Assumptions.						
⁽³⁾ Change in Funding Method.						

3.2(b) Summary of Accrued and Unfunded Accrued Liabilities - "Other"

Valuation Date	Aggregate Accrued Liability ('000's)	Valuation Assets ('000's)	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL) ('000's)	Annual Active Member Payroll ('000's)	UAL as a Percent of Annual Active Member Payroll
June 30, 1993	\$ 3,486,322	\$ 3,326,627	95.4%	\$ 159,695	\$ 1,011,864	15.8%
June 30, 1992 ⁽¹⁾	3,148,364	2,869,772	91.2%	278,592	961,054	29.0%
June 30, 1991 ⁽²⁾	2,815,819	2,481,018	88.1%	334,801	907,567	36.9%
June 30, 1990	2,331,243	2,266,871	97.2%	64,372	846,935	7.6%
June 30, 1989 ⁽³⁾	2,161,247	1,980,098	91.6%	181,149	808,835	22.4%
June 30, 1988	1,921,949	1,786,648	93.0%	135,301	806,100	16.8%
June 30, 1987	1,621,470	1,615,723	99.6%	5,747	790,463	.7%
June 30, 1986	1,306,937	1,332,956	102.0%	0	788,555	0%
June 30, 1985 ⁽³⁾	1,114,997*	1,046,982*	93.9%	68,015	738,198	9.2%
June 30, 1984	950,196	833,537	87.7%	116,659	693,148	16.8%
* Estimated. ⁽¹⁾ Change in Asset Valuation Method. ⁽²⁾ Change of Assumptions. ⁽³⁾ Change in Funding Method.						

3.3 Solvency Test

Valuation Date	Aggregate Accrued Liability For:			Valuation Assets ('000's)	Portion of Accrued Liabilities Covered by Assets		
	(1) Active Member Contributions ('000's)	(2) Inactive Members ('000's)	(3) Active Members (Employer-Financed Portion) ('000's)		(1)	(2)	(3)
June 30, 1993	\$ 551,753	\$ 1,921,967	\$ 1,652,041	\$ 3,936,776	100%	100%	88.6%
June 30, 1992 ⁽¹⁾	484,590	1,783,020	1,473,272	3,409,859	100%	100%	77.5%
June 30, 1991 ⁽²⁾	422,656	1,621,590	1,294,899	2,942,121	100%	100%	69.3%
June 30, 1990	380,680	1,285,515	1,087,323	2,677,486	100%	100%	93.0%
June 30, 1989 ⁽²⁾	329,966	1,217,648	1,015,654	2,348,423	100%	100%	78.8%
June 30, 1988	305,483	1,030,048	911,052	2,088,428	100%	100%	82.6%
June 30, 1987	216,504	820,853	867,648	1,898,253	100%	100%	99.2%
June 30, 1986	210,115*	493,724	852,771*	1,587,599	100%	100%	100.0%
June 30, 1985 ⁽²⁾⁽³⁾	169,433	466,222	693,574*	1,248,146	100%	100%	88.3%
June 30, 1984	125,534*	410,235	590,095*	987,638	100%	100%	76.6%
* Estimated. ⁽¹⁾ Change in Asset Valuation Method. ⁽²⁾ Change of Assumptions. ⁽³⁾ Change in Funding Method.							

3.4(a) Statement of Actuarial Present Value of Accumulated Plan Benefits - "Police/Fire"

Actuarial Present Value of Accumulated Plan Benefits
at June 30, 1993 (000's)

Retired participants and beneficiaries of deceased participants	\$ 237,222
Terminated participants with deferred benefits	17,783
Active participants - Vested	308,989
Active participants - Non-vested	8,101
Total Actuarial Present Value of Accumulated Plan Benefits	\$ 572,095

Notes to the Statement of Accumulated Plan Benefits.

1. The actuarial present value of accumulated plan benefits presented in this statement was determined using the following assumptions:
 - a. Future salary was not considered.
 - b. Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
 - c. Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability, and investment return.
2. Accumulated employee contributions with interest total \$84,996(000).
3. As with many of the comparative plan financial relationships otherwise available, an examination, over periods of time, of the relationship between the *value of accumulated plan benefits* and the *value of plan assets* may give an indication of the progress being made toward the funding of plan benefits. However, in the context of a "going concern" environment, a point in time comparison of these two values *should not be construed to be indicative of the expected ability of the plan to pay future benefits when due*. Furthermore, *that comparison is not valid for assessing a plan termination situation*. Consideration of inflation in the assumed return on plan assets while ignoring inflation's effect on future benefit levels *produces a significant understatement of the value of accumulated plan benefits* when applying going concern concepts. *The accumulated plan benefit value presented in this statement should not be confused with information presented elsewhere regarding funding requirements.*

3.4(a) Statement of Actuarial Present Value of Accumulated Plan Benefits - "Police/Fire" (continued)

4. The change in the Present Value of Accumulated Plan Benefits during the prior fiscal year is as follows:

A.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1992, (000's)	\$ 502,928
B.	Increase (Decrease) Attributable to:	
i.	Additional Benefits Accumulated, including Actuarial Experience	50,613
ii.	Increase due to Decrease in the Discount Period	42,939
iii.	Estimated Benefits Paid to Participants	(24,385)
iv.	Material System Changes	0
v.	Change in Assumptions	<u>0</u>
C.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1993 (000's)	\$ 572,095

3.4(b) Statement of Actuarial Present Value of Accumulated Plan Benefits - "Others"

Actuarial Present Value of Accumulated Plan Benefits
at June 30, 1993 ('000's)

Retired participants and beneficiaries of deceased participants	\$ 1,235,029
Terminated participants with deferred benefits	431,933
Active participants - Vested	1,324,548
Active participants - Non-vested	84,946
Total Actuarial Present Value of Accumulated Plan Benefits	\$ 3,076,456

Notes to the Statement of Accumulated Plan Benefits.

1. The actuarial present value of accumulated plan benefits presented in this statement was determined using the following assumptions:
 - a. Future salary was not considered.
 - b. Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
 - c. Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability, and investment return.
2. Accumulated employee contributions with interest total \$466,757(000).
3. As with many of the comparative plan financial relationships otherwise available, an examination, over periods of time, of the relationship between the *value of accumulated plan benefits* and the *value of plan assets* may give an indication of the progress being made toward the funding of plan benefits. However, in the context of a "going concern" environment, a point in time comparison of these two values *should not be construed to be indicative of the expected ability of the plan to pay future benefits when due*. Furthermore, *that comparison is not valid for assessing a plan termination situation*. Consideration of inflation in the assumed return on plan assets while ignoring inflation's effect on future benefit levels *produces a significant understatement of the value of accumulated plan benefits* when applying going concern concepts. *The accumulated plan benefit value presented in this statement should not be confused with information presented elsewhere regarding funding requirements.*

3.4(b) Statement of Actuarial Present Value of Accumulated Plan Benefits - "Others" (continued)

4. The change in the Present Value of Accumulated
Plan Benefits during the prior fiscal year is as follows:

A.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1992, (000's)	\$ 2,621,336
B.	Increase (Decrease) Attributable to:	
i.	Additional Benefits Accumulated, including Actuarial Experience	360,476
ii.	Increase due to Decrease in the Discount Period	223,720
iii.	Estimated Benefits Paid to Participants	(129,076)
iv.	Material System Changes	0
v.	Change in Assumptions	<u>0</u>
C.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1993 (000's)	\$ 3,076,456