University of Minnesota Supplemental Benefits Plan

Actuarial Valuation Report as of July 1, 2010 for Fiscal Year July 1, 2010 to June 30, 2011

April 2011

TOWERS WATSON

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Employee Benefits

Office of the Vice President for Human Resources

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May 3, 2011

Mr. Lawrence Martin
Executive Director
Legislative Commission on Pension & Retirement
55 State Office Building
100 Rev Dr Martin Luther King Jr Blvd
St. Paul, MN 55155

Re: University of Minnesota Supplemental Benefits Plan

Dear Mr. Martin:

Enclosed are 2 copies of the actuarial valuation for the University of Minnesota Supplemental Benefits Plan as of July 1, 2010.

If you have any questions, please feel free to contact me at 612.626.0792.

Sincerely,

Jacqueline M Singer
Director of Retirement Programs

Enclosures

CC (w/enclosure): Secretary of the Senate
Chief Clerk of the House
Carol Carrier
Richard Pfutzenreuter
Michael Volna
John Kellogg
Cynthia Scott
Doug Swyter

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PURPOSE AND SUMMARY

The purpose of this report is to set forth the results of our actuarial valuation of the University of Minnesota Supplemental Benefits Plan as of July 1, 2010, in accordance with Chapter 356 of the Minnesota Statutes. The valuation establishes a cost provision of $356,000 for the year ending June 30, 2011.

The valuation was based on employee census data as of July 1, 2010 and plan provisions as amended through July 1, 2010. The plan is composed of two distinct groups:

- Employees who began participation in the Faculty Retirement Plan prior to 1963. This is a closed group of participants; namely, existing retirees and a diminishing group of active participants soon to retire.

- Female participants in the Faculty Retirement Plan for whom contributions to the Faculty Retirement Plan were made at any time prior to July 1, 1982. (The Faculty Retirement Plan had used separate male and female factors prior to July 1, 1982. This plan equalizes those pre-July 1, 1982 amounts.) This is also a closed group.

In summary, the valuation shows a Chapter 356 requirement of $356,000. Contributions to the plan are made from central resources and from self-supporting departments. In order to satisfy Chapter 356, the total contribution from all sources, plus interest at 5% to June 30, 2011, must be at least $356,000.

EMPLOYEE AND FINANCIAL DATA

Table 2 summarizes the data used for the valuation. Data covering 9 active pre-1963 participants under the Faculty Retirement Plan was provided to us. Based on current account balances and the actuarial assumptions set forth below, it is projected that no member of this group will receive benefits from the Supplemental Benefits Plan. In addition, we were furnished a listing for the 212 retirees and survivors presently receiving benefits under the plan. We also received a summary by age grouping of account balances under the Faculty Retirement Plan for female participants at June 30, 2010.

The University reported assets with a market value of $2,404,798 as of July 1, 2010. For valuation purposes, Chapter 356 specifies the use of an Actuarial Value of Assets that smoothes gains and losses over a five-year period.

As set forth in Table 5, the Actuarial Value of Assets is $2,621,263 as of June 30, 2010.

PLAN VALUED

Tables 3(a) and 3(b) summarize the pertinent provisions of the Supplemental Benefits Plan for retirements before and after June 30, 1977, respectively. Table 3(c) summarizes the benefit increases that have been granted to pensioners. Since benefits under this program are directly dependent on the level of benefits payable under the University's Faculty Retirement Plan, we have set forth a complete description of the principal provisions of the Faculty Retirement Plan in Table 3(d).

There were no changes in the Supplemental Benefit Plan provisions being valued since the prior valuation.

We project that no active employee will receive a supplemental benefit from this plan. Therefore, the liabilities reflected in this report are for inactive participants and female participants subject to unisex adjustment.

ACTUARIAL ASSUMPTIONS AND METHODS

Table 4 is a summary of the actuarial assumptions and methods used in this valuation. These assumptions and methods conform to the provisions of Chapter 356 of the Minnesota Statutes.

The actuarial method used is the entry-age-normal cost method as prescribed by Statutes. Under this method, the normal cost is determined as the level percentage of future covered payroll that is required to be paid from each member's date of employment to retirement in order to provide the benefits under the plan. The accrued liability under this method is equal to the present value of all benefits payable under the plan less the present value of future normal costs. The unfunded accrued liability is then determined by subtracting the assets on the valuation date from the accrued liability.

Originally, Minnesota Statutes required funding the annual normal cost plus the amortization of the unfunded accrued liability for the first valuation completed after June 1, 1979 by the end of the fiscal year occurring in 2009. The amortization of any additional unfunded accrued liability generated by benefit improvements is determined by first computing the amortization over 30 years. The amount of this amortization is added to the remaining amortization of the June 1, 1979 amount and a determination is made as to the fiscal year when this combined payment fully funds the total unfunded accrued liability. Due to the increases in benefits which have occurred since 1979, all unfunded accrued liabilities are being amortized by the end of the fiscal year occurring in 2021.

CHANGES IN ASSUMPTIONS AND METHODS SINCE THE PRIOR VALUATION

The mortality tables were changed from 1983 Group Annuity Mortality tables to the RP-2000 generational mortality tables with white collar adjustment. The resulting increase in liability was $67,200.

VALUATION RESULTS

Table 1 sets forth the results of our valuation. Section A of the table sets forth basic data items for active and retired participants.

Section B sets forth the determination of accrued liability, unfunded accrued liability, annual normal cost, and annual cost provision all in accordance with Chapter 356. As of July 1, 2010, the annual cost provision is $339,000. Interest accrues at 5% until date of payment. As of June 30, 2011, the annual cost provision is $356,000.

Section C sets forth the administrative expenses of the plan.

GAIN AND LOSS ANALYSIS

Table 6 reconciles the unfunded accrued liability over the past year and summarizes the gain and loss analysis. There was an increase of $271,300 in the July 1, 2010 unfunded accrued liability when compared to that expected. This loss is the result of lower than expected mortality during 2010 and a loss on plan assets, partially offset by fewer unisex annuity conversions than expected and other actuarial gains (not related to mortality).

COMPARISON OF 2009 AND 2010 VALUATION RESULTS

Table 7 sets forth a comparison of the principal values underlying the 2009 and 2010 valuations. The unfunded accrued liability increased from $2,831,400 to $2,956,700.

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In preparing this valuation, we have relied upon information and data provided to us by the University of Minnesota. An audit of the financial and participant data provided was not performed, but we have checked the data for reasonableness as appropriate based on the purpose of the valuation. We have relied on all the information provided, including plan provisions and asset information, as complete and accurate.

The valuation summarized in this report involves actuarial calculations that require assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used.

The undersigned consultants of Towers Watson with actuarial credentials meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. Our objectivity is not impaired by any relationship between the plan sponsor and our employer, Towers Watson Delaware Inc.

Respectfully submitted,

Towers Watson

Scott M Hippen

Scott M. Hippen, ASA, EA
Consultant
April 2011

Towers Watson

Peter Bartosh

Peter Bartosh, FSA, EA
Consultant
April 2011

Towers Watson

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Table 1

Actuarial Valuation Results

Valuation determinations rounded to nearest $100

A. BASIC DATA

1.	Active Pre-1963 Participants			
	(a)	Total active pre-1963 participants under Faculty Retirement Plan (FRP)		9
	(b)	Total projected to receive supplemental benefits[1]		
		(i)	Number	0
		(ii)	Average annual projected supplement	0
	(c)	Covered Payroll		950,980
2.	Estimated Account Balance for Female Participants at July 1, 2010			25,301,973
3.	Retirees, Survivors and Widows			
	(a)	Number receiving or entitled to receive benefits		212
	(b)	Average annual benefit being paid		3,981
	(c)	Annual Rate of Benefit Payment		844,000

B. DETERMINATION OF ANNUAL REQUIREMENTS IN ACCORDANCE WITH CHAPTER 356 (MINNESOTA STATUTES)

1.	Accrued Liability as of July 1, 2010		
	(a)	Actives	0
	(b)	Retirees	1,551,400
	(c)	Widows	0
	(d)	Survivors	2,282,900
	(e)	Female unisex increase 7/1/1982	1,743,700
	(f)	Total	5,578,000
2.	Actuarial Value of Assets as of July 1, 2010		2,621,300
3.	Unfunded Accrued Liability as of July 1, 2010 (1(f) less 2)		2,956,700
4.	Annual Normal Cost		0
5.	Annual Requirement to Fund Normal Cost and Amortize the Unfunded Accrued Liability by June 30, 2021		
	(a)	Amortization of Unfunded Accrued Liability by June 30, 2021	339,000
	(b)	Normal cost	0
	(c)	Total as of July 1, 2010	339,000
	(d)	Total as of June 30, 2011	356,000

[1] Per investment earnings, salary scale, and Social Security assumptions summarized in Table 4.

C. ADMINISTRATIVE EXPENSES

1.	Administrative Expense	31,714
2.	Percentage of Covered Payroll	3.3%

Table 2

Distribution of Participants as of July 1, 2010

A. ACTIVE PARTICIPANTS (Pre-1963 FRP Participants)

Age Group Last Birthday	Males	Females	Total
60 - 64	0	0	0
65 & Over	9	0	9
Total	9	0	9

B. SURVIVORS

Age Group Last Birthday	Males	Females	Total	Annual Benefit Being Paid
60 - 64	0	1	1	1,203
65 - 69	0	1	1	3,001
70 - 74	0	3	3	21,367
75 - 79	0	2	2	1,600
80 - 84	0	15	15	54,223
85 - 89	0	28	28	105,039
90 & Over	0	43	43	308,019
Total	0	93	93	$494,452

C. RETIREES

Age Group Last Birthday	Males	Females	Total	Annual Benefit Being Paid
60 - 64	0	0	0	0
65 - 69	0	0	0	0
70 - 74	0	2	2	1,247
75 - 79	0	7	7	4,263
80 - 84	3	15	18	9,790
85 - 89	23	20	43	81,624
90 & Over	32	17	49	252,605
Total	58	61	119	$349,529

D. RECONCILIATION OF RETIREES AND SURVIVORS

		Number
1.	Number receiving benefits last year	226
2.	Deaths during year with no continuing benefits payable	14
3.	Certain period expired	0
4.	New retirees this year	0
5.	Data correction	0
6.	Number receiving or entitled to receive benefits this year (1 - 2 - 3 + 4 - 5)	212

E. ESTIMATED FACULTY RETIREMENT PLAN ACCOUNT BALANCES FOR FEMALE PARTICIPANTS AS OF JUNE 30, 2010 ATTRIBUTABLE TO CONTRIBUTIONS MADE PRIOR TO JULY 1, 1982

Age	Number of Participants	Total
56	5	40,913
57	4	97,943
58	7	324,482
59	6	183,402
60	10	440,614
61	10	512,597
62	10	767,905
63	17	1,180,605
64	8	598,266
65	8	819,679
66	15	1,275,192
67	12	937,867
68	15	2,033,367
69	17	1,647,739
70	10	1,789,446
71	6	1,443,886
72	7	691,664
73	10	1,428,962
74	10	1,696,627
75	12	1,231,142
76	8	1,308,405
77	3	764,538
78	2	122,081
79	2	163,404
80	4	915,250
81	2	144,553
82	5	530,722
83	2	376,614
84	2	594,154
85	4	558,549
86	1	48,889
87	2	114,416
88	3	348,703
89	1	92,618
90	1	76,799
	241	25,301,973

Table 3(a)

Summary of Principal Provisions of the Supplemental Plan (Provisions in effect for pre-June 30, 1977 retirees)

1. Eligibility:

Generally applicable to employees who first began participation in the Faculty Retirement Plan prior to 1963, and who retire on or after the June 30, next following the 65th birthday. Special early retirement provisions are available (see below).

2. Amount of Supplement:

Supplement (annual) is computed as follows:

(a) Determine 2% of final five year average salary for each year of actual service (maximum 30), but not to exceed the following:

(i)	Professor	$8,500
(ii)	Associate Professor	$8,000
(iii)	Assistant Professor or Instructor	$7,500

(b) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities using fixed annuity factors under FRP. Note that variable accumulations are converted on fixed basis for this purpose. Prior endowment accumulations are treated as annuity in this computation.

(c) Deduct $1,524 (estimate of 1963 Social Security level) from (a).

(d) Determine supplement as equal to (a) less (b) after adjustment for (c).

(Note: Dividends payable for coverage prior to 1963 are not included in (b) above. 1963 and later coverage dividends are included by direct reflection in interest credited on accumulations).

3. Early Retirement:
(Note: Any reference to age 65 in this description means the June 30th next following the 65th birthday.)

A member may retire as early as age 62 in which case his FRP accounts are used to purchase an annuity commencing immediately. Supplemental benefits payable are determined as follows:

(a) Determine 2% of final five year average salary for each year of service (projected to age 65 but subject to a maximum of 30) not to exceed the following:

(i)	Professor	$8,500
(ii)	Associate Professor	$8,000
(iii)	Assistant Professor or Instructor	$7,500

(b) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities payable at early retirement using annuity factors under FRP. Note that variable accumulations are converted on a fixed basis for this purpose.

(c) Deduct $1,524 (estimate of 1963 Social Security level) from (a).

(d) Determine supplemental benefit as equal to (a) less (b) after adjustment for (c).

Table 3(b)

Summary of Principal Provisions of the Supplemental Plan
(Provisions in effect for June 30, 1977 and later retirees)

1. Eligibility: Generally applicable to employees who first began participation in the Faculty Retirement Plan prior to 1963, and who retire on or after the June 30, next following the 65th birthday. Special early retirement provisions are available (see below).

2. Amount of Supplemental: Greater of benefit as determined under Supplemental Benefits Plan (Pre-June 30, 1977) or benefit computed as follows:

(a) Determine final five year average salary subject to following maximums for indicated retirement years:

Year	Amount	Year	Amount	Year	Amount
1976-77	$37,200	1988-89	59,600	2000-01	95,400
1977-78	38,700	1989-90	62,000	2001-02	99,200
1978-79	40,300	1990-91	64,500	2002-03	103,200
1979-80	41,900	1991-92	67,000	2003-04	107,300
1980-81	43,600	1992-93	69,700	2004-05	111,600
1981-82	45,300	1993-94	72,500	2005-06	116,100
1982-83	47,100	1994-95	75,400	2006-07	120,700
1983-84	49,000	1995-96	78,400	2007-08	125,500
1984-85	51,000	1996-97	81,600	2008-09	130,500
1985-86	53,000	1997-98	84,800	2009-10	135,800
1986-87	55,100	1998-99	88,200	2010-11	141,200
1987-88	57,300	1999-00	91,700		

(b) Determine 1-2/3% of final five year average salary for each year of actual service (maximum 30).

(c) Convert Faculty Retirement Plan net accumulations to fixed dollar life annuities using fixed annuity factors under FRP. Note that variable accumulations are converted on fixed basis for this purpose.

(d) Determine 100% of estimated primary Social Security benefit payable based on continuous coverage from date of University hire (or January 1, 1955, if later), to the date of retirement.

(e) Determine supplement equal to the excess of (b) over the sum of (c) plus (d).

3. Early Retirement:
(Note: Any reference to age 65 in this description means the June 30th next following the 65th birthday.)

A member may retire as early as age 62 in which case his FRP accounts are used to purchase an annuity commencing immediately. Supplemental benefits payable are determined as follows:

(a) Determine final five year average salary subject to the following maximums based on the year of early retirement:

Year	Amount	Year	Amount	Year	Amount
1978-79	$40,300	1989-90	62,000	2000-01	95,400
1979-80	41,900	1990-91	64,500	2001-02	99,200
1980-81	43,600	1991-92	67,000	2002-03	103,200
1981-82	45,300	1992-93	69,700	2003-04	107,300
1982-83	47,100	1993-94	72,500	2004-05	111,600
1983-84	49,000	1994-95	75,400	2005-06	116,100
1984-85	51,000	1995-96	78,400	2006-07	120,700
1985-86	53,000	1996-97	81,600	2007-08	125,500
1986-87	55,100	1997-98	84,800	2008-09	130,500
1987-88	57,300	1998-99	88,200	2009-10	135,800
1988-89	59,600	1999-00	91,700	2010-11	141,200

(b) Determine 1-2/3% of final five year average salary for each year of actual service, including projected service to age 65 (maximum 30).

(c) Convert Faculty Retirement Plan net accumulation to fixed dollar annuities using fixed annuity factors under FRP and reflecting early retirement. Note that variable accumulations are converted to the fixed basis for this purpose.

(d) Determine 100% of estimated primary Social Security benefit payable at early retirement based on continuous coverage from date of University hire (or January 1, 1955 if later) to the date of retirement.

(e) Determine supplement equal to the excess of (b) over the sum of (c) plus (d).

4. Unisex Adjustment Policy Established July 1, 1982

Periodic retirement benefits paid pursuant to the Faculty Retirement Plan shall be equalized for similarly situated males and females effective July 1, 1982. To the extent that benefits in addition to those which are available from the annuity contracts shall be required, such amounts shall be paid through the University of Minnesota Supplemental Benefits Plan.

The equalization shall be accomplished in the following manner:

For Individuals Not Yet Retired:

1. All contributions to the faculty retirement plan after the effective date shall be applied to purchase annuities under sex-neutral (unisex) rates.

2. Total benefits (annuities plus supplement) from contributions to the faculty retirement plan which are made prior to the effective date shall be determined by using male mortality rates for all University employees and female mortality rates for all joint annuitants under the joint and survivor option.

For Individuals Already Retired:

The amount of the total periodic benefit (annuity plus supplement) being paid shall be recalculated using male mortality rates for all University employees and female mortality rates for all joint annuitants under the joint and survivor option. In those instances where the application of such mortality rates provides for increased benefits, such increased benefits shall be paid through the University supplement on a retroactive and prospective basis.

Table 3(c)

Summary of Supplemental Plan Benefit Increases

1. Post-Retirement Benefit Increases Established July 1, 1981 and July 1, 1984:

Increases granted to certain retired faculty in the amount of $600 for a full share and $480 for an 80% share with full shares being paid to those retirees who are receiving single life annuities and 80% shares paid to retirees, or surviving spouses of retirees, who elected the survivorship option. Those retired faculty eligible to receive the increase shall be determined as follows:

   1. Exclude Vice Presidents, widows of Vice Presidents, and those with Dean status for retirement purposes.

   2. Include only pre-1963 participants, who retired on or before June 30, 1980 (June 30, 1983 for July 1, 1984 increase) and who are not specifically excluded, whether or not they are currently receiving a Supplement payment. 1969 and later surviving spouses currently receiving a Supplement are considered participants.

2. Post-Retirement Benefit Increase Established July 1, 1986:

Benefit increases were granted to pre-1963 participants who retired not later than July 1, 1985, excluding those Vice Presidents and Deans who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was $13.00 (single life annuities) or $10.40 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 1-1/2 points were awarded for each year since retirement. The value of a point was determined by the amount of funds available in the department budget for increases.

3. Cost of Living Increases Granted to Widows of Pre-1956 Retirees:

Effective Date	Revised Annual Benefit	
July 1, 1981	$4,020	(formerly $3,330)
July 1, 1984	4,176	
January 1, 1986	4,464	
January 1, 1988	4,704	

4. Post-Retirement Benefit Increase Established July 1, 1988

(a) Benefit increases were granted to pre-1963 participants who retired not later than July 1, 1987, excluding those Vice Presidents and Deans who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was $8.00 (single life annuities) or $6.40 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 1½ points were awarded for each year since retirement. The value of a point was determined by the amount of funds available in the department budget for increases.

(b) A supplemental benefit increase was granted to certain retired faculty in the amount of $600 annually. Those retired faculty eligible to receive the increase were determined as follows:

1. Exclude Vice Presidents, Widows of Vice Presidents, and those with Dean status for retirement purposes.

2. Include only pre-1963 participants, who retired on or before June 30, 1987 and who are not specifically excluded, whether or not they are currently receiving a Supplement payment. 1969 and later surviving spouses currently receiving a Supplement are considered participants.

5. Post-Retirement Benefit Increase Established January 1, 1990

Benefit increases were granted to pre-1963 participants who retired not later than June 30, 1988, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of increase was $20.00 (single life annuities) or $16.00 (joint and survivor or surviving spouse annuities) per year for each "point," where one point was awarded for each year of service up to 30 years and 3 points were awarded for each year since retirement. The amount of increase was limited such that the combination of available Faculty Retirement Plan annuities plus primary Social Security plus the supplement would not exceed $30,000.

6. Post-Retirement Benefit Increase Established July 1, 1993

Benefit increases were granted to pre-10/1/1963 participants who retired not later than June 30, 1992, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of the increase was the greater of $400 or 5% of the initial base. The initial base was the sum of the annual amounts of the Faculty Retirement Plan Fixed Annuity (not including the Additional Annuity), the University Supplements and the Unisex Supplements. The amount of increase was limited such that the combination of available Faculty Retirement Plan annuities plus primary Social Security plus the supplement would not exceed $20,000 times years of service (limited to 30) divided by 30.

7. Post-Retirement Benefit Increase Established July 1, 1994

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1993, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option. The amount of the increase was the amount needed to bring the participant's initial base (which includes University Supplement, Unisex Supplement, Estimated Social Security based upon the Primary Insurance Amount (PIA) and a life annuity calculated from the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement) up to a minimum annual amount. The minimum annual amount is based on a floor level, which was $20,500 for the July 1, 1994 increase. For participants with at least 30 years of service, the minimum annual amount is equal to the floor level. For participants that have less than 30 years of service, the minimum annual amount is calculated by subtracting the participant's estimated Social Security (PIA) from the floor level, dividing the balance by 30 and multiplying it by years of service (up to 30), then adding back the estimated Social Security (PIA). The floor level will be adjusted annually to reflect the cost-of-living increase applied to Social Security the previous January. However, the floor level will not be increased beyond $30,000.

8. Post-Retirement Benefit Increase Established July 1, 1995

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1994, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the lesser of the following amounts:

(a) The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)

(b) $30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced 20%.

9. <u>Post-Retirement Benefit Increase Established July 1, 1996</u>

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1995, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:
1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and 1½ points is awarded for each year since retirement.
2. $30,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced by 20%.

10. Post-Retirement Benefit Increase Established July 1, 1999

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1998, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:
1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and 1½ points is awarded for each year since retirement.
2. $32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint and Survivor payment option, the increase is reduced by 20%.

11. <u>Post-Retirement Benefit Increase Established July 1, 2000</u>

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 1999, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two points are awarded for each year since retirement.
2. $32,500, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

12. <u>Post-Retirement Benefit Increase Established July 1, 2001</u>

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2000, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two points are awarded for each year since retirement.
2. $34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

13. Post-Retirement Benefit Increase Established July 1, 2002

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2001, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and two and one-half points are awarded for each year since retirement.
2. $34,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

14. Post-Retirement Benefit Increase Established July 1, 2005

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2004, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:

1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $35,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the rime of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:

1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and three points are awarded for each year since retirement.
2. $35,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

15. <u>Post-Retirement Benefit Increase Established July 1, 2007</u>

Benefit increases were granted to pre-10/1/1963 participants who retired no later than June 30, 2006, excluding those Vice Presidents who qualified for special benefits, but including surviving spouses of retirees who elected the survivorship option.

Each July 1, eligible participants will receive a benefit increase equal to the sum of (a) and (b) below:

(a) The lesser of:
1. The difference between the current year's COLA amount and the prior year's COLA amount less the difference between the current year's Primary Social Security amount and the prior year's Primary Social Security amount. The resulting amount is reduced proportionally for service at retirement less than 30 years. (The COLA amount was set at $20,500 on July 1, 1994, and is increased each July 1 by the cost-of-living increase applied to Social Security the previous January.)
2. $36,000, reduced proportionally for service at retirement less than 30 years, less the sum of the University Supplement (converted to a life annuity, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity (calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

(b) The lesser of:
1. The amount of $8.00 per year for each "point," where one point is awarded for each year of service up to 30 years and three points are awarded for each year since retirement.
2. $36,000, reduced proportionally for service at retirement less than 30 years, less the sum of the actual University Supplement (not converted to a life annuity and including the COLA in (a)(1) above with Joint & Survivor reduction, if applicable), the Unisex Supplement, the Primary Social Security amount and the Estimated Life Annuity calculated based on the Accumulated Cash Value in the Faculty Retirement Plan at the time of retirement).

If the retiree elected the Joint & Survivor payment option, the increase is reduced by 20%.

Table 3(d)

Summary of Principal Provisions of the Faculty Retirement Plan

1.	Eligibility:	All full time academic staff members (including certain civil service staff members) participating in Faculty Group Life program, eligible to participate as follows:

	Classification	Date of Participation
(a)	Associate professor or higher	Date of hire.
(b)	Assistant professor	Date of hire.
(c)	Instructor	Date of hire.
(d)	Professional, Administrative, and MES Academic staff	(i) If salary less than \$45,863 on a 12-month appointment, immediately following three years of service. (ii) If salary greater or equal to \$45,863 but less than \$54,135 on a 12-month appointment, immediately following two years of service. (iii) If salary greater than or equal to \$54,135 on a 12-month appointment, date of hire.

2.	Financing:	Staff member contributes 2½% of covered salary, with University making contributions of 13% of such covered salary.
3.	Date to Which University Contributions are Made:	Contributions are continued until date of retirement or separation from service.

4. Investment Vehicles (Pre-Retirement):

Contributions are accumulated through insured annuity contracts and/or mutual funds, as follows:

(a) Annuity contracts
 (i) Fixed dollar: accumulate at rate of interest declared by insurers, but never less than minimum stipulated.
 (ii) Variable Income: Net contributions are immediately converted to accumulation units which are valued daily. Unit values reflect earnings of separate account less the fixed investment charge stipulated (subject to guaranteed maximum charges). Past and future accumulations are transferable to fixed in pre-retirement period.

(b) Mutual funds: Participants may invest in one or more of a variety of mutual funds offered by the Vanguard Group or Fidelity Investments.

5. Forms of Payment Available at Retirement:

Various forms of payment are available:

(a) Non-systematic withdrawal: Non-systematic withdrawals of a specific dollar amount or a percentage of the account balance may be made at any time.

(b) Systematic withdrawal: Systematic withdrawals of a flat dollar amount, a percentage of the account balance, a specific number of accumulated units/shares or interest only may be made monthly, quarterly, semi-annually or annually.

(c) Annuities: Either fixed annuities, or a combination of fixed and variable annuities may be purchased. Joint and survivor or certain and life options are available.

(d) Rollover: Rollover into an Individual Retirement Account.

6. Amount of Annuity Benefits:

At retirement, the cash value (representing accumulation of contributions under fixed dollar contracts or value of accumulation units under variable contracts) is applied to provide "life only" retirement income on the basis of stipulated income conversion factors as listed below. Account balances resulting from contributions made prior to July 1, 1982 will be applied on a male employee and female joint annuitant basis. Account balances resulting from contributions made subsequent to July 1, 1982 will be applied on a unisex basis.

	Monthly Income for Each $1,000 of Proceeds			
	Fixed Income		Variable Annuity	
7/1/2010 Conversion Basis				
Pre-7/1/1982 contributions:	Age 65	Age 68	Age 65	Age 68
Male	6.66	7.31	7.08	7.83
Female	5.83	6.30	6.13	6.66
Contributions 7/1/1982 and later:				
Unisex:	5.91	6.38	6.30	6.86

(NOTE: In the past when fixed income conversion factors proved to be too conservative, excess interest credits were being accorded to benefits in payment status via year-end dividends. Certain prior retirees are still being credited with excess interest dividend increases).

7. Early Retirement:

Participants may retire early, with annuity equivalents payable immediately.

8. Vesting (termination value):

Immediate 100% vested right in accumulations to date of termination.

9. Death Benefits:

(a) Pre-retirement:

Named beneficiary would receive total termination value of retirement annuity as in (6). Optional forms of payment as may be elected by beneficiary must be approved by the University.

(b) Post-retirement:

In accordance with optional form of payment elected, as follows:
(i) life annuity with no post-retirement death benefit.
(ii) life annuity with 60, 120, 180, or 240 monthly payments guaranteed in any event.
(iii) joint and 100% survivor annuity with 120 monthly payments guaranteed payable in any event.
(iv) joint and 66-2/3% to survivor annuity with 120 monthly payments guaranteed payable in any event.

10. Disability:

After a period of total and continuous disability lasting for at least three months, all contributions are waived with future credits being accorded on the basis of a continuation of contribution levels in effect at time of disability.

Table 4

Summary of actuarial assumptions and methods

1.	Mortality	
	Healthy Pre-retirement	RP 2000 non-annuitant generational mortality, white collar adjustment, set forward three years for males and set back one year for females.
	Healthy Post-retirement	RP 2000 annuitant generational mortality, white collar adjustment, with no setbacks for males or females.
2.	Turnover:	None assumed.
3.	Interest Rate:	5% per annum.
4.	Expected Return on Assets:	Same as interest rate assumption. Net of expenses.
5.	Salary Scale:	3½% per annum.
6.	Cost of Living Adjustments:	The floor benefit and PIA amount are assumed to increase at 2½% per annum.
7.	Assumed Retirement Age:	Greater of age 66 or current age.
8.	Actuarial Cost Method:	Individual entry-age-normal cost method, with normal cost determined as a level percentage of future covered payroll.
9.	Amortization of Unfunded Accrued Liability:	As a level dollar amount by June 30, 2021.
10.	Faculty Retirement Plan Accumulations:	Accumulated at 5% per annum assuming continuation of present contribution percentages on increasing covered payroll (per salary scale assumption). Net accumulations converted to fixed dollar life annuities using following 6¼% factors (monthly income for each $1,000 of proceeds).

Male	8.65
Female	7.64
Unisex	8.55

11.	Social Security Benefit:	Based on present law and 3½% salary scale applicable to current salaries.
12.	Unisex Benefits – Percentage Electing Annuities:	35%

Table 5

Actuarial value of assets under the adjusted market value method

A. Expected Return on Market Value of Assets for Prior Year

1. Assets and actual contributions and distributions in prior year weighted for timing

Item	Amount	Weight for Timing	Weighted Amount
(i)	(ii)	(iii)	(iv)=(ii) × (iii)
a. Market value of assets	2,979,796	100.000%	$ 2,979,796
b. Contributions	339,000	93.056%	315,460
c. Benefit payments	(940,804)	50.000%	(470,402)
d. Total			$ 2,824,854

2. Assumed rate of return on plan assets for the year — 5%
3. Expected return (1d. × 2.) — $ 141,243

B. Actual Return on Assets for Prior Year

1. Market value at July 1, 2009	$ 2,979,796
2. Contributions for prior plan year	339,000
3. Benefits payments	940,804
4. Market value at June 30, 2010	2,404,798
5. Actual return (4. + 3. – 2. – 1.)	26,806

C. Investment Gain/(Loss) for Prior Year (B.5. – A.3.) $ (114,437)

D. Actuarial Value of Assets as of July 1, 2010

1. Market value of assets at July 1, 2010 — $ 2,404,798
2. Deferred investment gains and (losses) for last 4 years

Plan Year Ending	Gain/(Loss)	Percent Recognized	Percent Deferred	Deferred Amount
(i)	(ii)	(iii)	(iv)	(v)=(ii) × (iv)
a. 06/30/2010	$ (114,437)	20%	80%	(91,550)
b. 06/30/2009	(42,773)	40%	60%	(25,664)
c. 06/30/2008	(127,237)	60%	40%	(50,895)
d. 06/30/2007	(241,780)	80%	20%	(48,356)
e. 06/30/2006	(322,021)	100%	0%	0
Total				$ (216,465)

3. Asset value adjusted for deferred gains and (losses) (1. – 2(v). Total) — $ 2,621,263

Table 6

Gain and loss analysis

1.	Unfunded Accrued Liability as of July 1, 2009		$2,831,400
2.	Normal Cost		0
3.	Interest at Valuation Rate (5%) on (1) and (2)		141,600
4.	Contributions During Year		339,000
5.	Interest at Valuation Rate (5%) on (4)		15,800
6.	Increase in Unfunded Accrued Liability due to Benefit Improvements		0
7.	Increase in Unfunded Accrued Liability due to Changes in Actuarial Assumptions		67,200
8.	Expected Unfunded Accrued Liability as of July 1, 2010 (1 + 2 + 3 – 4 – 5 + 6 + 7)		2,685,400
9.	Actual Unfunded Accrued Liability as of July 1, 2010		2,956,700
10.	Actuarial Gain/(Loss) During Year (8 – 9)		(271,300)
11.	Gain and Loss Analysis		
	(a)	Gain/(loss) due to supplemental plan asset earnings other than 5%	(183,200)
	(b)	Gain/(loss) due to actual post-retirement mortality	(146,600)
	(c)	Gain/(loss) due to actual salary increases	0
	(d)	Gain/(loss) due to other actuarial gains and losses	58,500
	(e)	Net actuarial gain/(loss) ((a) + (b) + (c) + (d))	(271,300)

Table 7

Comparison of 2009 and 2010 valuation reports

		2009	2010
1.	Active Pre-1963 Participants		
	(a) Total active pre-1963 participants under FRP	11	9
	(b) Total projected to receive supplemental benefits	0	0
2.	Estimated account balance for female participants with account balance prior to July 1, 1982	25,393,389	25,301,973
3.	Retirees, Survivors and Widows		
	(a) Number		
	- Retirees	130	119
	- Survivors	96	93
	- Total	226	212
	(b) Average annual benefit being paid or payable	4,161	3,981
4.	Accrued Liability on Valuation Date		
	(a) Active participants	0	0
	(b) Retirees, survivors and widows	4,377,300	3,834,300
	(c) Female participants with account balances prior to July 1, 1982	1,705,600	1,743,700
	(d) Total (a) + (b) + (c)	6,082,900	5,578,000
5.	Actuarial Value of Assets on Valuation Date	3,251,500	2,621,300
6.	Unfunded Accrued Liability (4) – (5)	2,831,400	2,956,700
7.	Annual Normal Cost	0	0
8.	Chapter 356 Minimum Provision		
	(a) Beginning of year	304,200	339,000
	(b) End of year	319,400	356,000
9.	Estimated Benefit Payments	940,300	958,300