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VIA EMAIL AND USPS

January 6, 2009

Ms. Robyn L. Barnes Communications & Special Projects Manager Los Angeles Fire and Police Pension System 360 East Second Street, 4th Floor Los Angeles, CA 90012-4203

Re: Five-Year Projection of Contributions, Funding Ratio and UAAL

Dear Robyn:

Enclosed please find five-year projections of contributions, funding ratios and Unfunded Actuarial Accrued Liabilities (UAAL) for each of the Pension and Retiree Health Plans.

We have excluded the Port Police for all calculations, since their contribution rate is budgeted separately. Also note that the impact of the final phase-in of the increase in the City's retiree health plan contribution due to the change in actuarial assumptions effective with the June 30, 2006 valuation has been included in the rates illustrated for the June 30, 2007 valuation.

Background and Discussions

We projected the City's contribution rates for the Pension and Retiree Health Plans assuming contributions would be made:

- (1) In one lump sum on July 15 and
- (2) On a periodic basis at the end of every biweekly period.

As directed, we have provided different scenarios of rates of return on a market value basis for the current fiscal year and the next two following. Scenarios 1, 2 and 3 assume losses of 20%, 25% and 30% for 2008-2009. Then after each of those returns we assume either one or two years of zero return before reverting to the long term assumption of 8%. That leads to the following return scenarios:

Benefits, Compensation and HR Consulting Atlanta Boston Chicago Cleveland Denver Hartford Houston Los angeles Minneapolis New Orleans New York Philadelphia Phoenix San Francisco Toronto Washington, DC



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Market Returns 2008-2009 and Later:

Scenario # 1a : -20%, 0%, 8%, 8%, 8% Scenario # 2a : -25%, 0%, 8%, 8%, 8% Scenario # 3a : -30%, 0%, 8%, 8%, 8%

Scenario # 1b : -20%, 0%, 0%, 8%, 8% Scenario # 2b : -25%, 0%, 0%, 8%, 8% Scenario # 3b : -30%, 0%, 0%, 8%, 8%

Unless noted otherwise, these projections are based on the June 30, 2008 actuarial valuation results, including the participant data and the actuarial assumptions on which that valuation was based. Calculations were completed under the supervision of Andy Yeung, ASA, MAAA, Enrolled Actuary.

Amortization Policy

Two years ago, the Board adopted a policy of amortizing the entire Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2006 for the health plan over a fixed period of 30 years beginning June 30, 2006. The Board has requested Segal to perform a review of its funding policy, including alternatives for the amortization period for experience gains and losses, changes in per capita cost and changes in the healthcare trend rate. In this report, the entire UAAL (including recent investment losses, after smoothing) for the health plan is amortized over the remaining amortization period from the 2006 amortization schedule (with 28 years remaining as of June 30, 2008). For the Pension Plan actuarial gains and losses (including recent investment losses, after smoothing) are amortized over 15 years.

Asset Smoothing and the Market Value "Corridor"

Consistent with the Board's current policy, any market value investment gains/losses are recognized over a five year period to determine the smoothed Actuarial Value of Assets (AVA). Current Board policy also includes a market value "corridor" that limits the AVA to be within 20% of the Market Value of Assets (MVA) (i.e., no greater than 120% and no less than 80% of MVA). Under all six investment scenarios, for the next three years the AVA without the corridor is greater than 120% of the MVA. That means that, with the 20% corridor, the AVA ends up being set equal to 120% of the MVA for these years, which reduces how much the recent losses can be smoothed.

The MVA corridor causes the contribution rates to increase more rapidly as more of the investment losses must be recognized immediately. Because of the extraordinary market losses expected for 2008-2009, the Board may wish to consider a policy alternative where the 20% corridor is either eliminated or temporarily suspended, so that the increase in contribution rates would be more gradual.

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Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

If you have any questions, please let us know.

Sincerely

Paul Angelo

SUV/gxk

Enclosures (5020889)

cc: Mike Perez

Projection of UAAL, Funding Ratio and City Contributions - Pension Only - Excludes Port Police Contributions Made on July 15

Scenario # 1a: -20%, 0%, 8%, 8%, 8% Return on Market Value of Assets

	June 30 of \	/aluation Year						City Contribution	ns (July 15)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Co	ontribution	In	cremental
Year	(In thousands)	Funded Ratio	Year End	(1	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	1	Increase
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$ 2,402,582	83.9%	2011	\$	1,304,016	19.27%	15.86%		35.13%	\$	458,133	\$	209,817
2010	\$ 3,672,000	76.6%	2012	\$	1,359,437	19.27%	24.20%		43.47%	\$	590,936	\$	132,803
2011	\$ 3,799,403	76.9%	2013	\$	1,417,213	19.27%	25.14%		44.41%	\$	629,415	\$	38,479
2012	\$ 4,953,255	71.3%	2014	\$	1,477,444	19.27%	32.56%		51.84%	\$	765,847	\$	136,432
2013	\$ 5,974,746	67.0%	2015	\$	1,540,235	19.27%	39.28%		58.55%	\$	901,768	\$	135,921

Scenario # 2a: -25%, 0%, 8%, 8%, 8% Return on Market Value of Assets

_	J	une 30 of Va	aluation Year			_			City Contribution	ns (July 15)				
									Additional	Total Rate				
Valuation		UAAL		Fiscal	Fis	cal Year Pay			Contribution	(Including	Co	ontribution	In	cremental
Year	(In	thousands)	Funded Ratio	Year End	(Ir	thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	1	ncrease
2007	\$	103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$	125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$	3,212,132	78.5%	2011	\$	1,304,016	19.27%	21.34%		40.61%	\$	529,561	\$	281,245
2010	\$	4,484,697	71.4%	2012	\$	1,359,437	19.27%	29.74%		49.01%	\$	666,218	\$	136,657
2011	\$	4,586,811	72.1%	2013	\$	1,417,213	19.27%	30.59%		49.86%	\$	706,617	\$	40,399
2012	\$	5,474,348	68.3%	2014	\$	1,477,444	19.27%	36.51%		55.78%	\$	824,097	\$	117,480
2013	\$	6,587,281	63.7%	2015	\$	1,540,235	19.27%	43.83%		63.10%	\$	971,919	\$	147,822

_	June 30 of Va	aluation Year			_			City Contribution	ns (July 15)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Co	ontribution	In	cremental
Year	(In thousands)	Funded Ratio	Year End	(lı	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	1	ncrease
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$ 4,021,681	73.1%	2011	\$	1,304,016	19.27%	26.83%		46.10%	\$	601,120	\$	352,804
2010	\$ 5,296,718	66.2%	2012	\$	1,359,437	19.27%	35.28%		54.55%	\$	741,636	\$	140,516
2011	\$ 5,375,332	67.3%	2013	\$	1,417,213	19.27%	36.05%		55.32%	\$	783,961	\$	42,325
2012	\$ 5,996,579	65.3%	2014	\$	1,477,444	19.27%	40.45%		59.72%	\$	882,347	\$	98,386
2013	\$ 7,199,189	60.3%	2015	\$	1,540,235	19.27%	48.37%		67.65%	\$ 1	1,041,916	\$	159,569

Projection of UAAL, Funding Ratio and City Contributions - Pension Only - Excludes Port Police Contributions Made on July 15

Scenario # 1b: -20%, 0%, 0%, 8%, 8% Return on Market Value of Assets

	June 3	0 of Va	aluation Year						City Contribution	ns (July 15)				
-									Additional	Total Rate				
Valuation	UAA	L		Fiscal	Fis	cal Year Pay			Contribution	(Including	Co	ntribution	Ind	cremental
Year	(In thous	ands)	Funded Ratio	Year End	(In	thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	1	ncrease
2007	\$ 10	3,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$ 12	5,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$ 2,40	2,582	83.9%	2011	\$	1,304,016	19.27%	15.86%		35.13%	\$	458,133	\$	209,817
2010	\$ 3,67	2,000	76.6%	2012	\$	1,359,437	19.27%	24.20%		43.47%	\$	590,936	\$	132,803
2011	\$ 4,76	6,487	71.0%	2013	\$	1,417,213	19.27%	31.17%		50.44%	\$	714,863	\$	123,927
2012	\$ 5,34	5,637	69.0%	2014	\$	1,477,444	19.27%	35.20%		54.47%	\$	804,829	\$	89,966
2013	\$ 6,50	5,626	64.1%	2015	\$	1,540,235	19.27%	42.75%		62.02%	\$	955,232	\$	150,403

Scenario # 2b: -25%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	J	une 30 of Va	aluation Year			_			City Contribution	ns (July 15)				
_									Additional	Total Rate				
Valuation		UAAL		Fiscal	Fis	cal Year Pay			Contribution	(Including	Co	ontribution	In	cremental
Year	(In	thousands)	Funded Ratio	Year End	(In	thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	ı	ncrease
2007	\$	103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$	125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$	3,212,132	78.5%	2011	\$	1,304,016	19.27%	21.34%		40.61%	\$	529,561	\$	281,245
2010	\$	4,484,697	71.4%	2012	\$	1,359,437	19.27%	29.74%		49.01%	\$	666,218	\$	136,657
2011	\$	5,496,699	66.6%	2013	\$	1,417,213	19.27%	36.26%		55.53%	\$	786,947	\$	120,729
2012	\$	5,843,889	66.2%	2014	\$	1,477,444	19.27%	38.98%		58.26%	\$	860,707	\$	73,760
2013	\$	7,086,211	60.9%	2015	\$	1,540,235	19.27%	47.09%		66.36%	\$ 1	1,022,138	\$	161,431

	June 30 of Va	aluation Year			_			City Contribution	ns (July 15)				
_					-			Additional	Total Rate				
Valuation	UAAL		Fiscal	Fisc	cal Year Pay			Contribution	(Including	Co	ontribution	Inc	cremental
Year	(In thousands)	Funded Ratio	Year End	(In	thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	Į,	ncrease
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23%	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85%	\$	248,316	\$	17,564
2009	\$ 4,021,681	73.1%	2011	\$	1,304,016	19.27%	26.83%		46.10%	\$	601,120	\$	352,804
2010	\$ 5,296,718	66.2%	2012	\$	1,359,437	19.27%	35.28%		54.55%	\$	741,636	\$	140,516
2011	\$ 6,226,744	62.2%	2013	\$	1,417,213	19.27%	41.35%		60.62%	\$	859,173	\$	117,537
2012	\$ 6,342,185	63.3%	2014	\$	1,477,444	19.27%	42.77%		62.04%	\$	916,586	\$	57,413
2013	\$ 7,666,775	57.7%	2015	\$	1,540,235	19.27%	51.43%		70.71%	\$ -	1,089,044	\$	172,458

Projection of UAAL, Funding Ratio and City Contributions - Health Only - Excludes Port Police Contributions Made on July 15

-		June 30 of Va	luation Year					City Co	ontributions (Ju	ly 15	5)		
Valuation		UAAL		Fiscal	Fis	cal Year Pay				Co	ntribution	Inc	remental
Year	(Ir	thousands)	Funded Ratio	Year End	(Ir	thousands)	Normal Cost	Amortization	Total Rate		Amount	Ir	ncrease
2007	\$	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08%	\$	84,973		
2008	\$	1,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47%	\$	105,911	\$	20,938
2009	\$	1,241,905	36.4%	2011	\$	1,304,016	3.47%	6.00%	9.47%	\$	123,494	\$	17,583
2010	\$	1,344,127	35.4%	2012	\$	1,359,437	3.47%	6.53%	10.00%	\$	135,971	\$	12,47
2011	\$	1,373,896	38.0%	2013	\$	1,417,213	3.47%	6.59%	10.06%	\$	142,603	\$	6,632
2012	\$	1,478,278	37.4%	2014	\$	1,477,444	3.47%	7.12%	10.59%	\$	156,519	\$	13,916
2013	\$	1,577,353	37.3%	2015	\$	1,540,235	3.47%	7.63%	11.11%	\$	171,052	\$	14,533
cenario #	‡ 2a	a: -25%, 0%,	8%, 8%, 8% Re	turn on Mar	ket	Value of Ass	ets						
_		June 30 of Va	luation Year					City Co	ontributions (Ju	ly 1	5)		
Valuation Year	(Ir	UAAL thousands)	Funded Ratio	Fiscal Year End		cal Year Pay thousands)	Normal Cost	Amortization	Total Rate		ontribution Amount	_	remental

Valuation Year 2007	`	UAAL n thousands) 969,045	Funded Ratio 41.5%	Fiscal Year End 2009	(lı	scal Year Pay n thousands) 1,199,860	Normal Cost 3.22%	Amortization 3.86%	Total Rate 7.08%	-	Contribution Amount 84,973	 cremental Increase
2008	\$	1,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47%	\$	105,911	\$ 20,938
2009	\$	1,288,755	34.0%	2011	\$	1,304,016	3.47%	6.32%	9.79%	\$	127,681	\$ 21,770
2010	\$	1,391,216	33.1%	2012	\$	1,359,437	3.47%	6.85%	10.32%	\$	140,335	\$ 12,654
2011	\$	1,419,320	36.0%	2013	\$	1,417,213	3.47%	6.90%	10.37%	\$	147,010	\$ 6,675
2012	\$	1,505,329	36.2%	2014	\$	1,477,444	3.47%	7.33%	10.80%	\$	159,632	\$ 12,622
2013	\$	1,613,291	35.9%	2015	\$	1,540,235	3.47%	7.90%	11.37%	\$	175,069	\$ 15,437

		June 30 of Va	luation Year				City Co	ontributions (Ju	ly 1	5)	
Valuation Year	(In	UAAL n thousands)	Funded Ratio	Fiscal Year End	scal Year Pay n thousands)	Normal Cost	Amortization	Total Rate	С	ontribution Amount	 remental ncrease
2007	\$	969,045	41.5%	2009	\$ 1,199,860	3.22%	3.86%	7.08%	\$	84,973	
2008	\$	1,070,307	41.8%	2010	\$ 1,250,855	3.47%	5.00%	8.47%	\$	105,911	\$ 20,938
2009	\$	1,335,605	31.6%	2011	\$ 1,304,016	3.47%	6.64%	10.11%	\$	131,867	\$ 25,956
2010	\$	1,438,258	30.9%	2012	\$ 1,359,437	3.47%	7.17%	10.64%	\$	144,700	\$ 12,833
2011	\$	1,464,800	33.9%	2013	\$ 1,417,213	3.47%	7.21%	10.68%	\$	151,418	\$ 6,718
2012	\$	1,532,079	35.1%	2014	\$ 1,477,444	3.47%	7.53%	11.01%	\$	162,596	\$ 11,178
2013	\$	1,649,033	34.5%	2015	\$ 1,540,235	3.47%	8.17%	11.64%	\$	179,241	\$ 16,645

Projection of UAAL, Funding Ratio and City Contributions - Health Only - Excludes Port Police Contributions Made on July 15

Scenario # 1b: -20%, 0%, 0%, 8%, 8% Return on Market Value of Assets

		June 30 of Va	aluation Year					City Co	ontributions (Ju	ly 1	5)		
Valuation		UAAL		Fiscal	Fis	cal Year Pay				C	ontribution	Inc	remental
Year	(Ir	thousands)	Funded Ratio	Year End	(Ir	thousands)	Normal Cost	Amortization	Total Rate		Amount	Ir	ncrease
2007	\$	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08%	\$	84,973		
2008	\$	1,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47%	\$	105,911	\$	20,938
2009	\$	1,241,905	36.4%	2011	\$	1,304,016	3.47%	6.00%	9.47%	\$	123,494	\$	17,583
2010	\$	1,344,127	35.4%	2012	\$	1,359,437	3.47%	6.53%	10.00%	\$	135,971	\$	12,477
2011	\$	1,439,108	35.0%	2013	\$	1,417,213	3.47%	7.00%	10.47%	\$	148,432	\$	12,461
2012	\$	1,501,509	36.4%	2014	\$	1,477,444	3.47%	7.28%	10.75%	\$	158,891	\$	10,459
2013	\$	1,612,299	35.9%	2015	\$	1,540,235	3.47%	7.87%	11.34%	\$	174,606	\$	15,715
				turn on Mar									
	•	June 30 of Va						City Co	ontributions (Ju	ly 1	5)		
Valuation		June 30 of Va		Fiscal		scal Year Pay		City Co	ontributions (Ju		5) ontribution	Inc	cremental
Valuation Year		i de la constanta de la consta			Fis	scal Year Pay n thousands)	Normal Cost	City Co	ontributions (Ju Total Rate				cremental ncrease
	(Ir	UAAL	aluation Year	Fiscal	Fis	•				С	ontribution		
Year	(Ir \$	UAAL thousands)	aluation Year Funded Ratio	Fiscal Year End	Fis (Ir	thousands)	Normal Cost	Amortization	Total Rate	C \$	ontribution Amount		
Year 2007	(Ir \$	UAAL thousands) 969,045	Funded Ratio 41.5%	Fiscal Year End 2009	Fis (Ir \$	1,199,860	Normal Cost 3.22%	Amortization 3.86%	Total Rate 7.08%	C \$ \$	ontribution Amount 84,973	li	ncrease
Year 2007 2008	(Ir \$ \$	UAAL n thousands) 969,045 1,070,307	Funded Ratio 41.5% 41.8%	Fiscal Year End 2009 2010	Fis (Ir \$ \$	1,199,860 1,250,855	Normal Cost 3.22% 3.47%	Amortization 3.86% 5.00%	Total Rate 7.08% 8.47%	C \$ \$	ontribution Amount 84,973 105,911	lı \$	ncrease 20,938
Year 2007 2008 2009	(Ir \$ \$ \$	UAAL thousands) 969,045 1,070,307 1,288,755	Funded Ratio 41.5% 41.8% 34.0%	Fiscal Year End 2009 2010 2011	Fis (Ir \$ \$ \$	1,199,860 1,250,855 1,304,016	Normal Cost 3.22% 3.47% 3.47%	Amortization 3.86% 5.00% 6.32%	Total Rate 7.08% 8.47% 9.79%	C \$ \$ \$	ontribution Amount 84,973 105,911 127,681	\$ \$	20,938 21,770
Year 2007 2008 2009 2010	(Ir \$ \$ \$ \$	UAAL 1 thousands) 969,045 1,070,307 1,288,755 1,391,216	Funded Ratio 41.5% 41.8% 34.0% 33.1%	Fiscal Year End 2009 2010 2011 2012	Fis (Ir \$ \$ \$	1,199,860 1,250,855 1,304,016 1,359,437	Normal Cost 3.22% 3.47% 3.47% 3.47%	Amortization 3.86% 5.00% 6.32% 6.85%	Total Rate 7.08% 8.47% 9.79% 10.32%	C \$ \$ \$ \$ \$	ontribution Amount 84,973 105,911 127,681 140,335	\$ \$ \$	20,938 21,770 12,654
Year 2007 2008 2009 2010 2011	(Ir \$ \$ \$ \$ \$ \$	UAAL h thousands) 969,045 1,070,307 1,288,755 1,391,216 1,481,233	Funded Ratio 41.5% 41.8% 34.0% 33.1% 33.1%	Fiscal Year End 2009 2010 2011 2012 2013	Fis (Ir \$ \$ \$ \$	1,199,860 1,250,855 1,304,016 1,359,437 1,417,213	Normal Cost 3.22% 3.47% 3.47% 3.47% 3.47%	Amortization 3.86% 5.00% 6.32% 6.85% 7.29%	Total Rate 7.08% 8.47% 9.79% 10.32% 10.76%	C \$\$\$\$\$\$	ontribution Amount 84,973 105,911 127,681 140,335 152,555	\$ \$ \$ \$	20,938 21,770 12,654 12,220

		June 30 of Va	luation Year					City Co	ontributions (Ju	ly 1	5)		
Valuation		UAAL		Fiscal	Fis	scal Year Pay				С	ontribution	Inc	remental
Year	(Ir	n thousands)	Funded Ratio	Year End	(lı	n thousands)	Normal Cost	Amortization	Total Rate		Amount	İ	ncrease
2007	\$	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08%	\$	84,973		
2008	\$	1,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47%	\$	105,911	\$	20,938
2009	\$	1,335,605	31.6%	2011	\$	1,304,016	3.47%	6.64%	10.11%	\$	131,867	\$	25,956
2010	\$	1,438,258	30.9%	2012	\$	1,359,437	3.47%	7.17%	10.64%	\$	144,700	\$	12,833
2011	\$	1,523,328	31.2%	2013	\$	1,417,213	3.47%	7.59%	11.07%	\$	156,821	\$	12,121
2012	\$	1,552,736	34.3%	2014	\$	1,477,444	3.47%	7.67%	11.15%	\$	164,671	\$	7,850
2013	\$	1,680,315	33.3%	2015	\$	1,540,235	3.47%	8.38%	11.85%	\$	182,486	\$	17,815

Projection of UAAL, Funding Ratio and City Contributions - Pension Only - Excludes Port Police Contributions Made Throughout the Year on a Bi-Weekly Basis

Scenario # 1a: -20%, 0%, 8%, 8%, 8% Return on Market Value of Assets

	June 30 of V	aluation Year						City Contributions (Middle of Year)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Co	ontribution	In	cremental
Year	(In thousands)	Funded Ratio	Year End	(Ir	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	- 1	Increase
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$ 2,354,932	84.2%	2011	\$	1,304,016	19.96%	16.10%		36.06%	\$	470,245	\$	221,929
2010	\$ 3,614,486	76.9%	2012	\$	1,359,437	19.96%	24.66%		44.62%	\$	606,643	\$	136,398
2011	\$ 3,745,660	77.2%	2013	\$	1,417,213	19.96%	25.66%		45.62%	\$	646,564	\$	39,921
2012	\$ 4,918,984	71.4%	2014	\$	1,477,444	19.96%	33.47%		53.44%	\$	789,505	\$	142,941
2013	\$ 5,937,853	67.1%	2015	\$	1,540,235	19.96%	40.39%		60.36%	\$	929,663	\$	140,158

Scenario # 2a: -25%, 0%, 8%, 8%, 8% Return on Market Value of Assets

	June 30 of Valuation Year							City Contributions (Middle of Year)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Cc	ntribution	In	cremental
Year	(In thousands) Funded Ratio	Year End	(lr	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount		Increase
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$ 125,86	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$ 3,158,39	78.8%	2011	\$	1,304,016	19.96%	21.73%		41.69%	\$	543,695	\$	295,379
2010	\$ 4,419,33	71.8%	2012	\$	1,359,437	19.96%	30.35%		50.31%	\$	683,921	\$	140,226
2011	\$ 4,527,218	72.4%	2013	\$	1,417,213	19.96%	31.26%		51.22%	\$	725,949	\$	42,028
2012	\$ 5,434,25	68.4%	2014	\$	1,477,444	19.96%	37.51%		57.47%	\$	849,079	\$	123,130
2013	\$ 6,543,140	63.7%	2015	\$	1,540,235	19.96%	45.06%		65.02%	\$ 1	,001,532	\$	152,453

June 30 of Valuation Year								City Contributions (Middle of Year)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including *	Co	ontribution	ln	cremental
Year	(In thousands)	Funded Ratio	Year End	(1	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	- 1	ncrease
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$ 3,963,258	73.4%	2011	\$	1,304,016	19.96%	27.37%		47.34%	\$	617,281	\$	368,965
2010	\$ 5,227,066	66.6%	2012	\$	1,359,437	19.96%	36.06%		56.02%	\$	761,623	\$	144,342
2011	\$ 5,311,396	67.6%	2013	\$	1,417,213	19.96%	36.88%		56.85%	\$	805,628	\$	44,005
2012	\$ 5,952,335	65.4%	2014	\$	1,477,444	19.96%	41.56%		61.52%	\$	908,960	\$	103,332
2013	\$ 7,149,929	60.3%	2015	\$	1,540,235	19.96%	49.74%		69.70%	\$	1,073,562	\$	164,602

Projection of UAAL, Funding Ratio and City Contributions - Pension Only - Excludes Port Police Contributions Made Throughout the Year on a Bi-Weekly Basis

Scenario # 1b: -20%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	June 30 of Valuation Year					_			City Contributions (Middle of Year)				
									Additional	Total Rate				
Valuation		UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	С	ontribution	ln-	cremental
Year	(In	thousands)	Funded Ratio	Year End	(lr	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	1	ncrease
2007	\$	103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$	125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$	2,354,932	84.2%	2011	\$	1,304,016	19.96%	16.10%		36.06%	\$	470,245	\$	221,929
2010	\$	3,614,486	76.9%	2012	\$	1,359,437	19.96%	24.66%		44.62%	\$	606,643	\$	136,398
2011	\$	4,695,791	71.4%	2013	\$	1,417,213	19.96%	31.80%		51.76%	\$	733,607	\$	126,964
2012	\$	5,302,998	69.2%	2014	\$	1,477,444	19.96%	36.14%		56.11%	\$	828,965	\$	95,358
2013	\$	6,457,182	64.2%	2015	\$	1,540,235	19.96%	43.91%		63.87%	\$	983,765	\$	154,800

Scenario # 2b: -25%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	June 30 of Valuation Year					_			City Contributions (Middle of Year)				
									Additional	Total Rate				
Valuation	L	JAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Co	ontribution	ln	cremental
Year	(In th	ousands)	Funded Ratio	Year End	(lr	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)	,	Amount	1	Increase
2007	\$	103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$	125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$ 3	3,158,399	78.8%	2011	\$	1,304,016	19.96%	21.73%		41.69%	\$	543,695	\$	295,379
2010	\$ 4	1,419,330	71.8%	2012	\$	1,359,437	19.96%	30.35%		50.31%	\$	683,921	\$	140,226
2011	\$ 5	5,415,506	67.0%	2013	\$	1,417,213	19.96%	37.00%		56.96%	\$	807,248	\$	123,327
2012	\$ 5	5,793,551	66.3%	2014	\$	1,477,444	19.96%	40.00%		59.96%	\$	885,929	\$	78,681
2013	\$ 7	7,029,005	61.0%	2015	\$	1,540,235	19.96%	48.35%		68.31%	\$1	1,052,113	\$	166,184

Scenario # 3b: -30%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	June 30 of V	aluation Year			_			City Contributions (Middle of Year)				
								Additional	Total Rate				
Valuation	UAAL		Fiscal	Fis	scal Year Pay			Contribution	(Including	Co	ontribution	Ind	cremental
Year	(In thousands)	Funded Ratio	Year End	(1	n thousands)	Normal Cost	Amortization	Pickup for Tier 5	Pickup)		Amount	I	ncrease
2007	\$ 103,772	99.2%	2009	\$	1,199,860	18.71%	0.52%		19.23% *	\$	230,752		
2008	\$ 125,862	99.1%	2010	\$	1,250,855	19.27%	0.58%		19.85% *	\$	248,316	\$	17,564
2009	\$ 3,963,258	73.4%	2011	\$	1,304,016	19.96%	27.37%		47.34%	\$	617,281	\$	368,965
2010	\$ 5,227,066	66.6%	2012	\$	1,359,437	19.96%	36.06%		56.02%	\$	761,623	\$	144,342
2011	\$ 6,137,613	62.5%	2013	\$	1,417,213	19.96%	42.21%		62.18%	\$	881,183	\$	119,560
2012	\$ 6,286,925	63.4%	2014	\$	1,477,444	19.96%	43.89%		63.85%	\$	943,353	\$	62,170
2013	\$ 7,602,832	57.8%	2015	\$	1,540,235	19.96%	52.80%		72.77%	\$	1,120,782	\$	177,429

^{*} Assumes pre-paid on July 15.

Projection of UAAL, Funding Ratio and City Contributions - Health Only - Excludes Port Police Contributions Made Throughout the Year on a Bi-Weekly Basis

Scenario # 1a: -20%, 0%, 8%, 8%, 8% Return on Market Value of Assets

	Jun	e 30 of Va	luation Year					City Cont	ributions (Middle	of Y	′ear)			
Valuation	U	IAAL		Fiscal	Fis	cal Year Pay				Co	ontribution	Inc	remental	
Year	(In the	ousands)	Funded Ratio	Year End	(Ir	n thousands)	Normal Cost	Amortization	Total Rate		Amount	In	crease	
2007	\$	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08% *	\$	84,973			
2008	\$ 1	,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47% *	\$	105,911	\$	20,938	
2009	\$ 1	,233,938	36.7%	2011	\$	1,304,016	3.60%	6.16%	9.76%	\$	127,251	\$	21,340	
2010	\$ 1	,331,586	35.7%	2012	\$	1,359,437	3.60%	6.67%	10.27%	\$	139,582	\$	12,331	
2011	\$ 1	,361,038	38.2%	2013	\$	1,417,213	3.60%	6.73%	10.33%	\$	146,397	\$	6,815	
2012	\$ 1	,462,744	37.5%	2014	\$	1,477,444	3.60%	7.27%	10.87%	\$	160,603	\$	14,206	
2013	\$ 1	,557,934	37.5%	2015	\$	1,540,235	3.60%	7.77%	11.37%	\$	175,112	\$	14,509	
Scenario #	scenario # 2a: -25%, 0%, 8%, 8%, 8% Return on Market Value of Assets													
	Jun	e 30 of Va	luation Year					City Cont	ributions (Middle	of Y	'ear)			

•										 		
Valuation		UAAL		Fiscal		cal Year Pay				 ontribution		cremental
Year	(Ir	n thousands)	Funded Ratio	Year End	(In	thousands)	Normal Cost	Amortization	Total Rate	Amount	11	ncrease
2007	\$	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08% *	\$ 84,973		
2008	\$	1,070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47% *	\$ 105,911	\$	20,938
2009	\$	1,278,548	34.3%	2011	\$	1,304,016	3.60%	6.47%	10.07%	\$ 131,316	\$	25,405
2010	\$	1,376,087	33.4%	2012	\$	1,359,437	3.60%	6.98%	10.58%	\$ 143,820	\$	12,504
2011	\$	1,404,091	36.2%	2013	\$	1,417,213	3.60%	7.05%	10.64%	\$ 150,816	\$	6,996
2012	\$	1,488,306	36.4%	2014	\$	1,477,444	3.60%	7.47%	11.07%	\$ 163,521	\$	12,705
2013	\$	1,591,569	36.0%	2015	\$	1,540,235	3.60%	8.03%	11.63%	\$ 179,114	\$	15,593

	June	30 of Va	aluation Year					City Cont	ributions (Middle	of Y	ear)		
Valuation	UA	\AL		Fiscal	Fis	cal Year Pay				Со	ntribution	Inc	remental
Year	(In tho	usands)	Funded Ratio	Year End	(In	thousands)	Normal Cost	Amortization	Total Rate	1	4mount	lr	ncrease
2007	\$ 9	969,045	41.5%	2009	\$	1,199,860	3.22%	3.86%	7.08% *	\$	84,973		
2008	\$ 1,0	070,307	41.8%	2010	\$	1,250,855	3.47%	5.00%	8.47% *	\$	105,911	\$	20,938
2009	\$ 1,3	323,236	31.9%	2011	\$	1,304,016	3.60%	6.79%	10.38%	\$	135,382	\$	29,471
2010	\$ 1,4	420,745	31.2%	2012	\$	1,359,437	3.60%	7.31%	10.90%	\$	148,199	\$	12,817
2011	\$ 1,4	447,397	34.2%	2013	\$	1,417,213	3.60%	7.36%	10.95%	\$	155,234	\$	7,035
2012	\$ 1,5	513,730	35.3%	2014	\$	1,477,444	3.60%	7.67%	11.27%	\$	166,438	\$	11,204
2013	\$ 1,6	325,337	34.6%	2015	\$	1,540,235	3.60%	8.29%	11.89%	\$	183,115	\$	16,677

Projection of UAAL, Funding Ratio and City Contributions - Health Only - Excludes Port Police Contributions Made Throughout the Year on a Bi-Weekly Basis

Scenario # 1b: -20%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	June 30 of Valuation Year				_		City Cont	ributions (Middle	of Y	′ear)	
Valuation Year	(In t	UAAL thousands)	Funded Ratio	Fiscal Year End	scal Year Pay n thousands)	Normal Cost	Amortization	Total Rate		ontribution Amount	 cremental ncrease
2007	\$	969,045	41.5%	2009	\$ 1,199,860	3.22%	3.86%	7.08% *	\$	84,973	
2008	\$	1,070,307	41.8%	2010	\$ 1,250,855	3.47%	5.00%	8.47% *	\$	105,911	\$ 20,938
2009	\$	1,233,938	36.7%	2011	\$ 1,304,016	3.60%	6.16%	9.76%	\$	127,251	\$ 21,340
2010	\$	1,331,586	35.7%	2012	\$ 1,359,437	3.60%	6.67%	10.27%	\$	139,582	\$ 12,331
2011	\$	1,421,689	35.3%	2013	\$ 1,417,213	3.60%	7.13%	10.72%	\$	151,994	\$ 12,412
2012	\$	1,483,841	36.6%	2014	\$ 1,477,444	3.60%	7.42%	11.02%	\$	162,753	\$ 10,759
2013	\$	1,589,828	36.1%	2015	\$ 1,540,235	3.60%	7.99%	11.59%	\$	178,473	\$ 15,720

Scenario # 2b: -25%, 0%, 0%, 8%, 8% Return on Market Value of Assets

_	June 30 of	Valuation Year				City Cont	ributions (Middle	of Y	′ear)	
Valuation Year	UAAL (In thousand	s) Funded Ratio	Fiscal Year End	scal Year Pay n thousands)	Normal Cost	Amortization	Total Rate	_	ontribution Amount	 remental ncrease
2007	\$ 969,04	5 41.5%	2009	\$ 1,199,860	3.22%	3.86%	7.08% *	\$	84,973	
2008	\$ 1,070,30	7 41.8%	2010	\$ 1,250,855	3.47%	5.00%	8.47% *	\$	105,911	\$ 20,938
2009	\$ 1,278,54	8 34.3%	2011	\$ 1,304,016	3.60%	6.47%	10.07%	\$	131,316	\$ 25,405
2010	\$ 1,376,08	7 33.4%	2012	\$ 1,359,437	3.60%	6.98%	10.58%	\$	143,820	\$ 12,504
2011	\$ 1,461,14	0 33.5%	2013	\$ 1,417,213	3.60%	7.42%	11.02%	\$	156,118	\$ 12,298
2012	\$ 1,508,04	4 35.5%	2014	\$ 1,477,444	3.60%	7.62%	11.21%	\$	165,670	\$ 9,552
2013	\$ 1,621,73	34.7%	2015	\$ 1,540,235	3.60%	8.24%	11.84%	\$	182,315	\$ 16,645

Scenario # 3b: -30%, 0%, 0%, 8%, 8% Return on Market Value of Assets

	June 30 of V	aluation Year				City Conf	ributions (Middle	of Y	′ear)		
Valuation	UAAL		Fiscal	Fiscal Year Pay				Co	ontribution	Inc	cremental
Year	(In thousands)	Funded Ratio	Year End	(In thousands)	Normal Cost	Amortization	Total Rate		Amount	l:	ncrease
2007	\$ 969,045	41.5%	2009	\$ 1,199,860	3.22%	3.86%	7.08% *	\$	84,973		
2008	\$ 1,070,307	41.8%	2010	\$ 1,250,855	3.47%	5.00%	8.47% *	\$	105,911	\$	20,938
2009	\$ 1,323,236	31.9%	2011	\$ 1,304,016	3.60%	6.79%	10.38%	\$	135,382	\$	29,471
2010	\$ 1,420,745	31.2%	2012	\$ 1,359,437	3.60%	7.31%	10.90%	\$	148,199	\$	12,817
2011	\$ 1,500,830	31.6%	2013	\$ 1,417,213	3.60%	7.71%	11.31%	\$	160,242	\$	12,043
2012	\$ 1,532,109	34.4%	2014	\$ 1,477,444	3.60%	7.80%	11.40%	\$	168,434	\$	8,192
2013	\$ 1,653,644	33.4%	2015	\$ 1,540,235	3.60%	8.49%	12.09%	\$	186,157	\$	17,723

^{*} Assumes pre-paid on July 15.