Required Supplementary Information (Continued)

Schedules of Employers' Net Pension Liability

	(dollars i	n thousands)			(4)		(6)		
System	Date	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Payroll	Net Pension Liability/ (Asset) as a Percentage of Covered Payroll		
Noncontributory	12/31/13	\$ 23,344,325	19,915,815	3,428,510	85.3%	\$ 3,705,771	92.5%		
Retirement	12/31/14	24,043,264	21,096,512	2,946,752	87.7	3,570,912	82.5		
System	12/31/15	24,899,572	21,192,437	3,707,135	85.1	3,458,286	107.2		
	12/31/16	26,501,781	22,618,743	3,883,038	85.3	3,406,567	114.0		
	12/31/17	28,088,619	25,205,127	2,883,492	89.7	3,375,321	85.4		
	12/31/18	29,122,948	24,666,059	4,456,889	84.7	3,330,548	133.8		
	12/31/19	30,351,815	27,635,923	2,715,892	91.1	3,328,314	81.6		
	12/31/20	31,763,859	30,478,072	1,285,787	96.0	3,306,382	38.9		
Contributory	12/31/13	\$ 1,312,921	1,281,945	30,976	97.6%	\$ 98,023	31.6%		
Retirement	12/31/14	1,309,800	1,269,991	39,809	97.0	90,623	43.9		
System	12/31/15	1,316,041	1,183,091	132,950	89.9	82,426	161.3		
	12/31/16	1,292,512	1,204,904	87,608	93.2	53,615	163.4		
	12/31/17	1,298,183	1,283,466	14,717	98.9	45,177	32.6		
	12/31/18	1,284,009	1,172,429	111,580	91.3	39,279	284.1		
	12/31/19	1,270,111	1,262,292	7,819	99.4	34,317	22.8		
	12/31/20	1,272,690	1,335,639	(62,949)	104.9	30,748	(204.7)		
Public Safety	12/31/13	\$ 3,269,140	2,712,184	556,956	83.0%	\$ 365,998	152.2%		
Retirement	12/31/14	3,360,027	2,899,386	460,641	86.3	360,750	127.7		
System	12/31/15	3,511,275	2,938,839	572,436	83.7	355,171	161.2		
	12/31/16	3,794,880	3,176,545	618,335	83.7	352,407	175.5		
	12/31/17	4,085,203	3,576,517	508,686	87.5	350,782	145.0		
	12/31/18	4,258,247	3,528,069	730,178	82.9	348,475	209.5		
	12/31/19	4,460,415	3,984,186	476,229	89.3	339,705	140.2		
	12/31/20	4,694,184	4,422,517	271,667	94.2	338,919	80.2		
Firefighters	12/31/13	\$ 999,024	968,661	30,363	97.0%	\$ 110,741	27.4%		
Retirement	12/31/14	1,014,328	1,031,039	(16,711)	101.6	111,305	(15.0)		
System	12/31/15	1,058,264	1,043,059	15,205	98.6	111,133	13.7		
	12/31/16	1,129,729	1,115,726	14,003	98.8	112,322	12.5		
	12/31/17	1,205,727	1,234,407	(28,680)	102.4	112,953	(25.4)		
	12/31/18	1,261,289	1,207,889	53,400	95.8	113,587	47.0		
	12/31/19	1,316,620	1,391,553	(74,933)	105.7	113,330	(66.1)		
	12/31/20	1,388,497	1,551,194	(162,697)	111.7	114,458	(142.1)		
Judges	12/31/13	\$ 182,638	155,676	26,962	85.2%		177.4%		
Retirement	12/31/14	192,285	163,834	28,451	85.2	16,072	177.0		
System	12/31/15	198,986	163,747	35,239	82.3	15,832	222.6		
	12/31/16	210,623	175,618	35,005	83.4	16,755	208.9		
	12/31/17	231,069	198,483	32,586	85.9	18,661	174.6		
	12/31/18	244,209	195,570	48,639	80.1	18,802	258.7		
	12/31/19	259,181	220,293	38,888	85.0	19,596	198.4		
	12/31/20	271,116	244,133	26,983	90.0	20,071	134.4		

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information (Continued)

Schedules of Employers' Net Pension Liability (Concluded)

(dollars in thousands)

	(dollars i	nti	housands)			(4)		(6)
System	Date		(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Payrol	Net Pension Liability/ (Asset) as a Percentage of Covered
Utah Governors	12/31/13	\$	11,879	10,166	1,713	85.6%	\$ 390	439.2%
and Legislative	12/31/14		12,267	10,366	1,901	84.5	928	204.8
Retirement Plan	12/31/15		12,247	10,039	2,208	82.0	943	234.1
	12/31/16		12,654	10,352	2,302	81.8	799	288.1
	12/31/17		13,074	11,220	1,854	85.8	722	256.6
	12/31/18		13,177	10,537	2,640	80.0	639	413.1
	12/31/19		13,053	11,344	1,709	86.9	639	267.4
	12/31/20		13,330	12,055	1,275	90.4	757	168.4
Tier 2	12/31/13	\$	48,292	47,690	602	98.8%	\$ 353,227	0.2%
Public Employees	12/31/14		86,261	89,291	(3,030)	103.5	492,882	(0.6)
Retirement	12/31/15		140,321	140,539	(218)	100.2	637,560	(0.0)
System	12/31/16		228,450	217,293	11,157	95.1	822,196	1.4
	12/31/17		338,035	329,218	8,817	97.4	996,965	0.9
	12/31/18		467,461	424,633	42,828	90.8	1,171,543	3.7
	12/31/19		634,074	611,583	22,491	96.5	1,380,488	1.6
	12/31/20		846,868	832,485	14,383	98.3	1,609,102	0.9
Tier 2	12/31/13	\$	3,345	3,935	(590)	117.6%	\$ 20,215	(2.9)%
Public Safety	12/31/14		7,226	8,705	(1,479)	120.5	35,019	(4.2)
and Firefighter	12/31/15		13,628	15,089	(1,461)	110.7	53,276	(2.7)
Retirement	12/31/16		24,266	25,135	(869)	103.6	74,834	(1.2)
System	12/31/17		39,023	40,180	(1,157)	103.0	98,113	(1.2)
·	12/31/18		56,841	54,336	2,505	95.6	123,439	2.0
	12/31/19		90,787	81,381	9,406	89.6	156,778	6.0
	12/31/20		129,253	120,284	8,969	93.1	188,667	4.8
All Retirement	12/31/13	\$ 2	29,171,564	25,096,072	4,075,492	86.0%	\$ 4,669,560	87.3%
Systems	12/31/14	3	30,025,458	26,569,124	3,456,334	88.5	4,679,491	73.9
	12/31/15	3	31,150,334	26,686,840	4,463,494	85.7	4,714,627	94.7
	12/31/16	3	3,194,895	28,544,316	4,650,579	86.0	4,839,495	96.1
	12/31/17	3	35,298,933	31,878,618	3,420,315	90.3	4,998,694	68.4
	12/31/18	3	86,708,181	31,259,522	5,448,659	85.2	5,146,312	105.9
	12/31/19		88,396,056	35,198,555	3,197,501	91.7	5,373,167	59.5
	12/31/20	4	10,379,797	38,996,379	1,383,418	96.6	5,609,104	24.7

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information (Continued)

Schedules of Employer Contributions

(dollars in thousands)

	(dollars in	thousands)				
System	Year Ended December 31	Actuarial Determined Contribution*	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Payroll	Contributions as a Percentage of Covered Payroll**
Name and Albertains	2011	ć (10.270	610.270		2 000 100	15.650/
Noncontributory	2011	\$ 610,270	610,270	_	3,900,106	15.65%
Retirement	2012	644,907	644,907	_	3,794,929	16.99
System	2013	710,933	710,933	_	3,705,771	19.18
	2014	772,420	772,420	_	3,570,912	21.63
	2015	813,449	813,449	_	3,458,286	23.52
	2016	831,631	831,631	_	3,406,567	24.41 25.31
	2017	854,255	854,255	_	3,375,321	
	2018	858,444	858,444	_	3,330,548	25.77
	2019	888,078	888,078	_	3,328,314	26.68
	2020	912,525	912,525		3,306,382	27.60
Contributory	2011	\$ 11,125	11,125	_	110,103	10.10%
Retirement	2012	11,705	11,705	_	103,074	11.36
System	2013	12,874	12,874	_	98,023	13.13
•	2014	12,954	12,954	_	90,623	14.29
	2015	11,719	11,719	_	82,426	14.22
	2016	8,188	8,188	_	53,615	15.27
	2017	7,946	7,946	_	45,177	17.59
	2018	6,027	6,027	_	39,279	15.34
	2019	5,433	5,433	_	34,317	15.83
	2020	4,759	4,759	_	30,748	15.48
Public Safety	2011	\$ 110,829	110,829	_	374,293	29.61%
Retirement	2012	117,975	117,975	_	366,471	32.19
System	2012	128,744	128,744	_	365,998	35.18
Jystein.	2013	135,588	135,588	_	360,750	37.59
	2015	141,024	141,024	_	355,171	39.71
	2016	147,099	147,099	_	352,407	41.74
	2017	145,814	145,814		350,783	41.57
	2017	147,101	147,101	_	348,475	42.21
	2019	150,467	150,467		339,705	44.29
	2020	150,512	150,512	_	338,919	44.41
Firefighters	2011	\$ 13,005	13,005		110,751	11.74%
Retirement	2012	17,321	17,321	_	110,608	15.66
System	2012	14,779	14,779		110,741	13.35
System	2013	19,668	19,668		111,305	17.67
	2015	23,908	23,908		111,133	21.51
	2016	17,523	17,523		112,322	15.60
	2017	7,938	7,938	_	112,953	7.03
	2017		15,768	_	113,587	13.88
	2019	15,768		_		43.50
	2019	49,302	49,302	_	113,330	
	2020	27,769	27,769		114,458	24.26
Judges	2011	\$ 5,403	5,403	_	14,981	36.07%
Retirement	2012	5,898	5,898	_	14,885	39.62
System	2013	6,488	6,488	_	15,195	42.70
	2014	7,113	7,113	_	16,072	44.26
	2015	8,208	8,208	_	15,832	51.84
	2016	8,852	8,852	_	16,755	52.83
	2017	9,040	9,040	_	18,661	48.44
	2018	9,609	9,609	_	18,802	51.11
	2019	10,036	10,036	_	19,596	51.21
	2020	10,056	10,056	_	20,071	50.10
		-,3	-,		,	

^{*}Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

^{**}Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.

Required Supplementary Information (Concluded)

Schedules of Employer Contributions (Concluded)

	(dollars in	thousands)	Contributions			Contributions
System	Year Ended December 31	Actuarial Determined Contribution*	in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Projected Covered Payroll	as a Percentage of Covered Payroll**
Utah Governors	2011	\$ 153	153	_	910	16.81%
and Legislative	2012	214	214	_	910	23.52
Retirement Plan	2013	252	252	_	390	64.62
	2014	411	411	_	928	44.29
	2015	421	421	_	943	44.64
	2016	421	421	_	799	52.69
	2017	404	404	_	722	55.96
	2018	392	392	_	639	61.35
	2019	384	384	_	639	60.09
	2020	369	369		757	48.75
Tier 2	2011	\$ 2,790	2,790	_	36,821	7.58%
Public Employees	2012	14,208	14,208	_	203,779	6.97
Retirement	2013	25,743	25,743	_	353,227	7.29
System†	2014	37,299	37,299	_	492,882	7.57
	2015	49,645	49,645	_	637,560	7.79
	2016	63,062	63,062	_	822,196	7.67
	2017	79,175	79,175	_	996,965	7.94
	2018	97,680	97,680	_	1,171,543	8.34
	2019	119,839	119,839	_	1,380,488	8.68
	2020	138,466	138,466	_	1,609,102	8.61
Tier 2	2011	\$ 89	89	_	855	10.41%
Public Safety	2012	1,031	1,031	_	10,237	10.07
and Firefighter	2013	2,451	2,451	_	20,215	12.12
Retirement	2014	4,365	4,365	_	35,019	12.46
System†	2015	6,221	6,221	_	53,276	11.68
	2016	8,488	8,488	_	74,834	11.34
	2017	11,126	11,126	_	98,113	11.34
	2018	14,295	14,295	_	123,439	11.58
	2019	18,197	18,197	_	156,778	11.61
	2020	25,020	25,020		188,667	13.26
All Retirement	2011	\$ 753,664	753,664	_	4,548,820	16.57%
Systems	2012	813,259	813,259	_	4,604,893	17.66
•	2013	902,264	902,264	_	4,669,560	19.32
	2014	989,818	989,818	_	4,678,491	21.16
	2015	1,054,595	1,054,595	_	4,714,628	22.37
	2016	1,085,264	1,085,264	_	4,839,495	22.43
	2017	1,115,698	1,115,698	_	4,998,694	22.32
	2018	1,149,316	1,149,316	_	5,146,312	22.33
	2019	1,241,736	1,241,736	_	5,373,167	23.11
	2020	1,269,476	1,269,476	_	5,609,104	22.63

[†]Additional years will be displayed as they become available.

Schedule of Investment Returns

Year Ended December 31	2020	2019	2018	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expense	12.64%	13.80%	(0.38)%	13.38%	8.73%	2.02%	7.94%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

^{*}Contributions for the Tier 1 Systems include contributions received on the Tier 2 payroll to help finance the unfunded actuarial accrued liability of the Tier 1 Systems.

^{**}Contributions as a percentage of covered payroll may be different than the board certified rate due to rounding and other administrative issues.