



Montana Teachers' Retirement System Valuation Results July 1, 2015

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Benefit Financing



- Basic Retirement Funding Equation

$$C + I = B + E$$

C = Contributions

I = Investment Income

B = Benefits Paid

E = Expenses (administration)



Results



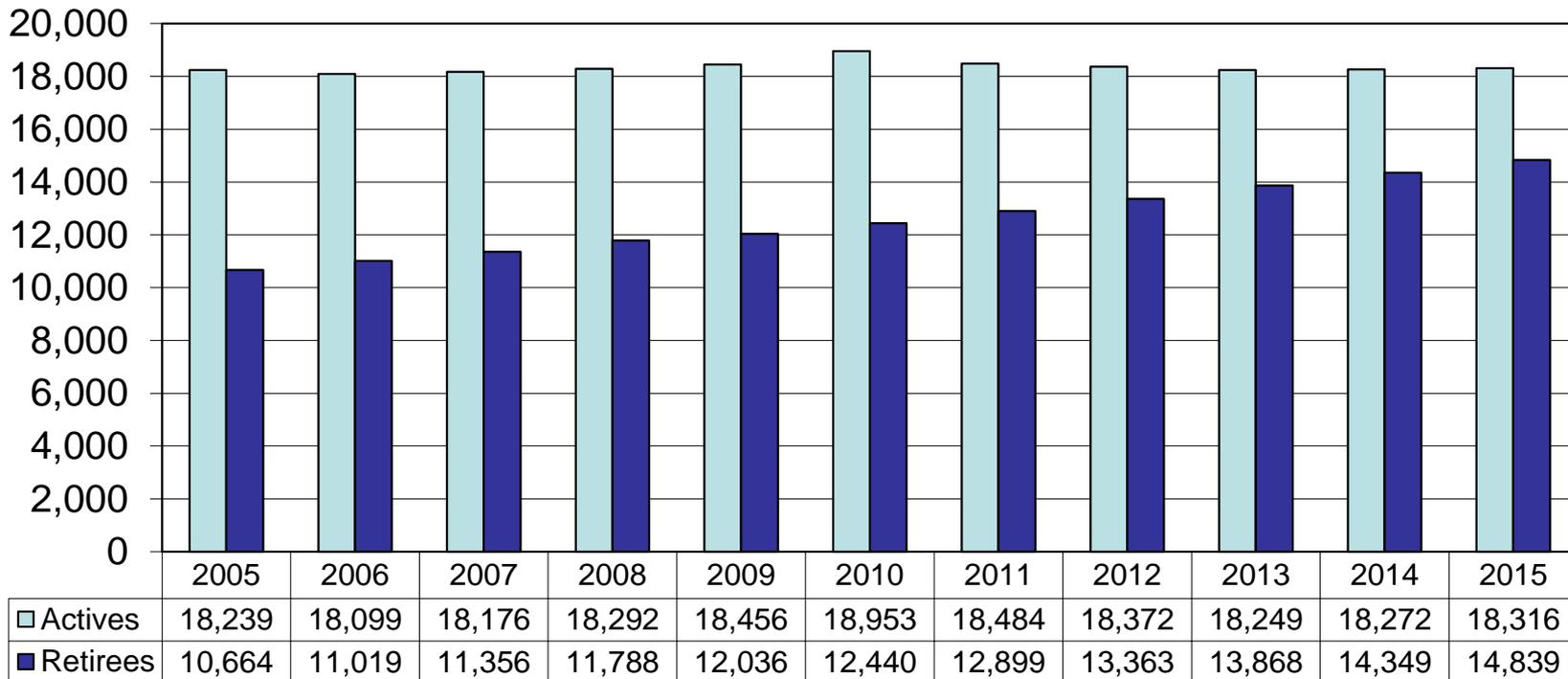
Comments on Valuation



- Asset returns
 - Market asset return 4.57% vs. 7.75% expected (3.18% less than expected).
 - Actuarial asset return 9.59% vs. 7.75% expected (1.84% greater than expected).
- Funded Ratio
 - Funding increased from 65.45% to 67.46%
- Amortization Period
 - Amortization period decreased from 28 to 26 years



Active and Retired Membership



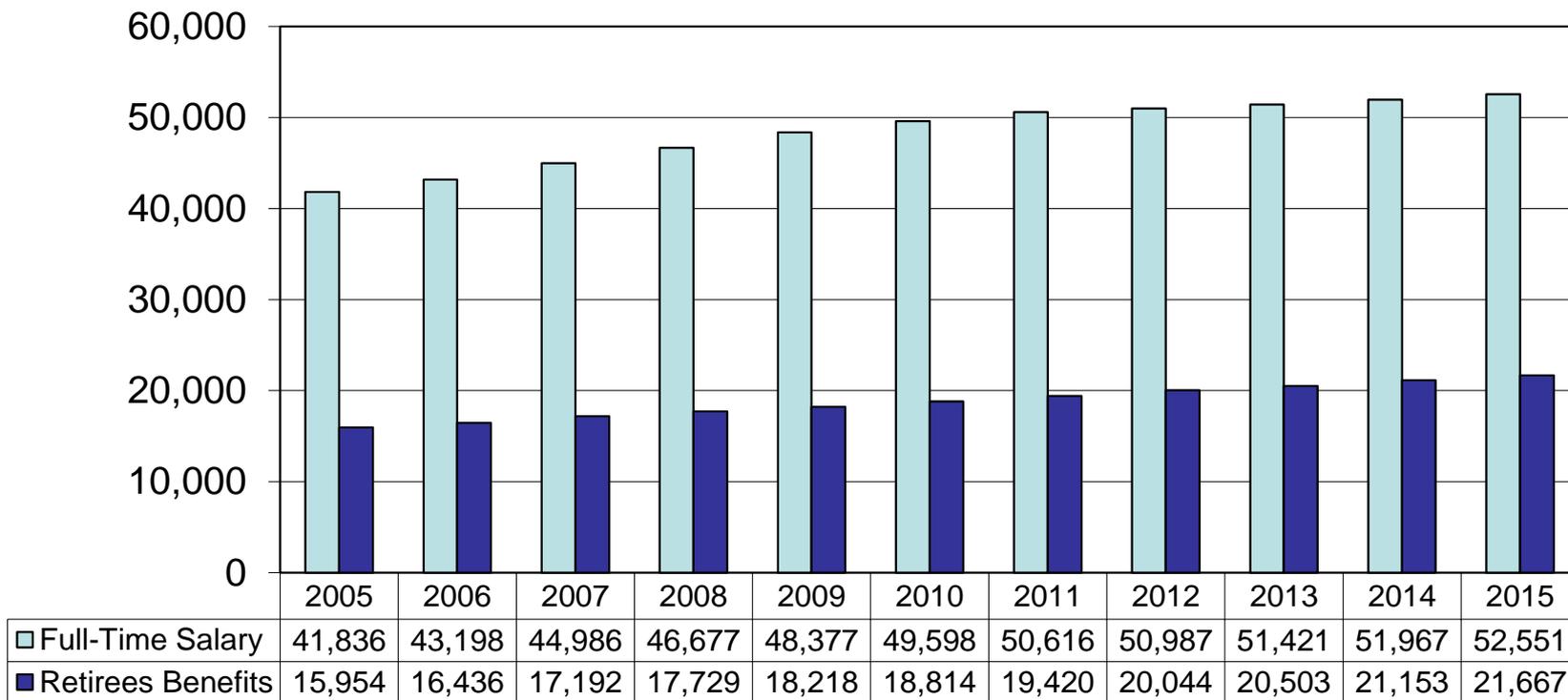
0.0% annual increase for active members since 2005; 0.2% increase for 2015.

3.4% annual increase for retired members since 2005; 3.4% increase for 2015.

0.6 retirees per active 10 years ago; 0.8 retirees per active now.



Average Salary and Benefits

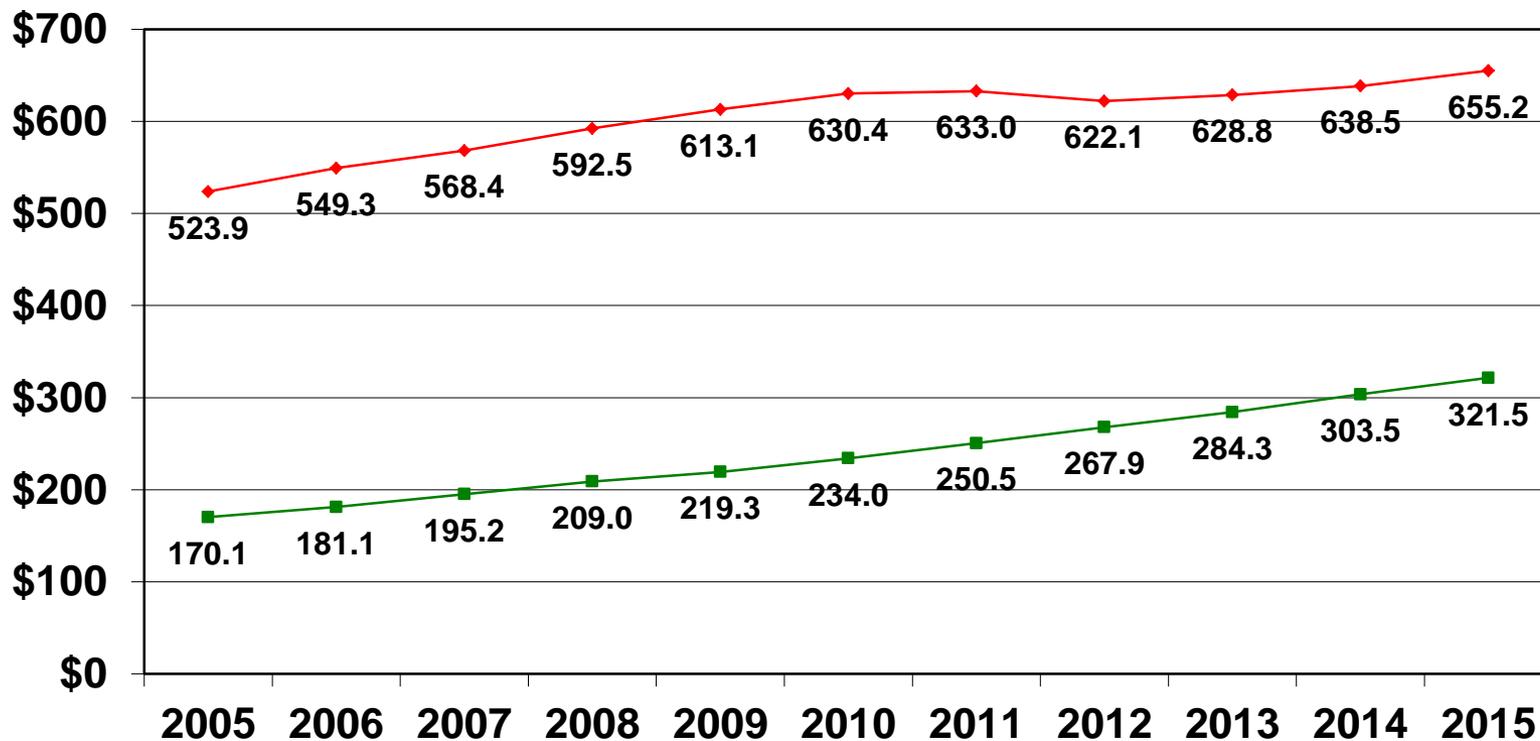


2.3% annual increase for average salary since 2005; 1.1% increase for 2015.

3.1% annual increase for average benefits since 2005; 2.4% increase for 2015.

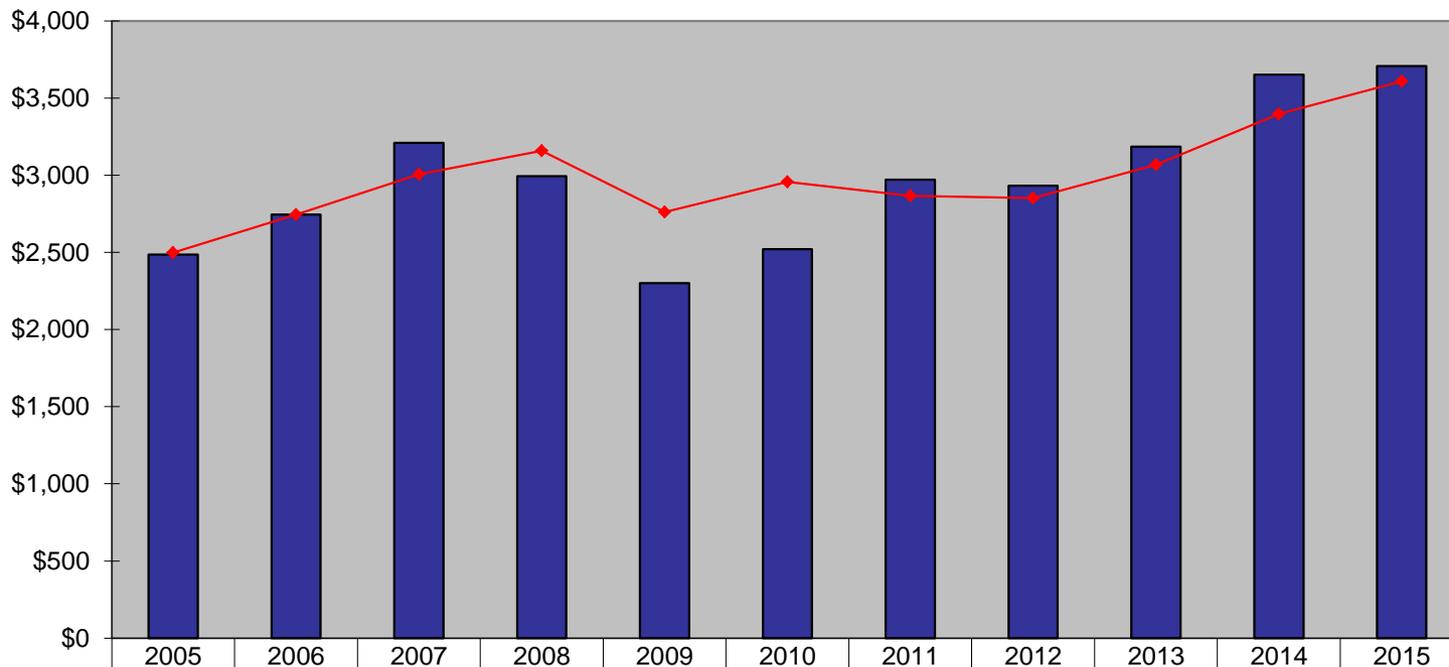


Payroll & Benefits (Millions)





Assets (\$ Millions)



Market Value	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Actuarial Value	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market Return	8.0%	8.9%	17.6%	(4.9)%	(20.8)%	12.9%	21.7%	2.2%	12.9%	17.1%	4.6%
Actuarial Return	2.7%	8.5%	10.2%	7.2%	(10.3)%	9.8%	(0.1)%	3.2%	12.0%	13.2%	9.6%



Funding Results

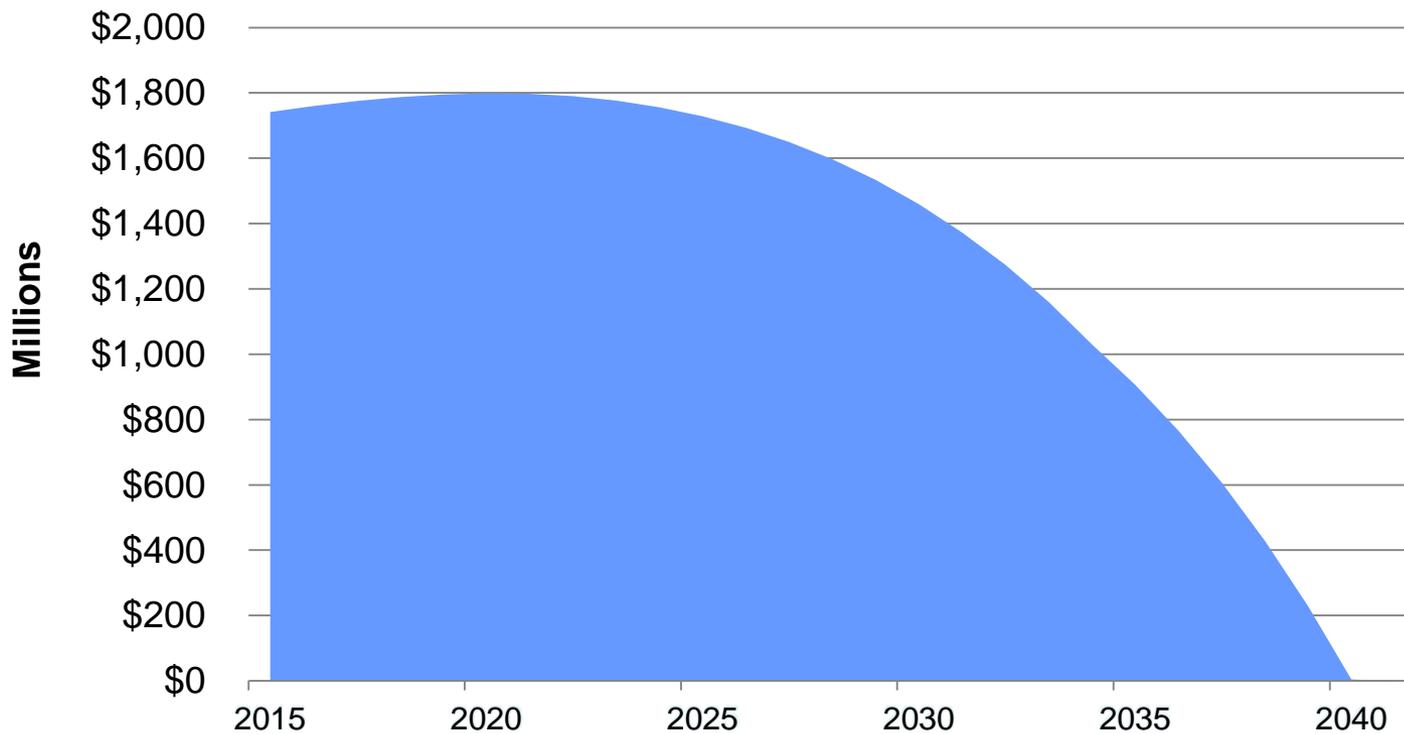


	July 1, 2015 Valuation	July 1, 2014 Valuation
Total Normal Cost Rate	9.21%	9.13%
Less Member Rate	<u>8.15%</u>	<u>8.15%</u>
Employer Normal Cost Rate	1.06%	0.98%
Administrative Expense Load	0.28%	0.31%
Rate to Amortize UAL	<u>9.82%</u>	<u>9.77%</u>
Total Employer Statutory Rate	11.16%	11.06%
Actuarial Accrued Liability	\$5,351.4 million	\$5,191.0 million
Actuarial Value of Assets	\$3,609.8 million	\$3,397.4 million
Unfunded Accrued Liability	\$1,741.6 million	\$1,793.6 million
Funded Ratio	67.46%	65.45%
Amortization Period*	26 Years	28 Years

* Reflects anticipated increase in employer supplemental contribution rate



Progress toward 100% Funding

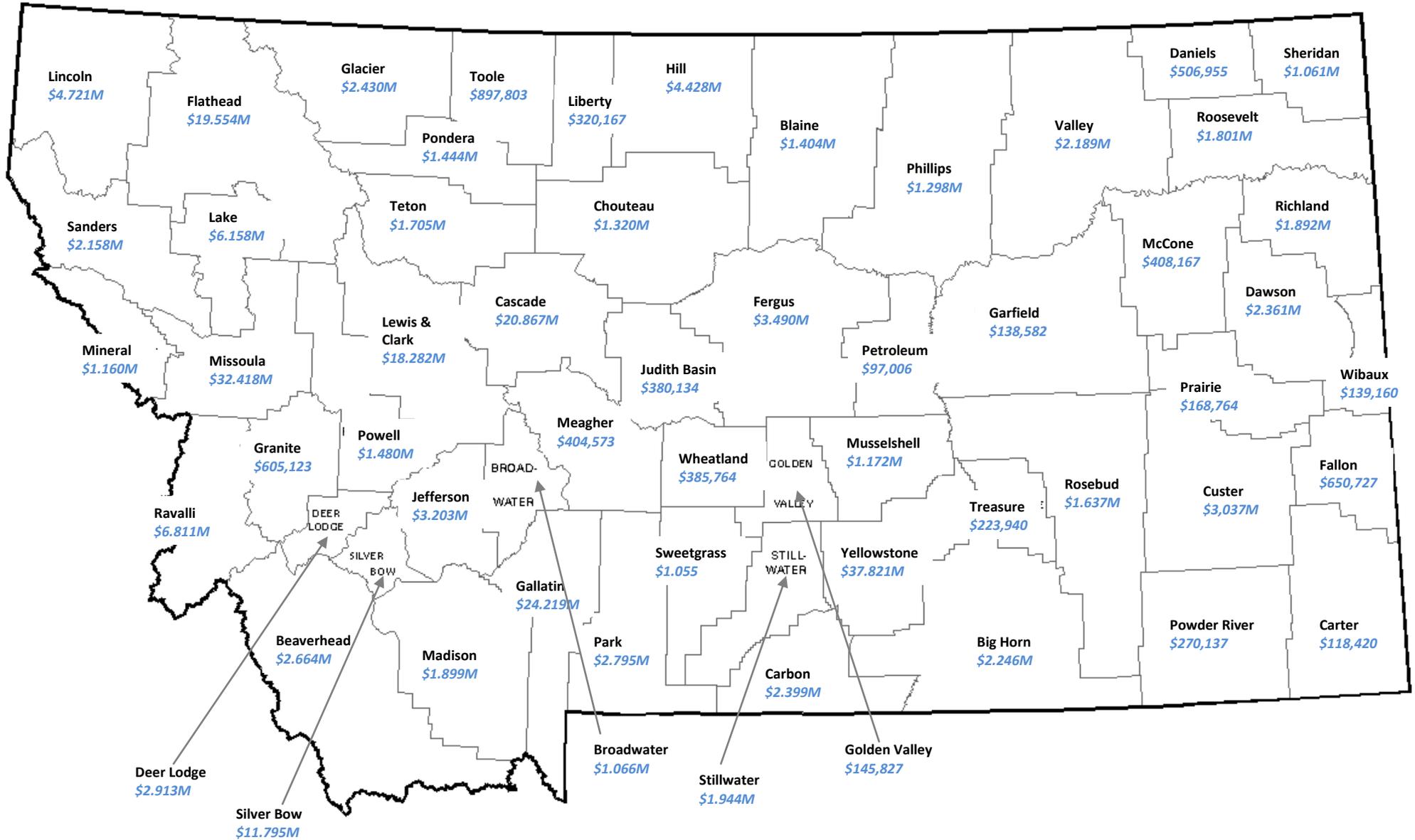


■ Projected UAAL - Level % of Pay



Montana Teachers' Retirement System

Retirement Benefits Paid by County – Fiscal Year 2015



Total Benefits Paid in Montana: \$251,159,293

Total Recipients in Montana: 11, 379

Prepared: October 1, 2015



Montana Teachers' Retirement System

Retirement Benefits Paid by County – Fiscal Year 2015

County	Gross Benefits Paid	# of Benefit Recipients	County	Gross Benefits Paid	# of Benefit Recipients
BEAVERHEAD	\$2,663,924	133	MCCONE	\$408,167	29
BIG HORN	\$2,245,506	108	MEAGHER	\$404,573	23
BLAINE	\$1,404,330	82	MINERAL	\$1,160,302	61
BROADWATER	\$1,066,236	53	MISSOULA	\$35,417,791	1,362
CARBON	\$2,398,985	132	MUSSELSHELL	\$1,172,439	56
CARTER	\$118,420	10	PARK	\$2,795,145	134
CASCADE	\$20,867,273	941	PETROLEUM	\$97,006	7
CHOUTEAU	\$1,320,327	78	PHILLIPS	\$1,298,233	65
CUSTER	\$3,037,177	151	PONDERA	\$1,443,790	82
DANIELS	\$506,955	28	POWDER RIVER	\$270,137	18
DAWSON	\$2,360,911	112	POWELL	\$1,480,182	75
DEER LODGE	\$2,912,665	132	PRAIRIE	\$168,764	12
FALLON	\$650,727	29	RAVALLI	\$6,810,722	379
FERGUS	\$3,489,647	185	RICHLAND	\$1,892,306	95
FLATHEAD	\$19,553,793	957	ROOSEVELT	\$1,801,282	100
GALLATIN	\$24,219,662	961	ROSEBUD	\$1,636,589	94
GARFIELD	\$138,582	10	SANDERS	\$2,157,593	123
GLACIER	\$2,430,148	115	SHERIDAN	\$1,060,535	54
GOLDEN VALLEY	\$145,827	12	SILVER BOW	\$11,794,778	488
GRANITE	\$605,123	32	STILLWATER	\$1,943,730	105
HILL	\$4,428,149	200	SWEET GRASS	\$1,055,412	41
JEFFERSON	\$3,203,249	151	TETON	\$1,705,421	92
JUDITH BASIN	\$380,134	23	TOOLE	\$897,803	50
LAKE	\$6,157,568	301	TREASURE	\$223,940	14
LEWIS AND CLARK	\$18,282,113	791	VALLEY	\$2,188,979	108
LIBERTY	\$320,167	20	WHEATLAND	\$385,764	30
LINCOLN	\$4,721,025	242	WIBAUX	\$139,160	7
MADISON	\$1,899,155	92	YELLOWSTONE	\$37,820,972	1,594

Total Montana:	\$251,159,293	11,379
Other U.S. States:	\$48,307,310	2,888
International:	\$351,905	30
Total:	\$299,818,508	14,297