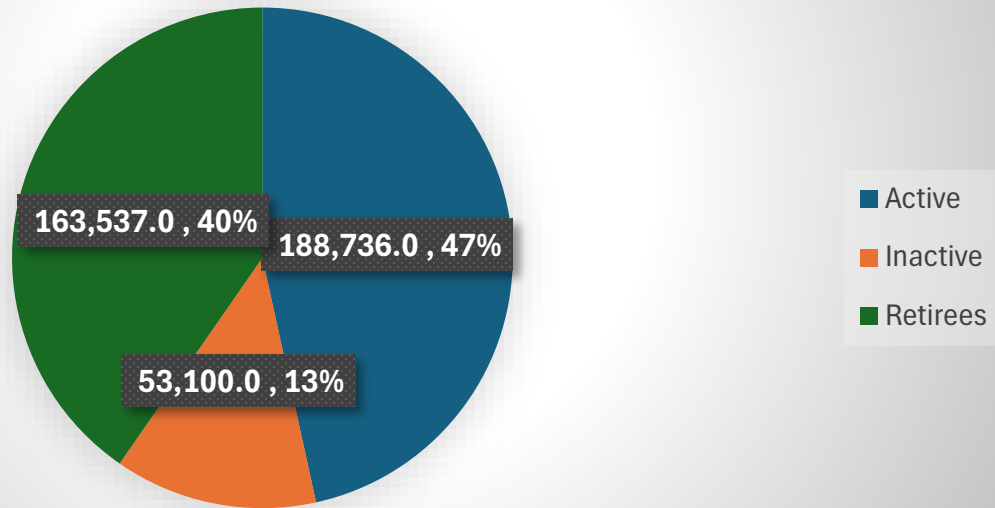
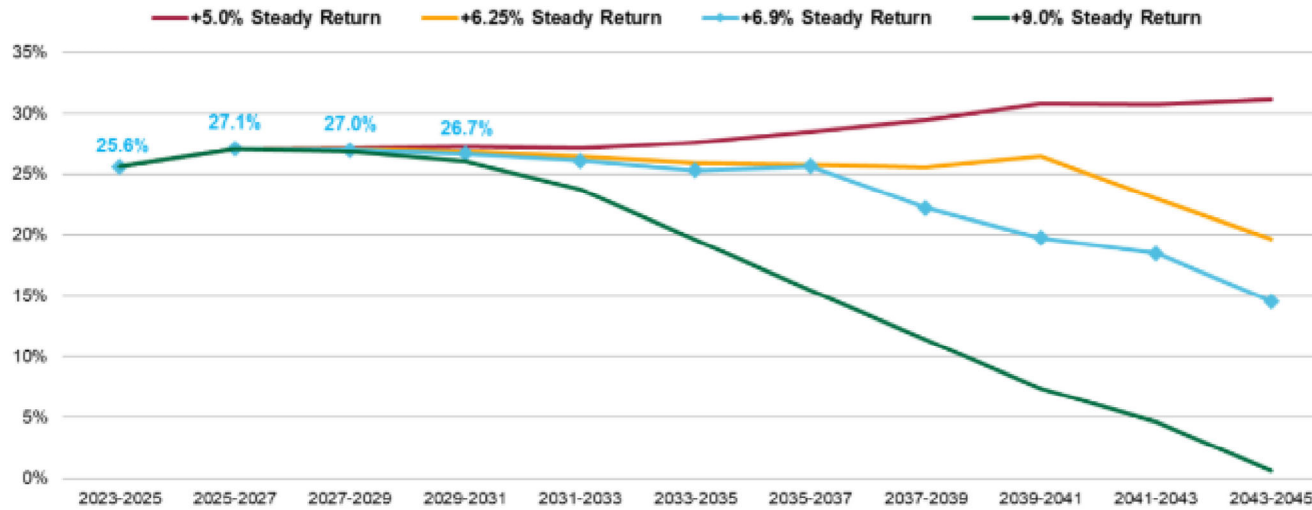

Public Employee Retirement System (PERS)

Total Number of PERS Members 405,373



Employer Collared Base Pension Rates (System Average)



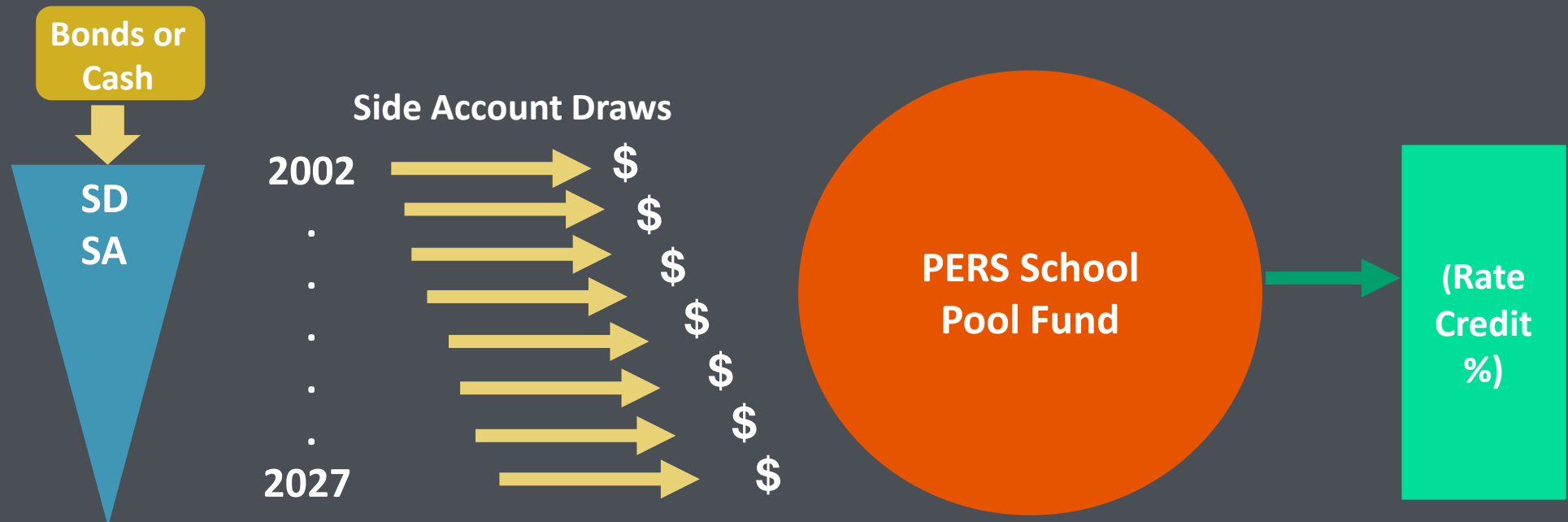
- If future investment returns are near assumption, system average employer collared base pension rates in 2027-29 are projected to be similar to 2025-27 rates
- Blue line: rates decrease as new OPSRP members replace exiting Tier One / Tier Two members
- 2027-29 rates will be based on asset returns through December 31, 2025, along with assumption and methods adopted after the upcoming Experience Study

LIMITED OPTIONS AVAILABLE

- Short of the availability of new revenue to fund PERS costs, what options are available?
 - Legislative solutions
 - Largely exhausted and/or modest prospective changes
 - Squirreling away existing resources to offset future increases:
 - Create PERS Reserve Fund held at the District
 - Create cash funded side account at PERS
 - Issue Pension Bonds (POBs) to borrow money to fund a side account at PERS if market conditions are promising
-

SIDE ACCOUNTS – THE BASICS

- Side Accounts (SAs): extra deposit made to dedicated PERS fund
 - Invested with overall PERS portfolio – subject to losses!
- Generally drawn down over 20-25 years, used to reduce payroll rates through rate credit
- Rate credit adjusted with each rate-setting valuation



POBS MAY HELP REDUCE PENSION COSTS

- Concept is to borrow at low interest rates and *if* returns exceed borrowing rate, borrowers generally save
 - “Generally” because other factors can impact performance
 - Outcome unknown when bonds are issued
 - Federal tax law requires POBs sold on taxable basis
 - Interest rates higher than on typical tax-exempt borrowings
 - Bond proceeds sent directly to PERS and deposited into a SA
 - SAs are drawn down and provide ‘rate credit’ over 20 years
 - Earnings/losses credited directly to SA; not subject to collar
 - Means net rate fluctuation can be more volatile
-

POBS ARE AN ARBITRAGE PLAY!

Issuing a POB is not like refinancing your mortgage...

Success from borrowing largely depends on the market returning more than the cost of the bond. In concept:

- If returns $>$ borrowing rate, pension costs lower than if no bonds were issued
- If returns = borrowing rate, break even
- If returns $<$ borrowing rate, pension costs higher than if no bonds were issued

So there is a chance that overall PERS costs are increased by issuing POBs...

PERS INVESTMENTS

OIC manages PERS' investments.

Average Rates of Return (1970-2022):

Regular account earnings:	10.11%
Tier One Crediting:	9.30%
Tier Two Crediting:	9.30%
Variable Crediting:	10.57%
Avg. SA return 2007-2022:	7.70%

YTD earnings as of 9/30/2024: 6.11%

THERE ARE OTHER RISKS TOO...

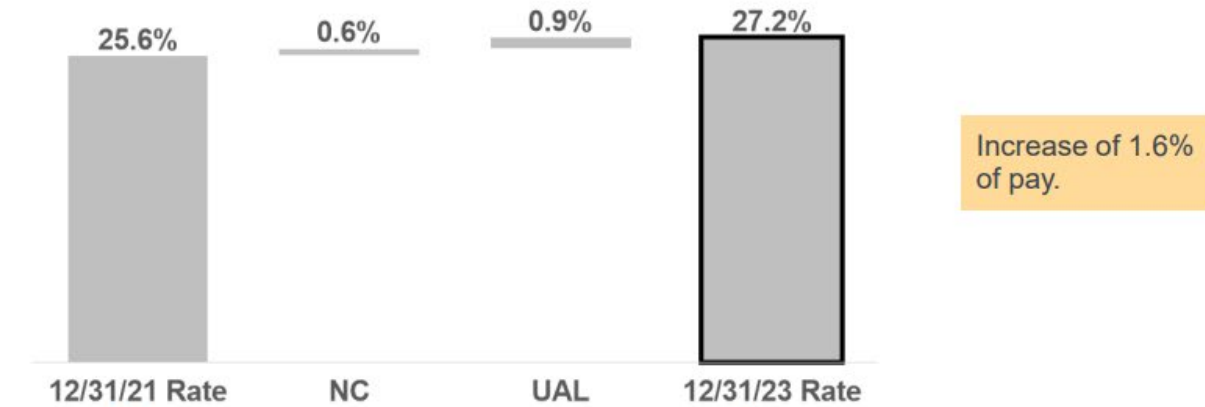
- Timing of earnings matter; early negative returns are hard to overcome, and may more than offset later positive returns
 - Rate credits will not be consistent:
 - Particularly fast or slow growth in payroll relative to assumption can cause increases or decreases in rate credits. If extreme and extended, may affect compounding (and potential savings)
 - Reductions in assumed rate increase UALs and reduce rate credits, at least temporarily
 - Earnings variability will cause volatility, even if earnings rate exceeds bond rates
 - SAs cause 'doubling down' of investment performance in Fund
-

VOLATILITY ILLUSTRATION

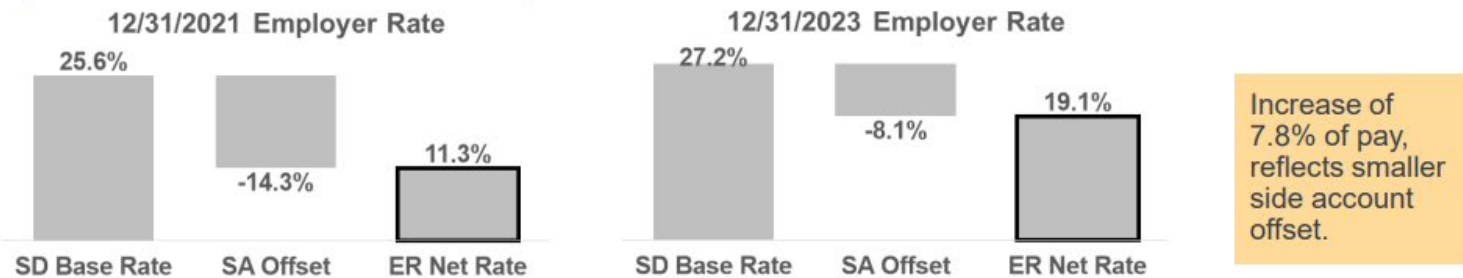
Net Rate Change: School District Illustration

Weighted by 12/31/2023 valuation payroll (Tier One/Tier Two, OPSRP GS, OPSRP PF)

School Districts without Side Accounts



Illustrative School with Side Account



Celebrating Successes

Most SDs who utilized SAs have saved substantial amounts
 Select Examples:

School District		Pension Bonds Issued	Total Savings through 2023	School District		Pension Bonds Issued	Total Savings through 2023
1	Baker	\$ 27,759,010	\$ 9,732,390	11	Monroe	\$ 1,738,361	\$ 1,110,791
2	Beaverton	269,155,000	85,635,917	12	North Clackamas	114,083,012	86,919,918
3	Eugene	53,435,000	19,675,456	13	North Marion	27,249,719	8,957,558
4	Forest Grove	30,100,000	10,165,128	14	Portland Public	891,063,897	431,625,814
5	Gladstone	16,513,406	14,224,312	15	Reedsport	2,908,726	2,500,415
6	Hillsboro	142,135,000	49,126,939	16	Salem	253,757,763	126,249,812
7	Hood River	25,118,416	15,351,335	17	South Lane	49,321,831	14,739,404
8	InterMountain ESD	23,339,618	8,262,696	18	Sutherlin	10,762,642	8,149,441
9	John Day	3,624,301	2,982,521	19	Sweet Home	17,289,072	13,019,171
10	Lincoln County	46,551,519	22,842,927	20	2007 Issuer	41,385,000	(3,505,478)
Total Savings:				\$ 927,766,467			

Overall savings have exceeded \$1 billion since 2002.

Summary of PERS Employer Contribution Rates

Rates shown reflect the effect of side account rate offsets and retiree healthcare contributions,
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School Districts							
.....							
School							
4404	Alliance Charter Academy	26.42%	23.58%	28.37%	28.43%	25.25%	30.52%
4306	Amity School District	1.18%	0.00%	3.13%	13.47%	10.29%	15.56%
3446	Ashwood School	24.27%	21.43%	26.22%	19.69%	16.51%	21.78%
3003	Baker School District #5J	5.27%	2.43%	7.22%	20.26%	17.08%	22.35%
4035	Banks School District	22.17%	19.33%	24.12%	26.74%	23.56%	28.83%
4062	Beaverton School District	17.93%	15.09%	19.88%	23.11%	19.93%	25.20%
3291	Bend-La Pine Public Schools	19.32%	16.48%	21.27%	23.32%	20.14%	25.41%
3510	Bethel School District	12.82%	9.98%	14.77%	18.23%	15.05%	20.32%
3451	Black Butte School District	24.32%	21.48%	26.27%	26.24%	23.06%	28.33%
3283	Brookings-Harbor School District #17C	8.18%	5.34%	10.13%	15.73%	12.55%	17.82%
3320	Camas Valley School District #21	25.80%	22.96%	27.75%	28.23%	25.05%	30.32%
4333	Canby School District	7.23%	4.39%	9.18%	17.09%	13.91%	19.18%
4334	Cascade School District #5	11.18%	8.34%	13.13%	22.98%	19.80%	25.07%
3859	Central School District #13J	14.00%	11.16%	15.95%	21.01%	17.83%	23.10%
4259	Clackamas Education Service District	16.38%	13.54%	18.33%	25.93%	22.75%	28.02%
3179	Clatsop County School District #1C	1.11%	0.00%	3.06%	14.93%	11.75%	17.02%
3116	Colton School District #53	26.09%	23.25%	28.04%	28.31%	25.13%	30.40%
3242	Coos Bay School District #9	20.81%	17.97%	22.76%	24.68%	21.50%	26.77%
3039	Corvallis School District #509J	16.13%	13.29%	18.08%	22.32%	19.14%	24.41%
3970	Cove School District	25.58%	22.74%	27.53%	27.72%	24.54%	29.81%
3502	Creswell School District #40	22.17%	19.33%	24.12%	25.52%	22.34%	27.61%
3274	Crook County School District	8.25%	5.41%	10.20%	20.28%	17.10%	22.37%
3850	Dallas School District	11.97%	9.13%	13.92%	17.66%	14.48%	19.75%
3843	David Douglas School District	23.86%	21.02%	25.81%	26.97%	23.79%	29.06%
4291	Dayton Public Schools	3.68%	0.84%	5.63%	13.01%	9.83%	15.10%
4237	Douglas Education Service District	24.19%	21.35%	26.14%	28.02%	24.84%	30.11%
4012	Dufur Schools	27.47%	24.63%	29.42%	29.38%	26.20%	31.47%
3927	Echo School District	6.75%	3.91%	8.70%	15.24%	12.06%	17.33%
4323	Estacada School District #108	15.97%	13.13%	17.92%	23.96%	20.78%	26.05%
3473	Eugene School District 4J	21.68%	18.84%	23.63%	26.72%	23.54%	28.81%
3887	Falls City School District	12.75%	9.91%	14.70%	27.23%	24.05%	29.32%
3494	Fern Ridge School District	13.37%	10.53%	15.32%	17.60%	14.42%	19.69%
4405	Forest Grove Community School	27.16%	24.32%	29.11%	29.17%	25.99%	31.26%
4313	Forest Grove School District	19.02%	16.18%	20.97%	23.58%	20.40%	25.67%
4034	Gaston Public Schools	7.82%	4.98%	9.77%	18.67%	15.49%	20.76%
4329	Gervais School District #1	0.00%	0.00%	1.67%	4.00%	0.82%	6.09%

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School Districts							
.....							
School							
3160	Gladstone School District #115	2.95%	0.11%	4.90%	18.95%	15.77%	21.04%
3316	Glide School District #12	17.72%	14.88%	19.67%	24.35%	21.17%	26.44%
4219	Grant County Education Service District	23.62%	20.78%	25.57%	27.21%	24.03%	29.30%
4260	Greater Albany School District #8J	19.17%	16.33%	21.12%	23.50%	20.32%	25.59%
4332	Gresham-Barlow School District #10	12.99%	10.15%	14.94%	20.72%	17.54%	22.81%
4326	Harney County School District #3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4258	Hermiston School District #8R	5.68%	2.84%	7.63%	15.72%	12.54%	17.81%
4252	High Desert Education Service District	17.87%	15.03%	19.82%	26.26%	23.08%	28.35%
4341	Hillsboro School District #1J	16.69%	13.85%	18.64%	23.39%	20.21%	25.48%
3409	Hood River County School District	15.95%	13.11%	17.90%	23.16%	19.98%	25.25%
4223	InterMountain Education Service District	8.84%	6.00%	10.79%	19.69%	16.51%	21.78%
4220	Jefferson County Education Service District	15.78%	12.94%	17.73%	17.46%	14.28%	19.55%
3729	Jefferson School District #14Cj	5.63%	2.79%	7.58%	13.46%	10.28%	15.55%
4315	John Day School District	8.81%	5.97%	10.76%	23.09%	19.91%	25.18%
3520	Junction City School District #69	15.73%	12.89%	17.68%	18.91%	15.73%	21.00%
3965	La Grande Public Schools	6.57%	3.73%	8.52%	12.77%	9.59%	14.86%
3461	Lake County School District #7	12.20%	9.36%	14.15%	18.15%	14.97%	20.24%
4268	Lake Oswego School District	15.15%	12.31%	17.10%	23.06%	19.88%	25.15%
4276	Lane County Education Service District	21.31%	18.47%	23.26%	27.71%	24.53%	29.80%
3579	Lincoln County School District	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3447	Madras School District	7.36%	4.52%	9.31%	18.78%	15.60%	20.87%
4142	McMinnville Schools	18.26%	15.42%	20.21%	23.33%	20.15%	25.42%
4288	Medford School District #549C	23.16%	20.32%	25.11%	26.21%	23.03%	28.30%
4335	Milton-Freewater Unified School District #7	0.76%	0.00%	2.71%	7.80%	4.62%	9.89%
4423	Molalla River Academy	26.79%	23.95%	28.74%	28.87%	25.69%	30.96%
4331	Molalla River School District	0.00%	0.00%	0.00%	6.75%	3.57%	8.84%
4340	Monroe School District #1J	14.64%	11.80%	16.59%	20.65%	17.47%	22.74%
3372	Monument School District #8	5.89%	3.05%	7.84%	14.67%	11.49%	16.76%
3809	Morrow County Schools	11.72%	8.88%	13.67%	20.27%	17.09%	22.36%
4238	Multnomah Education Service District	3.09%	0.25%	5.04%	13.67%	10.49%	15.76%
4336	Nestucca Valley School District #101	20.14%	17.30%	22.09%	26.33%	23.15%	28.42%
4135	Newberg School District #29Jt	9.61%	6.77%	11.56%	16.17%	12.99%	18.26%
3245	North Bend Public Schools	19.59%	16.75%	21.54%	22.53%	19.35%	24.62%
4321	North Clackamas School District #12	13.53%	10.69%	15.48%	21.58%	18.40%	23.67%
3463	North Lake School District #14	26.54%	23.70%	28.49%	28.80%	25.62%	30.89%
3730	North Marion School District #15	1.38%	0.00%	3.33%	11.97%	8.79%	14.06%

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School Districts							
.....							
School							
4342	North Santiam School District #29J	0.24%	0.00%	2.19%	6.49%	3.31%	8.58%
4381	North Wasco County School District #21	13.33%	10.49%	15.28%	26.22%	23.04%	28.31%
3307	Oakland School District	25.93%	23.09%	27.88%	28.41%	25.23%	30.50%
3524	Oakridge School District	13.91%	11.07%	15.86%	18.58%	15.40%	20.67%
3684	Ontario School District #8C	18.21%	15.37%	20.16%	24.24%	21.06%	26.33%
3122	Oregon City School District #62	6.36%	3.52%	8.31%	12.45%	9.27%	14.54%
4345	Oregon Trail School District 46	27.38%	24.54%	29.33%	29.31%	26.13%	31.40%
3462	Paisley School District	25.61%	22.77%	27.56%	28.17%	24.99%	30.26%
3820	Parkrose School District	9.17%	6.33%	11.12%	13.48%	10.30%	15.57%
3931	Pendleton School District #16R	2.83%	0.00%	4.78%	13.82%	10.64%	15.91%
3043	Philomath School District #17J	19.18%	16.34%	21.13%	24.97%	21.79%	27.06%
3414	Phoenix-Talent School District	13.59%	10.75%	15.54%	22.65%	19.47%	24.74%
3958	Pilot Rock School District #2R	13.64%	10.80%	15.59%	21.31%	18.13%	23.40%
3470	Pleasant Hill School District	27.26%	24.42%	29.21%	29.23%	26.05%	31.32%
3818	Portland Public Schools	0.00%	0.00%	1.29%	8.60%	5.42%	10.69%
4403	Portland Village School	26.37%	23.53%	28.32%	28.73%	25.55%	30.82%
3370	Prairie City School District #4	20.48%	17.64%	22.43%	25.45%	22.27%	27.54%
4320	Rainier School District #13	12.44%	9.60%	14.39%	19.66%	16.48%	21.75%
4311	Redmond School District #2J	8.14%	5.30%	10.09%	15.01%	11.83%	17.10%
4312	Reedsport School District	15.82%	12.98%	17.77%	22.80%	19.62%	24.89%
3824	Reynolds School District	8.43%	5.59%	10.38%	18.70%	15.52%	20.79%
3847	Riverdale School	13.98%	11.14%	15.93%	21.50%	18.32%	23.59%
3310	Roseburg Public Schools	1.38%	0.00%	3.33%	11.71%	8.53%	13.80%
3735	Salem-Keizer Public Schools	16.31%	13.47%	18.26%	22.51%	19.33%	24.60%
3665	Santiam Canyon School District	14.43%	11.59%	16.38%	21.37%	18.19%	23.46%
3000	School Districts	27.87%	25.03%	29.82%	29.70%	26.52%	31.79%
3647	Scio School District #95C	23.35%	20.51%	25.30%	25.54%	22.36%	27.63%
3187	Seaside Schools	16.97%	14.13%	18.92%	22.26%	19.08%	24.35%
4440	Sheridan Allprep Academy	24.16%	21.32%	26.11%	28.78%	25.60%	30.87%
4144	Sheridan School District #48J	26.93%	24.09%	28.88%	28.85%	25.67%	30.94%
4337	Sherman County School District	19.01%	16.17%	20.96%	22.56%	19.38%	24.65%
4317	Sherwood School District #88J	22.84%	20.00%	24.79%	26.09%	22.91%	28.18%
4270	Silver Falls School District	6.34%	3.50%	8.29%	15.83%	12.65%	17.92%
3296	Sisters School District	9.51%	6.67%	11.46%	21.16%	17.98%	23.25%
3537	Siuslaw School District #97J	14.41%	11.57%	16.36%	24.84%	21.66%	26.93%
3506	South Lane School District	0.00%	0.00%	0.00%	7.17%	3.99%	9.26%

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..... School Districts							
..... School							
3319	South Umpqua School District	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3487	Springfield School District #19	4.19%	1.35%	6.14%	12.57%	9.39%	14.66%
4279	St Helens School District #502	3.97%	1.13%	5.92%	14.84%	11.66%	16.93%
3942	Stanfield School District	10.01%	7.17%	11.96%	17.89%	14.71%	19.98%
3353	Sutherlin School District #130	4.26%	1.42%	6.21%	15.00%	11.82%	17.09%
3618	Sweet Home School District #55	5.01%	2.17%	6.96%	12.90%	9.72%	14.99%
4380	The Emerson School	26.15%	23.31%	28.10%	28.38%	25.20%	30.47%
4338	Three Rivers U J School District	15.99%	13.15%	17.94%	20.65%	17.47%	22.74%
4316	Tigard-Tualatin School District #23J	23.69%	20.85%	25.64%	27.33%	24.15%	29.42%
3902	Tillamook Public Schools	0.00%	0.00%	0.65%	7.81%	4.63%	9.90%
3928	Umatilla School District #6R	11.33%	8.49%	13.28%	20.35%	17.17%	22.44%
3966	Union County School District	16.42%	13.58%	18.37%	24.37%	21.19%	26.46%
3195	Warrenton-Hammond School District	20.94%	18.10%	22.89%	25.22%	22.04%	27.31%
3075	West Linn School District	7.92%	5.08%	9.87%	16.01%	12.83%	18.10%
4254	Willamette Education Service District	12.79%	9.95%	14.74%	25.09%	21.91%	27.18%
4314	Willamina School District #30J	23.59%	20.75%	25.54%	26.51%	23.33%	28.60%
3349	Winston-Dillard Schools	0.00%	0.00%	0.00%	1.11%	0.00%	3.20%
4166	Yamhill-Carlton School District #1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%