

STATISTICAL SECTION OVERVIEW

The Maryland State Retirement and Pension System (MSRPS) has implemented GASB Statement 44, Economic Condition Reporting: The Statistical Section. This statement establishes standardized reporting requirements relative to the supplementary information provided in this section in an effort to improve the understandability and usefulness of the information presented. GASB Statement 44 further states that the purpose of the Statistical Section is to provide historical perspective, context, and detail to assist readers in using the information in the financial statements and the notes to the financial statements to better understand and assess the System's overall economic condition. The schedules within the Statistical Section are classified into the following four categories: Financial Trends, Revenue Capacity, Demographic and Economic Information, and Operating Information.

The schedules beginning on page 121 show financial trend information to assist users in understanding and assessing how the MSRPS's financial position has changed over the past 10 years. The financial trend schedules presented are:

- Changes in Plan Net Position
- Benefits Expense by Type

The schedules beginning on page 122 show demographic and economic information and operating information. The demographic and economic information is intended to assist users in understanding the environment in which MSRPS operates. The operating information is intended to provide contextual information about MSRPS's operations to assist readers in using financial statement information. The demographic and economic information and the operating information presented include:

- Schedule of Average Benefit Payments .
- Funding Progress
- Contribution Rates by Plan
- Schedule of Retired Members by Type
- Schedule of Active Membership by Plan
- Schedule of Retirees and Beneficiaries by Plan
- Revenues by Source and Expenses by Type
- Revenues vs. Expenses
- Principal Participating Employers

TEN-YEAR HISTORY OF CHANGES IN PLAN NET POSITION for the Years Ended June 30,

(Expressed in thousands)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Additions										
Employer contributions	\$ 1,109,563	\$ 1,308,921	\$ 1,512,472	\$ 1,595,761	\$ 1,643,101	\$ 1,733,653	\$ 1,858,612	\$ 1,870,655	\$ 2,036,596 \$	1,995,017
Members contributions	532,100	535,581	528.028	703,256	710,856	727,726	755,444	764,414	782,686	791,583
Net Investment income	(7,355,906)	4,016,359	6,273,337	104,084	3,845,795	5,706,267	1,197,671	497,531	4,473,443	3,899,393
Total Additions	(5,714,243)	5,860,861	8,313,837	2,403,101	6,199,752	8,167,646	3,811,727	3,132,600	7,292,725	6,685,993
Deductions										
Benefit payments	2,279,170	2,445,540	2,580,392	2,755,106	2,950,700	3,121.823	3,284,550	3,469,493	3,577,123	3,744,132
Refunds	22,325	33,531	33,369	33,819	38,281	42,922	48,245	58,362	63,441	68,600
Administrative expenses	27,499	28,627	30,961	28,201	26,280	26,130	29,080	28,659	30,904	33,211
Total Deductions	2,328,994	2,507,698	2,644,722	2,817,126	3,015,261	3,190,875	3,361,875	3,556,514	3,671,468	3,845,943
Changes in Plan Net Positions	\$(8,043,237)	\$ 3,353,162	\$ 5,669,115	\$ (414,025)	\$ 3,184,491	\$ 4,976,771	\$ 449,852	\$ (423,914)	\$ 3,621,257	2,840,050

SCHEDULE OF BENEFIT EXPENSE BY TYPE

Fiscal	Fiscal <u>Age & Service Benefits</u> Year Retirees Survivors		Death In Service Pre- Retirement		sability Bene	Death After Retirement Post- Retirement		
Year	Retirees	Survivors	Benefits	Accidental	Ordinary	Survivors	Benefits	Total
2009	\$ 1,907,483	\$ 94,654	\$ 18,133	\$ 95,933	\$ 148,098	\$ 14,845	\$ –	\$ 2,279,146
2010	2,045,795	100,953	18,857	102,032	161,836	16,068	_	2,445,541
2011	2,164,368	104,884	18,758	105,493	170,267	16,623	_	2,580,393
2012	2,318,614	109,674	19,232	109,996	179,914	17,677	_	2,755,107
2013	2,484,792	118,044	20,027	116,636	192,440	18,761	_	2,950,700
2014	2,633,852	124,807	20,514	120,829	202,147	19,672	_	3,121,823
2015	2,777,136	130,215	21,005	124,090	211,373	20,731	_	3,284,550
2016	2,937,077	138,467	21,592	128,518	221,849	21,990	_	3,469,493
2017	3,028,182	145,322	21,522	130,309	229,143	22,644	_	3,577,122
2018	3,175,588	152,066	21,655	133,671	237,539	23,612	_	3,744,132

(Expressed In Thousands)

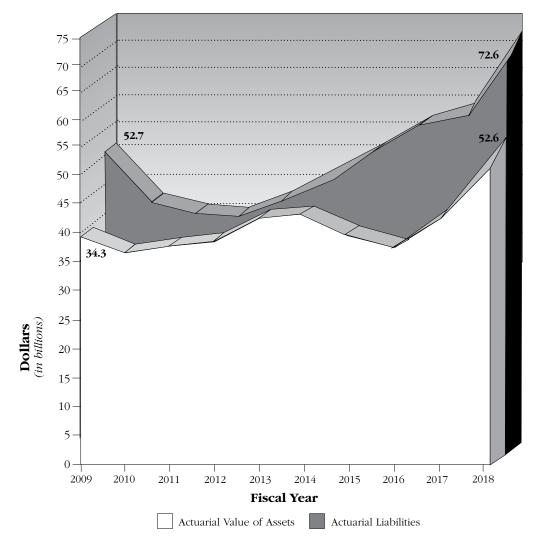
SCHEDULE OF REFUND EXPENSE BY TYPE

(Expressed in thousands)

Fiscal Year	Sonaration	Death	Misc.	Total
Iear	Separation	Deatii	MISC.	Iotai
2009	\$ 18,712	\$ 3,472	\$ 140	\$ 22,324
2010	29,320	4,029	182	33,531
2011	29,041	4,108	220	33,369
2012	29,521	4,142	156	33,819
2013	33,348	4,834	99	38,281
2014	36,835	5,955	132	42,922
2015	40,966	7,126	153	48,245
2016	51,372	6,869	120	58,362
2017	54,671	8,538	238	63,441
2018	59,108	9,315	177	68,600

MARYLAND STATE RETIREMENT AND PENSION SYSTEM TEN YEAR HISTORY OF AVERAGE BENEFIT PAYMENTS

		Years Credit	ed Service				
	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30+
Period 7/1/2008 to 6/30/2009 Average monthly benefit Monthly final average salary Number of retired members	\$ 534 \$ 2,604 191	\$ 577 \$ 3,273 751	\$ 868 \$ 3,638 625	\$ 1,232 \$ 4,222 757	\$ 1,657 \$ 4,781 872	\$ 1,973 \$ 4,924 678	\$ 2,925 \$ 5,679 2,171
Period 7/1/2009 to 6/30/2010 Average monthly benefit Monthly final average salary Number of retired members	\$ 505 \$ 2,902 271	\$ 542 \$ 3,425 834	\$838 \$3,636 662	\$ 1,246 \$ 4,392 690	\$ 1,670 \$ 4,814 873	\$ 1,971 \$ 5,097 698	\$ 2,933 \$ 5,811 2,266
Period 7/1/2010 to 6/30/2011 Average monthly benefit Monthly final average salary Number of retired members	\$ 435 \$ 2,884 306	\$ 541 \$ 3,373 951	\$ 851 \$ 3,734 901	\$ 1,211 \$ 4,309 950	\$ 1,800 \$ 4,984 1,164	\$ 2,161 \$ 5,395 900	\$ 3,100 \$ 5,970 2,856
Period 7/1/2011 to 6/30/2012 Average monthly benefit Monthly final average salary Number of retired members	\$ 351 \$ 2,878 254	\$ 437 \$ 3,483 931	\$806 \$3,788 844	\$ 1,296 \$ 4,645 817	\$ 1,745 \$ 5,128 989	\$ 2,175 \$ 5,520 837	\$ 3,358 \$ 6,310 2,662
Period 7/1/2012 to 6/30/2013 Average monthly benefit Monthly final average salary Number of retired members	\$ 435 \$ 2,810 234	\$ 473 \$ 3,577 972	\$802 \$3,907 860	\$ 1,317 \$ 4,686 910	\$ 1,712 \$ 5,028 978	\$ 2,231 \$ 5,548 917	\$ 3,297 \$ 6,217 2,389
Period 7/1/2013 to 6/30/2014 Average monthly benefit Monthly final average salary Number of retired members	\$ 405 \$ 2,475 218	\$ 472 \$ 3,508 918	\$ 832 \$ 4,064 873	\$ 1,324 \$ 4,699 964	\$ 1,794 \$ 5,222 910	\$ 2,234 \$ 5,673 938	\$ 3,383 \$ 6,380 2,304
Period 7/1/2014 to 6/30/2015 Average monthly benefit Monthly final average salary Number of retired members	\$ 454 \$ 2,338 201	\$ 459 \$ 3,515 911	\$ 888 \$ 4,139 972	\$ 1,304 \$ 4,679 1,089	\$ 1,804 \$ 5,124 968	\$ 2,275 \$ 5,571 1,042	\$ 3,246 \$ 6,134 2,621
Period 7/1/2015 to 6/30/2016 Average monthly benefit Monthly final average salary Number of retired members	\$ 501 \$ 2,371 219	\$ 472 \$ 3,407 918	\$ 869 \$ 4,128 934	\$ 1,367 \$ 4,773 1,118	\$ 1,901 \$ 5,427 953	\$ 2,366 \$ 5,786 1,016	\$ 3,377 \$ 6,425 2,423
Period 7/1/2016 to 6/30/2017 Average monthly benefit Monthly final average salary Number of retired members	\$ 576 \$ 2,199 138	\$ 509 \$ 3,626 748	\$ 864 \$ 4,110 873	\$ 1,400 \$ 4,865 1,028	\$ 1,943 \$ 5,389 964	\$ 2,454 \$ 5,855 863	\$ 3,479 \$ 6,563 2,060
Period 7/1/2017 to 6/30/2018 Average monthly benefit Monthly final average salary Number of retired members	\$ 279 \$ 3,012 87	\$ 520 \$ 3,482 704	\$ 938 \$ 4,290 925	\$ 1,476 \$ 4,934 1,200	\$ 1,982 \$ 5,457 1,084	\$ 2,626 \$ 6,046 964	\$ 3,526 \$ 6,584 2,428



TEN-YEAR HISTORY OF FUNDING PROGRESS

TEN-YEAR HISTORY OF EMPLOYER CONTRIBUTION RATES BY PLAN

			State			Participating Governmental Units (PGU)							
Fiscal Year	Combined State Rate	Teachers' Combined Rate	Employees' Combined Rate	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Combined PGU Rate	Law Enforcemen Officers' Pension	t Employees' Retirement	Employees' Pension	Correctional Officers' Retirement		
2009	11.14%	11.70%	8.73%	43.61%	20.53%	36.99%	N/A	30.53%	8.87%	3.87%	- %		
* * 2010	12.62	13.15	9.93	49.89	30.79	38.63	N/A	30.03	9.05	4.05	8.41		
2011	14.33	14.34	11.69	59.07	57.03	47.67	N/A	32.74	12.30	7.30	9.69		
2012	15.67	15.45	13.40	60.37	61.01	49.26	N/A	33.09	12.41	7.41	8.87		
2013	13.85	13.29	12.29	61.18	61.21	46.81	N/A	28.71	10.46	5.46	7.96		
2014	15.43	14.71	14.05	50.92	66.71	52.47	N/A	31.76	11.47	6.47	9.41		
2015	16.41	15.47	15.53	42.74	83.06	41.37	N/A	30.45	11.20	6.20	11.43		
2016	16.83	15.71	16.38	40.70	78.91	39.77	N/A	31.94	10.00	5.00	10.43		
2017	17.58	15.79	18.28	46.56	81.40	39.60	N/A	31.18	9.64	4.64	9.81		
2018	17.60	15.71	18.56	46.45	80.29	39.69	N/A	30.75	10.03	5.03	9.53		

*Rates for Municipal Systems only include basic employee cost rate.

Does not include reduction of \$120 Million in contributions for State Systems due to 2011 General Assembly reforms.

SCHEDULE OF RETIRED MEMBERS BY TYPE as of June 30, 2018

Amount of Monthly	Number of	of Type of Retirement							
Benefit	Retirees	NR(1)	ER(2)	SP(3)	SPD(4)	ADR(5)	ODR(6)	SPDR(7)	
1- 300	18,277	15,858	885	948	15	9	312	250	
301- 600	16,399	11,309	2,376	1,082	47	34	1,153	398	
601- 900	14,270	8,681	2,509	1,012	84	39	1,621	324	
901- 1,200	13,325	8,056	2,296	867	90	99	1,663	254	
1,201- 1,500	12,477	7,832	1,835	873	93	209	1,427	208	
1,501- 1,800	11,868	7,921	1,503	696	73	318	1,222	135	
1,801 - 2,100	10,453	7,160	1,253	517	68	348	1,032	75	
2,101 - 2,400	9,850	6,962	1,040	452	64	394	876	62	
2,401- 2,700	8,834	6,401	868	409	58	387	668	43	
2,701- 3,000	7,724	5,805	708	298	49	347	494	23	
Over 3,000	36,897	31,074	1,497	1,053	212	1,532	1,450	79	
	160,374	117,059	16,770	8,207	853	3,716	11,918	1,851	

Type of Retirement:

- 1 Normal retirement for age and service
- 2 Early retirement
- 3 Survivor payment normal or early retirement
- 4 Survivor payment death in service
- 5 Accidental disability retirement
- 6 Ordinary disability retirement
- 7 Survivor payment disability retirement

			#Optic	on Selected			
MAX	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 5	Opt. 6	Opt. 7
9,837	3,674	1,939	828	809	688	494	8
7,782	2,772	1,910	1,407	1,080	659	783	6
6,259	2,074	1,694	1,472	1,220	574	969	8
5,640	1,684	1,648	1,466	1,370	533	979	5
4,830	1,469	1,899	1,425	1,236	674	941	3
4,362	1,528	1,747	1,368	1,238	640	982	3
3,799	1,290	1,551	1,204	1,214	528	864	3
3,678	1,153	1,483	1,168	1,100	461	803	4
3,237	1,027	1,296	1,049	1,052	389	783	1
3,091	827	1,063	831	966	325	617	4
14,941	3,296	4,787	4,403	5,550	1,171	2,722	27
67,456	20,794	21,017	16,621	16,835	6,642	10,937	72

OF RETIREMENT AND OPTION SELECTED

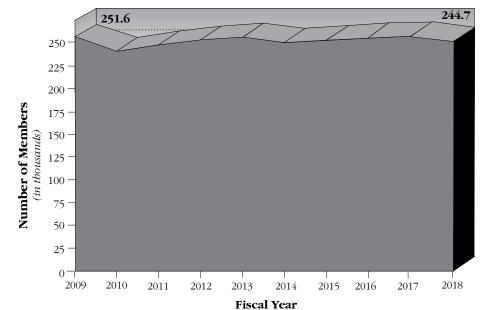
Option Selected:

- Basic The standard benefit if no option is selected. Generally, at retiree's death, all payments cease. However, the basic allowance for the State Police, Law Enforcement Offices (LEOPS), Judges and Legislators provides a continuing benefit for spouses or children under 18.
- Opt. 1 Guarantees return of the present value of the retirement benefit less the total payments already paid to the member.
- Opt. 2 Guarantees the same payment to the designated beneficiaries for their lifetime.
- Opt. 3 Guarantees one half the member's payment to the designated beneficiaries for their lifetime.
- Opt. 4 Guarantees return of the member's accumulated contributions and interest less the member's accumulated reserves already paid.
- Opt. 5 Guarantees the same payment to the designated beneficiaries for their lifetime, unless the beneficiaries predecease the respective members. Allowance then increases to the basic.
- Opt. 6 Guarantees one half the member's payment to the designated beneficiaries for their lifetime, unless the beneficiaries predecease the respective members. Allowance then increases to the basic.
- Opt. 7 Special option calculation performed by actuary.

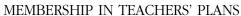
Fiscal Year	Total	Teachers' Retirement	Teachers' Pension	Employees' Retirement*	Employees' Pension	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Local Correctional Officers' Retirement
2009	251,571	4,550	124,552	11,027	106,961	365	1,414	2,634	68
2010	249,561	4,012	125,278	10,664	105,138	300	1,431	2,672	66
2011	245,970	3,339	124,806	10,139	103,292	297	1,386	2,625	86
2012	244,224	2,663	124,064	10,011	103,038	304	1,417	2,637	90
2013	244,362	2,154	125,429	9,865	102,463	298	1,404	2,658	91
2014	245,655	1,718	126,972	9,572	102,791	309	1,433	2,767	93
2015	246,369	1,372	128,695	9,370	102,270	315	1,475	2,781	91
2016	246,062	1,051	129,794	8,749	101,760	305	1,486	2,823	94
2017	246,370	805	130,990	8,409	101,415	321	1,461	2,869	100
2018	244,732	617	131,417	8,481	99,425	325	1,446	2,922	99

TEN-YEAR HISTORY OF MEMBERSHIP BY PLAN

Note: Includes vested former members. *Includes members of the Maryland General Assembly and State correctional officers.



TOTAL SYSTEM MEMBERSHIP



2013

Pension

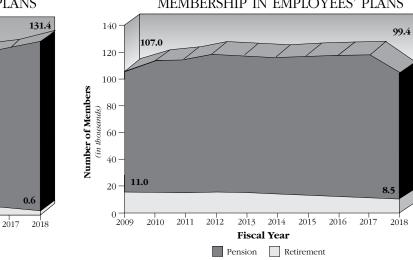
Fiscal Year

2012

2014

2015 2016

Retirement



MEMBERSHIP IN EMPLOYEES' PLANS

140

120

100

80

60

40

20-

0+ 2009

4.6

2010

2011

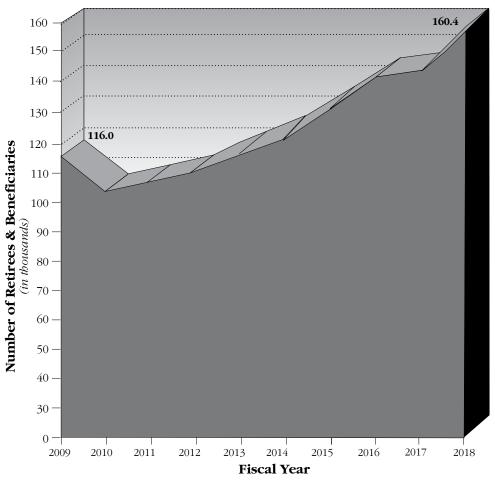
Number of Members (in thousands)

124.6

Fiscal Year	Total	Teachers' Retirement	Teachers' Pension	Employees' Retirement*	Employees' Pension	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Correctional Officers' Retirement System
2009	116,007	30,598	25,158	23,778	32,832	348	2,226	1,067	-
2010	120,247	30,270	27,269	23,475	35,418	351	2,282	1,182	-
2011	127,171	30,012	30,553	23,230	39,339	358	2,371	1,302	6
2012	132,493	29,705	33,994	22,796	41,840	365	2,387	1,396	10
2013	137,925	29,247	37,143	22,368	44,825	378	2,428	1,518	18
2014	142,887	28,762	40,167	22,013	47,446	395	2,468	1,613	23
2015	147,850	28,131	43,045	21,571	50,460	397	2,508	1,711	27
2016	152,566	27,552	46,030	21,172	53,039	407	2,536	1,801	29
2017	156,366	26,762	48,747	20,734	55,206	417	2,572	1,896	32
2018	160,374	25,764	51,437	20,340	57,947	421	2,477	1,954	34

TEN-YEAR HISTORY OF RETIREES AND BENEFICIARIES BY PLAN

* Includes members of the Maryland General Assembly and correctional officers.



TOTAL SYSTEM RETIREES AND BENEFICIARIES

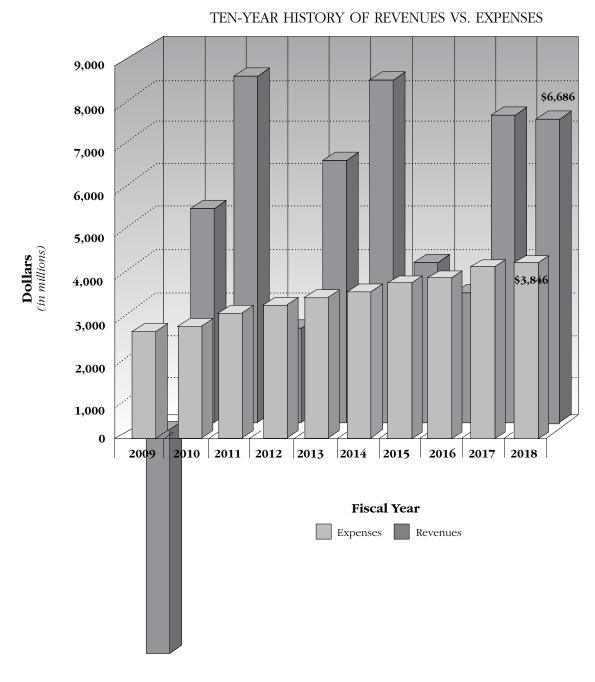
Fiscal Year	Members' Contributions	Employers' and Other Contributions	Annual Covered Payroll	Employers' and Other Contributions as a Percent of Covered Payroll	Net Investment Income	Total Revenues
2009	\$ 532,100	\$ 1,109,563	\$ 10,714,167	10.36 %	\$ (7,355,906)	\$ (5,714,243)
2010	535,581	1,308,921	10,657,944	12.28	4,016,359	5,860,861
2011	528,028	1,512,472	10,478,800	14.43	6,273,337	8,313,837
2012	703,256	1,595,761	10,336,536	15.44	104,084	2,403,100
2013	710,856	1,643,101	10,477,544	15.68	3,845,795	6,199,752
2014	727,726	1,733,653	10,803,631	16.05	5,706,267	8,167,646
2015	755,444	1,858,612	11,063,961	16.80	1,197,671	3,811,727
2016	764,414	1,870,655	11,155,924	16.77	497,531	3,132,600
2017	782,686	2,036,596	11,418,973	17.83	4,473,443	7,292,725
2018	791,583	1,995,017,	11,566,220	17.24	3,899,393	6,685,993

TEN-YEAR HISTORY OF REVENUES BY SOURCE AND EXPENSES BY TYPE (Expressed in Thousands)

REVENUES

EXPENSES

Fiscal		Administrative		
Year	Benefits	Expenses	Refunds	Total
2009	\$ 2,279,170	\$ 27,499	\$ 22,325	\$ 2,328,994
2010	2,445,540	28,627	33,531	2,507,698
2011	2,580,392	30,961	33,369	2,644,722
2012	2,755,106	28,201	33,819	2,817,126
2013	2,950,700	26,280	38,281	3,015,261
2014	3,121,823	26,130	42,922	3,190,875
2015	3,284,550	29,080	48,245	3,361,875
2016	3,469,493	28,659	58,362	3,556,514
2017	3,577,123	30,904	63,441	3,671,468
2018	3,744,132	33,211	68,600	3,845,943



PRINCIPAL PARTICIPATING EMPLOYERS CURRENT YEAR AND NINE YEARS AGO

		2018		2009			
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System	
Participating Government							
State of Maryland	354,034	1	87%	321,575	1	87%	
All other (Participating Municipalities)	51,072	2	13%	46,003	2	13%	
Total System	405,106			367,578			

Governmental Units Participating in the Systems

as of June 30, 2018

Allegany Community College Allegany County Board of Education Allegany County Government Allegany County Housing Authority Allegany County Library Allegany County Transit Authority Annapolis, City of Anne Arundel Community College Anne Arundel County Board of Education Anne Arundel County Community Action Agency, Inc. Baltimore Metropolitan Council Berlin, Town of Berwyn Heights, Town of Bladensburg, Town of Bowie, City of Brunswick, City of Calvert County Board of Education Cambridge, City of Cambridge Housing Authority Caroline County Board of Education Caroline County Sheriff Deputies Carroll County Board of Education Carroll County Public Library Carroll Soil Conservation District Catoctin & Frederick County Soil Conservation District Cecil County Board of Education Cecil County Government Cecil County Library Centreville, Town of Chesapeake Bay Commission Chestertown, Town of Cheverly, Town of College of Southern Maryland College Park, City of Crisfield, City of Crisfield Housing Authority Cumberland, City of Cumberland, City of -Police Department Denton, Town of District Heights, City of Dorchester County Board of Education Dorchester County Government Dorchester County Roads Board Dorchester County Sanitary Commission

Eastern Shore Regional Library Edmonston, Town of Elkton, Town of Emmitsburg, Town of Federalsburg, Town of Frederick County Board of Education Frostburg, City of Fruitland, City of Garrett County Board of Education Garrett County/Western Maryland Health Planning Council Garrett County Community Action Committee Garrett County Roads Board Greenbelt, City of Greensboro, Town of Hagerstown, City of Hagerstown Community College Hampstead, Town of Harford County Board of Education Harford County Community College Harford County Government Harford County Library Harford County Liquor Board Howard Community College Howard County Board of Education Howard County Community Action Committee Hurlock, Town of Hyattsville, City of Kent County Board of Education Kent County Government Kent Soil And Water Conservation District Landover Hills, Town of LaPlata, Town of Manchester, Town of Maryland Health & Higher Educational Facilities Authority Middletown, Town of Montgomery College Morningside, Town of Mount Airy, Town of Mount Rainier, City of New Carrollton, City of North Beach, Town of Northeast Maryland Waste Disposal Authority Oakland, Town of Oxford, Town of Pocomoke, City of

Preston, Town of Prince Georges Community College Prince Georges County Board of Education Prince Georges County Crossing Guards Prince Georges County Government Prince Georges County Memorial Library Princess Anne, Town of Queen Anne's County Board of Education Queen Anne's County Government Queenstown, Town of Ridgely, Town of Rockhall, Town of Salisbury, City of Shore Up! Snow Hill, Town of Somerset County Board of Education Somerset County Government Somerset County Economic Development Commission Somerset County Sanitary District, Inc. Southern MD Tri-County Community Action Committee St. Mary's County Board of Education St. Mary's County Government St. Mary's County Housing Authority St. Mary's County Metropolitan Commission St. Michaels, Town of Sykesville, Town of Takoma Park, City of Talbot County Board of Education Talbot County Government Taneytown, Town of Thurmont, City of Tri-County Council For Lower Eastern Shore Tri-County Council For Western Maryland University Park, Town of Upper Marlboro, Town of Walkersville, Town of Washington County Board of Education Washington County Liquor Board Washington County Library Westminster, City of Worcester County Board of Education Worcester County Government Worcester County Liquor Control Board Wor-Wic Community College

Anne Arundel County GovernmentMonBethesda Fire DepartmentMonCaroline County Roads BoardMonChevy Chase Fire DepartmentSt. MHancock, Town ofUnivHarford County Liquor Control Board (1982)WaslLexington Market AuthorityWasl

Maryland National Capital Park & Planning Commission Montgomery County Board of Education Montgomery County Government Montgomery County Public Library St. Mary's Nursing Home University of Maryland Medical System Washington County Government Washington County Board of License Commissioners (1972) Washington County Roads Board

*Withdrawn Governmental Units

Washington County Sanitary District Western Maryland Health Planning Agency Wicomico County Department of Recreation and Parks Wicomico County Roads Board

*List reflects withdrawn governmental units with a withdrawal liability balance.