REPORT

OF THE

STATE DEBT POLICY ADVISORY COMMISSION

2018
Legislative Update

January 25, 2018

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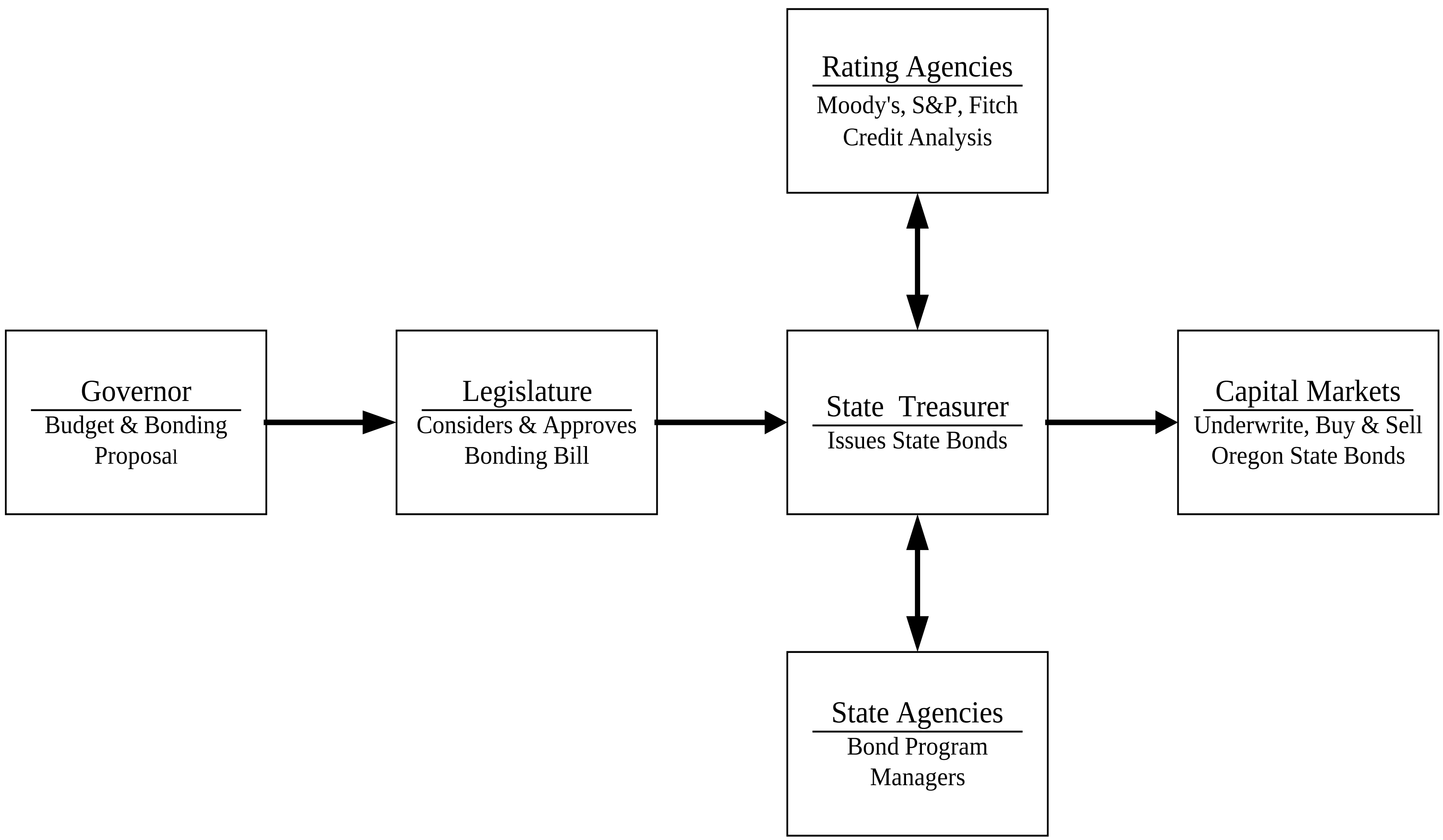
Oregon Bonding Process



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Oregon State Treasurer

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STATE DEBT POLICY ADVISORY COMMISSION

January 25, 2018

Governor Brown and Members of the 2018 Oregon Legislature:

I am pleased to present you with the *2018 Legislative Update* from the State Debt Policy Advisory Commission (the "Commission"), which provides the latest projections of debt capacity, based on current capital market conditions and the impact of bond authorizations by the 2017 Legislature.

The Commission serves to advise the Governor and Legislature on policies related to State debt and long-term capital financing. This report intends to provide policymakers with an overview of the State's long-term bonding capacity and to highlight emerging policy issues of concern in the debt arena.

Highlights of this year's report include:

- Based on the State's most recent long-term general fund revenue forecast, the initially projected $1.1 billion in General Fund supported debt authorized by the 2017 Legislature for the 2017-19 biennium remains well within the Commission's recommended General Fund debt capacity limits. We estimate that in addition to the $80.8 million balance of debt capacity still available for projects this biennium, the State can issue up to **$1.2 billion** in additional General Fund-supported debt in each of the next three biennia while staying within our maximum debt capacity limit of 5% General Fund debt service to General Fund revenue.
- Given the recently improved forecast of long-term Lottery revenues, our projections of long-term lottery debt capacity have increased compared to the *2017 Commission Report*, which recommended a maximum issuance of $209 million in Lottery-backed revenue bonds per biennia; assuming no additional Lottery bonding is authorized this biennium, the Commission projects that maximum biennial Lottery bond capacity will grow to approximately **$290 million** for each of the next four biennia. The Commission nevertheless cautions that Lottery bond capacity is a scarce resource and that additional Lottery bond authorizations will reduce future lottery resources and bond capacity accordingly.

As we look forward, Oregon will continue to be well served by maintaining our long-standing commitment to fiscal discipline in the authorization and issuance of State bonds. Debt is a powerful tool that can enhance the state's economic development, improve our public institutions, and build the capacity of future generations to compete and flourish. At the same time, it is a tool that has been – and should continue to be – used wisely. That means being judicious with borrowing today by staying within our prudent limits, while also making wise investment decisions regarding the appropriate balance related to the funding of new state buildings and infrastructure versus the funding that addresses the growing backlog of deferred maintenance of our existing building and facility portfolio.

Our state's strong financial management practices, including our prudent management of debt, history of balanced budgets and growing budgetary reserves, are all reasons we continue to receive strong credit ratings and have been able to achieve superior results when we borrow funds in the municipal capital markets. The State's General Obligation debt is rated AA+/Aa1/AA+ by Standard & Poor's, Moody's Investors Service, and Fitch Investors Service respectively. Our Lottery bond program also continues to garner strong ratings of AAA and Aa2 by Standard & Poor's and Moody's Investors Service respectively.

As a result of these high ratings, Oregon continues to be highly regarded by investors, which has allowed us to borrow for our highest priority capital projects and infrastructure needs at historically low interest rates. In addition, over the past several years, these low rates have allowed us to refinance a significant portion of our general obligation and revenue bond portfolio, saving in excess of $300 million in interest costs over the past decade.

As you make decisions critical to Oregon's long-term financial health, please consider the Commission and its staff as a resource available to you at any time.

Sincerely,

Tobias J. Read

Tobias J. Read, State Treasurer
Chair, State Debt Policy Advisory Commission

EXECUTIVE SUMMARY

Public borrowing is an important tool in Oregon's efforts to improve the State's infrastructure, educational capacity, and public buildings that impact the state's economy and the quality of life of Oregonians for generations to come. However, public borrowing must be used carefully because the resulting debt repayment becomes a fixed cost in future State budgets and an over-reliance on borrowing can cause deterioration in the State's credit ratings, resulting in higher borrowing costs.

Oregon Revised Statutes 286A.250 to 286A.255 establishes the State Debt Policy Advisory Commission. In accordance with these statutes, the five-member Commission is chaired by the State Treasurer and consists of a public member appointed by the Governor, an appointee from the Senate and the House of Representatives, and the Director of the Department of Administrative Services. The Commission is charged with advising the Governor and the Legislative Assembly regarding policies and actions that will enhance and preserve the State's credit rating and maintain the future availability of low-cost capital financing. In carrying out this function, the Commission is required to prepare an annual report to the Governor and the Legislative Assembly as to the available debt capacity of the State of Oregon. The Commission's *2017 Commission Report* was published January 23, 2017.

This *2018 Legislative Update* is intended to provide an abbreviated update of the *2017 Commission Report*, taking into account the actual amount of state debt sold in FY 2017, the most current long-term revenue projections of the Office of Economic Analysis (OEA) and the bonding authorizations adopted by the Legislature in SB 5530 (the 2017-19 bond bill.) This update evaluates debt capacity and debt burden for State bonding programs in four major categories: General Fund-supported debt, Lottery revenue-backed debt, net tax-supported debt, and non-tax supported debt.

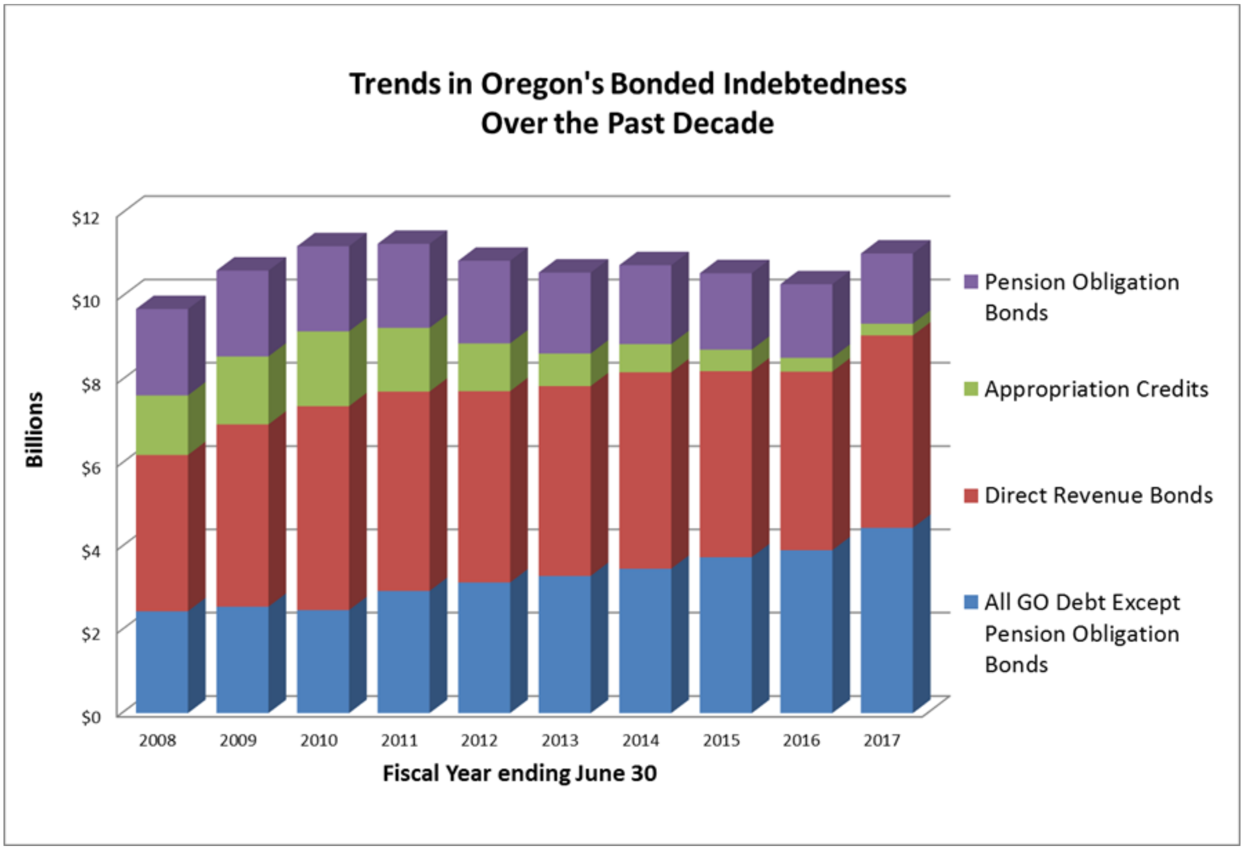
The Commission's findings are briefly outlined below and discussed in detail in the report itself.

Overall State Debt Levels

Oregon's combined long-term general obligation, appropriation and revenue bond debt outstanding was $11.9 billion as of June 30, 2017.[1] This represents an increase of $1.6 billion compared to the end of the 2016 fiscal year, which reflects the issuance of various bonds authorized by the 2015 and 2016 Legislatures.

The chart below displays the ten-year trend in overall state indebtedness. While overall state debt levels have not increased much since FY 2010, the mix of debt outstanding has shifted, with the reduction in outstanding appropriation debt replaced with lower cost general obligation bonds. Given the State's long-term commitment to managing its debt capacity in a prudent manner, new debt issuances have been timed for issuance at roughly the same pace and amounts that existing debt has been scheduled for retirement.

[1] Excludes conduit or "pass through" revenue bonds.



<u>GENERAL FUND-SUPPORTED DEBT</u>

The total debt outstanding for this category of state debt was $3.33 billion as of June 30, 2017. This amount is expected to increase to $4.12 billion by the end of the 2017-19 biennium assuming the retirement of approximately $300 million in existing debt and the issuance of approximately $1.11 billion in new General Fund supported debt, as authorized by the 2017 Legislature. Based on the Office of Economic Analysis (OEA) December 2017 revenue forecast and the planned timing of authorized bond sales over the balance of the biennium, we project that debt service as a percentage of General Fund revenues will not exceed 3.8% in FY 2018 and 3.6% in FY 2019, which is well within the Commission's General Fund supported debt capacity target of 5.0%

Using this maximum target debt ratio of 5.0% going forward, the Commission estimates the State has approximately $3.72 billion in additional General Fund-supported debt capacity over the next three biennia in addition to the $1.11 billion in debt already authorized for sale in this biennium.

Historically, the Commission has recommended that the State spread out this remaining General Fund debt capacity over time, which would result in a maximum of **$1.21 billion** per future biennium, as shown below. This "averaging" approach has served the State well over the years, as it has helped mitigate the impact of fluctuations in the State's revenues that could significantly impact the state's long-term debt capacity and allows for more consistent long-term capital planning and budgeting. Nevertheless, given OEA's improving long-term General Fund forecast, the latest Commission projections represent an increase of $365 million in long-term debt capacity over the next three biennia compared to last year's report.

Additional Debt Capacity for General Fund Supported Debt Programs*

($ Millions)

Fiscal Year Ending June 30th	Maximum Annual Amount of Debt That Can be Issued within 5% Target Capacity	GF Debt Service as a % of General Fund Revenues	SDPAC's Recommended Maximum Annual Amount of Debt that Should be Issued	GF Debt Service as a % of General Fund Revenues
2018	-	3.8%	-	3.8%
2019	$ 80.8 **	3.6%	$ 80.8**	3.6%
2020	1,097.6	5.0%	606.4	4.6%
2021	478.8	5.0%	606.4	4.7%
2022	613.5	5.0%	606.4	4.8%
2023	334.0	5.0%	606.4	4.9%
2024	487.3	5.0%	606.4	5.0%
2025	627.4	5.0%	606.4	5.0%
Total	**$ 3,719.4**		**$ 3,719.4**	

* Assumes issuance of $1.112 billion in General Fund supported bonds authorized by the 2017 Legislature.
**Balance of biennial General Fund debt capacity not allocated by 2017 Legislature.

LOTTERY REVENUE BOND DEBT

Total Lottery revenue bonds outstanding was $1.18 billion as of June 30, 2017. The covenants in the Lottery revenue bond indenture require a minimum debt service coverage ratio of four times unobligated net Lottery proceeds.

Over the past several years, the Commission has made a series of downward revisions to its estimate of the State's future Lottery debt capacity, based on OEA's downward revisions of long-term Lottery revenues due to new gaming competition in Washington State and potential trends in reduced consumer spending on gaming. The December 2017 OEA forecast, however, made a significant upward revision to their ten year lottery revenue forecast, which in turn has led to a healthy increase in the Commission's projection of lottery debt capacity compared to the Commission's previous reports.

The Commission now projects that based on this improved revenue forecast, there is a maximum of $1,162 million in additional Lottery bond capacity available over the next four biennia, in addition to the $199.9 million in Lottery bonds already authorized for sale in FY 2019. Assuming that no additional lottery bonds are authorized this biennium, and that the Legislature continues to spread out Lottery bond capacity evenly over time, the Commission projects that future lottery bond capacity will grow to **$290 million** per biennium, which is $81 million per biennium higher than projected at the time of last year's report.

The Commission nevertheless cautions that overall long-term Lottery bond capacity is a scarce resource that will remain constrained in the coming years. In addition to funding Lottery bond debt service, net Lottery revenue funds critical educational and economic development programs throughout the state. To the extent lottery revenues are dedicated to repayment of Lottery-backed debt, they are not available for other uses until these bonds are repaid in full. Therefore, the Commission recommends that the Legislature and Governor continue to target the use of Lottery bonding to the most critical state projects so that sufficient Lottery revenue continues to be available to fund the on-going operations of various state programs that rely on Lottery funding.

Additional Debt Capacity for Lottery Revenue Bond Program*

($ Millions)

Fiscal Year Ending June 30th	Maximum Annual Amount of Debt That Can be Issued within Debt Service Coverage Requirements	Debt Ratio Coverage (Times)	Debt Service as a % of Lottery Revenues	SDPAC's Recommended Maximum Annual Amount of Debt That Should Be Issued	Debt Ratio Coverage (Times)	Debt Service as a % of Lottery Revenues
2018	-	5.5	18%		5.5	18%
2019	$ 26.2**	5.2	19%	$ 26.2**	5.2	19%
2020	422.7	4.0	25%	141.9	4.4	22%
2021	99.0	4.0	25%	141.9	4.3	22%
2022	85.5	4.0	25%	141.9	4.2	23%
2023	75.8	4.0	25%	141.9	4.1	24%
2024	72.9	4.0	25%	141.9	4.1	24%
2025	74.6	4.0	25%	141.9	4.0	25%
2026	106.4	4.0	25%	141.9	4.0	25%
2027	198.7	4.0	25%	141.9	4.0	25%
Total	**$ 1,162.0**			**$ 1,162.0**		

*Assumes issuance of $199.9 million in Lottery revenue bonds as authorized by the 2017 Legislature.
**Balance of biennial Lottery debt capacity not allocated by 2017 Legislature.

NET TAX-SUPPORTED DEBT

While the amount of state indebtedness has remained relatively constant over the past decade, Oregon's Net Tax-Supported Debt (NTSD) per capita is considerably higher than the national average. As a geographically large state with an extensive highway network and a growing population, the State has issued a substantial amount of Highway User Tax, Lottery Revenue, and General Obligation bonds to address deferred maintenance and critical building and infrastructure needs around the state. In addition, the state issued approximately $2.0 billion in pension obligation bonds in 2003 to address its unfunded Public Employee Retirement System (PERS) liability, which significantly increased the state's net tax-supported debt.

At the end of FY 2017, Oregon's outstanding NTSD stood at roughly $8.5 billion. By the end of FY 2019, this amount is projected to increase by $400 million to $8.9 billion, as existing NTSD is retired and new General Obligation and Lottery Revenue bonds authorized by the 2017 Legislature are sold to investors. This in turn will increase the State's debt per capita ratio and debt as a percentage of personal income respectively.

State of Oregon
Net Tax-Supported Debt Ratios

	Fiscal Year Ending June 30th		
	FY 2017 (Actual)	**FY 2018 (Projected)**	**FY 2019 (Projected)**
Net Tax-Supported Debt (Billions)	$8.49	$8.29	$8.95
Population*	4,141,100	4,203,200	4,263,300
Personal Income (Billions)*	192.8	203.3	214.2
NTSD Per Capita	$2,050	$1,973	$2,099
NTSD as a % of Personal Income	4.4%	4.1%	4.2%
Pension Obligation Bonds Excluded			
NTSD Per Capita	$1,642	$1,594	$1,750
NTSD as a % of Personal Income	3.5%	3.3%	3.5%

*Source: Oregon Office of Economic Analysis, December 2017 economic and revenue forecast report

Rating agencies typically calculate total net tax-supported debt both with and without pension obligation bonds. In this way, states that issue POBs in comparison to others that may have a relatively low debt burden and have not issued POBs but have sizable unfunded pension liabilities are not overly penalized. When pension obligation bonds are excluded from this NTSD calculation, projected FY 2019 debt burden drops to $1,750 per capita and 3.5% as a percentage of personal income.

In recent years, the national rating agencies have placed more emphasis on state's overall balance sheet liability (their public net tax-supported debt as well as their unfunded actuarial pension and other post-employment liabilities); by this measure, Oregon's overall balance sheet liabilities per capita are well below the national median for states.

Standard & Poor's Rankings of State Debt, Pension, and OPEB Liabilities
(Ranked by PERS Funded Ratio, FY 2016)

Ranking	State	Pension Funded Ratio	Net Pension Liability (mil.)	Net Pension Liability per capita	Debt, pension and OPEB Liability per capita
1	Wisconsin	98.2%	$ 457	$ 79	$ 2,642
2	South Dakota	96.9	76	88	598
3	New York State	93.5	7,712	391	6,883
4	Tennessee	88.0	1,816	273	806
5	North Carolina	87.2	2,289	226	4,012
6	Idaho	87.2	547	325	472
7	Utah	85.7	1,525	500	1,483
8	Nebraska	85.5	426	223	242
9	Florida	85.9	4,535	220	2,049
10	Washington	83.8	4,028	553	3,818
11	Delaware	81.8	1,862	1,956	11,953
12	**Oregon**	**80.5**	**$ 2,963**	**$ 724**	**$ 2,583**
	50 State Median	**68.1%**	**$ 4,580**	**$ 1,102**	**$ 3,470**
	50 State Average	**68.1%**	**$ 15,200**	**$ 2,373**	**$ 5,493**

Source: Standard & Poor's, *U.S. State Pensions*: *Funded Ratios Declined Again in 2016*, October 18, 2017. Please note in the table above, the net pension liability used for each state is based on the amount reported in their Comprehensive Annual Financial Reports as of June 30, 2016, as now required by GASB. "OPEB" means Other Post-Employment Benefits, which generally include retiree health care benefits guaranteed for payment by a state.

In conclusion, while the Commission projects that the State will have improving available debt capacity in the years to come, it notes that this debt capacity must be balanced against the considerable backlog of pressing capital projects and infrastructure improvements for which the State will need to tap the credit markets for funding. The Commission therefore continues to recommend that the Legislature and Governor limit their bonding authorizations to only the highest priority State capital projects in order to maintain the State's strong credit ratings and overall healthy financial position.

I. BONDING IN OREGON

Historically, Oregon has operated under a biennial debt review and authorization process. Under that model, each individual bonding program receives specific legislative authorization and is managed by a state government agency. The Oregon State Treasury, as issuer of all State of Oregon bonds, is charged with the responsibility to centrally oversee all long-term debt programs. The State uses four primary types of long-term debt finance obligations: general obligation bonds (GOs), direct revenue bonds, appropriation credits, and conduit revenue bonds. General obligation bond authorized limits are normally expressed as a percentage of statewide value of taxable property. Revenue bonds and appropriation credits are usually limited by the Legislature to a specific dollar amount.

A brief explanation of the bond authorization and issuance process and the debt obligation types and associated State of Oregon bonding programs are provided below.

A. *Authorization and Issuance Process*

State Treasurer

The State Treasurer has been given responsibility and authority with respect to the sale and management of State bonds. The State Treasurer has assigned day-to-day responsibility for the coordinated issuance of all state obligations to the Debt Management Division of the Oregon State Treasury. The Division reviews the structure and security features of each bond and appropriation credit and recommends issuance to the State Treasurer. In addition, the Division coordinates the timing of the various agency bond sales, administers the issuance of bonds, secures credit ratings, prepares transcripts and other documents, provides for the delivery of bonds, assists with the signing and closing of bond issues, and coordinates the State's primary and secondary market disclosure responsibilities as required by regulations promulgated by the Security and Exchange Commission (SEC). In addition, Division staff provides advice to State agencies regarding market developments and makes debt policy and legislation recommendations to the State Treasurer.

Biennial Legislative Limitations

In addition to constitutional and statutory authorities and limitations, Oregon has historically followed a legislative practice of biennially approving bond volume limits. Prior to each biennium, the Governor's budget, in conjunction with advice from the State Treasurer, details program amounts recommended for bonding authority during the upcoming biennium. The budget recommendation takes into account requests by agencies for capital project needs, as well as grant and loan program needs. The Legislature then conducts a program-by-program review process and approves what it determines to be an appropriate level of issuance. Although this process has been successful, increasing demand for financing state capital needs necessitates a more comprehensive and longer-range approach to capital financing. The purpose of this report is to give the Governor and the Legislature additional advice when considering and approving biennial bond volume limits, as well as to make recommendations the Commission believes would enhance the State's bond ratings and maintain access to low-cost capital financing.

B. *State of Oregon Bonding Authorizations*

General Obligation Bonds

GO debt is secured by the full faith and credit of the participating issuer, for our purposes, the State of Oregon. Typically, GO debt necessitates constituency approval. In the State's case, each GO bond program was created by a constitutional amendment passed by state voters. Therefore, the People of the State have unconditionally pledged to pay debt service (i.e. principal and interest) payments, over the life of each GO issue. This means that barring the existence of other adequate repayment sources, all unrestricted public revenues must be used as needed to support debt service payments. This may include the levy of a statewide property tax if necessary and allowed by law.

Article XI, Section 7 of the Constitution provides the State with the general authority to issue GO debt. Currently, there are 18 constitutionally authorized GO bond programs.[1] While each of these programs has the potential for drawing on the State's General Fund or other taxing authority, many of the programs are fully self-supporting and are repaid from program revenues, gifts, grants, or other revenue streams.

The constitutionally authorized State of Oregon GO bond programs are listed below.[2]

- General Purpose Bonds – Article XI, Section 7
- State Highway Bonds – Article XI, Section 7
- Veterans Welfare Bonds – Article XI-A
- State Power Development Bonds – Article XI-D
- State Forest Rehabilitation Bonds – Article XI-E
- Higher Education Building Bonds – Article XI-F(1)
- Higher Education Facilities and Community College Bonds – Article XI-G[3]
- Pollution Control Bonds – Article XI-H
- Water Resources Bonds – Article XI-I(1)
- Elderly and Disabled Housing Bonds – Article XI-I(2)
- Alternate Energy Bonds – Article XI-J
- Oregon School Bond Guaranty Program – Article XI-K
- Oregon Opportunity Bonds – Article XI-L
- Seismic Rehabilitation of Public Education Buildings – Article XI-M

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[1] General Purpose bonds and State Highway bonds are both provided constitutional bonding authority by Article XI, Section 7. Likewise, Article XI-G provides constitutional bonding authority for both Higher Education bonds and Community College bonds.

[2] There is currently no outstanding general obligation debt related to State Power Development, State Forest Rehabilitation, Water Resources, and Oregon School Bond Guaranty Program.

[3] Higher Education Facilities GO bonds were historically issued by the Board of Higher Education, whereas Community College GO bonds were issued by the Board of Education. Higher Education and Community College bond issuance are combined and charged against the total debt authorized by the State Constitution Article XI-G.

- Seismic Rehabilitation of Emergency Services Buildings – Article XI-N
- Pension Obligation Bonds – Article XI-O
- Public School Facilities Bonds – Article XI-P
- State Property Bonds – Article XI-Q

Direct Revenue Bonds

Unlike GO bonds, direct revenue program debt is not secured by the State's unlimited pledge to fund debt service with unrestricted public revenues or, where permitted, a statewide ad valorem property tax. Rather, funds to pay debt service are provided by a specific dedicated revenue stream, and normally program revenues are directly associated with the funded project(s). Further, revenue programs typically do not require a vote of the People, but must be authorized by the Legislative Assembly. The State Legislature at all times holds the right to refer program approval to Oregon voters.

Oregon Revised Statutes provide for a variety of revenue bond programs. These programs are each considered fully self-supporting, and have no GO backing from the State. However, if program revenues were to become insufficient to support debt service payments, this does not preclude the State from providing a funding stream. Statutorily authorized direct revenue bond programs that are currently active are listed below.

- State Highway User Tax Bonds – ORS 367.620
- Oregon Transportation Infrastructure Fund Bonds – ORS 367.630[1]
- Lottery Revenue Bonds – ORS 286A.560 to 286A.585
- Oregon Bond Bank Revenue Bonds – ORS Chapter 285B.320 to 285B.371
- Single-Family and Multifamily Revenue Bonds – ORS 456.661

Conduit Revenue Bonds

Conduit revenue bonds are securities that are issued by a governmental unit to finance a project for a third party. Debt service payments are the obligation of the third party borrower and do not constitute a GO debt of the State or the issuing governmental agency. Economic and industrial development revenue bonds are a common type of conduit revenue security.

The State has three authorized and active conduit or "pass-through" revenue bond programs:

- Oregon Facilities Authority (OFA) – ORS Chapter 289.200 to 289.240
- Industrial Development Revenue Bonds – ORS Chapter 285B.320 to 285B.371
- Housing Development Revenue Bonds – ORS 456.692
- Beginning & Expanding Farmer Loan Revenue Bonds – ORS Chapter 285A.420 to 285A.435

Under these programs, the State is considered the issuer, but has no obligation to pay debt service. Payments are made by the entities on whose behalf the bonds were issued.

[1] Various legislative bills have authorized the sale of Transportation Infrastructure Bonds; however, no bonds have been issued to date by this program.

Appropriation Credits

Similar to revenue program debt, appropriation credits are not secured by the State's unlimited pledge to fund debt service with unrestricted public revenues or, where permitted, a statewide ad valorem property tax. The State has historically used two types of appropriation credits:

- Appropriation Bonds – SB 856 – 2003 Legislature
- Certificates of Participation (COPs) – ORS 283.085

These credits are special limited obligations of the State payable solely from funds appropriated or otherwise made available by the State Legislative Assembly. The obligation of the State to provide appropriated moneys and to pay the bonds is subject to future appropriation by the Legislature for the fiscal period in which payments are due. As with State direct revenue bond programs, appropriation credits do not require a vote of the People, but must be authorized by the Legislative Assembly. In 2010, voters approved Constitutional amendment Article XI-Q, which authorizes the State to issue GO Bonds for various State-owned or operated office buildings, facilities and other capital projects. Rather, as market conditions allow, the State has been refunding existing COPs with XI-Q bonds; to date, the State has refunded $580 million in outstanding COPs with XI-Q GO bonds, saving an estimated $92.4 million in interest costs on a present value savings basis.

Exhibit I.1

State of Oregon
OUTSTANDING[1] LONG-TERM FINANCIAL OBLIGATIONS[2] AND CONSTITUTIONAL PROVISIONS
As of June 30, 2017

General Obligation Bonds	Legal Provision	Constitutional Debt Limit (as % RMV) [3]	Constitutional Debt Limit (in Dollars)	Amount Outstanding [4]	Authorization Remaining [5]
General Fund Supported					
General Purpose Bonds	ARTICLE XI SEC 7	0.0000%	$ 50,000	$ 0	$ 50,000
State Highway	ARTICLE XI SEC 7	1.0000%	5,591,271,266	30,005,000	5,561,266,266
Community College Bonds	ARTICLE XI-G			188,665,000	
Higher Ed. Facility (XI-G) Bonds	ARTICLE XI-G	0.7500%	4,193,453,449	667,832,450	3,336,955,910
Pollution Control Bonds (42% of Total)	ARTICLE XI-H	1.0000%	5,591,271,266	14,131,740	2,334,202,192
DAS Oregon Opportunity Bonds	ARTICLE XI-L	0.5000%	2,795,635,633	86,725,000	2,708,910,666
Seismic Rehab – Public Education Bldgs.	ARTICLE XI-M	0.2000%	1,118,254,253	174,302,500	943,951,753
Seismic Rehab – Emergency Service Bldgs.	ARTICLE XI-N	0.2000%	1,118,254,253	45,712,500	1,072,541,753
DAS Pension Obligation Bonds (32% of Total)	ARTICLE XI-O	1.0000%	1,789,206,805	539,529,600	1,249,677,205
Alternate Energy Bonds (XI-J) (37% of Total)	ARTICLE XI-J	0.5000%	1,034,385,184	64,341,150	970,044,034
School District Capital Costs	AARTICLE XI-P	1.5000%	8,386,906,899	105,295,000	8,281,611,899
State Property (82% of total)	ARTICLE XI-Q	1.0000%	4,584,842,438	1,177,499,500	3,407,342,938
Total General Fund Supported				**$3,094,039,530**	
Self-Supporting					
Veteran's Welfare Bonds	ARTICLE XI-A	8.0000%	44,730,170,126	303,610,000	44,426,560,126
State Power Development	ARTICLE XI-D	1.5000%	8,386,906,899	0	8,386,906,899
Forest Rehabilitation	ARTICLE XI-E	0.1875%	1,048,363,362	0	1,048,363,362
Higher Ed. XI-F Bonds	ARTICLE XI-F(1)	0.7500%	4,193,453,449	1,159,056,279	3,034,397,171
Pollution Control Bonds (58% of Total)	ARTICLE XI-H	0.5000%	5,591,271,266	19,515,260	3,223,422,074
Water Resources Bonds	ARTICLE XI-I(1)	1.5000%	8,386,906,899	0	8,386,906,899
Elderly & Disabled Housing Bonds	ARTICLE XI-I(2)	0.5000%	2,795,635,633	44,710,000	2,750,925,633
Oregon School Bond Guaranty	ARTICLE XI-K	0.5000%	2,795,635,633	0	2,795,635,633
State Property (18% of Total)	ARTICLE XI-Q	1.0000%	1,006,428,828	258,475,500	747,953,328
Alternate Energy Project Bonds (63% of Total)	ARTICLE XI-J	0.5000%	1,761,250,449	109,553,850	1,651,696,599
DAS Pension Obligation Bonds (68% of Total)	ARTICLE XI-O	1.0000%	3,802,064,461	1,146,500,400	2,656,244,061
Total Self-Supporting				**$3,041,421,289**	
Total General Obligation Bonds				**$6,135,460,818**	
Revenue Bonds					
Direct Revenue Bonds					
Lottery Revenue Bond Program(s)	[ORS 286A.563-585]	---	---	1,185,140,000	
Transportation Infrastructure Bank	[ORS 367.030]	---	---	0	
Highway User Tax	[ORS 367.620]	---	---	2,521,870,000	
Single & Multi-Family Housing Programs	[ORS 456.661]	---	---	865,005,000	
Economic Development - Bond Bank	[ORS Ch. 285B]	---	---	53,725,000	
Total Direct Revenue Bonds				**$4,625,740,000**	

1 Totals may not agree with sum of components due to rounding.
2 Does not include Short-Term debt issued for less than 13 months.
3 Percentages listed are Real Market Value (RMV) of all taxable real property in the state.
4 Excludes refunded and defeased bonds.
5 Based on the January 1, 2016 Real Market Value (RMV) of $559,127,126,580. Authorization does not include inactive programs.

	Legal Provision	Constitutional Debt Limit (as % RMV)	Constitutional Debt Limit (in Dollars)	Amount Outstanding	Authorization Remaining
Pass Through Revenue Bonds					
Economic Development – Industrial Dev.	[ORS Ch. 285]			$ 286,053,267	
Beginning & Expanding Farmer Loan	[ORS 285A.420-435]			426,912	
Oregon Facilities Authority	[ORS Ch. 289]			2,347,309,446	
Multi-family Housing Programs	[ORS 456.692]			339,043,462	
Total Pass Through Revenue Bonds				**$2,972,833,086**	
Appropriation Credits					
Certificates of Participation (COPs GF)	[ORS Ch. 283.085]			$239,474,750	
Certificates of Participation (COPs Non-GF)	[ORS Ch. 283.085]			42,260,250	
Oregon Appropriation Bonds	[SB 856 – 2003 Legislature]			0	
Total Appropriation Credits				**$281,735,000**	

The State of Oregon Office of the Treasurer, acting on behalf of the Municipal Debt Advisory Commission (MDAC), maintains debt information to assist municipalities in debt related matters. The data is based on information obtained from sources believed to be reliable; however, its accuracy cannot be guaranteed. The Office of the State Treasurer does not independently verify the information received from reporting municipalities. The State of Oregon is not responsible for the accuracy, completeness or timeliness of the information obtained and data presented and disclaims any liability for or obligation to bond owners or others concerning the accuracy, completeness or timeliness of the data and information presented.

C. *General Fund Supported and Net Tax-Supported Debt*

The municipal credit rating industry uses a number of different measurements and indicators to evaluate a government's debt burden. Two of those measurements include *"general fund-supported debt"* and *"net tax-supported debt."*

A significant proportion of the State's overall long-term debt obligations are fully self-supporting with the source of bond debt service payments coming from resources other than General Fund appropriations or other tax revenue. Bonding programs that do not require State appropriated General Fund support or other direct State tax revenue support would not be included in either General Fund or net tax-supported debt measurements. However, in keeping with rating agency practice, some programs in which debt service payments are made with dedicated funds or special-tax revenue sources may still be viewed as General Fund or net tax-supported debt depending on the interpretation of the funding source(s). Examples of bond programs that do not require State tax revenues or General Fund appropriations to pay debt service include the Veterans' Welfare GO bond housing program, the Single and Multifamily Housing revenue bond program and all conduit revenue bonds.

General Fund Supported Debt is classified as long-term obligations whose debt service is paid primarily from General Fund appropriations made by the State Legislature. Examples include Higher Education Facility and Community College (Article XI-G) GO bonds, State Property Bonds (Article XI-Q) GO bonds, and Certificates of Participation (COPs).

Net Tax-Supported Debt is defined as all debt serviced by tax revenues of the State. This definition includes all General Fund supported-debt and other long-term obligations supported by specific State taxes. Highway User Tax Revenue bonds are an example of long-term debt that is net tax-supported, even though it does not pledge any General Fund appropriations towards repayment of the bonds. These bonds do not constitute a GO debt of the State but are instead payable solely from revenues received from highway user taxes. Furthermore, in accordance with the Oregon Constitution, highway user tax revenues must be used exclusively for public highways, roads, streets and rest areas of the state and the retirement of bonds for which such revenues have been pledged.

The three national rating agencies, Fitch, Moody's, and Standard & Poor's, differ somewhat in their assumptions and definitions of General Fund and net tax-supported debt with respect to the State of Oregon. For purposes of this report, the Commission has chosen to follow the Moody's model in determining both General Fund and net tax-supported debt. This decision was based primarily on Moody's historical gathering and publishing of key debt ratios for the fifty states, and the recognition of their annual state debt report as an accepted industry model.

As part of the development of this report, staff of the Office of the State Treasurer and the Department of Administrative Services periodically reviews all outstanding debt of the state with the goal of providing a more precise estimate of the amount of State debt that is actually supported by general fund revenues. Based on this review, the *2018 Legislative Update* adjusts downward the percentage of debt that is designated as General Fund-supported in relation to the GO bonds issued by the State to fund pension obligations, COPs, and Article XI-Q GO bonds. The report also incorporates a portion of the self-supporting GO debt issued by the Department of Environmental Quality and the Oregon Department of Energy to the extent that General Fund dollars are appropriated biennially for the following two years of debt service on these programs.

Based on these adjustments, this report includes the debt of the following bond programs in its assumptions of General Fund-supported debt:

- Higher Education Facility & Community College Bonds (Article XI-G)
- Pollution Control Bonds (Article XI-H) (42% of total)
- Alternate Energy Bonds (Article XI-J) (37% of total)
- Oregon Opportunity Bonds (Article XI-L);
- State Pension Obligation Bonds (Article XI-O) (32% of total)
- Seismic Rehabilitation Bonds for Public Education (Article XI-M)
- Public Safety Buildings (Article XI-N);
- Public School Facility Bonds (Article XI-P)
- State General Purpose Bonds (Article XI-Q) (82% of total)
- Certificate of Participation Obligations (ORS 283.085 to 283.092) (85% of total)

Net tax-supported debt includes the above-listed General Fund supported programs in addition to the following:

- Balance of State Pension Obligation Bonds, State General Purpose Bonds, and Certificates of Participation;
- Lottery Revenue Bonds (ORS 286A.560-585)
- State Highway Bonds (Article XI, Section 7)
- Highway User Tax Revenue Bonds (ORS 367.620)

Exhibit I.2 provides a comparison of total outstanding gross debt; General Fund-supported debt and net tax-supported debt as of June 30, 2017.

SDPAC - Exhibit I.2
State of Oregon
Comparison of Long-Term Debt Outstanding
As of 6/30/2017

Type & Purpose	Article	General Fund Supported Debt	Net Tax-Supported Debt	Total Gross Debt Outstanding
General Obligation				
General Fund Supported				
General Purpose	ARTICLE XI SEC 7	$ -	$ -	$ -
State Highway	ARTICLE XI SEC 7	30,005,000	30,005,000	30,005,000
Community College Bonds	ARTICLE XI-G	188,665,000	188,665,000	188,665,000
Higher Education Institutions & Activities	ARTICLE XI-G	667,832,540	667,832,540	667,832,540
Pollution Control Bonds	ARTICLE XI-H	14,131,740	14,131,740	14,131,740
Alternate Energy Bonds	ARTICLE XI-J	64,341,150	64,341,150	64,341,150
DAS Oregon Opportunity Bonds	ARTICLE XI-L	86,725,000	86,725,000	86,725,000
Seismic Rehab - Public Education Bldgs	ARTICLE XI-M	174,302,500	174,302,500	174,302,500
Seismic Rehab - Emergency Service Bldgs	ARTICLE XI-N	45,712,500	45,712,500	45,712,500
State General Purpose	ARTICLE XI-Q	1,177,499,500	1,177,499,500	1,177,499,500
DAS Pension Obligation Bonds (1)	ARTICLE XI-O	539,529,600	539,529,600	539,529,600
School District Capital Costs	ARTICLE XI-P	105,295,000	105,295,000	105,295,000
Total General Fund Supported		$ 3,094,039,530	$ 3,094,039,530	$ 3,094,039,530
Dedicated Fund Supported				
Veterans' Welfare Bonds	ARTICLE XI-A	-	-	303,610,000
Higher Education Building Projects	ARTICLE XI-F(1)	-	-	1,159,056,279
Pollution Control Bonds	ARTICLE XI-H	-	-	19,515,260
Elderly & Disabled Housing Bonds	ARTICLE XI-I(2) and ORS 456.519	-	-	44,710,000
Alternate Energy Project Bonds	ARTICLE XI-J	-	-	109,553,850
State General Purpose	ARTICLE XI-Q	-	258,475,500	258,475,500
DAS Pension Obligation Bonds (1)	ARTICLE XI-O	-	1,146,500,400	1,146,500,400
Total Dedicated Fund Supported		$ -	$ 1,404,975,900	$ 3,041,421,289
Total General Obligation		**$ 3,094,039,530**	**$ 4,499,015,430**	**$ 6,135,460,818**
Revenue Bonds				
Direct Revenue Bonds				
Lottery Revenue Bond Program(s)	ORS 296A.560 - 585	-	1,185,140,000	1,185,140,000
Highway User Tax Revenue Bonds	ORS 367.620	-	2,521,870,000	2,521,870,000
Single-Family & Multi-Family Housing	ORS 456.645 and ORS 456.661	-	-	865,005,000
Economic Development - Bond Bank	ORS 285B	-	-	53,725,000
Total Direct Revenue Bonds		$ -	$ 3,707,010,000	$ 4,625,740,000
Conduit or Pass Through Revenue Bonds				
Economic & Industrial Development	ORS 285	-	-	286,053,267
Beginning & Expanding Farmer Loans	ORS 285A.420-435	-	-	426,912
Oregon Facilities Authority	ORS 289	-	-	2,347,309,446
Multi-Family Housing Programs	ORS 456.645 and ORS 456.692	-	-	339,043,462
Total Conduit or Pass Through Revenue Bonds		$ -	$ -	$ 2,972,833,086
Total Revenue Bonds		**$ -**	**$ 3,707,010,000**	**$ 7,598,573,086**
Appropriation Credits				
Certificates of Participation (COPs)	ORS 283 & 286A	239,474,750	281,735,000	281,735,000
Oregon Appropriation Bonds	SB 856 - 2003 Legislature	-	-	-
Total Appropriation Credits		**$ 239,474,750**	**$ 281,735,000**	**$ 281,735,000**
Total Gross Debt				**$ 14,015,768,904**
Total Debt - Less Conduit Revenue Bonds		**$ 3,333,514,280**	**$ 8,487,760,430**	**$ 11,042,935,818**

The State of Oregon Office of the Treasurer maintains debt information to assist in debt related matters. The data is based on information obtained from sources believed to be reliable; however, its accuracy cannot be guaranteed. The Office of the State Treasurer does not independently verify the information received. The State of Oregon is not responsible for the accuracy, completeness or timeliness of the information obtained and the data presented and disclaims any liability for or obligation to bond owners or others concerning the accuracy, completeness or timeliness of the data and information presented.

(1) To conform to rating agency methodologies Pension Obligation Bonds are considered net tax-supported debt.

D. *Pension Obligation Bonds*

On September 16, 2003, the citizens of the State approved the issuance of State general obligation bonds to finance part of the State's unfunded actuarial liability (UAL) to the Oregon Public Employees Retirement System (OPERS). The UAL is the difference between the liability of PERS to retirees and the actuarially determined value of the assets available to pay the liability. Calculated at an actuarial assumed rate of 8.0%, the State's portion of the pension liability was estimated to be over $2 billion.

In October 2003, the State issued $2 billion in taxable Pension Obligation Bonds (POBs). Because the POBs were sold at an average interest rate of 5.8%, which was 2.2% below the actuarially assumed rate of 8% then in use by OPERS, the State anticipated receiving significant budgetary savings from the reduced cost of funding its UAL, despite the fact that this bond issue increased the state's outstanding net tax-supported debt and its debt ratios substantially.

The ultimate savings that will be achieved through the issuance of POBs depends on the overall future asset returns on the POB bond proceeds deposited in a side account at OPERS. While the costs of the POBs were known and fixed at the time of issuance, investment returns over the term of the bonds cannot be known in advance. Based on assumptions regarding the long-term rate of return of the PERS system made at the time of issuance in 2003, it was estimated that the POBs would provide nominal General Fund savings of approximately $900 million over the life of the bonds. The actual amount of savings will not be known, however, until the POB bonds are fully retired in FY 2027.

II. GENERAL FUND-SUPPORTED DEBT CAPACITY

A. *Debt Burden*

The key indicators most commonly used by the rating agencies and municipal analysts to evaluate a state's debt burden include debt per capita, debt to personal income and debt service to revenues. We measure our state's debt burden and capacity based on the percentage of debt service (i.e. principal and interest) to revenues. In this section, we compare debt service for General Fund-supported debt as a percent of General Fund revenues, or;

$$\frac{\textbf{Debt Service for General Fund-supported Debt}}{\textbf{General Fund Revenues}}$$

States recognized as having sound debt management practices typically use a range between 5% and 8% of revenues in determining their capacity measurements, with 5% as a frequent commitment. As an example, South Carolina, rated Aaa by Moody's, limits general obligation debt, excluding State Highway bonds, to 5.5% of General Fund revenues, while North Carolina's overall debt limit is 4% of General Fund revenues.

For purposes of determining Oregon's capacity standard, the Commission concludes that there exists a range under which the State can evaluate its capacity. This range exists between a low of 0.0% and a high of 10%.

In the following illustration, a ratio within the "green" area signifies that the State is within a prudent capacity range to pay debt service, and thus, has capacity to issue additional General Fund-supported debt obligations. A ratio within the "yellow" area signifies that the State's capacity is entering a cautionary zone where debt exceeds prudent capacity targets and may result in negative implications to the State's long-term credit rating and cost of funds. At this level, it would be wise for the State to reevaluate bonding priorities. Finally, were the State to reach a ratio within the "red" zone, consequences would be expected to include increased interest costs, negative credit rating impacts, and reduced access to capital markets.

Target debt capacity range can be visualized as follows:

General Fund-supported Debt Payments as a Percentage of General Fund Revenues

0 to 5% "Green"	**Over 5% to 7% "Yellow"**	**Over 7% to 10% "Red"**
Capacity Available	Exceeds Prudent Capacity Target	Capacity Limits Reached

B. *Inputs & Assumptions for General Fund Debt Capacity Model*

As required by ORS 286A.555, the Commission's model projects debt capacity over the same number of years as the quarterly Office of Economic Analysis' (OEA) Economic and Revenue forecast, which provides a General Fund forecast for the next ten years. The model looks at General Fund-supported debt programs as a whole, intending for the Governor and Legislature to determine which specific programs will receive funding within the capacity range.

This *2018 Legislative Update* provides a look at debt capacity from FY 2018 through FY 2025 based on the OEA December 2017 revenue forecast and the bonding authorizations enacted by the 2017 Legislature.

The model is based on General Fund-supported debt service as a percentage of General Fund revenues. The Commission has chosen to use 5% as the model's capacity target because it is the dividing point between a "green/available" capacity level and a "yellow/cautionary" target level as depicted above. It is acknowledged that this 5% target is not a strict capacity limitation, but rather reflects an approach into the "yellow/cautionary" capacity range. The movements from one target level to the next signals the need for a reevaluation of existing debt authorization and future bonding priorities.

The model first solves for "overall capacity" to pay debt service on General Fund-supported debt issuance. As noted earlier, the following programs are considered General Fund-supported debt obligations for purposes of this report:

- Higher Education Facility & Community College Bonds (Article XI-G only)
- Pollution Control Bonds (42% of total outstanding)
- Alternate Energy Bonds (37% of total outstanding)
- Oregon Opportunity Bonds (for OHSU projects)
- Seismic Rehab – Public Education Buildings Bonds (Article XI-M)
- Seismic Rehab – Emergency Service Buildings Bonds (Article XI-N)
- State Property Bonds (Article XI-Q) (82% of total outstanding)
- Pension Obligation Bonds (32% of total outstanding)
- Certificate of Participation obligations (85% of total outstanding)

As shown in *Table II.1*, the model solves for overall debt capacity for fiscal years 2018 through 2025 using the most recent General Fund forecast from OEA and the 5% of General Fund revenues as the maximum debt service capacity limit. Based on this capacity limit, the model demonstrates that yearly dollars to pay debt service ranges from $464.4 million in FY 2018 to $661.2 million in FY 2025.

Table II.1

General Fund Forecast
($ Millions)

Fiscal Year Ending June 30th	Estimated General Fund Revenues[1]	Amount Available for Debt Service at 5% Capacity Limit
2018	$ 9,288.5	$ 464.4
2019	10,168.3	508.4
2020	10,536.4	526.8
2021	11,139.4	557.0
2022	11,696.4	584.8
2023	12,133.2	606.7
2024	12,653.1	632.7
2025	13,224.9	661.2

After determining the yearly dollars available, the portion already committed to annual debt service on outstanding General Fund debt, as well as amounts used to pay debt service on authorized General Fund-supported bonds expected to be issued over the balance of the biennium is calculated. For purposes of this report, we assume that all $1.112 billion in General Fund-supported debt authorized by the 2017 Legislature will be issued by June 30, 2019.

This new General Fund-supported debt includes the following:

- $204.6 million in XI-G GO bonds for 50% matching grants for higher education and community college building projects;
- $10.3 million in XI-H GO bonds for Department of Environmental Quality orphan site clean-up;
- $101.2 million in XI-M GO bonds for seismic upgrade grants to public schools;
- $20.4 million in XI-N GO bonds for seismic upgrade grants to public safety facilities;
- $100.9 million in XI-P GO bonds for matching grants for K-12 school capital improvements;
- $563.8 million in XI-Q GO bonds for various state agency, higher education and affordable housing projects;
- $100.9 million in Certificates of Participation for the partial purchase from the Common School Fund of the Elliott State Forest.

Projected annual debt service payments on the planned new General Fund supported debt are based on the following assumptions:

[1] General Fund revenues are shown as projected by the Oregon Office of Economic Analysis in the *Oregon Economic and Revenue Forecast* for December 2017.

- Level annual debt service payments;
- An interest rate of 4.50%, the standard rate that will be used in annual SDPAC reports, which is 46 basis points higher than the 10-year average of the *Bond Buyer 20-Bond Index* as of December 7, 2017[1]; and
- Twenty-year average maturity length for all General Fund-supported debt obligations.

The model forecasts the remaining dollars available to pay debt service on future issuance, and therefore bonding capacity, by introducing known annual debt service payments for outstanding debt and the projected debt service payments for planned issuance. This is shown below in *Table II.2*. A detailed outline of debt service requirements for each General Fund-supported debt program is provided in *Appendix A* to this report.

Table II.2

Remaining General Fund Dollars Available for Future Debt Issuance
($ Millions)

	1	2	3	4
Fiscal Year Ending June 30th	**Available Dollars to Pay Annual Debt Service (at the 5% target)**	**(Less) Annual Payments for Debt Service on Existing General Fund-Supported Debt Outstanding[2]**	**(Less) Projected Annual Payments for Debt Service on New General Fund-supported Debt[3]**	**Remaining Dollars Available to Pay Debt Service on Future Debt**
2018	$464.4	$ (354.7)	$ -	$ 109.7
2019	508.4	(352.4)	(16.9)	139.2
2020	526.8	(350.7)	(85.5)	90.6
2021	557.0	(344.1)	(85.5)	127.4
2022	584.8	(324.8)	(85.5)	174.6
2023	606.7	(320.9)	(85.5)	200.2
2024	632.7	(309.4)	(85.5)	237.7
2025	661.2	(289.8)	(85.5)	285.9

The overall dollars available to pay debt service as determined in *Table II.1* is illustrated in *Table II.2* column 1 above. Columns 2 and 3 are the principal and interest payment amounts for outstanding General Fund-supported debt and for new authorized issuances respectively. The

[1] The *20-Bond Index* consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa3 rating and Standard & Poor's AA-minus rating.
[2] This represents the projected annual (fiscal year) debt service requirement on all General Fund-supported debt issued through June 30, 2017. See Appendix A for detail.
[3] The 2017 Legislature authorized $1.112 billion in General Fund-supported debt. The model assumes issuance of $219.6 million in FY 2018 and $ 892.6 million in FY 2019, with debt service beginning in the following year after the sale of bonds, as shown in *Table II.2, Column 3*.

remaining dollars available to pay debt service (column 4) is determined by subtracting the outstanding and planned issuance debt service (columns 2 and 3) from the overall calculated dollars available (column 1).

As outlined above, remaining dollars to pay for debt service on future state bonds varies over the forecast period as projected General Fund revenues change and as debt service requirements are amortized on existing state debt obligations. *Table II.3* displays the remaining dollars available to pay debt service on future debt issuance, including the balance of $80.8 million in projected 2019 debt capacity that was not allocated by the 2017 Legislature. The overall calculation of remaining General Fund dollars is based on the previously presented assumptions and with reductions each year to reflect the addition of new General Fund debt service.

Table II.3

General Fund-Supported Debt Capacity Determination
($ Millions)

	1	2	3	4	5
Fiscal Year Ending June 30th	**Remaining Dollars to Pay Debt Service**	**Maximum Amount of Additional Debt that May be Issued[1]**	**(Less) Debt Service on Amount of Additional Debt that May be Issued**	**Net Dollars Remaining to Pay Debt Service**	**Debt Service as a % of General Fund Revenues**
2018	$ 109.74	$ -	$ -	$109.7	3.8%
2019	139.2	80.8*	(6.2)	133.0	3.7%
2020	90.6	1,097.6	(84.4)	6.2	5.0%
2021	127.4	478.8	(36.8)	90.6	5.0%
2022	174.6	613.5	(47.2)	127.4	5.0%
2023	200.2	334.0	(25.7)	174.6	5.0%
2024	237.7	487.3	(37.5)	200.2	5.0%
2025	285.9	627.4	(48.2)	237.7	5.0%
Total Additional General Fund Capacity		**$3,719.4**			

*Balance of FY 2019 debt capacity not allocated by 2017 Legislature.

Table II.3 accounts for all issued and planned to be issued General Fund-supported debt, as authorized by the Legislature for the 2017-19 biennium, as well as the maximum amount of additional General Fund supported-debt that could be issued each year while staying within the Commission's target debt capacity limit of 5% debt service to General Fund revenues.

[1] *Table II.3* accounts for the issuance of $1.112 billion in planned General Fund-supported bonds that was authorized by the 2017 Legislature.

Based on the analysis above, the Commission concludes that the General Fund-supported debt issuance amounts illustrated in *Table II.3* would allow the State to issue a maximum of $3.719 billion in additional General Fund-supported debt through FY 2025 on top of the $1.112 billion already authorized by the 2017 Legislature. This represents an increase of approximately $365 in General Fund debt capacity compared to the amount projected at the time of the *2017 Commission Report.*

C. *Capacity Considerations*

The Commission emphasizes that while the State has the capacity to issue General Fund-supported debt in the amounts outlined in *Table II.3*, issuance of State bonds at this level has significant budgetary impacts that can extend for long periods of time into the future. An increase in monies used to finance General Fund-supported debt service could result in a reduction of funding for other State-supported programs, particularly in periods of economic downturns.

In addition, the Commission also cautions that while the current model shows that the State has substantial debt capacity over the next decade, this capacity can sharply decline if interest rates rise more than predicted in the model or if there is a substantial drop in future General Fund revenue levels. To address the large backlog of capital needs throughout the state, the Commission recommends that the Governor and Legislature continue the policy of spreading debt capacity evenly over future biennia, as illustrated in *Table II.4*. This will assist in assuring long-term planning for the funding for the State's highest priority capital projects over time, regardless of economic and revenue fluctuations that may occur over the forecast period.

Table II.4

Recommended Allocation of Additional General Fund-Supported Debt Capacity ($ Millions)

Fiscal Year Ending June 30th	Maximum Annual Amount of Additional Debt that Should be Issued	(Less) Debt Service on Future Debt Issued	Debt Service as a % of General Fund Revenues
2018	$ -	$ -	3.8%
2019	80.8*	(6.2)	3.6%
2020	606.4	(46.6)	4.6%
2021	606.4	(46.6)	4.7%
2022	606.4	(46.6)	4.8%
2023	606.4	(46.6)	4.9%
2024	606.4	(46.6)	5.0%
2025	606.4	(46.6)	5.0%
Total Additional General Fund Capacity	**$ 3,719.4**		

*Balance of FY 2019 debt capacity not allocated by 2017 Legislature.

Table II.5 and *Table II.6* illustrate the potential impact of changing interest rates and revenues on the forecast of the State's General Fund debt capacity. Based on planned debt issuances of $1.112 billion over the next two years and estimates of General Fund revenues for the balance of the ten year forecast period, remaining general fund capacity is $3.719 billion; a 1% increase in the long-term interest rate would decrease capacity by $392.5 million *(Table II.5)*. A 10% decline in revenue over the forecast period would decrease debt capacity by approximately $860.1 million. *(Table II.6)*.

Table II.5

Forecast of General Fund Debt Capacity
With Changing Interest Rates
FY 2018 - FY 2025
($ Millions)

	4.5% Interest Rate (From *Table III.3*)	**5.5% Interest Rate (1.0% Increase)**	**3.5% Interest Rate (1.0% Decrease)**
Total	$3,719.4	$3,326.9	$4,151.9
Difference from Base Case		(392.5)	432.4

Table II.6

Forecast of General Fund Debt Capacity
With Changing General Fund Revenues
FY 2018 – FY 2025
($ Millions)

	Projected General Fund Debt Capacity (From *Table III.3*)	**10% Increase in Net General Fund Revenue**	**10% Decrease in Net General Fund Revenue**
Total	$3,719.4	$4,579.6	$2,859.3
Difference from Base Case		860.1	(860.1)

III. LOTTERY-BACKED DEBT CAPACITY

Due to the importance of State Lottery revenues for funding various state programs and activities, the Commission believes it is important to point out that the State's continued ability to issue Lottery-backed bonds is predicated on the prudent management and sound fiscal position of the State Lottery program itself. Accordingly, for purposes of determining capacity, the Commission has chosen to view the Lottery revenue bond program as distinct from both net tax-supported and General Fund-supported debt programs.

A. *Unobligated Net Lottery Proceeds*

Article XV, Section 4 of the Oregon Constitution requires the Legislative Assembly to appropriate Unobligated Net Lottery Proceeds or revenues to first repay Lottery bonds, before appropriating the proceeds for any other purpose.

In each fiscal year, and prior to any use of such moneys for any other purpose, all unobligated net Lottery revenues are deposited into the Debt Service Account until all scheduled debt service for the fiscal year has been provided for. The unobligated net Lottery proceeds consist of all revenues derived from the operation of the State Lottery except for revenues used for the payment of prizes and expenses of the State Lottery.

Once debt service on Lottery-backed bonds are paid each year, the remaining State Lottery revenues are distributed to the Education Stability Fund, the Parks and Natural Resources Fund, the Veterans Services Fund, and the Outdoor School Education Fund, as required by the Constitution. Revenues are then allocated and applied to certain economic development and educational purposes. The Education Stability Fund and the Parks and Natural Resources Fund are allocated 18% and 15% respectively of unobligated net proceeds; the Veteran Services Fund receives 1.5%, and the Outdoor Education Fund receives the lesser of 4% or $22 million per year. In addition, an amount of not less than 1% of net Lottery proceeds is allocated to the Problem Gambling Treatment Fund, which is separate and distinct from the General Fund. Article XV, Section 4 of the Oregon Constitution and applicable Oregon law allocate any remaining amounts to various economic development and public education projects as authorized.

The forecast summary of net Lottery revenues is presented in *Table III.1*. Total available Lottery resources are net of Lottery prizes and administration. Also shown are the projected debt service for outstanding Lottery bonds and the projected debt service coverage ratio as of June 30, 2017; assuming that no additional Lottery bonds are issued either this biennium or in the future.

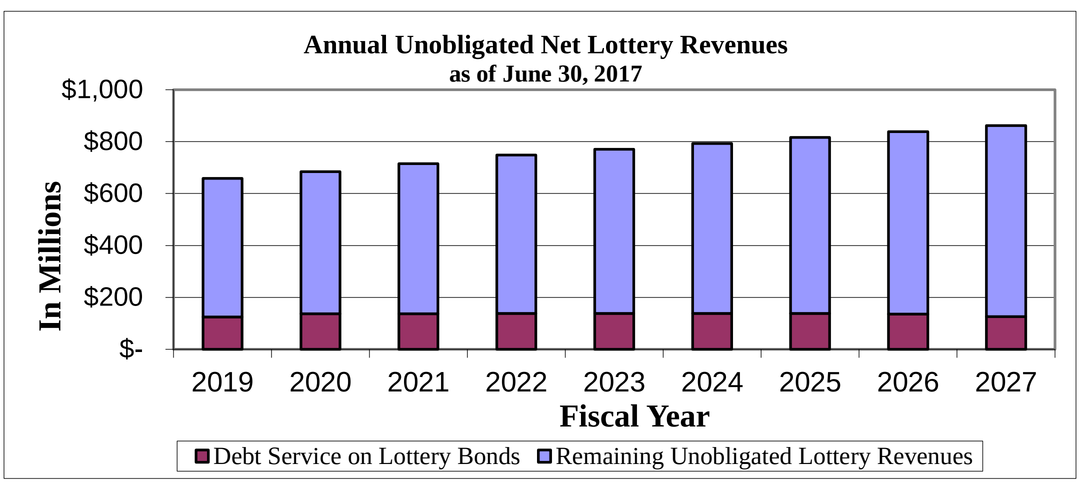
Table III.1

Forecast of Net Lottery Revenue, Lottery Debt Service, and Debt Service Coverage Ratios
as of June 30, 2017

Fiscal Year	Annual Net Lottery Revenues (millions)[1]	Debt Service on Outstanding Bonds (millions)[2]	Projected Debt Service Coverage Ratio (times)
2018	$ 700.1	$ 128.0	5.5
2019	657.8	124.7	5.3
2020	684.6	136.6	5.0
2021	714.5	136.5	5.2
2022	749.0	138.5	5.4
2023	770.8	138.2	5.6
2024	793.2	138.2	5.7
2025	816.1	138.2	5.9
2026	838.9	135.7	6.2

Exhibit III.1 below graphically displays the amount of revenues consumed by debt service on outstanding Lottery revenue bonds and the remaining proceeds available to the State for other purposes.

Exhibit III.1



[1] Oregon Office of Economic Analysis, Oregon Economic and Revenue Forecast, December 2017.
[2] Includes Lottery bonds issued through June 30, 2017. This does not include debt service on $199.9 million in authorized but not yet issued Lottery bonds that are planned to be issued before the end of FY 2019.

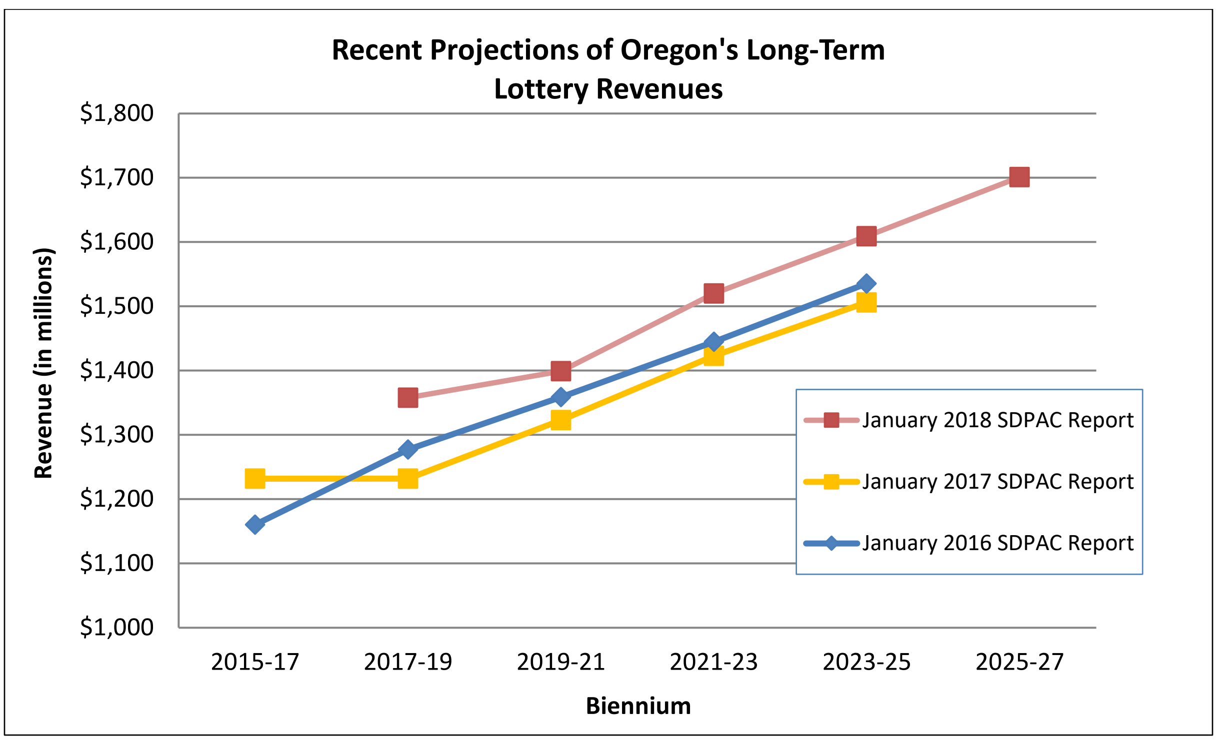
B. *Lottery Capacity Determination and Coverage Ratios*

The most appropriate means of determining future debt capacity for this program is its current legal debt service coverage requirements. This type of analysis compares expected debt service requirements to the available revenues pledged to repay this debt service. The extent to which the available revenues are forecasted to exceed debt service requirements is referred to as the debt service coverage ratio.

The Commission's current lottery bond capacity policy is that combined existing and proposed lottery debt service should not be more than 25% of net unobligated lottery revenues, which means that the debt service coverage ratio should not fall below a four times coverage. The four-times coverage ratio, is viewed by rating agencies as a conservative, yet realistic level and is incorporated in the State's Lottery Revenue bond indenture as a general bond covenant. This means that in order for the State to issue additional Lottery-backed bonds, unobligated net Lottery revenues must be at least four times the maximum annual debt service on all outstanding Lottery bonds, with the debt service on new proposed Lottery bonds treated as part of the debt service ratio calculation.

Over the past several years, the Commission's estimate of the State's future Lottery debt capacity has been lower than in earlier years, based on OEA's downward revisions of long-term Lottery revenues due to the prospect of gaming competition in Washington State and trends in reduced consumer spending on gaming. As *Exhibit III.2* below shows, OEA's most recent forecast of long-term Lottery revenues is considerably higher than it has been over the past few years, based on actual Lottery collections over the past year and a revised view of the impact that the new casino in Washington State will have on future Lottery revenue.

Exhibit III.2



Source: Oregon Office of Economic Analysis Economic and Revenue Forecast Reports, 2015 through 2017.

This significant increase in forecasted future Lottery revenues has in turn led to a healthy increase in the Commission's projection of future lottery debt capacity compared to previous Commission annual reports.

Table III.1 reflects the positive impacts of this improving long-term Lottery revenue forecast. Lottery debt service coverage ratios are projected at a healthy 5.0 for FY 2020, which takes into account the planned issuance of $199.9 million in Lottery bonds authorized by the 2017 Legislature. The table also shows that Lottery debt service payments remain relatively constant over the balance of the forecast period, with the corresponding debt service coverage ratio improving over time as projected Lottery revenue increases.

Based on OEA's most recent long-term forecast of Annual Unobligated Net Lottery Proceeds and the targeted four-times (4.0) coverage ratio, as displayed in *Table III.2*, the estimated available dollars for annual debt service ranges from $700.1 million in FY 2018 to $862.3 million in FY 2025.

For FY 2020, the calculation of maximum annual lottery debt service is:

Available Revenues ÷ Required Coverage Ratio = Maximum Annual Debt Service

– or –

$684.6 million ÷ 4 Times Coverage = **$171.2 million**

The capacity forecast for Lottery-backed revenue bonds illustrated in *Table III.2*, accounts for:

- all outstanding Lottery revenue bonds as of June 30, 2017,
- all new Lottery revenue bonds authorized and expected to be issued before the end of the 2017-19 biennium, and
- an estimate of remaining capacity to issue additional Lottery revenue bonds through the end of FY 2027.

Projected net unobligated Lottery revenues available to pay Lottery bond debt service are displayed in *Table III.2* column 1. The Lottery revenue bond debt service, as presented in *Table III.2* column 2, accounts for existing debt service, as of June 30, 2017, and the planned FY 2019 issuance in the amount of $199.9 million. The Commission estimates this sale will result in annual debt service payments of approximately $15.4 million starting in FY 2020, assuming a 4.5% interest rate[1] and a 20-year amortization period. The debt service on all future Lottery bonds are projected using a similar interest rate and term.

Table III.2 column 4 shows projected debt service for FY 2020 through FY 2027 resulting from the issuance of additional Lottery revenue bonds at the required coverage of four-times unobligated net Lottery revenues. Based on the assumptions provided above, there is a projected maximum of $1,162.0 million in Lottery bond capacity over the balance of the next four biennia.

[1] The assumed interest rate of 4.5% is the new standard rate that will be used in the Commission's annual reports. The 20-Bond Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa3 rating and Standard & Poor's AA- minus rating.

Table III.2

Lottery Debt Capacity Determination
($ Millions)

	1	2	3	4	5	6
Fiscal Year Ending June 30	**Estimated Lottery Revenues Available to Pay Debt Service**	**Debt Service on Bonds Outstanding As of June 30, 2017 and Planned FY 2019 Issuance***	**Maximum Amount of New Debt that can be Issued Within Required Debt Service Coverage Ratio**	**Projected Debt Service on Additional Issuance**	**Debt Service Coverage Ratio**	**Debt Service as a % of Lottery Revenues**
2018	$ 700.1	$ (128.0)	-	-	5.5	18%
2019	657.8	(124.7)	$ 26.2**	(2.0)	5.2	19%
2020	684.6	(136.6)	422.7	(32.5)	4.0	25%
2021	714.5	(136.5)	99.0	(7.6)	4.0	25%
2022	749.0	(138.5)	85.5	(6.6)	4.0	25%
2023	770.8	(138.2)	75.8	(5.8)	4.0	25%
2024	793.2	(138.2)	72.9	(5.6)	4.0	25%
2025	816.1	(138.2)	74.6	(5.7)	4.0	25%
2026	838.9	(135.7)	106.4	(8.2)	4.0	25%
2027	862.3	(126.2)	198.7	(15.3)	4.0	25%
Additional Lottery Debt Capacity:			**$ 1,162.0**			

*Debt service projection includes the planned Lottery bond issuance of $199.9 million in spring of 2019.
**Balance of 2017-19 Lottery bond capacity not allocated by 2017 Legislature.

C. *Other Capacity Considerations*

As is the case with General Fund supported debt capacity, the Commission recommends that projected Lottery debt be evenly spread out over time, in order to assure that the State does not overcommit this scarce resource. *Table III.3* displays the Commission's recommended approach to allocating Lottery debt capacity over time, an approach that has historically protected the high credit ratings on the State's Lottery Bonds in times when Lottery revenues have dropped sharply.

Table III.3

Recommended Allocation of Additional
Lottery Debt Capacity
($ Millions)

Fiscal Year Ending June 30th	Maximum Annual Amount of Additional Debt that Should be Issued*	Debt Service Coverage Ratio	Debt Service as a % of Lottery Revenues
2018	$-	5.5	18%
2019	26.2**	5.2	19%
2020	142.0	4.6	22%
2021	142.0	4.5	22%
2022	142.0	4.4	23%
2023	142.0	4.2	24%
2024	142.0	4.1	24%
2025	142.0	4.0	25%
2026	142.0	4.0	25%
2027	142.0	4.0	25%
Total Additional General Fund Capacity	**$ 1,162.0**		

*Does not includes the $199.9 million in planned Lottery bond issuance in spring of 2019.
**Balance of 2017-19 Lottery bond capacity not allocated by 2017 Legislature.

On occasion, the State has been required to issue a portion of its Lottery bonds on a taxable basis; generally, taxable Lottery bonds have funded economic development activities that do not fit into the Federal government's tax rules regarding "qualified" private activity. Issuance of Lottery debt on a taxable basis results in a higher overall interest rate than the tax-exempt rates assumed in the capacity calculation above. In addition, proposed changes in the Federal tax code that may reduce or eliminate tax-exemption could also further reduce long-term Lottery bond capacity, as these changes would increase the interest cost paid by the State to investors on future State bond issues.

Table III.4 illustrates the impact of changes to long-term interest rates assumptions in the Lottery debt capacity model. Based on current estimates of annual unobligated net Lottery revenues and the assumed long-term interest rate of 4.5%, the capacity of Lottery revenue to support additional bond issuance is calculated to be $1,162 million over the balance of the forecast period. A 1.0% (100 basis points) increase in the projected long-term interest rate on these bonds to 5.5% would reduce the maximum available capacity over this period by approximately $110.7 million; conversely, a reduction in the interest rate assumption by 1.0% to 3.5% would add roughly $135.5 million in capacity over the forecast period.

Table III.4

Forecast of Lottery Revenue Debt Capacity*
From FY 2018 to FY 2027
at Various Assumed Interest Rates
($ Millions)

	4.5 % Interest Rate (From *Table III.2*)	3.5 % Interest Rate (1% Decline)	5.5 % Interest Rate (1% Increase)
Total	$1,162.0	$1,297.5	$1,051.2
Difference from Base Case		135.5	(110.7)

*Does not includes the $199.9 million in planned Lottery bond issuance in spring of 2019.

As the recent past has demonstrated, OEA's revisions in projected long-term Lottery revenues have had a substantial impact on projections of future Lottery bond capacity. As shown in *Table III.5*, a 10% reduction in unobligated net Lottery revenues over the forecast period would reduce the available debt capacity by $280 million over the next four biennia.

Conversely, increases in projections of net Lottery proceeds would increase Lottery bond capacity substantially. As *Table IV.5* illustrates, a 10% increase in projected Lottery revenues would add $289 million to the long-term debt capacity forecast.

Table III.5

Forecast of Lottery Revenue Debt Capacity*
With Changing Lottery Revenues
($ Millions)

	Current Lottery Capacity Projection (From *Table III.2*)	10% Decrease in Unobligated Net Lottery Revenue	10% Increase in Unobligated Net Lottery Revenue
Total	$1,162.0	881.5	1,451.5
Difference from Base Case		(280.4)	289.5

*Does not include the $199.9 million in planned Lottery bond issuance in spring of 2019.

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IV. NET TAX-SUPPORTED DEBT

Net tax-supported debt (NTSD) is defined as all debt serviced by tax revenues of the State. Based on the approach taken by rating agencies, this definition encompasses General Fund-supported debt, as well as all Pension Obligation Bonds and Certificates of Participation that are characterized as self-supporting in Section III.B of this report, all Lottery revenue bonds and all State Highway revenue bonds. *Exhibit I.2* in the section titled "Bonding in Oregon," provides a comparison of the State's total outstanding gross debt, General Fund-supported debt, and net tax-supported debt as of June 30, 2017. The State's net tax supported debt, as of June 30, 2017, was $8.49 billion.

Lottery revenue bonds are included in the calculation of net tax-supported debt even though they are special obligations of the State with debt service for the bonds coming from non-tax resources, that is, discretionary lottery purchases. However, because Lottery bonds are also secured by a "moral obligation" pledge of the state and a statutory commitment to request appropriated funds for any deficiencies in reserves or inability to pay debt service, these bonds are considered tax-supported and included in rating agency calculations of net tax-supported debt.

Given the importance of Lottery revenue bonds to the State's overall capital planning process, Lottery revenue bond capacity is discussed separately in the previous section of this report.

The definition of net tax-supported debt omits a variety of other self-supporting debt obligations issued by the State that were designed to be self-supporting in all but the most extreme circumstances. General obligation bonds sold on behalf of the Oregon Veterans' Home Loan Program, the Pollution Control Loan Program, and the Oregon Housing and Community Services Department's Elderly and Disabled Mortgage Loan Program are examples of this category of self-supporting GO debt. These GO bond programs are expected to fully repay all GO bonds issued on their behalf from the loan revenue streams they receive over time from borrowers, while maintaining adequate loan reserves to cover any temporary shortfalls in loan repayments.

This same type of self-supporting financial structure is built into the Single and Multifamily Housing mortgage revenue bond loan programs and the Infrastructure Finance Authority's Bond Bank loan program, as well as all conduit revenue bonds sold by the State. While certain revenue and self-supporting GO bond debt programs are included on the State's gross debt balance sheet, these bond programs have a long history of paying their obligations with non-tax revenue resources and are therefore not included in the calculation of NTSD. While a large economic or natural disaster (e.g., a major seismic event) might temporarily impact loan repayments on some of these self-supporting loan programs (which is the reason that strong loan reserves are needed), it remains reasonable to exclude these programs from the NTSD calculation until such time that a State loan program actually requires the use of the State's tax resources to repay bonds issued on its behalf.

Table IV.1 lists the 2017-19 biennium net tax-supported debt authorizations approved by the 2017 Legislature. For purposes of this *2018 Legislative Update*, it is assumed that all authorized net tax-supported debt will be issued during the 2017-19 biennium. GO bonds issued for General Purposes (Article XI-Q); Higher Education facilities and Community College matching grants (Article XI-G); Public School Construction matching grants (Article XI-P); and Seismic Upgrade grants to schools (Article XI-M), along with Lottery Revenue Bonds make up the majority of new tax-supported debt planned for issuance this biennium.

Table IV.1

Net Tax-Supported Debt Authorizations
2017-19 Biennium

Type & Purpose	Authorized and Expected to Be Issued by June 30, 2019
General Obligation Bonds	
Community College Bonds (Article XI-G)	$ 103,185,000
Higher Education Facility Bonds (Article XI-G)	101,385,000
DEQ - Pollution Control Bonds (Article XI-H)	20,300,000
Seismic Upgrade Bonds for Public Schools (Article XI-M)	101,180,000
Seismic Upgrade Bonds for Public Safety Facilities (Article XI-N)	20,430,000
School Construction Bonds (Article XI-P)	100,985,000
DAS General Purpose GO's (Article XI-Q)	578,275,000
Total General Obligation Bonds	$1,025,740,000
Direct Revenue Bonds	
Lottery Revenue Bonds	199,860,000
Appropriation Credits	
DAS COPs (ORS 283 & 286A)	100,985,000
Total Net Tax-Supported Debt	$ 1,326,585,000

Two measures most commonly used by rating agencies and municipal analysts to gauge a state's overall debt burden include:

- Net Tax-Supported Debt Per Capita, and
- Net Tax-Supported Debt as a Percentage of Personal Income.

Prior to FY 2003, Oregon's debt burden was well below the 50-state medians as calculated by Moody's Investors Service. For the past 14 years, however, Oregon's debt burden per capita has exceeded national averages.

In their *2017 State Debt Medians* report (which uses calendar year 2016 data), Moody's determined the average NTSD per capita for the 50 states was $1,473 and the median was $1,006.[1] The average NTSD as a percentage of income was reported at 3.0% and the median at 2.5%. By comparison, Oregon's NTSD ranked 19th highest nationally in terms of net tax-supported debt outstanding at about $7.5 billion, but 14th highest in terms of net tax supported debt per capita at $1,842 and 11th in net tax-supported debt as a percentage of personal income at 4.4%.

The significant jump in Oregon's debt since FY 2003 was due to the issuance of $2 billion in pension obligation bonds, and the combined growth in issuance of Lottery and Highway User Tax revenue bonds to fund various economic development and transportation projects around the state.

[1] Moody's *2017 State Debt Medians* reflect NTSD as of the end of calendar year 2016.

As *Table IV.2* illustrates, at the end of FY 2017, net tax-supported debt totaled $8.49 billion with debt ratios of $2,050 per capita and 4.4% of personal income. Based on the issuance of an estimated $1.3 billion in authorized debt over the 2017-19 biennium, it is projected that the State's net tax-supported debt will increase to about $8.95 billion by the end of the 2019 fiscal year.

Table IV.2

Net Tax-Supported Debt Ratios[1]

	Fiscal Year Ending June 30th		
	FY 2017 (Actual)	**FY 2018 (Estimated)**	**FY 2019 (Estimated)**
Net Tax-Supported Debt (Billions)	$ 8.49	$ 8.29	$ 8.95
Population*	4,141,100	4,203,200	4,263,300
Personal Income (Billions)*	192.8	203.3	214.2
NTSD Per Capita	$2,050	$1,973	$2,099
NTSD as a % of Personal Income	4.4%	4.1%	4.2%
Pension Obligation Bonds Excluded			
NTSD Per Capita	$1,642	$1,594	$1,750
NTSD as a % of Personal Income	3.5%	3.3%	3.5%

*Source: Oregon Office of Economic Analysis Economic and Revenue Forecast, December 2017.

Rating agencies typically calculate total net tax-supported debt both with and without pension obligation bonds. In this way, they do not penalize states that issue POBs in comparison to other states that may have not issued POBs, yet may still have sizable unfunded pension liabilities. For Oregon, if pension obligation bonds are excluded from the NTSD calculation shown above in *Table IV.2*, the estimated FY 2019 debt burden would drop by $349 per capita and 0.7% as percentage of personal income.

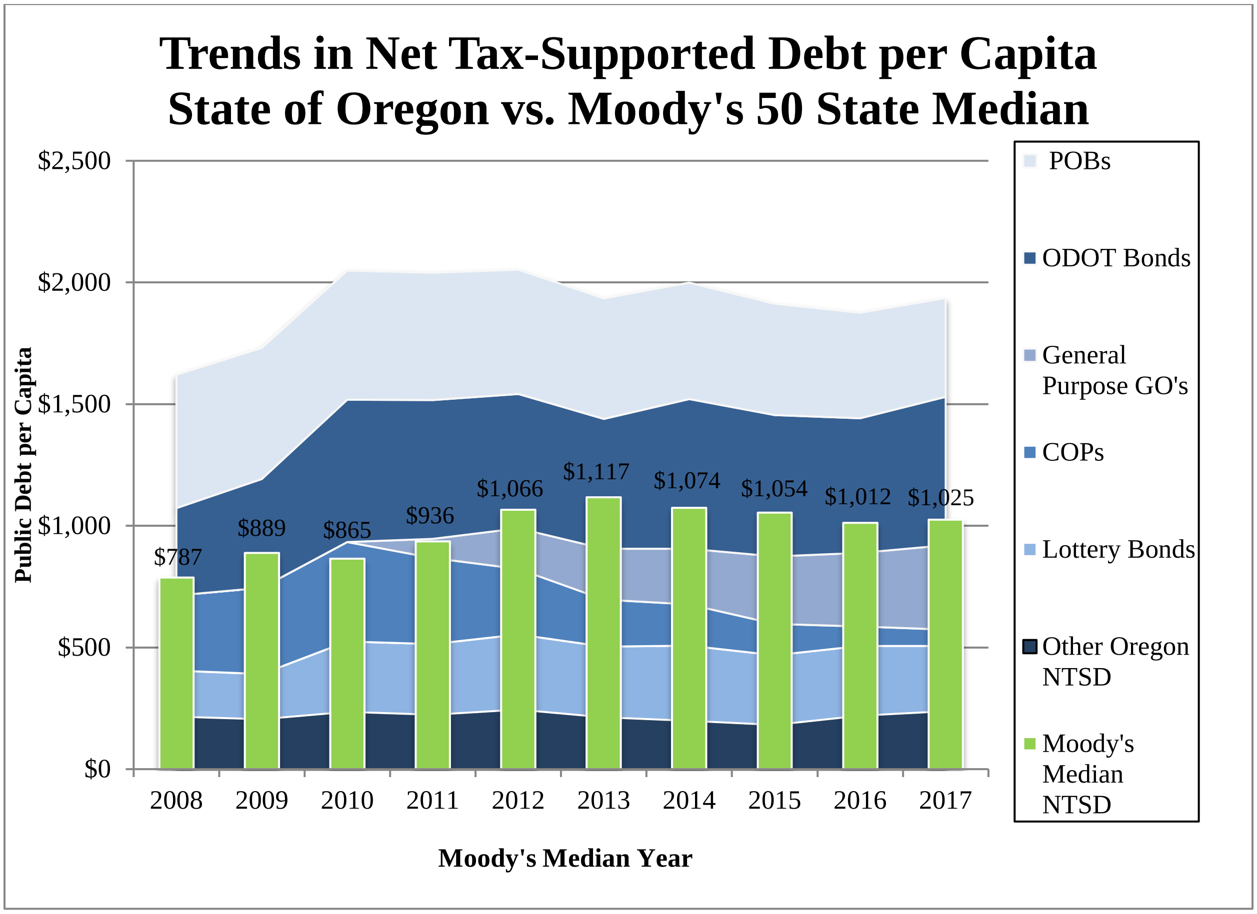
Debt Ratio Comparisons

At the time of this report, Oregon's general obligation debt was rated by Moody's as Aa1, and AA+ by both Standard & Poor's and Fitch Investors Service. *Exhibits IV.1a & IV.1b* compare Oregon's NTSD ratios over the past decade with the Moody's median ratios of all 50 states. Prior to FY 2003, Oregon's debt ratios compared favorably to the national averages, with Oregon generally having lower ratios than states with higher credit ratings. Since that time, the State has issued a substantial amount of new debt to address unfunded pension liabilities, economic

[1] FY 2018 and FY 2019 projections based on the issuance of $220 million and $1.11 billion of new tax-supported debt.

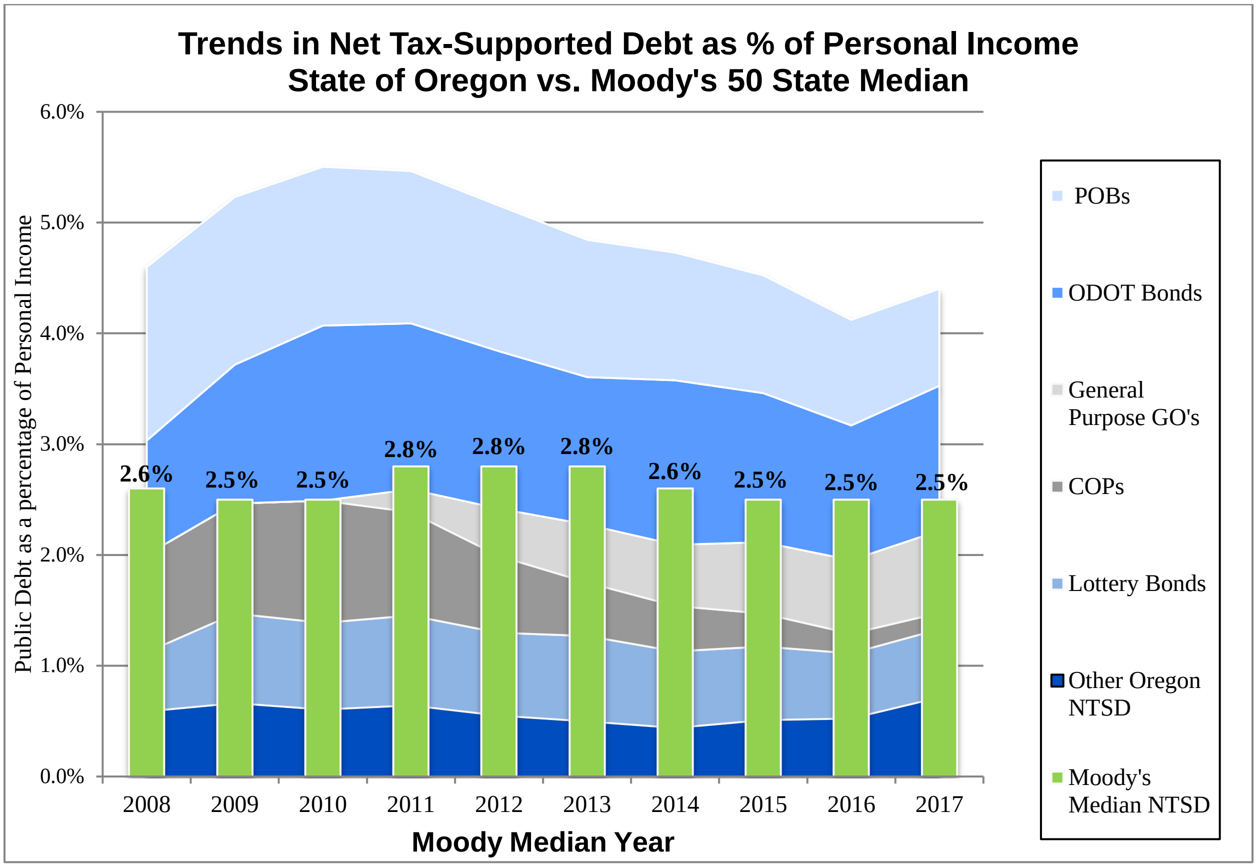
development, highway modernization, and public safety needs. As the charts show, Oregon's current per capita debt burden and debt as a percent of personal income is above Moody' national medians due to the aforementioned issuance of both POBs and Highway User Tax bonds for various Oregon Department of Transportation (ODOT) projects. *Exhibit IV.1a* and *Exhibit IV.1b* project Oregon's debt ratios over the next few years assuming the issuance of $1.33 billion in net tax-supported bonds authorized by the 2017 Legislature.

Exhibit IV.1a



Source: Moody's Median Reports, 2008-2017.

Exhibit IV.1b



Source: Moody's Median Reports, 2008-2017.

Since 2008, Standard & Poor's (S&P) has taken a more comprehensive approach to the tracking of overall state long-term liabilities; their reports include both the public indebtedness and the net pension liability of each state as reported in their Comprehensive Annual Financial Reports as part of their overall 50 state debt ratio analysis. *Table IV.3* displays an excerpt from S&P's most recent annual pension report, which still ranked Oregon's pension system funding as the 12th highest funded among the states as of the end of FY 2016, even after taking in to consideration the impact of the *Moro* decision.

The aforementioned S&P report also compares the combined public debt and unfunded pension liability ratio per capita for each state as compared to its gross state product, which provides great insight as to the portion of each state's financial resources are required to manage their overall state long-term liabilities. As *Table IV.4* shows, for FY ending 2016, the State of Oregon remained well below the national median for this debt measure, ranking 16th lowest overall among states.

Table IV.3

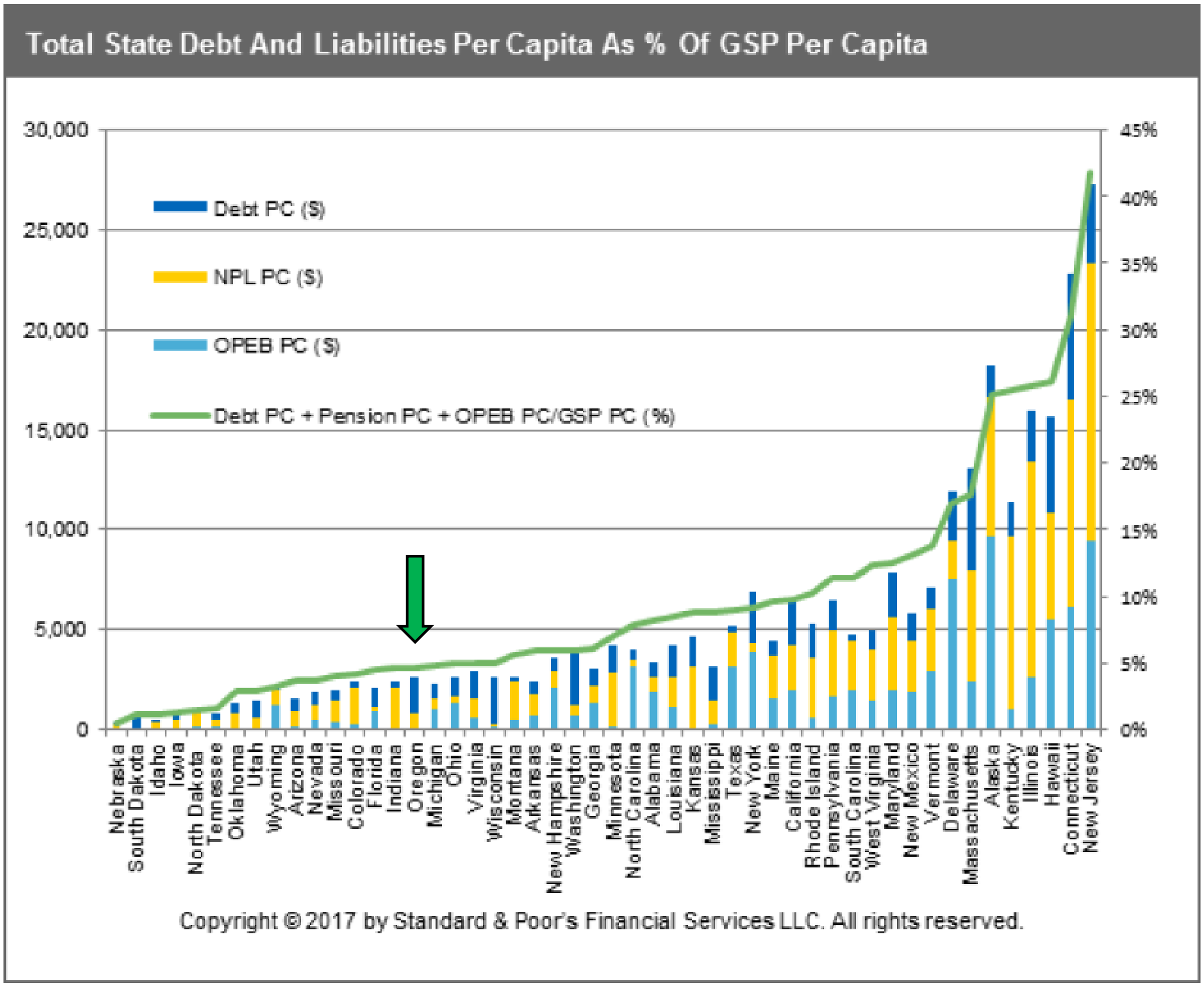
Standard & Poor's Rankings of State Debt, Pension, and OPEB Liabilities

(Ranked by PERS Funded Ratio, FY 2016)

Ranking	State	Pension Funded Ratio	Net Pension Liability (mil.)	Net Pension Liability per capita	Debt, pension and OPEB Liability per capita
1	Wisconsin	98.2%	$ 457	$ 79	$ 2,642
2	South Dakota	96.9	76	88	598
3	New York State	93.5	7,712	391	6,883
4	Tennessee	88.0	1,816	273	806
5	North Carolina	87.2	2,289	226	4,012
6	Idaho	87.2	547	325	472
7	Utah	85.7	1,525	500	1,483
8	Nebraska	85.5	426	223	242
9	Florida	85.9	4,535	220	2,049
10	Washington	83.8	4,028	553	3,818
11	Delaware	81.8	1,862	1,956	11,953
12	**Oregon**	**80.5**	**$ 2,963**	**$ 724**	**$ 2,583**
	50 State Median	**68.1%**	**$ 4,580**	**$ 1,102**	**$ 3,470**
	50 State Average	**68.1%**	**$ 15,200**	**$ 2,373**	**$ 5,493**

Source: Standard & Poor's, *U.S. State Pensions*: *Funded Ratios Declined Again in 2016*, October 18, 2017. Please note in the table above, the net pension liability used for each state is based on the amount reported in their Comprehensive Annual Financial Reports as of June 30, 2016, as now required by GASB. "OPEB" means Other Post-Employment Benefits, which generally include retiree health care benefits guaranteed for payment by a state.

Table V.4



Source: Standard & Poor's, *U.S. State Pensions*: *Funded Ratios Declined Again in 2016*, October 18, 2017. Please note in the table above, the net pension liability used for each state is based on the amount reported in their Comprehensive Annual Financial Reports as of June 30, 2016, as now required by GASB. "OPEB" means Other Post-Employment Benefits, which generally include retiree health care benefits guaranteed for payment by a state.

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VI. NON TAX-SUPPORTED DEBT

For several of the State's largest bonding programs, the majority of their bonds do not fall under the definition of either General Fund supported debt or net tax-supported as used in this report. These programs include:

- Veterans' Welfare General Obligation (GO) Bonds (Article XI-A);
- Higher Education Building Project GO Bonds (Article XI-F(1));
- OHCSD[1] Elderly & Disabled Housing Project GO Bonds (Article XI-1(2));
- OHCSD[1] Single-Family & Insured Multi-Family Revenue Bonds (ORS 456.661);
- Alternate Energy Project GO Bonds (Article XI-J); (63% of Total)
- Oregon School Bond Guaranty Program (Article XI-K);
- Oregon Infrastructure Authority Bond Bank Revenue Bonds; and
- Conduit or "Pass Through" Revenue Bond Programs.

These programs were designed and intended to be fully self-supporting from enterprise revenues or loan repayments and under normal circumstances are not expected to require a draw on General Fund or special tax revenues. Therefore, it is less meaningful to discuss their capacity in the same terms with which we discuss net tax-supported or General Fund supported debt programs. However, it is understandable that these programs cannot issue debt unconditionally without consequence because, with the exception of conduit revenue bonds, they represent an exposure to the financial resources and reputation of the State. Capacity for these programs is more appropriately judged by reflecting the need for sound management and lending practices, as well as careful consideration of the economic circumstances unique to each program. The Commission proposes that capacity for these programs is more appropriately based on ongoing review of constitutional and statutory limitations, program needs, sound program management practices, and biennial review and approval of debt program issuance rather than a specific dollar limit capacity.

A. *Conduit Revenue Bond Programs*

The State of Oregon has three actively operating conduit revenue bond programs. These programs operate under the auspices of the Oregon Facilities Authority, the Oregon Business Development Department and the Oregon Housing and Community Services Department.

Conduit revenue programs are viewed uniquely when discussing capacity concepts. These programs, although issued by Treasury, constitute no draw or contingent liability on any State of Oregon revenues. Debt service on these bonds is paid solely from revenues generated by the projects being financed or from other sources available to the conduit borrower. In no case is the credit of the State loaned or used for payment of any of the bonds. Further, the State is not responsible for expenses or costs incurred in connection with the issuance of the bonds. Therefore, capacity judgments should be reflected more in terms of market impact, beneficial interests of the State and prudent evaluation of participating conduit borrowers' ability to repay debt obligations.

[1] Oregon Housing and Community Services Department.

Table V.1

Debt Issuance Considerations for Non Tax-Supported Bond Programs

NON TAX-SUPPORTED DEBT PROGRAM	BASED ON:
Veterans' Welfare General Obligation Bonds *Article XI-A*	• Demand for loan program services; • Annual cash flow projections; • Legal limitations (8% of State TCV); • Governor's budgetary review; • Biennial Legislative Authorization; • Central debt management review.
Higher Education Building Project General Obligation Bonds *Article XI-F(1)*	• Need for capital building projects; • Revenue producing capacity of desired projects; • Projects are self-supporting without requiring any General Fund revenues to cover debt service; • Legal limitations (0.75% of State TCV); • Governor's budgetary review; • Biennial Legislative Authorization; • Central debt management review.
Alternate Energy Project General Obligation Bonds *Article XI-J*	• Local community/region energy needs; • Applicant screening; • Technical review; • Legal limitations (0.5% of State TCV); • Governor's budgetary review; • Biennial Legislative Authorization; • Central debt management review.
Oregon School Bond Guaranty Program General Obligation Bonds *Article XI-K*	• Maybe triggered if state has to pay district debt service; • State-Aid maybe intercepted for debt service payments; • May levy a district-specific or statewide property tax to repay bonds; • States full faith in credit; • Legal Limitation (0.5% of State TCV).
Infrastructure Finance Authority Bond Bank Program Revenue Bonds *ORS Chapter 285B*	• Municipality water and wastewater system needs; • Municipality infrastructure needs; • Legal limitations (0.5% of State TCV); • Governor's budgetary review; • Biennial Legislative Authorization; • Central debt management review.

Elderly & Disabled Housing Project General Obligation Bonds *Article XI-I(2)* and **Single-Family & Multi-Family Revenue Bonds** *ORS 456.661*	• Demand for mortgage program services; • Continued strict applicant screening and eligibility requirements; • Annual cash flow review; • Legal limitations; ▪ Elderly & Disabled (0.5% of State TCV) ▪ Single & Multifamily ($2 billion) • Governor's budgetary review; • Biennial Legislative Authorization; • Central debt management review.
Conduit Revenue Bond Programs *Oregon Facilities Authority* *Industrial Development Revenue Bonds* *Housing Development Revenue Bonds* *Beginning & Expanding Farmer Loan Revenue Bonds*	• Conduit borrower's ability to pay debt service on intended projects; • Evaluation of market impact of conduit issues on other State issues; • Biennial Legislative Authorization; • Central debt management review.

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APPENDIX A

Supporting Tables and Graphs

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Exhibit A.1

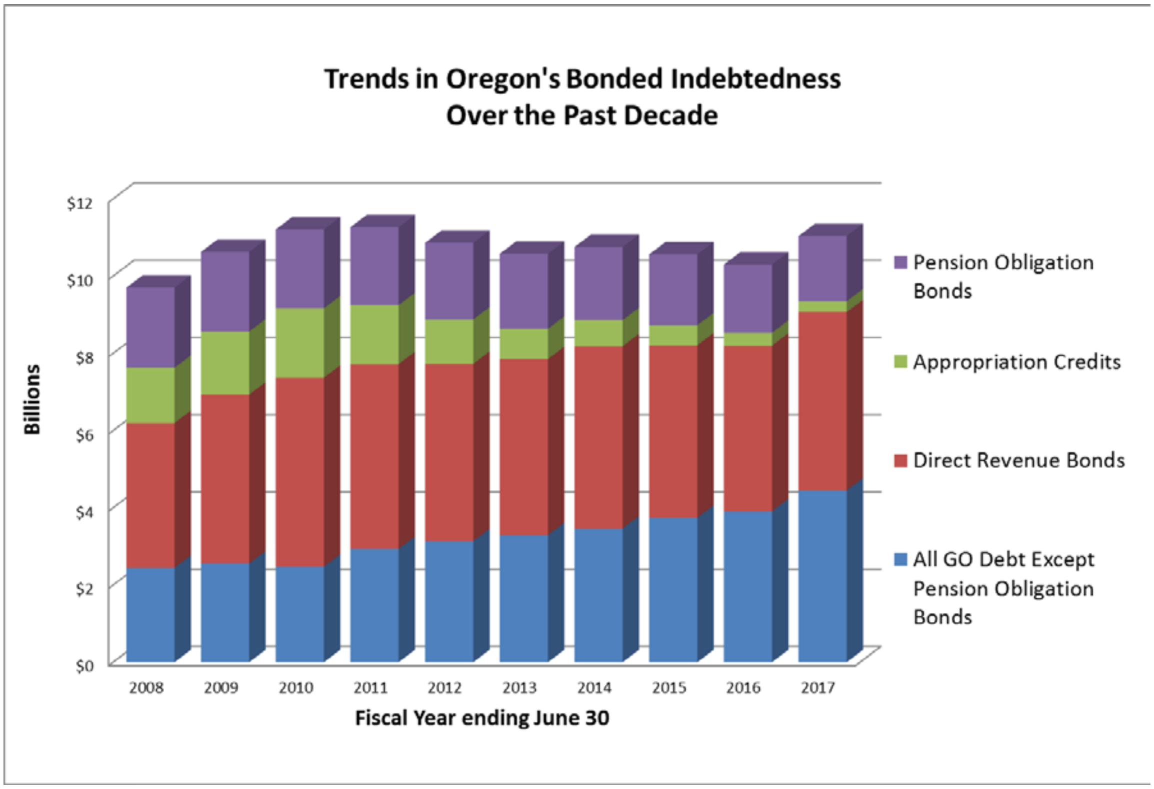

Exhibit A.2

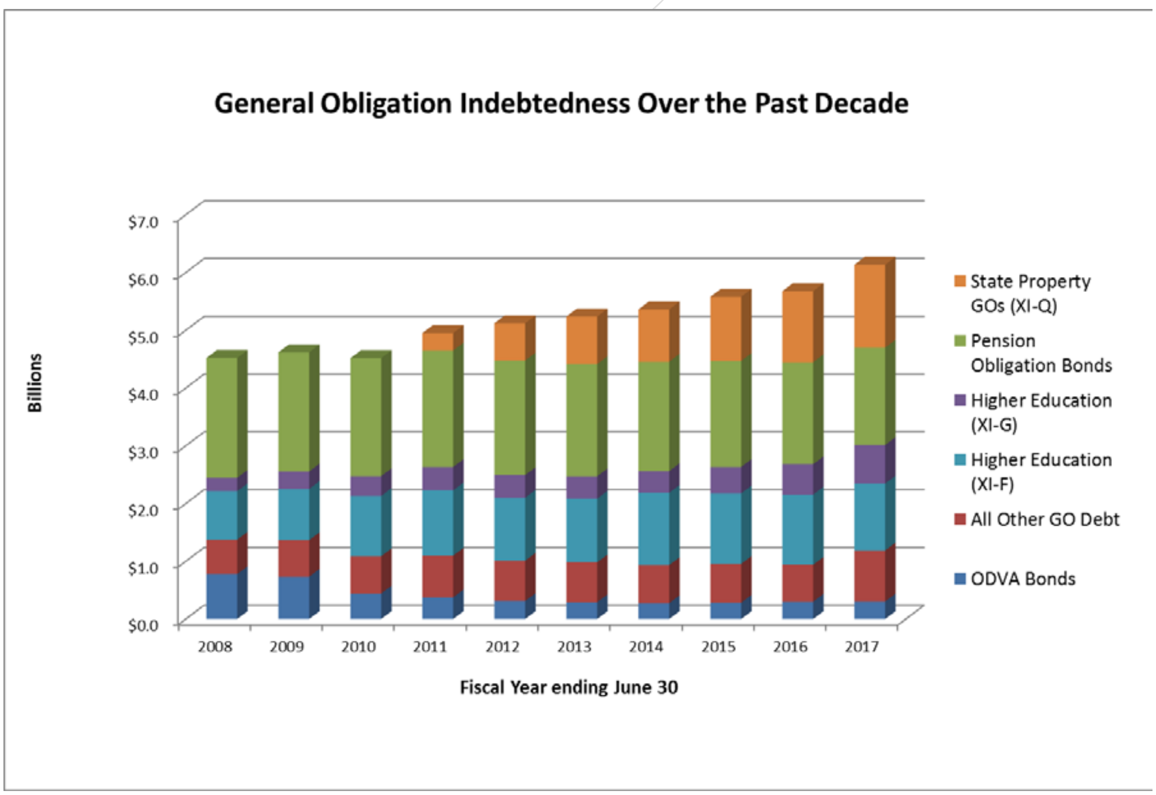

Exhibit A.3

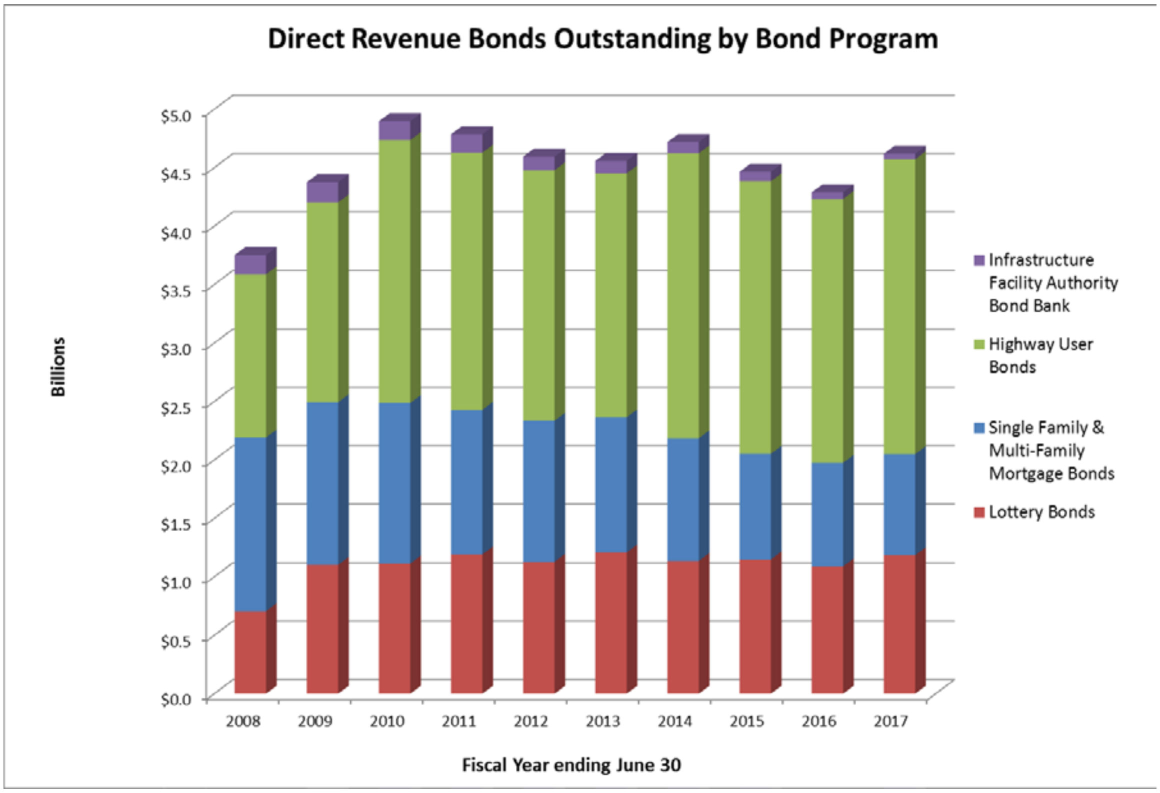

Exhibit A.4

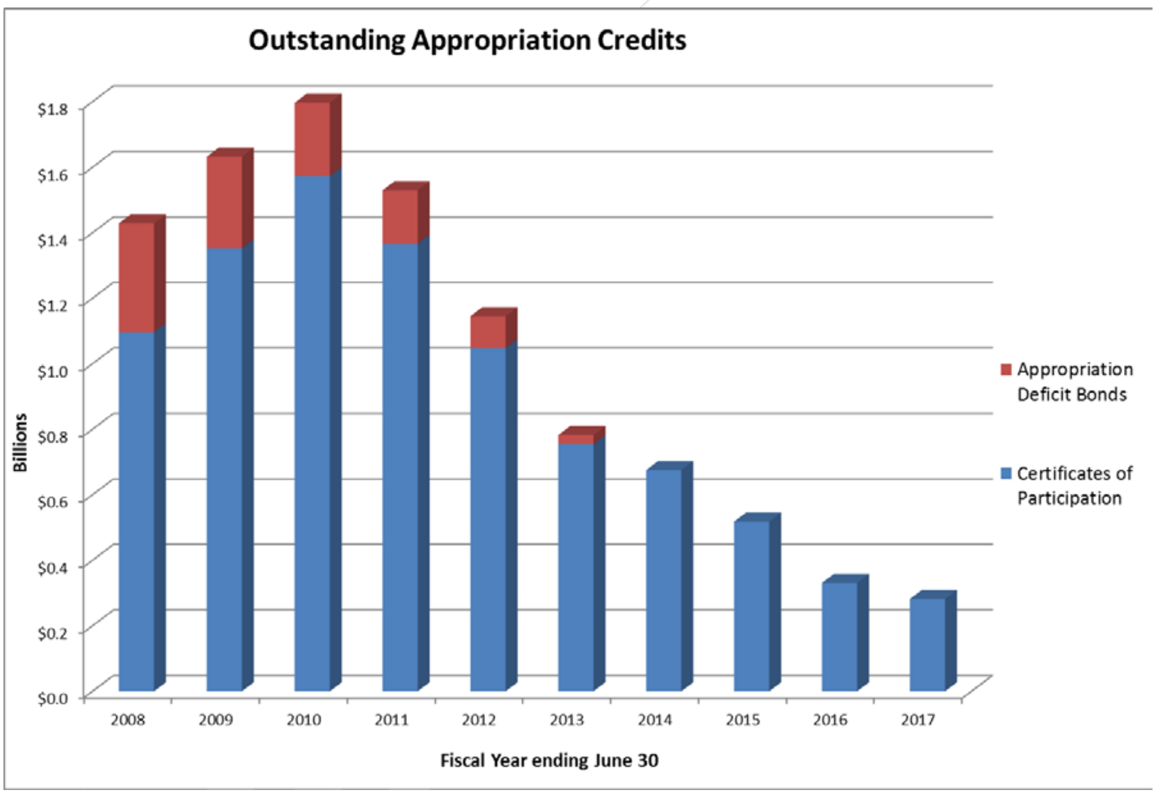

Table A-1

State of Oregon Bonding and Appropriation Credit Programs

Classification of Debt for Capacity and Debt Burden Determinations

Active

State of Oregon Bonding Programs

- **General Obligation**
- **Direct Revenue**
- **Appropriation Credit**

General Fund-Supported Debt Programs

General Obligation Bond Programs:
- State Highway - Article XI Sec 7
- Higher Education Facility – Article XI-G
- Community College Bonds – Article XI-G
- Pollution Control Bonds – Article XI-H (42%)
- Alternate Energy Bonds – Article XI-J (37%)
- Oregon Opportunity Bonds – Article XI-L
- Seismic Rehab – Public Education Bldgs. (Article XI-M)
- Seismic Rehab – Emergency Services Bldgs. (Article XI-N)
- School District Capital Costs – Article XI-P
- State Property Bonds Article XI-Q (85%)
- Pension Obligation Bonds – Article XI-O (32%)

***Direct Revenue Bond Programs*:**

Appropriation Credits
- Appropriation Bonds – SB 856 – 2003 Legislature
- Certificates of Participation – ORS 283.085 to 283.092 (85%)

Non Tax-Supported Debt Programs

General Obligation Bond Programs:
- Veterans' Welfare – Article XI-A
- Elderly & Disabled Housing Bonds – Article XI-I(2)
- Higher Education Building Bonds – Article XI-F(1)
- Pollution Control Bonds – Article-H (58%)
- Alternate Energy Bonds – Article XI-J (63%)
- State Property Bonds – Article XI-Q (15%)
- Pension Obligation Bonds – Article XI-O (68%)

***Direct Revenue Bond Programs*:**
- Single & Multi-Family Housing Bonds – ORS 456.661
- Oregon Infrastructure Authority Bond Bank – ORS 285B.482

Conduit Revenue Bond Programs:
- Economic & Industrial Development Bonds – ORS 285.310 to 285.397
- Oregon Facilities Authority – ORS Ch. 289
- Housing Development Revenue Bonds – ORS 456.692

Net Tax-Supported Debt

All General Fund-Supported Debt Programs

Plus

***Direct Revenue Bond Programs*:**
- Lottery Revenue Programs – ORS 286A.563 to 286A.585
- Highway User Tax Bonds – ORS 367.620

Table A-2

Net Tax-Supported Debt Authorizations for 2017-2019 Biennium[1]

Net Tax-Supported Debt Programs	2017-2019 Biennium Authorization	FY 2018 Issuance	FY 2019 Planned Issuance	Remaining Authorization
Community College Bonds Article XI-G	103,185,000	0	103,185,000	0
Dept. Of Higher Education Facility Bonds (Article XI-G)	101,385,000	0	101,385,000	0
DEQ – Pollution Control Bonds (Article XI-H)	20,300,000	5,000,000	15,300,000	0
Oregon Opportunity Bonds[2] Article XI-L	0	0	0	0
Seismic Rehab – Public Education Buildings (Article XI-M)	101,180,000	25,400,000	75,780,000	0
Seismic Rehab – Emergency Services Buildings (Article XI-N)	20,430,000	10,200,000	10,230,000	0
Dept. of Education – School Construction Bonds (Article XI-P)	100,985,000	0	100,985,000	0
State Property Bonds[3] Article XI-Q – 82%	563,839,225	179,050,000	384,789,225	0
Pension Obligation Bonds[4] Article XI-O	0	0	0	0
Lottery Revenue Bonds ORS 286.563-585	199,860,000	0	199,860,000	0
Highway User Tax Bonds[5] ORS 376.620	0	0	0	0
Dept. of Transportation – State Highway Bonds (Article XI (sect7))	0	0	0	0
Certificate of Participation Bonds ORS 283.025-092	115,420,775	0	115,420,775	0
State Appropriation Bonds (SB 856 – 2003 Legislature)	0	0	0	0
Total Net Tax-Supported Debt Authorizations	**$1,326,585,000**	**$219,650,000**	**$1,106,935,000**	**$0**

Note: May not foot due to rounding

[1] Amounts as authorized by the 79th Oregon Legislative Assembly – 2017 Regular Session. Authorization does not guarantee issuance of bonds or appropriation credits in these amounts. For the *2018 Legislative Update*, it is assumed that a portion of the authorization will be issued for certain programs in fiscal year 2018 and the remainder in fiscal year 2019.
[2] Oregon Opportunity bonds are limited by Article XI-L to $200 million net proceeds. There is no additional authorization.
[3] State Property Bonds: SB 5505, Legislature approved $563,839,225 for the 2017-19 biennium. Currently 82% is considered net-tax supported.
[4] Pension Obligation bonds are constitutionally limited to 1% of RMV or $559,127,126,580. While there is no Constitutional authorization there is no current intention to issue additional bonds.
[5] Highway User Tax Bonds: SB 5505 Legislature approved $0 for the 2017-19 biennium.

Table A-3

General Fund Supported Debt
Annual Debt Service Requirements[1]

Fiscal Year (ending June 30th)	State Appropriation Budget Deficit Bonds	Certificates of Participation (GF Supported)	Community College Bonds (XI-G)	Higher Education Facilities Bonds (XI-G)	Oregon Opportunity Bonds (OHSU)	Pension Obligation Bonds (General Fund Supported)	Seismic Rehabilitation of Public Education Bldgs. (XI-M)	Seismic Rehabilitation of Emergency Services Bldgs. (XI-N)	State Property (XI-Q) General Fund Supported
2018	-	$46,827,031	$12,917,038	$49,228,417	$15,430,825	$61,110,455	$13,988,496	$3,573,637	$129,949,012
2019	-	36,082,760	14,403,498	54,303,944	15,435,025	63,707,829	13,995,638	3,585,206	130,215,267
2020	-	28,553,772	14,423,229	54,027,153	15,434,250	66,415,515	14,004,688	3,580,606	134,222,448
2021	-	21,696,529	14,342,475	53,060,260	15,437,250	69,238,461	13,996,188	3,579,656	131,946,620
2022	-	21,563,122	14,330,356	53,050,584	15,437,125	72,181,742	13,996,638	3,582,206	112,063,951
2023	-	20,383,224	14,439,769	52,979,370	15,432,250	75,248,863	13,997,513	3,580,106	107,200,467
2024	-	19,704,419	14,456,444	52,830,619	8,041,125	78,446,564	13,993,888	3,587,188	101,186,836
2025	-	14,573,169	14,451,819	52,824,140	-	81,781,536	13,992,525	3,573,488	92,394,283
2026	-	14,402,889	14,445,919	52,183,501	-	85,257,296	13,990,738	3,585,263	90,236,718
2027	-	14,106,824	14,358,669	52,015,127	-	88,879,815	13,990,175	3,583,038	80,472,620
2028	-	13,960,956	14,355,491	50,314,108	-	-	13,990,025	3,581,181	74,157,983
2029	-	13,797,413	13,819,113	46,920,872	-	-	13,997,925	3,579,081	72,135,803
2030	-	13,639,673	13,433,472	44,765,635	-	-	13,995,275	3,577,581	68,309,576
2031	-	13,119,691	13,427,581	43,181,431	-	-	13,996,200	3,581,219	61,132,300
2032	-	12,943,842	13,427,444	41,579,267	-	-	13,989,575	3,574,619	54,941,619
2033	-	12,760,249	13,426,269	38,229,965	-	-	13,995,756	3,580,144	50,719,948
2034	-	12,576,414	13,426,716	38,259,108	-	-	13,999,550	3,577,519	45,262,695
2035	-	12,377,953	10,107,328	35,812,597	-	-	13,994,806	3,575,788	42,994,545
2036	-	-	10,105,019	35,729,092	-	-	12,526,400	2,203,125	37,457,236
2037	-	-	7,606,709	32,448,297	-	-	9,033,325	1,968,750	27,995,953
2038	-	-	7,614,219	31,881,125	-	-	-	-	18,706,383
2039	-	-	5,738,625	30,400,375	-	-	-	-	17,949,288
2040	-	-	5,731,500	27,271,125	-	-	-	-	6,228,105
2041	-	-	1,631,250	24,694,125	-	-	-	-	6,227,080
2042	-	-	1,627,500	20,320,500	-	-	-	-	5,015,325
2043	-	-	1,634,875	10,818,875	-	-	-	-	-
2044	-	-	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-	-	-
2047	-	-	-	-	-	-	-	-	-
2048	-	-	-	-	-	-	-	-	-
Program Totals	-	$343,069,932	$289,682,324	$1,079,129,611	$100,647,850	$742,268,076	$273,465,321	$68,609,400	$1,699,122,061

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all General Fund Supported debt issued through June 30, 2017.

Table A-3 (Continued)

Fiscal Year (ending June 30th)	Pollution Control Bonds (General Fund Supported portion)	Energy Bonds (General Fund Supported**)**	**Total General Fund Supported Debt Service**
2018	$1,868,206	$8,342,565	**$354,687,301**
2019	1,931,397	8,260,301	**352,350,390**
2020	1,793,258	7,845,216	**350,720,760**
2021	1,721,618	8,627,836	**344,064,694**
2022	1,447,487	6,681,714	**324,753,700**
2023	1,444,024	5,795,741	**320,913,351**
2024	1,386,402	5,398,546	**309,446,756**
2025	1,054,160	4,748,506	**289,801,825**
2026	1,057,526	4,762,467	**290,326,941**
2027	842,265	4,350,996	**282,994,028**
2028	843,654	4,257,493	**185,855,890**
2029	548,137	4,034,856	**179,223,449**
2030	550,452	3,230,193	**171,896,233**
2031	337,250	2,635,829	**161,798,127**
2032	338,205	1,755,673	**152,936,493**
2033	336,777	746,017	**144,172,500**
2034	-	519,670	**138,000,671**
2035	-	-	**129,242,892**
2036	-	-	**108,390,122**
2037	-	-	**89,424,034**
2038	-	-	**60,248,852**
2039	-	-	**56,135,663**
2040	-	-	**41,279,230**
2041	-	-	**34,602,705**
2042	-	-	**29,010,825**
2043	-	-	**14,503,750**
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
Program Totals	$17,500,817	$81,933,621	**$4,916,781,182**

Note: May not foot due to rounding.

Table A-4

General Fund Supported Debt
Total Principal and Interest Debt Service Requirements[1]

Fiscal Year (ending June 30th)	Principal	Interest	Total
2018	$189,108,228	$165,585,662	$354,693,891
2019	199,204,272	153,152,708	352,356,980
2020	206,617,666	144,103,094	350,720,760
2021	210,370,760	133,693,934	344,064,694
2022	200,500,354	124,253,346	324,753,700
2023	206,743,150	114,170,201	320,913,351
2024	205,352,800	104,093,956	309,446,756
2025	195,762,400	94,039,425	289,801,825
2026	206,375,100	83,951,841	290,326,941
2027	209,808,250	73,185,778	282,994,028
2028	123,661,150	62,194,740	185,855,890
2029	122,895,000	56,328,449	179,223,449
2030	121,491,900	50,404,333	171,896,233
2031	117,297,850	44,500,277	161,798,127
2032	114,004,250	38,932,243	152,936,493
2033	110,740,550	33,431,950	144,172,500
2034	109,979,000	28,021,671	138,000,671
2035	106,593,800	22,649,092	129,242,892
2036	90,992,300	17,397,822	108,390,122
2037	76,388,900	13,035,134	89,424,034
2038	50,733,100	9,515,752	60,248,852
2039	49,091,400	7,044,263	56,135,663
2040	36,567,500	4,711,730	41,279,230
2041	31,588,100	3,014,605	34,602,705
2042	27,496,500	1,514,325	29,010,825
2043	14,150,000	353,750	14,503,750
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
Totals	**$3,333,514,280**	**$1,583,280,082**	**$4,916,794,361**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all General Fund Supported debt issued through June 30, 2017.

Table A-5

Net Tax-Supported Debt
Annual Debt Service Requirements[1]

Fiscal Year (ending June 30th)	State Appropriation Budget Deficit Bonds	Certificates of Participation	Community College Bonds (XI-G)	Higher Education Facilities Bonds (XI-G)	Oregon Opportunity Bonds (OHSU)	Pension Obligation Bonds (XI-O)	Highway User Tax Revenue Bonds	Lottery Revenue Bonds	Energy Bonds (GF Supported portion)	State Property Bonds (Article XI-Q) (GF Supported Portion)
2018	-	55,090,625	$12,917,038	$49,228,417	$15,430,825	$190,970,172	$164,316,370	$127,955,777	8,349,155	$158,474,405
2019	-	42,450,306	14,403,498	54,303,944	15,435,025	199,086,967	176,115,734	124,675,857	8,266,891	158,799,106
2020	-	33,592,673	14,423,229	54,027,153	15,434,250	207,548,485	176,369,301	121,269,883	7,845,216	163,685,912
2021	-	25,525,328	14,342,475	53,060,260	15,437,250	216,370,191	177,194,281	121,139,338	8,627,836	160,910,513
2022	-	25,368,379	14,330,356	53,050,584	15,437,125	225,567,942	178,776,358	123,180,487	6,681,714	136,663,355
2023	-	23,980,263	14,439,769	52,979,370	15,432,250	235,152,696	179,421,934	122,809,902	5,795,741	130,732,277
2024	-	23,181,670	14,456,444	52,830,619	8,041,125	245,145,513	179,741,721	122,803,946	5,398,546	123,398,581
2025	-	17,144,905	14,451,819	52,824,140	-	255,567,300	180,076,632	122,803,422	4,748,506	112,675,955
2026	-	16,944,575	14,445,919	52,183,501	-	266,429,051	179,943,083	120,314,452	4,762,467	110,044,778
2027	-	16,596,264	14,358,669	52,015,127	-	277,749,421	180,295,890	110,881,050	4,350,996	98,137,341
2028	-	16,424,654	14,355,491	50,314,108	-	-	180,348,949	92,532,191	4,257,493	90,436,564
2029	-	16,232,251	13,819,113	46,920,872	-	-	177,567,818	79,383,575	4,034,856	87,970,491
2030	-	16,046,675	13,433,472	44,765,635	-	-	177,075,599	65,351,625	3,230,193	83,304,361
2031	-	15,434,931	13,427,581	43,181,431	-	-	178,364,079	55,774,488	2,635,829	74,551,586
2032	-	15,228,049	13,427,444	41,579,267	-	-	177,605,177	36,630,650	1,755,673	67,001,974
2033	-	15,012,058	13,426,269	38,229,965	-	-	177,771,779	34,843,650	746,017	61,853,595
2034	-	14,795,781	13,426,716	38,259,108	-	-	175,983,954	22,198,500	519,670	55,198,408
2035	-	14,562,298	10,107,328	35,812,597	-	-	177,083,261	22,196,000	-	52,432,372
2036	-	-	10,105,019	35,729,092	-	-	90,849,500	12,866,000	-	45,679,557
2037	-	-	7,606,709	32,448,297	-	-	93,351,500	12,862,500	-	34,141,406
2038	-	-	7,614,219	31,881,125	-	-	95,956,000	-	-	22,812,663
2039	-	-	5,738,625	30,400,375	-	-	98,659,875	-	-	21,889,375
2040	-	-	5,731,500	27,271,125	-	-	32,060,000	-	-	7,595,250
2041	-	-	1,631,250	24,694,125	-	-	33,340,000	-	-	7,594,000
2042	-	-	1,627,500	20,320,500	-	-	34,675,000	-	-	6,116,250
2043	-	-	1,634,875	10,818,875	-	-	-	-	-	-
2044	-	-	-	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-	-	-	-
2047	-	-	-	-	-	-	-		-	-
2048	-	-	-	-	-	-	-	-	-	-
Program Totals	**$0**	**$403,611,684**	**$289,682,324**	**$1,079,129,611**	**$100,647,850**	**$2,319,587,738**	**$3,672,943,794**	**$1,652,473,292**	**$82,006,800**	**$2,072,100,075**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Net Tax-Supported debt issued through June 30, 2017.

Table A-5 (Continued)

Net Tax-Supported Debt Annual Debt Service Requirements[1]

Fiscal Year (ending June 30th)	Seismic Rehab Public Ed Bldgs. (XI-M)	Seismic Rehab Emergency Services Bldgs. (XI-N)	State Highway GO Bonds (XI-Sec7)	Pollution Control Bonds (XI-H)	Total Net Tax-Supported Debt
2018	$13,988,496	$3,573,637	$2,050,096	$1,868,206	**$655,223,042**
2019	13,995,638	3,585,206	2,048,150	1,931,397	**659,509,528**
2020	14,004,688	3,580,606	2,046,550	1,793,258	**653,398,844**
2021	13,996,188	3,579,656	2,047,600	1,721,618	**646,227,112**
2022	13,996,638	3,582,206	2,049,200	1,447,487	**630,515,801**
2023	13,997,513	3,580,106	2,049,600	1,444,024	**626,742,226**
2024	13,993,888	3,587,188	2,048,800	1,386,402	**615,469,673**
2025	13,992,525	3,573,488	2,046,800	1,054,160	**595,253,614**
2026	13,990,738	3,585,263	2,049,125	1,057,526	**593,126,162**
2027	13,990,175	3,583,038	2,045,375	842,265	**576,660,408**
2028	13,990,025	3,581,181	2,049,375	843,654	**461,200,729**
2029	13,997,925	3,579,081	2,046,000	548,137	**438,609,680**
2030	13,995,275	3,577,581	2,050,125	550,452	**416,730,458**
2031	13,996,200	3,581,219	2,046,625	337,250	**398,251,933**
2032	13,989,575	3,574,619	2,045,500	338,205	**369,456,527**
2033	13,995,756	3,580,144	2,046,500	336,777	**359,039,738**
2034	13,999,550	3,577,519	2,049,375	-	**338,402,492**
2035	13,994,806	3,575,788	2,049,000	-	**330,706,498**
2036	12,526,400	2,203,125	2,050,250	-	**212,105,622**
2037	9,033,325	1,968,750	2,048,000	-	**195,638,034**
2038	-	-	2,047,125	-	**156,204,852**
2039	-	-	2,047,375	-	**154,795,538**
2040	-	-	2,048,500	-	**73,339,230**
2041	-	-	2,050,250	-	**67,942,705**
2042	-	-	2,047,500	-	**63,685,825**
2043	-	-	2,050,000	-	**14,503,750**
2044	-	-	-	-	-
2045	-	-	-	-	-
2046	-	-	-	-	-
2047	-	-	-	-	-
2048	-	-	-	-	-
Program Totals	**$273,465,321**	**$68,609,400**	**$53,252,796**	**$17,500,817**	**$12,253,050,875**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Net Tax-Supported debt issued through June 30, 2017.

Table A-6

Net Tax-Supported Debt
Total Principal and Interest Debt Service Requirements[1]

Fiscal Year (ending June 30th)	Principal	Interest	Total
2018	$414,537,578	$399,077,162	813,614,741
2019	445,694,472	377,784,622	823,479,094
2020	465,525,616	358,469,662	823,995,278
2021	485,717,810	336,604,924	822,322,734
2022	494,024,554	314,476,852	808,501,406
2023	519,869,150	290,308,719	810,177,869
2024	539,821,100	264,559,266	804,380,366
2025	551,835,800	237,485,251	789,321,051
2026	585,055,100	209,050,877	794,105,977
2027	604,597,150	178,597,586	783,194,736
2028	330,909,450	146,569,861	477,479,311
2029	324,126,900	130,317,468	454,444,368
2030	317,613,500	114,111,743	431,725,243
2031	313,763,800	97,907,418	411,671,218
2032	299,298,600	82,218,283	381,516,883
2033	302,813,500	67,359,885	370,173,385
2034	296,261,350	52,076,855	348,338,205
2035	303,870,000	36,274,325	340,144,325
2036	196,090,000	24,237,943	220,327,943
2037	184,055,000	17,728,487	201,783,487
2038	148,245,000	12,066,131	160,311,131
2039	150,665,000	8,070,625	158,735,625
2040	69,820,000	4,886,375	74,706,375
2041	66,180,000	3,129,625	69,309,625
2042	63,220,000	1,566,750	64,786,750
2043	14,150,000	353,750	14,503,750
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
Totals	**$8,487,760,430**	**$3,765,290,445**	**$12,253,050,875**

Note: May not foot due to rounding

[1] Includes annual fiscal year debt service requirements on all Net Tax-Supported debt issued through June 30, 2017.

Table A-7[1]

Annual Debt Service Requirements for Lottery Bonds Outstanding

Fiscal Year (ending June 30th)	$440,345,000 2009 Series A Portland Light Rail Project, Connect Oregon II, Oregon Street Car Project, Hillsboro Parking Project, OUS Deferred Maintenance	$40,825,000 2009 Series D Port of Newport - NOAA Fleet, Gilchrist Forest, Low-Income Housing, Umatilla Aquafier	$34,195,000 2010 Series A Port of Morrow, Port of Tillamook, Port of Coos Bay, Pendleton Round-Up, Construction & Maintain Court Facilities, Blue Mountain Community College, Mt. Hood Community College, Clatsop Community College, Low-Income Housing	$129,250,000 2011 Series A DAS - Port of Tillamook, DAS - Lane Transit District, Community Colleges & Workforse Development Dept., Connect Oregon III, Oregon University System	$23,795,000 2011 Series B Advance Refunding - Refunding Various Series (1998 - 2009)	$25,830,000 2011 Series C Oregon Business Development Dept. and Oregon Housing & Community Services Dept.	$18,855,000 2012 Series A DAS, Oregon University System, and Dept. of Forestry	$53,535,000 2012 Series B Advance Refunding - Refunding Various Series (2002A, 2002C, 2003A, 2004B, 2005A)	$2,750,000 2012 Series C DAS, Oregon University System, and Water Resources	$122,500,000 2013 Series A Oregon University System, Community College and Workforce Dept., and Transportation	$28,140,000 2013 Series B DAS, Business Oregon, Oregon University System, Community College and Workforce Dept., and Housing & Community Services	$71,075,000 2013 Series C Advance Refunding - Refunding Various Series (2001B, 2002B, 2003B, 2004A, 2005B, 2005C)
2018	20,635,000	1,875,000	1,880,000	-	-	-	475,000	10,165,000	445,000	-	6,475,000	10,165,000
2019	21,620,000	1,970,000	1,935,000	-	10,685,000	-	945,000	4,935,000	-	-	6,565,000	1,805,000
2020	-	2,070,000	2,005,000	-	12,400,000	-	985,000	1,450,000	-	1,990,000	4,680,000	1,840,000
2021	-	-	-	-	710,000	12,270,000	1,035,000	1,505,000	-	6,850,000	-	1,875,000
2022	-	-	-	-	-	13,560,000	1,085,000	1,570,000	-	7,180,000	-	1,915,000
2023	-	-	-	1,965,000	-	-	-	1,635,000	-	7,530,000	-	1,960,000
2024	-	-	-	2,065,000	-	-	-	1,715,000	-	7,905,000	-	2,010,000
2025	-	-	-	2,175,000	-	-	-	1,800,000	-	8,300,000	-	2,065,000
2026	-	-	-	2,850,000	-	-	-	-	-	8,715,000	-	-
2027	-	-	-	1,620,000	-	-	-	-	-	9,150,000	-	-
2028	-	-	-	1,280,000	-	-	-	-	-	9,610,000	-	-
2029	-	-	-	-	-	-	-	-	-	10,080,000	-	-
2030	-	-	-	3,355,000	-	-	-	-	-	10,485,000	-	-
2031	-	-	-	3,170,000	-	-	-	-	-	11,010,000	-	-
2032	-	-	-	-	-	-	-	-	-	11,560,000	-	-
2033	-	-	-	-	-	-	-	-	-	12,135,000	-	-
2034	-	-	-	-	-	-	-	-	-	-	-	-
2035	-	-	-	-	-	-	-	-	-	-	-	-
2036	-	-	-	-	-	-	-	-	-	-	-	-
2037	-	-	-	-	-	-	-	-	-	-	-	-
2038	-	-	-	-	-	-	-	-	-	-	-	-
2039	-	-	-	-	-	-	-	-	-	-	-	-
2040	-	-	-	-	-	-	-	-	-	-	-	-
2041	-	-	-	-	-	-	-	-	-	-	-	-
2042	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**42,255,000**	**5,915,000**	**5,820,000**	**18,480,000**	**23,795,000**	**25,830,000**	**4,525,000**	**24,775,000**	**445,000**	**122,500,000**	**17,720,000**	**23,635,000**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Lottery debt issued through June 30, 2017.

Table A-7[1] (Continued)

Annual Debt Service Requirements for Lottery Bonds Outstanding

$18,625,000 2014 Series A Advance Refunding - Refunding Various Series (2006 Series A, 2007 Series A, 2009 Series A)	**$89,515,000 2014 Series B Advance Refunding - Refunding Various Series (2006 Series A, 2007 Series A, 2009 Series A)**	**$105,635,000 2014 Series C Advance Refunding - Refunding Various Series (2006 Series A, 2007 Series A, 2009 Series A)**	**$77,805,000 2015 Series A DAS, Busines Oregon, Dept. of Transportation, Water Resources**	**$38,945,000 2015 Series B DAS, Community College & Workforce Development, Busines Oregon, Dept. of Energy, Housing & Community Services**	**$117,995,000 2015 Series C Advance Refunding - Refunding Various Series (2007 Series C, 2008 Series A, 2011 Series A)**	**$164,230,000 2015 Series D Advance Refunding - Refunding Various Series (2009 Series A)**	**$22,710,000 2015 Series E Advance Refunding - Refunding Various Series (2009 Series D)**	**$17,195,000 2015 Series F Advance Refunding - Refunding Various Series (2010 Series A)**	**$93,000,000 2017 Series A Various Projects - Tax-Exempt**	**$73,740,000 2017 Series B Various Projects - Taxable**	**$63,675,000 2017 Series C Advance Redunding - Refunding Various Series (2010 A, 2011 A, 2012 A)**	**Total Outstanding Principal**
560,000	7,800,000	-	-	4,655,000	3,460,000	-	-	-	-	5,285,000	-	**$ 73,875,000**
1,680,000	7,085,000	-	-	4,720,000	3,635,000	-	-	-	-	5,425,000	-	**$ 73,005,000**
1,730,000	7,435,000	-	-	4,805,000	3,820,000	20,700,000	-	-	-	6,510,000	-	**$ 72,420,000**
1,780,000	7,810,000	-	-	4,915,000	4,010,000	21,730,000	2,060,000	-	-	6,630,000	2,045,000	**$ 75,225,000**
1,860,000	8,815,000	24,240,000	-	5,030,000	4,205,000	-	2,165,000	-	-	6,770,000	2,125,000	**$ 80,520,000**
1,950,000	9,250,000	25,455,000	-	5,165,000	16,410,000	-	2,270,000	2,110,000	-	6,935,000	1,095,000	**$ 83,730,000**
2,045,000	9,715,000	26,725,000	260,000	5,045,000	17,230,000	-	2,380,000	2,220,000	-	7,120,000	1,150,000	**$ 87,585,000**
2,130,000	10,205,000	28,065,000	5,460,000	-	18,090,000	-	2,505,000	2,325,000	-	7,320,000	1,205,000	**$ 91,645,000**
2,245,000	9,880,000	-	5,730,000	-	21,830,000	28,260,000	2,630,000	2,445,000	-	7,535,000	1,430,000	**$ 93,550,000**
2,360,000	10,370,000	-	6,020,000	-	15,035,000	29,670,000	2,760,000	2,570,000	-	7,770,000	1,330,000	**$ 88,655,000**
-	-	-	6,320,000	-	3,750,000	31,155,000	2,900,000	2,695,000	1,570,000	6,440,000	8,875,000	**$ 74,595,000**
-	-	-	6,635,000	-	-	32,715,000	3,040,000	2,830,000	8,290,000	-	1,465,000	**$ 65,055,000**
-	-	-	6,965,000	-	-	-	-	-	8,705,000	-	24,665,000	**$ 54,175,000**
-	-	-	7,315,000	-	-	-	-	-	9,140,000	-	16,680,000	**$ 47,315,000**
-	-	-	7,680,000	-	-	-	-	-	9,600,000	-	1,700,000	**$ 30,540,000**
-	-	-	8,065,000	-	-	-	-	-	10,080,000	-	-	**$ 30,280,000**
-	-	-	8,465,000	-	-	-	-	-	10,585,000	-	-	**$ 19,050,000**
-	-	-	8,890,000	-	-	-	-	-	11,110,000	-	-	**$ 20,000,000**
-	-	-	-	-	-	-	-	-	11,670,000	-	-	**$ 11,670,000**
-	-	-	-	-	-	-	-	-	12,250,000	-	-	**$ 12,250,000**
-	-	-	-	-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	-	-	-	-	**$ -**
18,340,000	**88,365,000**	**104,485,000**	**77,805,000**	**34,335,000**	**111,475,000**	**164,230,000**	**22,710,000**	**17,195,000**	**93,000,000**	**73,740,000**	**63,765,000**	**$ 1,185,140,000**

Note: May not foot due to rounding

[1] Includes annual fiscal year debt service requirements on all Lottery debt issued through June 30, 2017.

Table A-8

Lottery Revenue Debt
Total Principal and Interest Debt Service Requirements[1]

Fiscal Year (ending June 30th)	Principal	Interest	Total
2018	$73,875,000	$54,080,777	$127,955,777
2019	73,005,000	51,670,857	124,675,857
2020	72,420,000	48,849,883	121,269,883
2021	75,225,000	45,914,338	121,139,338
2022	80,520,000	42,660,487	123,180,487
2023	83,730,000	39,079,902	122,809,902
2024	87,585,000	35,218,946	122,803,946
2025	91,645,000	31,158,422	122,803,422
2026	93,550,000	26,764,452	120,314,452
2027	88,655,000	22,226,050	110,881,050
2028	74,595,000	17,937,191	92,532,191
2029	65,055,000	14,328,575	79,383,575
2030	54,175,000	11,176,625	65,351,625
2031	47,315,000	8,459,488	55,774,488
2032	30,540,000	6,090,650	36,630,650
2033	30,280,000	4,563,650	34,843,650
2034	19,050,000	3,148,500	22,198,500
2035	20,000,000	2,196,000	22,196,000
2036	11,670,000	1,196,000	12,866,000
2037	12,250,000	612,500	12,862,500
Total	**$1,185,140,000**	**$466,720,792**	**$1,652,473,292**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Lottery revenue debt issued through June 30, 2017.

Table A-9

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY17

***Net State Aid includes State School Fund and Common School Fund, but does not include State Managed Timber Revenues or Property Taxes**

(High to Low based on Percentage of Debt Service to State Aid Guaranteed)

District Type	District	FY17 OSBG Annual P&I DS	FY17 POB Annual P&I DS	FY17 Total Annual P&I DS	*FY17 Net State Aid	FY17 % Total DS/*Net State Aid
School	Tillamook Cty SD 101 (Nestucca Valley)	784,100	199,474	983,574	58,091	1693.16%
School	Tillamook Cty SD 56 (Neah-Kah-Nie)	1,203,098		1,203,098	95,875	1254.86%
School	Clatsop Cty SD 10 (Seaside)		788,180	788,180	188,673	417.75%
School	Deschutes Cty SD 6 (Sisters)	2,673,325	810,144	3,483,469	2,009,373	173.36%
School	Lane Cty SD 68 (McKenzie)	722,800		722,800	990,848	72.95%
School	Lincoln Cty Unified SD	5,944,925	4,368,885	10,313,810	16,932,091	60.91%
School	Jackson Cty SD 5 (Ashland)	5,902,963		5,902,963	11,280,934	52.33%
School	Lane Cty SD 97J (Siuslaw)	1,562,350	840,005	2,402,355	5,441,581	44.15%
School	Multnomah Cty SD 1J (Portland)	48,739,450	44,532,723	93,272,173	213,331,704	43.72%
School	Washington Cty SD 88J (Sherwood)	11,725,098	1,155,205	12,880,303	29,465,166	43.71%
School	Clackamas Cty SD 12 (North Clackamas)	30,768,850	10,359,524	41,128,374	96,206,435	42.75%
School	Yamhill Cty SD 29J (Newberg)	9,358,325	3,187,566	12,545,891	30,221,184	41.51%
School	Clackamas Cty SD 3J (W.Linn-Wilsonville)	14,171,062	3,533,320	17,704,382	47,754,563	37.07%
School	Douglas Cty SD 12 (Glide)	825,350	278,610	1,103,960	3,183,450	34.68%
School	Multnomah Cty SD 51J (Riverdale)	463,037	394,452	857,489	2,497,515	34.33%
School	Benton Cty SD 509J (Corvallis)	9,501,000	2,061,833	11,562,833	33,987,858	34.02%
School	Clackamas Cty SD 115 (Gladstone)	3,666,850	1,525,971	5,192,821	15,557,587	33.38%
School	Lane Cty SD 4J (Eugene)	22,793,024	4,448,256	27,241,280	81,638,932	33.37%
School	Yamhill Cty SD 1 (Yamhill-Carlton)	1,398,344	856,372	2,254,716	6,776,751	33.27%
School	Deschutes Cty SD 2J (Redmond)	11,599,938	2,691,728	14,291,665	43,069,172	33.18%
School	Benton Cty SD 17J (Philomath)	2,926,350	520,998	3,447,348	10,653,125	32.36%
School	Clatsop Cty SD 1 (Astoria)	2,035,700	1,594,212	3,629,912	11,230,923	32.32%
School	Clackamas Cty SD 46 (Oregon Trail)	7,930,979		7,930,979	24,806,347	31.97%
School	Clackamas Cty SD 86 (Canby)	6,206,527	3,277,516	9,484,043	30,233,660	31.37%
School	Tillamook Cty SD 9 (Tillamook)	1,061,600	1,526,539	2,588,139	8,525,398	30.36%
School	Yamhill Cty SD 8 (Dayton)	1,433,564	675,174	2,108,738	7,045,573	29.93%
School	Lane Cty SD 40 (Creswell)	2,205,216	362,774	2,567,989	8,748,200	29.35%
School	Polk Cty SD 13J (Central)	4,951,540	1,838,548	6,790,088	23,976,048	28.32%
School	Umatilla Cty SD 1 (Helix)	466,525		466,525	1,658,862	28.12%
School	Washington Cty SD 48J (Beaverton)	53,848,969	14,334,354	68,183,323	244,627,612	27.87%
School	Lane Cty SD 28J (Fern Ridge)	1,826,700	597,831	2,424,531	8,948,830	27.09%
School	Umatilla Cty SD 8 (Hermiston)	8,897,522	1,873,455	10,770,977	40,504,754	26.59%
School	Washington Cty SD 13 (Banks)	1,267,423	291,208	1,558,630	5,953,262	26.18%
School	Curry Cty SD 17 (Brookings-Harbor)	1,264,118	923,193	2,187,311	8,502,804	25.72%
School	Multnomah Cty SD 3 (Parkrose)	4,180,400		4,180,400	16,410,327	25.47%
School	Columbia Cty SD 47J (Vernonia)	762,225		762,225	3,081,833	24.73%
School	Lane Cty SD 45J3 (South Lane)	2,635,246	2,046,260	4,681,506	19,215,436	24.36%
School	Crook Cty School District	1,813,025	2,157,844	3,970,869	16,419,476	24.18%
School	Hood River Cty SD (Hood River)	4,400,015	2,205,788	6,605,803	27,931,872	23.65%
School	Washington Cty SD 15 (Forest Grove)	7,922,850	2,353,669	10,276,519	44,209,607	23.24%
School	Yamhill Cty SD 40 (McMinnville)	8,541,256	2,556,945	11,098,201	48,222,652	23.01%
School	Umatilla Cty SD 16R (Pendleton)	2,927,950	2,335,498	5,263,448	22,945,996	22.94%
School	Clackamas Cty SD 62 (Oregon City)	7,043,242	3,826,429	10,869,671	48,326,648	22.49%
School	Washington Cty SD 23J (Tigard-Tualatin)	10,281,800	3,392,648	13,674,448	61,788,489	22.13%
School	Douglas Cty SD 116 (Winston-Dillard)	960,550	1,126,432	2,086,982	9,608,102	21.72%
School	Marion Cty SD 29J (North Santiam)	1,474,225	1,428,099	2,902,324	13,552,735	21.42%
School	Columbia Cty SD 6J (Clatskanie)	695,295		695,295	3,332,022	20.87%
School	Marion Cty SD 45 (St Paul)	496,850		496,850	2,395,167	20.74%
School	Washington Cty SD 511J (Gaston)	467,583	368,551	836,134	4,063,257	20.58%
School	Union Cty SD 1 (La Grande)	1,989,350	882,906	2,872,256	13,979,240	20.55%
School	Wasco Cty SD 29 (Dufur)	540,900		540,900	2,660,480	20.33%
School	Umatilla Cty SD 61 (Stanfield)	487,925	320,688	808,613	4,000,888	20.21%
School	Columbia Cty SD 1J (Scappoose)	2,529,550		2,529,550	12,920,427	19.58%
School	Lane Cty SD 1 (Pleasant Hill)	1,219,706		1,219,706	6,273,042	19.44%
School	Yamhill Cty SD 4J (Amity)	582,834	602,216	1,185,050	6,171,644	19.20%
School	Lane Cty SD 79 (Marcola)	342,513		342,513	1,805,983	18.97%
School	Marion Cty SD 4J (Silver Falls)	3,621,050	1,472,889	5,093,939	26,887,018	18.95%
School	Linn Cty SD 8J (Greater Albany)	8,132,750	3,822,048	11,954,798	63,375,843	18.86%
School	Marion Cty SD 5 (Cascade)	1,465,525	1,392,334	2,857,859	15,159,420	18.85%
School	Morrow Cty SD 1	1,954,475	656,779	2,611,254	14,068,543	18.56%
School	Douglas Cty SD 105 (Reedsport)	634,813	254,756	889,569	4,793,526	18.56%

Table A-9 (Continued)

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY17 *Net State Aid includes State School Fund and Common School Fund, but does not include State Managed Timber Revenues or Property Taxes *(High to Low based on Percentage of Debt Service to State Aid Guaranteed)*						
District Type	District	FY17 OSBG Annual P&I DS	FY17 POB Annual P&I DS	FY17 Total Annual P&I DS	*FY17 Net State Aid	FY17 % Total DS/*Net State Aid
School	Linn Cty SD 55 (Sweet Home)	1,398,700	1,559,269	2,957,969	16,108,083	18.36%
School	Jackson Cty SD 4 (Phoenix-Talent)	1,769,164	1,245,824	3,014,988	16,547,895	18.22%
School	Curry Cty SD 1 (Central Curry)	353,750		353,750	1,943,054	18.21%
School	Multnomah Cty SD 7 (Reynolds)	8,775,400	7,340,490	16,115,890	90,173,895	17.87%
School	Umatilla Cty SD 5R (Echo)	322,112	155,718	477,830	2,700,189	17.70%
School	Harney Cty SD 3 (Burns)	214,650	943,825	1,158,475	6,580,779	17.60%
School	Deschutes Cty SD 1 (Bend-Lapine)	7,877,120	6,433,141	14,310,260	81,548,608	17.55%
School	Jackson Cty SD 549C (Medford)	11,602,663	3,514,441	15,117,103	86,398,536	17.50%
School	Clackamas Cty SD 108 (Estacada)	2,093,463	994,201	3,087,663	18,071,848	17.09%
School	Josephine Cty SD (Three Rivers)	2,249,288	2,229,153	4,478,441	27,348,255	16.38%
School	Lane Cty SD 69 (Junction City)	1,617,622		1,617,622	10,130,773	15.97%
School	Lane Cty SD 19 (Springfield)	6,538,950	4,856,736	11,395,686	71,717,479	15.89%
School	Marion Cty SD 15 (North Marion)	1,295,793	1,086,174	2,381,966	15,044,351	15.83%
School	Douglas Cty SD 130 (Sutherlin)	427,600	964,625	1,392,225	8,812,713	15.80%
School	Marion Cty SD 24J (Salem Keizer)	31,112,321	17,904,340	49,016,661	311,996,721	15.71%
School	Jefferson Cty SD 509J (Madras)	2,647,444	1,106,469	3,753,913	23,924,451	15.69%
School	Clatsop Cty SD 4 (Knappa)	506,981		506,981	3,367,064	15.06%
School	Wasco Cty SD 12 (The Dalles) Bonds	1,749,800	1,377,230	3,127,030	20,842,200	15.00%
School	Umatilla Cty SD 2 (Pilot Rock)	257,850	206,870	464,720	3,176,495	14.63%
School	Malheur Cty SD 8C (Ontario)	2,068,040	868,997	2,937,037	20,454,054	14.36%
School	Douglas Cty SD 4 (Roseburg)	2,105,982	3,107,356	5,213,339	36,705,524	14.20%
School	Gilliam Cty SD 25J (Condon)	182,700		182,700	1,288,049	14.18%
School	Multnomah Cty SD 10J (Gresham-Barlow)	6,160,421	5,406,480	11,566,901	81,886,851	14.13%
School	Washington Cty SD 1J (Hillsboro)	9,334,838	8,045,510	17,380,348	123,827,468	14.04%
School	Union Cty SD 11 (Imbler)	428,000		428,000	3,070,406	13.94%
School	Umatilla Cty USD 7 (Milton-Freewater)	678,931	1,207,163	1,886,094	13,580,891	13.89%
School	Clackamas Cty SD 7J (Lake Oswego)		3,674,737	3,674,737	26,469,533	13.88%
School	Lane Cty SD 52 (Bethel)	4,899,122		4,899,122	35,637,718	13.75%
School	Marion Cty SD 91 (Mt Angel)	782,993		782,993	5,896,965	13.28%
School	Jefferson Cty SD 4 (Culver)	711,150		711,150	5,405,950	13.15%
School	Linn Cty SD 9 (Lebanon Community)	3,618,481		3,618,481	27,642,707	13.09%
School	Columbia Cty SD 502 (St Helens)		2,285,999	2,285,999	18,419,093	12.41%
School	Jackson Cty SD 9 (Eagle Point)	3,326,538		3,326,538	26,873,177	12.38%
School	Morrow Cty SD 2 (Ione)	264,800		264,800	2,164,141	12.24%
School	Klamath Cty SD 1 (Klamath Falls)	2,680,600		2,680,600	21,977,913	12.20%
School	Douglas Cty SD 19 (South Umpqua)		1,169,695	1,169,695	9,736,120	12.01%
School	Clackamas Cty SD 35 (Molalla River)		1,889,051	1,889,051	16,113,033	11.72%
School	Columbia Cty SD 13 (Rainier)		570,012	570,012	5,166,616	11.03%
School	Yamhill Cty SD 48J (Sheridan)	912,788		912,788	8,306,713	10.99%
School	Marion Cty SD 1 (Gervais)		877,035	877,035	8,299,145	10.57%
School	Umatilla Cty SD 6 (Umatilla)	842,500	345,690	1,188,190	11,419,758	10.40%
School	Polk Cty SD 2 (Dallas)	2,270,000		2,270,000	21,974,331	10.33%
School	Clatsop Cty SD 30 (Warrenton-Hammond)	260,875	347,460	608,335	6,094,111	9.98%
School	Jackson Cty SD 6 (Central Point)	2,827,702		2,827,702	29,086,992	9.72%
School	Lane Cty SD 32 (Mapleton)	160,828		160,828	1,679,865	9.57%
School	Multnomah Cty SD 40 (David Douglas)	5,319,063	3,040,211	8,359,273	89,800,285	9.31%
School	Marion Cty SD 14J (Jefferson)		630,430	630,430	6,777,373	9.30%
School	Umatilla Cty SD 29J (Athena-Weston)	397,212		397,212	4,292,689	9.25%
School	Jackson Cty SD 35 (Rogue River)	566,800		566,800	6,268,702	9.04%
School	Marion Cty SD 103 (Woodburn)	3,967,075		3,967,075	50,027,537	7.93%
School	Polk Cty SD 57 (Falls City)		156,851	156,851	2,001,159	7.84%
School	Yamhill Cty SD 30J (Willamina)	226,400	227,225	453,625	6,123,637	7.41%
School	Linn Cty SD 7J (Harrisburg)	443,633		443,633	6,103,024	7.27%
School	Lane Cty SD 76 (Oakridge)	297,350		297,350	4,381,929	6.79%
School	Grant Cty SD 3 (John Day)		329,290	329,290	5,013,157	6.57%
School	Coos Cty SD 13 (North Bend)	1,127,109	867,614	1,994,724	31,981,466	6.24%
School	Malheur Cty SD 61 (Adrian)	194,591		194,591	3,211,673	6.06%
School	Multnomah Cty SD 28J (Centennial)	2,870,356		2,870,356	48,254,072	5.95%
School	Union Cty SD 5 (Union)		148,868	148,868	2,510,440	5.93%
School	Coos Cty SD 9 (Coos Bay)		1,083,956	1,083,956	21,791,827	4.97%
School	Coos Cty SD 8 (Coquille)	329,188		329,188	7,046,743	4.67%
School	Klamath Cty SD	2,025,025		2,025,025	45,503,332	4.45%
School	Benton Cty SD 1J (Monroe)		156,082	156,082	3,875,046	4.03%
School	Coos Cty SD 41 (Myrtle Point)	181,276		181,276	4,505,892	4.02%
School	Douglas Cty SD 77 (Glendale)	100,531		100,531	2,519,129	3.99%
School	Douglas Cty SD 34 (Elkton)	157,800		157,800	4,028,673	3.92%
School	Baker Cty SD 5J (Baker)		743,185	743,185	19,707,816	3.77%
School	Polk Cty SD 21 (Perrydale)	100,535		100,535	2,876,924	3.49%
School	Malheur Cty SD 26 (Nyssa)	357,523		357,523	10,520,893	3.40%
School	Clackamas Cty SD 53 (Colton)	148,947		148,947	4,488,263	3.32%
School	Douglas Cty SD 1 (Oakland)	111,450		111,450	4,018,751	2.77%
School	Malheur Cty SD 84 (Vale) (UHD 3)	208,000		208,000	7,963,845	2.61%
School	Douglas Cty SD 22 (North Douglas)	64,250		64,250	2,633,444	2.44%
School	Linn Cty SD 129J (Santiam Canyon)		385,206	385,206	36,908,894	1.04%

Table A-10

District Type	District	FY17 OSBG Annual P&I DS	FY17 POB Annual P&I DS	FY17 Total Annual P&I DS	*FY17 Net State Aid	FY17 % Total DS/*Net State Aid
Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY17						
***Net State Aid includes State School Fund and Common School Fund, but does not include State Managed Timber Revenues or Property Taxes**						
(Alpha List)						
School	Baker Cty SD 5J (Baker)		743,185	743,185	19,707,816	3.77%
School	Benton Cty SD 17J (Philomath)	2,926,350	520,998	3,447,348	10,653,125	32.36%
School	Benton Cty SD 1J (Monroe)		156,082	156,082	3,875,046	4.03%
School	Benton Cty SD 509J (Corvallis)	9,501,000	2,061,833	11,562,833	33,987,858	34.02%
School	Clackamas Cty SD 108 (Estacada)	2,093,463	994,201	3,087,663	18,071,848	17.09%
School	Clackamas Cty SD 115 (Gladstone)	3,666,850	1,525,971	5,192,821	15,557,587	33.38%
School	Clackamas Cty SD 12 (North Clackamas)	30,768,850	10,359,524	41,128,374	96,206,435	42.75%
School	Clackamas Cty SD 35 (Molalla River)		1,889,051	1,889,051	16,113,033	11.72%
School	Clackamas Cty SD 3J (W.Linn-Wilsonville)	14,171,062	3,533,320	17,704,382	47,754,563	37.07%
School	Clackamas Cty SD 46 (Oregon Trail)	7,930,979		7,930,979	24,806,347	31.97%
School	Clackamas Cty SD 53 (Colton)	148,947		148,947	4,488,263	3.32%
School	Clackamas Cty SD 62 (Oregon City)	7,043,242	3,826,429	10,869,671	48,326,648	22.49%
School	Clackamas Cty SD 7J (Lake Oswego)		3,674,737	3,674,737	26,469,533	13.88%
School	Clackamas Cty SD 86 (Canby)	6,206,527	3,277,516	9,484,043	30,233,660	31.37%
School	Clatsop Cty SD 1 (Astoria)	2,035,700	1,594,212	3,629,912	11,230,923	32.32%
School	Clatsop Cty SD 10 (Seaside)		788,180	788,180	188,673	417.75%
School	Clatsop Cty SD 30 (Warrenton-Hammond)	260,875	347,460	608,335	6,094,111	9.98%
School	Clatsop Cty SD 4 (Knappa)	506,981		506,981	3,367,064	15.06%
School	Columbia Cty SD 13 (Rainier)		570,012	570,012	5,166,616	11.03%
School	Columbia Cty SD 1J (Scappoose)	2,529,550		2,529,550	12,920,427	19.58%
School	Columbia Cty SD 47J (Vernonia)	762,225		762,225	3,081,833	24.73%
School	Columbia Cty SD 502 (St Helens)		2,285,999	2,285,999	18,419,093	12.41%
School	Columbia Cty SD 6J (Clatskanie)	695,295		695,295	3,332,022	20.87%
School	Coos Cty SD 13 (North Bend)	1,127,109	867,614	1,994,724	31,981,466	6.24%
School	Coos Cty SD 41 (Myrtle Point)	181,276		181,276	4,505,892	4.02%
School	Coos Cty SD 8 (Coquille)	329,188		329,188	7,046,743	4.67%
School	Coos Cty SD 9 (Coos Bay)		1,083,956	1,083,956	21,791,827	4.97%
School	Crook Cty School District	1,813,025	2,157,844	3,970,869	16,419,476	24.18%
School	Curry Cty SD 1 (Central Curry)	353,750		353,750	1,943,054	18.21%
School	Curry Cty SD 17 (Brookings-Harbor)	1,264,118	923,193	2,187,311	8,502,804	25.72%
School	Deschutes Cty SD 1 (Bend-Lapine)	7,877,120	6,433,141	14,310,260	81,548,608	17.55%
School	Deschutes Cty SD 2J (Redmond)	11,599,938	2,691,728	14,291,665	43,069,172	33.18%
School	Deschutes Cty SD 6 (Sisters)	2,673,325	810,144	3,483,469	2,009,373	173.36%
School	Douglas Cty SD 1 (Oakland)	111,450		111,450	4,018,751	2.77%
School	Douglas Cty SD 105 (Reedsport)	634,813	254,756	889,569	4,793,526	18.56%
School	Douglas Cty SD 116 (Winston-Dillard)	960,550	1,126,432	2,086,982	9,608,102	21.72%
School	Douglas Cty SD 12 (Glide)	825,350	278,610	1,103,960	3,183,450	34.68%
School	Douglas Cty SD 130 (Sutherlin)	427,600	964,625	1,392,225	8,812,713	15.80%
School	Douglas Cty SD 19 (South Umpqua)		1,169,695	1,169,695	9,736,120	12.01%
School	Douglas Cty SD 22 (North Douglas)	64,250		64,250	2,633,444	2.44%
School	Douglas Cty SD 34 (Elkton)	157,800		157,800	4,028,673	3.92%
School	Douglas Cty SD 4 (Roseburg)	2,105,982	3,107,356	5,213,339	36,705,524	14.20%
School	Douglas Cty SD 77 (Glendale)	100,531		100,531	2,519,129	3.99%
School	Gilliam Cty SD 25J (Condon)	182,700		182,700	1,288,049	14.18%
School	Grant Cty SD 3 (John Day)		329,290	329,290	5,013,157	6.57%
School	Harney Cty SD 3 (Burns)	214,650	943,825	1,158,475	6,580,779	17.60%
School	Hood River Cty SD (Hood River)	4,400,015	2,205,788	6,605,803	27,931,872	23.65%
School	Jackson Cty SD 35 (Rogue River)	566,800		566,800	6,268,702	9.04%
School	Jackson Cty SD 4 (Phoenix-Talent)	1,769,164	1,245,824	3,014,988	16,547,895	18.22%
School	Jackson Cty SD 5 (Ashland)	5,902,963		5,902,963	11,280,934	52.33%
School	Jackson Cty SD 549C (Medford)	11,602,663	3,514,441	15,117,103	86,398,536	17.50%
School	Jackson Cty SD 6 (Central Point)	2,827,702		2,827,702	29,086,992	9.72%
School	Jackson Cty SD 9 (Eagle Point)	3,326,538		3,326,538	26,873,177	12.38%
School	Jefferson Cty SD 4 (Culver)	711,150		711,150	5,405,950	13.15%
School	Jefferson Cty SD 509J (Madras)	2,647,444	1,106,469	3,753,913	23,924,451	15.69%
School	Josephine Cty SD (Three Rivers)	2,249,288	2,229,153	4,478,441	27,348,255	16.38%
School	Klamath Cty SD	2,025,025		2,025,025	45,503,332	4.45%
School	Klamath Cty SD 1 (Klamath Falls)	2,680,600		2,680,600	21,977,913	12.20%
School	Lane Cty SD 1 (Pleasant Hill)	1,219,706		1,219,706	6,273,042	19.44%
School	Lane Cty SD 19 (Springfield)	6,538,950	4,856,736	11,395,686	71,717,479	15.89%
School	Lane Cty SD 28J (Fern Ridge)	1,826,700	597,831	2,424,531	8,948,830	27.09%

Table A-10 (Continued)

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY17

***Net State Aid includes State School Fund and Common School Fund, but does not include State Managed Timber Revenues or Property Taxes**

(Alpha List)

District Type	District	FY17 OSBG Annual P&I DS	FY17 POB Annual P&I DS	FY17 Total Annual P&I DS	*FY17 Net State Aid	FY17 % Total DS/*Net State Aid
School	Lane Cty SD 32 (Mapleton)	160,828		160,828	1,679,865	9.57%
School	Lane Cty SD 40 (Creswell)	2,205,216	362,774	2,567,989	8,748,200	29.35%
School	Lane Cty SD 45J3 (South Lane)	2,635,246	2,046,260	4,681,506	19,215,436	24.36%
School	Lane Cty SD 4J (Eugene)	22,793,024	4,448,256	27,241,280	81,638,932	33.37%
School	Lane Cty SD 52 (Bethel)	4,899,122		4,899,122	35,637,718	13.75%
School	Lane Cty SD 68 (McKenzie)	722,800		722,800	990,848	72.95%
School	Lane Cty SD 69 (Junction City)	1,617,622		1,617,622	10,130,773	15.97%
School	Lane Cty SD 76 (Oakridge)	297,350		297,350	4,381,929	6.79%
School	Lane Cty SD 79 (Marcola)	342,513		342,513	1,805,983	18.97%
School	Lane Cty SD 97J (Siuslaw)	1,562,350	840,005	2,402,355	5,441,581	44.15%
School	Lincoln Cty Unified SD	5,944,925	4,368,885	10,313,810	16,932,091	60.91%
School	Linn Cty SD 129J (Santiam Canyon)		385,206	385,206	36,908,894	1.04%
School	Linn Cty SD 55 (Sweet Home)	1,398,700	1,559,269	2,957,969	16,108,083	18.36%
School	Linn Cty SD 7J (Harrisburg)	443,633		443,633	6,103,024	7.27%
School	Linn Cty SD 8J (Greater Albany)	8,132,750	3,822,048	11,954,798	63,375,843	18.86%
School	Linn Cty SD 9 (Lebanon Community)	3,618,481		3,618,481	27,642,707	13.09%
School	Malheur Cty SD 26 (Nyssa)	357,523		357,523	10,520,893	3.40%
School	Malheur Cty SD 61 (Adrian)	194,591		194,591	3,211,673	6.06%
School	Malheur Cty SD 84 (Vale) (UHD 3)	208,000		208,000	7,963,845	2.61%
School	Malheur Cty SD 8C (Ontario)	2,068,040	868,997	2,937,037	20,454,054	14.36%
School	Marion Cty SD 1 (Gervais)		877,035	877,035	8,299,145	10.57%
School	Marion Cty SD 103 (Woodburn)	3,967,075		3,967,075	50,027,537	7.93%
School	Marion Cty SD 14J (Jefferson)		630,430	630,430	6,777,373	9.30%
School	Marion Cty SD 15 (North Marion)	1,295,793	1,086,174	2,381,966	15,044,351	15.83%
School	Marion Cty SD 24J (Salem Keizer)	31,112,321	17,904,340	49,016,661	311,996,721	15.71%
School	Marion Cty SD 29J (North Santiam)	1,474,225	1,428,099	2,902,324	13,552,735	21.42%
School	Marion Cty SD 45 (St Paul)	496,850		496,850	2,395,167	20.74%
School	Marion Cty SD 4J (Silver Falls)	3,621,050	1,472,889	5,093,939	26,887,018	18.95%
School	Marion Cty SD 5 (Cascade)	1,465,525	1,392,334	2,857,859	15,159,420	18.85%
School	Marion Cty SD 91 (Mt Angel)	782,993		782,993	5,896,965	13.28%
School	Morrow Cty SD 1	1,954,475	656,779	2,611,254	14,068,543	18.56%
School	Morrow Cty SD 2 (Ione)	264,800		264,800	2,164,141	12.24%
School	Multnomah Cty SD 10J (Gresham-Barlow)	6,160,421	5,406,480	11,566,901	81,886,851	14.13%
School	Multnomah Cty SD 1J (Portland)	48,739,450	44,532,723	93,272,173	213,331,704	43.72%
School	Multnomah Cty SD 28J (Centennial)	2,870,356		2,870,356	48,254,072	5.95%
School	Multnomah Cty SD 3 (Parkrose)	4,180,400		4,180,400	16,410,327	25.47%
School	Multnomah Cty SD 40 (David Douglas)	5,319,063	3,040,211	8,359,273	89,800,285	9.31%
School	Multnomah Cty SD 51J (Riverdale)	463,037	394,452	857,489	2,497,515	34.33%
School	Multnomah Cty SD 7 (Reynolds)	8,775,400	7,340,490	16,115,890	90,173,895	17.87%
School	Polk Cty SD 13J (Central)	4,951,540	1,838,548	6,790,088	23,976,048	28.32%
School	Polk Cty SD 2 (Dallas)	2,270,000		2,270,000	21,974,331	10.33%
School	Polk Cty SD 21 (Perrydale)	100,535		100,535	2,876,924	3.49%
School	Polk Cty SD 57 (Falls City)		156,851	156,851	2,001,159	7.84%
School	Tillamook Cty SD 101 (Nestucca Valley)	784,100	199,474	983,574	58,091	1693.16%
School	Tillamook Cty SD 56 (Neah-Kah-Nie)	1,203,098		1,203,098	95,875	1254.86%
School	Tillamook Cty SD 9 (Tillamook)	1,061,600	1,526,539	2,588,139	8,525,398	30.36%
School	Umatilla Cty SD 1 (Helix)	466,525		466,525	1,658,862	28.12%
School	Umatilla Cty SD 16R (Pendleton)	2,927,950	2,335,498	5,263,448	22,945,996	22.94%
School	Umatilla Cty SD 2 (Pilot Rock)	257,850	206,870	464,720	3,176,495	14.63%
School	Umatilla Cty SD 29J (Athena-Weston)	397,212		397,212	4,292,689	9.25%
School	Umatilla Cty SD 5R (Echo)	322,112	155,718	477,830	2,700,189	17.70%
School	Umatilla Cty SD 6 (Umatilla)	842,500	345,690	1,188,190	11,419,758	10.40%
School	Umatilla Cty SD 61 (Stanfield)	487,925	320,688	808,613	4,000,888	20.21%
School	Umatilla Cty SD 8 (Hermiston)	8,897,522	1,873,455	10,770,977	40,504,754	26.59%
School	Umatilla Cty USD 7 (Milton-Freewater)	678,931	1,207,163	1,886,094	13,580,891	13.89%
School	Union Cty SD 1 (La Grande)	1,989,350	882,906	2,872,256	13,979,240	20.55%
School	Union Cty SD 11 (Imbler)	428,000		428,000	3,070,406	13.94%
School	Union Cty SD 5 (Union)		148,868	148,868	2,510,440	5.93%
School	Wasco Cty SD 12 (The Dalles) Bonds	1,749,800	1,377,230	3,127,030	20,842,200	15.00%
School	Wasco Cty SD 29 (Dufur)	540,900		540,900	2,660,480	20.33%
School	Washington Cty SD 13 (Banks)	1,267,423	291,208	1,558,630	5,953,262	26.18%
School	Washington Cty SD 15 (Forest Grove)	7,922,850	2,353,669	10,276,519	44,209,607	23.24%
School	Washington Cty SD 1J (Hillsboro)	9,334,838	8,045,510	17,380,348	123,827,468	14.04%
School	Washington Cty SD 23J (Tigard-Tualatin)	10,281,800	3,392,648	13,674,448	61,788,489	22.13%
School	Washington Cty SD 48J (Beaverton)	53,848,969	14,334,354	68,183,323	244,627,612	27.87%
School	Washington Cty SD 511J (Gaston)	467,583	368,551	836,134	4,063,257	20.58%
School	Washington Cty SD 88J (Sherwood)	11,725,098	1,155,205	12,880,303	29,465,166	43.71%
School	Yamhill Cty SD 1 (Yamhill-Carlton)	1,398,344	856,372	2,254,716	6,776,751	33.27%
School	Yamhill Cty SD 29J (Newberg)	9,358,325	3,187,566	12,545,891	30,221,184	41.51%
School	Yamhill Cty SD 30J (Willamina)	226,400	227,225	453,625	6,123,637	7.41%
School	Yamhill Cty SD 40 (McMinnville)	8,541,256	2,556,945	11,098,201	48,222,652	23.01%
School	Yamhill Cty SD 48J (Sheridan)	912,788		912,788	8,306,713	10.99%
School	Yamhill Cty SD 4J (Amity)	582,834	602,216	1,185,050	6,171,644	19.20%
School	Yamhill Cty SD 8 (Dayton)	1,433,564	675,174	2,108,738	7,045,573	29.93%

Table A-11

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY17

***Net State Aid includes State School Fund and Common School Fund, but does not include State Managed Timber Revenues or Property Taxes**

(High to Low based on Percentage of Debt Service to State Aid Guaranteed)

District Type	District	FY17 OSBG Annual P&I DS	FY17 POB Annual P&I DS	FY17 Total Annual P&I DS	*FY17 Net State Aid	FY17 % Total DS/*Net State Aid
Community College	Oregon Coast Community College	1,791,175	182,179	1,973,354	1,787,622	110.39%
Community College	Tillamook Bay Community College	946,567	133,984	1,080,550	1,428,665	75.63%
Community College	Clatsop Community College	1,066,242	569,418	1,635,661	2,364,345	69.18%
Community College	Blue Mountain Community College	1,674,056	856,921	2,530,977	4,818,294	52.53%
Community College	Lane Community College	7,902,075	4,669,250	12,571,325	27,230,149	46.17%
Community College	Chemeketa Community College	9,496,044	3,958,649	13,454,693	31,685,032	42.46%
Community College	Columbia Gorge Community College (Treaty-Oak AED)	1,511,025	238,001	1,749,026	4,138,231	42.27%
Community College	Central Oregon Community College	3,034,800	795,075	3,829,875	9,321,102	41.09%
Community College	Rogue Community College	1,297,133	1,622,878	2,920,011	9,457,105	30.88%
Community College	Linn-Benton Community College	2,664,300	2,431,479	5,095,779	19,291,026	26.42%
Community College	Clackamas Community College	1,242,650	2,456,684	3,699,334	14,279,233	25.91%
Community College	Southwestern Oregon Community College		1,093,103	1,093,103	7,467,808	14.64%
Community College	Mt Hood Community College		3,431,590	3,431,590	27,057,711	12.68%
Community College	Treasure Valley Community College		737,876	737,876	7,082,906	10.42%
Community College	Portland Community College		8,975,198	8,975,198	89,344,276	10.05%
Community College	Umpqua Community College		989,430	989,430	10,498,947	9.42%