REPORT

OF THE

STATE DEBT POLICY ADVISORY COMMISSION

2019 Commission Report

January 25, 2019

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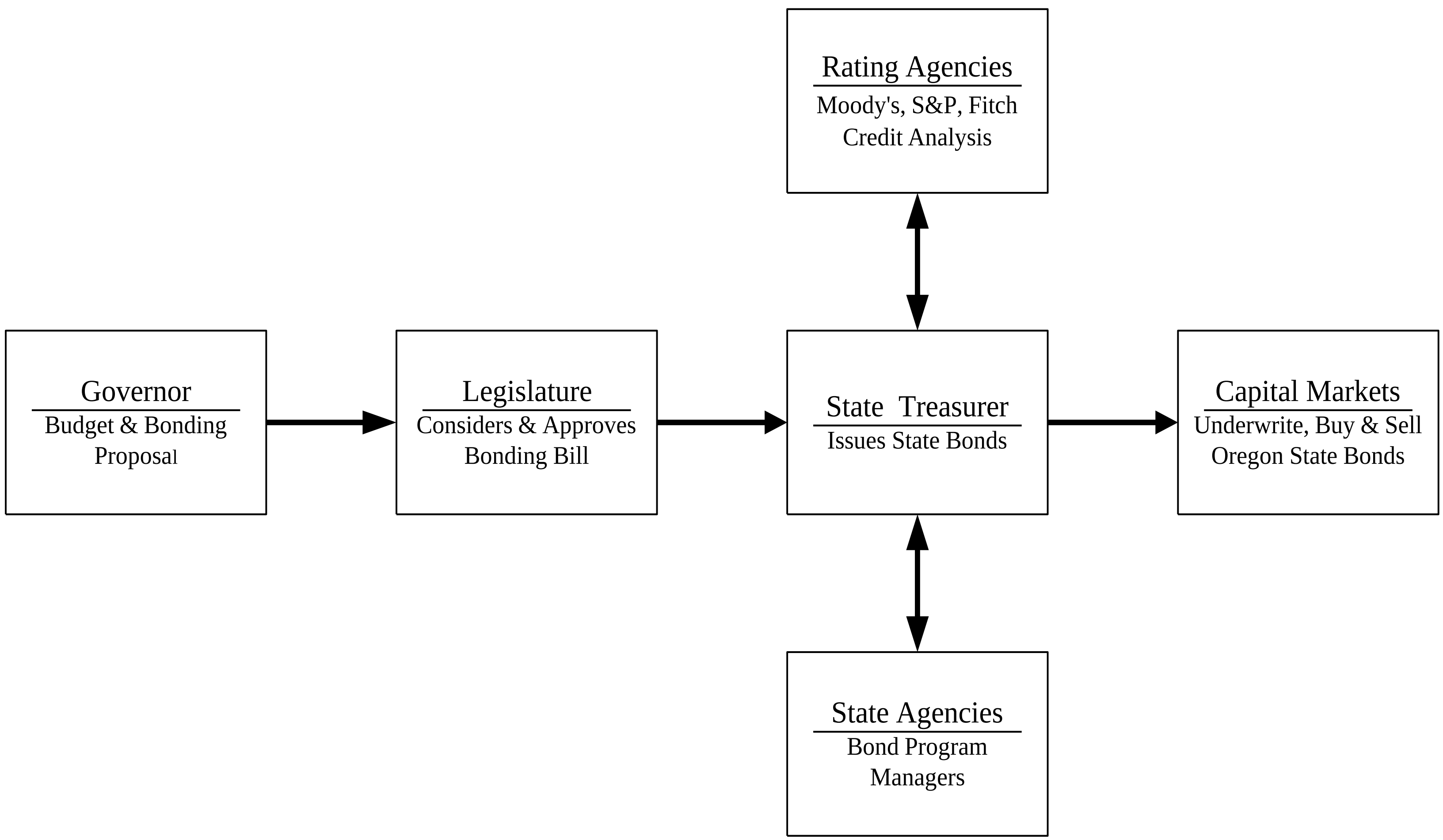
Oregon Bonding Process



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Oregon State Treasurer

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STATE DEBT POLICY ADVISORY COMMISSION

January 25, 2019

Governor Brown and Members of the 2019 Oregon Legislature:

I am pleased to present you with the *2019 Commission Report* 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 and 2018 Legislatures.

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 $1.18 billion in General Fund supported debt authorized by the 2017 and 2018 Legislatures for the 2017-19 biennium remains well within the Commission's recommended General Fund debt capacity limits. We estimate that the State can issue up to **$1.15 billion** in additional General Fund-supported debt in each of the next four biennia ($4.6 billion total) while staying within our maximum debt capacity limit of 5% General Fund debt service to General Fund revenue.
- Given the improving forecast of long-term Lottery revenues, our projections of long-term lottery debt capacity have increased compared to recent annual reports -- the Commission projects that maximum biennial Lottery bond capacity will be **$305 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.

Our state's strong financial management practices, including prudent management of debt, history of balanced budgets, and growing budgetary reserves, are all reasons receive strong credit ratings and achieve superior results when borrowing in the municipal capital markets. Our new money offerings obtain lower interest rates and the refunding of existing state indebtedness provides substantial cost savings. 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.

Looking 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 prudent debt limits.

The 2017 Legislature, by passing SB 1067, has chosen to emphasize long-term state capital planning based on a more systematic approach to the funding of deferred maintenance and capital renewal. The subsequent development and implementation of a comprehensive facility condition assessment program by the Department of Administrative Services, will enable Oregon to make more informed decisions regarding the appropriate balance between investments in new state and local government buildings and infrastructure versus seismically reinforcing and properly maintaining existing buildings, information systems, and institutional facilities.

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, 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. An update of this report, entitled the *2018 Legislative Update,* was published on January 25, 2018 which incorporated the impact on the bonding authorizations of the 2017 Legislature (the "2017-19 bond bill') and the latest general fund and lottery revenue projections of the Office of Economic Analysis (OEA) on the state's long-term debt capacity.

In anticipation of the upcoming 2019 legislative session, the *2019 Commission Report* is intended to provide a comprehensive overview of the State's current debt position, taking into account the actual amount of state debt sold in FY 2018, the most recent long-term revenue projections of the (OEA), and the impact of additional bonding authorizations adopted by the 2018 Legislature in SB 5702.

The report 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.

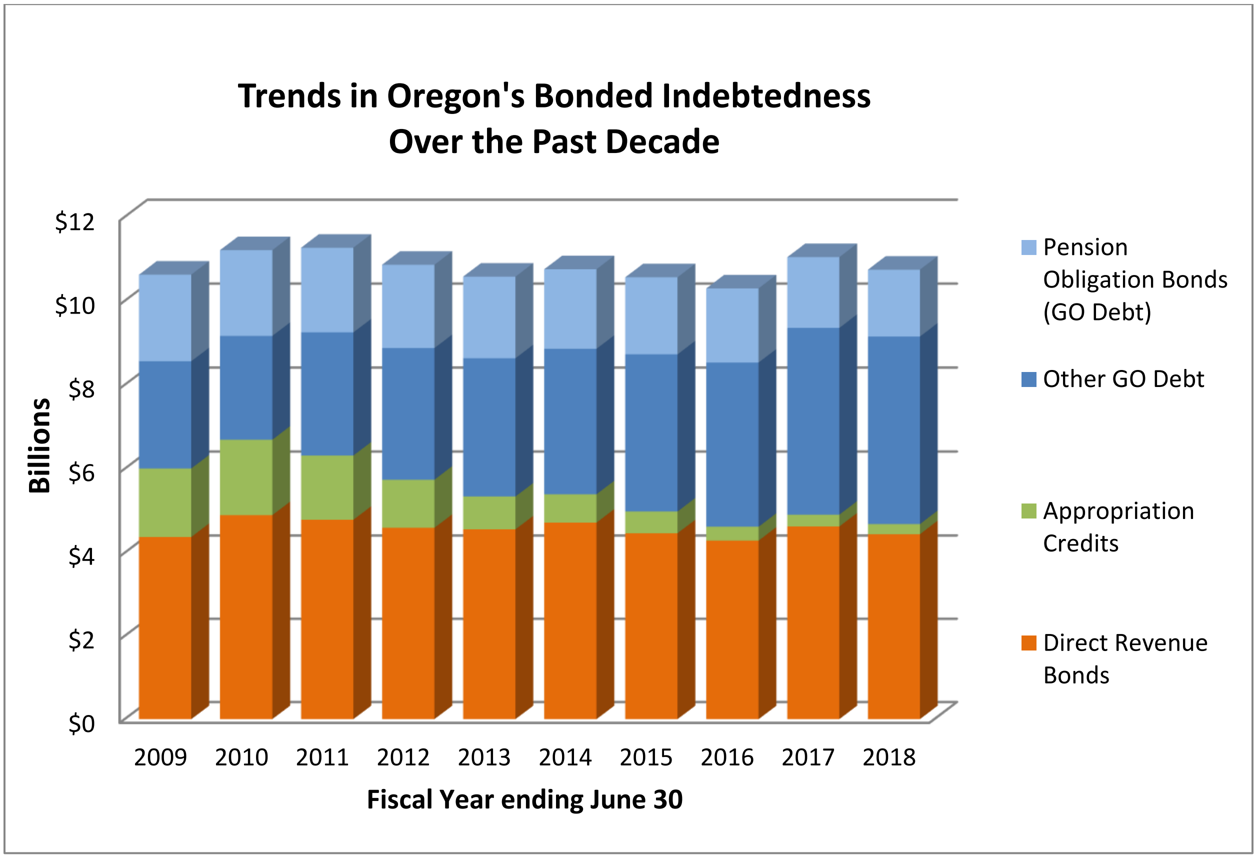
OVERALL STATE DEBT LEVELS

Oregon's combined long-term general obligation, appropriation and revenue bond debt outstanding was $10.9 billion as of June 30, 2018.[1] This represents a decrease of $164 million compared to the end of the 2017 fiscal year.

The following chart 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

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

debt issuances have been timed for issuance at roughly the same pace and amounts that existing debt has been scheduled for retirement.



GENERAL FUND-SUPPORTED DEBT

The total debt outstanding for general fund-supported state debt was $3.4 billion as of June 30, 2018. This amount is expected to increase to $4.0 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 billion in new General Fund supported debt, as authorized by the 2017 and 2018 Legislatures. Based on the (OEA's) December 2018 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 3.9% 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 $4.6 billion in additional General Fund-supported debt capacity over the next four biennia in addition to the $1 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 **$1.15 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 and long-term interest rates which together can significantly impact the state's long-term debt capacity and allows for more consistent long-term capital planning and budgeting.

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
2019	-	3.9%	-	3.9%
2020	434.0	5.0%	574.0	5.1%
2021	857.8	5.0%	574.0	4.9%
2022	800.5	5.0%	574.0	4.8%
2023	400.4	5.0%	574.0	4.9%
2024	571.0	5.0%	574.0	5.0%
2025	667.9	5.0%	574.0	4.8%
2026	375.6	5.0%	574.0	5.0%
2027	485.1	5.0%	574.0	5.0%
Total	**$ 4,592.3**		**$ 4,592.3**	

* Assumes issuance of $1.008 billion in General Fund supported bonds authorized by the 2017 and 2018 Legislatures.

LOTTERY REVENUE BOND DEBT

Total Lottery revenue bonds outstanding was $1.11 billion as of June 30, 2018. 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 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. Recent OEA lottery forecasts, however, have included significant upward revision to the ten year lottery revenue projections, which in turn has led to a healthy increase in the Commission's projection of lottery debt capacity compared to previous SDPAC reports.

The Commission now projects that based on this improved revenue forecast, there is a maximum of $1.22 billion in additional Lottery bond capacity available over the next four biennia, in addition to the $221 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 **$305 million** per biennium, which is $96 million per biennium higher than projected at the time of the 2017 Commission report.

The Commission nevertheless cautions that overall long-term Lottery bond capacity is a scarce resource and due to the relatively volatile nature of this revenue source its use should remain constrained. 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
2020	$ 487.8	4.0	25%	$152.6	4.7	21%
2021	85.8	4.0	25%	152.6	4.5	22%
2022	71.7	4.0	25%	152.6	4.3	23%
2023	94.7	4.0	25%	152.6	4.2	24%
2024	92.6	4.0	25%	152.6	4.1	24%
2025	80.5	4.0	25%	152.6	4.0	25%
2026	107.4	4.0	25%	152.6	3.9	25%
2027	200.0	4.0	25%	152.6	4.0	25%
Total	**$ 1,220.5**			**$1,220.5**		

*Assumes issuance of $221 million in Lottery revenue bonds as authorized by the 2017 and 2018 Legislatures.

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 2018, Oregon's outstanding NTSD stood at roughly $8.2 billion. By the end of FY 2019, this amount is projected to increase by $812 million to $9.0 billion, as existing NTSD is retired and new General Obligation and Lottery Revenue bonds authorized by the 2017 and 2018 Legislatures 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 (Actual)**	**FY 2019 (Projected)**
Net Tax-Supported Debt (Billions)	$8.49	$8.23	$9.04
Population*	4,141,100	4,203,200	4,2662,800
Personal Income (Billions)*	199.4	209.1	220.4
NTSD Per Capita	$2,050	$1,957	$2,120
NTSD as a % of Personal Income	4.3%	3.9%	4.1%
Pension Obligation Bonds Excluded			
NTSD Per Capita	$1,642	$1,578	$1,771
NTSD as a % of Personal Income	3.4%	3.2%	3.4%

*Source: Oregon Office of Economic Analysis, December 2018 economic and revenue forecast report

Rating agencies typically calculate total net tax-supported debt both with and without pension obligation bonds. Consequently, states that issue POBs are not overly penalized when compared to other states with a relatively low debt burden, but have sizable unfunded pension liabilities. When pension obligation bonds are excluded from this NTSD calculation, our projected FY 2019 debt burden drops to $1,771 per capita and 3.4% 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, as shown below:

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

Ranked by PERS Funded Ratio at the end of FY 2017

Ranking	State	Pension Funded Ratio	Net Pension Liability (mil.)	Net Pension Liability per capita	Debt, pension and OPEB Liability per capita
1	South Dakota	100.1%	$ -2	$ -2	$ 590
2	Wisconsin	99.1	231	40	2,598
3	New York State	96.7	4,735	239	7,175
4	North Carolina	90.7	1,927	188	3,919
5	Idaho	90.6	421	245	358
12	**Oregon**	**83.1%**	**$2,788**	**$ 673**	**$ 2,728**
	50 State Average	**69.5%**	**$4,195**	**$ 1,111**	**$ 3,630**

Source: Standard & Poor's, *U.S. State Pensions Struggle for Gains Amid Market Shifts and Demographic Headwinds,* October 30, 2018. 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, 2017, as now required by GASB. "OPEB" means Other Post-Employment Benefits, which generally include retiree health care benefits guaranteed for payment by a state.

EMERGING ISSUE OF CONCERN – PRIVATE ACTIVITY BOND ALLOCATIONS

Each year, the federal government allocates a limited amount of "private activity" tax-exempt financing authority to each state for their distribution to various qualified economic and community development projects. Historically, the State has allocated its private activity bond (PAB) volume cap primarily to affordable housing construction and rehabilitation, first time homebuyer mortgage programs, and a select number of solid waste, port, and energy production projects around the state. While Oregon has historically had an abundance of PAB allocation available for these purposes, it is unlikely that this will be the case in the coming years. There has been a sharp increase in the state's economic and construction activity and a commensurate growth in requests for PAB allocations by various economic development and affordable housing projects. Consequently, the legislative allocation of annual PAB to state agencies and to the PAB Committee will likely become a more challenging process, requiring careful thought and deliberation as to the highest and best uses of this limited resource.

CONCLUSION

While the Commission projects increased debt capacity in the next several biennia, it notes that this long-term debt capacity remains modest compared to the wide range of potential new state and local capital projects, seismic and other building improvements, information technology upgrades, and other state infrastructure needs. The Commission continues to recommend that the Legislature and Governor limit their bonding authorizations to only the highest priority essential State capital projects in order to maintain the State's strong credit ratings and overall healthy financial position.

Over the past several years, the Department of Administrative Services (DAS) has completed Facility Conditions Assessments (FCA) on 1,469 state-owned buildings, representing 16.5 million gross square feet or 71% of the state's real estate assets. Another 2.8 million square feet, representing 12% of the state's real estate assets, are being evaluated directly by state agencies. The data provided by these FCAs for the first time provides policymakers with a more comprehensive understanding of our state-owned building portfolio's condition and maintenance needs, as well as our seismic and natural hazard risks. Armed with this detailed data, the State is better positioned to conduct benefit-cost analyses comparing building rehabilitation vs. replacement, and to prioritize its hazard mitigation efforts.

Given the long-term savings that can be achieved by the state through the annual funding of on-going maintenance and repair of existing State facilities, the Commission applauds the 2017 Legislature for the passage of SB 1067, which will help the state take a more proactive approach to addressing the projected $860 million in deferred maintenance funding needed over the coming decade. The Commission urges the Legislature to take a similar approach to the funding of the maintenance needs of state information systems.

Finally, the Governor's proposed 2019-21 Budget did not contain funding for the approximately $1 million per biennium needed for the FCA to regularly and actively monitor the $7.1 billion state building and infrastructure portfolio. The Commission strongly urges the Legislature to consider the tremendous cost benefits derived from the FCA program and to fund this program on an on-going basis.

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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

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

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.

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, 2018

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%	6,209,097,167	29,410,000	6,179,687,167
Community College Bonds	ARTICLE XI-G			183,190,000	
Higher Ed. Facility (XI-G) Bonds	ARTICLE XI-G	0.7500%	4,656,822,875	649,242,221	3,824,390,654
Pollution Control Bonds (34% of Total)	ARTICLE XI-H	1.0000%	2,111,093,037	12,069,660	2,099,023,377
DAS Oregon Opportunity Bonds	ARTICLE XI-L	0.5000%	3,104,548,584	75,040,000	3,029,508,584
Seismic Rehab – Public Education Bldgs.	ARTICLE XI-M	0.2000%	1,241,819,433	191,372,500	1,050,446,933
Seismic Rehab – Emergency Service Bldgs.	ARTICLE XI-N	0.2000%	1,241,819,433	52,917,500	1,188,901,933
DAS Pension Obligation Bonds (33% of Total)	ARTICLE XI-O	1.0000%	2,049,002,065	525,817,050	1,523,185,015
Alternate Energy Bonds (XI-J) (39% of Total)	ARTICLE XI-J	0.5000%	1,210,773,948	61,005,750	1,149,768,198
School District Capital Costs	AARTICLE XI-P	0.5000%	3,104,548,584	102,835,000	3,001,713,584
State Property (87% of total)	ARTICLE XI-Q	1.0000%	5,401,914,535	1,293,124,500	4,108,790,035
Total General Fund Supported				**$3,176,024,181**	
Self-Supporting					
Veteran's Welfare Bonds	ARTICLE XI-A	8.0000%	49,672,777,336	350,080,000	49,322,697,636
State Power Development	ARTICLE XI-D	1.5000%	9,313,645,751	0	9,313,645,751
Forest Rehabilitation	ARTICLE XI-E	0.1875%	1,164,205,719	0	1,164,205,719
Higher Ed. XI-F Bonds	ARTICLE XI-F(1)	0.7500%	4,656,822,875	1,112,919,357	3,543,903,518
Pollution Control Bonds (66% of Total)	ARTICLE XI-H	1.0000%	4,098,004,130	23,429,340	4,074,574,790
Water Resources Bonds	ARTICLE XI-I(1)	1.5000%	9,313,645,751	0	9,313,645,751
Elderly & Disabled Housing Bonds	ARTICLE XI-I(2)	0.5000%	3,104,548,584	42,385,000	3,062,163,584
Oregon School Bond Guaranty	ARTICLE XI-K	0.5000%	3,104,548,584	0	3,104,548,584
State Property (13% of Total)	ARTICLE XI-Q	1.0000%	807,182,632	193,225,500	613,957,132
Alternate Energy Project Bonds (61% of Total)	ARTICLE XI-J	0.5000%	1,893,774,636	95,419,250	1,798,355,386
DAS Pension Obligation Bonds (67% of Total)	ARTICLE XI-O	1.0000%	4,160,095,102	1,067,567,950	3,092,527,152
Total Self-Supporting				**$2,885,026,397**	
Total General Obligation Bonds				**$6,061,050,579**	
Revenue Bonds					
Direct Revenue Bonds					
Lottery Revenue Bond Program(s)	[ORS 286A.563-585]	---	---	1,111,265,000	
Transportation Infrastructure Bank	[ORS 367.030]	---	---	0	
Highway User Tax	[ORS 367.620]	---	---	2,437,255,000	
Single & Multi-Family Housing Programs	[ORS 456.661]	---	---	981,675,000	
Economic Development - Bond Bank	[ORS Ch. 285B]	---	---	47,075,000	
Total Direct Revenue Bonds				**$4,577,270,000**	

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, 2017 Real Market Value (RMV) of $620,909,716,704. 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]			$ 517,145,040	
Beginning & Expanding Farmer Loan	[ORS 285A.420-435]			469,058	
Oregon Facilities Authority	[ORS Ch. 289]			2,212,167,229	
Multi-family Housing Programs	[ORS 456.692]			438,983,815	
Total Pass Through Revenue Bonds				**$3,168,765,142**	
Appropriation Credits					
Certificates of Participation (COPs GF)	[ORS Ch. 283.085]			$207,088,000	
Certificates of Participation (COPs Non-GF)	[ORS Ch. 283.085]			33,712,000	
Oregon Appropriation Bonds	[SB 856 – 2003 Legislature]			0	
Total Appropriation Credits				**$240,800,000**	

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 *2019 Commission Report* 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) (34% of total program debt)
- Alternate Energy Bonds (Article XI-J) (39% of total program debt)
- Oregon Opportunity Bonds (Article XI-L);
- State Pension Obligation Bonds (Article XI-O) (33% of total program debt)
- 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) (87% of total program debt)
- Certificate of Participation Obligations (ORS 283.085 to 283.092) (86% of total program debt)

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, 2018.

SDPAC - Exhibit I.2
State of Oregon
Comparison of Long-Term Debt Outstanding
As of 6/30/2018

Type & Purpose		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	29,410,000	29,410,000	29,410,000
Community College Bonds	ARTICLE XI-G	183,190,000	183,190,000	183,190,000
Higher Education Institutions & Activities	ARTICLE XI-G	649,242,221	649,242,221	649,242,221
Pollution Control Bonds	ARTICLE XI-H	12,069,660	12,069,660	12,069,660
Alternate Energy Bonds	ARTICLE XI-J	61,005,750	61,005,750	61,005,750
DAS Oregon Opportunity Bonds	ARTICLE XI-L	75,040,000	75,040,000	75,040,000
Seismic Rehab - Public Education Bldgs	ARTICLE XI-M	191,372,500	191,372,500	191,372,500
Seismic Rehab - Emergency Service Bldgs	ARTICLE XI-N	52,917,500	52,917,500	52,917,500
State Real or Personal Property	ARTICLE XI-Q	1,293,124,500	1,293,124,500	1,293,124,500
DAS Pension Obligation Bonds (1)	ARTICLE XI-O	525,817,050	525,817,050	525,817,050
School District Capital Costs	ARTICLE XI-P	102,835,000	102,835,000	102,835,000
Total General Fund Supported		$ 3,176,024,181	$ 3,176,024,181	$ 3,176,024,181
Dedicated Fund Supported				
Veterans' Welfare Bonds	ARTICLE XI-A	-	-	350,080,000
Higher Education Building Projects	ARTICLE XI-F(1)	-	-	1,112,919,357
Pollution Control Bonds	ARTICLE XI-H	-	-	23,429,340
Elderly & Disabled Housing Bonds	ARTICLE XI-I(2) and ORS 456.519	-	-	42,385,000
Alternate Energy Project Bonds	ARTICLE XI-J	-	-	95,419,250
State Real or Personal Property	ARTICLE XI-Q	-	193,225,500	193,225,500
DAS Pension Obligation Bonds (1)	ARTICLE XI-O	-	1,067,567,950	1,067,567,950
Total Dedicated Fund Supported		$ -	$ 1,260,793,450	$ 2,885,026,397
Total General Obligation		**$ 3,176,024,181**	**$ 4,436,817,631**	**$ 6,061,050,579**
Revenue Bonds				
Direct Revenue Bonds				
Lottery Revenue Bond Program(s)	ORS 296A.560 - 585	-	1,111,265,000	1,111,265,000
Highway User Tax Revenue Bonds	ORS 367.620	-	2,437,255,000	2,437,255,000
Single-Family & Multi-Family Housing	ORS 456.645 and ORS 456.661	-	-	981,675,000
Economic Development - Bond Bank	ORS 285B	-	-	47,075,000
Total Direct Revenue Bonds		$ -	$ 3,548,520,000	$ 4,577,270,000
Conduit or Pass Through Revenue Bonds				
Economic & Industrial Development	ORS 285	-	-	517,145,040
Beginning & Expanding Farmer Loans	ORS 285A.420-435	-	-	469,058
Oregon Facilities Authority	ORS 289	-	-	2,212,167,229
Multi-Family Housing Programs	ORS 456.645 and ORS 456.692	-	-	438,983,815
Total Conduit or Pass Through Revenue Bonds		$ -	$ -	$ 3,168,765,142
Total Revenue Bonds		**$ -**	**$ 3,548,520,000**	**$ 7,746,035,142**
Appropriation Credits				
Certificates of Participation (COPs)	ORS 283 & 286A	207,088,000	240,800,000	240,800,000
Oregon Appropriation Bonds	SB 856 - 2003 Legislature	-	-	-
Total Appropriation Credits		**$ 207,088,000**	**$ 240,800,000**	**$ 240,800,000**
Total Gross Debt				**$ 14,047,885,720**
Total Debt - Less Conduit Revenue Bonds		**$ 3,383,112,181**	**$ 8,226,137,631**	**$ 10,879,120,579**

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.

E. *Private Activity Bond Allocations*

Under Federal tax law, tax-exempt bonding is generally limited to the financing of capital projects, which are deemed to benefit the general public rather than private parties per se, although it does allow a limited amount of tax-exempt financing for "private activity" projects. Section 146 of the IRS Tax Code defines which projects qualify as "private activity", and authorizes by formula (state population x $105) each state's annual private activity tax-exempt bonding volume cap (PAB).

In CY 2018, Oregon's overall PAB was $435 million, of which the 2017 Legislature allocated $170 million to state agencies ($125 million to the Oregon Housing and Community Services Department (OHCSD) for affordable housing; $40 million to the Oregon Business Development Department (OBDD) for Industrial Development Bonds; and $5 million to OBDD for the Beginning and Emerging Farmers loan program), with the balance of $265 million allocated to the Private Activity Bond Committee (PAB Committee). This Committee, as established in state law (ORS 286A.615), meets quarterly to review applications for the allocation of PAB to state or local projects that seek tax-exempt financing for their proposed private activity projects.

In CY 2018, $310 million in overall PAB was used in Oregon to provide tax-exempt financing of various high priority economic and community development projects, as shown below:

- $125 million – Mortgage Revenue Bonds - OHCSD's First Time Homebuyers Program
- $126 million – OBDD Industrial Development Bonds – Red Rock Biofuel project
- $ 53 million – Home Forward (Multnomah Housing Authority) – 85 Stories project
- $ 2 million – Housing Authority of Clackamas County – Rosewood Terrace project

Unallocated or unused PAB allocations for a given year may be allocated by the PAB Committee as “carryforward” to projects or categories of projects dictated as private activity under IRS Section 146. This PAB carryforward must be used within three years for the allocated purpose or it is permanently lost, as it cannot be reallocated to another purpose once the carryforward election is made. Historically, the vast majority of PAB carryforward (which has generally been in the $200 - $250 million range) was allocated to OHCSD, who applied the allocations over time either to its First Time Homebuyer mortgage revenue bond program or to its multifamily affordable housing program. Given the increased level of bonding activity in CY 2018, the PAB Committee had a much smaller amount of carryforward available for distribution in 2019 (approximately $125 million) and a range of projects and programs competing for its use (approximately $210 million in total requests this calendar year).

In addition, while the State in recent years has had an abundance of current year PAB allocation available for state and local economic development and affordable housing projects, it is unlikely that this will be the case in the coming years, given the sharp increase in the State’s economic activity and the anticipated growth in the number of future PAB requests, particularly with regards to affordable housing projects. This forecast of increased competition for allocation requests is based on several factors including the recent passage of a Constitutional amendment authorizing voter-approved local general obligation bonds for affordable housing and Metro’s success in obtaining said approval for issuing up to $652 million in general obligation bonds for this purpose.

Finally, the federal 4% tax credit program, which provides additional equity for affordable housing, must be matched 50% with tax-exempt (as opposed to taxable) bonds, and the Governor’s 2019-21 proposed budget increase in annual allocation of OHCSD PAB authority from $125 million to $250 million, will likely result in future PAB allocations being a hotly sought after resource. Both legislatively and PAB Committee determined allocations will likely become a more challenging process, requiring careful thought and deliberation as to the highest and best uses of this limited financial resource.

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II. CURRENT DEBT PICTURE IN OREGON

A. *Outstanding Debt*

Prior to the late 1990s, the majority of State debt outstanding was linked to the bonds issued by the Department of Veterans' Affairs (ODVA) for veterans' mortgages. Since that time, the State's debt financing has been increasingly employed as the main vehicle to fund certain State programmatic needs as well as a huge backlog of infrastructure and capital needs linked to the deferred maintenance of state and higher educational facilities. Debt issuance for state highway improvements has substantially grown over the past decade, as has the amount of indebtedness linked to construction and renovation of state facilities, economic development efforts, and higher education projects.

In 2003, the Legislature authorized several major new bonding programs, including $2.1 billion in pension obligation bonds to fund the State's Public Employees Retirement System (PERS) liability, $432 million in appropriation deficit bonds, and $1.9 billion in new Oregon Department of Transportation (ODOT) highway user tax bonds to address statewide bridge and highway modernization needs. In 2009, the Legislature authorized the issuance of an additional $840 million in ODOT bonds to address highway congestion and safety issues.

The following exhibits reflect more recent trends in outstanding State general obligation bonds, direct revenue bonds and appropriation credit obligations. These exhibits offer a historical perspective on the underlying factors that determine the State's overall debt position.

Exhibit II.1 shows a 10-year history of the State's total outstanding obligations by major category from fiscal years ending 2009 to 2018.[1] This exhibit shows that overall state debt has remained relatively constant over the past decade, as new general obligation and revenue state bonds were issued at roughly the same pace as outstanding general obligation and revenue state debt was retired. The components of overall state debt have changed during this ten year timeframe, however, with general obligation debt replacing appropriation credit debt as the source of financing for most state capital projects.

[1] Does not include conduit or pass-through revenue bonds.

Exhibit II.1

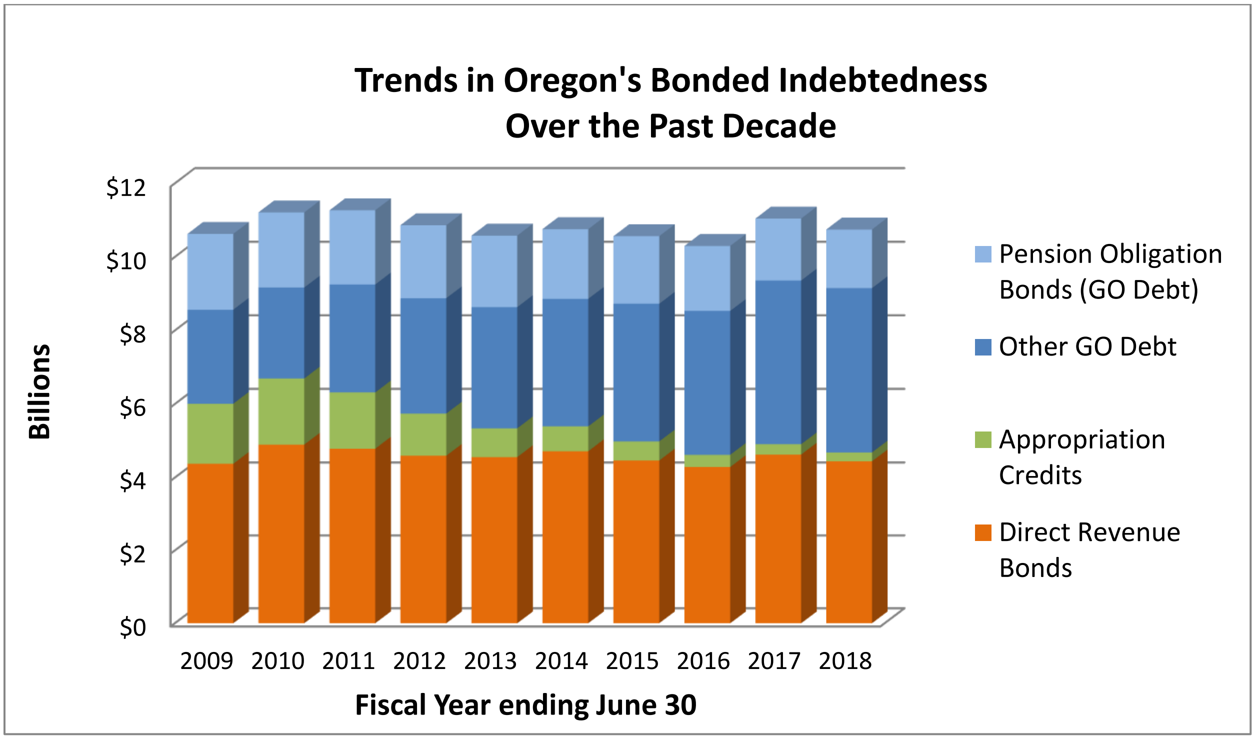
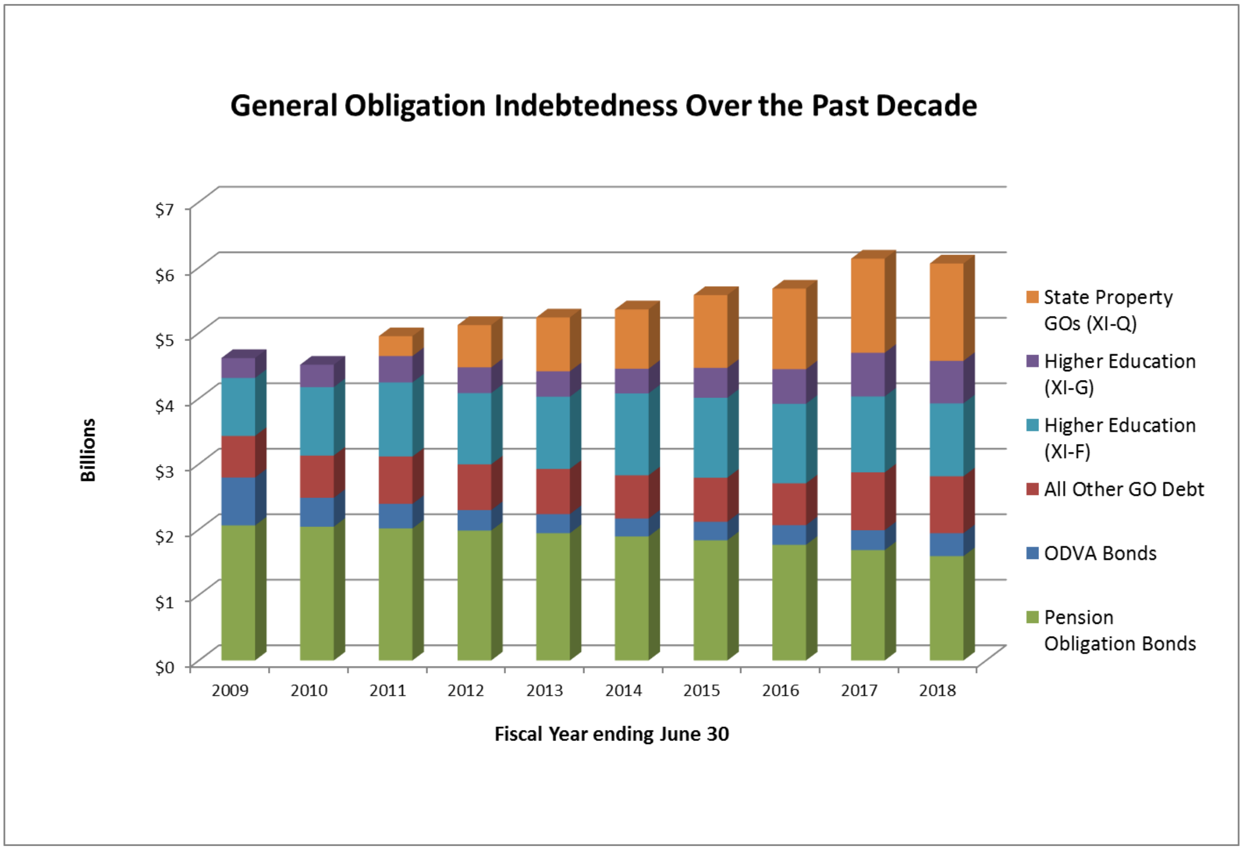


Exhibit II.2 provides more detail on the underlying components of this growth in State general obligation indebtedness. Overall outstanding State general obligation indebtedness totaled $6.06 billion at the end of FY 2018, representing an increase of approximately $1.4 billion over the levels reported ten years ago.

Over the past decade, the ODVA steadily paid down its general obligation bonds, while only a limited amount of new ODVA GO bonds have been sold to support new mortgage loans for Oregon veterans. Simultaneously, there has been a steady increase in the issuance of self-supporting Higher Education GO bonds (Article XI-F) that fund revenue-generating university capital projects, with this type of indebtedness growing from $886 million outstanding in FY 2009 to $1.1 billion outstanding in FY 2018.

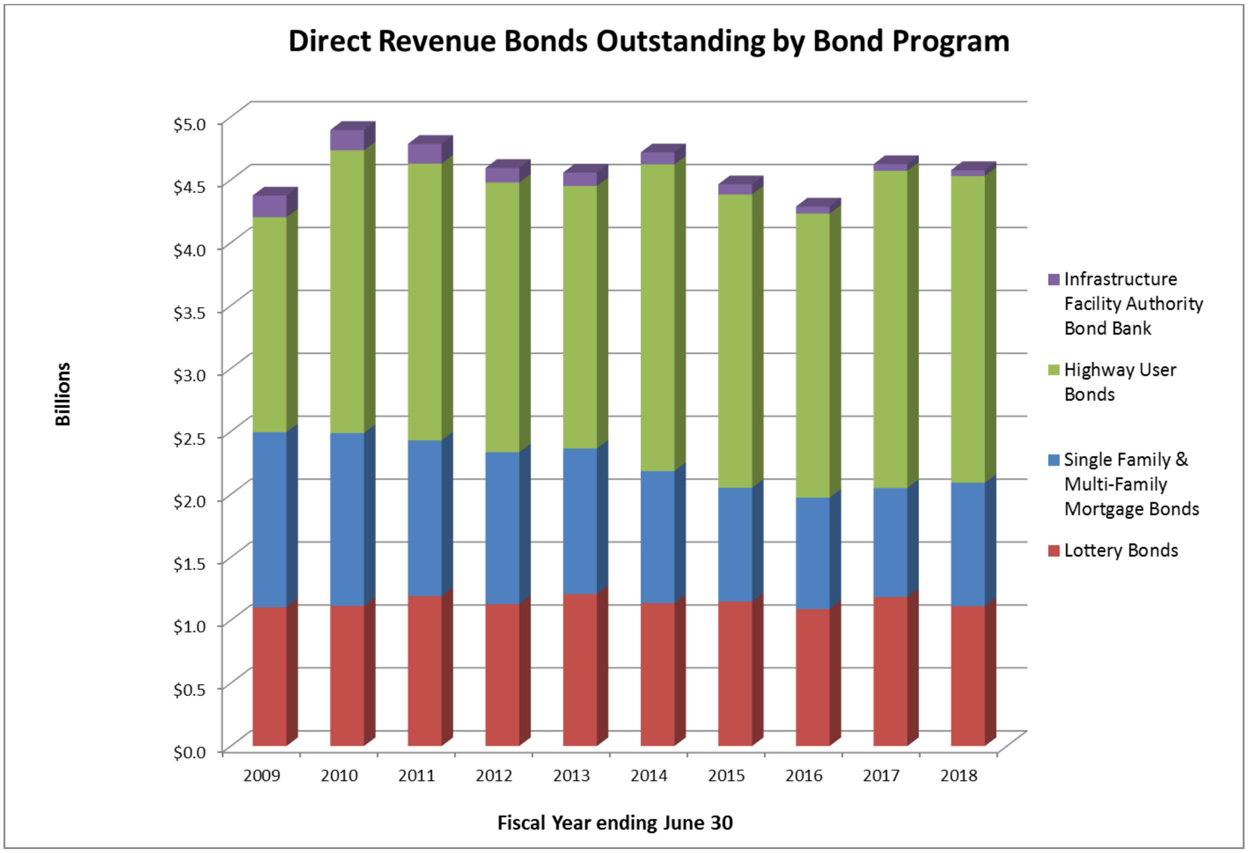
The other large growth area in terms of State GO bonded indebtedness is related to the establishment of the Article XI-Q GO bond program. In November 2010, Oregon voters authorized the sale of general obligation bonds for state buildings, facilities and other capital projects (Article XI-Q GO bonds) as an alternative to the more costly financing of these projects through Certificates of Participation (COPs). It was anticipated at the time of passage of this constitutional amendment that the State would over time refinance most of its outstanding COPs with these higher-rated, lower cost GO bonds. To date, the State has refunded $580 million in COPs with the new XI-Q GO bonds, saving an estimated $92.4 million in interest costs on a present value savings basis. In addition, all new state property projects have been financed with XI-Q GO bonds since FY 2011. As of June 30, 2018, only $240 million in COPs remain outstanding.

Exhibit II.2



As seen in *Exhibit II.3*, the overall amount of state direct revenue bonds outstanding has not increased substantially over the past ten years, although the components of this revenue indebtedness has shifted considerably between FY 2009 and FY 2018. Single family and multifamily housing revenue indebtedness has declined by $409 million, while Highway User Tax indebtedness grew by $729 million, reflecting the issuance of bonds to fund the balance of highway and bridge modernization projects authorized by the Oregon Transportation Infrastructure Acts (OTIA I, II, and III) and the congestion management and modernization projects authorized by the 2009 Jobs and Transportation Act (JTA). Over this time frame outstanding lottery-backed bonds remained constant, reflecting the balanced state approach of issuing new lottery bonds in amounts roughly equal to the amount of lottery debt that is retired each year.

Exhibit II.3



Appropriation obligations include both COPs and Appropriation bonds. The amount of appropriation obligations that can be issued is determined by the legislature each biennium. *Exhibit II.4* illustrates appropriation credit issuance history through fiscal year ending June 30, 2018.

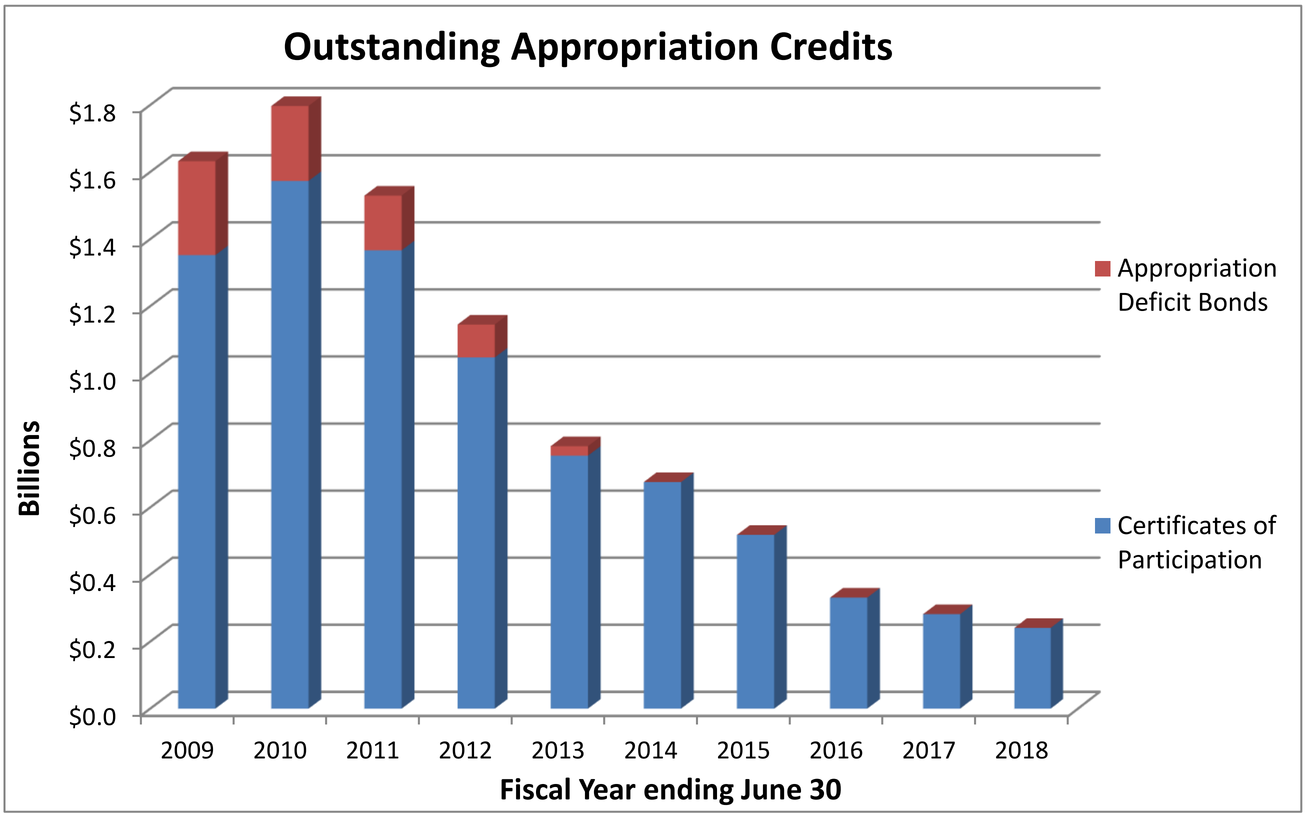
The State's original use of COPs was related to the passage of Ballot Measure 11 in 1994. Measure 11 created mandatory minimum penalties for specified crimes and required that juveniles charged with certain violent crimes be tried and sentenced as adults. At the time, there was not a constitutional provision that allowed for the issuance of GO bonds to fund general purpose state facilities. Therefore, COPs were used to fund the construction of adult and juvenile prisons and correctional facilities mandated by Measure 11. COPs were later used to fund the replacement of the aging Oregon State Hospital in Salem.

In 2010, the Oregon electorate approved the issuance of lower cost Article XI-Q general obligation bonds for State real or personal property projects. Since that time, $580 million of COPs have been refunded as Article XI-Q GO bonds, saving the State $92.4 million in interest costs on a present value savings basis over the remaining life of these obligations. It is unlikely the state will issue COPs in the future; rather, it is anticipated that as remaining outstanding COPs become eligible for refunding, the State will refund this debt using Article XI-Q GO bonds, saving taxpayers additional millions in interest costs.

It should be noted that there are a small amount of COPs issued by the State in the early 2000s to fund community correction facilities that are neither owned nor operated by the State of Oregon that cannot be refunded with XI-Q GO bonds (which can only be legally issued for projects that meet one of these two criteria). In addition, the State sold $161.7 million in taxable COPs in 2010 through the Build America Bond program that are not currently callable and therefore cannot be refunded with XI-Q GO bonds until 2020 at the earliest. Based on the above-referenced considerations, the scheduled final payment of COPs is currently projected to occur in FY 2035.

The first and only authorized State of Oregon Appropriation Bonds was issued in April 2003 in the amount of $431.6 million. The bonds were authorized by Senate Bill 856 (2003) and enacted by the 2003 Legislature Assembly for the purpose of financing a portion of the State's budget deficit which occurred towards the end of the 2001-03 biennium. These bonds were structured with a ten year term and were paid off in full in September 2013.

Exhibit II.4



B. *Future Capital Needs of the State of Oregon*

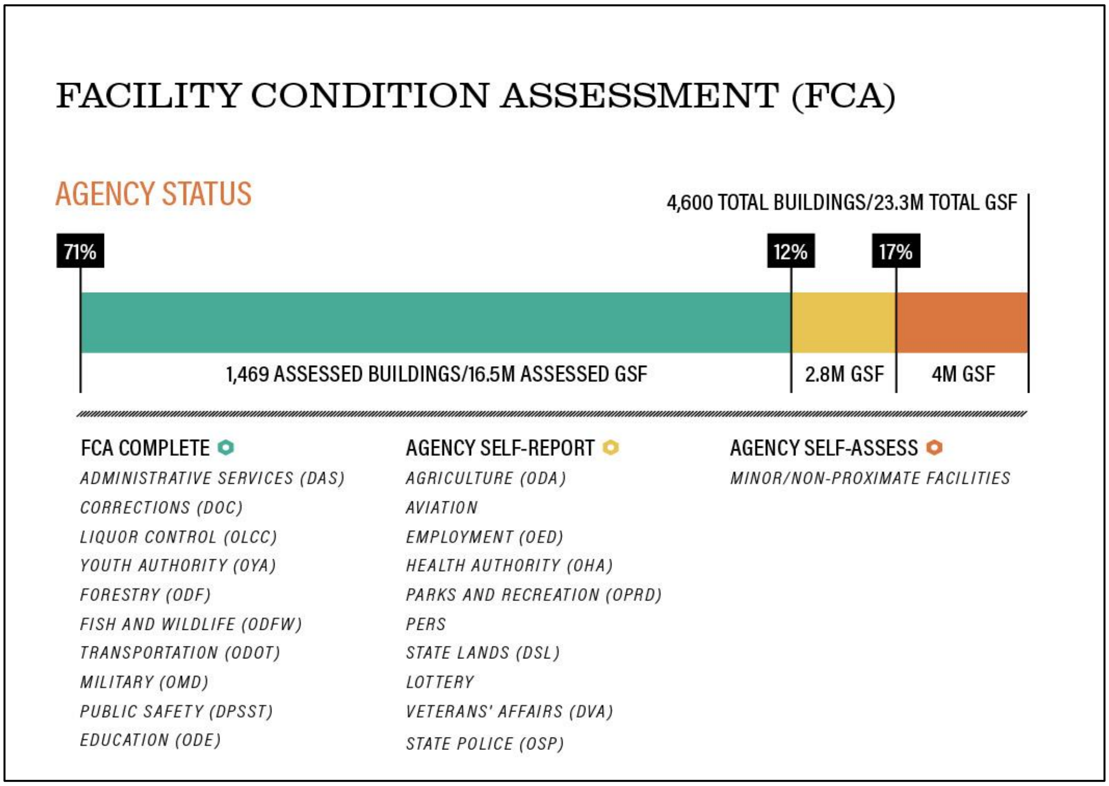
As this report demonstrates, there is approximately $1.15 billion in General Fund debt capacity available in each of the next four biennia. In addition, there will be on average approximately $305 million in Lottery bond capacity available over each of the next four biennia. Given the many competing demands for project funding throughout the state, the Commission continues to recommend that the Governor and Legislature carefully evaluate how to best allocate this future debt capacity.

The State of Oregon has current and future capital needs related to maintaining aging, state-owned facilities (the mean age is 40 years). The state-owned facility portfolio, including higher education facilities, is approximately 39 million gross square feet (MGSF) located in over 5,100 separate buildings. State agencies are housed in 23.3 MGSF of this space in approximately 4,600 buildings and facilities valued at $7.1 billion. Delaying ongoing maintenance, repairs and timely system replacements to the point that major renovations are required to maintain safe and adequate usage will cost significantly more. To the extent agency operating budgets are not sufficient to address ordinary maintenance and repairs of state facilities, this unmet need will continue to put pressure on the state's limited debt capacity to catch up on deferred maintenance through extensive and expensive renovation projects.

ORS 276.227 requires the Department of Administrative Services to establish a statewide planning process to evaluate the needs of the state's facilities, provide information on the condition of such facilities, establish guidelines for acquiring and maintaining facilities and provide financing and budgeting strategies to allocate resources to facilities' needs. In addition, state agencies are charged with implementing long-range maintenance and management plans to ensure that facilities are maintained in good repair and the useful lives of facilities are maximized. To assist agencies and the Legislature in prioritizing investment to steward the state's real estate assets, the Department of Administrative Services (DAS) implemented an initiative to collect detailed conditions information, including seismic and natural hazard risk assessments, on state-owned facilities. Using a statewide, programmatic approach, facility condition assessment (FCA) services were offered in the 2013-2015 and 2015-2017 biennia to agencies in an effort to ensure a consistent assessment methodology and uniform measure of facilities condition. In 2017-2019 biennium, four agencies self-funded their FCA's.

As shown in *Exhibit II.5* below, by the end of FY 2018, a total of 11 state agencies, compromising over 70 percent of agency-owned facility gross square footage, have completed their facility conditions assessments of major buildings and campuses. Based on these facility assessments, the capital renewal and deferred maintenance needs for assessed buildings are estimated to cost approximately $860 million over the next ten years.

Exhibit II.5



Source: Department of Administrative Services

The FCA process has also revealed that there is a great deal of variation in the current condition of state buildings and facilities by agency, as shown below in *Exhibit II.6*, with DAS, Public Safety and Transportation agency buildings ranked in good condition based on the Facility Condition Index (FCI) methodology shown below, with the balance of state agencies' buildings and infrastructure ranked in fair to poor condition. The FCI rating is based on a calculation of the cost of deferred maintenance and capital renewal needed for a given building compared to its current replacement value. The table below lists how each building's FCI is calculated:

FCI (%) = Facility Need (Capital Renewal and Deferred Maintenance Cost) / Current Replacement Value

0% to 5%	Good condition
5% to 10%	Fair condition
10% to 60%	Poor condition
Greater than 60%	Very poor condition

The FCA analysis conducted by DAS also suggests that if additional resources are not dedicated over the course of the coming decade to the on-going funding of capital renewal and deferred maintenance, in aggregate, all state agencies' buildings and infrastructure will decline to the poor condition FCI level by FY 2028.

Exhibit II.6

FACILITY CONDITION ASSESSMENT (FCA)

AGENCY FCI

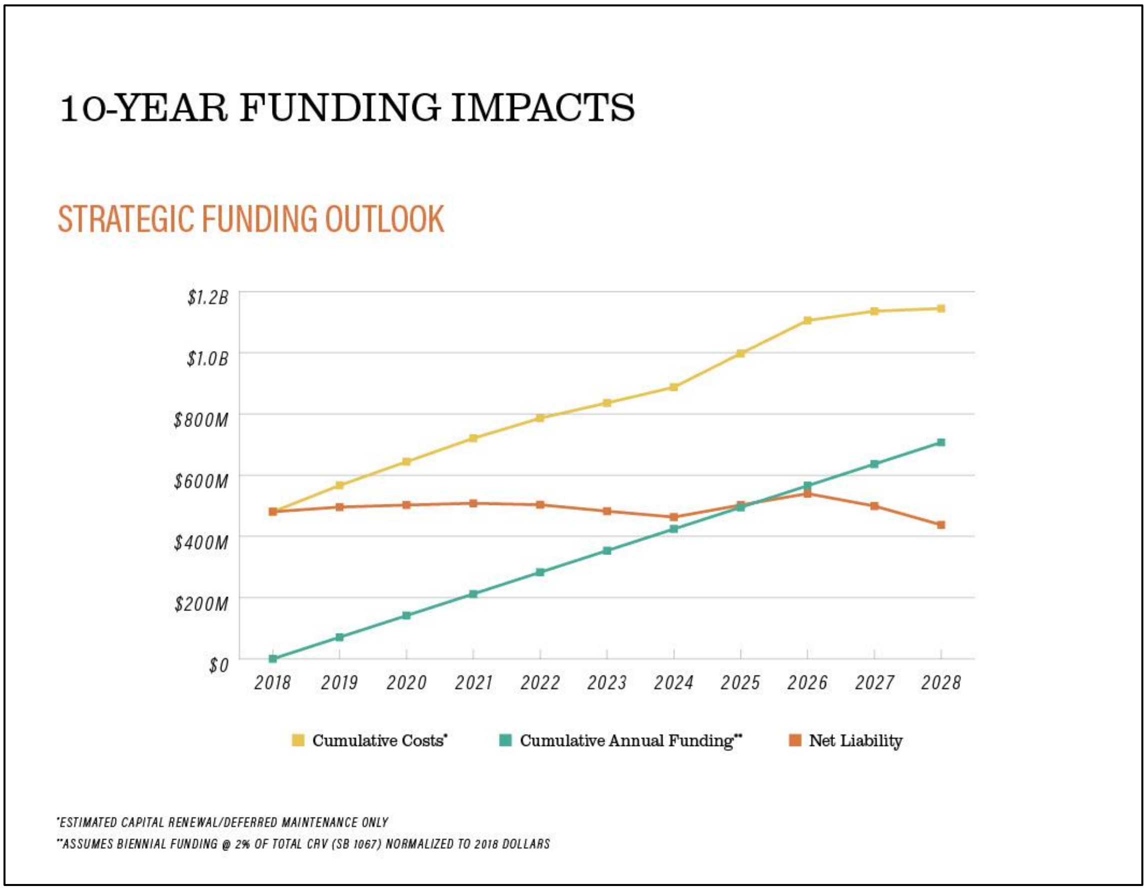
AGENCY*	2018 FCI	2018 CONDITION	2028 FCI	2028 CONDITION
ADMINISTRATIVE SERVICES (DAS)	4.2%	GOOD	18.2%	POOR
CORRECTIONS (DOC)	9.9%	FAIR	24.6%	POOR
EDUCATION (OED)	28.4%	POOR	45.4%	POOR
FISH & WILDLIFE (ODFW)	12.9%	POOR	25.2%	POOR
FORESTRY (ODF)	13.6%	POOR	28.0%	POOR
LIQUOR CONTROL (OLCC)	12.6%	POOR	29.7%	POOR
MILITARY (OMD)	5.5%	FAIR	20.3%	POOR
PUBLIC SAFETY (DPSST)	1.0%	GOOD	17.0%	POOR
TRANSPORTATION (ODOT)	4.5%	GOOD	13.8%	POOR
YOUTH AUTHORITY (OYA)	12.6%	POOR	35.1%	POOR

*FCA AGENCIES ONLY

Source: Department of Administrative Services

Given the results of the FCA analysis and the long-term savings that can be achieved by the state through the annual funding of on-going maintenance and repair of existing State facilities, the Commission applauds the 2017 Legislature for the passage of SB 1067, which will help the state take a more proactive approach to addressing the projected $860 million in deferred maintenance funding needed over the coming decade. SB 1067 requires that future Governors' Budgets include funding of deferred maintenance and capital renewal of existing state buildings and infrastructure, with minimum funding set at two percent of their current replacement value. As used in this context, the bill's definition of "state-owned buildings and infrastructure" excludes buildings and infrastructure owned or used by public universities and community colleges or the state's transportation infrastructure, such as its roads and bridges. Based on this 2% per biennium formula and the current replacement value of $7.1 billion for state-owned buildings and infrastructure, DAS projects that at a minimum funding level of $142 million per biennium, or $71 million per year, the state investment would exceed the net growth in deferred maintenance by FY 2026, as shown in *Exhibit II.7*. The 2019-21 Governor's Budget, recommends funding deferred maintenance and capital renewal at a bit higher rate, or 2.9 percent of the current replacement value of state-owned buildings and infrastructure, which if adopted would turn the corner on the growth of the state's deferred maintenance liability a year earlier.

Exhibit II.7



Source: Department of Administrative Services

Seismic and flood risk analyses have been completed for over 115 select DAS, Oregon Youth Authority, and Oregon Liquor Control Commission buildings. For the remaining eight assessed agencies, the FEMA Rapid Visual Screening portion of facility risk assessments are complete. The benefit-cost analysis, recommended rehabilitation or replacement approach, and other mitigation prioritization, will require additional technical expertise to complete, and will occur as funding is provided by the Legislature. In addition, additional funding of FCA analyses over time, at roughly $1 million per biennium, while not currently in the Governor's proposed 2019-21 budget, would allow the state to more actively continue to monitor its $7.1 billion in state buildings and infrastructure.

In addition to upgrading state buildings, in recent years, the State Legislature has established new grant programs funded with State bonds to incentivize Oregon local governments to address a myriad of their deferred maintenance and unmet capital needs (e.g. seismic retrofit of public school and public safety buildings, the creation of more affordable housing, county courthouse renovation and/or replacement, the development of new agricultural water infrastructure, and K-12 school capital improvements). While highly important to the State's long-term economic viability, potential growth in these bond-funded grant programs will also put pressure on the State's limited debt capacity.

Below is a list of some of the most pressing capital needs that have been identified as of the date of this report that were either funded in the 2017-19 biennium and/or will likely require funding in the future.

Public Safety

Both the Oregon Youth Authority (OYA) and the Department of Corrections (DOC) have significant backlogs of deferred maintenance on their facilities, for which a combined $67 million of Article XI-Q bonds was authorized in the 2017-19 biennium.

The OYA has a 10-year strategic facilities plan that identifies facility maintenance/renovation needs estimated at over $50 million. This two-phase plan addresses the age and condition of OYA's facilities; environmental issues; needed seismic upgrades; and handicap access to the appropriate types of space for OYA programs related to treatment, recreation, housing, visitation, education and vocational training. OYA's 2014 Facilities Condition Assessment (FCA) report identified immediate as well as long term facility needs over a 10-year horizon. These findings along with a programmatic transformation in how youth are housed, informed OYA's future facility disposition and consolidation strategy.

At over 5.5 MGSF, DOC has the largest facility portfolio of all state agencies. Many of these critical facilities are very old and in poor condition, despite a rigorous program of maintenance within the context of limited resources. DOC's deferred maintenance and capital renewal needs are currently assessed at $150 million, and without action are projected to reach nearly $300 million by 2028. DOC will need significant on-going funding to address accumulated deferred maintenance and capital renewal needs, as well as strategic seismic retrofits to many of its facilities. Given this, DOC must complete a strategic facilities plan that prioritizes funding to effectively address the sheer magnitude of these needs.

The Oregon Military Department (OMD) has identified over $100 million in deferred maintenance and capital renewal needs, compromising both new construction and maintenance/renovation projects at armories, readiness centers and other OMD facilities located throughout the state. The 2017 Legislature authorized issuance of $24 million of XI-Q bonds to match with federal funds to construct and upgrade facilities across the state.

Education

Oregon's public universities have significant projected capital needs that include construction of new classrooms, dorms, and other educational facilities, as well as deferred maintenance at existing facilities. All seven public universities are governed by independent boards that are autonomous from State government and have legislative authority to issue revenue bonds to fund their capital needs. However, given the State's financial resources and superior credit rating, it is likely that a significant portion of the future capital improvements at Oregon's independent universities will continue to be funded through the issuance of State General Obligation (GO) bonds to fund a combination of grants and loans from the Higher Education Coordinating Commission to the universities. To the extent that grants, rather than loans, are provided by the State, the capital needs of universities will continue to use a significant portion of available General Fund debt capacity.

For the 2017-19 biennium, approximately $327 million of General Fund supported GO bonds and $10 million in Lottery Revenue bonds were authorized to fund grants for public university capital projects. In addition, the 2017 Legislature authorized approximately $103 million in General Fund-supported Article XI-G bonds for community college construction projects. For the 2019-21 biennium, approximately $173 million of General Fund supported GO bonds are requested in the Governor's Budget to fund grants for public university capital projects. In addition, the 209-21 Governor's Budget requests $8 million in Lottery Revenue bonds and approximately $59.7 million in General Fund supported Article XI-G bonds for community college construction projects; however, several community colleges will not have the required matching funds for their projects, so the actual bond issuance may be less than authorized. Given the State's aspiration that 40% of adult Oregonians will have achieved a four-year college degree by 2025, it is likely there will be significant higher education capital project expenditures to meet this goal even with increased usage of online degree programs.

The issuance of $101 million of general obligation bonds under Article XI-P was authorized for school construction matching grants by the 2017 Legislature for the 2017-19 biennium. Article XI-P allows debt to be issued to provide matching funds to finance the capital costs of school districts that have received voter approval for local general obligation bonds. Capital costs include costs associated with acquisition, construction, improvement, maintenance or furnishing school facilities. The grant program is administered by the Department of Education in accordance with established grant eligibility and award requirements. Given the current condition of many school district facilities and the anticipated demand for matching grant monies, this program will likely need a significant portion of the state's General Fund debt capacity in future biennia.

The Oregon Department of Education's Deaf School has over $2.5 million in ADA deficiencies in addition to its deferred maintenance and capital renewal needs of $8.8 million (current) and $16.7 million in 2028. To continue operations at this campus requires significant future investment.

Economic and Community Development

The Oregon Business Development Department (OBDD) administers the Seismic Rehabilitation grant program for seismic upgrade of public schools and public emergency services facilities around the state. The 2017 Legislature authorized the issuance during the 2017-19 biennium of $101 million in Article XI-M Seismic Rehabilitation GO bonds for public school seismic projects and $20 million of Article XI-N Seismic Rehabilitation GO bonds for emergency services facilities. It should be noted that based on preliminary findings of the Oregon Department of Geology and Mineral Industries, there is a pressing need for the seismic retrofit of a significant number of Oregon's public schools and public safety facilities around the state, with an estimated cost of several billion dollars.

OBDD has traditionally used Lottery Bonds to capitalize and expand its Infrastructure Finance Authority Bond Bank loan programs, which offer low interest loans to local governments for local infrastructure including drinking water and sewer improvements. In the 2017-19 biennium, the Legislature authorized $22 million in Lottery Bonds for this purpose and an additional $11 million in Lottery Bonds specifically for levee improvement projects.

Given the shortage of affordable housing in Oregon, the 2017 Legislature authorized the issuance of Article XI-Q bonds to provide $80 million for low income housing projects through Oregon Housing and Community Services and $25 million of Lottery bond proceeds. This represents a significant increase over amounts authorized for this purpose in prior biennia.

Natural Resources

Water is essential for economic growth, environmental health, and the welfare of all Oregonians. Traditionally, the State of Oregon has left the development of water supply infrastructure to local entities and the federal government. In recognition of declining federal support and a rapidly increasing need for water infrastructure to meet Oregon's current and future instream and out-of-stream water needs, SB 839 (2013) established the foundation for a state grant and loan program for integrated water resources development in Oregon. This program was initially capitalized with the issuance of Lottery bonds during the 2013-15 biennium. The 2017 Legislature authorized $16 million in Lottery bonds for water supply development projects during the 2017-19 biennium.

Although Certificates of Participation (COPs) have not been issued for many years due to the superior credit of the State's GO bonds, the 2017 Legislature authorized the issuance of $101 million in COPs in the 2017-19 biennium to be repaid using General Fund revenues. In conjunction with this authorization, the Legislature amended ORS 283.085 to expand the purposes for which COPs can be issued. The proceeds will be used to release a portion of the Elliott State Forest from restrictions associated with the forest being owned by the Common School Fund (CSF) and/or to compensate the CSF for impacts of preserving non-economic public benefits of the forest such as wildlife or habitat preservation and recreation.

The buildings and infrastructure of natural resource agencies is specialized and widely dispersed and aging. Both Oregon Department of Fish and Wildlife (ODFW) and Department of Forestry have completed the FCA's of all their major facilities and those proximate to those facilities. Forestry's six regions have deferred maintenance of $21 million and $46 million in capital renewal needs over the next ten years. ODFW's building values are $16 million (2018) and $30 million (2028) respectively; adding in their civil infrastructure (fish ladders, tanks, etc.) are expected to double these costs, however.

Judicial

The Oregon Judicial Department administers a grant program funded through the issuance of Article XI-Q GO bonds to finance costs related to acquiring, constructing, remodeling, repairing or furnishing county courthouses that are owned or operated by the State of Oregon. For the 2017-19 biennium, approximately $107 million in XI-Q bonds were authorized to fund two courthouse projects, including $102 million for construction of the new Multnomah County courthouse. There is likely to be continued demand for state debt capacity for courthouse projects, particularly for replacement projects in which construction may span multiple biennia. An additional $6 million of XI-Q bonds was approved by the 2017 Legislative Assembly for renovations to the Oregon Supreme Court building.

Other Capital Needs

For the 2017-19 biennium, $30 million in Lottery bond proceeds were authorized to provide grants for multi-modal transportation including projects to improve rail, port, airport and bicycle/ pedestrian facilities through the Connect Oregon program. In recent biennia, the Legislative Assembly authorized the issuance of Lottery bonds to fund a wide range of Oregon regional and community economic development needs, including dredging and other port improvements, trade centers, planning for aquifer recharge and new irrigation systems, forest land acquisition, transit system expansions, parking garages, levee improvements, matching funds for federal disaster assistance, and public television infrastructure. In addition to the projects already mentioned above, Lottery bonds were authorized to provide $90 million of proceeds to fund regional and community projects across Oregon. Often, these types of projects are not financially feasible without the Legislature's allocation of Lottery bond proceeds for these purposes.

In addition, approximately $24 million of Article XI-Q GO bonds were authorized by the 2017 and 2018 Legislature to finance capital improvements to the Oregon Capitol Building including accessibility and safety issues. Other bonding needs include the funding of large-scale IT system development and upgrades. Examples of these systems include the Department of Human Services' ONE Integrated Eligibility and Medicaid Eligibility System, the Department of Justice's Child Support Enforcement System, and the Department of Revenue's Core Tax Revenue System. All of these projects were at least partially funded in 2017-19 through a total of $58 million in Article XI-Q GO bonds; if implementation is not completed by the end of the biennium, these projects will likely require continued state debt financing during the 2019-21 biennium.

Other Potential Impacts on State Debt Capacity

Appropriately, the use of bond proceeds has not been authorized by the legislature to assist in the structured settlement of large lawsuits against the State of Oregon. However, there are examples of other jurisdictions around the country issuing "judgment obligation" bonds for this purpose. Since the Oregon Constitution restricts general obligation bond issuance to a limited range of voter-approved purposes, the use of bonding for large lawsuit settlements would be restricted to appropriation based debt. If a significantly large enough lawsuit against the State was won by a plaintiff, this long-term liability would likely be considered by rating agencies and others as part of the State's general fund "indebtedness" and would be counted against its debt capacity. While the Commission is not aware of any large lawsuits of this magnitude that may be settled in the near future, it behooves the Legislature and Governor to remain mindful of these potential events and the long-term budget implications that this type of liability represents to the State.

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III. 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 *2019 Commission Report* provides a look at debt capacity from FY 2020 through FY 2027 based on the OEA December 2018 revenue forecast and the bonding authorizations enacted by the 2018 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. 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 (34% of total outstanding program debt)
- Alternate Energy Bonds (39% of total outstanding program debt)
- 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) (87% of total outstanding program debt)
- Pension Obligation Bonds (33% of total outstanding program debt)
- Certificate of Participation obligations (86% of total outstanding program debt)

As shown in *Table III.1*, the model solves for overall debt capacity for fiscal years 2020 through 2027 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 $502.7 million in FY 2020 to $743.5 million in FY 2027.

Table III.1

General Fund Forecast
($ Millions)

Fiscal Year Ending June 30th	Estimated General Fund Revenues[1]	Amount Available for Debt Service at 5% Capacity Limit
2020	$10,053.8	$ 502.7
2021	11,237.9	561.9
2022	12,057.8	602.9
2023	12,588.7	629.4
2024	13,109.4	655.5
2025	13,734.3	686.7
2026	14,284.7	714.2
2027	14,869.2	743.5

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 $1.183 billion in General Fund-supported debt authorized by the 2017 and 2018 Legislatures will be issued by June 30, 2019.

This new General Fund-supported debt includes the following:

- $235.1 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;
- $101.0 million in XI-P GO bonds for matching grants for K-12 school capital improvements;
- $613.7 million in XI-Q GO bonds for various state agency, higher education and affordable housing projects; and
- $101.0 million in Certificates of Participation for the partial purchase of the Elliott State Forest from the Common School Fund.

[1] General Fund revenues are shown as projected by the Oregon Office of Economic Analysis in the *Oregon Economic and Revenue Forecast* for December 2018.

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

- Level annual debt service payments;
- An interest rate of 4.50%, the standard rate used in annual SDPAC reports, which is 28 basis points higher than the 10-year average of the *Bond Buyer 20-Bond Index* as of November 29, 2018[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 in *Table III.2*. A detailed outline of debt service requirements for each General Fund-supported debt program is provided in *Appendix A* to this report.

[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.

Table III.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[1]**	**(Less) Projected Annual Payments for Debt Service on New General Fund-supported Debt[2]**	**Remaining Dollars Available to Pay Debt Service on Future Debt**
2020	$502.7	$ (378.4)	$ (90.9)	$ 33.4
2021	561.9	(371.7)	(90.9)	99.3
2022	602.9	(351.1)	(90.9)	160.8
2023	629.4	(346.9)	(90.9)	191.6
2024	655.5	(329.0)	(90.9)	235.5
2025	686.7	(308.9)	(90.9)	286.9
2026	714.2	(307.6)	(90.9)	315.7
2027	743.5	(299.5)	(90.9)	353.0

The overall dollars available to pay debt service as determined in *Table III.1* is illustrated in *Table III.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 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 III.3* displays the remaining dollars available to pay debt service on future debt issuance, including the balance of 2019 debt capacity that was not allocated by the 2017 and 2018 Legislative Assemblies. 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.

[1] This represents the projected annual (fiscal year) debt service requirement on all General Fund-supported debt issued through June 30, 2018. See Appendix A for detail.
[2] The 2017 and 2018 Legislative Assemblies collectively authorized $1.183 billion in General Fund-supported debt. The model assumes issuance of $174.4 million in FY 2018 and $1,008.3 million in FY 2019, with debt service beginning in the following year after the sale of bonds, as shown in *Table III.2, Column 3*.

Table III.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**
2019	$ 112.8	$ -	$ -	$ -	3.9%
2020	33.4	434.0	(33.4)	-	5.0%
2021	99.3	857.8	(65.9)	-	5.0%
2022	160.8	800.5	(61.5)	-	5.0%
2023	191.6	400.4	(30.8)	-	5.0%
2024	235.5	571.0	(43.9)	-	5.0%
2025	286.9	667.9	(51.3)	-	5.0%
2026	315.7	375.6	(28.9)	-	5.0%
2027	353.0	485.1	(37.3)	-	5.0%
Total Additional General Fund Capacity		**$4,592.3**			

Table III.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.

Based on the analysis above, the Commission concludes that the General Fund-supported debt issuance amounts illustrated in *Table III.3* would allow the State to issue a maximum of $4.592 billion in additional General Fund-supported debt through FY 2027 on top of the $1.183 billion already authorized by the 2018 Legislature. This represents an increase of approximately $26 million in General Fund debt capacity compared to the amount projected at the time of the *2018 Commission Report.*

[1] *Table III.3* accounts for the issuance of $1,008.3 million in planned General Fund-supported bonds that was authorized by the 2017 Legislature.

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 III.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 III.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 III.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
2019	$ -	$ -	3.9%
2020	574.0	(44.1)	5.1%
2021	574.0	(44.1)	4.9%
2022	574.0	(44.1)	4.8%
2023	574.0	(44.1)	4.9%
2024	574.0	(44.1)	4.9%
2025	574.0	(44.1)	4.8%
2026	574.0	(44.1)	5.0%
2027	574.0	(44.1)	5.0%
Total Additional General Fund Capacity	**$ 4,592.3**		

Table III.5 and *Table III.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 $1.183 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 $4.592 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 $967.1 million. *(Table III.6)*.

Table III.5

Forecast of General Fund Debt Capacity
With Changing Interest Rates
FY 2020 - FY 2027
($ Millions)

	4.5% Interest Rate (From *Table III.3*)	**5.5% Interest Rate (1.0% Increase)**	**3.5% Interest Rate (1.0% Decrease)**
Total	$4,592.3	$4,122.8	$5,127.0
Difference from Base Case		(469.5)	534.7

Table III.6

Forecast of General Fund Debt Capacity
With Changing General Fund Revenues
FY 2020 – FY 2027
($ 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	$4,592.3	$5,559.4	$3,625.2
Difference from Base Case		967.1	(967.1)

IV. 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 IV.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, 2018; assuming that no additional Lottery bonds are issued either this biennium or in the future.

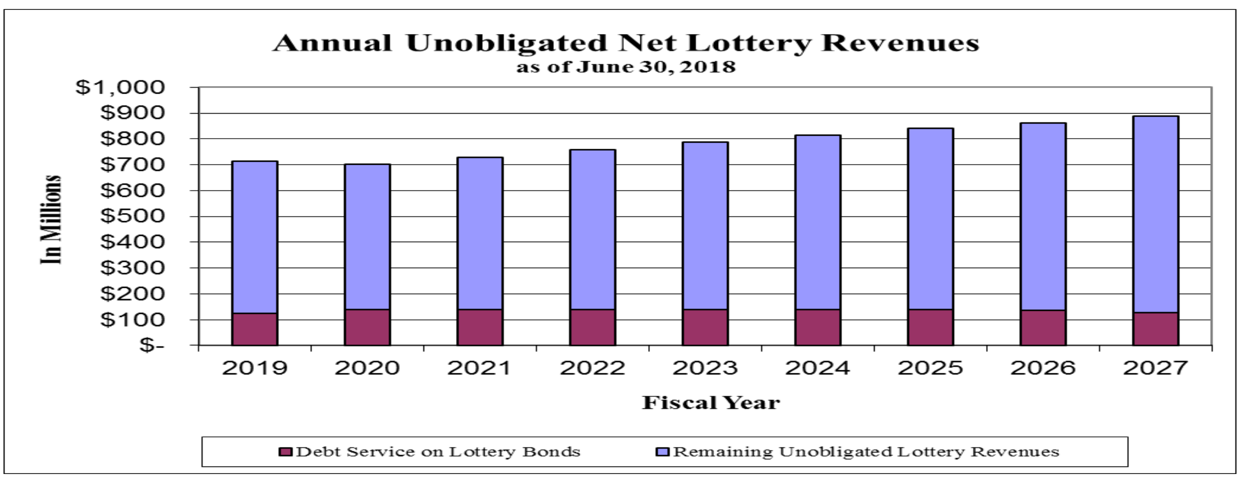
Table IV.1

Forecast of Net Lottery Revenue, Lottery Debt Service, and Debt Service Coverage Ratios as of June 30, 2018

Fiscal Year	Annual Net Lottery Revenues (millions)[1]	Debt Service on Outstanding Bonds (millions)[2]	Projected Debt Service Coverage Ratio (times)
2019	$ 712.6	$ 124.7	5.7
2020	703.0	138.3	5.1
2021	728.9	138.1	5.3
2022	759.1	140.2	5.4
2023	786.8	139.8	5.6
2024	815.2	139.8	5.8
2025	840.0	139.8	6.0
2026	863.0	137.3	6.3
2027	886.8	127.9	6.9

Exhibit IV.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 IV.1



[1] Oregon Office of Economic Analysis, Oregon Economic and Revenue Forecast, December 2018.
[2] Includes Lottery bonds issued through June 30, 2018. This does not include debt service on $221.0 million in authorized but not yet issued Lottery bonds that are planned to be issued before the end of FY 2019.

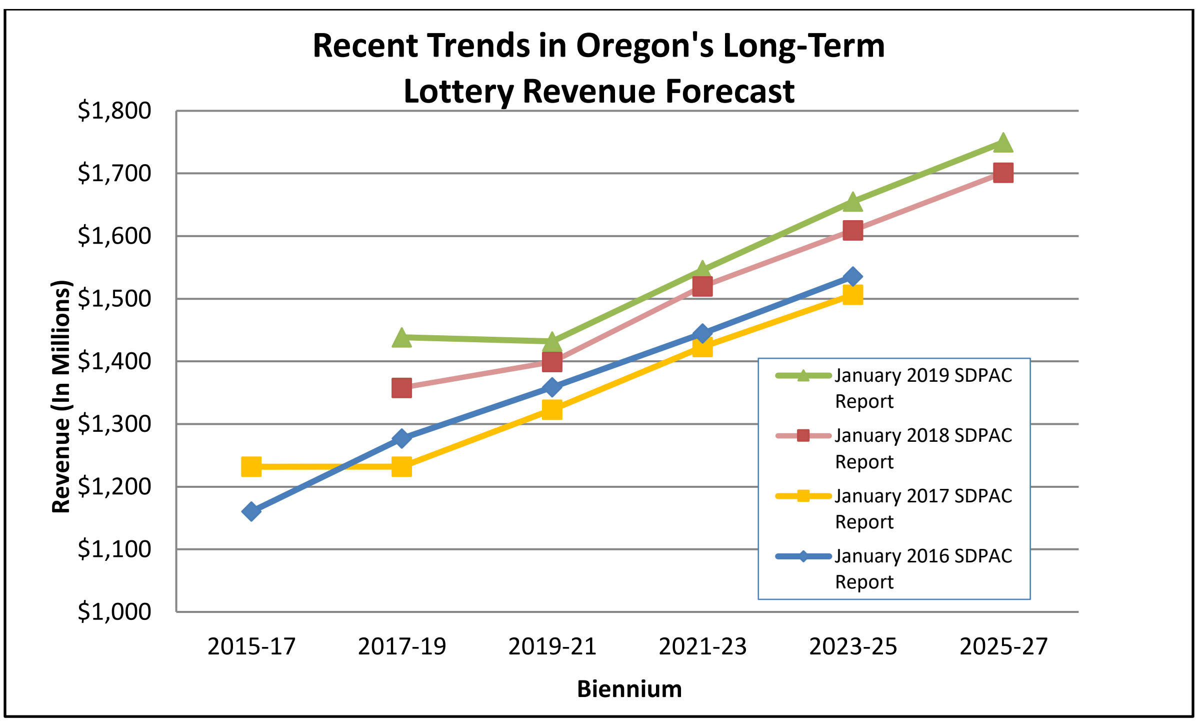
B. *Lottery Capacity Determination and Coverage Ratios*

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 the Office of Economic and Analysis (OEA) 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 IV.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 IV.2



Source: Oregon Office of Economic Analysis Economic and Revenue Forecast Reports, 2015 through 2018.

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 IV.1 reflects the positive impacts of this improving long-term Lottery revenue forecast. Lottery debt service coverage ratios are projected at a healthy 5.1 for FY 2020, which takes into account the planned issuance of $221.0 million in Lottery bonds authorized by the 2017 and 2018 Legislative Assemblies. 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 IV.2*, the estimated available dollars for annual debt service ranges from $703.0 million in FY 2020 to $886.8 million in FY 2027.

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

Available Revenues ÷ Required Coverage Ratio = Maximum Annual Debt Service
– or –
$703.0 million ÷ 4 Times Coverage = **$175.8 million**

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

- all outstanding Lottery revenue bonds as of June 30, 2018,
- 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 IV.2* column 1. The Lottery revenue bond debt service, as presented in *Table IV.2* column 2, accounts for existing debt service, as of June 30, 2018, and the planned FY 2019 issuance in the amount of $221.0 million. The Commission estimates this sale will result in annual debt service payments of approximately $17.0 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 IV.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 $1,220.5 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 IV.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**
2020	$703.0	$(138.3)	$487.8	$(37.5)	4.0	25%
2021	728.9	(138.1)	85.8	(6.6)	4.0	25%
2022	759.1	(140.2)	71.7	(5.5)	4.0	25%
2023	786.8	(139.8)	94.7	(7.3)	4.0	25%
2024	815.2	(139.8)	92.6	(7.1)	4.0	25%
2025	840.0	(139.8)	80.5	(6.2)	4.0	25%
2026	863.0	(137.3)	107.4	(8.3)	4.0	25%
2027	886.8	(127.9)	200.0	(15.4)	4.0	25%
Additional Lottery Debt Capacity:			**$ 1,220.5**			

*Debt service projection includes the planned Lottery bond issuance of $221.0 million to be issued before the end of FY 2019.

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 IV.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 IV.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
2020	$152.6	4.7	21%
2021	152.6	4.5	22%
2022	152.6	4.3	23%
2023	152.6	4.2	24%
2024	152.6	4.1	24%
2025	152.6	4.0	25%
2026	152.6	3.9	25%
2027	152.6	4.0	25%
Total Additional Lottery Capacity	**$ 1,220.5**		

*Does not includes the $221.0 million in planned Lottery bond issuance by the end of FY 2019. Does not foot due to rounding

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 IV.4 illustrates the impact of changes to long-term interest rate 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 $1,220.5 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 $117.2 million; conversely, a reduction in the interest rate assumption by 1.0% to 3.5% would add roughly $133.5 million in capacity over the forecast period.

Table IV.4

Forecast of Lottery Revenue Debt Capacity*
From FY 2020 to FY 2027
at Various Assumed Interest Rates
($ Millions)

	4.5 % Interest Rate (From *Table IV.2*)	3.5 % Interest Rate (1% Decline)	5.5 % Interest Rate (1% Increase)
Total	$1,220.5	$1,354.0	$1,103.3
Difference from Base Case		133.5	(117.2)

*Does not includes the $221.0 million in planned Lottery bond issuance by the end of FY 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 IV.5*, a 10% reduction in unobligated net Lottery revenues over the forecast period would reduce the available debt capacity by $288.4 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 $288.4 million to the long-term debt capacity forecast.

Table IV.5

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

	Current Lottery Capacity Projection (From *Table IV.2*)	10% Decrease in Unobligated Net Lottery Revenue	10% Increase in Unobligated Net Lottery Revenue
Total	$1,220.5	932.1	1,508.9
Difference from Base Case		(288.4)	288.4

*Does not include the $221.0 million in planned Lottery bond issuance by the end of FY 2019.

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V. 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, 2018. The State’s net tax supported debt, as of June 30, 2018, was $8.23 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 V.1 lists the 2017-19 biennium net tax-supported debt authorizations approved by the 2017 and 2018 Legislatures. For purposes of this *2019 Commission Report*, 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 V.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)	131,890,000
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 (Article XI-Q)	628,125,000
Total General Obligation Bonds	$1,106,095,000
Direct Revenue Bonds	
Lottery Revenue Bonds	221,025,000
Appropriation Credits	
DAS COPs (ORS 283 & 286A)	115,420,775
Total Net Tax-Supported Debt	$ 1,442,540,775

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 *2018 State Debt Medians* report (which uses calendar year 2017 data), Moody's determined the average NTSD per capita for the 50 states was $1,477 and the median was $987.[1] The average NTSD as a percentage of income was reported at 2.9% and the median at 2.3%. By comparison, Oregon's NTSD ranked 17th highest nationally in terms of net tax-supported debt outstanding at about $8.4 billion, but 12th highest in terms of net tax supported debt per capita at $2,017 and 11th in net tax-supported debt as a percentage of personal income at 4.5%.

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

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.

As *Table V.2* illustrates, at the end of FY 2018, net tax-supported debt totaled $8.23 billion with debt ratios of $1,957 per capita and 3.9% of personal income. Based on the issuance of an estimated $1.4 billion in authorized debt over the 2017-19 biennium, it is projected that the State's net tax-supported debt will increase to about $9.04 billion by the end of the 2019 fiscal year.

Table V.2

Net Tax-Supported Debt Ratios[1]

	Fiscal Year Ending June 30th		
	FY 2017 (Actual)	**FY 2018 (Actual)**	**FY 2019 (Estimated)**
Net Tax-Supported Debt (Billions)	$ 8.49	$ 8.23	$ 9.04
Population*	4,141,100	4,203,200	4,262,800
Personal Income (Billions)*	199.4	209.1	220.4
NTSD Per Capita	$2,050	$1,957	$2,120
NTSD as a % of Personal Income	4.3%	3.9%	4.1%
Pension Obligation Bonds Excluded			
NTSD Per Capita	$1,642	$1,578	$1,771
NTSD as a % of Personal Income	3.4%	3.2%	3.4%

*Source: Oregon Office of Economic Analysis Economic and Revenue Forecast, December 2018.

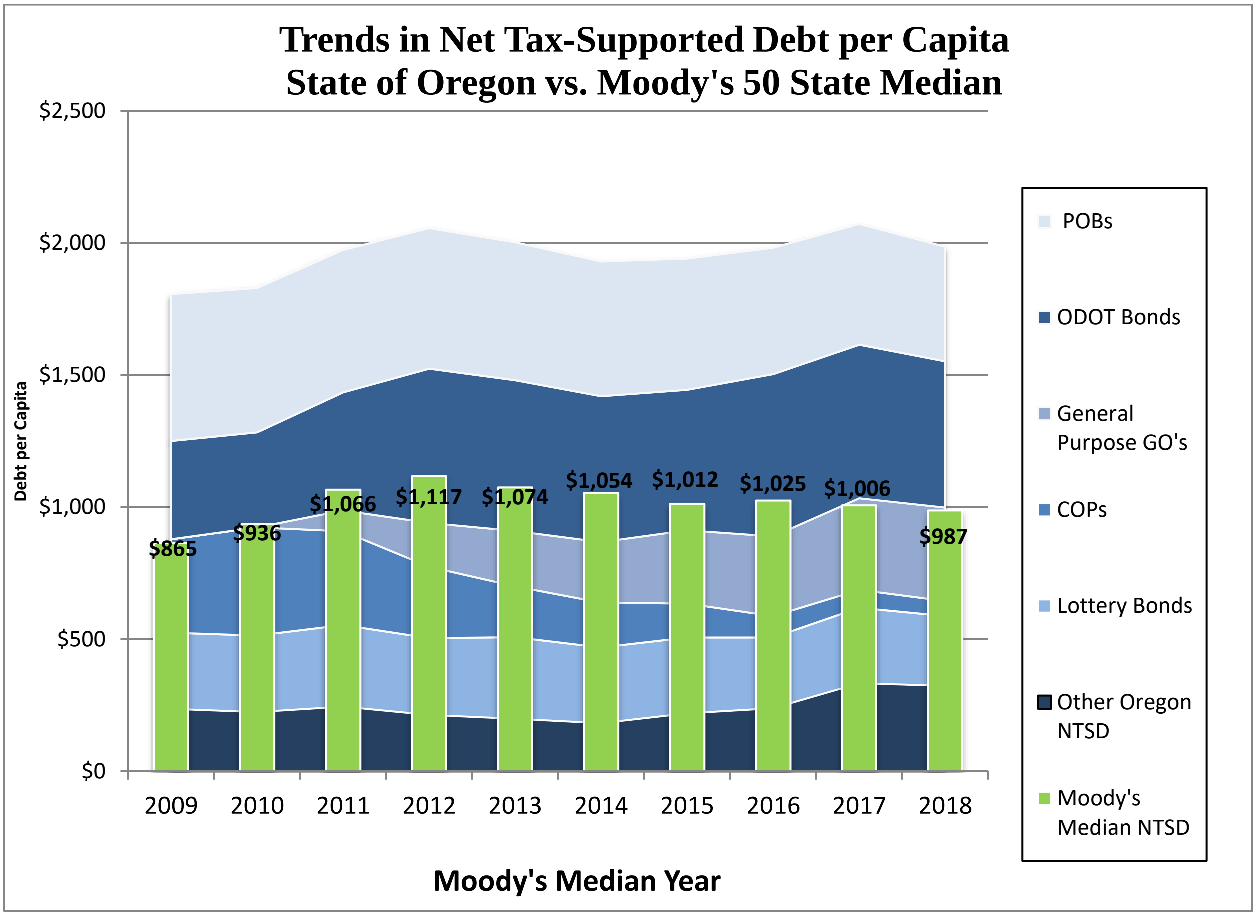
Rating agencies typically calculate total net tax-supported debt both with and without pension obligation bonds. In this way, they do not penalize states that issue POBs in comparison to other states that may have not issued POBs, yet may still have sizable unfunded pension liabilities. For Oregon, if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

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

Debt Ratio Comparisons

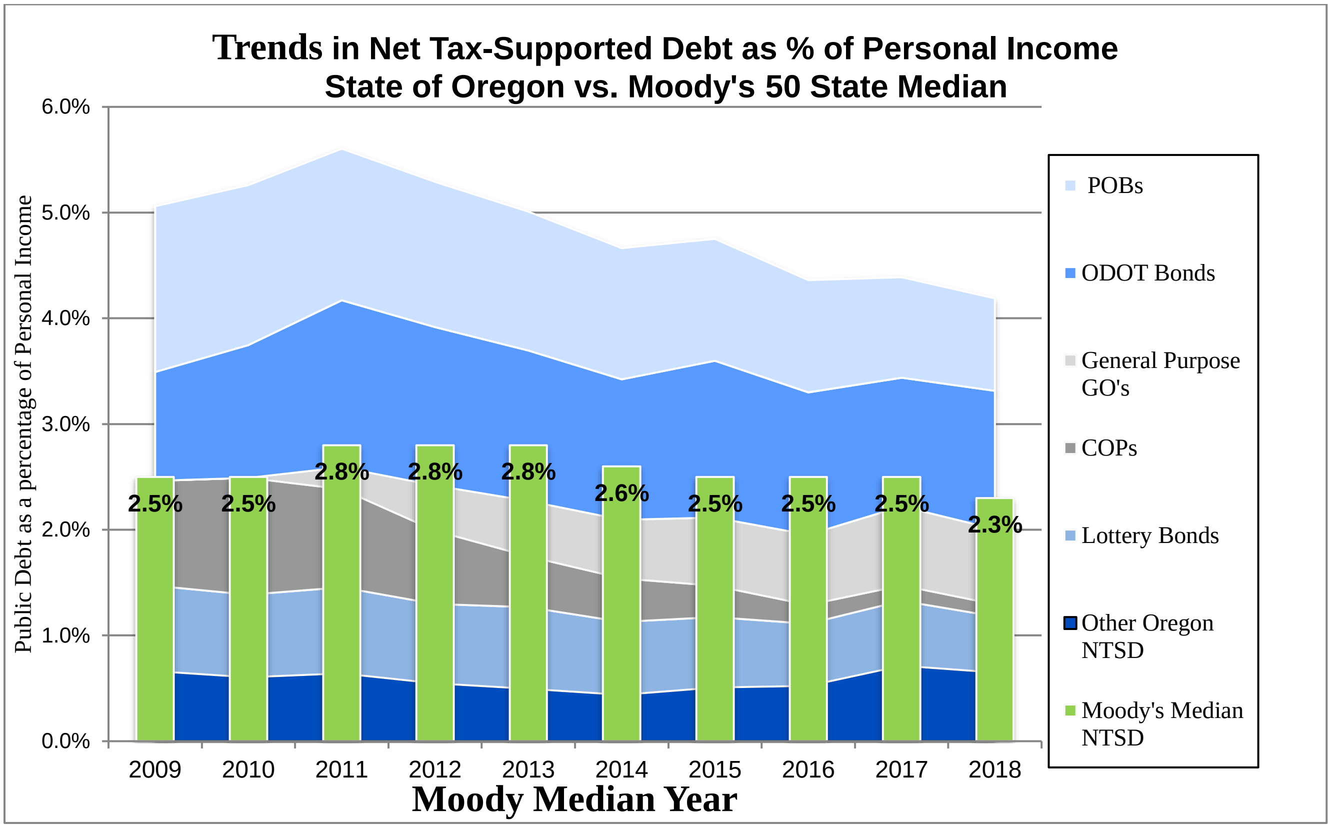
At the time of this report, Oregon's general obligation debt was rated by Moody's as Aa1, and AA+ by both Standard & Poor's and Fitch Investors Service. *Exhibits V.1a & V.1b* compare Oregon's NTSD ratios over the past decade with the Moody's median ratios of all 50 states. Prior to FY 2003, Oregon's 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 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 V.1a* and *Exhibit V.1b* show that Oregon's NTSD has remained well above the 50 state medians over the past decade, with General Purpose GO bonds replacing COPs, but together remaining relatively constant.

Exhibit V.1a



Source: Moody's Median Reports, 2009-2018.

Exhibit V.1b



Source: Moody's Median Reports, 2009-2018.

Given the growing awareness of unfunded long-term pension liability, 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. *Exhibit V.2* 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 2017, 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 *Exhibit V.3* shows, for FY ending 2017, the State of Oregon remained well below the national median for this debt measure, ranking 18th lowest overall among states.

Exhibit V.2

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

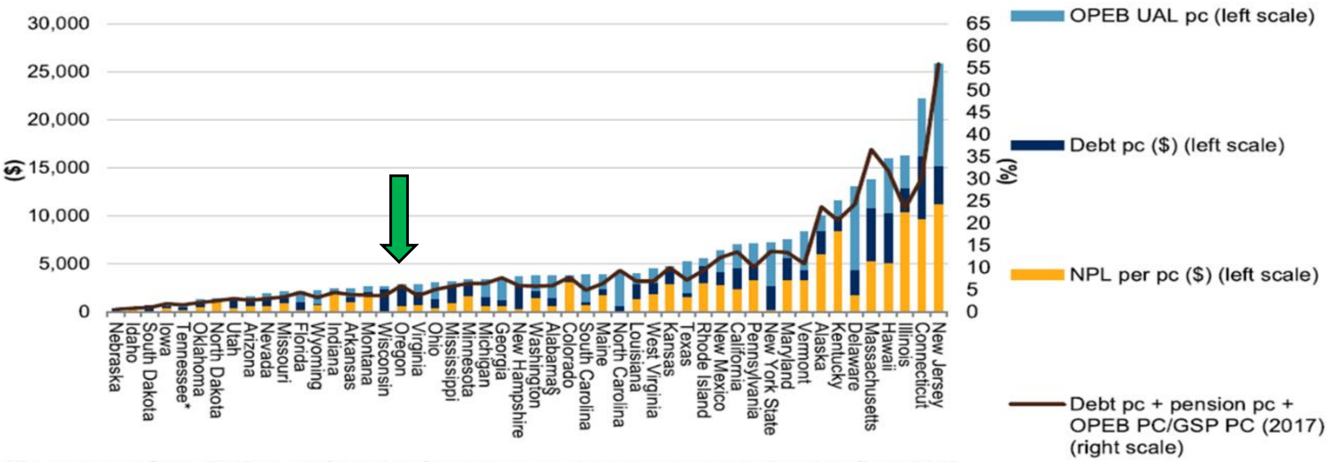
Ranked by PERS Funded Ratio at the end of FY 2017

Ranking	State	Pension Funded Ratio	Net Pension Liability (mil.)	Net Pension Liability per capita	Debt, pension and OPEB Liability per capita
1	South Dakota	100.1%	$ -2	$ -2	$ 590
2	Wisconsin	99.1	231	40	2,598
3	New York State	96.7	4,735	239	7,175
4	North Carolina	90.7	1,927	188	3,919
5	Idaho	90.6	421	245	358
12	**Oregon**	**83.1%**	**$2,788**	**$ 673**	**$ 2,728**
	50 State Average	**69.5%**	**$4,195**	**$ 1,111**	**$ 3,630**

Source: Standard & Poor's, *U.S. State Pensions Struggle for Gains Amid Market Shifts and Demographic Headwinds*, October 30, 2018. 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, 2017, as now required by GASB. "OPEB" means Other Post-Employment Benefits, which generally include retiree health care benefits guaranteed for payment by a state.

Exhibit V.3

Fiscal 2017 State Debt And Liabilities Per Capita As % Of Gross State Product Per Capita



*Tennessee reflects 2016 plan information for state agent plans as reported in the state fiscal 2017 CAFR.§Alabama incorporates fiscal 2016 information for employees' retirement system agent plans as reported in the state's unaudited fiscal 2017 comprehensive annual financial report (CAFR).

OPEB--Other postemployment benefits. UAL--Unfunded accrued liability. NPL--Net pension liability pc--Per capita. GSP--Gross state product.

Source: Standard & Poor's, *U.S. State Pensions Struggle for Gains Amid Market Shifts and Demographic Headwinds*, October 30, 2018. 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, 2017, 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); (61% 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.

[1] Oregon Housing and Community Services Department.

Table VI.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; and • 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; and • 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; and • Central debt management review.
Oregon School Bond Guaranty Program General Obligation Bonds *Article XI-K*	• May be triggered if state has to pay district debt service; • State-Aid may be intercepted for debt service payments; • May levy a district-specific or statewide property tax to repay bonds; • State's full faith in credit; and • 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; and • 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; and • 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; and • Central debt management review.

A. *Veterans' Welfare Bond Program*

As noted earlier, the Oregon Department of Veterans' Affairs (ODVA) is authorized to issue bonds to finance mortgage loans to eligible veterans. Although bonds outstanding under this program are fully self-supporting (repaid) from mortgage loan repayments, this was not always the perception by the bond market. In the late 1970s and early 1980s, the ODVA faced considerable difficulties due to the effects of the nationwide recession, aggressive lending practices, and improperly structured bond issues. Revenues from their mortgage portfolio were projected to be insufficient to cover operating expenses, bonded debt service resulting from mortgage prepayments and the increased losses from higher foreclosure rates. During this time, management practices allowed an extraordinary volume of bond issuance, resulting in over $6 billion outstanding in the ODVA program in 1985. These management practices were, in part, responsible for an eventual State ratings downgrade, leading to increased capital financing costs for the State for many of its bond programs.

Over the last thirty years, the State and ODVA made excellent progress and has transformed the Veterans' loan program into a sound, well-structured self-supporting GO bond program. ODVA did not issue debt between 1987 and 1995, and did not make mortgage loans between 1987 and 1991. The restructured program began lending mortgage monies again in 1992. Current financial strategies of the Department include: exercising bond call options for high cost debt where opportunity exists; close monitoring of administrative expenses; working to achieve the maximum spread between bond borrowing costs and mortgage lending rates permitted under Federal tax law; and structuring new bonds similar to proven single family mortgage revenue bond programs nationwide.

Requirements for participation in the ODVA Mortgage Loan Program are much more stringent than the early years of the program. Individual applicants and properties must generally meet Federal National Mortgage Association underwriting standards, which include, but are not limited to: adequate income, verification of stable employment, acceptable credit history, and sufficient funds to pay the down-payment and closing costs. A private mortgage insurer must also insure loans that exceed eighty percent of the value of the underlying security.

ODVA makes annual cash flow forecasts to assess future ability to meet debt service and related operating expenses. Future bond issuance will be based primarily on demand for program loans when ODVA loan rates can be provided below the prevailing commercial market rate.

B. *Higher Education Building Project Bond Program*

Historically, the Oregon University System (OUS) was composed of Oregon's seven public four-year universities, one satellite campus, and the affiliated Oregon Health & Science University (OHSU) in Portland. The Board of Higher Education had the authority to issue GO bonds for OUS projects based on two constitutional provisions, Article XI-F(1) and Article XI-G.

General obligation bonds issued on behalf of OUS are repaid either through revenues generated by various universities (Article XI-F (1)) or through State general fund appropriations (Article XI-G). Debt issued under Article XI-G is considered tax-supported debt for purposes of this report, and is accounted for in the General Fund capacity model and net tax-supported debt ratio calculations. Debt issued under Article XI-F (1), for Higher Education Building Projects, or through OUS revenue bonds, are not included in either model's calculations.

Article XI-F (1) bonded debt is paid solely out of non-General Fund revenues of OUS. These revenue sources may include tuition, student building fees, gifts, grants, endowment earnings, and other similar funds. Under program requirements, members of the OUS were required by the Board of Higher Education to set rates for the use of dormitories, cafeterias, parking structures and other self-liquidating auxiliary enterprises sufficient to produce revenues to fund all operation and maintenance costs, as well as to meet debt service requirements on their facilities.

Over the past several years, the State Legislature passed a series of bills that restructure the governance and management of many aspects of public higher education in Oregon. In 2011, the Oregon Education Investment Board was established to provide overarching policy guidance for Oregon's public education enterprise from pre-kindergarten through college. The 2011 Legislature also granted more independence to the various institutions within the OUS. In 2013, the Legislature adopted SB 270, which granted full administrative autonomy to individual public universities within OUS. The University of Oregon, Portland State University, and Oregon State University were granted the ability to establish independent governing boards that, as of July 1, 2014, directly oversee all aspects of each university's budget and operations, including the establishment of campus-wide multi-year capital master plans and the issuance of stand-alone revenue bonds. In 2014, the Legislature granted the same administrative autonomy to the remaining four schools within OUS, which became effective on July 1, 2015. With the simultaneous dissolution of OUS and the Board of Higher Education, state budget and bonding request coordination and other higher education policy duties were assigned by law to the Higher Education Coordination Commission. In 2015, this new business relationship between the State and the independent universities for bonding matters was further clarified and documented with the passage of HB 3199.

To the extent that these new, independent governing boards want to avail themselves of future self-supporting Article XI-F (1) or XI-Q GO bonds, State law requires that the Office of the State Treasurer (OST) review and approve any future standalone university revenue bonds to assure that the pledged revenues of the university are sufficient to cover debt service on both existing State GO bonds as well as these new university revenue bonds. To the extent that a university board does not wish to seek the review and approval of the OST prior to the sale of their revenue bonds, they are precluded from seeking new Article XI-F(1) or XI-Q GO bonding authority. To date, OST has reviewed and approved multiple series of revenue bonds issued by the University of Oregon and Oregon State University.

Historically, the combined non-General Fund revenues of the OUS were more than adequate to meet the operating and debt service requirements of the XI-F (1) bonding program. To assure that the General Fund is never actually required to repay this debt, and with the full implementation of independent university boards, the OST has the responsibility of working with the Higher Education Coordinating Commission and each university to identify enterprise revenues available at each school to pay debt service on existing and future XI-F (1) bonds. Each campus' future XI-F (1) bonding capacity will be dependent upon its governing board's adoption of sound financial management policies and practices and the revenue-producing ability of the projects financed.

C. *Housing & Community Services Department Bond Programs*

The Oregon Housing and Community Services Department (OHCSD) is authorized to issue GO bonds for the Elderly and Disabled Housing program, direct revenue bonds for Single-Family and

Multifamily housing mortgage programs, and pass-through revenue bonds for its multifamily conduit revenue program. None of these programs fall under the definition of net tax-supported debt used in this report. Thus, program capacity is discussed separately from assumptions made in the General Fund capacity model.

Like other self-supporting bonding programs, capacity for OHCSD programs is based primarily on the fiscal soundness of these programs and prudent financial management. The Director and the State Housing Council are appointed by the Governor. The Housing Council develops policies for OHCSD and submits proposed legislation to the Oregon Legislative Assembly on measures the Council considers necessary to address housing programs.

Applicants proposing to borrow monies under any of OHCSD's housing programs must first meet the eligibility requirements of that particular program. Applicants then follow an application review and approval process prior to receiving any loan monies associated with the program.

As noted earlier, bonds issued by OHCSD are fully self-supporting. Debt service is paid solely from revenues received from mortgage loan repayments, investment earning, and other assets held under each specific Trust Indenture. In order to assure that these assets are sufficient to fund necessary debt service requirements, OHCSD is required to submit materials outlining projected revenues annually to OST. These projections must outline the ability to repay principal and interest over the life of outstanding bonds, as well as other expenses of OHCSD. If projected revenues show an inability to provide for these requirements, OHCSD would be precluded from issuing additional bonds or applying any revenues to the financing of additional mortgage loans.

Similar to other programs outlined here, OHCSD's capacity to issue bonds is based on sound management, prudent lending practices, maintenance of strong operation reserves for program continuance, and awareness of evolving economic and social factors affecting individual borrowers' ability to repay mortgage loans. OHCSD, more than other state agencies, has used sophisticated public finance tools like variable rate bonds backed with liquidity facilities and floating-to-fixed interest rate swaps in order to offer more competitive mortgage rates to its customers while reducing its bond portfolio's interest rate risk.

D. *Alternate Energy Program Bonds*

The Oregon Department of Energy (ODOE) is authorized to issue GO bonds for the Alternative Energy Project in accordance with the provisions of Article XI-J to finance secured loans for the development of small-scale local energy projects (SELP) throughout Oregon. ODOE may have bonds outstanding equal to one-half of one percent of the true cash value of the property of the State. SELP was originally designed to be fully self-supporting requiring prior determination and identification of repayment sources prior to making loans from bond proceeds. Constitutional and statutory provisions mandate that loan repayments are made from secured loan sources before any General Funds are advanced to SELP for repayment of Article XI-J debt.

ODOE's program staff investigates and evaluates each loan request. Registered engineers typically design larger projects representing loan amounts in excess of $100,000. In general, the reviews examine project design and the reliability of the resource. The ODOE staff investigations provide reasonable assurance that each loan is secured and protected against loss.

Debt service on Alternate Energy Program GO bonds is paid from revenues received from loan repayments. Prior to each bond sale, ODOE is required to submit materials outlining projected revenues and expenses to the OST. The projections provided must show the program's future capability of meeting all planned and outstanding bond payments through program resources. ODOE's capacity to issue these bonds must be based on sound program and departmental management, prudent lending practices, maintenance of appropriate loan loss reserves, and awareness of underlying borrowers' ability to repay loans.

Currently, a portion of ODOE's Alternate Energy Bonds are considered as General Fund-supported debt, as XI-J GO bonds were sold to fund loans for energy projects on various OUS campuses that are being repaid through annual General Fund appropriations to the State's newly independent universities. For FY 2019, these General Fund appropriations represent approximately 39% of ODOE's overall GO debt service payments for this fiscal year.

In preparation for an ODOE bond sale in 2012, the State Treasurer's staff reviewed SELP's cash flow model to determine if their projected loan repayments were sufficient to meet all future debt service requirements of their GO bond portfolio. This evaluation revealed that SELP's loan loss reserves were seriously depleted, due to the default of an $18 million loan on an ethanol facility, and a growing number of large, delinquent loans to private parties that were 91 days or more past due. Since that time, several other large loans linked to renewable energy projects have also gone into default and have been written off as non-collectible, further deteriorating SELP's balance sheet and reserve balances, which have sharply reduced the program's ability to make new loans without additional financial support from State general fund resources.

To address these problems, ODOE's management has tightened loan underwriting standards and pursued delinquent borrowers. In addition, the State Treasury refunded and restructured a portion of the outstanding ODOE bond portfolio in 2017, lowering ODOE's debt service payments substantially. Even with these efforts, General Fund cash infusions will be required starting in FY 2020 to supplement SELP loan repayments. Approximately $4.4 million will be needed in the 2019-21 biennium, in order for the SELP program to meet its scheduled debt service obligations. The overall amount of General Fund assistance needed over time is projected to total approximately $7 million, although the amount, timing, and size of future cash infusions will change if more SELP loans become delinquent or are written off as uncollectible.

E. *Oregon Business Development Department Bond Bank Program*

The Oregon Business Development Department (OBDD) administers the Oregon Bond Bank. The Bond Bank was created by the consolidation of the Water Program, which authorizes loans to municipalities to finance safe drinking water projects and waste water system improvement projects, and the Special Public Works Fund program, which provides loans to municipalities for construction, improvement and repair of water, wastewater, and other local infrastructure. Periodically, the Legislative Assembly authorizes the sale of Lottery Revenue Bonds to replenish the funds available to OBDD to make new loans for local and regional water, wastewater and other infrastructure projects. Additionally, the Oregon Bond Bank may issue stand-alone revenue bonds secured by these loans, to free up OBDD funds that can then be loaned again to municipalities for additional local infrastructure projects.

In 2011, the Legislative Assembly authorized further consolidation of various OBDD loans, grants and bonding programs for local governments through the creation of the Oregon Infrastructure Finance Authority (IFA). The IFA was established as an administrative unit within OBDD, with a nine member advisory board that provides policy guidance on the infrastructure loan, grant, and bonding activities of the agency.

Infrastructure loans made through IFA are typically full faith and credit obligations of the borrowing municipality, payable from the borrower's utility enterprise as well as the municipality's General Fund. OBDD may request the State to withhold any amounts otherwise due to the municipality from the State of Oregon, and to pay such amounts to OBDD, in the event that a municipality defaults on its loan payments.

IFA Bond Bank Revenue bond capacity is based on OBDD's sound financial management, prudent lending practices, awareness of underlying borrowers' ability to repay loans and any funds provided by the Legislative Assembly as part of their historical practice of providing program capital.

F. *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 the OST, 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.

G. *Oregon School Bond Guaranty Program*

The Oregon Legislature passed the School Bond Guaranty Act in 1997, with subsequent approval by voters via a constitutional amendment the following year that allows the State to guarantee voter-approved GO bonds of qualifying Oregon education districts. Participation in the program is voluntary and is open to public school districts, education service districts, and community college districts.

The Oregon School Bond Guaranty (OSBG) program is administered by OST, which establishes administrative rules prescribing application procedures and qualification guidelines. Upon determination of a district's eligibility, OST issues a certificate of qualification valid for one year from the date of issuance, which may be applied to all GO bonds issued by the district during that period. Prior to bond closing and contingent on complying with OSBG requirements, the district receives a confirmation letter for the specific bond sale.

Constitutional, Statutory, and Administrative Framework

The Constitutional and statutory framework for the OSBG program provides several strong credit enhancement features that have resulted in the program receiving the same credit rating as the State receives on its GO bonds. These features include:

- A pledge of the State's full faith and credit to guarantee payment of a qualified district/community college's bond debt service when due;
- Authorization of OST to make debt service payments from the Oregon Common School Fund, the Oregon Short-term Fund, or other State funds assures immediate liquidity for all guaranteed school district and community college debt service payments;
- Constitutional provision authorizing OST to issue property tax-backed State GO bonds to fund the State's guaranty, if necessary; and
- Authorization of OST to assure repayment of any draws on state funds to make school district GO debt service payments, including:
    - use of the state school funds intercept mechanism; or
    - legal compulsion of a district or community college to levy sufficient property taxes to repay any loan made, or
    - State GO bond sold, on its behalf.

A participating district, for which the State has made a guaranteed payment, is obligated to repay the State, with interest, and in certain instances, may be subject to an additional penalty. The range of State school funds that can be intercepted for repayment include any payments from the State's General Fund, the State School Fund, income from the Common School Fund, or any other operating funds provided by the State to the school district.

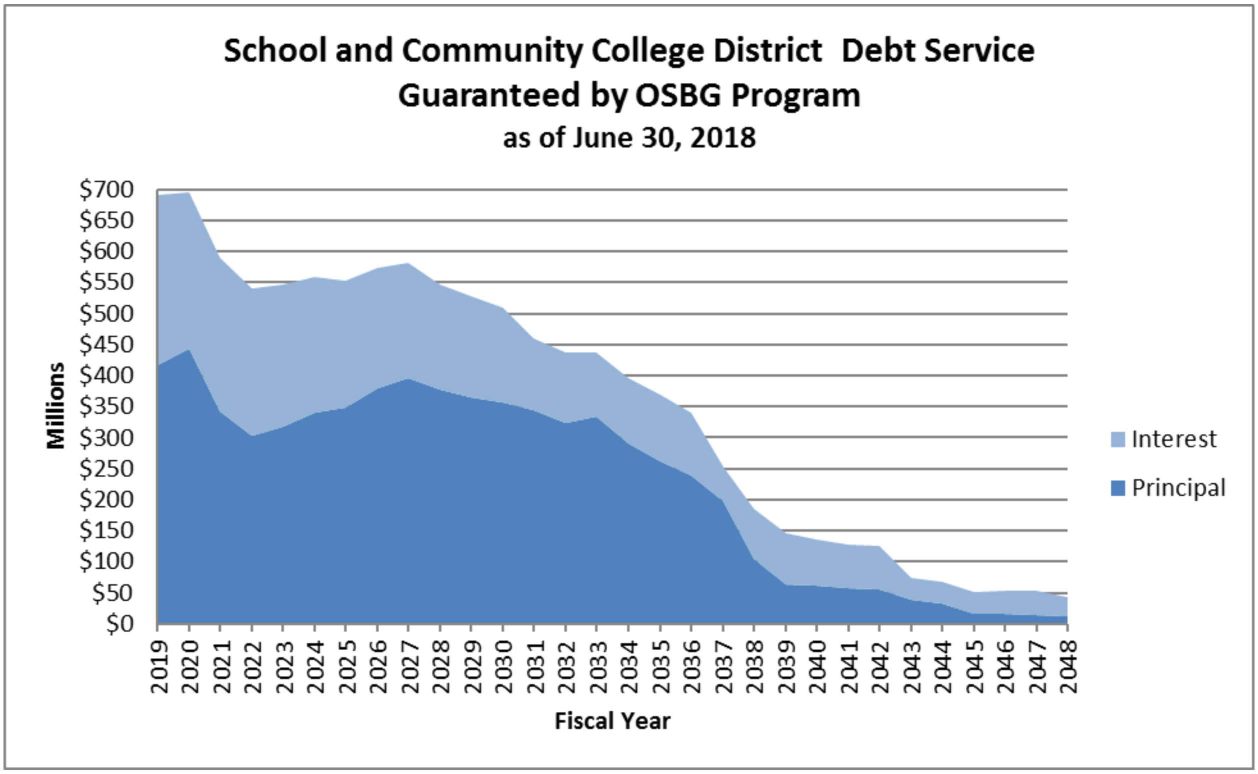
In addition, the administrative aspects of the OSBG program have been designed to reduce the likelihood of payment default by participating educational districts. The district's business administrator is required to transfer to its paying agent funds sufficient to cover each debt service payment at least 15 days before the scheduled payment date on OSBG guaranteed bonds. If it is unable to do so, the district must notify both the paying agent and OST at that time. The paying agent must notify OST if sufficient funds are not transferred at least 10 days before the scheduled payment date.

Program Statistics

Since its inception in 1999, the OSBG program has grown significantly in size and scope; as of June 30, 2018, the program has guarantees on $5.9 billion of outstanding GO bonds ($9.2 billion in principal and interest guaranteed debt service) issued by Oregon school districts and community colleges. While it is impossible to know precisely how much the State guaranty has saved Oregon taxpayers in interest costs on school bonds, a conservative estimate of an average reduction of .25% (25 basis points) in borrowing costs suggests debt service savings of roughly $15.3 million per year, or $305.3 million over a twenty year period.

Exhibit VI.1 projects State-guaranteed principal and interest over the remaining life of these school bonds. For FY 2019, this guaranty applies to local school district and community college annual debt service payments of $690.3 million, which is equivalent to approximately 6.67% of total State General Fund revenues for the fiscal year and 16.5% of overall State school aid for schools and community colleges.

Exhibit VI.1



State Guarantees of School District/Community College Pension Bonds

In 2001, the Legislative Assembly authorized the State Department of Education to enter into Fund Diversion Agreements as a means of improving the creditworthiness of Pension Obligation Bonds (POBs) issued by Oregon school districts and community colleges. POBs were initially issued from 2002 to 2007 by many local Oregon jurisdictions with this Fund Diversion provision to prepay their accrued unfunded pension liabilities in the Oregon's Public Employees Retirement System. Under these Fund Diversion Agreements, the State Board of Education agreed to make POB debt service payments to a POB bond trustee out of the annual state aid grants made to participating districts. Under current state law, OST does not have the authority to review or approve these fund diversion agreements although they represent a contingent liability of the State.

Since 2002, there have been nine separate pooled POB borrowings issued by the Oregon School Board Association and community colleges totaling $3.16 billion that have used this Fund Diversion Agreement approach to guarantee repayment of the POBs. While most of these pooled POBs were sold as non-callable taxable bonds, a few pooled POBs did have call features on certain maturities, which allowed for their refunding at lower interest rates over the last few years.

Exhibit VI.2 shows the substantial growth in the amount of state school aid that has been diverted each year to pay district POB debt service since FY 2005. The Commission estimates that the State diverted $290.4 million in state school aid for this purpose in FY 2018, or 6.9% of combined annual state aid for school districts and community colleges.

Exhibit VI.2

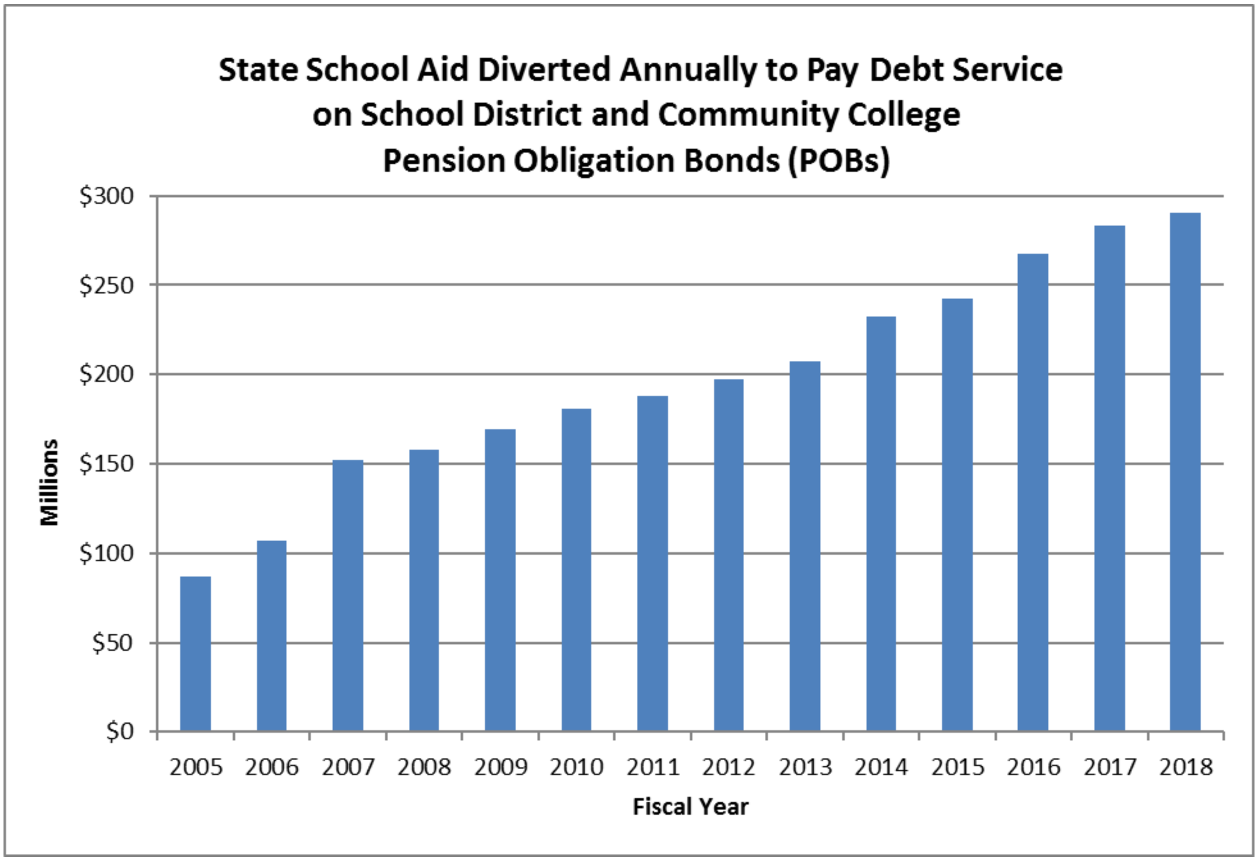
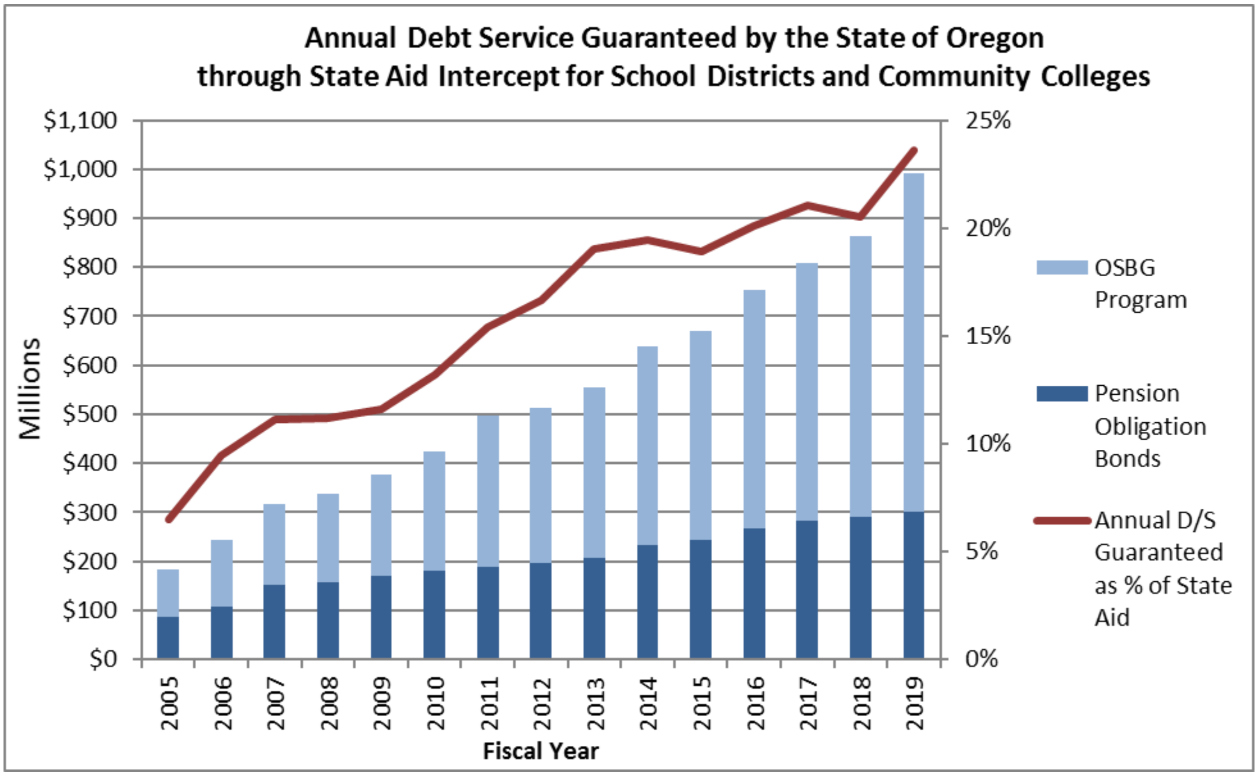


Exhibit VI.3 displays the steady growth in the State's combined annual guaranteed debt service for both the OSBG and the POB fund diversion programs. As the next chart shows, these two state aid intercept bonding programs combined are relying on a significant percentage of state aid to schools. The Commission projects that the **combined annual debt service** guaranteed by the State for school district and community college GO and pension bonds in FY 2019 represents over 23% of state school aid, an all-time high for the combined programs.

Exhibit VI.3



Policy Considerations

To date, no participating Oregon school district or community college has requested that the State of Oregon make a debt service payment on its behalf under the OSBG program. While OSBG guarantees are a contingent liability of the State, this long track record of positive district financial management has meant that to date the rating agencies do not consider this debt as part of the State's overall General Fund or net tax-supported debt.

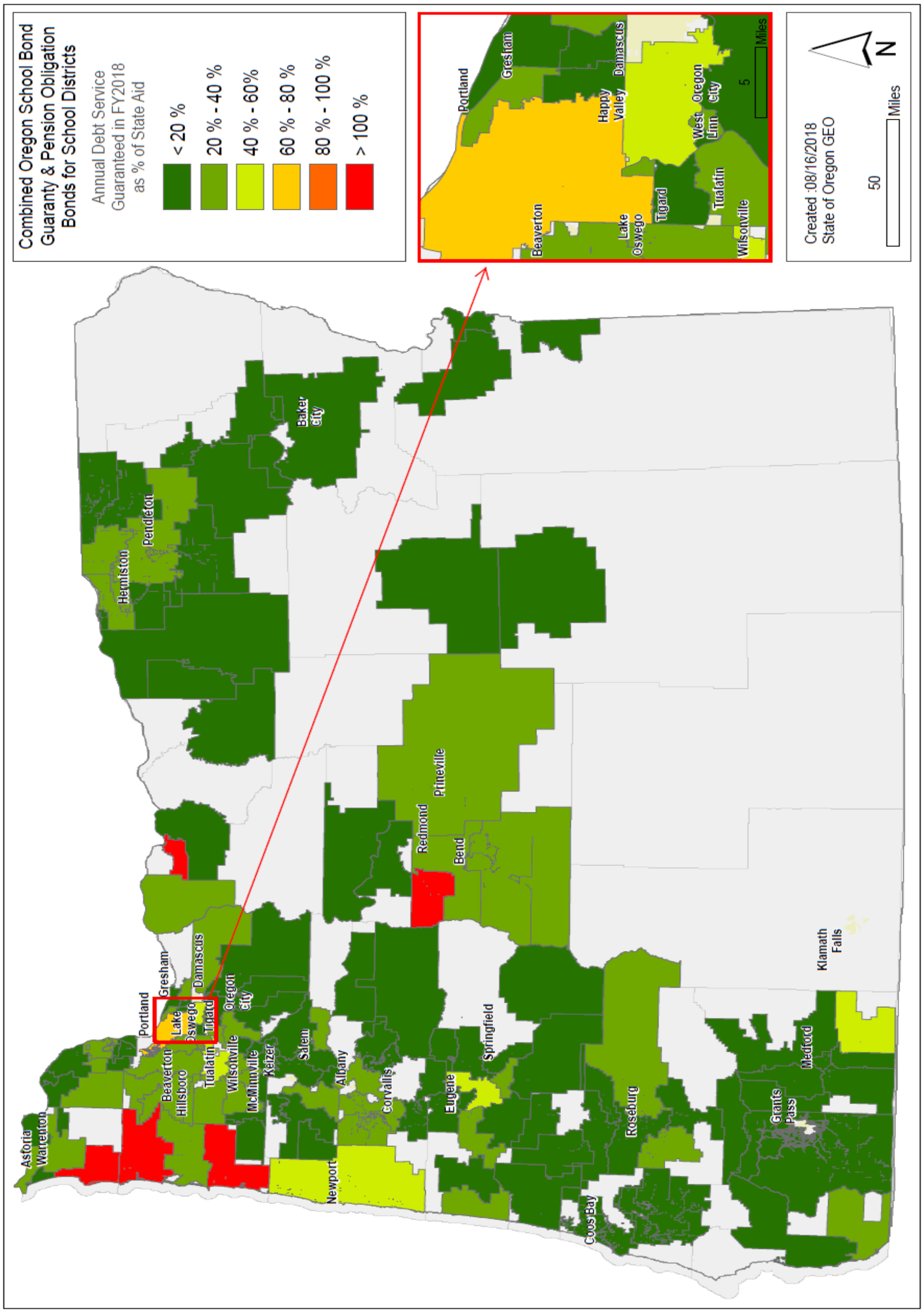
While the OSBG program successfully lowered the borrowing costs of participating jurisdictions throughout the State, OST has spent the past few years analyzing this program due to the increasing levels of annual state guaranteed debt overall, as well as the unusually high amounts of guaranteed debt noted for a few jurisdictions along the Oregon coast. Based on this review, OST has tightened the OSBG program rules to ensure the state guarantee of school debt is managed wisely.

Exhibits VI.4 and VI.5 illustrate each Oregon school district and community college district's respective state guaranteed debt service as a percentage of overall state aid for the fiscal year ending June 30, 2018. State aid is defined for purposes of the following exhibits to include annual appropriations made to school and community college districts through both the State School Fund and the Common School Fund.

As the exhibits demonstrate, there were five school districts and one community college which had a combined annual debt service on State guaranteed GO and POBs that exceeded the amount of annual State school aid they received in FY 2018. For additional detail on the state aid and the amount of debt service guaranteed for specific districts in FY 2018, please see Appendix A, Tables A-9, A-10, and A-11of this report.

Exhibit VI.4

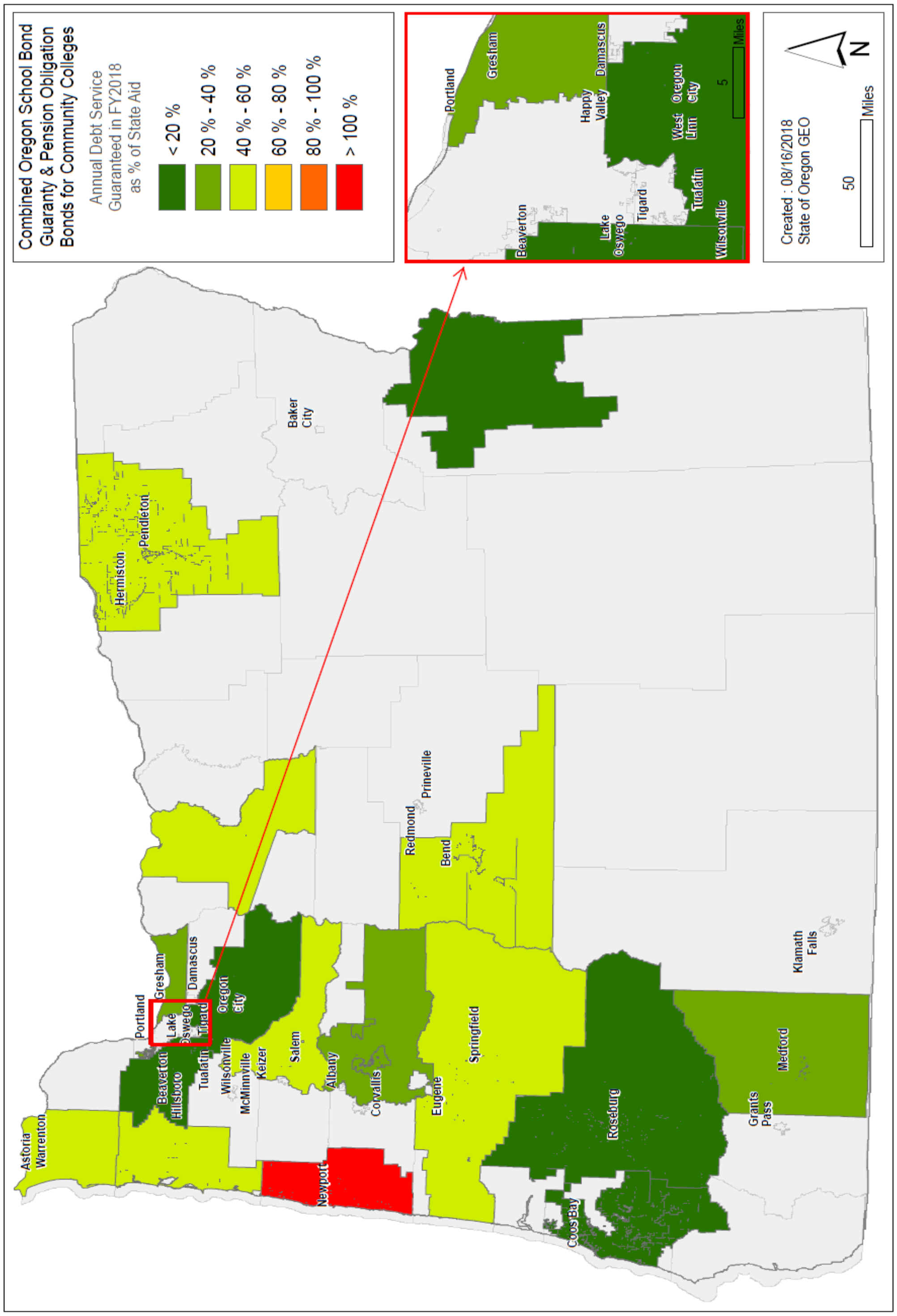
Combined Oregon School Bond Guaranty & Pension Obligation Bonds for School Districts



Map developed by Oregon Geospatial Enterprise Office (gis.oregon.gov)

Exhibit VI.5

Combined Oregon School Bond Guaranty & Pension Obligation Bonds for Community Colleges



Map developed by Oregon Geospatial Enterprise Office (gis.oregon.gov)

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APPENDIX A

Supporting Tables and Graphs

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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 Actual Issuance	FY 2019 Planned Issuance	Remaining Authorization
Community College Bonds Article XI-G	$ 103,185,000	$ 0	$ 103,185,000	4 0
Dept. Of Higher Education Facility Bonds (Article XI-G)	131,890,000	0	131,890,000	0
DEQ – Pollution Control Bonds (Article XI-H)	10,300,000	5,000,000	5,300,000	0
Seismic Rehab – Public Education Buildings (Article XI-M)	101,180,000	21,455,000	79,725,000	0
Seismic Rehab – Emergency Services Buildings (Article XI-N)	20,430,000	8,580,000	11,850,000	0
Dept. of Education – School Construction Bonds (Article XI-P)	100,985,000	0	100,985,000	0
State Property Bonds[2] Article XI-Q – 82%	613,689,225	139,350,000	474,339,225	0
Lottery Revenue Bonds ORS 286.563-585	221,025,000	0	221,025,000	0
Highway User Tax Bonds[3] 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	100,985,000	0	100,985,000	0
Total Net Tax-Supported Debt Authorizations	**$ 1,418,105,000**	**$ 174,385,000**	**$ 1,243,720,000**	**$ 0**

Note: May not foot due to rounding

[1] Amounts as authorized by the 79th Oregon Legislative Assembly – 2017 Regular Session and 2018 Interim Session. Authorization does not guarantee issuance of bonds or appropriation credits in these amounts. For the *2019 Commission Report,* it is assumed that all authorized bonds will be issued in fiscal year 2019.

[2] State Property Bonds: SB 5702, 2018 Legislature approved $628,125,000 for the 2017-19 biennium, of which $613,689,225 will be repaid from general fund resources.

[3] Highway User Tax Bonds: Legislature did not authorize the sale of any new bonds for this program for the 2017-19 biennium.

Table A-3

General Fund Supported Debt
Annual Debt Service Requirements[1]

Fiscal Year (ending June 30th)	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)	School District Capital Cost (XI-P)	State Property (XI-Q) General Fund Supported
2019	$36,507,262	$14,403,498	$54,303,944	$15,435,025	$65,698,699	$15,715,014	$4,266,988	$8,381,375	$152,652,412
2020	28,889,699	14,423,229	54,027,153	15,434,250	68,491,000	15,728,538	4,269,356	8,374,075	156,910,379
2021	21,951,782	14,342,475	53,060,260	15,437,250	71,402,163	15,717,438	4,267,406	8,370,200	154,491,835
2022	21,816,806	14,330,356	53,050,584	15,437,125	74,437,421	15,717,138	4,270,706	8,369,575	133,392,617
2023	20,623,026	14,439,769	52,979,370	15,432,250	77,600,390	15,720,513	4,268,606	8,362,425	128,239,275
2024	19,936,236	14,456,444	52,830,619	8,041,125	80,898,019	15,717,388	4,264,738	8,365,925	115,563,211
2025	14,744,618	14,451,819	52,824,140	-	84,337,209	15,714,525	4,274,938	8,361,400	106,240,295
2026	14,572,335	14,445,919	52,183,501	-	87,921,587	15,714,238	4,274,013	8,355,500	102,099,571
2027	14,272,787	14,358,669	52,015,127	-	91,657,309	15,712,925	4,273,538	8,349,125	91,468,148
2028	14,125,202	14,355,491	50,314,108	-	-	15,709,775	4,272,431	8,345,625	84,764,745
2029	13,959,735	13,819,113	46,920,872	-	-	15,717,425	4,270,081	8,344,250	82,624,785
2030	13,800,140	13,433,472	44,765,635	-	-	15,717,025	4,267,331	8,344,250	78,561,440
2031	13,274,041	13,427,581	43,181,431	-	-	15,717,450	4,268,719	8,340,000	70,951,663
2032	13,096,122	13,427,444	41,579,267	-	-	15,712,575	4,263,869	8,340,750	64,379,057
2033	12,910,370	13,426,269	38,229,965	-	-	15,717,506	4,269,894	8,330,875	59,903,901
2034	12,724,372	13,426,716	38,259,108	-	-	15,722,050	4,266,519	8,329,625	52,977,582
2035	12,523,576	10,107,328	35,812,597	-	-	15,714,806	4,262,788	8,330,875	50,571,639
2036	-	10,105,019	35,729,092	-	-	14,245,650	2,891,875	8,319,000	44,701,252
2037	-	7,606,709	32,448,297	-	-	10,753,325	2,657,750	8,323,000	34,659,706
2038	-	7,614,219	31,881,125	-	-	1,722,000	687,750	-	24,805,259
2039	-	5,738,625	30,400,375	-	-	-	-	-	20,465,119
2040	-	5,731,500	27,271,125	-	-	-	-	-	8,030,100
2041	-	1,631,250	24,694,125	-	-	-	-	-	8,027,055
2042	-	1,627,500	20,320,500	-	-	-	-	-	6,745,328
2043	-	1,634,875	10,818,875	-	-	-	-	-	1,420,493
2044	-	-	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-	-	-
2047	-	-	-	-	-	-	-	-	-
2048	-	-	-	-	-	-	-	-	-
2049	-	-	-	-	-	-	-	-	-
Program Totals	$299,728,110	$276,765,286	$1,029,901,194	$85,217,025	$702,443,797	$273,465,321	$78,809,294	$158,637,850	$1,834,646,865

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, 2018.

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**
2019	$1,696,035	$8,676,648	**379,785,049**
2020	1,584,650	8,230,776	**378,409,655**
2021	1,526,443	9,054,850	**371,669,703**
2022	1,304,265	6,950,053	**351,125,845**
2023	1,301,146	5,872,182	**346,888,553**
2024	1,254,135	5,643,448	**329,030,287**
2025	986,435	4,957,002	**308,928,980**
2026	988,641	4,970,392	**307,574,821**
2027	813,813	4,535,373	**299,502,188**
2028	815,992	4,437,562	**199,190,305**
2029	575,225	4,242,767	**192,520,253**
2030	577,992	3,404,798	**184,922,208**
2031	404,379	2,778,306	**174,390,195**
2032	405,620	1,850,574	**165,100,777**
2033	404,677	786,342	**156,026,298**
2034	132,005	547,760	**148,435,111**
2035	131,708		**139,504,317**
2036	132,813	-	**118,174,950**
2037	131,920	-	**98,628,707**
2038	132,430	-	**68,889,908**
2039	-	-	**58,651,494**
2040	-	-	**43,081,225**
2041	-	-	**36,402,680**
2042	-	-	**30,740,828**
2043	-	-	**15,924,243**
2044	-	-	
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
Program Totals	$15,300,324	$76,938,834	**$4,903,498,581**

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
2019	$215,922,062	$163,862,987	$379,785,049
2020	224,054,696	154,354,960	378,409,655
2021	228,446,570	143,223,133	371,669,703
2022	218,177,854	132,947,992	351,125,845
2023	224,866,400	122,022,153	346,888,553
2024	217,919,000	111,111,287	329,030,287
2025	208,462,450	100,466,530	308,928,980
2026	217,802,650	89,772,171	307,574,821
2027	221,038,200	78,463,988	299,502,188
2028	132,259,800	66,930,505	199,190,305
2029	131,845,900	60,674,353	192,520,253
2030	130,580,900	54,341,308	184,922,208
2031	126,370,900	48,019,295	174,390,195
2032	123,059,200	42,041,577	165,100,777
2033	119,901,100	36,125,198	156,026,298
2034	118,116,650	30,318,461	148,435,111
2035	114,941,300	24,563,017	139,504,317
2036	99,254,350	18,920,600	118,174,950
2037	84,458,400	14,170,307	98,628,707
2038	58,613,800	10,276,108	68,889,908
2039	51,206,000	7,445,494	58,651,494
2040	38,068,900	5,012,325	43,081,225
2041	33,162,550	3,240,130	36,402,680
2042	29,079,700	1,661,128	30,740,828
2043	15,502,850	421,393	15,924,243
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
Totals	**$3,383,112,181**	**$1,520,386,399**	**$4,903,498,581**

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, 2018.

Table A-5

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

Fiscal Year Ending June 30th)	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)
2019	$42,450,305	$14,403,498	$54,303,944	$15,435,025	$199,086,967	$180,298,734	$124,675,857	$8,676,648	152,652,412
2020	33,592,673	14,423,229	54,027,153	15,434,250	207,548,485	179,348,551	121,269,883	8,230,776	156,910,379
2021	25,525,328	14,342,475	53,060,260	15,437,250	216,370,191	179,253,531	121,139,338	9,054,850	154,491,835
2022	25,368,379	14,330,356	53,050,584	15,437,125	225,567,942	179,866,608	123,180,487	6,950,053	133,392,617
2023	23,980,263	14,439,769	52,979,370	15,432,250	235,152,696	179,683,934	122,809,902	5,872,182	128,239,275
2024	23,181,670	14,456,444	52,830,619	8,041,125	245,145,513	179,488,346	122,803,946	5,643,448	115,563,211
2025	17,144,905	14,451,819	52,824,140	-	255,567,300	179,285,194	122,803,422	4,957,002	106,240,295
2026	16,944,575	14,445,919	52,183,501	-	266,429,051	178,585,208	120,314,452	4,970,392	102,099,571
2027	16,596,264	14,358,669	52,015,127	-	277,749,421	178,351,015	110,881,050	4,535,373	91,468,148
2028	16,424,654	14,355,491	50,314,108	-	-	180,348,949	92,532,191	4,437,562	84,764,745
2029	16,232,251	13,819,113	46,920,872	-	-	177,567,818	79,383,575	4,242,767	82,624,785
2030	16,046,675	13,433,472	44,765,635	-	-	177,075,599	65,351,625	3,404,798	78,561,440
2031	15,434,931	13,427,581	43,181,431	-	-	178,364,079	55,774,488	2,778,306	70,951,663
2032	15,228,049	13,427,444	41,579,267	-	-	177,605,177	36,630,650	1,850,574	64,379,057
2033	15,012,058	13,426,269	38,229,965	-	-	177,771,779	34,843,650	786,342	59,903,901
2034	14,795,781	13,426,716	38,259,108	-	-	175,983,954	22,198,500	547,760	52,977,582
2035	14,562,298	10,107,328	35,812,597	-	-	177,083,261	22,196,000	-	50,571,639
2036	-	10,105,019	35,729,092	-	-	90,849,500	12,866,000	-	44,701,252
2037	-	7,606,709	32,448,297	-	-	93,351,500	12,862,500	-	34,659,706
2038	-	7,614,219	31,881,125	-	-	95,956,000	-	-	24,805,259
2039	-	5,738,625	30,400,375	-	-	98,659,875	-	-	20,465,119
2040	-	5,731,500	27,271,125	-	-	32,060,000	-	-	8,030,100
2041	-	1,631,250	24,694,125	-	-	33,340,000	-	-	8,027,055
2042	-	1,627,500	20,320,500	-	-	34,675,000	-	-	6,745,328
2043	-	1,634,875	10,818,875	-	-	-	-	-	1,420,493
2044	-	-	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-	-	-
2047	-	-	-	-	-	-	-	-	-
2048	-	-	-	-	-	-		-	-
2049	-	-	-	-	-	-	-	-	-
Program Totals	**$348,521,058**	**$276,765,286**	**$1,029,901,194**	**$85,217,025**	**$2,128,617,566**	**$3,672,943,794**	**$1,524,517,516**	**$73,938,834**	**$1,834,646,865**

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, 2018.

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
2019	$15,715,014	$4,266,988	$2,048,150	$1,696,035	**$846,901,082**
2020	15,728,538	4,269,356	2,046,550	1,584,650	**846,234,927**
2021	15,717,438	4,267,406	2,047,600	1,526,443	**843,689,134**
2022	15,717,138	4,270,706	2,049,200	1,304,265	**828,787,264**
2023	15,720,513	4,268,606	2,049,600	1,301,146	**829,454,122**
2024	15,717,388	4,274,938	2,048,800	1,254,135	**816,083,572**
2025	15,714,525	4,264,738	2,046,800	986,435	**800,522,960**
2026	15,714,238	4,274,013	2,049,125	988,641	**802,610,443**
2027	15,712,925	4,273,538	2,045,375	813,813	**790,817,497**
2028	15,709,775	4,272,431	2,049,375	815,992	**487,036,893**
2029	15,717,425	4,270,081	2,046,000	575,225	**464,090,394**
2030	15,717,025	4,267,331	2,050,125	577,992	**441,335,032**
2031	15,717,450	4,268,719	2,046,625	404,379	**421,291,624**
2032	15,712,575	4,263,869	2,045,500	405,620	**391,088,391**
2033	15,717,506	4,269,894	2,046,500	404,677	**379,694,572**
2034	15,722,050	4,266,519	2,049,375	132,005	**356,605,164**
2035	15,714,806	4,262,788	2,049,000	131,708	**348,378,981**
2036	14,245,650	2,891,875	2,050,250	132,813	**228,569,948**
2037	10,753,325	2,657,750	2,048,000	131,920	**210,021,744**
2038	1,722,000	687,750	2,047,125	132,430	**168,552,441**
2039	-	-	2,047,375	-	**160,369,375**
2040	-	-	2,048,500	-	**76,341,125**
2041	-	-	2,050,250	-	**70,942,125**
2042	-	-	2,047,500	-	**66,423,750**
2043	-	-	2,050,000	-	**16,136,500**
2044	-	-	-	-	
2045	-	-	-	-	-
2046	-	-	-	-	-
2047	-	-	-	-	-
2048	-	-	-	-	-
2049	-	-	-	-	-
Program Totals	**$273,465,321**	**$78,809,294**	**$51,202,700**	**$15,300,324**	**$11,691,979,060**

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, 2018.

Table A-6

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

Fiscal Year (ending June 30th)	Principal	Interest	Total
2019	$455,911,262	$390,989,820	$846,901,082
2020	475,847,896	370,387,031	846,234,927
2021	496,469,470	347,219,664	843,689,134
2022	505,217,354	323,569,910	828,787,264
2023	531,490,000	297,964,122	829,454,122
2024	544,941,500	271,142,072	816,083,572
2025	557,240,850	243,282,110	800,522,960
2026	588,590,700	214,019,743	802,610,443
2027	608,033,800	182,783,697	790,817,497
2028	336,802,300	150,234,593	487,036,893
2029	330,363,150	133,727,244	464,090,394
2030	324,085,200	117,249,832	441,335,032
2031	320,530,700	100,760,924	421,291,624
2032	306,316,400	84,771,991	391,088,391
2033	310,093,800	69,600,772	379,694,572
2034	302,588,850	54,016,314	356,605,164
2035	310,455,500	37,923,481	348,378,981
2036	202,987,300	25,582,648	228,569,948
2037	191,267,400	18,754,344	210,021,744
2038	155,794,200	12,758,241	168,552,441
2039	151,945,000	8,424,375	160,369,375
2040	71,165,000	5,176,125	76,341,125
2041	67,590,000	3,352,125	70,942,125
2042	64,705,000	1,718,750	66,423,750
2043	15,705,000	431,500	16,136,500
2044	-	-	
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
Totals	**$8,226,137,631**	**$3,765,290,445**	**$11,691,979,060**

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, 2018.

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	$129,250,000 2011 Series A DAS - Port of Tillamook, DAS - Lane Transit District, Community Colleges & Workforse Development Dept., Connect Oregon III,	$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)	$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	$71,075,000 2013 Series C Advance Refunding - Refunding Various Series (2001B, 2002B, 2003B, 2004A, 2005B, 2005C)	$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
2019	22,591,550	2,172,000	2,066,000	964,113	11,806,550	1,142,654	1,138,050	5,606,300	5,885,544	6,761,118	2,120,833	2,473,900	11,113,250	5,224,250	3,890,250
2020	-	2,173,500	2,065,150	964,113	13,009,500	1,142,654	1,140,250	1,888,500	7,875,544	4,768,452	2,126,231	2,473,500	11,109,000	5,224,250	3,890,250
2021	-	-	-	964,113	745,500	13,412,654	1,141,000	1,885,500	12,644,744	-	2,126,455	2,471,600	11,112,250	5,224,250	3,890,250
2022	-	-	-	964,113	-	14,169,522	1,139,250	1,890,300	12,646,944	-	2,127,080	2,468,950	11,726,750	29,464,250	3,890,250
2023	-	-	-	2,929,113	-	-	-	1,892,500	12,646,194	-	2,126,120	2,471,450	11,721,000	29,467,250	3,890,250
2024	-	-	-	2,925,950	-	-	-	1,890,750	12,644,694	-	2,125,160	2,473,050	11,723,500	29,464,500	4,150,250
2025	-	-	-	2,927,538	-	-	-	1,890,000	12,644,444	-	2,124,885	2,466,750	11,727,750	29,468,250	9,337,250
2026	-	-	-	3,488,350	-	-	-	-	12,644,444	-	-	2,475,250	10,892,500	-	9,334,250
2027	-	-	-	2,109,975	-	-	-	-	12,643,694	-	-	2,478,000	10,888,500	-	9,337,750
2028	-	-	-	1,684,925	-	-	-	-	12,646,194	-	-	-	-	-	9,336,750
2029	-	-	-	337,725	-	-	-	-	12,643,850	-	-	-	-	-	9,335,750
2030	-	-	-	3,692,725	-	-	-	-	12,645,650	-	-	-	-	-	9,334,000
2031	-	-	-	3,331,588	-	-	-	-	12,646,400		-	-	-	-	9,335,750
2032	-	-	-	-	-	-	-	-	12,645,900			-	-	-	9,335,000
2033	-	-	-	-	-	-	-	-	12,642,900			-	-	-	9,336,000
2034	-	-	-	-	-	-	-	-	-			-	-	-	9,332,750
2035	-	-	-	-	-	-	-	-	-			-	-	-	9,334,500
2036	-	-	-	-	-	-	-	-	-			-	-	-	-
2037	-	-	-	-	-	-	-	-	-			-	-	-	-
2038	-	-	-	-	-	-	-	-	-			-	-	-	-
2039	-	-	-	-	-	-	-	-	-			-	-	-	-
2040	-	-	-	-	-	-	-	-	-			-	-	-	-
2041	-	-	-	-	-	-	-	-				-	-	-	-
2042	-	-	-	-	-	-	-	-				-	-	-	-
2043	-	-	-	-	-	-	-	-				-	-	-	-
2044	-	-	-	-	-	-	-	-				-	-	-	-
Totals	**22,591,550**	**4,345,500**	**4,131,150**	**27,284,338**	**25,561,550**	**29,867,483**	**4,558,550**	**16,943,850**	**178,147,138**	**11,529,570**	**14,876,764**	**22,252,450**	**102,014,500**	**133,537,000**	**126,291,250**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Lottery debt issued through June 30, 2018.

Table A-7[1] (Continued)

Annual Debt Service Requirements for Lottery Bonds Outstanding

$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	$63,675,000 2017 Series C Advance Redunding - Refunding Various Series (2010 A, 2011 A, 2012 A)	**Total Outstanding Debt Service Requirements**
5,446,051	9,035,750	8,211,500	1,135,500	859,750	4,650,000	7,218,146	3,162,800	**$ 124,675,857**
5,444,203	9,039,000	28,911,500	1,135,500	859,750	4,650,000	8,216,237	3,162,800	**$ 121,269,883**
5,448,974	9,038,000	28,906,500	3,195,500	859,750	4,650,000	8,214,500	5,207,800	**$ 121,139,338**
5,444,048	9,032,500	6,090,000	3,197,500	859,750	4,650,000	8,213,281	5,206,000	**$ 123,180,487**
5,446,256	21,027,250	6,090,000	3,194,250	2,969,750	4,650,000	8,213,770	4,074,750	**$ 122,809,902**
5,185,251	21,026,750	6,090,000	3,190,750	2,974,250	4,650,000	8,214,091	4,075,000	**$ 122,803,946**
-	21,025,250	6,090,000	3,196,750	2,968,250	4,650,000	8,213,805	4,072,500	**$ 122,803,422**
-	23,860,750	34,350,000	3,196,500	2,972,000	4,650,000	8,213,158	4,237,250	**$ 120,314,452**
-	15,974,250	34,347,000	3,195,000	2,974,750	4,650,000	8,216,382	4,065,750	**$ 110,881,050**
-	3,937,500	34,348,500	3,197,000	2,971,250	6,220,000	6,645,822	11,544,250	**$ 92,532,191**
-	-	34,350,750	3,192,000	2,971,500	12,861,500	-	3,690,500	**$ 79,383,575**
-	-	-	-	-	12,862,000	-	26,817,250	**$ 65,351,625**
-	-	-	-	-	12,861,750	-	17,599,000	**$ 55,774,488**
-	-	-	-	-	12,864,750	-	1,785,000	**$ 36,630,650**
-	-	-	-	-	12,864,750	-	-	**$ 34,843,650**
-	-	-	-	-	12,865,750	-	-	**$ 22,198,500**
-	-	-	-	-	12,861,500	-	-	**$ 22,196,000**
-	-	-	-	-	12,866,000	-	-	**$ 12,866,000**
-	-	-	-	-	12,862,500	-	-	**$ 12,862,500**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
-	-	-	-	-	-	-	-	**$ -**
32,414,782	**142,997,000**	**227,785,750**	**31,026,250**	**24,240,750**	**163,840,500**	**79,579,192**	**98,700,650**	**$ 1,524,517,516**

Note: May not foot due to rounding

[1] Includes annual fiscal year debt service requirements on all Lottery debt issued through June 30, 2018.

Table A-8

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

Fiscal Year (ending June 30th)	Principal	Interest	Total
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
2038	-	-	-
Total	**$1,111,265,000**	**$413,252,516**	**$1,524,517,516**

Note: May not foot due to rounding.

[1] Includes annual fiscal year debt service requirements on all Lottery revenue debt issued through June 30, 2018.

Table A-9

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY18

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

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

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Clatsop Cty SD 10 (Seaside)	4,353,375	819,754	5,173,129	165,479	3126.16%
Tillamook Cty SD 101 (Nestucca Valley)	803,800	210,120	1,013,920	49,770	2037.19%
Tillamook Cty SD 56 (Neah-Kah-Nie)	1,242,794		1,242,794	86,332	1439.55%
Deschutes Cty SD 6 (Sisters)	2,752,947	850,144	3,603,091	1,768,921	203.69%
Wasco Cty SD 12 (The Dalles) Bonds	1,792,800	1,447,229	3,240,029	2,053,391	157.79%
Multnomah Cty SD 1J (Portland)	116,030,158	47,272,723	163,302,881	233,921,420	69.81%
Lincoln Cty Unified SD	6,092,625	4,588,886	10,681,511	18,267,963	58.47%
Jackson Cty SD 5 (Ashland)	6,078,938		6,078,938	12,554,355	48.42%
Washington Cty SD 88J (Sherwood)	13,470,849	1,205,403	14,676,252	33,374,036	43.98%
Lane Cty SD 4J (Eugene)	35,781,188	4,637,845	40,419,033	94,886,982	42.60%
Clackamas Cty SD 12 (North Clackamas)	30,998,045	10,879,524	41,877,569	101,875,251	41.11%
Yamhill Cty SD 29J (Newberg)	9,532,050	3,347,566	12,879,616	31,633,546	40.72%
Deschutes Cty SD 1 (Bend-Lapine)	30,583,376	6,757,126	37,340,502	93,382,574	39.99%
Lane Cty SD 97J (Siuslaw)	1,600,325	881,818	2,482,143	6,222,653	39.89%
Yamhill Cty SD 1 (Yamhill-Carlton)	1,457,698	901,372	2,359,070	6,471,945	36.45%
Clackamas Cty SD 46 (Oregon Trail)	9,705,229		9,705,229	27,330,016	35.51%
Clackamas Cty SD 115 (Gladstone)	3,797,450	1,600,971	5,398,421	15,391,749	35.07%
Deschutes Cty SD 2J (Redmond)	11,848,913	2,806,020	14,654,933	45,935,563	31.90%
Clackamas Cty SD 86 (Canby)	6,405,692	3,437,516	9,843,207	32,483,631	30.30%
Multnomah Cty SD 3 (Parkrose)	4,249,800		4,249,800	14,206,348	29.91%
Clatsop Cty SD 1 (Astoria)	2,093,400	1,674,213	3,767,613	12,602,462	29.90%
Benton Cty SD 17J (Philomath)	2,982,150	545,999	3,528,149	12,151,148	29.04%
Yamhill Cty SD 8 (Dayton)	1,472,564	693,624	2,166,187	7,583,983	28.56%
Washington Cty SD 48J (Beaverton)	58,658,709	14,910,359	73,569,067	258,552,649	28.45%
Tillamook Cty SD 9 (Tillamook)	1,194,579	1,606,539	2,801,118	10,090,478	27.76%
Columbia Cty SD 502 (St Helens)	2,959,920	2,400,999	5,360,919	19,493,413	27.50%
Columbia Cty SD 47J (Vernonia)	909,718		909,718	3,368,571	27.01%
Douglas Cty SD 12 (Glide)	845,600	288,609	1,134,209	4,293,284	26.42%
Polk Cty SD 13J (Central)	4,608,297	1,928,548	6,536,844	25,589,370	25.55%
Clackamas Cty SD 3J (W.Linn-Wilsonville)	10,124,675	3,711,987	13,836,662	56,098,422	24.66%
Multnomah Cty SD 51J (Riverdale)	463,037	414,453	877,490	3,598,445	24.39%
Lane Cty SD 28J (Fern Ridge)	1,882,300	627,831	2,510,131	10,304,881	24.36%
Umatilla Cty SD 1 (Helix)	472,450		472,450	1,960,195	24.10%
Curry Cty SD 17 (Brookings-Harbor)	1,287,292	969,741	2,257,032	9,474,111	23.82%
Linn Cty SD 8J (Greater Albany)	11,688,222	3,980,726	15,668,948	66,031,703	23.73%
Multnomah Cty SD 10J (Gresham-Barlow)	16,342,351	4,275,029	20,617,380	87,923,172	23.45%
Benton Cty SD 509J (Corvallis)	6,688,000	2,171,833	8,859,833	37,850,477	23.41%
Washington Cty SD 23J (Tigard-Tualatin)	12,068,975	3,523,393	15,592,368	67,735,227	23.02%
Washington Cty SD 511J (Gaston)	485,600	393,552	879,152	3,829,524	22.96%
Umatilla Cty SD 16R (Pendleton)	3,047,950	2,450,499	5,498,449	24,004,721	22.91%
Lane Cty SD 40 (Creswell)	1,712,730	378,787	2,091,517	9,303,821	22.48%
Yamhill Cty SD 40 (McMinnville)	8,850,375	2,687,099	11,537,474	51,557,813	22.38%
Washington Cty SD 15 (Forest Grove)	8,128,750	2,448,820	10,577,570	47,925,086	22.07%
Washington Cty SD 1J (Hillsboro)	19,573,913	8,461,492	28,035,405	129,758,995	21.61%
Hood River Cty SD (Hood River)	4,356,988	2,095,310	6,452,297	29,978,917	21.52%
Washington Cty SD 13 (Banks)	1,168,223	298,906	1,467,128	6,826,770	21.49%
Marion Cty SD 45 (St Paul)	516,850		516,850	2,442,966	21.16%
Umatilla Cty SD 8 (Hermiston)	8,198,635	1,764,065	9,962,700	47,192,533	21.11%
Crook Cty School District	1,874,575	2,262,845	4,137,420	19,618,670	21.09%
Douglas Cty SD 116 (Winston-Dillard)	990,200	1,181,432	2,171,632	10,481,116	20.72%
Umatilla Cty SD 61 (Stanfield)	481,178	340,687	821,865	4,062,595	20.23%
Marion Cty SD 29J (North Santiam)	1,520,025	1,498,100	3,018,125	15,075,529	20.02%
Clackamas Cty SD 62 (Oregon City)	5,958,496	3,990,107	9,948,603	49,808,292	19.97%
Columbia Cty SD 1J (Scappoose)	2,601,950		2,601,950	13,314,293	19.54%
Lane Cty SD 45J3 (South Lane)	2,713,488	1,277,690	3,991,178	20,584,407	19.39%
Lane Cty SD 1 (Pleasant Hill)	1,259,706		1,259,706	6,654,535	18.93%
Union Cty SD 1 (La Grande)	2,055,150	923,238	2,978,388	15,910,675	18.72%
Marion Cty SD 14J (Jefferson)	635,004	660,430	1,295,434	6,944,277	18.65%
Curry Cty SD 1 (Central Curry)	358,050		358,050	1,947,186	18.39%

Table A-9 (Continued)

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Jackson Cty SD 4 (Phoenix-Talent)	1,827,515	1,308,928	3,136,443	17,237,640	18.20%
Umatilla Cty SD 2 (Pilot Rock)	356,259	217,202	573,460	3,154,548	18.18%
Wasco Cty SD 29 (Dufur)	556,150		556,150	3,086,594	18.02%
Marion Cty SD 4J (Silver Falls)	3,733,175	1,546,741	5,279,916	29,680,486	17.79%
Yamhill Cty SD 4J (Amity)	598,578	632,215	1,230,793	6,936,201	17.74%
Marion Cty SD 5 (Cascade)	1,493,075	1,462,334	2,955,409	16,718,522	17.68%
Linn Cty SD 55 (Sweet Home)	1,475,048	1,639,270	3,114,318	17,883,446	17.41%
Multnomah Cty SD 7 (Reynolds)	8,970,400	7,710,490	16,680,890	96,422,947	17.30%
Jackson Cty SD 549C (Medford)	12,803,363	3,674,973	16,478,336	97,617,500	16.88%
Douglas Cty SD 105 (Reedsport)	647,063	269,756	916,819	5,474,063	16.75%
Harney Cty SD 3 (Burns)	217,900	988,826	1,206,726	7,318,458	16.49%
Columbia Cty SD 6J (Clatskanie)	679,494		679,494	4,162,525	16.32%
Umatilla Cty SD 5R (Echo)	343,425	160,718	504,143	3,111,489	16.20%
Linn Cty SD 9 (Lebanon Community)	4,680,873		4,680,873	28,909,056	16.19%
Clackamas Cty SD 108 (Estacada)	2,160,200	1,047,028	3,207,228	20,254,254	15.83%
Lane Cty SD 69 (Junction City)	1,694,750		1,694,750	10,956,291	15.47%
Morrow Cty SD 1	1,955,725	691,779	2,647,504	17,123,590	15.46%
Lane Cty SD 19 (Springfield)	6,737,150	5,048,537	11,785,687	77,959,303	15.12%
Marion Cty SD 15 (North Marion)	1,333,279	970,789	2,304,068	15,319,912	15.04%
Douglas Cty SD 130 (Sutherlin)	436,800	1,014,625	1,451,425	9,689,291	14.98%
Clatsop Cty SD 30 (Warrenton-Hammond)	593,625	348,124	941,749	6,328,092	14.88%
Josephine Cty SD (Three Rivers)	2,301,413	2,345,997	4,647,410	31,593,865	14.71%
Clackamas Cty SD 35 (Molalla River)		2,703,561	2,703,561	18,437,774	14.66%
Jefferson Cty SD 509J (Madras)	2,706,556	1,166,469	3,873,025	27,445,117	14.11%
Lane Cty SD 79 (Marcola)	361,213		361,213	2,646,577	13.65%
Lane Cty SD 52 (Bethel)	5,230,610		5,230,610	38,370,615	13.63%
Union Cty SD 11 (Imbler)	438,000		438,000	3,227,873	13.57%
Umatilla Cty USD 7 (Milton-Freewater)	704,000	1,267,164	1,971,164	14,559,383	13.54%
Marion Cty SD 24J (Salem Keizer)	26,696,373	18,388,534	45,084,907	340,749,558	13.23%
Jefferson Cty SD 4 (Culver)	734,600		734,600	5,645,330	13.01%
Clackamas Cty SD 7J (Lake Oswego)		3,879,738	3,879,738	30,181,305	12.85%
Clatsop Cty SD 4 (Knappa)	517,300		517,300	4,024,194	12.85%
Douglas Cty SD 4 (Roseburg)	2,143,192	2,945,447	5,088,639	40,909,651	12.44%
Benton Cty SD 1J (Monroe)	337,454	161,082	498,536	4,024,021	12.39%
Klamath Cty SD 1 (Klamath Falls)	2,809,200		2,809,200	22,884,997	12.28%
Gilliam Cty SD 25J (Condon)	183,500		183,500	1,524,808	12.03%
Marion Cty SD 91 (Mt Angel)	813,013		813,013	6,839,417	11.89%
Morrow Cty SD 2 (Ione)	267,400		267,400	2,293,828	11.66%
Yamhill Cty SD 48J (Sheridan)	940,588		940,588	8,076,357	11.65%
Jackson Cty SD 9 (Eagle Point)	3,429,763		3,429,763	29,510,354	11.62%
Columbia Cty SD 13 (Rainier)		591,708	591,708	5,399,777	10.96%
Umatilla Cty SD 6 (Umatilla)	866,800	365,691	1,232,491	11,755,127	10.48%
Douglas Cty SD 19 (South Umpqua)		1,229,695	1,229,695	11,828,330	10.40%
Lane Cty SD 66 (Crow-Applegate-Lorane)	222,485		222,485	2,233,391	9.96%
Polk Cty SD 2 (Dallas)	2,365,000		2,365,000	23,743,243	9.96%
Lane Cty SD 32 (Mapleton)	168,325		168,325	1,692,463	9.95%
Lane Cty SD 76 (Oakridge)	430,800		430,800	4,787,615	9.00%
Multnomah Cty SD 40 (David Douglas)	4,991,300	3,154,662	8,145,962	92,846,385	8.77%
Jackson Cty SD 6 (Central Point)	2,902,916		2,902,916	33,328,032	8.71%
Malheur Cty SD 8C (Ontario)	1,033,040	913,997	1,947,037	22,450,653	8.67%
Umatilla Cty SD 29J (Athena-Weston)	418,963		418,963	4,880,923	8.58%
Marion Cty SD 103 (Woodburn)	4,116,775		4,116,775	54,184,974	7.60%
Jackson Cty SD 35 (Rogue River)	544,839		544,839	7,301,249	7.46%
Linn Cty SD 7J (Harrisburg)	437,470		437,470	6,256,748	6.99%
Marion Cty SD 1 (Gervais)		778,352	778,352	11,213,142	6.94%
Yamhill Cty SD 30J (Willamina)	236,600	236,608	473,208	6,952,985	6.81%
Polk Cty SD 57 (Falls City)		166,851	166,851	2,516,342	6.63%
Coos Cty SD 13 (North Bend)	1,165,889	908,242	2,074,132	33,669,687	6.16%
Douglas Cty SD 34 (Elkton)	162,200		162,200	2,793,098	5.81%
Multnomah Cty SD 28J (Centennial)	2,957,713		2,957,713	51,427,811	5.75%

Table A-9 (Continued)

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Union Cty SD 5 (Union)		153,869	153,869	2,684,452	5.73%
Malheur Cty SD 84 (Vale) (UHD 3)	465,192		465,192	8,370,201	5.56%
Grant Cty SD 3 (John Day)		344,290	344,290	6,413,679	5.37%
Union Cty SD 8J (North Powder)	157,918		157,918	3,208,388	4.92%
Coos Cty SD 9 (Coos Bay)		1,126,939	1,126,939	24,659,729	4.57%
Klamath Cty SD	2,120,425		2,120,425	51,409,395	4.12%
Coos Cty SD 41 (Myrtle Point)	181,557		181,557	4,417,540	4.11%
Malheur Cty SD 61 (Adrian)	151,187		151,187	3,680,001	4.11%
Douglas Cty SD 77 (Glendale)	101,031		101,031	2,784,924	3.63%
Coos Cty SD 8 (Coquille)	344,198		344,198	10,014,478	3.44%
Polk Cty SD 21 (Perrydale)	106,095		106,095	3,204,135	3.31%
Clackamas Cty SD 53 (Colton)	156,439		156,439	4,908,699	3.19%
Baker Cty SD 5J (Baker)		778,185	778,185	30,208,058	2.58%
Douglas Cty SD 1 (Oakland)	113,300		113,300	5,117,306	2.21%
Douglas Cty SD 22 (North Douglas)	63,350		63,350	3,168,677	2.00%
Linn Cty SD 129J (Santiam Canyon)		401,497	401,497	37,358,589	1.07%

Table A-10

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY18

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

(Alpha List)

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Baker Cty SD 5J (Baker)		778,185	778,185	30,208,058	2.58%
Benton Cty SD 17J (Philomath)	2,982,150	545,999	3,528,149	12,151,148	29.04%
Benton Cty SD 1J (Monroe)	337,454	161,082	498,536	4,024,021	12.39%
Benton Cty SD 509J (Corvallis)	6,688,000	2,171,833	8,859,833	37,850,477	23.41%
Clackamas Cty SD 108 (Estacada)	2,160,200	1,047,028	3,207,228	20,254,254	15.83%
Clackamas Cty SD 115 (Gladstone)	3,797,450	1,600,971	5,398,421	15,391,749	35.07%
Clackamas Cty SD 12 (North Clackamas)	30,998,045	10,879,524	41,877,569	101,875,251	41.11%
Clackamas Cty SD 35 (Molalla River)		2,703,561	2,703,561	18,437,774	14.66%
Clackamas Cty SD 3J (W.Linn-Wilsonville)	10,124,675	3,711,987	13,836,662	56,098,422	24.66%
Clackamas Cty SD 46 (Oregon Trail)	9,705,229		9,705,229	27,330,016	35.51%
Clackamas Cty SD 53 (Colton)	156,439		156,439	4,908,699	3.19%
Clackamas Cty SD 62 (Oregon City)	5,958,496	3,990,107	9,948,603	49,808,292	19.97%
Clackamas Cty SD 7J (Lake Oswego)		3,879,738	3,879,738	30,181,305	12.85%
Clackamas Cty SD 86 (Canby)	6,405,692	3,437,516	9,843,207	32,483,631	30.30%
Clatsop Cty SD 1 (Astoria)	2,093,400	1,674,213	3,767,613	12,602,462	29.90%
Clatsop Cty SD 10 (Seaside)	4,353,375	819,754	5,173,129	165,479	3126.16%
Clatsop Cty SD 30 (Warrenton-Hammond)	593,625	348,124	941,749	6,328,092	14.88%
Clatsop Cty SD 4 (Knappa)	517,300		517,300	4,024,194	12.85%
Columbia Cty SD 13 (Rainier)		591,708	591,708	5,399,777	10.96%
Columbia Cty SD 1J (Scappoose)	2,601,950		2,601,950	13,314,293	19.54%
Columbia Cty SD 47J (Vernonia)	909,718		909,718	3,368,571	27.01%
Columbia Cty SD 502 (St Helens)	2,959,920	2,400,999	5,360,919	19,493,413	27.50%
Columbia Cty SD 6J (Clatskanie)	679,494		679,494	4,162,525	16.32%
Coos Cty SD 13 (North Bend)	1,165,889	908,242	2,074,132	33,669,687	6.16%
Coos Cty SD 41 (Myrtle Point)	181,557		181,557	4,417,540	4.11%
Coos Cty SD 8 (Coquille)	344,198		344,198	10,014,478	3.44%
Coos Cty SD 9 (Coos Bay)		1,126,939	1,126,939	24,659,729	4.57%
Crook Cty School District	1,874,575	2,262,845	4,137,420	19,618,670	21.09%
Curry Cty SD 1 (Central Curry)	358,050		358,050	1,947,186	18.39%
Curry Cty SD 17 (Brookings-Harbor)	1,287,292	969,741	2,257,032	9,474,111	23.82%
Deschutes Cty SD 1 (Bend-Lapine)	30,583,376	6,757,126	37,340,502	93,382,574	39.99%
Deschutes Cty SD 2J (Redmond)	11,848,913	2,806,020	14,654,933	45,935,563	31.90%
Deschutes Cty SD 6 (Sisters)	2,752,947	850,144	3,603,091	1,768,921	203.69%
Douglas Cty SD 1 (Oakland)	113,300		113,300	5,117,306	2.21%
Douglas Cty SD 105 (Reedsport)	647,063	269,756	916,819	5,474,063	16.75%
Douglas Cty SD 116 (Winston-Dillard)	990,200	1,181,432	2,171,632	10,481,116	20.72%
Douglas Cty SD 12 (Glide)	845,600	288,609	1,134,209	4,293,284	26.42%
Douglas Cty SD 130 (Sutherlin)	436,800	1,014,625	1,451,425	9,689,291	14.98%
Douglas Cty SD 19 (South Umpqua)		1,229,695	1,229,695	11,828,330	10.40%
Douglas Cty SD 22 (North Douglas)	63,350		63,350	3,168,677	2.00%
Douglas Cty SD 34 (Elkton)	162,200		162,200	2,793,098	5.81%
Douglas Cty SD 4 (Roseburg)	2,143,192	2,945,447	5,088,639	40,909,651	12.44%
Douglas Cty SD 77 (Glendale)	101,031		101,031	2,784,924	3.63%
Gilliam Cty SD 25J (Condon)	183,500		183,500	1,524,808	12.03%
Grant Cty SD 3 (John Day)		344,290	344,290	6,413,679	5.37%
Harney Cty SD 3 (Burns)	217,900	988,826	1,206,726	7,318,458	16.49%
Hood River Cty SD (Hood River)	4,356,988	2,095,310	6,452,297	29,978,917	21.52%
Jackson Cty SD 35 (Rogue River)	544,839		544,839	7,301,249	7.46%
Jackson Cty SD 4 (Phoenix-Talent)	1,827,515	1,308,928	3,136,443	17,237,640	18.20%
Jackson Cty SD 5 (Ashland)	6,078,938		6,078,938	12,554,355	48.42%
Jackson Cty SD 549C (Medford)	12,803,363	3,674,973	16,478,336	97,617,500	16.88%
Jackson Cty SD 6 (Central Point)	2,902,916		2,902,916	33,328,032	8.71%
Jackson Cty SD 9 (Eagle Point)	3,429,763		3,429,763	29,510,354	11.62%
Jefferson Cty SD 4 (Culver)	734,600		734,600	5,645,330	13.01%
Jefferson Cty SD 509J (Madras)	2,706,556	1,166,469	3,873,025	27,445,117	14.11%
Josephine Cty SD (Three Rivers)	2,301,413	2,345,997	4,647,410	31,593,865	14.71%
Klamath Cty SD	2,120,425		2,120,425	51,409,395	4.12%
Klamath Cty SD 1 (Klamath Falls)	2,809,200		2,809,200	22,884,997	12.28%
Lane Cty SD 1 (Pleasant Hill)	1,259,706		1,259,706	6,654,535	18.93%

Table A-10 (Continued)

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Lane Cty SD 19 (Springfield)	6,737,150	5,048,537	11,785,687	77,959,303	15.12%
Lane Cty SD 28J (Fern Ridge)	1,882,300	627,831	2,510,131	10,304,881	24.36%
Lane Cty SD 32 (Mapleton)	168,325		168,325	1,692,463	9.95%
Lane Cty SD 40 (Creswell)	1,712,730	378,787	2,091,517	9,303,821	22.48%
Lane Cty SD 45J3 (South Lane)	2,713,488	1,277,690	3,991,178	20,584,407	19.39%
Lane Cty SD 4J (Eugene)	35,781,188	4,637,845	40,419,033	94,886,982	42.60%
Lane Cty SD 52 (Bethel)	5,230,610		5,230,610	38,370,615	13.63%
Lane Cty SD 66 (Crow-Applegate-Lorane)	222,485		222,485	2,233,391	9.96%
Lane Cty SD 69 (Junction City)	1,694,750		1,694,750	10,956,291	15.47%
Lane Cty SD 76 (Oakridge)	430,800		430,800	4,787,615	9.00%
Lane Cty SD 79 (Marcola)	361,213		361,213	2,646,577	13.65%
Lane Cty SD 97J (Siuslaw)	1,600,325	881,818	2,482,143	6,222,653	39.89%
Lincoln Cty Unified SD	6,092,625	4,588,886	10,681,511	18,267,963	58.47%
Linn Cty SD 129J (Santiam Canyon)		401,497	401,497	37,358,589	1.07%
Linn Cty SD 55 (Sweet Home)	1,475,048	1,639,270	3,114,318	17,883,446	17.41%
Linn Cty SD 7J (Harrisburg)	437,470		437,470	6,256,748	6.99%
Linn Cty SD 8J (Greater Albany)	11,688,222	3,980,726	15,668,948	66,031,703	23.73%
Linn Cty SD 9 (Lebanon Community)	4,680,873		4,680,873	28,909,056	16.19%
Malheur Cty SD 61 (Adrian)	151,187		151,187	3,680,001	4.11%
Malheur Cty SD 84 (Vale) (UHD 3)	465,192		465,192	8,370,201	5.56%
Malheur Cty SD 8C (Ontario)	1,033,040	913,997	1,947,037	22,450,653	8.67%
Marion Cty SD 1 (Gervais)		778,352	778,352	11,213,142	6.94%
Marion Cty SD 103 (Woodburn)	4,116,775		4,116,775	54,184,974	7.60%
Marion Cty SD 14J (Jefferson)	635,004	660,430	1,295,434	6,944,277	18.65%
Marion Cty SD 15 (North Marion)	1,333,279	970,789	2,304,068	15,319,912	15.04%
Marion Cty SD 24J (Salem Keizer)	26,696,373	18,388,534	45,084,907	340,749,558	13.23%
Marion Cty SD 29J (North Santiam)	1,520,025	1,498,100	3,018,125	15,075,529	20.02%
Marion Cty SD 45 (St Paul)	516,850		516,850	2,442,966	21.16%
Marion Cty SD 4J (Silver Falls)	3,733,175	1,546,741	5,279,916	29,680,486	17.79%
Marion Cty SD 5 (Cascade)	1,493,075	1,462,334	2,955,409	16,718,522	17.68%
Marion Cty SD 91 (Mt Angel)	813,013		813,013	6,839,417	11.89%
Morrow Cty SD 1	1,955,725	691,779	2,647,504	17,123,590	15.46%
Morrow Cty SD 2 (Ione)	267,400		267,400	2,293,828	11.66%
Multnomah Cty SD 10J (Gresham-Barlow)	16,342,351	4,275,029	20,617,380	87,923,172	23.45%
Multnomah Cty SD 1J (Portland)	116,030,158	47,272,723	163,302,881	233,921,420	69.81%
Multnomah Cty SD 28J (Centennial)	2,957,713		2,957,713	51,427,811	5.75%
Multnomah Cty SD 3 (Parkrose)	4,249,800		4,249,800	14,206,348	29.91%
Multnomah Cty SD 40 (David Douglas)	4,991,300	3,154,662	8,145,962	92,846,385	8.77%
Multnomah Cty SD 51J (Riverdale)	463,037	414,453	877,490	3,598,445	24.39%
Multnomah Cty SD 7 (Reynolds)	8,970,400	7,710,490	16,680,890	96,422,947	17.30%
Polk Cty SD 13J (Central)	4,608,297	1,928,548	6,536,844	25,589,370	25.55%
Polk Cty SD 2 (Dallas)	2,365,000		2,365,000	23,743,243	9.96%
Polk Cty SD 21 (Perrydale)	106,095		106,095	3,204,135	3.31%
Polk Cty SD 57 (Falls City)		166,851	166,851	2,516,342	6.63%
Tillamook Cty SD 101 (Nestucca Valley)	803,800	210,120	1,013,920	49,770	2037.19%
Tillamook Cty SD 56 (Neah-Kah-Nie)	1,242,794		1,242,794	86,332	1439.55%
Tillamook Cty SD 9 (Tillamook)	1,194,579	1,606,539	2,801,118	10,090,478	27.76%
Umatilla Cty SD 1 (Helix)	472,450		472,450	1,960,195	24.10%
Umatilla Cty SD 16R (Pendleton)	3,047,950	2,450,499	5,498,449	24,004,721	22.91%
Umatilla Cty SD 2 (Pilot Rock)	356,259	217,202	573,460	3,154,548	18.18%
Umatilla Cty SD 29J (Athena-Weston)	418,963		418,963	4,880,923	8.58%
Umatilla Cty SD 5R (Echo)	343,425	160,718	504,143	3,111,489	16.20%
Umatilla Cty SD 6 (Umatilla)	866,800	365,691	1,232,491	11,755,127	10.48%
Umatilla Cty SD 61 (Stanfield)	481,178	340,687	821,865	4,062,595	20.23%
Umatilla Cty SD 8 (Hermiston)	8,198,635	1,764,065	9,962,700	47,192,533	21.11%
Umatilla Cty USD 7 (Milton-Freewater)	704,000	1,267,164	1,971,164	14,559,383	13.54%
Union Cty SD 1 (La Grande)	2,055,150	923,238	2,978,388	15,910,675	18.72%
Union Cty SD 11 (Imbler)	438,000		438,000	3,227,873	13.57%
Union Cty SD 5 (Union)		153,869	153,869	2,684,452	5.73%
Union Cty SD 8J (North Powder)	157,918		157,918	3,208,388	4.92%

Table A-10 (Continued)

School District Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Wasco Cty SD 12 (The Dalles) Bonds	1,792,800	1,447,229	3,240,029	2,053,391	157.79%
Wasco Cty SD 29 (Dufur)	556,150		556,150	3,086,594	18.02%
Washington Cty SD 13 (Banks)	1,168,223	298,906	1,467,128	6,826,770	21.49%
Washington Cty SD 15 (Forest Grove)	8,128,750	2,448,820	10,577,570	47,925,086	22.07%
Washington Cty SD 1J (Hillsboro)	19,573,913	8,461,492	28,035,405	129,758,995	21.61%
Washington Cty SD 23J (Tigard-Tualatin)	12,068,975	3,523,393	15,592,368	67,735,227	23.02%
Washington Cty SD 48J (Beaverton)	58,658,709	14,910,359	73,569,067	258,552,649	28.45%
Washington Cty SD 511J (Gaston)	485,600	393,552	879,152	3,829,524	22.96%
Washington Cty SD 88J (Sherwood)	13,470,849	1,205,403	14,676,252	33,374,036	43.98%
Yamhill Cty SD 1 (Yamhill-Carlton)	1,457,698	901,372	2,359,070	6,471,945	36.45%
Yamhill Cty SD 29J (Newberg)	9,532,050	3,347,566	12,879,616	31,633,546	40.72%
Yamhill Cty SD 30J (Willamina)	236,600	236,608	473,208	6,952,985	6.81%
Yamhill Cty SD 40 (McMinnville)	8,850,375	2,687,099	11,537,474	51,557,813	22.38%
Yamhill Cty SD 48J (Sheridan)	940,588		940,588	8,076,357	11.65%
Yamhill Cty SD 4J (Amity)	598,578	632,215	1,230,793	6,936,201	17.74%
Yamhill Cty SD 8 (Dayton)	1,472,564	693,624	2,166,187	7,583,983	28.56%

Table A-11

Oregon School Bond Guaranty and Pension Bonds vs. State Aid Analysis, FY18

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

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

Community College Name	FY17-18 OSBG Annual P&I Debt Service	FY17-18 Pension Annual P&I Debt Service	FY 17-18 Total Annual P&I Debt Service	FY17-18 *Net State Aid	FY 17-18 % Total Debt Service/ *Net State Aid
Oregon Coast Community College	1,842,875	188,000	2,030,875	1,910,872	106.28%
Lane Community College	8,115,863	4,904,250	13,020,113	22,956,387	56.72%
Blue Mountain Community College	1,743,406	892,188	2,635,595	5,356,498	49.20%
Clatsop Community College	996,822	596,882	1,593,704	3,246,757	49.09%
Central Oregon Community College	3,125,250	776,730	3,901,980	8,127,074	48.01%
Tillamook Bay Community College	685,125	135,966	821,090	1,716,502	47.84%
Chemeketa Community College	9,791,419	4,006,591	13,798,009	31,619,449	43.64%
Columbia Gorge Community College (Treaty-Oak AED)	1,498,525	231,763	1,730,288	4,284,718	40.38%
Rogue Community College	1,361,550	1,685,502	3,047,052	9,310,643	32.73%
Linn-Benton Community College	2,760,750	2,536,941	5,297,691	20,994,102	25.23%
Mt Hood Community College		6,156,327	6,156,327	28,056,763	21.94%
Clackamas Community College	640,100	2,560,761	3,200,861	16,310,144	19.62%
Southwestern Oregon Community College		1,149,657	1,149,657	7,594,993	15.14%
Treasure Valley Community College		720,358	720,358	6,702,897	10.75%
Portland Community College		9,357,877	9,357,877	94,428,015	9.91%
Umpqua Community College		1,032,258	1,032,258	11,438,177	9.02%

APPENDIX B

Constitutional & Statutory Framework

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GENERAL OBLIGATION BONDS

General Purpose Bonds – Article XI, Section 7. The Oregon Constitution Article XI, Section 7 prohibits the State from incurring indebtedness exceeding $50,000 without a constitutional amendment approved by voters. This single limitation applies to both General Purpose and short-term general obligation debt. Exceptions are provided such as in the case of war or invasion and also to build and maintain permanent roads. This section does not apply to real property leases up to 20 years entered into by the State for a public purpose. There are currently no General Purpose bonds currently outstanding for this purpose.

State Highway Bonds – Article XI, Section 7. Article XI, Section 7 of the Oregon Constitution approves the issuance of bonds up to one percent of the true cash value of property in the State for the purpose of building and maintaining permanent roads within the State. Although these bonds have the State's General Obligation (GO) backing as security, the debt service funding source is provided by specifically earmarked vehicle registration fees and gasoline and weight-mile tax revenues. As of June 30, 2018, there was $29.4 million in outstanding GO bonds issued under this provision of the state constitution.

Veterans' Welfare Bonds – Article XI-A. This program, authorized by Article XI-A of Oregon's Constitution, allows the State to borrow up to eight percent of the true cash value (TCV) of all taxable property in the state to fund the Oregon War Veterans' Fund. The fund is used to finance farm and home loans for eligible veterans. Although bonds issued under this program are direct general obligations of the State, for which a property tax may be levied, the program is fully self-supporting from loan repayments. Principal amount outstanding was $350.1 million as of June 30, 2018.

State Power Development Bonds – Article XI-D. Article XI-D of the Oregon Constitution provides authority to issue long-term GO debt, up to one and one-half percent of true cash value of all taxable property in the state, to provide for the development of hydroelectric power plants and transmission and distribution lines. This amendment to the Oregon Constitution was adopted in 1932 and has never been used.

State Forest Rehabilitation Bonds – Article XI-E. Article XI-E of the Oregon Constitution authorized the establishment of the Forest Rehabilitation bond program. The Article permits the state's credit to be loaned and indebtedness incurred in an amount not to exceed three-sixteenths of one percent of the state's true cash value to provide for the reforestation of land that the State currently owns or may acquire for the purpose of reforestation. Funds generated by the reforestation must be used to repay any outstanding debt issued under this provision. Property taxes are authorized to assist in the repayment of the debt if necessary. In addition to constitutional provisions, statutes place a limit of $750,000 of debt per year that can be incurred for this program. This program was put in place in response to the 1933 "Tillamook Burn" which ravaged 240,000 acres of forest-land in Tillamook County. The program has not been used since 1971 and there are no outstanding bonds under this authorization.

Higher Education Building Bonds – Article XI-F (1). The Oregon Constitution allows the State to issue GO bonds for publically-owned higher education facilities under two separate Articles, XI-F (1) and XI-G. Article XI-F(1) authorizes the State Board to borrow up to three-quarters of one percent of state true cash value to finance higher education building and land acquisition projects. Projects financed through this program must be fully self-supporting and self-liquidating from non-General Fund revenues, including tuition, gifts, grants, leases, and/or student building fees. Principal amount outstanding was $1.11 billion as of June 30, 2018. SB 270 (2013) authorized the establishment of independent universities with governing boards for the universities that were formerly part of the Oregon University System (OUS); these independent governing boards now have the ability to sell their own university revenue bonds that rely upon the same types of revenue streams for debt repayment that are also used for repayment of XI-F (1) bonds.

SB 270 required that in order for the newly independent universities to have continued access to the State's XI-F(1) bonding programs, any issuance of university revenue bonds must first be reviewed and approved by the Office of the State Treasurer (OST). Several revenue bonds have been reviewed and approved by OST to date for the University of Oregon and Oregon State University. These revenue bonds were eagerly accepted by the investing public, as both schools have strong, investment grade credit ratings. It is anticipated that the State will continue to issue XI-F (1) bonds for legislatively authorized projects for the balance of independent public universities with substantially lower or no credit ratings, given the significant interest cost savings afforded these universities by the State's higher credit ratings.

Higher Education Facilities and Community College Bonds – Article XI-G.[1] In addition to Article XI-F(1) provisions, Article XI-G, adopted in 1964, allows a debt limit of up to three-fourths of one percent TCV to finance public higher education institution and community college facilities that are not revenue producing. Unlike Article XI-F(1), however, Article XI-G requires that any indebtedness incurred under Article XI-G not exceed the dollar amount appropriated from the State's General Fund for the same or similar purpose as the indebtedness to be incurred. As a result, this type of bond is not issued, unless there is also a legislatively authorized and matching appropriation equal to at least 50 percent of the overall cost of the project.

Historically, Article XI-G bonds for higher education were used to finance instructional and public service facilities of the OUS and community colleges. General Fund appropriations are made annually to pay debt service on these bonds. Despite the change in university governance structure established by SB 270, the State anticipates it will continue to issue XI-G bonds for legislatively authorized projects at the seven independent universities and at the Oregon Health and Sciences University (OHSU). As of June 30, 2018, the principal amount outstanding for Community College XI-G bonds was $183.2million and $649.2 million for Higher Education Facilities XI-G bonds.

ORS 341.009 directs that the state should maintain a policy of substantial state participation in community college building costs. In the 1960s and 1970s, State GO bonds were issued to help support the costs of the expanding network of Oregon community colleges. The demand for a highly skilled workforce in Oregon has continued to grow, as has the need to support the retraining of existing workers for today's increasingly technical job market. Since 2007, the Legislature has included authorization of XI-G bonding in varying amounts for select community college instructional facilities.

Pollution Control Bonds – Article XI-H. Funds of up to one percent of the State's true cash value may be borrowed for purposes of financing pollution abatement and control facilities, as well as pollution control and disposal activities of State and local government agencies. This authorization, granted under Article XI-H, requires that most facilities funded by the program, with the exception of pollution control and disposal activities and hazardous substance facilities, must "conservatively appear" to be at least seventy percent self-supporting and self-liquidating from

[1] As of July 1, 2015, all Higher Education facility and Community College GO Bonds will be issued through the Higher Education Coordination Commission, with assistance from the Department of Administrative Services with regards to bond issuance and on-going debt administration. For purposes of calculating constitutional debt limitations, bond issuances under both programs are combined and charged against the total debt authorized under Article XI-G of the State Constitution.

revenues, gifts, federal grants, user charges, assessments and other fees.[1] Property taxing authority is provided as an additional source of revenue to support these bonds, but this authority has never been used. Historically, the portion of the debt service of these bonds associated with orphan hazardous disposal site clean-up has been repaid by General Fund appropriation, with the balance of debt service repaid by DEQ fees and repayment on loans. (Please see the "General Fund Supported Debt" chapter of this report for more information on General Fund versus Other Fund split.) The amount of General Fund support may vary over time. Principal amount outstanding was $35.5 million as of June 30, 2018.

Water Resources Bonds – Article XI-I(1). Up to one-half of one percent of the true cash value of property within the State may be borrowed to provide funds for loans to construct water development projects. Project purposes include irrigation and drainage, community water supply, fish protection and watershed restoration. Authorized by Article XI-I (1), at least fifty percent of these funds are reserved for irrigation and drainage projects. The program is intended to be self-supporting from revenues received pursuant to financing agreements with project borrowers. There were no bonds outstanding under this program as of June 30, 2018.

Elderly and Disabled Housing Bonds – Article XI-I (2). Funds may be borrowed to finance multifamily housing for elderly and disabled persons under Article XI-I (2). This program, under which one-half of one percent of state property true cash value may be borrowed, is fully self-supporting from project mortgage loan revenues. Principal amount outstanding was $42.4 million as of June 30, 2018.

Alternate Energy Bonds – Article XI-J. The Department of Energy is authorized by Article XI-J to incur debt up to one-half of one percent of the true cash value of all taxable property of the state to finance development of small-scale local energy projects (SELP). Projects are funded only if they can demonstrate there will be sufficient revenues to repay the loan. Although the program has the State's GO backing, it was designed and has historically been fully self-supporting from loan repayment revenues. In the past few years, the Department has written-off several large loans to private parties that were deemed non-collectible; greatly depleting SELP's loan reserves. Recent cash flow analysis shows that the State will need to make cash infusions starting in FY 2020 and extending through FY 2034 of at least $15.3 million in order for the Department to meet its debt service obligations.

Approximately $70 million in Article XI-J bonds has been issued for energy upgrades and efficiency projects throughout the OUS system; a significant amount of which will be repaid through General Fund annual appropriations. In FY 2018, the Legislature appropriated $8.3 million from the General Fund to cover the loan payments on these energy upgrades – this represents 37% of the overall debt service for the program. There were $156.4 million in outstanding Article XI-J bonds as of June 30, 2018, of which 39% is considered General Fund-supported debt for purposes of this report.

Oregon School Bond Guaranty Program – Article XI-K. Article XI-K of Oregon's constitution authorizes the State Treasurer to pledge the full faith and credit of the State to guaranty the GO bonds of Oregon common or union high school districts, education service districts or community college districts. The State Treasurer may also issue State GO bonds to meet the State's obligations under the Oregon School Bond Guaranty Program. The amount of State GO bonds that can be issued to back the guaranties is limited to one half of one percent of TCV of all taxable property

[1] In accordance with Article XI-H Section 2, the facilities supported by the Pollution Control Bonds must be 70% self-supporting and self-liquidating. However, the bonds that provide the funds to support the facilities are currently non-self-supporting, requiring debt service payments to be provided by General Fund appropriations.

in the state. As of the date of this report, the State had not issued any debt permitted under the provisions of Article XI-K.

Oregon Opportunity Bonds – Article XI-L. Authorizes bonds to finance capital costs of the Oregon Health and Sciences University (OHSU) in an aggregate principal amount that produces net proceeds for the University in an amount that does not exceed $200 million. Section 1 of the Article authorizes debt not to exceed one-half of one percent of the real market value of all property in the State. However, the State is not permitted to levy ad valorem (property) taxes to pay the bonds. The legislation authorizing the program contemplates that the bonds may be paid from tobacco settlement revenues, but those revenues are not directly pledged to pay the bonds. Principal amount outstanding was $75.0 million of June 30, 2018.

Seismic Rehabilitation of Public Education Buildings – Article XI-M. Authorizes bonds to be issued to provide funds for the planning and implementation of seismic rehabilitation of public education buildings. Outstanding authorized debt may not exceed one-fifth of one percent real market value of all property in the State. Ad valorem property taxes may not be pledged to repay these bonds. Principal amount outstanding was $191.4million as of June 30, 2018.

Seismic Rehabilitation of Emergency Services Buildings – Article XI-N. Authorizes bonds to be issued to provide funds for the planning and implementation of seismic rehabilitation of emergency services buildings. Outstanding authorized debt may not exceed one-fifth of one percent real market value of all property in the State. Ad valorem property taxes may not be pledged to repay these bonds. Principal amount outstanding was $52.9 million as of June 30, 2018.

Pension Obligation Bonds – Article XI-O. Pension Obligation Bonds (POBs) were issued under the authority of Article XI-O of the Oregon Constitution and House Bill 3659 in October 2003 in the principal amount of $2,083,960,000. These bonds are general obligations of the State to which the full faith and credit and taxing power of the State (other than the State's power to levy ad valorem property taxes) are pledged. Proceeds of the POBs were used to pay a substantial portion of the State's unfunded actuarial liability (UAL) of the Oregon Public Employees Retirement System (PERS). The UAL is the State's portion of the difference between PERS' actuarial liability and fair market value of assets in the Public Employees Retirement Fund (PERF) available to pay such liability on November 1, 2003.

The amount of outstanding indebtedness authorized by Article XI-O is limited to one percent of the real market value of all property in the state. Debt service on the bonds is allocated among both General Fund and non-General Fund State agencies based on the payroll of such agencies. The State expects that the allocated costs to each agency will be less than if the State did not issue the bonds. Approximately 67 percent of the bond debt service is paid by non-General Fund resources leaving 33 percent of the debt service to be paid with General Fund resources. The final payment on these bonds will occur in FY 2027. Principal amount outstanding on the POBs was $1.59 billion as of June 30, 2018.

School Construction Bonds – Article XI-P. In May 2010, the Oregon electorate adopted a constitutional amendment allowing for the issuance of State GO bonds as a match to local public school district funds for school capital projects (Article XI-P bonds). This constitutional amendment authorizes the State to incur indebtedness in an amount not to exceed one-half of one percent of the real market value of the real property in the state, but does not authorize a levy on property taxes to pay for these bonds.

The 2015 Legislature authorized the bond program's initial sale of bonds for this program, as well as adopting SB 447, which authorized the establishment of the Office of School Facilities within the Oregon Department of Education to administer the new bond and matching grant program, with the goal of increasing local school district investment in their capital construction and school facilities.

As currently designed, any school district whose voters approve a local general obligation bond measure for school construction projects is eligible to compete for a State matching grant, which is currently capped at $8 million per district. Districts with high numbers of disadvantaged students and low assessed value will be placed on a priority list, which gives them a better chance of receiving a State matching grant upon achieving voter approval of their local bond match. Other school districts will be awarded matching grants on a first-in-time basis - districts that submit applications first will receive State matching grants until XI-P bond funds are depleted. Given the estimated $7.6 billion in statewide deferred school capital and maintenance costs, it is anticipated that there will be strong statewide demand over time for this bond program. As of June 30, 2018, there was $102.8 million in bonds outstanding through this program.

State Facilities – **Article XI-Q.** Authorizes the State to incur indebtedness in an amount not to exceed one percent of the real market value of the real property in the state to provide funds to acquire, construct, remodel, repair, equip or furnish real or personal property that is or will be owned and/or operated by the State of Oregon. Passed by the voters in November 2010, and enacted into statute in the following year by the 2011 Legislative Assembly, the Article XI-Q bonding program replaced the Certificate of Participation bonding program as a means of financing most state owned property due to its superior credit ratings and lower cost of funds. Through June 30, 2018, the State has sold thirty-four separate issues of Article XI-Q bonds, both for new state capital projects but also to refund several series of outstanding COPs, saving Oregon taxpayers $92.4 million in interest costs on present value savings over the life of these bonds.

As of June 30, 2018 principal outstanding for Article XI-Q bonds totaled $1.49 billion.

DIRECT REVENUE BONDS

Single-Family and Multifamily Revenue Bonds – ORS 456.645. Oregon Revised Statute 456.645 to 456.725 authorizes the Housing and Community Services Department to issue revenue bonds for the purpose of financing single-family mortgage loans and multifamily housing projects. The statute limits outstanding debt to $2.5 billion. These bonds are fully self-supported with payment for the bonds coming from project rental revenues, as well as mortgage payments and fees. Principal amount outstanding was $981.7 million as of June 30, 2018.

State Highway User Tax Bonds – ORS 367.605. The Oregon Constitution Article IX, Section 3a and Oregon Revised Statutes 367.605 to 367.665 authorize the Department of Transportation to issue highway user tax revenue bonds to provide proceeds for building and maintaining permanent public roads. Highway user tax bonds differ from other State revenue bond programs in that they are secured by constitutionally dedicated tax proceeds from fuel sales and other taxes or fees charged for vehicle use and licensing. However, they are typical of revenue bond programs in that they are not secured by the State's GO pledge.

The 1999 Legislative Assembly under ORS 367.620 authorized the issuance of debt up to $138.4 million in highway user tax bonds. Under this authorization, the Department issued bonds in the amount of $58,355,000 in August 2000. The remainder of this authorization was repealed in 2001 Oregon Laws Chapter 669.

The 2001 Legislative Assembly revised ORS 367.620(2) to approve issuance of $400 million of new highway user tax bonds. House Bill 4010, passed during the First Special Session of the 2002 Legislature, again revised ORS 367.620 increasing the issuance of new highway user tax revenue bonds sufficient to produce net proceeds of not more than $500 million. The authority granted was further restricted to an aggregate principal amount that the department reasonably believes can be paid with $71.2 million in biennial debt service.[1] As of December 31, 2008 the department had issued all $500 million in net proceeds under this authorization; there is no remaining bonding authority under these provisions.

The 2003 Legislative Assembly approved HB 2041 amending ORS 367.620(3) to provide additional authority for $1.9 billion net proceeds in highway user tax revenue bonds for bridges and highway modernization purposes. It was envisioned at that time that bonds supporting this program authorization would be issued over a number of years; in 2010, the final series of highway user tax revenue bonds for this program were issued.

In 2009, the Legislative Assembly enacted the Jobs and Transportation Act (JTA) which authorized the Department to issue up to $840 million in net proceeds through the issuance of additional highway user tax revenue bonds for specific congestion management projects. The final series of revenue bonds associated with this authorization were sold in FY 2017.

The total principal amount outstanding for highway user tax revenue bonds was $2.44 billion as of June 30, 2018.

Oregon Transportation Infrastructure Fund Bonds – ORS 367.015. ORS 367.015 to 367.030 authorize the Department of Transportation to issue revenue bonds for the Oregon Transportation Infrastructure Fund. The fund is to provide infrastructure loans and assistance for transportation projects. The total principal amount of revenue bonds that may be issued and outstanding at any one time under this authorization cannot exceed $200 million. Currently, no Transportation Infrastructure Fund bonds authorized by these provisions have been issued or are outstanding.

City and County Roads and Recreation Facilities Bonds – ORS 367.700. ORS 367.700 to 367.750 authorizes State Department of Transportation bonded indebtedness in the aggregate principal amount of $50 million. This provision was enacted into law in 1975 for the purpose of providing funds to cities and counties to defray the costs of city and county street construction and the acquisition, development, maintenance and care of public park and recreation facilities. No State bonds have ever been issued under the provisions of this legislation.

Oregon Bond Bank Revenue Bonds – ORS Chapter 285B.467. The Oregon Economic and Community Development Department (OECDD) have been granted statutory authority to issue bonds under two revenue bond programs. Pursuant to ORS 285B.410 through 285B.479, bonds, may be issued to fund the Special Public Works Fund (SPWF) to assist municipalities in financing the infrastructure necessary for economic development. In addition, the Department, pursuant to ORS 285B.572 through 285B.587, may issue bonds to finance loans to municipalities for safe drinking water projects and wastewater system improvement projects. Bond proceeds under this program are used to fund the Water/Wastewater Financing Program to deliver funds to eligible municipalities. The bonds are payable from loan repayments made by municipalities. Under each of these programs, the Department is authorized to request the State to withhold any amounts otherwise due to the municipality from the State to pay such amounts that may be owed.

[1] The $58,355,000 Highway User Tax Revenue Bonds Series 2000, issued and outstanding amount, does not count against the $500 million in new issuance or the $71.2 million biennial debt service limitation imposed by HB 4010.

In 1997, the Oregon State Legislature enacted ORS 285B.482 to authorize the consolidation of proceeds of revenue bonds issued for the SPWF Program and the Water/Wastewater Program. Future bonds for these programs are issued under the consolidated Oregon Infrastructure Authority Bond Bank Revenue Program. Additionally, all prior bonds issued under these programs are considered parity bonds. Future bonds supporting the SPWF and the Water/Wastewater programs will be issued as single series under the Oregon Infrastructure Authority Bond Bank Revenue Bond program. Principal amount outstanding is $47.1million as of June 30, 2018.

Lottery Revenue Bond Program(s) – ORS 286A.560 to 286A.585. The Oregon State Lottery was created by an amendment to the Oregon Constitution in 1984. That amendment revised Article XV, Section 4 of the Oregon Constitution to require the establishment and operation of the Oregon State Lottery. Article XV, Section 4 requires that all proceeds from the Lottery, including interest earnings but excluding expenses and payment of prizes, be used for creating jobs, furthering economic development, financing public education in Oregon or restoring and protecting Oregon's parks, beaches, watersheds and critical fish and wildlife habitats. The Article also requires the Legislative Assembly to appropriate Lottery net proceeds in amounts sufficient to pay lottery bonds before appropriating the Lottery's net proceeds for any other purpose.

The first statutory authority, ORS 391.140, permitted the issuance of up to $115 million in bonds for financing the costs of development, acquisition and construction of the Westside corridor light-rail project. Subsequently, the Legislative Assembly has authorized additional Lottery-backed bond programs at each of its regular sessions. In 1999, the Legislature passed Senate Bill 200 to combine previously enacted legislation authorizing lottery bonds into a single Act. The Act, incorporated as ORS 286A.560 to 286A.585, creates a single consistent legislative authorization and uniform administrative procedures for all lottery bonds issued by the State of Oregon. As of June 30, 2018, Lottery Bond principal amount outstanding was $1.11 billion.

Forest Development Revenue Bonds – ORS 530.140. The State Forestry Department is authorized by the provisions of ORS 530.140 to 530.160 to sell revenue bonds of the State of Oregon, to be known as Oregon Forest Development Revenue Bonds. No bonds have been issued or are outstanding under this authorization.

Oregon Student Assistance Revenue Bonds – ORS 348.655. Bond authorization and eligibility requirements are defined by ORS 348.655 to 348.695. It authorizes the issuance of up to $30 million annually in revenue bonds to fund loans to support the "alternative student loan" program. Eligible student, as defined by ORS 348.618, means a student enrolled in an eligible post-secondary educational institution located in Oregon or a student who is an Oregon resident and who is enrolled in an eligible post-secondary educational institution located outside of Oregon. To date, no debt has been authorized or issued under this authorization.

Oregon Innovation Revenue Bonds – ORS 284.746. Bond authorization and project eligibility requirements are defined by ORS 284.740 to 284.749. These bonds are intended to fund loans and grants related to innovation-based economic development projects, as determined by the Oregon Innovation Council. To date, no debt has been authorized or issued under this authorization.

CONDUIT REVENUE BONDS

The State has authorized four conduit or "pass-through" revenue bond programs. Under these programs, the State is considered the issuer, but has no obligation to fund debt service payments other than out of payments from the entities on whose behalf the bonds are issued.

Oregon Facilities Authority (OFA) – ORS Chapter 289. The Oregon Facilities Authority, formerly named the Health, Housing, Educational, and Cultural Facilities Authority, was created in 1989 and operates pursuant to Oregon Revised Statues Chapter 289. OFA is a public corporation empowered to issue conduit revenue bonds and assist with the assembling and financing of lands for health care, housing, educational and cultural uses and for the construction and financing of facilities for such uses. Effective January 1, 2007, OFA's mandate was expanded to include the financing for all non-profit institutions, organizations or entities within the State that are exempt from taxation under section 501(c)(3) of the Internal Revenue Code, as defined in ORS 314.011. The Authority reviews proposed projects and makes recommendations to the State Treasurer whether to finance the project through the issuance of limited obligation bonds.

Although the State Treasurer issues OFA bonds, they are repaid solely from revenues generated by the projects being financed or from other sources available to the borrower. The State has no financial obligation for these bonds and bondholders have no recourse against the properties, funds or assets of the Issuer, the State or the Authority for payment of bond debt service. Bondholder's only recourse for payment of the bonds is against the actual borrower.

In 2007, OFA initiated the Small Nonprofit Accelerated Program (SNAP Bond Program), which is a streamlined low-cost private placement program for smaller non-profits that is simple to use and generally has smaller transaction costs. Principal amount outstanding for OFA in total was $2.21 billion as of June 30, 2018.

Industrial Development Revenue Bonds – ORS Chapter 285B. The Oregon Business Development Commission (OBDC) is empowered, pursuant to ORS 285B.320 to 285B.371, to issue Industrial Development Revenue Bonds through the Oregon Business Development Department, with the approval of the State Treasurer. They are issued as limited obligation bonds payable only from project revenues or other sources available to the borrower. Industrial or economic development revenue bonds do not constitute an indebtedness of the Issuer, the Commission or the State. Proceeds of these bonds are loaned to private businesses to finance various expansions, relocations, retentions, and other projects that will stimulate economic development and provide jobs in the State. Prior to approval of issuance, the State subjects individual projects to a cost effectiveness test to ensure that the public benefits of a project outweigh the related public costs. Principal amount outstanding was $517.1 million as of June 30, 2018.

Housing Development Revenue Bonds – ORS 456.692. The Oregon Housing and Community Services Department (OHCSD) is authorized pursuant to ORS 456.692 to issue conduit revenue bonds through the State Treasurer for its Housing Development Program. The multifamily housing program provides financing for developments in which a certain number of the housing units are for persons and families of lower income. Each bond issue finances a single development that is separately secured by revenues and assets specifically pledged by the borrower. Similar to the other State conduit revenue bond programs, as noted above, there is no bondholder recourse to the State for payment should the project not be able to meet its debt service requirements. Principal amount outstanding was $439.0 million as of June 30, 2018.

Beginning and Expanding Farmer Revenue Bonds – ORS 285.430. The Oregon Business Development Department is authorized pursuant to ORS 285.430 to issue conduit revenue bonds to fund Beginning and Expanding Farmer loans for approved agricultural projects. Each bond issue finances a single loan that is secured by revenues and assets specifically pledged by the borrower. Similar to the other State conduit revenue bond programs, as noted above, there is no bondholder recourse to the State for payment should the borrower not be able to meet its debt service obligations. As of June 30, 2018, two loans have been issued through this program, of which $469,058 remained outstanding.

APPROPRIATION CREDITS

Appropriation Bonds – SB 856 – 2003 Legislature. Senate Bill 856, the Appropriation Bond Act, was passed by the 2003 Legislative Assembly. The Act authorized the issuance of bonds to assist the State of Oregon in balancing its budget for the 2001-2003 Biennium. Appropriation bonds in the par amount of $431,560,000 were issued in April 2003. These bonds are special obligations of the State payable solely from appropriated moneys and do not represent a general, unlimited-tax obligation of the State. In the Appropriation Bond Act, the Legislative Assembly acknowledged its current intention to apply the moneys available to the State from tobacco settlement revenues to pay the debt service for the appropriation bonds. As of June 30, 2018 there were no outstanding bonds under this authorization.

Certificates of Participation – ORS Chapter 283.085. Oregon Revised Statutes 283.085 to 283.092 permit the State to enter into financing agreements, including lease purchase agreements, installment sales agreements and loan agreements to finance essential real or personal property and issue certificates of participation evidencing these financing agreements.

Certificates of Participation (COPs) are considered tax-exempt government securities and special obligations of the State payable solely from available funds. They are no general obligations secured by the full faith and credit of the State. Rather, the Oregon Legislature must appropriate COP repayment amounts each biennium for which repayments are scheduled. If the Legislature were to deny a budget request to make the COP payments for a future biennium, the COP Trustee would exercise available legal remedies against the State. These remedies could include the denial of the use of the building(s) or the equipment financed by the COPs for which payment had been denied. While the state's General Fund has been traditionally viewed as the source of repayment for all COP debt, a recent review indicates that a portion of this debt service payment is actually paid by other revenues. (Please see "General Fund Supported Debt" chapter of this report for additional information.)

Passage of Ballot Measure 11 by Oregon voters in 1994 is directly related to the significant increase in COP debt from about $191 million in FY 1995 to about $1.1 billion in FY 2008. Measure 11 created mandatory minimum penalties for specified crimes and required that juveniles charged with certain violent crimes be tried and sentenced as adults. The practical effect of Measure 11 is the considerable requirement for increased construction of adult and juvenile prisons and correctional facilities.

Beginning with the construction of the Snake River Correction Facility in Ontario in the early 1990s, the Oregon Department of Corrections has used COPs to finance the major expansion of the prison system. The proceeds from COPs are also used for the construction of local jail capacity related to the SB 1145[1] population, purchase of property, design costs, site costs, major improvements or upgrades of existing facilities, and the staff costs associated with the construction and improvement of facilities.

Since the passage of Article XI-Q GO bonds for state owned and/or operated facilities by voters in 2011, the State has dramatically reduced the use of this financing mechanism, as GO bonds provide a higher rating and lower cost of funds compared to COPs. In addition, the State has refinanced a significant portion of existing COP debt with Article XI-Q bonds, saving Oregon taxpayers $92.4 million in interest costs to date on a present value savings. Principal amount outstanding for remaining COP debt was $240.8 million as of June 30, 2018.

[1] The community corrections system is based on SB 1145 (1995) which transferred management of offenders sentenced or sanctioned for incarceration periods of 12 months or less and all felony offenders under community supervision to the counties effective January 1997. Oregon Department of Corrections provides funds to offset the cost of supervising these offenders.