

# **Nevada System of Higher Education Debt Summary and Guidelines**



**June 30, 2019**

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# **Nevada System of Higher Education**

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# Nevada System of Higher Education

## Debt Summary and Guidelines

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# SECTION A

## EXECUTIVE SUMMARY

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## EXECUTIVE SUMMARY

### INTRODUCTION

The Government Finance Officers Association recommends that government entities “develop a formal debt policy to establish parameters and to provide general direction in the planning and implementation of a debt program”.<sup>1</sup>

Debt can be viewed as the current use of future income. Because debt is a long-term resource, it should be managed with a long-term perspective. The purpose of the Nevada System of Higher Education (the “System”) debt management guidelines are to manage the issuance of the System’s debt obligations and maintain the System’s ability to incur debt and other long-term obligations at favorable interest rates for capital improvements, facilities and equipment beneficial to the System and necessary for essential services. The decision to incur debt may commit revenues for many years into the future, therefore limiting the System’s flexibility to respond to changing service priorities, revenue streams or cost structures. The System is governed by the Board of Regents (the “Board”). This document is not intended to review the System’s total financial position. Analysis of the System’s debt position is important, as growth in the System, aging facilities, and programmatic changes may result in an increased need for capital financing. Resources, as well as needs should drive the System’s debt issuance program. Decisions regarding the use of debt will be based in part on the long-term needs of the System and the amount of equity (cash) dedicated in a given fiscal year to capital outlays. The information contained herein reflects the current debt status of the System and provides a framework for the ongoing debt management process the System has implemented. A disciplined, systematic approach to debt management will allow the System to maintain its excellent credit ratings. Unless otherwise noted, the source for the various information presented in this document is the System.

This booklet consists of a Debt Summary followed by the Debt Management Guidelines. The recommendations included herein concur with the System’s financing objectives while maximizing the System’s ability to finance capital improvements. Debt guidelines have been utilized to maintain the highest possible credit ratings for the System.

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<sup>1</sup> An Elected Official’s Guide to Debt Issuance, p. 11, by J.B. Jurish and Patricia Tigie, Government Finance Officers Association

## SUMMARY

- Bonding should be used to finance or refinance only those capital improvements and long-term assets, or other costs directly associated with financing of a project, which have been determined to be beneficial to the System for which repayment sources have been identified. Bonding should be used only after considering alternative funding sources, such as State appropriations, State ad valorem bonds and Federal or State grants. (See “FINANCING ALTERNATIVES” on page C-1.)
- Each institution should respond to a specific set of questions when seeking added debt to ensure an understanding of the implications on resources. (See “Controlling the Financing Process” on page C-9.)
- The System will provide the rating agencies who maintain a rating on System securities with all material that has a pertinent bearing on System finances. (See “Continuing Disclosure of System Financial Information” on page C-15.)
- All bond issue requests should be coordinated by the Chief Financial Officer during the annual budget and Capital Improvement Program (“CIP”) formation process. Opportunities for refunding outstanding bonds should be communicated to the Chief Financial Officer. (See “Administration of Debt” and “Initial Review and Communication of Intent” on page C-9.)
- The System should encourage the use of competitive sales for all bond issues unless circumstances dictate otherwise. Negotiated sales will be considered by the Chief Financial Officer only under the conditions set forth herein. (See “Method of Sale” on page C-10.)
- The System should structure all long-term debt with prepayment options except when alternative structures are more advantageous to the System. The System will consider prepaying or defeasing portions of outstanding debt when available resources are identified and an economic benefit is provided. (See “Prior Redemption” on page C-16.)
- The scheduled maturity of bond issues should generally not exceed the expected useful life of the capital project or asset(s) financed or 30 years, whichever is less. (See “Maturity Structures” on page C-17.)
- The Chief Financial Officer should consider refunding outstanding bonds if one or more of the following conditions exist: (1) present value savings is at least 3 percent of the par amount of the refunded bonds, (2) the bonds to be refunded have restrictive or outdated covenants or (3) restructuring debt is deemed to be desirable. (See “Refunding” on page C-17.)
- Institutions seeking “unsecured” bank financing should state the anticipated source of repayment as well as an acknowledgment that the institution will pay debt service if the anticipated source of repayment is not sufficient. (See “Initial Review and Communication of Intent” on page C-9.)
- The Chief Financial Officer should review/update the System’s Debt Management Guidelines periodically.

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# SECTION B

## DEBT SUMMARY

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## DEBT SUMMARY

### CURRENT DEBT POSITION

It is recognized that all System debt, regardless of the source of revenue pledged for repayment, represents some sort of cost to taxpayers, facility users, or students. Therefore, all types of System debts/obligations are considered herein.

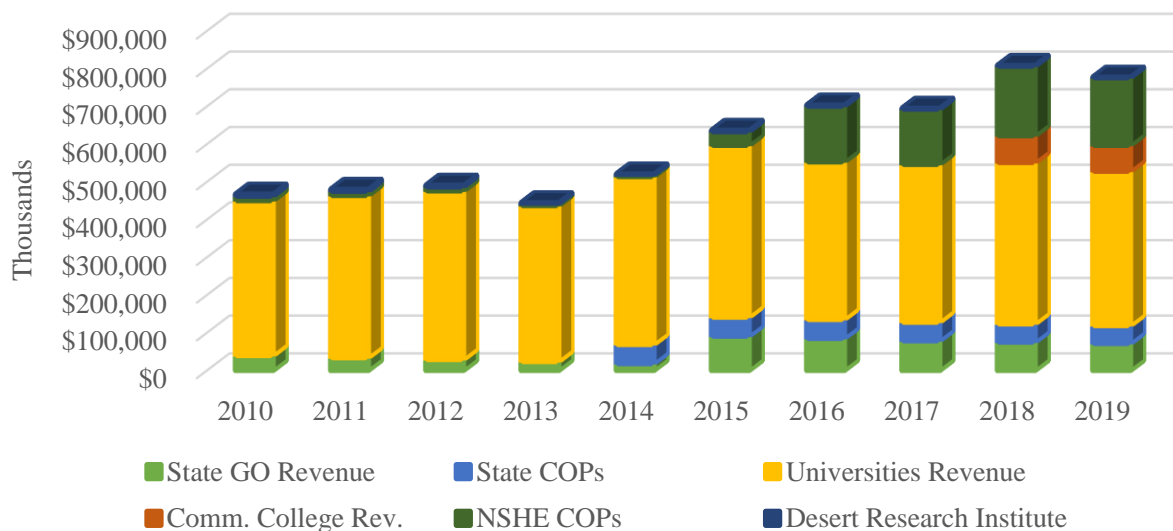
### Debt Issuance History

The following table and chart illustrate the bonds outstanding as well as the categories of the outstanding bonds as of June 30 for the past ten years.

OUTSTANDING LONG-TERM BONDED DEBT<sup>1</sup>  
Nevada System of Higher Education

FY Ending June 30	State GO Revenue	State COPs	Universities Revenue	Community College Revenue	NSHE COPs	DRI Lease- Revenue Bonds	TOTAL
2010	\$39,500,000	\$0	\$410,710,000	\$0	\$11,530,000	\$6,835,000	\$468,575,000
2011	33,805,000	0	429,975,000	0	11,015,000	6,505,000	481,300,000
2012	28,850,000	0	446,825,000	0	10,470,000	6,155,000	492,300,000
2013	23,640,000	0	413,240,000	0	3,165,000	5,775,000	445,820,000
2014	18,165,000	50,445,000	445,390,000	0	2,595,000	5,370,000	521,965,000
2015	90,745,000	50,445,000	455,445,000	0	36,205,000	4,930,000	637,770,000
2016	84,695,000	50,445,000	417,605,000	0	147,615,000	4,460,000	704,820,000
2017	78,335,000	49,495,000	418,355,000	0	146,255,000	3,955,000	696,395,000
2018	74,965,000	48,500,000	427,525,000	70,915,000	184,415,000	3,410,000	809,730,000
2019	71,420,000	47,455,000	409,035,000	68,715,000	179,305,000	2,825,000	778,755,000

<sup>1</sup> Excludes bank loans and leases.



The following table illustrates outstanding obligations of the System along with State General Obligation Bonds. See Section K for individual debt service schedules.

**OUTSTANDING INDEBTEDNESS AND OTHER OBLIGATIONS**  
Nevada System of Higher Education  
June 30, 2019

	<b>Date Issued</b>	<b>Maturity Date</b>	<b>Original Amount</b>	<b>Amount Outstanding</b>
<b><u>STATE G.O. REVENUE BONDS<sup>1</sup></u></b>				
Slot Tax Revenue Bonds, Series 2015A	03/10/15	08/01/32	\$78,335,000	<u>\$71,420,000</u>
			<b>TOTAL</b>	<b>\$71,420,000</b>
<b><u>STATE CERTIFICATES OF PARTICIPATION<sup>2</sup></u></b>				
Lease Rev. Certificates of Participation-NSC	11/26/13	06/01/43	\$50,445,000	<u>\$47,455,000</u>
			<b>TOTAL</b>	<b>\$47,455,000</b>
<b><u>UNIVERSITY REVENUE BONDS<sup>3</sup></u></b>				
Universities Revenue Bonds, Series 2008A	07/22/08	07/01/38	\$60,135,000	\$1,475,000
Universities Revenue Bonds, Series 2009A	02/24/09	07/01/38	18,140,000	1,430,000
Universities Revenue Bonds, Series 2010A <sup>4</sup>	12/21/10	07/01/20	29,455,000	28,125,000
Universities Revenue Bonds, Series 2011A	10/26/11	07/01/24	50,470,000	15,995,000
Universities Revenue Bonds, Series 2012A	04/05/12	07/01/32	27,375,000	25,965,000
Universities Revenue Bonds, Series 2012B	04/05/12	07/01/22	5,010,000	1,565,000
Universities Revenue Bonds, Series 2013A	04/23/13	07/01/33	40,035,000	31,440,000
Universities Revenue Bonds, Series 2013B	04/23/13	07/01/35	105,300,000	93,745,000
Universities Revenue Bonds, Series 2014A	03/11/14	07/01/43	49,995,000	45,180,000
Universities Revenue Bonds, Series 2015A	02/19/15	07/01/35	61,455,000	61,455,000
Universities Revenue Bonds, Series 2015B	09/19/15	07/01/26	7,480,000	6,105,000
Universities Revenue Bonds, Series 2016A	04/14/16	07/01/38	57,750,000	57,550,000
Universities Revenue Bonds, Series 2016B	10/26/16	07/01/36	13,580,000	13,100,000
Universities Revenue Bonds, Series 2017A	11/16/17	07/01/40	25,905,000	<u>25,905,000</u>
			<b>TOTAL</b>	<b>\$409,035,000</b>
<b><u>COMMUNITY COLLEGE REVENUE BONDS<sup>5</sup></u></b>				
Comm. College Rev. Bonds, Series 2017A	11/21/17	07/01/47	\$70,915,000	<u>\$68,715,000</u>
			<b>TOTAL</b>	<b>\$68,715,000</b>
<b><u>CERTIFICATES OF PARTICIPATION<sup>6</sup></u></b>				
Certificates of Participation, Series 2014A	08/07/14	07/01/44	\$34,220,000	\$31,375,000
Certificates of Participation, Series 2016A	02/04/16	07/01/46	63,095,000	59,020,000
Certificates of Participation, Series 2016B	03/22/16	07/01/46	50,405,000	48,405,000
Certificates of Participation, Series 2017A	11/14/17	07/01/47	28,890,000	28,030,000
Certificates of Participation, Series 2018A	04/05/18	07/01/48	12,475,000	<u>12,475,000</u>
			<b>TOTAL</b>	<b>\$179,305,000</b>

- Table continued on next page; footnotes on page B-4-



	<b>Date Issued</b>	<b>Maturity Date</b>	<b>Original Amount</b>	<b>Amount Outstanding</b>
<b>DESERT RESEARCH INSTITUTE<sup>7</sup></b>				
Taxable Lease Revenue Bonds, Series 2002	06/14/02	05/15/23	\$8,460,000	<u>\$2,825,000</u>
			TOTAL	\$2,825,000
<b>BANK LOANS/LEASES<sup>8</sup></b>				
<i>University of Nevada, Reno</i>				
UNR – 450 Sinclair Street Lease	11/20/13	01/01/27	\$1,428,579	\$913,989
UNR – Student Achievement Center Note	02/26/14	07/01/19	2,700,000	399,000
UNR – Fitness Center Note	08/14/14	01/01/20	7,200,000	2,466,000
UNR – MEB Refunding Note	04/21/16	01/02/26	7,570,000	5,930,000
UNR – Scoreboard Note	05/05/16	03/01/21	3,500,000	675,000
UNR – Fine Arts Building Note	04/20/17	07/01/22	11,326,000	<u>7,586,000</u>
			UNR TOTAL	\$17,969,989
<i>University of Nevada, Las Vegas</i>				
UNLV – Hotel Administration Bldg. Note	12/15/15	07/01/22	\$15,561,000	\$9,275,000
UNLV – Med School Practice Plan Note	06/28/17	07/01/23	14,700,000	13,333,000
UNLV – Football Complex Note	11/09/17	07/01/23	15,297,000	<u>12,690,000</u>
			UNLV TOTAL	\$35,298,000
<i>College of Southern Nevada</i>				
CSN – Promissory Note	01/03/13	06/01/23	\$10,000,000	\$4,226,000
CSN – Cisco Equipment Lease	09/14/18	10/14/22	4,141,128	<u>3,257,737</u>
			CSN TOTAL	\$7,483,737
<i>Desert Research Institute</i>				
DRI – Southern Nevada Science Park	01/09/02	12/01/21	\$2,000,000	\$376,682
DRI – CRVB	10/26/06	07/01/22	1,500,000	320,000
DRI – Dell Supercomputer Lease	06/01/16	05/01/21	314,085	120,400
DRI – Six Degrees Capital Lease	08/10/16	09/10/19	356,642	89,161
DRI – Dell Quest Lease	07/01/17	07/01/19	69,655	23,195
DRI – Citrix Lease	07/01/18	08/01/21	281,974	183,455
DRI – Dell PowerVault Lease	11/01/18	11/01/20	96,159	<u>61,924</u>
			DRI TOTAL	\$1,174,817
<i>Great Basin College</i>				
GBC – Apartment Complex	11/08/01	11/01/21	\$2,530,000	<u>\$405,889</u>
			GBC TOTAL	\$405,889
TOTAL BANK LOANS/LEASES				\$62,332,432
<b>GRAND TOTAL OUTSTANDING DEBT</b>				<b>\$841,087,432</b>

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- <sup>1</sup> General obligation bonds secured by the full faith, credit and taxing power of the State. The property tax available to pay these bonds is limited to the \$3.64 statutory and the \$5.00 constitutional limit. These bonds are additionally secured by pledged revenues; if revenues are not sufficient, the State is obligated to pay the difference between such revenues and debt service requirements of the respective bonds.
- <sup>2</sup> Lease revenue bonds secured by annual lease payments from the State of Nevada to the Nevada Real Property Corporation. The System has entered into an agreement with the Nevada Treasurer's Office to make the semi-annual debt service payments due on the obligations to the State.
- <sup>3</sup> Universities Revenue Bonds are special obligations of the System payable solely from and secured by a lien on the Net Pledged Revenues. See page B-18 herein.
- <sup>4</sup> The 2010A Bonds were refunded with proceeds of the 2017A Bonds. However, they are legally outstanding until redeemed on July 1, 2020.
- <sup>5</sup> Community College Revenue Bonds are special obligations of the System payable solely from and secured by a lien on the Net Pledged Revenues. See page B-27 herein.
- <sup>6</sup> These certificates are payable from "all legally available funds of the System." See page B-32.
- <sup>7</sup> These bonds are special obligations of the System and are paid for and secured by an irrevocable pledge of certain revenues as described on page B-39 under "Pledged Revenues".
- <sup>8</sup> Bank loans are payable from "all legally available funds of the System". See page B-42 herein. Does not include authorized but unissued or undrawn balances of bank loans/leases or bank loans/leases that were entered into after June 30, 2019.

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The following table illustrates the debt service to maturity of outstanding System debt by institution.

**DEBT SERVICE REQUIREMENTS TO MATURITY**  
By Institution  
Nevada System of Higher Education  
June 30, 2019

<b>FY Ending June 30</b>	<b>State GO Revenue Bonds</b>	<b>State Certs. of Participation<sup>1</sup></b>	<b>UNR<sup>2</sup></b>	<b>UNLV<sup>2</sup></b>	<b>CSN<sup>2</sup></b>	<b>TMCC<sup>2</sup></b>	<b>DRI</b>	<b>GBC</b>	<b>TOTAL</b>
2020	\$6,520,075	\$3,383,275	\$31,439,062	\$30,714,716	\$5,944,733	\$1,067,363	\$1,412,839	\$164,357	\$80,646,420
2021	6,519,075	3,383,275	26,331,467	29,535,048	5,945,331	1,061,863	1,299,942	165,099	74,241,100
2022	6,518,325	3,380,525	28,360,645	28,872,741	5,945,313	1,065,613	1,061,783	82,834	75,287,779
2023	6,522,200	3,380,025	27,481,546	26,756,309	5,945,437	1,063,113	844,503	0	71,993,133
2024	6,520,200	3,381,525	25,007,518	23,327,755	3,945,988	1,064,613	0	0	63,247,599
2025	6,521,825	3,379,775	25,070,100	18,944,852	3,946,988	1,069,863	0	0	58,933,403
2026	6,521,450	3,379,775	25,056,776	14,665,521	3,943,988	1,068,613	0	0	54,636,123
2027	6,520,500	3,381,275	24,127,400	13,478,595	3,946,988	1,066,113	0	0	52,520,871
2028	6,519,750	3,384,475	23,994,013	13,464,389	3,945,488	1,067,363	0	0	52,375,478
2029	6,520,800	3,383,063	23,984,913	13,468,055	3,944,488	1,063,913	0	0	52,365,232
2030	6,519,350	3,381,875	24,032,900	12,667,503	3,943,738	1,067,413	0	0	51,612,779
2031	6,520,550	3,382,713	23,017,000	12,661,006	3,944,713	1,062,113	0	0	50,588,095
2032	6,521,275	3,381,713	23,016,600	12,670,900	3,943,063	1,068,550	0	0	50,602,101
2033	6,521,375	3,381,213	21,804,700	12,664,651	3,945,113	1,063,438	0	0	49,380,490
2034	0	3,380,963	20,000,613	10,028,447	3,945,063	1,067,600	0	0	38,422,686
2035	0	3,383,606	20,002,931	10,023,689	3,947,913	710,163	0	0	38,068,302
2036	0	3,381,625	14,320,863	4,825,433	3,945,413	710,988	0	0	27,184,322
2037	0	3,382,138	14,318,150	3,857,026	3,945,569	710,763	0	0	26,213,646
2038	0	3,382,425	14,321,850	3,851,625	3,944,931	710,013	0	0	26,210,844
2039	0	3,382,250	10,839,650	3,066,324	3,946,531	713,738	0	0	21,948,493
2040	0	3,384,750	10,838,763	3,066,239	3,945,206	709,338	0	0	21,944,296
2041	0	3,380,500	8,946,825	3,066,433	3,944,206	714,338	0	0	20,052,302

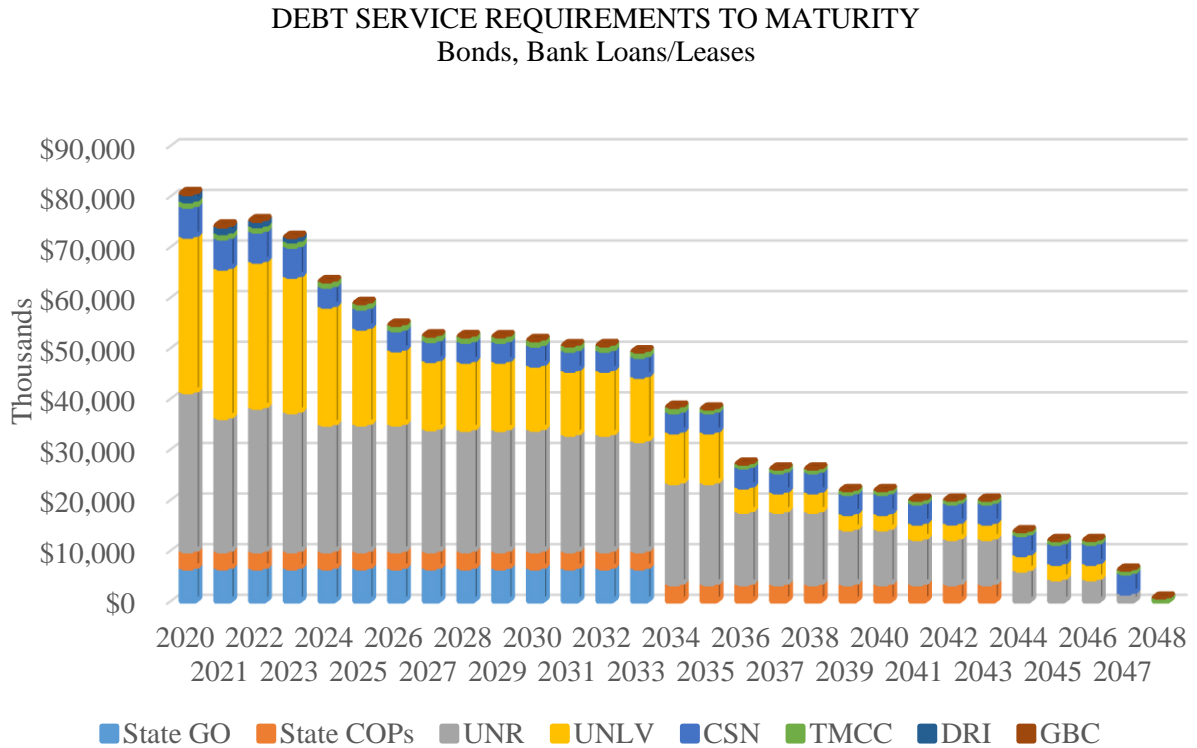
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<b>FY Ending June 30</b>	<b>State GO Revenue Bonds</b>	<b>State Certs. of Participation<sup>1</sup></b>	<b>UNR<sup>2</sup></b>	<b>UNLV<sup>2</sup></b>	<b>CSN<sup>2</sup></b>	<b>TMCC<sup>2</sup></b>	<b>DRI</b>	<b>GBC</b>	<b>TOTAL</b>
2042	0	3,384,500	8,946,719	3,066,670	3,943,606	709,650	0	0	20,051,145
2043	0	3,381,000	8,942,044	3,066,713	3,947,800	709,400	0	0	20,046,957
2044	0	0	6,095,419	3,066,328	3,948,000	712,000	0	0	13,821,747
2045	0	0	4,359,325	3,065,277	3,943,000	713,600	0	0	12,081,202
2046	0	0	4,358,625	3,068,325	3,947,800	714,200	0	0	12,088,950
2047	0	0	1,568,025	0	3,946,800	713,800	0	0	6,228,625
2048	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>712,400</u>	<u>0</u>	<u>0</u>	<u>712,400</u>
<b>TOTAL</b>	<b>\$91,286,750</b>	<b>\$81,168,259</b>	<b>\$500,584,442</b>	<b>\$321,010,570</b>	<b>\$118,473,207</b>	<b>\$25,951,935</b>	<b>\$4,619,067</b>	<b>\$412,290</b>	<b>\$1,143,506,520</b>

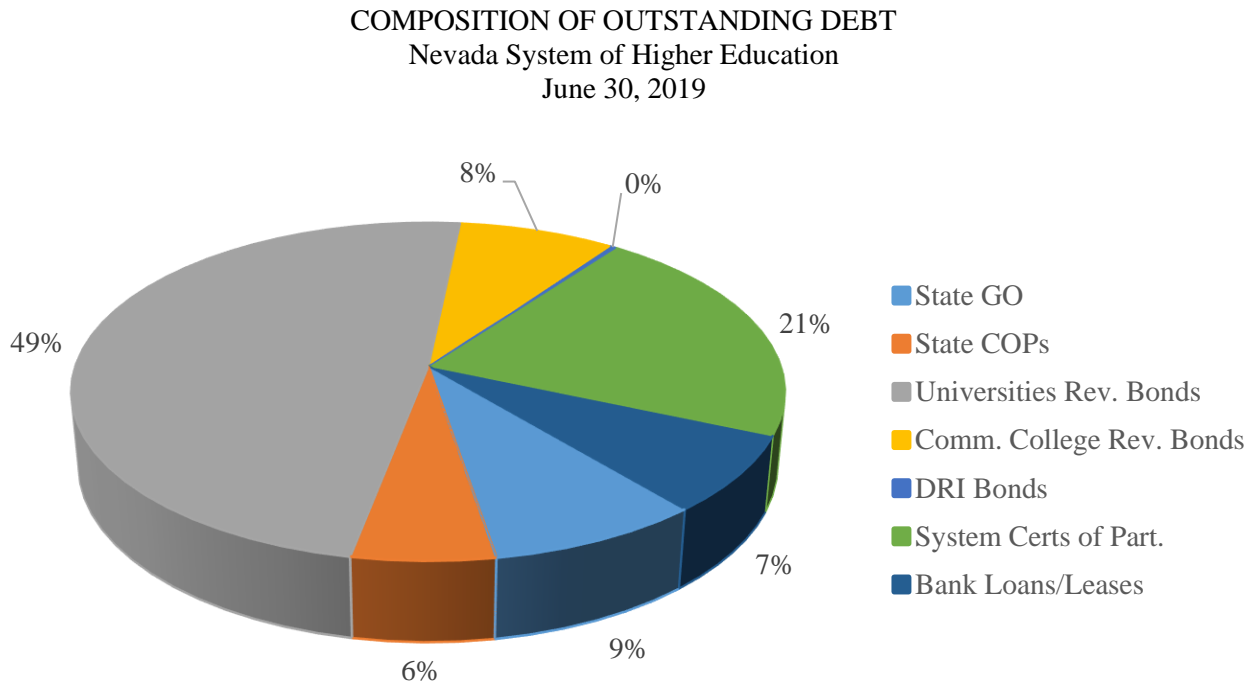
<sup>1</sup> Represents annual base rent payments due under an agreement between the Nevada System of Higher Education and the Nevada State Treasurer's Office for the Nevada State College Project.

<sup>2</sup> Payments for Universities Revenue Bonds, Community College Revenue Bonds, and NSHE Certificates of Participation made on July 1 of each year are treated as payments made in the prior fiscal year.

The following chart illustrates the debt service to maturity of outstanding System debt by institution.



The following chart illustrates the current allocation of outstanding System debt:



## State General Obligation Revenue Bonds

The following table illustrates the outstanding State General Obligation Revenue Bonded debt.

### OUTSTANDING STATE GENERAL OBLIGATION REVENUE BONDED DEBT

Nevada System of Higher Education

June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
University System Bonds	03/10/15	08/01/32	\$78,335,000	<u>\$71,420,000</u>
TOTAL				\$71,420,000

compiled by JNA Consulting Group, LLC

The State General Obligation Revenue Bonds were issued for the following projects:

- 2015 bonds Used to finance improvements to the Thomas & Mack Arena at UNLV and various capital improvements at UNR.

**Security for the Bonds** – The State of Nevada General Obligation Revenue Bonds (the “State GO/Revenue Bonds”) are direct general obligations of the State to which the full faith and credit of the State are pledged. Principal, interest and any prior redemption premiums on the State GO/Revenue Bonds are payable from general (property) taxes levied against all taxable property within the State (except to the extent any other revenues are made available therefor), subject to Nevada constitutional and statutory limitations on the aggregate amount of such taxes.

In any year in which the total property taxes levied within the State by all overlapping units (i.e., the State and any county, city, town, school district or special district) exceed such tax limitations, the reductions to be made by those units (including the State) must be in taxes levied for purposes other than the payment of their bonded indebtedness, including interest on such indebtedness, subject to any implied police power exception.

Nevada Revised Statute (“NRS”) 349.150 to NRS 349.326 (the “Bond Act”) provides that the faith of the State is pledged that the Project Act (NRS 463.385), the Bond Act, the laws authorizing the slot machine tax (as hereafter defined), any law supplemental or otherwise appertaining thereto and any other act concerning the bonds or other State securities, taxes or pledged revenues, will not be repealed, amended or modified in such a manner as to impair adversely any outstanding State securities, until all such securities have been discharged in full or provision for their payment and redemption has been fully made.

***Pledged Revenues*** – The State GO/Revenue Bonds are further secured by an irrevocable pledge and lien (but neither an exclusive pledge nor an exclusive lien) on a portion of the State’s annual \$250 tax on slot machines. Pursuant to NRS 463.385, the State levies an annual tax of \$250 per slot machine in operation within the State (the “Slot Machine Tax”). The proceeds of the Slot Machine Tax are allocated each year as follows: the first \$5,000,000 to the Capital Construction Fund for Higher Education (the “Capital Fund”), 20 percent of the total Slot Machine Tax to the Special Capital Construction Fund constitutes the Pledged Revenues.

The slot machines taxed include all coin-operated gaming devices, including typical slot machines and electronic poker, “21” and craps. If one slot machine is replaced by another, the replacement is not considered a different slot machine for the purpose of the Slot Machine Tax. The Slot Machine Tax is not dependent upon the gaming revenues generated by the slot machine nor upon the size of bet required to play.

The Project Act provides that the Slot Machine Tax credited to the Capital Fund and the Special Fund will not be repealed or diminished so as to impair the payment of principal or interest on the bonds. The payment of the bonds is not secured by any encumbrance, mortgage or other pledge of the property of the System or the State.

**SLOT MACHINE REVENUE DEBT SERVICE COVERAGE**  
Nevada System of Higher Education

<b>Fiscal Year Ended June 30</b>	<b>Collections</b>	<b>Revenues<sup>1</sup></b>	<b>Maximum Annual Debt Service Coverage on the State GO/Revenue Bonds<sup>2</sup></b>
2009	49,581,281	\$14,916,256	2.29
2010	48,390,092	14,678,018	2.25
2011	47,438,586	14,487,717	2.22
2012	46,619,836	14,323,967	2.20
2013	45,551,030	14,110,206	2.16
2014	44,317,162	13,863,432	2.13
2015	43,432,043	13,686,409	2.10
2016	42,696,766	13,539,353	2.08
2017	41,830,877	13,366,175	2.05
2018	41,662,618	13,332,524	2.04
2019 <sup>3</sup>	41,818,457	13,363,691	2.05

<sup>1</sup> Includes those amounts deposited into the Capital Fund and the Special Fund.

<sup>2</sup> Based on maximum annual debt service of \$6,522,200 in 2023.

<sup>3</sup> Unaudited.

SOURCE: Nevada State Gaming Control Board

The following table and chart illustrate the existing debt service for the outstanding State General Obligation Revenue Bonds.

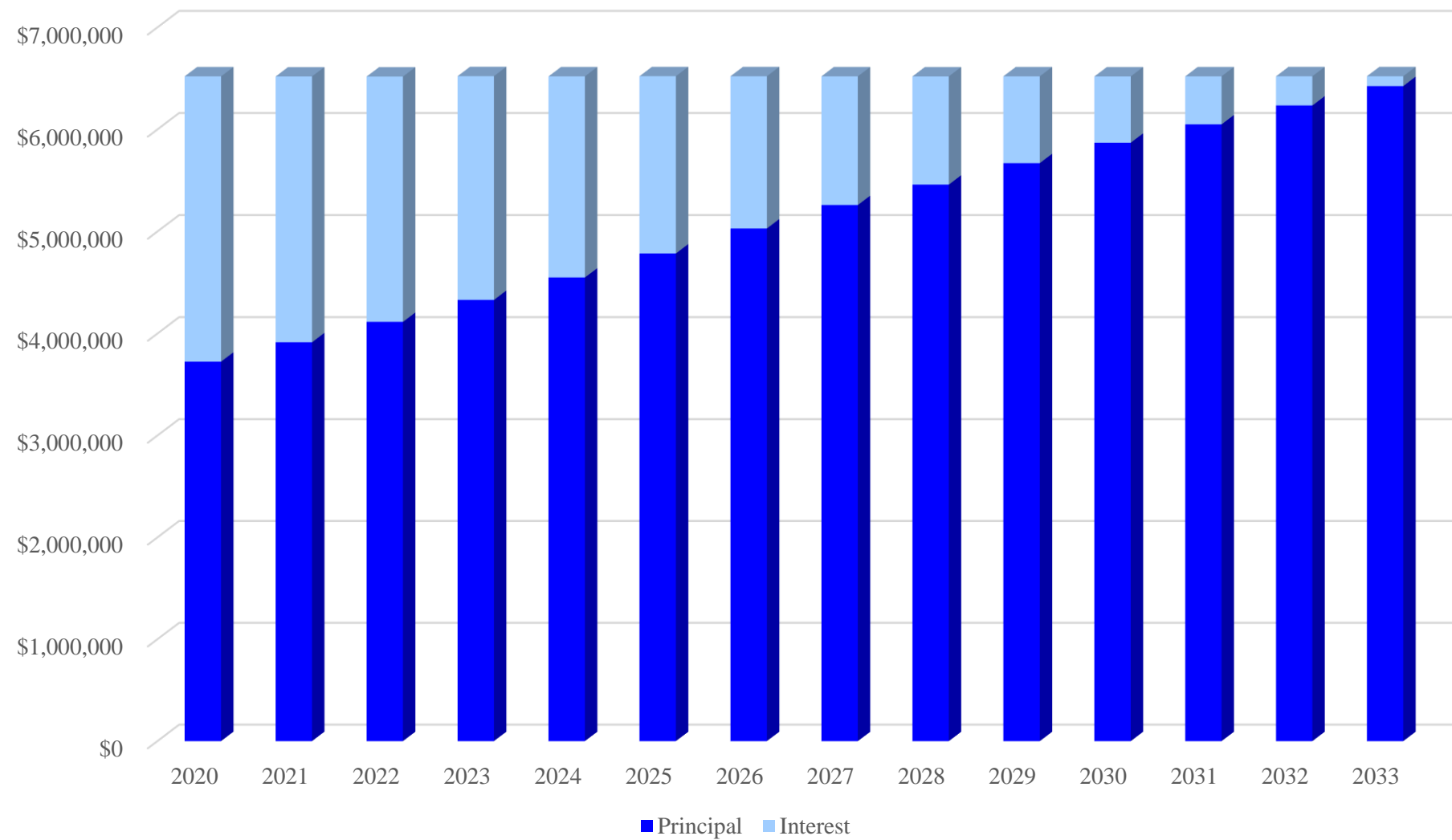
DEBT SERVICE REQUIREMENTS  
STATE GENERAL OBLIGATION REVENUE BONDED DEBT  
Nevada System of Higher Education  
June 30, 2019

<b>Fiscal Year Ending June 30</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2019	\$3,725,000	\$2,795,075	\$6,520,075
2020	3,915,000	2,604,075	6,519,075
2021	4,115,000	2,403,325	6,518,325
2022	4,330,000	2,192,200	6,522,200
2023	4,550,000	1,970,200	6,520,200
2024	4,785,000	1,736,825	6,521,825
2025	5,030,000	1,491,450	6,521,450
2026	5,260,000	1,260,500	6,520,500
2027	5,460,000	1,059,750	6,519,750
2028	5,670,000	850,800	6,520,800
2029	5,870,000	649,350	6,519,350
2030	6,050,000	470,550	6,520,550
2031	6,235,000	286,275	6,521,275
2033	<u>6,425,000</u>	<u>96,375</u>	<u>6,521,375</u>
<b>TOTAL</b>	<b>\$71,420,000</b>	<b>\$19,866,750</b>	<b>\$91,286,750</b>

compiled by JNA Consulting Group, LLC



DEBT SERVICE REQUIREMENTS  
State General Obligation Revenue Bonds



**Use of Refunding Savings** – If State GO/Revenue Bonds payable from the Pledged Revenues are refunded and if the amount required to pay the principal of and interest on the refunding State GO/Revenue Bonds in any fiscal year during the term of the bonds is less than the amount that would have been required in the same fiscal year to pay the principal of and the interest on the original bonds if they had not been refunded, there is appropriated to the System an amount sufficient to pay the principal of and interest on the original bonds, as if they had not been refunded. The amount required to pay the principal of and interest on the refunding bonds must be used for that purpose from the amount appropriated. The amount equal to the savings realized in that fiscal year from the refunding must be used by the System to defray wholly or in part the expenses of operation and maintenance of the facilities acquired in part with the proceeds of the original bonds.

## State Certificates of Participation

The following table outlines the State Lease Revenue Certificates of Participation issued by the Nevada Real Property Corporation (“NRPC”) secured by rental payments from the System to the State.

**OUTSTANDING STATE LEASE REVENUE CERTIFICATES OF PARTICIPATION**  
Nevada System of Higher Education  
June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
Nevada State College Project Certificates	11/26/13	06/01/43	\$50,445,000	\$47,455,000

compiled by JNA Consulting Group, LLC

The State Lease Revenue Certificates of Participation were issued for the following projects:

- 2013 certificates      Used to finance a 60,000 sq. ft. nursing/science/education facility and a 60,000 sq. ft. student activities/administration facility on the principal campus of Nevada State College in Henderson.

**Security for the Certificates** – The Certificates represent evidence of an undivided interest in the Base Rent payable under the Lease Purchase Agreement.

The Indenture establishes a Trust Estate securing the Certificates issued pursuant to the Indenture. The Trust Estate established pursuant to the Indenture is as follows:

- (a) the property leased under the Ground Lease and the project or facilities constructed thereon, subject to the rights of the State under the Lease Purchase Agreement;
- (b) all rights, title and interest of the Corporation in, to and under the Ground Lease;
- (c) all rights, title and interest of the Corporation in, to and under the Lease Purchase Agreement, other than the rights, title and interest of the Corporation with respect to certain payments or reimbursement to the Corporation thereunder for its costs, fees and expenses;
- (d) all Base Rent and Additional Rent payable under the Lease Purchase Agreement;

- (e) the Purchase Option Price specified in the Lease Purchase Agreement;
- (f) all right, title and interest of the Corporation in the Project Contracts, if applicable; and
- (g) all moneys and securities from time to time held by the Trustee under the Indenture in the Debt Service Fund and the Construction Fund and any and all other real or personal property from time to time specially pledged, as and for additional security under the Indenture.

The Certificates and the State's obligation to pay Base Rent under the Lease Purchase Agreement are not general obligations of the State of Nevada and are not backed by the faith and credit or the taxing power of the State. The State's obligation to pay Base Rent and make other payments to the Trustee under the Lease Purchase Agreement is subject to appropriation by the State. In the event that the State does not make a sufficient appropriation with respect to the Lease Purchase Agreement (an "Event of Non-appropriation"), the Lease Purchase Agreement will terminate, and there can be no assurance that funds held by the Trustee and the proceeds from any reletting or other use of the Project will be sufficient to pay principal and interest on the Certificates.

The Lease Purchase Agreement will terminate if the State fails to appropriate funds sufficient to make payments under such Lease Purchase Agreement during a Fiscal Year. A failure to appropriate generally means that (A) there is a failure of the legislature to appropriate money to NSHE for Nevada State College in an amount at least equal to payments due pursuant to the applicable Lease Purchase Agreement or (B) the legislature by express terms of a statute provides that, of the funds appropriated to NSHE for Nevada State College, as applicable, no amount or an insufficient amount is available for payments due pursuant to the Lease Purchase Agreement. The Lease Purchase Agreement has established a procedure pursuant to which determinations are made as to whether an "Event of Non-appropriation" resulting in termination of the Lease Purchase Agreement has occurred.

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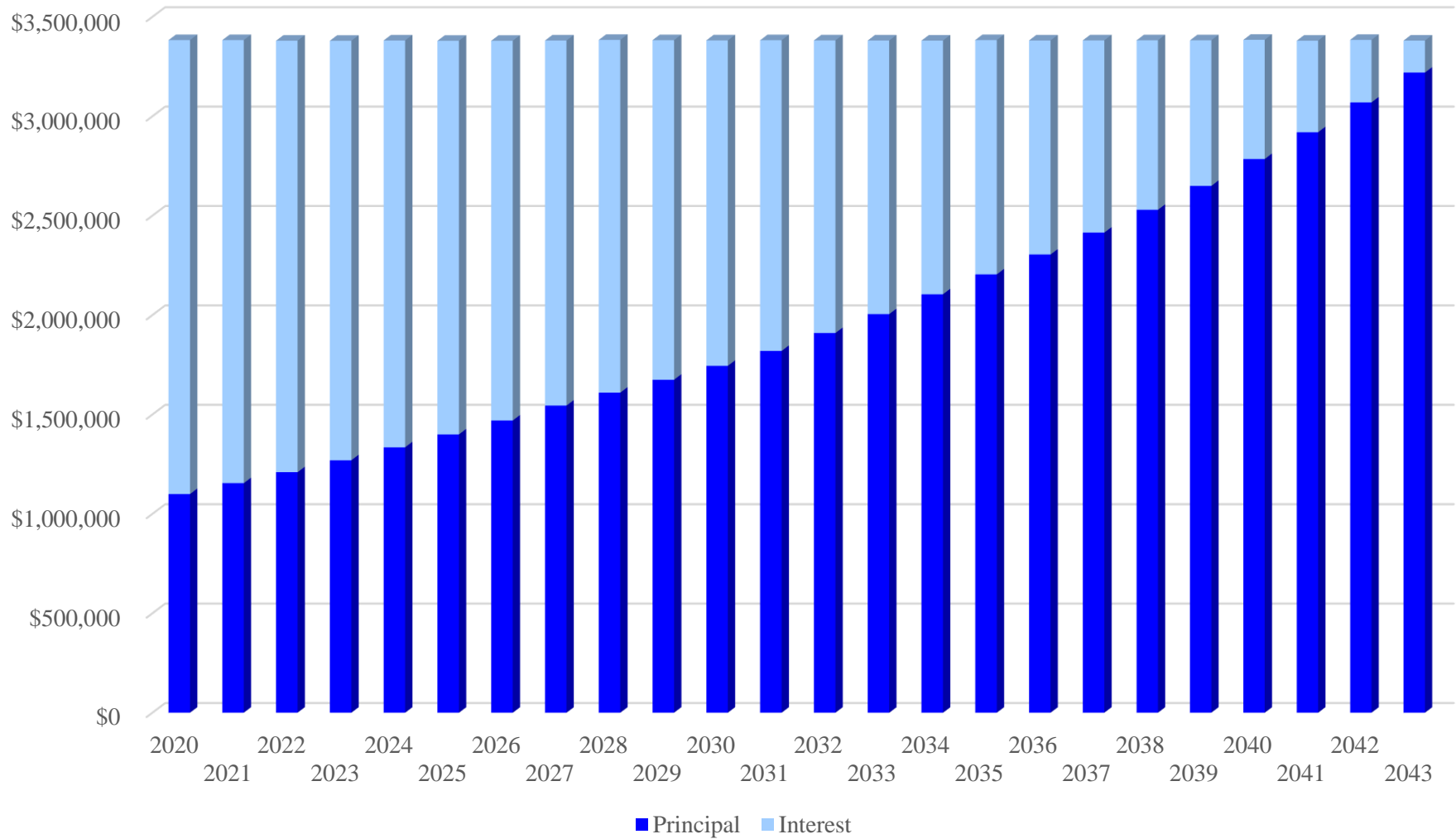
The following table and chart illustrate the existing debt service for the outstanding State Certificates of Participation.

DEBT SERVICE REQUIREMENTS  
STATE LEASE REVENUE CERTIFICATES OF PARTICIPATION  
Nevada System of Higher Education  
June 30, 2019

<b>Fiscal Year Ending June 30</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2020	\$1,100,000	\$2,283,275	\$3,383,275
2021	1,155,000	2,228,275	3,383,275
2022	1,210,000	2,170,525	3,380,525
2023	1,270,000	2,110,025	3,380,025
2024	1,335,000	2,046,525	3,381,525
2025	1,400,000	1,979,775	3,379,775
2026	1,470,000	1,909,775	3,379,775
2027	1,545,000	1,836,275	3,381,275
2028	1,610,000	1,774,475	3,384,475
2029	1,675,000	1,708,063	3,383,063
2030	1,745,000	1,636,875	3,381,875
2031	1,820,000	1,562,713	3,382,713
2032	1,910,000	1,471,713	3,381,713
2033	2,005,000	1,376,213	3,381,213
2034	2,105,000	1,275,963	3,380,963
2035	2,205,000	1,178,606	3,383,606
2036	2,305,000	1,076,625	3,381,625
2037	2,415,000	967,138	3,382,138
2038	2,530,000	852,425	3,382,425
2039	2,650,000	732,250	3,382,250
2040	2,785,000	599,750	3,384,750
2041	2,920,000	460,500	3,380,500
2042	3,070,000	314,500	3,384,500
2043	<u>3,220,000</u>	<u>161,000</u>	<u>3,381,000</u>
TOTAL	\$47,455,000	\$33,713,259	\$81,168,259

compiled by JNA Consulting Group, LLC

DEBT SERVICE REQUIREMENTS  
State Lease Revenue Certificates of Participation



## Universities Revenue Bonds

The following table illustrates the outstanding Universities Revenue Bonded debt. See page B-46 for a breakdown of authorized but unissued Universities Revenue Bonds.

**OUTSTANDING UNIVERSITIES REVENUE BONDED DEBT**  
Nevada System of Higher Education  
June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
Universities Revenue Bonds, Series 2008A	07/22/08	07/01/19	\$60,135,000	\$1,475,000
Universities Revenue Bonds, Series 2009A	02/24/09	07/01/20	18,140,000	1,430,000
Universities Revenue Bonds, Series 2010A <sup>1</sup>	12/21/10	07/01/20	29,455,000	28,125,000
Universities Revenue Bonds, Series 2011A	10/26/11	07/01/24	50,470,000	15,995,000
Universities Revenue Bonds, Series 2012A	04/05/12	07/01/32	27,375,000	25,965,000
Universities Revenue Bonds, Series 2012B	04/05/12	07/01/22	5,010,000	1,565,000
Universities Revenue Bonds, Series 2013A	04/23/13	07/01/33	40,035,000	31,440,000
Universities Revenue Bonds, Series 2013B	04/23/13	07/01/35	105,300,000	93,745,000
Universities Revenue Bonds, Series 2014A	03/11/14	07/01/43	49,995,000	45,180,000
Universities Revenue Bonds, Series 2015A	02/19/15	07/01/35	61,455,000	61,455,000
Universities Revenue Bonds, Series 2015B	02/19/15	07/01/26	7,480,000	6,105,000
Universities Revenue Bonds, Series 2016A	04/14/16	07/01/38	57,750,000	57,550,000
Universities Revenue Bonds, Series 2016B	10/26/16	07/01/36	13,580,000	13,100,000
Universities Revenue Bonds, Series 2017A	11/16/17	07/01/40	25,905,000	<u>25,905,000</u>
<b>TOTAL</b>				<b>\$409,035,000</b>

<sup>1</sup> The 2010A Bonds were refunded with proceeds of the 2017A Bonds. However, they are legally outstanding until redeemed on July 1, 2020.

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The Universities Revenue Bonds were issued for the following projects.

<b>Parity Lien Bonds</b>	
July 2008A Bonds	Proceeds used to construct a Center for Molecular Medicine on the campus of UNR.
February 2009A Bonds	Proceeds used to construct parking facilities on the campus of UNLV and to replace a swimming pool at UNLV.
December 2010A Bonds	Proceeds used to construct the Living Learning facilities on the campus of UNR.
October 2011A Bonds	Proceeds used to refinance portions of the 1998, 2002B, and 2003B Bonds as well as portions of outstanding System Notes for interest savings.
April 2012A Bonds	Proceeds used to refinance portions of the 2002B and 2003B Bonds for interest savings.
April 2012B Bonds	Proceeds used to refinance portions of the 2002C Bonds for interest savings.
April 2013A Bonds	Used to refinance portions of 2003A, 2003B, 2004A University Revenue Bonds and 2006A Certificates of Participation for interest savings.
April 2013B Bonds	Used to refinance portions of 2005A and 2005B University Revenue Bonds for interest savings.
March 2014A Bonds	Proceeds used to construct a Student Achievement Center and the Peavine dormitory on the campus of UNR and to finance the refurbishment of the James E Rogers Center for Administration and Justice at UNLV.
February 2015A Bonds	Proceeds used to improve Mackay Stadium on the campus of UNR, improve the Thomas & Mack Arena on the campus of UNLV, and to refinance portions of the 2005B Universities Revenue Bonds and the 2006F Promissory Note for interest savings.
February 2015B Bonds	Proceeds used to improve Mackay Stadium on the campus of UNR.
April 2016A Bonds	Used to refinance portions of the 2008A and 2009A University Revenue Bonds for interest savings.
October 2016B Bonds	Proceeds used to acquire the Gateway Parking Garage on the campus of UNLV.
November 2017A Bonds	Proceeds used to refinance the 2010A Bonds for debt service savings.

***Security for the Bonds*** – The Universities Bonds are special, limited obligations of the System payable from certain “Net Pledged Revenues” described in the following paragraph. The Universities Bonds do not constitute a debt or an indebtedness of the System within the meaning of any constitutional or statutory provision or limitation and are not general obligations of the System or general, special or other obligations of the State. The owner of any Universities Bond may not look to any general or other fund of the System for the payment of the Universities Bonds except the special funds pledged for the Universities Bonds. The System does not pledge its full faith and credit for the payment of the Universities Bonds. The System has no taxing power.

***Pledged Revenues*** – The Universities Bonds are payable solely out of and secured by an irrevocable pledge of certain income derived from: (i) the gross fees collected from students attending the Universities, which fees are commonly designated as the General Fund Fee, the Capital Improvement Fee, the Student Union Capital Improvement Fee and the General Improvement Fee (collectively, the “Student Fees”), (ii) the gross revenues derived from or otherwise pertaining to the operation of certain special event facilities located on the UNLV campus (known as the Thomas and Mack Center, the Cox Pavilion, and the Sam Boyd Stadium), the operation of all System-owned student housing facilities, dining facilities and parking facilities, whether or not presently existing, situated on the campus of UNLV, after the deduction of the expenses of operation and maintenance of such facilities (other than salaries and the costs of utility services) (collectively, the “UNLV Facilities Revenues”), (iii) the gross revenues derived from or otherwise pertaining to the operation of all System-owned student housing facilities, dining facilities and parking facilities, whether or not presently existing, situated on the campus of UNR, after the deduction of the expenses of operation and maintenance of such facilities (other than salaries and the costs of utility services) (collectively, the “UNR Facilities Revenues”), and (iv) all grants, conditional or unconditional, from the United States of America, the State of Nevada, or any other donor for the payment of the Universities Bonds, if any (the “Grant Revenues”) (collectively, the “Net Pledged Revenues”). Other funds of the Universities, including tuition and summer school fees, are not pledged to pay the Universities Bonds. Only non-resident students are charged tuition in addition to a registration fee.

***Student Fees*** – Both resident and nonresident students must pay registration fees that are established by the Board annually. The Board’s current policy (which may be changed at any time) is to set the increase in tuition and fees to at least the most recent Higher Education Price Index available for each year of the biennium. Additional factors are considered when setting professional school tuition and fees. There is no legal limit on the Board’s ability to raise fees and tuition. The Board’s current policy (which may be changed at any time) is to give certain in-state and out-of-state students grants-in-aid waivers of certain of the Student Fees for up to 3% of the enrollment for the prior fall semester. The Board historically has not provided grants-in-aid funding for the full 3% allowed by the policy.

Registration fees are generally payable upon registration for the fall and spring semesters.

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***UNLV Facilities Revenues*** – The UNLV Facilities Revenues consist in part of gross revenues derived from or otherwise pertaining to the operation of UNLV’s special event facilities after the deduction of expenses of operation and maintenance of those facilities (other than salaries and the costs of utility services). The special event facilities include Thomas and Mack, the Cox Pavilion and Sam Boyd Stadium. Thomas and Mack is a multi-purpose pavilion constructed on the UNLV campus in 1983. Thomas and Mack, which seats 18,500, houses many of the intercollegiate athletic offices as well as a portable basketball court and concession stands. Various sporting events, concerts, rodeos and miscellaneous University events are held in Thomas and Mack. The Cox Pavilion, which opened in the spring of 2001, is a 3,000-seat venue adjacent to Thomas and Mack. Cox Pavilion houses UNLV’s volleyball and women’s basketball program. It is also used for academic functions, concerts, trade shows and other functions. Sam Boyd Stadium was constructed in 1971 and currently seats 32,000. The venue is the home to UNLV’s football team and also houses other athletic and motor sport events.

The UNLV Facilities Revenues also include gross revenues derived from or otherwise pertaining to the operation of all System-owned student housing and dining facilities, whether or not presently existing, situated on the campus of UNLV, after the deduction of the expenses of operation and maintenance of such housing and dining facilities (other than salaries and the cost of utility services). UNLV currently has eleven resident halls and a separate dining commons. The residence halls have an aggregate capacity, based on the current configuration, of 1,757 students and can vary depending on single/double configurations and staff assignments.

The UNLV Facilities Revenues also include gross revenues derived from or otherwise pertaining to the operation of all University-owned parking facilities, whether or not presently existing, situated on the campus of UNLV, after the deduction of the expenses of operation and maintenance of such parking facilities (other than salaries and the cost of utility services). Currently, UNLV has 42 parking lots/structures of various sizes with 14,582 total parking spaces available. Parking fees are based upon status (i.e., student, faculty/staff, resident in on-campus housing or vendor) and whether spaces are reserved.

***UNR Facilities Revenues*** – The UNR Facilities Revenues include gross revenues derived from or otherwise pertaining to the operation of all System-owned student housing and dining facilities, whether or not presently existing, situated on the campus of UNR, after the deduction of the expenses of operation and maintenance of such facilities (other than salaries and the cost of utility services). UNR has eight residence halls and a separate resident dining facility. The eight residence halls have a design capacity of 3,407 students.

The UNR Facilities Revenues also include gross revenues derived from or otherwise pertaining to the operation of all System-owned parking facilities, whether or not presently existing, situated on the campus of UNR, after the deduction of the expenses of operation and maintenance of such parking facilities (other than salaries and the cost of utility services). Currently, UNR has 7,844 total parking spaces available, including permit required spaces, motorcycle spaces, parking meters and visitor spaces. The parking spaces have fees generally based upon the zone for which a permit is purchased; zones are priced according to their proximity to certain campus buildings.

***Historical Pledged Revenues*** – The following table shows the Net Pledged Revenues for the System’s Universities Revenue Bonds for each of the five fiscal years ending June 30, 2015 through June 30, 2019.

**HISTORICAL URB NET PLEDGED REVENUES**  
Nevada System of Higher Education

	<b>Fiscal Year<sup>1</sup></b>				
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019<sup>5</sup></b>
<b>STUDENT FEES</b>					
UNR General Fund Fees <sup>2</sup>	\$59,142,253	\$65,856,195	\$70,893,199	\$73,654,183	\$75,221,821
UNLV General Fund Fees <sup>2</sup>	76,572,382	83,617,179	89,218,669	94,947,332	98,671,911
UNR Capital Improvement & Student Union Capital Improvement Fees	7,105,852	7,566,387	7,783,553	7,845,255	7,711,676
UNLV Capital Improvement & Student Union Capital Improvement Fees	8,805,679	9,109,455	9,379,190	9,769,062	9,824,322
UNR General Improvement Fees	7,136,833	7,679,614	7,846,547	7,889,513	7,765,982
UNLV General Improvement Fees	<u>13,576,544</u>	<u>14,128,522</u>	<u>14,329,330</u>	<u>14,886,063</u>	<u>14,991,142</u>
<b>TOTAL STUDENT FEES</b>	<b>\$172,339,543</b>	<b>\$187,957,352</b>	<b>\$199,450,488</b>	<b>\$208,991,408</b>	<b>\$214,186,854</b>
<b>UNLV FACILITIES REVENUES</b>					
Special Event Facilities	\$22,070,524	\$15,447,822	\$13,710,599	\$15,424,799	\$16,136,876
Dining & Housing Facilities	7,404,727	6,931,468	7,793,211	7,344,294	6,958,257
Parking Facilities	<u>3,501,722</u>	<u>3,504,645</u>	<u>3,331,059</u>	<u>4,375,978</u>	<u>4,480,807</u>
<b>TOTAL UNLV FACILITIES REVENUES</b>	<b>\$32,976,973</b>	<b>\$25,883,935</b>	<b>\$24,834,869</b>	<b>\$27,145,071</b>	<b>\$27,575,940</b>
<b>UNR FACILITIES REVENUES</b>					
Dining & Housing Facilities	\$12,236,561	\$14,078,152	\$13,498,578	\$14,326,305	\$18,253,981
Parking Facilities	<u>3,839,697</u>	<u>3,528,058</u>	<u>4,287,305</u>	<u>5,122,250</u>	<u>5,518,731</u>
<b>TOTAL UNR FACILITIES REVENUES</b>	<b>\$16,076,258</b>	<b>\$17,606,210</b>	<b>\$17,785,883</b>	<b>\$19,448,555</b>	<b>\$23,772,712</b>
<b>TOTAL NET PLEDGED REVENUES</b>	<b>\$221,392,774</b>	<b>\$231,447,497</b>	<b>\$242,071,240</b>	<b>\$255,585,034</b>	<b>\$265,535,506</b>
<b>Coverage of Maximum Annual Debt Service on the Bonds (\$36,945,531 in 2019)<sup>3</sup></b>					
	5.99	6.26	6.55	6.92	7.19
<b>Statutory Coverage of Maximum Annual Debt Service on the Bonds (\$36,945,531 in 2019)<sup>3, 4</sup></b>					
	1.76	1.63	1.62	1.74	1.86

<sup>1</sup> Unaudited

<sup>2</sup> The increases in each fiscal year are primarily a result of increased General Fund Fees. See “Student Fees” on page B-18.

<sup>3</sup> See Debt Service Requirements in the following table.

<sup>4</sup> Statutory revenues include the UNR Capital Improvement and Student Union Capital Improvement Fees, the UNLV Capital Improvement and Student Union Capital Improvement Fees, all UNR Facilities Revenues, and all UNLV Facilities Revenues.

<sup>5</sup> Preliminary, subject to change.

The following table and chart illustrate the existing debt service for the outstanding Universities Revenue bonded debt currently paid by Net Pledged Revenues.

**DEBT SERVICE REQUIREMENTS**  
**UNIVERSITIES REVENUE BONDED DEBT**  
Nevada System of Higher Education  
June 30, 2019

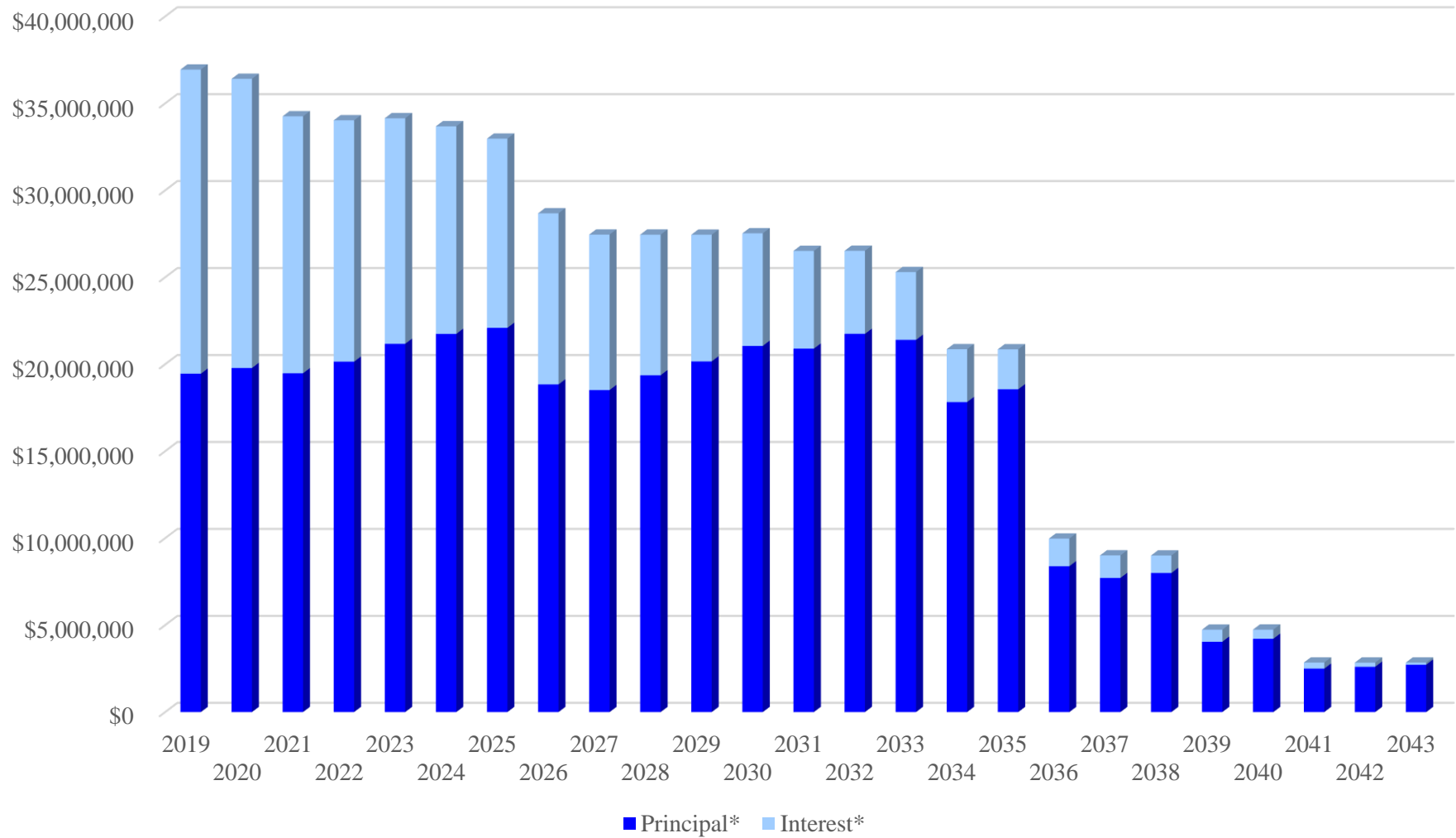
<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest</b>	<b>2017A Refunding<sup>2</sup></b>	<b>Total</b>
2019 <sup>3</sup>	\$19,460,000	\$18,553,431	(\$1,067,900)	\$36,945,531
2020	19,785,000	17,693,431	(1,067,900)	36,410,531
2021	20,305,000	16,805,331	(2,853,535)	34,256,796
2022	21,010,000	15,850,206	(2,833,260)	34,026,946
2023	22,075,000	14,885,986	(2,815,640)	34,145,346
2024	22,680,000	13,793,106	(2,790,340)	33,682,766
2025	23,075,000	12,668,451	(2,772,695)	32,970,756
2026	19,860,000	11,566,616	(2,747,035)	28,679,581
2027	19,585,000	10,589,796	(2,719,515)	27,455,281
2028	20,495,000	9,650,351	(2,693,195)	27,452,156
2029	21,345,000	8,767,351	(2,662,695)	27,449,656
2030	22,290,000	7,866,721	(2,628,015)	27,528,706
2031	22,200,000	6,916,593	(2,599,155)	26,517,438
2032	23,115,000	5,970,543	(2,561,455)	26,524,088
2033	22,835,000	4,989,083	(2,523,620)	25,300,463
2034	19,335,000	4,015,468	(2,485,255)	20,865,213
2035	20,145,000	3,156,128	(2,440,965)	20,860,163
2036	10,055,000	2,323,238	(2,400,750)	9,977,488
2037	9,470,000	1,891,264	(2,353,820)	9,007,444
2038	9,845,000	1,465,481	(2,305,175)	9,005,306
2039	5,985,000	1,008,764	(2,254,420)	4,739,344
2040	6,255,000	687,966	(2,201,160)	4,741,806
2041	2,500,000	349,225	0	2,849,225
2042	2,605,000	239,850	0	2,844,850
2043	<u>2,725,000</u>	<u>122,625</u>	<u>0</u>	<u>2,847,625</u>
<b>TOTAL</b>	<b>\$409,035,000</b>	<b>\$191,827,005</b>	<b>(\$269,554,938)</b>	<b>\$547,084,505</b>

<sup>1</sup> Payments for Universities Revenue Bonds made on July 1 of each year are treated as payments made in the prior fiscal year.

<sup>2</sup> Depicts the impact of refinancing the 2010A Bonds with the 2017A Crossover Refunding Bonds. The 2010A Bonds will be redeemed on July 1, 2020.

<sup>3</sup> Includes all principal and interest payments made in fiscal year 2019.

# DEBT SERVICE REQUIREMENTS Universities Revenue Bonds



\* Net of impact from 2017A refinancing of 2010A Bonds.

The following table illustrates the allocation of the Universities Revenue Bonds to UNR and UNLV.

**ALLOCATION OF BONDS  
UNIVERSITIES REVENUES BONDS  
Nevada System of Higher Education  
June 30, 2019**

	<b>Date Issued</b>	<b>Total Amount Outstanding</b>	<b>Amount Allocated to UNR<sup>1</sup></b>	<b>Amount Allocated to UNLV<sup>1</sup></b>
Universities Revenue Bonds, Srs 2008A	07/22/08	\$1,475,000	\$1,475,000	\$0
Universities Revenue Bonds, Srs 2009A	02/24/09	1,430,000	0	1,430,000
Universities Revenue Bonds, Srs 2010A	12/21/10	28,125,000	28,125,000	0
Universities Revenue Bonds, Srs 2011A	10/26/11	15,995,000	5,690,000	10,305,000
Universities Revenue Bonds, Srs 2012A	04/05/12	25,965,000	18,230,000	7,735,000
Universities Revenue Bonds, Srs 2012B	04/05/12	1,565,000	1,565,000	0
Universities Revenue Bonds, Srs 2013A	04/23/13	31,440,000	6,650,000	24,790,000
Universities Revenue Bonds, Srs 2013B	04/23/13	93,745,000	51,540,000	42,205,000
Universities Revenue Bonds, Srs 2014A	03/11/14	45,180,000	41,130,000	4,050,000
Universities Revenue Bonds, Srs 2015A	02/19/15	61,455,000	19,890,000	41,565,000
Universities Revenue Bonds, Srs 2015B	02/19/15	6,105,000	6,105,000	0
Universities Revenue Bonds, Srs 2016A	04/14/16	57,550,000	46,260,000	11,290,000
Universities Revenue Bonds, Srs 2016B	10/26/16	13,100,000	0	13,100,000
Universities Revenue Bonds, Srs 2017A	11/16/17	<u>25,905,000</u>	<u>25,905,000</u>	<u>0</u>
<b>TOTAL</b>		<b>\$409,035,000</b>	<b>\$252,565,000</b>	<b>\$156,470,000</b>
Less: 2017A Refunding Impact		<u>(26,575,000)</u>	<u>(26,575,000)</u>	<u>0</u>
		<b>\$382,460,000</b>	<b>\$225,990,000</b>	<b>\$156,470,000</b>

<sup>1</sup> See Section K for allocated individual debt service schedules.

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The following table and chart illustrate the existing debt service for the outstanding Universities Revenue bonds allocated between UNR and UNLV.

DEBT SERVICE REQUIREMENTS  
UNR/UNLV ALLOCATION OF UNIVERSITIES REVENUE BONDED DEBT  
Nevada System of Higher Education  
UNR/UNLV Allocation  
June 30, 2019

Fiscal Year Ending June 30 <sup>1</sup>	UNR <sup>2</sup>			UNLV			Combined Debt Service
	Principal	Interest	Total	Principal	Interest	Total	
2019 <sup>3</sup>	\$8,520,000	\$10,681,993	\$19,201,993	\$10,940,000	\$6,803,539	\$17,743,539	\$36,945,532
2020	8,450,000	10,327,018	18,777,018	11,335,000	6,298,514	17,633,514	36,410,532
2021	8,765,000	8,996,203	17,761,203	10,715,000	5,780,594	16,495,594	34,256,797
2022	9,195,000	8,600,803	17,795,803	10,955,000	5,276,144	16,231,144	34,026,947
2023	9,695,000	8,194,153	17,889,153	11,480,000	4,776,194	16,256,194	34,145,347
2024	10,140,000	7,729,423	17,869,423	11,605,000	4,208,344	15,813,344	33,682,767
2025	10,685,000	7,241,263	17,926,263	11,410,000	3,634,494	15,044,494	32,970,757
2026	11,165,000	6,754,763	17,919,763	7,675,000	3,084,819	10,759,819	28,679,582
2027	11,675,000	6,213,213	17,888,213	6,840,000	2,727,069	9,567,069	27,455,282
2028	12,235,000	5,662,788	17,897,788	7,135,000	2,419,369	9,554,369	27,452,157
2029	12,735,000	5,150,988	17,885,988	7,430,000	2,133,669	9,563,669	27,449,657
2030	13,310,000	4,618,175	17,928,175	7,745,000	1,855,531	9,600,531	27,528,706
2031	12,860,000	4,061,175	16,921,175	8,040,000	1,556,263	9,596,263	26,517,438
2032	13,390,000	3,531,275	16,921,275	8,360,000	1,242,813	9,602,813	26,524,088
2033	12,730,000	2,974,375	15,704,375	8,670,000	926,088	9,596,088	25,300,463
2034	11,460,000	2,442,675	13,902,675	6,365,000	597,538	6,962,538	20,865,213
2035	11,950,000	1,951,600	13,901,600	6,610,000	348,563	6,958,563	20,860,163
2036	6,725,000	1,493,044	8,218,044	1,660,000	99,444	1,759,444	9,977,488
2037	6,975,000	1,243,694	8,218,694	740,000	48,750	788,750	9,007,444
2038	7,240,000	980,606	8,220,606	760,000	24,700	784,700	9,005,306

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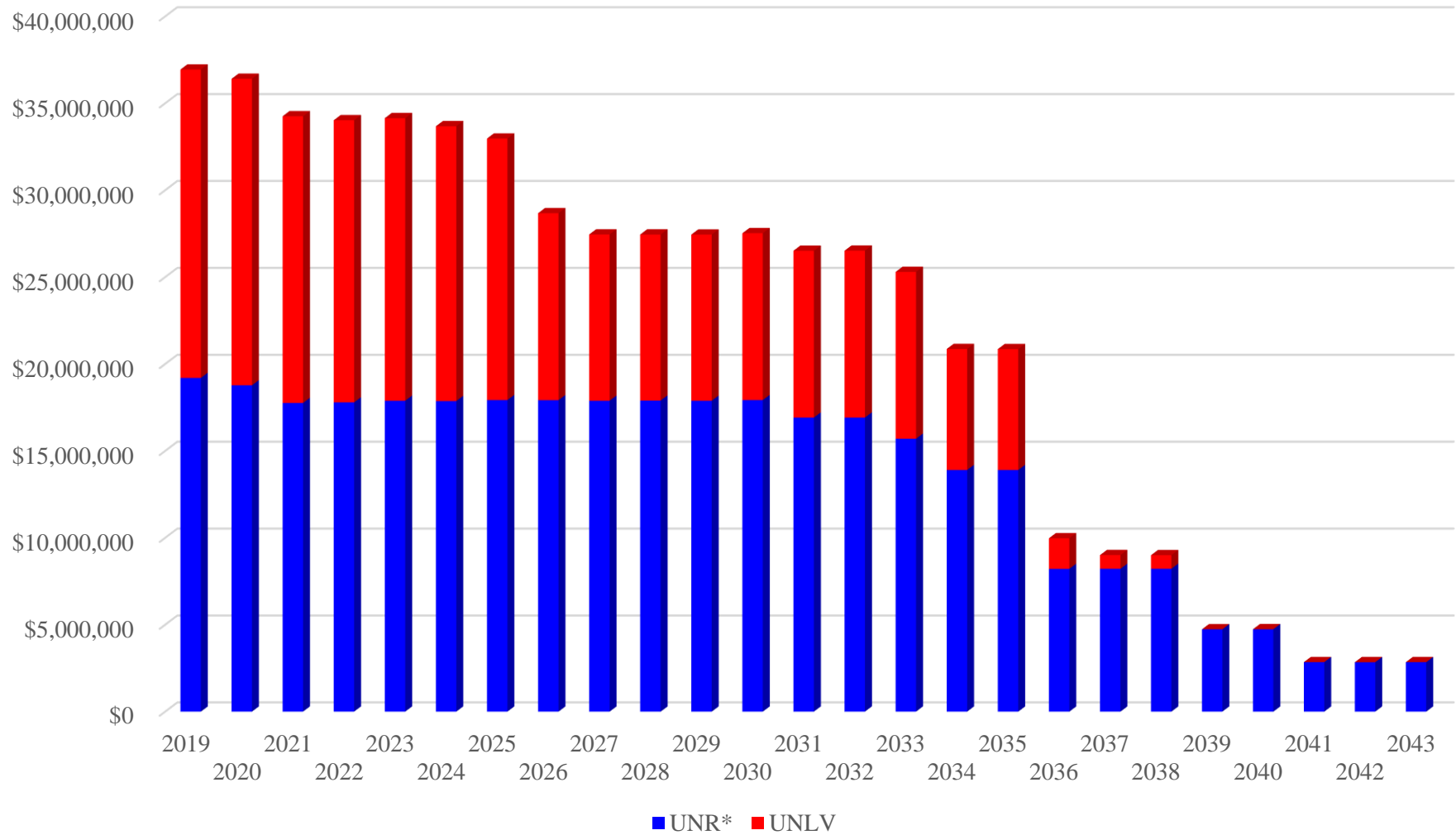
Fiscal Year Ending June 30 <sup>1</sup>	UNR <sup>2</sup>			UNLV			Combined Debt Service
	Principal	Interest	Total	Principal	Interest	Total	
2039	4,045,000	694,344	4,739,344	0	0	0	4,739,344
2040	4,215,000	526,806	4,741,806	0	0	0	4,741,806
2041	2,500,000	349,225	2,849,225	0	0	0	2,849,225
2042	2,605,000	239,850	2,844,850	0	0	0	2,844,850
2043	<u>2,725,000</u>	<u>122,625</u>	<u>2,847,625</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2,847,625</u>
TOTAL	\$225,990,000	\$110,782,077	\$336,772,077	\$156,470,000	\$53,842,439	\$210,312,439	\$547,084,516

<sup>1</sup> Payments for Universities Revenue Bonds made on July 1 of each year are treated as payments made in the prior fiscal year.

<sup>2</sup> Net of impact of 2017A refinancing of the 2010A Bonds.

<sup>3</sup> Includes all principal and interest payments made in fiscal year 2019.

**DEBT SERVICE REQUIREMENTS  
UNIVERSITIES REVENUE BONDS – UNR AND UNLV**



\* Net of impact from 2017A refinancing of 2010A Bonds.



## Community College Revenue Bonds

The following table illustrates the outstanding Community College Revenue Bonded debt. See page B-46 for a listing of authorized but unissued Community College Revenue Bonds.

### OUTSTANDING COMMUNITY COLLEGE REVENUE BONDED DEBT Nevada System of Higher Education June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
Comm. College Rev. Bonds, Series 2017A	11/21/17	07/01/47	70,915,000	<u>\$68,715,000</u>
<b>TOTAL</b>				<b>\$68,715,000</b>

The Community College Revenue Bonds were issued for the following projects.

<b>Senior Lien Bonds</b>	
November 2017A Bonds	Proceeds used to construct student union buildings on the three principal campuses of the College of Southern Nevada.

The community colleges consist of the College of Southern Nevada (“CSN”) in North Las Vegas, Great Basin College (“GBC”) in Elko, Truckee Meadow Community College (“TMCC”) in Reno, and Western Nevada College (“WNC”) in Carson City (collectively, the “Community Colleges”).

**Special Limited Obligations** – The Community College Revenue Bonds are special, limited obligations of the System payable from certain “Net Pledged Revenues” described in the following paragraph. The Community College Revenue Bonds do not constitute a debt or an indebtedness of the System within the meaning of any constitutional or statutory provision or limitation and are not general obligations of the System or general, special, or other obligations of the State. The owner of any Community College Revenue Bond may not look to any general or other fund of the System for the payment of the Community College Revenue Bonds except the special funds pledged for the Community College Revenue Bonds. The System does not pledge its full faith and credit for the payment of the Community College Revenue Bonds. The System has no taxing power.

**Net Pledged Revenues** – The Community College Revenue Bonds are payable solely out of and secured by an irrevocable pledge of certain income derived from: (i) the gross fees collected from students attending the Community Colleges, which fees are commonly designated as the General Fund Fee, the Capital Improvement Fee, the Student Association Fee and the General Improvement Fee (collectively, the “Student Fees”), (ii) all grants, conditional or unconditional, from the United States of America, the State of Nevada, or any other donor for the payment of the Community College Revenue Bonds, if any (the “Grant Revenues”), and (iii) net revenues, if any, from income-producing buildings, structure and improvements located at the Community Colleges and to which the Net Pledged Revenues pertain by an extension hereafter thereto (collectively, the “Net Pledged Revenues”). Other funds of the Community Colleges, including tuition and summer school fees, are not pledged to pay the Community College Revenue Bonds. Only non-resident students are charged tuition in addition to a registration fee.

**Historical Pledged Revenues** – The following table shows the Net Pledged Revenues for the System’s Community College Revenue Bonds for each of the five fiscal years ending June 30, 2015 through June 30, 2019.

**HISTORICAL CCRB NET PLEDGED REVENUES**  
Nevada System of Higher Education

	<b>Fiscal Year<sup>1</sup></b>				
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019<sup>4</sup></b>
<b>STUDENT FEES</b>					
General Fund Fees	\$52,335,242	\$55,409,251	\$57,082,970	\$58,677,915	\$61,475,777
Capital Improvement & Student Association Fees	4,761,763	4,794,683	4,748,190	4,925,188	5,156,538
General Improvement Fees	6,890,434	6,494,670	6,385,252	6,357,654	6,439,890
Student Union Capital Improvement Fees <sup>2</sup>	<u>4,432,814</u>	<u>4,269,821</u>	<u>4,280,769</u>	<u>4,164,411</u>	<u>4,266,687</u>
<b>TOTAL STUDENT FEES</b>	<b>\$68,420,253</b>	<b>\$70,968,425</b>	<b>\$72,497,181</b>	<b>\$74,125,168</b>	<b>\$77,338,892</b>
<b>TOTAL NET PLEDGED REVENUES</b>	<b>\$68,420,253</b>	<b>\$70,968,425</b>	<b>\$72,497,181</b>	<b>\$74,125,168</b>	<b>\$77,338,892</b>
Coverage of Maximum Annual Debt Service on the Bonds (\$3,948,000 in 2044) <sup>3</sup>	17.33	17.98	18.36	18.78	19.59
Statutory Coverage of Maximum Annual Debt Service on the Bonds (\$3,948,000 in 2044) <sup>3</sup>	2.33	2.30	2.29	2.30	2.39

<sup>1</sup> Unaudited

<sup>2</sup> The Student Union Capital Improvement Fees were not in effect prior to fiscal year 2018. Accordingly, the pro-forma numbers provided in this category have been calculated based upon the fees that would have been collected in such prior years if the Student Union Capital Improvement Fees had been in effect.

<sup>3</sup> See Debt Service Requirements in the following table.

<sup>4</sup> Preliminary, subject to change.

The following table and chart illustrate the existing debt service for the outstanding Community College Revenue bonded debt currently paid by Net Pledged Revenues.

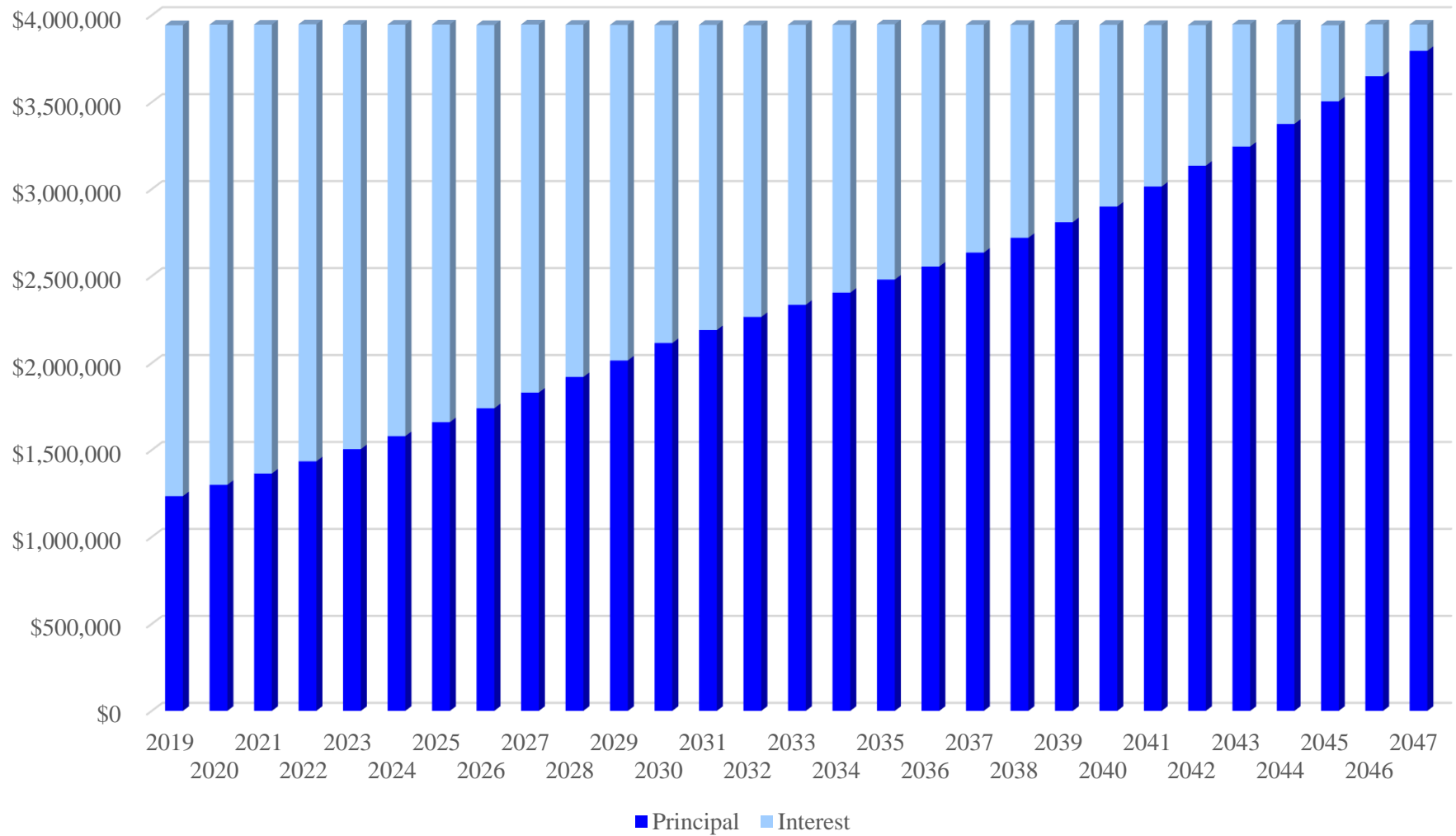
**DEBT SERVICE REQUIREMENTS**  
**COMMUNITY COLLEGE REVENUE BONDED DEBT**  
Nevada System of Higher Education  
June 30, 2019

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2019 <sup>2</sup>	\$1,235,000	\$2,707,988	\$3,942,988
2020	1,300,000	2,646,238	3,946,238
2021	1,365,000	2,581,238	3,946,238
2022	1,435,000	2,512,988	3,947,988
2023	1,505,000	2,441,238	3,946,238
2024	1,580,000	2,365,988	3,945,988
2025	1,660,000	2,286,988	3,946,988
2026	1,740,000	2,203,988	3,943,988
2027	1,830,000	2,116,988	3,946,988
2028	1,920,000	2,025,488	3,945,488
2029	2,015,000	1,929,488	3,944,488
2030	2,115,000	1,828,738	3,943,738
2031	2,190,000	1,754,713	3,944,713
2032	2,265,000	1,678,063	3,943,063
2033	2,335,000	1,610,113	3,945,113
2034	2,405,000	1,540,063	3,945,063
2035	2,480,000	1,467,913	3,947,913
2036	2,555,000	1,390,413	3,945,413
2037	2,635,000	1,310,569	3,945,569
2038	2,720,000	1,224,931	3,944,931
2039	2,810,000	1,136,531	3,946,531
2040	2,900,000	1,045,206	3,945,206
2041	3,015,000	929,206	3,944,206
2042	3,135,000	808,606	3,943,606
2043	3,245,000	702,800	3,947,800
2044	3,375,000	573,000	3,948,000
2045	3,505,000	438,000	3,943,000
2046	3,650,000	297,800	3,947,800
2047	<u>3,795,000</u>	<u>151,800</u>	<u>3,946,800</u>
<b>TOTAL</b>	<b>\$68,715,000</b>	<b>\$45,707,083</b>	<b>\$114,422,083</b>

<sup>1</sup> Payments for Community College Revenue Bonds made on July 1 of each year are treated as payments made in the prior fiscal year.

<sup>2</sup> Includes all principal and interest payments made in fiscal year 2019.

DEBT SERVICE REQUIREMENTS  
Community College Revenue Bonds



## Certificates of Participation

The following table illustrates the outstanding Certificates of Participation. No legislative authorization is required for the issuance of Certificates of Participation.

OUTSTANDING CERTIFICATES OF PARTICIPATION  
Nevada System of Higher Education  
June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
Certificates of Participation, Series 2014A	08/07/14	07/01/44	\$34,220,000	\$31,375,000
Certificates of Participation, Series 2016A	02/04/16	07/01/46	63,095,000	59,020,000
Certificates of Participation, Series 2016B	03/22/16	07/01/46	50,405,000	48,405,000
Certificates of Participation, Series 2017A	11/14/17	07/01/47	28,890,000	28,030,000
Certificates of Participation, Series 2018A	04/05/18	07/01/48	12,475,000	<u>12,475,000</u>
TOTAL				\$179,305,000

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The Certificates of Participation (the “Certificates”) were issued to finance the following projects.

<b>Certificates of Participation</b>	
August 2014A Certificates	Proceeds used to finance construction of the E.L. Wiegand Fitness Center on the campus of UNR and to finance construction of the William N. Pennington Health Science Center at TMCC’s Redfield Campus.
February 2016A Certificates	Proceeds used to finance construction of the New White Pine Residence Hall on the campus of UNR and to refinance the outstanding 2005B Universities Revenue Bonds for interest savings.
March 2016B Certificates	Proceeds used to acquire 42 acres of vacant land adjacent to the main UNLV campus.
November 2017A Certificates	Proceeds used to partially finance construction of a new School of Engineering Building on the campus of UNR.
April 2018A Certificates	Proceeds used to finance construction of a new fitness center on the campus of TMCC.

***Special, Limited Obligations*** – The Certificates are special, limited obligations of the System payable from “all legally available funds of the System.” Each campus taking part in the issuance of Certificates must identify a specific revenue stream to make payment on the Certificates. The revenue stream is not formally pledged to Certificate holders and the Certificate holders have no right to force the System to maintain rates and charges such that the revenue stream is not impaired. The Certificate holders do not have a lien position on any asset being financed. The Board covenants in the resolution authorizing the issuance of the Certificates to make sufficient provision annually in its budget to pay principal and interest on the Certificates when due. The Certificates do not constitute a debt or indebtedness of the State, nor a charge against the State’s taxing power.

The table and chart on the following pages illustrate the existing debt service for the outstanding Certificates.

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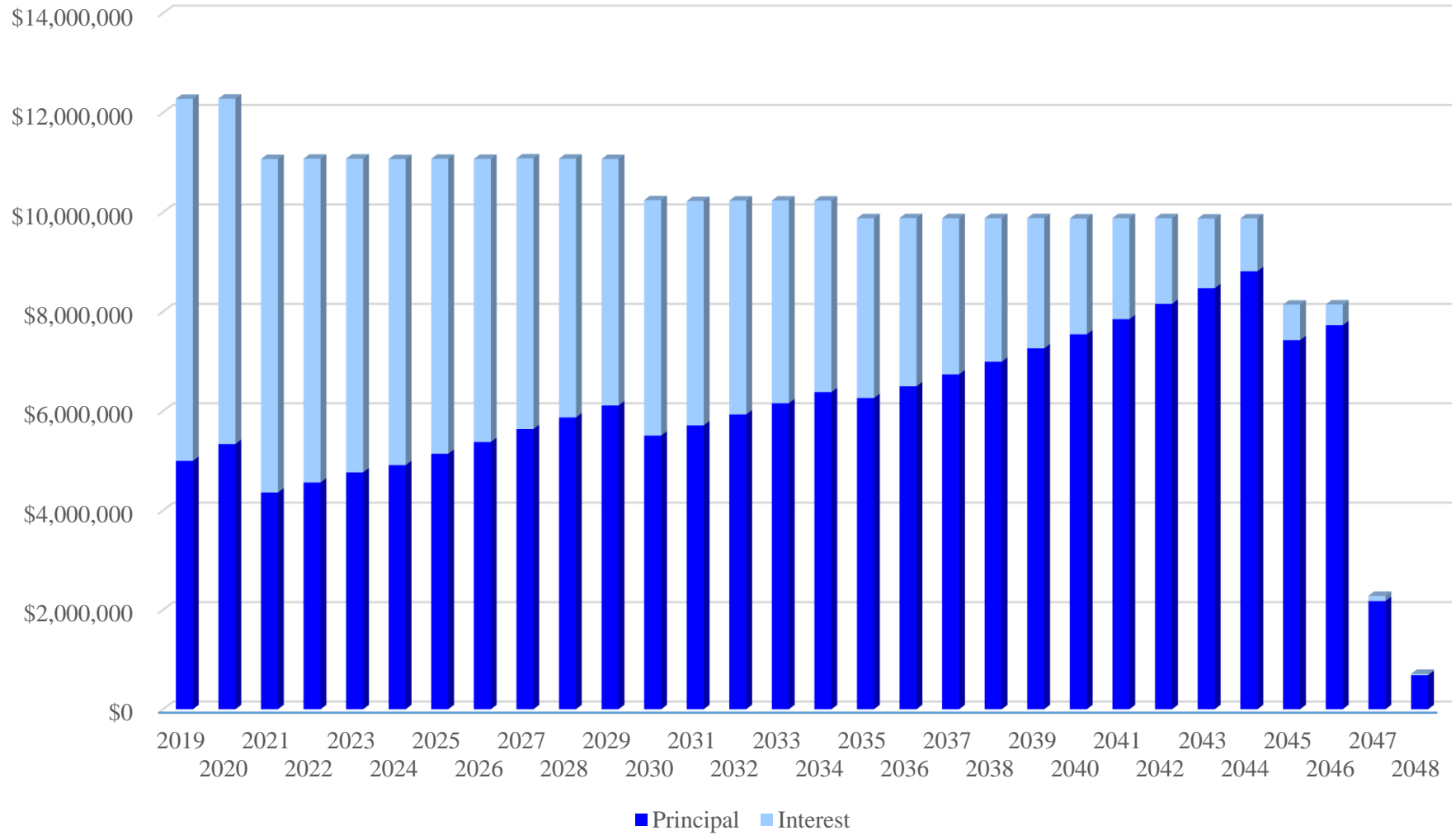
DEBT SERVICE REQUIREMENTS  
CERTIFICATES OF PARTICIPATION  
Nevada System of Higher Education  
June 30, 2019

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2019 <sup>2</sup>	\$4,995,000	\$7,283,161	\$12,278,161
2020	5,335,000	6,946,784	12,281,784
2021	4,360,000	6,707,277	11,067,277
2022	4,560,000	6,514,497	11,074,497
2023	4,765,000	6,310,224	11,075,224
2024	4,910,000	6,156,603	11,066,603
2025	5,140,000	5,932,796	11,072,796
2026	5,375,000	5,695,140	11,070,140
2027	5,635,000	5,445,214	11,080,214
2028	5,870,000	5,203,608	11,073,608
2029	6,110,000	4,957,223	11,067,223
2030	5,505,000	4,734,109	10,239,109
2031	5,710,000	4,512,681	10,222,681
2032	5,930,000	4,301,963	10,231,963
2033	6,155,000	4,077,326	10,232,326
2034	6,380,000	3,851,447	10,231,447
2035	6,260,000	3,616,620	9,876,620
2036	6,495,000	3,384,796	9,879,796
2037	6,735,000	3,143,495	9,878,495
2038	6,990,000	2,888,181	9,878,181
2039	7,260,000	2,620,368	9,880,368
2040	7,540,000	2,332,533	9,872,533
2041	7,845,000	2,033,371	9,878,371
2042	8,155,000	1,723,189	9,878,189
2043	8,470,000	1,400,523	9,870,523
2044	8,810,000	1,063,747	9,873,747
2045	7,425,000	713,202	8,138,202
2046	7,725,000	416,150	8,141,150
2047	2,175,000	106,825	2,281,825
2048	<u>685,000</u>	<u>27,400</u>	<u>712,400</u>
<b>TOTAL</b>	<b>\$179,305,000</b>	<b>\$114,100,453</b>	<b>\$293,405,453</b>

<sup>1</sup> Payments for Certificates of Participation made on July 1 of each year are treated as payments made in the prior fiscal year.

<sup>2</sup> Includes all principal and interest payments made in fiscal year 2019.

# DEBT SERVICE REQUIREMENTS Certificates of Participation





The following table illustrates the allocation of the Certificates of Participation to UNR, UNLV, and TMCC.

ALLOCATION OF OBLIGATIONS  
CERTIFICATES OF PARTICIPATION  
Nevada System of Higher Education  
June 30, 2019

	<b>Date Issued</b>	<b>Total Amount Outstanding</b>	<b>Amount Allocated to UNR<sup>1</sup></b>	<b>Amount Allocated to UNLV<sup>1</sup></b>	<b>Amount Allocated to TMCC<sup>1</sup></b>
Series 2014A	08/07/14	\$31,375,000	\$27,395,000	\$0	\$3,980,000
Series 2016A	02/04/16	59,020,000	51,705,000	7,315,000	0
Series 2016B	03/22/16	48,405,000	0	48,405,000	0
Series 2017A	11/14/17	28,030,000	28,030,000	0	0
Series 2018A	04/05/18	<u>12,475,000</u>	<u>0</u>	<u>0</u>	<u>12,475,000</u>
<b>TOTAL</b>		<b>\$179,305,000</b>	<b>\$107,130,000</b>	<b>\$55,720,000</b>	<b>\$16,455,000</b>

<sup>1</sup> See Section K for allocated individual debt service schedules.

The table and chart on the following pages illustrate the existing debt service for the outstanding Certificates of Participation allocated between UNR, UNLV, and TMCC.

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DEBT SERVICE REQUIREMENTS  
UNR/UNLV/TMCC ALLOCATION OF CERTIFICATES OF PARTICIPATION  
Nevada System of Higher Education  
UNR/UNLV/TMCC Allocation  
June 30, 2019

Fiscal Year Ending June 30 <sup>1</sup>	UNR			UNLV			TMCC			Combined Debt Service
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	
2019 <sup>2</sup>	\$3,165,000	\$4,139,825	\$7,304,825	\$1,550,000	\$2,355,417	\$3,905,417	\$280,000	\$787,919	\$1,067,919	\$12,278,161
2020	3,325,000	3,981,575	7,306,575	1,600,000	2,307,847	3,907,847	410,000	657,363	1,067,363	12,281,785
2021	2,285,000	3,815,325	6,100,325	1,650,000	2,255,090	3,905,090	425,000	636,863	1,061,863	11,067,278
2022	2,400,000	3,701,075	6,101,075	1,710,000	2,197,810	3,907,810	450,000	615,613	1,065,613	11,074,498
2023	2,525,000	3,581,075	6,106,075	1,770,000	2,136,037	3,906,037	470,000	593,113	1,063,113	11,075,225
2024	2,600,000	3,497,575	6,097,575	1,815,000	2,089,416	3,904,416	495,000	569,613	1,064,613	11,066,604
2025	2,735,000	3,367,575	6,102,575	1,880,000	2,020,358	3,900,358	525,000	544,863	1,069,863	11,072,796
2026	2,865,000	3,230,825	6,095,825	1,960,000	1,945,702	3,905,702	550,000	518,613	1,068,613	11,070,140
2027	3,015,000	3,087,575	6,102,575	2,045,000	1,866,527	3,911,527	575,000	491,113	1,066,113	11,080,215
2028	3,145,000	2,951,225	6,096,225	2,120,000	1,790,021	3,910,021	605,000	462,363	1,067,363	11,073,609
2029	3,290,000	2,808,925	6,098,925	2,195,000	1,709,386	3,904,386	625,000	438,913	1,063,913	11,067,224
2030	3,420,000	2,684,725	6,104,725	1,435,000	1,631,972	3,066,972	650,000	417,413	1,067,413	10,239,110
2031	3,550,000	2,545,825	6,095,825	1,490,000	1,574,744	3,064,744	670,000	392,113	1,062,113	10,222,682
2032	3,675,000	2,420,325	6,095,325	1,555,000	1,513,088	3,068,088	700,000	368,550	1,068,550	10,231,963
2033	3,810,000	2,290,325	6,100,325	1,625,000	1,443,563	3,068,563	720,000	343,438	1,063,438	10,232,326
2034	3,935,000	2,162,938	6,097,938	1,695,000	1,370,910	3,065,910	750,000	317,600	1,067,600	10,231,448
2035	4,070,000	2,031,331	6,101,331	1,770,000	1,295,126	3,065,126	420,000	290,163	710,163	9,876,620
2036	4,210,000	1,892,819	6,102,819	1,850,000	1,215,990	3,065,990	435,000	275,988	710,988	9,879,797
2037	4,350,000	1,749,456	6,099,456	1,935,000	1,133,276	3,068,276	450,000	260,763	710,763	9,878,495
2038	4,500,000	1,601,244	6,101,244	2,025,000	1,041,925	3,066,925	465,000	245,013	710,013	9,878,182
2039	4,655,000	1,445,306	6,100,306	2,120,000	946,324	3,066,324	485,000	228,738	713,738	9,880,368
2040	4,820,000	1,276,956	6,096,956	2,220,000	846,239	3,066,239	500,000	209,338	709,338	9,872,533
2041	4,995,000	1,102,600	6,097,600	2,325,000	741,433	3,066,433	525,000	189,338	714,338	9,878,371
2042	5,180,000	921,869	6,101,869	2,435,000	631,670	3,066,670	540,000	169,650	709,650	9,878,189
2043	5,360,000	734,419	6,094,419	2,550,000	516,713	3,066,713	560,000	149,400	709,400	9,870,532
2044	5,555,000	540,419	6,095,419	2,670,000	396,328	3,066,328	585,000	127,000	712,000	9,873,747
2045	4,020,000	339,325	4,359,325	2,795,000	270,277	3,065,277	610,000	103,600	713,600	8,138,202

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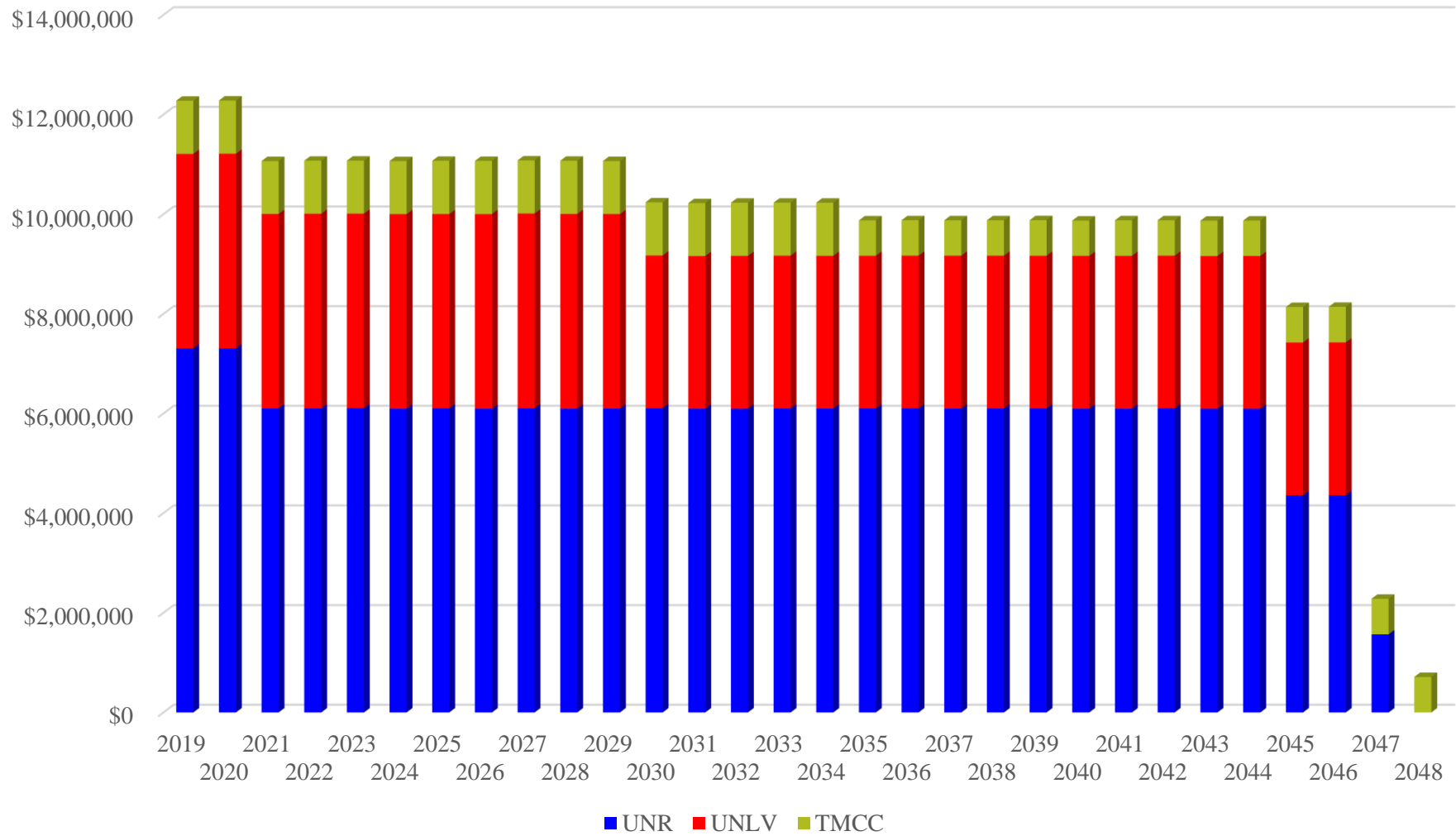
Fiscal Year Ending June 30 <sup>1</sup>	UNR			UNLV			TMCC			Combined Debt Service
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	
2046	4,160,000	198,625	4,358,625	2,930,000	138,325	3,068,325	635,000	79,200	714,200	8,141,150
2047	1,515,000	53,025	1,568,025	0	0	0	660,000	53,800	713,800	2,281,825
2048	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>685,000</u>	<u>27,400</u>	<u>712,400</u>	<u>712,400</u>
TOTAL	\$107,130,000	\$64,154,107	\$171,284,107	\$55,720,000	\$39,381,514	\$95,101,514	\$16,455,000	\$10,564,854	\$27,019,854	\$293,405,475

<sup>1</sup> Payments for Certificates of Participation made on July 1 of each year are treated as payments made in the prior fiscal year.

<sup>2</sup> Includes all principal and interest payments made in fiscal year 2019.

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DEBT SERVICE REQUIREMENTS  
CERTIFICATES OF PARTICIPATION – UNR, UNLV, & TMCC



## Desert Research Institute Revenue Bonds

The following table illustrates the outstanding Desert Research Institute debt.

### OUTSTANDING DRI REVENUE BONDED DEBT

Nevada System of Higher Education

June 30, 2019

	<b>Date Issued</b>	<b>Final Payment Date</b>	<b>Original Amount</b>	<b>Outstanding</b>
Taxable Lease Revenue Bonds	06/14/02	15/15/23	\$8,460,000	\$2,825,000

The Desert Research Institute Taxable Lease Revenue Bonds (the “DRI Bonds”) were issued to finance a portion of the costs of the planning, design, construction, acquisition, improvement and equipping of a building on the existing DRI campus in Las Vegas, Nevada, a portion of which will be leased to the U.S. Department of Energy.

***Special, Limited Obligations*** – The DRI Bonds are special, limited obligations of the System payable solely from the Pledged Revenues described below. The DRI Bonds do not constitute a debt or an indebtedness of the System within the meaning of any constitutional or statutory provision or limitation and are not general obligations of the System or general, special or other obligations of the State. The System does not pledge its full faith and credit for the payment of the Bonds. The System has no taxing power.

***Pledged Revenues*** – The DRI Bonds are payable solely out of and are secured by an irrevocable pledge of the Pledged Revenues. Pledged Revenues are comprised of the Construction Rent received by the Trustee pursuant to the U.S. Government Lease for Real Property between the System and the United States of America, as amended by Supplemental Lease Agreement No.1, Supplemental Lease Agreement No. 2 and Supplemental Lease Agreement No. 3 to Lease No. GS-09B-01075 (a.k.a. Lease No. LNV01075) and any subsequent supplements (collectively, the “GSA Lease”). In the GSA Lease, the United States Government (the “Government”) explicitly acknowledges that the Construction Rent is pledged to secure repayment of the Bonds. The Construction Rent will be the amount necessary to pay the principal of and interest on the Bonds. Only the Construction Rent constitutes Pledged Revenues.

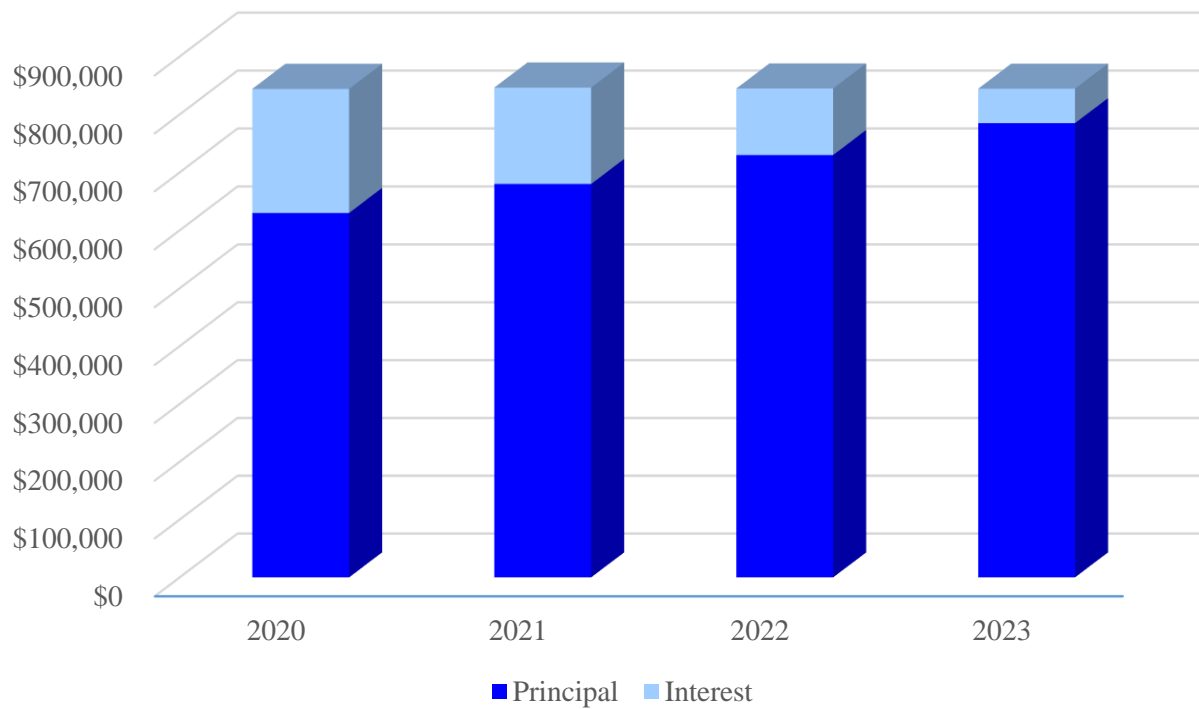
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The following table and chart illustrate the existing debt service for the outstanding lease revenue bonded debt currently paid by net pledged revenues.

**DEBT SERVICE REQUIREMENTS  
DRI REVENUE BONDED DEBT  
Nevada System of Higher Education  
June 30, 2019**

<b>Fiscal Year Ending June 30</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2020	\$630,000	\$214,136	\$844,136
2021	680,000	166,382	846,382
2022	730,000	114,838	844,838
2023	<u>785,000</u>	<u>59,504</u>	<u>844,504</u>
<b>TOTAL</b>	<b>\$2,825,000</b>	<b>\$554,860</b>	<b>\$3,379,860</b>

**DEBT SERVICE REQUIREMENTS  
DRI Revenue Bonds**



**Bank Loans/Leases**

The following table illustrates the bank loans and leases that are outstanding.

**OUTSTANDING BANK LOANS AND LEASES**

Nevada System of Higher Education

June 30, 2019

	<b>Date Issued</b>	<b>Maturity Date</b>	<b>Original Amount</b>	<b>Amount Outstanding</b>
<b><u>BANK LOANS/LEASES</u></b>				
<i>University of Nevada, Reno</i>				
UNR – 450 Sinclair Street Lease	11/20/13	01/01/27	\$1,428,579	\$913,989
UNR – Student Achievement Center Note	02/26/14	07/01/19	2,700,000	399,000
UNR – Fitness Center Note	08/14/14	01/01/20	7,200,000	2,466,000
UNR – MEB Refunding Note	04/21/16	01/02/26	7,570,000	5,930,000
UNR – Scoreboard Note	05/05/16	03/01/21	3,305,000	675,000
UNR – Fine Arts Building Note	04/20/17	07/01/22	11,326,000	<u>7,586,000</u>
			UNR TOTAL	\$17,969,989
<i>University of Nevada, Las Vegas</i>				
UNLV – Hotel Administration Bldg. Note	12/15/15	07/01/22	\$15,561,000	\$9,275,000
UNLV – Med School Practice Plan Note	06/28/17	07/01/23	14,700,000	13,333,000
UNLV – Football Complex Note	11/09/17	07/01/23	15,297,000	<u>12,690,000</u>
			UNLV TOTAL	\$35,298,000
<i>College of Southern Nevada</i>				
CSN – Promissory Note	01/03/13	06/01/23	\$10,000,000	\$4,226,000
CSN – Cisco Equipment Lease	09/14/18	10/14/22	4,141,128	<u>3,257,737</u>
			CSN TOTAL	\$7,483,737
<i>Desert Research Institute</i>				
DRI – Southern Nevada Science Park	01/09/02	12/01/21	\$2,000,000	\$376,682
DRI – CRVB	10/26/06	07/01/22	1,500,000	320,000
DRI – Dell Supercomputer Lease	06/01/16	05/01/21	314,085	120,400
DRI – Six Degrees Capital Lease	08/10/16	09/10/19	356,642	89,161
DRI – Dell Quest Lease	07/01/17	07/01/19	69,655	23,195
DRI – Citrix Lease	07/01/18	08/01/21	281,974	183,455
DRI – Dell PowerVault Lease	11/01/18	11/01/20	96,159	<u>61,924</u>
			DRI TOTAL	\$1,174,817
<i>Great Basin College</i>				
GBC – Apartment Complex	11/08/01	11/01/21	\$2,530,000	<u>\$405,889</u>
			GBC TOTAL	\$405,889
<b>TOTAL BANK LOANS/LEASES</b>				<b>\$62,332,432</b>

***Use of Bank Loans*** – Bank loans have been used by various institutions for a variety of purposes. In some cases, bank loans are used to provide temporary financing pending long term bond financing, to provide funds payable from expected donations, or used to provide permanent financing for various projects.

***Security for Bank Loans*** – Bank loans are payable from “all legally available funds of the System.” In most cases, the institution seeking bank financing has a specific revenue stream informally dedicated to make the debt service payments. Such revenue stream is not formally pledged to the loan and the lender has no rights to force the System to maintain rates and charges such that the revenue stream is not impaired. In general, the lender does not have a lien position in the asset being financed.

When the Board adopts a resolution authorizing bank financing, it covenants to make sufficient provision annually in its budget to pay the principal and interest on the loan when due. System bank loans do not constitute a debt or indebtedness of the State, nor a charge against the State’s taxing power.

***Bank Loan Attributes*** – The advantage of bank financing generally relates to their inherent flexibility. The specifications on a bank loan can be tailored to the needs of the institution. Such specifications include, whether or not the loan will be fully funded at closing or will be structured as a line of credit with a draw down component, the frequency of debt service payments (monthly, quarterly, semiannually, etc.), the term of the loan and the term of an interest only period before amortizing payments begins. The transaction costs associated with obtaining bank financing are normally relatively small. The System enjoys the flexibility to refinance bank loans or to retire loans prior to maturity, since most loans are fully pre-payable.

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***Use of Bank Loan/Lease Proceeds*** – The Bank loans/leases were used for the following projects.

<b>University of Nevada, Reno</b>	
450 Sinclair Street Lease	Lease of a building by UNR. The System will own the building at the end of the lease period.
Student Achievement Center Note	Proceeds used to construct a Student Achievement Center on the campus of UNR.
Fitness Center Note	Proceeds used to construct a Fitness Center on the campus of UNR.
MEB Refunding Note	Used to refinance the 2009 MEB Note which funded construction of the Medical Education Learning Lab on the campus of UNR.
Scoreboard Note	Used to improve audio/visual components at Mackay Stadium and Lawlor Events Center on the campus of UNR.
Fine Arts Building Note	Used to construct a Fine Arts Center on the campus of UNR.
<b>University of Nevada, Las Vegas</b>	
Hotel Administration Note	Proceeds used to construct the Hotel College Administration Building on the campus of UNLV.
Med School Practice Plan Note	Used to fund capital and operating costs of the UNLV School of Medicine Faculty Practice Plan during its initial startup phase.
Football Complex Note	Used to fund construction of the Fertitta Football Complex on the campus of UNLV.
<b>College of Southern Nevada</b>	
Promissory Note	Proceeds used to renovate the portions of the “A” and “B” buildings on the CSN West Charleston Campus.
Cisco Equipment Lease	Proceeds used to acquire networking components
<b>Desert Research Institute</b>	
Southern Nevada Science Park	Proceeds used to construct the science park.
CRV Building	Proceeds used to build the Computation Research and Visualization Building.
Dell Supercomputer Lease	Proceeds used to acquire a network computer.
Six Degrees Capital Lease	Proceeds used to acquire Check Point Appliances and related items.
Dell Quest Lease	Proceeds used to acquire data storage equipment
Citrix Lease	Proceeds used to acquire various computer equipment
Dell PowerVault Lease	Proceeds used to acquire computer and other equipment
<b>Great Basin College</b>	
Apartment Complex	Proceeds used to finance the acquisition of Student housing facilities and related improvements and costs.

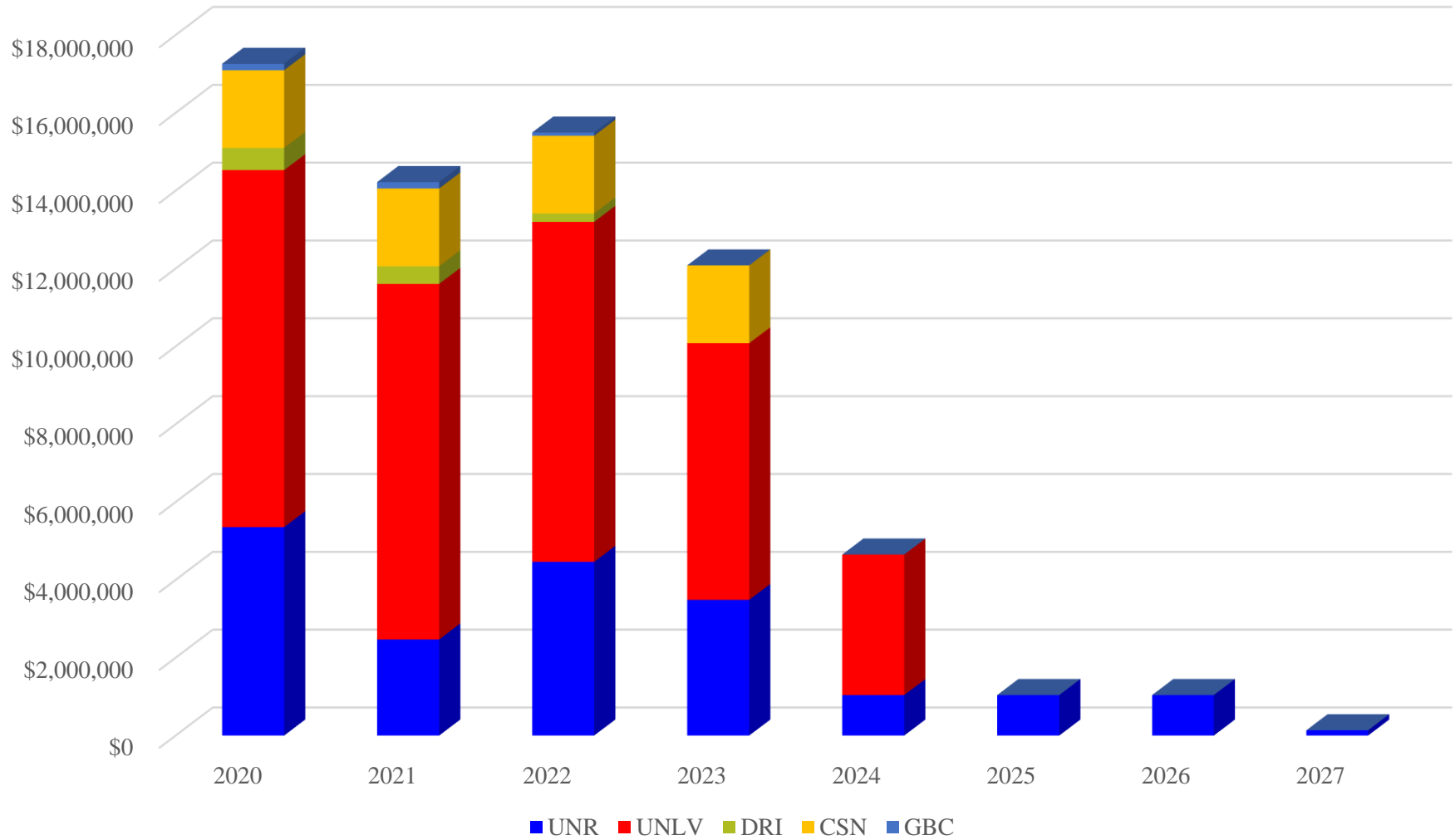
The following table and chart illustrate the annual bank loan/lease payments by institution.

DEBT SERVICE REQUIREMENTS  
BANK LOANS/LEASES  
Nevada System of Higher Education  
Allocation by Institution  
Total Annual Principal & Interest Payment  
June 30, 2019

<b>FY Ending June 30</b>	<b>UNR</b>	<b>UNLV</b>	<b>CSN</b>	<b>DRI</b>	<b>GBC</b>	<b>TOTAL</b>
2020	\$5,355,469	\$9,173,356	\$1,998,495	\$568,704	\$164,357	\$17,260,381
2021	2,469,940	9,134,364	1,999,093	453,561	165,099	14,222,057
2022	4,463,767	8,733,788	1,997,325	216,946	82,834	15,494,660
2023	3,486,319	6,594,079	1,999,200	0	0	12,079,598
2024	1,040,520	3,609,996	0	0	0	4,650,516
2025	1,041,262	0	0	0	0	1,041,262
2026	1,041,189	0	0	0	0	1,041,189
2027	<u>136,612</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>136,612</u>
<b>TOTAL</b>	<b>\$19,035,078</b>	<b>\$37,245,583</b>	<b>\$7,994,113</b>	<b>\$1,239,211</b>	<b>\$412,290</b>	<b>\$65,926,275</b>

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DEBT SERVICE REQUIREMENTS TO MATURITY  
Bank Loans/Leases



## DEBT LIMIT/AUTHORIZATION

The State of Nevada general obligation revenue bonds are subject to the State's general obligation debt limitation. There is no formal debt limit for revenue bonds or bank loans. However, the System's ability to issue bonds is limited to existing additional bonds tests found in the authorizing legislation, authorizing resolutions, and to projects or other revenues available for debt service.

The System has a total of \$276,025,000 in bonds authorized by the Legislature but unissued as of June 30, 2019.

The following table presents the authorized but unissued bonds of the System.

**AUTHORIZED BUT UNISSUED BONDS**  
Nevada System of Higher Education  
June 30, 2019

<b>Campus/Project</b>	<b>Principal</b>	<b>Expiration of Authorization</b>
UNR Student Housing, Dining, Library, Parking Facilities and/or other master plan facilities (AB 478, 2011)	\$2,790,000	01/2029
UNR Student Housing & Engineering Building (SB496, 2017)	58,710,000	05/2032
UNLV Student Housing, Dining Facilities and/or other master plan facilities (AB 401, 2009)	142,440,000	01/2029
CSN Student Service Facilities (including student union buildings), Classrooms, and Parking Facilities (SB 496, 2017)	10,085,000	05/2032
NSC Student Housing & Parking Facilities (SB 455, 2007)	20,000,000	06/2022
TMCC Fitness Complex (SB496, 2017)	22,000,000	05/2032
WNC Residence Hall (SB 455, 2007)	<u>20,000,000</u>	05/2032
TOTAL	\$276,025,000	

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The following table illustrates a calculation of Revenue bond authorization for UNR and UNLV.

UNIVERSITIES REVENUE BOND AUTHORIZATION CALCULATION  
UNLV & UNR

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**UNIVERSITY OF NEVADA, RENO**

Authorization as of August 1, 2005	\$39,685,000
Added by 2005 Legislation AB 534	100,855,000
2005B Bond issue (Student Union)	(56,380,000)
Added by 2007 Legislation SB 455	35,840,000
2008 Bond issue (Molecular Medicine Center)	(60,135,000)
2010 Bond issue (Living Learning dormitory)	(32,730,000)
Added by 2011 Legislation AB 478	35,665,000
2011 Bond issue (bank loan refunding)	(5,155,000)
2014 Bond issue (Achievement Ctr. & Peavine Hall)	(43,815,000)
2015 Bond issue (Mackay Stadium)	<u>(11,040,000)</u>
<b>Balance as of June 30, 2019</b>	<b>\$2,790,000</b>

**UNIVERSITY OF NEVADA, RENO (2017 AUTHORIZATION)**

Added by 2017 Legislation SB 496	<u>\$58,700,000</u>
<b>Balance as of June 30, 2019</b>	<b>\$58,700,000</b>

**UNIVERSITY OF NEVADA, LAS VEGAS**

Authorization as of August 1, 2005	\$75,745,000
Added by 2005 Legislation AB 534	140,055,000
2005B Bond issue (Student Union)	(38,525,000)
2005B Bond issue (Rec Center)	(39,115,000)
2005B Bond issue (Wellness Center)	(5,265,000)
2005B Bond issue (Parking)	(8,140,000)
Added by 2007 Legislation SB 455	83,100,000
2009A Bond issue (Parking & Pool)	(18,140,000)
2011 Bond issue (bank loan refunding)	(10,045,000)
2013 Bond issue (COP refunding)	(6,325,000)
2014 Bond issue (Rogers Center)	(6,180,000)
2015 Bond issue (Thomas & Mack Arena)	(11,145,000)
2016B Bond issue (Gateway Parking Garage)	<u>(13,580,000)</u>
<b>Balance as of June 30, 2019</b>	<b>\$142,440,000</b>

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## RATING AGENCY ANALYSIS

The most recent rating agency reports from Moody's Investors Service, Standard & Poor's, and Fitch Ratings have been inserted in Section J.

Rating agencies provide an independent assessment of the relative creditworthiness of municipal securities. The rating system consists of letter grades that convey each company's assessment of the ability and willingness of a borrower to repay its debt in full and on time. Many investors rely upon these letter grades as a means of assessing the likelihood of repayment.

Credit ratings issued by the bond rating agencies are a major factor in determining the cost of borrowed funds in the municipal bond market. Determination of a credit rating by a rating agency is based on the rating agency's assessment of the credit worthiness of an issuer with respect to a specific obligation. In addition to analyzing the administrative and fiscal management of the System, the rating analysts analyze the debt burden and economic base. Rating analysts review many factors not addressed in this document to determine bond ratings.

### DESCRIPTION OF BOND RATINGS

Moody's	Standard & Poor's	Description
High Grade		
Aaa	AAA	The highest rating assigned to a debt instrument, indicating an extremely strong capacity to pay principal and interest. Bonds in this category are often referred to as “gilt-edge” securities.
Aa1	AA+	High-quality bonds by all standards with strong capacity to pay principal and interest and are judged to be of high quality by all standards. These bonds are rated lower primarily because the margins of protection are less strong than those for Aaa and AAA.
Aa2	AA	
Aa3	AA-	
Medium Investment Grade		
A1	A+	These bonds possess many favorable investment attributes, but elements that suggest a susceptibility to impairment given adverse economic changes may be present.
A2	A	
A3	A-	
Baa1	BBB+	Bonds are regarded as having adequate capacity to pay principal and interest, but certain protective elements may be lacking in the event of adverse economic conditions that could lead to a weakened capacity for payment.
Baa2	BBB	
Baa3	BBB-	
Speculative		
Ba1	BB+	Bonds regarded as having only moderate protection of principal and interest payments during both good and bad times.
Ba2	BB	
Ba3	BB-	
B1	B+	Bonds that generally lack characteristics of other desirable investments and have greater vulnerability to default. Assurance of interest and principal payments over any long period of time may be small.
B2	B	
B3	B-	

## CURRENT DEBT RATINGS

The following table illustrates the System's various debt ratings:

Type of Debt	Ratings		
	Moody's	Standard & Poor's	Fitch
State GO/Revenue Bonds	Aa2	AA	AA+
Universities Parity Lien Revenue Bonds	Aa2	AA-	---
Community College Revenue Bonds	Aa3	AA-	---
Certificates of Participation	---	AA-	AA
Desert Research Institute Lease Revenue Bonds	---	---	AA-

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# SECTION C

## **DEBT MANAGEMENT GUIDELINES**

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## **DEBT MANAGEMENT GUIDELINES**

### **FINANCING ALTERNATIVES**

#### **General**

Before considering which method of financing may be the most appropriate, the System should evaluate all potential funding sources. These sources include intergovernmental grants from federal, state or other sources, current revenues and fund balances, private sector contributions, or public/private partnerships and leasing.

#### **State Funding**

Many System capital projects are funded directly by the legislature with appropriated State funds. Other System projects are funded by the sale of State property tax supported bonds. This funding source should be reserved for the most essential projects.

#### **Pay-As-You-Go Financing**

The pay-as-you-go method of funding means simply that capital projects are paid for from the current revenue base (i.e., the entity does not issue bonds.)

The use of pay-as-you-go financing has several advantages. For example, pay-as-you-go financing will result in saving the amount of interest which otherwise would be paid on bonds to finance the project. Furthermore, when economic conditions deteriorate due to normal business cycles, the entity is not encumbered by as much debt service. Pay-as-you-go contributions provide greater budgetary flexibility than does a debt issue, as contributions can be reduced in a given budget year. At the same time, the entity's long-term debt capacity is preserved for the future. Finally, lower debt ratios may have a positive effect upon the jurisdiction's credit rating.

There are several disadvantages to relying on current revenues to finance capital improvements. Exclusive reliance upon pay-as-you-go funds for capital improvements means that existing residents/users are obliged to pay for improvements that will benefit residents/users that relocate to the area or use the facility after the expenditure is made. Also, the large capital outlay required for some projects may result in an onerous debt service payment if the expenditure is financed within a single budget. The use of current revenues for capital projects may diminish the System's ability to respond to emergencies.

Many improvements and pieces of equipment are included in the operating budget on a pay-as-you-go basis. Ongoing operating costs should be supported by stable revenue sources. Thus, recurring equipment replacement needs, such as, cars, office equipment and recurring maintenance costs, should be funded through the operating budget.

In addition to these recurring needs, capital improvements can also be partially or completely paid for on a cash basis in order to avoid the interest costs incurred with other financing mechanisms.

In many cases, pay-as-you-go financing is impractical due to the cost of the capital improvement and the need to build the project in a limited time frame instead of in phases over a period of years.

# Grants

Government grants stem from a variety of sources, but the majority of grant revenues for capital projects come from the national and state governments. Often, they require a matching contribution. Most grants require an application, identifying specific improvements or equipment that will be purchased with the grant money.

# Bonds

The following section illustrates financing structures which have been used in previous financings and may be used in the future. Because of the high cost of funding certain capital improvements, governmental entities are generally not able to accumulate enough cash from current revenues to pay for necessary improvements. Bonds permit these organizations to acquire assets as needed rather than wait until a sufficient amount of cash has been built up.

Within each category there are many different types of financing instruments available depending on legal constraints, investor demand, capital market activity and the type of project being financed. The different types of financing instruments are discussed in the next section. Included here are brief summaries of financing alternatives that are currently available to the System.

**State General Obligation/Revenue Bonds** – The security for a general obligation (“GO”) bond is the taxing power of the state or local government. An issuer selling a GO bond secured by its full faith and credit attaches to that issue its broadest pledge, making the security of these bonds very high. The full faith and credit backing of a GO bond includes the pledge of all general revenues, unless specifically limited, as well as the legal means to raise tax rates to cover debt service. The public entity is authorized to levy and property taxes or to draw from other unrestricted revenue streams such as sales or income taxes to pay the bonds’ principal and interest. Primarily due to this superior security, interest rates on these bonds are generally the lowest of any public securities. From time to time, the State Legislature has authorized the Board of Regents to issue general obligation bonds on behalf of the State of Nevada which are additionally secured by pledged revenues. (See “State General Obligation Revenue Bonds” on page B-8.)

The following table illustrates the timing and events associated with the issuance of this type of bond.

STATE GENERAL OBLIGATION/REVENUE BONDS  
Sample Bond Issuance Schedule

<u>Number of Weeks From</u> <u>Start</u>	<u>Event</u>
0	State Legislature authorizes issuance of bonds
1	Board of Regents adopts Bond Sale Resolution
3	State Board of Finance adopts Sale Resolution
4	Due Diligence Meeting to Review the Preliminary Official Statement
7	Bond Sale State Treasurer executes Award Certificate
10	Bond Closing

**Revenue Bonds** – Revenue bonds that are issued to finance a specific revenue-generating project are sometimes secured by the revenues of that project. Reserve funds (when appropriate), certain restrictive covenants and additional bonds coverage tests also provide security on revenue bonds. Revenue bond financing provides a method of matching the capital cost of a facility to the ultimate user by amortizing the bond issue in annual installments including: bridges, airports, water and sewer treatment facilities, health care facilities, waste water recovery, public power projects and housing projects. Depending on the type of project financed, the issuing entity pays debt service from either user fees, tolls, concessions, lease back arrangements or revenues from the acquired or constructed facility.

Because revenue bonds are not backed by the full faith and credit of the issuer and the underlying security is only the revenue stream pledged to pay bond principal and interest, revenue bonds do not affect the state’s constitutional or statutory debt limitation placed on municipal entities.

The following table illustrates the timing and events associated with the issuance of Nevada System of Higher Education Revenue Bonds.

**ISSUANCE OF NEVADA SYSTEM OF HIGHER EDUCATION REVENUE BONDS**  
Sample Financing Schedule

<b><u>Number of Weeks From</u></b>	<b><u>Start</u></b>	<b><u>Event</u></b>
0		Legislature authorizes issuance of bonds
1		Board of Regents adopt Bond Sale Resolution*
3		Business Officers coordinate “Bank-Qualified” status (if needed)
6		CPA reviews Additional bonds test
7		Due Diligence Meeting to Review Official Statement
10		Board of Regents adopts Bond Resolution* Bond Sale
13		Bond Closing

\*Can be combined into one action.

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**Bank Loans** – Bank loans can be used by these institutions for a variety of purposes. In some cases, bank loans have been used to provide temporary financing pending long term bond financing. Bank loans can be used to provide current funds payable form expected donation, or to provide permanent financing for a variety of projects.

Bank loans are payable from “all legally available funds of the System”. In most cases, the institution seeking bank financing has a specific revenue stream informally dedicated to make debt service payments. Such revenue stream is not formally pledged to the loan and the lender has no rights to force the System to maintain rates and charges such that the revenue stream is not impaired. Generally, the lender does not have a lien position in the asset being financed.

When the Board adopts a resolution authorizing bank financing, they covenant to make sufficient provision annually in its budget to pay the principal and interest on the loan when due. System bank loans do not constitute a debt or indebtedness of the State, nor a charge against the State’s taxing power.

The following table illustrates the timing and events associates with obtaining bank financing:

ISSUANCE OF NEVADA SYSTEM OF HIGHER EDUCATION BANK LOANS  
Sample Financing Schedule

<b><u>Number of Weeks From Start</u></b>	<b><u>Event</u></b>
0	Institution requesting bank financing sends request letter to Chief Financial Officer
3	Board of Regents authorize financing bids to be solicited
5	Bank-Qualified Status memo distributed to Business Officers (if necessary)
7	Financing Request distributed to Banks
8	Business Officers confirm Bank-Qualified Status
11	Financing Proposals due Board of Regents adopts Resolution awarding financing
15	Loan Closing/First Draw Down

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***Lease-Purchase Obligations*** – Lease-purchase financing is a contractual arrangement between a unit of government, usually a state, city or municipality, (the “lessee”) for financing the acquisition of assets for the governmental unit and the lessor who is responsible for acquiring the assets per instructions given by the lessee. The lessor receives lease payments from the lessee over the life of the agreement. The lessee has complete control and responsibility for the assets during the contract term and must provide maintenance, insurance and general safekeeping of the assets. At the end of the term of the contract and upon fulfillment of all contractual obligations, title to the assets is normally transferred to the lessee.

Leases are generally funded as an operating expense. The security for lease-purchase financing may include the lease payments made by the lessee, the asset being financed and other legally available revenues. Lease payments may be subject to annual appropriation. This financing technique provides long-term financing through a lease (with mandatory purchase provision) that does not constitute indebtedness under a state or local government’s constitutional debt limit and does not require voter approval. In a lease-purchase transaction the asset being financed can include a new capital asset needed, assets under existing lease agreements, or, in some cases, equipment purchased in the past for which the government or municipal unit would prefer to be reimbursed and pay over time.

The following table illustrates the timing and events associates with obtaining bank financing:

ISSUANCE OF NEVADA SYSTEM OF HIGHER EDUCATION LEASE-PURCHASE OBLIGATIONS  
Sample Financing Schedule

<b><u>Number of Weeks From</u></b>	<b><u>Event</u></b>
<b><u>Start</u></b>	
0	Board of Regents authorize process (may be delegated) Developer/Construction Manager, Underwriter selected (may occur prior to Regent action)
3	Financing terms established
6	Due Diligence meeting to review the Preliminary Official Statement
7	Preliminary Official Statement distributed
9	Pricing (after construction costs finalized) Board of Regents adopt Resolution
12	Closing

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The following table generally illustrates various financing options (i.e., ways to leverage a revenue stream) as opposed to sources of debt repayment. Before a financing method can be selected, a source of repayment (revenue stream), must be selected.

### SUMMARY OF CAPITAL FINANCING OPTIONS<sup>1</sup>

	Financing Method	Security	Source of Debt Payment	Approval Process	Cost of Funds 1=Best	Notes
1	State General Obligation Bonds / Appropriations	General Obligation of State	State-Wide Property Tax	- Legislative authorization - State Board of Finance Timing: Varies	1	- No direct cost to System
2	State Lease Purchase	State Promise to Pay	State Funds (can include other funds)	- Legislative authorization or Interim Finance Committee - State Dept. of Admin, Treasurer - State Land Registrar - State Board of Finance - Board of Regents - State Board of Examiners Timing: 4-6 months	1	- No direct cost to System to the extent that the lease purchase paid with State funds - Subject to annual appropriation - State controls issuance process
3	Slot Tax Revenue (State) Bonds	Pledged Slot Tax Revenues / General Obligation of State	Slot Tax Revenues	- Legislative authorization - Board of Regents - State Board of Finance Timing: 3-5 months	2	- Historically used for pavilions - Coverage test limits usage - Used infrequently
4	Universities Revenue Bonds (Also Community College)	Pledged Student Fees; Revenues from Various Facilities	Most Revenue Streams	- Legislative authorization - Board of Regents Timing: 2-3 months	3	- "Statutory" coverage may become an issue - Fast process: 1 Regent meeting - Most used funding mechanism (\$418 million outstanding 06/30/16)
5	System Certificates of Participation	All Legally Available System Revenues	Most Revenue Streams	- Board of Regents Timing: 2-3 months	4	- No lien upon asset to be financed - Legislative authorization not required - Interest rates slightly greater than Universities Revenue Bonds due to lack of lien on a specific revenue stream
- Table and footnotes continued on following page -						
6	Bank Loans	All Legally Available System Revenues	Most Revenue Streams	- Board of Regents Timing: 2-3 months	5	- Flexible terms (can do via line of credit, prepayable) - Fast process: 1 Regent meeting



Financing Method	Security	Source of Debt Payment	Approval Process	Cost of Funds 1=Best	Notes
					- Difficult to obtain fixed rates beyond 10 years
7 Installment Purchase or Lease Purchase Financing	Generally, collateral in asset being financed and/or promise of System to pay	Most Revenue Streams	- Board of Regents Timing: 4-6 months	6 or higher	- Can do COPs - May have an annual appropriation clause - May need to do an appraisal
8 Industrial Development Revenue Bonds	Revenue stream / collateral (asset being financed)	Most Revenue Streams	- City or County - Board of Regents or a foundation Timing: 3-6 months	6 or higher	
9 Vendor / Developer Financing	Revenue stream / collateral (asset being financed)	Most Revenue Streams	- Board of Regents Timing: 3-6 months	7 or higher	- Generally, the most expensive source of funds

<sup>1</sup> Excludes: Donations, grants, other System funds and other sources of financing.

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## **Bond Variations**

The following is a list of financing vehicles currently available:

***Capital Appreciation Bonds*** – Capital Appreciation Bonds (“CABS”) are deeply discounted bonds bearing little or no interest. The yield is derived from the purchase price of the bond. For example, a current interest bond with a 20-year maturity bearing a 7% coupon would be sold at par (\$1,000). However, a \$1,000 bond yielding 7% without a semiannual coupon payment would be sold initially for \$252; at maturity the investor would receive \$1,000.

The purpose and benefit of a CAB is to delay debt service payments to later years. CAB’s are sometimes used to place debt burdens on eventual users of public facilities. Such a financing mechanism might be used in conjunction with more commonly used interest-bearing bonds to levelize the total debt service. CAB’s can only be used if the enabling legislation permits their use. (See “Use of Long-term Debt” on page C-17 for the System’s procedures regarding the use of CAB’s.)

***Variable Rate Debt*** – Variable rate instruments permit the municipality to capture the lower interest rates available to borrowers for very short debt maturities. While the issuer may receive an interest rate benefit, it assumes the risk of upward movements in the levels of tax-exempt interest rates or shifts in the market acceptability of short-term debt. (See “Use of Long-term Debt” on page C-17 for the System’s procedures regarding the use of variable rate debt.)

***Taxable Alternatives*** – The taxable municipal market has developed as a consequence of the impact of the Tax Reform Act of 1986 which eliminated the tax-exempt market as an alternative for many municipal financing needs. The area most dramatically affected is the issuance of industrial development bonds commonly used by municipalities to encourage economic development within their boundaries. The yield on these obligations is closely tied to Treasury obligations with a comparable average life and is more expensive debt than would be attainable in the tax-exempt market. The System has issued several taxable obligations in the past.

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## DEBT ISSUANCE PROCEDURES AND GUIDELINES

### Administration of Debt

The Chancellor is the Chief Executive Officer of the System. The Chief Financial Officer (the “CFO”) is the Chief Financial Officer of the System. With the exception of those responsibilities specifically assigned by state statute to the Chancellor, the CFO is responsible for administration of System financial policies. The Board of Regents must approve any form of System borrowing and the details associated therewith. The Director of Banking and Investments coordinates the administration and issuance of debt, as designated by the CFO.

The CFO is also responsible for attestation of disclosure and other bond related documents. References to the Chancellor in bond documents are hereinafter assumed to be assigned to the CFO as the “designee” for administration of these procedures.

### *Controlling the Financing Process*

The System and each institution should ask the following questions<sup>2</sup> to assess the cost and benefit of added debt:

- What are the capital needs of the institution for the next five years? Ten years?
- What other resources will be available to support added debt in the future?
- What funding will be necessary to meet the gap between capital needs and available resources?
- In the long-term capital plan, how much of the funding comes from continuing operating resources, i.e., student fees versus other sources?
- How restricted is the operating budget in sustaining existing debt service payments?

The questions demand institutional and System attention to present and future resources. The inaccurate assumption of resource availability will create a ripple effect over a number of years given the necessity to pay debt service and defer other program priorities.

The System will seek answers to the previous questions with each institutional request to incur additional debt, i.e., loans, bonds and leases. Further, presidential approval of debt with specific attention to the short and long-term implications on institutional resources is required.

### *Initial Review and Communication of Intent*

All borrowing requests (bonds, bank loans, leases, etc.) shall be communicated to and coordinated by the CFO, prior to seeking Board approval to incur debt. Opportunities for refunding shall originate with or be communicated to the CFO. Justification and requested size of the proposed financing must be presented as well as the proposed timing of the transaction.

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<sup>2</sup> Handbook on Debt Management for Colleges and Universities, p. 23, R.T. Forrester and Coopers and Lybrand, NACUBO, 1988.

For bank loans, the institution requesting financing will send a request letter to the CFO stating the following:

- size of bank loan
- anticipated source of repayment
- acknowledgment that the institution will make loan payments if anticipated source of repayment is not sufficient
- preferred timing

The CFO will evaluate each debt proposal comparing it with other competing interests within the System. All requests will be considered in accordance with the System's overall adopted priorities. The CFO will coordinate the issuance of all debt including: size of issuance, debt structuring, repayment sources and determination of mix (e.g., debt financing versus pay-as-you-go) and method of sale.

### ***Authorization of Debt***

All debt of the System (bonds and/or bank loans) must be approved by the Board of Regents. Capital leases, if the principal amount is less than \$100,000, may be approved by the president of the institution after consultation with the CFO.

### **Business Officers**

The Business Officers meet frequently to coordinate financial issues which have System wide implications. This group consists of the institutional Vice Presidents for Finance or other finance representatives. The Business Officers coordinate pending new or refunding bond issues, the method of bond sale (competitive or negotiated), contracts for bank and bond related services and the determination of the bank-qualified status.

The Business Officers meet under the direction of the CFO. Technical information and coordination related issues (e.g., bank-qualified status) are provided by the System's Financial Advisor.

### **Method of Sale**

There are two ways bonds can be sold: competitive (public) or negotiated sale. Competitive and negotiated sales provide for changing issue size, maturity amounts, term bond features, etc. The timing of competitive and negotiated sales for the System is generally related to the requirements for agenda publication and the Nevada open meeting law.

***Competitive Sale*** – With a competitive sale, any interested underwriter(s) is invited to submit a proposal to purchase an issue of bonds. The bonds are awarded to the underwriter(s) presenting the best bid according to stipulated criteria set forth in the notice of sale. The best bid is usually determined based on the lowest overall interest rate. Competitive sales should be used for all issues unless circumstances dictate otherwise.

***Negotiated Sale*** – A negotiated sale is a securities sale through an exclusive arrangement between the issuer and an underwriter or underwriting syndicate. At the end of successful negotiations, the issue is awarded to the underwriter(s).

Negotiated sale may be considered upon recommendation of the CFO based on one or more of the following criteria:

- Extremely large issue size
- Complex financing structure (i.e., variable rate financings, new structure and certain revenue issues, etc.) which provides a desirable benefit to the System
- Comparatively low credit rating
- Other factors which lead the CFO to conclude that a competitive sale would not be effective

***Underwriter Selection for Negotiated Sale –***

- The CFO may establish a list of pre-qualified underwriters when a negotiated sale is anticipated. The list will be based on firms that have submitted, as a part of the syndicate, bids for System competitive bond issues during the past five years.
- The request for proposal (“RFP”) will be sent by the CFO or his designee to underwriters on the list, as well as to other qualified underwriters. The format of the RFP will be determined by the CFO. Spread quotation for, (1) a management fee, (2) direct expenses, (3) an underwriting fee and (4) takedown (or sales concession) will be obtained from each firm.
- The proposals will be evaluated on responsiveness, experience, and cost.
- An underwriting syndicate will be designated by the CFO and ratified by the Board of Regents. It is the System’s intent, once an underwriting syndicate is established, to provide equal opportunity for the position of “book-running senior manager” of the underwriting syndicate. The CFO may rotate the book-running senior manager on a deal by deal basis (i.e., when more than one issue is being sold for the same project having different dated dates), to provide equal opportunity to all members of the syndicate.
- The underwriting syndicate should be balanced with firms having institutional, retail, and regional sales strengths. Qualified minority and/or woman owned firms may be included in the underwriting syndicate and if included will be given an equal opportunity to be book-running senior manager.
- The size of issue will determine the number of members in the underwriting team and whether more than one book running senior manager is desirable.

***Underwriting Spread*** – Before work commences on a bond issue to be sold at negotiated sale, the underwriter shall provide the CFO a detailed estimate of all components of their compensation. Such estimates should be contained in the RFP or provided immediately after their designation as underwriter. An updated estimate of the expense component of gross spread must be provided to the CFO by the book-running senior manager no later than one week prior to the day of pricing.

***Establishment of a Selling Group*** – When deemed appropriate by the CFO, a selling group will also be established to assist the underwriting syndicate in the marketing of the bond issue.

***Priority of Orders*** – The priority of orders to be established for negotiated sales is as follows:

- Nevada Investors
- Group Orders
- Designated Orders
- Member Orders

For underwriting syndicates with three or more underwriters, a three-firm rule for net designated orders will be established as follows:

- The designation of takedown on net designated orders is to benefit at least three firms of the underwriting syndicate.
- No more than 50% of the takedown may be designated to any one firm. No less than 10% of the takedown will be designated to any one firm.

***Retentions*** – If the use of retentions is desirable, the CFO will approve the percentage (up to 30%) of the takedown to be set aside. The amount of total retention will be allocated to each member of the underwriting syndicate in accordance with their respective underwriting liability, which is approved by the CFO.

***Allocation of Bonds*** – The book-running senior manager will be responsible for ensuring that the overall allocation of bonds meets the System's goals of obtaining the best price for the issue and a balanced distribution of the bonds. The CFO must approve the final bond allocation process with input from the book-running senior manager.

## **Use of Bond Insurance**

Bond insurance is an insurance policy purchased by an issuer or an underwriter for either an entire issue or specific maturities, which guarantees the payment of principal and interest. This security provides a higher credit rating and thus lowers the borrowing cost for an issuer.

Bond insurance can be purchased directly by the issuer prior to the bond sale (direct purchase) or at the underwriter's option and expense (underwriter's option). The System will attempt to qualify its bond issues for insurance with bond insurance companies rated higher than the underlying rating on the bonds.

The decision to purchase insurance directly versus underwriter option is based on:

- volatile markets
- current investor demand for insured bonds
- level of insurance premiums
- ability to purchase bond insurance from bond proceeds
- more complicated financing structure

When insurance is purchased directly by the System, the present value of the estimated debt service savings from insurance should be at least equal to or greater than the insurance premium. The bond insurance company will usually be chosen based on an estimate of the greatest net present value insurance benefit (present value of debt service savings less insurance premium).

It is the System's preference to have insurance purchased at underwriter's option, if at least two insurance companies are expected to qualify the issue for insurance.

## Derivatives

The term “derivatives” refers to a wide array of financial products that are dependent for their value on (or “derived” from) an underlying financial instrument (e.g., stocks, bonds or foreign currencies), a commodity, or an index representing values of groups of such instruments or assets. Some of the most commonly used derivatives are swaps, options, futures, forwards and a variety of structured securities.

The System may use interest rate swaps, derivatives, and similar instruments (collectively, "Derivatives") to meet its financial and management objectives, if appropriate. The System will adhere to sound financial and risk management policies when considering or entering into Derivatives.

- 1- The System will obtain the approval of the Board prior to entering into any Derivative agreement. The System, in consultation with its bond counsel and financial advisor will determine whether a proposed agreement complies with State law, applicable Commodities Futures Trading Commission (“CFTC”) Regulations, any other applicable law, and any other applicable provisions of the System's bond resolutions or agreements with respect to its outstanding debt.
- 2- The System will engage the services of a swap advisor prior to entering into any Derivative agreement. The qualifications of the swap advisor will meet the requirements outlined in Appendix 1 to this Section.
- 3- The System may execute a Derivative agreement to the extent the transaction can be reasonably expected to achieve one or more of the following objectives:
  - a. Result in a lower net cost of borrowing with respect to the System's debt,
  - b. Reduce exposure to changes in interest rates either in connection with a particular debt financing or investment transaction or in the management of interest rate risk with respect to the System's overall debt and investment portfolios, or
  - c. Enhance financing flexibility for future capital projects.
- 4- The System will not execute a Derivative agreement under the following circumstances:
  - a. When a Derivative is used for speculative purposes, such as potential trading gains, rather than for managing and controlling interest rate risk in connection with System debt or investments,
  - b. When a Derivative creates extraordinary leverage or financial risk,
  - c. When the System lacks sufficient liquidity to terminate the Derivative at current market rates, or
  - d. When insufficient price information prevents the System and its advisors from reasonably valuing the Derivative.
- 5- The System does not currently have any outstanding Derivatives. Prior to entering into such transactions, the System will consult with its bond counsel and financial advisor on appropriate limits to the System's exposure to Derivatives.
- 6- The System will execute Derivative agreements only with counter parties rated "A" or above by one or more major credit rating agencies (e.g. Standard & Poor's).
- 7- All Derivative agreements entered into by the System must include provision for optional termination by the System, with or without premium, not later than 10 years from the

commencement date or the redemption provisions of the underlying bond or transaction covered by the Derivative.

- 8- The System may require collateralization to secure Derivative payment obligations of the counter party if the counter party's rating falls to "A-" or below by one or more major credit rating agencies (e.g. Standard & Poor's). At minimum, such collateralization must meet or exceed the System's exposure to the counter party.
- 9- The Chancellor or the CFO will report annually to the Board regarding the System's outstanding Derivatives and review actual Derivative performance with the System's goals.
- 10- The System will promptly provide all Derivative documentation to any rating agency with a rating on System bonds.

### **Arbitrage Rebate**

Arbitrage is the practice of simultaneously buying and selling an item in different markets to profit from a spread in prices or yields resulting from market conditions.

With reference to municipal bonds, arbitrage profits are made by selling tax-exempt bonds and investing the proceeds in higher-yielding taxable securities. Municipal issuers are allowed to make arbitrage profits under certain, restricted conditions, but Section 103(c) of the Internal Revenue Code prohibits the sale of tax-exempt bonds primarily for the purpose of making arbitrage profits.

Arbitrage rebate refers to the amount of arbitrage that must be "rebated" to the federal government. For example, if an issuer sells bonds at 6%, it can keep all interest earning up to 6%. Interest earnings above 6%, if any, represent "arbitrage" and must be "rebated" to the federal government.

The System will calculate its arbitrage rebate liability on an annual basis. In conformity with generally accepted accounting principles, the System will segregate current arbitrage for future payment or credit to enter such an amount as a liability on its books.

Whenever feasible, the System will structure its financings in such a way as to reduce or eliminate the future arbitrage rebate liability.

### **Bank-Qualified Status**

The Tax-Reform Act of 1986 placed some restrictions on banks and other financial institutions in their ability to lend money to tax-exempt entities. If an issuer (the System, not the individual campuses) borrows less than \$10 million in a calendar year, the System can designate all tax-exempt borrowing (bonds, bank loans, leases, installment purchases, etc.) to be "bank-qualified". A bank-qualified borrowing is not subject to federal taxation for banks, hence, they will lend funds at lower interest rates. If a borrowing is not bank-qualified, the bank will charge a higher rate of interest to compensate for the federal taxes that must be paid.

The System's Business Officers (see page C-10) will make a recommendation to the CFO regarding whether or not to designate the current calendar year bank-qualified. This decision does not need to be made until the Board has taken action authorizing the solicitation for the first financing of the calendar year. Generally, the System's Financial Advisor distributes a memorandum to the Business Officers and other interested parties informing them of pending financings and seeking information about possible future financings.



## Continuing Disclosure of System Financial Information

The System will provide annual financial statements and other pertinent credit information, upon request to and at the expense of the persons making the request. Copies of all periodic reports may also be made available by any other means maintained by the System to provide information to persons wishing to receive it.

The System will provide the rating agencies who maintain a rating on System securities with all material that has a pertinent bearing on System finances.

The System makes no representation as to the frequency with which it may issue bonds in the future.

The System will remain in compliance with Securities & Exchange Commission (“SEC”) Rule 15c2-12 (“Rule”) by filing, and posting to the Municipal Securities Rulemaking Board through its Electronic Municipal Market Access system (EMMA), the Audited Financial Statements; annual information and operating data and notice of those material events which may occur during the year as the Rule requires. Presently, annual financial statements and information subject to continuing disclosure must be submitted within either 270 days of the end of the fiscal year or by the March 31<sup>st</sup> following the end of the fiscal year and notice of material events must be filed within 10 business days. Material events include:

- (1) Principal and interest payment delinquencies;
- (2) Non-payment related defaults, if material;
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (5) Substitution of credit or liquidity providers, or their failure to perform;
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the bonds, or other material events affecting the tax status of the bonds;
- (7) Modifications to rights of bondholders, if material;
- (8) Bond calls, if material, and tender offers;
- (9) Defeasances;
- (10) Release, substitution or sale of property securing repayment of bonds, if material;
- (11) Rating changes;
- (12) Bankruptcy, insolvency, receivership or similar event of the obligated person<sup>3</sup>;

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<sup>3</sup> For the purposes of the event identified in subparagraph (b)(5)(i)(C)(12) of the Rule, the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing body and official or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

- (13) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) Appointment of a successor or additional trustee or the change of a name of a trustee, if material;
- (15) Incurrence<sup>4</sup> of a Financial Obligation of the obligated person, if material, or an agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the obligated person, any of which affect security holders, if material; and
- (16) Default<sup>5</sup>, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of an obligated person, any of which reflect financial difficulties.

In November 1994, the SEC amended the Rule to prohibit any broker, dealer or municipal securities dealer from acting as an underwriter in a primary offering of municipal securities unless (1) the issuer or “obligated person” promises in writing to provide certain ongoing information or (2) the offering satisfies certain exemptions. The Rule impacts nearly every issuer of municipal securities. The stated purpose of the Rule is to deter fraud and manipulation in the municipal securities market by prohibiting the underwriting and subsequent recommendation of securities for which adequate information is not available.

The System intends to fully comply with the Rule, as amended.

### **Prior Redemption**

Bonds issued by the System should be subject to optional redemption no later than ten years from the date of issuance. With each issuance of bonds, the System should assess market conditions to determine if a more aggressive (shorter) call can be obtained without significant impact on the bond interest rate. In order to reduce its outstanding debt, the System should consider prepaying or defeasing outstanding debt when available resources are identified.

### **Investment of Bond Proceeds**

The System will invest bond proceeds in accordance with its Policy Governing Investment of Cash Assets (Title 4, Chapter 10, Section 6) or as provided in the resolution authorizing the issuance of the bonds.

### **Expenditure of Bond Proceeds**

Bond proceeds shall be expended for the projects authorized by the Board of Regents and relevant statutes and Board Policies. As applicable, in the event bond proceeds are accumulated with non-bond proceeds to finance a project, bond proceeds shall be expended first before other institutional funds.

In compliance with the Internal Revenue Code, the System will not issue obligations except for identifiable projects with very good prospects of timely initiation. Obligations will be issued as closely in time as reflected in the cash flow model provided by the institution to initiate a bonded project. The minimum goal will be that within three years 85% of the proceeds will be spent.

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<sup>4</sup> Effective for continuing disclosure undertakings entered into on or after February 27, 2019.

<sup>5</sup> Effective for continuing disclosure undertakings entered into on or after February 27, 2019.

## **Use of Long-term Debt**

### ***Not for Operations***

Long-term debt issued by the System will be used for capital improvements that cannot be funded with operating funds. Long-term debt will not be used for operations.

### ***Maturity Structures***

The term of debt issues should not extend beyond the useful life of the project or equipment financed. The repayment of principal should generally not extend beyond 30 years unless there are compelling factors which make it necessary to extend the term beyond this point.

Debt issued should be structured to provide for either level principal or level total debt service payments. Term bonds may be used only if they are subject to mandatory prior redemption. Deferring the repayment of principal should be avoided except in select instances where it will take a period of time before project revenues are sufficient to pay debt service or where the deferral of principal allows the System to achieve combined level debt service with other outstanding bonds. Ascending debt service should generally be avoided.

### ***Variable Rate Debt***

Variable rate debt will be considered on a case-by-case basis. When used, a cap on the rate is recommended.

### ***Capital Appreciation Bonds***

Capital Appreciation Bonds (“CABS”) should be considered only to achieve level debt service with other outstanding bonds. CABS may also be considered in order to achieve an economic benefit as compared to a traditional current interest bond structure. CABS can only be used if the enabling legislation permits their use. CABS issued by the System should be subject to optional redemption no later than ten years from the date of issuance.

## **Use of Short-term Debt**

Short-term debt, such as revenue anticipation notes (“RANS”), bond anticipation notes (“BANS”) and tax anticipation notes (“TANS”) should generally not be used. Short-term debt can be avoided by maintaining appropriate fund balances and timing bond issues to coincide with construction draws.

## **Refunding**

A refunding is generally the underwriting of a new bond issue whose proceeds are used to redeem an outstanding issue. Key definitions are described as follows:

***Advance Refunding*** – A method of providing for payment of debt service on a bond until the first call date or designated call date. Advance refunding is done by issuing a new bond or using available funds and investing the proceeds in an escrow account consisting of a portfolio of U.S. government securities structured to provide enough cash flow to pay debt service on the refunded bonds.

***Current Refunding*** – Same as an Advance Refunding, except the duration of the escrow account is 90 days or less.

***Gross Savings*** – Difference between debt service on refunding bonds and refunded bonds less any contribution from a reserve or debt service fund.

***Present Value Savings*** – Present value of gross savings discounted at the refunding bond yield to the closing date plus accrued interest less any contribution from a reserve or debt service fund.

Prior to beginning a refunding bond issue the System will review an estimate of the savings achievable from the refunding. The System may also review a pro forma schedule estimating the savings assuming that the refunding is done at various points in the future.

The System will generally consider refunding outstanding bonds if one or more of the following conditions exist:

- Present value savings are at least 3% of the par amounts of the refunding bonds.
- The bonds to be refunded have restrictive or outdated covenants.
- Restructuring debt is deemed to be desirable.

The System may pursue a refunding not meeting the above criteria if:

- Present value savings exceed the costs of issuing the bonds.
- Current savings are acceptable when compared to savings that could be achieved by waiting for more favorable interest rates and/or call premiums.

### **Bond Closings**

All bond closings shall be held in the State of Nevada unless an out-of-state closing is able to be combined with other System business or circumstances dictate otherwise.

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## **Appendix 1**

### **NEVADA SYSTEM OF HIGHER EDUCATION SWAP GUIDELINES AND PROCEDURES ADOPTED PURSUANT TO 17 CFR SECTION 23.450**

It is the purpose of the following policies and procedures to satisfy the requirements of 17 CFR Section 23.450, so that the Nevada System of Higher Education (the "System") is able to make the representation described in paragraph (d)(1)(i) of that Section in connection with Swap transactions.

- A. Selection of a Swap Advisor. The System shall select one or more independent swap advisors to act as a resource in evaluating and monitoring proposed and existing swaps as requested. Additionally, the firm or firms shall act as the System's designated Qualified Independent Representative (QIR) pursuant to Schedule 4 to the ISDA August 2012 Dodd-Frank Supplement which the System has agreed to follow.
- B. Required Advisor Qualifications. To be selected to act as the System's swap advisor and QIR, a firm engaged must demonstrate that it and the persons at the firm providing services to the System meet the following requirements:
  - (i) The firm and the persons at the firm providing services to the System have sufficient knowledge to evaluate the transaction and risks;
  - (ii) Neither the firm nor any person at the firm who provides services to the System is subject to a "statutory disqualification" as that term is used in 17 CFR Section 23.450(b)(1)(ii);
  - (iii) The firm and the persons at the firm providing services to the System are independent of any swap counter party on a swap on which the firm is providing advice to the System within the meaning of 17 CFR Section 23.450(c);
  - (iv) The firm undertakes a duty to act in the best interests of the System;
  - (v) The firm makes appropriate and timely disclosures to the System;
  - (vi) The firm evaluates, consistent with any guidelines provided by the System, fair pricing and the appropriateness of the swap; and
  - (vii) The System's QIR must be subject to restrictions on certain political contributions imposed by the Commodity Futures Trading Commission, the Securities and Exchange Commission or a self-regulatory organization subject to the jurisdiction of the Commodity Futures Trading Commission or the Securities and Exchange Commission.
  - (viii) The firm has written policies and procedures consistent with the requirements above.
- C. Ongoing Monitoring
  - (i) In order to continue to be engaged by the System, the selected QIR must continue to meet, and perform in accordance with, the requirements under B above.
  - (ii) On an annual basis the QIR must confirm its compliance with these policies and procedures in writing.
  - (iii) The performance of each firm selected to be a QIR to the System will be subject to review by the System's Chief Financial Officer, and the Chancellor, or his or her designee.
- D. Contractual Arrangement. Each firm selected to be a QIR to the System must enter into a contract with the System whereby it agrees to comply with the applicable requirements of 17 CFR Section 23.450(b).

Adopted this \_\_\_\_\_, 20\_\_

By \_\_\_\_\_  
Title: Chief Financial Officer

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# **SECTION D**

## **REFUNDING ANALYSIS**

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In December 2017, Congress passed, and the President signed the Tax Cuts and Jobs Act of 2017 (H.R. 1). The law changed provisions governing the issuance of tax-exempt bonds to refinance existing obligations. The most significant of these changes removed the ability of municipal bond issuers to issue tax-exempt bonds to refinance existing debt in situations where the refunded bond is not callable within 90 days of the issuance date of the new debt.

This section of the Debt Summary has been revised from prior years' analysis. It now illustrates the outstanding bonds of NSHE, when those bonds are callable, and the principal amount of bonds which are redeemable prior to maturity.

**Nevada System of Higher Education  
Refunding Analysis of Outstanding Bonds  
June 30, 2019**

Bond Issues Outstanding	Amount Outstanding as of 06/30/2019	Callable Portion of Bonds Outstanding	Interest Rates	Call Date	Maturity Date
2008A Revenue Bonds	\$1,475,000	\$1,475,000	4.25-5.00%	07/01/18	07/01/20
2009A Revenue Bonds	1,430,000	1,430,000	3.63-5.25%	01/01/19	07/01/21
2010A Revenue Bonds	1,550,000	n/a	5.75-6.70%	07/01/20	07/01/20
2011A Revenue Bonds	15,995,000	2,020,000	2.00-5.00%	07/01/21	07/01/24
2012A Revenue Bonds	25,965,000	24,070,000	3.50-5.00%	07/01/22	07/01/32
2012B Revenue Bonds	1,565,000	n/a	2.00-2.75%	n/a	07/01/22
2013A Revenue Bonds	31,440,000	23,880,000	3.00-5.00%	07/01/23	07/01/33
2013B Revenue Bonds	93,745,000	62,995,000	4.00-5.00%	07/01/23	07/01/35
2014A Revenue Bonds	45,180,000	35,245,000	4.00-5.00%	07/01/24	07/01/43
2015A Revenue Bonds	61,455,000	44,195,000	3.00-5.00%	07/01/25	07/01/35
2015B Revenue Bonds	6,105,000	n/a	2.00-3.00%	n/a	07/01/26
2016A Revenue Bonds	57,550,000	40,775,000	3.13-5.00%	07/01/26	07/01/38
2016B Revenue Bonds	13,100,000	8,315,000	2.50-5.00%	07/01/26	07/01/36
2017A Revenue Bonds	25,905,000	19,180,000	3.25-5.00%	07/01/27	07/01/40
2014A Certificates of Participation	31,375,000	26,375,000	2.00-5.00%	07/01/24	07/01/44
2016A Certificates of Participation	59,020,000	42,365,000	2.00-5.00%	07/01/26	07/01/46
2016B Certificates of Participation	48,405,000	39,425,000	1.65-4.72%	07/01/26	07/01/46
2017A Certificates of Participation	28,030,000	22,495,000	3.00-5.00%	07/01/27	07/01/47
2018A Certificates of Participation	12,475,000	10,165,000	3.00-5.00%	07/01/27	07/01/48
2017A Comm. College Rev. Bonds	68,715,000	55,065,000	3.00-5.00%	07/01/27	07/01/47
2015A State GO Revenue Bonds	71,420,000	40,970,000	3.00-5.00%	08/01/25	08/01/32
2013 State COPs (NSC)	47,455,000	42,720,000	4.00-5.00%	12/01/23	06/01/43
<b>TOTALS</b>	<b>\$749,355,000</b>	<b>\$543,160,000</b>			

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# **SECTION E**

**PROPOSED DEBT**

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The following projects have been identified for potential issuance of debt. Issuance of debt is subject to approval by the Board of Regents. The information below has been compiled to assist in capital financing plans.

<b>Project</b>	<b>Campus</b>	<b>Amount Financed</b>	<b>Financing Method</b>	<b>Timing</b>
School of Engineering building	UNLV	\$20,000,000	Univ. Rev. Bonds	Oct. 2019
Mackay Stadium ADA imp.	UNR	3,200,000	Bank Loan/Note	Dec. 2019
Parking garage	UNR	22,000,000	Certs. of Part.	Jan. 2020
Student housing acquisition	UNR	26,000,000	Certs. of Part.	Jan. 2020
Parking garage	UNLV	15,000,000	Univ. Rev. Bonds	April 2020
Medical School building	UNLV	100,000,000	Certs. of Part.	July 2020
School of Business building	UNR	60,000,000	Certs. of Part.	July 2020
Parking garage	UNLV	<u>30,000,000</u>	Univ. Rev. Bonds	Oct. 2021
TOTAL		\$276,200,000		

The tables on the following pages illustrate the pro-forma debt service on the proposed projects.

**UNLV School of Engineering Bonds  
(Universities Revenue Bonds)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2020	\$545,000	\$600,000	\$1,145,000
2021	365,000	778,200	1,143,200
2022	380,000	763,600	1,143,600
2023	395,000	748,400	1,143,400
2024	415,000	732,600	1,147,600
2025	430,000	716,000	1,146,000
2026	445,000	698,800	1,143,800
2027	465,000	681,000	1,146,000
2028	485,000	662,400	1,147,400
2029	505,000	643,000	1,148,000
2030	525,000	622,800	1,147,800
2031	545,000	601,800	1,146,800
2032	565,000	580,000	1,145,000
2033	590,000	557,400	1,147,400
2034	610,000	533,800	1,143,800
2035	635,000	509,400	1,144,400
2036	660,000	484,000	1,144,000
2037	690,000	457,600	1,147,600
2038	715,000	430,000	1,145,000
2039	745,000	401,400	1,146,400
2040	775,000	371,600	1,146,600
2041	805,000	340,600	1,145,600
2042	835,000	308,400	1,143,400
2043	870,000	275,000	1,145,000
2044	905,000	240,200	1,145,200
2045	940,000	204,000	1,144,000
2046	980,000	166,400	1,146,400
2047	1,020,000	127,200	1,147,200
2048	1,060,000	86,400	1,146,400
2049	<u>1,100,000</u>	<u>44,000</u>	<u>1,144,000</u>
<b>TOTAL</b>	<b>\$20,000,000</b>	<b>\$14,366,000</b>	<b>\$34,366,000</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**UNR Mackay Stadium ADA Imp.  
(Bank Loan/Note)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2020	\$315,000	\$56,000	\$371,000
2021	285,000	86,550	371,550
2022	290,000	78,000	368,000
2023	300,000	69,300	369,300
2024	310,000	60,300	370,300
2025	320,000	51,000	371,000
2026	330,000	41,400	371,400
2027	340,000	31,500	371,500
2028	350,000	21,300	371,300
2029	<u>360,000</u>	<u>10,800</u>	<u>370,800</u>
<b>TOTAL</b>	<b>\$3,200,000</b>	<b>\$506,150</b>	<b>\$3,706,150</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 3.0%.

**UNR Parking Garage  
(Certificates of Participation)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2020	\$0	\$440,000	\$440,000
2021	390,000	880,000	1,270,000
2022	410,000	864,400	1,274,400
2023	425,000	848,000	1,273,000
2024	440,000	831,000	1,271,000
2025	460,000	813,400	1,273,400
2026	475,000	795,000	1,270,000
2027	495,000	776,000	1,271,000
2028	515,000	756,200	1,271,200
2029	535,000	735,600	1,270,600
2030	560,000	714,200	1,274,200
2031	580,000	691,800	1,271,800
2032	605,000	668,600	1,273,600
2033	630,000	644,400	1,274,400
2034	655,000	619,200	1,274,200
2035	680,000	593,000	1,273,000
2036	705,000	565,800	1,270,800
2037	735,000	537,600	1,272,600
2038	765,000	508,200	1,273,200
2039	795,000	477,600	1,272,600
2040	825,000	445,800	1,270,800
2041	860,000	412,800	1,272,800
2042	895,000	378,400	1,273,400
2043	930,000	342,600	1,272,600
2044	965,000	305,400	1,270,400
2045	1,005,000	266,800	1,271,800
2046	1,045,000	226,600	1,271,600
2047	1,090,000	184,800	1,274,800
2048	1,130,000	141,200	1,271,200
2049	1,175,000	96,000	1,271,000
2050	<u>1,225,000</u>	<u>49,000</u>	<u>1,274,000</u>
TOTAL	\$22,000,000	\$16,609,400	\$38,609,400

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.



**UNR Student Housing  
(Certificates of Participation)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2020	\$0	\$780,000	\$780,000
2021	465,000	1,040,000	1,505,000
2022	480,000	1,021,400	1,501,400
2023	500,000	1,002,200	1,502,200
2024	520,000	982,200	1,502,200
2025	545,000	961,400	1,506,400
2026	565,000	939,600	1,504,600
2027	585,000	917,000	1,502,000
2028	610,000	893,600	1,503,600
2029	635,000	869,200	1,504,200
2030	660,000	843,800	1,503,800
2031	685,000	817,400	1,502,400
2032	715,000	790,000	1,505,000
2033	740,000	761,400	1,501,400
2034	770,000	731,800	1,501,800
2035	805,000	701,000	1,506,000
2036	835,000	668,800	1,503,800
2037	870,000	635,400	1,505,400
2038	905,000	600,600	1,505,600
2039	940,000	564,400	1,504,400
2040	975,000	526,800	1,501,800
2041	1,015,000	487,800	1,502,800
2042	1,055,000	447,200	1,502,200
2043	1,100,000	405,000	1,505,000
2044	1,145,000	361,000	1,506,000
2045	1,190,000	315,200	1,505,200
2046	1,235,000	267,600	1,502,600
2047	1,285,000	218,200	1,503,200
2048	1,335,000	166,800	1,501,800
2049	1,390,000	113,400	1,503,400
2050	<u>1,445,000</u>	<u>57,800</u>	<u>1,502,800</u>
<b>TOTAL</b>	<b>\$26,000,000</b>	<b>\$19,888,000</b>	<b>\$45,888,000</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**UNLV Parking Garage (2020)**  
**(Universities Revenue Bonds)**  
**Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2021	\$140,000	\$750,000	\$890,000
2022	300,000	594,400	894,400
2023	310,000	582,400	892,400
2024	320,000	570,000	890,000
2025	335,000	557,200	892,200
2026	350,000	543,800	893,800
2027	360,000	529,800	889,800
2028	375,000	515,400	890,400
2029	390,000	500,400	890,400
2030	405,000	484,800	889,800
2031	425,000	468,600	893,600
2032	440,000	451,600	891,600
2033	460,000	434,000	894,000
2034	475,000	415,600	890,600
2035	495,000	396,600	891,600
2036	515,000	376,800	891,800
2037	535,000	356,200	891,200
2038	555,000	334,800	889,800
2039	580,000	312,600	892,600
2040	600,000	289,400	889,400
2041	625,000	265,400	890,400
2042	650,000	240,400	890,400
2043	680,000	214,400	894,400
2044	705,000	187,200	892,200
2045	735,000	159,000	894,000
2046	760,000	129,600	889,600
2047	795,000	99,200	894,200
2048	825,000	67,400	892,400
2049	<u>860,000</u>	<u>34,400</u>	<u>894,400</u>
<b>TOTAL</b>	<b>\$15,000,000</b>	<b>\$10,861,400</b>	<b>\$25,861,400</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**UNLV School of Medicine Building  
(Certificates of Participation)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2021	\$1,785,000	\$4,000,000	\$5,785,000
2022	1,855,000	3,928,600	5,783,600
2023	1,930,000	3,854,400	5,784,400
2024	2,005,000	3,777,200	5,782,200
2025	2,085,000	3,697,000	5,782,000
2026	2,170,000	3,613,600	5,783,600
2027	2,255,000	3,526,800	5,781,800
2028	2,345,000	3,436,600	5,781,600
2029	2,440,000	3,342,800	5,782,800
2030	2,540,000	3,245,200	5,785,200
2031	2,640,000	3,143,600	5,783,600
2032	2,745,000	3,038,000	5,783,000
2033	2,855,000	2,928,200	5,783,200
2034	2,970,000	2,814,000	5,784,000
2035	3,085,000	2,695,200	5,780,200
2036	3,210,000	2,571,800	5,781,800
2037	3,340,000	2,443,400	5,783,400
2038	3,475,000	2,309,800	5,784,800
2039	3,610,000	2,170,800	5,780,800
2040	3,755,000	2,026,400	5,781,400
2041	3,905,000	1,876,200	5,781,200
2042	4,065,000	1,720,000	5,785,000
2043	4,225,000	1,557,400	5,782,400
2044	4,395,000	1,388,400	5,783,400
2045	4,570,000	1,212,600	5,782,600
2046	4,755,000	1,029,800	5,784,800
2047	4,945,000	839,600	5,784,600
2048	5,140,000	641,800	5,781,800
2049	5,345,000	436,200	5,781,200
2050	<u>5,560,000</u>	<u>222,400</u>	<u>5,782,400</u>
<b>TOTAL</b>	<b>\$100,000,000</b>	<b>\$73,487,800</b>	<b>\$173,487,800</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**UNR Business School Building  
(Certificates of Participation)  
Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2021	\$1,070,000	\$2,400,000	\$3,470,000
2022	1,110,000	2,357,200	3,467,200
2023	1,155,000	2,312,800	3,467,800
2024	1,205,000	2,266,600	3,471,600
2025	1,250,000	2,218,400	3,468,400
2026	1,300,000	2,168,400	3,468,400
2027	1,355,000	2,116,400	3,471,400
2028	1,410,000	2,062,200	3,472,200
2029	1,465,000	2,005,800	3,470,800
2030	1,525,000	1,947,200	3,472,200
2031	1,585,000	1,886,200	3,471,200
2032	1,645,000	1,822,800	3,467,800
2033	1,715,000	1,757,000	3,472,000
2034	1,780,000	1,688,400	3,468,400
2035	1,855,000	1,617,200	3,472,200
2036	1,925,000	1,543,000	3,468,000
2037	2,005,000	1,466,000	3,471,000
2038	2,085,000	1,385,800	3,470,800
2039	2,165,000	1,302,400	3,467,400
2040	2,255,000	1,215,800	3,470,800
2041	2,345,000	1,125,600	3,470,600
2042	2,440,000	1,031,800	3,471,800
2043	2,535,000	934,200	3,469,200
2044	2,635,000	832,800	3,467,800
2045	2,740,000	727,400	3,467,400
2046	2,850,000	617,800	3,467,800
2047	2,965,000	503,800	3,468,800
2048	3,085,000	385,200	3,470,200
2049	3,210,000	261,800	3,471,800
2050	<u>3,335,000</u>	<u>133,400</u>	<u>3,468,400</u>
<b>TOTAL</b>	<b>\$60,000,000</b>	<b>\$44,093,400</b>	<b>\$104,093,400</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**UNLV Parking Garage (2021)**  
**(Universities Revenue Bonds)**  
**Pro-Forma Debt Service Schedule**

<b>Fiscal Year Ending June 30<sup>1</sup></b>	<b>Principal</b>	<b>Interest<sup>2</sup></b>	<b>Total</b>
2022	\$820,000	\$900,000	\$1,720,000
2023	550,000	1,167,200	1,717,200
2024	575,000	1,145,200	1,720,200
2025	595,000	1,122,200	1,717,200
2026	620,000	1,098,400	1,718,400
2027	645,000	1,073,600	1,718,600
2028	670,000	1,047,800	1,717,800
2029	695,000	1,021,000	1,716,000
2030	725,000	993,200	1,718,200
2031	755,000	964,200	1,719,200
2032	785,000	934,000	1,719,000
2033	815,000	902,600	1,717,600
2034	850,000	870,000	1,720,000
2035	880,000	836,000	1,716,000
2036	920,000	800,800	1,720,800
2037	955,000	764,000	1,719,000
2038	990,000	725,800	1,715,800
2039	1,030,000	686,200	1,716,200
2040	1,075,000	645,000	1,720,000
2041	1,115,000	602,000	1,717,000
2042	1,160,000	557,400	1,717,400
2043	1,205,000	511,000	1,716,000
2044	1,255,000	462,800	1,717,800
2045	1,305,000	412,600	1,717,600
2046	1,360,000	360,400	1,720,400
2047	1,410,000	306,000	1,716,000
2048	1,470,000	249,600	1,719,600
2049	1,530,000	190,800	1,720,800
2050	1,590,000	129,600	1,719,600
2051	<u>1,650,000</u>	<u>66,000</u>	<u>1,716,000</u>
<b>TOTAL</b>	<b>\$30,000,000</b>	<b>\$21,545,400</b>	<b>\$51,545,400</b>

<sup>1</sup> Payments made on July 1 are considered paid in the prior fiscal year.

<sup>2</sup> Interest rate estimated at 4.0%.

**Pro-Forma Debt Service Coverage  
Universities Revenue Bonds**

<b>Fiscal Year Ending June 30</b>	<b>Existing Debt Service</b>	<b>Pro-Forma 2019 Bonds</b>	<b>Pro-Forma 2020 Bonds</b>	<b>Pro-Forma 2021 Bonds</b>	<b>Total</b>
2020	\$36,410,531	\$1,144,063	\$0	\$0	\$37,554,594
2021	34,256,796	1,144,700	890,000	0	36,291,496
2022	34,026,946	1,145,150	894,400	1,720,000	37,786,496
2023	34,145,346	1,145,150	892,400	1,717,200	37,900,096
2024	33,682,766	1,144,700	890,000	1,720,200	37,437,666
2025	32,970,756	1,143,800	892,200	1,717,200	36,723,956
2026	28,679,581	1,147,450	893,800	1,718,400	32,439,231
2027	27,455,281	1,145,500	889,800	1,718,600	31,209,181
2028	27,452,156	1,148,100	890,400	1,717,800	31,208,456
2029	27,449,656	1,145,100	890,400	1,716,000	31,201,156
2030	27,528,706	1,146,650	889,800	1,718,200	31,283,356
2031	26,517,438	1,147,600	893,600	1,719,200	30,277,838
2032	26,524,088	1,147,950	891,600	1,719,000	30,282,638
2033	25,300,463	1,147,700	894,000	1,717,600	29,059,763
2034	20,865,213	1,146,850	890,600	1,720,000	24,622,663
2035	20,860,163	1,145,400	891,600	1,716,000	24,613,163
2036	9,977,488	1,143,350	891,800	1,720,800	13,733,438
2037	9,007,444	1,145,700	891,200	1,719,000	12,763,344
2038	9,005,306	1,147,300	889,800	1,715,000	12,757,406
2039	4,739,344	1,148,150	892,600	1,716,200	8,496,294
2040	4,741,806	1,143,250	889,400	1,720,000	8,494,456
2041	2,849,225	1,147,750	890,400	1,717,000	6,604,375
2042	2,844,850	1,146,350	890,400	1,717,400	6,599,000
2043	2,847,625	1,144,200	894,400	1,716,000	6,602,225
2044	0	1,146,300	892,200	1,717,800	3,756,300
2045	0	1,147,500	894,000	1,717,600	3,759,100
2046	0	1,147,800	889,600	1,720,400	3,757,800
2047	0	1,147,200	894,200	1,716,000	3,757,400
2048	0	1,145,700	892,400	1,719,600	3,757,700
2049	0	1,143,300	894,400	1,720,800	3,758,500
2050	0	0	0	1,719,600	1,719,600
2051	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,716,000</u>	<u>1,716,000</u>
TOTAL	\$510,138,974	\$34,379,713	\$25,861,400	\$51,544,600	\$621,924,687
				MADS	\$37,900,096
				Pro-Forma Coverage <sup>1</sup>	7.01
				Pro-Forma Statutory Coverage <sup>2</sup>	1.82

<sup>1</sup> Based on FY2018-19 pledged revenues of \$265,535,506.

<sup>2</sup> Based on FY2018-19 statutory pledged revenues of \$68,884,650.

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# **SECTION F**

## **ARBITRAGE REBATE**

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## Nevada System of Higher Education Arbitrage Rebate Summary

Bond Issue	Campus	Final Maturity Date	Original Amount	Yield (%) <sup>1</sup>	Rebate Payment Due <sup>2</sup> (if any)	Accrued Liability
Promissory Note, Series 2014A	UNR	07/01/19	12,000,000	Variable <sup>2</sup>	02/26/19	n/a
Promissory Note, Series 2014B	UNR	01/01/20	16,000,000	Variable <sup>3</sup>	08/14/19	n/a
Promissory Note, Series 2015A	UNLV	06/03/24	19,900,000	Variable <sup>4</sup>	12/15/20	n/a
Certificates of Participation, Series 2016A	UNR/UNLV	07/01/46	63,095,000	3.13810	02/04/21	0.00
Promissory Note, Series 2017C	UNLV	07/01/23	15,297,000	1.97930	11/09/22	0.00
Certificates of Participation, Series 2017A	UNR	07/01/47	28,890,000	3.23010	11/14/22	0.00
Comm. College Rev. Bonds, Series 2017A	CSN	07/01/47	70,915,000	3.07480	11/21/22	0.00
Certificates of Participation, Series 2018A	TMCC	07/01/48	12,475,000	3.42420	04/05/23	0.00

<sup>1</sup> As reported in 8038-G filed with IRS at issuance.

<sup>2</sup> 60 days after the date indicated.

<sup>3</sup> The yield on the 2014A Promissory Note is calculated prior to the rebate payment due date.

<sup>4</sup> The yield on the 2014B Promissory Note is calculated prior to the rebate payment due date.

<sup>5</sup> The yield on the 2015A Promissory Note is calculated prior to the rebate payment due date.

The System is tracking ongoing arbitrage liability of the obligations listed in the table above. If any liability is owed to the IRS on a payment due date, the System will transfer funds available to make such a payment. See page C-14 for more information on the System's arbitrage rebate compliance policies.

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# **SECTION G**

**TAX-EXEMPT COMPLIANCE**

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## **TAX-EXEMPT POST-ISSUANCE COMPLIANCE**

The following information illustrates the System's voluntary compliance to various IRS suggested post-issuance compliance guidelines. This section is loosely formatted after IRS Form 13907 – "Tax-Exempt Bond Financings Compliance Check Questionnaire".

### **Part I – Post-Issuance Compliance – General**

1. The System has written procedures and guidelines that ensure that their tax-exempt financings remain in compliance with various federal tax requirements after the bonds are issued. The System generally updates annually the "Debt Summary and Guidelines" document, which this subsection is a part of. This document includes guidelines on a variety of bond pre- and post-issuance topics. For example, the System's procedures regarding Arbitrage Rebate compliance is on page C-14.
  - A. To assure the proper and timely use of bond proceeds and bond-financed property, The System prepares annual arbitrage rebate calculations. The System also sends to the Business Officers (See page C-10 regarding Business Officers) an annual letter, reminding them that facilities financed with tax-exempt debt are subject to certain limitations and compliance with bond covenants. See Appendix 1 to Section F for the form of the letter that is sent annually to the business officers.
  - B. The System monitors arbitrage related issues annually by reviewing the arbitrage rebate calculations.
  - C. The System's Bond Counsel prepares and files IRS Form 8038-G upon issuance of tax-exempt debt. The System monitors future filing requirements annually when they review the arbitrage rebate calculations.
2. As noted on page C-9, the Vice-Chancellor for Finance is the Chief Financial Officer of the System, and is ultimately responsible for the post-issuance compliance of the System's debt. The Director of Banking and Investments coordinates the administration and issuance of debt, as designated by the Vice-Chancellor for Finance. During the bond issuance process, the Director of Banking and Investments works closely with financial officers from the institution who will be the beneficiary of such debt.
3. When the System incurs debt, multiple participants are involved. In addition to System staff, the institution that is the beneficiary of the debt will have significant involvement with various debt related decisions. "Initial Review and Communication of Intent" "Authorization of Debt" and "Business Officers" on pages C-9 and C-10, describe various debt coordination issues.

Records relating to debt are maintained at both the System office and the participating institution.
4. Educational resources regarding post-issuance limitations are provided to the Business Officers (see page C-10) as specific questions arise. In addition, post bond issuance training has been provided in the past, and is available for presentation as needed in the future. The Business Officers are invited to request information when they receive a letter requesting updated debt information as explained in Section 1.A., above.
5. A and B. The System's tax-exempt status has never been revoked or reclassified.
6. A and B. The System is aware of their ability to voluntarily correct post-issuance compliance failures.

## **Part II – General Record Keeping**

7. The System maintains records pertaining to their tax-exempt bonds for the life of the bond issue, plus three additional years. If the bonds are called, the System keeps the records for three years past the final redemption date.
8. Since 2006, the System has kept bond records in both paper and electronic format.
9. The System maintains the following records:
  - All correspondence between the System and the IRS
  - Transcript of proceedings for transaction  
(Which includes: IRS Form 8038, or similar document as appropriate, copies of all appropriate Board resolutions, Federal Tax Certificate, Offering Document, etc.)
  - Audited Financial Statements
  - Trustee bank statements for financings
  - Correspondence directly related to tax-exempt financings

## **Part III – Investments and Arbitrage Compliance**

10. The System maintains documentation of the allocation of bond proceed investments and investment earnings. This information is also maintained with the System's arbitrage calculations.
11. The System also maintains records of any bond proceed investment bidding, etc.
12. The System maintains copies of the bond yield calculation, and computation of rebate or yield reduction payments and related reports with its arbitrage calculations.
13. The System reviews any applicable yield restriction requirements annually when the arbitrage calculations are updated. If yield restriction activity is required, then bond counsel is consulted, and the System takes appropriate action to remain in full compliance with IRS rules.
14. The System reviews bond financings for the application of a temporary period or spending exceptions each year as part of the annual arbitrage calculation process. Generally, the System contracts with a third party to perform their arbitrage rebate calculations. The System directs their arbitrage advisor to review the transactions for any exemptions prior to performing the arbitrage calculations.

## **Part IV – Expenditures and Assets**

15. The System maintains documentation of allocations of bond-financed proceeds to expenditures. Such documentation is part of the System's arbitrage record keeping activities.
16. A bond issuance budget is prepared prior to the issuance of tax-exempt bonds.
17. The institutions maintain copies of requisitions, draw requests, invoices and cancelled checks relating to bond proceeds during the construction period.
18. The institutions maintain copies of all construction contracts of tax-exempt bond financed facilities. In the case of projects administered by the State of Nevada, such documents are maintained by the State Public Works Board.

19. Institutions are responsible for maintaining records relating to expenditure reimbursements incurred prior to bond issuance, for which the institution intends to be reimbursed with tax-exempt bond proceeds.
20. The System maintains a list of all tax-exempt debt financed facilities and/or equipment. This list is updated annually and is found in section B of this document.
21. The institutions maintain depreciation schedules for bond-financed depreciable property.
22. The institutions maintain documentation that tracks the purchase and sale of bond-financed assets.

**Part V – Private Business Use**

23. The institutions are responsible for maintaining records of all unrelated trade or business activities allocated to tax-exempt bond financed facilities.
24. The institutions are responsible for maintaining records related to trade or business activities by third parties allocated to tax-exempt bond financed facilities.
25. The System has entered into some of the following arrangements for bond-financed property:
  - Management and other service agreements
  - Research contracts
  - Naming rights contracts
  - Ownership
  - Leases
  - Subleases
  - Leasehold improvement contracts
  - Joint venture arrangements
  - Limited Liability corporation arrangements
  - Partnership arrangements



26. Prior to entering into such arrangements, the System and/or the institution consults with bond counsel to determine if there is an impact on outstanding or proposed tax-exempt debt. The System also requests that bond counsel provide details of any post-issuance obligations. Copies of such agreements will be maintained by the participating institution.
27. In general, to ensure that its tax-exempt bonds remain exempt after they are issued, the System takes the following measures:
- Includes various business officers involved in the tax-exempt issuance process. This helps them to understand the various post-issuance compliance not only for the pending issue, but serves as a reminder for all outstanding issues.
  - Educates personnel as to the responsibilities of maintaining compliance with various tax-exempt covenants. The System has promoted educational seminars in the past on various post-issuance issues, and will do so in the future as needed.
  - Calculates annual arbitrage rebate liability. The results of the annual calculation are shared with the System and the institution.
  - Sends a letter to each institution on an annual basis, which requests information as to post-issuance activity, and reminds each institution of their post-issuance tax-exempt limitations.
  - Assembles a working group (consisting of: The System, the institution, bond counsel, financial advisor, and others as needed) to discuss the transaction and related limitations/rules if tax-exempt debt is being considered as a part of unconventional transactions.

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## Appendix 1

### Form of Annual Letter to Business Officers

*The following letter is sent annually to the various NSHE Business Officers as well as others who have debt related responsibilities.*

Date

Name/title of Business Officer  
Institution

re: Post Issuance Compliance of Tax-Exempt Debt

Dear (insert name)

In order for the Nevada System of Higher Education ("NSHE") to issue tax-exempt debt at favorable interest rates, various Federal tax rules and regulations must be followed. These were likely discussed when the debt was originally issued. In some situations, it may have been prudent for NSHE to issue debt that was not tax-exempt due to certain restrictions.

When tax-exempt debt was initially issued, Bond Counsel provided an opinion to investors/lenders that the debt qualified for tax-exempt status. However, this opinion is based on the assumption that NSHE and the institutions who are the beneficiary of the debt, continuously comply with various covenants made at the time the debt was originally issued. NSHE covenanted in the bond resolution that it will take all steps to comply with the requirements of the Federal Tax Code to the extent necessary to maintain the tax-exempt status of the debt.

The Federal Tax Code requirements relate to, among other things, the use of the facility being financed, and the use of management contracts. NSHE coordinates Arbitrage Rebate compliance. You are strongly encouraged to consult with me before you pursue changing the use of the facility or negotiating a management contract for a tax-exempt facility.

Below are some examples (for tax-exempt financed facilities) of situations that would need to be analyzed further to determine if there are any compliance issues:

- A building that has been used for classrooms, is converted to research, including private or Federal Government research activities.
- A food court is being planned.
- A private manager is being considered to run a parking garage
- A facility is being rented out for private use (concerts, etc.)

If you are aware of a change in the use of the facility or the imposition of a management contract, please contact me at your earliest convenience to discuss any impacts on the tax-exempt status of the debt.

Each institution is required to maintain documentation that tracks the purchase and sale of bond-financed assets. Also, each institution is required to maintain records of all unrelated trade or business activities allocated to tax-exempt bond financed facilities as well as records related to trade or business activities by third parties allocated to tax-exempt bond financed facilities.

Please contact me with any questions.

Sincerely,

Director of Banking and Investments

## Appendix 2

### Supplemental Written Procedures for Issuances of Direct Pay Build America Bonds ("BABs") and Tax Credit Bonds by the Nevada System of Higher Education (the "System")

The following supplemental procedures apply to issues of BABs, including but not limited to Direct Pay Build America Bonds and Direct Pay Recovery Zone Economic Development Bonds, and Tax Credit Bonds (collectively, "Bonds") unless the chief financial officer of the System (the "CFO") otherwise directs for a particular issue of Bonds, based on particular circumstances that relate to those Bonds, changes in guidance promulgated by the IRS, changes in law, the advice of bond counsel, or other factors the CFO deems relevant.

These procedures are intended to supplement and explain the procedures already followed by the System and evidenced in writing by the certificate of the Underwriter described in Section A2 below, the federal tax certificate (the "Tax Certificate"), the Form 8038-B or 8038-TC, as applicable, the Form 8038-CP and the instructions thereto, and to provide a more formal record of the procedures followed and to be followed by NSHE when it issues BABs or Tax Credit Bonds.

A. Procedures to ensure BABs and Tax Credit Bonds are issued with no more than a de minimis premium.

1. In a negotiated sale: the lead underwriter will be notified in writing (by being given a copy of these supplemental procedures and the certificate described in Section A2 below) prior to the bond sale that either (1) none of the maturities of the BABs or Tax Credit Bonds may be issued at a premium or (2) none may be issued with more than a "de minimis amount" of premium. The lead underwriter is responsible for discussing with bond counsel the computation of the "de minimis" amount of premium under Section A3 hereof.

In a competitive sale, either premiums will be prohibited, or a maximum premium (or premiums) which bond counsel has determined is not in excess of the "de minimis" premium under Section A3 hereof will be specifically listed in the official notice of bond sale.

2. The lead underwriter in a negotiated sale or successful bidder in a competitive sale will be required to certify that none of the Bonds were issued at a price in excess of par (if premiums are prohibited) or in excess of par plus a de minimis amount of premium as calculated under Section A3 hereof (herein the "Maximum Price"). This certificate may take the form of a certificate to the effect that none of the Bonds had an issue price in excess of the Maximum Price, that none of the Bonds were or will be sold to the public (excluding bond houses, brokers or similar persons acting in the capacity of underwriters or wholesalers) at a price in excess of the Maximum Price, or other form acceptable to bond counsel.

3. For purposes of this policy, "de minimis" amount of premium will be calculated to be **one-quarter** of one percent less than the maximum de minimis amount of premium as calculated under the Internal Revenue Code and regulations promulgated thereunder applicable to Bonds.

B. Procedures designed to comply with other BAB and Tax Credit requirements or provisions in Federal Tax Certificate. The provisions of the Tax Certificate executed by the System at the time of closing of the Bonds constitutes the System's written procedures designed to ensure that Bonds remain in compliance with the following federal tax requirements after the Bonds are issued:

1. Timely expenditure of bond proceeds.
2. Correct calculation of available project proceeds.
3. Arbitrage yield restriction and rebate.

4. Cost of issuance financed by the Bonds does not exceed 2% of proceeds of sale.
5. (Tax Credit Bonds only): Prevailing wage requirements
6. (Tax Credit Bonds only): No conflict of interest requirement
7. (Tax Credit Bonds only): Redemption of non-qualified Bonds requirement.

C. Procedures designed to comply with BAB and Tax Credit Bond requirements contained in 8038-G, 8038-B or 8038-TC.

The exhibit to the Form 8038-B or 8038-TC filed in connection with the Bonds which shows the amount of interest payable on each payment date and the amount of the refundable credit, will be prepared by the financial advisor or lead underwriter on the issue, and will be examined by the System. The preparation and examination of this exhibit will constitute the System's written procedure to ensure the proper determination of the amount of interest payable on each interest payment date and the proper amount of the refundable credit reportable on Form 8038-CP.

D. Procedures designed to comply with Capital Expenditure Requirements and Other Specific Expenditure Requirements. The provisions of the Tax Certificate and an examination and approval as a capital expenditure of proposed expenditures of BAB and Tax Credit Bond proceeds by a person with knowledge of the federal tax rules as to what expenditures constitute "capital expenditures" for federal tax purposes constitute the System's written procedures that the Bonds remain in compliance with the rules that the applicable amount of available proceeds (100% less any amount of reasonably required reserve, in the case of BABs) be used only for capital expenditures. The provisions of the Tax Certificate and an examination and approval of each proposed expenditure of Tax Credit Bond proceeds as being for a "qualified purpose" for that Tax Credit Bond by a person with knowledge of the qualified purpose for which the Tax Credit Bonds were issued constitute the System's written procedures that the Bonds remain in compliance with the requirement that available proceeds be used only for qualified purposes.

E. Procedures designed to comply with BAB and Tax Credit requirements in 8038-CP and instructions thereto.

The instructions for filing a Form 8038-CP, which describe how and when to file the Form 8038-CP will constitute the System's written procedures for timely filing of the Form 8038-CP. The CFO shall be responsible for making such filing or causing it to be made. Payment of the refundable credit will be made to the System or the trustee for the System, as determined by the CFO, unless otherwise provided by the CFO. The System's completion and examination of the Form 8038-CP constitute its procedure for ensuring that the refundable credit is made to the proper person.

F. Ongoing Procedures.

This policy and to the extent incorporated herein the Tax Certificate for the issue, the Form 8038-B, or 8038-TC for the issue, the Form 8038-CPs and instructions therefor for the issue, will be reviewed by the CFO or his designee (i) on or prior to each five-year anniversary date of the issue date of the Bonds; (ii) on or within 30 days of the date the Bonds are retired, defeased or refunded; (iii) on or prior to the dates of any rebate payment made if that date is not within 60 days of one of the date mentioned in (I) or the date the Bonds are retired, defeased or refunded; (iv) at the time of any change in use of any asset that was funded with a material amount of Bond proceeds; and (v) at the time of the occurrence or non-occurrence of any other event that could affect the tax status of the Bonds as indicated in the Tax Certificate (e.g., the occurrence of an event which the Tax Certificate represents will not occur or is not expected to occur, or the non-occurrence of an event the Tax Certificate represents will or is expected to occur). This review will be made for the purposes of identifying any possible violation of federal tax requirements related to BABs or Tax Credit Bonds and to ensure the timely correction of those violations for remedial action described in Treasury Regulations or through the Tax-Exempt Bonds Voluntary Closing Agreement Program. If a possible violation is identified, the CFO will consult with the System's bond counsel.

G. Record Keeping.

Records necessary to support the status of Bonds as qualified to receive a refundable credit or other tax credit will be maintained for the life of the Bonds, and any bonds that refund the Bonds, plus three years. These records may be maintained on paper, or by electronic media, or by any combination thereof.

Adopted: \_\_\_\_\_, \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

### **Appendix 3**

#### **Procedures for ongoing compliance with Sections 141 and 148 of the Internal Revenue Code**

These procedures and the tax certificate and Form 8038-G filed for each issue of tax-exempt bonds will be reviewed by the Chief Financial Officer or another officer or employee of the Nevada System of Higher Education designated by the Chief Financial Officer in writing (the "Compliance Officer") (i) on or prior to each five-year anniversary date of the issue date of the bonds; (ii) on or within 30 days of the date the bonds are retired, defeased or refunded; (iii) on or prior to the date of any rebate payment made if that date is not within 60 days of one of the dates mentioned in (i) or the date the bonds are retired, defeased or refunded; (iv) at the time of any change in use of any asset that was funded with a material amount of bond proceeds; and (v) at the time of the occurrence or non-occurrence of any other event that could affect the tax status of the Bonds as indicated in the tax certificate (e.g., the occurrence of an event which the tax certificate represents will not occur or is not expected to occur, or the non-occurrence of an event the tax certificate represents will or is expected to occur). In addition, the Compliance Officer will conduct annual compliance checks of the current status of the proceeds of each issue of tax-exempt bonds and the current use of the facilities financed by tax-exempt bonds. These reviews will be made for the purposes of identifying any possible violation of federal tax requirements and to ensure the timely correction of those violations with remedial action described in the regulations of the United States Department of the Treasury or through the Tax-Exempt Bonds Voluntary Closing Agreement Program. If a possible violation is identified, the Compliance Officer will consult with bond counsel as to the appropriate steps to take.

In addition, it is the Nevada System of Higher Education's policy to retain rebate consultants to assist in monitoring the compliance of its bond issues with the rebate and yield restriction requirements of Section 148 of the Internal Revenue Code in appropriate circumstances (e.g., where investments are made during a temporary period at a yield in excess of the bond yield, and if any the investments above the bond yield extend beyond the temporary period). If any event of non-compliance is discovered by the Compliance Officer, by the rebate consultants, or otherwise, the Compliance Officer will consult with bond counsel as to the appropriate action to take to remedy the non-compliance, including payment of late payment interest and penalties on rebate and yield reduction payments and through use of the Tax-Exempt Bond Voluntary Closing Agreement Program.

As part of the training of any successor, the Chief Financial Officer and Compliance Officer will review the requirements of these procedures, the tax certificate and Form 8038-G for each issue of tax-exempt bonds with the successor as part of the successor's transition into office. Any successor Chief Financial Officer will be encouraged to adopt these procedures as his or her own.

The Nevada System of Higher Education will retain all records relating to tax-exempt bonds and compliance with the requirements of the Internal Revenue Code until at least three years after the last bond of an issue (or any later issue that refinances the issue) is paid and discharged.

Adopted:           October 23, 2011

By: \_\_\_\_\_  
Chief Financial Officer

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# **SECTION H**

## **GASB 88 CHECKLIST**

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**Nevada System of Higher Education  
GASB Statement No. 88 Checklist**

Obligation	Maturity	Outstanding (\$)	Unused Line of Credit (\$)	Pledged Assets?	Finance-Related EOD Consequences?		Finance- Related Termination Events?	Subjective Acceleration Clause(s)?
					Interest Rate/Other	Acceleration		
UNR – Student Achievement Center Note	07/01/19	\$399,000	n/a	No	No	No	No	No
DRI – Dell Quest Lease	07/01/19	23,195	n/a	Yes-Note IX	No	No	No	No
DRI – Six Degrees Capital Lease	09/10/19	89,161	n/a	Yes-Note X	Yes-Note X	Yes-Note X	Yes-Note X	Yes-Note X
UNR – Fitness Center Note	01/01/20	2,466,000	n/a	No	No	No	No	No
DRI – Dell PowerVault Lease	11/01/20	61,924	n/a	Yes-Note IX	No	No	No	No
UNR – Scoreboard Note	03/01/21	675,000	n/a	No	Yes-Note II	No	No	No
DRI – Dell Supercomputer Lease	05/01/21	120,400	n/a	Yes-Note IX	No	No	No	No
DRI – Citrix Lease	08/01/21	183,455	n/a	Yes-Note IX	No	No	No	No
GBC – Apartment Complex Note	11/01/21	405,889	n/a	No	Yes-Note VIII	Yes-Note VIII	No	No
DRI – Southern Nevada Science Park Note	12/01/21	376,682	n/a	No	Yes-Note VIII	Yes-Note VIII	No	No
UNR – Fine Arts Bldg. Note	07/01/22	7,586,000	n/a	No	Yes-Note III	No	No	No
UNLV – HAB Note	07/01/22	9,275,000	n/a	No	Yes-Note IV	No	No	No
DRI – CRVB	07/01/22	320,000	n/a	No	Yes-Note VIII	Yes-Note VIII	No	No
CSN – Cisco Equipment Lease	10/14/22	3,257,737	n/a	Yes-Note VII	Yes-Note VII	Yes-Note VII	No	No
CSN – Las Vegas “A” & “B” Note	06/01/23	4,226,000	n/a	No	Yes-Note VI	No	No	No
UNLV – UNLV Medicine Note	07/01/23	13,333,000	n/a	No	Yes-Note V	No	No	No
UNLV – Football Complex Note	07/01/23	12,690,000	n/a	No	No	No	No	No
UNR – MEB Refunding Note	01/02/26	5,930,000	n/a	No	Yes-Note II	No	No	No
UNR – 450 Sinclair Lease	01/01/27	913,989	n/a	Yes-Note I	No	No	No	No

**Notes to GASB Statement No. 88 Checklist:**

- I. Property located at 450 Sinclair Street represents additional security for the lease.
- II. Upon the occurrence and continuance of an Event of Default, the Note will bear interest at the Default Rate, which consists of the summation of the following: (A) three percent (3.0%), and (B) the greatest of (i) the Prime Rate (as defined in Exhibit A of the Note) plus one percent (1.0%), (ii) the Federal Funds Rate (as defined in Exhibit A of the Note) plus two percent (2.0%), and (iii) seven percent (7.0%).
- III. Upon the occurrence and continuance of an Event of Default, the Note will bear interest at a rate of 6.02%.
- IV. Upon the occurrence and continuance of an Event of Default, the Note will bear interest at the Default Rate, which is defined Continuing Covenant Agreement as the summation of the following: (A) three percent (3.0%), and (B) the greatest of (i) the Prime Rate (as defined in the Continuing Covenant Agreement) plus one percent (1.0%), (ii) the Federal Funds Rate (as defined in the Continuing Covenant Agreement) plus two percent (2.0%), and (iii) seven percent (7.0%).
- V. Upon the occurrence of an Event of Default, the interest rate shall increase to the Default Rate, which is the summation of the following: (A) four hundred basis point (4.0%), and (B) the greatest of (i) the Prime Rate (as defined in the Credit Agreement) plus two percent (2.0%), the Monthly Reset LIBOR Rate (as defined in the Credit Agreement) plus two percent (2.0%), and (iii) five percent (5.0%).
- VI. Upon occurrence of an Event of Default, the interest rate on the Note may be increased by three hundred basis points (3.0%) per annum.
- VII. Assets pledged include equipment purchased with proceeds of the lease, as described in Exhibit A to the lease agreement. Upon Event of Default, payments due in the current fiscal year are accelerated and immediately due. Interest rate increases to lesser of 12% or maximum allowed by law.
- VIII. If an Event of Default shall have occurred, the owner may declare the unpaid principal balance of the Note, together with interest thereon, to be then fully due and payable.
- IX. Assets pledged include equipment purchased with proceeds of the lease, as described in Exhibit A to the lease agreement.
- X. Assets pledged include equipment purchased with proceeds of the lease, as described in Exhibit A to the lease agreement. Upon an event of default, the Agreement will accrue interest at a rate of twelve percent (12.0%), the lender may terminate the Agreement, and any amounts due under the Agreement are immediately due and payable.

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# **SECTION I**

## **DEFINITIONS**

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## DEFINITIONS

**Additional Bonds Test** – A requirement that future additional bonds, that will have a claim to revenues already pledged to outstanding revenue bonds, can only be issued if certain financial or other requirements are met.

**Advance Refunding** – A method of providing for the payment of debt service on a bond until the first call date or maturity. Advance refundings are generally pursued to achieve debt service savings for the issuer. Advance refundings are done by issuing a new municipal bond and investing the proceeds in a portfolio of U.S. government securities structured to provide enough cash flow to pay debt service on the refunded bonds. The old issue can then be said to be advance refunded.

**Amortization** – The payment of debt through scheduled payments.

**Arbitrage** – Generally, transactions by which securities are bought and sold in different markets at the same time for the sake of the profit arising from a difference in prices in the two markets. With respect to the issuance of municipal bonds, arbitrage generally refers to the difference between the interest paid on the bonds issued and the interest earned by investing the bond proceeds. Arbitrage profits are permitted on bond proceeds for various temporary periods after issuance of municipal bonds. Internal Revenue Service regulations govern arbitrage of municipal bond proceeds.

**Balloon Payment** – An inordinately large loan principal payment on a single date.

**Bid** – A proposal to purchase bonds, offered for sale either in a competitive offering or on a negotiated basis, specifying the interest rate(s) for each maturity, plus a premium or minus a discount.

**Bond** – Interest-bearing written obligation issued by governments and corporations when they borrow money. The issuer agrees to pay a fixed principal sum on a specified date and at a specified rate of interest.

**Bidding Syndicate** – Groups of underwriters that act together to submit a proposal to underwrite a bond issue.

**Bond Counsel or Bond Approving Counsel** – An attorney (or firm of attorneys) retained by the issuer to give a legal opinion that 1) the issuer is authorized to issue bonds, 2) the issuer has met all legal requirements necessary for issuance and 3) interest on the proposed bonds will be exempt from federal income taxation. Typically, bond counsel will prepare, or review and advise the issuer regarding authorizing resolutions, official statements, validation proceedings and litigation.

**Bond Insurance** – Insurance purchased by an issuer or underwriter which guarantees the payment of principal and interest on the bonds. This additional security usually provides a higher credit rating and thus a lower borrowing cost for an issuer.

**Bond Proceeds** – The funds the issuer receives from its bond sale.

**Bond Holder** – The owner of a bond to whom payments of principal and interest are made. The owner of a bearer bond is the person having possession of it, while the owner of a registered bond is the person whose name is noted on the bond register.

**Bond Register** – a record of the names and addresses of bondholders kept on behalf of an issuer. Generally, the Bond Registrar is the paying agent.

**Bond Resolution** – The document representing action of the issuer authorizing the issuance and sale of municipal bonds. Issuance of the bonds is usually approved in the authorizing resolution or ordinance, and the sale is usually authorized in a separate document known as the “sale” or “award” resolution. All of such resolutions, read together, constitute the bond resolution, which describes the nature of the obligation and the issuer’s duties to the bondholders.

**Callable Bond** – A bond which permits or requires the issuer to redeem the obligation before the stated maturity date at a specified price, usually at or above par by giving notice of redemption in a manner specified in the bond resolution.

**Closing** – The meeting of concerned parties on the date of delivery to sign bonds and various legal documents and to physically deliver the bonds in exchange for payment of the purchase price. The parties at closing usually include representatives of the issuer, financial advisor, bond counsel and the purchaser (underwriters). Sometimes a pre-closing meeting is held on the day before delivery to review the adequacy of the closing procedures and documents.

**Competitive Bid or Competitive Bidding** – A method of submitting proposals to purchase a new issue of bonds by which the bonds are awarded to the underwriting syndicate presenting the best bid according to stipulated criteria set forth in the notice of sale; usually the lowest interest cost. Underwriting bonds in this manner is also referred to as a competitive or public sale.

**Covenant or Bond Covenant** – The issuer's enforceable promise to do or refrain from doing some act. With respect to municipal bonds, covenants are generally stated in the bond resolution. Covenants commonly made in connection with a bond issue include covenants to charge fees for use of the financed project sufficient to provide required pledged revenues (rate covenant); to maintain casualty insurance on the project; to complete, maintain and operate the project; not to sell or encumber the project; not to issue parity bonds unless certain earnings tests are met (additional bond covenant); and not to take actions which would cause the bonds to be arbitrage bonds, i.e., violate IRS regulations, concerning levels of permitted investment earnings.

**Coverage** – The ratio of annual pledged revenues available to pay debt service, as compared to the annual debt service requirement. This ratio is one indication of the margin of safety for payment of debt service.

**Dated Date** – The date of a bond issue, printed on each bond, from which interest usually starts to accrue.

**Due Diligence** – The investigation of a bond issue, generally by the financial advisor and bond counsel, or other issuers counsel, to ensure that all material facts relating to the issue have been disclosed to potential buyers in the official statement.

**Financial Advisor** – With respect to a new issue of municipal bonds, a consultant who advises the issuer on matters relating to the bonds, such as structure, timing, marketing, fairness of pricing, terms and bond ratings. Such consultant may be employed in a capacity unrelated to a new issue of municipal securities, such as advising on cash flow and investment matters. The financial advisor is sometimes referred to as a fiscal consultant or fiscal agent.

**Good Faith Deposit** – An amount of money, usually 2% of the par value of an issue of securities, given by bidders to issuers when they bid for competitive issues. The sum, given as a cashier's, certified check or surety bond, is returned to the bidder if the bid is rejected.

**Lease** – A conditional sales agreement under which a municipal government leases equipment, using borrowed funds, that it acquires at the end of the lease period. The loans are secured by the equipment itself and are renegotiated annually.

**Legal Opinion** – The written statement of a lawyer trained in municipal bond law that the bond complies with bond law, especially with regard to its tax-exempt status.

**Negotiated Sale** – A securities sale through an exclusive arrangement between the issuer and an underwriter or underwriting syndicate. This form of issuance provides one or more pricings, where the underwriters solicit potential buyers for the securities. Based on investor interest, the features of the securities may be altered to accommodate market demand. At the end of successful negotiations, the issue is awarded to the underwriters.



**Notice of Sale** – A printed document announcing and soliciting bids for the bonds. It is generally an appendix to the Preliminary Official Statement. It includes pertinent details of bidding requirements, date and time of sale and a brief description of the purpose of the issue.

**Official Statement** – An offering document prepared by the issuer that contains information on the municipality and the security pledged to meet principal and interest; also known as a prospectus. Before the issue is priced it is known as the Preliminary Official Statement (POS); afterwards a final Official Statement is distributed (OS).

**Parity Bonds** – Separate bond issues which have the same lien against pledged revenues as a prior issue.

**Pledged Revenues** – The money promised to the payment of debt service and other deposits required by the resolution.

**Ratings** – Generally, the series of letters used by the bond rating agencies to designate the credit quality of a bond issuer's securities.

**Serial Bonds** – Bonds whose principal is repaid in installments, generally once a year.

**Underwriting** – The process of purchasing an issue of municipal bonds from the issuer and selling the bonds to investors.

**Underwriter** – The broker or dealer who buys the new issue of securities from the issuer and sells the bonds to investors.

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# **SECTION J**

## **RATING AGENCY REPORTS**

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## UNIVERSITIES REVENUE BONDS

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# MOODY'S

## INVESTORS SERVICE

### CREDIT OPINION

18 October 2017

#### New Issue

Rate this Research >>

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## Nevada System of Higher Education, NV

New Issue - Moody's assigns Aa2 to Nevada Sys. of Higher Ed's URBs & Aa3 to community college rev. bonds; outlook stable

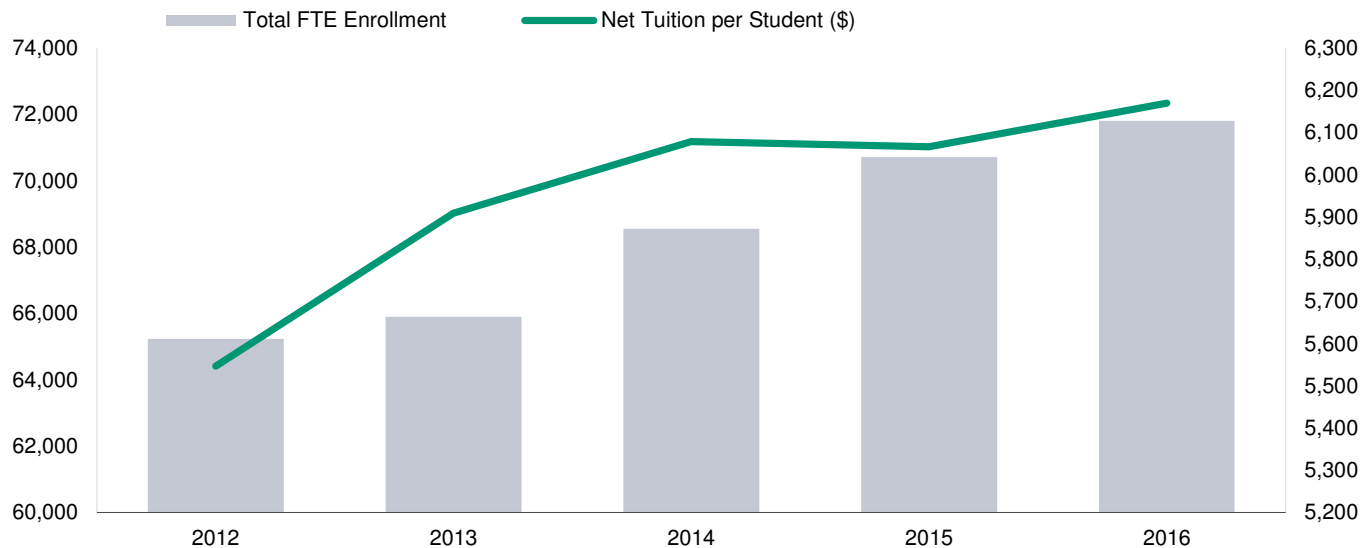
### Summary Rating Rationale

Moody's Investors Service has assigned a Aa2 rating to [Nevada System of Higher Education's](#) (NSHE) expected issuance of approximately \$28 million of fixed-rate universities revenue crossover refunding bonds, series 2017A (final maturity 2040) and an initial Aa3 rating to approximately \$70 million of community college revenue bonds, series 2017 (final maturity 2047). We also affirmed the Aa2 issuer rating and Aa2 ratings on all outstanding university revenue bonds.

NSHE's Aa2 issuer rating incorporates the system's excellent strategic positioning as system of public higher education for the [State of Nevada](#) (Aa2 stable) through its two-year and four-year campuses, diverse and growing revenue, good debt service coverage and solid liquidity. The Aa2 rating on the university revenue bonds (URBs) reflects the scale, scope and essentiality of the two four-year universities with growing enrollment and net pledged revenues. The community college revenue bonds (CCRBs) are rated Aa3, reflecting a more limited pool of pledged revenues available for debt service, but excellent projected debt service coverage.

Offsetting challenges are growing leverage with rapid recent debt issuance and a growing pension liability with high contribution rates dictated by the state. The system also faces longer-term enrollment and revenue pressures from slower population growth and intense competition from out-of-state universities for Nevada high school graduates.

Exhibit 1

**Continued enrollment and net tuition per student growth underscore strong student demand**

Source: Moody's Investors Service

**Credit Strengths**

- » Critical student market position as the sole provider of public higher education in Nevada, with system-wide FTE enrollment of almost 72,000 students
- » Strong wealth and liquidity relative to debt and operations
- » Demonstrated expense flexibility with consistent operating performance, and good debt service coverage
- » Strong net pledged revenues coverage of pro forma maximum annual debt service by over 6 times for university revenue bonds and over 17 times for community college revenue bonds
- » Increasing state operating appropriations, growing state supported financial aid programs, and solid capital support

**Credit Challenges**

- » Flat to contracting number of high school graduates in Nevada and growing competition from out-of-state universities
- » Stagnant wealth over the last few years with low returns and capital investment
- » Rapid pace of debt issuance recently
- » Retirement contributions representing a high 9.5% of total operating expenses, though a portion is paid by the state
- » Moderately high reliance on state funding (35% of operating revenue)

**Rating Outlook**

The stable outlook reflects expectations of generally balanced operations with cash flow margins in the 8-10% range, maintenance of healthy financial reserves, and growing pledged revenues from at least stable enrollment with implemented tuition and fee increases.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody.com](http://www.moody.com) for the most updated credit rating action information and rating history.



## Factors that Could Lead to an Upgrade

- » Increased fundraising supporting growth of wealth relative to debt and operations
- » Sustained and material improvement in operating performance
- » Expanded sponsored research activity

## Factors that Could Lead to a Downgrade

- » Erosion of operating cash flow, particularly due to growing pension contributions
- » Failure to grow wealth sufficiently to keep pace with growing debt
- » Sustained pressure on state funding without ability to adjust operations accordingly
- » Material enrollment declines and deterioration of pledged revenues and debt service coverage for either the universities or community colleges

## Key Indicators

Exhibit 2

	2012	2013	2014	2015	2016	2016 pro forma	Median: Aa Rated Public Universities
Total FTE Enrollment	65,238	65,903	68,550	70,713	71,803	71,803	28,405
Operating Revenue (\$000)	1,308,332	1,381,318	1,420,610	1,451,100	1,555,772	1,555,772	1,104,854
Annual Change in Operating Revenue (%)	-5.3	5.6	2.8	2.1	7.2	7.2	4.4
Total Cash & Investments (\$000)	1,264,807	1,347,634	1,459,225	1,384,930	1,383,197	1,383,197	1,201,140
Total Debt (\$000)	487,977	463,855	497,088	566,120	647,436	770,723	597,459
Spendable Cash & Investments to Total Debt (x)	1.9	2.2	2.2	1.8	1.5	1.3	1.3
Spendable Cash & Investments to Operating Expenses (x)	0.7	0.7	0.8	0.7	0.6	0.6	0.7
Monthly Days Cash on Hand (x)	177	203	218	202	190	190	162
Operating Cash Flow Margin (%)	8.6	9.7	8.7	7.6	8.2	8.2	12.0
Total Debt to Cash Flow (x)	4.3	3.5	4.0	5.1	5.1	6.1	4.4
Annual Debt Service Coverage (x)	2.6	3.2	2.8	1.9	2.5	2.5	3.0

Pro forma debt is as of October 18, 2017 including the current issuances. All other pro forma numbers are based on fiscal 2016 audited financials

Source: Moody's Investors Service

## Recent Developments

The system is issuing its first community college revenue bonds in over two decades to help finance the construction of student union facilities and related infrastructure at the College of Southern Nevada's (CSN) three main campuses in North Las Vegas, Las Vegas and Henderson. CSN is the largest of the system's four community colleges, representing over 18,000 of the total 28,000 community college full-time equivalent (FTE) enrollment. In addition to current pledged revenues, debt service on the bonds will be supported by a recently enacted, mandatory additional Union Capital Improvement Fee at the CSN campus, which began in fall 2017.

## Detailed Rating Considerations

### Market Profile: Growing enrollment as sole provider of public higher education in Nevada

The breadth of NSHE's operations as well as its position as the sole provider of all public higher education in the state of Nevada are key credit strengths and contribute to its excellent strategic positioning. NSHE will continue to experience solid demand through its broad academic offerings across its campuses although with some variability due to economic and demographic changes. Total fall 2016 system enrollment is large at almost 72,000 full-time equivalent (FTE) students, with 1-2% additional growth projected for fall 2017. The system plays an essential role in the state's economic development and educational attainment goals. It educates doctors and healthcare professionals through the state's only Academic Medical Center in Reno, as well as the broader workforce for growing industries through its community development training programs. UNLV opened its new allopathic medical school in fall 2017 with a class of 60.

Both UNLV and UNR have strong student demand with about 60% yield of accepted freshmen applicants. The Millennium Scholarship, currently funded through tobacco appropriations from the Nevada State Legislature and tobacco settlement funds, provides an important draw for Nevada residents. Approximately 26% of the 12,717 graduating high school students from 2016 have activated their award to date. Students have six years to activate and utilize the scholarship. The scholarship is currently funded through 2019, but the state can cease funding at its discretion.

The community colleges had relatively stable enrollment at 28,000 full-time equivalent students, with only modest declines as the economy improved over the last five years. In total, there are four community colleges, but the College of Southern Nevada, for whom the Series 2017A bonds are being issued, is the largest with over 18,000 FTEs in fiscal 2017. Enrollment at the community colleges will be bolstered by the Nevada Promise pilot program, launching in the 2018-2019 academic year. The program proposes to pay students' community college attendance fees and expenses not covered by federal and state awards.

NSHE's research enterprise, while sizeable, is modest compared to other Aa2 land grant and flagship institutions. Although research expenses of \$113 million have grown modestly in the last two years, federal awards in fiscal 2017 grew an impressive 6%. Research activities are conducted primarily at UNR, UNLV and the Desert Research Institute. Funding is almost entirely federal, though well diversified across federal agencies, reflecting NSHE's diverse research activities.

### Operating Performance: Stable cash flow with strong expense controls

NSHE's demonstrated budgetary controls and ability to cut expenses in line with fluctuating state appropriations help mitigate its relatively thin cash flow for the rating category. The system is expected to produce cash flow in the 8-10% range over the next few years, fueled by strong net tuition revenue growth and solid state funding increases of over 13% for both the 2017 and 2019 biennia. Cash flow was a slightly weaker 7.6% in fiscal 2015 due to a \$6.6 million midyear reduction in state appropriations. Operating cash flow of 8.2% in fiscal 2016 provides a solid over two times debt service coverage.

### Wealth and Liquidity: Reserves provide solid coverage; philanthropy and investment returns to replenish funds spent on capital

NSHE's reserves continue to provide sound support for both debt and operations, but were stagnant over the last few years from capital expenditures and below average investment returns. Wealth is expected to resume growth in fiscal 2017 due to a strong 12.3% investment return at June 30 and growing philanthropy with both UNR and UNLV in fundraising campaigns. Fiscal 2016 spendable cash and investments exceeded \$1 billion.

Endowment funds are split between a pool at the system, UNR and UNLV, each having different investment consultants and allocations. UNR and UNLV represent the bulk of NSHE's endowment, representing about 60% of the combined system total of \$648 million at June 30, 2017.

### LIQUIDITY

NSHE's healthy liquidity will continue to provide a sound cushion for operations, an offset to the system's relatively thinner cash flow. At June 30, 2016, the system had \$758 million of unrestricted monthly liquidity translating to 190 days cash. Monthly liquidity is projected to grow to \$821 million as of June 30, 2017.

### **Leverage: Revenue growth, strong capital funding and anticipated philanthropy keep leverage moderate**

NSHE's debt plans have accelerated, but remain manageable for the rating category given high regular amortization of \$38-50 million per year, solid revenue growth over the last few years and anticipated future reserve growth. Pro forma debt will reach a peak of \$770 million including the CCRB Series 2017A and URB Series 2017 issuances, as well as approximately \$60 million of bank notes that are bridging collections on donor pledges largely over the next five years. While fiscal 2016 pro forma debt to cash flow is somewhat elevated at 6 times due to NSHE's thinner cash flow, spendable cash and investments cover pro forma debt is line with the Aa public university median at 1.3 times.

Pledged revenues for the URBs have grown due to UNR and UNLV's strong enrollment growth combined with fee increases, and continue to produce strong debt service coverage. The separate CCRB pledged revenues are expected to grow with the introduction of project specific fee increases.

Capital plans call for up to \$153 million of projects over the next several years to be funded by gifts, capital appropriations and debt. In the next year, the system expects to issue up to \$20 million of bank notes, and up to \$12.5 million of certificates of participation.

### **DEBT STRUCTURE**

The large majority of NSHE's debt is amortizing and fixed rate debt. The predictability of this debt structure is important given its relatively thin annual cash flow. In addition to the pro forma \$401 million of URBs, the system will have \$70 million of community college revenue bonds, and approximately \$220 million of outstanding non-parity debt including \$143 million of Certificates of Participation and \$92 million of bank loans and leases which amortize regularly to match projected gift flow from pledges.

### **DEBT-RELATED DERIVATIVES**

Not applicable.

### **PENSIONS AND OPEB**

NSHE's pension plans add significant leverage, with a Moody's-adjusted net pension liability of approximately \$1 billion in fiscal 2016 resulting in total adjusted pro forma debt of almost \$1.8 billion. NSHE's spendable cash and investment coverage of total adjusted debt of 0.6 times is on par with the median coverage for Aa public universities.

Contributions to pensions and post retirement health benefits (OPEB) represent a growing and very high 9% of operating expenses, though a portion of the contributions are made by the state on behalf of the university via state appropriations. The system has little control over rising retirement benefit costs since the plans are largely controlled by state statute. Almost half of employees participate in either the state's Public Employees Retirement System (defined benefit, multiple-employer), and the remainder are in NSHE alternative retirement plans (defined contribution).

Post retirement health benefits are funded through the state's program, the Public Employee's Benefits Program (PEBP), which is funded on a pay-go basis. Contributions are relatively stable and are currently subsidized by the state, but the legislature is permitted to increase the system's contribution requirements in the future.

### **Governance and Management: Collaborative oversight between board and system**

NSHE has a publicly elected Board of Regents currently comprised of 13 members serving staggered terms of six years and subject to 12-year term limits. A publicly elected board is rare in public higher education and can raise issues of potential conflicts of managing the system to meet its long-term mission that may run counter to issues driven by popular opinion. The relationship between the board and NSHE management has strengthened and is highly cooperative as they worked together to cope with budget pressures from variable state funding during the recession and implementing strategic plans, including campus specific enrollment management plans. Although the universities within the system have a good degree of autonomy, the system provides strong oversight and acts as an advocate with the state.

## Legal Security

The universities revenue bonds, series 2017A are on parity with NSHE's other universities revenue bonds. The legal security are mandatory student fees collected at UNR and UNLV, gross revenues from a variety of auxiliary enterprises at the universities and all unrestricted federal and state grant revenues. Pledged revenues exclude tuition from non-resident students, summer session fees collected and fees and revenues from the system's other members. Fiscal 2017 (unaudited) net pledged revenues totaled \$242 million and provide robust coverage of pro forma maximum annual debt service of over 6 times including the Series 2017 bonds. There is no debt service reserve fund; there are tests for additional indebtedness.

The community college revenue bonds are secured by the net pledged revenues of the system's community colleges, including gross student fees, the capital improvement fee, the student association fee and the general improvement fee. Net pledged revenues also include all grants, conditional or unconditional (federal, state or any other donor for the payment of the 2017 bonds), and net revenues from income-producing buildings, structures and improvements at the community colleges. Fiscal 2017 (unaudited) net pledged revenues of almost \$73 million provide over 17 times coverage of pro forma maximum annual debt service of the series 2017 bonds.

## Use of Proceeds

The universities revenue refunding bonds, series 2017A will be used to refund as a crossover refunding certain of the system's outstanding obligations, and to pay costs of issuance.

Proceeds from the community college revenue bonds, series 2017 will be used to construct certain improvements on the College of Southern Nevada's campus, and to pay costs of issuance.

## Obligor Profile

NSHE is comprised of two four-year public universities - University of Nevada, Las Vegas and University of Nevada, Reno; Nevada State College, a four-year state college in Henderson near Las Vegas; the Desert Research Institute; and four two-year community colleges. The community colleges, College of Southern Nevada, Great Basin College; Truckee Meadows Community College; and Western Nevada College, are located throughout the state. Total system full-time equivalent enrollment was almost 72,000 in fall 2016, and total operating revenue was over \$1.5 billion in fiscal 2016.

## Methodology

The principal methodology used in this rating was Global Higher Education published in November 2015. Please see the Rating Methodologies page on [www.moody.com](http://www.moody.com) for a copy of this methodology.

## Ratings

Exhibit 3

### Nevada System of Higher Education, NV

Issue	Rating
Community College Revenue Bonds, Series 2017	Aa3
Rating Type	Underlying LT
Sale Amount	\$70,200,000
Expected Sale Date	11/02/2017
Rating Description	Revenue: Public University Broad Pledge
Universities Revenue Crossover Refunding Bonds, Series 2017A	Aa2
Rating Type	Underlying LT
Sale Amount	\$28,200,000
Expected Sale Date	10/25/2017
Rating Description	Revenue: Public University Broad Pledge

Source: Moody's Investors Service

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## Nevada System of Higher Education; Public Coll/Univ - Unlimited Student Fees

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# Nevada System of Higher Education; Public Coll/Univ - Unlimited Student Fees

## Credit Profile

US\$75.0 mil comnty coll rev bnds (Csn Student Union) ser 2017A due 07/01/2047		
<i>Long Term Rating</i>	AA-/Stable	New
US\$30.0 mil certs of part ser 2017A due 07/01/2047		
<i>Long Term Rating</i>	AA-/Stable	New
US\$29.0 mil universities rev bnds ser 2017A due 07/01/2040		
<i>Long Term Rating</i>	AA-/Stable	New

## Rationale

S&P Global Ratings assigned its 'AA-' long-term rating to the Nevada System of Higher Education's (NSHE) series 2017 community college revenue bonds, series 2017A certificates of participation (COP), and series 2017A revenue crossover refunding bonds. At the same time, S&P Global Ratings affirmed its 'AA-' long-term rating and underlying rating (SPUR) on NSHE's existing debt. The outlook is stable.

We assessed NSHE's enterprise profile as very strong, characterized by a large enrollment base that is growing at the component flagship institutions and by modest selectivity resulting from the inclusion of access-oriented institutions. We assessed NSHE's financial profile as very strong, supported by excellent financial resource ratios and low debt levels, although operations are negative on a full-accrual basis. We believe these combined credit factors lead to an indicative stand-alone credit profile of 'aa-' and final rating of 'AA-'.

The 'AA-' long-term rating reflects our opinion of the college's:

- Position as the sole comprehensive provider of public higher education in Nevada,
- Adequate available resources for the rating category, and
- Continued manageable pro forma maximum annual debt service (MADS) burden.

Partly offsetting the above strengths, in our view, are:

- NSHE's consistently negative operations on a full-accrual basis, although operations are positive on a cash basis; and
- Continued softening of enrollment at access-oriented institutions, although some decline was anticipated as the economy has recovered and growth in enrollment at flagship institutions partly offset declines.

Proceeds from the \$70 million series 2017 community college revenue bonds will be used to construct student amenities on the campus of the College of Southern Nevada. Primarily, the project to be constructed consists of separate student union facilities at CSN's three main campuses located in North Las Vegas, Las Vegas, and Henderson. Proceeds from the approximately \$28.2 million series 2017A COPs will be used pay the costs of constructing a new engineering building and a new fine arts building on the campus of the University of Nevada, Reno (UNR). Finally,



proceeds from the \$26 million in series 2017 revenue crossover refunding bonds will be used to advance refund approximately \$26 million of the series 2010A bonds.

The COPs are on parity with the series 2014A, 2016A, and 2016B COPs outstanding are all payable from legally available funds, including student tuition and fees, sales and services, unrestricted contributions, investment income, and cash and investments. Revenue pledged to the revenue bonds is available to pay debt service on the COPs after revenue bond debt service is paid. We do not notch the rating on the COPs because of the availability of revenue for paying the COPs' debt service. We view both the COPS and revenue bonds as unlimited student fee bonds. The community college revenue bonds are secured irrevocably by certain income derived from the gross fees collected from students attending the Community Colleges; all grants, conditional or unconditional, from the U.S., the State of Nevada, or any other donor for the payment of the 2017 Bonds; and net revenue, if any, from income-producing buildings, structure, and improvements located at the Community Colleges. We view this security pledge as equivalent to an unlimited student fee pledge, because of the availability of revenue paying debt service on the bonds.

Following the series 2017 issuances, NSHE will have \$745.2 million in pro forma debt. Pro forma MADS, including all debt issued after June 30, 2016, occurs in fiscal 2019 in the amount of \$68.6 million, equivalent to a MADS burden of 3.8% of fiscal 2016 operating expenses.

NSHE is the sole provider of public higher education in Nevada. In addition to UNR, and the University of Nevada, Las Vegas (UNLV), the NSHE includes four community colleges, a state college, and a research institute. UNR offers more than 75 baccalaureate majors and 75 advanced fields of study, such as agriculture, biotechnology, and natural resources; business administration; education; engineering; journalism; and medicine. UNLV has more than 100 baccalaureate degrees and 120 advanced-degree programs, including business, dentistry, education, engineering, hotel administration, urban affairs, and medicine.

## Outlook

The stable outlook reflects our expectation that over the two-year outlook period, NSHE will maintain or increase enrollment, maintain operating surpluses on a cash basis, and maintain available resource ratios, particularly in relation to debt, at levels that are commensurate with the rating.

### Downside scenario

We could consider a negative rating action during the two-year outlook period if the NSHE were to face significant declines in demand metrics, if operating deficits on a cash basis were sustained, or if financial resource ratios materially weakened.

### Upside scenario

We could consider raising the rating during the two-year outlook period in the unlikely event that NSHE were to materially improve operating margins on a full-accrual basis and improve overall system student characteristics to a level commensurate with a higher rating category.

## **Enterprise Profile**

### **Industry risk**

Industry risk addresses our view of the higher education sector's overall cyclical and competitive risk and growth through application of various stress scenarios and evaluation of barriers to entry, levels and trends of profitability, substitution risk, and growth trends observed in the industry. We believe the higher education sector represents a low credit risk when compared with other industries and sectors.

### **Economic fundamentals**

In our view the college has good geographic diversity, albeit mostly regional. The majority of students in the system come from within the state. As such, our assessment of NSHE's economic fundamentals is anchored by Nevada's gross state product per capita.

### **Market position and demand**

NSHE headcount has remained relatively stable during the past several years as enrollment at the access-oriented institutions has remained flat or declined modestly with improvement in the economy and as enrollment at the flagship institutions has increased. Full-time enrollment has increased more recently as a result of this shift in overall system enrollment. Management continues to meet expectations for continued growth at UNR and UNLV, successfully recruiting students from California as a result of competitive tuition pricing, in our opinion.

Applications have remained relatively stable for the past several years, increasing to 45,380 in fall 2016, and retention at the two flagship universities remains stable at 79% for fall 2016. Student quality remains above average compared with national averages but varies widely by component institution of the system.

### **Management and governance**

Management of NSHE has been relatively stable during the past several years, experiencing a transition at the chief financial officer role in August of 2017 and the chancellor role in July of 2017. Additionally, turnover at the component entities has been modest, particularly at the flagship institutions. We believe the system leadership provides depth and breadth to management and enhances the NSHE's budgeting and operating goals. A 13-member board, which is selected by a general election in the state, governs NSHE. We understand that the board is involved in all major NSHE policy decisions, approves administrative and faculty salaries, and appoints a chancellor to carry out prescribed duties.

The strategic plan is incorporated in the biennium budget as the budget is prepared for the legislature. The primary strategic priority for NSHE is adjusting operations to deal with the performance funding formula, which NSHE has been implementing during the past couple of years and which incorporates completion rates into the enrollment-driven funding formula. Management expects the formula to mostly affect NSHE's access-oriented institutions and minimally affect state appropriations for the UNR and UNLV campuses. We understand that performance funding has resulted in some delays in receipts of portions of funding, but to date all available performance funding has been recovered or is expected to be recovered.

We believe the NSHE has strong debt policies, including prescribed limits to revenue debt subject to authorizing legislations and resolutions.

## **Financial Profile**

### **Financial policies**

NSHE has formal policies for investments and debt. Although there is no formal reserve and liquidity policy, we believe management's practice of maintaining approximately 30% of the entire operating fund is sufficient for the system's ongoing needs. The system meets standard annual disclosure requirements. The financial policies assessment reflects our opinion that, despite areas of risk, the organization's overall financial policies are not likely to hamper its ability to pay debt service. Our analysis of financial policies includes a review of the organization's financial reporting and disclosure, investment allocation and liquidity, debt profile, contingent liabilities, and legal structure and a comparison of these policies with those of comparable providers.

### **Financial performance**

The audit reports a \$23 million increase in net position in fiscal 2016. After our adjustments, we estimate an operating deficit of \$47 million, stronger than the \$55 million deficit recorded in fiscal 2015. Fiscal 2016 operations on a cash basis, before depreciation, are positive at \$47 million, which is up from \$40 million in fiscal 2015. Management budgets break-even performance, and preliminary results for fiscal 2017 indicate that NSHE's net position will improve by approximately 3% over the fiscal 2016 result.

State operating appropriations represented about 31.1% of operating revenue in fiscal 2016. State appropriations for fiscal 2016 were stable for the general fund, including an appropriated salary restoration. The system has obtained a 13.4% increase in appropriations for the 2019 biennial budget for caseload growth, increases in student credit weighting, subsidization of the law school operations, and establishment of a medical school at UNLV. State appropriations remain significantly below the high of \$623 million in 2009, however. In our opinion, NSHE has successfully weathered a challenging state-funding environment, and we expect management will remain flexible to future changes.

### **Available resources**

NSHE's fiscal 2016 net assets totaled \$2.1 billion, an increase of \$22 million after a decline of \$300 million in fiscal 2015 that resulted from the implementation of a pension accounting change. Available resources are adequate for the rating category, in our opinion, with fiscal 2016 adjusted unrestricted net assets (including the foundations' unrestricted net assets, debt service reserves) totaling \$615 million, or 83% of pro forma debt and 33% of operating expenses. Cash and investments of \$1.1 billion are stronger, at 62% of operating expenses and 148% of pro forma debt. These ratios are consistent with the rating category medians, in our opinion.

The endowment held at the NSHE level was about \$221.3 million at fiscal year-end 2016. Effective July 1, 2014, the NSHE's endowment spending policy was lowered to 4.75% from 5.00% a year prior, which we view as sustainable. The NSHE endowment draw accounts for less than 1% of the operating budget. In addition, UNR and UNLV operate separate foundations. The June 30, 2017 combined endowment was \$647.7 million, which we consider to be consistent with the rating.

## Debt and contingent liabilities

As of June 30, 2016, NSHE had \$745.2 million in pro forma long-term debt. The debt includes around \$515.5 million in revenue bonds secured by student fees, auxiliary and facility revenue, and grants and donations at UNR and UNLV.

Pro forma debt service is front-loaded at around the \$67 million in fiscal 2018, dropping gradually to around \$37 million by 2035. The pro forma MADS burden is moderate, in our opinion, at 3.8% of adjusted fiscal 2016 expenses. We calculate MADS coverage based on total adjusted operating income and expenses as adequate, at 1.2x.

The obligor has no contingent liability risk exposures from financial instruments with payment provisions that change upon certain events.

In our view, fiscal 2016 net pledged revenue of \$242 million provided solid coverage of historical parity debt of \$37 million. Management has modest additional debt plans.

Nevada System of Higher Education						
	--Fiscal year ended June 30--					'AA' rated public college and university medians
	2017	2016	2015	2014	2013	2016
<b>Enrollment and demand</b>						
Headcount	107,637	106,563	106,360	104,618	105,045	MNR
Full-time equivalent	71,802	70,714	68,550	65,901	65,239	32,506
Freshman acceptance rate (%)	88.9	89.9	89.5	90.7	90.9	69.3
Freshman matriculation rate (%)	60.1	59.3	63.7	66.8	68.8	MNR
Undergraduates as a % of total enrollment	92.3	92.4	92.7	92.5	92.2	77.7
Freshman retention (%)	79.1	77.0	79.0	N.A.	N.A.	86.0
Graduation rates (five years; %)	N.A.	N.A.	N.A.	30.0	29.0	MNR
<b>Income statement</b>						
Adjusted operating revenue (\$000s)	N.A.	1,737,812	1,632,996	1,591,082	1,544,915	MNR
Adjusted operating expense (\$000s)	N.A.	1,784,603	1,688,003	1,628,311	1,568,542	MNR
Net adjusted operating income (\$000s)	N.A.	(46,791)	(55,007)	(37,229)	(23,627)	MNR
Net adjusted operating margin (%)	N.A.	(2.62)	(3.26)	(2.29)	(1.51)	1.46
Estimated operating gain/loss before depreciation (\$000s)	N.A.	51,878	39,903	58,385	71,756	MNR
Change in UNA (\$000s)	N.A.	(5,719)	(395,786)	72,120	39,312	MNR
State operating appropriations (\$000s)	N.A.	539,968	486,928	486,044	472,109	MNR
State appropriations to revenue (%)	N.A.	31.1	29.8	30.5	30.6	19.4
Student dependence (%)	N.A.	36.4	36.8	36.5	35.8	41.8
Health care operations dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	MNR
Research dependence (%)	N.A.	13.9	13.3	13.8	14.6	MNR
Endowment and investment income dependence (%)	N.A.	(0.1)	N.A.	N.A.	N.A.	0.8

## Nevada System of Higher Education (cont.)

	--Fiscal year ended June 30--					'AA' rated public college and university medians
	2017	2016	2015	2014	2013	2016
<b>Debt</b>						
Outstanding debt (\$000s)	N.A.	647,237	565,921	496,884	463,855	698,540
Proposed debt (\$000s)	N.A.	124,505	N.A.	N.A.	N.A.	MNR
Total pro forma debt (\$000s)	N.A.	745,167	N.A.	N.A.	N.A.	MNR
Pro forma MADS	N.A.	68,602	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	3.44	2.86	2.38	14.29	MNR
Current MADS burden (%)	N.A.	3.52	3.12	3.13	2.97	3.60
Pro forma MADS burden (%)	N.A.	3.84	N.A.	N.A.	N.A.	MNR
<b>Financial resource ratios</b>						
Endowment market value (\$000s)	N.A.	221,372	237,318	243,149	219,950	748,837
Related foundation market value (\$000s)	N.A.	638,953	612,539	566,180	487,934	606,279
Cash and investments (\$000s)	N.A.	1,102,852	1,145,639	1,117,656	957,315	MNR
UNA (\$000s)	N.A.	207,775	213,494	609,280	537,160	MNR
Adjusted UNA (\$000s)	N.A.	594,279	608,045	687,736	626,635	MNR
Cash and investments to operations (%)	N.A.	61.8	67.9	68.6	61.0	54.7
Cash and investments to debt (%)	N.A.	170.4	202.4	224.9	206.4	159.6
Cash and investments to pro forma debt (%)	N.A.	148.0	N.A.	N.A.	N.A.	MNR
Adjusted UNA to operations (%)	N.A.	33.3	36.0	42.2	40.0	31.9
Adjusted UNA plus debt service reserve to debt (%)	N.A.	95.1	111.3	142.7	139.4	89.7
Adjusted UNA plus debt service reserve to pro forma debt (%)	N.A.	82.6	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	14.1	13.8	12.9	12.2	12.9
OPEB liability to total liabilities (%)	N.A.	N.A.	0.0	0.0	0.0	MNR

MADS--Maximum annual debt service. MNR--Median not reported. N.A.--Not available. OPEB--Other postemployment benefits.  
 UNA--Unrestricted net assets. Net operating margin =  $100 \times (\text{net adjusted operating income} / \text{adjusted operating expense})$ . Student dependence =  $100 \times (\text{gross tuition revenue} + \text{auxiliary revenue}) / \text{adjusted operating revenue}$ . Current debt service burden =  $100 \times (\text{current debt service expense} / \text{adjusted operating expenses})$ . Current MADS burden =  $100 \times (\text{maximum annual debt service expense} / \text{adjusted operating expenses})$ .  
 Cash and investments = cash + short-term and long-term investments. Adjusted UNA = Unrestricted net assets + unrestricted net assets of the foundation. Average age of plant = accumulated depreciation/depreciation and amortization expense.

## Ratings Detail (As Of October 20, 2017)

Nevada System of Higher Education certs of part (Unr Fitness Center And Tmcc Health Science Ctr) ser 2014A due 07/01/2044		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education rev bnds (Taxable)		
Long Term Rating	AA-/Stable	Affirmed

Ratings Detail (As Of October 20, 2017) (cont.)		
Nevada System of Higher Education univ rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education univ rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education USF (BAM) (SECMKT)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education (Unr Cmm) (BHAC) (SEC MKT)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
<b>Nevada System of Higher Education univ rev bnds (Unr Cmm) ser 2008A</b>		
Long Term Rating	AA-/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys univ rev bnds ser 2004A, 2004B (MBIA)</b>		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys various rev bnds (MBIA)</b>		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Many issues are enhanced by bond insurance.		

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## **COMMUNITY COLLEGE REVENUE BONDS**

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# MOODY'S

## INVESTORS SERVICE

### CREDIT OPINION

18 October 2017

#### New Issue

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## Nevada System of Higher Education, NV

New Issue - Moody's assigns Aa2 to Nevada Sys. of Higher Ed's URBs & Aa3 to community college rev. bonds; outlook stable

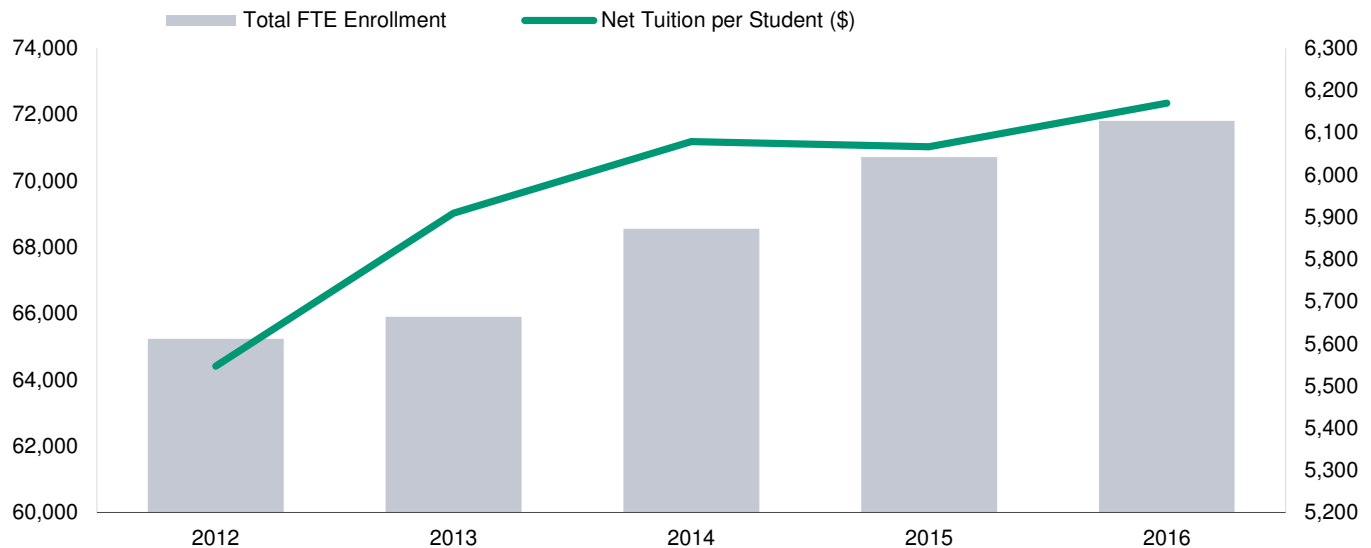
### Summary Rating Rationale

Moody's Investors Service has assigned a Aa2 rating to [Nevada System of Higher Education's](#) (NSHE) expected issuance of approximately \$28 million of fixed-rate universities revenue crossover refunding bonds, series 2017A (final maturity 2040) and an initial Aa3 rating to approximately \$70 million of community college revenue bonds, series 2017 (final maturity 2047). We also affirmed the Aa2 issuer rating and Aa2 ratings on all outstanding university revenue bonds.

NSHE's Aa2 issuer rating incorporates the system's excellent strategic positioning as system of public higher education for the [State of Nevada](#) (Aa2 stable) through its two-year and four-year campuses, diverse and growing revenue, good debt service coverage and solid liquidity. The Aa2 rating on the university revenue bonds (URBs) reflects the scale, scope and essentiality of the two four-year universities with growing enrollment and net pledged revenues. The community college revenue bonds (CCRBs) are rated Aa3, reflecting a more limited pool of pledged revenues available for debt service, but excellent projected debt service coverage.

Offsetting challenges are growing leverage with rapid recent debt issuance and a growing pension liability with high contribution rates dictated by the state. The system also faces longer-term enrollment and revenue pressures from slower population growth and intense competition from out-of-state universities for Nevada high school graduates.

Exhibit 1

**Continued enrollment and net tuition per student growth underscore strong student demand**

Source: Moody's Investors Service

**Credit Strengths**

- » Critical student market position as the sole provider of public higher education in Nevada, with system-wide FTE enrollment of almost 72,000 students
- » Strong wealth and liquidity relative to debt and operations
- » Demonstrated expense flexibility with consistent operating performance, and good debt service coverage
- » Strong net pledged revenues coverage of pro forma maximum annual debt service by over 6 times for university revenue bonds and over 17 times for community college revenue bonds
- » Increasing state operating appropriations, growing state supported financial aid programs, and solid capital support

**Credit Challenges**

- » Flat to contracting number of high school graduates in Nevada and growing competition from out-of-state universities
- » Stagnant wealth over the last few years with low returns and capital investment
- » Rapid pace of debt issuance recently
- » Retirement contributions representing a high 9.5% of total operating expenses, though a portion is paid by the state
- » Moderately high reliance on state funding (35% of operating revenue)

**Rating Outlook**

The stable outlook reflects expectations of generally balanced operations with cash flow margins in the 8-10% range, maintenance of healthy financial reserves, and growing pledged revenues from at least stable enrollment with implemented tuition and fee increases.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Factors that Could Lead to an Upgrade

- » Increased fundraising supporting growth of wealth relative to debt and operations
- » Sustained and material improvement in operating performance
- » Expanded sponsored research activity

## Factors that Could Lead to a Downgrade

- » Erosion of operating cash flow, particularly due to growing pension contributions
- » Failure to grow wealth sufficiently to keep pace with growing debt
- » Sustained pressure on state funding without ability to adjust operations accordingly
- » Material enrollment declines and deterioration of pledged revenues and debt service coverage for either the universities or community colleges

## Key Indicators

Exhibit 2

	2012	2013	2014	2015	2016	2016 pro forma	Median: Aa Rated Public Universities
Total FTE Enrollment	65,238	65,903	68,550	70,713	71,803	71,803	28,405
Operating Revenue (\$000)	1,308,332	1,381,318	1,420,610	1,451,100	1,555,772	1,555,772	1,104,854
Annual Change in Operating Revenue (%)	-5.3	5.6	2.8	2.1	7.2	7.2	4.4
Total Cash & Investments (\$000)	1,264,807	1,347,634	1,459,225	1,384,930	1,383,197	1,383,197	1,201,140
Total Debt (\$000)	487,977	463,855	497,088	566,120	647,436	770,723	597,459
Spendable Cash & Investments to Total Debt (x)	1.9	2.2	2.2	1.8	1.5	1.3	1.3
Spendable Cash & Investments to Operating Expenses (x)	0.7	0.7	0.8	0.7	0.6	0.6	0.7
Monthly Days Cash on Hand (x)	177	203	218	202	190	190	162
Operating Cash Flow Margin (%)	8.6	9.7	8.7	7.6	8.2	8.2	12.0
Total Debt to Cash Flow (x)	4.3	3.5	4.0	5.1	5.1	6.1	4.4
Annual Debt Service Coverage (x)	2.6	3.2	2.8	1.9	2.5	2.5	3.0

Pro forma debt is as of October 18, 2017 including the current issuances. All other pro forma numbers are based on fiscal 2016 audited financials

Source: Moody's Investors Service

## Recent Developments

The system is issuing its first community college revenue bonds in over two decades to help finance the construction of student union facilities and related infrastructure at the College of Southern Nevada's (CSN) three main campuses in North Las Vegas, Las Vegas and Henderson. CSN is the largest of the system's four community colleges, representing over 18,000 of the total 28,000 community college full-time equivalent (FTE) enrollment. In addition to current pledged revenues, debt service on the bonds will be supported by a recently enacted, mandatory additional Union Capital Improvement Fee at the CSN campus, which began in fall 2017.

## Detailed Rating Considerations

### Market Profile: Growing enrollment as sole provider of public higher education in Nevada

The breadth of NSHE's operations as well as its position as the sole provider of all public higher education in the state of Nevada are key credit strengths and contribute to its excellent strategic positioning. NSHE will continue to experience solid demand through its broad academic offerings across its campuses although with some variability due to economic and demographic changes. Total fall 2016 system enrollment is large at almost 72,000 full-time equivalent (FTE) students, with 1-2% additional growth projected for fall 2017. The system plays an essential role in the state's economic development and educational attainment goals. It educates doctors and healthcare professionals through the state's only Academic Medical Center in Reno, as well as the broader workforce for growing industries through its community development training programs. UNLV opened its new allopathic medical school in fall 2017 with a class of 60.

Both UNLV and UNR have strong student demand with about 60% yield of accepted freshmen applicants. The Millennium Scholarship, currently funded through tobacco appropriations from the Nevada State Legislature and tobacco settlement funds, provides an important draw for Nevada residents. Approximately 26% of the 12,717 graduating high school students from 2016 have activated their award to date. Students have six years to activate and utilize the scholarship. The scholarship is currently funded through 2019, but the state can cease funding at its discretion.

The community colleges had relatively stable enrollment at 28,000 full-time equivalent students, with only modest declines as the economy improved over the last five years. In total, there are four community colleges, but the College of Southern Nevada, for whom the Series 2017A bonds are being issued, is the largest with over 18,000 FTEs in fiscal 2017. Enrollment at the community colleges will be bolstered by the Nevada Promise pilot program, launching in the 2018-2019 academic year. The program proposes to pay students' community college attendance fees and expenses not covered by federal and state awards.

NSHE's research enterprise, while sizeable, is modest compared to other Aa2 land grant and flagship institutions. Although research expenses of \$113 million have grown modestly in the last two years, federal awards in fiscal 2017 grew an impressive 6%. Research activities are conducted primarily at UNR, UNLV and the Desert Research Institute. Funding is almost entirely federal, though well diversified across federal agencies, reflecting NSHE's diverse research activities.

### Operating Performance: Stable cash flow with strong expense controls

NSHE's demonstrated budgetary controls and ability to cut expenses in line with fluctuating state appropriations help mitigate its relatively thin cash flow for the rating category. The system is expected to produce cash flow in the 8-10% range over the next few years, fueled by strong net tuition revenue growth and solid state funding increases of over 13% for both the 2017 and 2019 biennia. Cash flow was a slightly weaker 7.6% in fiscal 2015 due to a \$6.6 million midyear reduction in state appropriations. Operating cash flow of 8.2% in fiscal 2016 provides a solid over two times debt service coverage.

### Wealth and Liquidity: Reserves provide solid coverage; philanthropy and investment returns to replenish funds spent on capital

NSHE's reserves continue to provide sound support for both debt and operations, but were stagnant over the last few years from capital expenditures and below average investment returns. Wealth is expected to resume growth in fiscal 2017 due to a strong 12.3% investment return at June 30 and growing philanthropy with both UNR and UNLV in fundraising campaigns. Fiscal 2016 spendable cash and investments exceeded \$1 billion.

Endowment funds are split between a pool at the system, UNR and UNLV, each having different investment consultants and allocations. UNR and UNLV represent the bulk of NSHE's endowment, representing about 60% of the combined system total of \$648 million at June 30, 2017.

### LIQUIDITY

NSHE's healthy liquidity will continue to provide a sound cushion for operations, an offset to the system's relatively thinner cash flow. At June 30, 2016, the system had \$758 million of unrestricted monthly liquidity translating to 190 days cash. Monthly liquidity is projected to grow to \$821 million as of June 30, 2017.

### **Leverage: Revenue growth, strong capital funding and anticipated philanthropy keep leverage moderate**

NSHE's debt plans have accelerated, but remain manageable for the rating category given high regular amortization of \$38-50 million per year, solid revenue growth over the last few years and anticipated future reserve growth. Pro forma debt will reach a peak of \$770 million including the CCRB Series 2017A and URB Series 2017 issuances, as well as approximately \$60 million of bank notes that are bridging collections on donor pledges largely over the next five years. While fiscal 2016 pro forma debt to cash flow is somewhat elevated at 6 times due to NSHE's thinner cash flow, spendable cash and investments cover pro forma debt is line with the Aa public university median at 1.3 times.

Pledged revenues for the URBs have grown due to UNR and UNLV's strong enrollment growth combined with fee increases, and continue to produce strong debt service coverage. The separate CCRB pledged revenues are expected to grow with the introduction of project specific fee increases.

Capital plans call for up to \$153 million of projects over the next several years to be funded by gifts, capital appropriations and debt. In the next year, the system expects to issue up to \$20 million of bank notes, and up to \$12.5 million of certificates of participation.

### **DEBT STRUCTURE**

The large majority of NSHE's debt is amortizing and fixed rate debt. The predictability of this debt structure is important given its relatively thin annual cash flow. In addition to the pro forma \$401 million of URBs, the system will have \$70 million of community college revenue bonds, and approximately \$220 million of outstanding non-parity debt including \$143 million of Certificates of Participation and \$92 million of bank loans and leases which amortize regularly to match projected gift flow from pledges.

### **DEBT-RELATED DERIVATIVES**

Not applicable.

### **PENSIONS AND OPEB**

NSHE's pension plans add significant leverage, with a Moody's-adjusted net pension liability of approximately \$1 billion in fiscal 2016 resulting in total adjusted pro forma debt of almost \$1.8 billion. NSHE's spendable cash and investment coverage of total adjusted debt of 0.6 times is on par with the median coverage for Aa public universities.

Contributions to pensions and post retirement health benefits (OPEB) represent a growing and very high 9% of operating expenses, though a portion of the contributions are made by the state on behalf of the university via state appropriations. The system has little control over rising retirement benefit costs since the plans are largely controlled by state statute. Almost half of employees participate in either the state's Public Employees Retirement System (defined benefit, multiple-employer), and the remainder are in NSHE alternative retirement plans (defined contribution).

Post retirement health benefits are funded through the state's program, the Public Employee's Benefits Program (PEBP), which is funded on a pay-go basis. Contributions are relatively stable and are currently subsidized by the state, but the legislature is permitted to increase the system's contribution requirements in the future.

### **Governance and Management: Collaborative oversight between board and system**

NSHE has a publicly elected Board of Regents currently comprised of 13 members serving staggered terms of six years and subject to 12-year term limits. A publicly elected board is rare in public higher education and can raise issues of potential conflicts of managing the system to meet its long-term mission that may run counter to issues driven by popular opinion. The relationship between the board and NSHE management has strengthened and is highly cooperative as they worked together to cope with budget pressures from variable state funding during the recession and implementing strategic plans, including campus specific enrollment management plans. Although the universities within the system have a good degree of autonomy, the system provides strong oversight and acts as an advocate with the state.

## Legal Security

The universities revenue bonds, series 2017A are on parity with NSHE's other universities revenue bonds. The legal security are mandatory student fees collected at UNR and UNLV, gross revenues from a variety of auxiliary enterprises at the universities and all unrestricted federal and state grant revenues. Pledged revenues exclude tuition from non-resident students, summer session fees collected and fees and revenues from the system's other members. Fiscal 2017 (unaudited) net pledged revenues totaled \$242 million and provide robust coverage of pro forma maximum annual debt service of over 6 times including the Series 2017 bonds. There is no debt service reserve fund; there are tests for additional indebtedness.

The community college revenue bonds are secured by the net pledged revenues of the system's community colleges, including gross student fees, the capital improvement fee, the student association fee and the general improvement fee. Net pledged revenues also include all grants, conditional or unconditional (federal, state or any other donor for the payment of the 2017 bonds), and net revenues from income-producing buildings, structures and improvements at the community colleges. Fiscal 2017 (unaudited) net pledged revenues of almost \$73 million provide over 17 times coverage of pro forma maximum annual debt service of the series 2017 bonds.

## Use of Proceeds

The universities revenue refunding bonds, series 2017A will be used to refund as a crossover refunding certain of the system's outstanding obligations, and to pay costs of issuance.

Proceeds from the community college revenue bonds, series 2017 will be used to construct certain improvements on the College of Southern Nevada's campus, and to pay costs of issuance.

## Obligor Profile

NSHE is comprised of two four-year public universities - University of Nevada, Las Vegas and University of Nevada, Reno; Nevada State College, a four-year state college in Henderson near Las Vegas; the Desert Research Institute; and four two-year community colleges. The community colleges, College of Southern Nevada, Great Basin College; Truckee Meadows Community College; and Western Nevada College, are located throughout the state. Total system full-time equivalent enrollment was almost 72,000 in fall 2016, and total operating revenue was over \$1.5 billion in fiscal 2016.

## Methodology

The principal methodology used in this rating was Global Higher Education published in November 2015. Please see the Rating Methodologies page on [www.moody's.com](http://www.moody's.com) for a copy of this methodology.

## Ratings

Exhibit 3

### Nevada System of Higher Education, NV

Issue	Rating
Community College Revenue Bonds, Series 2017	Aa3
Rating Type	Underlying LT
Sale Amount	\$70,200,000
Expected Sale Date	11/02/2017
Rating Description	Revenue: Public University Broad Pledge
Universities Revenue Crossover Refunding Bonds, Series 2017A	Aa2
Rating Type	Underlying LT
Sale Amount	\$28,200,000
Expected Sale Date	10/25/2017
Rating Description	Revenue: Public University Broad Pledge

Source: Moody's Investors Service



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## Nevada System of Higher Education; Public Coll/Univ - Unlimited Student Fees

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# Nevada System of Higher Education; Public Coll/Univ - Unlimited Student Fees

## Credit Profile

US\$75.0 mil comnty coll rev bnds (Csn Student Union) ser 2017A due 07/01/2047		
<i>Long Term Rating</i>	AA-/Stable	New
US\$30.0 mil certs of part ser 2017A due 07/01/2047		
<i>Long Term Rating</i>	AA-/Stable	New
US\$29.0 mil universities rev bnds ser 2017A due 07/01/2040		
<i>Long Term Rating</i>	AA-/Stable	New

## Rationale

S&P Global Ratings assigned its 'AA-' long-term rating to the Nevada System of Higher Education's (NSHE) series 2017 community college revenue bonds, series 2017A certificates of participation (COP), and series 2017A revenue crossover refunding bonds. At the same time, S&P Global Ratings affirmed its 'AA-' long-term rating and underlying rating (SPUR) on NSHE's existing debt. The outlook is stable.

We assessed NSHE's enterprise profile as very strong, characterized by a large enrollment base that is growing at the component flagship institutions and by modest selectivity resulting from the inclusion of access-oriented institutions. We assessed NSHE's financial profile as very strong, supported by excellent financial resource ratios and low debt levels, although operations are negative on a full-accrual basis. We believe these combined credit factors lead to an indicative stand-alone credit profile of 'aa-' and final rating of 'AA-'.

The 'AA-' long-term rating reflects our opinion of the college's:

- Position as the sole comprehensive provider of public higher education in Nevada,
- Adequate available resources for the rating category, and
- Continued manageable pro forma maximum annual debt service (MADS) burden.

Partly offsetting the above strengths, in our view, are:

- NSHE's consistently negative operations on a full-accrual basis, although operations are positive on a cash basis; and
- Continued softening of enrollment at access-oriented institutions, although some decline was anticipated as the economy has recovered and growth in enrollment at flagship institutions partly offset declines.

Proceeds from the \$70 million series 2017 community college revenue bonds will be used to construct student amenities on the campus of the College of Southern Nevada. Primarily, the project to be constructed consists of separate student union facilities at CSN's three main campuses located in North Las Vegas, Las Vegas, and Henderson. Proceeds from the approximately \$28.2 million series 2017A COPs will be used pay the costs of constructing a new engineering building and a new fine arts building on the campus of the University of Nevada, Reno (UNR). Finally,

proceeds from the \$26 million in series 2017 revenue crossover refunding bonds will be used to advance refund approximately \$26 million of the series 2010A bonds.

The COPs are on parity with the series 2014A, 2016A, and 2016B COPs outstanding are all payable from legally available funds, including student tuition and fees, sales and services, unrestricted contributions, investment income, and cash and investments. Revenue pledged to the revenue bonds is available to pay debt service on the COPs after revenue bond debt service is paid. We do not notch the rating on the COPs because of the availability of revenue for paying the COPs' debt service. We view both the COPS and revenue bonds as unlimited student fee bonds. The community college revenue bonds are secured irrevocably by certain income derived from the gross fees collected from students attending the Community Colleges; all grants, conditional or unconditional, from the U.S., the State of Nevada, or any other donor for the payment of the 2017 Bonds; and net revenue, if any, from income-producing buildings, structure, and improvements located at the Community Colleges. We view this security pledge as equivalent to an unlimited student fee pledge, because of the availability of revenue paying debt service on the bonds.

Following the series 2017 issuances, NSHE will have \$745.2 million in pro forma debt. Pro forma MADS, including all debt issued after June 30, 2016, occurs in fiscal 2019 in the amount of \$68.6 million, equivalent to a MADS burden of 3.8% of fiscal 2016 operating expenses.

NSHE is the sole provider of public higher education in Nevada. In addition to UNR, and the University of Nevada, Las Vegas (UNLV), the NSHE includes four community colleges, a state college, and a research institute. UNR offers more than 75 baccalaureate majors and 75 advanced fields of study, such as agriculture, biotechnology, and natural resources; business administration; education; engineering; journalism; and medicine. UNLV has more than 100 baccalaureate degrees and 120 advanced-degree programs, including business, dentistry, education, engineering, hotel administration, urban affairs, and medicine.

## Outlook

The stable outlook reflects our expectation that over the two-year outlook period, NSHE will maintain or increase enrollment, maintain operating surpluses on a cash basis, and maintain available resource ratios, particularly in relation to debt, at levels that are commensurate with the rating.

### Downside scenario

We could consider a negative rating action during the two-year outlook period if the NSHE were to face significant declines in demand metrics, if operating deficits on a cash basis were sustained, or if financial resource ratios materially weakened.

### Upside scenario

We could consider raising the rating during the two-year outlook period in the unlikely event that NSHE were to materially improve operating margins on a full-accrual basis and improve overall system student characteristics to a level commensurate with a higher rating category.

## **Enterprise Profile**

### **Industry risk**

Industry risk addresses our view of the higher education sector's overall cyclical and competitive risk and growth through application of various stress scenarios and evaluation of barriers to entry, levels and trends of profitability, substitution risk, and growth trends observed in the industry. We believe the higher education sector represents a low credit risk when compared with other industries and sectors.

### **Economic fundamentals**

In our view the college has good geographic diversity, albeit mostly regional. The majority of students in the system come from within the state. As such, our assessment of NSHE's economic fundamentals is anchored by Nevada's gross state product per capita.

### **Market position and demand**

NSHE headcount has remained relatively stable during the past several years as enrollment at the access-oriented institutions has remained flat or declined modestly with improvement in the economy and as enrollment at the flagship institutions has increased. Full-time enrollment has increased more recently as a result of this shift in overall system enrollment. Management continues to meet expectations for continued growth at UNR and UNLV, successfully recruiting students from California as a result of competitive tuition pricing, in our opinion.

Applications have remained relatively stable for the past several years, increasing to 45,380 in fall 2016, and retention at the two flagship universities remains stable at 79% for fall 2016. Student quality remains above average compared with national averages but varies widely by component institution of the system.

### **Management and governance**

Management of NSHE has been relatively stable during the past several years, experiencing a transition at the chief financial officer role in August of 2017 and the chancellor role in July of 2017. Additionally, turnover at the component entities has been modest, particularly at the flagship institutions. We believe the system leadership provides depth and breadth to management and enhances the NSHE's budgeting and operating goals. A 13-member board, which is selected by a general election in the state, governs NSHE. We understand that the board is involved in all major NSHE policy decisions, approves administrative and faculty salaries, and appoints a chancellor to carry out prescribed duties.

The strategic plan is incorporated in the biennium budget as the budget is prepared for the legislature. The primary strategic priority for NSHE is adjusting operations to deal with the performance funding formula, which NSHE has been implementing during the past couple of years and which incorporates completion rates into the enrollment-driven funding formula. Management expects the formula to mostly affect NSHE's access-oriented institutions and minimally affect state appropriations for the UNR and UNLV campuses. We understand that performance funding has resulted in some delays in receipts of portions of funding, but to date all available performance funding has been recovered or is expected to be recovered.

We believe the NSHE has strong debt policies, including prescribed limits to revenue debt subject to authorizing legislations and resolutions.

## **Financial Profile**

### **Financial policies**

NSHE has formal policies for investments and debt. Although there is no formal reserve and liquidity policy, we believe management's practice of maintaining approximately 30% of the entire operating fund is sufficient for the system's ongoing needs. The system meets standard annual disclosure requirements. The financial policies assessment reflects our opinion that, despite areas of risk, the organization's overall financial policies are not likely to hamper its ability to pay debt service. Our analysis of financial policies includes a review of the organization's financial reporting and disclosure, investment allocation and liquidity, debt profile, contingent liabilities, and legal structure and a comparison of these policies with those of comparable providers.

### **Financial performance**

The audit reports a \$23 million increase in net position in fiscal 2016. After our adjustments, we estimate an operating deficit of \$47 million, stronger than the \$55 million deficit recorded in fiscal 2015. Fiscal 2016 operations on a cash basis, before depreciation, are positive at \$47 million, which is up from \$40 million in fiscal 2015. Management budgets break-even performance, and preliminary results for fiscal 2017 indicate that NSHE's net position will improve by approximately 3% over the fiscal 2016 result.

State operating appropriations represented about 31.1% of operating revenue in fiscal 2016. State appropriations for fiscal 2016 were stable for the general fund, including an appropriated salary restoration. The system has obtained a 13.4% increase in appropriations for the 2019 biennial budget for caseload growth, increases in student credit weighting, subsidization of the law school operations, and establishment of a medical school at UNLV. State appropriations remain significantly below the high of \$623 million in 2009, however. In our opinion, NSHE has successfully weathered a challenging state-funding environment, and we expect management will remain flexible to future changes.

### **Available resources**

NSHE's fiscal 2016 net assets totaled \$2.1 billion, an increase of \$22 million after a decline of \$300 million in fiscal 2015 that resulted from the implementation of a pension accounting change. Available resources are adequate for the rating category, in our opinion, with fiscal 2016 adjusted unrestricted net assets (including the foundations' unrestricted net assets, debt service reserves) totaling \$615 million, or 83% of pro forma debt and 33% of operating expenses. Cash and investments of \$1.1 billion are stronger, at 62% of operating expenses and 148% of pro forma debt. These ratios are consistent with the rating category medians, in our opinion.

The endowment held at the NSHE level was about \$221.3 million at fiscal year-end 2016. Effective July 1, 2014, the NSHE's endowment spending policy was lowered to 4.75% from 5.00% a year prior, which we view as sustainable. The NSHE endowment draw accounts for less than 1% of the operating budget. In addition, UNR and UNLV operate separate foundations. The June 30, 2017 combined endowment was \$647.7 million, which we consider to be consistent with the rating.

## Debt and contingent liabilities

As of June 30, 2016, NSHE had \$745.2 million in pro forma long-term debt. The debt includes around \$515.5 million in revenue bonds secured by student fees, auxiliary and facility revenue, and grants and donations at UNR and UNLV.

Pro forma debt service is front-loaded at around the \$67 million in fiscal 2018, dropping gradually to around \$37 million by 2035. The pro forma MADS burden is moderate, in our opinion, at 3.8% of adjusted fiscal 2016 expenses. We calculate MADS coverage based on total adjusted operating income and expenses as adequate, at 1.2x.

The obligor has no contingent liability risk exposures from financial instruments with payment provisions that change upon certain events.

In our view, fiscal 2016 net pledged revenue of \$242 million provided solid coverage of historical parity debt of \$37 million. Management has modest additional debt plans.

Nevada System of Higher Education						
	--Fiscal year ended June 30--					'AA' rated public college and university medians
	2017	2016	2015	2014	2013	2016
<b>Enrollment and demand</b>						
Headcount	107,637	106,563	106,360	104,618	105,045	MNR
Full-time equivalent	71,802	70,714	68,550	65,901	65,239	32,506
Freshman acceptance rate (%)	88.9	89.9	89.5	90.7	90.9	69.3
Freshman matriculation rate (%)	60.1	59.3	63.7	66.8	68.8	MNR
Undergraduates as a % of total enrollment	92.3	92.4	92.7	92.5	92.2	77.7
Freshman retention (%)	79.1	77.0	79.0	N.A.	N.A.	86.0
Graduation rates (five years; %)	N.A.	N.A.	N.A.	30.0	29.0	MNR
<b>Income statement</b>						
Adjusted operating revenue (\$000s)	N.A.	1,737,812	1,632,996	1,591,082	1,544,915	MNR
Adjusted operating expense (\$000s)	N.A.	1,784,603	1,688,003	1,628,311	1,568,542	MNR
Net adjusted operating income (\$000s)	N.A.	(46,791)	(55,007)	(37,229)	(23,627)	MNR
Net adjusted operating margin (%)	N.A.	(2.62)	(3.26)	(2.29)	(1.51)	1.46
Estimated operating gain/loss before depreciation (\$000s)	N.A.	51,878	39,903	58,385	71,756	MNR
Change in UNA (\$000s)	N.A.	(5,719)	(395,786)	72,120	39,312	MNR
State operating appropriations (\$000s)	N.A.	539,968	486,928	486,044	472,109	MNR
State appropriations to revenue (%)	N.A.	31.1	29.8	30.5	30.6	19.4
Student dependence (%)	N.A.	36.4	36.8	36.5	35.8	41.8
Health care operations dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	MNR
Research dependence (%)	N.A.	13.9	13.3	13.8	14.6	MNR
Endowment and investment income dependence (%)	N.A.	(0.1)	N.A.	N.A.	N.A.	0.8



## Nevada System of Higher Education (cont.)

	--Fiscal year ended June 30--					'AA' rated public college and university medians
	2017	2016	2015	2014	2013	2016
<b>Debt</b>						
Outstanding debt (\$000s)	N.A.	647,237	565,921	496,884	463,855	698,540
Proposed debt (\$000s)	N.A.	124,505	N.A.	N.A.	N.A.	MNR
Total pro forma debt (\$000s)	N.A.	745,167	N.A.	N.A.	N.A.	MNR
Pro forma MADS	N.A.	68,602	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	3.44	2.86	2.38	14.29	MNR
Current MADS burden (%)	N.A.	3.52	3.12	3.13	2.97	3.60
Pro forma MADS burden (%)	N.A.	3.84	N.A.	N.A.	N.A.	MNR
<b>Financial resource ratios</b>						
Endowment market value (\$000s)	N.A.	221,372	237,318	243,149	219,950	748,837
Related foundation market value (\$000s)	N.A.	638,953	612,539	566,180	487,934	606,279
Cash and investments (\$000s)	N.A.	1,102,852	1,145,639	1,117,656	957,315	MNR
UNA (\$000s)	N.A.	207,775	213,494	609,280	537,160	MNR
Adjusted UNA (\$000s)	N.A.	594,279	608,045	687,736	626,635	MNR
Cash and investments to operations (%)	N.A.	61.8	67.9	68.6	61.0	54.7
Cash and investments to debt (%)	N.A.	170.4	202.4	224.9	206.4	159.6
Cash and investments to pro forma debt (%)	N.A.	148.0	N.A.	N.A.	N.A.	MNR
Adjusted UNA to operations (%)	N.A.	33.3	36.0	42.2	40.0	31.9
Adjusted UNA plus debt service reserve to debt (%)	N.A.	95.1	111.3	142.7	139.4	89.7
Adjusted UNA plus debt service reserve to pro forma debt (%)	N.A.	82.6	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	14.1	13.8	12.9	12.2	12.9
OPEB liability to total liabilities (%)	N.A.	N.A.	0.0	0.0	0.0	MNR

MADS--Maximum annual debt service. MNR--Median not reported. N.A.--Not available. OPEB--Other postemployment benefits.  
 UNA--Unrestricted net assets. Net operating margin =  $100 \times (\text{net adjusted operating income} / \text{adjusted operating expense})$ . Student dependence =  $100 \times (\text{gross tuition revenue} + \text{auxiliary revenue}) / \text{adjusted operating revenue}$ . Current debt service burden =  $100 \times (\text{current debt service expense} / \text{adjusted operating expenses})$ . Current MADS burden =  $100 \times (\text{maximum annual debt service expense} / \text{adjusted operating expenses})$ .  
 Cash and investments = cash + short-term and long-term investments. Adjusted UNA = Unrestricted net assets + unrestricted net assets of the foundation. Average age of plant = accumulated depreciation/depreciation and amortization expense.

## Ratings Detail (As Of October 20, 2017)

Nevada System of Higher Education certs of part (Unr Fitness Center And Tmcc Health Science Ctr) ser 2014A due 07/01/2044		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education rev bnds (Taxable)		
Long Term Rating	AA-/Stable	Affirmed

**Ratings Detail (As Of October 20, 2017) (cont.)**

Nevada System of Higher Education univ rev bnds		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Nevada System of Higher Education univ rev bnds		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Nevada System of Higher Education USF (BAM) (SECMKT)		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Nevada System of Higher Education (Unr Cmm) (BHAC) (SEC MKT)		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
<b>Nevada System of Higher Education univ rev bnds (Unr Cmm) ser 2008A</b>		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys univ rev bnds ser 2004A, 2004B (MBIA)</b>		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys various rev bnds (MBIA)</b>		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

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## **CERTIFICATES OF PARTICIPATION**

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## Nevada System Of Higher Education; Public Coll/Univ - Unlimited Student Fees

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# Nevada System Of Higher Education; Public Coll/Univ - Unlimited Student Fees

## Credit Profile

US\$11.78 mil certs of part (Tmcc Health And Sports Complex) ser 2018A dtd 03/15/2018 due 07/01/2048

<i>Long Term Rating</i>	AA-/Stable	New
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Nevada System of Higher Education univ rev bnds

<i>Long Term Rating</i>	AA-/Stable	Affirmed
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## Rationale

S&P Global Ratings assigned its 'AA-' long-term rating to the Nevada System of Higher Education's (NSHE) series 2018A certificates of participation (COPs). At the same time, S&P Global Ratings affirmed its 'AA-' long-term rating and underlying rating (SPUR) on NSHE's existing debt. The outlook is stable.

We assessed NSHE's enterprise profile as very strong, characterized by a large enrollment base that is growing at Nevada State College as well as at the component flagship institutions and by modest selectivity resulting from the inclusion of access-oriented institutions. We assessed NSHE's financial profile as very strong, supported by solid financial resource ratios and low debt levels, although operations are consistently negative on a full-accrual basis. We believe these combined credit factors lead to an indicative stand-alone credit profile of 'aa-' and final rating of 'AA-'.

The 'AA-' long-term rating reflects our opinion of the system's:

- Position as the sole comprehensive provider of public higher education in Nevada,
- Solid available resources for the rating category, and
- Continued manageable pro forma maximum annual debt service (MADS) burden.

Partly offsetting the above strengths, in our view, are:

- NSHE's consistently negative operations on a full-accrual basis, although operations are positive on a cash basis; and
- Continued softening of enrollment at access-oriented institutions, although some decline was anticipated as the economy has recovered and growth in enrollment at flagship institutions partly offset declines.

Proceeds from the \$12.3 million series 2018A COPs will be used to construct a fitness center on the campus of Truckee Meadows Community College.

The COPs are on parity with the series 2014A, 2016A, 2016B, and 2017A COPs outstanding, which are all payable from legally available funds, including student tuition and fees, sales and services, unrestricted contributions, investment income, and cash and investments. Revenue pledged to the revenue bonds is available to pay debt service on the COPs after revenue bond debt service is paid. We do not notch the rating on the COPs because of the availability of revenue for paying the COPs' debt service. The community college revenue bonds are secured irrevocably by certain income derived from the gross fees collected from students attending the Community Colleges;



all grants, conditional or unconditional, from the U.S., the State of Nevada, or any other donor for the payment of the 2017 bonds; and net revenue, if any, from income-producing buildings, structure, and improvements located at the Community Colleges. We view both the COPs and revenue bonds as unlimited student fee bonds.

Following the series 2018A issuance, NSHE will have \$686.3 million in pro forma debt. We also understand that management plans to issue an additional \$20 million of debt in calendar year 2018, which would bring total pro forma debt to \$706.3 million. Pro forma MADS, including all debt issued after June 30, 2016, occurs in fiscal 2019 in the amount of \$72.4 million, equivalent to a MADS burden of 3.9% of fiscal 2017 operating expenses.

NSHE is the sole provider of public higher education in Nevada. In addition to University of Nevada, Reno (UNR), and the University of Nevada, Las Vegas (UNLV), the NSHE includes four community colleges, a state college, and a research institute. UNR offers more than 75 baccalaureate majors and 75 advanced fields of study, such as agriculture, biotechnology, and natural resources; business administration; education; engineering; journalism; and medicine. UNLV has more than 100 baccalaureate degrees and 120 advanced-degree programs, including business, dentistry, education, engineering, hotel administration, urban affairs, and medicine.

## Outlook

The stable outlook reflects our expectation that over the two-year outlook period, NSHE will maintain or increase enrollment, maintain operating surpluses on a cash basis, and maintain available resource ratios, particularly in relation to debt, at levels that are commensurate with the rating.

### Downside scenario

We could consider a negative rating action during the two-year outlook period if the NSHE were to face significant declines in demand metrics, if operating deficits on a cash basis were sustained, or if available resource ratios materially weakened.

### Upside scenario

We could consider raising the rating during the two-year outlook period in the unlikely event that NSHE were to materially improve operating margins on a full-accrual basis and improve overall system student characteristics to a level commensurate with a higher rating category.

## Enterprise Profile

### Industry risk

Industry risk addresses our view of the higher education sector's overall cyclical and competitive risk and growth through application of various stress scenarios and evaluation of barriers to entry, levels and trends of profitability, substitution risk, and growth trends observed in the industry. We believe the higher education sector represents a low credit risk when compared with other industries and sectors.

## **Economic fundamentals**

In our view the college has good geographic diversity, albeit mostly regional. Approximately 86% of students in the system come from within the state. As such, our assessment of NSHE's economic fundamentals is anchored by Nevada's gross state product per capita.

## **Market position and demand**

NSHE headcount has increased modestly in each of the past several years as enrollment at the access-oriented institutions has remained flat or declined modestly with improvement in the economy and as enrollment at the state college and at the flagship institutions has increased. Management continues to meet expectations for continued growth at UNR and UNLV, successfully recruiting students from California as a result of competitive tuition pricing, in our opinion.

Applications have also increased in the past several years, increasing to 54,713 in fall 2017, and retention at the two flagship universities remains stable at 79% for fall 2016. Student quality remains above average compared with national averages but varies widely by component institution of the system.

## **Management and governance**

Management of NSHE has been relatively stable during the past several years, experiencing a transition of the chief financial officer in August of 2017 and the chancellor in July of 2017. While there are two presidential searches underway at component institutions, turnover has been modest, particularly at the flagship institutions. We believe the system leadership provides depth and breadth to management and enhances the NSHE's budgeting and operating goals. A 13-member board, which is selected by a general election in the state, governs NSHE. We understand that the board is involved in all major NSHE policy decisions, approves administrative and faculty salaries, and appoints a chancellor to carry out prescribed duties.

The strategic plan is incorporated in the biennium budget as the budget is prepared for the legislature. The primary strategic priority for NSHE is adjusting operations to deal with the performance funding formula, which NSHE has been implementing during the past couple of years and which incorporates completion rates into the enrollment-driven funding formula. Management expects the formula to mostly affect NSHE's access-oriented institutions and minimally affect state appropriations for the UNR and UNLV campuses. We understand that performance funding has resulted in some delays in receipts of portions of funding, but to date all available performance funding has been recovered or is expected to be recovered.

We believe the NSHE has strong debt policies, including prescribed limits to revenue debt subject to authorizing legislations and resolutions.

## **Financial Profile**

### **Financial policies**

NSHE has formal policies for investments and debt. Although there is no formal reserve and liquidity policy, we believe management's practice of maintaining approximately 30% of the entire operating fund is sufficient for the system's ongoing needs. The system meets standard annual disclosure requirements. The financial policies assessment reflects

our opinion that, despite areas of risk, the organization's overall financial policies are not likely to hamper its ability to pay debt service. Our analysis of financial policies includes a review of the organization's financial reporting and disclosure, investment allocation and liquidity, debt profile, contingent liabilities, and legal structure and a comparison of these policies with those of comparable providers.

### **Financial performance**

The audit reports a \$56 million increase in net position in fiscal 2017. After our adjustments, we estimate an operating surplus of \$36.2 million, stronger than the \$43 million deficit recorded in fiscal 2016. Management budgets break-even performance, and budget to actual results for fiscal 2018 to-date indicate that NSHE's net position will be consistent with fiscal 2017.

State operating appropriations represented about 30% of operating revenue in fiscal 2017. State appropriations for fiscal 2017 were up slightly for the general fund, including an appropriated salary restoration. The system has obtained a 13.4% increase in appropriations for the 2019 biennial budget for caseload growth, increases in student credit weighting, subsidization of the law school operations, and establishment of a medical school at UNLV. However, state appropriations remain below the high of \$623 million in 2009. In our opinion, NSHE has successfully weathered a challenging state-funding environment, and we expect management will remain flexible to future changes.

### **Available resources**

NSHE's fiscal 2017 net assets totaled \$2.2 billion, an increase of \$56 million after a more modest \$22 million increase in fiscal 2016 and a decline of \$300 million in fiscal 2015 that resulted from the implementation of a pension accounting change. Available resources are adequate for the rating category, in our opinion, with fiscal 2017 adjusted unrestricted net assets (including the foundations' unrestricted net assets, debt service reserves) totaling \$677 million, or 96% of pro forma debt and 35% of operating expenses. Cash and investments of \$1.1 billion are stronger, at 60% of operating expenses and 157% of pro forma debt. These ratios are consistent with the rating category medians, in our opinion.

The endowment held at the NSHE level was about \$259 million at calendar year-end 2017. Effective July 1, 2014, the NSHE's endowment spending policy was lowered to 4.75% from 5.00% a year prior, which we view as sustainable. The NSHE endowment draw accounts for less than 1% of the operating budget. In addition, UNR and UNLV operate separate foundations. The Dec. 31, 2017, combined endowment was \$877.5 million, which we consider to be consistent with the rating.

### **Debt and contingent liabilities**

As of June 30, 2017, NSHE had \$706.3 million in pro forma long-term debt. The debt includes about \$515.5 million in revenue bonds secured by student fees, auxiliary and facility revenue, and grants and donations at UNR and UNLV. Pro forma debt service is front-loaded at around the \$67 million in fiscal 2018, dropping gradually to around \$27 million by 2036. The pro forma MADS burden is moderate, in our opinion, at 3.9% of adjusted fiscal 2017 expenses. We calculate MADS coverage based on total adjusted operating income and expenses as adequate, at 2.3x.

The obligor has no contingent liability risk exposures from financial instruments with payment provisions that change upon certain events.

In our view, fiscal 2017 net pledged revenue of \$242 million provided solid coverage of historical parity debt of \$37 million. Management has modest additional debt plans.

Nevada System of Higher Education Enterprise And Financial Statistics						
	--Fiscal year ended June 30--					Medians for 'AA' rated public colleges and universities
	2018	2017	2016	2015	2014	2016
<b>Enrollment and demand</b>						
Headcount	109,304	107,637	106,563	106,360	104,618	MNR
Full-time equivalent	72,895	71,802	70,714	68,550	65,901	32,506
Freshman acceptance rate (%)	89.8	88.9	89.9	89.5	90.7	69.3
Freshman matriculation rate (%)	58.6	60.1	59.3	63.7	66.8	MNR
Undergraduates as a % of total enrollment (%)	92.2	92.3	92.4	92.7	92.5	77.7
Freshman retention (%)	N.A.	79.1	77.0	79.0	N.A.	86.0
<b>Income statement</b>						
Adjusted operating revenue (\$000s)	N.A.	1,813,102	1,740,394	1,632,996	1,591,082	MNR
Adjusted operating expense (\$000s)	N.A.	1,858,031	1,784,603	1,688,003	1,628,311	MNR
Net adjusted operating income (\$000s)	N.A.	(44,929)	(44,209)	(55,007)	(37,229)	MNR
Net adjusted operating margin (%)	N.A.	(2.42)	(2.48)	(3.26)	(2.29)	1.46
Estimated operating gain/loss before depreciation (\$000s)	N.A.	58,092	54,460	39,903	58,385	MNR
Change in unrestricted net assets (UNA; \$000s)	N.A.	44,382	(5,719)	(395,786)	72,120	MNR
State operating appropriations (\$000s)	N.A.	568,163	539,968	486,928	486,044	MNR
State appropriations to revenue (%)	N.A.	31.3	31.0	29.8	30.5	19.4
Student dependence (%)	N.A.	36.0	36.4	36.8	36.5	41.8
Research dependence (%)	N.A.	14.0	13.9	13.3	13.8	MNR
Endowment and investment income dependence (%)	N.A.	N.A.	N.A.	N.A.	N.A.	0.8
<b>Debt</b>						
Outstanding debt (\$000s)	N.A.	673,939	647,237	565,921	496,884	698,540
Proposed debt (\$000s)	N.A.	32,320	N.A.	N.A.	N.A.	MNR
Total pro forma debt (\$000s)	N.A.	706,259	N.A.	N.A.	N.A.	MNR
Pro forma MADS	N.A.	72,380	N.A.	N.A.	N.A.	MNR
Current debt service burden (%)	N.A.	3.50	3.44	2.86	2.38	MNR
Current MADS burden (%)	N.A.	N.A.	3.52	3.12	3.13	3.60
Pro forma MADS burden (%)	N.A.	3.90	N.A.	N.A.	N.A.	MNR
<b>Financial resource ratios</b>						
Endowment market value (\$000s)	N.A.	246,959	221,372	237,318	243,149	748,837
Related foundation market value (\$000s)	N.A.	722,893	638,953	612,539	566,180	606,279
Cash and investments (\$000s)	N.A.	1,106,966	1,102,988	1,145,639	1,117,656	MNR
UNA (\$000s)	N.A.	252,157	207,775	213,494	609,280	MNR
Adjusted UNA (\$000s)	N.A.	649,481	594,279	608,045	687,736	MNR

## Nevada System of Higher Education Enterprise And Financial Statistics (cont.)

	--Fiscal year ended June 30--					Medians for 'AA' rated public colleges and universities
	2018	2017	2016	2015	2014	2016
Cash and investments to operations (%)	N.A.	59.6	61.8	67.9	68.6	54.7
Cash and investments to debt (%)	N.A.	164.3	170.4	202.4	224.9	159.6
Cash and investments to pro forma debt (%)	N.A.	156.7	N.A.	N.A.	N.A.	MNR
Adjusted UNA to operations (%)	N.A.	35.0	33.3	36.0	42.2	31.9
Adjusted UNA plus debt service reserve to debt (%)	N.A.	100.5	95.1	111.3	142.7	89.7
Adjusted UNA plus debt service reserve to pro forma debt (%)	N.A.	95.9	N.A.	N.A.	N.A.	MNR
Average age of plant (years)	N.A.	14.3	14.1	13.8	12.9	12.9

N.A.--Not available. MNR--median not reported.

## Ratings Detail (As Of February 26, 2018)

Nevada System of Higher Education rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education rev bnds (Taxable)		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education univ rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education PCU-USF		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education PCU-USF (BAM)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Nevada System of Higher Education USF (BAM) (SECMKT)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education PCU_USF		
Long Term Rating	AA-/Stable	Affirmed
Nevada System of Higher Education (Unr Cmm) (BHAC) (SEC MKT)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Nevada Sys of Hgr Ed (BAM)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
<b>Nevada System of Higher Education univ rev bnds (Unr Cmm) ser 2008A</b>		
Long Term Rating	AA-/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys univ rev bnds ser 2004A, 2004B (MBIA)</b>		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
<b>Nevada Univ &amp; Comnty Coll Sys various rev bnds (MBIA)</b>		

**Ratings Detail (As Of February 26, 2018) (cont.)**

<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Many issues are enhanced by bond insurance.		

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## Fitch Rates Nevada System of Higher Education COPs 'AA'; Outlook Stable

Fitch Ratings-Chicago-23 February 2018: Fitch Ratings has assigned an 'AA' rating to approximately \$12.5 million series 2018A certificates of participation (COPs) issued by the Nevada System of Higher Education (NSHE).

COP proceeds will fund capital expenditures and pay issuance expenses. The COPs are expected to sell by competitive bid on March 7, 2018.

In addition, Fitch affirms the following ratings at 'AA':

- \$28,890,000 series 2017A COPs;
- \$49,415,000 series 2016B COPs;
- \$61,560,000 series 2016A COPs;
- \$32,075,000 series 2014A COPs.

The Rating Outlook is Stable.

### SECURITY

The COPs are payable from all legally available NSHE funds after payment of debt service on the system's outstanding senior lien university revenue bonds (URBs). The COPs are an absolute and unconditional pledge of the system and are not subject to annual appropriation or abatement risk. State operating appropriations are specifically not pledged.

Pledged revenues for the URBs are derived primarily from specific student fees/charges and net auxiliary revenues of the system's two universities. There are substantial revenues not pledged to the URBs that are available to pay the subordinate COPs and related parity obligations.

### KEY RATING DRIVERS

**STABLE CREDIT CHARACTERISTICS:** The 'AA' rating reflects the system's strong state-wide market position, gradually improving student demographics, current increases in state operating support, moderate debt burden and adequate balance sheet ratios. Negative GAAP operating margins and narrow institutional coverage remain offsetting factors.

**NO APPROPRIATION RISK:** The system's obligation to pay debt service on the subordinate lien COPs and parity note obligations is absolute and unconditional. In addition, significant revenue is available for this debt that is not pledged to the senior lien URBs. The potential for credit dilution from URB issuance persists.

**SOLID MARKET POSITION:** The system provides the only public higher education in Nevada (State GOs rated AA+/Stable). FTE enrollment at the two universities is increasing modestly, while enrollment at the primarily two-year institutions fluctuates with economic cycles.

**GROWTH IN STATE APPROPRIATIONS:** State support is a substantial portion of overall funding at 33.9% of fiscal 2017 revenues. NSHE's state appropriations have increased consistently since fiscal 2015.

**SLIM INSTITUTIONAL COVERAGE:** System operations are consistently negative on a GAAP basis but positive on a cash basis before depreciation expense. Institutional maximum annual debt service (MADS) coverage (including all debt security types) was slim at about 1.1x in fiscal 2017, as calculated by Fitch. This is due in part to the lag between when new student revenues were implemented and increasing debt service. Coverage is expected to improve going forward.

## RATING SENSITIVITIES

**FINANCIAL PROFILE DETERIORATION:** Failure of the Nevada System for Higher Education to generate improved system-wide debt service coverage of combined senior and subordinate debt would likely lead to a rating downgrade.

## CREDIT PROFILE

Established in 1864, the system consists of two principal university campuses: University of Nevada, Reno (UNR) and the University of Nevada, Las Vegas (UNLV), four community colleges, the Nevada State College at Henderson (NSC, a four-year institution founded in 2002), and the Desert Research Institute (the system's basic and applied environmental research division). Fall 2017 FTE enrollment was about 72,895, with the two universities at 41,580 and NSC and the two-year institutions at 31,315.

Starting fall 2018, Nevada has established a new "last dollar" scholarship program for community college students, the "Nevada Promise Scholarship". The program is designed to cover the cost of mandatory student fees. Student must meet all eligibility and application rules, and initial state funding is intended to cover only the high school graduating class of 2018. Fitch understands that scholarships will be awarded only while state Promise funds are available.

## STABLE FINANCIAL OPERATIONS

NSHE financial results remain negative on a GAAP basis. As calculated by Fitch, the fiscal 2017 GAAP loss was \$39.155 million (-2.3%), compared to \$31 million (-1.9%) in fiscal 2016. On a cash basis, excluding depreciation expense, NSHE produces a positive margin and sufficient net available for debt service; in fiscal 2017 this was \$88.6 million.

Current debt service coverage in 2017 was 1.4x on about \$65 million of debt service. Pro forma MADS is about \$77 million, including recent bond and COPs issuances, and was weak at 1.1x. System management notes that new student fees and revenues established internally to support the new debt began collection in fiscal 2018, and thus lag fiscal 2017 operating results. Improved institutional coverage is expected from NSHE going forward.

Fitch calculates coverage from consolidated audit results and includes debt service for all debt types. While somewhat slim compared to peer-rated universities, NSHE's profile is supported by healthy liquidity.

Available funds (AF), defined by Fitch as all cash and investments less certain restricted net assets, was \$926 million at June 30, 2017. AF equaled 54% of fiscal 2017 operating expenses, and a healthy 104% of pro forma debt (about \$891 million). Fitch views balance sheet ratios as consistent with the rating category.

## SOLID MARKET DRIVES DEMAND

As the only provider of public education in Nevada, NSHE has seen relatively steady enrollment growth since the 2008 recession. Particularly at the two flagship institutions, headcount enrollment increased between 1%-3% for UNR and UNLV in fall 2017. While Western Interstate Commission on Higher Education (WICHE) data estimates the number of new high school graduates grew slightly again in 2017, this growth may flatten going forward.

Enrollment at NSHE's two-year institutions is cyclical to the economy; it rises as the economy worsens, and vice versa. Further, some international student declines impacted overall enrollment in fiscals 2016 and 2017. NSHE's near monopoly on in-state higher education, coupled with economic and population growth in the state are expected to support enrollment going forward. NSHE reports no plans to add new campuses, and reports it has capacity at existing campuses.

State operating support tends to fluctuate with economic cycles. An improving economic landscape in the state, coupled with NSHE's educational role, has supported improved appropriations since 2013. State operating appropriations increased by 8.4% in fiscal

2018, and 4.5% in fiscal 2019, the second year of the biennium. Operating appropriations represented 33.9% of fiscal 2017 revenue. Net student fee revenue comprised another 30% of operating revenue.

#### MANAGEABLE DEBT BURDEN

The series 2018A COP issuance brings pro forma debt to approximately \$891 million and MADS to about \$77 million. NSHE's bonded debt is fixed rate, with a front-loaded debt service structure. The system's pro forma MADS debt burden is moderate at 4.6%.

The system is authorized for over \$204 million in senior lien URBs and \$52 million in community college revenue bonds (CCRBs). Fitch understands that no new debt has been formally approved, but that the system has additional debt plans within the next 12-18 months. Fitch believes this debt can be absorbed at the current rating level assuming solid institutional debt service coverage.

The 'AA' COPs rating is supported by NSHE's unconditional obligation to make the principal and interest payments on the system's COPs and parity notes and leases. The COPs are not subject to appropriation or abatement risk. The COPs and parity subordinate obligations benefit from both a subordinate pledge of URB net revenue (approximately \$242 million in fiscal 2017), and from additional legally available funds (approximately \$448 million in fiscal 2017) not pledged to the URBs. Such additional funds include unrestricted revenues and student fees (tuition and registration), non-resident student fees, and other income.

NSHE participates in the State of Nevada Public Employees Retirement System (PERS), a cost-sharing multiple-employer defined benefit retirement system. Contribution rates are established by statute. The system is only liable to PERS for its annual contribution; it is not obligated to pay a proportional share of UAAL.

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### **Applicable Criteria**

Rating Criteria for Public Sector Revenue-Supported Debt (pub. 05 Jun 2017)  
(<https://www.fitchratings.com/site/re/898969>)

U.S. Public Finance College and University Rating Criteria (pub. 26 Apr 2017)  
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### **Additional Disclosures**

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## **DRI LEASE REVENUE BONDS**

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## Fitch Affirms University & Community College System of Nevada Lease Revs at 'AA-'; Outlook Stable

Fitch Ratings-New York-22 February 2019: Fitch Ratings has affirmed the 'AA-' rating on the \$8.46 million (\$3.41 million outstanding) taxable lease revenue bonds, series 2002 issued by the Nevada System of Higher Education, formerly known as University and Community College System of Nevada (the university system). The Rating Outlook is Stable.

### KEY RATING DRIVERS

The rating reflects the strength of the lease-rental agreement, credit quality of the counterparties and likelihood of continued payments by a strong lessee (the U.S. federal government). The university system (certificates of participation rated AA/Stable) is expected to continue to maintain the leased premises to the standards required under the lease. Modestly higher operational risk due to the single-site nature of the facility supports a rating below that of the university system.

#### Low Complexity, Minimal Risk - Cost Risk: Stronger

The university system is required to maintain the building in good repair to avoid cancellation of the lease by the lessee. Through over 15 years of operations, there have been no instances of maintenance falling below the standards of the lease. The U.S. Government General Services Administration (GSA) pays a share of the operating costs as a component of its annual rent.

#### Abatement Risk Well-Contained - Revenue Risk: Stronger

Lease payments are subject to abatement in the event of damage to the building preventing or limiting occupancy by the lessee. The maintenance of property and casualty insurance, rental interruption insurance and a lease bond (to cover rent in the event it is not paid in full by the GSA) mitigate the risk of abatement.

#### Adequate Structural Protections - Debt Structure: Stronger

The fixed-rate bonds are secured by GSA lease rental payments sufficient to cover interest and mandatory sinking fund payments. The lease may only be cancelled under certain limited conditions, including failure by the university system to maintain the facility in good repair, and inability to reconstruct the facility within two years in case of damage.

### PEER GROUP

There are no direct peers in the Fitch portfolio.

### RATING SENSITIVITIES

#### Future Developments That May, Individually or Collectively, Lead to Negative Rating Action:

The university system's failure to maintain the building in good repair could result in deductions in rental payments or outright cancellation of the lease, increasing the risk of payment disruption.

#### Future Developments That May, Individually or Collectively, Lead to Positive Rating Action:

Positive rating action is unlikely given the fixed monthly lease rental payments structure, equal to debt service.

## CREDIT UPDATE

The university system continues to comply with requirements laid out in the lease and bond documents, including operation and maintenance of the leased premises and maintenance of the letter of credit (LOC) supporting debt service. These measures have ensured timely and full lease payments by the federal government. Debt service payments have been made in full and on time.

The bonds are secured by a stream of monthly lease rental payments, equal to debt service, which are made by the GSA. The pledged payments are a subset of a larger rental payment relating to the lease by the GSA, on behalf of the Department of Energy (DOE), for a portion of a building at the university system's Desert Research Institute. The 2018-2019 government shutdown did not interfere with the lease payments.

The obligation by the federal government to make lease payments required under the lease is a general obligation, with only limited opportunity to cancel or abate. The lease provides for cancellation only under limited and unlikely circumstances, such as damage to the building that the university system cannot repair within two years. The GSA may also cancel the lease, if, in the event of damage, the university system does not provide a plan for reconstruction and execute a related contract within 90 days of the casualty event. Lease payments are subject to abatement, commensurate with the loss of use of the facility, in the event of fire or structural damage.

To mitigate the risk of abatement, the university system maintains rental interruption insurance and the LOC-backed lease bond. Rental interruption insurance is equivalent to the forthcoming year of debt service payments and the lease bond is equal to two years of scheduled rent payments (debt service and GSA's share of operating costs). The LOC on the lease bond extends through the remaining life of the bonds (May 2023). There were no draws on the LOC in FY 2018, or in past years.

The rating also considers the general credit-worthiness of the university system, as the system is responsible for maintaining the leased facility in good repair, and creating and implementing replacement plans in case of damage to the property. The university system maintains property and casualty insurance equaling the lesser of bond principal outstanding or the building's replacement cost.

## Asset Description

Bondholders do not have a security interest in the leased premises, nor does ownership transfer to the lessee at the end of the lease. Fitch considers the leased facility to be important to, but not essential to the federal government as lessee. The DOE uses the building as a repository for Nevada Test Site documentation and records on radiation exposure and nuclear testing, a public information center, and a museum for artifacts and archeological materials found at the site. Federal law requires public access to these documents and collection and curation of the artifacts. The building was designed and constructed for this purpose.

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#### Applicable Criteria

Availability-Based Projects Rating Criteria - Effective from 23 August 2018 to 6 June 2019 (pub. 23 Aug 2018)  
Rating Criteria for Infrastructure and Project Finance (pub. 27 Jul 2018)

#### Additional Disclosures

Dodd-Frank Rating Information Disclosure Form  
Solicitation Status  
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# **SECTION K**

## **INDIVIDUAL DEBT SERVICE SCHEDULES**

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NEVADA SYSTEM OF HIGHER EDUCATION  
INDIVIDUAL DEBT SERVICE SCHEDULES  
As of June 30, 2019

Issue	Issue Date	Maturity Date	Original Amount	Amount Outstanding	Page #
<u>State of Nevada General Obligation Revenue Bonds</u>					
Slot Tax Revenue Bonds	03/10/2015	08/01/2032	78,335,000	<u>71,420,000</u>	K-3 K-4
SUBTOTAL				71,420,000	
<u>State of Nevada Certificates of Participation</u>					
Nevada State College Certificates	11/26/2013	06/01/2043	50,445,000	<u>47,455,000</u>	K-5 K-6
SUBTOTAL				47,455,000	
<u>University Revenue Bonds - UNLV/UNR</u>					
Universities Revenue Bonds	07/22/2008A	07/01/2019	60,135,000	1,475,000	K-7 K-8
Universities Revenue Bonds	02/24/2009A	07/01/2020	18,140,000	1,430,000	K-9
Universities Revenue Bonds	12/21/2010A	07/01/2040	29,455,000	28,125,000	K-10
Universities Revenue Bonds	10/26/2011A	07/01/2024	50,470,000	15,995,000	K-11
Universities Revenue Bonds	04/05/2012A	07/01/2032	27,375,000	25,965,000	K-12
Universities Revenue Bonds	04/05/2012B	07/01/2022	5,010,000	1,565,000	K-13
Universities Revenue Bonds	04/23/2013A	07/01/2033	40,035,000	31,440,000	K-14
Universities Revenue Bonds	04/23/2013B	07/01/2035	105,300,000	93,745,000	K-15
Universities Revenue Bonds	03/11/2014A	07/01/2043	49,995,000	45,180,000	K-16
Universities Revenue Bonds	02/19/2015A	07/01/2035	61,455,000	61,455,000	K-17
Universities Revenue Bonds	02/19/2015B	07/01/2026	7,480,000	6,105,000	K-18
Universities Revenue Bonds	04/14/2016A	07/01/2038	57,750,000	57,550,000	K-19
Universities Revenue Bonds	10/26/2016B	07/01/2036	13,580,000	13,100,000	K-20
Universities Revenue Bonds	11/16/2017A	07/01/2040	25,905,000	25,905,000	K-21
Universities Revenue Bonds (Escrow Impact)	11/16/2017A	07/01/2040	(26,575,000)	<u>(26,575,000)</u>	K-22
SUBTOTAL				382,460,000	
<u>Allocation of University Revenue Bonds - UNR</u>					
Universities Revenue Bonds	07/22/2008A	07/01/2019	60,135,000	1,475,000	K-23 K-24
Universities Revenue Bonds	12/21/2010A	07/01/2040	29,455,000	28,125,000	K-25
Universities Revenue Bonds	10/26/2011A	07/01/2024	13,195,000	5,690,000	K-26
Universities Revenue Bonds	04/05/2012A	07/01/2032	19,030,000	18,230,000	K-27
Universities Revenue Bonds	04/05/2012B	07/01/2022	5,010,000	1,565,000	K-28
Universities Revenue Bonds	04/23/2013A	07/01/2033	7,400,000	6,650,000	K-29
Universities Revenue Bonds	04/23/2013B	07/01/2035	57,550,000	51,540,000	K-30
Universities Revenue Bonds	03/11/2014A	07/01/2043	43,815,000	41,130,000	K-31
Universities Revenue Bonds	02/19/2015A	07/01/2035	19,890,000	19,890,000	K-32
Universities Revenue Bonds	02/19/2015B	07/01/2026	7,480,000	6,105,000	K-33
Universities Revenue Bonds	04/14/2016A	07/01/2038	46,430,000	46,260,000	K-34
Universities Revenue Bonds	11/16/2017A	07/01/2040	25,905,000	25,905,000	K-35
Universities Revenue Bonds (Escrow Impact)	11/16/2017A	07/01/2040	(26,575,000)	<u>(26,575,000)</u>	K-36
SUBTOTAL				225,990,000	
<u>Allocation of University Revenue Bonds - UNLV</u>					
Universities Revenue Bonds	02/24/2009A	07/01/2020	18,140,000	1,430,000	K-37 K-38
Universities Revenue Bonds	10/26/2011A	07/01/2024	37,275,000	10,305,000	K-39
Universities Revenue Bonds	04/05/2012A	07/01/2032	8,345,000	7,735,000	K-40
Universities Revenue Bonds	04/23/2013A	07/01/2033	32,635,000	24,790,000	K-41
Universities Revenue Bonds	04/23/2013B	07/01/2035	47,750,000	42,205,000	K-42
Universities Revenue Bonds	03/11/2014A	07/01/2024	6,180,000	4,050,000	K-43
Universities Revenue Bonds	02/19/2015A	07/01/2035	41,565,000	41,565,000	K-44
Universities Revenue Bonds	04/14/2016A	07/01/2038	11,320,000	11,290,000	K-45
Universities Revenue Bonds	10/26/2016B	07/01/2036	13,580,000	<u>13,100,000</u>	K-46
SUBTOTAL				156,470,000	
<u>Community College Revenue Bonds</u>					
Community College Revenue Bonds	11/21/2017	07/01/2047	70,915,000	<u>68,715,000</u>	K-47 K-48
SUBTOTAL				68,715,000	

**NEVADA SYSTEM OF HIGHER EDUCATION  
INDIVIDUAL DEBT SERVICE SCHEDULES  
As of June 30, 2019**

Issue	Issue Date	Maturity Date	Original Amount	Amount Outstanding	Page #
<u>Nevada System of Higher Education Certificates of Participation</u>					
Certificates of Participation	08/07/2014	07/01/2044	34,220,000	31,375,000	K-49
Certificates of Participation	02/04/2016	07/01/2046	63,095,000	59,020,000	K-51
Certificates of Participation	03/22/2016	07/01/2046	50,405,000	48,405,000	K-52
Certificates of Participation	11/14/2017	07/01/2047	28,890,000	28,030,000	K-53
Certificates of Participation	04/05/2018	07/01/2048	12,475,000	12,475,000	K-54
SUBTOTAL				179,305,000	
<u>Allocation of Certificates of Participation – UNR</u>					
Certificates of Participation	08/07/2014	07/01/2044	29,600,000	27,395,000	K-55
Certificates of Participation	02/04/2016	07/01/2046	54,765,000	51,705,000	K-56
Certificates of Participation	11/14/2017	07/01/2047	28,890,000	28,030,000	K-58
SUBTOTAL				107,130,000	
<u>Allocation of Certificates of Participation – UNLV</u>					
Certificates of Participation	02/04/2016	07/01/2029	8,330,000	7,315,000	K-59
Certificates of Participation	03/22/2016	07/01/2046	50,405,000	48,405,000	K-61
SUBTOTAL				55,720,000	
<u>Allocation of Certificates of Participation – TMCC</u>					
Certificates of Participation	08/07/2014	07/01/2034	4,620,000	3,980,000	K-62
Certificates of Participation	04/05/2018	07/01/2048	12,475,000	12,475,000	K-64
SUBTOTAL				16,455,000	
<u>Lease Revenue Bonds – DRI</u>					
Taxable Lease Revenue Bonds	06/14/2002	05/15/2023	8,460,000	2,825,000	K-65
<b>BANK LOANS/LEASES</b>					
<u>University of Nevada, Reno</u>					
City of Reno Lease – 450 Sinclair Street	11/20/2013	01/01/2027	1,428,579	913,989	K-66
Student Achievement Center Note	02/26/2014	07/01/2019	2,700,000	399,000	K-67
Fitness Center Note	08/14/2014	01/01/2020	7,200,000	2,466,000	K-69
MEB Refunding Note	04/21/2016	01/02/2026	7,570,000	5,930,000	K-70 & K-71
Scoreboard Note	05/05/2016	03/01/2021	3,305,000	675,000	K-72
Fine Arts Building Note	04/20/2017	07/01/2022	11,326,000	7,586,000	K-73
SUBTOTAL				17,969,989	
<u>University of Nevada, Las Vegas</u>					
Hotel Admin Building Note	12/15/2015	07/01/2022	15,561,000	9,275,000	K-74
Med School Practice Plan Loan	06/28/2017	07/03/2023	19,000,000	13,333,000	K-75
Football Complex Note	11/09/2017	07/01/2023	15,297,000	12,690,000	K-76
SUBTOTAL				35,298,000	
<u>College of Southern Nevada</u>					
West Charleston Buildings "A" & "B" Note	01/03/2013	06/01/2023	10,000,000	4,226,000	K-78
Cisco Equipment Lease	09/14/2018	10/14/2022	4,141,128	3,257,737	K-79
SUBTOTAL				7,483,737	
<u>Desert Research Institute</u>					
Science Park	01/09/2002	12/01/2021	2,000,000	376,682	K-81
CRVB	10/26/2006	09/01/2021	1,500,000	320,000	K-82
Dell Supercomputer Lease	06/01/2016	05/01/2021	314,085	120,400	K-83
Six Degrees Lease	08/10/2016	09/10/2019	356,642	89,161	K-84
Dell Quest Lease	07/01/2017	07/01/2019	69,655	23,195	K-85
Citrix Lease	07/01/2018	08/01/2021	281,974	183,455	K-86
Dell PowerVault Leases	11/01/2018	11/01/2020	96,159	61,924	K-87
SUBTOTAL				1,174,816	
<u>Great Basin College</u>					
Apartment Complex	11/08/2001	11/01/2021	2,530,000	405,889	K-89
SUBTOTAL				405,889	K-90
GRAND TOTAL				\$814,512,431	

**Total State General Obligation Bonds**

<b>Date</b>	<b>Principal</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>	<b>Annual Principal</b>	<b>Annual Interest</b>
02/01/2019						
08/01/2019	3,725,000	1,444,100.00	5,169,100.00			
02/01/2020		1,350,975.00	1,350,975.00	6,520,075.00	3,725,000	2,795,075.00
08/01/2020	3,915,000	1,350,975.00	5,265,975.00			
02/01/2021		1,253,100.00	1,253,100.00	6,519,075.00	3,915,000	2,604,075.00
08/01/2021	4,115,000	1,253,100.00	5,368,100.00			
02/01/2022		1,150,225.00	1,150,225.00	6,518,325.00	4,115,000	2,403,325.00
08/01/2022	4,330,000	1,150,225.00	5,480,225.00			
02/01/2023		1,041,975.00	1,041,975.00	6,522,200.00	4,330,000	2,192,200.00
08/01/2023	4,550,000	1,041,975.00	5,591,975.00			
02/01/2024		928,225.00	928,225.00	6,520,200.00	4,550,000	1,970,200.00
08/01/2024	4,785,000	928,225.00	5,713,225.00			
02/01/2025		808,600.00	808,600.00	6,521,825.00	4,785,000	1,736,825.00
08/01/2025	5,030,000	808,600.00	5,838,600.00			
02/01/2026		682,850.00	682,850.00	6,521,450.00	5,030,000	1,491,450.00
08/01/2026	5,260,000	682,850.00	5,942,850.00			
02/01/2027		577,650.00	577,650.00	6,520,500.00	5,260,000	1,260,500.00
08/01/2027	5,460,000	577,650.00	6,037,650.00			
02/01/2028		482,100.00	482,100.00	6,519,750.00	5,460,000	1,059,750.00
08/01/2028	5,670,000	482,100.00	6,152,100.00			
02/01/2029		368,700.00	368,700.00	6,520,800.00	5,670,000	850,800.00
08/01/2029	5,870,000	368,700.00	6,238,700.00			
02/01/2030		280,650.00	280,650.00	6,519,350.00	5,870,000	649,350.00
08/01/2030	6,050,000	280,650.00	6,330,650.00			
02/01/2031		189,900.00	189,900.00	6,520,550.00	6,050,000	470,550.00
08/01/2031	6,235,000	189,900.00	6,424,900.00			
02/01/2032		96,375.00	96,375.00	6,521,275.00	6,235,000	286,275.00
08/01/2032	6,425,000	96,375.00	6,521,375.00			
02/01/2033		0.00	0.00	6,521,375.00	6,425,000	96,375.00
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	\$71,420,000	\$19,866,750.00	\$91,286,750.00	\$91,286,750.00	\$71,420,000.00	\$19,866,750.00

State of Nevada General Obligation Revenue Bonds, Series 2015A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
02/01/2019					
08/01/2019	3,725,000	5.000%	1,444,100.00	5,169,100.00	
02/01/2020			1,350,975.00	1,350,975.00	6,520,075.00
08/01/2020	3,915,000	5.000%	1,350,975.00	5,265,975.00	
02/01/2021			1,253,100.00	1,253,100.00	6,519,075.00
08/01/2021	4,115,000	5.000%	1,253,100.00	5,368,100.00	
02/01/2022			1,150,225.00	1,150,225.00	6,518,325.00
08/01/2022	4,330,000	5.000%	1,150,225.00	5,480,225.00	
02/01/2023			1,041,975.00	1,041,975.00	6,522,200.00
08/01/2023	4,550,000	5.000%	1,041,975.00	5,591,975.00	
02/01/2024			928,225.00	928,225.00	6,520,200.00
08/01/2024	4,785,000	5.000%	928,225.00	5,713,225.00	
02/01/2025			808,600.00	808,600.00	6,521,825.00
08/01/2025	5,030,000	5.000%	808,600.00	5,838,600.00	
02/01/2026			682,850.00	682,850.00	6,521,450.00
08/01/2026	5,260,000	4.000%	682,850.00	5,942,850.00	
02/01/2027			577,650.00	577,650.00	6,520,500.00
08/01/2027	5,460,000	3.500%	577,650.00	6,037,650.00	
02/01/2028			482,100.00	482,100.00	6,519,750.00
08/01/2028	5,670,000	4.000%	482,100.00	6,152,100.00	
02/01/2029			368,700.00	368,700.00	6,520,800.00
08/01/2029	5,870,000	3.000%	368,700.00	6,238,700.00	
02/01/2030			280,650.00	280,650.00	6,519,350.00
08/01/2030	6,050,000	3.000%	280,650.00	6,330,650.00	
02/01/2031			189,900.00	189,900.00	6,520,550.00
08/01/2031	6,235,000	3.000%	189,900.00	6,424,900.00	
02/01/2032			96,375.00	96,375.00	6,521,275.00
08/01/2032	6,425,000	3.000%	96,375.00	6,521,375.00	
02/01/2033			0.00	0.00	6,521,375.00
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	\$71,420,000		\$19,866,750.00	\$91,286,750.00	\$91,286,750.00

Combined State Certificates of Participation Debt Service

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
06/01/2019						
12/01/2019		1,141,637.50	1,141,637.50			
06/01/2020	1,100,000	1,141,637.50	2,241,637.50	3,383,275.00	1,100,000.00	2,283,275.00
12/01/2020		1,114,137.50	1,114,137.50			
06/01/2021	1,155,000	1,114,137.50	2,269,137.50	3,383,275.00	1,155,000.00	2,228,275.00
12/01/2021		1,085,262.50	1,085,262.50			
06/01/2022	1,210,000	1,085,262.50	2,295,262.50	3,380,525.00	1,210,000.00	2,170,525.00
12/01/2022		1,055,012.50	1,055,012.50			
06/01/2023	1,270,000	1,055,012.50	2,325,012.50	3,380,025.00	1,270,000.00	2,110,025.00
12/01/2023		1,023,262.50	1,023,262.50			
06/01/2024	1,335,000	1,023,262.50	2,358,262.50	3,381,525.00	1,335,000.00	2,046,525.00
12/01/2024		989,887.50	989,887.50			
06/01/2025	1,400,000	989,887.50	2,389,887.50	3,379,775.00	1,400,000.00	1,979,775.00
12/01/2025		954,887.50	954,887.50			
06/01/2026	1,470,000	954,887.50	2,424,887.50	3,379,775.00	1,470,000.00	1,909,775.00
12/01/2026		918,137.50	918,137.50			
06/01/2027	1,545,000	918,137.50	2,463,137.50	3,381,275.00	1,545,000.00	1,836,275.00
12/01/2027		887,237.50	887,237.50			
06/01/2028	1,610,000	887,237.50	2,497,237.50	3,384,475.00	1,610,000.00	1,774,475.00
12/01/2028		854,031.25	854,031.25			
06/01/2029	1,675,000	854,031.25	2,529,031.25	3,383,062.50	1,675,000.00	1,708,062.50
12/01/2029		818,437.50	818,437.50			
06/01/2030	1,745,000	818,437.50	2,563,437.50	3,381,875.00	1,745,000.00	1,636,875.00
12/01/2030		781,356.25	781,356.25			
06/01/2031	1,820,000	781,356.25	2,601,356.25	3,382,712.50	1,820,000.00	1,562,712.50
12/01/2031		735,856.25	735,856.25			
06/01/2032	1,910,000	735,856.25	2,645,856.25	3,381,712.50	1,910,000.00	1,471,712.50
12/01/2032		688,106.25	688,106.25			
06/01/2033	2,005,000	688,106.25	2,693,106.25	3,381,212.50	2,005,000.00	1,376,212.50
12/01/2033		637,981.25	637,981.25			
06/01/2034	2,105,000	637,981.25	2,742,981.25	3,380,962.50	2,105,000.00	1,275,962.50
12/01/2034		589,303.13	589,303.13			
06/01/2035	2,205,000	589,303.13	2,794,303.13	3,383,606.26	2,205,000.00	1,178,606.26
12/01/2035		538,312.50	538,312.50			
06/01/2036	2,305,000	538,312.50	2,843,312.50	3,381,625.00	2,305,000.00	1,076,625.00
12/01/2036		483,568.75	483,568.75			
06/01/2037	2,415,000	483,568.75	2,898,568.75	3,382,137.50	2,415,000.00	967,137.50
12/01/2037		426,212.50	426,212.50			
06/01/2038	2,530,000	426,212.50	2,956,212.50	3,382,425.00	2,530,000.00	852,425.00
12/01/2038		366,125.00	366,125.00			
06/01/2039	2,650,000	366,125.00	3,016,125.00	3,382,250.00	2,650,000.00	732,250.00
12/01/2039		299,875.00	299,875.00			
06/01/2040	2,785,000	299,875.00	3,084,875.00	3,384,750.00	2,785,000.00	599,750.00
12/01/2040		230,250.00	230,250.00			
06/01/2041	2,920,000	230,250.00	3,150,250.00	3,380,500.00	2,920,000.00	460,500.00
12/01/2041		157,250.00	157,250.00			
06/01/2042	3,070,000	157,250.00	3,227,250.00	3,384,500.00	3,070,000.00	314,500.00
12/01/2042		80,500.00	80,500.00			
06/01/2043	3,220,000	80,500.00	3,300,500.00	3,381,000.00	3,220,000.00	161,000.00
	<u>\$47,455,000</u>	<u>\$33,713,256.26</u>	<u>\$81,168,256.26</u>	<u>\$81,168,256.26</u>	<u>\$47,455,000.00</u>	<u>\$33,713,256.26</u>

State of Nevada Certificates of Participation, Series 2013 (Nevada State College Project)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
06/01/2019					
12/01/2019			1,141,637.50	1,141,637.50	
06/01/2020	1,100,000	5.000%	1,141,637.50	2,241,637.50	3,383,275.00
12/01/2020			1,114,137.50	1,114,137.50	
06/01/2021	1,155,000	5.000%	1,114,137.50	2,269,137.50	3,383,275.00
12/01/2021			1,085,262.50	1,085,262.50	
06/01/2022	1,210,000	5.000%	1,085,262.50	2,295,262.50	3,380,525.00
12/01/2022			1,055,012.50	1,055,012.50	
06/01/2023	1,270,000	5.000%	1,055,012.50	2,325,012.50	3,380,025.00
12/01/2023			1,023,262.50	1,023,262.50	
06/01/2024	1,335,000	5.000%	1,023,262.50	2,358,262.50	3,381,525.00
12/01/2024			989,887.50	989,887.50	
06/01/2025	1,400,000	5.000%	989,887.50	2,389,887.50	3,379,775.00
12/01/2025			954,887.50	954,887.50	
06/01/2026	1,470,000	5.000%	954,887.50	2,424,887.50	3,379,775.00
12/01/2026			918,137.50	918,137.50	
06/01/2027	1,545,000	4.000%	918,137.50	2,463,137.50	3,381,275.00
12/01/2027			887,237.50	887,237.50	
06/01/2028	1,610,000	4.125%	887,237.50	2,497,237.50	3,384,475.00
12/01/2028			854,031.25	854,031.25	
06/01/2029	1,675,000	4.250%	854,031.25	2,529,031.25	3,383,062.50
12/01/2029			818,437.50	818,437.50	
06/01/2030	1,745,000	4.250%	818,437.50	2,563,437.50	3,381,875.00
12/01/2030			781,356.25	781,356.25	
06/01/2031	1,820,000	5.000%	781,356.25	2,601,356.25	3,382,712.50
12/01/2031			735,856.25	735,856.25	
06/01/2032	1,910,000	5.000%	735,856.25	2,645,856.25	3,381,712.50
12/01/2032			688,106.25	688,106.25	
06/01/2033	2,005,000	5.000%	688,106.25	2,693,106.25	3,381,212.50
12/01/2033			637,981.25	637,981.25	
06/01/2034	2,105,000	4.625%	637,981.25	2,742,981.25	3,380,962.50
12/01/2034			589,303.13	589,303.13	
06/01/2035	2,205,000	4.625%	589,303.13	2,794,303.13	3,383,606.26
12/01/2035			538,312.50	538,312.50	
06/01/2036	2,305,000	4.750%	538,312.50	2,843,312.50	3,381,625.00
12/01/2036			483,568.75	483,568.75	
06/01/2037	2,415,000	4.750%	483,568.75	2,898,568.75	3,382,137.50
12/01/2037			426,212.50	426,212.50	
06/01/2038	2,530,000	4.750%	426,212.50	2,956,212.50	3,382,425.00
12/01/2038			366,125.00	366,125.00	
06/01/2039	2,650,000	5.000%	366,125.00	3,016,125.00	3,382,250.00
12/01/2039			299,875.00	299,875.00	
06/01/2040	2,785,000	5.000%	299,875.00	3,084,875.00	3,384,750.00
12/01/2040			230,250.00	230,250.00	
06/01/2041	2,920,000	5.000%	230,250.00	3,150,250.00	3,380,500.00
12/01/2041			157,250.00	157,250.00	
06/01/2042	3,070,000	5.000%	157,250.00	3,227,250.00	3,384,500.00
12/01/2042			80,500.00	80,500.00	
06/01/2043	3,220,000	5.000%	80,500.00	3,300,500.00	3,381,000.00
	<u>\$47,455,000</u>		<u>\$33,713,256.26</u>	<u>\$81,168,256.26</u>	<u>\$81,168,256.26</u>

Combined Universities Revenue Bonds Debt Service

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	19,460,000	8,742,765.64	28,202,765.64	28,202,765.64	19,460,000.00	8,742,765.64
01/01/2020		8,312,765.64	8,312,765.64			
07/01/2020	19,785,000	8,312,765.64	28,097,765.64	36,410,531.28	19,785,000.00	16,625,531.28
01/01/2021		7,388,398.14	7,388,398.14			
07/01/2021	19,480,000	7,388,398.14	26,868,398.14	34,256,796.28	19,480,000.00	14,776,796.28
01/01/2022		6,938,473.14	6,938,473.14			
07/01/2022	20,150,000	6,938,473.14	27,088,473.14	34,026,946.28	20,150,000.00	13,876,946.28
01/01/2023		6,485,173.14	6,485,173.14			
07/01/2023	21,175,000	6,485,173.14	27,660,173.14	34,145,346.28	21,175,000.00	12,970,346.28
01/01/2024		5,968,883.14	5,968,883.14			
07/01/2024	21,745,000	5,968,883.14	27,713,883.14	33,682,766.28	21,745,000.00	11,937,766.28
01/01/2025		5,437,878.14	5,437,878.14			
07/01/2025	22,095,000	5,437,878.14	27,532,878.14	32,970,756.28	22,095,000.00	10,875,756.28
01/01/2026		4,919,790.64	4,919,790.64			
07/01/2026	18,840,000	4,919,790.64	23,759,790.64	28,679,581.28	18,840,000.00	9,839,581.28
01/01/2027		4,470,140.64	4,470,140.64			
07/01/2027	18,515,000	4,470,140.64	22,985,140.64	27,455,281.28	18,515,000.00	8,940,281.28
01/01/2028		4,041,078.14	4,041,078.14			
07/01/2028	19,370,000	4,041,078.14	23,411,078.14	27,452,156.28	19,370,000.00	8,082,156.28
01/01/2029		3,642,328.14	3,642,328.14			
07/01/2029	20,165,000	3,642,328.14	23,807,328.14	27,449,656.28	20,165,000.00	7,284,656.28
01/01/2030		3,236,853.14	3,236,853.14			
07/01/2030	21,055,000	3,236,853.14	24,291,853.14	27,528,706.28	21,055,000.00	6,473,706.28
01/01/2031		2,808,718.76	2,808,718.76			
07/01/2031	20,900,000	2,808,718.76	23,708,718.76	26,517,437.52	20,900,000.00	5,617,437.52
01/01/2032		2,387,043.76	2,387,043.76			
07/01/2032	21,750,000	2,387,043.76	24,137,043.76	26,524,087.52	21,750,000.00	4,774,087.52
01/01/2033		1,950,231.26	1,950,231.26			
07/01/2033	21,400,000	1,950,231.26	23,350,231.26	25,300,462.52	21,400,000.00	3,900,462.52
01/01/2034		1,520,106.26	1,520,106.26			
07/01/2034	17,825,000	1,520,106.26	19,345,106.26	20,865,212.52	17,825,000.00	3,040,212.52
01/01/2035		1,150,081.26	1,150,081.26			
07/01/2035	18,560,000	1,150,081.26	19,710,081.26	20,860,162.52	18,560,000.00	2,300,162.52
01/01/2036		796,243.76	796,243.76			
07/01/2036	8,385,000	796,243.76	9,181,243.76	9,977,487.52	8,385,000.00	1,592,487.52
01/01/2037		646,221.88	646,221.88			
07/01/2037	7,715,000	646,221.88	8,361,221.88	9,007,443.76	7,715,000.00	1,292,443.76
01/01/2038		502,653.13	502,653.13			
07/01/2038	8,000,000	502,653.13	8,502,653.13	9,005,306.26	8,000,000.00	1,005,306.26
01/01/2039		347,171.88	347,171.88			
07/01/2039	4,045,000	347,171.88	4,392,171.88	4,739,343.76	4,045,000.00	694,343.76
01/01/2040		263,403.13	263,403.13			
07/01/2040	4,215,000	263,403.13	4,478,403.13	4,741,806.26	4,215,000.00	526,806.26
01/01/2041		174,612.50	174,612.50			
07/01/2041	2,500,000	174,612.50	2,674,612.50	2,849,225.00	2,500,000.00	349,225.00
01/01/2042		119,925.00	119,925.00			
07/01/2042	2,605,000	119,925.00	2,724,925.00	2,844,850.00	2,605,000.00	239,850.00
01/01/2043		61,312.50	61,312.50			
07/01/2043	2,725,000	61,312.50	2,786,312.50	2,847,625.00	2,725,000.00	122,625.00
01/01/2044						
	\$382,460,000	\$155,881,739.88	\$538,341,739.88	\$538,341,739.88	\$382,460,000.00	\$155,881,739.88



Universities Revenue Bonds, Series 2008A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,475,000	4.250%	31,343.75	1,506,343.75	1,506,343.75
01/01/2020			0.00	0.00	
07/01/2020			0.00	0.00	0.00
01/01/2021			0.00	0.00	
07/01/2021			0.00	0.00	0.00
01/01/2022			0.00	0.00	
07/01/2022			0.00	0.00	0.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$1,475,000</u>		<u>\$31,343.75</u>	<u>\$1,506,343.75</u>	<u>\$1,506,343.75</u>

Universities Revenue Bonds, Series 2009A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	700,000	3.625%	26,922.50	726,922.50	726,922.50
01/01/2020			14,235.00	14,235.00	
07/01/2020	730,000	3.900%	14,235.00	744,235.00	758,470.00
01/01/2021			0.00	0.00	
07/01/2021			0.00	0.00	0.00
01/01/2022			0.00	0.00	
07/01/2022			0.00	0.00	0.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$1,430,000</u>		<u>\$55,392.50</u>	<u>\$1,485,392.50</u>	<u>\$1,485,392.50</u>

**Universities Revenue Bonds, Series 2010A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	760,000	5.750%	1,062,582.50	1,822,582.50	1,822,582.50
01/01/2020			1,040,732.50	1,040,732.50	
07/01/2020	790,000	6.700%	1,040,732.50	1,830,732.50	2,871,465.00
01/01/2021			1,014,267.50	1,014,267.50	
07/01/2021	825,000	6.700%	1,014,267.50	1,839,267.50	2,853,535.00
01/01/2022			986,630.00	986,630.00	
07/01/2022	860,000	6.700%	986,630.00	1,846,630.00	2,833,260.00
01/01/2023			957,820.00	957,820.00	
07/01/2023	900,000	6.700%	957,820.00	1,857,820.00	2,815,640.00
01/01/2024			927,670.00	927,670.00	
07/01/2024	935,000	6.700%	927,670.00	1,862,670.00	2,790,340.00
01/01/2025			896,347.50	896,347.50	
07/01/2025	980,000	6.700%	896,347.50	1,876,347.50	2,772,695.00
01/01/2026			863,517.50	863,517.50	
07/01/2026	1,020,000	7.600%	863,517.50	1,883,517.50	2,747,035.00
01/01/2027			824,757.50	824,757.50	
07/01/2027	1,070,000	7.600%	824,757.50	1,894,757.50	2,719,515.00
01/01/2028			784,097.50	784,097.50	
07/01/2028	1,125,000	7.600%	784,097.50	1,909,097.50	2,693,195.00
01/01/2029			741,347.50	741,347.50	
07/01/2029	1,180,000	7.600%	741,347.50	1,921,347.50	2,662,695.00
01/01/2030			696,507.50	696,507.50	
07/01/2030	1,235,000	7.600%	696,507.50	1,931,507.50	2,628,015.00
01/01/2031			649,577.50	649,577.50	
07/01/2031	1,300,000	7.900%	649,577.50	1,949,577.50	2,599,155.00
01/01/2032			598,227.50	598,227.50	
07/01/2032	1,365,000	7.900%	598,227.50	1,963,227.50	2,561,455.00
01/01/2033			544,310.00	544,310.00	
07/01/2033	1,435,000	7.900%	544,310.00	1,979,310.00	2,523,620.00
01/01/2034			487,627.50	487,627.50	
07/01/2034	1,510,000	7.900%	487,627.50	1,997,627.50	2,485,255.00
01/01/2035			427,982.50	427,982.50	
07/01/2035	1,585,000	7.900%	427,982.50	2,012,982.50	2,440,965.00
01/01/2036			365,375.00	365,375.00	
07/01/2036	1,670,000	7.900%	365,375.00	2,035,375.00	2,400,750.00
01/01/2037			299,410.00	299,410.00	
07/01/2037	1,755,000	7.900%	299,410.00	2,054,410.00	2,353,820.00
01/01/2038			230,087.50	230,087.50	
07/01/2038	1,845,000	7.900%	230,087.50	2,075,087.50	2,305,175.00
01/01/2039			157,210.00	157,210.00	
07/01/2039	1,940,000	7.900%	157,210.00	2,097,210.00	2,254,420.00
01/01/2040			80,580.00	80,580.00	
07/01/2040	2,040,000	7.900%	80,580.00	2,120,580.00	2,201,160.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$28,125,000</u>		<u>\$28,210,747.50</u>	<u>\$56,335,747.50</u>	<u>\$56,335,747.50</u>

**Universities Revenue Bonds, Series 2011A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	5,960,000	5.000%	399,875.00	6,359,875.00	6,359,875.00
01/01/2020			250,875.00	250,875.00	
07/01/2020	4,865,000	5.000%	250,875.00	5,115,875.00	5,366,750.00
01/01/2021			129,250.00	129,250.00	
07/01/2021	3,150,000	5.000%	129,250.00	3,279,250.00	3,408,500.00
01/01/2022			50,500.00	50,500.00	
07/01/2022	480,000	5.000%	50,500.00	530,500.00	581,000.00
01/01/2023			38,500.00	38,500.00	
07/01/2023	750,000	5.000%	38,500.00	788,500.00	827,000.00
01/01/2024			19,750.00	19,750.00	
07/01/2024	790,000	5.000%	19,750.00	809,750.00	829,500.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$15,995,000</u>		<u>\$1,377,625.00</u>	<u>\$17,372,625.00</u>	<u>\$17,372,625.00</u>

Universities Revenue Bonds, Series 2012A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019			564,312.50	564,312.50	564,312.50
01/01/2020			564,312.50	564,312.50	
07/01/2020			564,312.50	564,312.50	1,128,625.00
01/01/2021			564,312.50	564,312.50	
07/01/2021			564,312.50	564,312.50	1,128,625.00
01/01/2022			564,312.50	564,312.50	
07/01/2022	1,895,000	4.000%	564,312.50	2,459,312.50	3,023,625.00
01/01/2023			526,412.50	526,412.50	
07/01/2023	1,980,000	5.000%	526,412.50	2,506,412.50	3,032,825.00
01/01/2024			476,912.50	476,912.50	
07/01/2024	2,075,000	5.000%	476,912.50	2,551,912.50	3,028,825.00
01/01/2025			425,037.50	425,037.50	
07/01/2025	3,055,000	3.500%	425,037.50	3,480,037.50	3,905,075.00
01/01/2026			371,575.00	371,575.00	
07/01/2026	3,155,000	5.000%	371,575.00	3,526,575.00	3,898,150.00
01/01/2027			292,700.00	292,700.00	
07/01/2027	3,320,000	5.000%	292,700.00	3,612,700.00	3,905,400.00
01/01/2028			209,700.00	209,700.00	
07/01/2028	3,480,000	4.000%	209,700.00	3,689,700.00	3,899,400.00
01/01/2029			140,100.00	140,100.00	
07/01/2029	3,615,000	4.000%	140,100.00	3,755,100.00	3,895,200.00
01/01/2030			67,800.00	67,800.00	
07/01/2030	1,085,000	4.000%	67,800.00	1,152,800.00	1,220,600.00
01/01/2031			46,100.00	46,100.00	
07/01/2031	1,130,000	4.000%	46,100.00	1,176,100.00	1,222,200.00
01/01/2032			23,500.00	23,500.00	
07/01/2032	1,175,000	4.000%	23,500.00	1,198,500.00	1,222,000.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$25,965,000</u>		<u>\$9,109,862.50</u>	<u>\$35,074,862.50</u>	<u>\$35,074,862.50</u>

Universities Revenue Bonds, Series 2012B

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	615,000	2.250%	19,093.75	634,093.75	634,093.75
01/01/2020			12,175.00	12,175.00	
07/01/2020	630,000	2.500%	12,175.00	642,175.00	654,350.00
01/01/2021			4,300.00	4,300.00	
07/01/2021	160,000	2.625%	4,300.00	164,300.00	168,600.00
01/01/2022			2,200.00	2,200.00	
07/01/2022	160,000	2.750%	2,200.00	162,200.00	164,400.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	\$1,565,000		\$56,443.75	\$1,621,443.75	\$1,621,443.75

**Universities Revenue Bonds, Series 2013A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	1,365,000	5.000%	649,875.00	2,014,875.00	2,014,875.00
01/01/2020			615,750.00	615,750.00	
07/01/2020	1,435,000	5.000%	615,750.00	2,050,750.00	2,666,500.00
01/01/2021			579,875.00	579,875.00	
07/01/2021	1,510,000	5.000%	579,875.00	2,089,875.00	2,669,750.00
01/01/2022			542,125.00	542,125.00	
07/01/2022	1,580,000	5.000%	542,125.00	2,122,125.00	2,664,250.00
01/01/2023			502,625.00	502,625.00	
07/01/2023	1,670,000	5.000%	502,625.00	2,172,625.00	2,675,250.00
01/01/2024			460,875.00	460,875.00	
07/01/2024	1,750,000	5.000%	460,875.00	2,210,875.00	2,671,750.00
01/01/2025			417,125.00	417,125.00	
07/01/2025	1,860,000	5.000%	417,125.00	2,277,125.00	2,694,250.00
01/01/2026			370,625.00	370,625.00	
07/01/2026	960,000	3.000%	370,625.00	1,330,625.00	1,701,250.00
01/01/2027			356,225.00	356,225.00	
07/01/2027	985,000	3.000%	356,225.00	1,341,225.00	1,697,450.00
01/01/2028			341,450.00	341,450.00	
07/01/2028	1,010,000	4.000%	341,450.00	1,351,450.00	1,692,900.00
01/01/2029			321,250.00	321,250.00	
07/01/2029	1,050,000	3.250%	321,250.00	1,371,250.00	1,692,500.00
01/01/2030			304,187.50	304,187.50	
07/01/2030	3,835,000	4.000%	304,187.50	4,139,187.50	4,443,375.00
01/01/2031			227,487.50	227,487.50	
07/01/2031	3,985,000	4.000%	227,487.50	4,212,487.50	4,439,975.00
01/01/2032			147,787.50	147,787.50	
07/01/2032	4,150,000	3.500%	147,787.50	4,297,787.50	4,445,575.00
01/01/2033			75,162.50	75,162.50	
07/01/2033	4,295,000	3.500%	75,162.50	4,370,162.50	4,445,325.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$31,440,000</u>		<u>\$11,174,975.00</u>	<u>\$42,614,975.00</u>	<u>\$42,614,975.00</u>

**Universities Revenue Bonds, Series 2013B**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	5,640,000	4.000%	2,116,775.00	7,756,775.00	7,756,775.00
01/01/2020			2,003,975.00	2,003,975.00	
07/01/2020	5,875,000	4.000%	2,003,975.00	7,878,975.00	9,882,950.00
01/01/2021			1,886,475.00	1,886,475.00	
07/01/2021	6,105,000	5.000%	1,886,475.00	7,991,475.00	9,877,950.00
01/01/2022			1,733,850.00	1,733,850.00	
07/01/2022	6,405,000	5.000%	1,733,850.00	8,138,850.00	9,872,700.00
01/01/2023			1,573,725.00	1,573,725.00	
07/01/2023	6,725,000	5.000%	1,573,725.00	8,298,725.00	9,872,450.00
01/01/2024			1,405,600.00	1,405,600.00	
07/01/2024	7,060,000	5.000%	1,405,600.00	8,465,600.00	9,871,200.00
01/01/2025			1,229,100.00	1,229,100.00	
07/01/2025	7,420,000	5.000%	1,229,100.00	8,649,100.00	9,878,200.00
01/01/2026			1,043,600.00	1,043,600.00	
07/01/2026	7,155,000	5.000%	1,043,600.00	8,198,600.00	9,242,200.00
01/01/2027			864,725.00	864,725.00	
07/01/2027	7,505,000	5.000%	864,725.00	8,369,725.00	9,234,450.00
01/01/2028			677,100.00	677,100.00	
07/01/2028	7,885,000	4.000%	677,100.00	8,562,100.00	9,239,200.00
01/01/2029			519,400.00	519,400.00	
07/01/2029	8,205,000	4.000%	519,400.00	8,724,400.00	9,243,800.00
01/01/2030			355,300.00	355,300.00	
07/01/2030	8,540,000	4.000%	355,300.00	8,895,300.00	9,250,600.00
01/01/2031			184,500.00	184,500.00	
07/01/2031	1,705,000	4.000%	184,500.00	1,889,500.00	2,074,000.00
01/01/2032			150,400.00	150,400.00	
07/01/2032	1,770,000	4.000%	150,400.00	1,920,400.00	2,070,800.00
01/01/2033			115,000.00	115,000.00	
07/01/2033	1,840,000	4.000%	115,000.00	1,955,000.00	2,070,000.00
01/01/2034			78,200.00	78,200.00	
07/01/2034	1,915,000	4.000%	78,200.00	1,993,200.00	2,071,400.00
01/01/2035			39,900.00	39,900.00	
07/01/2035	1,995,000	4.000%	39,900.00	2,034,900.00	2,074,800.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$93,745,000</u>		<u>\$29,838,475.00</u>	<u>\$123,583,475.00</u>	<u>\$123,583,475.00</u>



**Universities Revenue Bonds, Series 2014A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	1,460,000	5.000%	1,092,271.88	2,552,271.88	2,552,271.88
01/01/2020			1,055,771.88	1,055,771.88	
07/01/2020	1,535,000	5.000%	1,055,771.88	2,590,771.88	3,646,543.76
01/01/2021			1,017,396.88	1,017,396.88	
07/01/2021	1,610,000	5.000%	1,017,396.88	2,627,396.88	3,644,793.76
01/01/2022			977,146.88	977,146.88	
07/01/2022	1,690,000	5.000%	977,146.88	2,667,146.88	3,644,293.76
01/01/2023			934,896.88	934,896.88	
07/01/2023	1,780,000	5.000%	934,896.88	2,714,896.88	3,649,793.76
01/01/2024			890,396.88	890,396.88	
07/01/2024	1,860,000	5.000%	890,396.88	2,750,396.88	3,640,793.76
01/01/2025			843,896.88	843,896.88	
07/01/2025	1,160,000	5.000%	843,896.88	2,003,896.88	2,847,793.76
01/01/2026			814,896.88	814,896.88	
07/01/2026	1,215,000	5.000%	814,896.88	2,029,896.88	2,844,793.76
01/01/2027			784,521.88	784,521.88	
07/01/2027	1,280,000	5.000%	784,521.88	2,064,521.88	2,849,043.76
01/01/2028			752,521.88	752,521.88	
07/01/2028	1,345,000	5.000%	752,521.88	2,097,521.88	2,850,043.76
01/01/2029			718,896.88	718,896.88	
07/01/2029	1,410,000	5.000%	718,896.88	2,128,896.88	2,847,793.76
01/01/2030			683,646.88	683,646.88	
07/01/2030	1,480,000	5.000%	683,646.88	2,163,646.88	2,847,293.76
01/01/2031			646,646.88	646,646.88	
07/01/2031	1,550,000	5.000%	646,646.88	2,196,646.88	2,843,293.76
01/01/2032			607,896.88	607,896.88	
07/01/2032	1,630,000	5.000%	607,896.88	2,237,896.88	2,845,793.76
01/01/2033			567,146.88	567,146.88	
07/01/2033	1,715,000	5.000%	567,146.88	2,282,146.88	2,849,293.76
01/01/2034			524,271.88	524,271.88	
07/01/2034	1,800,000	5.000%	524,271.88	2,324,271.88	2,848,543.76
01/01/2035			479,271.88	479,271.88	
07/01/2035	1,885,000	5.000%	479,271.88	2,364,271.88	2,843,543.76
01/01/2036			432,146.88	432,146.88	
07/01/2036	1,985,000	5.000%	432,146.88	2,417,146.88	2,849,293.76
01/01/2037			382,521.88	382,521.88	
07/01/2037	2,080,000	5.000%	382,521.88	2,462,521.88	2,845,043.76
01/01/2038			330,521.88	330,521.88	
07/01/2038	2,190,000	5.000%	330,521.88	2,520,521.88	2,851,043.76
01/01/2039			275,771.88	275,771.88	
07/01/2039	2,295,000	4.250%	275,771.88	2,570,771.88	2,846,543.76
01/01/2040			227,003.13	227,003.13	
07/01/2040	2,395,000	4.375%	227,003.13	2,622,003.13	2,849,006.26
01/01/2041			174,612.50	174,612.50	
07/01/2041	2,500,000	4.375%	174,612.50	2,674,612.50	2,849,225.00
01/01/2042			119,925.00	119,925.00	
07/01/2042	2,605,000	4.500%	119,925.00	2,724,925.00	2,844,850.00
01/01/2043			61,312.50	61,312.50	
07/01/2043	2,725,000	4.500%	61,312.50	2,786,312.50	2,847,625.00
	<u>\$45,180,000</u>		<u>\$29,698,353.34</u>	<u>\$74,878,353.34</u>	<u>\$74,878,353.34</u>

**Universities Revenue Bonds, Series 2015A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	170,000	3.000%	1,305,525.00	1,475,525.00	1,475,525.00
01/01/2020			1,302,975.00	1,302,975.00	
07/01/2020	1,045,000	4.000%	1,302,975.00	2,347,975.00	3,650,950.00
01/01/2021			1,282,075.00	1,282,075.00	
07/01/2021	2,390,000	4.000%	1,282,075.00	3,672,075.00	4,954,150.00
01/01/2022			1,234,275.00	1,234,275.00	
07/01/2022	3,190,000	4.000%	1,234,275.00	4,424,275.00	5,658,550.00
01/01/2023			1,170,475.00	1,170,475.00	
07/01/2023	3,325,000	5.000%	1,170,475.00	4,495,475.00	5,665,950.00
01/01/2024			1,087,350.00	1,087,350.00	
07/01/2024	3,485,000	5.000%	1,087,350.00	4,572,350.00	5,659,700.00
01/01/2025			1,000,225.00	1,000,225.00	
07/01/2025	3,655,000	5.000%	1,000,225.00	4,655,225.00	5,655,450.00
01/01/2026			908,850.00	908,850.00	
07/01/2026	1,185,000	5.000%	908,850.00	2,093,850.00	3,002,700.00
01/01/2027			879,225.00	879,225.00	
07/01/2027	885,000	5.000%	879,225.00	1,764,225.00	2,643,450.00
01/01/2028			857,100.00	857,100.00	
07/01/2028	925,000	5.000%	857,100.00	1,782,100.00	2,639,200.00
01/01/2029			833,975.00	833,975.00	
07/01/2029	975,000	5.000%	833,975.00	1,808,975.00	2,642,950.00
01/01/2030			809,600.00	809,600.00	
07/01/2030	1,020,000	5.000%	809,600.00	1,829,600.00	2,639,200.00
01/01/2031			784,100.00	784,100.00	
07/01/2031	7,235,000	4.000%	784,100.00	8,019,100.00	8,803,200.00
01/01/2032			639,400.00	639,400.00	
07/01/2032	7,530,000	4.000%	639,400.00	8,169,400.00	8,808,800.00
01/01/2033			488,800.00	488,800.00	
07/01/2033	7,825,000	4.000%	488,800.00	8,313,800.00	8,802,600.00
01/01/2034			332,300.00	332,300.00	
07/01/2034	8,145,000	4.000%	332,300.00	8,477,300.00	8,809,600.00
01/01/2035			169,400.00	169,400.00	
07/01/2035	8,470,000	4.000%	169,400.00	8,639,400.00	8,808,800.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$61,455,000</u>		<u>\$28,865,775.00</u>	<u>\$90,320,775.00</u>	<u>\$90,320,775.00</u>

Universities Revenue Bonds, Series 2015B

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	710,000	2.000%	73,870.00	783,870.00	783,870.00
01/01/2020			66,770.00	66,770.00	
07/01/2020	720,000	2.000%	66,770.00	786,770.00	853,540.00
01/01/2021			59,570.00	59,570.00	
07/01/2021	735,000	2.000%	59,570.00	794,570.00	854,140.00
01/01/2022			52,220.00	52,220.00	
07/01/2022	750,000	2.200%	52,220.00	802,220.00	854,440.00
01/01/2023			43,970.00	43,970.00	
07/01/2023	770,000	2.400%	43,970.00	813,970.00	857,940.00
01/01/2024			34,730.00	34,730.00	
07/01/2024	785,000	2.600%	34,730.00	819,730.00	854,460.00
01/01/2025			24,525.00	24,525.00	
07/01/2025	805,000	3.000%	24,525.00	829,525.00	854,050.00
01/01/2026			12,450.00	12,450.00	
07/01/2026	830,000	3.000%	12,450.00	842,450.00	854,900.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$6,105,000</u>		<u>\$662,340.00</u>	<u>\$6,767,340.00</u>	<u>\$6,767,340.00</u>

**Universities Revenue Bonds, Series 2016A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	100,000	5.000%	1,165,121.88	1,265,121.88	1,265,121.88
01/01/2020			1,162,621.88	1,162,621.88	
07/01/2020	1,630,000	5.000%	1,162,621.88	2,792,621.88	3,955,243.76
01/01/2021			1,121,871.88	1,121,871.88	
07/01/2021	2,440,000	4.000%	1,121,871.88	3,561,871.88	4,683,743.76
01/01/2022			1,073,071.88	1,073,071.88	
07/01/2022	2,545,000	4.000%	1,073,071.88	3,618,071.88	4,691,143.76
01/01/2023			1,022,171.88	1,022,171.88	
07/01/2023	2,650,000	5.000%	1,022,171.88	3,672,171.88	4,694,343.76
01/01/2024			955,921.88	955,921.88	
07/01/2024	2,345,000	5.000%	955,921.88	3,300,921.88	4,256,843.76
01/01/2025			897,296.88	897,296.88	
07/01/2025	2,470,000	5.000%	897,296.88	3,367,296.88	4,264,593.76
01/01/2026			835,546.88	835,546.88	
07/01/2026	2,595,000	5.000%	835,546.88	3,430,546.88	4,266,093.76
01/01/2027			770,671.88	770,671.88	
07/01/2027	2,715,000	3.500%	770,671.88	3,485,671.88	4,256,343.76
01/01/2028			723,159.38	723,159.38	
07/01/2028	2,815,000	4.000%	723,159.38	3,538,159.38	4,261,318.76
01/01/2029			666,859.38	666,859.38	
07/01/2029	2,925,000	4.000%	666,859.38	3,591,859.38	4,258,718.76
01/01/2030			608,359.38	608,359.38	
07/01/2030	3,045,000	4.000%	608,359.38	3,653,359.38	4,261,718.76
01/01/2031			547,459.38	547,459.38	
07/01/2031	3,170,000	4.000%	547,459.38	3,717,459.38	4,264,918.76
01/01/2032			484,059.38	484,059.38	
07/01/2032	3,295,000	4.500%	484,059.38	3,779,059.38	4,263,118.76
01/01/2033			409,921.88	409,921.88	
07/01/2033	3,445,000	4.500%	409,921.88	3,854,921.88	4,264,843.76
01/01/2034			332,409.38	332,409.38	
07/01/2034	3,600,000	4.500%	332,409.38	3,932,409.38	4,264,818.76
01/01/2035			251,409.38	251,409.38	
07/01/2035	3,760,000	3.125%	251,409.38	4,011,409.38	4,262,818.76
01/01/2036			192,659.38	192,659.38	
07/01/2036	3,875,000	3.125%	192,659.38	4,067,659.38	4,260,318.76
01/01/2037			132,112.50	132,112.50	
07/01/2037	4,005,000	3.250%	132,112.50	4,137,112.50	4,269,225.00
01/01/2038			67,031.25	67,031.25	
07/01/2038	4,125,000	3.250%	67,031.25	4,192,031.25	4,259,062.50
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$57,550,000</u>		<u>\$25,674,353.30</u>	<u>\$83,224,353.30</u>	<u>\$83,224,353.30</u>

**Universities Revenue Bonds, Series 2016B**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	505,000	5.000%	235,196.88	740,196.88	740,196.88
01/01/2020			222,571.88	222,571.88	
07/01/2020	530,000	5.000%	222,571.88	752,571.88	975,143.76
01/01/2021			209,321.88	209,321.88	
07/01/2021	555,000	5.000%	209,321.88	764,321.88	973,643.76
01/01/2022			195,446.88	195,446.88	
07/01/2022	585,000	5.000%	195,446.88	780,446.88	975,893.76
01/01/2023			180,821.88	180,821.88	
07/01/2023	615,000	4.000%	180,821.88	795,821.88	976,643.76
01/01/2024			168,521.88	168,521.88	
07/01/2024	640,000	4.000%	168,521.88	808,521.88	977,043.76
01/01/2025			155,721.88	155,721.88	
07/01/2025	665,000	4.000%	155,721.88	820,721.88	976,443.76
01/01/2026			142,421.88	142,421.88	
07/01/2026	690,000	4.000%	142,421.88	832,421.88	974,843.76
01/01/2027			128,621.88	128,621.88	
07/01/2027	720,000	4.000%	128,621.88	848,621.88	977,243.76
01/01/2028			114,221.88	114,221.88	
07/01/2028	745,000	4.000%	114,221.88	859,221.88	973,443.76
01/01/2029			99,321.88	99,321.88	
07/01/2029	775,000	2.500%	99,321.88	874,321.88	973,643.76
01/01/2030			89,634.38	89,634.38	
07/01/2030	795,000	2.625%	89,634.38	884,634.38	974,268.76
01/01/2031			79,200.00	79,200.00	
07/01/2031	815,000	3.000%	79,200.00	894,200.00	973,400.00
01/01/2032			66,975.00	66,975.00	
07/01/2032	840,000	3.000%	66,975.00	906,975.00	973,950.00
01/01/2033			54,375.00	54,375.00	
07/01/2033	865,000	3.000%	54,375.00	919,375.00	973,750.00
01/01/2034			41,400.00	41,400.00	
07/01/2034	895,000	3.000%	41,400.00	936,400.00	977,800.00
01/01/2035			27,975.00	27,975.00	
07/01/2035	920,000	3.000%	27,975.00	947,975.00	975,950.00
01/01/2036			14,175.00	14,175.00	
07/01/2036	945,000	3.000%	14,175.00	959,175.00	973,350.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$13,100,000</u>		<u>\$4,216,653.24</u>	<u>\$17,316,653.24</u>	<u>\$17,316,653.24</u>

**Universities Revenue Bonds, Series 2017A**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019			533,950.00	533,950.00	533,950.00
01/01/2020			533,950.00	533,950.00	
07/01/2020			533,950.00	533,950.00	1,067,900.00
01/01/2021			533,950.00	533,950.00	
07/01/2021	825,000	5.000%	533,950.00	1,358,950.00	1,892,900.00
01/01/2022			513,325.00	513,325.00	
07/01/2022	870,000	5.000%	513,325.00	1,383,325.00	1,896,650.00
01/01/2023			491,575.00	491,575.00	
07/01/2023	910,000	5.000%	491,575.00	1,401,575.00	1,893,150.00
01/01/2024			468,825.00	468,825.00	
07/01/2024	955,000	5.000%	468,825.00	1,423,825.00	1,892,650.00
01/01/2025			444,950.00	444,950.00	
07/01/2025	1,005,000	5.000%	444,950.00	1,449,950.00	1,894,900.00
01/01/2026			419,825.00	419,825.00	
07/01/2026	1,055,000	5.000%	419,825.00	1,474,825.00	1,894,650.00
01/01/2027			393,450.00	393,450.00	
07/01/2027	1,105,000	5.000%	393,450.00	1,498,450.00	1,891,900.00
01/01/2028			365,825.00	365,825.00	
07/01/2028	1,165,000	4.000%	365,825.00	1,530,825.00	1,896,650.00
01/01/2029			342,525.00	342,525.00	
07/01/2029	1,210,000	4.000%	342,525.00	1,552,525.00	1,895,050.00
01/01/2030			318,325.00	318,325.00	
07/01/2030	1,255,000	4.000%	318,325.00	1,573,325.00	1,891,650.00
01/01/2031			293,225.00	293,225.00	
07/01/2031	1,310,000	4.000%	293,225.00	1,603,225.00	1,896,450.00
01/01/2032			267,025.00	267,025.00	
07/01/2032	1,360,000	4.000%	267,025.00	1,627,025.00	1,894,050.00
01/01/2033			239,825.00	239,825.00	
07/01/2033	1,415,000	4.000%	239,825.00	1,654,825.00	1,894,650.00
01/01/2034			211,525.00	211,525.00	
07/01/2034	1,470,000	4.000%	211,525.00	1,681,525.00	1,893,050.00
01/01/2035			182,125.00	182,125.00	
07/01/2035	1,530,000	3.250%	182,125.00	1,712,125.00	1,894,250.00
01/01/2036			157,262.50	157,262.50	
07/01/2036	1,580,000	3.250%	157,262.50	1,737,262.50	1,894,525.00
01/01/2037			131,587.50	131,587.50	
07/01/2037	1,630,000	3.250%	131,587.50	1,761,587.50	1,893,175.00
01/01/2038			105,100.00	105,100.00	
07/01/2038	1,685,000	4.000%	105,100.00	1,790,100.00	1,895,200.00
01/01/2039			71,400.00	71,400.00	
07/01/2039	1,750,000	4.000%	71,400.00	1,821,400.00	1,892,800.00
01/01/2040			36,400.00	36,400.00	
07/01/2040	1,820,000	4.000%	36,400.00	1,856,400.00	1,892,800.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$25,905,000</u>		<u>\$13,577,950.00</u>	<u>\$39,482,950.00</u>	<u>\$39,482,950.00</u>

**Universities Revenue Bonds, Series 2017A (Crossover Escrow)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019			(533,950.00)	(533,950.00)	(533,950.00)
01/01/2020			(533,950.00)	(533,950.00)	
07/01/2020			(533,950.00)	(533,950.00)	(1,067,900.00)
01/01/2021			(1,014,267.50)	(1,014,267.50)	
07/01/2021	(825,000)		(1,014,267.50)	(1,839,267.50)	(2,853,535.00)
01/01/2022			(986,630.00)	(986,630.00)	
07/01/2022	(860,000)		(986,630.00)	(1,846,630.00)	(2,833,260.00)
01/01/2023			(957,820.00)	(957,820.00)	
07/01/2023	(900,000)		(957,820.00)	(1,857,820.00)	(2,815,640.00)
01/01/2024			(927,670.00)	(927,670.00)	
07/01/2024	(935,000)		(927,670.00)	(1,862,670.00)	(2,790,340.00)
01/01/2025			(896,347.50)	(896,347.50)	
07/01/2025	(980,000)		(896,347.50)	(1,876,347.50)	(2,772,695.00)
01/01/2026			(863,517.50)	(863,517.50)	
07/01/2026	(1,020,000)		(863,517.50)	(1,883,517.50)	(2,747,035.00)
01/01/2027			(824,757.50)	(824,757.50)	
07/01/2027	(1,070,000)		(824,757.50)	(1,894,757.50)	(2,719,515.00)
01/01/2028			(784,097.50)	(784,097.50)	
07/01/2028	(1,125,000)		(784,097.50)	(1,909,097.50)	(2,693,195.00)
01/01/2029			(741,347.50)	(741,347.50)	
07/01/2029	(1,180,000)		(741,347.50)	(1,921,347.50)	(2,662,695.00)
01/01/2030			(696,507.50)	(696,507.50)	
07/01/2030	(1,235,000)		(696,507.50)	(1,931,507.50)	(2,628,015.00)
01/01/2031			(649,577.50)	(649,577.50)	
07/01/2031	(1,300,000)		(649,577.50)	(1,949,577.50)	(2,599,155.00)
01/01/2032			(598,227.50)	(598,227.50)	
07/01/2032	(1,365,000)		(598,227.50)	(1,963,227.50)	(2,561,455.00)
01/01/2033			(544,310.00)	(544,310.00)	
07/01/2033	(1,435,000)		(544,310.00)	(1,979,310.00)	(2,523,620.00)
01/01/2034			(487,627.50)	(487,627.50)	
07/01/2034	(1,510,000)		(487,627.50)	(1,997,627.50)	(2,485,255.00)
01/01/2035			(427,982.50)	(427,982.50)	
07/01/2035	(1,585,000)		(427,982.50)	(2,012,982.50)	(2,440,965.00)
01/01/2036			(365,375.00)	(365,375.00)	
07/01/2036	(1,670,000)		(365,375.00)	(2,035,375.00)	(2,400,750.00)
01/01/2037			(299,410.00)	(299,410.00)	
07/01/2037	(1,755,000)		(299,410.00)	(2,054,410.00)	(2,353,820.00)
01/01/2038			(230,087.50)	(230,087.50)	
07/01/2038	(1,845,000)		(230,087.50)	(2,075,087.50)	(2,305,175.00)
01/01/2039			(157,210.00)	(157,210.00)	
07/01/2039	(1,940,000)		(157,210.00)	(2,097,210.00)	(2,254,420.00)
01/01/2040			(80,580.00)	(80,580.00)	
07/01/2040	(2,040,000)		(80,580.00)	(2,120,580.00)	(2,201,160.00)
01/01/2041			0.00	0.00	
07/01/2041	0		0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042	0		0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043	0		0.00	0.00	0.00
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	(\$26,575,000)		(\$26,668,550.00)	(\$53,243,550.00)	(\$53,243,550.00)

**Combined Universities Revenue Bonds Debt Service (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>	<b>Annual Principal</b>	<b>Annual Interest</b>
01/01/2019						
07/01/2019	8,520,000	5,340,996.26	13,860,996.26	13,860,996.26	8,520,000.00	5,340,996.26
01/01/2020		5,163,508.76	5,163,508.76			
07/01/2020	8,450,000	5,163,508.76	13,613,508.76	18,777,017.52	8,450,000.00	10,327,017.52
01/01/2021		4,498,101.26	4,498,101.26			
07/01/2021	8,765,000	4,498,101.26	13,263,101.26	17,761,202.52	8,765,000.00	8,996,202.52
01/01/2022		4,300,401.26	4,300,401.26			
07/01/2022	9,195,000	4,300,401.26	13,495,401.26	17,795,802.52	9,195,000.00	8,600,802.52
01/01/2023		4,097,076.26	4,097,076.26			
07/01/2023	9,695,000	4,097,076.26	13,792,076.26	17,889,152.52	9,695,000.00	8,194,152.52
01/01/2024		3,864,711.26	3,864,711.26			
07/01/2024	10,140,000	3,864,711.26	14,004,711.26	17,869,422.52	10,140,000.00	7,729,422.52
01/01/2025		3,620,631.26	3,620,631.26			
07/01/2025	10,685,000	3,620,631.26	14,305,631.26	17,926,262.52	10,685,000.00	7,241,262.52
01/01/2026		3,377,381.26	3,377,381.26			
07/01/2026	11,165,000	3,377,381.26	14,542,381.26	17,919,762.52	11,165,000.00	6,754,762.52
01/01/2027		3,106,606.26	3,106,606.26			
07/01/2027	11,675,000	3,106,606.26	14,781,606.26	17,888,212.52	11,675,000.00	6,213,212.52
01/01/2028		2,831,393.76	2,831,393.76			
07/01/2028	12,235,000	2,831,393.76	15,066,393.76	17,897,787.52	12,235,000.00	5,662,787.52
01/01/2029		2,575,493.76	2,575,493.76			
07/01/2029	12,735,000	2,575,493.76	15,310,493.76	17,885,987.52	12,735,000.00	5,150,987.52
01/01/2030		2,309,087.51	2,309,087.51			
07/01/2030	13,310,000	2,309,087.51	15,619,087.51	17,928,175.02	13,310,000.00	4,618,175.02
01/01/2031		2,030,587.51	2,030,587.51			
07/01/2031	12,860,000	2,030,587.51	14,890,587.51	16,921,175.02	12,860,000.00	4,061,175.02
01/01/2032		1,765,637.51	1,765,637.51			
07/01/2032	13,390,000	1,765,637.51	15,155,637.51	16,921,275.02	13,390,000.00	3,531,275.02
01/01/2033		1,487,187.51	1,487,187.51			
07/01/2033	12,730,000	1,487,187.51	14,217,187.51	15,704,375.02	12,730,000.00	2,974,375.02
01/01/2034		1,221,337.51	1,221,337.51			
07/01/2034	11,460,000	1,221,337.51	12,681,337.51	13,902,675.02	11,460,000.00	2,442,675.02
01/01/2035		975,800.01	975,800.01			
07/01/2035	11,950,000	975,800.01	12,925,800.01	13,901,600.02	11,950,000.00	1,951,600.02
01/01/2036		746,521.88	746,521.88			
07/01/2036	6,725,000	746,521.88	7,471,521.88	8,218,043.76	6,725,000.00	1,493,043.76
01/01/2037		621,846.88	621,846.88			
07/01/2037	6,975,000	621,846.88	7,596,846.88	8,218,693.76	6,975,000.00	1,243,693.76
01/01/2038		490,303.13	490,303.13			
07/01/2038	7,240,000	490,303.13	7,730,303.13	8,220,606.26	7,240,000.00	980,606.26
01/01/2039		347,171.88	347,171.88			
07/01/2039	4,045,000	347,171.88	4,392,171.88	4,739,343.76	4,045,000.00	694,343.76
01/01/2040		263,403.13	263,403.13			
07/01/2040	4,215,000	263,403.13	4,478,403.13	4,741,806.26	4,215,000.00	526,806.26
01/01/2041		174,612.50	174,612.50			
07/01/2041	2,500,000	174,612.50	2,674,612.50	2,849,225.00	2,500,000.00	349,225.00
01/01/2042		119,925.00	119,925.00			
07/01/2042	2,605,000	119,925.00	2,724,925.00	2,844,850.00	2,605,000.00	239,850.00
01/01/2043		61,312.50	61,312.50			
07/01/2043	2,725,000	61,312.50	2,786,312.50	2,847,625.00	2,725,000.00	122,625.00
01/01/2044						
	<u>\$225,990,000</u>	<u>\$105,441,075.38</u>	<u>\$331,431,075.38</u>	<u>\$331,431,075.38</u>	<u>\$225,990,000.00</u>	<u>\$105,441,075.38</u>



Universities Revenue Bonds, Series 2008A (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,475,000	4.250%	31,343.75	1,506,343.75	1,506,343.75
01/01/2020			0.00	0.00	
07/01/2020			0.00	0.00	0.00
01/01/2021			0.00	0.00	
07/01/2021			0.00	0.00	0.00
01/01/2022			0.00	0.00	
07/01/2022			0.00	0.00	0.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$1,475,000</u>		<u>\$31,343.75</u>	<u>\$1,506,343.75</u>	<u>\$1,506,343.75</u>

**Universities Revenue Bonds, Series 2010A (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	760,000	5.750%	1,062,582.50	1,822,582.50	1,822,582.50
01/01/2020			1,040,732.50	1,040,732.50	
07/01/2020	790,000	6.700%	1,040,732.50	1,830,732.50	2,871,465.00
01/01/2021			1,014,267.50	1,014,267.50	
07/01/2021	825,000	6.700%	1,014,267.50	1,839,267.50	2,853,535.00
01/01/2022			986,630.00	986,630.00	
07/01/2022	860,000	6.700%	986,630.00	1,846,630.00	2,833,260.00
01/01/2023			957,820.00	957,820.00	
07/01/2023	900,000	6.700%	957,820.00	1,857,820.00	2,815,640.00
01/01/2024			927,670.00	927,670.00	
07/01/2024	935,000	6.700%	927,670.00	1,862,670.00	2,790,340.00
01/01/2025			896,347.50	896,347.50	
07/01/2025	980,000	6.700%	896,347.50	1,876,347.50	2,772,695.00
01/01/2026			863,517.50	863,517.50	
07/01/2026	1,020,000	7.600%	863,517.50	1,883,517.50	2,747,035.00
01/01/2027			824,757.50	824,757.50	
07/01/2027	1,070,000	7.600%	824,757.50	1,894,757.50	2,719,515.00
01/01/2028			784,097.50	784,097.50	
07/01/2028	1,125,000	7.600%	784,097.50	1,909,097.50	2,693,195.00
01/01/2029			741,347.50	741,347.50	
07/01/2029	1,180,000	7.600%	741,347.50	1,921,347.50	2,662,695.00
01/01/2030			696,507.50	696,507.50	
07/01/2030	1,235,000	7.600%	696,507.50	1,931,507.50	2,628,015.00
01/01/2031			649,577.50	649,577.50	
07/01/2031	1,300,000	7.900%	649,577.50	1,949,577.50	2,599,155.00
01/01/2032			598,227.50	598,227.50	
07/01/2032	1,365,000	7.900%	598,227.50	1,963,227.50	2,561,455.00
01/01/2033			544,310.00	544,310.00	
07/01/2033	1,435,000	7.900%	544,310.00	1,979,310.00	2,523,620.00
01/01/2034			487,627.50	487,627.50	
07/01/2034	1,510,000	7.900%	487,627.50	1,997,627.50	2,485,255.00
01/01/2035			427,982.50	427,982.50	
07/01/2035	1,585,000	7.900%	427,982.50	2,012,982.50	2,440,965.00
01/01/2036			365,375.00	365,375.00	
07/01/2036	1,670,000	7.900%	365,375.00	2,035,375.00	2,400,750.00
01/01/2037			299,410.00	299,410.00	
07/01/2037	1,755,000	7.900%	299,410.00	2,054,410.00	2,353,820.00
01/01/2038			230,087.50	230,087.50	
07/01/2038	1,845,000	7.900%	230,087.50	2,075,087.50	2,305,175.00
01/01/2039			157,210.00	157,210.00	
07/01/2039	1,940,000	7.900%	157,210.00	2,097,210.00	2,254,420.00
01/01/2040			80,580.00	80,580.00	
07/01/2040	2,040,000	7.900%	80,580.00	2,120,580.00	2,201,160.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$28,125,000</u>		<u>\$28,210,747.50</u>	<u>\$56,335,747.50</u>	<u>\$56,335,747.50</u>

**Universities Revenue Bonds, Series 2011A (UNR Portion)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,275,000	5.000%	142,250.00	1,417,250.00	1,417,250.00
01/01/2020			110,375.00	110,375.00	
07/01/2020	945,000	5.000%	110,375.00	1,055,375.00	1,165,750.00
01/01/2021			86,750.00	86,750.00	
07/01/2021	1,450,000	5.000%	86,750.00	1,536,750.00	1,623,500.00
01/01/2022			50,500.00	50,500.00	
07/01/2022	480,000	5.000%	50,500.00	530,500.00	581,000.00
01/01/2023			38,500.00	38,500.00	
07/01/2023	750,000	5.000%	38,500.00	788,500.00	827,000.00
01/01/2024			19,750.00	19,750.00	
07/01/2024	790,000	5.000%	19,750.00	809,750.00	829,500.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	\$5,690,000		\$754,000.00	\$6,444,000.00	\$6,444,000.00

**Universities Revenue Bonds, Series 2012A (UNR Portion)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019			393,150.00	393,150.00	393,150.00
01/01/2020			393,150.00	393,150.00	
07/01/2020			393,150.00	393,150.00	786,300.00
01/01/2021			393,150.00	393,150.00	
07/01/2021			393,150.00	393,150.00	786,300.00
01/01/2022			393,150.00	393,150.00	
07/01/2022	1,070,000	4.000%	393,150.00	1,463,150.00	1,856,300.00
01/01/2023			371,750.00	371,750.00	
07/01/2023	1,120,000	5.000%	371,750.00	1,491,750.00	1,863,500.00
01/01/2024			343,750.00	343,750.00	
07/01/2024	1,175,000	5.000%	343,750.00	1,518,750.00	1,862,500.00
01/01/2025			314,375.00	314,375.00	
07/01/2025	2,110,000	3.500%	314,375.00	2,424,375.00	2,738,750.00
01/01/2026			277,450.00	277,450.00	
07/01/2026	2,180,000	5.000%	277,450.00	2,457,450.00	2,734,900.00
01/01/2027			222,950.00	222,950.00	
07/01/2027	2,290,000	5.000%	222,950.00	2,512,950.00	2,735,900.00
01/01/2028			165,700.00	165,700.00	
07/01/2028	2,400,000	4.000%	165,700.00	2,565,700.00	2,731,400.00
01/01/2029			117,700.00	117,700.00	
07/01/2029	2,495,000	4.000%	117,700.00	2,612,700.00	2,730,400.00
01/01/2030			67,800.00	67,800.00	
07/01/2030	1,085,000	4.000%	67,800.00	1,152,800.00	1,220,600.00
01/01/2031			46,100.00	46,100.00	
07/01/2031	1,130,000	4.000%	46,100.00	1,176,100.00	1,222,200.00
01/01/2032			23,500.00	23,500.00	
07/01/2032	1,175,000	4.000%	23,500.00	1,198,500.00	1,222,000.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$18,230,000</u>		<u>\$6,654,200.00</u>	<u>\$24,884,200.00</u>	<u>\$24,884,200.00</u>

Universities Revenue Bonds, Series 2012B (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	615,000	2.250%	19,093.75	634,093.75	634,093.75
01/01/2020			12,175.00	12,175.00	
07/01/2020	630,000	2.500%	12,175.00	642,175.00	654,350.00
01/01/2021			4,300.00	4,300.00	
07/01/2021	160,000	2.625%	4,300.00	164,300.00	168,600.00
01/01/2022			2,200.00	2,200.00	
07/01/2022	160,000	2.750%	2,200.00	162,200.00	164,400.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$1,565,000</u>		<u>\$56,443.75</u>	<u>\$1,621,443.75</u>	<u>\$1,621,443.75</u>

Universities Revenue Bonds, Series 2013A (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	5,000	5.000%	124,543.75	129,543.75	129,543.75
01/01/2020			124,418.75	124,418.75	
07/01/2020	5,000	5.000%	124,418.75	129,418.75	253,837.50
01/01/2021			124,293.75	124,293.75	
07/01/2021	5,000	5.000%	124,293.75	129,293.75	253,587.50
01/01/2022			124,168.75	124,168.75	
07/01/2022	5,000	5.000%	124,168.75	129,168.75	253,337.50
01/01/2023			124,043.75	124,043.75	
07/01/2023	5,000	5.000%	124,043.75	129,043.75	253,087.50
01/01/2024			123,918.75	123,918.75	
07/01/2024	5,000	5.000%	123,918.75	128,918.75	252,837.50
01/01/2025			123,793.75	123,793.75	
07/01/2025	5,000	5.000%	123,793.75	128,793.75	252,587.50
01/01/2026			123,668.75	123,668.75	
07/01/2026	5,000	3.000%	123,668.75	128,668.75	252,337.50
01/01/2027			123,593.75	123,593.75	
07/01/2027	5,000	3.000%	123,593.75	128,593.75	252,187.50
01/01/2028			123,518.75	123,518.75	
07/01/2028	5,000	4.000%	123,518.75	128,518.75	252,037.50
01/01/2029			123,418.75	123,418.75	
07/01/2029	5,000	3.250%	123,418.75	128,418.75	251,837.50
01/01/2030			123,337.50	123,337.50	
07/01/2030	1,555,000	4.000%	123,337.50	1,678,337.50	1,801,675.00
01/01/2031			92,237.50	92,237.50	
07/01/2031	1,615,000	4.000%	92,237.50	1,707,237.50	1,799,475.00
01/01/2032			59,937.50	59,937.50	
07/01/2032	1,685,000	3.500%	59,937.50	1,744,937.50	1,804,875.00
01/01/2033			30,450.00	30,450.00	
07/01/2033	1,740,000	3.500%	30,450.00	1,770,450.00	1,800,900.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$6,650,000</u>		<u>\$3,214,143.75</u>	<u>\$9,864,143.75</u>	<u>\$9,864,143.75</u>

**Universities Revenue Bonds, Series 2013B (UNR Portion)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	2,715,000	4.000%	1,150,225.00	3,865,225.00	3,865,225.00
01/01/2020			1,095,925.00	1,095,925.00	
07/01/2020	2,820,000	4.000%	1,095,925.00	3,915,925.00	5,011,850.00
01/01/2021			1,039,525.00	1,039,525.00	
07/01/2021	2,935,000	5.000%	1,039,525.00	3,974,525.00	5,014,050.00
01/01/2022			966,150.00	966,150.00	
07/01/2022	3,080,000	5.000%	966,150.00	4,046,150.00	5,012,300.00
01/01/2023			889,150.00	889,150.00	
07/01/2023	3,240,000	5.000%	889,150.00	4,129,150.00	5,018,300.00
01/01/2024			808,150.00	808,150.00	
07/01/2024	3,395,000	5.000%	808,150.00	4,203,150.00	5,011,300.00
01/01/2025			723,275.00	723,275.00	
07/01/2025	3,565,000	5.000%	723,275.00	4,288,275.00	5,011,550.00
01/01/2026			634,150.00	634,150.00	
07/01/2026	3,740,000	5.000%	634,150.00	4,374,150.00	5,008,300.00
01/01/2027			540,650.00	540,650.00	
07/01/2027	3,930,000	5.000%	540,650.00	4,470,650.00	5,011,300.00
01/01/2028			442,400.00	442,400.00	
07/01/2028	4,130,000	4.000%	442,400.00	4,572,400.00	5,014,800.00
01/01/2029			359,800.00	359,800.00	
07/01/2029	4,295,000	4.000%	359,800.00	4,654,800.00	5,014,600.00
01/01/2030			273,900.00	273,900.00	
07/01/2030	4,470,000	4.000%	273,900.00	4,743,900.00	5,017,800.00
01/01/2031			184,500.00	184,500.00	
07/01/2031	1,705,000	4.000%	184,500.00	1,889,500.00	2,074,000.00
01/01/2032			150,400.00	150,400.00	
07/01/2032	1,770,000	4.000%	150,400.00	1,920,400.00	2,070,800.00
01/01/2033			115,000.00	115,000.00	
07/01/2033	1,840,000	4.000%	115,000.00	1,955,000.00	2,070,000.00
01/01/2034			78,200.00	78,200.00	
07/01/2034	1,915,000	4.000%	78,200.00	1,993,200.00	2,071,400.00
01/01/2035			39,900.00	39,900.00	
07/01/2035	1,995,000	4.000%	39,900.00	2,034,900.00	2,074,800.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$51,540,000</u>		<u>\$17,832,375.00</u>	<u>\$69,372,375.00</u>	<u>\$69,372,375.00</u>

**Universities Revenue Bonds, Series 2014A (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	865,000	5.000%	991,021.88	1,856,021.88	1,856,021.88
01/01/2020			969,396.88	969,396.88	
07/01/2020	910,000	5.000%	969,396.88	1,879,396.88	2,848,793.76
01/01/2021			946,646.88	946,646.88	
07/01/2021	955,000	5.000%	946,646.88	1,901,646.88	2,848,293.76
01/01/2022			922,771.88	922,771.88	
07/01/2022	1,000,000	5.000%	922,771.88	1,922,771.88	2,845,543.76
01/01/2023			897,771.88	897,771.88	
07/01/2023	1,055,000	5.000%	897,771.88	1,952,771.88	2,850,543.76
01/01/2024			871,396.88	871,396.88	
07/01/2024	1,100,000	5.000%	871,396.88	1,971,396.88	2,842,793.76
01/01/2025			843,896.88	843,896.88	
07/01/2025	1,160,000	5.000%	843,896.88	2,003,896.88	2,847,793.76
01/01/2026			814,896.88	814,896.88	
07/01/2026	1,215,000	5.000%	814,896.88	2,029,896.88	2,844,793.76
01/01/2027			784,521.88	784,521.88	
07/01/2027	1,280,000	5.000%	784,521.88	2,064,521.88	2,849,043.76
01/01/2028			752,521.88	752,521.88	
07/01/2028	1,345,000	5.000%	752,521.88	2,097,521.88	2,850,043.76
01/01/2029			718,896.88	718,896.88	
07/01/2029	1,410,000	5.000%	718,896.88	2,128,896.88	2,847,793.76
01/01/2030			683,646.88	683,646.88	
07/01/2030	1,480,000	5.000%	683,646.88	2,163,646.88	2,847,293.76
01/01/2031			646,646.88	646,646.88	
07/01/2031	1,550,000	5.000%	646,646.88	2,196,646.88	2,843,293.76
01/01/2032			607,896.88	607,896.88	
07/01/2032	1,630,000	5.000%	607,896.88	2,237,896.88	2,845,793.76
01/01/2033			567,146.88	567,146.88	
07/01/2033	1,715,000	5.000%	567,146.88	2,282,146.88	2,849,293.76
01/01/2034			524,271.88	524,271.88	
07/01/2034	1,800,000	5.000%	524,271.88	2,324,271.88	2,848,543.76
01/01/2035			479,271.88	479,271.88	
07/01/2035	1,885,000	5.000%	479,271.88	2,364,271.88	2,843,543.76
01/01/2036			432,146.88	432,146.88	
07/01/2036	1,985,000	5.000%	432,146.88	2,417,146.88	2,849,293.76
01/01/2037			382,521.88	382,521.88	
07/01/2037	2,080,000	5.000%	382,521.88	2,462,521.88	2,845,043.76
01/01/2038			330,521.88	330,521.88	
07/01/2038	2,190,000	5.000%	330,521.88	2,520,521.88	2,851,043.76
01/01/2039			275,771.88	275,771.88	
07/01/2039	2,295,000	4.250%	275,771.88	2,570,771.88	2,846,543.76
01/01/2040			227,003.13	227,003.13	
07/01/2040	2,395,000	4.375%	227,003.13	2,622,003.13	2,849,006.26
01/01/2041			174,612.50	174,612.50	
07/01/2041	2,500,000	4.375%	174,612.50	2,674,612.50	2,849,225.00
01/01/2042			119,925.00	119,925.00	
07/01/2042	2,605,000	4.500%	119,925.00	2,724,925.00	2,844,850.00
01/01/2043			61,312.50	61,312.50	
07/01/2043	2,725,000	4.500%	61,312.50	2,786,312.50	2,847,625.00
	<u>\$41,130,000</u>		<u>\$29,061,853.34</u>	<u>\$70,191,853.34</u>	<u>\$70,191,853.34</u>



**Universities Revenue Bonds, Series 2015A (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	15,000	3.000%	416,450.00	431,450.00	431,450.00
01/01/2020			416,225.00	416,225.00	
07/01/2020	20,000	4.000%	416,225.00	436,225.00	852,450.00
01/01/2021			415,825.00	415,825.00	
07/01/2021	15,000	4.000%	415,825.00	430,825.00	846,650.00
01/01/2022			415,525.00	415,525.00	
07/01/2022	20,000	4.000%	415,525.00	435,525.00	851,050.00
01/01/2023			415,125.00	415,125.00	
07/01/2023	20,000	5.000%	415,125.00	435,125.00	850,250.00
01/01/2024			414,625.00	414,625.00	
07/01/2024	20,000	5.000%	414,625.00	434,625.00	849,250.00
01/01/2025			414,125.00	414,125.00	
07/01/2025	20,000	5.000%	414,125.00	434,125.00	848,250.00
01/01/2026			413,625.00	413,625.00	
07/01/2026	25,000	5.000%	413,625.00	438,625.00	852,250.00
01/01/2027			413,000.00	413,000.00	
07/01/2027	850,000	5.000%	413,000.00	1,263,000.00	1,676,000.00
01/01/2028			391,750.00	391,750.00	
07/01/2028	895,000	5.000%	391,750.00	1,286,750.00	1,678,500.00
01/01/2029			369,375.00	369,375.00	
07/01/2029	935,000	5.000%	369,375.00	1,304,375.00	1,673,750.00
01/01/2030			346,000.00	346,000.00	
07/01/2030	980,000	5.000%	346,000.00	1,326,000.00	1,672,000.00
01/01/2031			321,500.00	321,500.00	
07/01/2031	2,965,000	4.000%	321,500.00	3,286,500.00	3,608,000.00
01/01/2032			262,200.00	262,200.00	
07/01/2032	3,085,000	4.000%	262,200.00	3,347,200.00	3,609,400.00
01/01/2033			200,500.00	200,500.00	
07/01/2033	3,210,000	4.000%	200,500.00	3,410,500.00	3,611,000.00
01/01/2034			136,300.00	136,300.00	
07/01/2034	3,340,000	4.000%	136,300.00	3,476,300.00	3,612,600.00
01/01/2035			69,500.00	69,500.00	
07/01/2035	3,475,000	4.000%	69,500.00	3,544,500.00	3,614,000.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$19,890,000</u>		<u>\$11,246,850.00</u>	<u>\$31,136,850.00</u>	<u>\$31,136,850.00</u>

**Universities Revenue Bonds, Series 2015B (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	710,000	2.000%	73,870.00	783,870.00	783,870.00
01/01/2020			66,770.00	66,770.00	
07/01/2020	720,000	2.000%	66,770.00	786,770.00	853,540.00
01/01/2021			59,570.00	59,570.00	
07/01/2021	735,000	2.000%	59,570.00	794,570.00	854,140.00
01/01/2022			52,220.00	52,220.00	
07/01/2022	750,000	2.200%	52,220.00	802,220.00	854,440.00
01/01/2023			43,970.00	43,970.00	
07/01/2023	770,000	2.400%	43,970.00	813,970.00	857,940.00
01/01/2024			34,730.00	34,730.00	
07/01/2024	785,000	2.600%	34,730.00	819,730.00	854,460.00
01/01/2025			24,525.00	24,525.00	
07/01/2025	805,000	3.000%	24,525.00	829,525.00	854,050.00
01/01/2026			12,450.00	12,450.00	
07/01/2026	830,000	3.000%	12,450.00	842,450.00	854,900.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	\$6,105,000		\$662,340.00	\$6,767,340.00	\$6,767,340.00

**Universities Revenue Bonds, Series 2016A (UNR Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	85,000	5.000%	936,465.63	1,021,465.63	1,021,465.63
01/01/2020			934,340.63	934,340.63	
07/01/2020	1,610,000	5.000%	934,340.63	2,544,340.63	3,478,681.26
01/01/2021			894,090.63	894,090.63	
07/01/2021	1,685,000	4.000%	894,090.63	2,579,090.63	3,473,181.26
01/01/2022			860,390.63	860,390.63	
07/01/2022	1,760,000	4.000%	860,390.63	2,620,390.63	3,480,781.26
01/01/2023			825,190.63	825,190.63	
07/01/2023	1,825,000	5.000%	825,190.63	2,650,190.63	3,475,381.26
01/01/2024			779,565.63	779,565.63	
07/01/2024	1,915,000	5.000%	779,565.63	2,694,565.63	3,474,131.26
01/01/2025			731,690.63	731,690.63	
07/01/2025	2,015,000	5.000%	731,690.63	2,746,690.63	3,478,381.26
01/01/2026			681,315.63	681,315.63	
07/01/2026	2,115,000	5.000%	681,315.63	2,796,315.63	3,477,631.26
01/01/2027			628,440.63	628,440.63	
07/01/2027	2,215,000	3.500%	628,440.63	2,843,440.63	3,471,881.26
01/01/2028			589,678.13	589,678.13	
07/01/2028	2,295,000	4.000%	589,678.13	2,884,678.13	3,474,356.26
01/01/2029			543,778.13	543,778.13	
07/01/2029	2,385,000	4.000%	543,778.13	2,928,778.13	3,472,556.26
01/01/2030			496,078.13	496,078.13	
07/01/2030	2,485,000	4.000%	496,078.13	2,981,078.13	3,477,156.26
01/01/2031			446,378.13	446,378.13	
07/01/2031	2,585,000	4.000%	446,378.13	3,031,378.13	3,477,756.26
01/01/2032			394,678.13	394,678.13	
07/01/2032	2,685,000	4.500%	394,678.13	3,079,678.13	3,474,356.26
01/01/2033			334,265.63	334,265.63	
07/01/2033	2,810,000	4.500%	334,265.63	3,144,265.63	3,478,531.26
01/01/2034			271,040.63	271,040.63	
07/01/2034	2,935,000	4.500%	271,040.63	3,206,040.63	3,477,081.26
01/01/2035			205,003.13	205,003.13	
07/01/2035	3,065,000	3.125%	205,003.13	3,270,003.13	3,475,006.26
01/01/2036			157,112.50	157,112.50	
07/01/2036	3,160,000	3.125%	157,112.50	3,317,112.50	3,474,225.00
01/01/2037			107,737.50	107,737.50	
07/01/2037	3,265,000	3.250%	107,737.50	3,372,737.50	3,480,475.00
01/01/2038			54,681.25	54,681.25	
07/01/2038	3,365,000	3.250%	54,681.25	3,419,681.25	3,474,362.50
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$46,260,000</u>		<u>\$20,807,378.29</u>	<u>\$67,067,378.29</u>	<u>\$67,067,378.29</u>

**Universities Revenue Bonds, Series 2017A (UNR Portion)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019			533,950.00	533,950.00	533,950.00
01/01/2020			533,950.00	533,950.00	
07/01/2020			533,950.00	533,950.00	1,067,900.00
01/01/2021			533,950.00	533,950.00	
07/01/2021	825,000	5.000%	533,950.00	1,358,950.00	1,892,900.00
01/01/2022			513,325.00	513,325.00	
07/01/2022	870,000	5.000%	513,325.00	1,383,325.00	1,896,650.00
01/01/2023			491,575.00	491,575.00	
07/01/2023	910,000	5.000%	491,575.00	1,401,575.00	1,893,150.00
01/01/2024			468,825.00	468,825.00	
07/01/2024	955,000	5.000%	468,825.00	1,423,825.00	1,892,650.00
01/01/2025			444,950.00	444,950.00	
07/01/2025	1,005,000	5.000%	444,950.00	1,449,950.00	1,894,900.00
01/01/2026			419,825.00	419,825.00	
07/01/2026	1,055,000	5.000%	419,825.00	1,474,825.00	1,894,650.00
01/01/2027			393,450.00	393,450.00	
07/01/2027	1,105,000	5.000%	393,450.00	1,498,450.00	1,891,900.00
01/01/2028			365,825.00	365,825.00	
07/01/2028	1,165,000	4.000%	365,825.00	1,530,825.00	1,896,650.00
01/01/2029			342,525.00	342,525.00	
07/01/2029	1,210,000	4.000%	342,525.00	1,552,525.00	1,895,050.00
01/01/2030			318,325.00	318,325.00	
07/01/2030	1,255,000	4.000%	318,325.00	1,573,325.00	1,891,650.00
01/01/2031			293,225.00	293,225.00	
07/01/2031	1,310,000	4.000%	293,225.00	1,603,225.00	1,896,450.00
01/01/2032			267,025.00	267,025.00	
07/01/2032	1,360,000	4.000%	267,025.00	1,627,025.00	1,894,050.00
01/01/2033			239,825.00	239,825.00	
07/01/2033	1,415,000	4.000%	239,825.00	1,654,825.00	1,894,650.00
01/01/2034			211,525.00	211,525.00	
07/01/2034	1,470,000	4.000%	211,525.00	1,681,525.00	1,893,050.00
01/01/2035			182,125.00	182,125.00	
07/01/2035	1,530,000	3.250%	182,125.00	1,712,125.00	1,894,250.00
01/01/2036			157,262.50	157,262.50	
07/01/2036	1,580,000	3.250%	157,262.50	1,737,262.50	1,894,525.00
01/01/2037			131,587.50	131,587.50	
07/01/2037	1,630,000	3.250%	131,587.50	1,761,587.50	1,893,175.00
01/01/2038			105,100.00	105,100.00	
07/01/2038	1,685,000	4.000%	105,100.00	1,790,100.00	1,895,200.00
01/01/2039			71,400.00	71,400.00	
07/01/2039	1,750,000	4.000%	71,400.00	1,821,400.00	1,892,800.00
01/01/2040			36,400.00	36,400.00	
07/01/2040	1,820,000	4.000%	36,400.00	1,856,400.00	1,892,800.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$25,905,000</u>		<u>\$13,577,950.00</u>	<u>\$39,482,950.00</u>	<u>\$39,482,950.00</u>

**Universities Revenue Bonds, Series 2017A (UNR Crossover Escrow Portion)**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019			(533,950.00)	(533,950.00)	(533,950.00)
01/01/2020			(533,950.00)	(533,950.00)	
07/01/2020			(533,950.00)	(533,950.00)	(1,067,900.00)
01/01/2021			(1,014,267.50)	(1,014,267.50)	
07/01/2021	(825,000)		(1,014,267.50)	(1,839,267.50)	(2,853,535.00)
01/01/2022			(986,630.00)	(986,630.00)	
07/01/2022	(860,000)		(986,630.00)	(1,846,630.00)	(2,833,260.00)
01/01/2023			(957,820.00)	(957,820.00)	
07/01/2023	(900,000)		(957,820.00)	(1,857,820.00)	(2,815,640.00)
01/01/2024			(927,670.00)	(927,670.00)	
07/01/2024	(935,000)		(927,670.00)	(1,862,670.00)	(2,790,340.00)
01/01/2025			(896,347.50)	(896,347.50)	
07/01/2025	(980,000)		(896,347.50)	(1,876,347.50)	(2,772,695.00)
01/01/2026			(863,517.50)	(863,517.50)	
07/01/2026	(1,020,000)		(863,517.50)	(1,883,517.50)	(2,747,035.00)
01/01/2027			(824,757.50)	(824,757.50)	
07/01/2027	(1,070,000)		(824,757.50)	(1,894,757.50)	(2,719,515.00)
01/01/2028			(784,097.50)	(784,097.50)	
07/01/2028	(1,125,000)		(784,097.50)	(1,909,097.50)	(2,693,195.00)
01/01/2029			(741,347.50)	(741,347.50)	
07/01/2029	(1,180,000)		(741,347.50)	(1,921,347.50)	(2,662,695.00)
01/01/2030			(696,507.50)	(696,507.50)	
07/01/2030	(1,235,000)		(696,507.50)	(1,931,507.50)	(2,628,015.00)
01/01/2031			(649,577.50)	(649,577.50)	
07/01/2031	(1,300,000)		(649,577.50)	(1,949,577.50)	(2,599,155.00)
01/01/2032			(598,227.50)	(598,227.50)	
07/01/2032	(1,365,000)		(598,227.50)	(1,963,227.50)	(2,561,455.00)
01/01/2033			(544,310.00)	(544,310.00)	
07/01/2033	(1,435,000)		(544,310.00)	(1,979,310.00)	(2,523,620.00)
01/01/2034			(487,627.50)	(487,627.50)	
07/01/2034	(1,510,000)		(487,627.50)	(1,997,627.50)	(2,485,255.00)
01/01/2035			(427,982.50)	(427,982.50)	
07/01/2035	(1,585,000)		(427,982.50)	(2,012,982.50)	(2,440,965.00)
01/01/2036			(365,375.00)	(365,375.00)	
07/01/2036	(1,670,000)		(365,375.00)	(2,035,375.00)	(2,400,750.00)
01/01/2037			(299,410.00)	(299,410.00)	
07/01/2037	(1,755,000)		(299,410.00)	(2,054,410.00)	(2,353,820.00)
01/01/2038			(230,087.50)	(230,087.50)	
07/01/2038	(1,845,000)		(230,087.50)	(2,075,087.50)	(2,305,175.00)
01/01/2039			(157,210.00)	(157,210.00)	
07/01/2039	(1,940,000)		(157,210.00)	(2,097,210.00)	(2,254,420.00)
01/01/2040			(80,580.00)	(80,580.00)	
07/01/2040	(2,040,000)		(80,580.00)	(2,120,580.00)	(2,201,160.00)
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	(\$26,575,000)		(\$26,668,550.00)	(\$53,243,550.00)	(\$53,243,550.00)

**Combined Universities Revenue Bonds Debt Service (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>	<b>Annual Principal</b>	<b>Annual Interest</b>
01/01/2019						
07/01/2019	10,940,000	3,401,769.38	14,341,769.38	14,341,769.38	10,940,000.00	3,401,769.38
01/01/2020		3,149,256.88	3,149,256.88			
07/01/2020	11,335,000	3,149,256.88	14,484,256.88	17,633,513.76	11,335,000.00	6,298,513.76
01/01/2021		2,890,296.88	2,890,296.88			
07/01/2021	10,715,000	2,890,296.88	13,605,296.88	16,495,593.76	10,715,000.00	5,780,593.76
01/01/2022		2,638,071.88	2,638,071.88			
07/01/2022	10,955,000	2,638,071.88	13,593,071.88	16,231,143.76	10,955,000.00	5,276,143.76
01/01/2023		2,388,096.88	2,388,096.88			
07/01/2023	11,480,000	2,388,096.88	13,868,096.88	16,256,193.76	11,480,000.00	4,776,193.76
01/01/2024		2,104,171.88	2,104,171.88			
07/01/2024	11,605,000	2,104,171.88	13,709,171.88	15,813,343.76	11,605,000.00	4,208,343.76
01/01/2025		1,817,246.88	1,817,246.88			
07/01/2025	11,410,000	1,817,246.88	13,227,246.88	15,044,493.76	11,410,000.00	3,634,493.76
01/01/2026		1,542,409.38	1,542,409.38			
07/01/2026	7,675,000	1,542,409.38	9,217,409.38	10,759,818.76	7,675,000.00	3,084,818.76
01/01/2027		1,363,534.38	1,363,534.38			
07/01/2027	6,840,000	1,363,534.38	8,203,534.38	9,567,068.76	6,840,000.00	2,727,068.76
01/01/2028		1,209,684.38	1,209,684.38			
07/01/2028	7,135,000	1,209,684.38	8,344,684.38	9,554,368.76	7,135,000.00	2,419,368.76
01/01/2029		1,066,834.38	1,066,834.38			
07/01/2029	7,430,000	1,066,834.38	8,496,834.38	9,563,668.76	7,430,000.00	2,133,668.76
01/01/2030		927,765.63	927,765.63			
07/01/2030	7,745,000	927,765.63	8,672,765.63	9,600,531.26	7,745,000.00	1,855,531.26
01/01/2031		778,131.25	778,131.25			
07/01/2031	8,040,000	778,131.25	8,818,131.25	9,596,262.50	8,040,000.00	1,556,262.50
01/01/2032		621,406.25	621,406.25			
07/01/2032	8,360,000	621,406.25	8,981,406.25	9,602,812.50	8,360,000.00	1,242,812.50
01/01/2033		463,043.75	463,043.75			
07/01/2033	8,670,000	463,043.75	9,133,043.75	9,596,087.50	8,670,000.00	926,087.50
01/01/2034		298,768.75	298,768.75			
07/01/2034	6,365,000	298,768.75	6,663,768.75	6,962,537.50	6,365,000.00	597,537.50
01/01/2035		174,281.25	174,281.25			
07/01/2035	6,610,000	174,281.25	6,784,281.25	6,958,562.50	6,610,000.00	348,562.50
01/01/2036		49,721.88	49,721.88			
07/01/2036	1,660,000	49,721.88	1,709,721.88	1,759,443.76	1,660,000.00	99,443.76
01/01/2037		24,375.00	24,375.00			
07/01/2037	740,000	24,375.00	764,375.00	788,750.00	740,000.00	48,750.00
01/01/2038		12,350.00	12,350.00			
07/01/2038	760,000	12,350.00	772,350.00	784,700.00	760,000.00	24,700.00
01/01/2039		0.00	0.00			
07/01/2039	0	0.00	0.00	0.00	0.00	0.00
01/01/2040		0.00	0.00			
07/01/2040	0	0.00	0.00	0.00	0.00	0.00
01/01/2041		0.00	0.00			
07/01/2041	0	0.00	0.00	0.00	0.00	0.00
01/01/2042		0.00	0.00			
07/01/2042	0	0.00	0.00	0.00	0.00	0.00
01/01/2043		0.00	0.00			
07/01/2043	0	0.00	0.00	0.00	0.00	0.00
01/01/2044						
	<u>\$156,470,000</u>	<u>\$50,440,664.50</u>	<u>\$206,910,664.50</u>	<u>\$206,910,664.50</u>	<u>\$156,470,000.00</u>	<u>\$50,440,664.50</u>

Universities Revenue Bonds, Series 2009A (UNLV Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	700,000	3.625%	26,922.50	726,922.50	726,922.50
01/01/2020			14,235.00	14,235.00	
07/01/2020	730,000	3.900%	14,235.00	744,235.00	758,470.00
01/01/2021			0.00	0.00	
07/01/2021			0.00	0.00	0.00
01/01/2022			0.00	0.00	
07/01/2022			0.00	0.00	0.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$1,430,000</u>		<u>\$55,392.50</u>	<u>\$1,485,392.50</u>	<u>\$1,485,392.50</u>

Universities Revenue Bonds, Series 2011A (UNLV Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	4,685,000	5.000%	257,625.00	4,942,625.00	4,942,625.00
01/01/2020			140,500.00	140,500.00	
07/01/2020	3,920,000	5.000%	140,500.00	4,060,500.00	4,201,000.00
01/01/2021			42,500.00	42,500.00	
07/01/2021	1,700,000	5.000%	42,500.00	1,742,500.00	1,785,000.00
01/01/2022			0.00	0.00	
07/01/2022			0.00	0.00	0.00
01/01/2023			0.00	0.00	
07/01/2023			0.00	0.00	0.00
01/01/2024			0.00	0.00	
07/01/2024			0.00	0.00	0.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$10,305,000</u>		<u>\$623,625.00</u>	<u>\$10,928,625.00</u>	<u>\$10,928,625.00</u>



**Universities Revenue Bonds, Series 2012A (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019			171,162.50	171,162.50	171,162.50
01/01/2020			171,162.50	171,162.50	
07/01/2020			171,162.50	171,162.50	342,325.00
01/01/2021			171,162.50	171,162.50	
07/01/2021			171,162.50	171,162.50	342,325.00
01/01/2022			171,162.50	171,162.50	
07/01/2022	825,000	4.000%	171,162.50	996,162.50	1,167,325.00
01/01/2023			154,662.50	154,662.50	
07/01/2023	860,000	5.000%	154,662.50	1,014,662.50	1,169,325.00
01/01/2024			133,162.50	133,162.50	
07/01/2024	900,000	5.000%	133,162.50	1,033,162.50	1,166,325.00
01/01/2025			110,662.50	110,662.50	
07/01/2025	945,000	3.500%	110,662.50	1,055,662.50	1,166,325.00
01/01/2026			94,125.00	94,125.00	
07/01/2026	975,000	5.000%	94,125.00	1,069,125.00	1,163,250.00
01/01/2027			69,750.00	69,750.00	
07/01/2027	1,030,000	5.000%	69,750.00	1,099,750.00	1,169,500.00
01/01/2028			44,000.00	44,000.00	
07/01/2028	1,080,000	4.000%	44,000.00	1,124,000.00	1,168,000.00
01/01/2029			22,400.00	22,400.00	
07/01/2029	1,120,000	4.000%	22,400.00	1,142,400.00	1,164,800.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$7,735,000</u>		<u>\$2,455,662.50</u>	<u>\$10,190,662.50</u>	<u>\$10,190,662.50</u>

**Universities Revenue Bonds, Series 2013A (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	1,360,000	5.000%	525,331.25	1,885,331.25	1,885,331.25
01/01/2020			491,331.25	491,331.25	
07/01/2020	1,430,000	5.000%	491,331.25	1,921,331.25	2,412,662.50
01/01/2021			455,581.25	455,581.25	
07/01/2021	1,505,000	5.000%	455,581.25	1,960,581.25	2,416,162.50
01/01/2022			417,956.25	417,956.25	
07/01/2022	1,575,000	5.000%	417,956.25	1,992,956.25	2,410,912.50
01/01/2023			378,581.25	378,581.25	
07/01/2023	1,665,000	5.000%	378,581.25	2,043,581.25	2,422,162.50
01/01/2024			336,956.25	336,956.25	
07/01/2024	1,745,000	5.000%	336,956.25	2,081,956.25	2,418,912.50
01/01/2025			293,331.25	293,331.25	
07/01/2025	1,855,000	5.000%	293,331.25	2,148,331.25	2,441,662.50
01/01/2026			246,956.25	246,956.25	
07/01/2026	955,000	3.000%	246,956.25	1,201,956.25	1,448,912.50
01/01/2027			232,631.25	232,631.25	
07/01/2027	980,000	3.000%	232,631.25	1,212,631.25	1,445,262.50
01/01/2028			217,931.25	217,931.25	
07/01/2028	1,005,000	4.000%	217,931.25	1,222,931.25	1,440,862.50
01/01/2029			197,831.25	197,831.25	
07/01/2029	1,045,000	3.250%	197,831.25	1,242,831.25	1,440,662.50
01/01/2030			180,850.00	180,850.00	
07/01/2030	2,280,000	4.000%	180,850.00	2,460,850.00	2,641,700.00
01/01/2031			135,250.00	135,250.00	
07/01/2031	2,370,000	4.000%	135,250.00	2,505,250.00	2,640,500.00
01/01/2032			87,850.00	87,850.00	
07/01/2032	2,465,000	3.500%	87,850.00	2,552,850.00	2,640,700.00
01/01/2033			44,712.50	44,712.50	
07/01/2033	2,555,000	3.500%	44,712.50	2,599,712.50	2,644,425.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$24,790,000</u>		<u>\$7,960,831.25</u>	<u>\$32,750,831.25</u>	<u>\$32,750,831.25</u>

**Universities Revenue Bonds, Series 2013B (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	2,925,000	4.000%	966,550.00	3,891,550.00	3,891,550.00
01/01/2020			908,050.00	908,050.00	
07/01/2020	3,055,000	4.000%	908,050.00	3,963,050.00	4,871,100.00
01/01/2021			846,950.00	846,950.00	
07/01/2021	3,170,000	5.000%	846,950.00	4,016,950.00	4,863,900.00
01/01/2022			767,700.00	767,700.00	
07/01/2022	3,325,000	5.000%	767,700.00	4,092,700.00	4,860,400.00
01/01/2023			684,575.00	684,575.00	
07/01/2023	3,485,000	5.000%	684,575.00	4,169,575.00	4,854,150.00
01/01/2024			597,450.00	597,450.00	
07/01/2024	3,665,000	5.000%	597,450.00	4,262,450.00	4,859,900.00
01/01/2025			505,825.00	505,825.00	
07/01/2025	3,855,000	5.000%	505,825.00	4,360,825.00	4,866,650.00
01/01/2026			409,450.00	409,450.00	
07/01/2026	3,415,000	5.000%	409,450.00	3,824,450.00	4,233,900.00
01/01/2027			324,075.00	324,075.00	
07/01/2027	3,575,000	5.000%	324,075.00	3,899,075.00	4,223,150.00
01/01/2028			234,700.00	234,700.00	
07/01/2028	3,755,000	4.000%	234,700.00	3,989,700.00	4,224,400.00
01/01/2029			159,600.00	159,600.00	
07/01/2029	3,910,000	4.000%	159,600.00	4,069,600.00	4,229,200.00
01/01/2030			81,400.00	81,400.00	
07/01/2030	4,070,000	4.000%	81,400.00	4,151,400.00	4,232,800.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$42,205,000</u>		<u>\$12,006,100.00</u>	<u>\$54,211,100.00</u>	<u>\$54,211,100.00</u>

**Universities Revenue Bonds, Series 2014A (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	595,000	5.000%	101,250.00	696,250.00	696,250.00
01/01/2020			86,375.00	86,375.00	
07/01/2020	625,000	5.000%	86,375.00	711,375.00	797,750.00
01/01/2021			70,750.00	70,750.00	
07/01/2021	655,000	5.000%	70,750.00	725,750.00	796,500.00
01/01/2022			54,375.00	54,375.00	
07/01/2022	690,000	5.000%	54,375.00	744,375.00	798,750.00
01/01/2023			37,125.00	37,125.00	
07/01/2023	725,000	5.000%	37,125.00	762,125.00	799,250.00
01/01/2024			19,000.00	19,000.00	
07/01/2024	760,000	5.000%	19,000.00	779,000.00	798,000.00
01/01/2025			0.00	0.00	
07/01/2025			0.00	0.00	0.00
01/01/2026			0.00	0.00	
07/01/2026			0.00	0.00	0.00
01/01/2027			0.00	0.00	
07/01/2027			0.00	0.00	0.00
01/01/2028			0.00	0.00	
07/01/2028			0.00	0.00	0.00
01/01/2029			0.00	0.00	
07/01/2029			0.00	0.00	0.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$4,050,000</u>		<u>\$636,500.00</u>	<u>\$4,686,500.00</u>	<u>\$4,686,500.00</u>

**Universities Revenue Bonds, Series 2015A (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	155,000	3.000%	889,075.00	1,044,075.00	1,044,075.00
01/01/2020			886,750.00	886,750.00	
07/01/2020	1,025,000	4.000%	886,750.00	1,911,750.00	2,798,500.00
01/01/2021			866,250.00	866,250.00	
07/01/2021	2,375,000	4.000%	866,250.00	3,241,250.00	4,107,500.00
01/01/2022			818,750.00	818,750.00	
07/01/2022	3,170,000	4.000%	818,750.00	3,988,750.00	4,807,500.00
01/01/2023			755,350.00	755,350.00	
07/01/2023	3,305,000	5.000%	755,350.00	4,060,350.00	4,815,700.00
01/01/2024			672,725.00	672,725.00	
07/01/2024	3,465,000	5.000%	672,725.00	4,137,725.00	4,810,450.00
01/01/2025			586,100.00	586,100.00	
07/01/2025	3,635,000	5.000%	586,100.00	4,221,100.00	4,807,200.00
01/01/2026			495,225.00	495,225.00	
07/01/2026	1,160,000	5.000%	495,225.00	1,655,225.00	2,150,450.00
01/01/2027			466,225.00	466,225.00	
07/01/2027	35,000	5.000%	466,225.00	501,225.00	967,450.00
01/01/2028			465,350.00	465,350.00	
07/01/2028	30,000	5.000%	465,350.00	495,350.00	960,700.00
01/01/2029			464,600.00	464,600.00	
07/01/2029	40,000	5.000%	464,600.00	504,600.00	969,200.00
01/01/2030			463,600.00	463,600.00	
07/01/2030	40,000	5.000%	463,600.00	503,600.00	967,200.00
01/01/2031			462,600.00	462,600.00	
07/01/2031	4,270,000	4.000%	462,600.00	4,732,600.00	5,195,200.00
01/01/2032			377,200.00	377,200.00	
07/01/2032	4,445,000	4.000%	377,200.00	4,822,200.00	5,199,400.00
01/01/2033			288,300.00	288,300.00	
07/01/2033	4,615,000	4.000%	288,300.00	4,903,300.00	5,191,600.00
01/01/2034			196,000.00	196,000.00	
07/01/2034	4,805,000	4.000%	196,000.00	5,001,000.00	5,197,000.00
01/01/2035			99,900.00	99,900.00	
07/01/2035	4,995,000	4.000%	99,900.00	5,094,900.00	5,194,800.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	\$41,565,000		\$17,618,925.00	\$59,183,925.00	\$59,183,925.00

**Universities Revenue Bonds, Series 2016A (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	15,000	5.000%	228,656.25	243,656.25	243,656.25
01/01/2020			228,281.25	228,281.25	
07/01/2020	20,000	5.000%	228,281.25	248,281.25	476,562.50
01/01/2021			227,781.25	227,781.25	
07/01/2021	755,000	4.000%	227,781.25	982,781.25	1,210,562.50
01/01/2022			212,681.25	212,681.25	
07/01/2022	785,000	4.000%	212,681.25	997,681.25	1,210,362.50
01/01/2023			196,981.25	196,981.25	
07/01/2023	825,000	5.000%	196,981.25	1,021,981.25	1,218,962.50
01/01/2024			176,356.25	176,356.25	
07/01/2024	430,000	5.000%	176,356.25	606,356.25	782,712.50
01/01/2025			165,606.25	165,606.25	
07/01/2025	455,000	5.000%	165,606.25	620,606.25	786,212.50
01/01/2026			154,231.25	154,231.25	
07/01/2026	480,000	5.000%	154,231.25	634,231.25	788,462.50
01/01/2027			142,231.25	142,231.25	
07/01/2027	500,000	3.500%	142,231.25	642,231.25	784,462.50
01/01/2028			133,481.25	133,481.25	
07/01/2028	520,000	4.000%	133,481.25	653,481.25	786,962.50
01/01/2029			123,081.25	123,081.25	
07/01/2029	540,000	4.000%	123,081.25	663,081.25	786,162.50
01/01/2030			112,281.25	112,281.25	
07/01/2030	560,000	4.000%	112,281.25	672,281.25	784,562.50
01/01/2031			101,081.25	101,081.25	
07/01/2031	585,000	4.000%	101,081.25	686,081.25	787,162.50
01/01/2032			89,381.25	89,381.25	
07/01/2032	610,000	4.500%	89,381.25	699,381.25	788,762.50
01/01/2033			75,656.25	75,656.25	
07/01/2033	635,000	4.500%	75,656.25	710,656.25	786,312.50
01/01/2034			61,368.75	61,368.75	
07/01/2034	665,000	4.500%	61,368.75	726,368.75	787,737.50
01/01/2035			46,406.25	46,406.25	
07/01/2035	695,000	3.125%	46,406.25	741,406.25	787,812.50
01/01/2036			35,546.88	35,546.88	
07/01/2036	715,000	3.125%	35,546.88	750,546.88	786,093.76
01/01/2037			24,375.00	24,375.00	
07/01/2037	740,000	3.250%	24,375.00	764,375.00	788,750.00
01/01/2038			12,350.00	12,350.00	
07/01/2038	760,000	3.250%	12,350.00	772,350.00	784,700.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
	<u>\$11,290,000</u>		<u>\$4,866,975.01</u>	<u>\$16,156,975.01</u>	<u>\$16,156,975.01</u>

**Universities Revenue Bonds, Series 2016B (UNLV Portion)**

<b>Date</b>	<b>Principal</b>	<b>Rate</b>	<b>Interest</b>	<b>Semi-Annual Debt Service</b>	<b>Annual Debt Service</b>
01/01/2019					
07/01/2019	505,000	5.000%	235,196.88	740,196.88	740,196.88
01/01/2020			222,571.88	222,571.88	
07/01/2020	530,000	5.000%	222,571.88	752,571.88	975,143.76
01/01/2021			209,321.88	209,321.88	
07/01/2021	555,000	5.000%	209,321.88	764,321.88	973,643.76
01/01/2022			195,446.88	195,446.88	
07/01/2022	585,000	5.000%	195,446.88	780,446.88	975,893.76
01/01/2023			180,821.88	180,821.88	
07/01/2023	615,000	4.000%	180,821.88	795,821.88	976,643.76
01/01/2024			168,521.88	168,521.88	
07/01/2024	640,000	4.000%	168,521.88	808,521.88	977,043.76
01/01/2025			155,721.88	155,721.88	
07/01/2025	665,000	4.000%	155,721.88	820,721.88	976,443.76
01/01/2026			142,421.88	142,421.88	
07/01/2026	690,000	4.000%	142,421.88	832,421.88	974,843.76
01/01/2027			128,621.88	128,621.88	
07/01/2027	720,000	4.000%	128,621.88	848,621.88	977,243.76
01/01/2028			114,221.88	114,221.88	
07/01/2028	745,000	4.000%	114,221.88	859,221.88	973,443.76
01/01/2029			99,321.88	99,321.88	
07/01/2029	775,000	2.500%	99,321.88	874,321.88	973,643.76
01/01/2030			89,634.38	89,634.38	
07/01/2030	795,000	2.625%	89,634.38	884,634.38	974,268.76
01/01/2031			79,200.00	79,200.00	
07/01/2031	815,000	3.000%	79,200.00	894,200.00	973,400.00
01/01/2032			66,975.00	66,975.00	
07/01/2032	840,000	3.000%	66,975.00	906,975.00	973,950.00
01/01/2033			54,375.00	54,375.00	
07/01/2033	865,000	3.000%	54,375.00	919,375.00	973,750.00
01/01/2034			41,400.00	41,400.00	
07/01/2034	895,000	3.000%	41,400.00	936,400.00	977,800.00
01/01/2035			27,975.00	27,975.00	
07/01/2035	920,000	3.000%	27,975.00	947,975.00	975,950.00
01/01/2036			14,175.00	14,175.00	
07/01/2036	945,000	3.000%	14,175.00	959,175.00	973,350.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
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	\$13,100,000		\$4,216,653.24	\$17,316,653.24	\$17,316,653.24

Combined Community College Revenue Bonds Debt Service

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	1,235,000	1,353,993.75	2,588,993.75	2,588,993.75	1,235,000.00	1,353,993.75
01/01/2020		1,323,118.75	1,323,118.75			
07/01/2020	1,300,000	1,323,118.75	2,623,118.75	3,946,237.50	1,300,000.00	2,646,237.50
01/01/2021		1,290,618.75	1,290,618.75			
07/01/2021	1,365,000	1,290,618.75	2,655,618.75	3,946,237.50	1,365,000.00	2,581,237.50
01/01/2022		1,256,493.75	1,256,493.75			
07/01/2022	1,435,000	1,256,493.75	2,691,493.75	3,947,987.50	1,435,000.00	2,512,987.50
01/01/2023		1,220,618.75	1,220,618.75			
07/01/2023	1,505,000	1,220,618.75	2,725,618.75	3,946,237.50	1,505,000.00	2,441,237.50
01/01/2024		1,182,993.75	1,182,993.75			
07/01/2024	1,580,000	1,182,993.75	2,762,993.75	3,945,987.50	1,580,000.00	2,365,987.50
01/01/2025		1,143,493.75	1,143,493.75			
07/01/2025	1,660,000	1,143,493.75	2,803,493.75	3,946,987.50	1,660,000.00	2,286,987.50
01/01/2026		1,101,993.75	1,101,993.75			
07/01/2026	1,740,000	1,101,993.75	2,841,993.75	3,943,987.50	1,740,000.00	2,203,987.50
01/01/2027		1,058,493.75	1,058,493.75			
07/01/2027	1,830,000	1,058,493.75	2,888,493.75	3,946,987.50	1,830,000.00	2,116,987.50
01/01/2028		1,012,743.75	1,012,743.75			
07/01/2028	1,920,000	1,012,743.75	2,932,743.75	3,945,487.50	1,920,000.00	2,025,487.50
01/01/2029		964,743.75	964,743.75			
07/01/2029	2,015,000	964,743.75	2,979,743.75	3,944,487.50	2,015,000.00	1,929,487.50
01/01/2030		914,368.75	914,368.75			
07/01/2030	2,115,000	914,368.75	3,029,368.75	3,943,737.50	2,115,000.00	1,828,737.50
01/01/2031		877,356.25	877,356.25			
07/01/2031	2,190,000	877,356.25	3,067,356.25	3,944,712.50	2,190,000.00	1,754,712.50
01/01/2032		839,031.25	839,031.25			
07/01/2032	2,265,000	839,031.25	3,104,031.25	3,943,062.50	2,265,000.00	1,678,062.50
01/01/2033		805,056.25	805,056.25			
07/01/2033	2,335,000	805,056.25	3,140,056.25	3,945,112.50	2,335,000.00	1,610,112.50
01/01/2034		770,031.25	770,031.25			
07/01/2034	2,405,000	770,031.25	3,175,031.25	3,945,062.50	2,405,000.00	1,540,062.50
01/01/2035		733,956.25	733,956.25			
07/01/2035	2,480,000	733,956.25	3,213,956.25	3,947,912.50	2,480,000.00	1,467,912.50
01/01/2036		695,206.25	695,206.25			
07/01/2036	2,555,000	695,206.25	3,250,206.25	3,945,412.50	2,555,000.00	1,390,412.50
01/01/2037		655,284.38	655,284.38			
07/01/2037	2,635,000	655,284.38	3,290,284.38	3,945,568.76	2,635,000.00	1,310,568.76
01/01/2038		612,465.63	612,465.63			
07/01/2038	2,720,000	612,465.63	3,332,465.63	3,944,931.26	2,720,000.00	1,224,931.26
01/01/2039		568,265.63	568,265.63			
07/01/2039	2,810,000	568,265.63	3,378,265.63	3,946,531.26	2,810,000.00	1,136,531.26
01/01/2040		522,603.13	522,603.13			
07/01/2040	2,900,000	522,603.13	3,422,603.13	3,945,206.26	2,900,000.00	1,045,206.26
01/01/2041		464,603.13	464,603.13			
07/01/2041	3,015,000	464,603.13	3,479,603.13	3,944,206.26	3,015,000.00	929,206.26
01/01/2042		404,303.13	404,303.13			
07/01/2042	3,135,000	404,303.13	3,539,303.13	3,943,606.26	3,135,000.00	808,606.26
01/01/2043		351,400.00	351,400.00			
07/01/2043	3,245,000	351,400.00	3,596,400.00	3,947,800.00	3,245,000.00	702,800.00
01/01/2044		286,500.00	286,500.00			
07/01/2044	3,375,000	286,500.00	3,661,500.00	3,948,000.00	3,375,000.00	573,000.00
01/01/2045		219,000.00	219,000.00			
07/01/2045	3,505,000	219,000.00	3,724,000.00	3,943,000.00	3,505,000.00	438,000.00
01/01/2046		148,900.00	148,900.00			
07/01/2046	3,650,000	148,900.00	3,798,900.00	3,947,800.00	3,650,000.00	297,800.00
01/01/2047		75,900.00	75,900.00			
07/01/2047	3,795,000	75,900.00	3,870,900.00	3,946,800.00	3,795,000.00	151,800.00
01/01/2048						
	<u>\$68,715,000</u>	<u>\$44,353,081.31</u>	<u>\$113,068,081.31</u>	<u>\$113,068,081.31</u>	<u>\$68,715,000.00</u>	<u>\$44,353,081.31</u>



**Community College Revenue Bonds, Series 2017A**

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,235,000	5.000%	1,353,993.75	2,588,993.75	2,588,993.75
01/01/2020			1,323,118.75	1,323,118.75	
07/01/2020	1,300,000	5.000%	1,323,118.75	2,623,118.75	3,946,237.50
01/01/2021			1,290,618.75	1,290,618.75	
07/01/2021	1,365,000	5.000%	1,290,618.75	2,655,618.75	3,946,237.50
01/01/2022			1,256,493.75	1,256,493.75	
07/01/2022	1,435,000	5.000%	1,256,493.75	2,691,493.75	3,947,987.50
01/01/2023			1,220,618.75	1,220,618.75	
07/01/2023	1,505,000	5.000%	1,220,618.75	2,725,618.75	3,946,237.50
01/01/2024			1,182,993.75	1,182,993.75	
07/01/2024	1,580,000	5.000%	1,182,993.75	2,762,993.75	3,945,987.50
01/01/2025			1,143,493.75	1,143,493.75	
07/01/2025	1,660,000	5.000%	1,143,493.75	2,803,493.75	3,946,987.50
01/01/2026			1,101,993.75	1,101,993.75	
07/01/2026	1,740,000	5.000%	1,101,993.75	2,841,993.75	3,943,987.50
01/01/2027			1,058,493.75	1,058,493.75	
07/01/2027	1,830,000	5.000%	1,058,493.75	2,888,493.75	3,946,987.50
01/01/2028			1,012,743.75	1,012,743.75	
07/01/2028	1,920,000	5.000%	1,012,743.75	2,932,743.75	3,945,487.50
01/01/2029			964,743.75	964,743.75	
07/01/2029	2,015,000	5.000%	964,743.75	2,979,743.75	3,944,487.50
01/01/2030			914,368.75	914,368.75	
07/01/2030	2,115,000	3.500%	914,368.75	3,029,368.75	3,943,737.50
01/01/2031			877,356.25	877,356.25	
07/01/2031	2,190,000	3.500%	877,356.25	3,067,356.25	3,944,712.50
01/01/2032			839,031.25	839,031.25	
07/01/2032	2,265,000	3.000%	839,031.25	3,104,031.25	3,943,062.50
01/01/2033			805,056.25	805,056.25	
07/01/2033	2,335,000	3.000%	805,056.25	3,140,056.25	3,945,112.50
01/01/2034			770,031.25	770,031.25	
07/01/2034	2,405,000	3.000%	770,031.25	3,175,031.25	3,945,062.50
01/01/2035			733,956.25	733,956.25	
07/01/2035	2,480,000	3.125%	733,956.25	3,213,956.25	3,947,912.50
01/01/2036			695,206.25	695,206.25	
07/01/2036	2,555,000	3.125%	695,206.25	3,250,206.25	3,945,412.50
01/01/2037			655,284.38	655,284.38	
07/01/2037	2,635,000	3.250%	655,284.38	3,290,284.38	3,945,568.76
01/01/2038			612,465.63	612,465.63	
07/01/2038	2,720,000	3.250%	612,465.63	3,332,465.63	3,944,931.26
01/01/2039			568,265.63	568,265.63	
07/01/2039	2,810,000	3.250%	568,265.63	3,378,265.63	3,946,531.26
01/01/2040			522,603.13	522,603.13	
07/01/2040	2,900,000	4.000%	522,603.13	3,422,603.13	3,945,206.26
01/01/2041			464,603.13	464,603.13	
07/01/2041	3,015,000	4.000%	464,603.13	3,479,603.13	3,944,206.26
01/01/2042			404,303.13	404,303.13	
07/01/2042	3,135,000	3.375%	404,303.13	3,539,303.13	3,943,606.26
01/01/2043			351,400.00	351,400.00	
07/01/2043	3,245,000	4.000%	351,400.00	3,596,400.00	3,947,800.00
01/01/2044			286,500.00	286,500.00	
07/01/2044	3,375,000	4.000%	286,500.00	3,661,500.00	3,948,000.00
01/01/2045			219,000.00	219,000.00	
07/01/2045	3,505,000	4.000%	219,000.00	3,724,000.00	3,943,000.00
01/01/2046			148,900.00	148,900.00	
07/01/2046	3,650,000	4.000%	148,900.00	3,798,900.00	3,947,800.00
01/01/2047			75,900.00	75,900.00	
07/01/2047	3,795,000	4.000%	75,900.00	3,870,900.00	3,946,800.00
	<u>\$68,715,000</u>		<u>\$44,353,081.31</u>	<u>\$113,068,081.31</u>	<u>\$113,068,081.31</u>

Combined Certificates of Participation Debt Service

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	4,995,000	3,583,302.09	8,578,302.09	8,578,302.09	4,995,000.00	3,583,302.09
01/01/2020		3,473,392.09	3,473,392.09			
07/01/2020	5,335,000	3,473,392.09	8,808,392.09	12,281,784.18	5,335,000.00	6,946,784.18
01/01/2021		3,353,638.66	3,353,638.66			
07/01/2021	4,360,000	3,353,638.66	7,713,638.66	11,067,277.32	4,360,000.00	6,707,277.32
01/01/2022		3,257,248.61	3,257,248.61			
07/01/2022	4,560,000	3,257,248.61	7,817,248.61	11,074,497.22	4,560,000.00	6,514,497.22
01/01/2023		3,155,112.11	3,155,112.11			
07/01/2023	4,765,000	3,155,112.11	7,920,112.11	11,075,224.22	4,765,000.00	6,310,224.22
01/01/2024		3,078,301.66	3,078,301.66			
07/01/2024	4,910,000	3,078,301.66	7,988,301.66	11,066,603.32	4,910,000.00	6,156,603.32
01/01/2025		2,966,397.81	2,966,397.81			
07/01/2025	5,140,000	2,966,397.81	8,106,397.81	11,072,795.62	5,140,000.00	5,932,795.62
01/01/2026		2,847,569.81	2,847,569.81			
07/01/2026	5,375,000	2,847,569.81	8,222,569.81	11,070,139.62	5,375,000.00	5,695,139.62
01/01/2027		2,722,607.01	2,722,607.01			
07/01/2027	5,635,000	2,722,607.01	8,357,607.01	11,080,214.02	5,635,000.00	5,445,214.02
01/01/2028		2,601,804.11	2,601,804.11			
07/01/2028	5,870,000	2,601,804.11	8,471,804.11	11,073,608.22	5,870,000.00	5,203,608.22
01/01/2029		2,478,611.71	2,478,611.71			
07/01/2029	6,110,000	2,478,611.71	8,588,611.71	11,067,223.42	6,110,000.00	4,957,223.42
01/01/2030		2,367,054.51	2,367,054.51			
07/01/2030	5,505,000	2,367,054.51	7,872,054.51	10,239,109.02	5,505,000.00	4,734,109.02
01/01/2031		2,256,340.61	2,256,340.61			
07/01/2031	5,710,000	2,256,340.61	7,966,340.61	10,222,681.22	5,710,000.00	4,512,681.22
01/01/2032		2,150,981.26	2,150,981.26			
07/01/2032	5,930,000	2,150,981.26	8,080,981.26	10,231,962.52	5,930,000.00	4,301,962.52
01/01/2033		2,038,662.99	2,038,662.99			
07/01/2033	6,155,000	2,038,662.99	8,193,662.99	10,232,325.98	6,155,000.00	4,077,325.98
01/01/2034		1,925,723.61	1,925,723.61			
07/01/2034	6,380,000	1,925,723.61	8,305,723.61	10,231,447.22	6,380,000.00	3,851,447.22
01/01/2035		1,808,310.01	1,808,310.01			
07/01/2035	6,260,000	1,808,310.01	8,068,310.01	9,876,620.02	6,260,000.00	3,616,620.02
01/01/2036		1,692,397.91	1,692,397.91			
07/01/2036	6,495,000	1,692,397.91	8,187,397.91	9,879,795.82	6,495,000.00	3,384,795.82
01/01/2037		1,571,747.41	1,571,747.41			
07/01/2037	6,735,000	1,571,747.41	8,306,747.41	9,878,494.82	6,735,000.00	3,143,494.82
01/01/2038		1,444,090.48	1,444,090.48			
07/01/2038	6,990,000	1,444,090.48	8,434,090.48	9,878,180.96	6,990,000.00	2,888,180.96
01/01/2039		1,310,184.11	1,310,184.11			
07/01/2039	7,260,000	1,310,184.11	8,570,184.11	9,880,368.22	7,260,000.00	2,620,368.22
01/01/2040		1,166,266.51	1,166,266.51			
07/01/2040	7,540,000	1,166,266.51	8,706,266.51	9,872,533.02	7,540,000.00	2,332,533.02
01/01/2041		1,016,685.28	1,016,685.28			
07/01/2041	7,845,000	1,016,685.28	8,861,685.28	9,878,370.56	7,845,000.00	2,033,370.56
01/01/2042		861,594.28	861,594.28			
07/01/2042	8,155,000	861,594.28	9,016,594.28	9,878,188.56	8,155,000.00	1,723,188.56
01/01/2043		700,266.11	700,266.11			
07/01/2043	8,470,000	700,266.11	9,170,266.11	9,870,532.22	8,470,000.00	1,400,532.22
01/01/2044		531,873.36	531,873.36			
07/01/2044	8,810,000	531,873.36	9,341,873.36	9,873,746.72	8,810,000.00	1,063,746.72
01/01/2045		356,601.13	356,601.13			
07/01/2045	7,425,000	356,601.13	7,781,601.13	8,138,202.26	7,425,000.00	713,202.26
01/01/2046		208,075.15	208,075.15			
07/01/2046	7,725,000	208,075.15	7,933,075.15	8,141,150.30	7,725,000.00	416,150.30
01/01/2047		53,412.50	53,412.50			
07/01/2047	2,175,000	53,412.50	2,228,412.50	2,281,825.00	2,175,000.00	106,825.00
01/01/2048		13,700.00	13,700.00			
07/01/2048	685,000	13,700.00	698,700.00	712,400.00	685,000.00	27,400.00
01/01/2049			0.00			
	\$179,305,000	\$110,400,603.69	\$289,705,603.69	\$289,705,603.69	\$179,305,000.00	\$110,400,603.69

Certificates of Participation, Series 2014A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	735,000	5.000%	680,000.00	1,415,000.00	1,415,000.00
01/01/2020			661,625.00	661,625.00	
07/01/2020	775,000	5.000%	661,625.00	1,436,625.00	2,098,250.00
01/01/2021			642,250.00	642,250.00	
07/01/2021	810,000	5.000%	642,250.00	1,452,250.00	2,094,500.00
01/01/2022			622,000.00	622,000.00	
07/01/2022	850,000	5.000%	622,000.00	1,472,000.00	2,094,000.00
01/01/2023			600,750.00	600,750.00	
07/01/2023	895,000	5.000%	600,750.00	1,495,750.00	2,096,500.00
01/01/2024			578,375.00	578,375.00	
07/01/2024	935,000	5.000%	578,375.00	1,513,375.00	2,091,750.00
01/01/2025			555,000.00	555,000.00	
07/01/2025	990,000	5.000%	555,000.00	1,545,000.00	2,100,000.00
01/01/2026			530,250.00	530,250.00	
07/01/2026	1,035,000	5.000%	530,250.00	1,565,250.00	2,095,500.00
01/01/2027			504,375.00	504,375.00	
07/01/2027	1,085,000	5.000%	504,375.00	1,589,375.00	2,093,750.00
01/01/2028			477,250.00	477,250.00	
07/01/2028	1,140,000	5.000%	477,250.00	1,617,250.00	2,094,500.00
01/01/2029			448,750.00	448,750.00	
07/01/2029	1,195,000	4.000%	448,750.00	1,643,750.00	2,092,500.00
01/01/2030			424,850.00	424,850.00	
07/01/2030	1,250,000	5.000%	424,850.00	1,674,850.00	2,099,700.00
01/01/2031			393,600.00	393,600.00	
07/01/2031	1,305,000	4.000%	393,600.00	1,698,600.00	2,092,200.00
01/01/2032			367,500.00	367,500.00	
07/01/2032	1,360,000	4.000%	367,500.00	1,727,500.00	2,095,000.00
01/01/2033			340,300.00	340,300.00	
07/01/2033	1,415,000	4.000%	340,300.00	1,755,300.00	2,095,600.00
01/01/2034			312,000.00	312,000.00	
07/01/2034	1,470,000	4.000%	312,000.00	1,782,000.00	2,094,000.00
01/01/2035			282,600.00	282,600.00	
07/01/2035	1,175,000	4.000%	282,600.00	1,457,600.00	1,740,200.00
01/01/2036			259,100.00	259,100.00	
07/01/2036	1,225,000	4.000%	259,100.00	1,484,100.00	1,743,200.00
01/01/2037			234,600.00	234,600.00	
07/01/2037	1,275,000	4.000%	234,600.00	1,509,600.00	1,744,200.00
01/01/2038			209,100.00	209,100.00	
07/01/2038	1,325,000	4.000%	209,100.00	1,534,100.00	1,743,200.00
01/01/2039			182,600.00	182,600.00	
07/01/2039	1,375,000	4.000%	182,600.00	1,557,600.00	1,740,200.00
01/01/2040			155,100.00	155,100.00	
07/01/2040	1,430,000	4.000%	155,100.00	1,585,100.00	1,740,200.00
01/01/2041			126,500.00	126,500.00	
07/01/2041	1,490,000	4.000%	126,500.00	1,616,500.00	1,743,000.00
01/01/2042			96,700.00	96,700.00	
07/01/2042	1,550,000	4.000%	96,700.00	1,646,700.00	1,743,400.00
01/01/2043			65,700.00	65,700.00	
07/01/2043	1,610,000	4.000%	65,700.00	1,675,700.00	1,741,400.00
01/01/2044			33,500.00	33,500.00	
07/01/2044	1,675,000	4.000%	33,500.00	1,708,500.00	1,742,000.00
01/01/2045			0.00	0.00	
07/01/2045			0.00	0.00	0.00
01/01/2046			0.00	0.00	
07/01/2046			0.00	0.00	0.00
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
01/01/2048			0.00	0.00	
07/01/2048			0.00	0.00	0.00
	<u>\$31,375,000</u>		<u>\$18,888,750.00</u>	<u>\$50,263,750.00</u>	<u>\$50,263,750.00</u>

Certificates of Participation, Series 2016A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	2,620,000	5.000%	1,107,584.38	3,727,584.38	3,727,584.38
01/01/2020			1,042,084.38	1,042,084.38	
07/01/2020	2,755,000	5.000%	1,042,084.38	3,797,084.38	4,839,168.76
01/01/2021			973,209.38	973,209.38	
07/01/2021	1,685,000	5.000%	973,209.38	2,658,209.38	3,631,418.76
01/01/2022			931,084.38	931,084.38	
07/01/2022	1,770,000	5.000%	931,084.38	2,701,084.38	3,632,168.76
01/01/2023			886,834.38	886,834.38	
07/01/2023	1,860,000	2.000%	886,834.38	2,746,834.38	3,633,668.76
01/01/2024			868,234.38	868,234.38	
07/01/2024	1,895,000	5.000%	868,234.38	2,763,234.38	3,631,468.76
01/01/2025			820,859.38	820,859.38	
07/01/2025	1,985,000	5.000%	820,859.38	2,805,859.38	3,626,718.76
01/01/2026			771,234.38	771,234.38	
07/01/2026	2,085,000	5.000%	771,234.38	2,856,234.38	3,627,468.76
01/01/2027			719,109.38	719,109.38	
07/01/2027	2,200,000	4.000%	719,109.38	2,919,109.38	3,638,218.76
01/01/2028			675,109.38	675,109.38	
07/01/2028	2,280,000	4.000%	675,109.38	2,955,109.38	3,630,218.76
01/01/2029			629,509.38	629,509.38	
07/01/2029	2,370,000	3.000%	629,509.38	2,999,509.38	3,629,018.76
01/01/2030			593,959.38	593,959.38	
07/01/2030	1,605,000	3.000%	593,959.38	2,198,959.38	2,792,918.76
01/01/2031			569,884.38	569,884.38	
07/01/2031	1,650,000	3.000%	569,884.38	2,219,884.38	2,789,768.76
01/01/2032			545,134.38	545,134.38	
07/01/2032	1,700,000	3.000%	545,134.38	2,245,134.38	2,790,268.76
01/01/2033			519,634.38	519,634.38	
07/01/2033	1,750,000	3.125%	519,634.38	2,269,634.38	2,789,268.76
01/01/2034			492,290.63	492,290.63	
07/01/2034	1,805,000	3.125%	492,290.63	2,297,290.63	2,789,581.26
01/01/2035			464,087.50	464,087.50	
07/01/2035	1,865,000	3.250%	464,087.50	2,329,087.50	2,793,175.00
01/01/2036			433,781.25	433,781.25	
07/01/2036	1,925,000	3.250%	433,781.25	2,358,781.25	2,792,562.50
01/01/2037			402,500.00	402,500.00	
07/01/2037	1,985,000	3.250%	402,500.00	2,387,500.00	2,790,000.00
01/01/2038			370,243.75	370,243.75	
07/01/2038	2,050,000	3.375%	370,243.75	2,420,243.75	2,790,487.50
01/01/2039			335,650.00	335,650.00	
07/01/2039	2,120,000	3.500%	335,650.00	2,455,650.00	2,791,300.00
01/01/2040			298,550.00	298,550.00	
07/01/2040	2,195,000	3.500%	298,550.00	2,493,550.00	2,792,100.00
01/01/2041			260,137.50	260,137.50	
07/01/2041	2,270,000	3.500%	260,137.50	2,530,137.50	2,790,275.00
01/01/2042			220,412.50	220,412.50	
07/01/2042	2,350,000	3.500%	220,412.50	2,570,412.50	2,790,825.00
01/01/2043			179,287.50	179,287.50	
07/01/2043	2,430,000	3.500%	179,287.50	2,609,287.50	2,788,575.00
01/01/2044			136,762.50	136,762.50	
07/01/2044	2,515,000	3.500%	136,762.50	2,651,762.50	2,788,525.00
01/01/2045			92,750.00	92,750.00	
07/01/2045	2,605,000	3.500%	92,750.00	2,697,750.00	2,790,500.00
01/01/2046			47,162.50	47,162.50	
07/01/2046	2,695,000	3.500%	47,162.50	2,742,162.50	2,789,325.00
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
01/01/2048			0.00	0.00	
07/01/2048			0.00	0.00	0.00
	<u>\$59,020,000</u>		<u>\$29,666,578.28</u>	<u>\$88,686,578.28</u>	<u>\$88,686,578.28</u>

Certificates of Participation, Series 2016B

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,025,000	2.080%	1,020,308.33	2,045,308.33	2,045,308.33
01/01/2020			1,009,648.33	1,009,648.33	
07/01/2020	1,045,000	2.393%	1,009,648.33	2,054,648.33	3,064,296.66
01/01/2021			997,144.90	997,144.90	
07/01/2021	1,070,000	2.643%	997,144.90	2,067,144.90	3,064,289.80
01/01/2022			983,004.85	983,004.85	
07/01/2022	1,100,000	2.843%	983,004.85	2,083,004.85	3,066,009.70
01/01/2023			967,368.35	967,368.35	
07/01/2023	1,130,000	2.993%	967,368.35	2,097,368.35	3,064,736.70
01/01/2024			950,457.90	950,457.90	
07/01/2024	1,165,000	3.138%	950,457.90	2,115,457.90	3,065,915.80
01/01/2025			932,179.05	932,179.05	
07/01/2025	1,200,000	3.388%	932,179.05	2,132,179.05	3,064,358.10
01/01/2026			911,851.05	911,851.05	
07/01/2026	1,245,000	3.488%	911,851.05	2,156,851.05	3,068,702.10
01/01/2027			890,138.25	890,138.25	
07/01/2027	1,285,000	3.588%	890,138.25	2,175,138.25	3,065,276.50
01/01/2028			867,085.35	867,085.35	
07/01/2028	1,335,000	3.688%	867,085.35	2,202,085.35	3,069,170.70
01/01/2029			842,467.95	842,467.95	
07/01/2029	1,380,000	3.838%	842,467.95	2,222,467.95	3,064,935.90
01/01/2030			815,985.75	815,985.75	
07/01/2030	1,435,000	3.988%	815,985.75	2,250,985.75	3,066,971.50
01/01/2031			787,371.85	787,371.85	
07/01/2031	1,490,000	4.138%	787,371.85	2,277,371.85	3,064,743.70
01/01/2032			756,543.75	756,543.75	
07/01/2032	1,555,000	4.471%	756,543.75	2,311,543.75	3,068,087.50
01/01/2033			721,781.73	721,781.73	
07/01/2033	1,625,000	4.471%	721,781.73	2,346,781.73	3,068,563.46
01/01/2034			685,454.85	685,454.85	
07/01/2034	1,695,000	4.471%	685,454.85	2,380,454.85	3,065,909.70
01/01/2035			647,563.13	647,563.13	
07/01/2035	1,770,000	4.471%	647,563.13	2,417,563.13	3,065,126.26
01/01/2036			607,994.78	607,994.78	
07/01/2036	1,850,000	4.471%	607,994.78	2,457,994.78	3,065,989.56
01/01/2037			566,638.03	566,638.03	
07/01/2037	1,935,000	4.721%	566,638.03	2,501,638.03	3,068,276.06
01/01/2038			520,962.35	520,962.35	
07/01/2038	2,025,000	4.721%	520,962.35	2,545,962.35	3,066,924.70
01/01/2039			473,162.23	473,162.23	
07/01/2039	2,120,000	4.721%	473,162.23	2,593,162.23	3,066,324.46
01/01/2040			423,119.63	423,119.63	
07/01/2040	2,220,000	4.721%	423,119.63	2,643,119.63	3,066,239.26
01/01/2041			370,716.53	370,716.53	
07/01/2041	2,325,000	4.721%	370,716.53	2,695,716.53	3,066,433.06
01/01/2042			315,834.90	315,834.90	
07/01/2042	2,435,000	4.721%	315,834.90	2,750,834.90	3,066,669.80
01/01/2043			258,356.73	258,356.73	
07/01/2043	2,550,000	4.721%	258,356.73	2,808,356.73	3,066,713.46
01/01/2044			198,163.98	198,163.98	
07/01/2044	2,670,000	4.721%	198,163.98	2,868,163.98	3,066,327.96
01/01/2045			135,138.63	135,138.63	
07/01/2045	2,795,000	4.721%	135,138.63	2,930,138.63	3,065,277.26
01/01/2046			69,162.65	69,162.65	
07/01/2046	2,930,000	4.721%	69,162.65	2,999,162.65	3,068,325.30
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
01/01/2048			0.00	0.00	
07/01/2048			0.00	0.00	0.00
	<u>\$48,405,000</u>		<u>\$36,430,903.29</u>	<u>\$84,835,903.29</u>	<u>\$84,835,903.29</u>

Certificates of Participation, Series 2017A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	505,000	5.000%	531,453.13	1,036,453.13	1,036,453.13
01/01/2020			518,828.13	518,828.13	
07/01/2020	530,000	5.000%	518,828.13	1,048,828.13	1,567,656.26
01/01/2021			505,578.13	505,578.13	
07/01/2021	555,000	5.000%	505,578.13	1,060,578.13	1,566,156.26
01/01/2022			491,703.13	491,703.13	
07/01/2022	585,000	5.000%	491,703.13	1,076,703.13	1,568,406.26
01/01/2023			477,078.13	477,078.13	
07/01/2023	615,000	4.000%	477,078.13	1,092,078.13	1,569,156.26
01/01/2024			464,778.13	464,778.13	
07/01/2024	635,000	5.000%	464,778.13	1,099,778.13	1,564,556.26
01/01/2025			448,903.13	448,903.13	
07/01/2025	670,000	5.000%	448,903.13	1,118,903.13	1,567,806.26
01/01/2026			432,153.13	432,153.13	
07/01/2026	700,000	5.000%	432,153.13	1,132,153.13	1,564,306.26
01/01/2027			414,653.13	414,653.13	
07/01/2027	740,000	5.000%	414,653.13	1,154,653.13	1,569,306.26
01/01/2028			396,153.13	396,153.13	
07/01/2028	775,000	5.000%	396,153.13	1,171,153.13	1,567,306.26
01/01/2029			376,778.13	376,778.13	
07/01/2029	815,000	5.000%	376,778.13	1,191,778.13	1,568,556.26
01/01/2030			356,403.13	356,403.13	
07/01/2030	855,000	5.000%	356,403.13	1,211,403.13	1,567,806.26
01/01/2031			335,028.13	335,028.13	
07/01/2031	895,000	4.000%	335,028.13	1,230,028.13	1,565,056.26
01/01/2032			317,128.13	317,128.13	
07/01/2032	930,000	4.000%	317,128.13	1,247,128.13	1,564,256.26
01/01/2033			298,528.13	298,528.13	
07/01/2033	970,000	3.000%	298,528.13	1,268,528.13	1,567,056.26
01/01/2034			283,978.13	283,978.13	
07/01/2034	1,000,000	3.000%	283,978.13	1,283,978.13	1,567,956.26
01/01/2035			268,978.13	268,978.13	
07/01/2035	1,030,000	3.000%	268,978.13	1,298,978.13	1,567,956.26
01/01/2036			253,528.13	253,528.13	
07/01/2036	1,060,000	3.000%	253,528.13	1,313,528.13	1,567,056.26
01/01/2037			237,628.13	237,628.13	
07/01/2037	1,090,000	3.000%	237,628.13	1,327,628.13	1,565,256.26
01/01/2038			221,278.13	221,278.13	
07/01/2038	1,125,000	3.000%	221,278.13	1,346,278.13	1,567,556.26
01/01/2039			204,403.13	204,403.13	
07/01/2039	1,160,000	3.375%	204,403.13	1,364,403.13	1,568,806.26
01/01/2040			184,828.13	184,828.13	
07/01/2040	1,195,000	3.375%	184,828.13	1,379,828.13	1,564,656.26
01/01/2041			164,662.50	164,662.50	
07/01/2041	1,235,000	3.375%	164,662.50	1,399,662.50	1,564,325.00
01/01/2042			143,821.88	143,821.88	
07/01/2042	1,280,000	3.375%	143,821.88	1,423,821.88	1,567,643.76
01/01/2043			122,221.88	122,221.88	
07/01/2043	1,320,000	3.375%	122,221.88	1,442,221.88	1,564,443.76
01/01/2044			99,946.88	99,946.88	
07/01/2044	1,365,000	3.375%	99,946.88	1,464,946.88	1,564,893.76
01/01/2045			76,912.50	76,912.50	
07/01/2045	1,415,000	3.500%	76,912.50	1,491,912.50	1,568,825.00
01/01/2046			52,150.00	52,150.00	
07/01/2046	1,465,000	3.500%	52,150.00	1,517,150.00	1,569,300.00
01/01/2047			26,512.50	26,512.50	
07/01/2047	1,515,000	3.500%	26,512.50	1,541,512.50	1,568,025.00
01/01/2048			0.00	0.00	
07/01/2048			0.00	0.00	0.00
	<u>\$28,030,000</u>		<u>\$16,880,540.87</u>	<u>\$44,910,540.87</u>	<u>\$44,910,540.87</u>

Certificates of Participation, Series 2018A

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	110,000	5.000%	243,956.25	353,956.25	353,956.25
01/01/2020			241,206.25	241,206.25	
07/01/2020	230,000	5.000%	241,206.25	471,206.25	712,412.50
01/01/2021			235,456.25	235,456.25	
07/01/2021	240,000	5.000%	235,456.25	475,456.25	710,912.50
01/01/2022			229,456.25	229,456.25	
07/01/2022	255,000	5.000%	229,456.25	484,456.25	713,912.50
01/01/2023			223,081.25	223,081.25	
07/01/2023	265,000	5.000%	223,081.25	488,081.25	711,162.50
01/01/2024			216,456.25	216,456.25	
07/01/2024	280,000	5.000%	216,456.25	496,456.25	712,912.50
01/01/2025			209,456.25	209,456.25	
07/01/2025	295,000	5.000%	209,456.25	504,456.25	713,912.50
01/01/2026			202,081.25	202,081.25	
07/01/2026	310,000	5.000%	202,081.25	512,081.25	714,162.50
01/01/2027			194,331.25	194,331.25	
07/01/2027	325,000	5.000%	194,331.25	519,331.25	713,662.50
01/01/2028			186,206.25	186,206.25	
07/01/2028	340,000	3.000%	186,206.25	526,206.25	712,412.50
01/01/2029			181,106.25	181,106.25	
07/01/2029	350,000	3.000%	181,106.25	531,106.25	712,212.50
01/01/2030			175,856.25	175,856.25	
07/01/2030	360,000	3.000%	175,856.25	535,856.25	711,712.50
01/01/2031			170,456.25	170,456.25	
07/01/2031	370,000	3.125%	170,456.25	540,456.25	710,912.50
01/01/2032			164,675.00	164,675.00	
07/01/2032	385,000	3.250%	164,675.00	549,675.00	714,350.00
01/01/2033			158,418.75	158,418.75	
07/01/2033	395,000	3.250%	158,418.75	553,418.75	711,837.50
01/01/2034			152,000.00	152,000.00	
07/01/2034	410,000	3.375%	152,000.00	562,000.00	714,000.00
01/01/2035			145,081.25	145,081.25	
07/01/2035	420,000	3.375%	145,081.25	565,081.25	710,162.50
01/01/2036			137,993.75	137,993.75	
07/01/2036	435,000	3.500%	137,993.75	572,993.75	710,987.50
01/01/2037			130,381.25	130,381.25	
07/01/2037	450,000	3.500%	130,381.25	580,381.25	710,762.50
01/01/2038			122,506.25	122,506.25	
07/01/2038	465,000	3.500%	122,506.25	587,506.25	710,012.50
01/01/2039			114,368.75	114,368.75	
07/01/2039	485,000	4.000%	114,368.75	599,368.75	713,737.50
01/01/2040			104,668.75	104,668.75	
07/01/2040	500,000	4.000%	104,668.75	604,668.75	709,337.50
01/01/2041			94,668.75	94,668.75	
07/01/2041	525,000	3.750%	94,668.75	619,668.75	714,337.50
01/01/2042			84,825.00	84,825.00	
07/01/2042	540,000	3.750%	84,825.00	624,825.00	709,650.00
01/01/2043			74,700.00	74,700.00	
07/01/2043	560,000	4.000%	74,700.00	634,700.00	709,400.00
01/01/2044			63,500.00	63,500.00	
07/01/2044	585,000	4.000%	63,500.00	648,500.00	712,000.00
01/01/2045			51,800.00	51,800.00	
07/01/2045	610,000	4.000%	51,800.00	661,800.00	713,600.00
01/01/2046			39,600.00	39,600.00	
07/01/2046	635,000	4.000%	39,600.00	674,600.00	714,200.00
01/01/2047			26,900.00	26,900.00	
07/01/2047	660,000	4.000%	26,900.00	686,900.00	713,800.00
01/01/2048			13,700.00	13,700.00	
07/01/2048	685,000	4.000%	13,700.00	698,700.00	712,400.00
	<u>\$12,475,000</u>		<u>\$8,533,831.25</u>	<u>\$21,008,831.25</u>	<u>\$21,008,831.25</u>

Combined Certificates of Participation Debt Service (UNR Portion)

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	3,165,000	2,069,912.51	5,234,912.51	5,234,912.51	3,165,000.00	2,069,912.51
01/01/2020		1,990,787.51	1,990,787.51			
07/01/2020	3,325,000	1,990,787.51	5,315,787.51	7,306,575.02	3,325,000.00	3,981,575.02
01/01/2021		1,907,662.51	1,907,662.51			
07/01/2021	2,285,000	1,907,662.51	4,192,662.51	6,100,325.02	2,285,000.00	3,815,325.02
01/01/2022		1,850,537.51	1,850,537.51			
07/01/2022	2,400,000	1,850,537.51	4,250,537.51	6,101,075.02	2,400,000.00	3,701,075.02
01/01/2023		1,790,537.51	1,790,537.51			
07/01/2023	2,525,000	1,790,537.51	4,315,537.51	6,106,075.02	2,525,000.00	3,581,075.02
01/01/2024		1,748,787.51	1,748,787.51			
07/01/2024	2,600,000	1,748,787.51	4,348,787.51	6,097,575.02	2,600,000.00	3,497,575.02
01/01/2025		1,683,787.51	1,683,787.51			
07/01/2025	2,735,000	1,683,787.51	4,418,787.51	6,102,575.02	2,735,000.00	3,367,575.02
01/01/2026		1,615,412.51	1,615,412.51			
07/01/2026	2,865,000	1,615,412.51	4,480,412.51	6,095,825.02	2,865,000.00	3,230,825.02
01/01/2027		1,543,787.51	1,543,787.51			
07/01/2027	3,015,000	1,543,787.51	4,558,787.51	6,102,575.02	3,015,000.00	3,087,575.02
01/01/2028		1,475,612.51	1,475,612.51			
07/01/2028	3,145,000	1,475,612.51	4,620,612.51	6,096,225.02	3,145,000.00	2,951,225.02
01/01/2029		1,404,462.51	1,404,462.51			
07/01/2029	3,290,000	1,404,462.51	4,694,462.51	6,098,925.02	3,290,000.00	2,808,925.02
01/01/2030		1,342,362.51	1,342,362.51			
07/01/2030	3,420,000	1,342,362.51	4,762,362.51	6,104,725.02	3,420,000.00	2,684,725.02
01/01/2031		1,272,912.51	1,272,912.51			
07/01/2031	3,550,000	1,272,912.51	4,822,912.51	6,095,825.02	3,550,000.00	2,545,825.02
01/01/2032		1,210,162.51	1,210,162.51			
07/01/2032	3,675,000	1,210,162.51	4,885,162.51	6,095,325.02	3,675,000.00	2,420,325.02
01/01/2033		1,145,162.51	1,145,162.51			
07/01/2033	3,810,000	1,145,162.51	4,955,162.51	6,100,325.02	3,810,000.00	2,290,325.02
01/01/2034		1,081,468.76	1,081,468.76			
07/01/2034	3,935,000	1,081,468.76	5,016,468.76	6,097,937.52	3,935,000.00	2,162,937.52
01/01/2035		1,015,665.63	1,015,665.63			
07/01/2035	4,070,000	1,015,665.63	5,085,665.63	6,101,331.26	4,070,000.00	2,031,331.26
01/01/2036		946,409.38	946,409.38			
07/01/2036	4,210,000	946,409.38	5,156,409.38	6,102,818.76	4,210,000.00	1,892,818.76
01/01/2037		874,728.13	874,728.13			
07/01/2037	4,350,000	874,728.13	5,224,728.13	6,099,456.26	4,350,000.00	1,749,456.26
01/01/2038		800,621.88	800,621.88			
07/01/2038	4,500,000	800,621.88	5,300,621.88	6,101,243.76	4,500,000.00	1,601,243.76
01/01/2039		722,653.13	722,653.13			
07/01/2039	4,655,000	722,653.13	5,377,653.13	6,100,306.26	4,655,000.00	1,445,306.26
01/01/2040		638,478.13	638,478.13			
07/01/2040	4,820,000	638,478.13	5,458,478.13	6,096,956.26	4,820,000.00	1,276,956.26
01/01/2041		551,300.00	551,300.00			
07/01/2041	4,995,000	551,300.00	5,546,300.00	6,097,600.00	4,995,000.00	1,102,600.00
01/01/2042		460,934.38	460,934.38			
07/01/2042	5,180,000	460,934.38	5,640,934.38	6,101,868.76	5,180,000.00	921,868.76
01/01/2043		367,209.38	367,209.38			
07/01/2043	5,360,000	367,209.38	5,727,209.38	6,094,418.76	5,360,000.00	734,418.76
01/01/2044		270,209.38	270,209.38			
07/01/2044	5,555,000	270,209.38	5,825,209.38	6,095,418.76	5,555,000.00	540,418.76
01/01/2045		169,662.50	169,662.50			
07/01/2045	4,020,000	169,662.50	4,189,662.50	4,359,325.00	4,020,000.00	339,325.00
01/01/2046		99,312.50	99,312.50			
07/01/2046	4,160,000	99,312.50	4,259,312.50	4,358,625.00	4,160,000.00	198,625.00
01/01/2047		26,512.50	26,512.50			
07/01/2047	1,515,000	26,512.50	1,541,512.50	1,568,025.00	1,515,000.00	53,025.00
01/01/2048			0.00			
	<u>\$107,130,000</u>	<u>\$62,084,194.15</u>	<u>\$169,214,194.15</u>	<u>\$169,214,194.15</u>	<u>\$107,130,000.00</u>	<u>\$62,084,194.15</u>



Certificates of Participation, Series 2014A (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	565,000	5.000%	588,275.00	1,153,275.00	1,153,275.00
01/01/2020			574,150.00	574,150.00	
07/01/2020	595,000	5.000%	574,150.00	1,169,150.00	1,743,300.00
01/01/2021			559,275.00	559,275.00	
07/01/2021	625,000	5.000%	559,275.00	1,184,275.00	1,743,550.00
01/01/2022			543,650.00	543,650.00	
07/01/2022	655,000	5.000%	543,650.00	1,198,650.00	1,742,300.00
01/01/2023			527,275.00	527,275.00	
07/01/2023	690,000	5.000%	527,275.00	1,217,275.00	1,744,550.00
01/01/2024			510,025.00	510,025.00	
07/01/2024	720,000	5.000%	510,025.00	1,230,025.00	1,740,050.00
01/01/2025			492,025.00	492,025.00	
07/01/2025	760,000	5.000%	492,025.00	1,252,025.00	1,744,050.00
01/01/2026			473,025.00	473,025.00	
07/01/2026	795,000	5.000%	473,025.00	1,268,025.00	1,741,050.00
01/01/2027			453,150.00	453,150.00	
07/01/2027	835,000	5.000%	453,150.00	1,288,150.00	1,741,300.00
01/01/2028			432,275.00	432,275.00	
07/01/2028	875,000	5.000%	432,275.00	1,307,275.00	1,739,550.00
01/01/2029			410,400.00	410,400.00	
07/01/2029	920,000	4.000%	410,400.00	1,330,400.00	1,740,800.00
01/01/2030			392,000.00	392,000.00	
07/01/2030	960,000	5.000%	392,000.00	1,352,000.00	1,744,000.00
01/01/2031			368,000.00	368,000.00	
07/01/2031	1,005,000	4.000%	368,000.00	1,373,000.00	1,741,000.00
01/01/2032			347,900.00	347,900.00	
07/01/2032	1,045,000	4.000%	347,900.00	1,392,900.00	1,740,800.00
01/01/2033			327,000.00	327,000.00	
07/01/2033	1,090,000	4.000%	327,000.00	1,417,000.00	1,744,000.00
01/01/2034			305,200.00	305,200.00	
07/01/2034	1,130,000	4.000%	305,200.00	1,435,200.00	1,740,400.00
01/01/2035			282,600.00	282,600.00	
07/01/2035	1,175,000	4.000%	282,600.00	1,457,600.00	1,740,200.00
01/01/2036			259,100.00	259,100.00	
07/01/2036	1,225,000	4.000%	259,100.00	1,484,100.00	1,743,200.00
01/01/2037			234,600.00	234,600.00	
07/01/2037	1,275,000	4.000%	234,600.00	1,509,600.00	1,744,200.00
01/01/2038			209,100.00	209,100.00	
07/01/2038	1,325,000	4.000%	209,100.00	1,534,100.00	1,743,200.00
01/01/2039			182,600.00	182,600.00	
07/01/2039	1,375,000	4.000%	182,600.00	1,557,600.00	1,740,200.00
01/01/2040			155,100.00	155,100.00	
07/01/2040	1,430,000	4.000%	155,100.00	1,585,100.00	1,740,200.00
01/01/2041			126,500.00	126,500.00	
07/01/2041	1,490,000	4.000%	126,500.00	1,616,500.00	1,743,000.00
01/01/2042			96,700.00	96,700.00	
07/01/2042	1,550,000	4.000%	96,700.00	1,646,700.00	1,743,400.00
01/01/2043			65,700.00	65,700.00	
07/01/2043	1,610,000	4.000%	65,700.00	1,675,700.00	1,741,400.00
01/01/2044			33,500.00	33,500.00	
07/01/2044	1,675,000	4.000%	33,500.00	1,708,500.00	1,742,000.00
01/01/2045			0.00	0.00	
07/01/2045			0.00	0.00	0.00
01/01/2046			0.00	0.00	
07/01/2046			0.00	0.00	0.00
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
	<u>\$27,395,000</u>		<u>\$17,309,975.00</u>	<u>\$44,704,975.00</u>	<u>\$44,704,975.00</u>

Certificates of Participation, Series 2016A (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	2,095,000	5.000%	950,184.38	3,045,184.38	3,045,184.38
01/01/2020			897,809.38	897,809.38	
07/01/2020	2,200,000	5.000%	897,809.38	3,097,809.38	3,995,618.76
01/01/2021			842,809.38	842,809.38	
07/01/2021	1,105,000	5.000%	842,809.38	1,947,809.38	2,790,618.76
01/01/2022			815,184.38	815,184.38	
07/01/2022	1,160,000	5.000%	815,184.38	1,975,184.38	2,790,368.76
01/01/2023			786,184.38	786,184.38	
07/01/2023	1,220,000	2.000%	786,184.38	2,006,184.38	2,792,368.76
01/01/2024			773,984.38	773,984.38	
07/01/2024	1,245,000	5.000%	773,984.38	2,018,984.38	2,792,968.76
01/01/2025			742,859.38	742,859.38	
07/01/2025	1,305,000	5.000%	742,859.38	2,047,859.38	2,790,718.76
01/01/2026			710,234.38	710,234.38	
07/01/2026	1,370,000	5.000%	710,234.38	2,080,234.38	2,790,468.76
01/01/2027			675,984.38	675,984.38	
07/01/2027	1,440,000	4.000%	675,984.38	2,115,984.38	2,791,968.76
01/01/2028			647,184.38	647,184.38	
07/01/2028	1,495,000	4.000%	647,184.38	2,142,184.38	2,789,368.76
01/01/2029			617,284.38	617,284.38	
07/01/2029	1,555,000	3.000%	617,284.38	2,172,284.38	2,789,568.76
01/01/2030			593,959.38	593,959.38	
07/01/2030	1,605,000	3.000%	593,959.38	2,198,959.38	2,792,918.76
01/01/2031			569,884.38	569,884.38	
07/01/2031	1,650,000	3.000%	569,884.38	2,219,884.38	2,789,768.76
01/01/2032			545,134.38	545,134.38	
07/01/2032	1,700,000	3.000%	545,134.38	2,245,134.38	2,790,268.76
01/01/2033			519,634.38	519,634.38	
07/01/2033	1,750,000	3.125%	519,634.38	2,269,634.38	2,789,268.76
01/01/2034			492,290.63	492,290.63	
07/01/2034	1,805,000	3.125%	492,290.63	2,297,290.63	2,789,581.26
01/01/2035			464,087.50	464,087.50	
07/01/2035	1,865,000	3.250%	464,087.50	2,329,087.50	2,793,175.00
01/01/2036			433,781.25	433,781.25	
07/01/2036	1,925,000	3.250%	433,781.25	2,358,781.25	2,792,562.50
01/01/2037			402,500.00	402,500.00	
07/01/2037	1,985,000	3.250%	402,500.00	2,387,500.00	2,790,000.00
01/01/2038			370,243.75	370,243.75	
07/01/2038	2,050,000	3.375%	370,243.75	2,420,243.75	2,790,487.50
01/01/2039			335,650.00	335,650.00	
07/01/2039	2,120,000	3.500%	335,650.00	2,455,650.00	2,791,300.00
01/01/2040			298,550.00	298,550.00	
07/01/2040	2,195,000	3.500%	298,550.00	2,493,550.00	2,792,100.00
01/01/2041			260,137.50	260,137.50	
07/01/2041	2,270,000	3.500%	260,137.50	2,530,137.50	2,790,275.00
01/01/2042			220,412.50	220,412.50	
07/01/2042	2,350,000	3.500%	220,412.50	2,570,412.50	2,790,825.00
01/01/2043			179,287.50	179,287.50	
07/01/2043	2,430,000	3.500%	179,287.50	2,609,287.50	2,788,575.00
01/01/2044			136,762.50	136,762.50	
07/01/2044	2,515,000	3.500%	136,762.50	2,651,762.50	2,788,525.00
01/01/2045			92,750.00	92,750.00	
07/01/2045	2,605,000	3.500%	92,750.00	2,697,750.00	2,790,500.00
01/01/2046			47,162.50	47,162.50	
07/01/2046	2,695,000	3.500%	47,162.50	2,742,162.50	2,789,325.00
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
	<u>\$51,705,000</u>		<u>\$27,893,678.28</u>	<u>\$79,598,678.28</u>	<u>\$79,598,678.28</u>

Certificates of Participation, Series 2017A (UNR Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	505,000	5.000%	531,453.13	1,036,453.13	1,036,453.13
01/01/2020			518,828.13	518,828.13	
07/01/2020	530,000	5.000%	518,828.13	1,048,828.13	1,567,656.26
01/01/2021			505,578.13	505,578.13	
07/01/2021	555,000	5.000%	505,578.13	1,060,578.13	1,566,156.26
01/01/2022			491,703.13	491,703.13	
07/01/2022	585,000	5.000%	491,703.13	1,076,703.13	1,568,406.26
01/01/2023			477,078.13	477,078.13	
07/01/2023	615,000	4.000%	477,078.13	1,092,078.13	1,569,156.26
01/01/2024			464,778.13	464,778.13	
07/01/2024	635,000	5.000%	464,778.13	1,099,778.13	1,564,556.26
01/01/2025			448,903.13	448,903.13	
07/01/2025	670,000	5.000%	448,903.13	1,118,903.13	1,567,806.26
01/01/2026			432,153.13	432,153.13	
07/01/2026	700,000	5.000%	432,153.13	1,132,153.13	1,564,306.26
01/01/2027			414,653.13	414,653.13	
07/01/2027	740,000	5.000%	414,653.13	1,154,653.13	1,569,306.26
01/01/2028			396,153.13	396,153.13	
07/01/2028	775,000	5.000%	396,153.13	1,171,153.13	1,567,306.26
01/01/2029			376,778.13	376,778.13	
07/01/2029	815,000	5.000%	376,778.13	1,191,778.13	1,568,556.26
01/01/2030			356,403.13	356,403.13	
07/01/2030	855,000	5.000%	356,403.13	1,211,403.13	1,567,806.26
01/01/2031			335,028.13	335,028.13	
07/01/2031	895,000	4.000%	335,028.13	1,230,028.13	1,565,056.26
01/01/2032			317,128.13	317,128.13	
07/01/2032	930,000	4.000%	317,128.13	1,247,128.13	1,564,256.26
01/01/2033			298,528.13	298,528.13	
07/01/2033	970,000	3.000%	298,528.13	1,268,528.13	1,567,056.26
01/01/2034			283,978.13	283,978.13	
07/01/2034	1,000,000	3.000%	283,978.13	1,283,978.13	1,567,956.26
01/01/2035			268,978.13	268,978.13	
07/01/2035	1,030,000	3.000%	268,978.13	1,298,978.13	1,567,956.26
01/01/2036			253,528.13	253,528.13	
07/01/2036	1,060,000	3.000%	253,528.13	1,313,528.13	1,567,056.26
01/01/2037			237,628.13	237,628.13	
07/01/2037	1,090,000	3.000%	237,628.13	1,327,628.13	1,565,256.26
01/01/2038			221,278.13	221,278.13	
07/01/2038	1,125,000	3.000%	221,278.13	1,346,278.13	1,567,556.26
01/01/2039			204,403.13	204,403.13	
07/01/2039	1,160,000	3.375%	204,403.13	1,364,403.13	1,568,806.26
01/01/2040			184,828.13	184,828.13	
07/01/2040	1,195,000	3.375%	184,828.13	1,379,828.13	1,564,656.26
01/01/2041			164,662.50	164,662.50	
07/01/2041	1,235,000	3.375%	164,662.50	1,399,662.50	1,564,325.00
01/01/2042			143,821.88	143,821.88	
07/01/2042	1,280,000	3.375%	143,821.88	1,423,821.88	1,567,643.76
01/01/2043			122,221.88	122,221.88	
07/01/2043	1,320,000	3.375%	122,221.88	1,442,221.88	1,564,443.76
01/01/2044			99,946.88	99,946.88	
07/01/2044	1,365,000	3.375%	99,946.88	1,464,946.88	1,564,893.76
01/01/2045			76,912.50	76,912.50	
07/01/2045	1,415,000	3.500%	76,912.50	1,491,912.50	1,568,825.00
01/01/2046			52,150.00	52,150.00	
07/01/2046	1,465,000	3.500%	52,150.00	1,517,150.00	1,569,300.00
01/01/2047			26,512.50	26,512.50	
07/01/2047	1,515,000	3.500%	26,512.50	1,541,512.50	1,568,025.00
	<u>\$28,030,000</u>		<u>\$16,880,540.87</u>	<u>\$44,910,540.87</u>	<u>\$44,910,540.87</u>

Combined Certificates of Participation Debt Service (UNLV Portion)

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	1,550,000	1,177,708.33	2,727,708.33	2,727,708.33	1,550,000.00	1,177,708.33
01/01/2020		1,153,923.33	1,153,923.33			
07/01/2020	1,600,000	1,153,923.33	2,753,923.33	3,907,846.66	1,600,000.00	2,307,846.66
01/01/2021		1,127,544.90	1,127,544.90			
07/01/2021	1,650,000	1,127,544.90	2,777,544.90	3,905,089.80	1,650,000.00	2,255,089.80
01/01/2022		1,098,904.85	1,098,904.85			
07/01/2022	1,710,000	1,098,904.85	2,808,904.85	3,907,809.70	1,710,000.00	2,197,809.70
01/01/2023		1,068,018.35	1,068,018.35			
07/01/2023	1,770,000	1,068,018.35	2,838,018.35	3,906,036.70	1,770,000.00	2,136,036.70
01/01/2024		1,044,707.90	1,044,707.90			
07/01/2024	1,815,000	1,044,707.90	2,859,707.90	3,904,415.80	1,815,000.00	2,089,415.80
01/01/2025		1,010,179.05	1,010,179.05			
07/01/2025	1,880,000	1,010,179.05	2,890,179.05	3,900,358.10	1,880,000.00	2,020,358.10
01/01/2026		972,851.05	972,851.05			
07/01/2026	1,960,000	972,851.05	2,932,851.05	3,905,702.10	1,960,000.00	1,945,702.10
01/01/2027		933,263.25	933,263.25			
07/01/2027	2,045,000	933,263.25	2,978,263.25	3,911,526.50	2,045,000.00	1,866,526.50
01/01/2028		895,010.35	895,010.35			
07/01/2028	2,120,000	895,010.35	3,015,010.35	3,910,020.70	2,120,000.00	1,790,020.70
01/01/2029		854,692.95	854,692.95			
07/01/2029	2,195,000	854,692.95	3,049,692.95	3,904,385.90	2,195,000.00	1,709,385.90
01/01/2030		815,985.75	815,985.75			
07/01/2030	1,435,000	815,985.75	2,250,985.75	3,066,971.50	1,435,000.00	1,631,971.50
01/01/2031		787,371.85	787,371.85			
07/01/2031	1,490,000	787,371.85	2,277,371.85	3,064,743.70	1,490,000.00	1,574,743.70
01/01/2032		756,543.75	756,543.75			
07/01/2032	1,555,000	756,543.75	2,311,543.75	3,068,087.50	1,555,000.00	1,513,087.50
01/01/2033		721,781.73	721,781.73			
07/01/2033	1,625,000	721,781.73	2,346,781.73	3,068,563.46	1,625,000.00	1,443,563.46
01/01/2034		685,454.85	685,454.85			
07/01/2034	1,695,000	685,454.85	2,380,454.85	3,065,909.70	1,695,000.00	1,370,909.70
01/01/2035		647,563.13	647,563.13			
07/01/2035	1,770,000	647,563.13	2,417,563.13	3,065,126.26	1,770,000.00	1,295,126.26
01/01/2036		607,994.78	607,994.78			
07/01/2036	1,850,000	607,994.78	2,457,994.78	3,065,989.56	1,850,000.00	1,215,989.56
01/01/2037		566,638.03	566,638.03			
07/01/2037	1,935,000	566,638.03	2,501,638.03	3,068,276.06	1,935,000.00	1,133,276.06
01/01/2038		520,962.35	520,962.35			
07/01/2038	2,025,000	520,962.35	2,545,962.35	3,066,924.70	2,025,000.00	1,041,924.70
01/01/2039		473,162.23	473,162.23			
07/01/2039	2,120,000	473,162.23	2,593,162.23	3,066,324.46	2,120,000.00	946,324.46
01/01/2040		423,119.63	423,119.63			
07/01/2040	2,220,000	423,119.63	2,643,119.63	3,066,239.26	2,220,000.00	846,239.26
01/01/2041		370,716.53	370,716.53			
07/01/2041	2,325,000	370,716.53	2,695,716.53	3,066,433.06	2,325,000.00	741,433.06
01/01/2042		315,834.90	315,834.90			
07/01/2042	2,435,000	315,834.90	2,750,834.90	3,066,669.80	2,435,000.00	631,669.80
01/01/2043		258,356.73	258,356.73			
07/01/2043	2,550,000	258,356.73	2,808,356.73	3,066,713.46	2,550,000.00	516,713.46
01/01/2044		198,163.98	198,163.98			
07/01/2044	2,670,000	198,163.98	2,868,163.98	3,066,327.96	2,670,000.00	396,327.96
01/01/2045		135,138.63	135,138.63			
07/01/2045	2,795,000	135,138.63	2,930,138.63	3,065,277.26	2,795,000.00	270,277.26
01/01/2046		69,162.65	69,162.65			
07/01/2046	2,930,000	69,162.65	2,999,162.65	3,068,325.30	2,930,000.00	138,325.30
01/01/2047			0.00			
	\$55,720,000	\$38,203,803.29	\$93,923,803.29	\$93,923,803.29	\$55,720,000.00	\$38,203,803.29

Certificates of Participation, Series 2016A (UNLV Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	525,000	5.000%	157,400.00	682,400.00	682,400.00
01/01/2020			144,275.00	144,275.00	
07/01/2020	555,000	5.000%	144,275.00	699,275.00	843,550.00
01/01/2021			130,400.00	130,400.00	
07/01/2021	580,000	5.000%	130,400.00	710,400.00	840,800.00
01/01/2022			115,900.00	115,900.00	
07/01/2022	610,000	5.000%	115,900.00	725,900.00	841,800.00
01/01/2023			100,650.00	100,650.00	
07/01/2023	640,000	2.000%	100,650.00	740,650.00	841,300.00
01/01/2024			94,250.00	94,250.00	
07/01/2024	650,000	5.000%	94,250.00	744,250.00	838,500.00
01/01/2025			78,000.00	78,000.00	
07/01/2025	680,000	5.000%	78,000.00	758,000.00	836,000.00
01/01/2026			61,000.00	61,000.00	
07/01/2026	715,000	5.000%	61,000.00	776,000.00	837,000.00
01/01/2027			43,125.00	43,125.00	
07/01/2027	760,000	4.000%	43,125.00	803,125.00	846,250.00
01/01/2028			27,925.00	27,925.00	
07/01/2028	785,000	4.000%	27,925.00	812,925.00	840,850.00
01/01/2029			12,225.00	12,225.00	
07/01/2029	815,000	3.000%	12,225.00	827,225.00	839,450.00
01/01/2030			0.00	0.00	
07/01/2030			0.00	0.00	0.00
01/01/2031			0.00	0.00	
07/01/2031			0.00	0.00	0.00
01/01/2032			0.00	0.00	
07/01/2032			0.00	0.00	0.00
01/01/2033			0.00	0.00	
07/01/2033			0.00	0.00	0.00
01/01/2034			0.00	0.00	
07/01/2034			0.00	0.00	0.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
01/01/2044			0.00	0.00	
07/01/2044			0.00	0.00	0.00
01/01/2045			0.00	0.00	
07/01/2045			0.00	0.00	0.00
01/01/2046			0.00	0.00	
07/01/2046			0.00	0.00	0.00
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	\$7,315,000		\$1,772,900.00	\$9,087,900.00	\$9,087,900.00

Certificates of Participation, Series 2016B (UNLV Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	1,025,000	2.080%	1,020,308.33	2,045,308.33	2,045,308.33
01/01/2020			1,009,648.33	1,009,648.33	
07/01/2020	1,045,000	2.393%	1,009,648.33	2,054,648.33	3,064,296.66
01/01/2021			997,144.90	997,144.90	
07/01/2021	1,070,000	2.643%	997,144.90	2,067,144.90	3,064,289.80
01/01/2022			983,004.85	983,004.85	
07/01/2022	1,100,000	2.843%	983,004.85	2,083,004.85	3,066,009.70
01/01/2023			967,368.35	967,368.35	
07/01/2023	1,130,000	2.993%	967,368.35	2,097,368.35	3,064,736.70
01/01/2024			950,457.90	950,457.90	
07/01/2024	1,165,000	3.138%	950,457.90	2,115,457.90	3,065,915.80
01/01/2025			932,179.05	932,179.05	
07/01/2025	1,200,000	3.388%	932,179.05	2,132,179.05	3,064,358.10
01/01/2026			911,851.05	911,851.05	
07/01/2026	1,245,000	3.488%	911,851.05	2,156,851.05	3,068,702.10
01/01/2027			890,138.25	890,138.25	
07/01/2027	1,285,000	3.588%	890,138.25	2,175,138.25	3,065,276.50
01/01/2028			867,085.35	867,085.35	
07/01/2028	1,335,000	3.688%	867,085.35	2,202,085.35	3,069,170.70
01/01/2029			842,467.95	842,467.95	
07/01/2029	1,380,000	3.838%	842,467.95	2,222,467.95	3,064,935.90
01/01/2030			815,985.75	815,985.75	
07/01/2030	1,435,000	3.988%	815,985.75	2,250,985.75	3,066,971.50
01/01/2031			787,371.85	787,371.85	
07/01/2031	1,490,000	4.138%	787,371.85	2,277,371.85	3,064,743.70
01/01/2032			756,543.75	756,543.75	
07/01/2032	1,555,000	4.471%	756,543.75	2,311,543.75	3,068,087.50
01/01/2033			721,781.73	721,781.73	
07/01/2033	1,625,000	4.471%	721,781.73	2,346,781.73	3,068,563.46
01/01/2034			685,454.85	685,454.85	
07/01/2034	1,695,000	4.471%	685,454.85	2,380,454.85	3,065,909.70
01/01/2035			647,563.13	647,563.13	
07/01/2035	1,770,000	4.471%	647,563.13	2,417,563.13	3,065,126.26
01/01/2036			607,994.78	607,994.78	
07/01/2036	1,850,000	4.471%	607,994.78	2,457,994.78	3,065,989.56
01/01/2037			566,638.03	566,638.03	
07/01/2037	1,935,000	4.721%	566,638.03	2,501,638.03	3,068,276.06
01/01/2038			520,962.35	520,962.35	
07/01/2038	2,025,000	4.721%	520,962.35	2,545,962.35	3,066,924.70
01/01/2039			473,162.23	473,162.23	
07/01/2039	2,120,000	4.721%	473,162.23	2,593,162.23	3,066,324.46
01/01/2040			423,119.63	423,119.63	
07/01/2040	2,220,000	4.721%	423,119.63	2,643,119.63	3,066,239.26
01/01/2041			370,716.53	370,716.53	
07/01/2041	2,325,000	4.721%	370,716.53	2,695,716.53	3,066,433.06
01/01/2042			315,834.90	315,834.90	
07/01/2042	2,435,000	4.721%	315,834.90	2,750,834.90	3,066,669.80
01/01/2043			258,356.73	258,356.73	
07/01/2043	2,550,000	4.721%	258,356.73	2,808,356.73	3,066,713.46
01/01/2044			198,163.98	198,163.98	
07/01/2044	2,670,000	4.721%	198,163.98	2,868,163.98	3,066,327.96
01/01/2045			135,138.63	135,138.63	
07/01/2045	2,795,000	4.721%	135,138.63	2,930,138.63	3,065,277.26
01/01/2046			69,162.65	69,162.65	
07/01/2046	2,930,000	4.721%	69,162.65	2,999,162.65	3,068,325.30
	<u>\$48,405,000</u>		<u>\$36,430,903.29</u>	<u>\$84,835,903.29</u>	<u>\$84,835,903.29</u>

Combined Certificates of Participation Debt Service (TMCC Portion)

Date	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
01/01/2019						
07/01/2019	280,000	335,681.25	615,681.25	615,681.25	280,000.00	335,681.25
01/01/2020		328,681.25	328,681.25			
07/01/2020	410,000	328,681.25	738,681.25	1,067,362.50	410,000.00	657,362.50
01/01/2021		318,431.25	318,431.25			
07/01/2021	425,000	318,431.25	743,431.25	1,061,862.50	425,000.00	636,862.50
01/01/2022		307,806.25	307,806.25			
07/01/2022	450,000	307,806.25	757,806.25	1,065,612.50	450,000.00	615,612.50
01/01/2023		296,556.25	296,556.25			
07/01/2023	470,000	296,556.25	766,556.25	1,063,112.50	470,000.00	593,112.50
01/01/2024		284,806.25	284,806.25			
07/01/2024	495,000	284,806.25	779,806.25	1,064,612.50	495,000.00	569,612.50
01/01/2025		272,431.25	272,431.25			
07/01/2025	525,000	272,431.25	797,431.25	1,069,862.50	525,000.00	544,862.50
01/01/2026		259,306.25	259,306.25			
07/01/2026	550,000	259,306.25	809,306.25	1,068,612.50	550,000.00	518,612.50
01/01/2027		245,556.25	245,556.25			
07/01/2027	575,000	245,556.25	820,556.25	1,066,112.50	575,000.00	491,112.50
01/01/2028		231,181.25	231,181.25			
07/01/2028	605,000	231,181.25	836,181.25	1,067,362.50	605,000.00	462,362.50
01/01/2029		219,456.25	219,456.25			
07/01/2029	625,000	219,456.25	844,456.25	1,063,912.50	625,000.00	438,912.50
01/01/2030		208,706.25	208,706.25			
07/01/2030	650,000	208,706.25	858,706.25	1,067,412.50	650,000.00	417,412.50
01/01/2031		196,056.25	196,056.25			
07/01/2031	670,000	196,056.25	866,056.25	1,062,112.50	670,000.00	392,112.50
01/01/2032		184,275.00	184,275.00			
07/01/2032	700,000	184,275.00	884,275.00	1,068,550.00	700,000.00	368,550.00
01/01/2033		171,718.75	171,718.75			
07/01/2033	720,000	171,718.75	891,718.75	1,063,437.50	720,000.00	343,437.50
01/01/2034		158,800.00	158,800.00			
07/01/2034	750,000	158,800.00	908,800.00	1,067,600.00	750,000.00	317,600.00
01/01/2035		145,081.25	145,081.25			
07/01/2035	420,000	145,081.25	565,081.25	710,162.50	420,000.00	290,162.50
01/01/2036		137,993.75	137,993.75			
07/01/2036	435,000	137,993.75	572,993.75	710,987.50	435,000.00	275,987.50
01/01/2037		130,381.25	130,381.25			
07/01/2037	450,000	130,381.25	580,381.25	710,762.50	450,000.00	260,762.50
01/01/2038		122,506.25	122,506.25			
07/01/2038	465,000	122,506.25	587,506.25	710,012.50	465,000.00	245,012.50
01/01/2039		114,368.75	114,368.75			
07/01/2039	485,000	114,368.75	599,368.75	713,737.50	485,000.00	228,737.50
01/01/2040		104,668.75	104,668.75			
07/01/2040	500,000	104,668.75	604,668.75	709,337.50	500,000.00	209,337.50
01/01/2041		94,668.75	94,668.75			
07/01/2041	525,000	94,668.75	619,668.75	714,337.50	525,000.00	189,337.50
01/01/2042		84,825.00	84,825.00			
07/01/2042	540,000	84,825.00	624,825.00	709,650.00	540,000.00	169,650.00
01/01/2043		74,700.00	74,700.00			
07/01/2043	560,000	74,700.00	634,700.00	709,400.00	560,000.00	149,400.00
01/01/2044		63,500.00	63,500.00			
07/01/2044	585,000	63,500.00	648,500.00	712,000.00	585,000.00	127,000.00
01/01/2045		51,800.00	51,800.00			
07/01/2045	610,000	51,800.00	661,800.00	713,600.00	610,000.00	103,600.00
01/01/2046		39,600.00	39,600.00			
07/01/2046	635,000	39,600.00	674,600.00	714,200.00	635,000.00	79,200.00
01/01/2047		26,900.00	26,900.00			
07/01/2047	660,000	26,900.00	686,900.00	713,800.00	660,000.00	53,800.00
01/01/2048		13,700.00	13,700.00			
07/01/2048	685,000	13,700.00	698,700.00	712,400.00	685,000.00	27,400.00
01/01/2049			0.00			
	\$16,455,000	\$10,112,606.25	\$26,567,606.25	\$26,567,606.25	\$16,455,000.00	\$10,112,606.25

Certificates of Participation, Series 2014A (TMCC Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	170,000	5.000%	91,725.00	261,725.00	261,725.00
01/01/2020			87,475.00	87,475.00	
07/01/2020	180,000	5.000%	87,475.00	267,475.00	354,950.00
01/01/2021			82,975.00	82,975.00	
07/01/2021	185,000	5.000%	82,975.00	267,975.00	350,950.00
01/01/2022			78,350.00	78,350.00	
07/01/2022	195,000	5.000%	78,350.00	273,350.00	351,700.00
01/01/2023			73,475.00	73,475.00	
07/01/2023	205,000	5.000%	73,475.00	278,475.00	351,950.00
01/01/2024			68,350.00	68,350.00	
07/01/2024	215,000	5.000%	68,350.00	283,350.00	351,700.00
01/01/2025			62,975.00	62,975.00	
07/01/2025	230,000	5.000%	62,975.00	292,975.00	355,950.00
01/01/2026			57,225.00	57,225.00	
07/01/2026	240,000	5.000%	57,225.00	297,225.00	354,450.00
01/01/2027			51,225.00	51,225.00	
07/01/2027	250,000	5.000%	51,225.00	301,225.00	352,450.00
01/01/2028			44,975.00	44,975.00	
07/01/2028	265,000	5.000%	44,975.00	309,975.00	354,950.00
01/01/2029			38,350.00	38,350.00	
07/01/2029	275,000	4.000%	38,350.00	313,350.00	351,700.00
01/01/2030			32,850.00	32,850.00	
07/01/2030	290,000	5.000%	32,850.00	322,850.00	355,700.00
01/01/2031			25,600.00	25,600.00	
07/01/2031	300,000	4.000%	25,600.00	325,600.00	351,200.00
01/01/2032			19,600.00	19,600.00	
07/01/2032	315,000	4.000%	19,600.00	334,600.00	354,200.00
01/01/2033			13,300.00	13,300.00	
07/01/2033	325,000	4.000%	13,300.00	338,300.00	351,600.00
01/01/2034			6,800.00	6,800.00	
07/01/2034	340,000	4.000%	6,800.00	346,800.00	353,600.00
01/01/2035			0.00	0.00	
07/01/2035			0.00	0.00	0.00
01/01/2036			0.00	0.00	
07/01/2036			0.00	0.00	0.00
01/01/2037			0.00	0.00	
07/01/2037			0.00	0.00	0.00
01/01/2038			0.00	0.00	
07/01/2038			0.00	0.00	0.00
01/01/2039			0.00	0.00	
07/01/2039			0.00	0.00	0.00
01/01/2040			0.00	0.00	
07/01/2040			0.00	0.00	0.00
01/01/2041			0.00	0.00	
07/01/2041			0.00	0.00	0.00
01/01/2042			0.00	0.00	
07/01/2042			0.00	0.00	0.00
01/01/2043			0.00	0.00	
07/01/2043			0.00	0.00	0.00
01/01/2044			0.00	0.00	
07/01/2044			0.00	0.00	0.00
01/01/2045			0.00	0.00	
07/01/2045			0.00	0.00	0.00
01/01/2046			0.00	0.00	
07/01/2046			0.00	0.00	0.00
01/01/2047			0.00	0.00	
07/01/2047			0.00	0.00	0.00
01/01/2048			0.00	0.00	
07/01/2048			0.00	0.00	0.00
	<u>\$3,980,000</u>		<u>\$1,578,775.00</u>	<u>\$5,558,775.00</u>	<u>\$5,558,775.00</u>



Certificates of Participation, Series 2018A (TMCC Portion)

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019					
07/01/2019	110,000	5.000%	243,956.25	353,956.25	353,956.25
01/01/2020			241,206.25	241,206.25	
07/01/2020	230,000	5.000%	241,206.25	471,206.25	712,412.50
01/01/2021			235,456.25	235,456.25	
07/01/2021	240,000	5.000%	235,456.25	475,456.25	710,912.50
01/01/2022			229,456.25	229,456.25	
07/01/2022	255,000	5.000%	229,456.25	484,456.25	713,912.50
01/01/2023			223,081.25	223,081.25	
07/01/2023	265,000	5.000%	223,081.25	488,081.25	711,162.50
01/01/2024			216,456.25	216,456.25	
07/01/2024	280,000	5.000%	216,456.25	496,456.25	712,912.50
01/01/2025			209,456.25	209,456.25	
07/01/2025	295,000	5.000%	209,456.25	504,456.25	713,912.50
01/01/2026			202,081.25	202,081.25	
07/01/2026	310,000	5.000%	202,081.25	512,081.25	714,162.50
01/01/2027			194,331.25	194,331.25	
07/01/2027	325,000	5.000%	194,331.25	519,331.25	713,662.50
01/01/2028			186,206.25	186,206.25	
07/01/2028	340,000	3.000%	186,206.25	526,206.25	712,412.50
01/01/2029			181,106.25	181,106.25	
07/01/2029	350,000	3.000%	181,106.25	531,106.25	712,212.50
01/01/2030			175,856.25	175,856.25	
07/01/2030	360,000	3.000%	175,856.25	535,856.25	711,712.50
01/01/2031			170,456.25	170,456.25	
07/01/2031	370,000	3.125%	170,456.25	540,456.25	710,912.50
01/01/2032			164,675.00	164,675.00	
07/01/2032	385,000	3.250%	164,675.00	549,675.00	714,350.00
01/01/2033			158,418.75	158,418.75	
07/01/2033	395,000	3.250%	158,418.75	553,418.75	711,837.50
01/01/2034			152,000.00	152,000.00	
07/01/2034	410,000	3.375%	152,000.00	562,000.00	714,000.00
01/01/2035			145,081.25	145,081.25	
07/01/2035	420,000	3.375%	145,081.25	565,081.25	710,162.50
01/01/2036			137,993.75	137,993.75	
07/01/2036	435,000	3.500%	137,993.75	572,993.75	710,987.50
01/01/2037			130,381.25	130,381.25	
07/01/2037	450,000	3.500%	130,381.25	580,381.25	710,762.50
01/01/2038			122,506.25	122,506.25	
07/01/2038	465,000	3.500%	122,506.25	587,506.25	710,012.50
01/01/2039			114,368.75	114,368.75	
07/01/2039	485,000	4.000%	114,368.75	599,368.75	713,737.50
01/01/2040			104,668.75	104,668.75	
07/01/2040	500,000	4.000%	104,668.75	604,668.75	709,337.50
01/01/2041			94,668.75	94,668.75	
07/01/2041	525,000	3.750%	94,668.75	619,668.75	714,337.50
01/01/2042			84,825.00	84,825.00	
07/01/2042	540,000	3.750%	84,825.00	624,825.00	709,650.00
01/01/2043			74,700.00	74,700.00	
07/01/2043	560,000	4.000%	74,700.00	634,700.00	709,400.00
01/01/2044			63,500.00	63,500.00	
07/01/2044	585,000	4.000%	63,500.00	648,500.00	712,000.00
01/01/2045			51,800.00	51,800.00	
07/01/2045	610,000	4.000%	51,800.00	661,800.00	713,600.00
01/01/2046			39,600.00	39,600.00	
07/01/2046	635,000	4.000%	39,600.00	674,600.00	714,200.00
01/01/2047			26,900.00	26,900.00	
07/01/2047	660,000	4.000%	26,900.00	686,900.00	713,800.00
01/01/2048			13,700.00	13,700.00	
07/01/2048	685,000	4.000%	13,700.00	698,700.00	712,400.00
	<u>\$12,475,000</u>		<u>\$8,533,831.25</u>	<u>\$21,008,831.25</u>	<u>\$21,008,831.25</u>

Taxable Lease Revenue Bonds (DRI) Series 2002

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
05/15/2019							
11/15/2019			107,067.50	107,067.50			
05/15/2020	630,000	7.580%	107,067.50	737,067.50	844,135.00	630,000.00	214,135.00
11/15/2020			83,190.50	83,190.50			
05/15/2021	680,000	7.580%	83,190.50	763,190.50	846,381.00	680,000.00	166,381.00
11/15/2021			57,418.50	57,418.50			
05/15/2022	730,000	7.580%	57,418.50	787,418.50	844,837.00	730,000.00	114,837.00
11/15/2022			29,751.50	29,751.50			
05/15/2023	785,000	7.580%	29,751.50	814,751.50	844,503.00	785,000.00	59,503.00
11/15/2023			0.00	0.00			
05/15/2024			0.00	0.00	0.00	0.00	0.00
11/15/2024			0.00	0.00			
05/15/2025			0.00	0.00	0.00	0.00	0.00
11/15/2025			0.00	0.00			
05/15/2026			0.00	0.00	0.00	0.00	0.00
11/15/2026			0.00	0.00			
05/15/2027			0.00	0.00	0.00	0.00	0.00
11/15/2027			0.00	0.00			
05/15/2028			0.00	0.00	0.00	0.00	0.00
11/15/2028			0.00	0.00			
05/15/2029			0.00	0.00	0.00	0.00	0.00
11/15/2029			0.00	0.00			
05/15/2030			0.00	0.00	0.00	0.00	0.00
11/15/2030			0.00	0.00			
05/15/2031			0.00	0.00	0.00	0.00	0.00
11/15/2031			0.00	0.00			
05/15/2032			0.00	0.00	0.00	0.00	0.00
11/15/2032			0.00	0.00			
05/15/2033			0.00	0.00	0.00	0.00	0.00
	<u>\$2,825,000</u>		<u>\$554,856.00</u>	<u>\$3,379,856.00</u>	<u>\$3,379,856.00</u>	<u>\$2,825,000.00</u>	<u>\$554,856.00</u>

Combined UNR Bank Loans/Leases Debt Service

Fiscal Year	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
	2,034,000.00	179,097.08	2,213,097.08			
2020	2,961,653.75	180,718.43	3,142,372.18	5,355,469.26	4,995,653.75	359,815.51
	265,000.00	117,946.97	382,946.97			
2021	1,944,750.87	142,241.84	2,086,992.71	2,469,939.68	2,209,750.87	260,188.81
	920,000.00	97,426.90	1,017,426.90			
2022	3,335,018.14	111,322.11	3,446,340.25	4,463,767.15	4,255,018.14	208,749.01
	2,421,000.00	56,321.55	2,477,321.55			
2023	958,462.64	50,534.51	1,008,997.15	3,486,318.70	3,379,462.64	106,856.06
	0.00	24,119.40	24,119.40			
2024	978,091.71	38,308.99	1,016,400.70	1,040,520.10	978,091.71	62,428.39
	0.00	16,143.40	16,143.40			
2025	999,913.04	25,205.91	1,025,118.95	1,041,262.35	999,913.04	41,349.31
	0.00	8,144.50	8,144.50			
2026	1,020,934.59	12,109.41	1,033,044.00	1,041,188.50	1,020,934.59	20,253.91
	0.00	0.00	0.00			
2027	131,164.67	5,447.31	136,611.98	136,611.98	131,164.67	5,447.31
	<u>\$17,969,989.41</u>	<u>\$1,065,088.31</u>	<u>\$19,035,077.72</u>	<u>\$19,035,077.72</u>	<u>\$17,969,989.41</u>	<u>\$1,065,088.31</u>

UNR 2013 City of Reno Lease - 450 Sinclair Street

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		4.153%			
07/01/2019				0.00	
01/01/2020	98,653.75		37,958.25	136,612.00	136,612.00
07/01/2020				0.00	
01/01/2021	102,750.87		33,861.13	136,612.00	136,612.00
07/01/2021				0.00	
01/01/2022	107,018.14		29,593.86	136,612.00	136,612.00
07/01/2022				0.00	
01/01/2023	111,462.64		25,149.36	136,612.00	136,612.00
07/01/2023				0.00	
01/01/2024	116,091.71		20,520.29	136,612.00	136,612.00
07/01/2024				0.00	
01/01/2025	120,913.04		15,698.96	136,612.00	136,612.00
07/01/2025				0.00	
01/01/2026	125,934.59		10,677.41	136,612.00	136,612.00
07/01/2026				0.00	
01/01/2027	131,164.67		5,447.31	136,611.98	136,611.98
	<u>\$913,989.41</u>		<u>\$178,906.57</u>	<u>\$1,092,895.98</u>	<u>\$1,092,895.98</u>

UNR Student Achievement Center Note

Date	Principal	Rate 1/	Interest 1/	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		2.567%			
07/01/2019	399,000.00		5,121.17	404,121.17	
01/01/2020	0.00		0.00	0.00	404,121.17
07/01/2020	0.00		0.00	0.00	
01/01/2021	0.00		0.00	0.00	0.00
07/01/2021	0.00		0.00	0.00	
01/01/2022	0.00		0.00	0.00	0.00
07/01/2022	0.00		0.00	0.00	
01/01/2023	0.00		0.00	0.00	0.00
07/01/2023	0.00		0.00	0.00	
01/01/2024	0.00		0.00	0.00	0.00
07/01/2024	0.00		0.00	0.00	
01/01/2025	0.00		0.00	0.00	0.00
07/01/2025	0.00		0.00	0.00	
01/01/2026	0.00		0.00	0.00	0.00
07/01/2026	0.00		0.00	0.00	
01/01/2027	0.00		0.00	0.00	0.00
	<u>\$399,000.00</u>		<u>\$5,121.17</u>	<u>\$404,121.17</u>	<u>\$404,121.17</u>

1/ Based on effective interest rate as of June 30, 2019. Subject to change.

UNR Fitness Center Note

Date	Principal	Rate 1/	Interest 1/	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		2.957%			
07/01/2019	1,225,000.00		36,459.81	1,261,459.81	
01/01/2020	1,241,000.00		18,348.19	1,259,348.19	2,520,808.00
07/01/2020	0.00		0.00	0.00	
01/01/2021	0.00		0.00	0.00	0.00
07/01/2021	0.00		0.00	0.00	
01/01/2022	0.00		0.00	0.00	0.00
07/01/2022	0.00		0.00	0.00	
01/01/2023	0.00		0.00	0.00	0.00
07/01/2023	0.00		0.00	0.00	
01/01/2024	0.00		0.00	0.00	0.00
07/01/2024	0.00		0.00	0.00	
01/01/2025	0.00		0.00	0.00	0.00
07/01/2025	0.00		0.00	0.00	
01/01/2026	0.00		0.00	0.00	0.00
07/01/2026	0.00		0.00	0.00	
01/01/2027	0.00		0.00	0.00	0.00
	<u>\$2,466,000.00</u>		<u>\$54,808.00</u>	<u>\$2,520,808.00</u>	<u>\$2,520,808.00</u>

1/ Based on effective interest rate as of June 30, 2019. Subject to change.

## UNR 2016A MEB Refunding Note

Date	Principal	Rate	Interest	Monthly Debt Service	Annual Debt Service
06/03/2019		1.800%			
07/01/2019			8,302.00	8,302.00	
08/01/2019			9,191.50	9,191.50	
09/03/2019			9,784.50	9,784.50	
10/01/2019			8,302.00	8,302.00	
11/01/2019			9,191.50	9,191.50	
12/02/2019			9,191.50	9,191.50	
01/02/2020	801,000		9,191.50	810,191.50	
02/03/2020			8,206.40	8,206.40	
03/02/2020			7,180.60	7,180.60	
04/01/2020			7,693.50	7,693.50	
05/01/2020			7,693.50	7,693.50	
06/01/2020			7,949.95	7,949.95	902,878.45
07/01/2020			7,693.50	7,693.50	
08/03/2020			8,462.85	8,462.85	
09/01/2020			7,437.05	7,437.05	
10/01/2020			7,693.50	7,693.50	
11/02/2020			8,206.40	8,206.40	
12/01/2020			7,437.05	7,437.05	
01/04/2021	815,000		8,719.30	823,719.30	
02/01/2021			6,039.60	6,039.60	
03/01/2021			6,039.60	6,039.60	
04/01/2021			6,686.70	6,686.70	
05/03/2021			6,902.40	6,902.40	
06/01/2021			6,255.30	6,255.30	902,573.25
07/01/2021			6,471.00	6,471.00	
08/02/2021			6,902.40	6,902.40	
09/01/2021			6,471.00	6,471.00	
10/01/2021			6,471.00	6,471.00	
11/01/2021			6,686.70	6,686.70	
12/01/2021			6,471.00	6,471.00	
01/03/2022	831,000		7,118.10	838,118.10	
02/01/2022			5,050.35	5,050.35	
03/01/2022			4,876.20	4,876.20	
04/01/2022			5,398.65	5,398.65	
05/02/2022			5,398.65	5,398.65	
06/01/2022			5,224.50	5,224.50	903,539.55
07/01/2022			5,224.50	5,224.50	
08/01/2022			5,398.65	5,398.65	
09/01/2022			5,398.65	5,398.65	
10/03/2022			5,572.80	5,572.80	
11/01/2022			5,050.35	5,050.35	
12/01/2022			5,224.50	5,224.50	
01/03/2023	847,000		5,746.95	852,746.95	
02/01/2023			3,822.20	3,822.20	
03/01/2023			3,690.40	3,690.40	
04/03/2023			4,349.40	4,349.40	
05/01/2023			3,690.40	3,690.40	
06/01/2023			4,085.80	4,085.80	904,254.60
07/03/2023			4,217.60	4,217.60	
08/01/2023			3,822.20	3,822.20	
09/01/2023			4,085.80	4,085.80	
10/02/2023			4,085.80	4,085.80	
11/01/2023			3,954.00	3,954.00	
12/01/2023			3,954.00	3,954.00	
01/02/2024	862,000		4,217.60	866,217.60	
02/01/2024			2,661.00	2,661.00	
03/01/2024			2,572.30	2,572.30	
04/01/2024			2,749.70	2,749.70	
05/01/2024			2,661.00	2,661.00	
06/03/2024			2,927.10	2,927.10	903,908.10

UNR 2016A MEB Refunding Note

Date	Principal	Rate	Interest	Monthly Debt Service	Annual Debt Service
06/03/2019		1.800%			
07/01/2024			2,483.60	2,483.60	
08/01/2024			2,749.70	2,749.70	
09/03/2024			2,927.10	2,927.10	
10/01/2024			2,483.60	2,483.60	
11/01/2024			2,749.70	2,749.70	
12/02/2024			2,749.70	2,749.70	
01/02/2025	879,000		2,749.70	881,749.70	
02/03/2025			1,432.00	1,432.00	
03/03/2025			1,253.00	1,253.00	
04/01/2025			1,297.75	1,297.75	
05/01/2025			1,342.50	1,342.50	
06/02/2025			1,432.00	1,432.00	904,650.35
07/01/2025			1,297.75	1,297.75	
08/01/2025			1,387.25	1,387.25	
09/02/2025			1,432.00	1,432.00	
10/01/2025			1,297.75	1,297.75	
11/03/2025			1,476.75	1,476.75	
12/01/2025			1,253.00	1,253.00	
01/02/2026	895,000		1,432.00	896,432.00	
02/02/2026			0.00	0.00	
03/01/2026			0.00	0.00	
04/01/2026			0.00	0.00	
05/01/2026			0.00	0.00	
06/01/2026			0.00	0.00	904,576.50
	<u>\$5,930,000.00</u>		<u>\$396,380.80</u>	<u>\$6,326,380.80</u>	<u>\$6,326,380.80</u>



## UNR 2016B Scoreboard Note

Date	Principal	Rate	Interest	Monthly Debt Service	Annual Debt Service
06/01/2019		2.010%			
07/01/2019			1,130.63	1,130.63	
08/01/2019			1,168.31	1,168.31	
09/03/2019			1,243.69	1,243.69	
10/01/2019			1,055.25	1,055.25	
11/01/2019			1,168.31	1,168.31	
12/02/2019			1,168.31	1,168.31	
01/02/2020			1,168.31	1,168.31	
02/03/2020			1,206.00	1,206.00	
03/02/2020	559,000		1,055.25	560,055.25	
04/01/2020			194.30	194.30	
05/01/2020			194.30	194.30	
06/01/2020			200.78	200.78	569,953.44
07/01/2020			194.30	194.30	
08/03/2020			213.73	213.73	
09/01/2020			187.82	187.82	
10/01/2020			194.30	194.30	
11/02/2020			207.25	207.25	
12/01/2020			187.82	187.82	
01/04/2021			220.21	220.21	
02/01/2021			181.35	181.35	
03/01/2021	116,000		181.35	116,181.35	
04/01/2021			0.00	0.00	
05/03/2021			0.00	0.00	
06/01/2021			0.00	0.00	117,768.13
	<u>\$675,000.00</u>		<u>\$12,721.57</u>	<u>\$687,721.57</u>	<u>\$687,721.57</u>

UNR 2017A Fine Arts Note

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		2.020%			
07/01/2019	410,000.00		76,618.60	486,618.60	
01/01/2020	262,000.00		72,477.60	334,477.60	821,096.20
07/01/2020	265,000.00		69,831.40	334,831.40	
01/01/2021	911,000.00		67,154.90	978,154.90	1,312,986.30
07/01/2021	920,000.00		57,953.80	977,953.80	
01/01/2022	2,397,000.00		48,661.80	2,445,661.80	3,423,615.60
07/01/2022	2,421,000.00		24,452.10	2,445,452.10	
01/01/2023			0.00	0.00	2,445,452.10
07/01/2023			0.00	0.00	
01/01/2024			0.00	0.00	0.00
07/01/2024			0.00	0.00	
01/01/2025			0.00	0.00	0.00
07/01/2025			0.00	0.00	
01/01/2026			0.00	0.00	0.00
07/01/2026			0.00	0.00	
01/01/2027			0.00	0.00	0.00
	<u>\$7,586,000.00</u>		<u>\$417,150.20</u>	<u>\$8,003,150.20</u>	<u>\$8,003,150.20</u>

Combined UNLV Bank Loans/Leases Debt Service

Fiscal Year	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
2020	5,693,000.00	422,224.20	6,115,224.20			
	2,697,000.00	361,131.51	3,058,131.51	9,173,355.71	8,390,000.00	783,355.71
	5,775,000.00	320,691.90	6,095,691.90			
2021	2,781,000.00	257,672.20	3,038,672.20	9,134,364.10	8,556,000.00	578,364.10
	5,499,000.00	213,187.93	5,712,187.93			
2022	2,869,000.00	152,600.01	3,021,600.01	8,733,787.94	8,368,000.00	365,787.94
	4,864,000.00	109,865.25	4,973,865.25			
2023	1,553,000.00	67,213.36	1,620,213.36	6,594,078.61	6,417,000.00	177,078.61
	3,567,000.00	42,995.83	3,609,995.83			
2024	0.00	0.00	0.00	3,609,995.83	3,567,000.00	42,995.83
	0.00	0.00	0.00			
2025	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2026	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2027	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
	<u>\$35,298,000.00</u>	<u>\$1,947,582.19</u>	<u>\$37,245,582.19</u>	<u>\$37,245,582.19</u>	<u>\$35,298,000.00</u>	<u>\$1,947,582.19</u>

UNLV 2015A Hotel Administration Building Note

Date	Principal	Rate 1/	Interest	Monthly Debt Service	Annual Debt Service
06/03/2019		2.429%			
07/01/2019	1,267,000		17,522.54	1,284,522.54	
08/01/2019			16,749.84	16,749.84	
09/03/2019			17,830.48	17,830.48	
10/01/2019			15,128.89	15,128.89	
11/01/2019			16,749.84	16,749.84	
12/02/2019			16,749.84	16,749.84	
01/02/2020	1,286,000		16,749.84	1,302,749.84	
02/03/2020			14,513.54	14,513.54	
03/02/2020			12,699.35	12,699.35	
04/01/2020			13,606.45	13,606.45	
05/01/2020			13,606.45	13,606.45	
06/01/2020			14,060.00	14,060.00	2,738,967.06
07/01/2020	1,304,000		13,606.45	1,317,606.45	
08/03/2020			12,063.63	12,063.63	
09/01/2020			10,601.37	10,601.37	
10/01/2020			10,966.94	10,966.94	
11/02/2020			11,698.06	11,698.06	
12/01/2020			10,601.37	10,601.37	
01/04/2021	1,324,000		12,429.19	1,336,429.19	
02/01/2021			7,734.48	7,734.48	
03/01/2021			7,734.48	7,734.48	
04/01/2021			8,563.17	8,563.17	
05/03/2021			8,839.40	8,839.40	
06/01/2021			8,010.71	8,010.71	2,750,849.25
07/01/2021	1,344,000		8,286.94	1,352,286.94	
08/02/2021			5,937.56	5,937.56	
09/01/2021			5,566.46	5,566.46	
10/01/2021			5,566.46	5,566.46	
11/01/2021			5,752.01	5,752.01	
12/01/2021			5,566.46	5,566.46	
01/03/2022	1,365,000		6,123.10	1,371,123.10	
02/01/2022			2,710.02	2,710.02	
03/01/2022			2,616.57	2,616.57	
04/01/2022			2,896.92	2,896.92	
05/02/2022			2,896.92	2,896.92	
06/01/2022			2,803.47	2,803.47	2,765,722.89
07/01/2022	1,385,000		2,803.47	1,387,803.47	
08/01/2022			0.00	0.00	
09/01/2022			0.00	0.00	
10/03/2022			0.00	0.00	
11/01/2022			0.00	0.00	
12/01/2022			0.00	0.00	
01/03/2023			0.00	0.00	
02/01/2023			0.00	0.00	
03/01/2023			0.00	0.00	
04/03/2023			0.00	0.00	
05/01/2023			0.00	0.00	
06/01/2023			0.00	0.00	1,387,803.47
	<u>\$9,275,000.00</u>		<u>\$368,342.67</u>	<u>\$9,643,342.67</u>	<u>\$9,643,342.67</u>

1/ Based on the effective interest rate as of June 30, 2019. Subject to change.

UNLV Medical School Practice Plan Note

Date	Principal	Rate 1/	Interest 1/	Semi-Annual Debt Service	Annual Debt Service
01/02/2019		2.938%			
07/01/2019	1,389,000.00		195,861.77	1,584,861.77	
01/02/2020	1,411,000.00		180,331.18	1,591,331.18	3,176,192.95
07/01/2020	1,434,000.00		155,589.38	1,589,589.38	
01/04/2021	1,457,000.00		138,862.37	1,595,862.37	3,185,451.75
07/01/2021	1,480,000.00		111,013.64	1,591,013.64	
01/03/2022	1,504,000.00		93,537.11	1,597,537.11	3,188,550.75
07/01/2022	1,528,000.00		68,045.88	1,596,045.88	
01/03/2023	1,553,000.00		47,512.36	1,600,512.36	3,196,558.24
07/03/2023	1,577,000.00		23,294.83	1,600,294.83	
01/01/2024	0.00		0.00	0.00	1,600,294.83
07/01/2024	0.00		0.00	0.00	
01/01/2025	0.00		0.00	0.00	0.00
07/01/2025	0.00		0.00	0.00	
01/01/2026	0.00		0.00	0.00	0.00
07/01/2026	0.00		0.00	0.00	
01/01/2027	0.00		0.00	0.00	0.00
	<u>\$13,333,000.00</u>		<u>\$1,014,048.52</u>	<u>\$14,347,048.52</u>	<u>\$14,347,048.52</u>

1/ Based on the effective interest rate as of June 30, 2019. Subject to change.

UNLV 2017C Football Complex Note

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		1.980%			
07/01/2019	3,037,000.00		125,631.00	3,162,631.00	
01/01/2020			95,564.70	95,564.70	3,258,195.70
07/01/2020	3,037,000.00		95,564.70	3,132,564.70	
01/01/2021			65,498.40	65,498.40	3,198,063.10
07/01/2021	2,675,000.00		65,498.40	2,740,498.40	
01/01/2022			39,015.90	39,015.90	2,779,514.30
07/01/2022	1,951,000.00		39,015.90	1,990,015.90	
01/01/2023			19,701.00	19,701.00	2,009,716.90
07/01/2023	1,990,000.00		19,701.00	2,009,701.00	
01/01/2024			0.00	0.00	2,009,701.00
07/01/2024			0.00	0.00	
01/01/2025			0.00	0.00	0.00
07/01/2025			0.00	0.00	
01/01/2026			0.00	0.00	0.00
07/01/2026			0.00	0.00	
01/01/2027			0.00	0.00	0.00
	<u>\$12,690,000.00</u>		<u>\$565,191.00</u>	<u>\$13,255,191.00</u>	<u>\$13,255,191.00</u>

Combined CSN Bank Loans/Leases Debt Service

Fiscal Year	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
2020	1,278,502.11	169,071.89	1,447,574.00			
	516,000.00	34,921.00	550,921.00	1,998,495.00	1,794,502.11	203,992.89
	1,318,975.56	128,944.64	1,447,920.20			
2021	526,000.00	25,173.20	551,173.20	1,999,093.40	1,844,975.56	154,117.84
	1,359,658.94	87,419.46	1,447,078.40			
2022	535,000.00	15,246.80	550,246.80	1,997,325.20	1,894,658.94	102,666.26
	1,403,600.31	44,467.09	1,448,067.40			
2023	546,000.00	5,132.40	551,132.40	1,999,199.80	1,949,600.31	49,599.49
	0.00	0.00	0.00			
2024	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2025	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2026	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2027	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
	<u>\$7,483,736.92</u>	<u>\$510,376.48</u>	<u>\$7,994,113.40</u>	<u>\$7,994,113.40</u>	<u>\$7,483,736.92</u>	<u>\$510,376.48</u>

CSN 2013 West Charleston Buildings "A" & "B" Promissory Note

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
06/01/2019		1.880%			
12/01/2019	511,000.00		39,724.40	550,724.40	
06/01/2020	516,000.00		34,921.00	550,921.00	1,101,645.40
12/01/2020	521,000.00		30,070.60	551,070.60	
06/01/2021	526,000.00		25,173.20	551,173.20	1,102,243.80
12/01/2021	530,000.00		20,228.80	550,228.80	
06/01/2022	535,000.00		15,246.80	550,246.80	1,100,475.60
12/01/2022	541,000.00		10,217.80	551,217.80	
06/01/2023	546,000.00		5,132.40	551,132.40	1,102,350.20
12/01/2023			0.00	0.00	
06/01/2024			0.00	0.00	0.00
12/01/2024			0.00	0.00	
06/01/2025			0.00	0.00	0.00
12/01/2025			0.00	0.00	
06/01/2026			0.00	0.00	0.00
12/01/2026			0.00	0.00	
06/01/2027			0.00	0.00	0.00
	<u>\$4,226,000.00</u>		<u>\$180,715.00</u>	<u>\$4,406,715.00</u>	<u>\$4,406,715.00</u>



CSN 2018 CISCO Equipment Lease

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
04/14/2019		3.900%			
10/14/2019	767,502.11		129,347.49	896,849.60	
04/14/2020				0.00	896,849.60
10/14/2020	797,975.56		98,874.04	896,849.60	
04/14/2021				0.00	896,849.60
10/14/2021	829,658.94		67,190.66	896,849.60	
04/14/2022				0.00	896,849.60
10/14/2022	862,600.31		34,249.29	896,849.60	
04/14/2023			0.00	0.00	896,849.60
10/14/2023			0.00	0.00	
04/14/2024			0.00	0.00	0.00
10/14/2024			0.00	0.00	
04/14/2025			0.00	0.00	0.00
10/14/2025			0.00	0.00	
04/14/2026			0.00	0.00	0.00
10/14/2026			0.00	0.00	
04/14/2027			0.00	0.00	0.00
	<u>\$3,257,736.92</u>		<u>\$329,661.48</u>	<u>\$3,587,398.40</u>	<u>\$3,587,398.40</u>

Combined DRI Bank Loans/Leases Debt Service

Fiscal Year	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
	364,179.22	28,245.27	392,424.49			
2020	167,590.06	8,689.89	176,279.95	568,704.44	531,769.28	36,935.16
	263,749.56	16,886.86	280,636.42			
2021	168,615.97	4,308.96	172,924.93	453,561.35	432,365.53	21,195.82
	210,680.88	6,265.18	216,946.06			
2022	0.00	0.00	0.00	216,946.06	210,680.88	6,265.18
	0.00	0.00	0.00			
2023	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2024	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2025	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2026	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2027	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
	<u>\$1,174,815.69</u>	<u>\$64,396.16</u>	<u>\$1,239,211.85</u>	<u>\$1,239,211.85</u>	<u>\$1,174,815.69</u>	<u>\$64,396.16</u>

DRI Southern Nevada Science Park

Date	Principal	Rate	Interest	Quarterly Debt Service	Annual Debt Service
06/01/2019		2.644%			
09/01/2019	35,532.98		2,489.87	38,022.85	
12/01/2019	35,991.35		2,255.00	38,246.35	
03/01/2020	36,455.64		2,017.09	38,472.73	
06/01/2020	36,925.92		1,776.12	38,702.04	153,443.97
09/01/2020	37,402.27		1,532.04	38,934.31	
12/01/2020	37,884.75		1,284.81	39,169.56	
03/01/2021	38,373.47		1,034.39	39,407.86	
06/01/2021	38,868.49		780.75	39,649.24	157,160.97
09/01/2021	39,369.89		523.83	39,893.72	
12/01/2021	39,877.47		263.59	40,141.06	
03/01/2022			0.00	0.00	
06/01/2022			0.00	0.00	80,034.78
	<u>\$376,682.23</u>		<u>\$13,957.49</u>	<u>\$390,639.72</u>	<u>\$390,639.72</u>

DRI 2006 CRVB Bank Financing

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
03/01/2019		3.790%			
09/01/2019	61,600.00		6,064.00	67,664.00	
03/01/2020	62,800.00		4,896.68	67,696.68	135,360.68
09/01/2020	64,000.00		3,706.62	67,706.62	
03/01/2021	65,200.00		2,493.82	67,693.82	135,400.44
09/01/2021	66,400.00		1,258.28	67,658.28	
03/01/2022			0.00	0.00	67,658.28
09/01/2022			0.00	0.00	
03/01/2023			0.00	0.00	0.00
09/01/2023			0.00	0.00	
03/01/2024			0.00	0.00	0.00
09/01/2024			0.00	0.00	
03/01/2025			0.00	0.00	0.00
09/01/2025			0.00	0.00	
03/01/2026			0.00	0.00	0.00
09/01/2026			0.00	0.00	
03/01/2027			0.00	0.00	0.00
	<u>\$320,000.00</u>		<u>\$18,419.40</u>	<u>\$338,419.40</u>	<u>\$338,419.40</u>

## DRI 2016 Dell Lease

Date	Principal	Rate	Interest	Monthly Debt Service	Annual Debt Service
06/01/2019		0.000%			
07/01/2019	5,234.75		0.00	5,234.75	
08/01/2019	5,234.75		0.00	5,234.75	
09/01/2019	5,234.75		0.00	5,234.75	
10/01/2019	5,234.75		0.00	5,234.75	
11/01/2019	5,234.75		0.00	5,234.75	
12/01/2019	5,234.75		0.00	5,234.75	
01/01/2020	5,234.75		0.00	5,234.75	
02/01/2020	5,234.75		0.00	5,234.75	
03/01/2020	5,234.75		0.00	5,234.75	
04/01/2020	5,234.75		0.00	5,234.75	
05/01/2020	5,234.75		0.00	5,234.75	
06/01/2020	5,234.75		0.00	5,234.75	62,817.00
07/01/2020	5,234.75		0.00	5,234.75	
08/01/2020	5,234.75		0.00	5,234.75	
09/01/2020	5,234.75		0.00	5,234.75	
10/01/2020	5,234.75		0.00	5,234.75	
11/01/2020	5,234.75		0.00	5,234.75	
12/01/2020	5,234.75		0.00	5,234.75	
01/01/2021	5,234.75		0.00	5,234.75	
02/01/2021	5,234.75		0.00	5,234.75	
03/01/2021	5,234.75		0.00	5,234.75	
04/01/2021	5,234.75		0.00	5,234.75	
05/01/2021	5,235.01		0.00	5,235.01	
06/01/2021	0.00		0.00	0.00	57,582.51
	<u>\$120,399.51</u>		<u>\$0.00</u>	<u>\$120,399.51</u>	<u>\$120,399.51</u>

DRI 2016 Six Degrees Lease

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
02/09/2019		0.000%			
08/09/2019	89,160.50		0.00	89,160.50	
02/09/2020			0.00	0.00	89,160.50
08/09/2020			0.00	0.00	
02/09/2021			0.00	0.00	0.00
08/09/2021			0.00	0.00	
02/09/2022			0.00	0.00	0.00
08/09/2022			0.00	0.00	
02/09/2023			0.00	0.00	0.00
08/09/2023			0.00	0.00	
02/09/2024			0.00	0.00	0.00
08/09/2024			0.00	0.00	
02/09/2025			0.00	0.00	0.00
08/09/2025			0.00	0.00	
02/09/2026			0.00	0.00	0.00
08/09/2026			0.00	0.00	
02/09/2027			0.00	0.00	0.00
	<u>89,160.50</u>		<u>\$0.00</u>	<u>\$89,160.50</u>	<u>\$89,160.50</u>

DRI 2017 Dell Quest Lease

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
01/01/2019		5.647%			
07/01/2019	23,195.03		1,309.84	24,504.87	
01/01/2020				0.00	24,504.87
07/01/2020			0.00	0.00	
01/01/2021				0.00	0.00
07/01/2021			0.00	0.00	
01/01/2022				0.00	0.00
07/01/2022			0.00	0.00	
01/01/2023				0.00	0.00
07/01/2023			0.00	0.00	
01/01/2024				0.00	0.00
07/01/2024			0.00	0.00	
01/01/2025				0.00	0.00
07/01/2025			0.00	0.00	
01/01/2026				0.00	0.00
07/01/2026			0.00	0.00	
01/01/2027				0.00	0.00
	23,195.03		1,309.84	24,504.87	24,504.87

## DRI 2018 Citrix Lease

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
02/01/2019		6.303%			
08/01/2019	57,350.14		11,902.86	69,253.00	
02/01/2020				0.00	69,253.00
08/01/2020	61,071.11		8,181.89	69,253.00	
02/01/2021				0.00	69,253.00
08/01/2021	65,033.52		4,219.48	69,253.00	
02/01/2022				0.00	69,253.00
08/01/2022			0.00	0.00	
02/01/2023				0.00	0.00
08/01/2023			0.00	0.00	
02/01/2024				0.00	0.00
08/01/2024			0.00	0.00	
02/01/2025				0.00	0.00
08/01/2025			0.00	0.00	
02/01/2026				0.00	0.00
08/01/2026			0.00	0.00	
02/01/2027				0.00	0.00
	<u>\$183,454.77</u>		<u>\$24,304.23</u>	<u>\$207,759.00</u>	<u>\$207,759.00</u>



DRI 2018 Dell PowerVault Leases

Date	Principal	Rate	Interest	Semi-Annual Debt Service	Annual Debt Service
05/01/2019		6.821%			
11/01/2019	29,940.72		4,223.70	34,164.42	
05/01/2020				0.00	34,164.42
11/01/2020	31,982.93		2,181.50	34,164.43	
05/01/2021				0.00	34,164.43
11/01/2021			0.00	0.00	
05/01/2022				0.00	0.00
11/01/2022			0.00	0.00	
05/01/2023				0.00	0.00
11/01/2023			0.00	0.00	
05/01/2024				0.00	0.00
11/01/2024			0.00	0.00	
05/01/2025				0.00	0.00
11/01/2025			0.00	0.00	
05/01/2026				0.00	0.00
11/01/2026			0.00	0.00	
05/01/2027				0.00	0.00
	<u>\$61,923.65</u>		<u>\$6,405.20</u>	<u>\$68,328.85</u>	<u>\$68,328.85</u>

Combined GBC Bank Loans/Leases Debt Service

Fiscal Year	Principal	Interest	Semi-Annual Debt Service	Annual Debt Service	Annual Principal	Annual Interest
	79,886.24	2,199.95	82,086.19			
2020	80,526.61	1,743.70	82,270.31	164,356.50	160,412.85	3,943.65
	81,172.12	1,283.78	82,455.90			
2021	81,822.78	820.17	82,642.95	165,098.85	162,994.90	2,103.95
	82,481.47	352.84	82,834.31			
2022	0.00	0.00	0.00	82,834.31	82,481.47	352.84
	0.00	0.00	0.00			
2023	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2024	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2025	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2026	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
2027	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00			
	<u>\$405,889.22</u>	<u>\$6,400.44</u>	<u>\$412,289.66</u>	<u>\$412,289.66</u>	<u>\$405,889.22</u>	<u>\$6,400.44</u>

GBC Apartment Complex

Date	Principal	Rate	Interest	Quarterly Debt Service	Annual Debt Service
05/01/2019		1.140%			
08/01/2019	39,863.39		1,156.78	41,020.17	
11/01/2019	40,022.85		1,043.17	41,066.02	
02/01/2020	40,182.94		929.11	41,112.05	
05/01/2020	40,343.67		814.59	41,158.26	164,356.50
08/01/2020	40,505.05		699.61	41,204.66	
11/01/2020	40,667.07		584.17	41,251.24	
02/01/2021	40,829.73		468.27	41,298.00	
05/01/2021	40,993.05		351.90	41,344.95	165,098.85
08/01/2021	41,157.03		235.07	41,392.10	
11/01/2021	41,324.44		117.77	41,442.21	
02/01/2022			0.00	0.00	
05/01/2022			0.00	0.00	82,834.31
	<u>\$405,889.22</u>		<u>\$6,400.44</u>	<u>\$412,289.66</u>	<u>\$412,289.66</u>