PUTTING *Georgians* FIRST

DEBT MANAGEMENT PLAN
2019 - 2023

Governor Brian P. Kemp

STATE OF GEORGIA
DEBT MANAGEMENT PLAN
FISCAL YEAR 2019 – FISCAL YEAR 2023

Prepared by:
Georgia State Financing and Investment Commission
Financing and Investment Division

GEORGIA STATE FINANCING AND INVESTMENT COMMISSION

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January 14, 2019

The Honorable Brian P. Kemp, Governor of Georgia
The Honorable Members of the General Assembly
Citizens of the State of Georgia

Each year during the capital budget process the Georgia State Financing and Investment Commission (Commission) works with the Governor's Office of Planning and Budget and issues its debt management plan (Plan) which is intended to ensure an acceptable balance is maintained between funding capital projects and infrastructure investments that are vitally important for economic growth and competitiveness and the State's ability to repay the debt incurred to finance those capital investments. We are honored to serve a state that makes fiscally conservative debt management a priority.

It is our privilege to present the Plan for Fiscal Year 2019 – Fiscal Year 2023. The Plan indicates that new bond authorization amounts of $1.2 billion for Fiscal Year 2020 through Fiscal Year 2023 are within affordable debt levels and consistent with the State's commitment to maintaining a triple-A credit rating by all three of the major rating agencies.

The independent agencies which rate the State's general obligation and guaranteed revenue debt view the Plan as an integral part of the State's overall strong financial management and governance practices by helping to ensure the State does not exceed an affordable debt burden. The projected levels of new debt authorizations and resulting projected annual debt service requirements are compared to the actual treasury receipts of the State for the immediately preceding fiscal year and projected future treasury receipts of the State to determine the ratio of debt service requirements to the prior year's State treasury receipts. This ratio, which is established by the Constitution at a maximum of 10% and further limited to a maximum of 7% by Commission policy, along with several other ratios discussed in the Plan, provides the Governor and the General Assembly with a basis to assess the impact of debt authorization and issuance on the State's fiscal position and enables informed, prudent decision-making on capital spending priorities.

Respectfully submitted,

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STATE OF GEORGIA
DEBT MANAGEMENT PLAN
FISCAL YEAR 2019 – FISCAL YEAR 2023

EXECUTIVE SUMMARY

Each year, the Georgia State Financing and Investment Commission (the "Commission") produces its debt management plan (the "Plan") which provides projections of the State of Georgia's (the "State") general obligation and guaranteed revenue debt and the annual debt service requirements for all outstanding debt and projected new debt. The Plan covers the current fiscal year and the four succeeding fiscal years. The resulting projected annual debt service requirements are compared to the actual treasury receipts of the State for the immediately preceding fiscal year, as well as projected future treasury receipts of the State, to determine the ratio of highest annual debt service requirements to the prior year's State treasury receipts. This ratio, which is established by the Constitution of the State (the "Constitution") at a maximum of 10%, but for reasons discussed within the Plan is limited to a maximum of 7% by Commission policy, along with several other ratios discussed in the Plan, serves as a guide for the Governor and the General Assembly in their consideration of the authorization of new State debt during the budget preparation, review, and adoption process. Projected authorizations of new debt may be increased or decreased depending on the capital needs of the State and projections of estimated treasury receipts in future years.

The following table shows general obligation debt authorizations (in millions $) for new capital projects and bond issuances for each fiscal year and the resulting ratio of annual debt service (for aggregate general obligation and guaranteed revenue debt) to prior year treasury receipts. (Note: the amount of bonds issued in a fiscal year may exceed the amount of new authorizations if there are any unused authorizations carried over from prior fiscal years which also are issued.) As State revenues recovered from the 2007-2009 recession and its lingering aftermath, authorizations for new debt were restricted to critical infrastructure projects, and the State vigorously pursued opportunities to refund its debt and lower debt service payments, the HADS (highest annual debt service) ratio shown below declined to 5.2% from its peak of 8.1% in fiscal year ("FY") 2011. The $1.184 billion of general obligation debt authorized for FY 2019 addressed needs for new facilities for K-12 education, higher education facilities for The University System of Georgia ("USG") and the Technical College System of Georgia ("TCSG"), essential roads and transportation infrastructure improvements, additional funding for the Savannah Harbor Deepening project, several projects for economic development purposes, and other facilities of the State. The planning level for general obligation debt authorizations for FY 2020 through FY 2023 is $1.2 billion per year. The highest annual debt service ratio ("HADS") is based on the actual debt service payments for all outstanding general obligation bonds and guaranteed revenue bonds and the debt service appropriation for authorized but unissued debt.

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	Actual Amounts						Projected Amounts			
Fiscal Year	2014	2015	2016	2017	2018	2019*	2020	2021	2022	2023
New Authorizations	$850	$878	$1,099	$952	$1,166	$1,184	$1,200	$1,200	$1,200	$1,200
Bond Issuances	$858	$824	$1,008	$920	$1,041	$1,229	$1,438	$1,200	$1,200	$1,200
HADS Ratio	6.3%	6.3%	6.0%	5.5%	5.5%	5.1%	5.5%	5.6%	5.5%	5.5%

*As of December 31, 2018

Various State authorities are authorized by State law to enter into multi-year debt obligations which are secured by revenues of the authority; these obligations, however, are not State general obligation debt or guaranteed revenue debt included in the debt service ratio defined in the Constitution. The Commission must authorize any new debt to be issued by State authorities. These revenue backed debt obligations, which are commitments only of the issuing State Authority, are payable solely from the revenues of the project or issuing State Authority and there is no legal recourse to the State for their repayment. The obligations of State authorities are discussed in more detail in a later section of this Plan.

There are other types of multi-year obligations, which even though they do not meet Georgia's statutory definition of debt, sometimes are considered debt of the State or the USG by the credit markets and rating agencies and thus that debt does have credit rating implications for the State. The two primary types of such obligations are: (1) lease obligations of State agencies and (2) the debt of foundations and cooperative organizations associated with the USG and its various institutions. In compliance with various Statements of the Governmental Accounting Standards Board ("GASB"), these obligations are reflected in the State's Comprehensive Annual Financial Report ("CAFR"); they are discussed later in the Plan.

CONSTITUTIONAL AND STATUTORY FRAMEWORK FOR STATE DEBT

Prior to the adoption in 1972 of an amendment to the Constitution, the State's capital project needs were met through the issuance of revenue bonds by ten separate State authorities with the security for those bonds being annually renewable lease/rental agreements between the issuing authority and one or more State departments and/or agencies. In November 1972 the electorate of the State approved a comprehensive amendment to the Constitution (the "1972 Amendment") which took effect January 1, 1973 that permitted the State to finance its capital project needs directly through the issuance of general obligation debt and guaranteed revenue debt. The 1972 Amendment also included a prohibition against the State entering into any new lease/rental agreements if those agreements would serve as security for financings by State authorities or other public institutions. With the passage of the 1972 Amendment and the statutory implementation of the 1972 Amendment by the General Assembly through the enactment of the Georgia State Financing and Investment Commission Act in 1973 (the "Commission Act"), the State was granted the ability to incur legally binding general obligation and guaranteed revenue debt backed by the full faith and credit of the State. The ability to incur general obligation debt and guaranteed revenue debt enabled the State to achieve higher credit ratings for its debt - and thus lower interest rates - than State authority revenue bond debt secured by lease obligations which were subject to annual appropriations of the General Assembly. The State's first issue of general obligation bonds subsequent to the 1972 Amendment was in September 1974 after a judicial validation process affirming the new credit structure was approved by the Supreme Court of the State of Georgia - $20,000,000 series 1974A bonds (of a total $170,053,000 which had been authorized by the General Assembly) with annual maturities from 1975 through 1999. At that time, there also was approximately $1.052 billion of State authority debt outstanding, but that debt has been paid in full.

With the subsequent ratification of a new Constitution in 1983, the ratio of maximum fiscal year general obligation and guaranteed revenue debt service to prior year State treasury receipts was lowered to 10% from its initial level of 15%. Since 1983, amendments to the State debt provisions of the Constitution were approved in 1984, 1986, 1992, 2010, and 2012. These amendments included: allowing general obligation bonds to be issued for public library facilities, allowing general obligation bonds or guaranteed revenue bonds to be issued for the purpose of making loans to local government entities for water or sewerage facilities or systems, allowing general obligation bonds or guaranteed revenue bonds to be issued for regional or multijurisdictional solid waste recycling or solid waste facilities or systems, allowing for multiyear contracts for energy efficiency improvement projects, and allowing for multiyear lease agreements for real property.

The Constitution and the Commission Act establish the parameters regarding the issuance of general obligation and guaranteed revenue debt which forms a firm foundation for the high ratings assigned by the credit rating agencies to the State's debt, and thus significantly contributes to the high regard in the credit market for the State's debt. Some of the key provisions include:

- a prohibition against incurring additional debt (either via general obligation bonds or guaranteed revenue bonds) which would cause the highest aggregate annual debt service in the then current year or any subsequent year to exceed 10% of the previous year's total State treasury receipts;
- an explicit recitation of the types of capital projects which can be funded with general obligation and guaranteed revenue debt;
- a requirement that the maximum annual debt service for proposed new debt be appropriated at the time the debt is authorized;
- a requirement for full appropriation each fiscal year of an amount sufficient to pay the aggregate debt service coming due for that year;
- a provision that debt service appropriations for new debt authorizations which were not issued do not lapse at the end of the fiscal year in which they were authorized;
- a provision for repeal, prior to their issuance, of debt authorizations by the General Assembly;
- guidelines as to how general obligation and guaranteed revenue debt may be refunded to ensure that there is no incremental increase in debt service in any future year and to prohibit the extension of the debt as a result of the refunding;
- limitations on cash flow borrowing for operating budget purposes;
- a prohibition against the issuance of any new Authority debt secured by lease agreements with State agencies or departments as had been utilized extensively by the State prior to the 1972 Amendment;
- a provision that should the amount appropriated for debt service payments be insufficient for any reason to make all payments due with respect to general obligation

debt the first revenues thereafter received in the general fund of the State must be set aside to the extent necessary to cure any such payment deficiency;

- an explicit right established by the Constitution for any general obligation debt holder to bring suit, if necessary, to compel the appropriate state fiscal officer to meet the obligation to set aside the first revenues received after a determination that insufficient funds have been set aside for payment of all payments due with respect to general obligation debt of the State; and
- guidelines as to the issuance of guaranteed revenue debt including a requirement that there be a debt service reserve funded at the time the debt is incurred which is equal to the highest annual debt service amount for that debt, and provisions for the replenishment of that reserve should there be a need to utilize any of the funds within the reserve for payment of debt service.

As previously stated, the issuance of all State debt, which includes debt issued by State authorities, is subject to Commission approval. The Commission is comprised of seven members (all members serve on an ex-officio basis) with the Commission officer designations as established in the Constitution: the Governor of the State serves as Chairman of the Commission, the President of the Georgia State Senate (the Lieutenant Governor) serves as Vice-Chairman, and the State Auditor serves as Secretary and Treasurer; the other members of the Commission are the Attorney General, the Commissioner of Agriculture, the Speaker of the House of Representatives, and the State Treasurer.

Pursuant to the Constitution and the Commission Act, the Commission is charged with the following responsibilities:

- the issuance of all public debt of the State,
- the proper application of the proceeds of such debt to the purposes for which it is incurred,
- the investment of all proceeds to be administered by the Commission,
- providing debt related financial advisory services to State authorities and agencies,
- providing construction services for State agencies for general obligation debt funded projects, and
- additional responsibilities as provided by law.

In summary, the Constitution provides for the issuance, and limitations and conditions thereon, by the State of both general obligation debt and guaranteed revenue debt, and establishes that the full faith, credit and taxing power of the State is pledged to the repayment of both of these types of public debt. During the legislative session each year as part of the appropriations process, the General Assembly may authorize new general obligation debt to be issued by the State and/or guaranteed revenue debt to be issued by various State authorities; the Governor may approve or veto individual debt authorizations included in the appropriations bill. The Constitution also provides for the issuance of revenue debt which may be issued by certain State authorities as authorized by State statute. The non-guaranteed revenue debt issued by State authorities cannot be secured by the full faith, credit and taxing power of the State; rather, such debt can only be secured by revenues generated by the specific projects that are being funded.

TYPES OF DEBT OBLIGATIONS

General Obligation Debt

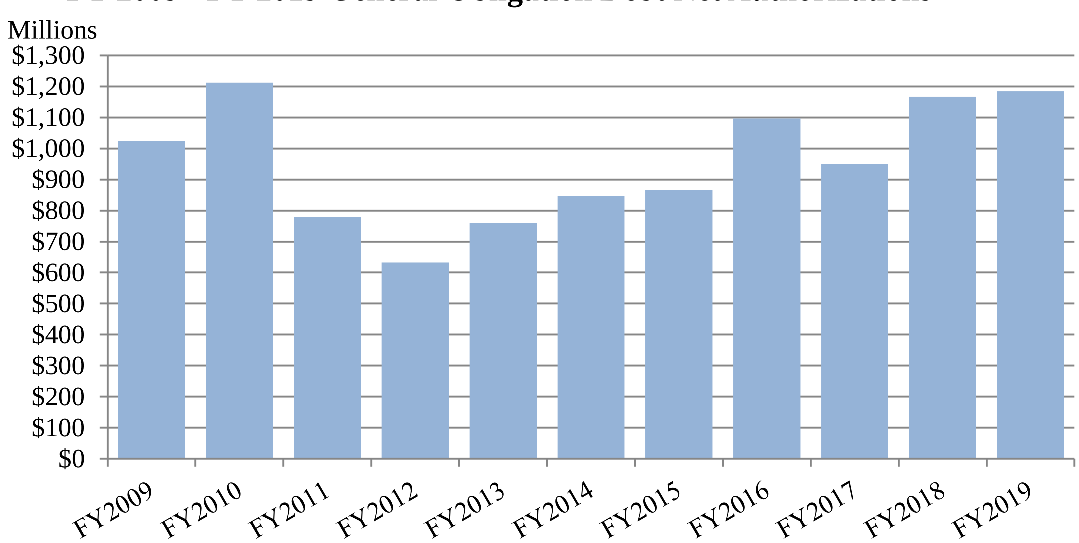
The Constitution limits the use of general obligation debt to the following purposes:

- to acquire, construct, develop, extend, enlarge, or improve land, waters, property, highways, buildings, structures, equipment, or facilities of the State, its agencies, departments, institutions, and of certain State authorities;
- to provide educational facilities for county and independent school systems and for public library facilities for county and independent school systems, counties, municipalities, and boards of trustees of public libraries or boards of trustees of public library systems; and,
- to make loans to counties, municipal corporations, political subdivisions, local authorities, and other local government entities for water or sewerage facilities or systems, or for regional or multi-jurisdictional solid waste recycling or solid waste facilities or systems.

For the first two purposes described above, the State Constitution limits the term of general obligation debt to 25 years. As a matter of practice, however, the General Assembly typically approves the issuance of general obligation debt with a 20-year final maturity from the date that the debt is incurred for major construction and renovation projects, or for a shorter final maturity for minor repair projects and capital equipment needs, in order to match the useful life of specific projects and equipment with the term of the debt.

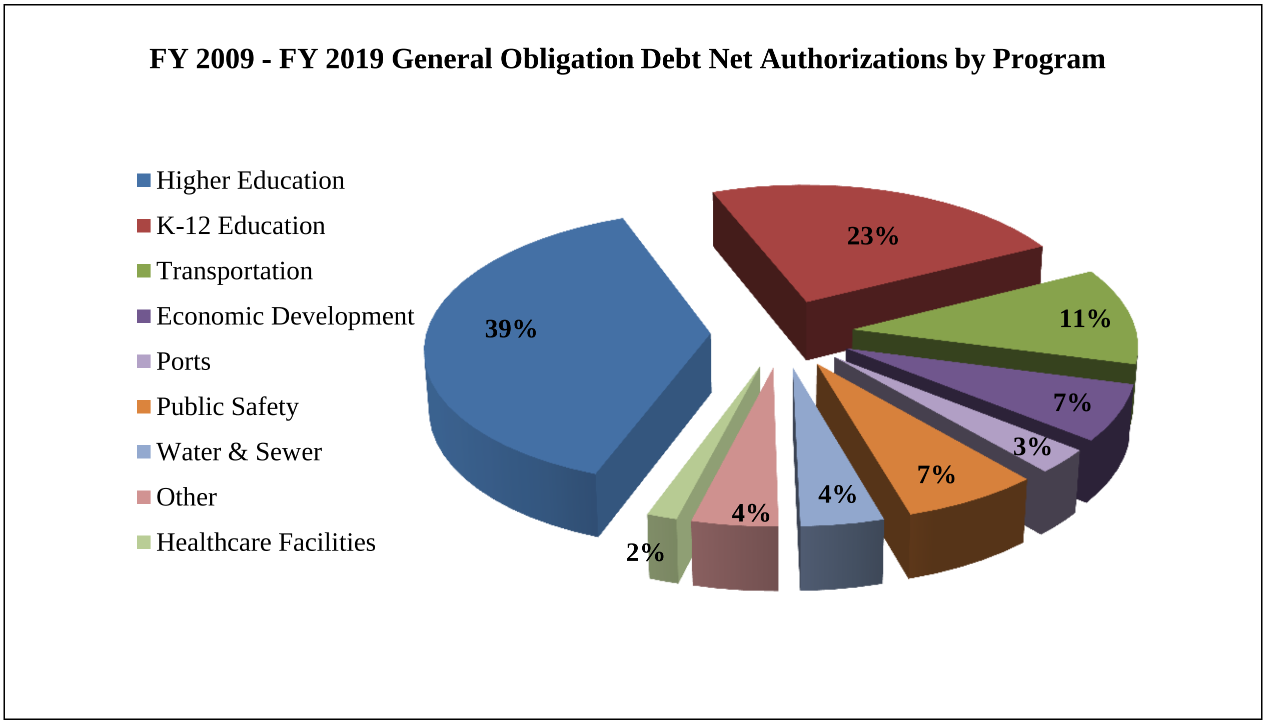
The following chart depicts the net general obligation debt authorized for the period FY 2009 through FY 2019 (net is equal to original authorizations less deauthorizations). As part of its active and responsive financial management of the budget in response to the decline in State revenues during and after the end of the last recession in mid-2009, the State reduced new authorizations for general obligation debt to only the most critical infrastructure projects in order to bring the various debt ratios back within planning limits sooner rather than later. As State revenues recovered, new debt authorizations were returned gradually to more normal levels.

FY 2009 - FY 2019 General Obligation Debt Net Authorizations



General obligation debt may be incurred only if the General Assembly first enacts legislation as part of the annual appropriations bill or the amended annual appropriations bill that states the purpose(s), in either general or specific terms, for which the general obligation debt is to be incurred; the bill also must specify the maximum principal amount of the debt and appropriate funds in an amount sufficient to meet the highest annual debt service requirement to amortize such debt within the specified not-to-exceed time frame. The Governor may approve or veto these authorizations on an individual basis as part of signing the appropriations bill legislation into law. Authorizations for debt and the appropriations made for payment of debt service on that debt do not lapse for any reason and continue in effect until either the debt for which the appropriation was authorized has been incurred or the authorization has been repealed by the General Assembly.

The following chart shows how the FY 2009 through FY 2019 debt authorizations were distributed among major functions and programs of the State.

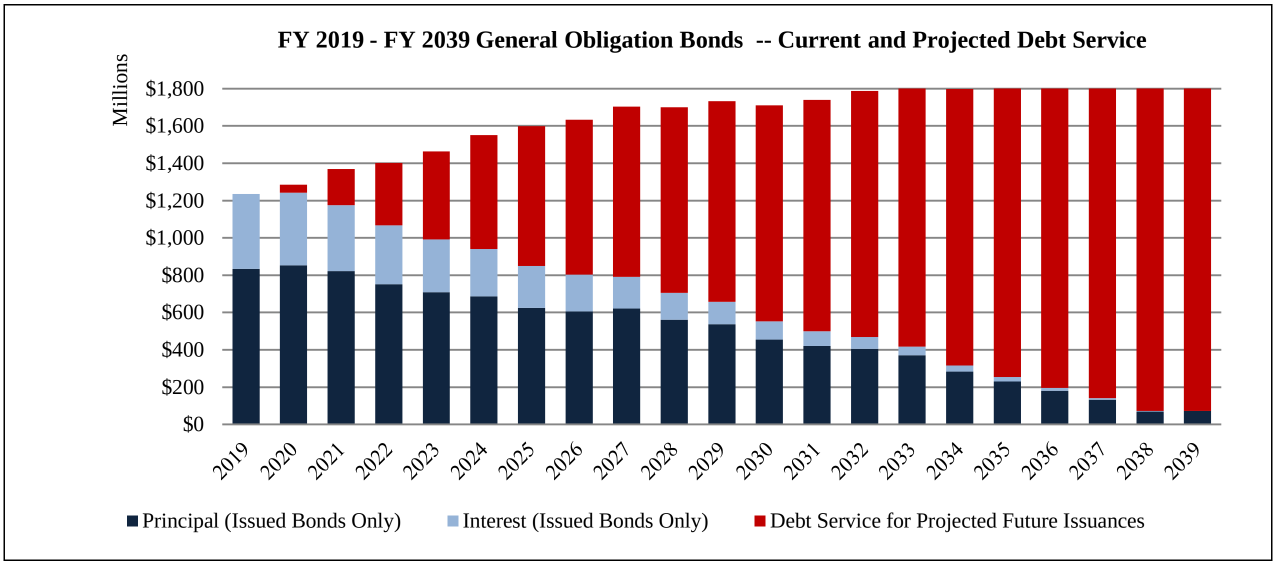


The Constitution requires that each year the appropriations for debt service payments on all general obligation debt be made to a special trust fund which is designated as the State of Georgia General Obligation Debt Sinking Fund (the "sinking fund"). The amount to be appropriated to the sinking fund must be sufficient to pay that year's debt service on all outstanding general obligation debt and also the highest annual debt service requirement on any and all authorized but unissued debt. The Constitution mandates that appropriations to the sinking fund shall be used solely for the payment of debt service for general obligation debt.

As a safeguard against shortages in the sinking fund, the Constitution provides that should the General Assembly fail to make sufficient appropriation to the sinking fund as described above, or if for any reason the amount in the sinking fund is insufficient to make all required debt service payments, the first revenues thereafter received in the general fund of the State, to the extent necessary to cure the deficiency, are to be set aside and deposited into the sinking fund by the appropriate fiscal officer.

As of June 30, 2018 there was approximately $8.994 billion of general obligation debt outstanding (see Appendix A, page A-1). In July 2018, the State funded approximately $1.32 billion of its authorized and unissued total of approximately $1.558 billion general obligation debt, thus leaving $238.375 million of authorizations available for future issuances. The net effect of this transaction, together with scheduled principal payments and early retirements which were made from July 1, 2018 through December 31, 2018, was that as of December 31, 2018 the total principal amount of general obligation debt outstanding increased to approximately $9.691 billion. As of the date of this Plan, no additional issuance of general obligation bonds is planned for the remainder of FY 2019.

The following chart reflects the annual debt service on all currently outstanding general obligation debt plus the projected debt service on the debt currently authorized but not yet incurred, as well as projected future new debt authorizations of $1.2 billion in FY 2020 and annually thereafter.



Guaranteed Revenue Debt

Guaranteed revenue debt is revenue debt which has been issued by a State authority and for which the State, via the legislative process, has guaranteed the repayment of the debt. The Constitution limits the use of guaranteed revenue debt to the following purposes:

- toll bridges or toll roads,
- land-based public transportation facilities or systems,
- water facilities or systems,
- sewage facilities or systems,
- loans to, and loan programs for, citizens of the State for educational purposes, and
- regional or multi-jurisdictional solid waste recycling or solid waste facilities or systems.

The amount of guaranteed revenue debt that may be issued to fund water or sewage treatment facilities or systems, and to make loans for educational purposes, is limited by the Constitution as follows:

> "No guaranteed revenue debt may be incurred to finance water or sewage treatment facilities or systems when the highest annual debt service requirements for the then current year or any subsequent fiscal year of the State for outstanding or proposed guaranteed revenue debt for water facilities or systems or sewage facilities or systems exceed 1 percent of the total revenue receipts less refunds of the State treasury in the fiscal year immediately preceding the year in which any such debt is to be incurred."

There also is a limit on the amount of guaranteed revenue debt for educational purposes,

> "The aggregate amount of guaranteed revenue debt incurred to make loans for educational purposes that may be outstanding at any time shall not exceed $18 million, and the aggregate amount of guaranteed revenue debt incurred to purchase, or lend or deposit against the security of, loans for educational purposes that may be outstanding at any time shall not exceed $72 million."

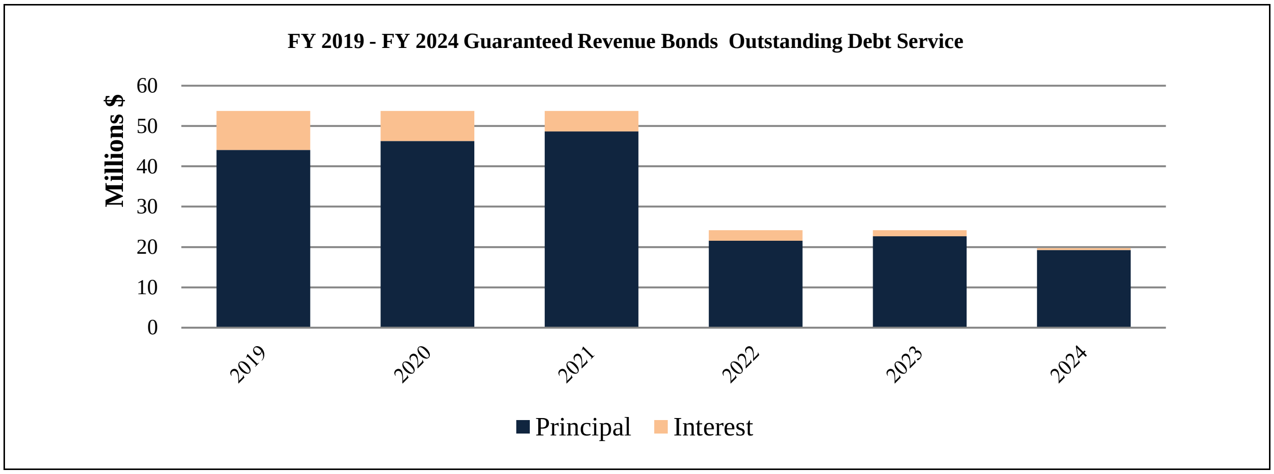
Prior to incurring guaranteed revenue debt, legislation must be enacted by the General Assembly and signed into law by the Governor authorizing the guarantee of the proposed debt obligation. The General Assembly must determine conclusively that such obligations will be self-liquidating over the life of the obligation, specify the maximum principal amount of such obligation, and appropriate an amount at least equal to the highest annual debt service requirement for the obligation which must be deposited into a special trust fund designated as the State of Georgia Guaranteed Revenue Debt Common Reserve Fund (the “common reserve fund”) at the time guaranteed revenue debt is incurred. This trust fund provides a common reserve for debt service payments pursuant to the State guarantee(s) made in connection with each and every guaranteed revenue debt obligation. Appropriations of the maximum annual debt service made for the benefit of guaranteed revenue debt do not lapse for any reason and the appropriations continue in effect until the debt for which such appropriation was authorized has been incurred. Any such authorization and appropriation of debt service may be repealed provided such repeal occurs prior to the debt being incurred and payment made into the common reserve fund for the highest annual debt serve requirement of the debt.

If the revenue pledged to the payment of the guaranteed revenue debt is not sufficient to meet the debt service requirement and debt service payment then is required to be made from the common reserve fund, the common reserve fund must be reimbursed from the State's general funds within ten (10) days after the start of the next fiscal year to restore the common reserve fund to the required amount. The requirement to reimburse the common reserve fund for any such payment, however, is subordinate to the obligation to make sinking fund deposits for the payment of general obligation debt.

The Constitution requires that the amount to the credit of the common reserve fund must at all times be at least equal to the aggregate highest annual debt service requirements on all guaranteed revenue obligations outstanding; the Constitution also provides that any excess funding in the common reserve fund at fiscal year-end is to be transferred to the State's general fund.

As of June 30, 2018 there was a total of $202.575 million of guaranteed revenue debt outstanding (see Appendix A, page A-2). Scheduled principal payments from July 1, 2018 through December 31, 2018 reduced the amount of guaranteed revenue debt outstanding as of December 31, 2018 to $184.035 million.

The following chart shows the annual debt service for all guaranteed revenue debt for the period FY 2019 through FY 2024, which is the final year of debt service for the outstanding guaranteed revenue bonds.



Refunding Opportunities

To ensure that the debt service to be paid on the State's outstanding debt is minimized, the Commission continuously monitors market conditions to evaluate if any outstanding debt could be refunded and thereby reduce the debt service. Refunding bond issues must comply with the requirements of both the Constitution and the Commission's official policy which includes: refunding debt may not extend the term beyond the term of the refunded debt; refunding debt may not increase debt service in any fiscal year; refunding debt must produce minimum present value debt service savings of 3% for current refundings or 4% minimum present value debt service savings for advance refundings; there are additional restrictions imposed by federal regulations if the refunding debt is incurred as tax-exempt debt for federal income tax purposes. (Note: the terms "current refunding" and "advance refunding" are references to federal tax law definitions for two different types of refunding transaction structures; federal tax laws which went into effect on January 1, 2018 prohibited advance refundings of tax-exempt bonds from the proceeds of tax-exempt bonds.)

Authority Revenue Debt

Certain State authorities are authorized to issue revenue bonds for various revenue-producing undertakings. Since such revenue debt incurred by State authorities is not tax-supported and there is no State guarantee regarding payment of the debt service (except in the case of the previously described guaranteed revenue obligations), the issuance of such debt by State authorities does not directly impact the State's debt burden or debt capacity. Unless specifically exempted by its enabling legislation, the State authority is required to request and receive permission from the Commission before incurring any debt, including any lines of credit for operating cash flow purposes. Following is a brief summary of those State authorities which have revenue bonds or other debt obligations currently outstanding - no State authorities have entered into interest rate management agreements relative to their financings. Unless noted otherwise, all figures are as of June 30, 2018 with the outstanding amounts updated as of December 31, 2018. (See Appendix B for authority debt service schedules.)

- The **Georgia Environmental Loan Acquisition Corporation** ("GELAC"), which was created in July 2010, is a non-profit entity and subsidiary of the Georgia Environmental Finance Authority ("GEFA"). GELAC issued a total of $231.98 million revenue bonds in March 2011 for the purpose of providing funds to enable GELAC to purchase water and sewer loans from GEFA. As of June 30, 2018, GELAC had $38.81 million of revenue bonds outstanding from the March 2011 bond issue; as of December 31, 2018 the amount outstanding had been reduced to $35.065 million as a result of loan payments and loan pre-payments from July through December 2018. This debt is not an obligation of either the State or GEFA.
- The **Georgia Higher Education Facilities Authority** ("GHEFA") is authorized to incur debt to finance self-liquidating capital projects for the USG and the TCSG; GHEFA is authorized by statute to have outstanding at any point in time a maximum debt of $500 million. GHEFA issued revenue bonds in 2008, 2009, and 2010 which, in aggregate, financed eighteen projects at thirteen separate USG institutions. During FY 2015, three of the student housing projects which had been constructed via GHEFA financings were included in the USG's student housing privatization initiative; the outstanding bonds which had been issued to finance those projects were defeased in full and are no longer outstanding. Also during FY 2015, GHEFA issued bonds to refund the outstanding 2008 bonds other than the bonds for the Georgia State University housing project which had been defeased as part of the housing privatization initiative. In July 2018, the $18.805 million of outstanding bonds related to the Bainbridge College project which had been funded via the 2009 bonds were defeased and are no longer outstanding. As of June 30, 2018, the amount of outstanding GHEFA bonds was $229.150 million; the Bainbridge College project defeasance transaction reduced the aggregate outstanding principal to $210.345 million as of December 31, 2018.
- The **Georgia Housing and Finance Authority** ("GHFA") is authorized to issue bonds and notes for the purpose of facilitating economic development including the underwriting or purchase of single family residential mortgages; the improvement of public health, safety, and welfare; and for other public purposes, including healthcare services. By statute, GHFA may have a maximum aggregate amount of bonds and notes outstanding at any point in time of $3 billion for GHFA's single family residential housing program, excluding refunding bonds and notes. As of June 30, 2018, GHFA had approximately $1.330 billion bonds outstanding, all of which were for its single family residential housing program. At its October 3, 2018 meeting, the Commission authorized GHFA to issue up to $250 million of new money or refunding bonds during the period of November 15, 2018 through December 31, 2019 for its single family residential mortgage loans program. On October 31, 2018, GHFA issued $125.33 million of additional bonds and also has made additional principal redemptions during the second half of calendar year 2018. As a result of these transactions, GHFA's total outstanding bonds amount was approximately $1.4 billion as of December 31, 2018.
- The **Georgia World Congress Center Authority** ("GWCCA") is authorized to issue revenue bonds for multi-purpose stadiums and coliseums and certain ancillary facilities.

GWCCA is authorized to have no more than $400 million bonds outstanding at any one time. There currently are no GWCCA bonds outstanding; however, in FY 2016 GWCCA received a loan of approximately $30.05 million through GEFA's energy efficiency project multiyear contract program (see program description in a later section of the Plan) with the final loan payment due in FY 2034.

- The **Lake Lanier Islands Development Authority** ("LLIDA") is authorized to issue revenue bonds and borrow money (there is no statutory limitation) for the purpose of improving, developing, and promoting the islands in Lake Lanier. In 2008, LLIDA issued $10 million revenue bonds for roadway and other capital improvements; it also borrowed approximately $15.141 million from GEFA to make improvements to its sewerage system. As of June 30, 2018, LLIDA had a total of approximately $15.576 million principal outstanding of revenue bonds and the GEFA loan; as of December 31, 2018, scheduled repayments of principal further reduced the outstanding balance to approximately $14.843 million.
- The **State Road and Tollway Authority** ("SRTA") is authorized to issue revenue bonds (there is no statutory limitation) for self-liquidating land public transportation systems (roads, bridges, etc.) and projects. As described in more detail below, as of June 30, 2018 the total amount of bonds outstanding was approximately $604.48 million; as of December 31, 2018, the total outstanding amount had decreased to approximately $587.04 million. (Note: the TIFIA loan described below in the Northwest Corridor Project discussion is not included in the preceding figures.)
  - **Guaranteed Revenue Bonds**. As of June 30, 2018, there were three series (2011A, 2011B, and 2016, which refunded bonds that had been issued in 2001 and 2003) of guaranteed revenue refunding bonds outstanding in an aggregate amount of $202.575 million. A scheduled principal payment of the 2011B bonds on October 1, 2018 reduced the aggregate amount outstanding to $184.035 million as of December 31, 2018.
  - **GARVEE Bonds**. As of June 30, 2018, SRTA had an aggregate outstanding amount of GARVEE bonds (described in more detail in the following GARVEE Bonds section) of approximately $367.905 million from three separate issues (2008, 2009, and 2017). During FY 2018, SRTA issued $63.85 million of GARVEE bonds to fund, in part, right of way acquisition for construction of express lanes adjoining I-285 along its northern arc between I-75 and I-85. At the same time as it issued the new GARVEE bonds, SRTA issued $285.915 million of refunding GARVEE bonds to refund $298.615 million of the 2006, 2008, and 2009 GARVEE bond issues, achieving a total debt service savings of $13.9 million over the remaining term of the refunded bonds. The net result of these transactions was that the aggregate outstanding amount of GARVEE bonds increased for a short period of time to $521.13 million, but then declined to $367.905 million as of June 30, 2018 after the payment of $153.225 million principal. There were no scheduled payments of principal between June 30, 2018 and December 31, 2018, thus the aggregate outstanding amount of GARVEE bonds remained at $367.905 million. SRTA anticipates that a portion of the $600 million GARVEE bonds could be issued as early as FY 2020 (or possibly in several tranches which will be issued over several fiscal years) to provide additional funding for managed lanes as a part of the northern portion of I-285 in Cobb, Fulton, and DeKalb counties. For purposes of this Plan, however, it is assumed that all $600 million will be issued in FY 2020. (See "Grant Anticipation Revenue Vehicle Bonds ("GARVEE") Debt" below.

    - **I-75 South Express Lanes Project Toll Revenue Bonds**. As of June 30, 2018, the outstanding value of SRTA's toll revenue bonds, which were issued in June 2014 for the construction of the I-75 South Express Lanes Project in Henry and Clayton counties (which are just south of the City of Atlanta), was approximately $33.935 million. The toll revenue bonds consist of capital appreciation bonds ("CABs") and convertible capital appreciation bonds ("CCABs") which currently do not pay interest on a periodic basis; rather, in the case of the CABs, at the scheduled mandatory redemption or maturity date of the bond, the bondholder will receive a single payment which represents both repayment of the initial principal amount and the unpaid compounded interest to the redemption or maturity date. In the case of the CCABs, the bonds will convert to current interest paying bonds on June 1, 2024 (the Conversion Date) and after the Conversion Date will pay interest on a semi-annual basis on each June 1 and December 1 through maturity. The tolls charged for the use of these managed lanes is the sole source of revenue for the repayment of these bonds. No debt service payments are due prior to FY 2020 on the bonds. The debt service schedule for the toll revenue bonds is shown in Appendix B. As of December 31, 2018, the value of the toll revenue bonds had increased to approximately $35.1 million.
    - **Northwest Corridor Project Toll Revenue Bonds**. In order to provide funding for the Northwest Corridor managed lanes project adjoining I-75 and I-575 in Cobb and Cherokee counties (which are just north of the City of Atlanta), SRTA obtained a loan commitment from the United States Department of Transportation in an amount of up to $275 million which is secured solely by the toll revenues of this managed lane project (the "TIFIA Loan"). Users of the Northwest Corridor managed lanes will be charged tolls and these toll revenues will be the sole source of revenue for the repayment of the TIFIA Loan. The TIFIA Loan was closed in November 2013 in the form of toll revenue bonds; the projected repayment schedule is shown in Appendix B. The final TIFIA Loan repayment schedule will be determined at the completion of the Northwest Corridor Project based on the actual amount and timing of the TIFIA Loan. As of June 30, 2018, there had been approximately $211.78 million disbursed from the TIFIA Loan commitment; since then, two additional disbursements totaling approximately $33.16 million have been made for a total disbursed of $244.94 million. The project was placed into service on September 8, 2018 and full draw down of the TIFIA Loan commitment is expected by September 8, 2019.
- **Georgia Military College** ("GMC") was authorized in 2002 by the Commission to incur debt not to exceed $7.0 million to construct new barracks for cadets on its Milledgeville campus. As of June 30, 2018 there was approximately $2.597 million of debt outstanding for this project. As of December 31, 2018, scheduled repayments of principal had reduced the outstanding amount to approximately $2.488 million.

Grant Anticipation Revenue Vehicle Bonds ("GARVEE") Debt

In August 2006, SRTA issued $450 million fixed rate GARVEE bonds and approximately $50 million (of $150 million authorized) was issued in a commercial paper mode. SRTA structured the GARVEE bonds as consisting of two separate series, one described as Grant Anticipation Revenue Bonds and the other described as Reimbursement Revenue Bonds; each series had a final maturity of approximately 12 years from the date issued. The master trust indenture for the

GARVEE bonds established an additional bonds test requiring that the amount of Federal Obligation Authority available must be equal to at least 3.0 times the maximum annual debt service on all outstanding and any proposed GARVEE debt which would be issued on parity with the outstanding debt. In April 2008 and March 2009, additional parity GARVEE bonds totaling $600 million in each year were issued; in 2008, the commercial paper was retired with a portion of the proceeds from the bonds which were issued that year. As described in the previous section, during FY 2018, SRTA issued approximately $63.85 million of new parity GARVEE bonds to fund express lanes adjoining I-285 and also issued $285.915 million refunding bonds to refund a portion of the outstanding GARVEE bonds in order to achieve debt service savings. Following the previously established structuring methodology, the 2017 bonds had a final maturity of approximately 12 years from the date they were issued. All of SRTA's GARVEE bonds are secured by federal highway grant revenues and reimbursements and do not carry either a direct or an implied guarantee of the State. The final maturity of the currently outstanding GARVEE bonds is June 1, 2029.

The 2017 GARVEE bonds were issued pursuant to Commission action on December 15, 2016, which authorized SRTA to issue up to $675 million of additional GARVEE bonds for the purpose of funding right-of-way acquisition for planned improvements to the northern portion of Interstate 285 between Interstate 75 and Interstate 85. It currently is anticipated that a portion of the remaining authorized GARVEE bonds will be issued at some point in FY 2020. Debt service payments on the 2017 GARVEE bonds began in FY 2018 and currently it is expected that the debt service payments on the remaining bonds to be issued will begin in either FY 2020 or FY 2021, depending upon the actual date of issuance of those bonds. The resolution adopted by the Commission specified that the final maturity of these GARVEE bonds may not be later than June 1, 2035.

The following table summarizes the projected annual debt service requirements on the outstanding and proposed GARVEE bonds, the most recent projected Federal Obligation Authority funding amounts, and the resulting debt service coverage ratios.

	FY 2019	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
Debt Service Requirements - Issued	$141,594,750	$141,598,750	$74,049,500	$7,268,800	$7,262,300
Debt Service Requirements – Projected	-	$36,000,000	$69,435,000	$69,304,000	$69,166,000
Total Debt Service Requirements	$141,594,750	$177,598,750	$143,484,500	$76,572,600	$76,428,500
Projected Federal Obligation Authority ($000)	$1,378,056	$1,455,088	$1,369,110	$1,461,508	$1,453,653
Debt Service Coverage	9.73x	8.2x	9.54x	19.1x	19.0

SRTA's GARVEE bond issues in 2006, 2008, and 2009 initially received ratings of Aa2/AA-/AA- from Moody's Investors Service ("Moody's), S&P Global Ratings, a division of Standard and Poor's Financial Services LLC ("Standard & Poor's"), and FitchRatings ("Fitch"), respectively. Since the initial ratings on those GARVEE bond issues, both Moody's and Fitch lowered their ratings for GARVEE bonds on a programmatic basis nationwide primarily due to the uncertainty surrounding the future level and structure of federal transportation funding, although Standard & Poor's, based on their assessment of the program nationally, continued to rate SRTA's GARVEE bonds as AA- with a stable outlook. When rating the 2017 GARVEE bonds and reviewing the rating on the outstanding bonds, Fitch maintained its existing A+ rating (with a stable outlook) and Moody's maintained its A2 rating (with a stable outlook) to each series of the Grant Anticipation Revenue Bonds and A1 rating (with a stable outlook) to each series of the Reimbursement Revenue Bonds; Standard & Poor's, however, upgraded its rating to AA (with a stable outlook) on all of SRTA's GARVEE bonds.

With respect to calculations of net tax-supported debt, the three rating agencies differ in their treatment of GARVEE debt - both Moody's and Fitch include GARVEE debt (with a corresponding allowance granted for the federal revenue sources which support the debt) in their calculations while Standard & Poor's does not include GARVEE debt in its calculations. Given the size of the program, and that both Moody's and Fitch include GARVEE debt in their calculations of tax-supported debt, the State believes that it is important that it also consider the effect that the GARVEE debt has on the net tax-supported debt ratio projections.

As shown in the table on page 29, including both the outstanding and proposed GARVEE bonds in the debt ratio calculations does slightly increase the State's overall debt burden. The ratio of debt service requirements to the prior year's State treasury receipts is projected at 5.5% in FY 2019, 5.8% in FY 2020 (the final year of debt service on the 2008 GARVEE bonds), 5.8% in FY 2021 (the final year of debt service on the 2009 GARVEE bonds), 5.5% in FY 2022, and 5.5% in FY 2023; these percentages are well below the planning level limit of 8% inclusive of the GARVEE debt as established in the Plan.

Multiyear Contracts for Energy Efficiency Projects

In November 2010, an amendment to the Constitution to provide for multiyear contracts for energy efficiency or conservation improvement projects (the "2010 Amendment") was approved by the electorate of the State. The 2010 Amendment allowed the General Assembly, through adoption of general law (2010 General Assembly Senate Bill 194, effective January 1, 2011), to authorize state governmental entities to incur debt for the purpose of entering into multiyear contracts for governmental energy efficiency or conservation improvement projects in which contract vendors guarantee that debt service payments for the energy efficiency improvements will be fully offset by specified savings or revenue gains attributable solely to the improvements. Senate Bill 194 also required that the Commission adopt fiscal policies and establish a total multiyear contract value for such contracts, and that any contract entered into by a state agency that is not in compliance with the policies and multiyear contract value authority set by the Commission would be void and of no effect. On December 12, 2012, the Commission adopted its "Fiscal Requirements for Energy Performance Contracts" policy as required by Senate Bill 194. The Commission separately authorized $73.5 million for FY 2016 and $55.3 million for FY 2019; no authorizations were approved for FY 2017 or FY 2018. Although the debt service amount is not required to be included in the calculation of the debt service ratio previously discussed in the Plan, nor can it be construed as either general obligation debt or guaranteed revenue debt of the State, the Commission has determined to make such calculations to ensure that conservative debt affordability standards are maintained. The energy project multiyear contracts are recorded as Notes Payable on the financial statements of the State.

Multiyear Contracts for Real Property Leases

In November 2012, an amendment to the Constitution to provide for multiyear rental agreements for real property (the "2012 Amendment") was approved by the electorate of the State. The 2012 Amendment allowed the General Assembly, through adoption of general law (2012

General Assembly Senate Bill 37, effective January 1, 2013), to authorize certain State agencies - the State Properties Commission (the "SPC") and the Board of Regents ("BOR") - to enter into multiyear rental agreements, without obligating funds for the total amount of the obligation that the State will bear under the full term of such agreements, provided the Commission has adopted fiscal policies and established total multiyear contract value authority for the current and future fiscal years. The Commission adopted the requisite fiscal policies at its December 12, 2012 meeting. As of June 30, 2018, SPC and BOR had closed on an aggregate of approximately $353 million of multiyear rental agreements per authorizations approved by the Commission; for FY 2019 to date, as of December 31, 2018, SPC had closed on an additional $88 million of multiyear rental agreements related to a total of $155 million of Commission approved multiyear contract authority for FY 2019. (BOR had not closed on any additional leases as of the end of calendar year 2018.) Although the debt service amount for the multiyear rental agreement contract value authority is not required to be included in the calculation of the debt service ratio previously discussed in the Plan, nor can it be construed as general obligation debt or guaranteed revenue debt of the State, the Commission has determined to make such calculations to ensure that conservative debt affordability standards are maintained. Various accounting rules and standards dictate that the multiyear real property rental agreements are considered leases on the financial statements of the State (see "OTHER LONG-TERM OBLIGATIONS Leases" below).

OTHER LONG-TERM OBLIGATIONS

Leases

The State routinely acquires use of real property and equipment through leases (including the multiyear contracts for energy projects and real property leases as described in the preceding section). Many of these agreements contain fiscal funding clauses in accordance with O.C.G.A. § 50-5-64 which prohibits the creation of a debt to the State for the payment of any sums under such agreements beyond the fiscal year of execution, or on a current year basis in the years subsequent to the initial fiscal year of execution, if appropriated funds are not available. Various GASB statements require that the entire lease term, including all renewal/option years expected to be exercised and periods requiring annual appropriations by the General Assembly, should be considered when determining whether a lease will be accounted for as an operating or capital lease. Although these leases do not directly impact the calculation of the debt service ratio as defined by the State Constitution, they are considered by the rating agencies as tax-supported debt and are included in the rating agency's calculations. For additional information regarding capital leases, see the State's audited Comprehensive Annual Financial Report for the fiscal year ending June 30, 2018, Note 11, available on the State Accounting Office's website and the GSFIC's website on the Investor/Continuing Disclosure Information page in the Financing and Investment Division section.

In some instances, the lessor obtained acquisition and/or renovation financing for the property leased by the State via a funding process which involved the issuance of revenue bonds by a local city or county government or local development authority (the proceeds then are loaned to the lessor for the acquisition and/or renovations and the state agency leases the property on an annually renewable basis). When this is the case (for example, the highly specialized archives storage facility originally developed for the Secretary of State which since has been transferred to the BOR), the rating agencies have indicated that despite the legal ability of the State to not renew a lease in a subsequent fiscal year, a non-appropriation of the lease payment in any year during the term of the bond issue would be viewed as an adverse credit event for the State. Numerous and repetitive communications from the rating agencies have affirmed that such an event of non-appropriation likely would jeopardize the State's triple-A credit ratings as being indicative of either an unwillingness, or inability, of the State to continue the lease and thus fulfill its credit obligations. While these obligations are not legally equivalent to the debt service payment obligations for general obligation debt or guaranteed revenue debt, the annual payments essentially become a de facto fixed payment obligation which has the practical effect of binding the State to make these lease payments for the entire term of the lease, thus reducing the future financial flexibility of the State.

Public University Foundation Debt

According to data from the BOR of USG, as of June 30, 2018 there were 168 projects funded by outstanding bond issues by local authorities for various USG institution foundations or other cooperative organizations associated with the State's colleges and universities with approximately $2.909 billion of revenue bonds outstanding (excluding bonds issued by GHEFA as previously described). For FY 2019 through December 31, 2018, no additional projects have been initiated. Proceeds of these bond issues have been used to construct or acquire various types of projects at the colleges and universities, such as student housing, dining, research facilities, faculty and administrative office buildings, parking, and student activity facilities, which then are leased by the foundation or cooperative organization to the BOR on an annually renewable basis. Most of the projects generate revenues (such as housing or parking fees), or the BOR has instituted dedicated student fees (such as student activity or parking fees), which provide revenues designed to provide for the annual lease payment; upon renewal of the lease each subsequent fiscal year, the lease payment obligation becomes a legal and binding obligation of the BOR for that fiscal year and thus is secured by the entirety of the legally available financial resources of the BOR. These obligations are included on the financial statements of the various USG institutions and thus the financial statements of the BOR and the State; additional information may be obtained from those documents.

During FY 2015, the BOR implemented Phase I of a Public Private Partnership ("P3") program for existing and new on-campus student housing at nine (9) member institutions. The P3 program was designed to shift the financial risk for the selected projects from the BOR and various institution foundations to the private sector partner and thus remove the associated debt from the BOR's financial statements. Any debt which is incurred by the P3 vendor to construct the additional student housing per the P3 program will not be a capital liability obligation of the BOR and will not be backed by a rental agreement with the BOR. No existing projects have been converted to P3 status since FY 2015 and no such conversions are expected to be completed during FY 2019.

Other Significant Liabilities of the State

Retirement Systems and Other Post-Employment Benefits: These liabilities do not directly impact the calculation of the State's debt service ratio as defined by the Constitution, but they do represent significant ongoing financial commitments which have an effect upon both the current and future financial flexibility of the State. Also, the rating agencies view these liabilities as long-term tax-supported debt and include their own adjusted calculations in various calculations of tax-supported debt as an indicator of financial flexibility of the State and as comparative metrics among the states. For a more complete description and discussion of these liabilities, which involve extremely complex actuarial calculations unique to each pension plan and assumptions regarding investment returns of the various pension funds and other post-employment benefits funds, please see notes 15 and 16 in the State's FY 2018 Comprehensive Annual Financial Report which is available via the State Accounting Office's website at www.sao.georgia.gov. The calculations shown in the latter sections of the Plan currently do not include either the pension liabilities or the other post-employment benefits liabilities for the State or the comparison states.

DEBT STRUCTURE

State debt may be issued with fixed interest rates or which vary according to a prescribed methodology and generally are known as variable rate debt. The use of variable rate debt introduces an element of interest rate risk and the potential of increased debt service payments for that debt. That risk can be reduced, but not eliminated entirely, through the use of hedging instruments (each instrument will have its own particular risk profile) such as a floating to fixed interest rate swap agreement. To ensure that the level of interest rate risk is reasonable, the rating agencies suggest that an issuer limit the aggregate amount of variable rate debt in its capital structure to a maximum of approximately 15% to 20% of its total debt. The primary benefit to an issuer of utilizing variable rate debt is that generally the interest rate resets on a periodic basis (such as daily or weekly) with the bond holder able to "put" the bond back to either the issuer or a liquidity provider which has been engaged by the issuer specifically for that purpose, and thus the interest rate prices at the short term rate and is expected to be lower than if the debt had been incurred at a fixed interest rate for the full term of the debt. During FY 2017 the State refunded all of its outstanding variable rate general obligation debt with fixed interest rate debt and no other debt has been issued as variable rate debt since that time. There are no current plans to consider the use of variable rate debt in the near future.

The State's objective for each new general obligation and guaranteed revenue bond issue is to structure the issue with approximately level annual debt service payments over the life of the bonds. Should any variable rate debt be considered in the future, the maximum allowed interest rate would be utilized to develop a level annual debt service schedule for that debt.

DEBT AFFORDABILITY

The Plan is intended to ensure an acceptable balance is maintained between the provision of capital projects required to meet the State's future needs and the State's ability and willingness to repay the debt incurred to finance these projects. Through the establishment of reasonable target levels based on the State's expected population growth and per capita income projections balanced with the financial resources available to meet its debt obligations, assurance is provided that the authorization of additional debt by the General Assembly is at prudent levels which should not jeopardize the State's triple-A bond ratings.

There is no specific formula, however, for determining the maximum amount of debt which can be issued by the State in any particular year to accomplish these objectives. Many factors must be considered including balancing the State's current and projected operating budget for funding ongoing program requirements, current year and out year projected revenues, available fund balances, and an overall plan for managing the operating budget in balance with the need for new or renovated capital projects. The Plan takes into account the concept of debt affordability in determining the maximum amount of tax-supported debt that the State can issue. Also, any model for determining debt affordability is dependent upon the reasonableness and accuracy of economic forecasts and the projected impact on the State's total financial resources. Beginning in FY 2006, the Commission has utilized a 7% cap (8% including GARVEEs) for planning purposes for the debt service ratio as specified in the Constitution, which is in line with the State's peer group of states rated triple-A by all three of the major credit rating agencies.

Rating Agency Considerations

Due to the economic and financial diversity among the 50 states, many purchasers of tax-exempt bonds historically have relied heavily on the major rating agencies to analyze the factors affecting each borrower's ability to meet its debt obligations as reflected by the ratings on those obligations. Each issuer's rating(s) has (have) a major impact on the marketability of its bonds and also the interest rates necessary to generate investor demand for the issuer's debt obligations. States whose general obligation bonds are rated triple-A generally are able to sell their debt at the lowest possible interest rates at any given point in time. Another benefit of triple-A ratings was demonstrated during the credit market disruptions of late 2008 and early 2009 when higher rated issuers were able to re-access the credit market sooner and in larger amounts than was the case for lower rated issuers. (For some of the referenced time period, credit market access was severely curtailed to almost nonexistent and was restored only in a gradual manner over several months.) The highest rated issuers, including the State of Georgia, were among the earliest issuers to regain access to the market, particularly with respect to larger issue sizes such as the State typically brings to market.

Rating agencies consider and incorporate into their rating decisions trends relating to an issuer's overall debt and liability burden, revenue base, fund balances and general economic base, as well as a comparison of actual fiscal experience versus budget projections over a three- to five-year period. While specific rating criteria and weightings do vary slightly between the three rating agencies, overall the rating analysis generally takes into account four primary factors:

- debt burden as measured by ratios,
- quality and strength of the state's economic base,
- fiscal management, and
- actual financial performance versus projections.

The amount of an issuer's tax supported debt is an important factor in the determination of its credit rating. Credit analysts usually calculate several ratios, including those which are discussed in greater detail in a later section of the Plan, to use as measure of debt burden. Credit analysts also look for balance, diversity, and growth potential of the economic base and the primary sources of revenue to generate sufficient revenues to consistently meet operating program needs and to repay all debt obligations – this is what the rating agencies generally refer to as "structural balance".

When analyzing an issuer's fiscal management practices, credit analysts compare fiscal results with budgets and plans. Over time, such comparisons tend to serve as a good indicator of the effectiveness and quality of fiscal management by the issuer. Another criterion of sound fiscal management is the existence of laws, policies, and procedures which allow an issuer to exercise strong, reasonable, and flexible control over its sources and timing of revenue, expenditures, and debt issuance.

Financial performance is a result of both the quality of a state's fiscal management and general economic performance of the local economy. One indicator of financial performance is an issuer's ability to adjust to revenue shortfalls due to unexpected economic downturns, or downturns that are much more severe than initial expectations, such as occurred during the last recession and the very slow, long, and shallow recovery which followed. Another gauge of an issuer's fiscal management and financial performance is its ability to establish and maintain reasonable levels of reserves for cushioning the effects of unexpected adverse economic events, and then its ability to rebuild those reserves in a timely manner subsequent to their use in preparation for future downturns in the economy.

Illustrative of how these various concepts affect the State's general obligation bond rating, the Rating Agency credit reports released in June 2018 for the State's series 2018A and 2018B General Obligation Bonds highlighted the following strengths.

- Moody's Investors Service:
  - Strong management and governance practices.
  - Continuously positive financial results since the last recession.
  - Commitment to maintaining an affordable debt burden, as evidenced by the state's response to a higher than 7% debt service to revenues ratio in 2011 by borrowing less; the state's commitment to limiting growth in debt is one of several material governance strengths.
  - History of prompt spending cuts in response to revenue shortfalls has been an important aspect of the state's credit profile.
- S&P Global Ratings:
  - Well-diversified and broad-based economic growth that is outpacing that of the nation.
  - Strong financial monitoring and oversight with a history of budget adjustments, mainly through expenditure reductions, to restore fiscal balance; financial management practices are well embedded and likely sustainable.
  - Revenue is diverse, with sales tax and personal income tax each contributing more than 15% of revenues. In addition, the state has significant flexibility to raise revenue with a simple majority vote and can raise taxes and fees to close budget gaps.
  - Proactive management of long-term liabilities through full funding of the state's portion of pension contributions and the creation of other postemployment benefit fund reserves.
  - Additional flexibility provided by continued growth in the revenue shortfall reserve.
- Fitch Ratings:
  - Conservative debt management; carefully managed debt issuance likely to keep carrying costs for long-term liabilities low.
  - Proven willingness and ability to maintain fiscal balance. Georgia's exceptionally strong gap-closing ability during cyclical downturns derives primarily from its superior budget flexibility.

- Broad-based and expanding economy with growth outpacing national trends.
- Personal income tax and sales and use tax together account for approximately three-fourths of the state's general fund receipts with personal income tax making up approximately one-half of total receipts; both are economically sensitive and respond quickly to shifts in the state's economic trajectory.
- Major pension systems covering both state employees [ERS] and teachers [TRS] have benefitted from consistent full actuarial contributions.

Some of the State's weaknesses as cited in the reports included:

- Finances that have been vulnerable in past recessions.
- Liquidity is sufficient to manage normal revenue volatility; pressure, however, could arise in the midst of another large recession, which absent expenditure cuts would consume much of the state's reserves.
- Below average income levels, especially in rural areas of the state.
- Georgia's demographic profile is mixed, with above-average population growth and a median age below the nation's, alongside relatively weaker wealth indicators.

Measuring the Debt Burden

When calculating indebtedness, credit analysts use measures which take into account all debt supported, or serviced, by the issuer's sources of tax revenues, such as income taxes and sales and use taxes; in some cases the debt being supported or serviced will include general obligation debt as well as various leases, GARVEE bonds, and other debt. Such debt is classified as net tax-supported debt. For the State, net tax-supported debt includes all general obligation debt and guaranteed revenue debt, but does not include any revenue bonds not supported by the guarantee of the State; however, the GARVEE bonds are included due to the essential infrastructure nature of the projects. Guaranteed revenue debt is included in the calculation of net tax-supported debt because the guarantee is related to all of the revenues, including taxes, of the State. Revenue bonds which are issued by an instrumentality of the State, but which do not carry the State's explicit guarantee, are not included in the calculation of the State's net tax-supported debt. As described earlier in the Plan, the issuance of revenue bonds by State authorities requires prior approval by the Commission; such approval is granted only after careful evaluation of the dedicated revenue stream that provides the security for these issues. As Authority revenues, these revenues are not included in the State's general treasury revenues and thus can be pledged to the repayment of the debt.

The following table summarizes the State's issued principal amounts for new projects as of December 31, 2018; there remained $238.375 million of general obligation debt authorized which had not been incurred as of that date. (There is no authorized but not incurred guaranteed revenue debt.)

	Total Principal Issued	Outstanding Principal
General Obligation Debt	$27,818,530,000	$9,691,585,000
Guaranteed Revenue Debt	852,715,000	184,035,000
Total State Obligations	$28,671,245,000	$9,875,620,000

Five debt ratios as shown in the following table frequently are used to measure debt burden. These debt ratios provide a means to monitor the relative debt burden level for the State over a period of years and also provide a method of comparison of debt burdens among the various states.

Debt Ratio	**How Ratio is Calculated**
Debt per Capita	Net Tax-supported Debt / State Population
Debt as Percent of Personal Income	Net Tax-supported Debt / Total Personal Income of the State's Population
Debt Service as Percent of State Net Revenues	Annual Debt Service Requirement / Net Revenues of the State
Debt as Percent of Full Valuation of Assessed Property	Net Tax-supported Debt / Full Valuation of All Taxable Property
Debt as Percent of State Gross Domestic Product	Net Tax-supported Debt / State Gross Domestic Product

Credit analysts also examine how fast the debt is being repaid by calculating how much, in percentage terms, of the issuer's total long term debt is retired after 5 and 10 years. Analysts use a standard for this measure of 25 percent retired in 5 years and 50 percent retired in 10 years as being more favorable than slower amortizations. The rating agencies comment favorably about the State's more rapid debt repayment.

All of the ratios described above serve as important tools to track and monitor the impact of the State's debt. The Plan establishes reasonable amounts and peer-group comparable levels for three of the five debt ratios to help maintain triple-A credit ratings, as well as ensuring that the State remains below the maximum allowable debt limit as established by the Constitution.

Furthermore, as the State has issued $1.714 billion in GARVEE bonds from FY 2007 through the date of this Plan to address transportation infrastructure needs (not including bonds issued to refund previously issued debt), and given that the rating agencies differ in their treatment of this debt for their analytical purposes, it also is prudent to analyze the impact that GARVEE debt has on the State's debt burden. As previously mentioned, however, GARVEE bonds are secured solely from federal highway grant revenues and reimbursements and they do not have any legal claim to the full faith and credit of the State; thus they are not general obligation debt or guaranteed revenue debt of the State and are not included in the debt service coverage ratio as defined by the Constitution. As of December 31, 2018 there was $367.905 million of GARVEE bonds outstanding.

The last recession which ended in mid-2009 was quite severe and the ensuing slower than normal economic recovery which followed that recession resulted in dramatically reduced state treasury receipts which were very slow to recover to previous levels; however, the debt service ratio has improved in each year since then. The Plan indicates that setting new authorizations for general obligation debt at $1.2 billion for FY 2020 through FY 2023, along with the recent recovery and projected growth of State treasury receipts, will result in this ratio remaining below the planning limit for the period covered by the Plan.

The maximum debt ratio planning levels utilized in the Plan are shown in the following table.

Debt Ratio Planning Level	Without GARVEEs	With GARVEEs
Debt Service to Prior Year Revenues	7.0%	8.0%
Debt to Personal Income	3.5%	4.0%
Debt per Capita	$1,200	$1,500

Trend in State Debt Ratios

The table shown below presents a historical comparison of the State's net tax-supported indebtedness and debt ratios (note, GARVEE debt is not included in this table).

Historical Debt Ratios							
Fiscal Year Ended June 30	**Debt Outstanding ($ millions)**	**Debt as % of Personal Income**	**Debt per Capita**	**Debt as % of Estimated Full Value**	**Annual Debt Service as % of Prior Year Receipts**	**% of Debt To Be Retired in 5 Years**	**% of Debt To Be Retired in 10 Years**
2014	$9,112.5	2.3%	$906	1.0%	6.3%	38%	71%
2015	9,098.1	2.2	888	1.0	6.3	39	70
2016	9,241.3	2.2	890	1.0	6.0	42	72
2017	9,108.3	2.1	867	0.9	5.5	43	73
2018	9,196.6	2.0	886	0.9	5.1	42	73

During the period FY 2014 through FY 2018, the net amount of debt outstanding increased by $84.1 million and the "Debt as % of Personal Income" ratio decreased to 2.0% from 2.3%. Although the ratio "Debt Service as % of Prior Year Receipts" for FY 2014 and FY 2015 was below the planning level of 7.0%, it still was somewhat elevated primarily due to the significant decline followed by a slow recovery in State revenues which resulted from the severe impact of the 2007-2009 recession on Georgia's economy. As a result of the continued improvement in the State's economy during the last several years, this ratio improved to 5.1% for FY 2018. The percent of debt to be retired in 5 years and in 10 years also improved slightly during this period and the rating agencies view these ratios favorably.

Comparison of Debt Burden to Other Triple-A States

Georgia is one of thirteen states which currently are rated triple-A by all three of the three major rating agencies; however, only the ten states shown below are active issuers of general obligation debt (the states not included are Indiana, Iowa, and South Dakota). To assess the reasonableness of its target debt ratios for the Plan, Georgia has compared its ratios to those of this ratings peer group.

The following table presents the debt ratios for the triple-triple-A states, the group median and average, and also the 50-state median and average. As shown in the following table, Georgia is close to the triple-triple-A average in all of the categories. In this table, Moody's net tax-supported debt also includes GARVEEs, capital leases as reported in the State's CAFR, and

Development Authority of Clayton County revenue bonds issued in 2012 for the State Archives Building. Moody's debt calculations are based on an analysis of calendar year 2017 debt issuance and fiscal year 2017 debt service.

Moody's Comparison of Debt Ratios for Triple-Triple-A States						
State	**Net Tax-Supported Debt Per Capita**	**Ranking Among 50 States**	**Net Tax-Supported Debt as a % of 2016 Personal Income**	**Ranking Among 50 States**	**Net Tax-Supported Debt as a % of 2016 Gross State Domestic Product**	**Ranking Among 50 States**
Georgia	**$986**	**26**	**2.4%**	**25**	**1.94%**	**29**
Delaware	2,587	8	5.5	6	3.48	12
Florida	889	29	2.0	29	2.02	27
Maryland	2,164	11	3.7	15	3.42	13
Missouri	532	38	1.2	40	1.09	40
North Carolina	611	37	1.5	35	1.20	39
Tennessee	312	43	0.7	43	0.63	44
Texas	410	42	0.9	42	0.73	42
Utah	772	31	1.9	30	1.52	31
Virginia	1,515	19	2.9	19	2.60	19
Triple-A Median	831	--	1.7	--	1.36	--
Triple-A Average	1,078	--	2.0	--	1.67	--
50-State Median	987	--	2.3	--	2.05	--
50-State Average	1,477	--	2.9	--	2.57	--

Compiled from Moody's 2018 State Debt Medians

For comparison purposes, Moody's measures the ratios of tax-supported debt service to prior year receipts for all fifty states. Moody's considers Georgia's debt service burden to be in the low to moderate range as well as a key credit strength for the State. As shown in the following table, at 6.4% Georgia's budgetary requirements for debt service to prior year receipts ratio is considered moderate, but it is higher than all but one of the triple-triple-A rated states. This is, in part, because unlike most other states, Georgia devotes a substantial portion of its debt capacity each year to providing significant levels of bond-funded capital outlay grant funds to local school systems throughout the State; for those states which have such a program, most are not as comprehensive in scope as Georgia's program. Also, as Georgia has been one the fastest growing states for the last several decades, it has needed to devote substantial capital outlay funding to meet various infrastructure needs in order to remain economically competitive with other states.

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Moody's Comparison of Debt Ratios for Triple-Triple-A States		
State	**FY 2017 Debt Service to FY 2016 Revenues (%)**	**Ranking among 50 States**
Georgia	**6.4**	**11**
Delaware	5.1	17
Florida	4.4	24
Maryland	7.0	9
Missouri	3.5	31
North Carolina	3.1	34
Tennessee	1.3	45
Texas	2.7	36
Utah	5.3	15
Virginia	4.8	21
Triple-A Median	4.6	--
Triple-A Average	4.4	--
50-State Median*	4.2	--
50-State Average*	4.5	--

Compiled from Moody's 2018 State Debt Medians

Debt Issuance Projections

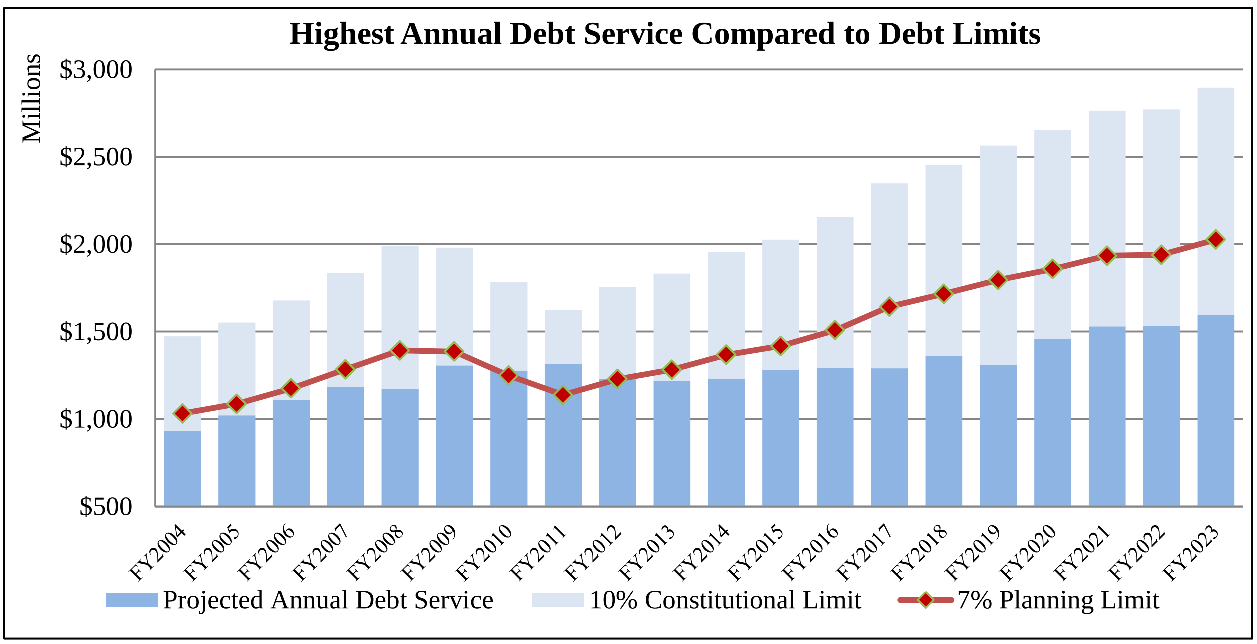
For FY 2019, approved new general obligation debt authorizations totaled approximately $1.184 billion and there was a total of $374.41 million unissued prior years' debt authorizations carried over into FY 2019, for a total of approximately $1.558 billion debt authorizations. In July 2018, the State utilized approximately $1.320 billion of debt authorizations for the issuance of its 2018A and 2018B bonds, leaving $238.375 million of debt authorizations to be carried forward into FY 2020 (unless any of this debt authorization is incurred during the remainder of FY 2019, or is deauthorized prior to its being incurred). New debt authorizations for FY 2020 through FY 2023 are projected at $1.2 billion per year as shown in the following table. The Plan also projects that all currently authorized but unissued debt is shown as being issued in FY 2020 and all new authorizations are issued in the year authorized. As is the usual practice of the State, new debt is expected to be structured to achieve approximately level debt service each fiscal year.

($ Thousands)	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
Prior Year Authorizations Carry Over	$ 275,990	$ 238,375	-	-	-
Current Year 5 Year Bond Authorizations	86,420	250,000	$250,000	$250,000	$250,000
Current Year 10 Year Bond Authorizations	116,250	-	-	-	-
Current Year 20 Year Bond Authorizations	841,435	950,000	950,000	950,000	950,000
Total Projected Issuances	$1,320,095	$1,438,375	$1,200,000	$1,200,000	$1,200,000

Based on the currently outstanding debt, scheduled debt retirements, and projected debt issuance, the following table summarizes the projected debt outstanding at the end of the fiscal year for each year through FY 2023 and the projected annual debt service in each year.

($ Thousands)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Debt at Beginning of Year	$9,196,615	$9,547,290	$10,086,580	$10,337,455	$10,611,345
G.O. & G.R.B. Authorization Utilized	1,320,095	1,438,375	1,200,000	1,200,000	1,200,000
Scheduled Payments/Early Retirements/Refunded bonds/Premium Proceeds	(969,420)	(899,085)	(949,125)	(926,110)	(962,880)
Debt Outstanding at End of Fiscal Year	9,547,290	10,086,580	10,337,455	10,611,345	10,848,465
HADS (Both Issued and Authorized but Unissued)	1,309,360	1,457,931	1,530,450	1,533,982	1,598,529

The following chart shows historical HADS for FY 2004 through FY 2018 and projected HADS for FY 2019 through FY 2023. As mentioned earlier, as part of the active and responsive financial management of the State's finances in response to the decline in State revenues during and after the end of the last recession in mid-2009, and the subsequent slow recovery of State revenues, the HADS ratio exceeded the 7% planning limit and the State reduced new debt authorizations to critical infrastructure projects for several years. As State revenues have gradually recovered, the HADS ratio improved to where it was possible to incrementally increase new authorizations for debt to levels more reflective of the need to fund new projects to be responsive to the challenges created by population and economic growth throughout the State. Furthermore, the HADS ratio now is low enough that should extraordinary events create more needs for critical infrastructure funding, or economic growth be such that there is a need for additional capital project funding, authorizations for new debt and the required highest annual debt service appropriation for those authorizations could be increased in FY 2020 by approximately $400 million without exceeding the HADS ratio planning limit of 7%.



Economic and Demographic Projections

The State economist provides projections of Treasury Receipts, personal income, and assessed and actual valuation of taxable property; the Governor's Office of Planning and Budget provides estimates the future population of the State. These projections are summarized in the following table.

Economic and Demographic Projections								
Fiscal Year	**Treasury Receipts (millions)**	**Year over Year Growth**	**Personal Income (billions)**	**Year over Year Growth**	**Population (millions)**	**Year over Year % Growth**	**Estimated Full Value (billions)**	**Year over Year Growth**
2019	$26,690	4.1%	$480	4.2%	10.766	2.4%	$1,098	3.8%
2020	27,545	3.2	501	4.5	10.895	1.2	1,139	3.7
2021	27,706	0.6	518	3.4	11.024	1.2	1,179	3.5
2022	28,954	4.5	542	4.6	11.153	1.2	1,220	3.5
2023	29,999	3.6	568	4.9	11.282	1.2	1,258	3.1

Projected Interest Rates Assumptions

In analyzing debt issuance levels for the Plan period, the State has made the following assumptions regarding budgeted and projected interest rates for new issues of general obligation debt:

	FY 2019	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
5 Year Debt	5.10%	5.10%	5.10%	5.10%	5.10%
20 Year Debt	5.80%	5.80%	5.80%	5.80%	5.80%

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Impact of Debt Issuance Projections on State Debt Ratios

As can be seen in the following chart, based on the assumptions utilized in the Plan, the authorization of $1.184 billion of new debt in FY 2019 and the projected annual new debt authorizations of $1.2 billion for FY 2020 through FY 2023 will result in projected ratios that are within the Commission's planning levels. Furthermore, the projected ratios indicate that there still is some available margin should any of the growth rate assumptions, or projections regarding the interest rate environment, prove to be too optimistic.

Projected Debt Ratios (General Obligation and Guaranteed Revenue Debt)							
Fiscal Year Ended June 30	**Debt Outstanding (thousands)**	**Debt as % of Personal Income**	**Debt per Capita**	**Debt as % of Estimated Full Value**	**HADS as % of Prior Year Receipts**	**% of Debt Retired in 5 Years**	**% of Debt Retired in 10 Years**
2019	$9,547,290	2.0%	$887	0.9%	5.1%	42%	72%
2020	10,086,580	2.0	926	0.9	5.5	41	71
2021	10,337,455	2.0	938	0.9	5.6	41	71
2022	10,611,345	2.0	951	0.9	5.5	42	70
2023	10,848,465	1.9	962	0.9	5.5	42	70

CONCLUSION

The Plan serves as a guide to the State in ensuring the availability of funding for necessary capital projects required to meet the State's future needs while maintaining the balance between the State's need for capital and the ability and willingness of the State to repay additional debt. In addition, the Plan assists the State in its efforts to preserve triple-A bond ratings from all three rating agencies by assuring the rating agencies that the State can fund the capital projects necessary to sustain its economic growth while still continuing to meet citizen demand for State provided services in an affordable manner. The State has established its maximum limits for the debt ratios and will carefully monitor its debt levels and ratios and adjust debt issuances if the ratios consistently exceed the target levels. The Plan will be updated annually and all assumptions will be revisited and reaffirmed or revised as needed to most accurately and conservatively project the State's debt capacity. The Plan indicates that new bond authorization amounts of $1.2 billion for FY 2020 through 2023 will not cause the State to equal or exceed any of its planning levels for the various ratios measured by the Plan during the period covered by the Plan, even though debt outstanding at the end of each fiscal year covered by the Plan will increase as a result of the increased level of annual authorizations.

Following are tables which summarize the assumptions and resulting debt ratios, both with and without the inclusion of the GARVEE bonds, based on the currently projected debt issuance schedule. The annual debt service amounts reflect actual debt service for existing debt issued as of calendar year end 2018 plus the highest annual debt service ("HADS") for projected new authorizations and current authorized unissued amounts, based on the previously described 10% debt limit dictated by the Constitution. Additional tables present the outstanding general obligation debt, outstanding guaranteed revenue debt, and outstanding revenue debt of State authorities.

Summary of Projected Debt Ratios
General Obligation and Guaranteed Revenue Debt
(000's omitted)

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Principal Outstanding at Beginning of Year	**$ 9,196,615**	**$ 9,547,290**	**$10,086,580**	**$ 10,337,455**	**$10,611,345**
G.O. Bond Authorizations (New) - Projected Issuances	1,044,105	1,200,000	1,200,000	1,200,000	1,200,000
G.O. Bond Authorizations (Prior Year) - Projected Issuances	275,990	238,375			
Projected Principal Payments	(877,575)	(899,085)	(949,125)	(926,110)	(962,880)
Premium Proceeds from General Obligation Issuances	(91,470)				
Refunding Effect (Net) and Early Redemptions	(375)				
Principal Outstanding at End of Year (June 30)	**$ 9,547,290**	**$10,086,580**	**$10,337,455**	**$ 10,611,345**	**$10,848,465**
Total Treasury Receipts (millions $)	26,690	27,545	27,706	28,954	29,999
Population (millions)	10.766	10.895	11.024	11.153	11.282
Personal Income (billions $)	480	501	518	542	568
Property Valuation (billions $)	1,098	1,139	1,179	1,220	1,258
Ratios for Outstanding Principal at the End of the Fiscal Year					
Debt to Personal Income	2.0%	2.0%	2.0%	2.0%	1.9%
Debt per Capita	$887	$926	$938	$951	$962
Debt to Estimated Actual Property Value	0.9%	0.9%	0.9%	0.9%	0.9%
Ratio for 10% Constitutional Limit*					
Highest Annual Debt Service - Issued (through 12/31/18)	$ 1,288,487	$ 1,296,558	$ 1,228,577	$ 1,091,609	$ 1,015,656
Highest Annual Debt Service - Authorized/Unissued	20,873	161,373	301,873	442,373	582,873
Total Highest Annual Debt Service	$ 1,309,360	$ 1,457,931	$ 1,530,450	$ 1,533,982	$ 1,598,529
Debt service to Prior Year Receipts	**5.10%**	**5.46%**	**5.56%**	**5.54%**	**5.52%**

* Highest Annual Debt Service for the 10% Constitutional limit calculation is based on actual issuances as of 12/31/2018 and also includes debt service for projected amounts above that have not been issued as of 12/31/2018.

Summary of Projected Debt Ratios
General Obligation, Guaranteed Revenue, and GARVEE Debt
(000's omitted)

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Principal Outstanding at Beginning of Year	**$ 9,564,520**	**$ 9,791,975**	**$ 10,801,880**	**$ 10,948,880**	**$ 11,180,140**
General Obligation Bond Authorizations - Projected Issuances	1,320,095	1,438,375	1,200,000	1,200,000	1,200,000
GARVEEs - Projected Issuances		600,000			
Projected Principal Payments	(1,000,795)	(1,028,470)	(1,053,000)	(968,740)	(1,008,010)
Premium Proceeds from General Obligation Issuances	(91,470)				
Refunding Effect (Net) and Early Redemptions	(375)				
Principal Outstanding at End of Year	**$ 9,791,975**	**$ 10,801,880**	**$ 10,948,880**	**$ 11,180,140**	**$ 11,372,130**
Total Treasury Receipts (millions $)	26,690	27,545	27,706	28,954	29,999
Estimated Federal Reimbursements (millions $)	1,338	1,361	1,384	1,407	1,431
Total Revenues (millions $)	28,028	28,905	29,090	30,361	31,430
Population (millions)	10.766	10.895	11.024	11.153	11.282
Personal Income (billions $)	480	501	518	542	568
Property Valuation (billions $)	1,098	1,139	1,179	1,220	1,258
Ratios for Outstanding Principal at the End of the Fiscal Year					
Debt to Personal Income	2.0%	2.2%	2.1%	2.1%	2.0%
Debt per Capita	$910	$991	$993	$1,002	$1,008
Debt to Estimated Actual Property Value	0.9%	0.9%	0.9%	0.9%	0.9%
Ratios for Highest Annual Debt Service					
Highest Annual Debt Service - Issued and Authorized Unissued	1,450,954	1,635,529	1,673,935	1,610,554	1,674,958
Debt service to Prior Year Total Revenues	**5.49%**	**5.84%**	**5.79%**	**5.54%**	**5.52%**
Debt service to Current Year Total Revenues	5.18%	5.66%	5.75%	5.30%	5.33%

APPENDIX A

STATE OF GEORGIA

GENERAL OBLIGATION BONDS AND GUARANTEED REVENUE BONDS

DEBT SERVICE SCHEDULES AS OF JUNE 30, 2018

State of Georgia

Debt Service Schedule
For
All Outstanding General Obligation Bonds
As of
June 30, 2018

Fiscal Year	Principal	Interest	Total
2019	$ 833,470,000	$ 377,356,051	$ 1,210,826,051
2020	789,750,000	340,413,570	1,130,163,570
2021	757,015,000	305,165,898	1,062,180,898
2022	683,105,000	271,699,358	954,804,358
2023	636,440,000	242,417,769	878,857,769
2024	612,245,000	215,010,511	827,255,511
2025	573,325,000	189,216,076	762,541,076
2026	552,260,000	163,633,297	715,893,297
2027	564,765,000	139,981,220	704,746,220
2028	503,300,000	116,488,262	619,788,262
2029	475,655,000	94,637,209	570,292,209
2030	405,190,000	74,988,711	480,178,711
2031	368,075,000	58,856,778	426,931,778
2032	351,100,000	44,232,728	395,332,728
2033	313,305,000	31,076,508	344,381,508
2034	223,430,000	19,725,583	243,155,583
2035	168,725,000	12,046,689	180,771,689
2036	116,565,000	6,060,026	122,625,026
2037	66,320,000	2,037,210	68,357,210
Totals	$8,994,040,000	$2,705,043,452	$11,699,083,452

State of Georgia

Debt Service Schedule
For
All Outstanding Guaranteed Revenue Bonds
As of
June 30, 2018

Fiscal Year	Principal	Interest	Total
2019	$ 44,105,000	$ 9,665,250	$ 53,770,250
2020	46,335,000	7,436,250	53,771,250
2021	48,675,000	5,094,500	53,769,500
2022	21,545,000	2,634,375	24,179,375
2023	22,650,000	1,529,500	24,179,500
2024	19,265,000	481,625	19,746,625
Totals	$202,575,000	$26,841,500	$229,416,500

State of Georgia

Combined Debt Service Schedule
For
All Outstanding General Obligation and Guaranteed Revenue Bonds
As of
June 30, 2018

Fiscal Year	Principal	Interest	Total
2019	$ 877,575,000	$ 387,021,301	$ 1,264,596,301
2020	836,085,000	347,849,820	1,183,934,820
2021	805,690,000	310,260,398	1,115,950,398
2022	704,650,000	274,333,733	978,983,733
2023	659,090,000	243,947,269	903,037,269
2024	631,510,000	215,492,136	847,002,136
2025	573,325,000	189,216,076	762,541,076
2026	552,260,000	163,633,297	715,893,297
2027	564,765,000	139,981,220	704,746,220
2028	503,300,000	116,488,262	619,788,262
2029	475,655,000	94,637,209	570,292,209
2030	405,190,000	74,988,711	480,178,711
2031	368,075,000	58,856,778	426,931,778
2032	351,100,000	44,232,728	395,332,728
2033	313,305,000	31,076,508	344,381,508
2034	223,430,000	19,725,583	243,155,583
2035	168,725,000	12,046,689	180,771,689
2036	116,565,000	6,060,026	122,625,026
2037	66,320,000	2,037,210	68,357,210
Totals	$9,196,615,000	$2,731,884,952	$11,928,499,952

State of Georgia

Combined Debt Service Schedule
For
All Outstanding General Obligation and Guaranteed Revenue Bonds
As of
December 31, 2018

Fiscal Year	Principal	Interest	Total
2019	$ 327,955,000	$ 210,997,754	$ 538,952,754
2020	899,085,000	397,472,637	1,296,557,637
2021	871,350,000	357,227,176	1,228,577,176
2022	773,165,000	318,443,727	1,091,608,727
2023	730,615,000	285,040,904	1,015,655,904
2024	706,220,000	253,406,319	959,626,319
2025	624,410,000	224,439,142	848,849,142
2026	605,535,000	196,663,119	802,198,119
2027	620,370,000	170,686,225	791,056,225
2028	561,350,000	144,745,377	706,095,377
2029	536,285,000	120,311,210	656,596,210
2030	455,005,000	98,202,799	553,207,799
2031	420,220,000	79,741,695	499,961,695
2032	405,695,000	62,665,293	468,360,293
2033	370,480,000	46,930,856	417,410,856
2034	282,885,000	33,302,045	316,187,045
2035	230,350,000	23,452,081	253,802,081
2036	180,675,000	14,982,577	195,657,577
2037	133,025,000	8,367,085	141,392,085
2038	69,220,000	3,810,235	73,030,235
2039	71,725,000	1,307,513	73,032,513
Totals	$9,875,620,000	$3,052,195,769	$12,927,815,769

Amounts as shown above include all new bonds issued (2018A and 2018B) and all early retirement transactions during the period of July 1, 2018 through December 31, 2018; FY 2019, however, includes only the remaining scheduled debt service payments for January 2019 through June 2019.

APPENDIX B

DEBT SERVICE SCHEDULES

For

STATE AUTHORITIES

Georgia Environmental Loan Acquisition Corporation

Local Government Loan Securitization Bonds
Series 2011 (Loan Pool)
Debt Outstanding as of June 30, 2018

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$ -	$ 1,989,013	$ 1,989,013
2020	-	1,989,013	1,989,013
2021	-	1,989,013	1,989,013
2022	-	1,989,013	1,989,013
2023	-	1,989,013	1,989,013
2024	-	1,989,013	1,989,013
2025	-	1,989,013	1,989,013
2026	-	1,989,013	1,989,013
2027	-	1,989,013	1,989,013
2028	-	1,989,013	1,989,013
2029	-	1,989,013	1,989,013
2030	-	1,989,013	1,989,013
2031	38,810,000	1,491,759	40,301,759
Total	$ 38,810,000	$ 25,359,909	$ 64,169,909

Note: Amounts shown above may not add precisely due to rounding. Actual interest paid in FY 2019 and future years will be less depending upon the amounts and timing of additional principal redemptions made during FY 2019. Principal redemptions are made as often as monthly based upon revenues received, including loan payoffs.

Georgia Higher Education Facilities Authority

Revenue Bonds
Series 2009, 2010, and 2015 Refunding
Debt Outstanding as of June 30, 2018

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$ 4,925,000	$ 10,036,919	$ 14,961,919
2020	5,645,000	9,790,669	15,435,669
2021	6,120,000	9,536,594	15,656,594
2022	6,530,000	9,230,594	15,760,594
2023	6,920,000	8,904,094	15,824,094
2024	7,270,000	8,558,094	15,828,094
2025	7,630,000	8,211,013	15,841,013
2026	8,010,000	7,840,381	15,850,381
2027	8,345,000	7,506,856	15,851,856
2028	8,715,000	7,160,238	15,875,238
2029	9,120,000	6,763,456	15,883,456
2030	9,590,000	6,305,269	15,895,269
2031	10,085,000	5,822,044	15,907,044
2032	10,560,000	5,351,719	15,911,719
2033	11,085,000	4,847,894	15,932,894
2034	11,625,000	4,318,544	15,943,544
2035	12,200,000	3,762,794	15,962,794
2036	12,790,000	3,179,019	15,969,019
2037	13,415,000	2,560,225	15,975,225
2038	14,075,000	1,910,563	15,985,563
2039	14,770,000	1,228,431	15,998,431
2040	6,700,000	511,956	7,211,956
2041	4,220,000	200,450	4,420,450
Total	$ 210,345,000	$ 133,537,813	$ 343,882,813

Note: Due to rounding to the nearest dollar, amounts may not add precisely.

Georgia Housing and Finance Authority
Debt Outstanding as of June 30, 2018
(Under the 1976 Resolution)

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$ 36,815,000	$ 43,954,402	$ 80,769,402
2020	38,710,000	43,246,105	81,956,105
2021	39,955,000	42,356,214	82,311,214
2022	40,430,000	41,324,177	81,754,177
2023	37,650,000	40,235,460	77,885,460
2024	36,330,000	39,205,499	75,535,499
2025	37,230,000	38,169,765	75,399,765
2026	35,260,000	36,992,474	72,252,474
2027	33,360,000	35,939,416	69,299,416
2028	39,045,000	34,843,658	73,888,658
2029	44,200,000	33,505,150	77,705,150
2030	47,335,000	31,956,654	79,291,654
2031	48,110,000	30,384,331	78,494,331
2032	49,135,000	28,768,848	77,903,848
2033	51,955,000	27,092,152	79,047,152
2034	55,985,000	25,296,035	81,281,035
2035	58,220,000	23,248,524	81,468,524
2036	57,015,000	21,231,359	78,246,359
2037	57,970,000	19,238,956	77,208,956
2038	57,085,000	17,171,698	74,256,698
2039	57,355,000	15,147,091	72,502,091
2040	60,410,000	13,080,234	73,490,234
2041	59,235,000	10,927,480	70,162,480
2042	51,695,000	8,826,327	60,521,327
2043	43,160,000	7,151,143	50,311,143
2044	47,150,000	5,427,866	52,577,866
2045	33,905,000	3,848,676	37,753,676
2046	29,125,000	2,606,438	31,731,438
2047	24,575,000	1,519,006	26,094,006
2048	18,645,000	558,288	19,203,288
2049	2,585,000	51,700	2,636,700
Total	$ 1,329,635,000	$ 723,305,126	$ 2,052,940,126

Lake Lanier Islands Development Authority

Revenue Bonds and GEFA Loan

Debt Outstanding as of June 30, 2018

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$ 1,481,552	$ 653,875	$ 2,135,427
2020	1,545,792	589,635	2,135,427
2021	1,612,900	522,528	2,135,427
2022	1,683,005	452,422	2,135,427
2023	1,756,247	379,180	2,135,427
2024	1,832,769	302,658	2,135,427
2025	1,912,724	222,703	2,135,427
2026	1,996,269	139,158	2,135,427
2027	966,899	67,470	1,034,369
2028	787,983	26,174	814,157
Total	$ 15,576,139	$ 3,355,804	$ 18,931,942

Note: Amounts as shown do not add precisely due to rounding.

State Road and Tollway Authority
Guaranteed Revenue Refunding Bonds, Series 2011A, 2011B, and 2016
Debt Outstanding as of June 30, 2018

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$ 44,105,000	$ 9,665,250	$ 53,770,250
2020	46,335,000	7,436,250	53,771,250
2021	48,675,000	5,094,500	53,769,500
2022	21,545,000	2,634,375	24,179,375
2023	22,650,000	1,529,500	24,179,500
2024	19,265,000	481,625	19,746,625
Total	$ 202,575,000	$ 26,841,500	$ 229,416,500

State Road and Tollway Authority
GARVEE Bonds Series 2008, 2009, 2017, and 2017 Refunding
Debt Outstanding as of June 30, 2018

Fiscal Year	Principal	Interest	Annual Debt Service
2019	$123,220,000	$18,374,750	$141,594,750
2020	129,385,000	12,213,750	141,598,750
2021	68,305,000	5,744,500	74,049,500
2022	4,930,000	2,338,800	7,268,800
2023	5,170,000	2,092,300	7,262,300
2024	5,435,000	1,833,800	7,268,800
2025	5,695,000	1,573,000	7,268,000
2026	5,980,000	1,288,250	7,268,250
2027	6,275,000	989,250	7,264,250
2028	6,590,000	675,500	7,265,500
2029	6,920,000	346,000	7,266,000
Total	$367,905,000	$47,469,900	$415,374,900

State Road and Tollway Authority

Northwest Corridor Project Toll Revenue Bonds (TIFIA Second Lien Bonds)
Projected Debt Service Schedule as of June 30, 2018 (1)

Fiscal Year (2)	Principal (3)	Interest (3)	Annual Debt Service
2019 - 2022	$ -	$ -	$ -
2023	-	12,877,706	12,877,706
2024	-	12,895,443	12,895,443
2025	1,222,125	12,849,751	14,071,876
2026	2,433,251	12,809,753	15,243,004
2027	3,720,664	12,705,686	16,426,350
2028	5,198,298	12,567,894	17,766,192
2029	6,705,776	12,322,562	19,028,338
2030	8,468,685	12,069,286	20,537,971
2031	8,891,138	11,744,511	20,635,649
2032	9,205,207	11,419,751	20,624,958
2033	9,619,912	11,035,890	20,655,802
2034	10,003,702	10,683,137	20,686,839
2035	10,405,652	10,300,548	20,706,200
2036	10,812,753	9,915,870	20,728,623
2037	11,285,948	9,474,879	20,760,827
2038	11,703,568	9,056,364	20,759,932
2039	12,190,853	8,608,086	20,798,939
2040	12,667,441	8,152,845	20,820,286
2041	13,121,573	7,646,455	20,768,028
2042	13,612,678	7,155,350	20,768,028
2043	14,133,486	6,634,542	20,768,028
2044	14,666,017	6,102,011	20,768,028
2045	15,243,290	5,524,738	20,768,028
2046	15,818,523	4,949,505	20,768,028
2047	16,423,725	4,344,303	20,768,028
2048	17,047,185	3,720,843	20,768,028
2049	17,708,821	3,059,207	20,768,028
2050	18,381,814	2,386,214	20,768,028
2051	19,085,085	1,682,943	20,768,028
2052	19,814,208	953,820	20,768,028
2053	10,189,781	194,152	10,383,933
Total	$ 339,781,159	$ 255,844,045	$ 595,625,204

(1) The TIFIA Second Lien Bonds closed on November 14, 2013; through FY 2018 there were three draws on the TIFIA loan totaling approximately $211.8 million.

(2) Principal and interest amounts reflect required deposits of toll revenues to the TIFIA debt service fund during each fiscal year. Principal is to be paid each July 1 and interest is to be paid each January 1 and July 1 starting in FY 2023.

(3) The TIFIA loan amount is projected to be $275,000,000. Pursuant to the TIFIA loan agreement, interest on draws of the loan accruing through July 1, 2022 will be deferred and added to the outstanding principal balance. The total principal as shown includes the loan amount of $275,000,000 plus deferred interest projected to be $64,781,159. The principal amount of the TIFIA loan, the deferred interest and the payments of principal and interest may change based on the actual amount and timing of loan proceeds disbursed by TIFIA. The TIFIA loan amount cannot exceed $275,000,000. TIFIA principal may be prepaid from excess toll revenues after meeting required payments and deposits.

State Road and Tollway Authority
I-75 South Express Lanes Toll Revenue Bonds
Debt Service Schedule as of June 30, 2018

Fiscal Year	Principal*	Interest	Annual Debt Service
2019	$ -	$ -	$ -
2020	848,231	-	848,231
2021	1,305,314	-	1,305,314
2022	1,657,838	-	1,657,838
2023	2,049,876	-	2,049,876
2024	2,405,000	-	2,405,000
2025	396,144	2,383,850	2,779,994
2026	743,769	2,383,850	3,127,619
2027	1,134,118	2,383,850	3,517,968
2028	1,138,108	2,383,850	3,521,958
2029	1,119,347	2,383,850	3,503,197
2030	1,341,865	2,383,850	3,725,715
2031	1,343,849	2,383,850	3,727,699
2032	1,344,138	2,383,850	3,727,988
2033	1,342,816	2,383,850	3,726,666
2034	1,340,000	2,383,850	3,723,850
2035	1,345,000	2,383,850	3,728,850
2036	1,435,000	2,289,700	3,724,700
2037	1,540,000	2,189,250	3,729,250
2038	1,645,000	2,081,450	3,726,450
2039	1,760,000	1,966,300	3,726,300
2040	1,885,000	1,843,100	3,728,100
2041	2,015,000	1,711,150	3,726,150
2042	2,155,000	1,570,100	3,725,100
2043	2,305,000	1,419,250	3,724,250
2044	2,470,000	1,257,900	3,727,900
2045	2,645,000	1,085,000	3,730,000
2046	2,825,000	899,850	3,724,850
2047	3,025,000	702,100	3,727,100
2048	3,210,000	490,350	3,700,350
2049	3,795,000	265,650	4,060,650
Total	$ 53,565,413	$ 45,993,500	$ 99,558,913

*Principal consists of both Capital Appreciation Bonds (which do not pay interest) and Convertible Capital Appreciation Bonds (which do not pay interest until they convert to current interest paying bonds on June 1, 2024). No debt service payments are due prior to FY 2020.

STATE OF GEORGIA

Georgia State Financing and Investment Commission

Financing and Investment Division

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