



GREAT LAKES WATER AUTHORITY

Great Lakes Water Authority Debt Management Policy

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Introduction

The Great Lakes Water Authority (“GLWA”) is an independent Authority of the State of Michigan. GLWA was formed on November 26, 2014 by the City of Detroit (the “City”), the Charter County of Wayne, the County of Oakland, and the Charter County of Macomb (collectively, the “Incorporating Municipalities”), pursuant to Act No. 233, Public Acts of Michigan, 1955, as amended, in order to lease the Leased Sewer Facilities and the Leased Water Facilities and to operate the Regional Sewer System and the Regional Water System and maintain the Leased Sewer Facilities and the Leased Water Facilities pursuant to separate leases of the respective facilities, between the City and GLWA. Pursuant to the Lease, GLWA has assumed all of the City’s obligations related to the Regional Sewer System, including, but not limited to, the City’s obligations to pay debt service on all of the City’s Department of Water and Sewerage (“DWSD”) Water and Sewer Bonds.

Purpose

To create and maintain a high quality debt management program, the GLWA has adopted the guidelines and policies set forth in this document titled “Debt Management Policy” (the “Policy”). The purpose of creating the Policy is to establish and codify the objectives and practices for debt management for GLWA and to assist parties in understanding GLWA’s approach to debt management.

The Policy is intended to guide current and future decisions related to debt issued by GLWA. GLWA has the right to waive or modify any of the policies included herein but requires approval of the GLWA Board.

Since the guidelines contained in the Policy require regular updating in order to maintain relevance and to respond to the changes inherent in the capital markets and the water and sewer industry, GLWA plans to revisit the Policy from time to time.

Policy Statement

This policy shall govern the issuance and management of all bonds and other forms of indebtedness of the GLWA, together with any credit, liquidity, or other security instruments and agreements that may be executed in connection with the issuance of bonds and other forms of indebtedness. The Policy formally establishes parameters for issuing debt and managing a debt portfolio which considers GLWA’s specific capital improvement needs, ability to repay financial obligations, and the existing legal, economic, financial and debt market conditions.

By implementing this policy, GLWA expects to realize financial benefits such as debt service savings and efficiencies.

Goals & Objectives

Debt policies and procedures are tools which ensure that financial resources are adequate to meet GLWA’s long-term planning objectives. In addition, the Policy helps to ensure that financings undertaken by GLWA satisfy certain clear objective standards which allow GLWA to protect its financial resources in order to meet its long-term capital needs. The adoption of clear and comprehensive financial policies enhances the internal financial management of GLWA.

Specifically, the policies outlined in this document are intended to assist in the following:

1. Promote cooperation and coordination with all stakeholders in the financing and delivery of services by:
 - Seeking the lowest cost of capital reasonably available and minimizing financing costs for capital projects and other debt issuances.
 - Establishing criteria to determine use of financing sources (Long and Short-Term debt, Pay-As-

- You-Go (PAYGO) financing, grants and other Alternative Forms of Financing).
- Evaluating debt issuance options including the amount and type of debt.
 - Minimizing the use of unplanned, Short-Term cash flow borrowings by maintaining adequate working capital and authorizing the minimum amount required to offset mismatches between available cash and cash outflows determined by cash flow analysis.
2. Promote sound financial management to maximize and best utilize future debt capacity by:
- Maximizing administrative and operating flexibility.
 - Minimizing Legal and Financial Risk to current and future budgets.
 - Protecting GLWA's credit ratings in order to maintain access, on the best available terms, to local, regional and national credit markets.
 - Maintaining an appropriate level of operating cash reserves.
 - Maintaining reasonable and justifiable levels of rates and fees that address the current and future needs of stakeholders.
 - Improving the quality of decisions and parameters for justification on debt structure

Types of Debt

When GLWA determines that the use of debt is appropriate, the following criteria will be utilized to evaluate the type of debt to be issued.

1. **Long-Term Debt.** GLWA may issue long-term debt (revenue bonds) where it is deemed that capital improvements will not be financed from current revenues. Long-term borrowing will not be used to finance current operations or normal maintenance. Long-term debt will be self-supporting and structured such that financial obligations do not exceed the expected useful life of the project.
2. **State Revolving Fund Loan.** GLWA will seek to maximize its borrowing through available State Revolving Fund Loan programs, in which subsidized interests provide significant debt service savings to GLWA. Such program participation generally involves Long-Term Debt with a fixed rate through the Michigan Finance Authority.
3. **Short-Term Debt.** Short-term borrowing may be utilized subject to the following policies:
 - a) **Bond Anticipation Notes (BANs)** may be issued instead of capitalizing interest to reduce the debt service during the construction period of a project or facility. The BANs may not mature more than the later of 3 years from the date of issuance or will mature 60 days after the expected date of issuance of the long-term municipal security that will finance the project or facility.
 - d) **Other Short-Term Debt**, including commercial paper notes, may be used when it provides an interest rate advantage or as interim financing until market conditions are more favorable. GLWA will determine and utilize the least costly method for short-term borrowing. GLWA may issue short-term debt when there is a defined repayment source or amortization of principal.
4. **Lease Purchase Debt.** Lease purchase debt, including certificates of participation, may be considered as an alternative to long-term vendor leases. Such debt will be subject to annual appropriation. In order to reduce the cost of lease borrowing and to improve control over leases, GLWA may adopt a master lease program.
5. **Variable Rate Debt.** To maintain a predictable debt service burden, GLWA may give preference to debt that carries a fixed interest rate. GLWA, however, may consider variable rate debt. The percentage of variable rate debt outstanding (excluding debt which has been converted to synthetic fixed rate debt) may not exceed 20% of GLWA's total outstanding debt. Net variable rate exposure

is calculated by including all variable rate debt, and then excluding variable rate bonds hedged by interest rate swaps in a synthetic fixed rate structure or by GLWA short-term assets earning variable interest income.

The following circumstances may result in the consideration of issuing variable rate debt:

- a) *High Interest Rates.* Interest rates are above historical averages.
- b) *Variable Revenue Stream.* The revenue stream for repayment is variable, and is anticipated to move in the same direction as market-generated variable interest rates, or the dedication of revenues allows capacity for variability.
- c) *Adequate Safeguards Against Risk.* Financing structure and budgetary safeguards are in place to prevent adverse impacts from interest rate shifts; such structures could include, but are not limited to, interest rate caps and short-term cash investments in GLWA's General Fund.
- d) *Registered Municipal Advisor Analysis.* An analysis from GLWA's Registered Municipal Advisor evaluating and quantifying the risks and returns involved in the variable rate financing and recommending variable rate as the lowest cost option.
- e) *As a Component to Synthetic Fixed Rate Debt.* Variable rate bonds may be used in conjunction with a financial strategy, which results in synthetic fixed rate debt.

Prior to Issuance

Prior to issuing debt, GLWA will establish the criteria to determine how the proposed sources of funding will impact current and future budgets and identify how the costs will be allocated.

1. **Identify Projects to be Funded.** To the extent possible, GLWA should annually identify projects within its 5 year Capital Improvement Plans ("CIP") and determine the funding source for each project. In order to develop a funding plan, GLWA should:
 - a) Determine the timing and amount of each project to be funded;
 - b) Determine if the project is a GLWA common to all expense, GLWA customer specific or DWSD-R specific project; and
 - c) Develop a funding analysis which will allocate the project costs based on the criteria above and allocate debt service payments accordingly.
2. **DWSD-R Specific Projects.** Prior to issuing bonds for DWSD-R specific projects, an independent analysis will be performed by an outside or mutually agreed upon party to demonstrate the ability of the DWSD-R to repay the estimated debt service payments or meet the annual revenue financed capital allocation.
3. **Funding Sources.** Establishing criteria to determine what funding sources, such as long and short-term debt, revenue financed capital, grants and other alternative forms of funding, best meet the budget requirements of GLWA.

Methods of Issuance

GLWA will determine the method of issuance on a case-by-case basis.

1. **Competitive Sale.** In a competitive sale, GLWA's bonds will be awarded to the bidder providing the lowest true interest cost as long as the bid adheres to the requirements set forth in the official notice of sale.

2. **Negotiated Sale.** GLWA recognizes that certain securities are best sold through negotiation. For example, GLWA may be best served until its credit is fully established, and it has a financial history to use a negotiated sale method as the initial financings will require a strong pre-marketing effort. It is expected that all of GLWA's securities will be sold on a negotiated basis for at least a two to three year period after the initial transition to the GLWA credit structure.
3. **Private Placement.** From time to time GLWA may elect to privately place its debt. Such placement may only be considered if this method is demonstrated to result in a cost savings to GLWA relative to other methods of debt issuance.

Bond Structure

GLWA will establish all terms and conditions relating to the issuance of bonds, and will invest all bond proceeds pursuant to the terms of GLWA's Investment Policy. To the extent that GLWA issues bonds to fund the DWSD-R capital program, GLWA will identify the portion of any borrowing that is allocable to the DWSD-R system. GLWA will work in coordination with DWSD-R on the bond structuring elements of any borrowing for the DWSD-R local system, and will assist in the ongoing administration of the debt allocation.

Unless otherwise authorized by GLWA, the following will serve as bond requirements:

1. **Term.** All capital improvements financed through the issuance of debt will be financed for a period not to exceed the useful life of the improvements, but in no event will the term exceed forty (40) years.
2. **Capitalized Interest.** From time to time certain financings may benefit from the use of capitalized interest from the issuance date until GLWA has beneficial use and/or occupancy of the financed project. Interest may not be funded (capitalized) beyond three years or a shorter period if further restricted by statute. Interest earnings may, at GLWA's discretion, be applied to extend the term of capitalized interest but in no event beyond the term statutorily authorized.
3. **Debt Service Structure.** Debt issuance will be planned to achieve relatively level debt service while still matching debt service to the useful life of facilities. GLWA will avoid the use of bullet or balloon maturities except in those instances where these maturities serve to make existing overall debt service level.
4. **Call Provisions.** In general, GLWA's securities will include a call feature, which is no later than 10.5 years from the date of delivery of the bonds unless recommended by GLWA's registered municipal advisor and approved by bond counsel. GLWA will avoid the sale of non-callable bonds absent careful evaluation by GLWA with respect to the value of the call option.
5. **Original Issue Discount and Premium Bonds.** Discount and premium bonds are permitted if GLWA determines that such discount or premium bonds, including the impact on call option value, will result in a lower interest cost on the bonds.
6. **Debt Service Reserve Fund (the "DSRF"):** GLWA will consider providing a DSRF as market conditions dictate, if a funded DSRF will reduce the overall borrowing cost of GLWA. A DSRF can be established to support each individual series of bonds or as a common reserve that can support more than one series of bond's Debt Service. The DSRF may be funded with bond proceeds at the time of issuance, cash, Letter of Credit, or Surety Bonds, as permitted by law.
7. **Derivative Structures.** GLWA may not use derivative structures unless the Authority Board approves a separate policy related to the management of such derivative structures. Such policy will establish the authority and parameters for any use of derivatives by GLWA.

Refinancing Outstanding Debt

GLWA's Chief Financial Officer with assistance from GLWA's Registered Municipal Advisor will have the responsibility to analyze outstanding bond issues for refunding opportunities. GLWA will consider the following issues when analyzing possible refunding opportunities:

1. **Debt Service Savings.** GLWA establishes a minimum present value savings threshold of 2.5% of the refunded bond principal amount. The present value savings will be net of all costs related to the refinancing. If present value savings are less than 2.5%, GLWA may consider the option value captured as a percent of total savings. If the present value savings are less than 2.5%, GLWA may opt to complete a refunding. A structure which takes savings on an upfront or deferred basis must be explicitly approved by GLWA. Aggregate debt service installment requirements for both the additional bonds and the current bonds of equal and higher priority lien must be less in the current fiscal year and each fiscal year thereafter until maturity following the refunding.
2. **Restructuring.** GLWA will refund debt when it is in the best financial interest of GLWA to do so. Such refunding will be limited to restructuring to meet unanticipated revenue expectations, achieve cost savings, mitigate irregular debt service payments, release reserve funds or remove unduly restrictive bond covenants.
3. **Term of Refunding Issues.** GLWA will refund bonds within the term of the originally issued debt. However, GLWA may consider maturity extension, when necessary to achieve a desired outcome, provided that such extension is legally permissible. GLWA may also consider shortening the term of the originally issued debt to realize greater savings. The remaining useful life of the financed facility and the concept of inter-generational equity should guide this decision.
4. **Escrow Structuring.** GLWA will utilize the least costly securities available in structuring refunding escrows. A certificate will be provided by a third party agent, who is not a broker-dealer stating that the securities were procured through an arms-length, competitive bid process (in the case of open market securities), that such securities were more cost-effective than State and Local Government Obligations (SLGS), and that the price paid for the securities was reasonable within Federal guidelines. Under no circumstances may an underwriter, agent or Registered Municipal Advisor sell escrow securities to GLWA from its own account.
5. **Arbitrage.** GLWA will take all necessary steps to optimize escrows and to avoid negative arbitrage in its refundings. Any resulting positive arbitrage will be rebated as necessary according to Federal guidelines.

Underwriter Selection

Senior Manager Selection. GLWA will select the senior manager for a proposed negotiated sale. The selection criteria will include, but not be limited to, the following:

- The firm's ability and experience in managing complex transactions
- Prior knowledge and experience with GLWA, if applicable
- The firm's willingness to risk capital and demonstration of such risk
- Quality and experience of personnel assigned to GLWA's engagement
- Financing plan presented
- Underwriting fees

Co-Manager Selection. Co-managers will be selected on the same basis as the senior manager. In addition to their qualifications, co-managers appointed to specific transactions will be a function of transaction size and the necessity to ensure maximum distribution of GLWA's bonds.

Selling Groups. GLWA may establish selling groups in certain transactions in order to broaden the reach to potential investors.

Underwriter's Counsel. In any negotiated sale of GLWA debt in which legal counsel is required to represent the underwriter, the appointment will be made by the Senior Manager while also being acceptable to GLWA.

Underwriter's Discount. GLWA's Registered Municipal Advisor will evaluate the proposed underwriter's discount against comparable issues in the market. If there are multiple underwriters in the transaction, the Chief Financial Officer will determine the allocation of liabilities and fees among the underwriters, with input from GLWA's Registered Municipal Advisor.

All fees and allocation of liability and fees will be determined prior to the sale date; a cap on management fee (if any), expenses and underwriter's counsel will be established and communicated to all parties by the Chief Financial Officer or GLWA's Registered Municipal Advisor. The senior manager will submit an itemized list of expenses charged to members of the underwriting group. Any additional expenses must be substantiated.

Evaluation of Underwriter Performance. GLWA will evaluate each bond sale after completion to assess the following: costs of issuance including underwriters' compensation, pricing of the bonds in terms of the overall interest cost and on a maturity-by-maturity basis, the distribution of bonds, and sales credits.

Following each sale, the Chief Financial Officer or GLWA's Registered Municipal Advisor will provide a report to the Audit Committee on the results of the sale.

Syndicate Policies. For each negotiated transaction, the Chief Financial Officer will, with input and advice from GLWA's Registered Municipal Advisor, approve a syndicate policy that will describe the designation policies governing the upcoming sale.

Designation Policies. To encourage the pre-marketing efforts of each member of the underwriting team, orders for GLWA's bonds should be net designated whenever practical, unless otherwise expressly stated. GLWA will require the senior manager to:

- Equitably allocate bonds to other managers and the selling group
- Comply with MSRB regulations governing the priority of orders and allocations
- Within 10 working days after the sale date, submit to the Chief Financial Officer, and GLWA's Registered Municipal Advisor, a detail of orders, allocations and other relevant information pertaining to GLWA's sale

Consultants

Registered Municipal Advisor. GLWA will retain a Registered Municipal Advisor (or advisors) to provide GLWA with a comprehensive analysis of options available to GLWA. The Financial Advisor(s) will advise on the structuring and execution of all debt and debt-related transactions and provide other services as defined by approved contracts.

Bond Counsel. GLWA will retain Bond Counsel to issue an opinion as to the legality and tax status of all debt obligations. GLWA may also seek the advice of Bond Counsel on other types of financing and on any other questions involving local, state or federal law. Bond Counsel is also responsible for the preparation of the resolution authorizing the issuance of obligations, certain bond and closing documents necessary for the execution of the debt issuance, and the performance of other services as defined by contract approved by GLWA.

Conflicts of Interest. GLWA requires that its consultants and advisors provide objective advice and analysis, maintain the confidentiality of GLWA financial plans, and be free from any conflicts of interest.

Disclosure by Financing Team Members. All financing team members will be required to provide full and complete disclosure, relative to agreements with other financing team members and outside parties. The extent of disclosure may vary depending on the nature of the transaction. However, in general terms, no agreements will be permitted which could compromise the firm's ability to provide independent advice which is solely in GLWA's best interests or which could reasonably be perceived as a conflict of interest.

Compliance with Master Bond Ordinances

GLWA adopted its Master Water Bond Ordinance and Master Sewer Bond Ordinance on October 7, 2015 (the "Master Ordinances") which sets forth the security for its bonds and binds GLWA by certain covenants. It is GLWA's intention to comply with the provisions of its Master Ordinances. Two covenants in particular which impact GLWA's debt management are the Fixing and Revising Rates; Rate Covenant (Section 604) and the Additional Bonds (Section 207).

Rate Covenant: The Master Bond Ordinances contain a covenant to fix, charge and collect, or cause to be fixed, charged and collected, rates, fees and charges for the use and operation of the Sewage Disposal or Water System. Such rates, fees and charges shall be fixed and revised from time to time as may be expected to be necessary to produce the greater of:

1. The amounts required:
 - a) To provide for the payment of Operation and Maintenance Expenses of the Sewage Disposal System or Water System; and
 - b) To provide for the payment of all Debt Service Installment Requirements coming due during the Fiscal Year of calculation; and
 - c) To provide for the creation and maintenance of reserves therefor as required by the Master Bond Ordinance; and
 - d) To provide for the payment of the Lease Payment; and
 - e) To provide for the deposit to the WRAP Fund; and
 - f) To repay any withdrawals from the Extraordinary Repair and Replacement Fund; and
 - g) To provide for such other expenditures and funds as the Master Bond Ordinances may require; and
2. Amounts so that the Rate Covenant Debt Service Coverage shall not be less than the Required Coverage (as defined below); and
3. Amounts required by Act 94.

The coverage requirements for determining the Required Coverage under the Master Bond Ordinances are the following percentages of Net Revenues divided by the Maximum Annual Debt Service requirements, and will not be less than the following:

<u>Priority of GLWA Bonds:</u>	<u>Percentage:</u>
Senior Lien GLWA Bonds	120%
Second Lien GLWA Bonds	110%
SRF Junior Lien GLWA Bonds and Pension Junior Lien GLWA Bonds	100%

Additional Bonds: Before issuing new debt which will be paid from Net Revenues, GLWA must demonstrate compliance with the provisions of Section 207 of the Master Ordinances, entitled the "Additional Bonds."

Under the Master Bond Ordinances, GLWA may not incur any obligations payable from Pledged Assets except for GLWA Bonds, and no obligations of GLWA may be secured by a lien on Pledged Assets except as provided in the Sewer Master Bond Ordinance.

Coverage Requirements: Under the Master Bond Ordinances, prior to or concurrently with the issuance of GLWA Additional Bonds of any Priority of Lien, GLWA shall calculate a number equal to Projected Net Revenues in the then current or the next succeeding Fiscal Year, or Historical Net Revenues, all as determined by GLWA, divided by Maximum Annual Debt Service for such Priority of Lien and any higher

Priority of Lien (the “Additional Bonds Debt Service Coverage”). GLWA may elect to determine Additional Bonds Debt Service Coverage on the basis of Projected Net Revenues or Historical Net Revenues. In determining Projected Net Revenues, GLWA shall engage the services of and be guided by a professionally qualified person, firm or corporation nationally recognized in the municipal water supply industry and of favorable reputation for skill and experience in performing the duties of providing consulting services to municipal water supply systems comparable in size and function to the Sewage Disposal System, including setting of rates and charges for the use of such systems (a “System Consultant”). In determining Historical Net Revenues, GLWA may engage the services of and be guided by a System Consultant if it is relying on audited financial statements without augmenting Net Revenues on the basis of changes in rates, fees or charges or repairs, extensions, enlargements, improvements, acquisitions, extensions or connections to the Sewage Disposal System. In determining Historical Net Revenues, GLWA shall engage the services of and be guided by a System Consultant if it is augmenting Net Revenues on such a basis.

General Authority: Under the Master Bond Ordinance, GLWA may issue GLWA Bonds of any Priority of Lien (the “GLWA Additional Bonds”) for repairs, extensions, enlargements, and improvements to the Regional Sewer System or the Local Sewer System (including repaying amounts withdrawn from the Extraordinary Repair and Replacement Reserve Fund for the Regional Water System or the Local Water System), and/or refunding all or a part of any Outstanding GLWA Bonds and paying the costs of issuing such GLWA Additional Bonds, including deposits, if any, to be made to any Reserve Account established or to be established for such GLWA Additional Bonds or any other GLWA Bonds, if, but only if GLWA shall certify that the Additional Bonds Debt Service Coverage for each Priority of Lien (regardless of the Priority of Lien of the GLWA Additional Bonds) is not less than the Required Coverage. The determination in a Series Ordinance that the Additional Bonds Debt Service Coverage for each Priority of Lien is not less than the Required Coverage shall be conclusive.

Alternate Test for Refundings: Under the Master Bond Ordinances, GLWA may issue GLWA Bonds of any Priority of Lien, including a portion of a Series of GLWA Bonds, without regard to the above requirements for refunding all or part of GLWA Bonds then Outstanding and paying costs of issuing such GLWA Additional Bonds, including deposits which may be made to any Reserve Account established or to be established for such GLWA Additional Bonds or any other GLWA Bonds if, but only if the combined Debt Service required to be set aside in the Bond Fund in the current Fiscal Year and each Fiscal Year thereafter until maturity on (A) the GLWA Additional Bonds and (B) giving effect to the refunding, all Outstanding unrefunded GLWA Bonds of equal and higher Priority of Lien, is less than the combined Debt Service required to be set aside in the Bond Fund in the current Fiscal Year and each Fiscal Year thereafter until maturity on all equal and higher Priority of Lien GLWA Bonds, without giving effect to the refunding.

Credit Quality and Credit Enhancement

GLWA’s debt management activities will be conducted to achieve, maintain and improve its credit ratings. GLWA will seek to obtain investment grade credit ratings on all of its borrowings to the extent possible, consistent with GLWA’s financing objectives. GLWA will also strive to achieve not less than “A” category ratings from all three national rating agencies – Fitch, Moody’s and Standard & Poor’s for both its senior and second lien borrowings. In general, GLWA will intend to use ratings from at least two of the three national rating agencies for its debt issuance in the capital markets. Under special circumstances, however, GLWA will consider certain financial transactions with no ratings, if approved by the Board and recommended by the Chief Financial Officer with the advice of its Registered Municipal Advisor.

GLWA will consider the use of credit enhancement to fixed rate and variable rate debt on a case-by-case basis, evaluating the economic benefit versus cost for each case. Only when clearly demonstrable savings can be shown may an enhancement be considered. GLWA may purchase municipal bond insurance when such purchase is deemed prudent and advantageous for its fixed rate debt issuance, as documented by GLWA’s Registered Municipal Advisor or senior managing underwriter. GLWA will also consider the remaining bond insurance capacity as part of its consideration of utilization of credit enhancement for fixed rate bonds.

For variable rate debt transactions that require credit enhancement (such as Variable Rate Demand Bonds), GLWA will consider credit enhancement products such as a Letter of Credit, that are typically required by

rating agencies to achieve the highest short-term ratings. GLWA will consider the cost and marketability implications of each variable rate product and supporting credit enhancement product prior to each transaction on a case-by-case basis. In addition, to manage business and counterparty risk, GLWA will consider a diversity of credit enhancement providers. Prior to entering into agreements with a letter of credit, liquidity facility or other credit enhancement, GLWA or its advisor will prepare and distribute a request for qualifications to qualified banks which includes terms and conditions that are acceptable to GLWA.

Documentation

The completion of a debt transaction requires the Financing Team to develop, review, and adopt/execute several documents. While not exhaustive, the following represents the key documents in a debt transaction:

1. *Authorizing Resolution*: A document, approved by the Board that authorizes GLWA to issue the bonds subject to several financial and other parameters as set forth in Authorizing Resolution as well as the Indenture and other Board Resolutions. Bond Counsel is the primary drafter of this document.
2. *Supplemental Indenture*: A document, approved by the Board that amends the terms of the Indenture to incorporate the provisions of the additional debt being issued. Bond Counsel is the primary drafter of this document.
3. *Official Statement*: The offering document that is used to disclose details about the transaction as well as GLWA's financial and operating information. The document, in preliminary form (the Preliminary Official Statement), is used to assist in marketing the transaction to investors prior to pricing. Disclosure Counsel is the primary drafter of this document.
4. *Bond Purchase Agreement (BPA)*: The contract between the Underwriter and GLWA sets forth the final terms, prices and conditions upon which the Underwriter purchases a new issue of municipal securities in a Negotiated Sale. Underwriter's Counsel is the primary drafter of this document.

Communication and Disclosure

Rating Agencies. GLWA seeks to maintain the highest possible credit ratings it believes appropriate for its debt without compromising the delivery of its basic core services. The Public Finance Manager will manage relationships with the rating analysts assigned to GLWA.

Investors, Bond Insurers, Liquidity Providers. The Public Finance Manager will manage relationships using both informal and formal methods to disseminate information.

Continuing Disclosure. GLWA recognizes that accurate and complete disclosure is imperative to maintaining the high credit quality of its debt. GLWA will comply with all state and federal disclosure obligations and will meet its disclosure requirements in a timely and thorough manner.

Ongoing Debt Administration

The Chief Financial Officers is responsible for the investment of proceeds, as well as all post issuance and compliance activities.

1. **Investment of Bond Proceeds.** The Chief Financial Offer and GLWA Finance staff, after receipt of bond proceeds, will invest the funds based on the GLWA's Investment Policy and federal tax regulations.
2. **Project Compliance**
 - **Arbitrage:** GLWA does not pay federal income tax and generally GLWA's bondholders do not pay federal income tax on interest earned from bonds issued by GLWA. With the investment of bond proceeds, the treatment of interest earned on the permitted investments during this period is governed by IRS arbitrage rules designed to eliminate any arbitrage incentive to:
 - Issue more bonds than needed,
 - Issue bonds earlier than needed, and
 - Leave bonds outstanding longer than needed

To accomplish the purpose of the bond issuance, GLWA must follow IRS rules governing the Yield restriction (when you may legally earn the Arbitrage Yield from investing bond proceeds) and Arbitrage rebate (when you must return the invested earnings above the Arbitrage Yield back to the IRS). The following guidelines apply:

- The Tax Certificate for the transaction provides the relevant information.
 - GLWA may retain the services of a qualified arbitrage rebate agent to calculate any arbitrage due to the IRS on outstanding bond issuances with proceeds remaining.
 - Arbitrage consultant selected by a RFP or RFQ will be used to determine compliance and rebates
- **Annual Review:** GLWA will review expenditures and reimbursements to determine if any private business use in facilities that were constructed using tax-exempt debt, except as specifically disclosed prior to sale of debt or as subsequently opined by nationally recognized Bond Counsel, do not impact the tax-exempt status of the debt.
 - **Bond Proceeds:** GLWA will track bond proceeds, ensuring expenditures are within the legally allowable construction period and other parameters to comply with legal requirements.
 - **Document Retention:** GLWA will retain documents related to the debt issue for the life of an issue or the life of the Refunding of the issue plus three years.
- 3. Continuing Disclosure Compliance.** The Official Statement and the Continuing Disclosure Agreement for the transaction will detail what information is required to be disclosed and on what timeline. To meet these disclosure requirements:
- GLWA will use a Dissemination / Disclosure Agent whom shall be named as responsible for the required reporting for each debt issue requiring Continuing Disclosure under Securities and Exchange Commission Rule 15(c)(2)(12).
 - Dissemination of the required information is accomplished through the Electronic Municipal Market Access system (EMMA).
 - Finance staff will monitor required reporting dates to ensure annual and periodic reporting requirements are satisfied.
 - Bond Counsel shall be consulted to determine compliance and updates in Continuing Disclosure.
 - Compliance status shall be reported annually to the Board at a public meeting.
- 4. Refinancing Opportunities Monitoring**
- The Chief Financial Officer, in conjunction with finance staff and with the Registered Municipal Advisor, will periodically monitor refinancing opportunities including unsolicited proposal from third parties regarding the refinancing of outstanding GLWA debt.
 - As refinancing opportunities are more further defined and achieve financial targets, this information shall be reported to the Board.
- 5. Registered Municipal Advisor Rule Compliance.**
- The Securities and Exchange Commission and the Municipal Securities Rulemaking Board, as mandated by the Dodd-Frank Wall Street Reform Act, are expected to issue the procedures and requirements associated with the registration and conduct of Registered Municipal Advisors (“MA Rules”) by January 1, 2016. The MA Rules II generally impose additional requirements for Registered Municipal Advisors to municipal entities, including GLWA’s financial advisor. The MA Rules will also impact the way and manner in which GLWA relates and receives information and recommendations from municipal bond underwriters. GLWA will continue to monitor the implementation of the MA Rules and implement changes as necessary.

Glossary

Additional Bonds Debt Service Coverage. Projected Net Revenues or Historical Net Revenues, as determined by GLWA, divided by Maximum Annual Debt Service for such Priority of Lien and any higher Priority of Lien.

Arbitrage. The difference between the interest paid on the tax-exempt securities and the interest earned by investing the security proceeds in higher-yielding taxable securities. IRS regulations govern arbitrage on the proceeds from issuance of municipal securities.

Balloon Maturity. A later maturity within an issue of bonds which contains a disproportionately large percentage of the principal amount of the original issue.

Bond Anticipation Notes (BANs). Notes which are paid from the proceeds of the issuance of long-term bonds. Typically issued for capital projects.

Bond Fund. Collectively, the Bond Interest and Redemption Funds.

Bond Interest and Redemption Funds. Each fund for the payment of Debt Service for each series of bonds of the same Priority of Lien.

Bullet Maturity. A maturity for which there are no principal and/or sinking fund payments prior to the stated maturity date.

Call Provisions. The terms of the bond giving the issuer the right to redeem all or a portion of a bond prior to its stated date of maturity at a specific price, usually at or above par.

Capitalized Interest. A portion of the proceeds of a bond issue which is set aside to pay interest on the same bond issue for a specific period of time. Interest is commonly capitalized for the construction period of the project.

Commercial Paper. Very short-term, unsecured promissory notes issued in either registered or bearer form, and usually backed by a line of credit with a bank.

Competitive Sale. A sale/auction of securities by an issuer in which underwriters or syndicates of underwriters submit sealed bids to purchase the securities. Contrast to a negotiated sale.

Continuing Disclosure. The principle that accurate and complete information material to the transaction which potential investors would be likely to consider material in making investment decisions with respect to the securities be made available on an ongoing basis.

Credit Enhancement. Credit support purchased by the issuer to raise the credit rating of the issue. The most common credit enhancements consist of bond insurance, direct or standby letters of credit, and lines of credit.

Debt Service. With respect to bonds of each Priority of Lien, the amount scheduled to become due and payable annually on all outstanding bonds as (i) interest, exclusive of interest capitalized on such outstanding bonds and paid from the proceeds of a series of bonds or investment earnings on such capitalized interest, plus (ii) principal, plus (iii) mandatory redemption requirements.

Debt Service Installment Requirements. As of the first day of the month with respect to each priority of lien of outstanding bonds, the amounts calculated as described in the Master Ordinances.

Debt Service Reserve Fund. The fund in which moneys are placed which may be used to pay debt service if pledged revenues are insufficient to satisfy the debt service requirements.

Deep Discount Bonds. Bonds which are priced for sale at a substantial discount from their face or par value.

Derivatives. A financial product whose value is derived from some underlying asset value.

Designation Policies. Outline how an investor's order is filled when a maturity is oversubscribed when there is an underwriting syndicate. The senior managing underwriter and issuer decide how the bonds will be allocated among the syndicate. There are three primary classifications of orders which form the designation policy: Group Net orders; Net Designated orders and Member orders.

Escrow. A fund established to hold moneys pledged and to be used to pay debt service on an outstanding issue.

Expenses. Compensates senior managers for out-of-pocket expenses including: underwriters counsel, DTC charges, travel, syndicate expenses, dealer fees, overtime expenses, communication expenses, computer time and postage.

Extraordinary Repair and Replacement Fund. For any Fiscal Year, 15% of the budgeted Operation and Maintenance Expenses of the Regional Sewer System and the Local Sewer System or the Regional Water System and the Local Water System for such Fiscal Year, less any amount that is withdrawn in the Fiscal Year from the Extraordinary Repair and Replacement Reserve Fund for paying a major unanticipated repair or replacement to the Regional Sewer System, the Local Sewer System, the Regional Water System or the Local Water System pursuant to the Master Ordinances, but only in the Fiscal Year that such amount is withdrawn.

Fiscal Year. The fiscal year and operating year of GLWA which begins on July 1 and ends on the following June 30, as it may be modified.

Historical Net Revenues. As defined in the Master Ordinances, (a) the Net Revenues of the Sewer System or the Water System for either (i) the immediately preceding Fiscal Year for which audited financial statements of GLWA are available, and if not, the audited financial statements of DWSD for such Fiscal Year may be used, or (ii) any audited Fiscal Year ending not more than sixteen months prior to the date of delivery of the Additional Bonds then being issued pursuant to the Master Ordinances, as determined by GLWA, plus, at the option of GLWA, (b) an amount determined by the GLWA in accordance with the Master Ordinances to equal the effect of any change in the rates, fees and charges of the Regional Sewer System and the Local Sewer System or the Regional Water System and the Local Water System authorized at or prior to the date of sale of the Additional Bonds then being issued pursuant to the Master Ordinances, as if the Sewer System's billings or the Water System's billings during such Fiscal Year had been at the increased rates, plus, at the option of GLWA, (c) an amount determined by the GLWA in accordance with the Master Ordinances to equal one hundred percent of the estimated increase in Net Revenues projected to accrue as a result of (i) the acquisition of the repairs, extensions, enlargements and improvements to the Sewer System or the Water System projected to be paid in whole or in part from the proceeds of the Additional Bonds then being issued pursuant to the Master Ordinances and (ii) any acquisition, extension or connection which was made subsequent to the end of such Fiscal Year. For purposes of determining Historical Net Revenues, if the first Fiscal Year of such determination is comprised of less than 12 months, then the combined Net Revenues of (i) Detroit Water and Sewerage Department as in existence immediately prior to the effective date and (ii) Detroit Water and Sewerage Department as in existence on and after the effective date and GLWA's partial years shall be used with adjustments to assure no duplication of Revenues in the calculation.

Interest Rate Swap. A contract between two parties to exchange interest rate payments at specified dates in the future. One party under the swap contract normally makes payments based on a fixed rate while the other party makes payments based on a variable (floating) rate.

Lease. Regional Sewage Disposal System Lease dated June 12, 2015, between the City, as lessor, and GLWA, as lessee, of the Leased Sewer Facilities and the Leased Water Facilities, as amended from time to time.

Lease Payment. The annual payment required to be made by GLWA for the benefit of the City pursuant to the Lease, in consideration for the leasing of the Leased Sewer Facilities or the Leased Water Facilities to GLWA and the absolute and irrevocable assignment and transfer to GLWA of the Revenues as provided in the Lease and to be applied by the GLWA as provided in the Master Ordinances.

Leased Sewer Facilities. Collectively, all of the City's right, title and interest in and to that portion of the real and tangible personal property comprising a part of the Regional Sewer System and owned by the City and providing sewer service to the wholesale customers of the Regional Sewer System and Retail Sewer Customers up to the point of connection to the Detroit Local Sewer Facilities, including without limitation the land, buildings, basins, pump stations, outfalls, storage facilities, other structures, fixtures (including screens, meters, control gates, interceptors and collection lines), and improvements, and real property interests such as easements, access rights, rights of way, permits, licenses and leases, all as more fully set forth in Schedule A attached to the Lease (the "Real Property"), and any and all tangible personal property such as machinery, equipment, vehicles, furniture, office equipment, software, hardware, security systems, communications systems, other information technology systems and inventory used in connection with the Real Property, including without limitation the personal property that is described in Schedule A attached to the Lease (the "Personal Property"). Leased Sewer Facilities include all improvements and additions to and replacements of the foregoing described Real Property and Personal Property, but do not include the Detroit Local Sewer Facilities.

Leased Water Facilities. Collectively, all of the City's right, title and interest in and to that portion of the real and tangible personal property comprising a part of the Water System and owned by the City and providing water service to both the wholesale customers of the Regional Water System and Retail Water Customers up to the point of connection to the Detroit Local Water Facilities all as more fully set forth in the Water Lease.

Letters of Credit and Liquidity Facilities. A bank credit facility wherein the bank agrees to lend a specified amount of funds for a limited term.

Local Sewer System. That portion of the Sewer System that provides sewer service directly to Retail Sewer Customers, which on the Effective Date consists of the Detroit Local Sewer Facilities.

Local Water System. That portion of the Water System that provides water service directly to the Retail Water Customers, which on the Effective Date consists of the Detroit Local Water Facilities.

Maximum Annual Debt Service. With respect to any given Priority of Lien, the maximum Debt Service in any future Fiscal Year on Outstanding Bonds of such Priority of Lien and any Additional Bonds then being issued in accordance with Section 207 of the Master Ordinances. If any Additional Bonds (any of such, the "Refunding Bonds") are to be issued to refund Outstanding Bonds (the "Bonds to be Refunded"), the Debt Service to be used for determining Maximum Annual Debt Service shall be the Debt Service on the Refunding Bonds and not the Debt Service on the Bonds to be Refunded.

Management Fee. The fixed percentage of the gross spread which is paid to the managing underwriter for the structuring phase of a transaction.

Members. Underwriters in a syndicate other than the senior underwriter.

Negotiated Sale. A method of sale in which the issuer chooses one underwriter to negotiate terms pursuant to which such underwriter will purchase and market the bonds. Contrast to a competitive sale.

Net Revenue. For any period of time, all Revenues received during such period of time, except for those Revenues transferred to the Operation and Maintenance Fund.

Notional Amount. Used in the context of derivatives, the notional amount is the principal amount by which the swap rates are multiplied.

Operation and Maintenance Expenses. The reasonable expenses of administration, operation and maintenance of the Regional Sewer System or the Local Sewer System, or the Regional Water System or the Local Water System, as the case may be, but shall not include the Required Annual General Retirement System Payment.

Original Issue Discount. The amount by which the original par amount of an issue exceeds its public offering price at the time it is originally offered to an investor.

Pay-As-You-Go. An issuer elects to finance a project with existing cash flow as opposed to issuing debt obligations.

Pledged Assets. The (i) Net Revenues; (ii) funds and accounts established by or pursuant to the Master Ordinances except for the Operation and Maintenance Fund, the Construction Fund and the Rebate Fund and any account of any such fund; and investments of amounts or any income or gain realized therefrom credited to any fund, account or subaccount that is a Pledged Asset.

Present Value. The current value of a future cash flow.

Priority of Lien. With respect to any particular Bonds, all other Bonds having a lien on Pledged Assets on parity with such Bonds.

Private Placement. The original placement of an issue with one or more investors as opposed to being publicly offered or sold.

Projected Net Revenues. The Net Revenues of the Sewer System or the Water System for the then-current or next succeeding Fiscal Year, as determined by GLWA, which may include (a) in the case of Section 207 of the Master Ordinances for the purpose of determining the Additional Bonds Debt Service Coverage, one hundred percent of the estimated increase in Net Revenues projected to accrue as a result of the acquisition of the repairs, extensions, enlargements and improvements to the Sewer System and the Water System projected to be paid for in whole or in part from the proceeds of the Additional Bonds under Section 207 of the Master Ordinances, and (b) in the case of Section 604 of the Master Ordinances for the purpose of determining the Rate Covenant Debt Service Coverage, one hundred percent of the estimated increase in Net Revenues as a result of approved rate increases for the next succeeding Fiscal Year.

Rate Covenant Debt Service Coverage. A number equal to Projected Net Revenues for the Fiscal Year of calculation divided by the aggregate Debt Service Installment Requirements on Bonds for such Fiscal Year, net of funds on hand for accrued principal and interest, all for such Priority of Lien and any higher Priority of Lien.

Rebate. A requirement imposed by Tax Reform Act of 1986 whereby the issuer of tax-exempt bonds must pay the IRS an amount equal to its profit earned from investment of tax-exempt bond proceeds at rates exceeding the tax-exempt borrowing rate. The tax-exempt borrowing rate (or "bond yield") is calculated pursuant to the IRS code together with all income earned on the accumulated profit pending payment.

Regional Sewer System. That portion of the Sewer System that provides sewer service to the wholesale customers thereof and Retail Sewer Customers up to the point of connection to the Local Sewer System, which on the Effective Date consists of the Leased Sewer Facilities.

Regional Water System. That portion of the Water System that provides water service to the wholesale customers thereof and Retail Customers up to the point of connection to the Local Water System, which on the Effective Date consists of the Leased Water Facilities.

Required Coverage. Means (a) for Senior Lien Bonds, 1.20, (b) for Second Lien Bonds, 1.10, and (c) for any Junior Lien Bonds other than Second Lien Bonds, 1.00.

Selling Groups. The group of securities dealers who participate in an offering not as underwriters but rather who receive securities less the selling concession from the managing underwriter for distribution at the public offering price.

Syndicate Policies. The contractual obligations placed on the underwriting group relating to distribution, price limitations and market transactions.

Underwriter. A dealer that purchases new issues of municipal securities from the Issuer and resells them to investors.

Underwriter's Discount. The difference between the price at which bonds are bought by the Underwriter from the Issuer and the price at which they are reoffered to investors.

Variable Rate Debt. An interest rate on a security which changes at intervals according to an index or a formula or other standard of measurement as stated in the bond contract.

WRAP Fund. The Water Residential Assistance Program Fund to be established pursuant to the MOU and created under Section 502(a)(10), which is a fund independently-administered on behalf of the Authority to provide assistance to indigent residential customers throughout the Water System and the Sewer System.

Yield. The annual rate of return on an investment, based on the purchase price of the investment, its coupon rate and the length of time the investment is held.