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MEMORANDUM

GLWA Financial Forecast Model

May 17, 2018

To: Nicolette Bateson

From: Bart Foster

At your request, we have prepared modeling analyses to support evaluation of potential GLWA financial policies. Our analyses calculate forecasted financial metrics that align with those used by investment community analysts when evaluating the credit worthiness of utility enterprises, including the GLWA Water and Sewer Systems. This material is intended to establish financial benchmarks against which to measure future financial performance of the Systems.

The accompanying exhibits provide summary information regarding our preliminary analyses to establish long-term financial forecast results. We have established a "forecast period" that extends through FY 2030. This longer term period facilitates complete review of potential impacts of policy decisions on financial metrics. However, we note that forecasting beyond five years requires development of assumptions that do not represent currently published plans, particularly with respect to capital improvement program ("CIP") needs, as the current published CIPs only extend five years.

For purposes of our analyses, we have estimated annual CIP financing requirements beyond FY 2023 at levels indicated by averages of the current five-year plans. This assumption is just one of a myriad that impact the forecast presented herein, all of which could have material impacts on the results if they were modified. We have identified what we consider to be "key assumptions" that define the general scenarios introduced in this presentation.

The intent of this document is not to advocate for any specific policy, nor any specific combination of assumptions, but rather to provide perspective for policy discussions amongst stakeholders. Towards that goal, we are presenting two scenarios in this document for purposes of illustration.

• Scenario 1 reflects the "baseline" financial plan submitted as part of the FY 2019 budget request, which included annual BUDGET increases of a 2% for FY 2019 and 4% thereafter. We have assumed annual increases in the operating expense budget of 2% for this scenario.

• Scenario 2 assumes no BUDGET increase for FY 2019 and 3% thereafter. Scenario 2 assumes lower annual increases annual increases (1%) in the operating expense budget.

All other assumptions are identical for the two scenarios being introduced in this document. As noted above, this topic lends itself to most effective communication through a verbal presentation, and we are prepared to provide such presentation at the GLWA Audit Committee meeting on May 22. Herewith a brief introduction to the various exhibits.

The exhibits for each Scenario contain a key assumption page, and 5 pages of individual forecast results, arranged to illustrate categories of metrics. There are separate metric exhibits for the Water System and the Sewer System.

As noted in the introduction, we have attempted to incorporate specific financial metrics used by ratings agency analysts (and others) often compute independently to compare GLWA with peer utilities. The unique nature of the GLWA / DWSD relationship requires analysts to modify their traditional calculation approaches in order to accurately interpret GLWA audited financial statements, and to accurately reflect GLWA metrics when comparing with peer utilities. The necessary adjustments are a topic that the GLWA finance team has preliminary communicated with rating agency analysts, and will continue to do so as review continues. Where appropriate, we briefly introduced such modifications in this document.

- **Introductory Page**: Identifies key assumptions and outlines basis for capital financing strategies. Of particular note:
 - Perhaps the key assumption is the forecasted change in overall BUDGET for the Regional System(s), as noted in the Scenario introduction above.
 - We have assumed an ongoing annual pension reimbursement requirement of \$9 million (combined for the Regional and Local Systems) starting in FY 2023. The current annual requirement is \$45 million.
 - We have reflected potential minimum balances for the I&E and Construction Funds. These assumptions are intended to support policy discussions, and illustrate:
 - The capital financing strategies that are noted on the assumption page.
 - Note that a key assumption in this forecast is that DWSD has indicated a short term policy approach of financing all "post bifurcation" debt service via use of the annual Lease Payment, and therefore reducing revenues available to the consolidated Water and Sewer Systems by a like amount. Each of the scenarios presented in this document assume that such an approach remains intact for the duration of the forecast period.

- Page 1: Capital Financing Forecast Summary: Illustrates comparative forecasted funding sources for the Regional System CIP. The overall financial strategy envisions less reliance on debt financing, with more of the CIP being financed with revenue generated funds.
 - The chart on the top of the page compares annual forecasted funding sources for the CIP.
 - The chart on the bottom of the page indicates a "rolling 5-year forecast" of the portion of the CIP that is financed via debt, and compares it with the Fitch "AA Median" metric.
- Page 2: Forecasted Annual Revenue Requirement Summary: Illustrates the forecasted elements of the annual Regional System revenue requirement. The overall financial strategy envisions lessening the portion of the annual revenue dollar that is dedicated to debt service, and increasing the portion that is available to transfer to the I&E Fund(s) to cash finance the CIP.
 - The chart on the top of the page shows the change in annual BUDGET. The black line reflects the total annual BUDGET increase, and the bars reflect the components. The reduction in the Master Bond Ordinance requirements in FY 2024 reflects the assumed reduction in legacy pension obligation requirements. All else being equal, the impact of this change would allow for a larger deposit to the I&E Fund, as illustrated in the chart(s).
 - The chart on the bottom of the page indicates the relative forecasted share each element comprises of the overall annual BUDGET.
- Page 3: Forecasted Debt Service Coverage: Illustrates calculations of this metric, which is seen as perhaps the most critical indicator of financial performance by the investment community. The overall financial strategy envisions increasing debt service coverage ratios.
 - The chart on the top of the page reflects calculated "rate covenant" debt service coverage ratios by the various liens of debt.
 - Senior Lien (rate covenant minimum is 1.20);
 - 2nd Lien (rate covenant minimum is 1.10);
 - SRF Junior Lien (rate covenant minimum is 1.00). The SRF Junior Lien debt service coverage is often referred to as the "all in" or "total" coverage ratio.
 - The top chart also reflects calculated "income statement proxy" coverage ratios a metric that ratings agency analysts (and others) often compute independently. The only difference between this metric and the "all in"

- coverage is that it **generally** does not include investment income as revenue, whereas the rate covenant allows inclusion of investment income. However:
- o The initially calculated "income statement proxy" coverage (solid green line) is misleading due to the unique nature of the GLWA / DWSD relationship, and requires and adjustment. This is because the GLWA financial statement of "Revenues, Expenses, and Changes in Net Position" (from which net revenues available to pay debt service are derived by analysts) only includes the net revenues from the regional system, while reported annual debt service payments include both the Regional System and Local System portions.
- Our "Adjusted Income Statement Proxy" coverage ratios (dotted green line) reflect our suggested modification to accurately reflect true GLWA "all in" debt service coverage.
- The black line reflects the target metric for AA rated utilities based on an interpretation of Fitch and Moody's guidance. This metric is intended to apply to the "all in" coverage ratios (equivalent to the SRF Jr. Lien).
- The chart on the bottom of the page illustrates the elements that provide the "coverage" over and above debt service. In essence, these are annual revenue requirements that are subordinate to operating expense and debt service in the Master Bond Ordinance Flow of Funds. The bars in the chart indicate the amount
- The Regional System components are illustrated in green and represent the "coverage" that each element comprises of the forecasted Regional System debt service share.
- The Local System components are illustrated in red and represent the "coverage" that each element comprises of the forecasted Local System debt service share.
- The assumed DWSD policy approach of utilizing a portion of the annual Lease Payment for debt service essentially produces "negative" contributions to Local System (and overall consolidated) debt service coverage.
- The black line illustrates total "all in" coverage providers for the consolidated system, and aligns with the ratios in the top table. This metric represents a weighted average of Regional and Local elements.
- Page 4: Additional Forecasted Rating Agency Metrics: Illustrates calculations of other comparative metrics. The overall financial strategy envisions meeting or exceeding peer performance metrics to improve credit ratings.
 - The first chart illustrates forecasted "Operating Margin." Operating Margin is defined as operating revenues minus operating expenses (including

- depreciation expense). The metric in the chart represents Operating Margin divided by operating revenues.
- The second chart illustrates forecasted "Free Cash as a % of Depreciation". This metric deducts annual debt service from Operating Margin, adds in annual depreciation expense, and then divides the result by annual depreciation expense.
 - This metric requires an adjustment to accurately reflect GLWA financial results. We have computed the "adjusted" metric by only reflecting the debt service allocable to the Regional System in the calculation.
- The final chart illustrates forecasted "Debt to Operating Revenues". This metric represents total long term debt divided by operating revenues.
 - This metric requires an adjustment to accurately reflect GLWA financial results. We have computed the "adjusted" metric by only reflecting the long term debt allocable to the Regional System in the calculation.
- Page 5: Forecasted Balance Sheet Metrics: Illustrates depictions of key relative GLWA assets and liabilities since inception, and forecasted.
 - The chart on the top of the page presents the Net Position, and the cash and investment balances in the "revenue generated" funds established by the Master Bond Ordinance. (excludes Construction Fund and annual forecasted funding sources for the CIP.
 - The chart on the bottom of the page compares the GLWA net capital assets (including the amounts owed by DWSD for Local System assets) and long term debt. The ratio of the two metrics is reflected by the dotted line. The overall financial strategy envisions reducing this metric to less than 100%, so that the balance sheet depiction of net capital assets exceeds related debt.
 - We note that the asset valuation that established the GLWA "starting net position" with respect to capital assets, and established ongoing depreciation schedules, has a significant impact on short term depictions of these metrics. The depreciation schedules are undergoing diligent review, and assumptions of projected future depreciation expense may change in subsequent forecasts.

We trust that this information provides an effective introduction to this topic, and we look forward to presenting it to stakeholders in more detail.