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MEMORANDUM

Series 2018 GLWA Revenue Bonds  
Preliminary Results Summary

September 18, 2018

To: Nicolette Bateson

From: Bart Foster

The attached exhibits are designed to provide a high-level summary of the results from yesterday's pricing the above captioned GLWA bond sale(s). By way of background, the Preliminary Official Statements for the bond sales contained five-year financial forecasts that we developed as part of our responsibilities as Feasibility Consultant for the transactions. Those forecasts produced projected financial plans that embraced the Authority's strategic objective to improve the financial position of the Water and Sewer utilities. Specifically, the financial plans were designed to reduce the traditional heavy reliance on debt to finance capital improvements by employing more "pay go" strategy via utilization of the Improvement and Extension ("I&E") Funds of the utilities.

The original financial forecasts set forth in the Preliminary Official Statements were accompanied by supporting materials, including the "Preliminary Feasibility Report Introduction" memorandum we submitted on August 20, 2018. As noted in all of that material, the preliminary forecasts did not reflect any potential debt service savings associated with the refinancing portion of the Series 2018 Bonds. It did, however, include the estimated impact on debt service of the new money portion of the Series 2018 **Sewer** Bonds (to finance Local DWSD Sewer System capital improvements), and of future projected bond sales during the five-year forecast period to finance Regional System capital improvements for both the Water and Sewer Systems.

The principal objective of this discussion is to illustrate the impact on the financial forecasts of the refinancing savings achieved by the pricing of the Series 2018 Bonds. The updated forecasts reflect the pricing results, and will be set forth in the Final Official Statements. As of this writing it is our understanding that the Final Official Statements will be posted on September 20.

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**Water Bond Sale Highlights:**

- The Series 2018 Water Bonds are entirely refunding bonds issued for purposes of achieving debt service savings. No “new money” proceeds were generated.
- The Series 2018 Water Bonds refinanced certain existing outstanding bonds maturing from 2019 through 2029.
- The total debt service savings achieved was almost \$31 million, which equates to almost \$25 million on a net present value basis.
- The refinancing generates approximately \$2.8 million of annual debt service savings for FYs 2019 through 2029, and approximately \$14 million in total for the five-year forecast period.
- Our original five-year forecast anticipated:
  - *Issuance of approximately \$11 million of additional revenue bonds to finance Regional Water System capital improvements;*
  - *Increasing “all in” Water debt service coverage ratios from 1.41 to 1.51 during the forecast period.*
- Our updated five-year forecast:
  - *Maintains the original “top line” revenue projections;*
  - *Redirects the debt service savings towards deposits to the I&E Fund;*
  - *Eliminates the need to project ANY additional bond sales for Regional Water System capital improvements during the five-year forecast period;*
  - *Results in “all in” Water debt service coverage ratios that are approximately 2 points higher than the preliminary forecast.*

**Sewer Bond Sale Highlights:**

- The Series 2018 Sewer Bonds contain both new money and refunding elements.
- The new money debt service is not materially different than envisioned in the preliminary forecast.
- The Series 2018 Sewer Bonds refinanced certain existing outstanding bonds maturing from 2019 through 2029.
- The total debt service savings achieved was over \$54 million, which equates to almost \$35 million on a net present value basis.
- The refinancing generates approximately \$4.9 million of annual debt service savings for FYs 2019 through 2029, and almost \$25 million in total for the five-year forecast period.
- Our original five-year forecast anticipated:
  - *Issuance of approximately \$257 million of additional revenue bonds to finance Regional Sewer System capital improvements;*

- *Increasing “all in” Sewer debt service coverage ratios from 1.23 to 1.40 during the forecast period.*
- Our updated five-year forecast:
  - *Maintains the original “top line” revenue projections;*
  - *Redirects the debt service savings towards deposits to the I&E Fund;*
  - *Reduces the projected additional bond sales for Regional Sewer System capital improvements during the five-year forecast period by almost \$40 million, to a total of approximately \$217 million;*
  - *Results in “all in” debt service coverage ratios that are approximately 4 points higher than the preliminary forecast by the end of the forecast period.*

The accompanying exhibits are designed to illustrate the executive summary observations above. We are prepared to further discuss this matter at your convenience.

*[Remainder of page intentionally left blank]*

## Illustration of the Effect of the 2018 Bonds on Financial Forecast

|  | (1)         | (2)         | (3)         | (4)         | (5)         | (6)                 |
|--|-------------|-------------|-------------|-------------|-------------|---------------------|
|  | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>5-Year Total</u> |
|  | \$ millions | \$ millions | \$ millions | \$ millions | \$ millions | \$ millions         |

**WATER SUPPLY SYSTEM****Pre-Refunding**

|                                  |             |             |             |             |             |              |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 1 Debt Service                   | 171.0       | 178.9       | 190.8       | 187.4       | 192.9       | 920.9        |
| 2 I&E Funding                    | <u>39.1</u> | <u>41.4</u> | <u>41.3</u> | <u>56.8</u> | <u>64.7</u> | <u>243.2</u> |
| 3 Combined Total                 | 210.1       | 220.3       | 232.0       | 244.1       | 257.6       | 1,164.1      |
| 4 All In Debt Service Coverage   | 1.41        | 1.41        | 1.39        | 1.48        | 1.51        |              |
| 5 Projected Bond Sale (Regional) | 0.0         | 0.0         | 0.0         | 0.0         | 11.0        | 11.0         |

Debt service savings applied to I&E deposits

**Post-Refunding**

|                                   |             |             |             |             |             |              |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 6 Debt Service                    | 168.2       | 176.1       | 188.0       | 184.6       | 189.9       | 906.6        |
| 7 I&E Funding                     | <u>41.9</u> | <u>44.2</u> | <u>44.1</u> | <u>59.6</u> | <u>67.7</u> | <u>257.5</u> |
| 8 Combined Total                  | 210.1       | 220.3       | 232.0       | 244.1       | 257.6       | 1,164.1      |
| 9 All In Debt Service Coverage    | 1.44        | 1.44        | 1.41        | 1.50        | 1.53        |              |
| 10 Projected Bond Sale (Regional) | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0          |

**Impact of 2018 Bonds**

|                                   |            |            |            |            |            |             |
|-----------------------------------|------------|------------|------------|------------|------------|-------------|
| 11 Debt Service                   | (2.8)      | (2.8)      | (2.8)      | (2.8)      | (3.0)      | (14.3)      |
| 12 I&E Funding                    | <u>2.8</u> | <u>2.8</u> | <u>2.8</u> | <u>2.8</u> | <u>3.0</u> | <u>14.3</u> |
| 13 Combined Total                 | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0         |
| 14 All In Debt Service Coverage   | 0.03       | 0.03       | 0.02       | 0.02       | 0.02       |             |
| 15 Projected Bond Sale (Regional) | 0.0        | 0.0        | 0.0        | 0.0        | (11.0)     | (11.0)      |

Results in lower projected bond sales and . . .

Higher debt service coverage ratios



Minor impact on  
use of Lease  
Payment for debt  
service

### Illustration of the Effect of the 2018 Bonds on Financial Forecast

|                                   | (1)         | (2)         | (3)         | (4)         | (5)         | (6)                 |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|---------------------|
|                                   | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>5-Year Total</u> |
|                                   | \$ millions | \$ millions | \$ millions | \$ millions | \$ millions | \$ millions         |
| <b>SEWAGE DISPOSAL SYSTEM</b>     |             |             |             |             |             |                     |
| <b>Pre-Refunding</b>              |             |             |             |             |             |                     |
| 1 Debt Service                    | 242.1       | 252.8       | 251.7       | 261.1       | 258.4       | 1,266.1             |
| 2 I&E Funding                     | <u>14.4</u> | <u>19.2</u> | <u>35.8</u> | <u>42.6</u> | <u>62.3</u> | <u>174.3</u>        |
| 3 Combined Total                  | 256.5       | 272.0       | 287.5       | 303.8       | 320.7       | 1,440.4             |
| 4 All In Debt Service Coverage    | 1.23        | 1.24        | 1.31        | 1.32        | 1.40        |                     |
| 5 Projected Bond Sale (Regional)  | 0.0         | 56.0        | 59.0        | 90.0        | 52.0        | 257.0               |
| <b>Post-Refunding</b>             |             |             |             |             |             |                     |
| 6 Debt Service                    | 238.2       | 247.7       | 246.2       | 255.3       | 252.3       | 1,239.6             |
| 7 I&E Funding                     | <u>19.7</u> | <u>24.3</u> | <u>41.4</u> | <u>48.6</u> | <u>68.5</u> | <u>202.5</u>        |
| 8 Combined Total                  | 257.9       | 272.0       | 287.6       | 303.8       | 320.8       | 1,442.1             |
| 9 All In Debt Service Coverage    | 1.25        | 1.26        | 1.34        | 1.35        | 1.44        |                     |
| 10 Projected Bond Sale (Regional) | 0.0         | 42.3        | 50.8        | 79.9        | 44.2        | 217.1               |
| <b>Impact of 2018 Bonds</b>       |             |             |             |             |             |                     |
| 11 Debt Service                   | (3.9)       | (5.0)       | (5.6)       | (5.9)       | (6.2)       | (26.5)              |
| 12 I&E Funding                    | <u>5.3</u>  | <u>5.1</u>  | <u>5.6</u>  | <u>5.9</u>  | <u>6.2</u>  | <u>28.2</u>         |
| 13 Combined Total                 | 1.4         | 0.1         | 0.0         | 0.0         | 0.0         | 1.7                 |
| 14 All In Debt Service Coverage   | 0.02        | 0.02        | 0.03        | 0.03        | 0.04        |                     |
| 15 Projected Bond Sale (Regional) | 0.0         | (13.7)      | (8.2)       | (10.1)      | (7.8)       | (39.9)              |

Debt  
service  
savings  
applied to  
I&E  
deposits

Results in  
lower  
projected  
bond sales  
and . . .

Higher debt service  
coverage ratios



## Illustration of the Effect of the 2018 Bonds on Financial Forecast

|                                   | (1)         | (2)         | (3)         | (4)          | (5)          | (6)                 |
|-----------------------------------|-------------|-------------|-------------|--------------|--------------|---------------------|
|                                   | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u>  | <u>2023</u>  | <u>5-Year Total</u> |
|                                   | \$ millions | \$ millions | \$ millions | \$ millions  | \$ millions  | \$ millions         |
| <b>COMBINED WATER &amp; SEWER</b> |             |             |             |              |              |                     |
| <b>Pre-Refunding</b>              |             |             |             |              |              |                     |
| 1 Debt Service                    | 413.0       | 431.7       | 442.5       | 448.5        | 451.3        | 2,187.0             |
| 2 I&E Funding                     | <u>53.5</u> | <u>60.6</u> | <u>77.0</u> | <u>99.4</u>  | <u>126.9</u> | <u>417.5</u>        |
| 3 Combined Total                  | 466.6       | 492.2       | 519.5       | 547.9        | 578.3        | 2,604.5             |
| 4 All In Debt Service Coverage    | 1.30        | 1.31        | 1.34        | 1.39         | 1.45         |                     |
| 5 Projected Bond Sale (Regional)  | 0.0         | 56.0        | 59.0        | 90.0         | 63.0         | 268.0               |
| <b>Post-Refunding</b>             |             |             |             |              |              |                     |
| 6 Debt Service                    | 406.3       | 423.8       | 434.1       | 439.8        | 442.2        | 2,146.2             |
| 7 I&E Funding                     | <u>61.7</u> | <u>68.5</u> | <u>85.5</u> | <u>108.1</u> | <u>136.2</u> | <u>460.0</u>        |
| 8 Combined Total                  | 468.0       | 492.3       | 519.6       | 548.0        | 578.3        | 2,606.2             |
| 9 All In Debt Service Coverage    | 1.33        | 1.34        | 1.37        | 1.42         | 1.48         |                     |
| 10 Projected Bond Sale (Regional) | 0.0         | 42.3        | 50.8        | 79.9         | 44.2         | 217.1               |
| <b>Impact of 2018 Bonds</b>       |             |             |             |              |              |                     |
| 11 Debt Service                   | (6.7)       | (7.8)       | (8.4)       | (8.7)        | (9.2)        | (40.8)              |
| 12 I&E Funding                    | <u>8.1</u>  | <u>7.9</u>  | <u>8.4</u>  | <u>8.7</u>   | <u>9.3</u>   | <u>42.5</u>         |
| 13 Combined Total                 | 1.4         | 0.1         | 0.0         | 0.0          | 0.1          | 1.7                 |
| 14 All In Debt Service Coverage   | 0.02        | 0.03        | 0.02        | 0.03         | 0.03         |                     |
| 15 Projected Bond Sale (Regional) | 0.0         | (13.7)      | (8.2)       | (10.1)       | (18.8)       | (50.9)              |

Debt service savings applied to I&E deposits

Results in lower projected bond sales and . . .

Higher debt service coverage ratios (informational only - combined debt service coverage is not a formal metric)

