



**Detroit Water and Sewerage Department
Finance Division
735 Randolph, Detroit, Michigan 48226**

DT: May 8, 2013

TO: All DWSD Customers

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Chief Financial Officer

RE: FY 2012 Audited Financial Reports for the Detroit Water and Sewer Systems

The Board of Water Commissioners and management of the Detroit Water and Sewerage Department (DWSD) are committed to expanding accountability and transparency of the department's decision making processes and finances. Board agendas, minutes, and the Director's monthly report are featured on DWSD's website at www.dwsd.org. The wholesale customer outreach portal (www.dwsdoutreach.org) is a significant resource for the entire wholesale customer community. The outreach portal records the work of the Water Technical Advisory Committee and Wastewater Steering Committee. These two committees are comprised of customer community representatives organized into seven work groups. Committee members evaluate operational, financial, and management aspects of water delivery and wastewater collection.

Accountability and transparency as it relates to DWSD's finances is achieved through considerable detail that is publicly available, especially as it relates to the rate setting process. For many years, however, there has been no user-friendly communication discussing DWSD's overall financial results. The purpose of this report is a step in that direction: to explain the bigger picture of DWSD's financial condition based upon the audited financial results for the fiscal year ended June 30, 2012.

FY 2012 Audited Financial Report Recap

- ✓ The water and sewer systems are audited annually. In FY 2012 the audit was conducted by KPMG, LLP. Both systems received a "clean audit report."
- ✓ The water system had a 22% operating margin and the sewer system generated a 20% margin.
- ✓ "Net assets" decreased for FY 2012 primarily due to the decrease in the value of derivatives related to debt financing. By the end of FY 2012, DWSD's exposure to debt-related derivative valuation risk was eliminated based upon termination of the swap portfolio.
- ✓ The swap portfolio was terminated to avoid a demand for payment by swap counterparties. This scenario occurred due to "termination events" defined in the swap agreements. The first termination event occurred when an emergency review team was appointed by the Michigan Department of Treasury to assess the City of Detroit's finances in December 2011.
- ✓ DWSD has initiated a performance benchmarking program to evaluate financial condition and establish realistic goals.
- ✓ DWSD's current ratio demonstrates that current assets are sufficient to cover current liabilities.
- ✓ DWSD's debt service coverage ratio has improved since the prior year.

DWSD Receives “Clean” Annual Financial Audit Report

As DWSD is a municipal utility, it is subject to the same auditing and reporting standards that are applied to all Michigan local governments. The activities for water system and sewer system operations are separate and distinct activities for accounting, reporting, and auditing requirements. In addition, by operation of State Law, DWSD’s finances are subject to a statutory lien pledged to DWSD’s bond holders. As a result, DWSD’s funds cannot be used to subsidize other funds, including the City of Detroit’s general fund. DWSD’s annual audited financial reports are available at www.dwsd.org.

For the fiscal year ended June 30, 2012 (FY 2012) the City’s auditor KPMG, LLP provided the water and sewer systems with a “clean” audit opinion. While the audited financial statements are attached for your review, the length of the report can be unwieldy. For this reason, we offer an analysis of DWSD financial activities for FY 2012.

FY 2012 Audited Financial Report Discussion and Analysis

Statement of Revenues, Expenses, and Changes in Net Assets (Figure 1) summarizes water and sewer revenue and expense activity for FY 2012. Both systems had net positive results (A) of operating activities. Operating activities include revenues earned from customer billings. Expenses include the cost of providing water and sewer services, administrative expenses, and noncash expenses such as depreciation (B) of capital assets. The water system experienced a net 22% operating income and the sewer system generated a 20% operating income. These operating margins are necessary in order to satisfy DWSD’s bond covenants related to debt service coverage ratios.

	Water		Sewer	
	<u>FY 2012</u>	<u>%</u>	<u>FY 2012</u>	<u>%</u>
Operating revenues	\$ 336,129,945	100%	\$ 437,654,891	100%
Operating expenses, excluding depreciation	<u>180,204,688</u>	<u>54%</u>	<u>232,355,828</u>	<u>53%</u>
Operating income before depreciation	155,925,257	46%	205,299,063	47%
Depreciation (B)	<u>81,602,960</u>	<u>24%</u>	<u>115,604,049</u>	<u>26%</u>
Operating income (A)	74,322,297	22%	89,695,014	20%
Nonoperating revenues (expenses)				
Interest expense (D)	(108,750,464)	-32%	(108,153,176)	-25%
Change in fair value of derivatives (J)	(74,288,862)	-22%	(65,954,994)	-15%
Other	<u>(4,878,929)</u>	<u>-2%</u>	<u>(5,445,386)</u>	<u>-1%</u>
Total nonoperating expenses, net	<u>(187,918,255)</u>	<u>-56%</u>	<u>(179,553,556)</u>	<u>-41%</u>
Decrease in net assets (C)	(113,595,958)	<u>-34%</u>	(89,858,542)	<u>-21%</u>
Net assets, beginning	<u>123,478,064</u>		<u>247,322,493</u>	
Net assets, ending	<u>\$ 9,882,106</u>		<u>\$ 157,463,951</u>	

In reviewing Figure 1, it is important to note that the major driver of the “decrease in net assets” **(B)** for both Water and Sewer was the change in value of derivatives related to swap agreements. Accounting rules require these instruments be adjusted to market value as reflected by the “decrease in fair value of derivatives” **(J)**. The termination of the swap agreements during FY 2012 related to debt caused this decrease in value to be realized as bonded debt. Now, the system is free from the derivative liability associated with the swap agreements (as more fully discussed with Figures 4 and 5, below).

Due to the capital and debt intensive nature of a utility fund, interest expense is often the largest category of *non-operating* expenses. In FY 2012 interest expense **(D)** was equal to 32% of water revenues and 25% of sewer revenues. To better evaluate these amounts, it is helpful to benchmark DWSD’s experience with other large utility systems. For this purpose, the most recent audited financial reports for the Philadelphia Water Department, District of Columbia Water and Sewer Authority, Citizens Energy Group (Indianapolis), Pittsburgh Water and Sewer Authority, and Atlanta Department of Watershed Management were obtained. Each of these utilities combines the water and wastewater activities for financial reporting purposes. Some of these benchmark entities enjoy a significantly higher bond rating than DWSD. By selecting higher rated benchmark entities, we are establishing goals for improved long-term financial stability, lower interest costs, and performance accountability.

Figure 2 - Interest Expense as a Percent of Operating Revenue presents the results of the benchmarking analysis. As expected, interest expense is significant for each public utility although the range is from 14% to 34% of operating revenue. DWSD’s interest expense is higher than the average of 23% **(E)**.

Figure 2 - Interest Expense as a Percent of Operating Revenue		
Entity	Reporting Year	Percent
Philadelphia Water Department	FYE 6/30/2012	14%
District of Columbia Water and Sewer Authority	FYE 6/30/2012	16%
Citizens Energy Group (Indianapolis)	FYE 9/30/2012	17%
Detroit Water & Sewerage (Sewer Fund)	FYE 6/30/2012	25%
Pittsburgh Water and Sewer Authority	FYE 12/31/2011	26%
Detroit Water & Sewerage (Water Fund)	FYE 6/30/2012	32%
Atlanta Department of Watershed Management	FYE 6/30/2012	34%
Average (E)		23%

The ability of a utility system to meet its annual debt service requirements (interest expense plus annual principal payment) is best reflected by the “debt service coverage” ratio. This ratio is perhaps the most prevalently reviewed indicator of financial strength by the investment community. It is calculated by dividing the net revenue by the annual debt service requirements. It should be noted that net revenues often exclude non-cash operating expenses such as depreciation (such is the case with DWSD’s bond ordinances). **Figure 3 – Debt Service Coverage Ratios** presents the benchmark analysis of debt service coverage ratios with most of the same entities noted earlier (Washington DC’s data was not available). Coverage ratios are computed on both senior lien and second (or “junior”) lien debt for publicly held

revenue debt only (i.e. excludes debt held by the State Revolving Fund). Senior debt has the first security interest on net revenues over second liens. A higher ratio is an indicator of positive financial flexibility. DWSD's ratios are favorable in comparison to some entities within the peer group and within the range of values overall **(F)**. More importantly, DWSD's ratios improved from the prior year.

Figure 3 - Debt Service Coverage Ratios

<u>Entity</u>	<u>Senior Lien</u>	<u>Second Lien</u>
Citizens Energy Group (Sewer Debt)	2.54	1.85
Detroit Water & Sewerage (Sewer Fund)	2.17	1.36
Atlanta Department of Watershed Management	1.78	NA
Detroit Water & Sewerage (Water Fund)	1.56	1.18
Citizens Energy Group (Water Debt)	1.23	1.21
Philadelphia Water Department	1.20	1.09
Pittsburgh Water and Sewer Authority	1.13	1.01
Average (F)	1.66	1.28

NA: not applicable

Note: Benchmark ratios are derived from the most recent full year Electronic Municipal Market Access (EMMA) filings or in the case of Pittsburgh from the most recent Moody's report.

In order to mitigate the impact of debt on the financial position of the water and sewer systems, DWSD's Board and management initiated a comprehensive program to restructure its debt during FY 2012. The result was the issuance of \$500.7 million of water bonds and \$659.8 million of sewer bonds.

Figure 4 – Use of Bonds Issued in FY 2012 highlights the debt restructuring efforts. Eligible revenue bonds were refunded or redeemed to lower interest cost **(G)** and swap agreements were terminated to reduce an inherent level of liquidity risk **(H)**. In this case, liquidity risk relates to the risk that the holder of the swap agreement would demand payment based on triggering events that occurred in FY 2012 related to the City of Detroit's overall finances. The FY 2012 bonds also included planned funding for the capital improvement program **(I)**.

Figure 4 - Use of Bonds Issued in FY 2012

<u>Use of Bonds Issued</u>	<u>Water</u>	<u>Sewer</u>
Construction Fund (I)	\$ 163,088,241	\$ 196,202,869
Swap Termination Payments and Interest (H)	221,921,429	319,516,581
Redemption, Escrow, and Bond Reserve Funds (G)	116,059,121	152,394,188
Other (Issuance Costs, Net Premium/Discount, and Accrued Interest)	(393,791)	(8,333,638)
Par Amount of Bonds Issued	<u>\$ 500,675,000</u>	<u>\$ 659,780,000</u>

Since termination of a full swap portfolio is not common, the topic is worthy of explanation. In the late 1990's and early 2000's variable rate instruments and interest rate swap agreements were used by local governments to manage their debt portfolio. Swap agreements were designed to simulate a *fixed* interest rate on *variable* rate debt at a time when the fixed rate market was higher. The subsequent financial crisis in 2008 upended this strategy. The cost and level of risk associated with the underlying variable rate bonds, which were converted to fixed rate bonds in 2008 and 2009, escalated. As interest rates continued to get lower, the swap agreements had substantial negative value. Although this situation did not affect operations, it did create a liability in the financial statements. Once the City became under review for a financial emergency by the Michigan Department of Treasury in December 2011, certain termination rights for the swap agreement counterparties were triggered. If the counterparties demanded payment based on the termination event, DWSD was faced with a significant cash liability.

After an in-depth analysis, DWSD elected to terminate these agreements to minimize the termination and liquidity risks associated with the City's financial difficulties. That decision by DWSD's Board was affirmed when subsequent termination events occurred including the declaration of the City of Detroit's financial emergency and a related downgrade of the Water and Sewer ratings by Moody's because of perceived spillover threats to DWSD. After the FY 2012 bond issues (**Figure 4**), DWSD has no swap exposure from debt and has reduced its variable rate debt to a very manageable level at less than 10% of the total debt portfolio.

From an accounting standpoint, the swap agreements are treated as hedging and investment derivative instruments. The "change in fair value of derivatives" non-operating expense as shown in **Figure 1** was \$74.3 million for water and \$66 million for sewer (**J**). With the debt restructuring efforts in FY 2012, DWSD's exposure to swap agreements in its debt portfolio ended. Two of the benchmark entities also have swap agreements in their capital structure and incurred a charge to expenses from derivative activity as shown in **Figure 5 – Loss on Derivatives as a Percent of Operating Revenues**.

Pittsburgh Water and Sewer Authority	FYE 12/31/2011	9%
Detroit Water & Sewerage (Sewer Fund)	FYE 6/30/2012	17%
Detroit Water & Sewerage (Water Fund)	FYE 6/30/2012	20%
Atlanta Department of Watershed Management	FYE 6/30/2012	34%

Statement of Net Assets (Figure 6) provides a high level summary of the water and sewer systems assets, liabilities, and net assets. Based on the nature of the DWSD's mission, capital assets (**K**) and long-term debt (**L**) are the largest categories. The current ratio (current assets divided current liabilities) of 1.9 for water and 2.21 for sewer (**M**) indicates that the system is in a good position to meet its short term obligations, a key measure of fiscal health. Since DWSD is an enterprise fund, it follows the full accrual method of accounting. This means that long-term debt and assets are recorded in addition to

other liabilities such as the annual shortfall in fully funding retiree health care obligations. This accounting treatment is consistent with other municipal enterprise funds.

Figure 6 - Statement of Net Assets		
As of June 30, 2012		
	<u>Water</u>	<u>Sewer</u>
	<u>FY 2012</u>	<u>FY 2012</u>
Current assets	\$ 348,153,393	\$ 566,840,003
Capital assets, net (K)	2,157,804,200	2,923,013,636
Other long-term assets	<u>341,069,685</u>	<u>276,881,421</u>
Total assets	<u>\$ 2,847,027,278</u>	<u>\$ 3,766,735,060</u>
Current liabilities	\$ 183,566,876	\$ 256,423,559
Long-term debt (L)	2,588,591,719	3,289,850,132
Other long-term liabilities	<u>64,986,577</u>	<u>62,997,418</u>
Total liabilities	<u>\$ 2,837,145,172</u>	<u>\$ 3,609,271,109</u>
Net assets	<u>\$ 9,882,106</u>	<u>\$ 157,463,951</u>
Current ratio (M)	<u>1.90</u>	<u>2.21</u>

DWSD's Financial Outlook

DWSD's Board, management team, and employees have been actively involved in an organization wide optimization process. This process, initiated in fiscal year 2013, is a monumental realignment of staffing and capital resources to achieve and maintain long-term financial sustainability. Progress on the optimization effort is reported by the Director at monthly DWSD Board meetings. It is important to note that the optimization process is not a one-time project. Instead, it is a process that establishes an organizational culture shift to an environment that fosters continuous improvement.

Presently, DWSD's financial, purchasing, and human resources functions are undergoing a significant transformation pursuant to authority granted by a federal court order. With oversight by the Board of Water Commissioners, this order allows for these key administrative functions to operate independently of the City of Detroit to ensure effective management of DWSD. In addition, the Board's Finance Committee meets publicly on a monthly basis to monitor DWSD's finances and evaluate strategy and policy for the future.

The result of these efforts is becoming clear. In January 2013, the Board approved a water and sewer rate increase that was the lowest in decades. Personnel expenditures have been controlled as evidenced by a decline in staffing levels from 1,970 as of July 1, 2012 to 1,806 as of March 31, 2013. This level of staffing adjustment is ahead of budgetary expectations. Recently, the five year forecast was

updated. The underlying assumptions demonstrate a commitment to moderated rate adjustments and controlled expenses.

Where to Find More Financial Information

Additional information about DWSD's financial position and key source documents are available on DWSD's website (including the official statements from the FY 2012 bond sales, capital improvement plan, and updates on the current organization wide optimization process).

During the next year, the depth of financial information available on the DWSD's website will continue to expand. We value your feedback, questions, and participation on this and the many other initiatives for DWSD today and in the future.