Downriver Utility Wastewater Authority

Financial Report
December 31, 2018

Contents

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Independent Auditor's Report

To the Downriver Utility Wastewater Authority Board
Downriver Utility Wastewater Authority

Report on the Financial Statements

We have audited the accompanying financial statements of Downriver Utility Wastewater Authority (the "Authority") as of and for the year ended December 31, 2018 and the related notes to the financial statements, which collectively comprise Downriver Utility Wastewater Authority's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Downriver Utility Wastewater Authority as of December 31, 2018 and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As described in Note 9 to the financial statements, on September 27, 2018, the Authority consummated a years-long initiative to transfer the Downriver Sewage Disposal System from Wayne County, Michigan to the Authority. Our conclusion is not modified with respect to this matter.

To the Downriver Utility Wastewater Authority Board
Downriver Utility Wastewater Authority

Other Matters

Required Supplemental Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Plante & Moran, PLLC

June 17, 2019

Using this Annual Report

Downriver Utility Wastewater Authority (the "Authority") is a joint venture of 13 communities in southeastern Michigan (the cities of Allen Park, Belleville, Dearborn Heights, Ecorse, Lincoln Park, River Rouge, Riverview, Romulus, Southgate, Taylor, and Wyandotte, Michigan and the charter townships of Brownstown and Van Buren; collectively, the "Communities"). The Authority was established in 2010 in order to acquire, finance, manage, improve, and operate the Downriver Sewage Disposal Treatment Plant and related collection systems. The system is the second largest wastewater system in Michigan, serving the Communities with a service area population of 350,000. The Authority provides services exclusively to the 13 Communities.

This annual report consists of a series of financial statements. The statement of net position and the statement of activities provide information about the activities of the Authority as a whole and present a longer-term view of the Authority's finances. This longer-term view uses the accrual basis of accounting so that it can measure the cost of providing services during the current year, and whether the taxpayers have funded the full cost of providing government services. These are followed by the statement of cash flows, which presents detailed information about the changes in the Authority's cash position during the year.

Government-wide Overall Financial Analysis

As noted earlier, net position over time may serve as a useful indicator of a government's financial position. In the case of the Authority, assets and deferred outflows of resources exceeded liabilities and deferred inflows by $94,441,310 at the close of the most recent fiscal year.

Authority's Net Position

	2017	2018	Change	Percent Change
Assets				
Current and other assets:				
Cash and investments	$ 600,945	$ 25,836,377	$ 25,235,432	4,199.3
Receivables	-	2,265,932	2,265,932	-
Other assets	-	17,896,402	17,896,402	-
Capital assets	-	180,631,280	180,631,280	-
Total assets	600,945	226,629,991	226,029,046	37,612.3
Liabilities				
Current liabilities	92,180	5,705,669	5,613,489	6,089.7
Noncurrent liabilities	-	126,483,012	126,483,012	-
Total liabilities	92,180	132,188,681	132,096,501	143,302.8
Net Position				
Net investment in capital assets	-	55,215,685	55,215,685	-
Restricted	-	16,465,691	16,465,691	-
Unrestricted	508,765	22,759,934	22,251,169	4,373.6
Total net position	**$ 508,765**	**$ 94,441,310**	**$ 93,932,545**	18,462.9

The Authority assumed control of the wastewater treatment plant in September 2018. As such, the increase in net position for fiscal year 2018 includes the transfer of assets from Wayne County, Michigan to the Authority. These assets included unrestricted and restricted cash, capital assets, and debt. Prior to assuming control of the plant, the Authority's assets and liabilities were limited to cash received from the municipal customers and accounts payable for services provided by vendors working on the transfer. The gain on the transfer of assets amounted to approximately $98 million.

Authority's Changes in Net Position

	2017	2018	Change	Percent Change
Operating Revenue				
Sewage Disposal and Excess Flow charges	$ -	$ 4,315,947	$ 4,315,947	-
Other charges	-	238,045	238,045	-
Total operating revenue	-	4,553,992	4,553,992	-
Operating Expenses				
System operations	-	3,208,682	3,208,682	-
System management	131,030	883,869	752,839	574.6
Utilities	-	1,038,697	1,038,697	-
Professional services	192,621	379,555	186,934	97.0
Other operating expenses	3,040	631,346	628,306	20,668.0
Depreciation	-	1,123,750	1,123,750	-
Total operating expenses	326,691	7,265,899	6,939,208	2,124.1
Operating Loss	(326,691)	(2,711,907)	(2,385,216)	730.1
Nonoperating Revenue (Expense)	593,873	(1,345,073)	(1,938,946)	(326.5)
Special Items	-	97,989,525	97,989,525	-
Change in Net Position	267,182	93,932,545	93,665,363	35,056.8
Net Position - Beginning of year	241,583	508,765	267,182	110.6
Net Position - End of year	**$ 508,765**	**$ 94,441,310**	**$ 93,932,545**	18,462.9

Fiscal year 2018 results included the initial period of time operating the wastewater treatment plant (approximately three months of operations). For the remainder of the year, the Authority's operations consisted of revenue from assessments to the communities and expenses paid to consultants for work performed on the transfer of the Downriver Sewage Disposal System.

Overall, the Authority recognized a positive change in net position of $93,932,545. Revenue primarily consisted of sewage disposal charges and excess flow charges from the municipal customers (approximately 95 percent of operating revenue). Operating expenses were primarily related to operation of the plant by an outside contractor (44 percent of operating expenses), administrative expenses (12 percent of operating expenses), utilities (14 percent) and depreciation (15 percent). A special item in the amount of $97,989,525 was recorded, representing the net gain on the transfer of the Downriver Sewage Disposal System's assets from Wayne County, Michigan to the Authority.

Capital Assets and Debt Administration

Capital assets with a net book value of approximately $180 million were transferred from Wayne County, Michigan to the Authority. Included in the transfer were assets directly related to the sewer system of $176 million. Depreciation expense of $1.1 million was recorded in 2018, representing three months of having control of the Downriver Sewage Disposal System.

As part of the transfer, the Authority issued debt in the amount of $55,225,000 for the transfer cost paid to Wayne County, Michigan. The Authority also issued a promissory note to Wayne County, Michigan in the amount of $3,500,000 to be paid within five years. The Authority also assumed SRF debt in the amount of $61,632,135 from Wayne County, Michigan; these bonds will be paid with funds billed to the municipal customers based on average flows.

Economic Factors and Next Year's Budgets and Rates

The Authority is responsible for setting the budget and rates to cover the operation of the Downriver Sewage Disposal System. The budget is based on the fiscal year period from January through December, while the rates cover the period from July through June. The budget process began in October and the budget was adopted by the board in December. The rates were developed in March - April and were approved by the board in May. Factors that affect the budget and rates include the flows into the Downriver Sewage Disposal System, the cost of utilities and chemicals, and capital expenditures to maintain the operation of the plant. A significant expense that is affecting the Authority is sludge disposal; the Authority is working on a long-term solution to offset the limited availability of landfills willing to accept the disposal of the sludge, as well as the increased costs for disposal.

Requests for Further Information

This financial report is intended to provide a general overview of the Authority's finances and demonstrate the Authority's accountability for the money it receives. If you have questions about this report or need additional information, please contact DNS Financial Services at DNSFinancialSvcs@gmail.com. This report, authority budgets, and other financial information are available on the Authority's website at www. http://DUWAuthority.org.

Statement of Net Position

	December 31, 2018
Assets	
Current assets:	
Cash and cash equivalents	$ 25,836,377
Receivables (Note 7)	2,265,932
Prepaid expenses and other assets	363,294
Total current assets	28,465,603
Noncurrent assets:	
Restricted cash and cash equivalents (Note 8)	17,533,108
Capital assets: (Note 4)	
Assets not subject to depreciation	3,900,516
Assets subject to depreciation - Net	176,730,764
Total noncurrent assets	198,164,388
Total assets	226,629,991
Liabilities	
Current liabilities:	
Accounts payable	3,678,602
Unearned revenue	2,027,067
Current portion of bonds payable (Note 5)	3,595,000
Total current liabilities	9,300,669
Noncurrent liabilities:	
Interest payable from restricted assets	1,067,417
Bonds payable - Net of current portion (Note 5)	121,820,595
Total noncurrent liabilities	122,888,012
Total liabilities	132,188,681
Net Position	
Net investment in capital assets	55,215,685
Restricted: (Note 8)	
Debt service	11,655,541
Rate stabilization	3,210,150
Tunnel repair and replacement	1,600,000
Unrestricted	22,759,934
Total net position	**$ 94,441,310**

See notes to financial statements.

Statement of Revenue, Expenses, and Changes in Net Position

	Year Ended December 31, 2018
Operating Revenue	
Sewage Disposal and Excess Flow charges	$ 4,315,947
Other charges	238,045
Total operating revenue	4,553,992
Operating Expenses	
System operations	3,208,682
System management	883,869
Utilities	1,038,697
Professional services	379,555
Other operating expenses	631,346
Depreciation	1,123,750
Total operating expenses	7,265,899
Operating Loss	(2,711,907)
Nonoperating Revenue (Expense)	
Investment income - Net	100,157
Community assessments	108,300
Reimbursements	500,000
Interest and bond issuance charges	(2,053,530)
Total nonoperating expense	(1,345,073)
Special Items (Note 9)	97,989,525
Change in Net Position	93,932,545
Net Position - Beginning of year	508,765
Net Position - End of year	**$ 94,441,310**

Statement of Cash Flows

	Year Ended December 31, 2018
Cash Flows from Operating Activities	
Receipts from member communities for monthly charges	$ 2,583,586
Payments to vendors	(2,919,021)
Other payments	(295,526)
Net cash and cash equivalents used in operating activities	(630,961)
Cash Flows Provided by Noncapital Financing Activities - Community assessments and county reimbursement	608,300
Cash Flows from Capital and Related Financing Activities	
Issuance of bonds to purchase System (Note 9)	61,285,302
Cash paid for transfer of System from Wayne County, Michigan (Note 9)	(54,000,000)
Cash received as part of transfer of System from Wayne County, Michigan (Note 9)	37,009,771
Purchase of capital assets	(617,916)
Principal, interest, and bond issuance costs paid on capital debt	(986,113)
Net cash and cash equivalents provided by capital and related financing activities	42,691,044
Cash Flows Provided by Investing Activities - Interest on investments	100,157
Net Increase in Cash and Cash Equivalents	42,768,540
Cash and Cash Equivalents - Beginning of year	600,945
Cash and Cash Equivalents - End of year	**$ 43,369,485**
Classification of Cash and Cash Equivalents	
Cash and investments	$ 25,836,377
Restricted cash	17,533,108
Total cash and cash equivalents	**$ 43,369,485**
Reconciliation of Operating Loss to Net Cash from Operating Activities	
Operating loss	$ (2,711,907)
Adjustments to reconcile operating loss to net cash from operating activities:	
Depreciation and amortization	1,123,750
Changes in assets and liabilities:	
Receivables	(2,265,932)
Prepaid and other assets	(363,294)
Accounts payable	3,586,422
Total adjustments	2,080,946
Net cash and cash equivalents used in operating activities	**$ (630,961)**
Significant Noncash Transactions	
State revolving fund loans assumed as part of system transfer (Note 9)	$ 66,822,135
Capital assets acquired as part of system transfer (Note 9)	180,235,833

See notes to financial statements.

Note 1 - Nature of the Authority

Downriver Utility Wastewater Authority (the "Authority") is a joint venture of 13 communities in southeastern Michigan (the cities of Allen Park, Belleville, Dearborn Heights, Ecorse, Lincoln Park, River Rouge, Riverview, Romulus, Southgate, Taylor, and Wyandotte, Michigan and the charter townships of Brownstown and Van Buren; collectively, the "Communities"). The Authority was established in 2010 in order to acquire, finance, manage, improve, and operate the Downriver Sewage Disposal Treatment Plant and related collection systems. The system is the second largest wastewater system in Michigan, serving the Communities with a service area population of 350,000. The Authority provides services exclusively to the 13 Communities.

On September 27, 2018, the treatment plant and collection systems were transferred from Wayne County, Michigan to the Authority at a purchase price of $57.5 million, of which $54 million was paid at closing to the County and the remaining $3.5 million will be paid five years from closing. In the fall of 2018, the Authority engaged a private operator to operate the system under an operations agreement for a period of 20 years.

Note 2 - Significant Accounting Policies

Accounting and Reporting Principles

The Authority follows accounting principles generally accepted in the United States of America (GAAP), as applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Governmental Accounting Standards Board. The following is a summary of the significant accounting policies used by the Authority:

Basis of Accounting

The Authority uses the full accrual basis of accounting. Revenue is recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

Reporting Entity

The Authority is a public body corporate established in accordance with Michigan Public Act 233 of 1955, as amended. In addition to this statutory authority, the governance for the Authority is found in its Articles of Incorporation, by-laws, polices, and ordinances. The Authority's governing body is composed of 13 representative members, consisting of either mayors or supervisors (or their alternates) of each of the communities. In accordance with government accounting principles, there are no component units appropriate to be reported within these financial statements.

Specific Balances and Transactions

<u>Cash and Cash Equivalents</u>

Cash and cash equivalents include cash on hand, demand deposits, and short-term investments with a maturity of three months or less when acquired. In addition, the statement of cash flows includes both restricted and unrestricted cash and cash equivalents.

<u>Inventories and Prepaid Items</u>

Inventories are valued at cost, on a first-in, first-out basis. Certain payments to vendors reflect costs applicable to future fiscal years and are recorded as prepaid items in both government-wide and fund financial statements, when applicable.

Note 2 - Significant Accounting Policies (Continued)

Restricted Assets

The revenue bonds of the Authority require amounts to be set aside for debt service principal and interest on all debt, operations and maintenance, and a bond reserve. The bonds also require establishment of a rate stabilization fund. These amounts have been classified as restricted assets. Unspent bond proceeds, if any, are required to be set aside for construction. In addition, by agreement with the tunnel communities, a minimum of $1,500,000 is restricted for tunnel repair and replacement. These amounts have also been classified as restricted assets.

Capital Assets

Capital assets include the treatment plant, interceptors, storage tunnel, equipment, and vehicles. Capital assets are defined by the Authority as assets with an initial individual cost of more than $5,000 and an estimated useful life in excess of one year. Capital assets are recorded at historical cost if purchased or constructed or, if donated, at their acquisition value on the date donated.

Interest incurred during the construction of capital assets of business-type activities is included as part of the capitalized value of the assets constructed.

Capital assets are depreciated using the straight-line method over the following useful lives:

	Depreciable Life - Years
Buildings and improvements	40
Machinery and equipment	7
Land improvements	20
Office equipment	7
Sewer system	40
Vehicles	5

Long-term Obligations

Long-term debt and other long-term obligations are reported as liabilities. Bond premiums and discounts are deferred and amortized over the life of the bonds using the effective interest method. Bonds payable are reported net of the applicable bond premium or discount. Bond issuance costs are expensed at the time they are incurred.

Net Position

Net position of the Authority is classified in three components. Net investment in capital assets consists of capital assets net of accumulated depreciation and is reduced by the current balances of any outstanding borrowings used to finance the purchase or construction of those assets. The restricted component of net position consists of restricted assets reduced by liabilities related to those assets. Unrestricted net position is the remaining net position that does not meet the definition of invested in capital or restricted.

Net Position Flow Assumption

The Authority will sometimes fund outlays for a particular purpose from both restricted and unrestricted resources. In order to calculate the amounts to report as restricted net position and unrestricted net position in the government-wide and proprietary fund financial statements (as applicable), a flow assumption must be made about the order in which the resources are considered to be applied. It is the Authority’s policy to consider restricted net position to have been depleted before unrestricted net position is applied.

Note 2 - Significant Accounting Policies (Continued)

Proprietary Funds Operating Classification

Proprietary funds distinguish operating revenue and expenses from nonoperating items. Operating revenue and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. Operating revenue represents billings to member communities based on the Authority's operating expenses, exclusive of depreciation and inclusive of capital outlay not financed by debt. Communities are responsible for passing along and collecting the charges to their individual system customers. Operating revenue also includes industrial pretreatment charges and surveillance fees charged directly to commercial users. Operating expenses for these funds include the cost of sales or services, administrative expenses, and may include depreciation on capital assets. All revenue and expenses not meeting this definition are reported as nonoperating revenue and expenses.

System Operations and Management

The Authority has entered into an agreement with a contract operator for a term of 20 years commencing on October 1, 2018 to operate the system. The current agreement expires on September 30, 2038. Under the terms of the operations agreement, the operator provides all the required labor, materials, and supervision necessary for the operation of the sewage treatment plant and related collection systems, with the exception of certain costs paid directly by the Authority, such as electricity, legal, accounting, engineering, capital outlay, insurance, and overall system management. The Authority pays the operator a monthly fee. In addition, the Authority has entered into a contract with an engineering firm to provide system management services. The contract is for three years and is based on hourly rates.

Upcoming Accounting Pronouncements

In November 2016, the Governmental Accounting Standards Board (GASB) issued Statement No. 83, *Certain Asset Retirement Obligations*, which establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. The Authority is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Authority's financial statements for the 2019 fiscal year.

In June 2017, the GASB issued Statement No. 87, *Leases*, which improves accounting and financial reporting for leases by governments. This statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The Authority is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Authority's financial statements for the year ending December 31, 2020.

In March 2018, the GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements.* This statement establishes criteria to improve the information that is disclosed in the notes to the government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. The Authority is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Authority's financial statements for the year ending December 31, 2019.

Note 2 - Significant Accounting Policies (Continued)

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period,* which simplifies accounting for interest cost incurred before the end of construction and requires those costs to be expensed in the period incurred. As a result, interest cost incurred before the end of a construction period will not be capitalized and included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This statement also reiterates that, in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of the standard will be applied prospectively and result in increased interest expense during periods of construction. The provisions of this statement are effective for the Authority's financial statements for the December 31, 2020 fiscal year.

Note 3 - Deposits and Investments

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended) authorizes local governmental units to make deposits and invest in the accounts of federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. The law also allows investments outside the state of Michigan when fully insured. The local unit is allowed to invest in bonds, securities, and other direct obligations of the United States or any agency or instrumentality of the United States; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications, which matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions, which are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

The Authority's cash and investments are subject to several types of risk, which are examined in more detail below:

Custodial Credit Risk of Bank Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the Authority's deposits may not be returned to it. At year end, the Authority had $10,994,384 of bank deposits (checking accounts) that were uninsured and uncollateralized.

Custodial Credit Risk of Investments

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Authority will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party.

Interest Rate Risk

Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. The Authority's investment policy minimizes interest rate risk by structuring the investment portfolio so that securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity. The Authority also minimizes the risk by investing operating funds primarily in shorter-term securities, money market mutual funds, or similar investment pools and limiting the average maturity of the portfolio in accordance with this policy.

At year end, the Authority held money market funds with a fair value of $31,731,574 with a weighted-average maturity of 19 days.

Note 3 - Deposits and Investments (Continued)

Credit Risk

State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. The Authority's investment policy states that the Authority will minimize credit risk by limiting the investments to the types of securities listed in Section VI of the investment policy, prequalifying the financial institutions broker/dealers, intermediaries, and advisers with which the Authority will do business, and diversifying the investment portfolio so that the impact of the potential losses from any one type of security or from any one individual issuer will be minimized.

At year end, the Authority held $31,731,574 in money market funds with a rating of AAAm issued by S&P.

Concentration of Credit Risk

The Authority's investment policy minimizes concentration of credit risk by diversifying the investment portfolio so that the impact of potential losses from any one type of security or from any one individual issuer will be minimized. At year end, the Authority held $31,731,574 in money market funds, which consisted primarily of U.S. government agency debt and U.S. Treasury repurchase agreements.

Fair Value Measurements

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. Investments that are measured at fair value using net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy below.

In instances whereby inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Authority’s assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset.

The Authority has the following recurring fair value measurements as of December 31, 2018:

- Money market funds of $31,731,574 are valued using a matrix pricing model (Level 2 inputs).

Note 4 - Capital Assets

Capital asset activity of the Authority was as follows:

	Balance January 1, 2018	Additions	Balance December 31, 2018	Depreciable Life - Years
Capital assets not being depreciated:				
Land	$ -	$ 2,426,717	$ 2,426,717	
Construction in progress	-	1,473,799	1,473,799	
Subtotal	-	3,900,516	3,900,516	
Capital assets being depreciated:				
Sewer system	-	176,080,310	176,080,310	40
Buildings and improvements	-	964,081	964,081	40
Machinery and equipment	-	144,090	144,090	7
Vehicles	-	79,133	79,133	5
Office equipment	-	33,775	33,775	7
Land improvements	-	553,125	553,125	20
Subtotal	-	177,854,514	177,854,514	
Accumulated depreciation:				
Sewer system	-	1,100,502	1,100,502	
Buildings and improvements	-	6,025	6,025	
Machinery and equipment	-	5,146	5,146	
Vehicles	-	3,957	3,957	
Office equipment	-	1,206	1,206	
Land improvements	-	6,914	6,914	
Subtotal	-	1,123,750	1,123,750	
Net capital assets being depreciated	-	176,730,764	176,730,764	
Net business-type activity capital assets	$ -	$ 180,631,280	$ 180,631,280	

Note 5 - Long-term Debt

Long-term debt activity for the year ended December 31, 2018 can be summarized as follows:

	Interest Rate Ranges	Principal Maturity Ranges	Beginning Balance	Additions	Reductions	Ending Balance	Due within One Year
Revenue bonds payable:							
Series 2018 Senior Lien Bonds - Due 2043	5%	$1,190,000 - $4,105,000	$ -	$ 55,225,000	$ -	$ 55,225,000	$ -
SRF Junior Lien Bonds - Due 2037	1.625-2.5%	$1,110,000 - $4,230,000	-	64,262,135	(3,570,000)	60,692,135	3,595,000
Wayne County Junior Lien Bond - Due 2023	0%	$0- $3,500,000	-	3,500,000	-	3,500,000	-
Total principal outstanding			-	122,987,135	(3,570,000)	119,417,135	3,595,000
Unamortized bond premiums			-	6,060,302	(61,842)	5,998,460	-
Total business-type activities long-term debt			$ -	$ 129,047,437	$ (3,631,842)	$ 125,415,595	$ 3,595,000

Note 5 - Long-term Debt (Continued)

Revenue Bonds

Revenue bonds involve a pledge of specific income derived from the acquired or constructed assets to pay debt service. The Authority has pledged substantially all of the revenue of the system, net of operating expenses, to repay the sewer revenue bonds listed below:

Series 2018 Senior Lien Bonds

Proceeds from the Series 2018 Bonds provided financing for the transfer of the system from Wayne County, Michigan to the Authority described in Note 9. The bonds are payable solely from the net revenue from the sewer system. Also, $2,630,000 of bond proceeds were used to defease, on behalf of Wayne County, Michigan, the series 2007D revenue bonds previously issued by Wayne County, Michigan. In addition, the Series 2018 Bonds provided for the funding of reserve accounts and cost of issuance.

State Revolving Fund (SRF) Junior Lien Bonds

As part of the system transfer, DUWA assumed the outstanding principal amount of indebtedness of the County as of the date of the system transfer, September 27, 2018. These bonds were previously issued to finance improvements to the system.

Wayne County Junior Lien Bond

Under the transfer agreement, DUWA will make a payment of $3,500,000 to Wayne County, Michigan within five years of closing. This obligation is structured as a junior lien bond.

During the current year, net revenue of the system was a deficit $879,700, compared to annual debt requirements of principal of $3,570,000 and interest of $205,575. The debt payments were made concurrent with the transfer described in Note 9 and were paid with funds received at closing of the transfer versus being paid with net revenue of the system.

Debt Service Requirements to Maturity

Annual debt service requirements to maturity for the above bonds and note obligations are as follows:

	Revenue Bonds		
Years Ending December 31	Principal	Interest	Total
2019	$ 3,595,000	$ 4,207,404	$ 7,802,404
2020	3,665,000	4,090,928	7,755,928
2021	4,950,000	3,973,450	8,923,450
2022	5,100,000	3,822,574	8,922,574
2023	8,755,000	3,666,481	12,421,481
2024-2028	28,675,000	15,773,880	44,448,880
2029-2033	26,592,135	11,039,391	37,631,526
2034-2038	19,885,000	6,639,276	26,524,276
Thereafter	18,200,000	2,366,000	20,566,000
Total	$ 119,417,135	$ 55,579,384	$ 174,996,519

Note 6 - Risk Management

The Authority is exposed to various risks of loss related to property loss, torts, and errors and omissions. The Authority has purchased commercial insurance for all claims. Settled claims relating to the commercial insurance have not exceeded the amount of insurance coverage in any of the past fiscal years. The plans, coverage limits, retentions, and deductibles are as follows:

- General liability, hired and nonowned auto liability, public officials liability - Limits of $5,000,000 and $10,000,000; retention amount of $250,000
- Pollution liability - Limit of $5,000,000; retention amount of $25,000,000
- Property liability - Flood limits of $10,000,000 and $50,000,000; Quake limit of $50,000,000, All risk limit of $320,565,843; deductible of $250,000

Note 7 - Receivables

Receivables as of December 31, 2018 are as follows:

Community operating charges	$ 1,715,238
Industrial pretreatment charges	255,168
Due from Wayne County, Michigan	295,526
Net community operating charges	$ 2,265,932

Note 8 - Restricted Assets

The Authority's Master Bond Ordinance has established certain accounts to be held in trust by the trustee. All revenue of the system shall be deposited with the trustee. As of the first day of each month, amounts held in the Receiving Fund shall be transferred as follows:

First - One-twelfth of the budgeted operation and maintenance expenses are to be transferred to the operations and maintenance account.

Second - One-sixth of the next Senior Lien debt service payment is to be transferred to the Senior Lien Debt Service Account.

Third - Any shortfall in the required Senior Lien Bond Reserve Account shall be transferred to the Senior Lien Bond Reserve Account.

Fourth - One-sixth of the next Junior Lien debt service payment is to be transferred to the Bond and Interest Redemption Fund, and any shortfall in the required Junior Lien Reserve Account shall be transferred to the Junior Lien Bond Reserve Account.

Fifth - Any shortfall in the Rate Stabilization Fund shall be transferred to the Rate Stabilization Fund.

After the reserves are funded as noted above, the Authority may set funds aside for extraordinary repair and replacement or for improvement and extension. These reserves are discretionary. Any remaining funds will be retained in the Receiving Fund unless the Authority directs that they be transferred to the Surplus Fund. The Surplus Fund and the remaining untransferred balance in the Receiving Fund are deemed to consist of all funds not otherwise restricted for debt service, debt reserves, or rate stabilization.

In addition, the Authority is required to set aside funds for repair and replacement of the wet weather storage tunnel at a minimum amount of $1,500,000 per contractual agreement. The balance of $1,600,000 includes accumulated interest.

Note 8 - Restricted Assets (Continued)

At December 31, 2018, restricted assets are composed of the following:

Senior Lien Debt Service	$ 564,858
Senior Lien Bond Reserve	4,129,181
Junior Lien Bond and Interest Redemption	3,244,782
Junior Lien Bond Reserve	4,784,137
Rate Stabilization Fund	3,210,150
Tunnel Reserve	1,600,000
Total	$ 17,533,108

Note 9 - Special Item

On September 27, 2018, the Authority consummated a years-long initiative to transfer the Downriver Sewage Disposal System from Wayne County, Michigan to the Authority. The authority and Wayne County, Michigan are not included within the same financial reporting entity. A transfer price of $57,500,000 was negotiated. In addition to the transfer price, the Authority assumed the outstanding liabilities of the system, with the exception of postretirement benefits and the judgment levy debt, which included $748,580 of current liabilities and $66,762,135 of noncurrent liabilities. The Communities individually will continue to provide the funding for the existing EPA levy debt issued by Wayne County, Michigan. The Authority has no responsibility for this debt. The Authority did assume the County's nonjudgment levy State Revolving Fund debt, and that debt has been renamed through the Michigan Finance Authority as authority debt. As part of the transfer, the Authority received the capital assets of $180,235,833 and the current assets, such as cash, receivables, and prepaid balances, which totaled $42,764,407. This transaction is accounted for as a transfer of operations, and, as such, the capital assets of the system are reflected as capital asset additions based on the net book value of the assets as recorded by Wayne County, Michigan prior to the sale. As a result of the transfer, the Authority reflected a special item, as the capital assets and current asset values exceeded the assumed liabilities and new debt balances.

Note 10 - Related Party Transactions

The Authority receives utility services from the Wyandotte Department of Municipal Services (WDMS), which is a department created by the City of Wyandotte, Michigan, a member of the Communities. WDMS is operated and governed independently from the City of Wyandotte, Michigan by a separate commission. The Authority incurred utility expenses provided by WDMS of approximately $1,006,000 during the year.