

Delaware County Regional Sewer District

Sanitary Sewer Master Plan Technical Memorandum #5

December 21, 2016

FINAL

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Introduction

Delaware County Regional Sewer District (DCRSD) has commissioned a Sanitary Sewer Master Plan (Master Plan) intended to reflect the current growth trends throughout the various Townships as well as the overall County, as well as incorporate input from stakeholders. An important aspect of the Master Plan is a comprehensive evaluation of the financial impacts resulting from implementation of the plan. Raftelis Financial Consultants, Inc. (RFC), as part of the HDR team, has developed a comprehensive financial plan and electronic model for DCRSD to assess the short- and long-term Master Plan's impacts on the operational, capital and strategic financial objectives of the utility.

This financial plan and model is based on DCRSD's current financial data, including customer account information, annual operating budgets and actual expenses, and existing debt service requirements. The forecasted annual needs incorporate the capital investment recommendations from the Master Plan which identify costs relative to the existing system (called the "O&M" capital projects) and projected future growth (called the "Development" capital projects). The overall operating and capital requirements have been projected over a long-term planning horizon to determine any future revenue shortfalls and the rates and charges that would be needed to meet DCRSD financial policies and goals.

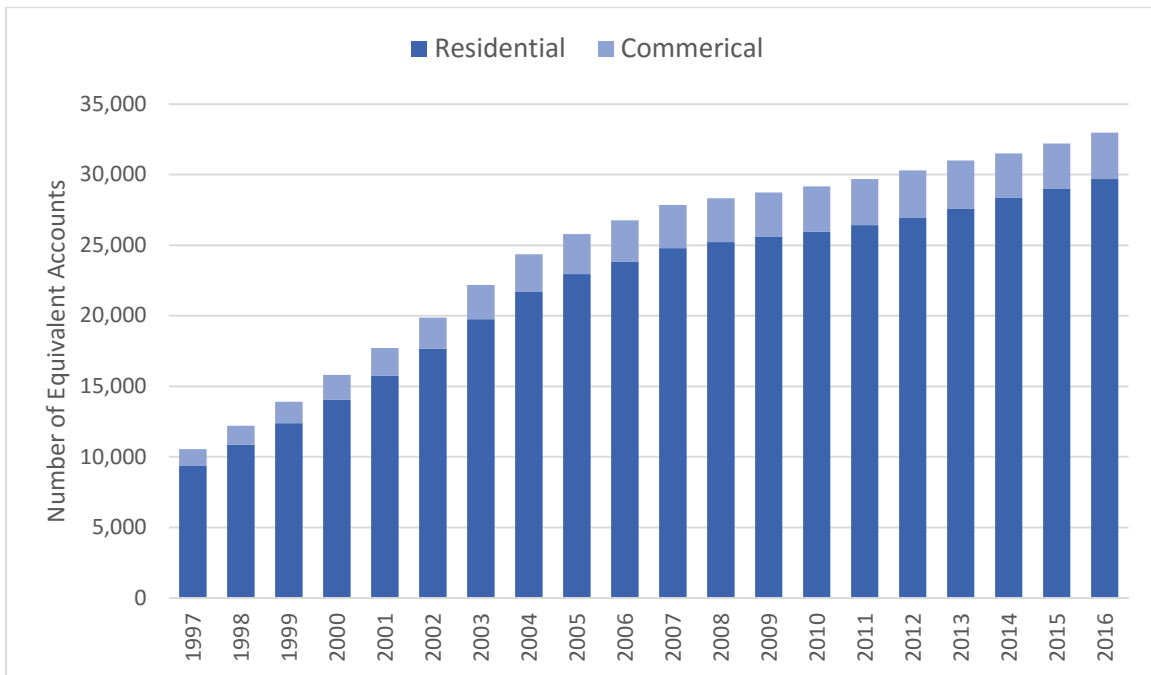
This memorandum will document the assumptions, projections, and recommendations for meeting the financial needs of the Master Plan.

Customer Accounts & Revenue Projections

DCRSD generates revenue through two primary customer charges: a flat monthly user charge and a capacity fee paid by new connections. The monthly user charge revenue is entirely dependent on the number of system accounts, and because DCRSD does not assess user charge revenue based on sewer flow volumes, the revenue stream is much more stable and predictable than many peer utilities. The capacity fees are based on the number of new lots developed, which has provided a strong revenue stream as the County remains the fastest growing county in the State.

The user charges are based on the number of equivalent residential units (ERUs) which recognizes the larger potential demands placed on the system by certain customers. At the beginning of calendar year 2016, residential ERUs totaled 28,986 and commercial ERUs were 3,221. Delaware County has been fortunate to experience significant growth over the past twenty years, however, the financial recession beginning in 2008 did trigger a slowdown in new development. From 1997 through 2004, annual growth in ERUs averaged 12.7% per year, with growth peaking at 2,324 ERUs added in 2003. Over the past 10 years, growth has stabilized around 2.0% per year on average, with some slight increases to that over the past 2-3 years. The number of historical customer accounts can be seen in Figure 1.

FIGURE 1. HISTORICAL CUSTOMER ACCOUNTS



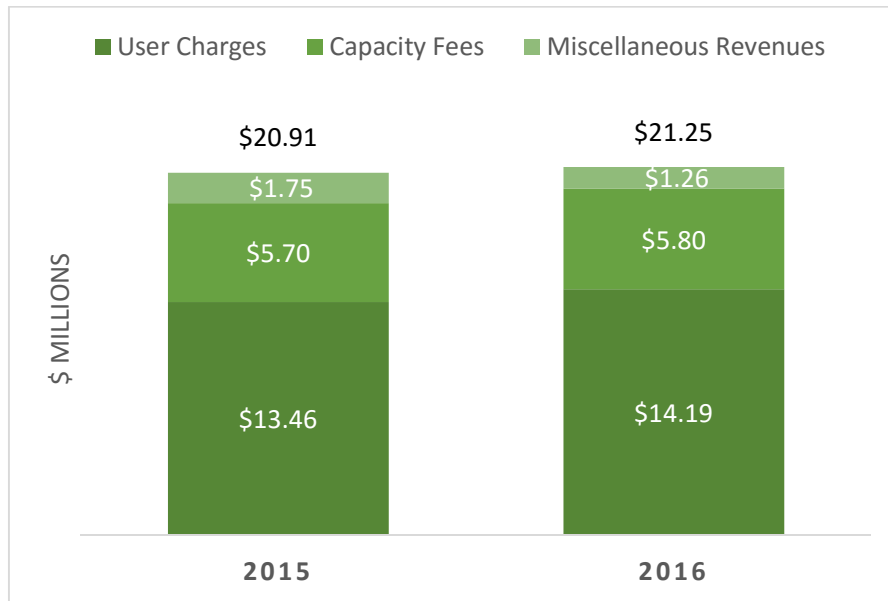
There is no guaranteed approach when projecting the number of accounts for future years, however the Master Plan has considered many local variables and conditions when designing the projection. The financial forecast assumes that 750 additional residential ERUs will be added annually in 2017 through 2020. Over the same time frame, annual growth of 1.25% is projected for commercial ERUs. The overall projection is an increase of approximately 2.3% per year for 2017 through 2020, which is consistent with recent trends. Beyond 2020, system ERUs are projected to increase by 2.15% annually.

Annual increases in customer accounts of 2% would be well above average for many utilities throughout the state, region, and country. However, Delaware County is the fastest growing county in the State and there are many known, planned, and underway developments that reinforce this assumption. Additionally, if the late-90's is any indication, actual growth could greatly exceed this projection.

The monthly sewer user fee is charged per ERU and is designed to recover operating costs which include budgeted expenses, as well as debt service, and meeting coverage and reserve amounts. The 2016 and 2017 monthly charge is \$32/ERU. An increase in the charge to \$33/ERU is already approved by the Commissioners for 2018. The capacity fee revenues recover capital costs associated with providing service to new system customers and promote that "growth pays for growth." The current capacity fee is \$5,900/ERU, and there are certain areas within the District that are subject to additional surcharges to this amount. These surcharges were implemented to recover costs of certain assets that provide service to those customers. Surcharges range from approximately \$1,000 to \$4,000 depending on the area.

In 2016, DCRSD will generate approximately \$14 million in annual revenue from the sewer user charges, which includes approximately \$1.5 million for contract customers (Dublin, Polaris, Union County, and Westerville). The anticipated capacity fee revenue for 2016 is approximately \$5.8 million, which includes \$450,000 from contract communities (primarily Columbus and represents the 50% rate surcharge) and \$829,000 from surcharges. DCRSD also receives approximately \$1.2 million in annual revenue from miscellaneous sources such as delinquent charges and inspection fees. Actual revenues received in 2015 and the projected 2016 total are presented in Figure 2.

FIGURE 2. ACTUAL SYSTEM REVENUES



Revenue Requirements

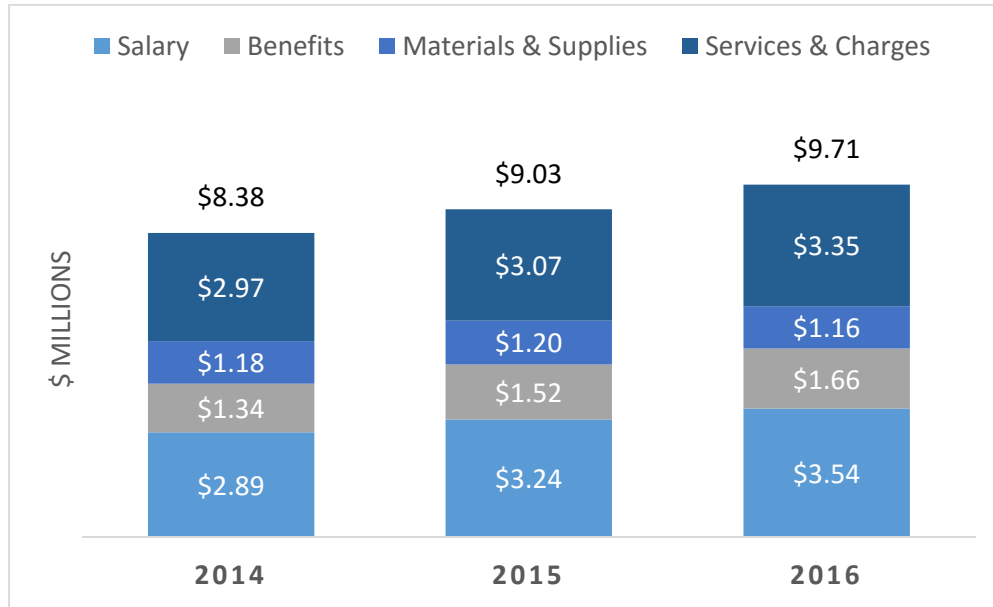
The financial plan is developed with a projection of system revenue requirements, or expenditures, that need to be recovered annually throughout the forecast period. The financial plan is based on the cash needs of the system and thus includes expenditures for operating and maintenance, annual debt service requirements, capital outlays, and funding requirements to meet the financial policies and goals of the system.

Operating and Maintenance Costs

Operating and maintenance expenses fall into four primary categories: **salaries; benefits**, such as health insurance and workers’ compensation; **materials and supplies**, such as, computer supplies, uniforms, minor tools, equipment, and furniture valued at less than \$1,000; and **services and charges**, such as costs associated with external services and purchases, including maintenance and repair services, professional services, and communications and postage. Since

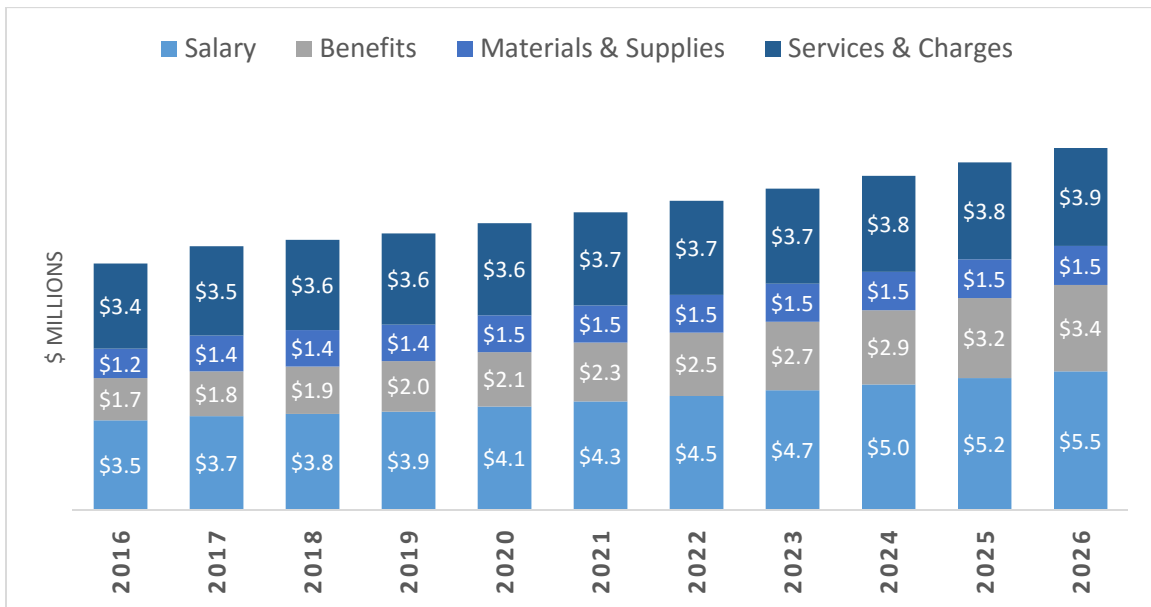
2014, actual operating expenses have increased by an average of 7.7% per year. The historical operating expenses can be seen in Figure 3 and includes the projected 2016 total expenses.

FIGURE 3. HISTORICAL OPERATING EXPENSES



The financial plan uses the budgeted O&M expenses for 2017 as a basis for projecting operating costs. Operating costs are projected to increase based on annual cost escalation rates which vary by expense type. Salary costs are projected to increase by 2.5% per year in 2018 and 2019, and by 5% per year thereafter. Benefits are projected to increase by 6% per year in 2018 and 2019, and by 8% per year thereafter. Materials & supplies and services & charges are projected to increase by 1% per year throughout the forecast. The 2017 increase is the result of a need to “catch-up” on some expense items that have lagged and not been completed by previous management. This causes the reduced percentage increases in 2018 and beyond. The overall projected increase in operating costs is approximately 3.5% per year and the forecasted expenses are presented in Figure 4.

FIGURE 4. PROJECTED OPERATING EXPENSES



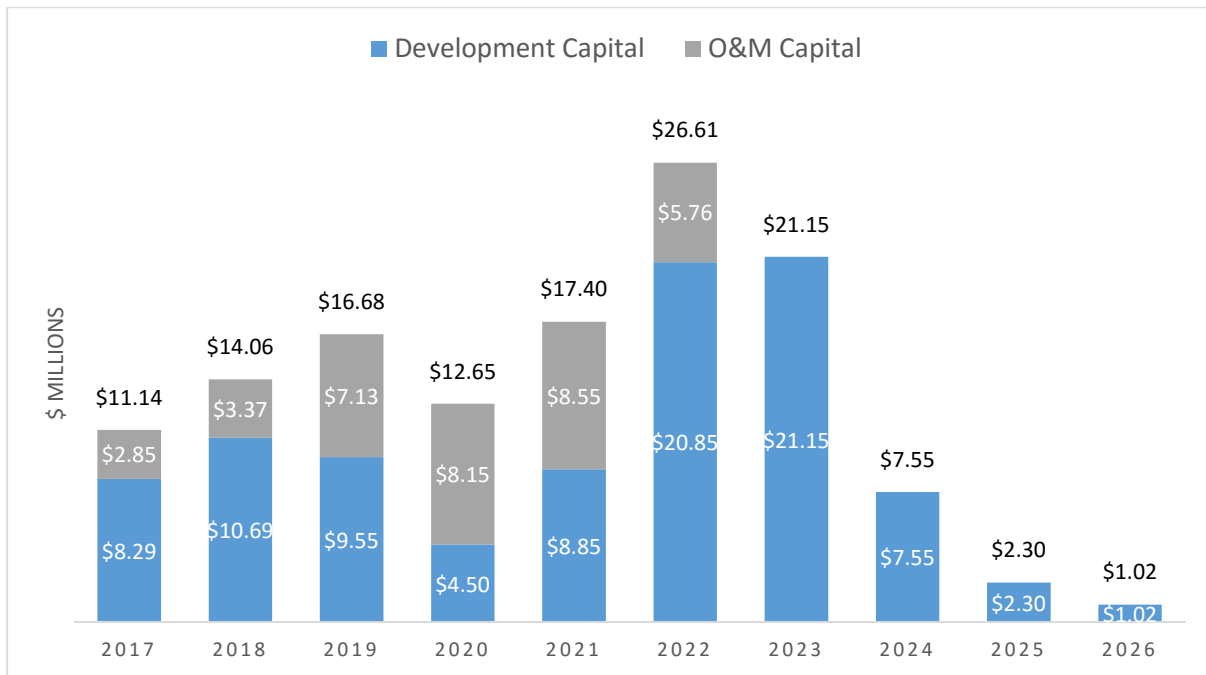
Capital Projects and Funding Requirements

The DCRSD Master Plan capital project recommendations have been separated into two major groups: O&M Capital Projects and Development Capital Projects. In response to current needs, while proactively seeking to ensure safe and reliable future service, the Master Plan includes investments in the existing system assets. These investments are the O&M portion of the projected capital needs. Costs related with extending service to new areas of the County which support growth are the Development portion of the capital needs.

Over the next ten years, the Master Plan recommends an investment of \$35.8 million for the O&M capital projects and \$94.7 million for the Development projects (2016 dollars). O&M capital projects include repair and replacement as well as improvements of the existing system and its assets. The largest improvements as part of the O&M project list are for improvements and upgrades at the Alum Creek Water Reclamation Facility and the Olentangy Environmental Control Center. The Master Plan also includes recommended projects that will occur in 2027 and beyond in the amounts of \$19.9 million for the O&M portion and \$3.0 million for the Development portion which do not appear in this ten-year financial forecast but have been accounted for in the long-term financial planning model.

The Development capital project list includes eighteen projects that expand the service area to key growth corridors. These projects are additionally set apart from O&M projects because they are eligible to be funded by capacity fees collected from new customers. These projects are presented in Appendix A to this memorandum and explained in further detail in other sections of the Master Plan. The projected capital project needs are presented in Figure 5.

FIGURE 5. MASTER PLAN CAPITAL IMPROVEMENT RECOMMENDATIONS



Identifying appropriate financing mechanisms for these capital projects is one of the primary objectives of this financial plan. When considering the real impacts to system revenues and cash flows, it is important to account for future cost inflation. The financial plan assumes that capital project costs are escalated by 2% per year. It is also important to develop financing projections for each component of the CIP independently to ensure that user charges are funding the O&M projects while capacity fee revenue is supporting the Development projects.

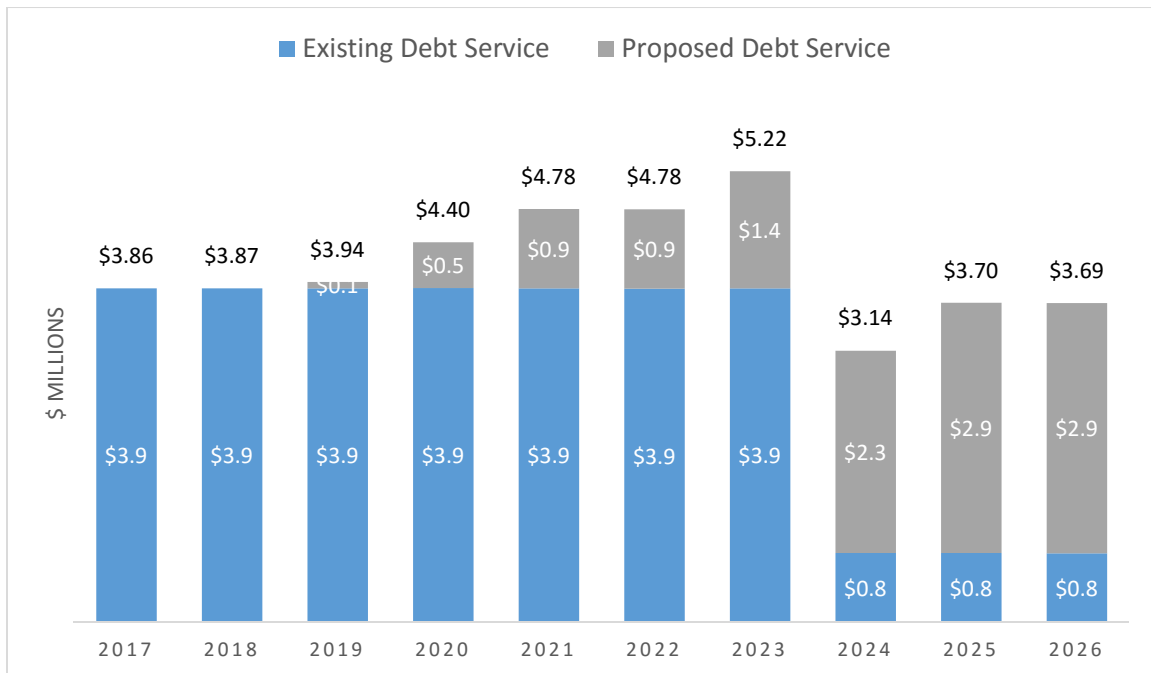
The O&M projects are funded by a combination of cash reserves, rate revenues, and State Revolving Fund (SRF) Loans. A \$15 million Ohio Water Development Authority (OWDA) loan is projected to be issued in 2020, and the remainder of the O&M capital project needs are projected to be financed through cash reserves and rate revenues. The \$15 million OWDA loan is expected to fund the OECC headworks project which begin design in 2019 and construction will take four years to complete. Repayment of the loan is projected to begin in 2022 and is based on a 20-year term at 3.0% interest rate.

As mentioned earlier, Development-related capital projects are primarily funded by capacity fees collected from new customers. Capacity fees are anticipated to fund approximately \$65 million of the total Development project needs. Other sources of funding include an annual 3% transfer from the Revenue Fund; revenue bond proceeds of \$2.5 million, \$15 million, and \$19 million in 2018, 2022, and 2023, respectively; and \$4 million in tax-increment financing (TIF) proceeds received in 2018 through 2022 for the infrastructure needed to support growth in the central/western Alum Creek area.

Debt Service Requirements

DCRSD has two revenue bond issues outstanding with a total annual payment requirement of approximately \$3.8 million. The largest issue is the 1999 Sewer Revenue Bonds; it accounts for \$3.0 million in annual debt service costs and will be fully repaid in 2023. The future borrowing needed to fund the capital project needs will result in additional debt service requirements. The proposed annual debt service will be approximately \$2.9 million by the end of the ten-year forecast period. The existing and proposed debt service requirements are presented in Figure 6.

FIGURE 6. EXISTING AND PROPOSED DEBT SERVICE



Financial Policy Considerations

As evidenced by their 'AAA' credit rating, DCRSD has built a strong financial position through effective management, budgeting, and capital planning. Maintaining this position and implementing financial policy targets that can be used to guide long-term decision making was also an objective of the Master Plan. Financial objectives which were used as a guide in developing the forecast include:

1. Minimizing annual increases in operating expenses
2. Limiting exposure to long-term borrowing for capital improvements through the use of cash reserve and revenue generated through rates and capacity fees
3. Maintaining unrestricted cash balances equal to one-year of operating expenses
4. Exceeding all debt coverage requirements

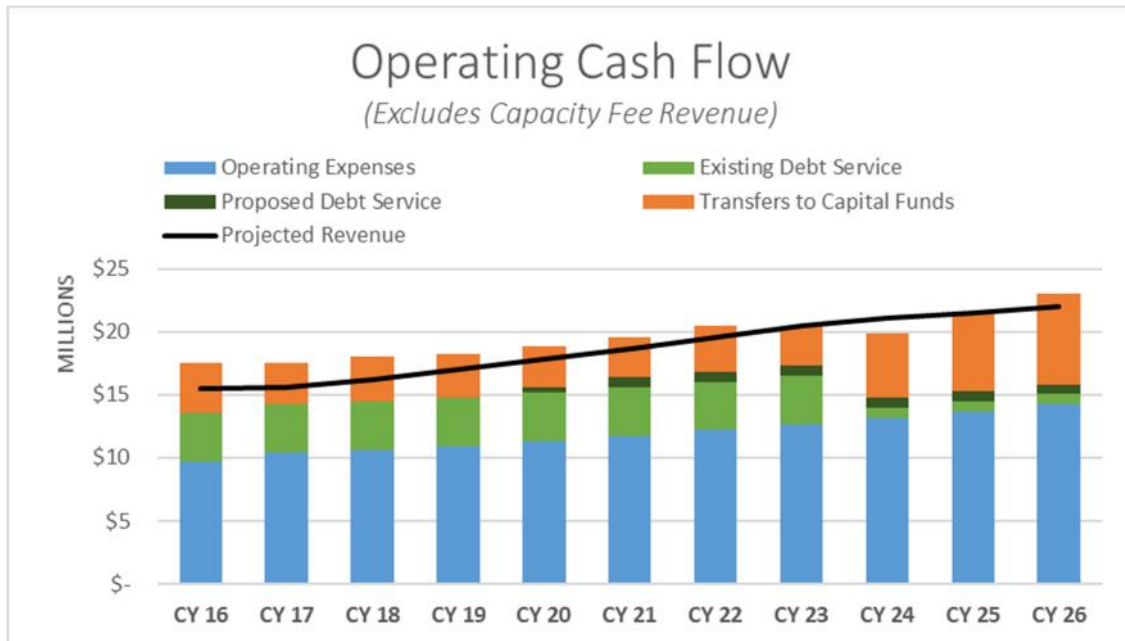
5. Leveraging capacity fee revenue in funding Development projects to provide for “growth to pay for growth.”

Financial Plan & Rate Recommendations

Developing a financial planning forecast is, at its most basic structure, the process of aligning the projection of system revenues with the projection of system expenditures. The financial planning process included a broad review of the various factors and requirements that drive the operations and policies of the utility, as described in earlier sections of the memorandum, and is completed with the recommendation of user charges and capacity fees that support the operational, capital, and policy needs of the utility.

The financial plan has been developed with independent cash flow projections for the existing system (which funds the O&M capital projects) and the Development-related funds. The O&M system is primarily funded with revenues from user charges, and is also supported by 10% of the annual capacity fee revenue. This portion of the capacity fees reflects that some development continues to occur in already built-out service areas. The O&M system funds the annual operating costs of the utility, the existing debt service and proposed revenue bond, as well as annual capital outlays and rate-funded capital. In order to meet these obligations, the financial plan projects a need for 3% annual user charge increases in 2019 through 2023 and an increase to \$39/ERU per month in 2024. The O&M financial plan is presented in Figure 7 and is also presented in greater detail in Appendix A.

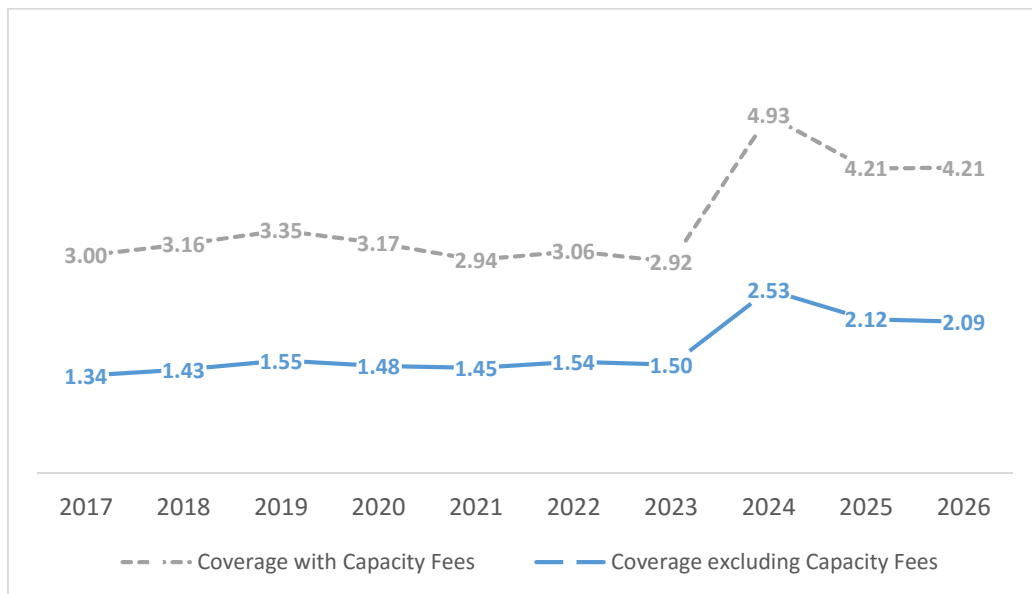
FIGURE 7. O&M FINANCIAL PLAN



Under the proposed forecast of customer growth and user charge increases, revenues excluding capacity fees are projected to increase from \$15.5 million in 2016 to nearly \$22 million in 2026. These increased revenues are needed to support the projected future operating expenses, to finance the O&M capital project needs, and to maintain cash reserves and debt service coverage levels.

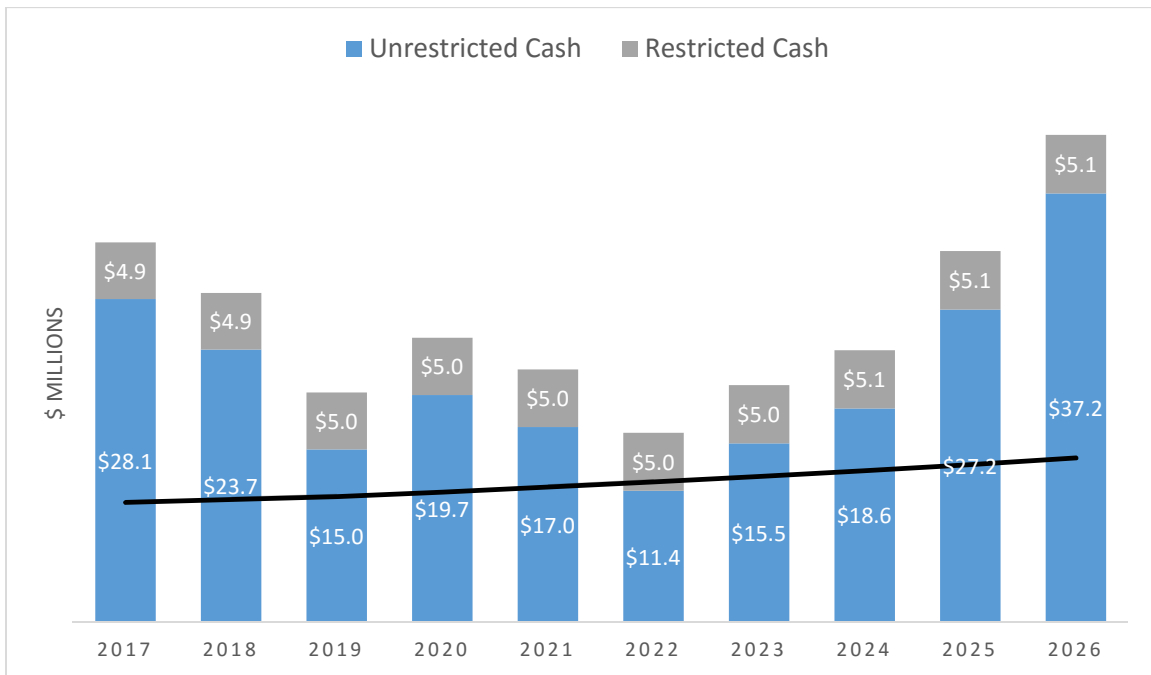
Credit agencies (Standard & Poor’s, Moody’s, and Fitch) consider many metrics when evaluating the credit worthiness of a municipality. Cash reserves and debt service coverage are two of the more important variables to their assessments. When evaluating debt service coverage, the credit agencies will consider the metrics with and without the revenue from capacity fees since this revenue source is subject to volatility based on external factors. Figure 8 presents the total debt service coverage ratios with and without capacity fee revenue; the financial plan recommendations preserve coverage levels that are consistent with DCRSD’s ‘AAA’ rating.

FIGURE 8. TOTAL DEBT SERVICE COVERAGE



Cash reserves are another key financial metric that rating agencies will consider when evaluating DCRSD’s credit profile and the utility has an internal target of maintaining one year’s worth of operating expenses in unrestricted cash balance. This target is consistent with industry best practices and rating agency guidelines due to the infrastructure-intensive nature of the sanitary sewer industry and the self-supporting nature of the DCRSD enterprise fund. Reserves can be used in the event of unforeseen capital or operating expense, to help smooth projected rate increases, and to finance capital projects. Figure 9 shows the projected cash balances throughout the forecast period. Existing reserves are used to finance capital improvements over the first five years of the plan. The projected increase in reserves beginning in 2024 will likely be used for future O&M capital projects, however, these projects are not yet known or projected in this forecast. The restricted cash balance includes funds which are required to be held by the revenue bond Trust Agreement.

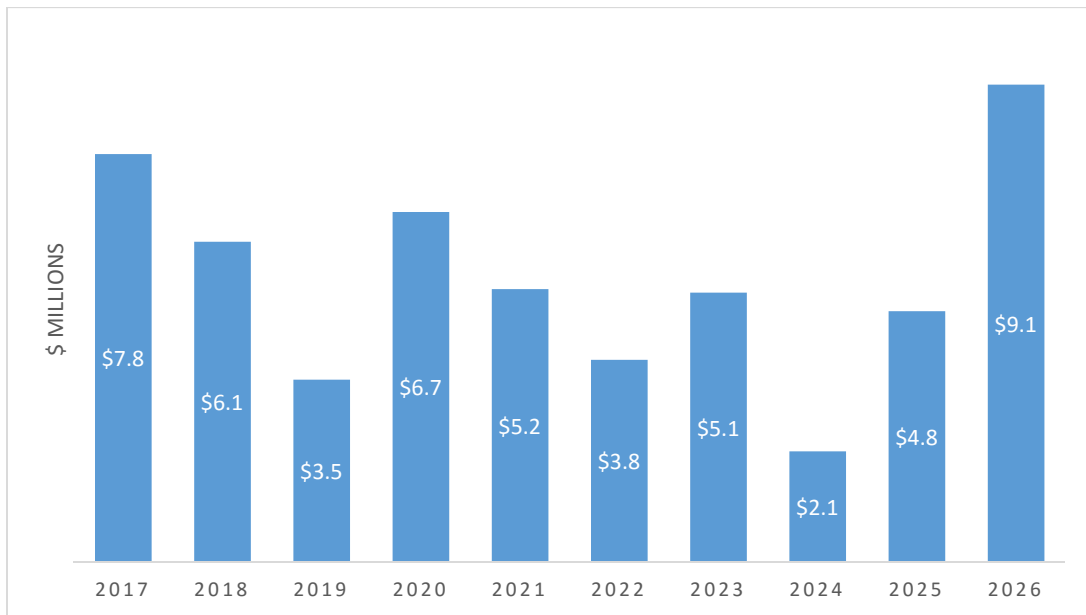
FIGURE 9. PROJECTED CASH RESERVES



As mentioned previously, ensuring the “growth pays for growth” is a DCRSD objective. The Development capital projects were evaluated as a standalone component of the financial plan to identify the capacity fee revenues which would support the capital financing needs. The Master Plan projects capital spending over the next ten years based on all information known currently and variations in development and growth could vary significantly from this projection. However, if growth does not materialize as projected, DCRSD will have the flexibility to defer projects to meet the new timing without impacting the financing significantly.

Meeting the Development capital financing needs requires increases to the capacity fees. The District recommends phasing the capacity fee increases in over a four-year period to allow developers and other organizations an opportunity to plan for the change. The current fee of \$5,900/ERU is projected to increase to \$6,400/ERU in 2017, \$6,900 in 2018, \$7,500 in 2019, and to \$8,100 in 2020 where it will remain throughout the forecast. In addition to these increases, elimination of the capacity fee surcharges is also recommended over the same four-year period. Removal of the surcharges eliminates administrative burden for DCRSD staff and will promote the total system financial health. The detailed Development financial plan results are presented in Appendix A. The projected capacity fee revenue is used to cash finance capital projects directly, to meet the annual debt service obligations related to borrowing for Development projects, and to maintain a targeted cash reserve position. The Development cash reserve projection is shown in Figure 10.

FIGURE 10. DEVELOPMENT FUND CASH RESERVES



The Development fund cash flow includes transfer of approximately 10% of capacity fee revenue to the O&M fund to recognize some continued growth in existing service areas. The O&M fund also transfers 3% of the annual sewer user charge revenue to the Development fund consistent with existing DCRSD ordinances. Development of Evans Farm is projected to be supported by Tax-Increment Financing (TIF). The TIF earmarks a portion of future property tax revenue for DCRSD based on the idea that installation of the utilities helped to spur growth in the area. This \$4.0 million in proceeds is projected to be received over a five-year period from 2018 through 2022. Peach blow and Lower Alum Creek Relief Pump Station Improvements have been earmarked as TIF-eligible for the Evans Farm Development.

DCRSD staff presented the preliminary results of the Master Plan and financial analysis to the BIA of Central Ohio, Chamber of Commerce, and Rotary Commission to solicit their feedback and input. The presentations included a review of 4-year and 2-year phase-ins of the proposed connection fees and surcharge changes. The 4-year scenario for phase-in of the connection fee increase and surcharge decrease was the preferred approach by these stakeholder groups, and the District also established a policy for prepayment of connection fees prior to April 1, 2017 for already platted lots. This approach gives the business community an opportunity to plan for the increased changes and will result in elimination of the surcharges and equal connection fees across the Alum Creek and OECC basins. This approach also provides DCRSD with strong capacity fee revenues in 2017 and 2018 that will help support the immediate and short-term needs development capital projects.

Conclusions & Recommendations

The Master Plan capital recommendations allow DCRSD to maintain and improve the existing system assets they already use to provide excellent and reliable service throughout the County, while providing for investments which support future growth projections. These capital investments are significant, but can be achieved through the financial plan presented in this Technical Memorandum. The financial plan was developed with DCRSD staff to fully support the existing system needs and allow for development to fund the projects from which it benefits. The projected increases in user charges and capacity fees maintain the system's strong financial position without adversely impacting customer bills and development prospects.

The financial plan was developed using an electronic model built in Microsoft Excel and will be a formal deliverable of the Master Plan. The financial plan and model is a dynamic tool which has been designed to be used and updated on a regular basis by DCRSD staff. Maintaining constant awareness of changing financial projections and positions will allow DCRSD to react to customer growth, operating cost changes, financing conditions, and the other variables used in this financial plan.

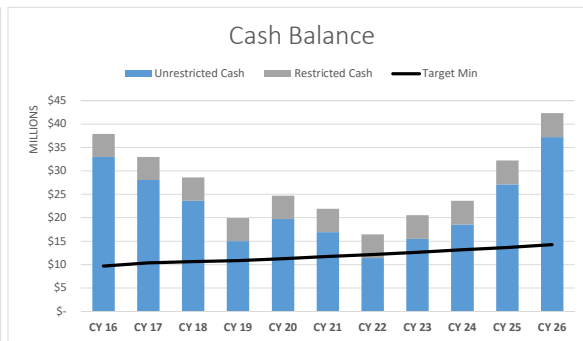
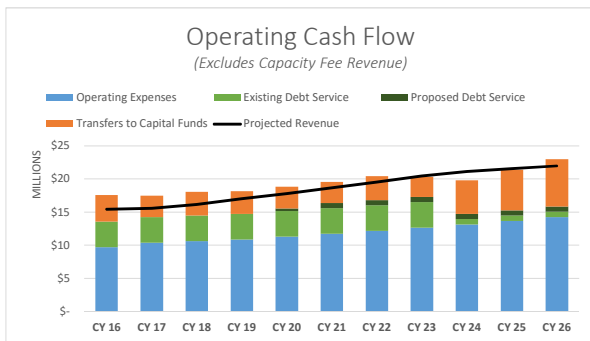
Appendix A.

Financial Plan Model Schedules

Delaware Co. Regional Sewer District
Financial Planning Model
Cashflow Worksheet

	CY 2015 Actual	CY 2016 Actual	CY 2017 Budget	CY 2018 Projected	CY 2019 Projected	CY 2020 Projected	CY 2021 Projected	CY 2022 Projected	CY 2023 Projected	CY 2024 Projected	CY 2025 Projected	CY 2026 Projected	Total
Annual Cashflow													
System Revenues													
User Charges	\$ 13,461,126	\$ 14,187,500	\$ 14,296,961	\$ 14,844,050	\$ 15,661,113	\$ 16,414,845	\$ 17,249,319	\$ 18,072,244	\$ 18,985,629	\$ 19,594,798	\$ 19,988,759	\$ 20,387,776	\$ 203,144,120
Capacity Fees	5,696,507	5,798,829	6,408,859	6,696,648	7,075,307	7,455,167	7,149,997	7,287,697	7,425,397	7,563,097	7,708,897	7,854,697	84,121,099
Miscellaneous Revenue	1,750,155	1,260,450	1,291,661	1,322,999	1,354,431	1,386,000	1,417,042	1,448,787	1,481,316	1,514,634	1,548,709	1,583,586	17,359,770
Total: System Revenues	\$ 20,907,789	\$ 21,246,779	\$ 21,997,481	\$ 22,863,696	\$ 24,090,852	\$ 25,256,012	\$ 25,816,358	\$ 26,808,729	\$ 27,892,342	\$ 28,672,528	\$ 29,246,365	\$ 29,826,060	\$ 304,624,990
	18.03%	1.62%	3.53%	3.94%	5.37%	4.84%	2.22%	3.84%	4.04%	2.80%	2.00%	1.98%	
System Expenditures													
Operating Expenses													
Salary	\$ 3,240,204	\$ 3,538,031	\$ 3,695,000	\$ 3,787,375	\$ 3,882,059	\$ 4,076,162	\$ 4,279,970	\$ 4,493,969	\$ 4,718,667	\$ 4,954,601	\$ 5,202,331	\$ 5,462,447	\$ 51,330,818
Benefits	1,519,892	1,657,630	1,767,000	1,873,020	1,985,401	2,144,233	2,315,772	2,501,034	2,701,116	2,917,206	3,150,582	3,402,629	27,935,515
Materials And Supplies	1,203,383	1,162,168	1,414,530	1,428,675	1,442,962	1,457,392	1,471,966	1,486,685	1,501,552	1,516,568	1,531,733	1,547,051	17,164,665
Services And Charges	3,067,337	3,353,633	3,523,000	3,558,230	3,593,812	3,629,750	3,666,048	3,702,708	3,739,735	3,777,133	3,814,904	3,853,053	43,279,345
Subtotal: Operating Expenses	\$ 9,030,816	\$ 9,711,463	\$ 10,399,530	\$ 10,647,300	\$ 10,904,235	\$ 11,307,538	\$ 11,733,756	\$ 12,184,396	\$ 12,661,071	\$ 13,165,507	\$ 13,699,550	\$ 14,265,180	\$ 139,710,343
	7.79%	7.54%	7.09%	2.38%	2.41%	3.70%	3.77%	3.84%	3.91%	3.98%	4.06%	4.13%	
Non-Operating Expenses													
Existing Debt Service	\$ 3,865,163	\$ 3,861,864	\$ 3,863,313	\$ 3,865,338	\$ 3,866,488	\$ 3,867,763	\$ 3,864,863	\$ 3,861,638	\$ 3,866,638	\$ 801,238	\$ 803,038	\$ 799,038	\$ 37,186,376
Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ 72,649	\$ 531,769	\$ 918,240	\$ 918,240	\$ 918,240	\$ 1,354,134	\$ 2,342,162	\$ 2,894,294	\$ 11,925,782
Transfer to O&M Capital Fund	1,500,000	1,500,000	1,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,500,000	2,000,000	4,000,000	5,000,000	6,000,000	\$ 32,000,000
Annual Capital Outlays	2,515,000	2,074,500	1,319,500	1,121,575	953,339	810,338	688,787	585,469	497,649	491,921	516,517	542,343	\$ 6,901,661
3% Transfer to Development Capital Fund	-	425,600	428,900	445,300	469,800	492,400	517,400	542,100	569,500	587,800	599,600	611,600	6,094,300
Subtotal: Non-Operating Expenses	\$ 7,880,163	\$ 7,861,964	\$ 7,111,713	\$ 7,432,213	\$ 7,362,275	\$ 7,702,269	\$ 7,989,290	\$ 8,407,447	\$ 8,287,921	\$ 8,223,120	\$ 9,813,449	\$ 10,847,275	\$ 87,206,458
Total: System Expenditures	\$ 16,910,978	\$ 17,573,426	\$ 17,511,243	\$ 18,079,513	\$ 18,266,510	\$ 19,009,807	\$ 19,723,046	\$ 20,591,843	\$ 20,948,992	\$ 21,388,627	\$ 23,512,999	\$ 25,112,455	\$ 226,916,801
Net Annual Cashflow: Surplus/(Deficit)	\$ 3,996,810	\$ 3,673,352	\$ 4,486,238	\$ 4,784,184	\$ 5,824,341	\$ 6,246,205	\$ 6,093,312	\$ 6,216,886	\$ 6,943,350	\$ 7,283,902	\$ 5,733,366	\$ 4,713,605	\$ 77,708,189
Transfer to Capacity Fee Fund	-	(5,798,829)	(5,767,973)	(6,026,983)	(6,367,776)	(6,709,650)	(6,434,997)	(6,558,927)	(6,682,857)	(6,806,787)	(6,938,007)	(7,069,227)	\$ (71,162,015)
Debt Funded with Development Fees	-	-	-	-	72,649	145,298	145,298	145,298	581,192	1,569,220	2,121,353	2,121,353	6,901,661
Net Cash Flow - Sewer Revenue Fund	\$ 3,996,810	\$ (2,125,476)	\$ (1,281,735)	\$ (1,242,800)	\$ (470,786)	\$ (318,147)	\$ (196,387)	\$ (196,744)	\$ 841,685	\$ 2,046,334	\$ 916,711	\$ (234,270)	\$ 13,447,834
Sewer User Fee, per ERU	\$ 30.00	\$ 32.00	\$ 32.00	\$ 33.00	\$ 34.00	\$ 35.10	\$ 36.20	\$ 37.30	\$ 38.50	\$ 39.00	\$ 39.00	\$ 39.00	
Capacity Fee, per ERU	\$ 5,900	\$ 5,900	\$ 6,400	\$ 6,900	\$ 7,500	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	

Reserve Fund Balances	Fund	Type												
Sewer Revenue Fund	662	Unrestricted	\$ 9,091,522	\$ 8,798,591	\$ 7,516,856	\$ 6,274,056	\$ 5,803,270	\$ 5,485,123	\$ 5,288,736	\$ 5,091,993	\$ 5,933,678	\$ 7,980,012	\$ 8,896,723	\$ 8,662,453
O&M Capital Fund (1)	666	Unrestricted	6,512,779	14,207,164	12,800,164	11,295,264	5,733,365	7,583,365	6,472,605	2,486,494	4,486,494	8,486,494	13,486,494	19,486,494
Development Capital Fund (1)	667	Unrestricted	-	10,024,429	7,762,850	6,097,012	3,474,189	6,660,141	5,196,841	3,848,272	5,127,642	2,107,429	4,774,108	9,086,525
Replacement Fund	665	Restricted	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
Bond Reserve Fund	664	Restricted	3,862,374	3,897,748	3,917,188	3,936,725	3,956,360	3,976,093	3,995,924	4,015,854	4,035,883	4,056,013	4,076,243	4,096,573
Total: Cash Reserve Fund Balance			\$ 20,466,675	\$ 37,927,931	\$ 32,997,057	\$ 28,603,057	\$ 19,967,184	\$ 24,704,722	\$ 21,954,106	\$ 16,442,612	\$ 20,583,697	\$ 23,629,948	\$ 32,233,567	\$ 42,332,046
Net: Unrestricted Cash Balance			15,604,301	33,030,183	28,079,869	23,666,332	15,010,824	19,728,629	16,958,182	11,426,758	15,547,813	18,573,935	27,157,325	37,235,473
Days Cash on Hand			631	1,241	986	811	502	637	528	342	448	515	724	953
SRF Days Cash on Hand			367	331	264	215	194	177	165	153	171	221	237	222



Financial Plan Assumptions

Customer Growth
- 750 Residential ERUs added annually (2016-2020), 2.25% annual growth beyond 2020
- 1.25% annual growth in commercial accounts

Unrestricted Cash Fund Balance Minimum: 360 Days of O&M Expenses

Development Capital Fund
- Annual transfer equal to 3% of sewer revenues
- Approx. 90% of capacity fees transferred to development fund

Operating Expenses increase by approx. 3.6% annually, based on estimated 2017 expenses

(1) Capital fund balances exclude debt proceeds

Delaware Co. Regional Sewer District
 Financial Planning Model
 Cashflow Worksheet

	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>	<u>CY 2020</u>	<u>CY 2021</u>	<u>CY 2022</u>	<u>CY 2023</u>	<u>CY 2024</u>	<u>CY 2025</u>	<u>CY 2026</u>	<u>Total</u>
Total: System Revenues	\$ 20,907,789	\$ 21,246,779	\$ 21,997,481	\$ 22,863,696	\$ 24,090,852	\$ 25,256,012	\$ 25,816,358	\$ 26,808,729	\$ 27,892,342	\$ 28,672,528	\$ 29,246,365	\$ 29,826,060	\$ 304,624,990
Less: Operating Expenses	(9,030,816)	(9,711,463)	(10,399,530)	(10,647,300)	(10,904,235)	(11,307,538)	(11,733,756)	(12,184,396)	(12,661,071)	(13,165,507)	(13,699,550)	(14,265,180)	(139,710,343)
Revenues Available for Debt	\$ 11,876,973	\$ 11,535,316	\$ 11,597,951	\$ 12,216,396	\$ 13,186,617	\$ 13,948,474	\$ 14,082,602	\$ 14,624,332	\$ 15,231,271	\$ 15,507,021	\$ 15,546,815	\$ 15,560,880	\$ 164,914,647
Less Capacity Fee Revenue	(5,696,507)	(5,798,829)	(6,408,859)	(6,696,648)	(7,075,307)	(7,455,167)	(7,149,997)	(7,287,697)	(7,425,397)	(7,563,097)	(7,708,897)	(7,854,697)	(84,121,099)
Net Revenues Available for Debt	\$ 6,180,465	\$ 5,736,487	\$ 5,189,092	\$ 5,519,748	\$ 6,111,310	\$ 6,493,307	\$ 6,932,605	\$ 7,336,635	\$ 7,805,874	\$ 7,943,924	\$ 7,837,918	\$ 7,706,183	\$ 80,793,548
Operating Margin	0.57	0.54	0.53	0.53	0.55	0.55	0.55	0.55	0.55	0.54	0.53	0.52	0.54
Operating Margin excluding Capacity Fees	0.30	0.27	0.24	0.24	0.25	0.26	0.27	0.27	0.28	0.28	0.27	0.26	0.27
Debt to Revenue Ratio	0.25	0.25	0.25	0.24	0.23	0.25	0.26	0.24	0.26	0.15	0.17	0.17	0.22
Debt Service Coverage													
<u>Revenue Bond Debt Service</u>	\$ 3,865,163	\$ 3,861,864	\$ 3,863,313	\$ 3,865,338	\$ 3,939,137	\$ 4,399,532	\$ 4,783,102	\$ 4,779,877	\$ 5,220,772	\$ 3,143,399	\$ 3,697,332	\$ 3,693,332	
Coverage with Capacity Fees	3.07	2.99	3.00	3.16	3.35	3.17	2.94	3.06	2.92	4.93	4.21	4.21	
Coverage excluding Capacity Fees	1.60	1.49	1.34	1.43	1.55	1.48	1.45	1.54	1.50	2.53	2.12	2.09	
<u>Total Debt Service</u>	\$ 3,865,163	\$ 3,861,864	\$ 3,863,313	\$ 3,865,338	\$ 3,939,137	\$ 4,399,532	\$ 4,783,102	\$ 4,779,877	\$ 5,220,772	\$ 3,143,399	\$ 3,697,332	\$ 3,693,332	
Coverage with Capacity Fees	3.07	2.99	3.00	3.16	3.35	3.17	2.94	3.06	2.92	4.93	4.21	4.21	
Coverage excluding Capacity Fees	1.60	1.49	1.34	1.43	1.55	1.48	1.45	1.54	1.50	2.53	2.12	2.09	
Allowable Reserve Funds for Coverage	\$ 13,346,597	\$ 6,370,725	\$ 4,916,973	\$ 3,612,231	\$ 3,077,211	\$ 2,658,239	\$ 2,355,297	\$ 2,045,894	\$ 2,768,410	\$ 4,688,635	\$ 5,471,835	\$ 5,096,158	
<u>Total Debt Service</u>													
Coverage with Capacity Fees & Reserves	6.53	4.64	4.28	4.10	4.13	3.78	3.44	3.49	3.45	6.43	5.69	5.59	
Coverage excluding Capacity Fees	5.05	3.14	2.62	2.36	2.33	2.08	1.94	1.96	2.03	4.02	3.60	3.47	
Outstanding Debt Principal													
Existing Debt	\$ 35,210,000	\$ 32,740,000	\$ 30,165,000	\$ 27,475,000	\$ 24,685,000	\$ 21,780,000	\$ 18,755,000	\$ 15,620,000	\$ 12,370,000	\$ 8,985,000	\$ 8,530,000	\$ 8,055,000	
Proposed Debt	-	-	-	2,500,000	2,416,667	2,333,333	2,250,000	17,166,667	35,583,333	34,366,667	33,150,000	31,933,333	
Total: Outstanding Debt	\$ 35,210,000	\$ 32,740,000	\$ 30,165,000	\$ 29,975,000	\$ 27,101,667	\$ 24,113,333	\$ 21,005,000	\$ 32,786,667	\$ 47,953,333	\$ 43,351,667	\$ 41,680,000	\$ 39,988,333	

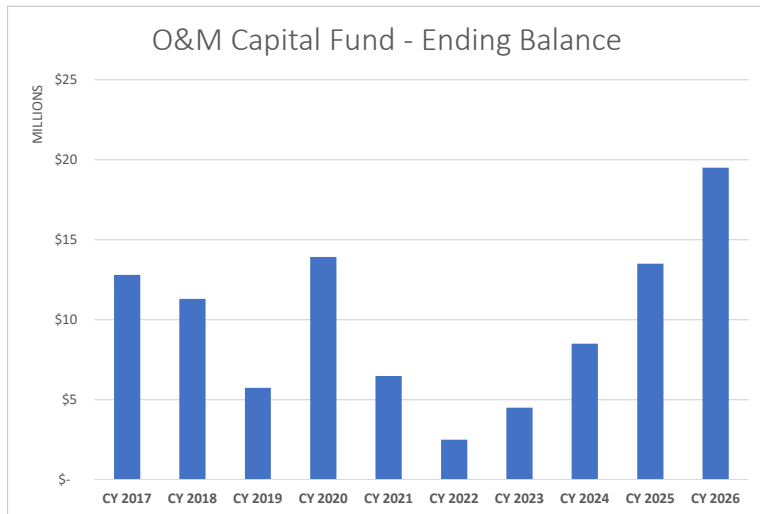
Delaware Co. Regional Sewer District
 Financial Planning Model
 CIP Summary

	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>	<u>CY 2020</u>	<u>CY 2021</u>	<u>CY 2022</u>	<u>CY 2023</u>	<u>CY 2024</u>	<u>CY 2025</u>	<u>CY 2026</u>	<u>Total</u>
Capital Improvements Plan (2016 Dollars)											
<u>O&M Capital Projects</u>											
Tartan Fields Upgrades	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000							\$ 1,000,000
Scioto Reserve Upgrades	250,000	500,000	500,000	250,000							1,500,000
Lower Scioto WRF Service Upgrades	500,000	500,000	500,000								1,500,000
Leatherlips PS Service Area I&I Reduction	100,000	100,000	100,000								300,000
Seldom Seen Forcemain Redirection		268,800									268,800
Olentangy/Wingate/White Oak Road Sewer Upsizing (1)											-
ACWRF Mixer and Aeration Upgrades	1,000,000	1,500,000									2,500,000
ACWRF Dewatering Improvements			1,710,000								1,710,000
ACWRF Grit Removal Improvements			495,800	2,000,000	2,000,000	500,000					4,995,800
Arc Flash Study	300,000										300,000
WRF Electrical and I&C Improvements	200,000		500,000	1,000,000	1,300,000						3,000,000
OECC Facilities Study	250,000	250,000									500,000
OECC Dewatering Improvements			1,570,000								1,570,000
OECC Cake Storage Improvements				1,650,000							1,650,000
OECC Headworks			1,500,000	3,000,000	5,250,000	5,259,800					15,009,800
OECC South Aeration Upgrades (1)											-
OECC Filter Upgrades (1)											-
Woodland Hall Road Sewer Upsizing (1)											-
Subtotal: O&M Capital Projects	\$ 2,850,000	\$ 3,368,800	\$ 7,125,800	\$ 8,150,000	\$ 8,550,000	\$ 5,759,800	\$ -	\$ -	\$ -	\$ -	\$ 35,804,400
<u>Development Capital Projects</u>											
Peachblow PS Near Term Upgrade	\$ 200,000	\$ 620,100	\$ 620,100								\$ 1,440,200
Cheshire PS Upgrade	233,200	1,250,000	1,250,000								2,733,200
Lower Alum Creek Relief PS (LACR PS)	609,400	3,500,000	3,500,000								7,609,400
Liberty Sawmill Sewer Phase 1	2,500,000	2,500,000									5,000,000
Liberty Sawmill Sewer Phase 2				500,000	2,250,000	2,250,000					5,000,000
OECC North Plant Rehab					500,000	500,000	1,750,000	4,250,000	2,300,900		9,300,900
West Alum Creek PS (WAC PS)						1,500,000	2,225,500				3,725,500
Central Alum Creek WRF (CACWRF)	500,000	500,000	1,000,000	2,000,000	3,000,000	7,500,000	7,500,000				22,000,000
Summerwood PS Upgrade										1,023,100	1,023,100
East Alum Creek PS (EAC PS) Upgrade						1,422,200	2,000,000				3,422,200
Golf Village Relief Sewer		140,500	250,000	1,000,000	1,100,000	2,300,000	2,300,000	2,300,000			9,390,500
Olentangy River Trunk Sewer Parallel Relief Sewer					2,000,000	3,377,900	3,377,900				8,755,800
Berkshire Township Pump Station	250,000	250,000	1,000,000	1,000,000							2,500,000
U.S. 23 Sewers		1,933,000	1,933,000								3,866,000
Peachblow PS Long Term Upgrade (1)											-
Central Alum Creek WRF (CACWRF) Influent Gravity Sewers						2,000,000	2,000,000	1,000,000			5,000,000
Clark Shaw Trunk Sewer	4,000,000										4,000,000
Subtotal: Development Capital Projects	\$ 8,292,600	\$ 10,693,600	\$ 9,553,100	\$ 4,500,000	\$ 8,850,000	\$ 20,850,100	\$ 21,153,400	\$ 7,550,000	\$ 2,300,900	\$ 1,023,100	\$ 94,766,800
Total: CIP Needs	\$ 11,142,600	\$ 14,062,400	\$ 16,678,900	\$ 12,650,000	\$ 17,400,000	\$ 26,609,900	\$ 21,153,400	\$ 7,550,000	\$ 2,300,900	\$ 1,023,100	\$ 130,571,200
Annual Cost Escalation - 2016 Base	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
Cumulative Inflation Factor	102.0%	104.0%	106.1%	108.2%	110.4%	112.6%	114.9%	117.2%	119.5%	121.9%	
Net: Capital Improvement Needs	\$ 11,365,452	\$ 14,630,521	\$ 17,699,649	\$ 13,692,360	\$ 19,209,600	\$ 29,965,408	\$ 24,296,795	\$ 8,845,580	\$ 2,749,576	\$ 1,247,057	\$ 143,701,998
% Change		28.73%	20.98%	-22.64%	40.29%	55.99%	-18.92%	-63.59%	-68.92%	-54.65%	

(1) These projects are included in the Master Plan recommendation, however, they are forecast to occur in 2027 and beyond and do not appear in this ten-year forecast. The total estimated cost of these projects is \$22.9 million (2016 dollars).

Delaware Co. Regional Sewer District
 Financial Planning Model
 CIP Summary

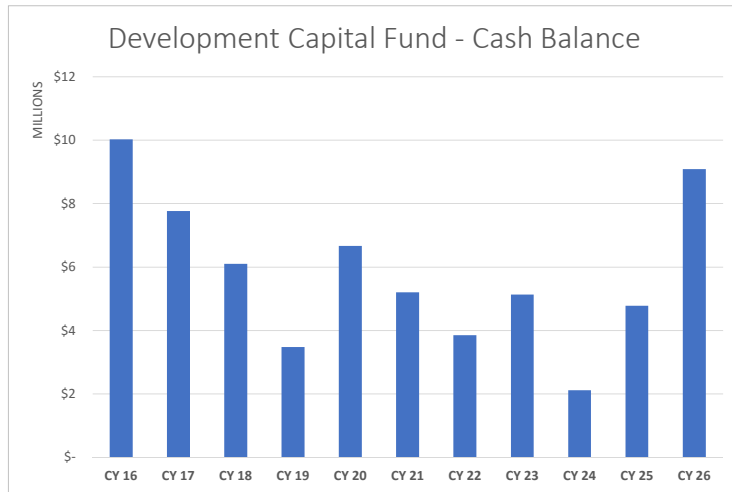
	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>	<u>CY 2020</u>	<u>CY 2021</u>	<u>CY 2022</u>	<u>CY 2023</u>	<u>CY 2024</u>	<u>CY 2025</u>	<u>CY 2026</u>
O&M Capital Financing Plan										
<u>Net Capital Financing Needs</u>	\$ 2,907,000	\$ 3,504,900	\$ 7,561,899	\$ 8,821,560	\$ 9,439,200	\$ 6,486,111	\$ -	\$ -	\$ -	\$ -
<u>Capital Financing Sources</u>										
Fund Balance	1,407,000	1,504,900	5,561,899	17,733,365	7,439,200	3,986,111	-	-	-	-
Cash Financing of Construction (PAYGO)	1,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,500,000	2,000,000	4,000,000	5,000,000	6,000,000
SRF Loans (OWDA/OPWC)	-	-	-	-	-	-	-	-	-	-
Capital Reserves	-	-	-	-	-	-	-	-	-	-
Grants & Contributions	-	-	-	-	-	-	-	-	-	-
Subtotal: Capital Financing Sources	\$ 2,907,000	\$ 3,504,900	\$ 7,561,899	\$ 19,733,365	\$ 9,439,200	\$ 6,486,111	\$ 2,000,000	\$ 4,000,000	\$ 5,000,000	\$ 6,000,000
Capital Financing Shortfall	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction Fund										
<u>Beginning Balance</u>	\$ 14,207,164	\$ 12,800,164	\$ 11,295,264	\$ 5,733,365	\$ 13,911,805	\$ 6,472,605	\$ 2,486,494	\$ 4,486,494	\$ 8,486,494	\$ 13,486,494
<u>Sources of Funds</u>										
Cash Financing of Capital	1,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,500,000	2,000,000	4,000,000	5,000,000	6,000,000
Revenue Bond Proceeds	-	-	-	15,150,000	-	-	-	-	-	-
SRF Loan Proceeds	-	-	-	-	-	-	-	-	-	-
Transfers from Other Funds	-	-	-	-	-	-	-	-	-	-
<u>Uses of Funds</u>										
Capital Project Needs	\$ (2,907,000)	\$ (3,504,900)	\$ (7,561,899)	\$ (8,821,560)	\$ (9,439,200)	\$ (6,486,111)	\$ -	\$ -	\$ -	\$ -
Debt Reserve Funding	-	-	-	-	-	-	-	-	-	-
Issuance Costs	-	-	-	(150,000)	-	-	-	-	-	-
Transfer to Development Capital Fund	-	-	-	-	-	-	-	-	-	-
Ending Balance	\$ 12,800,164	\$ 11,295,264	\$ 5,733,365	\$ 13,911,805	\$ 6,472,605	\$ 2,486,494	\$ 4,486,494	\$ 8,486,494	\$ 13,486,494	\$ 19,486,494



O&M Capital Assumptions

- \$29.0M added between 2017 and 2026 to support capital needs and maintain \$2.5 M minimum balance
- \$20.8M of capital needs funded with cash
- \$15.0M of capital needs funded with debt issuance
- Existing debt service is an O&M expense
- Fund balance in 2024 and beyond available for future repairs that are not yet identified in the CIP

	CY 2016 Estimated	CY 2017 Projected	CY 2018 Projected	CY 2019 Projected	CY 2020 Projected	CY 2021 Projected	CY 2022 Projected	CY 2023 Projected	CY 2024 Projected	CY 2025 Projected	CY 2026 Projected	Total
Capacity Fee & Development Cashflow												
Development Capital Fund - Beginning Balance	\$ 3,800,000	\$ 10,024,429	\$ 7,762,850	\$ 6,097,012	\$ 3,474,189	\$ 6,660,141	\$ 5,196,841	\$ 3,848,272	\$ 5,127,642	\$ 2,107,429	\$ 4,774,108	
Sources of Funds												
Capacity Fees	\$ 5,798,829	\$ 6,408,859	\$ 6,696,648	\$ 7,075,307	\$ 7,455,167	\$ 7,149,997	\$ 7,287,697	\$ 7,425,397	\$ 7,563,097	\$ 7,708,897	\$ 7,854,697	\$ 78,424,592
3% Transfer from Sewer Revenue	425,600	428,900	445,300	469,800	492,400	517,400	542,100	569,500	587,800	599,600	611,600	5,690,000
Revenue Bond Proceeds	-	-	2,500,000	-	-	-	15,000,000	19,000,000	-	-	-	36,500,000
SRF Loan Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
TIF Proceeds	-	-	500,000	750,000	1,000,000	1,500,000	250,000	-	-	-	-	4,000,000
Total: Sources of Funds	\$ 6,224,429	\$ 6,837,759	\$ 10,141,948	\$ 8,295,107	\$ 8,947,567	\$ 9,167,397	\$ 23,079,797	\$ 26,994,897	\$ 8,150,897	\$ 8,308,497	\$ 8,466,297	\$ 124,614,592
Uses of Funds												
Proposed Debt Service												
Revenue Bonds	\$ -	\$ -	\$ -	\$ 72,649	\$ 145,298	\$ 145,298	\$ 145,298	\$ 581,192	\$ 1,569,220	\$ 2,121,353	\$ 2,121,353	\$ 6,901,661
SRF & Loans	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Proposed Debt	\$ -	\$ -	\$ -	\$ 72,649	\$ 145,298	\$ 145,298	\$ 145,298	\$ 581,192	\$ 1,569,220	\$ 2,121,353	\$ 2,121,353	\$ 6,901,661
Transfer to Sewer Revenue Fund	-	640,886	669,665	707,531	745,517	715,000	728,770	742,540	756,310	770,890	785,470	7,262,576
Development-Related Capital Expenditures	-	8,458,452	11,125,621	10,137,750	4,870,800	9,770,400	23,479,298	24,296,795	8,845,580	2,749,576	1,247,057	104,981,329
Debt Issuance Costs	-	-	12,500	-	-	-	75,000	95,000	-	-	-	182,500
Total: Uses of Funds	\$ -	\$ 9,099,338	\$ 11,807,786	\$ 10,917,930	\$ 5,761,615	\$ 10,630,698	\$ 24,428,366	\$ 25,715,527	\$ 11,171,109	\$ 5,641,818	\$ 4,153,879	\$ 119,328,066
Net Annual Cashflow: Surplus/(Deficit)	\$ 6,224,429	\$ (2,261,579)	\$ (1,665,838)	\$ (2,622,823)	\$ 3,185,952	\$ (1,463,301)	\$ (1,348,569)	\$ 1,279,370	\$ (3,020,212)	\$ 2,666,679	\$ 4,312,418	\$ 5,286,525
Development Capital Fund - Ending Balance	\$ 10,024,429	\$ 7,762,850	\$ 6,097,012	\$ 3,474,189	\$ 6,660,141	\$ 5,196,841	\$ 3,848,272	\$ 5,127,642	\$ 2,107,429	\$ 4,774,108	\$ 9,086,525	
Capacity Fee, per ERU	\$ 5,900	\$ 6,400	\$ 6,900	\$ 7,500	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	\$ 8,100	



Assumptions Used in Development Forecast

- Surcharges phased out between 2017 and 2022, approx 25% per year
- Tap fee increases through 2020
- Approx. 90% of capacity fees transferred to Development Fund
- Annual transfer equal to 3% of sewer revenues
- \$105M in total capital needs through 2026 (inflated dollars)
 - Approx. \$64.5M funded with cash
 - Approx. \$36.5M funded with debt issuance
 - Approx. \$4.0M in TIF proceeds available for partial funding of Evans Tract