

Financial Management Systems has developed a suite of municipal finance products (Micromuni Debt, Micromuni Refund and Micromuni Sizing) designed to assist state and local governments, bond underwriters, and financial consultants in evaluating the debt service and calculations associated with municipal bond issues.

## **Micromuni Debt – A Brief Look**

- A highly flexible software tool for analyzing the cash flows associated with a potential refinancing of an existing bond issue (or issues), or for simply structuring new debt.
- Save several bond issues within your unique database. Each bond issue is identified by a Project Name, Key Name, and a unique numeric Key ID generated by Micromuni Debt.
- Evaluates the repayment structure of tax-exempt debt obligations.
- Performs bond calculations, NIC, TIC, Arbitrage yield,
- Used for competitive bid calculations and bid verifications.
- Consolidates multiple bond issues into a single debt service stream.
- Calculates bond maturities for Level, Accelerated, Deferred, and Uniform Debt Service. Solutions can include prior debt service for wraparound Debt Service.
- Reports include Bond Issue Debt Service, Consolidated Debt Service, Debt Service Savings, Bond Production.

Micromuni Debt has the capability of handling two sets of bond issue cash flows. Each set contains a complete set of information about a bond issue, such as the dated date, delivery date, first and last maturity dates, and all the cash flows that represent the debt service principal and interest repayments. The two bond issues are referred to as the "Current Bond Issue" and the "Prior Bond Issue".



## Current Bond Issue

The "Current Bond Issue" is the work area where all bond information is entered via input pages. You can enter and modify the bond issue information while it is stored in the program's current issue workspace. The current issue data is saved in your database and can be loaded into the current issue workspace or loaded into the prior issue workspace.

Current  
Bond Issue

Micromuni Debt

**Micromuni Debt**  
Current 182

Input Load Calculate

- General Bond Information
- Amounts, Coupons, Yields, Prices
- Call Options (Bond Pricing)
- Mandatory Redemptions

**Bond Maturity Dates**

Save Info

Par Amount: \$20,225,000.00 Denomination: 5,000.00

Dated Date: 1/1/2021 Delivery Date: 1/15/2021

First Coupon: 4/1/2021 First Maturity Date: 4/1/2022

Fiscal (Interest Payment Date): 4/1/2021 Last Maturity Date: 4/1/2041

Interest Frequency: Semi-Annual Maturity Frequency: Annual

Year for Interest Calculations: 30/360 Data Share: No

Project Name: State and Local Governments

Key Name: Municipal Financing Project

Report Titles:

- State and Local Governments
- Municipal Financing Project
- 

Maturity Date	Amount	Bond Type	Coupon	Yield	Price
04/01/2022	\$975,000.00	Standard	0.100000	0.000000	100.000000
04/01/2023	\$975,000.00	Standard	0.150000	0.000000	100.000000
04/01/2024	\$980,000.00	Standard	0.200000	0.000000	100.000000
04/01/2025	\$980,000.00	Standard	0.250000	0.000000	100.000000
04/01/2026	\$985,000.00	Standard	0.300000	0.000000	100.000000
04/01/2027	\$985,000.00	Standard	0.350000	0.000000	100.000000
04/01/2028	\$990,000.00	Standard	0.400000	0.000000	100.000000
04/01/2029	\$995,000.00	Standard	0.450000	0.000000	100.000000
04/01/2030	\$995,000.00	Standard	0.000000	0.000000	100.000000
04/01/2031	\$995,000.00	Standard	0.550000	0.000000	100.000000
04/01/2032	\$1,005,000.00	Standard	0.600000	0.000000	100.000000
04/01/2033	\$1,010,000.00	Standard	0.650000	0.000000	100.000000
04/01/2034	\$1,015,000.00	Standard	0.700000	0.000000	100.000000
04/01/2035	\$1,025,000.00	Standard	0.750000	0.000000	100.000000
04/01/2036	\$1,030,000.00	Standard	0.800000	0.000000	100.000000
04/01/2037	\$1,040,000.00	Standard	0.850000	0.000000	100.000000
04/01/2038	\$1,045,000.00	Standard	0.900000	0.000000	100.000000
04/01/2039	\$1,055,000.00	Standard	0.950000	0.000000	100.000000
04/01/2040	\$1,065,000.00	Standard	1.000000	0.000000	100.000000
04/01/2041	\$1,080,000.00	Standard	1.050000	0.000000	100.000000

**Micromuni Debt** Input Load Calculate Report Data / Modify Products Logout

Current 182

Current Bond Issue Professional Version

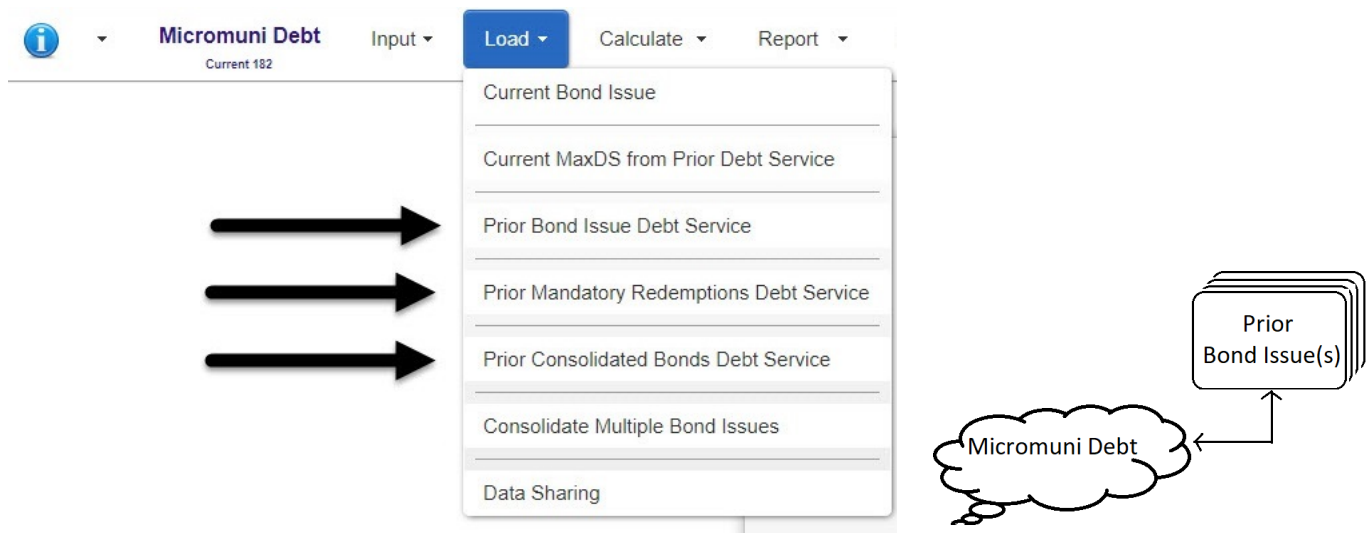
State and Local Governments  
Municipal Financing Project  
Delivery: January 15, 2021

### Debt Service Schedule

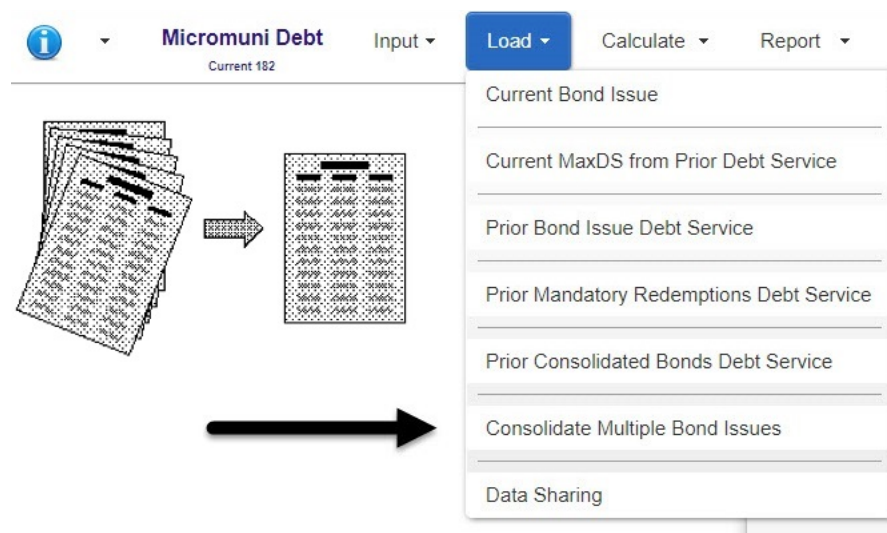
Date	Principal	Coupon	Yield	Interest	Period Total	Fiscal Total
4/1/2021				28,261.25	28,261.25	28,261.25
10/1/2021				56,522.50	56,522.50	
4/1/2022	975,000.00	0.1000	0.1000	56,522.50	1,031,522.50	1,088,045.00
10/1/2022				56,035.00	56,035.00	
4/1/2023	975,000.00	0.1500	0.1500	56,035.00	1,031,035.00	1,087,070.00
10/1/2023				55,303.75	55,303.75	
4/1/2024	980,000.00	0.2000	0.2000	55,303.75	1,035,303.75	1,090,607.50
10/1/2024				54,323.75	54,323.75	
4/1/2025	980,000.00	0.2500	0.2500	54,323.75	1,034,323.75	1,088,647.50
10/1/2025				53,098.75	53,098.75	
4/1/2026	985,000.00	0.3000	0.3000	53,098.75	1,038,098.75	1,091,197.50
10/1/2026				51,621.25	51,621.25	
4/1/2027	985,000.00	0.3500	0.3500	51,621.25	1,036,621.25	1,088,242.50
10/1/2027				49,897.50	49,897.50	
4/1/2028	990,000.00	0.4000	0.4000	49,897.50	1,039,897.50	1,089,795.00
10/1/2028				47,917.50	47,917.50	
4/1/2029	995,000.00	0.4500	0.4500	47,917.50	1,042,917.50	1,090,835.00
10/1/2029				45,678.75	45,678.75	
4/1/2030	995,000.00			45,678.75	1,040,678.75	1,086,357.50
10/1/2030				45,678.75	45,678.75	
4/1/2031	995,000.00	0.5500	0.5500	45,678.75	1,040,678.75	1,086,357.50
10/1/2031				42,942.50	42,942.50	
4/1/2032	1,005,000.00	0.6000	0.6000	42,942.50	1,047,942.50	1,090,885.00
10/1/2032				39,927.50	39,927.50	
4/1/2033	1,010,000.00	0.6500	0.6500	39,927.50	1,049,927.50	1,089,855.00
10/1/2033				36,645.00	36,645.00	

## Prior Bond Issue

The "Prior Bond Issue" is the work area where bond information, previously saved, can be loaded, through the "Load" menu item and "Prior Bond Debt Service" submenu item. The "Prior Bond Issue" can be used for bond issue comparisons with the "Current Bond Issue" or used for wraparound bond solutions so that the combination of the Current and Prior Bond Issues provide a desired debt service.



Additionally, using the "Load" menu item and "Consolidate Multiple Bond Issues" submenu item you can consolidate several bond issues into one set of cash flows and load it in the prior issue workspace. This feature is very helpful in advanced refunding's when you are evaluating various combinations of prior debt service.



# Bond Debt Service Report

## State and Local Governments Municipal Financing Project

Dated Date Monday, January 1, 2018  
Delivery Date Monday, January 15, 2018  
Debt Service Schedule

Date	Principal	Bond Type	Coupon	Interest	Debt Service	Fiscal Total	Bond Balance
7/1/2018				193,420.00	193,420.00	193,420.00	20,255,000.00
1/1/2019				193,420.00	193,420.00		20,255,000.00
7/1/2019				193,420.00	193,420.00	386,840.00	20,255,000.00
1/1/2020				193,420.00	193,420.00		20,255,000.00
7/1/2020	875,000.00	Standard	0.900000	193,420.00	1,068,420.00	1,261,840.00	19,380,000.00
1/1/2021				189,482.50	189,482.50		
7/1/2021	885,000.00	Standard	1.000000	189,482.50	1,074,482.50	1,263,965.00	18,495,000.00
1/1/2022				185,057.50	185,057.50		
7/1/2022	890,000.00	Standard	1.100000	185,057.50	1,075,057.50	1,260,115.00	17,605,000.00
1/1/2023				180,162.50	180,162.50		
7/1/2023	900,000.00	Standard	1.200000	180,162.50	1,080,162.50	1,260,325.00	16,705,000.00
1/1/2024				174,762.50	174,762.50		
7/1/2024	910,000.00	Standard	1.300000	174,762.50	1,084,762.50	1,259,525.00	15,795,000.00
1/1/2025				168,847.50	168,847.50		
7/1/2025	925,000.00	Standard	1.400000	168,847.50	1,093,847.50	1,262,695.00	14,870,000.00
1/1/2026				162,372.50	162,372.50		
7/1/2026	935,000.00	Standard	1.500000	162,372.50	1,097,372.50	1,259,745.00	13,935,000.00
1/1/2027				155,360.00	155,360.00		
7/1/2027	950,000.00	Standard	1.600000	155,360.00	1,105,360.00	1,260,720.00	12,985,000.00
1/1/2028				147,760.00	147,760.00		
7/1/2028	965,000.00	Standard	1.700000	147,760.00	1,112,760.00	1,260,520.00	12,020,000.00
1/1/2029				139,557.50	139,557.50		
7/1/2029	985,000.00	Standard	1.800000	139,557.50	1,124,557.50	1,264,115.00	11,035,000.00

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## State and Local Governments Municipal Financing Project

Dated Date Monday, January 1, 2018  
Delivery Date Monday, January 15, 2018  
Debt Service Schedule

Date	Principal	Bond Type	Coupon	Interest	Debt Service	Fiscal Total	Bond Balance
1/1/2030				130,692.50	130,692.50		
7/1/2030	1,000,000.00	Standard	1.900000	130,692.50	1,130,692.50	1,261,385.00	10,035,000.00
1/1/2031				121,192.50	121,192.50		
7/1/2031	1,020,000.00	Standard	2.000000	121,192.50	1,141,192.50	1,262,385.00	9,015,000.00
1/1/2032				110,992.50	110,992.50		
7/1/2032	1,040,000.00	Standard	2.100000	110,992.50	1,150,992.50	1,261,985.00	7,975,000.00
1/1/2033				100,072.50	100,072.50		
7/1/2033	1,060,000.00	Standard	2.200000	100,072.50	1,160,072.50	1,260,145.00	6,915,000.00
1/1/2034				88,412.50	88,412.50		
7/1/2034	1,085,000.00	Standard	2.300000	88,412.50	1,173,412.50	1,261,825.00	5,830,000.00
1/1/2035				75,935.00	75,935.00		
7/1/2035	1,110,000.00	Standard	2.400000	75,935.00	1,185,935.00	1,261,870.00	4,720,000.00
1/1/2036				62,615.00	62,615.00		
7/1/2036	1,135,000.00	Standard	2.500000	62,615.00	1,197,615.00	1,260,230.00	3,585,000.00
1/1/2037				48,427.50	48,427.50		
7/1/2037	1,165,000.00	Standard	2.600000	48,427.50	1,213,427.50	1,261,855.00	2,420,000.00
1/1/2038				33,282.50	33,282.50		
7/1/2038	1,195,000.00	Standard	2.700000	33,282.50	1,228,282.50	1,261,565.00	1,225,000.00
1/1/2039				17,150.00	17,150.00		
7/1/2039	1,225,000.00	Standard	2.800000	17,150.00	1,242,150.00	1,259,300.00	
	20,255,000.00			5,551,370.00	25,806,370.00		
			Accrued	15,043.78	15,043.78		
	20,255,000.00			5,536,326.22	25,791,326.22		

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# Combined Debt Service Report

Another feature of Micromuni Debt, all you to perform a bond solution (e.g., Level Debt Service) by solving for the maturity amounts where the combined debt service of the Current and Prior Bond issues is level.

[illegible]

# Debt Service Savings Report

## State and Local Governments Municipal Financing Project

Delivery Monday, January 15, 2018

### Debt Service Savings

Date	Principal	Coupon	Interest	Total	Current Fiscal Totals	Prior Fiscal Totals	Fiscal Savings
7/1/2018			193,420.00	193,420.00	193,420.00	214,812.50	21,392.50
1/1/2019			193,420.00	193,420.00			
7/1/2019			193,420.00	193,420.00	386,840.00	429,625.00	42,785.00
1/1/2020			193,420.00	193,420.00			
7/1/2020	875,000.00	0.900000	193,420.00	1,068,420.00	1,261,840.00	1,289,625.00	27,785.00
1/1/2021			189,482.50	189,482.50			
7/1/2021	885,000.00	1.000000	189,482.50	1,074,482.50	1,263,965.00	1,290,165.00	26,200.00
1/1/2022			185,057.50	185,057.50			
7/1/2022	890,000.00	1.100000	185,057.50	1,075,057.50	1,260,115.00	1,289,725.00	29,610.00
1/1/2023			180,162.50	180,162.50			
7/1/2023	900,000.00	1.200000	180,162.50	1,080,162.50	1,260,325.00	1,288,285.00	27,960.00
1/1/2024			174,762.50	174,762.50			
7/1/2024	910,000.00	1.300000	174,762.50	1,084,762.50	1,259,525.00	1,290,825.00	31,300.00
1/1/2025			168,847.50	168,847.50			
7/1/2025	925,000.00	1.400000	168,847.50	1,093,847.50	1,262,695.00	1,287,250.00	24,555.00
1/1/2026			162,372.50	162,372.50			
7/1/2026	935,000.00	1.500000	162,372.50	1,097,372.50	1,259,745.00	1,287,610.00	27,865.00
1/1/2027			155,360.00	155,360.00			
7/1/2027	950,000.00	1.600000	155,360.00	1,105,360.00	1,260,720.00	1,286,800.00	26,080.00
1/1/2028			147,760.00	147,760.00			
7/1/2028	965,000.00	1.700000	147,760.00	1,112,760.00	1,260,520.00	1,289,790.00	29,270.00
1/1/2029			139,557.50	139,557.50			
7/1/2029	985,000.00	1.800000	139,557.50	1,124,557.50	1,264,115.00	1,286,455.00	22,340.00
1/1/2030			130,692.50	130,692.50			
7/1/2030	1,000,000.00	1.900000	130,692.50	1,130,692.50	1,261,385.00	1,286,855.00	25,470.00
1/1/2031			121,192.50	121,192.50			

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## State and Local Governments Municipal Financing Project

Delivery Monday, January 15, 2018

### Debt Service Savings

Date	Principal	Coupon	Interest	Total	Current Fiscal Totals	Prior Fiscal Totals	Fiscal Savings
7/1/2031	1,020,000.00	2.000000	121,192.50	1,141,192.50	1,262,385.00	1,290,855.00	28,470.00
1/1/2032			110,992.50	110,992.50			
7/1/2032	1,040,000.00	2.100000	110,992.50	1,150,992.50	1,261,985.00	1,288,305.00	26,320.00
1/1/2033			100,072.50	100,072.50			
7/1/2033	1,060,000.00	2.200000	100,072.50	1,160,072.50	1,260,145.00	1,289,270.00	29,125.00
1/1/2034			88,412.50	88,412.50			
7/1/2034	1,085,000.00	2.300000	88,412.50	1,173,412.50	1,261,825.00	1,288,590.00	26,765.00
1/1/2035			75,935.00	75,935.00			
7/1/2035	1,110,000.00	2.400000	75,935.00	1,185,935.00	1,261,870.00	1,291,215.00	29,345.00
1/1/2036			62,615.00	62,615.00			
7/1/2036	1,135,000.00	2.500000	62,615.00	1,197,615.00	1,260,230.00	1,286,965.00	26,735.00
1/1/2037			48,427.50	48,427.50			
7/1/2037	1,165,000.00	2.600000	48,427.50	1,213,427.50	1,261,855.00	1,290,915.00	29,060.00
1/1/2038			33,282.50	33,282.50			
7/1/2038	1,195,000.00	2.700000	33,282.50	1,228,282.50	1,261,565.00	1,287,735.00	26,170.00
1/1/2039			17,150.00	17,150.00			
7/1/2039	1,225,000.00	2.800000	17,150.00	1,242,150.00	1,259,300.00	1,287,500.00	28,200.00
	20,255,000.00		5,551,370.00	25,806,370.00	25,806,370.00	26,419,172.50	612,802.50
		Accrued	15,043.78	15,043.78			
	20,255,000.00		5,536,326.22	25,791,326.22			
Bond Years			255,182.500				
Average Coupon			2.1754509				
Average Life			12.5984942				
N I C %			2.1048027	using	99.6465427		
T I C %			2.1837787	from Delivery Date			

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# Bond Production Report

## State and Local Governments Municipal Financing Project

Dated January 01, 2018  
Delivery January 15, 2018

### Bond Production Details Report

Date	Principal	Bond Type	Bond Years	Coupon	Yield	YTM	PTM	Call Option	YTC	PTC	Production
7/1/2020	875,000	Standard	2,187.500	0.900	0.800	0.800	100.243				877,126
7/1/2021	885,000	Standard	3,097.500	1.000	0.900	0.900	100.339				888,000
7/1/2022	890,000	Standard	4,005.000	1.100	1.000	1.000	100.435				893,872
7/1/2023	900,000	Standard	4,950.000	1.200	1.100	1.100	100.528				904,752
7/1/2024	910,000	Standard	5,915.000	1.300	1.200	1.200	100.619				915,633
7/1/2025	925,000	Standard	6,937.500	1.400	1.300	1.300	100.708				931,549
7/1/2026	935,000	Standard	7,947.500	1.500	1.400	1.400	100.795				942,433
7/1/2027	950,000	Standard	9,025.000	1.600	1.500	1.500	100.878				958,341
7/1/2028	965,000	Standard	10,132.500	1.700	1.600	1.600	100.959				974,254
7/1/2029	985,000	Standard	11,327.500	1.800	1.700	1.700	101.037				995,214
7/1/2030	1,000,000	Standard	12,500.000	1.900	1.800	1.800	101.111				1,011,110
7/1/2031	1,020,000	Standard	13,770.000	2.000	1.907	1.900	101.182	7/1/2030 @100.000	1.907	101.104	1,031,261
7/1/2032	1,040,000	Standard	15,080.000	2.100	2.012	2.000	101.250	7/1/2030 @100.000	2.012	101.097	1,051,409
7/1/2033	1,060,000	Standard	16,430.000	2.200	2.117	2.100	101.313	7/1/2030 @100.000	2.117	101.090	1,071,554
7/1/2034	1,085,000	Standard	17,902.500	2.300	2.221	2.200	101.374	7/1/2030 @100.000	2.221	101.084	1,096,761
7/1/2035	1,110,000	Standard	19,425.000	2.400	2.325	2.300	101.430	7/1/2030 @100.000	2.325	101.077	1,121,955
7/1/2036	1,135,000	Standard	20,997.500	2.500	2.428	2.400	101.483	7/1/2030 @100.000	2.428	101.071	1,147,156
7/1/2037	1,165,000	Standard	22,717.500	2.600	2.530	2.500	101.532	7/1/2030 @100.000	2.530	101.064	1,177,396

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## State and Local Governments Municipal Financing Project

Dated January 01, 2018  
Delivery January 15, 2018

### Bond Production Details Report

Date	Principal	Bond Type	Bond Years	Coupon	Yield	YTM	PTM	Call Option	YTC	PTC	Production
7/1/2038	1,195,000	Standard	24,497.500	2.700	2.633	2.600	101.578	7/1/2030 @100.000	2.633	101.057	1,207,631
7/1/2039	1,225,000	Standard	26,337.500	2.800	2.735	2.700	101.620	7/1/2030 @100.000	2.735	101.051	1,237,875
\$20,255,000			255,182.500								\$20,435,282

Par Amount	\$20,255,000	
Production	180,282	
Gross Production	20,435,282	
Bond Insurance	64,515.93	
Underwriters Discount	187,359	
Bid	\$20,183,407	99.6465427
Accrued	15,044	
Net to Issuer	\$20,198,451	
Gross Interest Cost	5,551,370	
- Premium / + Discount	71,593	
Net Interest Cost	5,622,963	
N I C %	2.1048027	using
T I C %	2.1837787	from
Bond Years	255,182.500	99.6465427
Average Coupon	2.175451	Delivery Date
Average Life	12.598494	

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