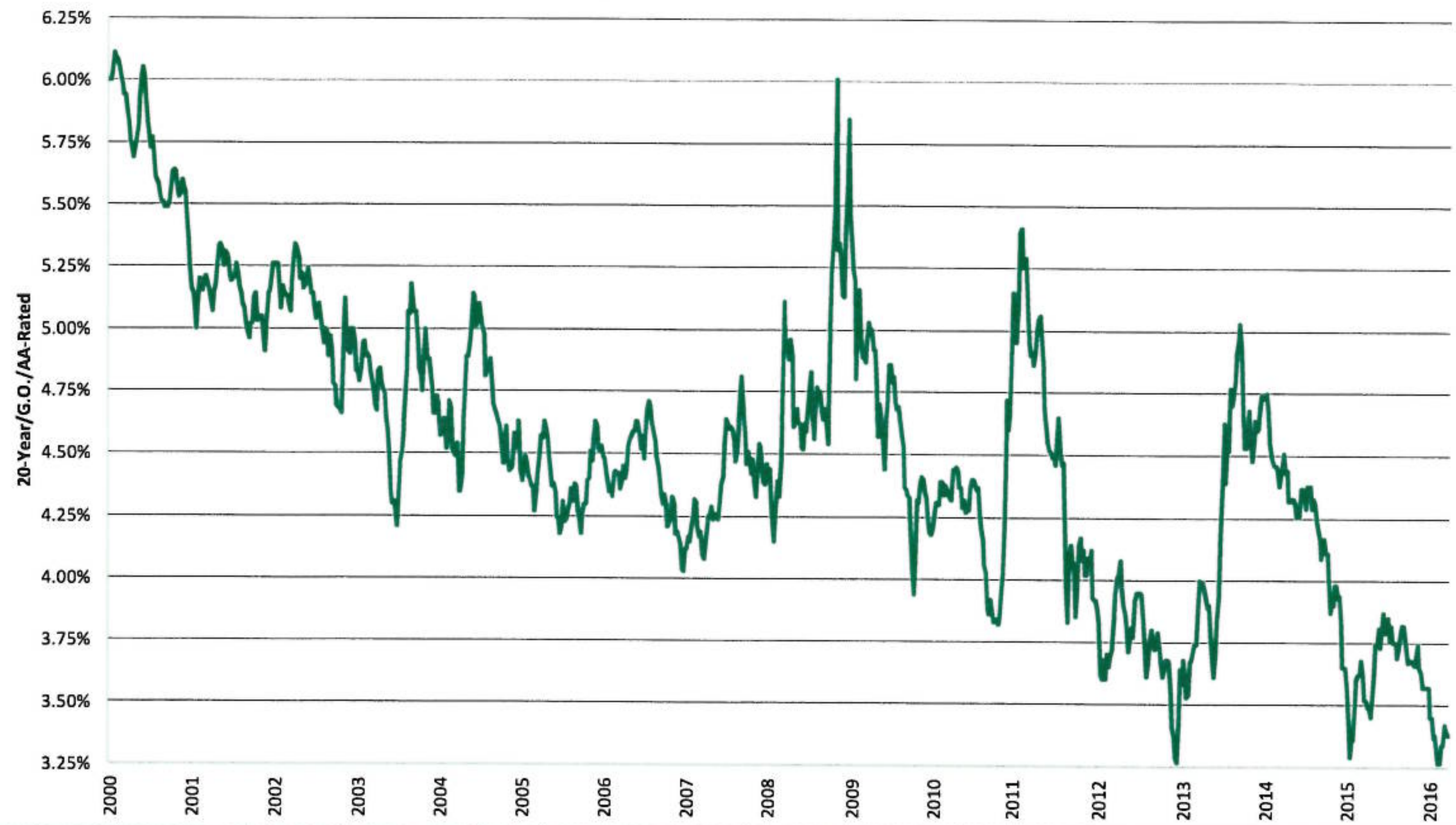
Bond Buyer's Index 2000 to Present



Source: Data compiled by Northland Securities from published Bond Buyer's GO 20-Bond Index

NORTHLAND SECURITIES

Northland Securities, Inc.
45 South 7th Street, Suite 2000, Minneapolis, MN 55402
Toll Free 1-800-851-2920 Main 612-851-5900
www.northlandsecurities.com
Member FINRA and SIPC

Preliminary

ISD 077, Mankato, Minnesota

Taxable G.O. OPEB Refunding Bonds, Series 2016

2009A

Refunding Summary

Dated 07/15/2016 | Delivered 07/15/2016

Sources Of Funds

Par Amount of Bonds	$5,055,000.00
Total Sources	**$5,055,000.00**

Uses Of Funds

Deposit to Crossover Escrow Fund	4,968,241.53
Costs of Issuance	86,700.00
Rounding Amount	58.47
Total Uses	**$5,055,000.00**

Flow of Funds Detail

State and Local Government Series (SLGS) rates for	11/28/2012
Date of OMP Candidates	
Crossover Escrow Fund Solution Method	Net Funded
Total Cost of Investments	$4,968,241.53
Interest Earnings @ 0.700%	53,395.47
Total Draws	$5,021,637.00

Issues Refunded And Call Dates

09aold	2/01/2018

PV Analysis Summary (Net to Net)

Net PV Cashflow Savings @ 1.866%(Bond Yield)	361,027.75
Contingency or Rounding Amount	58.47
Net Present Value Benefit	$361,086.22
Net PV Benefit / $4,885,000 Refunded Principal	7.392%
Net PV Benefit / $5,055,000 Refunding Principal	7.143%

Bond Statistics

Average Life	4.967 Years
Average Coupon	1.8706093%
Net Interest Cost (NIC)	1.8706093%
Bond Yield for Arbitrage Purposes	1.8655987%
True Interest Cost (TIC)	1.8655987%
All Inclusive Cost (AIC)	2.2336491%

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Taxable G.O. OPEB Refunding Bonds, Series 2016

2009A

Debt Service Comparison

Date	Total P+I	PCF	Existing D/S	Net New D/S	Old Net D/S	Savings
02/01/2017	48,167.00	(48,167.00)	1,022,685.00	1,022,626.53	1,022,685.00	58.47
02/01/2018	88,470.00	(4,973,470.00)	5,913,575.00	1,028,575.00	1,028,575.00	-
02/01/2019	968,470.00	-	-	968,470.00	1,035,050.00	66,580.00
02/01/2020	967,470.00	-	-	967,470.00	1,032,370.00	64,900.00
02/01/2021	964,565.00	-	-	964,565.00	1,032,190.00	67,625.00
02/01/2022	834,715.00	-	-	834,715.00	898,330.00	63,615.00
02/01/2023	834,800.00	-	-	834,800.00	898,290.00	63,490.00
02/01/2024	818,000.00	-	-	818,000.00	885,360.00	67,360.00
Total	**$5,524,657.00**	**(5,021,637.00)**	**$6,936,260.00**	**$7,439,221.53**	**$7,832,850.00**	**$393,628.47**

PV Analysis Summary (Net to Net)

Gross PV Debt Service Savings....................	361,027.75
Net PV Cashflow Savings @ 1.866%(Bond Yield).....	361,027.75
Contingency or Rounding Amount...................	58.47
Net Present Value Benefit	$361,086.22
Net PV Benefit / $5,281,975.56 PV Refunded Debt Service	6.836%
Net PV Benefit / $4,885,000 Refunded Principal...	7.392%
Net PV Benefit / $5,055,000 Refunding Principal..	7.143%

Refunding Bond Information

Refunding Dated Date	7/15/2016
Refunding Delivery Date	7/15/2016

Preliminary

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Taxable G.O. OPEB Refunding Bonds, Series 2016

2009A

Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/15/2016	-	-	-	-	-
02/01/2017	-	-	48,167.00	48,167.00	48,167.00
08/01/2017	-	-	44,235.00	44,235.00	-
02/01/2018	-	-	44,235.00	44,235.00	88,470.00
08/01/2018	-	-	44,235.00	44,235.00	-
02/01/2019	880,000.00	1.250%	44,235.00	924,235.00	968,470.00
08/01/2019	-	-	38,735.00	38,735.00	-
02/01/2020	890,000.00	1.450%	38,735.00	928,735.00	967,470.00
08/01/2020	-	-	32,282.50	32,282.50	-
02/01/2021	900,000.00	1.650%	32,282.50	932,282.50	964,565.00
08/01/2021	-	-	24,857.50	24,857.50	-
02/01/2022	785,000.00	1.900%	24,857.50	809,857.50	834,715.00
08/01/2022	-	-	17,400.00	17,400.00	-
02/01/2023	800,000.00	2.100%	17,400.00	817,400.00	834,800.00
08/01/2023	-	-	9,000.00	9,000.00	-
02/01/2024	800,000.00	2.250%	9,000.00	809,000.00	818,000.00
Total	**$5,055,000.00**	**-**	**$469,657.00**	**$5,524,657.00**	**-**

Date And Term Structure

Dated	7/15/2016
Delivery Date	7/15/2016
First Coupon Date	2/01/2017
First available call date	
Call Price	-

Yield Statistics

Bond Year Dollars	$25,107.17
Average Life	4.967 Years
Average Coupon	1.8706093%
Net Interest Cost (NIC)	1.8706093%
True Interest Cost (TIC)	1.8655987%
All Inclusive Cost (AIC)	2.2336491%

IRS Form 8038

Net Interest Cost	1.8706093%
Weighted Average Maturity	4.967 Years
Bond Yield for Arbitrage Purposes	1.8655987%

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Taxable G.O. OPEB Bonds of 2009A

Debt Service To Maturity And To Call

Date	Refunded Bonds	Interest to Call	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
08/01/2016	-	125,025.00	125,025.00	-	-	125,025.00	125,025.00	-
02/01/2017	-	125,025.00	125,025.00	-	4.100%	125,025.00	125,025.00	250,050.00
08/01/2017	-	125,025.00	125,025.00	-	-	125,025.00	125,025.00	-
02/01/2018	4,885,000.00	125,025.00	5,010,025.00	-	4.500%	125,025.00	125,025.00	250,050.00
08/01/2018	-	-	-	-	-	125,025.00	125,025.00	-
02/01/2019	-	-	-	785,000.00	4.800%	125,025.00	910,025.00	1,035,050.00
08/01/2019	-	-	-	-	-	106,185.00	106,185.00	-
02/01/2020	-	-	-	820,000.00	4.900%	106,185.00	926,185.00	1,032,370.00
08/01/2020	-	-	-	-	-	86,095.00	86,095.00	-
02/01/2021	-	-	-	860,000.00	5.100%	86,095.00	946,095.00	1,032,190.00
08/01/2021	-	-	-	-	-	64,165.00	64,165.00	-
02/01/2022	-	-	-	770,000.00	5.200%	64,165.00	834,165.00	898,330.00
08/01/2022	-	-	-	-	-	44,145.00	44,145.00	-
02/01/2023	-	-	-	810,000.00	5.300%	44,145.00	854,145.00	898,290.00
08/01/2023	-	-	-	-	-	22,680.00	22,680.00	-
02/01/2024	-	-	-	840,000.00	5.400%	22,680.00	862,680.00	885,360.00
Total	**$4,885,000.00**	**$500,100.00**	**$5,385,100.00**	**$4,885,000.00**	**-**	**$1,396,690.00**	**$6,281,690.00**	**-**

Yield Statistics

Average Life	5.060 Years
Weighted Average Maturity (Par Basis)	5.060 Years
Average Coupon	5.1893144%

Refunding Bond Information

Refunding Dated Date	7/15/2016
Refunding Delivery Date	7/15/2016

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Taxable G.O. OPEB Refunding Bonds, Series 2016

2009A

Crossover Escrow Fund Cashflow

Date	Principal	Rate	Interest	Receipts	Disbursements	Cash Balance
07/15/2016	-	-	-	0.53	-	0.53
02/01/2017	29,230.00	0.360%	18,937.03	48,167.03	48,167.00	0.56
08/01/2017	26,969.00	0.550%	17,266.30	44,235.30	44,235.00	0.86
02/01/2018	4,912,042.00	0.700%	17,192.14	4,929,234.14	4,929,235.00	-
Total	**$4,968,241.00**	**-**	**$53,395.47**	**$5,021,637.00**	**$5,021,637.00**	**-**

Investment Parameters

Investment Model [PV, GIC, or Securities]	Securities
Default investment yield target	Bond Yield
Cash Deposit	0.53
Cost of Investments Purchased with Bond Proceeds	4,968,241.00
Total Cost of Investments	$4,968,241.53
Target Cost of Investments at bond yield	$4,880,942.38
Actual positive or (negative) arbitrage	(87,299.15)
Yield to Receipt	0.6997291%
Yield for Arbitrage Purposes	1.8655987%
State and Local Government Series (SLGS) rates for	11/28/2012