

Bond Refunding Analysis For

CRANBERRY TOWNSHIP Butler County, Pennsylvania

**In Connection with Current Refunding
Of Series 2011 and 2012 General Obligation Bonds**



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TABLE OF CONTENTS

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| Report | Page |
|--|------|
| Summary of Bonds Refunded | 1 |
| Escrow Requirements | 2 |
| Sources and Uses of Funds | 3 |
| Savings | 4 |
| Bond Debt Service | 5 |
| Summary of Refunding Results | 6 |

SUMMARY OF BONDS REFUNDED

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| Bond | Maturity Date | Interest Rate | Par Amount | Call Date | Call Price |
|-------------------|------------------|------------------|----------------------|--------------|---------------|
| Series 2011, SER: | | | | | |
| | 03/01/2021 | 5.000% | 2,140,000.00 | | |
| | 03/01/2022 | 5.000% | 2,250,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2023 | 5.000% | 2,370,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2024 | 5.000% | 2,480,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2025 | 4.500% | 2,605,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2026 | 4.500% | 2,730,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2027 | 4.500% | 2,850,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2028 | 4.250% | 1,295,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2029 | 4.000% | 830,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2030 | 4.000% | 860,000.00 | 03/01/2021 | 100.000 |
| | 03/01/2031 | 4.125% | 895,000.00 | 03/01/2021 | 100.000 |
| | | | 21,305,000.00 | | |
| Series 2012, SER: | | | | | |
| | 09/01/2021 | 2.125% | 1,010,000.00 | 12/01/2020 | 100.000 |
| | 09/01/2021 | 2.250% | 300,000.00 | 12/01/2020 | 100.000 |
| | 09/01/2022 | 4.000% | 1,795,000.00 | 12/01/2020 | 100.000 |
| | 09/01/2023 | 4.000% | 1,865,000.00 | 12/01/2020 | 100.000 |
| | 09/01/2024 | 2.625% | 1,045,000.00 | 12/01/2020 | 100.000 |
| | 09/01/2025 | 2.750% | 105,000.00 | 12/01/2020 | 100.000 |
| | | | 6,120,000.00 | | |
| | | | 27,425,000.00 | | |

ESCROW REQUIREMENTS

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| Period Ending | Principal | Interest | Principal Redeemed | Total |
|------------------|---------------------|-------------------|-----------------------|----------------------|
| 12/01/2020 | | 51,232.81 | 6,120,000.00 | 6,171,232.81 |
| 03/01/2021 | 2,140,000.00 | 494,940.63 | 19,165,000.00 | 21,799,940.63 |
| | 2,140,000.00 | 546,173.44 | 25,285,000.00 | 27,971,173.44 |

SOURCES AND USES OF FUNDS

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

Sources:

| | |
|----------------|----------------------|
| Bond Proceeds: | |
| Par Amount | 25,550,000.00 |
| Net Premium | 2,613,973.90 |
| | <hr/> |
| | 28,163,973.90 |

Uses:

| | |
|----------------------------|----------------------|
| Refunding Escrow Deposits: | |
| Cash Deposit | 6,171,233.72 |
| SLGS Purchases | 21,795,103.00 |
| | <hr/> |
| | 27,966,336.72 |

| | |
|---------------------|------------------|
| Cost of Issuance: | |
| Bond Counsel | 28,500.00 |
| Solicitor | 10,000.00 |
| Rating | 30,500.00 |
| Paying Agent | 2,000.00 |
| CUSIP / Misc | 647.00 |
| Printing | 3,000.00 |
| Auditor Consent Fee | 1,250.00 |
| Contingency | 2,000.00 |
| | <hr/> |
| | 77,897.00 |

| | |
|-------------------------|------------|
| Delivery Date Expenses: | |
| Underwriter's Discount | 114,975.00 |

| | |
|----------------------|----------------------|
| Other Uses of Funds: | |
| Additional Proceeds | 4,765.18 |
| | <hr/> |
| | 28,163,973.90 |

SAVINGS

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| Date | Prior Debt Service | Refunding Debt Service | Savings | Present Value to 12/01/2020 @ 1.0217623% |
|------------|-----------------------|---------------------------|---------------------|--|
| 12/31/2021 | 4,591,312.52 | 4,304,300.00 | 287,012.52 | 279,107.71 |
| 12/31/2022 | 5,048,350.02 | 4,763,300.00 | 285,050.02 | 271,861.08 |
| 12/31/2023 | 5,051,050.02 | 4,761,500.00 | 289,550.02 | 273,217.54 |
| 12/31/2024 | 4,145,200.02 | 3,856,600.00 | 288,600.02 | 273,717.11 |
| 12/31/2025 | 3,182,156.26 | 2,893,700.00 | 288,456.26 | 275,485.58 |
| 12/31/2026 | 3,079,231.26 | 2,787,800.00 | 291,431.26 | 276,078.17 |
| 12/31/2027 | 3,073,681.26 | 2,785,000.00 | 288,681.26 | 270,754.40 |
| 12/31/2028 | 1,427,037.51 | 1,136,700.00 | 290,337.51 | 269,578.52 |
| 12/31/2029 | 917,918.76 | 629,400.00 | 288,518.76 | 265,197.25 |
| 12/31/2030 | 914,118.76 | 626,200.00 | 287,918.76 | 261,987.14 |
| 12/31/2031 | 913,459.38 | 622,200.00 | 291,259.38 | 262,368.55 |
| | 32,343,515.77 | 29,166,700.00 | 3,176,815.77 | 2,979,353.04 |

Savings Summary

| | |
|-------------------------------|--------------|
| PV of savings from cash flow | 2,979,353.04 |
| Plus: Refunding funds on hand | 4,765.18 |
| Net PV Savings | 2,984,118.22 |

BOND DEBT SERVICE

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| Period Ending | Principal | Coupon | Interest | Debt Service | Annual Debt Service |
|------------------|-------------------|--------|------------------|-------------------|---------------------------|
| 03/01/2021 | 3,610,000 | 4.000% | 255,500 | 3,865,500 | |
| 09/01/2021 | | | 438,800 | 438,800 | |
| 12/31/2021 | | | | | 4,304,300 |
| 03/01/2022 | 3,965,000 | 4.000% | 438,800 | 4,403,800 | |
| 09/01/2022 | | | 359,500 | 359,500 | |
| 12/31/2022 | | | | | 4,763,300 |
| 03/01/2023 | 4,125,000 | 4.000% | 359,500 | 4,484,500 | |
| 09/01/2023 | | | 277,000 | 277,000 | |
| 12/31/2023 | | | | | 4,761,500 |
| 03/01/2024 | 3,370,000 | 4.000% | 277,000 | 3,647,000 | |
| 09/01/2024 | | | 209,600 | 209,600 | |
| 12/31/2024 | | | | | 3,856,600 |
| 03/01/2025 | 2,525,000 | 4.000% | 209,600 | 2,734,600 | |
| 09/01/2025 | | | 159,100 | 159,100 | |
| 12/31/2025 | | | | | 2,893,700 |
| 03/01/2026 | 2,520,000 | 4.000% | 159,100 | 2,679,100 | |
| 09/01/2026 | | | 108,700 | 108,700 | |
| 12/31/2026 | | | | | 2,787,800 |
| 03/01/2027 | 2,620,000 | 4.000% | 108,700 | 2,728,700 | |
| 09/01/2027 | | | 56,300 | 56,300 | |
| 12/31/2027 | | | | | 2,785,000 |
| 03/01/2028 | 1,045,000 | 4.000% | 56,300 | 1,101,300 | |
| 09/01/2028 | | | 35,400 | 35,400 | |
| 12/31/2028 | | | | | 1,136,700 |
| 03/01/2029 | 570,000 | 4.000% | 35,400 | 605,400 | |
| 09/01/2029 | | | 24,000 | 24,000 | |
| 12/31/2029 | | | | | 629,400 |
| 03/01/2030 | 590,000 | 4.000% | 24,000 | 614,000 | |
| 09/01/2030 | | | 12,200 | 12,200 | |
| 12/31/2030 | | | | | 626,200 |
| 03/01/2031 | 610,000 | 4.000% | 12,200 | 622,200 | |
| 12/31/2031 | | | | | 622,200 |
| | 25,550,000 | | 3,616,700 | 29,166,700 | 29,166,700 |

SUMMARY OF REFUNDING RESULTS

Township of Cranberry
Tax-Exempt Combined Current Refunding of Series of 2011 and 2012
Tax-Exempt General Obligation Bonds, Series of 2020
Assumed 'Aaa' Underlying Rating
Non-Bank Qualified
Preliminary

| | |
|--|---------------|
| Dated Date | 12/01/2020 |
| Delivery Date | 12/01/2020 |
| Arbitrage yield | 1.021762% |
| Escrow yield | 0.088777% |
| Value of Negative Arbitrage | 50,636.71 |
| | |
| Bond Par Amount | 25,550,000.00 |
| True Interest Cost | 1.142845% |
| Net Interest Cost | 1.236156% |
| All-In TIC | 1.225358% |
| Average Coupon | 4.000000% |
| Average Life | 3.539 |
| | |
| Par amount of refunded bonds | 27,425,000.00 |
| Average coupon of refunded bonds | 4.317935% |
| Average life of refunded bonds | 3.901 |
| | |
| PV of prior debt to 12/01/2020 @ 1.021762% | 31,143,326.94 |
| Net PV Savings | 2,984,118.22 |
| Percentage savings of refunded bonds | 10.881014% |
| Percentage savings of refunding bonds | 11.679523% |