

# SPECIAL BOARD OF COMMISSIONERS MEETING

Stormwater & Sanitary Sewer Projects

September 23<sup>rd</sup>, 2020

JACK LARKIN  
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Twp President  
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Township Secretary  
JOHN B. RICE, ESQ.  
Solicitor  
KATHRYN GARTLAND  
Treasurer

To: Board of Commissioners  
From: William White, Township Manager  
Date: August 10, 2020  
Re: Stormwater Funding Summary

On tonight's agenda, we included a discussion on funding for stormwater projects. This stems from our discussions over the past couple of years where we have discussed projects, but never developed a plan on funding them. As we conclude the engineering design of several projects (identified below) and given the necessity to move on these projects as quickly as we can, tonight's agenda item is meant to move the funding discussion forward.

- To start, here are several key factors to consider as we move forward:
- Annually, the Township's stormwater fee (set at \$29.00 per unit) generates \$1.0MM
  - Current market conditions favor borrowing as rates have hit, or are near all-time lows
  - Last fall, a stormwater project report (attached) showed that the total cost of all known projects was in the ballpark of \$53MM and sanitary sewer capital needs of approximately \$4.0MM annually.

Next, please note that the Board has authorized the development of engineering plans for the following stormwater projects that are complete, or substantially complete:

Projects Name (from attached report)	Project Estimate
Cumberland / Arbor Place	354,200
Gulph Creek Flood Project	2,705,000
North Wayne / SEPTA Parking Lot	1,468,000
Radnor / Willow Area Tree Trench	151,916
South Devon Ave	2,575,000
South Wayne Parking Lot	2,951,750
West Wayne Precision and Darby Creek	3,248,806
Cornerstone Basin Retrofit	199,226
Arthur Road	265,560
Highview Road Outfall	836,000
Main Road Culvert Replacement	1,454,750
Wistar Road Outfall	300,300
Wootton Road storm sewer replacement	208,725
Total of Projects Under Design	\$15,819,233

Stormwater Funding Summary Memo  
Page 2

Given current market conditions, borrowing rates are extremely favorable. The table below reflects annual debt service estimates given various borrowing amounts:

Scenario Fee	\$10MM	\$15MM	\$20MM	\$25MM
Issue Date	10/14/2020	10/14/2020	10/14/2020	10/14/2020
First Interest Payment	9/1/2021	9/1/2021	9/1/2021	9/1/2021
First Principal Payment	11/1/2021	11/1/2021	11/1/2021	11/1/2021
Final Maturity	11/1/2030	11/1/2030	11/1/2030	11/1/2030
101 Par Call Date	11/1/2020	11/1/2020	11/1/2020	11/1/2020
Par Issued	\$ 10,200,000	\$ 15,300,000	\$ 20,400,000	\$ 25,500,000
Issuance Premium	\$ 123,306	\$ 1,488,933	\$ 2,242,593	\$ 2,985,804
Carry Proceeds	\$ 10,141,306	\$ 10,118,933	\$ 15,117,933	\$ 10,181,304
Project Fund	\$ 10,140,000	\$ 10,000,000	\$ 15,000,000	\$ 20,000,000
At-risk Total Interest Cost	\$ 2,227%	\$ 2,786%	\$ 2,786%	\$ 2,786%
Average Annual Debt Service	\$ 464,418	\$ 496,022	\$ 741,900	\$ 987,996
Total Debt Service	\$ 11,354,409	\$ 14,304,076	\$ 22,293,828	\$ 29,686,527

As an example, if the Township elected to fund only those projects that (a) have been designed and (b) exceed \$500,000 in estimated cost, we would need approximately \$14.4MM. Under this scenario, any project with a cost less than \$500,000 would be paid from the annual stormwater revenue currently generated at the \$29/unit fee and installed over time (years). Then, for the projects paid for with debt proceeds, the cost to borrow those funds would be \$741,960 per year. Presumably, this cost would be added to the Stormwater Fund and the fee would need to be adjusted accordingly. The table below takes the same four scenarios above and calculates the increase needed to the stormwater fee:

Scenario Fee	\$10MM	\$15MM	\$20MM	\$25MM
Annual Debt Service	\$ 464,418	\$ 496,022	\$ 741,900	\$ 987,996
Unl. Transfer from Stormwater Fund	\$ (250,000)	\$ (250,000)	\$ (250,000)	\$ (250,000)
Savings on Advance Refunding	\$ (88,000)	\$ (88,000)	\$ (88,000)	\$ (88,000)
Remaining Debt Service	\$ 126,418	\$ 158,022	\$ 403,900	\$ 649,996
# of stormwater billing units	8,681	8,681	8,681	8,681
Cost per unit	\$ 14.56	\$ 18.20	\$ 46.53	\$ 74.88
Current Billing Unit Amount	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Resulting Billing Unit Amount	\$ 49.56	\$ 43.20	\$ 71.53	\$ 105.88
Residential Delta (amount the annual bill will increase)				
1 Unit	\$ 14.56	\$ 18.20	\$ 46.53	\$ 74.88
2 Units	\$ 29.13	\$ 36.41	\$ 93.07	\$ 149.75
3 Units	\$ 43.69	\$ 54.61	\$ 139.60	\$ 224.63
4 Units	\$ 58.25	\$ 72.81	\$ 186.14	\$ 299.50

To summarize, if the Township proceeds with installing all of the stormwater projects it has already approved the design for, and does so through a combination of borrowing and cash; we are looking at a borrowing of \$15MM, which would result in a fee adjustment from \$29 per unit to \$75.53. The residential impact of this increase is shown in the table above, depending on the size of the property (1 to 4 units). Please note, these are annual amounts; the highest fee for residential would go from \$116 per year to \$302.14 per year.

Stormwater Funding Summary Memo  
Page 3

Again, this memorandum is meant to serve as the launching point for discussion. Ultimately, at current rates, the Township doesn't generate enough revenue to pay for capital improvements. This has been the stalling point for project discussions for years. The hope is, with looking at these funding numbers, we can move the project funding discussion forward.

I look forward to the discussion. Thank you for your consideration.

Sanitary Sewer Funding: The same problem exists for sanitary sewer as it does for stormwater; current fee rates do not generate enough for capital projects. Therefore, a similar calculation can be done for sanitary sewer but not before some decisions are made at the Board level, including:

- Long-term ownership
- Capital project approach decision: Systematic vs. pay-as-it-breaks
- Known project discussion: Regardless of the two preceding bullets, there are several pumping station and sewer line replacement projects that are known and could be added to the immediate borrowing if the Board so desires. See attached.

	Designation: (I) Infrastructure (SWM) Stormwater Management	Project Name	Design Status	Description	*Award Date	*Completion Date	Updated Project Estimates (\$)
B I D 0	I	Cumberland / Arbor Place	Design Completed in 2020	Extend storm sewer to reduce flooding	2/22/2021	6/30/2021	372,000
	I	Arthur Road	Design completed in 2018. Bid package to be completed by 10/30/20	Convey ponding water in culdesac to existing storm sewer	2/22/2021	6/30/2021	292,000
	I	Wooton Road Storm Sewer Replacement	Design completed in 2018. Bid package to be completed by 10/30/20	Replace damaged pipe, from mid yard to creek	2/22/2021	6/30/2021	230,000
B I D 1	SWM	Radnor / Willow Area Tree Trench	Design & bid package to be awarded	Install tree trenches as incremental SWM BMPs, to reduce flooding	2/22/2021	8/30/2021	160,000
	SWM	South Wayne Parking Lot	Design to be completed in October 2020 (PECO gas conflicts)	Install SWM at parking lot, connect South Wayne runoff to RMS system	2/22/2021	9/30/2021	3,250,000
	SWM	West Wayne Preserve and Friends of the Radnor Trail Park	Design to be completed in December 2020. Anticipate DEP permit approval in February 2021.	Install SWM facility at WWP, subsurface SWM at FORT	6/28/2021	10/30/2021	2,460,000
	I	Malin Road Culvert Replacement	Design stalled due to PECO gas line conflict	Replace Malin Road Culvert	4/28/2021	12/15/2021	1,600,000
A F W A I N D I N G	SWM	Gulph Creek Flood Project aka North Wayne Flood Plain Creation Project	A large scale flood plain creation project, resident meetings still taking place. Design ongoing.	Create flood plain along Gulph Creek to reduce floodig probability.	**2021	**2022	2,975,000
	SWM	North Wayne Municipal Parking Lot	Authorization for design required.	Porous paving to manage runoff, revised parking, landscaping	**2021	**2022	1,600,000
	SWM	Cornerstone Basin Retrofit	Design 50% complete. Recommend receiving Dep approval on township PRP prior to meeting with Cornerstone HOA	DEP mandated MS4 program- Polution Reduction Program (PRP)	**2021	**2022	219,000
	I	Highview Road Outfall	Original design completed 2018. Possible re-design due to resident concerns	Extend storm sewer outfall from mid yard, mitigate deep eroded trench	**2021	**2021	900,000
	I	Wistar Road Outfall	Design 70%, pending resident concerns & easements	Extend storm sewer outfall in yard, creating eroded conditions	**2021	**2021	330,000
	<b>TOTAL</b>						

\*Based on fuding commitment date of 9/23 \*\* These projects involve easement acquisition, which may take an extended period of time, hence the assumed timeline.  
Projects awarded Winter of 2021 will not be completed until Spring/Summer of 2021, due to weather conditions.

# How a municipal project comes to be constructed.



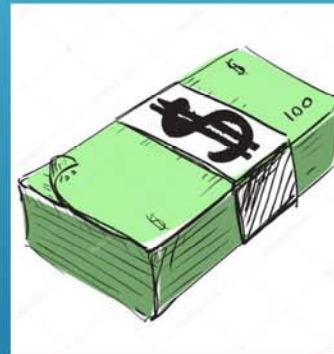
An idea for a project is put forth, from elected officials, administration, staff, or residents



A proposal for design of the project is brought before the Commissioners. If approved...



A project gets constructed!



The Board of Commissioners must fund a project for construction to begin.



The project is designed. At this point, it is not funded for construction.



**Estimated Cost: \$372,000**

**Award Date: 2/22/2021**

**Completion Date: 6/30/2021**

## CUMBERLAND PLACE STORM SEWER

RUNOFF FROM ARBOR PLACE (TOWNSHIP ROAD) FLOODS 102 CUMBERLAND PLACE

INSTALL PIPING AND INLETS TO CAPTURE RUNOFF FROM ARBOR PLACE AND CONVEY TO EXISTING SYSTEM



**Estimated Project Cost: \$292,000**

**Award Date: 2/22/2021**

**Completion Date: 6/30/2021**

## ARTHUR ROAD STORM SEWER

PONDING IN THE CUL-DE-SAC CAUSES ICY CONDITIONS IN THE WINTER, AND CONCERN FOR MOSQUITO BORNE DISEASE IN THE OTHER MONTHS

INSTALL PIPING AND INLETS TO CONVEY PONDING WATER TO EXISTING INLET



**Estimated Cost: \$230,000**

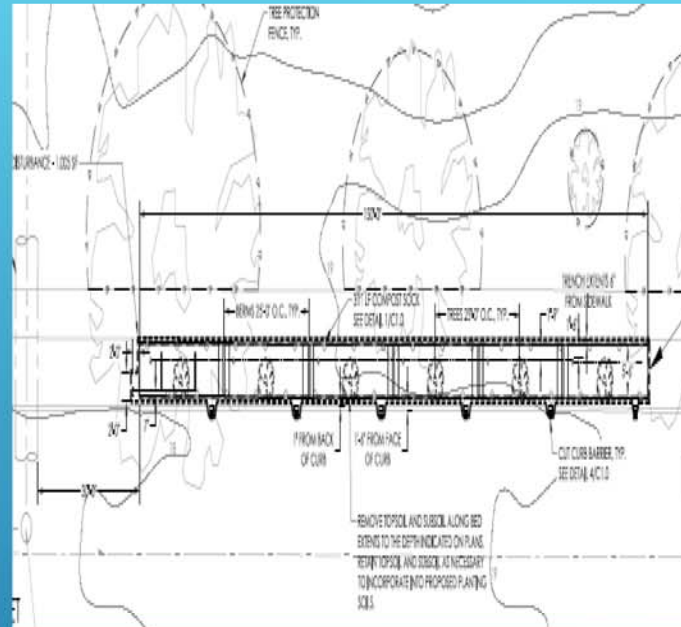
**Award Date: 2/22/2021**

**Completion Date: 6/30/2021**

## WOOTON ROAD STORM SEWER REPLACEMENT

EXISTING STORM SEWER, THE OUTFALL FROM WOOTON ROAD, HAS DETERIORATED AND WAS DAMAGED FROM UPROOTED TREES

REPLACE THE DAMAGED PIPE, INSTALL END WALL, INSTALL MANHOLE



**Estimated Cost: \$160,000**

**Award Date: 2/22/2021**

**Completion Date: 8/30/2021**

## TREE TRENCHES

THE TREE TRENCHES WILL PROVIDE ADDITIONAL, INCREMENTAL RUNOFF REDUCTION IN THE NORTH WAYNE AREA, HARD HIT BY FLOODING

TREE TRENCHES WOULD BE INSTALLED IN THE R.O.W. WHERE POSSIBLE.





Estimated Cost: \$3,250,000

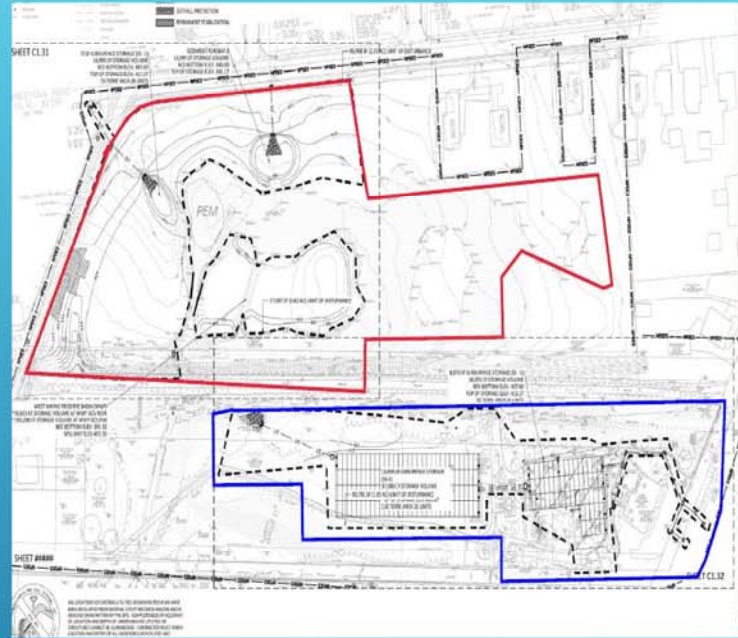
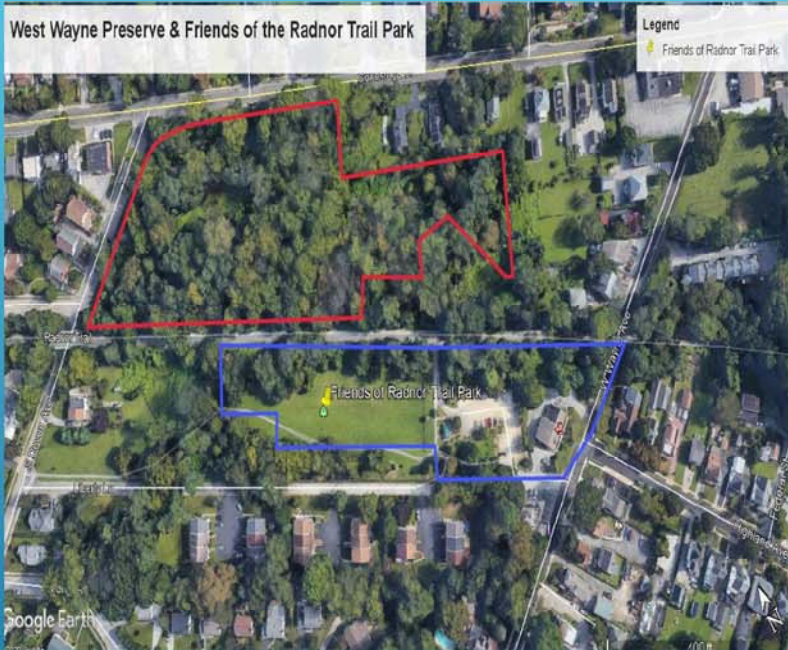
Award Date: 2/22/2021

Completion Date: 9/30/2021

# SOUTH WAYNE PARKING LOT

THE PURPOSE OF THE PROJECT IS TO REDUCE THE PROBABILITY OF FLOODING ON SOUTH WAYNE AVENUE.

INSTALL SUBSURFACE SWM IN PARKING LOT & CONVEY RUNOFF FROM SOUTH WAYNE AVENUE TO RMS SYSTEM. THIS CONVEYANCE WAS IN THE ORIGINAL DESIGN, BUT NEVER COMPLETED. THIS WILL ALLOW FULL UTILIZATION OF THE RMS SUBSURFACE SWM SYSTEM



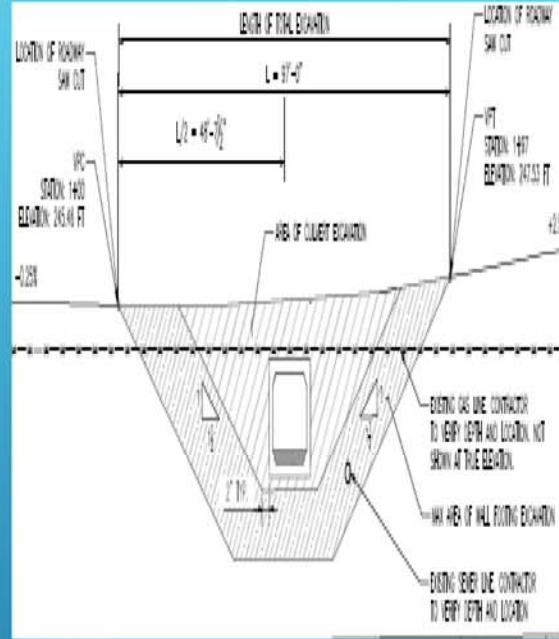
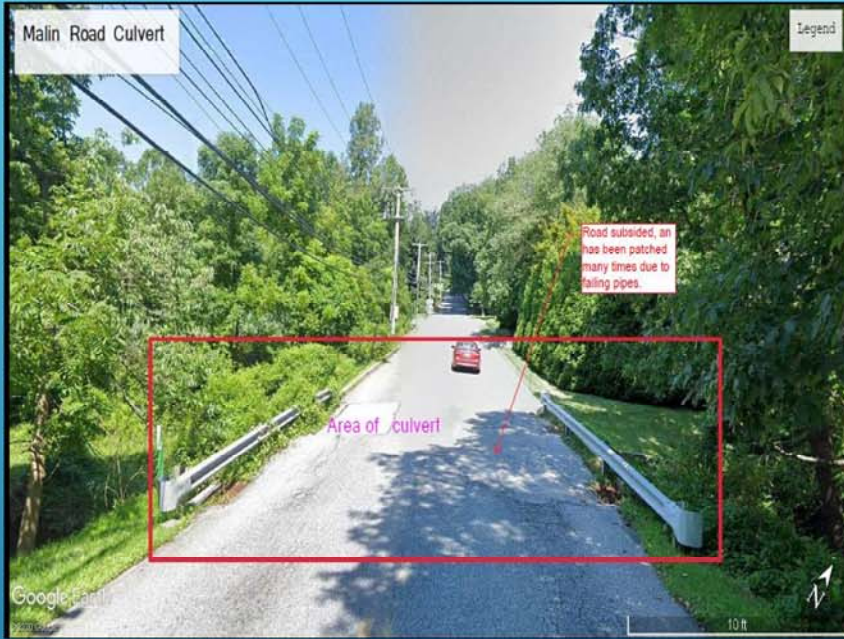
**Estimated Cost: \$2,460,000**

**Award Date: 6/28/2021**

**Completion Date: 10/30/2021**

## WEST WAYNE PRESERVE AND FRIENDS OF THE RADNOR TRAIL PARK STORMWATER MANAGEMENT SYSTEMS

CONVERT THE WEST WAYNE PRESERVE TO A SWM FACILITY (THE REASON THE TOWNSHIP PURCHASED THE PARCEL) AND INSTALL SUBSURFACE SWM IN THE FRIENDS OF THE RADNOR TRAIL PARK



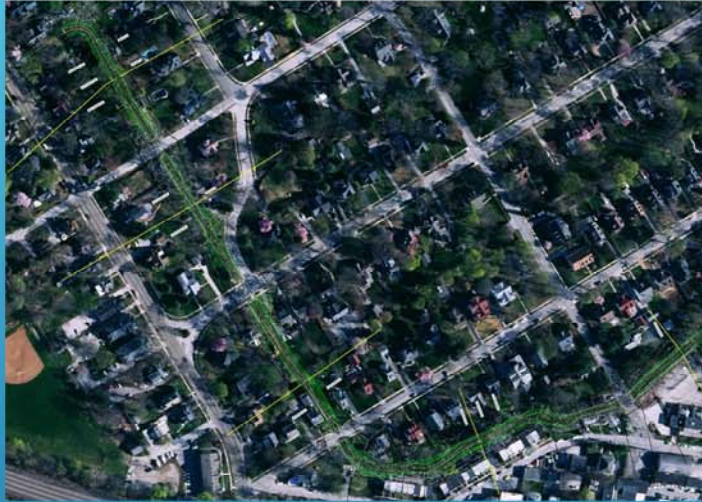
Estimated Cost: \$1,600,000

Award Date: 4/28/2021

Completion Date: 12/15/2021

## MALIN ROAD CULVERT

THE MALIN ROAD CULVERT HAS BEEN FAILING FOR SEVERAL YEARS. THE EXISTING TWIN PIPE CONFIGURATION SHOWS SIGNS OF DETERIORATION, AS WELL AS ROAD SUBSIDENCE.



**Estimated Cost: \$2,975,000**

**Award Date: 2021**

**Completion Date: 2022**

## NORTH WAYNE FLOOD PLAIN CREATION PROJECT

MELIORA DESIGN DETERMINED THAT THE MOST EFFECTIVE METHOD, FROM A FLOOD REDUCTION STANDPOINT AS WELL AS COST, IS TO CREATE FLOODPLAIN ALONG GULPH CREEK.

THE PROJECT INVOLVES 110 PROPERTIES, OF WHICH 70 HAVE BEEN CONTACTED (THE PANDEMIC, AS WELL AS HOLIDAYS, HAVE SLOWED OUR OUTREACH). WE ARE CURRENTLY MEETING WITH RESIDENTS WEEKLY. THE OVERWHELMING MAJORITY OF RESIDENTS CONTACTED ARE IN FAVOR OF THE PROJECT.



Estimated Cost: \$1,600,000

Award Date: 2021

Completion Date: 2022

## NORTH WAYNE MUNICIPAL PARKING LOT

INSTALL POROUS PAVING TO MANAGE THE RUNOFF FROM THE PARKING LOT. ANCILLARY BENEFITS INCLUDE IMPROVED TRAFFIC FLOW, LIGHTING, TREE PLANTING, AND POSSIBLY ADDRESS RUN OF CONCERNS FROM WAYNE PRESBYTERIAN CHURCH.



THE WAYNE PRESBYTERIAN CHURCH OWNS A LARGE PORTION OF THE PARKING LOT; THE TOWNSHIP WILL HAVE TO OBTAIN THEIR PERMISSION TO CONSTRUCT THE PROJECT.



### POLLUTANT REDUCTION PLAN DRAFT

Proposed BMP: Darby Creek

BMP Name	Location	BMP Type	Drainage Area (ac)	Percent Impervious (%)	TSS Reduction (lbs/yr)
Cornerstone and Hills of Bryn Mawr Basin Retrofit	Cornerstone Dr.	Basin Retrofit	108.39	18	36,212

**Estimated Cost: \$219,000**

**\*Start Date: 2021**

**Completion Date: 2022**

## CORNERSTONE BASIN RETROFIT

THE CORNERSTONE BASIN RETROFIT IS PART OF THE TOWNSHIP'S PROPOSED POLLUTION REDUCTION PLAN (PRP). TWO IMPORTANT ITEMS TO NOTE:

1. \*THE CORNERSTONE HOA WOULD HAVE TO PROVIDE PERMISSION TO INSTALL THE RETROFIT; AT THIS TIME, WE HAVE NOT MET FORMALLY ON THIS ISSUE.
2. THE DEP HAS YET TO APPROVE OUR PRP. WE CAN MOVE FORWARD WITH PROJECT, PENDING THE HOA APPROVAL, AND IT WILL COUNT TOWARDS OUR PRP.



**Estimated Cost: \$900,000**

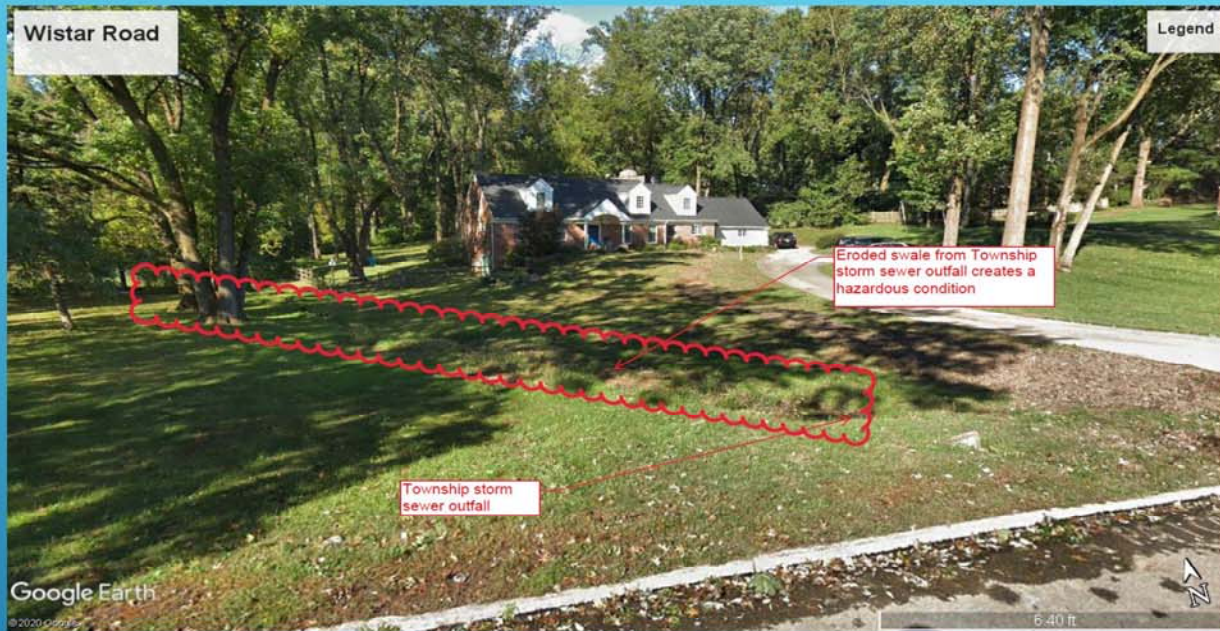
**Start Date: 2021**

**Completion Date: 2021**

## HIGHVIEW OUTFALL

THE TOWNSHIP'S OUTFALL PIPE HAS CREATED A DANGEROUS ERODED TRENCH IN THE REAR YARD. ALSO NOTE THE PIPE HAS SEPARATED.

THIS PROJECT WILL INSTALL NEW PIPE AND REDUCE THE SIZE OF THE TRENCH TO A GRADED SWALE.



**Estimated Cost: \$330,000**

**Award Date: 2021**

**Completion Date: 2021**

## WISTAR ROAD OUTFALL

THE TOWNSHIP'S STORM SEWER OUTFALL HAS CREATED AN ERODED SWALE, WHICH CREATES A HAZARDOUS CONDITION.

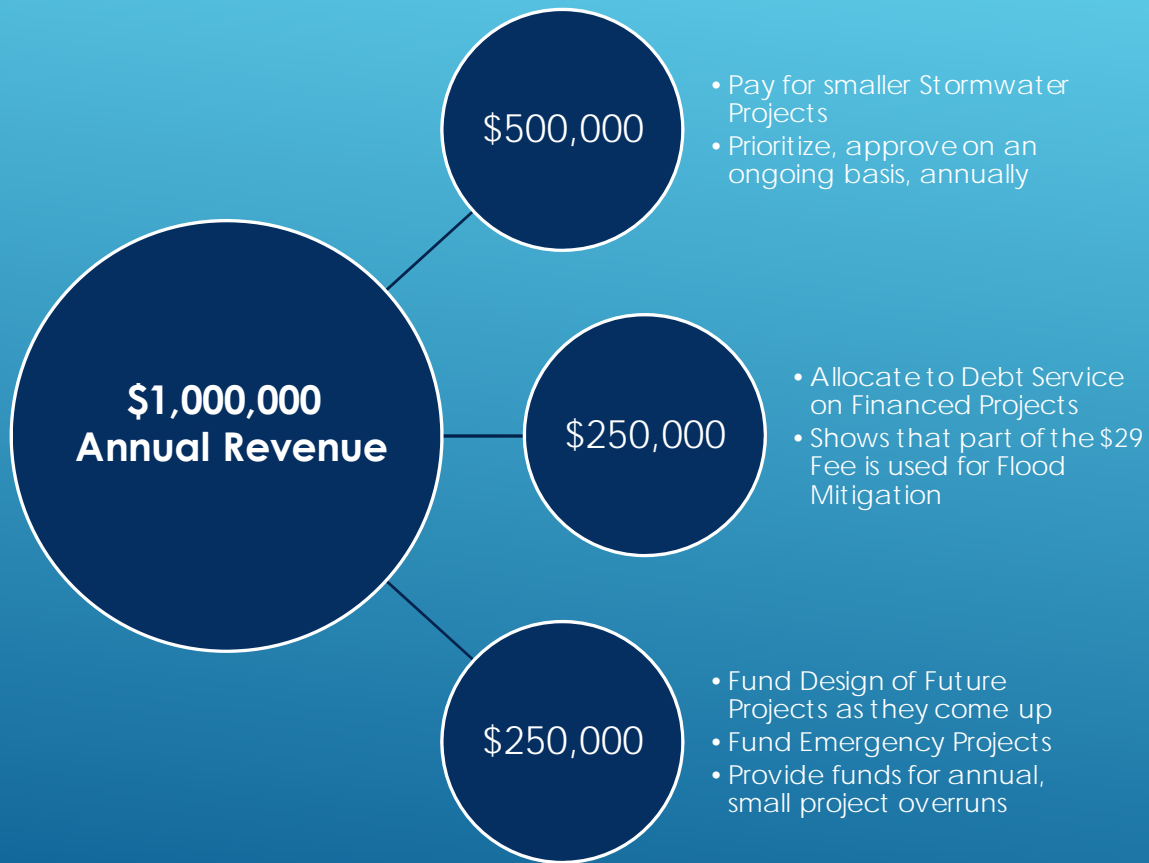
THE PROJECT ENTAILS EXTENDING THE OUTFALL TO THE REAR OF THE YARDS.



# FINANCING PROPOSAL

This section will cover:

- Stormwater Fee Planning (Current)
- Project Funding Cash Flow
- Stormwater Fee Impact (Future)



## CURRENT STORMWATER FEE BREAKOUT PROPOSAL

- Fee is \$29.00 per unit (same since inception)
- Billed annually to all customers
- Generates \$1,000,000 in revenue annually

	Designation: (I) Infrastructure (SWM) Stormwater Management	Project Name	Funded with Current Annual Revenues	Funded with Proposed Financing	Annual Cash Needed for Smaller Projects			Annual Financing Draws Needed		
					2020	2021	2022	2020	2021	2022
B I D 2 0 2 0	I	Cumberland / Arbor Place	\$ 372,000		\$ 372,000					
	I	Arthur Road	\$ 292,000		\$ 292,000					
	I	Wooton Road Storm Sewer Replacement	\$ 230,000		\$ 230,000					
B I D 2 0 2 1	SWM	Radnor / Willow Area Tree Trench	\$ 160,000			\$ 160,000				
	SWM	South Wayne Parking Lot		\$ 3,250,000				\$ 3,250,000		
	SWM	West Wayne Preserve and Friends of the Radnor Trail Park		\$ 2,460,000				\$ 2,460,000		
	I	Malin Road Culvert Replacement		\$ 1,600,000				\$ 1,600,000		
A W A I T I F N U G N D I N G	SWM	Gulph Creek Flood Project aka North Wayne Flood Plain Creation Project		\$ 2,975,000						\$ 2,975,000
	SWM	North Wayne Municipal Parking Lot		\$ 1,600,000						\$ 1,600,000
	SWM	Cornerstone Basin Retrofit	\$ 219,000			\$ 219,000				
	I	Highview Road Outfall		\$ 900,000						\$ 900,000
	I	Wistar Road Outfall	\$ 330,000				\$ 330,000			
	<b>TOTALS</b>			<b>\$ 1,603,000</b>	<b>\$ 12,785,000</b>	<b>\$ 894,000</b>	<b>\$ 379,000</b>	<b>\$ 330,000</b>	<b>\$ -</b>	<b>\$ 7,310,000</b>

# PROJECT FUNDING CASH FLOW

## LARGE PROJECT FINANCING PLAN

	Bond Financing	Bank Loan
<b>Total Project Amount</b>	<b>\$13,000,000</b>	<b>\$13,000,000</b>
Debt Service Exp.		
Year 1	182,000	148,673
Year 2	643,374	241,343
Year 3	643,374	229,634
Three Year Total	1,468,748	619,650
Years 4 – 27 Annual DS Exp.	643,374	643,374

- Larger stormwater projects (>\$500,000)
- Not enough annual revenues to fund with cash
- Recommending a Bank Loan / Draw Down approach over the next three years; then
- Once projects are installed and complete, the Township would roll the balance of the bank loan into a long-term, fixed-rate municipal bond

## DEBT SERVICE EXPENSE FORECAST

	2021	2022	2023
Debt Service Exp	\$148,673	\$241,343	\$229,634
Less: Current Rev Contribution	(250,000)	(250,000)	(250,000)
<b>Net New Expense</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>

	2024 - 2051
Debt Service Exp	\$643,374
Less: Current Rev Contribution	(250,000)
<b>Net New Debt Service Expense</b>	<b>393,374</b>

- During bank loan period, no increase in fee is needed to cover added cost (so long as we agree to allocate \$250,000 from current revenues)
- Long-Term Debt Service expense (2024 – 2051, assuming 30-year amortization) would require additional revenue to cover

Billing Unit Adjustment	2024 - 2051
Net New Debt Service Expense	\$393,374
Number of Billing Units	8,681
Net New Debt Service per Billing Unit	\$45.31
Current Billing Unit Fee	\$29.00
Amended Billing Unit Fee	\$74.31

Annual Residential Impact	Current	Revised	Annual \$Δ	Annual %Δ
1 Unit	\$29.00	\$74.31	\$45.31	156%
2 Units	58.00	148.62	90.62	156%
3 Units	87.00	222.93	135.93	156%
4 Units	116.00	297.24	181.24	156%

## STORMWATER FEE IMPACT

- New revenue to cover new debt service (net of \$250,000 from existing revenue)
- Estimated to be needed in year 2024
- **Could phase in over multiple years since 2021 – 2023 have no increase forecasted**

THANK YOU