

SPECIAL  
BOARD OF COMMISSIONERS AGENDA  
Radnor Township  
Zoom Meeting  
Wednesday, September 23, 2020 – 6:30 PM

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1. Pledge of Allegiance
2. Public Comment
3. Stormwater and Sanitary Sewer Projects and Funding Discussion
4. Public Comment
5. Adjournment

Meeting Notice

There will be a Special Board of Commissioners meeting held on Wednesday, September 23, 2020 at 6:30 PM via Zoom and streamed live on the Radnor Township YouTube Channel at <https://www.youtube.com/channel/UCvh6jeMQTvo3ojCTh8wZkbA>. The purpose of meeting is to discuss Stormwater and Sanitary Sewer Projects and Funding and any other matters. If you would like to submit public comment, please send an email to [publiccomment@radnor.org](mailto:publiccomment@radnor.org). This email address will only be monitored during the meeting.

## Peggy Hagan

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**From:** William White  
**Sent:** Thursday, September 17, 2020 2:25 PM  
**To:** Peggy Hagan  
**Subject:** 9/23 Special Meeting Backup  
**Attachments:** Stormwater Funding Summary Memo -- August 10, 2020.pdf

Peggy,

Please include this email along with the attached Memorandum from August 10, 2020 into the packet for the special Board meeting scheduled for September 23, 2020.

The special meeting was scheduled to discuss stormwater projects and potential funding alternatives. Please review the initial thoughts presented in the attached Memorandum. In addition, we are working on developing a more refined project installation timeline and matching borrowing plan that will (a) separate the projects into two categories based on cost, and (b) phase the projects over multiple years for the following reasons:

- We are not staffed to successfully install all these projects at the same time in addition to the other projects already borrowed for (2016/ 2019)
- The phased approach will allow for incremental rate increases rather than a single large increase
- The phased approach will, in all likelihood, result in lower overall borrowing costs (even if rates increase over the next three years)

We look forward to the discussion on Wednesday and moving forward with a plan to being installing these projects.

Best,  
Bill

**William M. White**, MBA | Township Manager  
Radnor Township | 301 Iven Ave | Wayne, PA 19087 | 610.688.5600 ext 127  
[www.radnor.com](http://www.radnor.com)





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*Township Manager*  
*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:

Project 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
<del>South Devon Ave</del>	<del>2,575,000</del>
• South Wayne Parking Lot	● 2,951,750
West Wayne Preserve and Darby Creek	● 2,348,806
Cornerstone Basin Retrofit	● 199,226
• Arthur Road	● 265,560
Highview Road Outfall	● 836,000
Malin Road Culvert Replacement	● 1,454,750
Wistar Road Outfall	● 300,300
• Wooton Road storm sewer replacement	● 208,725
<b>Total of Projects Under Design</b>	<b>\$15,819,233</b>

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

Scenarios >>>	\$10MM BQ	\$10MM Non-BQ	\$15MM Non-BQ	\$20MM Non-BQ
Issue Date	10/14/2020	10/14/2020	10/14/2020	10/14/2020
First Interest Payment	5/1/2021	5/1/2021	5/1/2021	5/1/2021
First Principal Payment	11/1/2021	11/1/2021	11/1/2021	11/1/2021
Final Maturity	11/1/2050	11/1/2050	11/1/2050	11/1/2050
1st Par Call Date	11/1/2025	11/1/2030	11/1/2030	11/1/2030
Par Issued	\$ 10,020,000	\$ 8,635,000	\$ 12,915,000	\$ 17,200,000
Issuance Premium	\$ 121,306	\$ 1,498,953	\$ 2,242,593	\$ 2,985,804
Gross Proceeds	\$ 10,141,306	\$ 10,133,953	\$ 15,157,593	\$ 20,185,804
Project Fund	\$ 10,000,000	\$ 10,000,000	\$ 15,000,000	\$ 20,000,000
All-in True Interest Cost	2.292%	2.788%	2.768%	2.758%
Average Annual Debt Service	\$ 464,418	\$ 496,022	\$ 741,960	\$ 987,996
Total Debt Service	\$ 13,954,469	\$ 14,904,076	\$ 22,293,826	\$ 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:

Scenarios >>>	\$10MM BQ	\$10MM Non-BQ	\$15MM Non-BQ	\$20MM Non-BQ
Annual Debt Service	\$ 464,418	\$ 496,022	\$ 741,960	\$ 987,996
Less: 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	\$ 403,960	\$ 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	\$ 29.00	\$ 29.00	\$ 29.00	\$ 29.00
Resulting Billing Unit Amount	\$ 43.56	\$ 47.20	\$ 75.53	\$ 103.88
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.

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.

# Stormwater Projects



Radnor Township, PA  
Stormwater Project Cost Report  
by Project Type and Project Ranking

Printed: 10/29/2019

Project Estimate	95	90	85	80	75	70	65	60	55	50	45	40	35	Grand Total
<b>SWM/FLOOD REDUCTION</b>	\$ 8,005,556		\$ 2,695,000	\$ 7,302,500	\$ 2,575,000	\$ 1,387,591	\$ 6,886,675	\$ 1,468,000	\$ 354,200	\$ 125,225		\$ 75,000	\$ 64,975	\$ 30,939,722
Beechtree and Chestnut						\$ 150,766								\$ 150,766
North Wayne Area Tree Trench						\$ 150,766								\$ 150,766
Beechtree and Oak East						\$ 129,790								\$ 129,790
North Wayne Area Tree Trench						\$ 129,790								\$ 129,790
Beechtree and Oak North						\$ 151,916								\$ 151,916
North Wayne Area Tree Trench						\$ 151,916								\$ 151,916
Boxwood													\$ 64,975	\$ 64,975
Sewer Install to capture underground spring runoff													\$ 64,975	\$ 64,975
Cowan Park							\$ 4,019,250							\$ 4,019,250
North Wayne Area Stormwater Management							\$ 4,019,250							\$ 4,019,250
Cowan Park Parking Lot										\$ 125,225				\$ 125,225
North Wayne Area Stormwater Management										\$ 125,225				\$ 125,225
Cumberland Place								\$ 354,200						\$ 354,200
Cumbrland and Arbor Places								\$ 354,200						\$ 354,200
Gulph Creek Flood Project	\$ 2,705,000													\$ 2,705,000
North Wayne Area Stormwater Management	\$ 2,705,000													\$ 2,705,000
North Wayne								\$ 1,468,000						\$ 1,468,000
SEPTA Lot SWM								\$ 1,468,000						\$ 1,468,000
North Wayne Field Parking Lot							\$ 137,425							\$ 137,425
North Wayne Area Stormwater Management							\$ 137,425							\$ 137,425
Poplar and Woodland						\$ 118,330								\$ 118,330
North Wayne Area Tree Trench						\$ 118,330								\$ 118,330
Poplar Bypass				\$ 7,302,500										\$ 7,302,500
North Wayne Area Stormwater Management				\$ 7,302,500										\$ 7,302,500
Poplar East						\$ 126,966								\$ 126,966
North Wayne Area Tree Trench						\$ 126,966								\$ 126,966
Poplar West						\$ 118,330								\$ 118,330
North Wayne Area Tree Trench						\$ 118,330								\$ 118,330
Radnor and Willow						\$ 151,916								\$ 151,916
North Wayne Area Tree Trench						\$ 151,916								\$ 151,916
South Devon Avenue					\$ 2,575,000									\$ 2,575,000
West Wayne Preserve & Darby Creek FR					\$ 2,575,000									\$ 2,575,000
South Wayne	\$ 2,951,750													\$ 2,951,750
S. Wayne Parking Lot	\$ 2,951,750													\$ 2,951,750
SR 320												\$ 75,000		\$ 75,000
Ramsey Run Flood Reduction Feasibility Study												\$ 75,000		\$ 75,000
Walnut and Woodland East						\$ 129,803								\$ 129,803
North Wayne Area Tree Trench						\$ 129,803								\$ 129,803
Walnut and Woodland North						\$ 129,803								\$ 129,803
North Wayne Area Tree Trench						\$ 129,803								\$ 129,803
Wayne (Parking Lot)			\$ 2,695,000				\$ 2,730,000							\$ 5,425,000
North Wayne Parking Lot SWM			\$ 2,695,000											\$ 2,695,000
Waynewood/Louella Parking Lots SWM							\$ 2,730,000							\$ 2,730,000
West Wayne Preserve	\$ 2,348,806													\$ 2,348,806
West Wayne Preserve & Darby Creek FR	\$ 2,348,806													\$ 2,348,806
Woodland and Beechtree						\$ 179,971								\$ 179,971
North Wayne Area Tree Trench						\$ 179,971								\$ 179,971

Projects highlighted in green are 90%-100% designed

Projects highlighted in red are in various stages of design and permitting

Radnor Township, PA  
Stormwater Project Cost Report  
by Project Type and Project Ranking

Printed: 10/29/2019

Project Estimate	95	90	85	80	75	70	65	60	55	50	45	40	35	Grand Total
MS4							\$ 1,566,650			\$ 1,716,171	\$ 11,210,933			\$ 14,493,754
Conerstone										\$ 199,226				\$ 199,226
Basin Retrofit										\$ 199,226				\$ 199,226
Devon Square										\$ 72,956				\$ 72,956
Basin Retrofit										\$ 72,956				\$ 72,956
Eastern University West Campus Overflow Lot											\$ 1,716,375			\$ 1,716,375
Parking Lot to Porous Pavement											\$ 1,716,375			\$ 1,716,375
Haviland										\$ 47,702				\$ 47,702
Basin Retrofit										\$ 47,702				\$ 47,702
Haymarket										\$ 23,851				\$ 23,851
Basin Retrofit										\$ 23,851				\$ 23,851
Ithan Creek							\$ 1,566,650							\$ 1,566,650
MS4 PRP Streambank Restoaration							\$ 1,566,650							\$ 1,566,650
Ithan Valley Creek Park											\$ 897,000			\$ 897,000
Parking Lot to Porous Pavement											\$ 897,000			\$ 897,000
KTMC										\$ 48,635				\$ 48,635
Basin Retrofit										\$ 48,635				\$ 48,635
Montrose Condominiums										\$ 65,941				\$ 65,941
Basin Retrofit										\$ 65,941				\$ 65,941
Portledge										\$ 42,090				\$ 42,090
Basin Retrofit										\$ 42,090				\$ 42,090
Radnor Financial Center											\$ 2,921,000			\$ 2,921,000
Parking Lot to Porous Pavement											\$ 2,921,000			\$ 2,921,000
Radnor House											\$ 3,505,200			\$ 3,505,200
Parking Lot to Porous Pavement											\$ 3,505,200			\$ 3,505,200
Radnor Trail										\$ 1,045,500				\$ 1,045,500
MS4 PRP Underground (under trail) System										\$ 1,045,500				\$ 1,045,500
Radwyn Aparatments											\$ 1,109,575			\$ 1,109,575
Parking Lot to Porous Pavement											\$ 1,109,575			\$ 1,109,575
Trianon										\$ 75,510				\$ 75,510
Basin Retrofit										\$ 75,510				\$ 75,510
Valley Forge Military											\$ 1,061,783			\$ 1,061,783
Parking Lot to Porous Pavement											\$ 1,061,783			\$ 1,061,783
Woods Lane Basin 1										\$ 28,060				\$ 28,060
Basin Retrofit										\$ 28,060				\$ 28,060
Woods Lane Basin 2										\$ 66,700				\$ 66,700
Basin Retrofit										\$ 66,700				\$ 66,700



Radnor Township, PA  
 Stormwater Project Cost Report  
 by Project Type and Project Ranking

Printed: 10/29/2019

Project Estimate	95	90	85	80	75	70	65	60	55	50	45	40	35	Grand Total
<b>INFRASTRUCTURE</b>	\$ 1,454,750	\$ 759,000	\$ 1,086,000	\$ 232,530		\$ 3,873,625	\$ 565,860							\$ 7,971,765
Arthur Road							\$ 265,560							\$ 265,560
Arthur Road Stormsewer Project							\$ 265,560							\$ 265,560
Brookside Road						\$ 328,900								\$ 328,900
Brookside Road Stormsewer Replacement						\$ 328,900								\$ 328,900
Chamounix & Eagle						\$ 3,336,000								\$ 3,336,000
Culvert replacements (2)						\$ 3,336,000								\$ 3,336,000
Highview Road			\$ 836,000											\$ 836,000
Highview Outfall			\$ 836,000											\$ 836,000
Malin Road	\$ 1,454,750													\$ 1,454,750
Malin Road Culvert Replacment	\$ 1,454,750													\$ 1,454,750
Mill Road			\$ 250,000											\$ 250,000
Mill Road Wall Replacement			\$ 250,000											\$ 250,000
Plant				\$ 114,540										\$ 114,540
Repair Storm Sewer under Resident House				\$ 114,540										\$ 114,540
Roberts Road		\$ 759,000												\$ 759,000
Roberts Road Culvert Repair		\$ 759,000												\$ 759,000
South Devon				\$ 117,990										\$ 117,990
Replace Storm Sewer under sidewalk and driveway				\$ 117,990										\$ 117,990
Villanova							\$ 300,300							\$ 300,300
Wistar Road Outfall							\$ 300,300							\$ 300,300
Wooton Road						\$ 208,725								\$ 208,725
Wooton Road Stormsewer Replacement						\$ 208,725								\$ 208,725
<b>Grand Total</b>	\$ 9,460,306	\$ 759,000	\$ 3,781,000	\$ 7,535,030	\$ 2,575,000	\$ 5,261,216	\$ 9,019,185	\$ 1,468,000	\$ 354,200	\$ 1,841,396	\$ 11,210,933	\$ 75,000	\$ 64,975	\$ 53,405,241

**Radnor Township, PA**  
Stormwater Project Ranking Scoring

Scoring Methodology for Stormwater Management Projects			
Scoring Criteria	Criteria Description	Explanation/Example	Total Possible Points Per Category
Threat to Person and Property	Encompasses flooding events that may cause physical harm to residents, and/or damage property. Includes depth of floodwater, which affects both items.	Areas where floodwaters could cause harm to a resident, or real property is damaged by floodwaters. A lower depth floodwater height may be more damaging to one area, than higher depth of floodwaters in another.	30
Delay of Emergency Response	Flooded streets cause delay in emergency responders (Police, Fire, Ambulance) accessing a residence or business. Includes depth of flood waters, which may hinder the emergency responders.	Threat to residents due the fact that an ambulance may not be able to reach a dwelling for a time, that would endanger that resident. Flooding that occurs at a Police Station or Fire House, and hinders access/egress of emergency vehicles, may affect the entire service area.	15
Cost/Benefit	The ratio of total cost: design, construction, possible easements to the frequency of storm managed.	The cost of the project versus the benefit provided. For instance, a high cost of design, construction, and possible easements for a SWM project that only manages a very small frequency storm would score on the lower end of the scale.	25
MS4	Projects that include pollution load reduction, water quality, BMPs.	The DEP MS4 program requires pollution load reductions, and water quality BMPs. The Township is required to design a PRP (Pollution Reduction Plan) to comply with MS4; these projects should include some aspect of Pollution Reduction or Water Quality. Those that do would rank higher than those that do not.	15
Ownership	To be addressed on a site by site basis	Township owned property would rank highest. Partnership with other landowners (government, transportation, school districts, private property) ranks favorably in obtaining grants, but the possible cost may negate that, hence the case by case basis.	10
Maintenance Costs	The annual and lifetime costs to ensure proper operation of the SWM system.	A SWM system that requires frequent maintenance to keep the system operating as designed would rank lower than one that perhaps needs only annual maintenance. The accessibility of maintenance crews must also be considered.	5
Maximum Possible Points - Aggregate of all categories.			100

# Sanitary Sewer Projects

**Radnor Township, PA**

Printed: 10/29/2019

Sanitary Sewer Fund Capital Forecast  
Assuming CASH Funded

	2020	2021	2022	2023	2024
<b>Future Project</b>	<b>\$ 1,697,000</b>	<b>\$ 3,880,000</b>	<b>\$ 4,386,000</b>	<b>\$ 4,356,000</b>	<b>\$ 4,868,750</b>
Administrative	\$ 50,000	\$ 50,000	\$ 50,000	\$ 30,000	\$ 50,000
GIS Mapping	\$ 50,000	\$ 50,000	\$ 50,000	\$ 30,000	\$ 50,000
Annual scanning of plans, maint. Rpts, etc.	\$ 50,000	\$ 50,000	\$ 50,000	\$ 30,000	\$ 50,000
<b>Pumping Station</b>	<b>\$ 562,000</b>	<b>\$ 100,000</b>	<b>\$ 606,000</b>	<b>\$ 506,000</b>	
Hermitage		\$ 100,000	\$ 506,000		
Replace antiquated pumping station		\$ 100,000	\$ 506,000		
Ithan Mills			\$ 100,000	\$ 506,000	
Replace antiquated pumping station			\$ 100,000	\$ 506,000	
Woods Lane	\$ 562,000				
Replace antiquated pumping station	\$ 562,000				
<b>Sewer</b>	<b>\$ 1,085,000</b>	<b>\$ 3,730,000</b>	<b>\$ 3,730,000</b>	<b>\$ 3,820,000</b>	<b>\$ 4,818,750</b>
Township-Wide	\$ 1,000,000	\$ 3,730,000	\$ 3,730,000	\$ 3,730,000	\$ 3,730,000
Emergency Repairs as needed	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Systematic Replacement of VCP (annually)		\$ 2,730,000	\$ 2,730,000	\$ 2,730,000	\$ 2,730,000
Pennsylvania Ave	\$ 85,000				
Replace deep manhole [22 Vertical Feet]	\$ 85,000				
Lancaster Ave				\$ 90,000	\$ 1,088,750
Lancaster Ave Sanitary Sewer				\$ 90,000	\$ 1,088,750
<b>Grand Total</b>	<b>\$ 1,697,000</b>	<b>\$ 3,880,000</b>	<b>\$ 4,386,000</b>	<b>\$ 4,356,000</b>	<b>\$ 4,868,750</b>