b. Street Committee
    i. *Set Meeting Date*

c. Finance Committee
    i. *Recommendation to amend the FY2023 budget pertaining to FY2022 carry-forward items in the General Fund.*
    ii. *Recommendation to amend the FY2023 budget pertaining to FY2022 carry-forward items in the Public Utility Fund.*
    iii. *Recommendation to authorize the Town Manager to execute a two-year contract with Hydrostructures pertaining to an inflow and infiltration study.*
    iv. *Set Meeting Date*

d. Personnel Committee

e. Ordinance Committee

f. Tourism & Economic Development

g. Park Commission
    i. *Set Meeting Date*

h. Planning Commission

8. Old Business

9. New Business

10. Town Manager's Report

11. Mayor's Report

12. Council Person Reports

13. Communications

    a. *WoodsTACO – September 10 (Court Square Noon – 5p)*
    b. *Planning Commission Meeting – September 26*

14. Executive Session

15. Adjournment

Cc: *Mayor*
Town Council
Town Clerk
Town Attorney
Chief of Police
Department Heads
Planning Commission Chairman Keith Lantz
Supervisor Karl Roulston
Shenandoah County Chamber of Commerce
Woodstock Fire Department
Woodstock Rescue Squad
Woodstock Enhancement Committee Chair
Media

RESOLUTION

GENERAL FUND

Revenues:

Unassigned Fund Balance – General Fund (10-3410-0605)	$75,224.00
Total Revenue Increase:	**$75,224.00**

Expenditures:

Capital Outlay – Information Technology Equipment (10-4910-6110)	$2,101.00
Capital Outlay – Communications Equipment (10-4910-6300)	29,223.00
Capital Outlay – Motor Vehicles & Equipment (10-4910-6400)	29,900.00
Capital Outlay – Public Space Improvements (10-4910-6914)	14,000.00
Total Expenditure Increase:	**$75,224.00**

BE IT RESOLVED by the Town Council of Woodstock, Virginia, that the budget for the fiscal year 2022-2023 be, and hereby is, amended, and the Council does hereby make an appropriation of the funds as set forth herein for the fiscal year 2022-2023.

Adopted this 6th day of September 2022.

_____
Mayor

ATTEST:

_____
Clerk

Town Council Agenda Item

Amend the Fiscal Year 2023 General Fund Budget to Carry Forward FY 2022 Capital Outlay Expenditures

September 6, 2022

Specific Action Requested:

That the Town Council appropriates $75,224.00 of General Fund fund balance to carry forward the unspent FY 2022 appropriations of capital projects to continue in the current fiscal year.

Summary:

Capital projects received funding in the FY 2022 budget and projects remain ongoing in FY 2023. With the close of the fiscal year, unspent funds would be captured in fund balance. This action will allow the Town to spend the previously approved balance on the remaining activities of the project.

This action will not cause the fund balance to drop below the General Fund fund balance policy minimum of 20%.

Account	Project Title	FY 2022 Budget	FY 23 Carry Forward	Note
10-4910-6110	Information Technology Equipment	20,000.00	2,101.00	Town Office AV Equipment Upgrades; project activities carried into FY 2023
10-4910-6300	Communications Equipment	29,223.00	29,223.00	Electric sign board; Procurement carried into FY 2023
10-4910-6400	Motor Vehicles & Equipment	197,610.00	29,900.00	Police Department vehicle; Procurement carried into FY 2023
10-4910-6914	Public Space Improvements	24,000.00	14,000.00	Snowflake and flag replacement; Procurement carried into FY 2023
		TOTAL	**75,224.00**	

TO: Aaron Grisdale, Town Manager

FROM: Tammy DePhillip, Director of Finance

SUBJECT: Revisions to Fiscal Year 2023 General Fund budget

The following chart summarizes all budget revisions to the Budget for the fund indicated below. The summary includes approved items, as well as items to be presented to the Town Council at the meeting date indicated.
Items for consideration are shown in bold italics.

Fund: General Fund				**Function: Non-Departmental**
REVENUES (SOURCE OF FUNDS)				
Date	**Description of Revision or Adjustment**	**Type**	**Amount**	**Balance**
July 1, 2022	Adopted Budget	Multiple	$2,594,839.00	$2,594,839.00
September 5, 2022	*Carry forward FY 2022 CIP appropriations for uncompleted projects*	*Fund balance*	*$75,224.00*	*$2,670,063.00*
EXPENDITURES (USE OF FUNDS)				
Date	**Description of Revision or Adjustment**	**Function**	**Amount**	**Balance**
July 1, 2022	Adopted Budget	Non-departmental	$2,594,839.00	$2,594,839.00
September 5, 2022	*Carry forward FY 2022 CIP appropriations for uncompleted projects*	*Non-departmental*	*$75,224.00*	*$2,670,063.00*

RESOLUTION

PUBLIC UTILTIES FUND

Revenues:

Unrestricted Reserves – Public Utilities Fund (60-3410-0606)	$67,691.00
Total Revenue Increase:	**$67,691.00**

Expenditures:

WWTP Repairs and Maintenance (60-4730-3210)	$67,691.00
Total Expenditure Increase:	**$67,691.00**

BE IT RESOLVED by the Town Council of Woodstock, Virginia, that the budget for the fiscal year 2022-2023 be, and hereby is, amended, and the Council does hereby make an appropriation of the funds as set forth herein for the fiscal year 2022-2023.

Adopted this 6th day of September 2022.

_____
Mayor

ATTEST:

_____
Clerk

Town Council Agenda Item

Amend the Fiscal Year 2023 Public Utilities Fund Budget to Carry Forward FY 2022 Wastewater Treatment Plant Expenditures

September 6, 2022

Specific Action Requested:

That the Town Council appropriates $67,691 of Public Utilities Fund fund balance to carry forward the unspent FY 2022 appropriations of Wastewater Treatment Plant repair and maintenance expenditures to continue in FY 2023.

Summary:

Wastewater Treatment Plant accounting line 60-4730-3210 – Repairs and Maintenance received funding in the FY 2022 budget and projects remain ongoing in FY 2023. The ongoing projects include crane maintenance and arc flash hazard testing at the Wastewater Treatment Plant. With the close of the fiscal year, unspent funds would be captured in unrestricted reserves. This action will allow the Town to spend the previously approved balance on the remaining activities of the project.

Account	Project Title	FY 2022 Budget	FY 2022 Actuals	FY 23 Carry Forward	Note
60-4730-3210	WWTP Repairs and Maintenance	$83,495	$15,804	$67,691	Activities incomplete at end of FY 2022

TO: Aaron Grisdale, Town Manager

FROM: Tammy DePhillip, Director of Finance

SUBJECT: Revisions to Fiscal Year 2023 Public Utilties Fund budget

The following chart summarizes all budget revisions to the Budget for the fund indicated below. The summary includes approved items, as well as items to be presented to the Town Council at the meeting date indicated.
Items for consideration are shown in bold italics.

Fund: Public Utilities Fund			**Function: Wastewater Treatment Plant**	
REVENUES (SOURCE OF FUNDS)				
Date	**Description of Revision or Adjustment**	**Type**	**Amount**	**Balance**
July 1, 2022	Adopted Budget	Multiple	$1,224,045.00	$1,224,045.00
September 5, 2022	***Carry forward unspent FY 2022 repairs and maintenance appropriations for uncompleted projects***	***Unrestricted reserves***	***$67,691.00***	***$1,291,736.00***
EXPENDITURES (USE OF FUNDS)				
Date	**Description of Revision or Adjustment**	**Function**	**Amount**	**Balance**
July 1, 2022	Adopted Budget	Wastewater Treatment Plant	$1,224,045.00	$1,224,045.00
September 5, 2022	***Carry forward unspent FY 2022 CIP repairs and maintenance appropriations for uncompleted projects***	***Wastewater Treatment Plant***	***$67,691.00***	***$1,291,736.00***

Town Council Agenda Item

Approval of inflow and infiltration study contract

September 6, 2022

Specific Action Requested:

That the Town Council authorize the Town Manager to execute a two-year contract with Hydrostructures to conduct a sewer system evaluation survey to investigate excessive inflow and infiltration sources in the Town's sewer system.

Summary:

The Town's procurement policy states the Town Council must above all contracts totaling $100,000 or more. The aggregate or sum of all phases for single or term contracts should be included in the total contract amount. The Town Manager is authorized to execute contracts resulting from procurements after Council award approval is obtained.

The Virginia Public Procurement Act (VPPA), Section 2.2-4300 allows a public body to purchase from a contract awarded through a cooperative procurement solicitation. Virginia Beach issued RFP PUCN-19-0036 for sanitary sewer evaluation services specifying that the procurement was a cooperative procurement. A contract was awarded from the procurement to Hydrostructures.

The Town can enter into a separate agreement with Hydrostructures without completing a competitive bidding process. This is advantageous for the Town by eliminating the administrative burden of carrying out a competitive bidding process.

The total cost of the contract is not to exceed $142,000. FY 2023 costs are included in the FY 2023 Public Utilities Fund budget. FY 2024 costs are included in the FY 2023 – 2027 Capital Improvement Plan and will be included as part of the annual budget process.

Attachments:

1. Sanitary sewer system study proposal

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Town of Woodstock
Sewer System Evaluation Survey
Scope of Services

August 17, 2022

I. BACKGROUND/PURPOSE

The purpose of this document is to provide the town council of Woodstock, Virginia the necessary information and insight into the fiscal benefits of conducting a Sewer System Evaluation Survey (SSES).

TrenchlessPedia.com defines an SSES as: '*A sewer system evaluation survey is a systematic evaluation used to investigate reports of excessive inflow or infiltration sources in a sewer system. The survey also assesses the flow rate and the cost for rehabilitation if said sources are found to be excessive. The typical sewer system evaluation survey includes the elements of physical evaluation, rainfall simulation, preparatory cleaning, internal inspection and the final survey report. Sewer system surveys are useful tools in confirming the need for trenchless repair or replacement efforts.'*

The town's sanitary system consists of the following:

- Approximately 31 miles (163,151LF) of sanitary sewer pipe ranging from 4 inches to 24 inches, in diameter. The pipes are mainly constructed of concrete or vitrified clay
- Approximately 700 sanitary sewer manholes
- 6 sewer lift/pumping stations
- One Wastewater Treatment Plant (WWTP) – rated at 2 MGD (million gallons per day, maximum acceptable flow), with a current average of 600,000 GPD flow.
    - It was upgraded approximately 10 years ago, with the anticipation of approximately 1,800 new homes being constructed during the housing boom.
    - Prior to the upgrade, the town was under a Consent Order* by the Virginia Department of Environmental Quality (DEQ).
    - *A consent order is a negotiated order. It is issued to an owner, operator or other responsible party for a violation to perform specific actions that will bring the entity into compliance with the relevant legal requirement. Consent orders are developed cooperatively with the responsible party and entered into by mutual agreement. The consent order may provide detail concerning the assessment and collection of civil charges for past violations. DEQ, in conjunction with the state Air, Water and Waste Boards, issues a variety of

enforcement orders to facilities to secure compliance with environmental laws and regulations. (www.deq.virginia.gov)

The Town is currently facing the following challenges with its Sanitary Sewer Infrastructure:

1) When the town receives significant rainfall (4"-5") within a 24hr period, the flow at the WWTP can increase to 3.6 MGD, which is significantly over the current rated treatment capacity.
2) Although rain events like this do not occur regularly, the WWTP does see regular flows hitting the 2 MGD limit. It is assumed that the high flows are due to infiltration (ground water) or Inflow from stormwater.
3) During the severe weather events, the headworks of the WWTP have seen 4800 GPM of flow, causing major problems at the WWTP. This typically results in the collection system having to be surcharged to minimize the damage to the plant. Often times, this results in SSOs (sewer system overflows) in the system. During these events it can take 4 days for the flow to return to normal levels. This type of response is indicative of both Inflow and Infiltration of ground water and stormwater respectively.
4) With most of the infrastructure in place for the previously planned 1,800 homes, the current sewer system's ability to handle the increased capacity should those units come online, the system would be extremely strained.

The town staff have taken the following actions over the past several years, as time allows to remediate some of the issues:

1) Staff completed some smoke testing (2006ish) to find leaks in the pipes.
2) Staff inserted watertight pans into manholes to help alleviate some Inflow.

II. PROPOSED SCOPE OF SERVICES

In a typical SSES Program, a Phased approach is recommended to determine the locations of the Inflow and Infiltration and to maximize the available budget.

Phase I – FY 2022-2023

The first Phase of the program would be to conduct Flow monitoring study and Rain Gauge analysis. This phase usually takes 3-6 months to collect data (typically want to have at least 2 decent rain events). The purpose of the study is to identify and isolate areas that show significant increases in flow during rain events compared to normal dry weather flow. It is also used to confirm flow seen at the WWTP during various weather conditions. This analysis gives us the ability to prioritize the basins based upon the amount of increase flow during the wet weather events for further study.

Currently, the Town has a GIS Program where it is mapping its system and assets, although at this point, the accuracy cannot be verified. We recommend that locations be verified and updated as the SSES program moves forward, via field inspections.

Phase II - FY2023-2024

Smoke testing will provide detailed information on wet weather I/I sources to the sanitary sewer system. The Flow Monitoring study previously conducted will be used to test the top-rated basins eliminating the need to test the entire system.

Manhole Inspections will evaluate the condition of the manhole structure and its component parts to identify potential sources of I & I as well verify the location and interconnection of the assets.

Based on the information gathered during the Smoke testing and Manhole inspections, we can further isolate the areas or specific lines that seem to be the cause of the I & I. At this point, we will perform line cleaning, CCTV inspections and Dye testing to determine the exact location and pipe defect that is causing the problems.

Summary

There are many benefits to taking a proactive approach in implementing an SSES Program to identify and prioritize defects within the town's sanitary sewer system:

- By finding and fixing problems in your sewer collection system, you are reducing/eliminating the clean water from rain, snow melt and creek/stream/rivers from unnecessarily being treated at your WWTP. This will reduce the overall cost of treatment by reducing the amount of chemicals and materials needed.
- Once you have evaluated your system, your WWTP professionals are able to accurately put together a maintenance and repair schedule that is more cost effective proactive is always better than reactive.
- Evaluating your system will help prioritize which pipes are on the verge of collapse or more susceptible to back-ups, thus reducing consumer and environmental safety issues with backups into homes or business, overflows into yards, streets, lakes or rivers.

By taking a proactive approach to identify the current structural status of their system and creating a plan that will repair or replace parts of the system over time, the Town shows they are taking serious actions to reduce SSOs and other environmental issues. There are many Jurisdictions with large systems who have had multiple SSOs, failures at WWTPs and regularly occurring pipe collapses that have been issued Consent Orders by the E.P.A., in which they are required to create a plan to fix all deficiencies and decrease the amount of nutrients entering the water ways. Typically, they must complete all the activities within a specified period of time, thus tying the hands of the jurisdiction as to where yearly funding is directed and how it should be spent.

Smaller systems may not currently be under the microscope of the E.P.A., but state agencies, like the Virginia DEQ, are beginning to put pressure on towns and municipalities to upgrade and repair their sanitary sewer systems at significant costs and with strict oversight and direction. By implementing an SSES Program, agencies can make long-term financial decisions (adjusting yearly as needed) and show their constituents and regulators that they are wisely using their tax dollars.

BUDGET ESTIMATE

Below is a budget estimate based on various assumptions and criteria that are indicative of most SSES programs that Hydrostructures has conducted in the past.

FY 2022-2023

The Fee estimate in **Appendix A** is for installation, maintenance and data analysis for up to 12 flow monitors for three months to isolate the basins that contribute the most to Inflow and Infiltration thereby allowing us to focus the following efforts on specific areas instead of the entire system. For the basis of estimating the budget, the SSES activities for the next fiscal year are a percentage of the system and not the entire system. Depending on what we find initially will determine the final budget for the recommended tasks.

FY 2023-2024

The Fee estimate in **Appendix B** is for Smoke testing, Manhole Inspections, Cleaning and CCTV inspections of mains and laterals along with dye testing and lateral inspections. The SSES activities for this fiscal year are a percentage (approximately 30%) of the system and not the entire system. What we determine from the I & I analysis will determine the recommended tasks.

Appendix A

City of Virginia Beach - Department of Public Utilities
Contract #PUCN-19-0036
Sanitary Sewer Evaluation Studies (SSES) and Flow
Flow Monitoring Field Services - Program #1
Woodstock VA - Piggy-back contract
FY 2022-2023 Project

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Virginia Beach, VA 23462
Phone 757-631-7989
Fax 757-631-2656

August 16, 2022

FEE PROPOSAL - All activities

SSES SERVICES SUMMARY

Item	Work Break down structure Description	Sub Total
1 - 5	Phase 1 activities - Smoke Testing, NFI, Manhole Inspections, C/O Plug installation, Manhole Insert installation Data review, QA/QC	$0.00
6 - 10	Phase 2 activities - Cleaning & CCTV Inspection, Dye Testing/Flooding, Lateral Inspection, Data Review, QA/QC	$0.00
11 - 12	Flow Monitoring Services	$70,875.00
13-15	Additional Field Services	$0.00
ITEMIZED ESTIMATED SSES SERVICES		***TOTAL*** **$70,875.00**

Item	Description of SSES activity	Unit	Qnty	Unit Price	Total
1	Smoke Testing (linear feet) Includes Report & Public Notification - Attachment B, pg 6, Smoke Testing				
1.1	Street Access - within the asphalt Right of Way	L.F.		$0.42	$0.00
1.2	Off-Street Access - outside the asphalt Right of Way	L.F.		$0.42	$0.00
2	Night Flow Isolations - Attachment B, pg 9, Night Flow Isolation				
2.1	Without Plug	each		$199.50	$0.00
2.2	With Plug	each		$199.50	$0.00
3	Digital Manhole Inspections - Attachment B, pg 9, Digital Manhole Scanning Inspection				
3.1	Manhole scanning inspection all in service area	each		$126.00	$0.00
3.2	Manhole scanning inspection random locations	each		$141.75	$0.00
4	Cleanout Plug Material and Installation - Attachment B, pg 18, Installation of Cleanout Plugs				
4.1	Cleanout Plug Installation (3" - 4")	each		$22.05	$0.00
4.2	Cleanout Plug Installation (6")	each		$31.50	$0.00
4.3	Cleanout Plug Installation (8")	each		$42.00	$0.00
5	Manhole Insert - Material and Installation - Attachment B, pg 17, Installation of Manhole Inserts				
5.1	Manhole Insert Installation 19" - 26" OD	each		$147.00	$0.00
5.2	Manhole Insert Installation 27" - 32" OD	each		$210.00	$0.00
5.3	Manhole Insert Installation 33" - 36" OD	each		$241.50	$0.00
6	Light Pipe Cleaning - Attachment B, pg 17, Pipeline Cleaning				
6.1	6-12" Diameter (all in service area)	L.F.		$0.95	$0.00
6.2	15-18" Diameter (all in service area)	L.F.		$1.16	$0.00
6.3	20-24" Diameter (all in service area)	L.F.		$1.73	$0.00
6.4	6-12" Diameter (random locations)	L.F.		$1.26	$0.00
6.5	15-18" Diameter (random locations)	L.F.		$1.47	$0.00
6.6	20-24" Diameter (random locations)	L.F.		$2.10	$0.00
7	Heavy Pipe Cleaning (per pass all diameters)	L.F.		$0.42	$0.00

8	Mainline CCTV Inspection - Attachment B, pg 17, Mainline CCTV Inspection				
8.1	6-12" Diameter (all in service area)	L.F.		$1.73	$0.00
8.2	15-18" Diameter (all in service area)	L.F.		$1.84	$0.00
8.3	20-24" Diameter (all in service area)	L.F.		$1.94	$0.00
8.4	6-12" Diameter (random locations)	L.F.		$2.42	$0.00
8.5	15-18" Diameter (random locations)	L.F.		$2.52	$0.00
8.6	20-24" Diameter (random locations)	L.F.		$2.63	$0.00
9	Lateral CCTV Inspection includes Public Notification - Attachment B, pg 17, Lateral CCTV Inspection				
9.1	Lateral CCTV Inspection 4"- 6" Diameter from Clean-out	each		$262.50	$0.00
9.2	Lateral CCTV Inspection 4"- 6" Dia. Launched from the main	each		$278.25	$0.00
10	Dye Water Testing includes Public Notification - Attachment B, pg 14, Dye Water Testing				
10.1	Dye Water Testing (above ground defects 0-10 gals dye water) not including CCTV inspection	each		$603.75	$0.00
10.2	Dye Water Flooding (storm drain cross-connections > 10 gals dye water) not including CCTV inspection	each		$787.50	$0.00
11	Flow, Pressure & Rainfall Monitoring - Attachement C				
11.1	Flow Monitoring Equipment Installation (1 - 15 meters)	each	12	$892.50	$10,710.00
11.2	Flow Monitoring Equipment Installation (>= 16 meters)	each		$787.50	$0.00
11.3	Flow Monitoring (per meter week)	week	144	$367.50	$52,920.00
11.4	Rain Gauge Installation	each	2	$157.50	$315.00
11.5	Rainfall Gauging (per gauge week)	week	12	$157.50	$1,890.00
11.6	Pressure Monitor Installation	each		$787.50	$0.00
11.7	Pressure Monitoring (per gauge week)	week		$210.00	$0.00
12	Install Pressure-side Flow Meter	each		$787.50	$0.00
12.1	Pressure-side Flow Monitoring (per meter week)	week		$262.50	$0.00
12.2	Permanent Flow meter site investigation & programming	each		$210.00	$0.00
12.3	Equipment replacement & installation - includes labor	each		$3,150.00	$0.00
12.4	Meter maintenance - includes calibration, cleaning and data evaluation per meter per month	meter/ month	12	$420.00	$5,040.00
12.5	2-man meter maintenance crew for emergency service	hour		$126.00	$0.00
12.6	Removal of sensors, telog boxes and other equipment	meter		$420.00	$0.00
	SSES Field Services SUB-TOTAL				**$70,875.00**
13	Additional Field Activities - Attachment B, pg 10, Manhole				
13.1	Top Side Manhole Inspection (in ROW) all in service area	each		$89.25	$0.00
13.2	Top Side Manhole Inspection (in ROW) random locations	each		$94.50	$0.00
13.3	Top Side Manhole Inspection (outside ROW) all in service	each		$94.50	$0.00
13.4	Top Side Manhole Inspection (outside ROW) random	each		$105.00	$0.00
14	Traffic Control for High Traffic, State Road or Busy				
14.1	Group 1 Channelizing Device	ea/day		$0.79	$0.00
14.2	Group 2 Channelizing Device	ea/day		$1.05	$0.00
14.3	Electonic Arrow (Flashing Arrow Panel)	ea/day		$157.50	$0.00
14.4	Truck Mounted Attenuator Service	ea/day		$630.00	$0.00
14.5	Flagger Service (Police Assisted)	hr		$52.50	$0.00
15	SL RAT Accoustic Monitoring at various locations in support of Hotspot Cleaning program			$89.25	

15.1	Set-up at random locations, per line segment, per each set-up, one test - 30-day rotation	each		$89.25	$0.00
15.2	Set-up at random locations, per line segment, per each set-up, one test - 60-day rotation	each		$89.25	$0.00
15.3	Set-up at random locations, per line segment, per each set-up, one test - 90-day rotation	each		$89.25	$0.00
15.4	Set-up at random locations, per line segment, per each set-up, one test - 180-day rotation	each		$89.25	$0.00
15.5	Set-up at random locations, per line segment, per each set-up, one test - 365-day rotation	each		$89.25	$0.00
	Additional Field Services SUB-TOTAL				**$0.00**
	TOTAL FEE ESTIMATE	**$70,875.00**			

Appendix B

City of Virginia Beach - Department of Public Utilities
Contract #PUCN-19-0036
Sanitary Sewer Evaluation Studies (SSES) and Flow
Flow Monitoring Field Services - Program #1
Woodstock VA - Piggy-back contract
FY 2022-2023 Project

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Fax 757-631-2656

August 16, 2022

FEE PROPOSAL - All activities

SSES SERVICES SUMMARY

Item	Work Break down structure Description	Sub Total
1 - 5	Phase 1 activities - Smoke Testing, NFI, Manhole Inspections, C/O Plug installation, Manhole Insert installation Data review, QA/QC	$52,458.00
6 - 10	Phase 2 activities - Cleaning & CCTV Inspection, Dye Testing/Flooding, Lateral Inspection, Data Review, QA/QC	$18,613.25
11 - 12	Flow Monitoring Services	$0.00
13-15	Additional Field Services	$0.00
ITEMIZED ESTIMATED SSES SERVICES	***TOTAL***	**$71,071.25**

Item	Description of SSES activity	Unit	Qnty	Unit Price	Total
1	Smoke Testing (linear feet) Includes Report & Public Notification - Attachment B, pg 6, Smoke Testing				
1.1	Street Access - within the asphalt Right of Way	L.F.	50,000	$0.42	$21,000.00
1.2	Off-Street Access - outside the asphalt Right of Way	L.F.	5,000	$0.42	$2,100.00
2	Night Flow Isolations - Attachment B, pg 9, Night Flow Isolation				
2.1	Without Plug	each		$199.50	$0.00
2.2	With Plug	each		$199.50	$0.00
3	Digital Manhole Inspections - Attachment B, pg 9, Digital Manhole Scanning Inspection				
3.1	Manhole scanning inspection all in service area	each	233	$126.00	$29,358.00
3.2	Manhole scanning inspection random locations	each		$141.75	$0.00
4	Cleanout Plug Material and Installation - Attachment B, pg 18, Installation of Cleanout Plugs				
4.1	Cleanout Plug Installation (3" - 4")	each		$22.05	$0.00
4.2	Cleanout Plug Installation (6")	each		$31.50	$0.00
4.3	Cleanout Plug Installation (8")	each		$42.00	$0.00
5	Manhole Insert - Material and Installation - Attachment B, pg 17, Installation of Manhole Inserts				
5.1	Manhole Insert Installation 19" - 26" OD	each		$147.00	$0.00
5.2	Manhole Insert Installation 27" - 32" OD	each		$210.00	$0.00
5.3	Manhole Insert Installation 33" - 36" OD	each		$241.50	$0.00
6	Light Pipe Cleaning - Attachment B, pg 17, Pipeline Cleaning				
6.1	6-12" Diameter (all in service area)	L.F.	5,000	$0.95	$4,750.00
6.2	15-18" Diameter (all in service area)	L.F.		$1.16	$0.00
6.3	20-24" Diameter (all in service area)	L.F.		$1.73	$0.00
6.4	6-12" Diameter (random locations)	L.F.		$1.26	$0.00
6.5	15-18" Diameter (random locations)	L.F.		$1.47	$0.00
6.6	20-24" Diameter (random locations)	L.F.		$2.10	$0.00
7	Heavy Pipe Cleaning (per pass all diameters)	L.F.	1,000	$0.42	$420.00

8	Mainline CCTV Inspection - Attachment B, pg 17, Mainline CCTV Inspection				
8.1	6-12" Diameter (all in service area)	L.F.	5,000	$1.73	$8,650.00
8.2	15-18" Diameter (all in service area)	L.F.		$1.84	$0.00
8.3	20-24" Diameter (all in service area)	L.F.		$1.94	$0.00
8.4	6-12" Diameter (random locations)	L.F.		$2.42	$0.00
8.5	15-18" Diameter (random locations)	L.F.		$2.52	$0.00
8.6	20-24" Diameter (random locations)	L.F.		$2.63	$0.00
9	Lateral CCTV Inspection includes Public Notification - Attachment B, pg 17, Lateral CCTV Inspection				
9.1	Lateral CCTV Inspection 4"- 6" Diameter from Clean-out	each	5	$262.50	$1,312.50
9.2	Lateral CCTV Inspection 4"- 6" Dia. Launched from the main	each	1	$278.25	$278.25
10	Dye Water Testing includes Public Notification - Attachment B, pg 14, Dye Water Testing				
10.1	Dye Water Testing (above ground defects 0-10 gals dye water) not including CCTV inspection	each	4	$603.75	$2,415.00
10.2	Dye Water Flooding (storm drain cross-connections > 10 gals dye water) not including CCTV inspection	each	1	$787.50	$787.50
11	Flow, Pressure & Rainfall Monitoring - Attachement C				
11.1	Flow Monitoring Equipment Installation (1 - 15 meters)	each		$892.50	$0.00
11.2	Flow Monitoring Equipment Installation (>= 16 meters)	each		$787.50	$0.00
11.3	Flow Monitoring (per meter week)	week		$367.50	$0.00
11.4	Rain Gauge Installation	each		$157.50	$0.00
11.5	Rainfall Gauging (per gauge week)	week		$157.50	$0.00
11.6	Pressure Monitor Installation	each		$787.50	$0.00
11.7	Pressure Monitoring (per gauge week)	week		$210.00	$0.00
12	Install Pressure-side Flow Meter	each		$787.50	$0.00
12.1	Pressure-side Flow Monitoring (per meter week)	week		$262.50	$0.00
12.2	Permanent Flow meter site investigation & programming	each		$210.00	$0.00
12.3	Equipment replacement & installation - includes labor	each		$3,150.00	$0.00
12.4	Meter maintenance - includes calibration, cleaning and data evaluation per meter per month	meter/ month		$420.00	$0.00
12.5	2-man meter maintenance crew for emergency service	hour		$126.00	$0.00
12.6	Removal of sensors, telog boxes and other equipment	meter		$420.00	$0.00
	SSES Field Services SUB-TOTAL				**$71,071.25**
13	Additional Field Activities - Attachment B, pg 10, Manhole				
13.1	Top Side Manhole Inspection (in ROW) all in service area	each		$89.25	$0.00
13.2	Top Side Manhole Inspection (in ROW) random locations	each		$94.50	$0.00
13.3	Top Side Manhole Inspection (outside ROW) all in service	each		$94.50	$0.00
13.4	Top Side Manhole Inspection (outside ROW) random	each		$105.00	$0.00
14	Traffic Control for High Traffic, State Road or Busy				
14.1	Group 1 Channelizing Device	ea/day		$0.79	$0.00
14.2	Group 2 Channelizing Device	ea/day		$1.05	$0.00
14.3	Electonic Arrow (Flashing Arrow Panel)	ea/day		$157.50	$0.00
14.4	Truck Mounted Attenuator Service	ea/day		$630.00	$0.00
14.5	Flagger Service (Police Assisted)	hr		$52.50	$0.00
15	SL RAT Accoustic Monitoring at various locations in support of Hotspot Cleaning program			$89.25	

15.1	Set-up at random locations, per line segment, per each set-up, one test - 30-day rotation	each		$89.25	$0.00
15.2	Set-up at random locations, per line segment, per each set-up, one test - 60-day rotation	each		$89.25	$0.00
15.3	Set-up at random locations, per line segment, per each set-up, one test - 90-day rotation	each		$89.25	$0.00
15.4	Set-up at random locations, per line segment, per each set-up, one test - 180-day rotation	each		$89.25	$0.00
15.5	Set-up at random locations, per line segment, per each set-up, one test - 365-day rotation	each		$89.25	$0.00
	Additional Field Services SUB-TOTAL				**$0.00**
	TOTAL FEE ESTIMATE	**$71,071.25**			