



Annual Report

**January 1, 2022
Through
December 31, 2022**

PURSUANT TO PARAGRAPH 19, OF THE CONSENT DECREE BETWEEN BALTIMORE COUNTY AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, DEPARTMENT OF JUSTICE AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Pursuant to Paragraph 20 of the Consent Decree entered between Baltimore County and the United States Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE), this document constitutes the required Annual Report for the period **January 1, 2022** through **December 31, 2022**.

The annual report is a periodic review of Baltimore County activities related to the accomplishment of the Consent Decree general and specific requirements. The report is required to address:

- i. Sanitary Sewer Overflow (SSO) structure elimination progress
- ii. Rainfall and Flow Monitoring Plan compliance
- iii. Evaluation of rainfall and flow monitoring data
- iv. Fats, Oils and Grease (FOG) Program updates
- v. Illegal storm water discharges
- vi. Pump station status
- vii. Collection system model implementation status
- viii. Supplemental collection system inspection progress
- ix. Sewer cleaning progress
- x. Collection system inventory progress
- xi. Emergency Response Plan
- xii. Building Backup Report
- xiii. Annual update to the SSO characterization report

i. Sanitary Sewer Overflow (SSO) Structure Elimination Progress

- (a) Summarize progress in implementing approved schedules for the elimination of Non-Pump Station SSO structures

The listing of relief points is shown in **Attachment A**. Below is the status of the SSO elimination projects:

- 38 original SSOs (per CD Appendix A-2)
- 9 SSOs identified after CD effective date
- 3 SSOs reclassified as pump station SSOs
- 34 SSOs eliminated
- 10 SSOs scheduled for elimination

No SSO structures were eliminated during the reporting period.

Elimination of Non-Pump Station SSO Structures 22, 23A, 23B, 24

The original Consent Decree deadline for SSO elimination was March 22, 2017; however, on February 14, 2017, the County submitted a time of performance extension request due to completing a required Phase II archaeological investigation for the Maryland Historical Trust and resulting delay in obtaining permit approval from the U.S. Army Corps of Engineers (ACOE). The requested SSO elimination date was undefined since the determination from the archaeological investigation may have required realignment and re-design of the new relief sewer. Subsequently, the County obtained ACOE's permit and, to expedite project completion, the County separated the project into 2 construction contracts.



On September 3, 2019, the County issued the notice to proceed for the Phase I construction project (18180 SX0). The project achieved functional use on January 26, 2021. The Phase II construction project was separated into 2 projects, the County advertised the Phase II construction contract and construction Notice to Proceed was issued on January 24, 2023. The Phase III project requires right-of-way acquisition and environmental permits. After the right-of-way easements have been acquired, the environmental permits obtained and the Phase III construction project notice to proceed has been issued, the County will submit a second time of performance extension with a definitive date to eliminate the SSO structures.

Elimination of Non-Pump Station SSO Structures 41 and 129

The original Consent Decree deadline for SSO elimination was March 20, 2018; however on October 4, 2017 the County submitted a time of performance extension request due to private property easement acquisition. As stated in the time extension request, the requested SSO elimination date was undefined since the time to negotiate and acquire the easements was unknown. Subsequently, the right-of-entry agreements were finalized and the County completed design work. On October 3, 2019 the County awarded the construction project. On April 27, 2020 the County submitted a second time of performance extension to eliminate the overflow structures by August 3, 2023. On January 4, 2022, the County submitted a third time of performance extension due to unanticipated site conditions. The requested SSO elimination date was December 4, 2023. On May 17, 2022, the County submitted a fourth time of performance extension due to continuing delays stemming from unanticipated site conditions. The requested SSO elimination date was March 3, 2024.

Elimination of Non-Pump Station SSO Structures 113, 116, 117 and 118

The County continues to meet and coordinate with Baltimore City to complete the needed hydraulic improvements to the downstream collection system, which is maintained by the City.

A summary of all County and EPA/MDE communication in during the reporting period related to SSO structures is shown below:

Date of Correspondence	From	To	Control ID	SSO ID	SSO Name	Subject
1/4/2022	County	EPA/MDE	386	41 and 129	Aiken Avenue and Queen Anne Drive	Time of performance extension request
5/17/2022	County	EPA/MDE	432	41 and 129	Aiken Avenue and Queen Anne Drive	Time of performance extension request
6/14/2022	County	EPA/MDE	441	41 and 118	Aiken Avenue and Overbook Road near Medwick Garth	Request to waive stipulated penalties (6/18/2022)
7/8/2022	County	EPA/MDE	443	23A, 23B, 24 and 41	Southern Cross Drive, Southern Cross, Patterson Avenue, Aiken Avenue	Request to waive stipulated penalties (7/2/2022)
7/19/2022	County	EPA/MDE	448	22, 23A, 23B and 24	Alter Road, Southern Cross Drive, Southern Cross, Patterson Avenue	Request to waive stipulated Penalties (7/16/2022)
8/21/2022	County	EPA/MDE	452	129	Queen Anne Drive	Request to waive stipulated Penalties (8/4/2022)
8/22/2022	County	EPA/MDE	453			Response to 2018 SSO penalties
10/11/2022	County	EPA/MDE	458	23A, 23B and 24	Southern Cross Drive, Southern Cross, Patterson Avenue	Request to waive stipulated penalties (9/12/2022)
11/21/2022	County	EPA/MDE	464			Response to 2018 SSO penalties



A summary of the County's SSO elimination and/or flow monitoring activities that were performed during the reporting period is provided in **Attachment B**.

- (b) Summarize post-monitoring data after the elimination of a Non-Pump Station SSO structure

Flow monitoring activities will continue in accordance with Paragraph 7.C.v of the Consent Decree. Once sufficient flow monitoring data has been collected, the County will complete the hydraulic evaluation in accordance with Paragraph 7.C.v of the Consent Decree.

- (c) Progress in implementing plans developed in response to certain discharges from Pump Station SSO structure(s)

Texas Pump Station Action Plan

The action plan is to correct the primary PLC programming logic, which was completed on November 17, 2022. After correcting the logic, the County confirmed the PLC was properly selecting a pump to run after an electrical service transfer.

ii. Rainfall and Flow Monitoring Plan Compliance

- (a) Summarize results of annual evaluation of numbers and placement of rain gauges and flow monitors

In accordance with Paragraph 9.B.i, the County continued to collect rainfall data as necessary to allow the characterization of flow from sewershed service areas, the characterization of known SSOs, the development or improvement of hydraulic models for the sewersheds, and evaluate the effectiveness of measures implemented to reduce I/I and to increase system capacity.

- (b) Report any changes to the locations of gauges or flow monitors

A summary of the flow monitoring locations as of December 31, 2022 is provided in **Attachment B**. Maps of flow monitoring and rain gauge locations are provided in **Map Attachments 1 and 2**.

- (c) Report on any deviations from the approved plan

None.

iii. Evaluation of Rainfall and Flow Monitoring Data

- (a) Inflow/infiltration (I/I) evaluation progress (due 60 days prior to date of SRRR plan submittal)

This task is complete.

- (b) Long-term capacity/peak flow management evaluation (due 60 days prior to date of SRRR plan submittal)

This task is complete.



iv. Fats, Oils and Grease (FOG) Program Updates

- (a) Provide the results of the annual evaluation of the effectiveness of the modified FOG control program

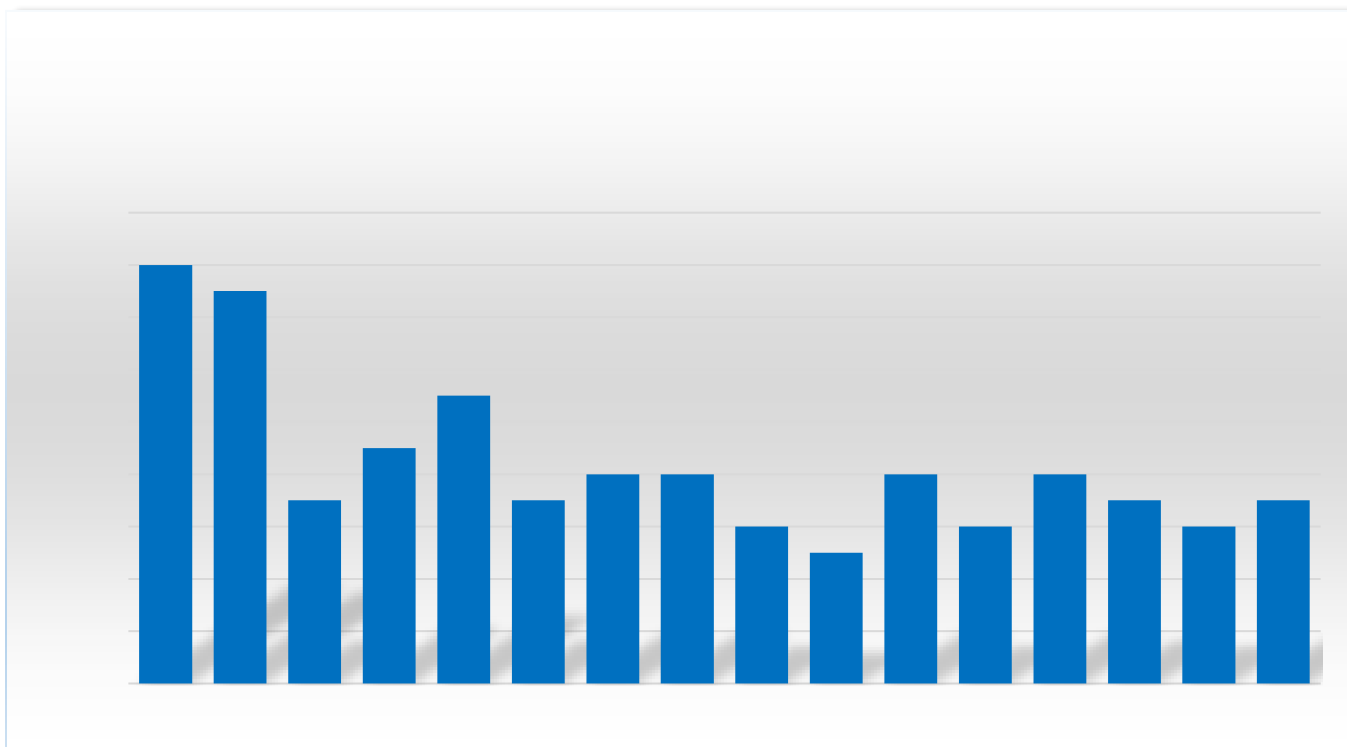
In accordance with Paragraph 11.I of the Consent Decree, the County continues to use the food service facility (FSF) inspection results and the performance indicators to evaluate the effectiveness of the modified FOG Program. The results of the modified FOG control program effectiveness are summarized in Paragraph (c) below. The County continues to use the FSF inspection results to identify and prioritize future inspection locations and frequency.

- (b) Provide an updated database and map of grease generating facilities

A map and database of grease generating facilities with grease related sewer overflows are provided in **Map Attachment 3**.

- (c) Evaluate the effectiveness of the modified FOG program

The evaluation of the modified FOG program attempted to determine a trend in the annual number of reportable FOG-related SSO discharges. Below are the analysis results:



The graph indicates a 56-percent decrease in the number of reportable FOG-related SSOs between 2007 and 2022. Since 2010, when the County implemented the modified FOG program, the number of reportable FOG-related SSOs has remained relatively stable; however, the County believes that there is an insignificant number of FOG-related SSOs to establish a trend.



v. Illegal Stormwater Discharges

During the reporting period, the County identified no potential illegal stormwater connections pending confirmation. There are also 8 potential illegal stormwater connections from previous reporting periods. A summary of the actions taken in response to each instance is provided in **Appendix C**.

vi. Pumping Station Status

- (a) Report on the required annual evaluation of the backup power program

Baltimore County completed the evaluation of the effectiveness of its existing Pump Station backup power program, including the use of portable generators as backup power for multiple stations, in preventing SSOs relating to power outages.

During the reporting period, the fleet of seven (7) portable generators that supplement on-site backup power at the County’s stations was adequate to meet the emergency power needs. The percent of Pump Stations which are now equipped with on-site backup emergency power is ninety seven percent.

- (b) Report on the development and implementation of any plans related to overflows due to power outages at pumping stations

The following pump stations discharged to their overflow structures:

Pump Station	Sewershed	Date of Overflow
Texas	Texas	11/8/2022

According to CD Paragraph 7.C.vi, the County is required to submit an action plan and schedule for certain discharges from Pump Station SSO Structures that are caused by an event other than complete loss of pumping capacity of the pump station. Following is a summary of the action plans that were submitted during the reporting period.

Texas Pump Station Action Plan

On November 8, 2022, the Texas Pump Station experienced intermittent power disruption of the primary electrical feed, which resulted in a 31,000-gallon sanitary sewer overflow. The MDE- and County-approved backup electrical source for the station is an independent secondary electrical feed; however, based on the pump station’s high consequence of failure, Baltimore County maintains an on-site generator as a tertiary power source. A post-SSO investigation by Baltimore Gas & Electric Company confirmed the intermittent disruptions to the primary electrical feed; however, the County’s concurrent investigation determined that a computer programming error in the primary programmable logic controller (PLC), which automatically assigns the pump run order, did not select a pump to start after the electrical disruption. The most recent electrical transfer test was completed on September 13, 2022 and confirmed that the equipment was properly transferring primary to secondary to generator electrical service and that the pumps were automatically selected to start after the electrical transfer.

The action plan is to correct the primary PLC programming logic, which was completed on November 17, 2022. After correcting the logic, the County confirmed the PLC was properly selecting a pump to run after an electrical service transfer.



(c) Pump station inspection deficiencies list

A report on the deficiencies discovered during the inspections of the County's pumping stations is provided in **Attachment D**.

(d) Pump station deficiencies discovered during Engineering Evaluation/Condition Assessments

This task is complete.

(e) Summarize the progress in implementing a pump station information management system

This task is complete.

vii. Collection System Model Implementation Status

This task is complete.

viii. Supplemental Collection System Inspection Progress

This task is complete.

ix. Sewer Cleaning Progress

This task is complete.

x. Collection System Inventory Progress

This task is complete.

xi. Emergency Response Plan

In response to EPA's review comments that were received on February 2, 2022, the County will submit to EPA/MDE the updated Emergency Response Plan, when finalized.

xii. Building Backup Report

Maps of Building Backups since the last submission are provided in **Map Attachment 4**.

There were 74 reported building backups (including occurrences with zero gallon volumes) during the reporting period, as summarized in **Map Attachment E**. A summary of reported building backup history is provided below:

Year	Total Number of Reported Backups (ea.)	Percent Increase/Decrease from Previous Year (%)
2006	113	---
2007	48	-57.5
2008	77	60.4
2009	44	-42.9
2010	90	104.5
2011	241	167.8
2012	139	-42.3
2013	217	56.1

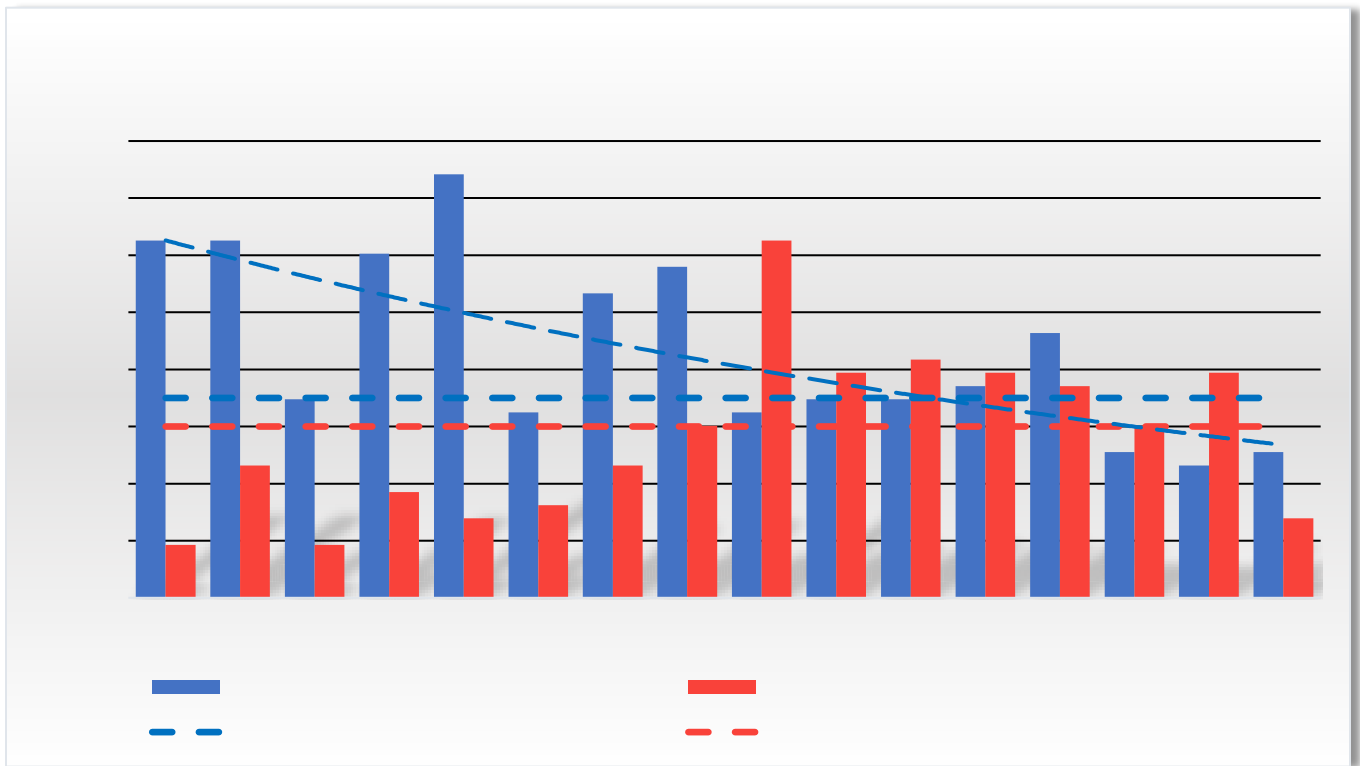


Year	Total Number of Reported Backups (ea.)	Percent Increase/Decrease from Previous Year (%)
2014	346	59.5
2015	143	-58.6
2016	136	-4.9
2017	71	-47.8
2018	345	386
2019	80	-76.8
2020	119	48.75
2021	63	-47.1
2022	74	17.5

xiii. Annual Update of SSO Characterization Report

In accordance with Paragraph 7.B.ii of the Consent Decree, the updated SSO characterization maps are provided in **Map Attachment 5**.

Based on the data available in EPA’s report to Congress titled “Impacts and Control on CSOs and SSOs” (2004) there are, on average, approximately 7 dry-weather SSOs due to pipeline blockages per 1,000 miles per year and an additional 6 dry-weather SSOs with unknown causes per 1,000 miles per year. Below is a summary per year of Baltimore County’s dry-weather SSOs due to a pipeline blockage.



I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete.

Lisa K Eicholtz

Lisa K. Eicholtz, PE
Bureau Chief, Engineering and Construction

Attachments available at FTP location:

1. Flow Meter Site Location Maps
2. Rain Gauge Site Location Maps
3. Maps and Database of Grease Generating Facilities
4. Basement Backup Characterization Maps
5. SSO Characterization Maps

Control Document No. 480



Attachment A – Non-Pump Station Overflow Structures



Non-Pump Station Overflow Structures

Name	Address	SSO ID	Grid	Key-sheet	Active	Assigned SSA	Date Removed	End of Post-Elimination Monitoring	Notes
Alter Road	Alter Road & Southern Cross	22	33G02	KNW	Yes	83-06-05-07			Original CD elimination deadline was 3/22/2017. Extension request, with undefined SSO elimination date submitted on 2/14/2017. Powder Mill Interceptor Relief Sewer Phase I construction project is complete. Phase II construction project is in contractor selection. A second time extension request with a definitive SSO elimination date will be submitted after right-of-way acquisition, environmental permits obtained and construction notice to proceed is issued for Phase III.
Southern Cross Dr	Southern Cross Drive & Parsons Avenue	23A	33G01	KNW	Yes	83-06-05-07			
Southern Cross	3909 Southern Cross Drive	23B	33G01	KNW	Yes	83-06-05-07			
Patterson Ave	3902 Patterson Avenue	24	33G03	KNW	Yes	83-06-05-03			
Aiken Avenue	7829 Aiken Ave Near Taylor	41	28A10	NSE	Yes	33-93-03-00			Original CD elimination deadline was 3/20/2018. East Branch Herring Run Relief Sewer construction project in construction. A time extension request was submitted on 5/17/2022 to eliminate the overflow structures by 3/3/2024.
Queen Anne Dr	Queen Anne Dr. & Hillcrest Ave.	129	28A10	NSE	Yes	33-92-00-00			
Marnat Rd	Marnat & Hatton Rd	113	25J11	OSW	Yes	45-10-22-01			Original CD elimination deadline was 9/20/2016. An extension request with undefined SSO elimination date was submitted on 6/22/2016. A second time extension request with a defined SSO elimination date will be submitted after the County receives from the City the proposed downstream sewer improvements and associated construction schedule. The County is continuing post-construction flow monitoring.
Nunnery Lane	North of Frederick Road	116	41G02	GNW	Yes	81-52-00-00			
Briarwood Rd	North of Frederick Rd	117	41G02	GNW	Yes	81-54-00-00			
Overbrook Rd	Overbrook Near Medwick Garth	118	41H02	GNW	Yes	81-50-01-00			



Attachment B – Flow Monitor Summary



Sewershed	Manhole ID	Comments
Herring Run	694	SSO 129 Overflow Pipe
Herring Run	11481	SSO 41 Overflow Pipe
Jones Falls	793	SSO 113 Overflow Pipe
Gwynns Falls	11060	SSO 22 Overflow Pipe
Gwynns Falls	16432	SSO 24 Overflow Pipe
Gwynns Falls	16837	SSO 23A Overflow Pipe
Gwynns Falls	901891	SSO 23B Overflow Pipe
West Low Level	902029	SSO 117 Overflow Pipe
West Low Level	371	SSO 118 Overflow Pipe
West Low Level	7368	SSO 116 Overflow Pipe
Patapsco	1907	1811 Frederick Rd
Patapsco	1350	Poplar Ave & Shelbourne Rd
Patapsco	39345	Cedar Branch
Patapsco	73127	Cedar Branch
Gwynns Falls	10365	Danlou Dr
Gwynns Falls	901904	Gwynndale Ave & Gwynnmore Ave
Gwynns Falls	8109	6501 Laurel Dr
Gwynns Falls	902148	Powder Mill Park
Herring Run	11832	1727 Ryewood Rd
Herring Run	6565	Herring Run
Herring Run	6571	Herring Run
Herring Run	6591	7500 Queen Anne Dr
Herring Run	3946	2500 Wycliffe Rd
Herring Run	11483	7900 Highpoint Rd
Herring Run	32922	Perring Pkwy
Herring Run	6765	2007 Taylor Ave
Herring Run	32928	Perring Pkwy
Herring Run	32333	1904 Taylor Ave
Herring Run	14110	Herring Run
Herring Run	14111	1805 Dalhousie Ct
Herring Run	6584	1827 Berrywood Rd
Herring Run	12139	Oakleigh Rd & Redwood Ave
Herring Run	12138	1819 Redwood Ave
Herring Run	16755	8200 Harris Ave



Attachment C – List of Illegal Stormwater Discharges



**Illegal Stormwater Discharges
Discovered During Inspection Process**

Date of Observation	Street	Sewer ID	Problem Description	Repair Date
11/16/2021	3302 SMITH AVE	9872-9871	Sump Pump	In Process
11/16/2021	3311 SMITH AVE	9873-9872	Plumbing in Building	In Process
11/16/2021	7606 LORRY LANE	14055-14054	Plumbing in Building	In Process
11/17/2021	3204 HATTON ROAD	NA	Basement Drain	In Process
11/17/2021	3210 NORTHBROOK ROAD	LP3246406	Plumbing in Building	In Process
11/17/2021	3309 NORTHBROOK ROAD	NA	DR Roof Leader/Drain	In Process
11/17/2021	3301 MARNAT RD	NA	Basement Drain	In Process
11/18/2021	3225 MARNAT RD	794-793	Plumbing in Building	In Process
2022	None	NA	-	-



Attachment D – List of Deficiencies found during the Inspection of Pumping Stations



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
Enchanted Hills	Gwynns Falls	1/7/2022	Phase module	Failed module	Replaced module	1/13/2022	2	
Lodge Forest	Delmar	1/10/2022	Pump 1	Pump locked out	Repaired pump	1/12/2022	1	
Dundalk	Dundalk	1/16/2022	Pump 4	Choked pump	Unchoked pump	1/17/2022	1	
Green Hill Cove	Gray Manor	1/24/2022	Pump 1	Choked pump	Unchoked pump	1/25/2022	1	
Texas	Texas	1/26/2022	Pump 4	Failed seal	Rebuilt pump	1/27/2022	1	
Texas	Texas	1/26/2022	Spare pump	Burned motor lead	Repaired pump	3/9/2022	2	
Springdale 1	Texas	1/27/2022	Pump 1	Pump is air bound	Bled air	1/28/2022	1	
Forge Acres	Bird River	1/31/2022	Check Valve 1	Hydraulic leak	Rebuilt actuator	2/2/2022	2	
Gunpowder	Gunpowder	2/1/2022	Pump 4	Packing is worn	Replaced packing	2/2/2022	1	
Bear Creek Towne	Gray Manor	2/3/2022	Check Valve 2	Blockage in line	Removed blockage	2/4/2022	1	
Texas	Texas	2/3/2022	Pump 3	None	N/A	8/9/2022	2	Installed wrong sized impeller. Rework required.
Bear Creek Towne	Gray Manor	2/4/2022	Transducer 1	Choked transducer	Repaired transducer	2/8/2022	1	
Dundalk	Dundalk	2/7/2022	Pump 2	Choked pump	Unchoked pump	2/8/2022	1	
Old Stemmers Run	Stemmers Run	2/8/2022	Electrical room	Debris in VFDs	Built filter frames	2/9/2022	1	
Sparrows Point	Delmar	2/9/2022	NS940	Choked pump	Unchoked pump	2/10/2022	1	
Bear Creek	Gray Manor	2/13/2022	Pump 1	Choked pump	Unchoked pump	2/15/2022	1	
Bear Creek Towne	Gray Manor	2/18/2022	Pump 2	Choked pump	Unchoked pump	2/19/2022	1	
Bear Creek	Gray Manor	2/23/2022	Pump 1	Choked pump	Unchoked pump	2/24/2022	1	
Red House Run	Redhouse Run	2/28/2022	Pump 3	Sheared impeller bolt	Repaired pump	3/1/2022	2	
Old Stemmers Run	Stemmers Run	3/1/2022	Surge Tank 3	Noise at pump shutdown	Replaced solenoids and level sensor	9/21/2022	2	Delay to purchase and receive new sensor
Bear Creek Towne	Gray Manor	3/8/2022	Pump 2	Choked pump	Unchoked pump	3/9/2022	1	
Long Quarters	Long Quarter	3/10/2022	Grinder pump	Worn cutters	Rebuilt pump	5/13/2022	2	
Old Stemmers Run	Stemmers Run	3/14/2022	Emergency lights	Lights not functioning	Replaced lights	3/30/2022	1	
Montrose Avenue	Gwynns Falls	3/19/2022	Pump 1	Choked pump	Unchoked pump	3/20/2022	1	
Bear Creek	Gray Manor	3/21/2022	Pump 3	Choked pump	Unchoked pump	3/23/2022	1	
Bear Creek	Gray Manor	3/21/2022	Pump 3	Choked pump	Unchoked pump	3/23/2022	1	
Texas	Texas	3/22/2022	Pump 2	Broken motor connection plate	Replaced connection plate	4/7/2022	2	
Country Ridge	Essex	3/23/2022	Tuning fork	Loose wire connection	Installed new wiring	8/2/2022	2	



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
Dundalk	Dundalk	3/28/2022	Pump 3	Choked pump	Unchoked pump	3/29/2022	1	
Texas	Texas	3/29/2022	Display fault code	Low memory display	Hard reset and reboot terminal	4/1/2022	1	
North Point Village	Gray Manor	3/29/2022	Tuning fork	Bad wiring	Installed new wiring	8/1/2022	2	
New Stemmers Run	Stemmers Run	3/29/2022	Discharge Valve 1	Jammed valve	Adjusted valve seat	4/11/2022	2	
Helena Avenue	Duck Creek	3/30/2022	Generator	Unknown	Made repairs	4/5/2022	2	
Baurenschmidt	Duck Creek	3/30/2022	Generator	Unknown	Repaired generator	4/5/2022	2	
Green Hill Cove	Gray Manor	3/31/2022	Pump 2	Vibration issue	Rebuilt pump	4/4/2022	2	
Dundalk	Dundalk	3/31/2022	Pump 2	Choked pump	Unchoked pump	4/1/2022	1	
Carroll Avenue	Gwynns Falls	4/4/2022	Pump 1	Pump won't start	Reset pump	4/5/2022	1	
Frederick Road	Patapsco	4/5/2022	Pump 4	Choked pump	Unchoked pump	4/6/2022	1	
Veronica Avenue	Delmar	4/10/2022	Pump 1	Choked pump	Unchoked pump	4/11/2022	2	
Hyde Park	Duck Creek	4/13/2022	Transducer	Choked tube	Unchoked tube	4/14/2022	1	
Texas	Texas	4/19/2022	Pump 3	High amps fault	Replaced impeller	5/13/2022	2	
Bear Creek Towne	Gray Manor	4/25/2022	Pump 2	Choked pump	Unchoked pump	4/26/2022	1	
Lodge Forest	Delmar	4/27/2022	Tuning fork	Debris on sensor	Cleaned sensor	5/1/2022	1	
Bear Creek Towne	Gray Manor	5/1/2022	Check Valve 2	Blockage in line	Removed blockage	5/2/2022	1	
Sparrows Point	Delmar	5/6/2022	Suction Valve 1	Valve stuck in seat	Exercised valve	5/10/2022	2	
Bear Creek Towne	Gray Manor	5/11/2022	Unassigned pump	Choked pump	Unchoked pump	5/12/2022	1	
Long Quarters	Long Quarter	5/24/2022	Pump 3	Choked pump	Unchoked pump	5/26/2022	1	
Long Quarters	Long Quarter	6/1/2022	Pump 2	Bad capacitor and inverter rectifier boards	Replaced capacitor and boards	6/1/2022	1	
Bletzer	Gray Manor	6/5/2022	NS929	Choked pump	Unchoked pump	6/6/2022	1	
Fieldstone	Gwynns Falls	6/6/2022	Level transducer	Faulty level transducer	Replaced I/O board	8/1/2022	2	
Long Quarters	Long Quarter	6/6/2022	Pump 1 starter	Routine equipment replacement	Replaced equipment	6/7/2022	1	
North Point Village	Gray Manor	6/8/2022	Pump 1	Choked pump	Unchoked pump	6/11/2022	1	
Fairbrook Park	Patapsco	6/12/2022	Pump 2	Faulting VFD	BGE voltage issue	6/22/2022	2	
Montrose Avenue	Gwynns Falls	6/14/2022	Pump 1	Choked check valve	Unchoked pump	6/18/2022	1	
New Stemmers Run	Stemmers Run	6/27/2022	Cone Valve 1	Worn bushings	Replaced bushings	6/29/2022	2	
Bengies	Bengies	7/5/2022	Pump 1	Vibration issue	Pump returned to normal operation	7/6/2022	1	



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
Old Battle Grove	Gray Manor	7/11/2022	Pump 1	Failed seal	Replaced seal	9/27/2022	2	
Old Battle Grove	Gray Manor	7/11/2022	Spare Pump	Failed seal	Replaced seal	10/21/2022	2	
New Stemmers Run	Stemmers Run	7/18/2022	Check Valve 1	Bad solenoid	Replaced cone valve rod	7/21/2022	2	
Montrose Avenue	Gwynns Falls	7/23/2022	Pump 1	Choked pump	Unchoked pump	7/25/2022	1	
Bletzer	Gray Manor	7/27/2022	Check Valve 1	Blockage in line	Removed blockage	10/30/2022	1	
Essex	Essex	7/27/2022	Switchgear	Faulted UPS	Replaced UPS	7/27/2022	1	
Red House Run	Red House Run	8/1/2022	Grinder	Damaged gearbox	Replaced cutter box	8/4/2022	2	
Patapsco	Patapsco	8/3/2022	Odor Control 1	Unknown	Replaced broken and missing parts	8/17/2022	2	
Lodge Forest	Delmar	8/7/2022	Pump 3	Vibration issue	Repaired pump	8/8/2022	1	
Windsor Mill	Gwynns Falls	8/8/2022	Transducer	Choked tube	Cleaned tubes	8/9/2022	1	
Montrose Avenue	Gwynns Falls	8/9/2022	Pump 1	Choked pump	Unchoked pump	8/10/2022	1	
Bear Creek	Gray Manor	8/15/2022	Pump 3	Choked pump	Unchoked pump	8/16/2022	1	
Beachwood Estates	Gray Manor	8/18/2022	Pump 2	Choked pump	Unchoked pump	10/24/2022	2	
Bletzer	Gray Manor	8/20/2022	Sump pump 2	Choked pump	Unchoked pump	8/21/2022	1	
Bear Creek Towne	Gray Manor	8/31/2022	Pump 2 starter	Bad starter	Replaced starter	11/16/2022	2	
Bear Creek	Gray Manor	9/12/2022	Pump 2	Choked pump	Unchoked pump	9/13/2022	1	
Wye Road	Duck Creek	9/15/2022	Check Valve 2	Blockage in line	Removed blockage	10/24/2022	1	
Woodland Avenue	Patapsco	9/15/2022	Wetwell fan	Broken belt	Replaced belt	9/28/2022	2	
Forge Acres	Bird River	9/20/2022	Cone Valve 2	Faulty limit switch	Repaired switch	9/21/2022	2	
Bengies	Bengies	9/21/2022	VFD	Fault reset message	Turned reset function on	9/29/2022	1	
McTavish	Patapsco	9/22/2022	Transducer	Choked transducer	Cleaned transducer	9/23/2022	1	
Texas	Texas	9/25/2022	Cone Valve 4	Faulty valve	Reset valve	9/29/2022	1	
Ravens	Gwynns Falls	10/4/2022	Pump 1	Choked pump	Unchoked pump	11/1/2022	1	
Country Ridge	Essex	10/6/2022	Check Valve 1	Blockage in line	Removed blockage	10/11/2022	1	
Country Ridge	Essex	10/6/2022	Check Valve 3	Blockage in line	Removed blockage	10/11/2022	1	
Country Ridge	Essex	10/6/2022	Pump 3	Choked pump	Unchoked pump	10/11/2022	1	
Hawthorne 1	Orems	10/18/2022	Pump 2	Choked pump	Unchoked pump	10/19/2022	1	
Lodge Forest	Delmar	10/20/2022	Force Main	Crushed pipe	Repaired force main	10/21/2022	1	
Dundalk	Dundalk	10/21/2022	Pump 4	Faulty starter	Cleaned starter	10/21/2022	1	
Bird River	Bird River	10/31/2022	Pump 4	Worn shaft sleeve	Rebuilt pump	11/14/2022	2	
Dundalk	Dundalk	11/11/2022	Pump 4	Choked pump	Unchoked pump	11/13/2022	1	



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
Bear Creek	Gray Manor	11/13/2022	Pump 2	Choked pump	Unchoked pump	11/14/2022	1	
Texas	Texas	11/21/2022	Cone Valve 4	Bad valve	Recharged accumulator	11/25/2022	2	
Country Ridge	Essex	11/26/2022	Check Valve 1	Blockage in line	Removed blockage	11/27/2022	1	
Country Ridge	Essex	11/26/2022	Check Valve 2	Blockage in line	Removed blockage in Check Valve 1	11/27/2022	1	
Bengies	Bengies	11/29/2022	Pump 3	Worn shaft sleeve	Rebuilt pump	11/30/2022	2	
Bird River	Bird River	12/4/2022	Pump 2	Worn impeller ring	Replaced wear ring retaining bolts	12/5/2022	2	
Lyons Home	Dundalk	12/5/2022	Pump 2	Pump locked out	Adjusted timer	12/6/2022	2	
Lynch Point	Delmar	12/7/2022	Automatic transfer switch	Faulty display monitor	Replaced monitor	12/8/2022	1	
Chesaco Park	Redhouse Run	12/19/2022	VFD	Faulty VFD	Replaced VFD	12/21/2022	2	
Bear Creek	Gray Manor	12/24/2022	Pump	Choked pump	Unchoked pump	12/26/2022	1	
Enchanted Hills	Gwynns Falls	12/25/2022	Check Valve 2	Blockage in line	Removed blockage	12/26/2022	1	

The pump station deficiencies listed below were outstanding in the 2019 Annual Report:

Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
New Stemmers Run	Stemmers Run	7/1/2019	VFD 3	Damaged VFD	Replace VFD		2	VFD series discontinued. Requires mechanical/ electrical reengineering.

The pump station deficiencies listed below were outstanding in the 2021 Annual Report:

Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
Greenhill Cove	Gray Manor	9/1/2021	Pump 1	Leaking pump	10/26/21 Waiting on purchasing to approve the letter so a new pumps can be purchased. Rebuilt pump installed	5/16/2022	2	Lead-time on parts and wait on rebuild from vendor.
Texas	Texas	9/14/2021	Pump 5	Inoperable Flygt MAS-711 Monitoring System	11/1/21 MAS 711 unit is here and will	New MAS installed and programed	2	Should not have still been on the list.



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
					be installed this week. 11/15/21 Waiting on VFD to be repaired, Pump 5 removed and sent to shop to check the temperature sensors. New MAS unit installed	before the end of 2021. 11/15/21		Less than 3 months to repair I Believe this got lumped in with the VFD issue.
Gray Manor	Gray Manor	9/17/2021	Pump 3	Damaged cone valve	New hydraulic cylinder installed	1/12/23	2	Requested- The justification letter was written on 9/8/21, the RQS was created on 9/13/21. Approved- The PO was created on 10/27/21. Ordered - sent out the PO to the vendor on 11/9/21. Received the order on 7/29/22
Stanton Wood	Jones Falls	9/27/2021	Pump 1	Seal failure	Pump was repaired	02/23/22	2	
Texas	Texas	10/20/2021	Pump 5	VFD fault	New VFD on order, current drive obsolete.		2	PO received and order placed 4/22/22. the original ship date showed 1 week lead time at time of order. Due to supply issues actual ship date is 1/3/23
Texas	Texas	10/26/2021	Pump 4	Pump coolant leak	Repaired pump	3/9/2022	2	
Lynch Point	Delmar	10/26/2021	Pump 2	Pump shut down	Rebuilt pump installed	2/17/22	2	Long lead time on parts for the repair shop
Lynch Point	Delmar	10/30/2021	Pump 1	Pump shut down	Pump removed and taken to repair shop. Spare pump		2	Pump was returned from the repair shop (DSI) but still had same



Station	Sewershed	Date	Equipment	Problem	Nature of Repair	Completed Date	Priority	Reason for Delay if Open > 6 Months
					has been installed			issue. Pump was returned a second time in December 2022. Waiting to be installed.
Duck Creek	Duck Creek	11/4/2021	Pump 3	Broken mechanical seal	Replaced seal	1/17/2023	2	RQS 18515 was originally put in on 10/26/21. PO was created on 3/7/22. REQ was created on 9/27/22 to move it to Workday. PO was created on 9/29/22. The seals were received on 11/10/22, kit was missing a piece. Replacement was received and then installed on 1/17/23
Long Quarter	Long Quarter	11/7/2021	VFD 2	VFD fault	Replaced pressure sensor	4/28/2022	2	



Attachment E – Building Backups



Building Backups

ADDRESS	ZIP CODE	DATE	WORK ORDER	CAUSE	VOLUME (gallons)
3305 TERRAPIN RD	21208	4-Jan-22	900175	ROOTS	UNKNOWN/OTHER ¹
1303 GLENMONT RD	21239	12-Jan-22	899095	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
2520 PERRING WOODS RD	21234	26-Jan-22	902527	CLEANING	UNKNOWN/OTHER ¹
2200 E JOPPA RD	21234	26-Jan-22	902738	GREASE	50
4133 RALEIGH RD	21208	30-Jan-22	904289	ROOTS	UNKNOWN/OTHER ¹
4027 JACINTH WAY	21236	1-Feb-22	904286	ROOTS	UNKNOWN/OTHER ¹
29 RIVERSIDE RD	21221	9-Feb-22	906207	CLEANING	UNKNOWN/OTHER ¹
1855 LOCH SHIEL RD	21286	11-Feb-22	908149	GREASE	UNKNOWN/OTHER ¹
1405 WOODCLIFF AVE	21228	13-Feb-22	907318	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
1008 GOFF RD	21221	14-Feb-22	907878	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
1008 GOFF RD	21221	14-Feb-22	907878	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
108 FELTON RD	21093	15-Feb-22	908139	CLEANING	UNKNOWN/OTHER ¹
10700 LAKESPRING WAY	21030	17-Feb-22	908775	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
2330 POPLAR RD	21221	26-Feb-22	911259	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
2330 POPLAR RD	21221	26-Feb-22	911259	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
2906 TOPAZ RD	21234	27-Feb-22	911336	ROOTS	UNKNOWN/OTHER ¹
4526 RASPE AVE	21206	1-Mar-22	911974	ROOTS	UNKNOWN/OTHER ¹
10415 GREENTOP RD	21030	15-Mar-22	915777	CLEANING	45
1725 HILLTOP AVE	21221	21-Mar-22	917210	RAGS	UNKNOWN/OTHER ¹
1410 SULPHUR SPRING RD	21227	28-Mar-22	919008	GREASE	UNKNOWN/OTHER ¹
8117 LIBERTY RD	21244	30-Mar-22	919808	GREASE	UNKNOWN/OTHER ¹
705 OLD HOME RD	21206	5-Apr-22	921306	GREASE	UNKNOWN/OTHER ¹
918 MARTIN RD	21221	6-Apr-22	921657	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
5525 BALTIMORE NATIONAL PIKE	21228	11-Apr-22	922774	GREASE	0
16 IRON MILL GARTH	21030	13-Apr-22	923528	CLEANING	1
10030 HARFORD RD	21234	18-Apr-22	924383	GREASE	119.2
430 ELMWOOD RD	21206	20-Apr-22	924996	CLEANING	1
503 NORTH POINT RD	21224	20-Apr-22	924567	DEFECTIVE PIPE	UNKNOWN/OTHER ¹
58 HELMSMAN CT	21221	22-Apr-22	925878	UNKNOWN/OTHER	3
101 LANCEFIELD RD	21209	24-Apr-22	925981	ROOTS	22
2207 E JOPPA RD	21234	25-Apr-22	926295	CLEANING	4
2501 WYCLIFFE RD	21234	25-May-22	933946	CLEANING	UNKNOWN/OTHER ¹
2829 VERMONT AVE	21227	1-Jun-22	936448	RAGS	UNKNOWN/OTHER ¹
3504 MCSHANE WAY	21222	2-Jun-22	937877	GREASE	P/O STATED 1 INCH OF SEWER WATER THROUGHOUT BASEMENT
5521 WILLYS AVE	21227	3-Jun-22	938645	DEFECTIVE PIPE	17
4112 COLBY RD	21208	8-Jun-22	940905	CLEANING	UNKNOWN/OTHER ¹
9102 NAYGALL RD	21234	21-Jun-22	947092	DEFECTIVE PIPE	36



ADDRESS	ZIP CODE	DATE	WORK ORDER	CAUSE	VOLUME (gallons)
983 CIRCLE DR	21227	24-Jun-22	951290	RAGS	UNKNOWN/OTHER ¹
24 WALKWAY CT	21220	27-Jul-22	960105	CLEANING	UNKNOWN/OTHER ¹
23 WALKWAY CT	21220	27-Jul-22	960092	CLEANING	UNKNOWN/OTHER ¹
6918 UPPER MILLS CIR	21228	7-Aug-22	963597	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
6914 UPPER MILLS CIR	21228	7-Aug-22	963598	UNKNOWN/OTHER	0
9130 PHILADELPHIA RD	21237	10-Aug-22	964521	CLEANING	SPLASH
208 ROTHWELL DR	21093	15-Aug-22	965818	ROOTS	0
3214 RICHWOOD AVE	21244	18-Aug-22	966774	UNKNOWN/OTHER	SPLASH
4409 SILVER SPRING RD	21128	24-Aug-22	968334	GREASE	UNKNOWN/OTHER ¹
6408 GOLDEN RING RD	21237	31-Aug-22	970225	GREASE	UNKNOWN/OTHER ¹
200 PARK DR	21228	2-Sep-22	970795	RAGS	UNKNOWN/OTHER ¹
22 HONEYCOMB RD	21220	17-Sep-22	976087	CLEANING	SPLASHED WHILE MAIN LINE WAS BEING CLEANED
23 HONEYCOMB RD	21220	17-Sep-22	976092	CLEANING	SPLASHED WHILE MAIN LINE WAS BEING CLEANED
24 HONEYCOMB RD	21220	21-Sep-22	976090	CLEANING	SPLASHED WHILE MAIN LINE WAS BEING CLEANED
129 ELINOR AVE	21236	27-Sep-22	798954	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
8207 ROBIN HOOD COURT	21204	27-Sep-22	801690	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
3113 CAMBRIDGE DR	21244	27-Sep-22	806788	UNKNOWN/OTHER	UNKNOWN/OTHER ¹
102 MIDHURST RD	21212	4-Oct-22	980373	HIGH WATER	20
108 MIDHURST RD	21212	4-Oct-22	980374	HIGH WATER	10
2417 HAMMONDS FERRY RD	21227	5-Oct-22	981150	DEBRIS	UNKNOWN/OTHER ¹
7401 DUNMANWAY	21222	8-Oct-22	982021	UNKNOWN/OTHER	1
7522 RABON AVE	21222	17-Oct-22	983860	GREASE	UNKNOWN/OTHER ¹
3024 TAYLOR AVE	21234	25-Oct-22	986872	RAGS	UNKNOWN/OTHER ¹
5533 WINDSOR MILL RD	21207	4-Nov-22	991148	GREASE	< 1 INCH
104 CHURCH LN	21208	4-Nov-22	991219	GREASE	< 1 INCH
1 PERRY WOODS CT	21234	6-Nov-22	991286	RAGS	50
3219 MCSHANE WAY	21222	7-Nov-22	991643	ROOTS	58.88
415 LAMBETH RD	21228	7-Nov-22	991645	ROOTS	18.8
1114 WILSON AVE	21207	11-Nov-22	992450	GREASE	10
4713 VICKY RD	21236	15-Nov-22	993292	CLEANING	UNKNOWN/OTHER ¹
75 BROADSHIP RD	21222	26-Nov-22	996176	GREASE	0
3047 LIBERTY PKWY	21222	12-Dec-22	999729	GREASE	UNKNOWN/OTHER ¹
4316 BALTIMORE ST	21227	15-Dec-22	1000920	HIGH WATER	15
8214 CORNWALL RD	21222	22-Dec-22	1002395	CLEANING	1
202 WOODLAND AVE	21222	23-Dec-22	1002506	HIGH WATER	< 1 INCH
6003 UPDALE CT	21207	23-Dec-22	1002542	ROOTS	< 1 INCH
424 DEACON BROOK CIR	21136	24-Dec-22	1002570	UNKNOWN/OTHER	< 1 INCH

(1) County not granted access to verify quantities.

