Southmont Borough
Sanitary Sewer System Corrective Action Progress Report
Southmont Borough and Johnstown Regional Authority Sewage Systems
Corrective Action Plans and Schedules
January 1, 2021 through June 30, 2021

Introduction:

The following report is intended to provide an update of the actions and measures that have been undertaken by the Southmont Borough during the period of January 1 through June 30, 2021 with the intent of reducing wet weather hydraulic loading within the Southmont Borough sanitary sewer system and the downstream Johnstown Redevelopment Authority's sewer systems that receive flows from Southmont Borough. This report covers just those activities and milestones described in the Correction Action Plan schedule and the Consent Order and Agreement which have either been commenced or completed during the most recent six-month report period or continued from previous report periods, and that are planned to be undertaken in the near future.

I. **Adopt Municipal Resolution** – Completed, see previous progress reports by others

II. **Identify the Lineal Feet of Collection Line within the Municipality** - Completed, see previous progress reports by others

III. **Adoption of an Ordinance Requiring the Testing of Drains Upon Sale/Transfer of Property and Implementation of said Ordinance** – The Borough previously adopted a Property Transfer Testing Ordinance and has been implementing said ordinance since 2009. During the current report period, a total of thirty-four (34) properties were tested under this initial ordinance. Of those properties tested, no properties failed to meet the requirements of the sewer ordinance. Since property testing began in 2009, the number of properties tested totals 555. Of all properties tested, a total of only seven (7) properties have failed. In accordance with Ordinance No 155, all deficiencies are required to be corrected and inspected prior to the transfer of property to new owners and a Compliance Certificate must be provided as part of the property transfer. The following Table 1 summarizes the inspections completed over the past ten years under the property transfer sewer testing ordinance:

CAP Report Period	Total Properties Inspected	Total Properties Passing Inspection	Total Properties Failing Inspection	% Failing Testing
Jan 1, 2009 – Dec 31, 2020	521	514	7	1.3%
Current Report Period Jan 1 through June 30, 2021	34	34	0	0%
Total	**555**	**548**	**7**	**1.3%**

The Borough has completed both Phases of the Boroughwide sanitary sewer replacement project which included the replacement of customer laterals from the mainline to the property line, and also the replacement of the customer service lateral from the property line to the building foundation. As discussed in previous reports, the Borough adopted a revised customer service lateral inspection and testing ordinance (#501) on September 21, 2015. The revised sewer testing ordinance requires testing of private service laterals of those property owners who did not provide the necessary construction easements to the Borough for the replacement of the service lateral during the two-phase, system-wide sewer replacement project (see Section IX for project details). In cases where a property owner refused to grant the Borough an easement, the Borough did not exercise condemnation to obtain the easement. Instead, as of February 1, 2016, those owners who did not provide an easement are subject to the Borough's new ordinance which requires more rigorous and comprehensive sewer testing (low-pressure testing or other approved testing method) upon property transfer. If the private lateral is found to be defective upon transfer testing, the property owner will be required to repair/replace the lateral at his/her expense. Additionally, should the Borough not meet the abatement goals as provided in the CO&A by the end of the project, all those residents who did not provide an easement will be subject to mandated repairs/replacement of their private laterals.

The owners of a total of fifteen properties within the two project areas did not grant the requested easements to the Borough and will be subject to the enhanced testing requirements. However, since the February 1, 2016 effective date, none of the fifteen properties have undergone an ownership transfer that would trigger the more rigorous lateral testing.

IV. Smoke Testing of the Entire System – As covered in previous reports prepared by the EADS Group, smoke testing was completed throughout the entire system during 2000 and 2001. Violation notices were sent to the owners of the properties where the defects were found and all have either been repaired by the property respective owner, or have been remediated during the construction of the two-phase, borough-wide sewer system replacement project. No additional testing has been performed to date.

V. Dye Testing and Removal of Illegal Stormwater Connections –

1. Public Sector (stormwater catch basins) –Since both phases of the Sanitary Sewer Replacement Project have been completed, additional dye testing, for the purpose of identifying public stormwater connections, has not been necessary to be performed and none was performed during the current January 1 through June 30, 2021 report period.
2. Private Sector (Roof Leaders, Driveway drains, sub-slab etc.) - Observation ports were installed on each lateral during the Borough-wide sanitary sewer replacement project. During the third and fourth quarters of 2020 and first and second quarters of 2021 the Borough completed wet weather OB stack inspections for approximately 95 percent of the service area. The inspections were completed during three extreme precipitation events in October and November 2020 and two events in March and July of 2021. A spreadsheet was developed to track and follow up with properties that showed

excessive clear water infiltration during the inspection. To date 854 properties were inspected and 222 had extraneous flows observed. Southmont Borough mailed letters to the 222 property owners, allowing them 8 months to remove the extraneous flow from their private system.

Southmont Borough intends to complete the inspection process for the remaining 5% of the Borough during the first extreme precipitation event in the third and fourth quarter of 2021.

VI. Eliminate Streams Conveyed by the Sewer System or Back-flowing into the Sewer System
No streams had been found to be flowing directly through the sanitary sewer system and none have been found to be flowing indirectly through the system due to backflow into the sanitary sewer system. No stream connections were identified during investigations of the system conducted during the sewer system replacement project design or during construction of the Phase 1 and Phase 2 replacement projects.

VII. Physical Survey/Visual Inspections of all Sewer Lines, Manholes and Other Visible Sewer Appurtenances –

1. **Physical Survey/Visual Inspections** –The State Street SSO has been eliminated and removed from the system. Borough personnel also inspected all manholes during this report period, but no issues were identified. Borough personnel plan to continue to perform visual inspections of manholes and lateral observation ports during major precipitation events in an effort to locate any additional potential sources of inflow and infiltration that were not previously identified and to monitor system surcharging conditions so that customers in affected areas could be notified, if necessary, before backups into customer residences and businesses would occur.

2. **Flow Monitoring** – Flow monitoring was resumed at various locations within the project area from March 2021 through the end of the second quarter 2021. The additional flow monitoring, using portable in-line flow meters installed at various locations throughout the service area, was conducted to determine if peak flows discharged to the JRA system have been reduced to a flow rate less than 625 gpd/EDU. An evaluation of the flow monitoring data will be conducted following completion of the flow metering and a report will be prepared summarize the results of the metering program and success of the sewer system replacement projects. This metering effort will continue until such time that a 2-year 24-hour intensity storm event has occurred. Unfortunately, at least with respect to wrapping up the metering program, such an event has not yet occurred.

VIII. Sewer System Cleaning and Video Inspections – No additional video inspections were performed during the current report period for the purpose of identifying system defects.

Routine line cleaning is typically performed throughout various sections of the sewer system to maintain conveyance capacity of the system and to reduce the chance of sanitary sewer overflows as a result of flow restrictions or debris clogs. However, since construction of the Sewer System Replacement Project has just recently been completed, no line cleaning was determined to be necessary and none was performed. A comprehensive program of routine scheduled line cleaning will be resumed in the near future.

IX. Sewer System Repairs & System-wide Sewer Replacement Project Status

Sewer System Repairs: To date, defects identified during past internal video inspections have been repaired as reported in previous semi-annual reports. During the current report period, only routine maintenance has been necessary within the sewer system. No additional major repair and rehabilitation projects are currently planned until a determination is made regarding the success of the Sewer System Replacement Project in reducing wet weather flows to the levels established in the Consent Order and Agreement.

System-wide Sewer Replacement Project: The comprehensive, two-phase, system-wide sanitary sewer improvement project has been completed and both project phases have been closed out. The project involved the replacement of the majority of the Southmont sanitary sewer system and included the replacement of the Borough's sewer mains and manholes, the replacement of customer service laterals from the Borough main line to the building foundation and the installation of inspection ports on each new customer lateral at the point of connection of the private service lateral to the Borough's service lateral. As discussed previously, the inspection ports will enable the Borough to observe and monitor flows from individual connections which will aid in the identification of wet weather flows that may be emanating from any remaining defects or illegal connections inside the respective properties.

Construction of the Phase 1 Sewer Replacement Project included the replacement of sanitary sewers in the drainage basins identified as M-5 and M-6 and a small portion of M-2 located along the western section of Carrot Alley north of State Street and west of Diamond Boulevard. The Phase 1 Project has accomplished the replacement or lining of a combined total of 33,780 LF of 8", 10" and 12" sanitary sewer main lines, replacement of 179 manholes, installation of 25 mainline cleanouts, and the replacement or lining of 29,435 LF of customer laterals. The construction contract for work items completed on the Phase 1 project totaled $5,822,328 including change orders.

Construction of the Phase 2 project involved the replacement or lining of sanitary sewer main lines, and the replacement manholes and laterals within Basins M-1, M-3, M-4, portions of M-2, and within several minor sections of the system not previously included in a metered sub-basin. During the Phase 2 Project, 32,790.5 LF of mainline were replaced or slip lined, 185 manholes were replaced, 30 mainline cleanouts were installed, 440 service connections were made and 27,343 LF of service laterals were replaced or slip lined. The total construction contract was $5,571,436.

In summary, the following Phase 1 and Phase 2 Sewer System Replacement Project Activities have been completed during the currently report period:

Phase 1 Project:

- No Activity- Project complete.

Phase 2 Project:

- Repaired lateral defects identified from wet weather inspections.

X. **Complete GIS Map of the Sewer System** – No additional work was completed on the GIS mapping updates during the current report period. As-built plans have been completed for the Phase 1 Project and the Phase 2 Project. Upon completion of the as-built plans, the relevant features of the mapping and project design will be available for integration into the Borough's GIS system as may be warranted.

XI. **Overflows and Bypasses** – To date, only one sanitary sewer overflow (SSO) has been identified and is known to exist within the Southmont sanitary sewer system. The SSO is located along the 100 block of State Street in the Borough. Previously, overflows from this SSO were monitored by the EADS Group via an area-velocity meter installed at the outfall. However, the meter has been removed by EADS and has currently not been replaced. In late 2019, the State Street SSO was eliminated and removed from the system.

XII. **Sewer Lateral Backups** – During the period covered by this report, there were zero reported sewer lateral back-ups.

XIII. **Flow Monitoring** – A mentioned in Section VII, flow monitoring was resumed in the Spring of 2021 within the Phase 1 and Phase 2 areas. Meters will remain in place within each project area until at least one storm event of 2-year/24-hour intensity is recorded. Upon completion of the additional flow monitoring, the results of all post project metering conducted will be evaluated and a report will be prepared. The report will summarize the potential continued impact of wet weather flows originating from outside the Southmont service area and the effectiveness of the Phase 1 and Phase 2 projects in remediating excessive wet weather flows within the Southmont system and reducing peak hourly flows to the JRA system to a prescribed rate of flow less than 625 gpd/EDU.

XIV. **Sewer Rates** – Effective January 2019, Southmont Borough Council increased its monthly sewer rates by $7 per month. The rate increase raised the monthly rate from $39/month ($468/year) to $46/month ($552/year). No rate increases were implemented in 2020 or 2021.

XV. Consent Order and Agreement Implementation

On January 18, 2015, the Borough formally entered into a Consent Order and Agreement (COA) with DEP which has established milestones and goals to be accomplished by Southmont Borough for reducing hydraulic loading within the Southmont collection and JRA conveyance and treatment systems to a peak hourly flow rate of less than 625 gpd/EDU and for eliminating the State Street SSO. The general tasks and milestones outlined in the COA, and status of achievement of said milestones is as follows:

COA Task	Milestone Date	Status/Date Accomplished
1. SSO Identification, monitoring and reporting	Completed	SSO Eliminated
2. Submit SSO Abatement Plan to PA DEP	July 30, 2015	Completed Final draft submitted September 1, 2015, approved by DEP September 17, 2015
3. Submit all necessary permit applications for projects identified in the SSO Abatement Plan	July 31, 2017	Completed Phase 1 - Jul through Nov 2015 Phase 2 - Apr through Jun 2016
4. Identify and remove all illegal connections of stormwater from the sanitary system in all areas where that are not replaced under projects established in the SSO Abatement Plan	June 30, 2021	Approximately 50 OB stacks need inspected during the next extreme precipitation event.
5. Repair or replace all significant defects within the Southmont Borough sanitary sewer system	June 30, 2021	Completed October 2019
6. Complete construction of all sewer system improvements projects identified in the SSO Abatement Plan and begin operation of said improvements	June 30, 2021	Construction of both Sewer System Replacement Projects Completed and placed into Operation. Substantial Completion dates: Phase 1 Project - November 14, 2017 Phase 2 Project – November 30, 2018
7. Televise or pressure test all private laterals and remediate, repair or replace all laterals that fail to pass the respective testing	June 30, 2021	On schedule[1] See note below
8. Eliminate all SSOs from the sanitary sewer system and block all SSO structures	June 30, 2021	On schedule Removed State Street SSO December 2019
9. Reduce flows discharges from the Southmont sewer system to the JRA sanitary sewer system to a level of 625 GPD/EDU on a peak hourly basis	December 31, 2021	Behind Schedule Meters identified a peak hourly flow rate that exceeded allowable flow during precipitation event in August 2020. Borough then initiated wet weather OB stack inspection program. To date 222 violation letters have been sent to residents to correct their private laterals.

[1]*Note: Item 7 Private lateral testing. Since the date of execution of the COA, Southmont Borough has decided to include private lateral replacements as part of the Phase 1 and 2 sewer system replacement projects. All new laterals have been inspected & pressure tested during installation. Only those locations where property owners have not granted construction easements to the Borough and subsequently were not replaced during the project will be pressure tested upon property transfer or following completion of the project should the replacement project not achieve the desired flow reduction goals.*

Summary of work completed during current report period:

The following is a consolidated summary of work completed during the current report period (January 1 2021 through June 30 2021) as discussed in the preceding sections of this report:

- Tested thirty-four (34) service laterals under the property transfer program. No failures were identified.
- Completed wet weather OB stack inspections on 3-18-21 & 7-1-21. Approximately 50 homes yet to be inspected.
- Completed replacement / repairs on 12 sanitary sewer laterals.
- Commenced Project follow-up flow metering in the Phase 1 and Phase 2 Project Areas.

Anticipated work to be completed over the next two quarters:

Southmont Borough anticipates undertaking and/or completing the following during the period of January 2021 through June 2021

- Perform wet weather inspections of remaining 5% of the service area. Continue notifying property owners of defective internal plumbing and issue compliance schedules to property owners for mandated completion of repairs.
- Continue post-construction sewer system flow monitoring within the Project Areas and respective Upper Yoder Township points of connection to the Southmont service area

Anticipated schedule for major tasks to be performed through the following 24-month period:

- Evaluate the additional post-construction flow metering results and prepare a report summarizing the findings

- Complete wet weather inspections of entire sewer service area private service lateral inspection ports and prepare list of properties with potential internal plumbing defects and illegal connections for future internal investigation and testing

- Perform internal inspections and testing of sewer system plumbing in structures identified during wet weather observation port inspections to be discharging extraneous flows

- Notify property owners of defective internal plumbing and issue compliance schedules to property owners for mandated completion of repairs.

- Televise or pressure test, during property transfer, all private laterals of property owners that did not grant easements for private lateral replacements during the Phase 1 or Phase 2 projects and require property owner remediation, repair or replacement of all laterals that fail to pass the respective testing. If post-project metering does not document that wet weather flows have been reduced to rates established in the CO&A, all said private laterals will be tested.

- Eliminate all SSO events.
- Reduce flows discharges from the Southmont sewer system to the JRA sanitary sewer system to a level of 625 GPD/EDU on a peak hourly basis

A detailed Schedule of Implementation is attached which has been updated to reflect the current status of the SSO Abatement Plan Goals. Should you have any questions regarding the preceding status report or need additional information regarding any of the items included, please do not hesitate to contact our office.

Sincerely,

Tobias Nagle

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Sr. Environmental Scientist

Enclosures
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