



# SMOKE SHOW

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Throughout these last few months, I have been spending some time smoke testing several of our member's collection systems. Most needing several days of work, these collection systems are clay tile and rather old. However, even the most recently replaced lines can have issues. Some are only gray water systems and should have rather low flow. During one particular week, my colleague and I set out for Gardiner, NY for an investigation into their inflow and infiltration issues. Once we arrive and get started, the smoke show quickly begins and the infiltration discovery that proceeds is a weeklong discovery process. From low lying manholes that collect water, to broken clean outs underground, to improper connections in homes, there was a conglomerate of issues. All smoke that wasn't coming from the proper roof vents or manholes were documented for attention or repair. Smoke testing is also another great tool in identifying manholes that have remained undiscovered. In Gardiner we found several manholes that were unexpectedly putting on a show. Ultimately allowing greater access for the town crew to utilize during cleaning and inspections.



**Allegany Drain Inlet I&I**

that were plugged but have deteriorated and now allow passage of rainwater from storm drains, several basement drains that were unknown to the system, and we also helped identify issues for the community too. There were active laterals of homeowners that the smoke testing identified and the homeowners or tenants were able to configure plans to address the issues identified. There were also several missing traps inside some homes that were able to be addressed. By the end of the week, we had covered the whole village and were able to put documentation towards implementation to fixing and addressing some major issues of I&I. Storm drains, low lying areas, and abandoned or demolished homes seem to have a major role in allowing infiltration. Identifying and repairing these areas in any system will help with I&I issues, and the smoke show is one of the most reliable ways of finding the path the water can take into your collection system. If you have major flows during events I HIGHLY recommend taking advantage of a crucial part of investigating and get some smoke testing completed. Your plant and collection system won't regret it! 💧💧💧



**Allegany Smoke Test Manhole**

Another example of some recent smoke testing was in Allegany, NY, where the inflow and infiltration issues cost them as they transport to a neighboring plant to be treated. Quite literally, just a collection system now for maintenance as far as wastewater. However, just collection has a cost that gets very high when the flows come up. Ideally we all want to treat just the wastewater from our systems. I&I play a major role in cost efficiency when you are paying for rain water or even when treating it at the plant. Bypasses are not ideal but an unfortunate part of our aging systems. Setting out on a smoke testing investigation, we began the smoke show. During my week there we found several issues that allow infiltration that include laterals to homes that are no longer there, laterals



**Allegany Smoke Testing**