

May 3, 2016  
7:00 PM

The workshop of the Monroe Township Municipal Authority was called to order by Chairman Miller to have an open discussion regarding the 2016 and Beyond Northern and Southern District Inflow and Infiltration investigation options.

## ATTENDANCE

Kevin Miller, Chairman  
Sue Sunday, Vice Chairperson  
William Beck, Treasurer  
Ronald Eckerd, Secretary

Mark Bruening, Engineer  
Karen Lowery, Recording Secretary

Mr. Miller stated in the fall he provided an outline to highlight investigation items to be discussed and then in December a hit list was discussed and Mr. Bruening was asked to provide pricing for some of the items.

Mr. Bruening said that the Board has talked about maintenance items to determine I&I issues. He has provided a memo dated March 22, 2016 listing identifying steps that can be taken and has started with the easier, less expensive items.

The first step would be visual inspections by pulling manhole lids during rain events to isolate areas demonstrating high flows. In the past we have installed flow meters and checked them monthly, but they aren't being supported anymore, so it wouldn't be beneficial.

The second step would be conduct home inspections. This was done in the Southern District several years ago. Mr. Kuhl added that this didn't find any violations, so would it be worth doing it again? Mr. Bruening said probably not in the Southern district, but maybe in the Northern district.

The third step would be to install diaphragms in low lying manholes, which would cost \$40 each for fiberglass diaphragms. This could be done at the same time as the visual inspections, along with looking at the integrity of the manhole.

Mr. Kuhl asked if the diaphragm that was lodged in the sewer line was fiberglass. Mr. Bruening said that it was, but in 35 years of doing this he has never seen that before. He believes it got lodged in the pipe due to the manhole itself being damaged. The road crew has since fixed this problem. Mr. Miller added that stainless steel diaphragms shouldn't be able to get lodged in a pipe. Mr. Bruening said the stainless steel would be more expensive, plus could rust through after time due to the sulfuric acid in the system.

Mr. Kuhl asked if the road crew could do these inspections. Mr. Bruening said that with some training the road crew could look for certain items and complete an information sheet for each manhole. Mr. Kuhl added that pictures could be taken to add to our files or asset management program.

The fourth step would be to perform smoke testing to find inflow in the system. Mr. Bruening explained the process and that smoke testing could find cross connections, broken pipes or broken cleanouts. It is best to do this during dry periods. He added that information has been added to the newest Rules and Regulations regarding notifications that must be made prior to performing smoke testing. Mr. Kuhl asked who is responsible for clean out repairs. Mr. Bruening said the clean out at the right-of-way is the township's responsibility, but there may be other clean outs in the yard, which would be the homeowners responsibility.

The fifth step would be flow metering areas. Mr. Bruening touched on this earlier and the meters we have are outdated.

The sixth step would be Electro Scanning, which is where the technology is right now. Mr. Bruening works with Hamilton Township and they have purchased the equipment and would be willing to perform the Electro Scanning for the township at a cost of \$3 per foot. This process can report if there is an opening in the pipe.

Mr. Miller asked the price of CCTV. Mr. Bruening said it would be \$0.55 per foot and \$175 per lateral.

## SOUTHERN DISTRICT

Mr. Miller said that the worst area is the Southern district. Based on the options available he would like to determine the most cost effective option and the most beneficial. Mr. Eckerd asked if we could narrow down an areas by the pump stations to determine the worst areas. Mr. Miller said that the area of Sandy pump station is the worst. Mr. Miller stated that in the Southern district the most influence for I&I would be the Spring and Sandy pump station areas, so we should focus there. We could use the Electro scan data we already have and pull manholes to do a visual inspection.

Mr. Bruening added that pump run times from monthly reports could be plotted with rain events. He added that DEP contacted him looking for average daily flows and peak flows for the Chapter 94 report, so he will be gathering some of this information.

Mr. Bruening added that the pump at Sandy pump station originally pumped 300 gallons and is now pumping 200 gallons. This has decreased due to gravel and dirt in the system wearing away at the impeller. Mr. Kuhl asked how often the pump stations are cleaned. Mr. Bruening said once a year. Mr. Miller said that we have a contract with Jeffrey Wilbur Plumbing to do this work.

Mr. Miller suggested that at the next regular meeting a recommendation be made to purchase 100 diaphragms to start the first phase.

Mr. Miller asked that the Southern District I&I investigation Phase 1 be added to the next agenda to start with visual inspections and installing diaphragms where needed.

Mr. Eckerd asked if there are grants available. Mr. Bruening said we tried to get a grant 2 years ago for testing to find I&I issues, but grants were only available for repairs. Mr. Miller added that if we find major problems we could write a proposal for a grant.

Mr. Eckerd suggested determining a figure of how much will be spent to investigate. Mr. Beck asked what the cost will be to do the visual inspection and diaphragms. Mr. Bruening said 6 to 10 manholes could

be pulled per night at a cost of \$450 to \$500. Mr. Kuhl asked if the road crew could be trained to do this so the professionals aren't out at 2 AM. Mr. Miller stated that the road crew could be trained, but there is value in having a professional present to get his input and guidance. It was discussed that if the road crew could pull the manhole lids off during the day to make sure they are loose, the visual inspections at night could go quicker.

Mr. Beck provided a handout giving a financial overview of the Southern district.

Mr. Bruening added that dry weather flows would be used as the target flows.

#### NORTHERN DISTRICT

Mr. Eckerd provided some financial information and that he and Mr. Beck will need to meet to discuss the budgets for the districts.

Mr. Miller stated that the Northern district is aging, so we need to look at costs and what can be done. There may be issues with infiltration during high water periods with sump pumps connections and leaks.

Ms. Sunday asked what the best scenario would be to find sump pump connections, gutter connections or other illegal connections. Mr. Miller said home inspections would locate these items. Smoke testing could be done, but it won't located sump pump connections.

Mr. Eckerd stated that he doesn't feel the problem is with I&I. He feels that lowering the principal and interest would be a better direction to go. Mr. Miller said he understands that, but we also have to keep tabs on the aging system and address inflow issues. Mr. Miller feels that the focus would be in the Nixon Drive and Spring Circle areas.

There was some discussion in regards to future plant updates, but nothing official has been announced at this time.

#### ADJOURN

**On the motion of Mr. Eckerd, and seconded by Ms. Sunday, and by unanimous vote of the members it was duly RESOLVED to adjourn the workshop at 8:55 PM.**

Respectfully Submitted,

Karen M. Lowery  
Recording Secretary