November 22, 2021

TO: MWPAAC Engineering and Planning Subcommittee Members

FROM: Lisa Tobin (Chair), John McClellan (Vice-Chair)

RE: Side Sewer Inspector Training and Certification Program for
     Inflow/Infiltration (I/I) Reduction

The primary objective of the December 2, 2021 E&P meeting will be to decide whether and how to proceed with the Side Sewer Inspector Training and Certification Program. Please review the following information before the meeting.

Background

In 2017, Wastewater Treatment Division (WTD), their consultant, and MWPAAC began evaluating regional I/I reduction concepts to determine if programs should be established to help reduce I/I, in addition to specific I/I reduction projects performed by the local agencies and by WTD.

In October 2018, MWPAAC members unanimously approved further evaluation of three potential I/I reduction programs: 1) Regional Best Management Practices (BMPs), 2) Side Sewer Inspector Training and Certification, and 3) Private Side Sewer Inspection.

In April 2021 following a recommendation by the E&P Subcommittee, MWPAAC sent a letter to WTD recommending implementation the first I/I reduction program - the Regional BMP program.

During 2021, the Engineering and Planning Subcommittee (E&P) has devoted several meetings to discussing the Side Sewer Inspector Training and Certification program, with the goal of asking the MWPAAC members to recommend to WTD whether or not to implement this program.

Based on the results of the survey, it appears that about half of the agencies (by area) would likely participate in the program. These agencies represent about 65% of the sewer customers. However, many of their responses to the survey indicated neutral support for the program. Although the time commitment for training for the local agency inspectors will only be 1 day every 5 years or so, there will be significant time and expense both for WTD (to create the program) and for MWPAAC (to review and provide input to the program at both E&P meetings and General meetings).

Discussion

Given the large number of agencies who do not intend to participate, those who likely will do it but see a lot of duplication with their own training programs, and the time and effort to create the program, do we want to ask the MWPAAC membership to recommend this program to WTD or not?

If **yes**, a draft recommendation is attached for your review.

If **no**, we will discuss the changes to the draft recommendation to explain why E&P does not support the program.

Engineering and Planning (E&P) Subcommittee Recommendation to MWPAAC for Implementation of Inspector Training and Certification for Inflow and Infiltration Reduction

December 2, 2021

Introduction

In 2018, the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) in collaboration with King County Wastewater Treatment Division (WTD) recommended that three inflow and infiltration (I/I) reduction program concepts be further defined and evaluated for their ability to help reduce I/I in the separated sewer portion of the regional wastewater system. I/I reduction from these measures, **together with I/I reduction projects within the local agencies' collection systems and within the regional system**, will contribute to downsizing, deferring or eliminating future planned capital projects. The three program concepts included: 1) regional best management practices (BMPs), 2) an inspector training and certification program, and 3) a private side sewer inspection program with financial assistance. In April 2021, MWPAAC recommended that WTD implement the 1st program concept – regional BMPs.

The E&P Subcommittee now recommends that MWPAAC consider a recommendation to WTD to begin implementation of the voluntary Inspector Training and Certification Program for the following reasons:

- There is currently no regional standard for inspection of sewer mains, laterals, and private side sewers.

- In interviews conducted with local agencies in 2017, many agencies indicated that training for sewer construction inspectors is provided on the job.

- Standardized inspector training and inspection practices would provide a basic level of assurance that sewer infrastructure is constructed and repaired at a consistent level of quality across the regional service area. Supporting the professional development of sewer inspectors would help prevent substandard installations, side sewer degradation, gradually reduce some of the sources of I/I from within local systems, and thus over time help reduce the regional I/I flows.

Description of Inspector Training and Certification Program

The goal of the Inspector Training and Certification Program is to ensure that all local agency sewer inspectors (either staff or contractors) are consistently trained to a common standard and certified to inspect side sewers and laterals of the sanitary sewer system and will enforce proper installation, rehabilitation, and repairs to reduce I/I. The training would not require that specific codes and procedures be adopted universally throughout the service area, and would allow agency-specific codes and procedures to continue to be used.

Ideally, 100% of side sewer inspectors would be trained and certified within 3-5 years after the program is available. Although each local agency would participate in the program **voluntarily**,

participation by at least half of the local agencies would be needed to justify development of the program.

Key elements of the inspector program include:

1. Online (self-study) training modules on inspection and testing methods and construction practices for side sewer installation and repair and for new connections to the public sewer. An additional potential module would address safety considerations (e.g., such as other utilities boring through side sewers) and communication with contractors and property owners. Participants would be able to complete all modules within 7 hours, culminating in a 1-hour online test for certification.

2. Minimum qualifications (high school graduate, completion of sewer-related training courses, 5 years' experience with sewers) to ensure that inspectors have sufficient background and experience to be successful in the self-study program. There would be a provision for an agency to allow their inspectors to participate without meeting all of the qualifications.

3. Certification by passing an online test, with recertification every 5 years. There would be a test-out or streamlined training option for qualified, experienced applicants (qualifications to be determined).

4. King County WTD development and administration of the program, likely with 1 Full Time Employee (FTE) to be authorized through the WTD budget process. The training would be provided free of charge to the local agencies' inspectors, with the local agencies responsible for compensating their inspectors for their time completing the training.

E&P Subcommittee Discussion

- Recognize that inspector training is only one element of I/I reduction. Local agencies may need to do more (smoke testing to locate illegal connections, rehabilitation and replacement of leaking collection system piping, prevention of unauthorized construction discharges, etc.) to reduce their I/I.

- Decennial flow monitoring will not likely show how effective the inspector training is in the short term in reducing I/I. Instead, the training is an investment in the professional development of the inspection staff and in quality construction that will last longer with reduced I/I over time.

- Input from the local agencies in the development of the training curriculum and qualifications is essential to ensure that the material is relevant, that field experience and expertise are considered, and that inspectors have the opportunity to be successful in completing the program and certification.

Implementation

MWPAAC can accept this recommendation without change, accept the recommendation with amendments, or reject the recommendation. Once funded through the County budget process, WTD would coordinate with MWPAAC in developing the curriculum and qualifications for the Inspector Training and Certification Program.