

**2019 Legislative Recommendations
Legislative Water Commission
Increase MDH Drinking Water Service Connection Fee
October 2018**

**Recommendation #1
Not in priority order**

Issue: Addressing Inflow and Infiltration Infrastructure Problems

What's needed: Legislation to allow sanitary districts to use existing revenue for public and private property inflow and infiltration mitigation, in the same way as cities are allowed to address the problems.

A 7) Legislation to allow wastewater districts to use existing revenue to address the significant inflow and infiltration problems associated public and private wastewater infrastructure. Inflow and infiltration infrastructure repair needs affect groundwater quality and wastewater treatment demands. Legislation is needed to allow sanitary districts to use existing revenue for public and private property inflow and infiltration mitigation.



Background: Well-maintained and properly functioning wastewater (wastewater and storm water) systems are important because they protect public health and encourage economic development. Many communities have problems with infiltration and inflow (I/I) caused by broken or cracked pipes, sump-pump connections, extreme rain events and lack of overflow capacity. Funding to repair these leaks, for public and private wastewater lines, is a big problem for wastewater districts. Unlike cities, sanitary districts are not allowed to use existing funds to address these issues.

Groundwater entering sanitary sewers through defective pipes is called *infiltration*. Pipes leak due to careless installation or sewer-line damage after installation. Infiltration generally increases as sewer systems age. Infiltration is greatest where groundwater levels are higher than sewer pipes. Gravel materials in sewer pipe trenches act as French drains where water parallel to the sewer until it reaches the area of damaged pipe. In areas of low groundwater, sewage may leak into groundwater from leaking sewers. Inflow generally enters sewers as runoff from the land's surface. Although inflow is technically different from infiltration, it is often difficult to determine which is causing dilution problems. The United States Environmental Protection Agency defines the term infiltration/inflow as combined contributions from both.

Infiltration and Inflow is a problem because it causes ddilution in sanitary sewers. Dilution of sewage decreases the efficiency of treatment, and cause sewage volumes to exceed design capacity. High rates of infiltration and inflow limit the carrying capacity of sewer lines. Sewage may back up into the homes during wet weather, or street manholes may overflow. Inflow and infiltration also increases the costs of

pumping and disinfection. Treatment structures sometimes need to be enlarged to handle the peak flow. Dilution from inflow and infiltration are problems for secondary wastewater facilities because treatment is effective only when concentrations of soluble and colloidal pollutants remains high enough to sustain a population of microorganisms digesting those pollutants.

This recommendation addresses the maintenance and operation of adequate wastewater and storm water infrastructure with the goal of sufficient and clean water for the future. Treatment of diluted flow from combined sewers produces large volumes of wastewater that has to be treated as sewage.

October 2018 (jrs)

Inflow and Infiltration

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