



Department Source: City Utilities - Sewer/Stormwater

To: City Council

From: City Manager & Staff

Council Meeting Date: November 20, 2017

Re: Amending Chapter 22 to Revise the Inflow and Infiltration Reduction Program

Executive Summary

Staff has prepared for Council consideration an ordinance to amend Chapter 22 of the City Code of Ordinances to revise the current Inflow and Infiltration Reduction Program by updating program requirements to more closely align with the Cost Reimbursement Program for the Installation of Pressure Sewers, Backflow Prevention Devices or Removal of Plumbing Fixtures. These revisions are intended to make the programs complement one another and make the program more user friendly for the customers, ultimately helping to reduce the total inflow and infiltration entering the sewer system.

Discussion

Staff has prepared a revised ordinance for the reduction of private sources of inflow and infiltration. The revisions will allow for simpler navigation of the program and expand the program to allow the participation of property owners who are also seeking to participate in the Cost Reimbursement Program for the Installation of Pressure Sewers, Backflow Prevention Devices or Removal of Plumbing Fixtures.

Infiltration is groundwater that enters sanitary sewers through leaks in pipes and manholes. Inflow is storm water that enters the sanitary sewer system directly through illegal connections such as roof downspouts, driveway drains and sump pumps. During wet weather, inflow and infiltration can increase the flow to the sanitary sewer system to the point of overload. When this occurs, the excess water can cause manholes to overflow, cause backups into buildings and operation problems at the Waste Water Treatment Plant.

The goals of the Inflow and Infiltration Reduction program are to reduce the incidence of wet weather related building backups and sewer overflows. Through the experiences of the last six years, staff has become more knowledgeable on the process, methods and results of many aspects of the program. Previously, the indicated goals were to eliminate building backups and overflows along with attempting to meet a certain ratio of wet weather flow to dry weather flow. Staff now acknowledges that these goals were overstated; it is not possible to "eliminate" all backups and overflows. However, reduction in the frequency and duration of backups and overflows is reasonable and is being achieved. Results and effectiveness of the overall efforts to reduce inflow and infiltration were outlined in the May 15, 2017 report to City Council. By having a private source inflow and infiltration reduction program that is more accessible to property owners, there is greater opportunity for participation than has occurred in the past.



Since the reimbursement program was started in 2011, there has been a total of \$21,817.02 of reimbursements over six years benefitting 33 property owners. The proposed changes will make the program easier to navigate for the customer which is anticipated to increase the use of the program ultimately resulting in greater reduction of inflow and infiltration to the system. The suggested revisions would also align the program more closely with the recently adopted Cost Reimbursement Program for the Installation of Pressure Sewers, Backflow Prevention Devices or Removal of Plumbing Fixtures. Private inflow and infiltration sources must be addressed prior to any participation in the Cost Reimbursement Program for the Installation of Pressure Sewers, Backflow Prevention Devices or Removal of Plumbing Fixtures; therefore, the proposed revisions will provide customers consistency and certainty if they choose to participate in both programs.

Fiscal Impact

Short-Term Impact: The fiscal year 2018 budget includes \$100,000 for reimbursement to property owners for Inflow and Infiltration reduction.

Long-Term Impact: Funds will be included in the operating budget in future years for this reimbursement program. At this time, \$100,000 per year is anticipated with the cost decreasing as private I&I sources are removed.

Strategic & Comprehensive Plan Impacts

Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Environmental Management, Secondary Impact: Infrastructure, Tertiary Impact: Not Applicable

Legislative History

| Date | Action |
|------------|---|
| 07/17/2017 | B190-17 Cost Reimbursement programs for installation of pressure sewers and backflow prevention devices or the removal of plumbing fixtures |
| 05/15/2017 | REP38-17 Update on sewer system inflow and infiltration reduction efforts and impact on the reduction of overflows and sewer backups into buildings |
| 08/1/2011 | B192-11 Inflow & Infiltration Reduction Program Amendment |
| 03/7/2011 | B54-11 Inflow & Infiltration Reduction Program |
| 07/23/2010 | REP- 70-10 Inflow and Infiltration Reduction Program |



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Suggested Council Action

Approve the ordinance to amend Chapter 22 of the City Code to revise the Inflow and Infiltration Reduction Program.