



February 15, 2021

***Delivered via Email***

**Chairwoman Taft and Members of Wastewater Commission**

The City of Racine (City) received three letters from the Racine Wastewater Utility (Utility) dated June 5, 2020; August 3, 2020; and, October 9, 2020, regarding requirements and conditions under the Intergovernmental Agreement (IGA) for peak flows from the City. These three letters identify four rainfall events for which the Utility has determined the City exceeded their peak flow allocations. The letters further state that, under the agreement, a moratorium exists on sewer extensions and the addition of new customers until such time the City, as a Sewer Service Recipient (SSR) under the agreement, demonstrates to the Wastewater Commission, as the Sewer System Provider (SSP), that modifications are made or capacity allocation procured such that sewer extensions or additions will not result in future peak flow exceedances.

The City has retained a consultant to help address this issue and has met with Utility staff to further understand the exceedance data and requirements of the IGA. As you may know, the City has several potential developments being considered and is anxious to obtain relief from the moratorium.

Past studies have identified that the primary contributors to peak flows within the City of Racine are foundation drains and sump pumps, lateral leakage, sewer main leakage, and manholes. The City has maintained a program of sewer system evaluation, repair, lining, and upgrade through the existing Sewer Asset Management program. From 2004-2018, the City has invested nearly \$3 million in CCTV to evaluate storm and sanitary sewer system deficiencies. The sanitary sewer system is comprised of nearly 1.06 million linear feet of sewers, 4,200 structures, and 29,000 laterals with a replacement value estimated at \$225 million.

Based on evaluation of the probable cause of the exceedances and consideration of cost-effective options for peak flow reductions, the City proposes the following actions to mitigate peak flows.

**Enhancement of Current Programs**

- Lateral repair program – The City will continue efforts to repair, re-line or replace defective laterals in city rights-of-way or easements. From 2008 to 2020 City has addressed 2,555 laterals (approximately 9% of the system) with 2002 laterals addressed proactively and 553 emergency responses totaling nearly \$4.8 million.
- Funding – The City has increased the Sanitary Sewer Maintenance fee from \$63 to \$75 to provide and additional \$350,000 in annual funding for sewer system improvements.
- CCTV/Sewer Asset Management Program – The City will re-focus the CCTV inspection program, originally focused primarily on structural defects, to equally address Inflow and Infiltration (I/I) observations in the sanitary sewer system.

- Stormwater Utility Clear Water Management – The City will continue to rigorously enforce their stormwater management program to minimize the quantity of stormwater entering the sanitary sewer system and implement new investigations to identify and mitigate sources of clear water entry into the sanitary sewer system.

#### Additional Projects and Programs

- Deficiencies identified in CCTV/Sewer Asset Management Program
  - Commitment to approximately \$4.6 million in sanitary sewer lining over the next 10 years to address a backlog of deficiencies.
  - Additional city engineering staff time commitment of 500 hours in 2021 focused on sanitary sewer system improvements.
  - Additional \$350,000 in sanitary sewer rehabilitation funding from the increased Sanitary Sewer Maintenance fee to annually address laterals.
- Manhole Program – Create a program to plug pick/vent hole and/or replace manhole covers in areas identified to have surface water ponding or surface water flow over manholes with pick/vent holes.
- Roosevelt-Kinzie Improvements – Final completion the improvements already identified or in progress, dealing with private property issues of stormwater entering the sanitary sewers, by end of 2021.
- Flow Metering for I/I – Develop and implement a program of sanitary sewer flow metering to identify areas with excessive peaking factors in rain/runoff events. The program will use various data to select sub-basins for effective metering. Data will include CCTV observations, contributing area land use, soil type, ground water level, etc. to select sub-basins for metering with the greatest potential for cost effective solutions to clear water entry. An estimated five (5) points will be selected for initial metering beginning in early 2021.
- Flow Metering for Sewer/Lateral Lining Evaluation – Conduct sanitary sewer flow metering on select sub-basins that have already had neighborhood-wide sewer main lining or sewer main with lateral lining to determine if previously enacted policies of maximum I/I removal versus cost-effective I/I removal achieved expected results. This evaluation will inform future sewer and lateral lining projects aimed at removing clear water contributing to the exceedances.
- Smoke Testing - Where flow metering indicates inflow rather than infiltration as the probable cause of high peaking factors, smoke testing will be used to quickly identify specific defects for rehabilitation.
- Foundation Drains – Create incentives for private property owners to prevent/reduce clear water from foundation drains entering the sanitary sewer system. Incentives may include public-private partnerships with non-profits or grant funding. Elements eligible for incentives may include:
  - Downspout extensions
  - Surface grading away from the foundation
  - Rain barrels
  - Water gardens
  - Other green infrastructure

- Main Street/Goold Street Area – Retain an engineering consultant for preliminary engineering for storage options near the Racine Zoological Gardens. The options may include a relief and/or storage sewer under Main Street, integration of the zoo pond, modification of the zoo pond connection, evaluation of the parking lots west of zoo for construction of a storage basin, storage or other improvements under Goold Street, and construction of storage in conjunction with other proposed projects. The City is aware that the Utility has engaged a consultant to design a replacement sewer on Main Street. The City is also coordinating with the Wisconsin Department of Transportation for the reconstruction of Main Street between Goold and Melvin. Also, the City is actively engaged with other SSR parties to identify and assess potential, mutually beneficial approaches to addressing peak flows. Based on all of this, the City plans to work with the Utility to coordinate all of these activities in the Main Street and Goold Street area.
- Lift Station 1 to Lift Station 2 Operation Review – Retain an engineering consultant to evaluate flows and peak flow control options between LS 2 and LS 1. Also, the City is actively engaged with other SSR parties to identify and assess potential, mutually beneficial approaches to addressing peak flows.
- Future Land Developments – Evaluate any proposed development for impacts on peak flows and require evaluation of options to mitigate the impact of the development on peak flows in the area of the development.
- Land Bank Program – The City, in collaboration with the County, are working to expand the land bank program. As part of that program, the City will incorporate feasible best practices to minimize the flows into the sanitary sewer system.
- Summary Report – The City will develop a summary report assessing the impact of these actions and estimate the impact on peak flows.

We believe these projects and programs provide a broad, robust, and appropriate approach to address the City's peak flows and will result in negligible impact by future developments on peak flows. We request the Wastewater Commission accept these proposed activities as evidence of the City's efforts to reduce peak flows and mitigate any peak flow impact of potential future connections. The City also proposes to provide an update to the Wastewater Commission on these activities in mid-2021. Therefore, we request the Commission relieve the City from the current moratorium. We are prepared to provide the Commission with additional information or respond to any questions.

Sincerely,



Cory Mason  
Mayor