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Frequently Asked Questions

FAQ Sheet 4 – COMBINED SEWER OVERFLOWS (CSO's)

1. What is a combined sewer overflow?

Combined Sewer Overflows (CSO's) are relief points within the sewer system that allow a mixture of rain water and sanitary sewage to be discharged into Lake Erie or the Rocky River. The purpose of CSO's is to protect the lower portion of the sewer system from becoming overwhelmed during a heavy rain. The CSO itself is an underground pipe from a manhole on one of the main trunk sewers to the cliff over the lake or river. After the main trunk sewer fills to capacity the water rises in the manhole and begins to flow out of the CSO pipe, preventing the water from rising further. The combined sewage discharge through each CSO is regulated by the Ohio Environmental Protection Agency (Ohio EPA) through the National Pollution Discharge Elimination System (NPDES) program as the enforcement Agency for the United States EPA. Lakewood's sewer system has 10 CSO's. Six of them are along the Lake Erie shore and four are along the Rocky River.

2. How do CSO's relate to basement flooding?

CSO discharges during heavy rains and basement flooding can occur when there is more flow than the sewers can handle or when blockages restrict the ability of the sewer to remove the water quickly enough. Fortunately, the solution to frequent basement flooding and the Ohio EPA requirement to eliminate the CSO's will be the same plan.

3. What is the NPDES Permit and how does it affect Lakewood's sewer program?

The National Pollution Discharge Elimination System (NPDES) program Permit acts as our "license" to operate the sewer system and the waste water treatment plant. It is renewed every five years, with each renewal accompanied by a set of specific requirements, or "mandates", that the City must comply with. These mandates include major construction projects intended to eliminate the CSO's. Ohio EPA changed the designation of Lake Erie such that Lakewood's previously permitted CSO's must now be eliminated. The City is subject to sanctions if the requirements of the Permit are violated. These sanctions could include court orders and substantial fines. Neither Ohio EPA nor U.S. EPA provide funding to pay for the mandates they impose.

4. Why are we hearing so much about CSO's in Lakewood now?

There has always been an emphasis on the gradual elimination of CSO's nationwide since the founding of the EPA. They started with the largest cities and have gradually phased in smaller and smaller communities. Cleveland, Columbus, Cincinnati, Akron and Toledo have already had to develop and submit compliance plans called Long Term Control Plans. It is now the turn for cities the size of Lakewood. Lakewood is scheduled to submit a Long Term Control Plan to Ohio EPA by June 2006. Work on this program began in 2003.

5. What is the Long Term Control Plan?

Completion of the Long Term Control Plan (LTCP) is required by Lakewood's NPDES Permit. It is a "roadmap" that tells Ohio EPA how the City will address the new requirement to eliminate the CSO's. Completion of the Plan will have three components:

- Analysis of the configuration and flow capabilities of the existing sewer system.
- Evaluation of alternative methods intended to manage both combined sewage flows during storms and basement flooding reduction, after the CSO's have been eliminated.
- Selection of the most cost effective and acceptable method for accomplishing those goals.

The LTCP will produce a written document that will be submitted to Ohio EPA, who will review and finally approve it. It will then serve as the forward planning document for the engineering and construction projects that follow.

6. What are some of the CSO and basement flooding elimination methods other cities have used?

a. Many large cities such as Greater Cleveland have dug large storage tunnels to hold the excess storm–generated combined sewage until it could be processed through a treatment plant. This plan has relatively minimal disruption on the surface and does not require large scale owner-financed private property sewer separation work. A number of streets would still need major sewer improvement projects to address local flooding.

b. Some smaller communities have chosen to replace their combined and over/under sewers with separate storm and sanitary sewer systems. Private property owners would also have to reconstruct or replace their lateral sewers so that they, too, would fully separate the storm and sanitary flows.

7. How much will it cost and how will it be funded?

a. As may be expected, estimated budget costs for completing the improvements will not be available until the conceptual studies are completed near the end of 2005. If the deep storage tunnel concept is chosen, a rough estimate would be $50 million to $100 million. A complete system replacement could cost several times that amount.

b. At the present time, there are no Federal or State grants or funding support available to significantly cover the estimated cost of this program. Cities generally pay for the projects by selling bonds which are repaid by sewer users through the sewer bills.

8. Will residents be involved with the program?

Yes. The Mayor and his Administration will be forming the Lakewood Infrastructure Committee. The Committee will be formed in January 2005 and will consist of approximately 5 to 10 residents who are seriously dedicated to assisting City Government with the practical improvement of all of Lakewood's infrastructure. Their first task will be participation in the Long Term Control Plan project. Committee members will become thoroughly familiar with the details of the engineering process so that they can serve as small group moderators during public meetings. Once the sewer improvement options have been outlined, committee members can make informed evaluations based on cost, schedule, neighborhood impacts and private property issues. Applications will be accepted until December 15, 2004. Please contact the Division of Engineering at 529-6805 and a form will be sent to you.