1. What does the City do to maintain the sewers?

The City is responsible for the maintenance of the sewer system within the public right of way, which generally is the area that includes the sidewalks, tree lawns and street pavement. This includes the main sewers under the street and the lateral sewers which run from the main sewer to the service connections on private property, usually at the inspection tee's behind the sidewalk. The Public Works Department is responsible for sewer maintenance through the Division of Waste Water Collection. This Division presently has 14 employees and an Operations Manager. Activities include:

- Responding to service calls on public property.
- Responding to basement flooding calls.
- Catch basin and sewer cleaning.
- Sewer televising.
- Small to moderate size sewer repairs.
- Vermin control in sewers.
- Larvaciding catch basins to control West Nile Virus.
- Water quality sampling.
- Assist with planning major sewer repair and improvement projects.
- Advising property owners and contractors regarding sewer issues.
- Inspection of private sewer connections to the public sewer system.

2. What types of sewer responsibilities do property owners have?

Property owners are responsible for existing conditions and maintenance for all portions of the storm and sanitary sewers and service connection laterals located on their properties, including inspection tee's located near the sidewalks. This includes cleaning them when they are clogged and repairing or replacing them when they are broken or missing.

a. Owners are also responsible for complying with all Federal, State and Lakewood laws and regulations regarding sewer connections. All local regulations in the Codified Ordinances of the City of Lakewood are founded on State and Federal laws resulting from the 1972 Clean Water Act and other sanitary Codes which date back to the founding of the City.

- Every habitable building must be connected to the public sewer system.
- All sources of sanitary sewage (toilets, showers, sinks), including building interior drains, shall be connected to the public sanitary sewer, including drains inside garages.
- All sources of storm water (downspouts, yard drains, pavement inlets) shall be connected to the public storm sewer unless approved for surface discharge, including driveway drains.
- Storm water can not be conveyed to a sanitary sewer and sanitary sewage can not be conveyed to a storm sewer.
- Oils, greases, solids, automotive cooling fluids and any noxious chemicals can not be dumped into any sewer or street catch basin.

Solid, non-dissolvable objects can not be introduced into any sewer. For example, toilet paper can be flushed down the toilet, but many feminine hygiene products and disposable diapers can not. A good rule of thumb is – "do not put anything into the toilet you haven't eaten first".
b. Clearly, original Lakewood homes and buildings were not constructed with modern environmental laws in mind. However, this does not excuse present owners from complying with these laws. Most property owners encounter sewer connection regulations when applying for a building permit for projects that include work on downspouts and drains. For example, basement waterproofing or re-siding a home requires the removal of gutters, downspouts and drains. Part of the permit process includes a dye test of the downspouts to see if they are connected to the public storm or sanitary sewer. If the dye shows up in the sanitary sewer, the property owner will be required to re-pipe the downspouts to the public storm sewer at the owner’s expense. Before that is done, however, the City will ask the owner to clean the storm lateral, followed by a new dye check. Many times this will demonstrate that the downspouts were, in fact, correctly connected – they only needed cleaning. In any case, please be assured that the City of Lakewood will never permit a downspout or driveway drain to be re-connected to a sanitary sewer or sanitary lateral.

c. Private property owners are not responsible for the maintenance of any public sewer which may be located under their properties. The City does have easement rights to access these sewers and outfalls to the lake when necessary. This applies to only a small handful of properties in Lakewood.

3. What are the City’s responsibilities for sewer improvements?

The Division of Engineering and Construction in the Public Works Department is responsible for managing public construction projects in the City, which includes major sewer repair and improvement work. This Division also hires consulting engineers who are experts in municipal sewer analysis and design to assist in the planning process. The projects are only done within the public right of way as sewer improvements on private property are the responsibility of the owners.

4. What types of sewer improvements are currently being done?

The individual projects are identified by the maintenance crews or are mandated by Ohio EPA. The Administration determines which projects can be funded during a budget year and proposes them to City Council, who then adopts them by legislation. The overall goals of the construction projects are to reduce the frequency of basement flooding and reduce pollution to Lake Erie.

a. Sewer repair and replacement projects. These projects are typically identified by the maintenance crews and consist of replacement of damaged pipe. This type of work can range from a hundred feet in length to an entire street and will include repair or replacement of laterals and separation of the storm and sanitary manholes on over/under streets.

b. Sewer repairs during street resurfacing projects. Every street scheduled for repaving will have its sewers cleaned and inspected by the maintenance crews. Identified pipe repairs and replacements are included with the street work. Also included are lateral repairs and separation of the storm and sanitary manholes on over/under streets.

c. Sewer upgrade and improvement projects. These projects are done when the Ohio EPA mandates them or other studies indicate that the existing sewers on a street need to be enlarged or reconfigured. This type of project always considers the impact of additional sewage flow on downstream properties and will never be done when it will increase flooding elsewhere in the City. Examples of improvement projects include the conversion of a combined sewer to a separate storm and sanitary system, re-connection of homes from a flooded sewer to another sewer with excess capacity and the replacement of a small sanitary sewer with a larger one.

d. The Lakewood Geographic Information System is a computer - based program that contains sewer information that is accessed by means of a City map. The sewers are shown on a City map and, by selecting a particular pipe on that map, information about that pipe can be read. This same map can also be used by special software that can simulate the flow of waste water. This enables an operator to identify design bottlenecks or observe if a proposed sewer project might cause increased flooding on a downstream street.
5. **What future sewer system improvements are planned for Lakewood?**

The goals of the sewer improvement program are to comply with mandated anti-pollution regulations and to reduce basement flooding events to an absolute minimum without causing an increase in flooding somewhere else in the City. This will be done by making sewer repairs that separate the storm water from the sanitary flows and providing enough storage space underground to contain heavy storm flows. All this will rely on a professional analysis of the system and innovative designs.

**a.** The Long Term Control Plan is a three year study project whose goal is to propose a practical concept for limiting basement flooding and eliminating the combined sewer overflow pollution to Lake Erie mandated by Ohio EPA.

**b.** The concept outlined by the Long Term Control Plan will be finalized by a design project that will produce construction drawings and specifications.

**c.** There will likely be a series of major underground construction projects over a period of several years based on the Long Term Control Plan. We anticipate that a series of deep tunnels may be bored under the City into which the existing sewer system will discharge. These tunnels would store the excess sanitary and combined sewage until it could be processed through the waste water treatment plant.

**d.** The program of repair and replacement of damaged shallow sewers will continue. Specifically, Detroit Avenue will have large sections of sewer replaced over the next several years. All streets that will have major repaving projects will also have their manholes reconstructed, laterals repaired and damaged pipe replaced.

**e.** A new program to install storm sewer laterals to properties that do not now have them will be initiated. When an owner finds that a new storm drainage system is needed at their property, the City will participate by providing a storm sewer lateral to that property from the sewer in the street.

**f.** Expansion of the Lakewood Geographic Information System (LGIS) so that the entire sewer system is fully documented. This will enable accurate flow analysis to be done for all of the improvement projects and will also allow for more efficient maintenance planning.